



इरकॉन इन्टरनेशनल लिमिटेड
नवरत्न कम्पनी
(भारत सरकार का उपक्रम)
IRCON INTERNATIONAL LIMITED
NAVRATNA COMPANY
(A Govt. of India Undertaking)



No. IRCON/B-1300035/NFR-VB/Composite Works/2025

Date: 14.01.2026

To,

M/s. GHV (India) Pvt Ltd,
AML Centre 1, 8 Mahal Industries Area,
Mahakali Caves Road, Andheri (East),
Mumbai-400 093 (Maharashtra)
Email: Info@ghvgroup.com

(Kind Attn: Sh. Ayoob Shaikh, Authorized Representative)

Dear Sir,

Sub: Letter of Acceptance (LoA) for the work of "Composite Work (Civil, Electrical, Mechanical and Signal & Telecom) involving construction (A) At-NJP- Upgradation/Development of maintenance infrastructure for energy efficient Vande Bharat Express at Coaching Complex/NJP. (B) New Jalpaiguri~At-NJP Next Generation Freight Maintenance Facilities (C) At SGUJ- Infrastructure construction of GE Loco shed for homing of 250 Nos GE locos (WDG4G/WDG6G) in Katihar Division Over Northeast Frontier Railway."

Ref: 1. NIT No: IRCON/B-1300035/NFR-VB/Composite Works/2025 Dated 17.11.2025
2. Corrigendum-01 dated: 22.11.2025
3. Corrigendum-02 dated: 26.11.2025
4. Corrigendum-03 dated: 01.12.2025
5. Your negotiated offer dated: 08.01.2026
6. Letter of Intent No. IRCON/B-1300035/NFR-VB/Composite Works/2025 Date: 10.01.2026

- 1.0 The Competent Authority for and on behalf of IRCON International Limited has accepted your offer for the subject work at your negotiated offered cost of ₹ 217,78,08,121.00/- (Rupees Two Hundred Seventeen Crore Seventy-eight Lakh Eight Thousand One Hundred and Twenty-one only) including all taxes, duties, etc. & GST @ 18%. The summary of accepted BOQ Schedule is enclosed herewith as **Annexure-I**.
- 2.0 Detailed Schedule for Bill of Quantities (BOQ) is enclosed herewith as **Annexure-II**.
- 3.0 The completion period of work is 14 (Fourteen) months from the date of issue of letter of acceptance including monsoon period as per clause no. 34.0 of SCC of the tender document. This LOA shall be treated as notice of commencement of work.
- 4.0 It is requested to submit a Performance Security for an amount of ₹10,88,90,406/- (Rupees Ten Crores Eighty-eight Lacs Ninety Thousand Four Hundred Six only) in the prescribed form as per Clause no. 4.1 of SCC (Corrigendum-3 dated: 01.12.2025) of the tender document in favour of IRCON International Limited, within 21 (twenty-one) days from the date of issue of letter of acceptance (LOA).



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- 5.0 This letter will constitute a legal and binding contract between IRCON International Limited and M/s. GHV (India) Pvt Ltd till such time the Contract Agreement is signed, as per clause no. 23.0 of Instructions to Tenderer of tender document. You will enter into and execute the contract agreement within 28 days from the date of issue of this letter as per Clause no 50 of SCC (*Corrigendum-3 dated: 01.12.2025*) of the tender document, on the stamp paper of the requisite value as per the prevailing laws, to be arranged at your cost.
- 6.0 All other terms and conditions shall be as per the tender documents, which shall form an integral part of this contract and shall be binding on you.
- 7.0 This letter is being issued in duplicate, one copy of which may please be returned within 07 (seven) days of the issue of the LOA. Duplicate copy shall be duly stamped and signed and returned as a token of your unconditional acceptance.
- 8.0 You are requested to contact Chief General Manager/Civil, Siliguri, West Bengal for further instructions.

Encl: Annexure-I & II

Yours faithfully,
For and on behalf of
Ircon international limited

 SURENDER SINGH
(Surender Singh)
Executive Director/Project

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Copy to::

- (i) CGM/Civil, Siliguri, West Bengal - *for necessary action please.*
- (ii) ED/BD & CGM/BD, Corporate Office, Saket, New Delhi - *for information please.*

Annexure-I

Name of Work: Composite Work (Civil, Electrical, Mechanical and Signal & Telecom) involving construction (A) At-NJP- Upgradation/Development of maintenance infrastructure for energy efficient Vande Bharat Express at Coaching Complex/NJP. (B) New Jalpaiguri~~At-NJP Next Generation Freight Maintenance Facilities (C) At SGUJ- Infrastructure construction of GE Loco shed for homing of 250 Nos GE locos (WDG4G/WDG6G) in Katihar Division Over Northeast Frontier Railway.

NIT No: IRCON/ B-1300035/NFR-VB/ Composite works/2025 Date: 17.11.2025

SUMMARY OF BILL OF QUANTITY			
Sl. No.	Schedule	Description	Basic Amount (in Rs.)
1	Schedule-1	VANDE BHARAT CIVIL (Item Directory - CPWD DSR 2021-Ver-2)	11,71,68,715.83
2	Schedule-2	VANDE BHARAT CIVIL USSOR (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	6,53,41,200.00
3	Schedule-3	VANDE BHARAT CIVIL USSOR (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	2,29,05,125.00
4	Schedule-4	VANDE BHARAT CIVIL USSOR (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	78,57,310.00
5	Schedule-5	VANDE BHARAT CIVIL USSOR (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	55,01,767.04
6	Schedule-6	VANDE BHARAT CIVIL (NS ITEM) (Item Directory - Not Applicable)	9,09,75,154.70
7	Schedule-7	VANDE BHARAT Electrical General (NS ITEM) (Item Directory - Not Applicable)	3,03,51,606.73
8	Schedule-8	VANDE BHARAT Electrical TRD (NS ITEM) (Item Directory - Not Applicable)	6,77,90,552.24
9	Schedule-9	VANDE BHARAT S&T (NS ITEM) (Item Directory - Not Applicable)	3,53,17,216.51
10	Schedule-10	VANDE BHARAT Mechanical (NS ITEM) (Item Directory - Not Applicable)	9,77,15,196.18
11	Schedule-11	Next Generation Freight Maintenance (Item Directory - CPWD DSR 2021-Ver-2)	34,13,22,123.73
12	Schedule-12	Next Generation Freight Maintenance (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	3,29,26,840.00
13	Schedule-13	Next Generation Freight Maintenance (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	4,12,29,225.00
14	Schedule-14	Next Generation Freight Maintenance (Civil) (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	11,66,471.08
15	Schedule-15	Next Generation Freight Maintenance (Civil P.WAY) (Item Directory - NFR-HQ-IR-USSOR 2021-3-Ver-3)	81,30,698.84
16	Schedule-16	Next Generation Freight Maintenance (Civil NS ITEM) (Item Directory - Not Applicable)	13,50,99,695.50
17	Schedule-17	Next Generation Freight Maintenance (Civil NS ITEM P.WAY) (Item Directory - Not Applicable)	2,41,00,920.00



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SUMMARY OF BILL OF QUANTITY			
18	Schedule-18	Next Generation Freight Maintenance Electrical General (NS ITEM) (Item Directory - Not Applicable)	5,52,69,458.61
19	Schedule-19	Next Generation Freight Maintenance Electrical TRD (NS ITEM) (Item Directory - Not Applicable)	2,73,23,132.69
20	Schedule-20	Next Generation Freight Maintenance Mechanical (NS ITEM) (Item Directory - Not Applicable)	13,41,60,545.34
21	Schedule-21	AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) (Item Directory - CPWD DSR 2021-Ver-2)	12,73,06,229.92
22	Schedule-22	AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) (Item Directory - NFR-HQ-IR- USSOR 2021-3-Ver-3)	1,10,652.00
23	Schedule-23	AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) Warehouse NS ITEM (Item Directory - Not Applicable)	32,52,554.64
24	Schedule-24	AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) cover shed NS ITEM (Item Directory - Not Applicable)	11,53,69,097.10
25	Schedule-25	AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) cover shed NS ITEM (Item Directory - Not Applicable)	14,46,353.14
26	Schedule-26	AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) NS ITEM Shed for wheel turning facilities. (Item Directory - Not Applicable)	12,34,403.10
27	Schedule-27	AT-SGUJ Infrastructure construction of GE Loco Shed (Electrical General) (Item Directory - Not Applicable)	12,19,98,559.61
Total Basic amount			171,23,70,804.53
GST @ 18%			30,82,26,744.82
Total Estimated cost			202,05,97,549.35
Add premium @ 7.78 % on total estimated cost			15,72,10,571.65
Awarded Amount			217,78,08,121.00



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 (Surender Singh)
 Executive Director/Project

Annex-II

NAME of WORK: "Composite Work (Civil, Electrical & PEB) involving construction (A) At-NJP Upgradation/Development of maintenance infrastructure for energy efficient Vande Bharat Express at Coaching Complex/NJP. (B) At SGUJ- Infrastructure construction of GE Loco shed for homing of 250 Nos GE locos (WDG4G/WDG6G). (C) New Jalpaiguri At-NJP Next Generation Freight Maintenance Facilities in Katihar division Over Northeast Frontier railway."

BILL OF QUANTITIES

Sche- dule	1-VANDE BHARAT CIVIL				
Item - 1	Execution of work as per DSR 2021 Ver-2				
S No.	Description of Item	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1	All kinds of soil,	cum	5100	192.65	982515
2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	3100	170.55	528705
3	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	3150	1451.42	4571973
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
4	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	780	4946.3	3858114
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
5	Foundations, footings, bases for columns	Sqm	384	206.82	79418.88
	REINFORCED CEMENT CONCRETE				
	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form work for				



6	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	2706	206.82	559654.92
7	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	1740	449.66	782408.4
8	Suspended floors, roofs, landings, balconies and access platform	Sqm	110	514.8	56628
9	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	120	408.55	49026
10	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	2016	540.12	1088881.92
	STEEL REINFORCEMENT				
	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
11	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	412400	60.21	24830604
	DESIGN MIX CONCRETE				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works upto plinth level				
12	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	5110	5831.88	29800906.8
	All works above plinth level upto floor V level				
13	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	50	6921.45	346072.5
	MASONRY WORK				
	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
14	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	30	4471.55	134146.5
	HALF BRICK MASONRY				
	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :				



15	Cement mortar 1:3 (1 cement : 3 coarse sand)	Sqm	100	579.5	57950
STEEL WORK					
16	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	196413	75.18	14766329.34
	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
17	Hot finished seamless type tubes	Kg	24500	113.46	2779770
18	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	Kg	49500	59.44	2942280
19	Providing and fixing bolts including nuts and washers complete.	Kg	4100	94.12	385892
FLOORING					
20	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete.	cum	10	5344.88	53448.8
ROOFING					
	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel roovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866. The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
21	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	Sqm	2400	791.96	1900704



	Providing & fixing at all heights, levels and locations colour finish Aluminium alloy roofing sheets of alloy IS designation 31500, temper Hx8 conforming to IS 737 and dimensions as per IS code 2676 with characteristics of good formability and corrosion resistance. The profile sheets shall be fixed to truss members in slope or required pitch or curvature with Hex cap headed self drilling/tapping Stainless steel screws M6, 50 mm long with 3 mm EPDM seal washer etc. all inclusive of labour, scaffolding, T&P and sundries etc. complete as per directions of the Engineer-In- Charge. (Cost of truss/frame work shall be paid separately).				
22	0.91 mm, Aluminium Color coated troughed profile with center to center pitch of 200 mm, depth of 32 mm, overall profile width 1092 mm, cover width 1000mm.	Sqm	8000	1118.39	8947120
	FINISHING				
	CEMENT PLASTER (IN COARSE SAND)				
	12 mm cement plaster of mix :				
23	1:4 (1 cement: 4 coarse sand)	Sqm	200	206.34	41268
	EXTERIOR FINISHING				
	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.				
24	On concrete work	Sqm	3500	133.24	466340
	DISMANTLING AND DEMOLISHING				
25	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	25	1966.45	49161.25
	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :				
26	In cement mortar	cum	10	1361.36	13613.6
	ROAD WORK				
	ROADS				
27	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	Sqm	6000	121.22	727320
	Supplying and stacking at site.				
28	90 mm to 45 mm size stone aggregate	cum	1380	1301.25	1795725
29	63 mm to 45 mm size stone aggregate	cum	600	1090.99	654594
30	53 mm to 22.4 mm size stone aggregate	cum	450	1233.86	555237
31	Moorum	cum	600	596.56	357936



32	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	cum	3030	581.45	1761793.5
	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.				
33	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	2000	120.55	241100
	Providing and applying tack coat using bitumen emulsion conforming to IS:8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.				
	Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702, prepared by using mastic cooker and laid to required level and slope, including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface protruding 1 mm to 4 mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification).				
34	40 mm thick	Sqm	6000	781.12	4686720
	MISCELLANEOUS				
	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifcatons and directions of Engineer-in-Charge.				
35	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	450	6724.74	3026133



	Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D- 4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).				
36	Overhead informatory road signage	Sqm	25	3767.26	94181.5
37	Providing and applying 2.5 mm thick road marking strips (retro- reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	Sqm	40	418.94	16757.6
	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.				
38	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	cum	375	1785.13	669423.75
39	With material conforming to Grade-II (size range 53 mm to 0.075 mm) having CBR Value-25	cum	375	1864.08	699030
40	With material conforming to Grade-III (size range 26.5 mm to 0.075 mm) having CBR Value-20	cum	375	1754.81	658053.75



	WATER SUPPLY				
	C.P.V.C. PIPES				
	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc.-Internal work - Exposed on wall				
41	25 mm dia nominal bore	Metre	400	329.88	131952
42	32 mm dia nominal bore	Metre	400	378.5	151400
43	40 mm dia nominal bore	Metre	400	487	194800
44	50 mm dia nominal bore	Metre	600	599.85	359910
	C.I. SLUICE VALVES/ FIRE HYDRANTS & FIXTURES				
	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc.				
	(the tail pieces if required will be paid separately) :				
	100 mm diameter				
45	Class I	Each	2	2752.07	5504.14
	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :				
46	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	2	6784.64	13569.28
	AIR VALVE & WATER METER (BULK TYPE)				
	Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket :				
47	100 mm dia pipes	Joint	40	64.57	2582.8
	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :				
48	100 mm dia C.I. Double Flanged Pipe	Metre	200	1234.43	246886
	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :				
49	100 mm dia Ductile Iron Class K-7 pipes	Metre	60	752.91	45174.6
Sub Total					117168715.83
Schedule	2-VANDE BHARAT CIVIL USSOR				
Item - 1	Execution of work as Schedule.(EARTH WORK)				



S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, platforms etc. with contractor's own earth conforming to Soil Quality Class SQ1/SQ2/SQ3, after preparation of foundations as applicable, benching in existing banks wherever required, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as per RDSO Specifications: RDSO/2020/GE: IRS-0004 with latest correction slips. Note: 1) Foundation preparation, Benching including additional earthwork on account of this, wherever required, shall be paid extra under relevant schedule item for benching. 2) Payment for Earthwork under this item shall be made based on the cross section measurements calculated (i) with original ground profile of existing bank based on initial ground levels before doing benching and (ii) final profile of the bank worked out with final levels as per prevailing guidelines.				
1	Using Soil Class SQ1	cum	255000	256.24	65341200

Sub Total

65341200.00

Schedule	3-VANDE BHARAT CIVIL USSOR
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Item - 1	Execution of work as Schedule.(Blanketing)
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S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Manufacturing of blanketing material by wet mixing of naturally available suitable soil including additional blending with naturally available or manufactured material as required to achieve specified gradation, in designed proportion in Pug mill or wet mix plant to have uniform gradation including all incidental transportation, laying over finished formation in uniform layer(s) with motor grader, compaction with suitable vibratory roller to specified density and finishing to correct profile, complete as per RDSO Specification No. RDSO/2020/GE: IRS-0004 with latest correction slips.	cum	12500	1832.41	22905125

Sub Total

22905125.00

Schedule	4-VANDE BHARAT CIVIL USSOR
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Item - 1	Execution of work as Schedule.
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S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
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1	Supplying, driving and erecting in all types of soils, hard wood pile 5m to 7m long without joint, 125mm average dia. for protection of bank slope including two coats of coal tar paint complete, as directed. Note: Payment will be made as per actual driven length of pile.	Metre	60	269.19	16151.4
	Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30cm), including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed where necessary in River bed area including standing/flowing water with all necessary arrangements except making of platform under water which shall be paid under relevant item of SOR.				
2	0m to 10m	Metre	120	1737.04	208444.8
3	10m to 20m	Metre	120	1780.96	213715.2
4	20m to 30m	Metre	120	1935.22	232226.4
5	30m to 40m	Metre	10	1968.17	19681.7
	Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:1888 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit.				
6	Plate size 45cm x 45cm	Each	1	127665.58	127665.58
7	Conducting in situ Vane shear test for soil as per IS:4434	Each	5	2063.33	10316.65
8	Conducting determination of California Bearing Ratio as per IS:2720	Each	5	1358.77	6793.85
9	Conducting standard penetration test as per IS:2131 at approximate 1.5m intervals in bore holes, as directed by the Engineer in charge	Each	5	332.6	1663
10	Collection of water samples at required intervals	Each	2	696.77	1393.54
	Conducting laboratory Tests on collected soil samples as per relevant IS code				
11	Moisture Content/Dry Density	Each	5	853.7	4268.5
12	Atterberg Limits	Each	5	933.76	4668.8
13	Specific Gravity	Each	5	555.86	2779.3
14	Grain size analysis including Hydrometer analysis	Each	5	1406.36	7031.8
15	Direct Shear Test	Each	5	2022.62	10113.1
16	Natural Density	Each	5	1647.46	8237.3
17	Consolidation Test	Each	5	2104.5	10522.5
18	Unconfined Compression Test	Each	5	2303.98	11519.9
19	Tri-axial Test	Each	5	2207.44	11037.2
20	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	2	5897.18	11794.36



	Earthwork in excavation by mechanical means (Hydraulic Excavator)/Manual Means for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil up to a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge. Note: This item will be used for excavation work in connection with other miscellaneous works also like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines.				
21	All kinds of soils	cum	600	165.42	99252
	Providing and laying in position Plain cement concrete of specified Nominal Mix for miscellaneous works like side drains, foundation for OHE masts and other miscellaneous structures excluding the cost of Cement, centering and shuttering - All work up to plinth level :				
22	1:1½:3 (1 Cement: 1½ coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size)	cum	15	3221.8	48327
23	1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	cum	10	3339.79	33397.9
24	1:2:4 (1 Cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 40 mm nominal size)	cum	40	3299.46	131978.4
25	Providing and casting machine batched, machine mixed and machine vibrated Cement Concrete of specified grade as per approved Design Mix, mixed in Mobile Concrete Batching/Mixing Plant at site or RMC from approved plants, (Cast in-Situ/Pre-cast) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls, thrust bed or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of RCC box of any size including finishing, Plasticiser in approved proportions (as per IS:9103), to modify workability without impairing strength and durability, complete as per drawings and technical specifications as directed by Engineer in charge. Note: 1. Payment for cement, reinforcement and shuttering shall be made extra under relevant item. 2. Plasticiser shall invariably be used in approved proportion to increase workability with minimum possible quantity of cement for all grade of Design Mix Concrete unless it is specifically approved citing reasons at the stage of Mix Design and in that case deduction shall be made as per relevant item.	cum	355	3629.72	1288550.6
	Centering and shuttering including strutting, propping etc. and removal of form for :				



26	All types of bridge sub-structures,e.g. pier, abutment, wing wall, retaining wall, RCC box type foundations, Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc. up to 5m above ground level	Sqm	750	580.15	435112.5
27	Supplying, spreading and compacting well graded hard stone of 63mm average size (maximum up to 80mm size) in the bottom of foundation of box culverts, bridges etc. including all lead, lift, ascent, descent etc. complete job as per directions of Engineer In-charge.	cum	35	1966.38	68823.3
	Supply and using Cement at Worksite				
28	Ordinary Portland Cement 53 grade of approved brands/makes	MT	164	7343.58	1204347.12
	Supply of steel reinforcement of approved brands/makes for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
29	Thermo-Mechanically Treated bars of grade Fe-500D or more of approved brands/makes.	Kg	27500	91.73	2522575
30	Supplying of stone boulders weighing not less than 35 kg each at specified bridge locations.	cum	150	1428.78	214317
31	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with spalls on slopes, laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item).	cum	180	2081.45	374661
32	Providing and laying Filter Material as per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical Specification.	cum	25	2676.57	66914.25
33	Providing and laying 300mm thick (average) Dry Stone flooring with boulders of not less than 35kg each in weight, hand packed with surface levelled off to the correct section with hammer dressing as necessary on the ground including filling the gaps with quarry spalls and ordinary sand complete including cost of supply of all materials, labour, lead, lift, tools, plants, crossing of tracks and the like as per drawing and technical specification as directed by Engineer in charge.	cum	25	2479.62	61990.5
34	Supply and laying of coarse sand including consolidation with all labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or laying the filtering media.	cum	40	1793.69	71747.6
35	Providing and fixing of Drainage Spouts of 110mm UPVC Type A ISI marked (Working pressure 4 kg/sqcm) using suitable clamps and adhesive etc., complete.	Metre	50	359.9	17995



36	Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498 (latest) in required profile behind boulder filling of abutments, wing walls / return walls etc. above bed level with all labour and material complete job as per drawing and technical specification of RDSO Guidelines.	cum	35	2265.27	79284.45
37	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	cum	150	348.73	52309.5
38	Dewatering of natural or accumulated water from any location. Payment to be done for Horse power of pump multiplied by pumping hours.	HP Hour	100	47.15	4715
	Hiring of machinery for minor miscellaneous works for short duration including operator/driver, fuel, lubricants and consumable. The contractor shall arrange all statutory permits as required by rules and regulations prevailing in the area of work. Payment shall be made for actual working hours at site.				
39	JCB Backhoe Loaders 3DX Plus or similar with minimum 1.10 cum bucket capacity	Hour	60	668.06	40083.6
40	Hydra or similar tyre mounted Pick-n-Carry crane of 12T capacity for misc. works of handling of material	Hour	60	1240.32	74419.2
41	Tractor with Trolley for local transportation or other misc. works.	Hour	60	295.07	17704.2
42	Supplying and filling 50 kg size empty cement polythene bags with Rly. ballast/moorum/earth/Sand/quarry dust etc. placing the filled bags on the high banks /bridge approaches/nominated place etc. dumping and spreading at the nominated locations to profile under block period with all contractor's labour, tools, plants, loading, unloading, filling, spreading including all lead/lift etc. complete and as directed by the Engineer in charge at site including crossing of track where necessary.	Each	2000	14.39	28780

Sub Total

7857310.00

Schedule	5-VANDE BHARAT CIVIL USSOR				
Item - 1	Execution of work as Schedule.(P.WAY)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	Insertion of rails of all types & length in track, laid on any type &				



	density of sleeper to the specified gauge under traffic block. Rates include fastening of rail with sleepers with standard set of fastenings and fixing of fish plates and bolts or, if required, providing gap for welding and stacking of released material without infringement within 250m as directed by Engineer-in-Charge. Note: Rail drilling and cutting to be paid separately.				
1	For Through Rail Renewal work	TRM	3800	41.92	159296
	Through Sleeper Renewal (TSR) with PSC sleepers involving removal existing sleepers of any type along with fittings from track, insertion of PSC sleepers lying along the cess / formation / slope / toe within 5 metres height with all fittings to specified spacing, gauge and squareness, one round of through packing to make track fit for 20 kmph speed, dressing of ballast to standard profile, all in accordance with the latest provisions of IRPWM and stacking of all released material neatly at specified places within an average lead of 100 m as directed by Engineer in-charge.				
2	For PSC wider base sleepers - For location of work involving deep screening. (deep screening to be paid separately)	Each	200	181.22	36244
3	Lubrication of ERCs and its liner contact area by removal of ERCs and Metal / GFN liners in rail panel, cleaning of rust / scale of ERC, Metal / GFN liners & SGCI insert by using wire brush, scrapper / sand emery paper etc supply and application of graphite grease, as prescribed by Railway for under side of liners & corresponding area of rail foot & SGCI insert with ERCs and re-fixing the same as per procedure prescribed in latest edition of IRPWM with contractors grease and all other tools & plants complete and as directed. Note: Each ERC in this item shall constitute 1 ERC and its Liner Contact area.	ERC	19340	5.05	97667
	Under Traffic Block: Dismantling of existing BG turnouts, diamond crossings and derailing switches with all types of rails and sleeper layout, removing rails, switches, crossings, sleepers & fastenings, leveling of ballast to correct profile & stacking all the released materials, sleepers, fastenings, rails, switches & crossings including segregating & stacking at specified locations in a neat and countable manner, within the lead of 250m & all lift, clear of infringements, crossing of track, if any complete, as directed. Note: 1. This item shall be operated only when existing turnout is replaced either with new turnout in case of TTR or with plain track when existing turnout is no more required at that location. 2. Rail cutting will be paid extra under relevant item. 3. Laying of new turnout or plain track on prepared ballast bed, as required, shall be paid separately under relevant item.				
4	1 in 8½ Turnout (Under Traffic Block)	Set	2	28719.5	57439



	Assembling all types of Switches on staging, clear of infringements, to correct gauge and alignment as per standard drawings with all types of rail sections over PSC sleepers at specified locations, duly leading rails, special sleepers, switches with a maximum lead of 500m, all lift & crossing of track as required including cutting, drilling, fixing of all components, fittings etc. with housing of tongue rails as per requirement of signaling including lubrication of fittings/fastenings, complete in all respect. Note: Required P.Way fittings shall be supplied at SSE/P.Way stores.				
5	1 in 8½ Turnouts	Set	6	16828.4	100970.4
6	1 in 12 Turnouts	Set	4	19343.76	77375.04
7	Derailing Switch	Set	7	7819.76	54738.32
	Laying and linking of turnouts of all types including diamond crossings & Derailing switches with 52Kg / 60Kg rail section on PSC sleepers on prepared ballast bed for New lines or during total closure of section at indicated location as per standard drawing, duly leading sleepers, rails, switches, crossings, fastenings including rail cutting, drilling, fixing of all components, fittings with housing of tongue rails as per requirement of signaling, preparing ballast bed, filling and spreading of ballast as required, linking of turnout with track, attending track parameters including lifting, providing one round of packing to make track fit for 20 kmph speed including lubrication of fittings/fastenings, complete as directed by Engineer in-charge.				
8	1 in 8½ Turnouts	Set	6	41190.64	247143.84
9	1 in 12 Turnouts	Set	4	47770.49	191081.96
10	Derailing Switch	Set	7	9096.23	63673.61
	Manual deep screening of Plain track/turnouts as per procedure prescribed in IRPWM, June 2020 or latest, on PSC sleepers of any density and throwing away screened muck arising out of screening on toe of bank or on cess, if low or on spoil banks above top of cutting (including throwing and leveling, if required beyond minimum 5m from the edge of cutting which are up to 3m deep or alternatively carting it up to 50m for disposing it off beyond cutting or platforms) as per direction of Engineer in-charge, including cutting cess for effective drainage on both sides, one round of kutchra packing with screened ballast and further attending to track parameter to make track fit for 20 kmph speed complete in all respect. Note : Payment shall be made for length along main line only for turnouts.				
11	Depth of 300 mm below bottom of sleeper - For Plain Track :	TRM	2000	527.15	1054300



12	Lifting and packing for regrading the existing PSC sleeper track to required height / level in stages not exceeding 75mm or part thereof at a time, providing permissible ramp for the track, insertion of moorum / sand / stone ballast uniformly under the existing track and placing the same to safe approved gradient, gauge, cushion including levelling and one round of through packing to allow train movement at restricted speed of 30 kmph for a specified length with all leads & lifts and fixing, marking, painting rail level pegs at every 30m interval. Note: Lifting of track shall be done in stages as per procedure prescribed in latest edition of IRPWM to get the proposed final level as per approved working profile, as directed by Engineer in- charge.	TRM	1000	162.08	162080
13	Extra for additional lift over 75mm for every 50mm lift or part thereof up to 275mm for item nos. 083010 for each TRM.	TRM	1000	25.13	25130
14	Boxing and profiling of ballast as per procedure prescribed in latest edition of IRPWM including cess dressing on both sides of track. The work will include removing excess ballast from track and putting the same in crib and shoulder by leading to a maximum of 50m including crossing of track, deweeding on ballast section etc and as directed by Engineer-In charge.	TRM	2000	23.81	47620
15	25mm gap 'in-situ' welding during traffic block using Railway's welding portion & Welder and finishing of weld to meet the prescribed tolerances and pass all stipulated tests with all required labour, materials, consumables, tools, equipments etc. to complete the work in all respect as per IR's "Manual for Fusion Welding of Rails by Alumino - Thermic Process" with latest correction slips, including marking of welded joint, painting weld collar with anticorrosive paint, restoration of track near weld joint to original position and fixing of joggled fish plate at new weld, to be removed after passing of weld in USFD test as directed by Engineer in charge. Note: 1. Only welding portion and related accessories as per Annexure - I and Welder shall be supplied by Railways. 2. Hydraulic Weld trimmer shall be used for chipping and profile Grinder for finishing. 3. Required nos. of Joggled fish plates shall be supplied by Railway at nearest P. Way Stores and the same shall be returned at nearest P. Way Store or at other location as per direction of Engineer-in-Charge after release from track.	Each	200	1491.57	298314
16	Dismantling of existing LWR/SWR track of any structure, removing rails, sleepers, fish plates, cutting of rails, segregation and stacking of released Rails, Sleepers and fitting at nominated location in countable manner within a free lead of 500m, levelling of ballast to correct profile for laying new track over it, all as per direction of Engineer-in-Charge.	TRM	1000	169.71	169710



	First or Second Through Packing of track of all sleeper density including giving a general lift, as desired to eliminate sag after Deep Screening work, lifting of track, lowering of track and major realignment of curves and formation rehabilitation as per procedure prescribed in latest edition of IRPWM. Note: General lift is normally 25 mm and isolated lift may be up to 50 mm.				
17	For PSC Sleeper Track with Sleeper Density of 1540	TRM	4000	113.34	453360
	Third or subsequent Through Packing of track for all sleeper density including picking of slacks, as required after second through packing, subsequent to Deep Screening work as per procedure prescribed in latest edition of IRPWM. This item can also be used after lifting/regrading/realignment works also. Note: General lift is normally 25 mm and isolated lift may be up to 50 mm.				
18	For PSC Sleeper Track with Sleeper Density of 1540	TRM	2000	87.19	174380
	Pulling back of rails / panels on running track for creep adjustment or other incidental activities by removing and re-fixing all the fittings, and fastenings including squaring of sleepers and slack picking of displaced sleepers, as directed.				
19	For rails up to 13 metre length	TRM	500	32.66	16330
	Slewing and realigning of curves under traffic line block condition, as directed by Engineer in-charge with contractor's labour, tools & plants, as required with general lift up to 25mm including one round of through packing, ballast profiling, loosening/tightening of P.Way fittings, if required and other incidental works. Note: Payment will be made based on average slew calculated in each 50m length of track by averaging absolute values of positive and negative value of slews.				
20	PSC Sleeper track - Maximum slew up to 50mm	TRM	1000	113.67	113670
21	PSC Sleeper track - Maximum slew more than 50mm and up to 100mm	TRM	500	143.33	71665
22	PSC Sleeper track - Maximum slew more than 100mm and up to 150mm	TRM	500	165.63	82815
23	PSC Sleeper track - Maximum slew more than 150mm	TRM	500	189.94	94970
24	Replacing existing glued joint rail with cut rails or with glued joint rail or insertion of glued joint by cutting existing track under traffic condition by cutting rails, refixing with all rail sleeper fastenings and providing required gaps for carrying out welding as an alternative to drilling holes or joining rails with fish plates duly drilling holes as required including stacking of released material and as directed by engineer in-charge. Note: (1) Drilling holes & rail cutting will be paid separately. (2) Transportation of materials to the site of work from supply points, if more than 250m, shall be paid separately.	Each	60	1632.39	97943.4



	Anti-corrosive painting of rail on running track of any sleeper density on web, foot etc. including liner contact area (excluding bottom of foot) and fishing plane as per requirement with two coats of thickness of 100 microns each by bituminous black paint confirms to IS-9862 of reputed make including painting of liners, ERCs and including surface preparation, as a complete job as per procedure prescribed in latest edition of IRPWM Note: 60% of payment shall be made if painting on only gauge face side is done.				
25	For 52 Kg Rails	TRM	4800	77.32	371136
	Quick cutting with abrasive rail cutter of all types of rail sections including wear resistant, head hardened rails up to 110 UTS, with contractors tools & plants, equipment, consumable with all lead & lift etc. complete as directed by Engineer in-charge. Abrasive Rail Cutter will be as per RDSO Specification No. TM/SM/1 (Rev. 01 of 2012) with latest status of RDSO; Rail Cutting Wheel Abrasive Disc will be as per RDSO Specification No. TM/SM/2 (Rev. 01 of 2020)				
26	52 Kg - 90 UTS - Outside Track	Each	10	241.83	2418.3
27	52 Kg - 90 UTS- On Running Line	Each	20	269.46	5389.2
	Drilling holes of 16 mm to 32 mm dia. with Rail Drilling machine including chamfering with appropriate chamfering tools in all types of rail section with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Rail Drilling Machine will be as per RDSO Specification No. TM/SM/3, dated 24.04.1991.				
28	On Running Line	Each	200	65.37	13074
	Loading of rails of any section and length up to 13 metres in Wagons / Truck / trailer including lead up to 50 metres and lift up to 5 metres.				
29	In Wagon where mechanical handling is possible and traffic block is not required or in Truck/trailer.	MT	298	139.04	41433.92
	Loading of tongue rail, stock rail, switch assembly and crossings of any section and length, SEJ, Glued joint etc. with / without P.Way fittings and fastenings, in Wagon / Truck / trailer including lead up to 250 metre and lift up to 5 metre.				
30	In Wagon where mechanical handling is possible and traffic block is not required or in Truck/trailer.	MT	150	135.01	20251.5
	Loading, leading and unloading of 52Kg / 60Kg rail up to 13 metre length by Railway's Rail Dolly / Dip Lorry to the nominated location under traffic with line protection in case road carriage is not possible with different lead with a lift up to 5 metre during block period.				
31	For lead up to 500 metre.	MT	100	347.09	34709
32	For lead beyond 500 metre and up to 1 Km.	MT	100	448.01	44801



	Unloading of rails of any section and length up to 13 metre, in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/trailer including lead up to 50 metre, lift up to 5 metre and stacking in prescribed manner.				
33	From Wagon where mechanical handling is possible and traffic block is not required or in Truck / trailer.	MT	298	101.85	30351.3
	Loading of 52kg / 60kg PSC normal line and special sleepers up to 2.75 metre length in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track with free lead up to 250 metre and lift up to 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
34	In Wagon where mechanical handling is possible and traffic block is not required or in Truck / trailer	MT	1225	111.23	136256.75
	Loading of 52kg / 60kg PSC line and special sleepers beyond 2.75 metre length including existing fittings and fastenings in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/trailer with crane or any other means including crossing of one track with free lead up to 250 metre and lift up to 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
35	In Wagon/Truck / trailer where mechanical handling is possible and traffic block is not required.	MT	480	134.65	64632
	Loading, leading and unloading of all types of P.Way fittings and all other miscellaneous material except Rails, sleepers, switches, crossings, SEJs and Glued Joints by road vehicles for different leads. Note: Lead shall be the shortest motorable road length between the points of loading and unloading.				
36	Lead up to 5 Km	MT	40	150.34	6013.6
37	Lead beyond 100 Km and up to 150 Km	MT	80	834.57	66765.6
	Transportation of Rails, sleepers, switches, crossings, SEJs and Glued Joints by road vehicles for different leads. Note: 1. Lead shall be the shortest motorable road length between the points of loading and unloading. 2. Loading and unloading shall be paid extra under relevant items.				
38	Lead up to 5 Km	MT	1050	45.99	48289.5
39	Lead beyond 20 Km and up to 30 km	MT	1600	191.55	306480



	Unloading of 52kg / 60kg PSC line and special sleepers up to 2.75 metre length in Depot / Station / Mid-section between stations in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track and lead up to 250 metre & lift up to 5 metre with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
40	From Truck / Trailer	MT	1225	97.44	119364
	Unloading of 52kg / 60kg PSC special sleepers beyond 2.75 metre length in Depot / Station / Mid-section between stations in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track and lead up to 50 metre & lift up to 5 metre with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
41	From Truck / Trailer	MT	480	104.73	50270.4
	Unloading of Switches / Crossings / SEJ Rails / Glued Joints of any rail section and length with or without P.Way fittings & fastenings in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with lead up to 250 metre & lift up to 5 metres.				
42	From DMT - Not involving traffic block or on lines, not opened to traffic	MT	150	151.76	22764
	Hiring of machinery for minor miscellaneous works for short duration including operator/driver, fuel, lubricants and consumable. The contractor shall arrange all statutory permits as required by rules and regulations prevailing in the area of work. Payment shall be made for actual working hours at site.				
43	JCB Backhoe Loaders 3DX Plus or similar with minimum 1.10 cum bucket capacity	Hour	100	666.82	66682
44	Manufacturing and fixing buffer stop with Railway supplied rails, cutting, including bending of rails as per plan, with all contractor's labour, materials, tools, plants etc. and all lead and lift including crossing of track where necessary and as directed by Engineer in charge at site. Note: Excavation, fixing rails in cement concrete, drilling of holes will be paid separately.	Each	7	14681.2	102768.4
Sub Total					5501767.04
Schedule	6-VANDE BHARAT CIVIL (NS ITEM)				



Item - 1 Execution of work as per NS ITEM(PEB Shed)					
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Providing and fixing air roof ventilator wind driven turbine ventilator of approved brand and quality size of roof ventilator is 22" x 28" and fan size 28" ring size 29". Rate includes cost of ventilator with all necessary accessories, materials, tools, plants, , transportation, taxes etc. complete in all respect as per direction of Engineer-in-charge or his authorised representative at site. Roof ventilator shall be approved component authority before installation of air roof ventilator.	Each	300	2780.67	834201
2	Laying heavy duty stilonite industrial flooring with provision of MS flat square of grating of size up to 30cmx30cm as per specification/ drawing with contractors own tools, plants, labour including vibrating during casting as well as proper curing. Stilonite as per requirement including liquid hardener 6mm down machine crushed aggregate, pakur variety granite as well as MS plate for making gratings are to be supplied by contractor at his own cost except cement which will be paid in separate item on actual consumption. Rate of flooring is also inclusive of fabrication of MS flat gratings as directed by the Engineer. Specification for flooring 1 part stilonite (Metallic substance) : 4 Part cement : 8 Part 6mm down crushed aggregates with liquid hardener @ 90 liter per 100 sqm area i.e. 12.5 Kg stilonite : 50 kg cement and 100 Kg down crushed aggregates.	Sqm	5500	545.63	3000965



3	Providing, Fabricating & laying of colour coated Galvalume (Proflex system roofing) material for self supported roofing system (Technology similar to Proflex system provided by M&B engineering Pvt.Ltd., Ahmedabad), Material shall be of following specification, BMT 1.60mm to 1.80mm, APT 0.95mm Tolerance +/- 0.02mm thick, width 605 mm or as decided by Railway (Tolerance +/- 2mm), including supplying, loading, transporting, unloading and staking at site, fabricating and laying with all contractors tools, plants, machineries materials and fixtures labours including all lead and lift and laps/wastage if any etc complete. The colour of sheet will be decided by Railway. The rate is also inclusive of designing of roofing system, proof checking and providing execution drawing. Fabrication and installation of self supported roofing technology similar to Proflex System provided by M&B engineering Pvt.Ltd., Ahmedabad or decided by engineer. a) length 19 meter or as per site requirement. b) Arch length 23m or as per site requirement. Note :- The roofing system should be self supported roofing system i.e. without trusses, purlins or any ancillary supports shall be designed by the contractor through the consultant and got duly proof checked from VJTI/IIT Mumbai, any other Govt. agencies. Design and drawing will be approved by railways. For design of roofing system relevant load parameters of IS code of practice to be adopted. The cost of designing and proof checking of design and drawings will not be paid separately and these charges are deemed to be included in rates of this item. The rate shall also inclusive of preparation of necessary auto cad drawing required for execution of roofing system should be 100% leak proof, resistant to corrosion and maintenance free.	Sqm	9000	1970.24	17732160
4	Holding Down MS Bolts including all assemblies and accessories that are embedded in concrete work under scope of this work. Bolts shall be of sufficient length to ensure that a minimum 40mm length of threaded portion is embedded in concrete. Threaded portion to be left projecting outside the concrete surface shall be as per requirement of supplier's design and approved drawings. Cost of fabricated, assembled and supplied Bolts shall include all necessary expenses incurred, including cost of all washers, nuts, locknuts and pins that may be required for securing the structural member with the embedded bolts. Work of actual fastening of the structural components with the embedded bolts shall have to be carried out by the suppliers/contractors of the PEB/Steel structure under this item Note - PEB NS ITEM (Detailed Description Kept at SN- 488 at PEB specification document)	MT	840	75976.53	63820285.2
Sub Total				85387611.20	
Item - 2	Execution of work as Schedule.(NS ITEM P.WAY WORK)				



5	Erection of Rail/tubular pole to 1/5 th of its height with CC foundation from base block (30 cm x 30 cm x 15 cm) including digging & refilling of earth to a height of 30 cm above ground level as per drawing no.CEE/OH@47'40@FGA) in ratio 1:3:6 by cement sand & Chips 19 mm & down including excavation of earth	Numbers	100	1285	128500
6	Supply & fixing of MS channel bracket (75 x 40 x 40 x 6) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50x 16 mm MS nut,bolt & washer including drilling of holes	Metre	200	243.62	48724
7	Supply & fixing of MS angle bracket (50 x 50 x 6) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50x 16 mm MS nut,bolt	Metre	200	207.74	41548
8	Supply , erection of HT galvanized stay set comprising of 20 mm dia , 1.8 mt long stay rod, anchor plate (23 cm x 23 cm x 6 mm) , 16 mm dia turn buckle , thimble , stay clamp, 7/10 SWG GI stay wire , strain insulator etc in CC foundation with ratio 1:3:6 of cement, sand & stone chips of size 19 mm & down including excavation & refilling as per instruction of Engineer incharge at site.	Set	20	1775.67	35513.4
9	Supply & fixing of 11 kV danger board/plate of 250 mm X 200 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription of letter in tri-laguage , figure and conventional skull and bone sign in single red colour on front side as required as per instruction of Engineer incharge at site.	Numbers	60	133.38	8002.8
10	supply and fixing of Barbed Wire	Kg	50	51.27	2563.5
11	Supply of paint, painting & numbering (at identical spot) of Rail/Tubular pole with two coats of approved quality aluminum paint over a coat of red oxide primer & final coat of black paint upto a height of 1.5 Mt from top of muffing. The poles shall be thoroughly scratched and cleaned before providing red oxide as per engineer incharge at site.	Numbers	30	257.28	7718.4
12	Supply, erection, testing & commissioning of Distribution lightning arrestors, 9 kV / 5KA with all accessories as per instruction of Engineer incharge at site. Lighting arrestor must conform to IEC 99- 4/1991 (3 no in a set)	Numbers	6	6511.35	39068.1
13	Supply & erection of 11 kV, 400 amps, 3 Pole vertical type Gang Operated Air Break off load, disconnecting switch, Rocking Tilting type complete with galvanised steel base, HT insulators, non-ferrous knife, spring loaded contacts, GI pipe, operating handle, Dropout Fuse set etc as per instruction of Engineer incharge at site. (3 no in a set)	Numbers	8	29025	232200
14	Supply, erection , testing & commissioning of HT 11 kV (E) cable termination Kit out door, heat shrinkable type for 3 core, 95 sq mm XLPE insulated PVC armoured cable complete with jointing materials as per instruction of Engineer incharge at site.	Numbers	16	9153.72	146459.52



15	Supply, fixing, testing & Commissioning of 11 kV composite Pin insulator polymer type with all accessories as per instruction of Engineer incharge at site. Insulator must conform to IEC - 61109 with upto date ammendments.	Numbers	220	175.57	38625.4
16	Supply, fixing, testing & Commissioning of 11 kV composite Ball & Socket type Disc insulator polymer type with all accessories as per instruction of Engineer incharge at site. Insulator must conform to IEC - 61109 with upto date ammendments	Numbers	30	185.04	5551.2
17	Laying , commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement	Metre	1600	41.32	66112
18	Horizontal machine boring of 300 mm dia hole across track/Road/High drain etc. at a depth of 1.0 mtr below of ground level with suitable boring instruments & necessary arrangement and as per technical procedure.	Metre	800	1921.15	1536920
19	Supply , laying , commissioning & testing of CI Pipe 200 mm dia Class LA type (IS 1536-2001) to be laid partly along the pole and partly through ground under railway track/road in cable trench for protection of cable with suitable fixing arrangement by MS clamp, nut,bolt,washer etc.as per instruction of Engineer incharge at site.	Metre	100	1214.5	121450
20	Supply, laying, commissioning & testing of HDPE pipe 110 mm dia PN-6 grade to be laid partly along the pole /underground with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer and required bend, joint	Metre	800	290.68	232544
21	Supply, stringing & binding of ACSR conductor "DOG" of size 50 mm ² , 6/1/3.35 mm as per instruction of Engineer incharge at site. (for HT line)	MT	6000	53.67	322020
22	Supply and Laying of AB Cable 3 x 95+80 sqmm as per IS 7098 nominal cross section area 95 sqmm, minimum strand in each conductor 15, continous working temparature is 90 degree, breaking strength is 26 kN, three power cable should be twisted around the bare messenger in RHS direction to form the cable	Metre	3000	863.88	2591640
23	A. Supply and Fixing of heat shrinkable outdoor type cable termination kit Cable end termination kit for 11 KV AB Cable 3 x 95/120+70 mm ² , XLPE (3C + Earth)	Set	12	8760.51	105126.12
24	Supply and Fixing of straight through jointing kit for 11 KV AB	Set	4	28177.05	112708.2
	Cable 3 x 95+70 mm ² , XLPE (3C + Earth)				



25	Supply and Fixing of Suspension clamp made of weather and UV resistant elastomer and hot dip galvanised steel can be insaled in straight direction and in line deviation angle to 30 degree.	Set	60	745.26	44715.6
26	Supply and Fixing of dead end clamp made of weather and UV resistant elastomer and hot dip galvanised steel.	Set	60	1277.59	76655.4
27	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	1	25065.74	25065.74
28	Supply, installation, testing and commissioning of Air Circuit Breaker (ACB) 1250 A, 50 kA, EDO, 4P ,Microprocessor Based breaking capacity Icu=Ics=Icw (1 sec) as per instruction of Engineer incharge at site.	Numbers	2	267579.2	535158.4
29	Supply & fixing of onload changeover switch 1200 amps Four Pole, 415 V 50 Hz, with Sheet Steel Enclosure (with front handle) as per IS/IEC 60947-1&3	Numbers	1	39908.83	39908.83
30	Digital Voltmeter (0-500) volts and Digital Ammeter (0-500) amps with s/switch and CTs	Set	1	4249.59	4249.59
31	Supply, Fixing & Testing of Copper bus bar 1000 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	1	5392.04	5392.04
32	Supply , installation and Casing in box of 3 PH energy meter including testing charges of AC Three Phase LT/CT Multifunction Net meter DLMS Compliance of Accuracy Class 0.5s, 3 X 240V, 50Hz with Optical & RS232 Port, Backlit LCD Display, (Measures Import kWh, kVAh, Export kWh, kVAh, Net kWh, kVAh, V,I,kW, 6 months history of Energy, Load survey, TOD, Tamper detection & logging, Power On/Off Events, instantaneous parameters of Rating - /5A with display in absence of power.	Set	1	13610.95	13610.95



33	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	1	33538.74	33538.74
34	MCCB FP 400 amps, 36 kA, Ics=100% Icu	Numbers	1	19944.02	19944.02
35	MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	3	11227.7	33683.1
36	MCB TP 63 A, 10 kA, C-curve as per IS/IEC 60898-1 2002	Numbers	3	1950.59	5851.77
37	Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	1	2676.91	2676.91
38	Supply, fixing, connection & testing of LED indication lamp RYB	Set	1	178.58	178.58
39	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	4	33538.74	134154.96
40	MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	4	11227.7	44910.8
41	MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	8	6197.88	49583.04
42	Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	4	2676.91	10707.64
43	Supply, fixing, connection & testing of LED indication lamp RYB	Set	4	178.58	714.32



44	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	20	2127.32	42546.4
45	Supply and erection of earthing with copper earth plate of size 600 x 600 x 6 mm thick with all accessories including masonry work like construction of earth pit and cover etc and earth continuity by copper strip of size 25 x 5 mm of minimum 15 mtr length to secured by nut & bolts to the earthing plate. Earthing terminal should be connected to neutral terminal of Transformer also.	Set	12	21891.43	262697.16
46	Supply, wiring, testing & commissioning of FL point/ Lamp point/Fan point (loop wiring) with ceiling rose/ angle/ batten holder by FR-LSH PVC insulated and unsheathed single core, 2.5 sq mm flexible copper cable with earth continuity by 1.5 sq mm copper wire to be drawn through rigid PVC conduit pipe not less than 20 mm dia medium gauge including bends, joints etc. as per instruction of Engineer incharge at site. (For Highbay light + Fan)	Numbers	300	351.47	105441
47	Supply, fixing & laying of 3 Core, 4 sq mm PVC insulated and FR PVC Round Sheathed, Copper Conductor (flexible) industrial cable, 1100 Volt, conforming to IS 694 as per instruction of Engineer Incharge at Site.	Metre	1500	284.01	426015
48	Supply, fixing & laying of 3 Core, 2.5 sq mm PVC insulated and FR PVC Round Sheathed, Copper Conductor (flexible) industrial cable, 1100 Volt, conforming to IS 694 as per instruction of Engineer Incharge at Site.	Metre	1800	187.97	338346
49	Supply, installation, testing & commissioning of 120 watt energy saving, environment friendly & robust Highbay LED with PDC housing suitable for ceiling (Surface/Suspended) mounting with system efficacy upto 150 lm/W as per instruction of Engineer Incharge at Site.	Numbers	250	7949.63	1987407.5
50	Supply, fixing, testing & commissioning of Polycarbonate/ thermoplastic junction box / loop box of size (155 x 210 x 92) mm, IP 66/67 with terminals and fixed alongwith pole by MS clamp, nut, bolt etc for made connection for loop wiring as per instruction of Engin+B60:B61eer Incharge at Site.	Numbers	120	984.45	118134
51	Supply, installation, testing & commissioning of 100 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 65, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection.	Numbers	60	7017.21	421032.6



52	Supply, installation, testing & commissioning of pre-cooling plug with cable consisting of industrial type 125 amps top (3P+E) with IP 67 grade protection with supply & connection of 25 mtr long PVC insulated and sheathed industrial multi core 16 sq mm, 3 core copper flexible cable with socket at one end as per instruction of Engineer incharge at site.	Numbers	25	30909.67	772741.75
53	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site.	Numbers	30	7385.95	221578.5
54	a. MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	30	5483.65	164509.5
55	b. Supply, fixing, testing & commissioning of 63 amp Industrial plug & socket DB (CRCA/SS made) complete with metal Plug, socket (5P) & MCB DP 63 amp	Numbers	30	7197.48	215924.4
56	c. Supply, fixing, testing & commissioning of 20 amp Industrial plug & socket DB (CRCA/SS made) complete with metal Plug, socket (3P) & MCB DP 20 amp	Numbers	60	2032.72	121963.2
57	d. Copper bus bar 100 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	30	678.65	20359.5
58	a. Supply, installation, testing & commissioning of battery charging terminal 110 V DC housed inside GI sheet with metal clad water proof box having hinged type front cover and fixing with structure/ pole by suitable clamping and provision of screw type connectors with insulating FRP base and AL round bar as per direction of site Engineer . (Painting of the box to be done completely. The face of terminal to be coloured with red & black paint)	Set	40	631.74	25269.6
59	b. Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 320 Amp./415 Volt copper bus bar with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site.	Numbers	40	7385.95	295438
60	c. Supply, installation, testing & commissioning of 3 phase battery charger 2 x 100 amps having input 415 volt +/- 10 % AC , 50 Hz, 3 phase, 4 wires, & out put 135/140 volt DC @ 2 x 100 amps maximum, ripple in output < 6% as per instruction of Engineer incharge at site.	Numbers	2	331661.16	663322.32
61	a. Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS	Set	4	25065.74	100262.96



	sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-				
62	b.MCCB FP 400 amps, 36 kA, Ics=100% Icu (Main	Numbers	4	19944.84	79779.36
63	c.MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals	Numbers	8	23169.75	185358
64	d.MCCB FP 250 amps, 36 kA, Ics=100% Icu	Numbers	12	12291.71	147500.52
65	e.MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	12	11227.7	134732.4
66	f.Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs	Set	4	4249.59	16998.36
67	g.Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	4	2676.91	10707.64
68	a. Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	2	25065.74	50131.48
69	b. MCCB FP 200 amps, 25 kA,Ics=100% Icu	Numbers	2	11227.7	22455.4
70	c.MCCB FP 100 amps, 25 kA, Ics= 100% Icu	Numbers	6	6197.88	37187.28
71	d.MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	6	5483.65	32901.9
72	e.MCB FP 40 amps, C-curve, 10 kA, ISI marked, conforms to IS/IEC 60898-1:2002	Numbers	6	1830.63	10983.78
73	f.Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs	Set	2	4249.59	8499.18



74	a.Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	2	25065.74	50131.48
75	b.MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	2	5483.65	10967.3
76	c.Copper bus bar 100 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	2	678.65	1357.3
77	d.Supply & installation of Digital Time Switch (Daily and weekly programmable) with 3 pole (3NO) Contactor 140 amp. fitted on mounting plate/DIN rail as per instruction of Engineer Incharge at Site.	Set	4	26876.64	107506.56
78	e.MCB SP 6-32 amps, 1 module, 10 kA, Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit)	Numbers	8	184.44	1475.52
79	Supply, wiring, testing & commissioning of FL point/ Lamp point/Fan point (concealed loop wiring) with ceiling rose/ angle/ batten holder by FR-LSH PVC insulated and unsheathed single core, 2.5 sq mm flexible copper cable with earth continuity by 1.5 sq mm copper wire to be drawn through rigid PVC conduit pipe not less than 20 mm dia medium gauge including bends, joints etc. as per instruction of Engineer incharge at site. (For Highbay light + Fan)	Numbers	800	351.47	281176
80	Supply, installation, testing and commissioning of LED Pit light (Pillar Light) of System wattage - 22 watt $\pm$ 10% , operating voltage - 40V-72 V AC, 50HZ, CRI70, System lumens output- 1600 lm - 1700 lm, IP67 etc. as per instruction of Engineer incharge at site.	Numbers	800	4209.25	3367400
81	Supply, installation, testing & commissioning of "SEW" Make Transformer having Input Voltage: 230 Volt output Voltage:72 Volt, of 25 KVA Capacity, 50 Hz. Dyn-11, oil cooled, Aluminium Wound as per instruction of Engineer incharge at site.	Numbers	6	33487.97	200927.82
82	Cutting of Road/ Pucca/ hard soil below (0.3 X 1) mt from ground level and make it good as original with supply & execution of CC work (1:3:6)	Metre	500	226.27	113135



83	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	40	2127.32	85092.8
84	Supply and erection of GI strip of size 25 mm x 6 mm (For earthing connection)	Metre	600	80.22	48132
85	Supply, laying, commissioning & testing of GI pipe 100 mm medium guage with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut, bolt etc. (For protection of cable) as per instruction of Engineer incharge at site.	Metre	80	696.31	55704.8
86	Supply, laying, commissioning & testing of HDPE pipe 110 mm dia PN-6 grade to be laid partly along the pole /underground with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer and required bend, joints.	Metre	200	290.68	58136
87	Supply , laying , commissioning & testing of HDPE pipe 50 mm dia, PN-6 grade to be laid partly along the pole/wall with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer etc as per instruction of Engineer Incharge at site.	Metre	300	53.06	15918
88	Laying , commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement	Metre	6800	41.32	280976
89	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 400 Amp./415 Volt copper bus bar with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site.	Numbers	6	7385.95	44315.7
90	Supply, laying, installation and commissioning of Cable tray 105/450 MM with all Supporting & Jointing Accessories as per instruction of Engineer Incharge at Site.	Metre	500	1297.05	648525
91	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 320 Amp./415 Volt copper bus bar 200 amp with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site.	Numbers	10	7385.95	73859.5
92	a.MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	20	11227.7	224554
93	b .Supply, fixing, connection & testing of LED indication lamp RYB	Set	10	178.58	1785.8
94	MCB DP 63 amps, C-curve, 2 module, 10 kA, conforms to IS/IEC 60898:2002 with metallic enclosure	Numbers	30	890.19	26705.7



95	Supply, wiring & testing of main wire by 6 sq mm, Single Core FR- LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 through PVC rigid conduit pipe/polythene pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	4000	85.56	342240
96	Supply, installation, testing & commissioning of Wall Air Circulator Fan (Industrial fan), 600 mm sweep (Speed- 1440 RPM, Max. wattage-180 Watt, Air delivery > 16000 CMH, Aerodynamically designed aluminum alloy single piece blades for high air delivery> 16500 CMH, conforms to IS 2997-1964 standards) with suitable fixing arrangement on wall as per instruction of Engineer incharge at site.	Numbers	80	4746.47	379717.6
97	a. Supply, installation, testing & commissioning of 6 way SPN Distribution Board, Flush/Surface mounting, IP 43 grade protection with copper bus bar, fully shrouded neutral bar, earth bar, cable ties, metal double door as per IS 8623 - III with supply and fixing of following RCBO/MCB's	Set	4	1520.96	6083.84
98	b. MCB DP 16-32 amps, 2 module, 10 kA, Conforms to IS/IEC 60898 - 1:2002 (For AC circuit/16 A plug point circuit) (32 Amp)	Numbers	4	414.65	1658.6
99	MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit) (6-16 Amp)	Numbers	16	184.44	2951.04
100	a. Supply, wiring, testing & commissioning of concealed point wiring by FR PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm, single core multi strand copper wire concealed on wall through PVC rigid conduit pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re- mended to original finish by contractor's own material. FL Point/LED Tube Point with C/rose	Numbers	180	607	109260
101	b. Lamp Point/Inverter Point with angle holder	Numbers	20	535.93	10718.6
102	c. Fan point with c/rose and 5 step fan regulator 2 M	Numbers	40	1103.73	44149.2
103	Exhaust fan point with c/rose	Numbers	6	613.22	3679.32
104	Supply, wiring, testing & commissioning of 2 x 6 amps plug point on separate board complete with 2 nos. 6 amps switch with 2 nos. 6 amps 5 pin socket fitted on half flash MS board with hylem sheet top (Concealed Wiring by Sub-main wire 2.5 sq mm)	Numbers	30	113.57	3407.1



105	Supply , wiring, testing & commissioning of Power plug point on separate half flush MS board with hylem sheet top complete with 16 A flush type controlling switch & 6/16 amps socket as per instruction of Engineer incharge at site. (Wiring by Sub-main wire 2.5 sq mm concealed)	Numbers	30	165.4	4962
106	Supply, installation, testing & commissioning of modular power unit complete with 32 Amp mini MCB DP "C" series 3kA , 25 amps starter, 25 Amp Socket and 25 Amp plug to be mounted on 6 module GI box, 6 module combined plate concealed on wall and wiring by 6 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts with earth continuity wire by 1 sq mm copper cable Conforming to IS: 694 to be drawn through Rigid PVC conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Set	12	908.91	10906.92
107	Supply, wiring, testing & commissioning of concealed call bell point wiring by FR-LSH PVC insulated and unsheathed 1.5 sq mm, single core flexible copper wire concealed on wall through PVC rigid conduit pipe/Polyethylene pipe of dia not less than 20 mm dia with all types of joints and bends as required complete with 6 amps bell push controlling switch fitted on half flush MS board with hylem sheet top and earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire complete to be concealed in wall including supply, fixing, testing & commissioning of call bell "Ding Dong / Multitune door bell".	Numbers	4	326.63	1306.52
108	Supply and fixing of computer point on separate board complete with 04 nos. 5-pin 6 amps socket and 4 nos. 6 amps switch fitted on half flush MS board with hylem sheet top. (Board should be completely concealed in wall with hylem sheet top to wall surface level). Concealed wiring extra	Set	20	250	5000
109	Supply and fixing of computer point on separate board complete with 04 nos. 5-pin 6 amps socket and 4 nos. 6 amps switch fitted on half flush MS board with hylem sheet top. (Board should be completely concealed in wall with hylem sheet top to wall surface level). Concealed wiring extra	Numbers	10	9635.38	96353.8
110	Supply, wiring & testing of main wire by 2.5 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 concealed in wall through PVC rigid conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	4800	56.31	270288



111	Supply, wiring & testing of main wire by 4 sq mm, Single Core FR- LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 concealed in wall through PVC rigid conduit pipe not less than 20 mm dia	Metre	3200	66.27	212064
112	Supply, wiring & testing of main wire by 6 sq mm, Single Core FR- LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 through PVC rigid conduit pipe/polythene pipe not less than 20 mm dia as per instruction of Engineer incharge at site	Metre	2000	85.56	171120
113	Supply, drawing, commissioning & testing of 10 sq mm, Single Core FR-LSH or HRFR PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts Conforming to IS: 694 as per instruction of Engineer incharge at site.	Metre	800	74.08	59264
114	a. Supply, installation, testing & commissioning of 4 way VTPN MCCB DB (MCCB+12 modules) with IP 43 grade protection, metal door with wire sets, busbar, earth bar, blanking plates, cable ties etc with supply and fixing of following MCCB/MCB as per instruction of Engineer incharge at site.	Set	3	8865.72	26597.16
115	MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	3	5484.47	16453.41
116	c. MCB SP 6-32 amps, 1 module, 10 kA, Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit)	Numbers	36	184.44	6639.84
117	a. Supply, installation, testing & commissioning of 12 way SPN Distribution Board, Flush/Surface mounting, IP 43 grade protection with copper bus bar, fully shrouded neutral bar, earth bar, cable ties, metal double door as per IS 8623 - III with supply and fixing of following RCBO/MCB's	Set	10	1520.96	15209.6
118	b. MCB DP 16-32 amps, 2 module, 10 kA, Conforms to IS/IEC 60898 - 1:2002 (For AC circuit/16 A plug point circuit) (32 Amp)	Numbers	10	414.65	4146.5
119	c. MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit) (6-16 Amp)	Numbers	100	184.44	18444
120	Supply, fixing, connection & testing of indoor LED tube batten with 20 watt LED T8 tubular lamp with extruded aluminium body and PC diffuser complete with inbuilt driver (System wattage-20 Watt, System efficacy > 105 lm/W, Power factor 0.90) with suitable fixing arrangement as per instruction of Engineer incharge at site.	Numbers	200	744.05	148810
121	Supply and testing of Electric ceiling fans, Decorative 4 blade, 1200 mm, mettalic paint finish suitable for operation on single phase, 230 Volt, 50Hz AC supply	Numbers	12	5367.06	64404.72



122	Supply, installation, testing & commissioning of 300 mm sweep (metallic) heavy duty exhaust fan, 1400 RPM complete with fixing on wall by suitable size bolts & nuts grouted on wall.	Numbers	8	2149.75	17198
123	Supply, installation, testing & commissioning of Inverter Split Air Conditioners 1.5 Ton, (BEE star rating-5 star, Coil material-Copper, Eco-friendly refrigerant, Nominal cooling capacity in Ton / (kcal/hr)-1.5 Ton / 4500 kcal/hr) with all accessories as per OEM suitable for operation on 230V AC, single phase, 50 Hz as per instruction of Engineer incharge at site. Re-mending work should be done after installation of RAC. (with 1 pair outdoor wall stand)	Numbers	4	38081.72	152326.88
124	Supply, installation, testing & commissioning of wall mounted bracket fan 400 mm sweep complete with all accessories to be fixed on wall by suitable fixing arrangement including connection by 2 core, 1.5 sqmm PVC insulated and FR PVC Round Sheathed, Copper Conductor (flexible) industrial cable as per instruction of Engineer Incharge at site.	Numbers	6	3439.38	20636.28
125	Supply, installation, testing & commissioning of Surface/Recessed LED luminaire with slim line CRCA sheet metal body, square type, (System wattage-18 Watt, Nominal system efficacy 100 lm/watt) suitable for 600 x 600 mm modular ceiling as per instruction of Engineer incharge at site.	Numbers	30	1747.71	52431.3
126	Supply, installation, commissioning & testing of LED indication station name board (Length of board will be as per proportion of letter so that all the 4 side of the board will have extra space) with channel letters with 3.75 ft. in length with suitable widen and 4 mm projection size which inside ACP board (Brand- ALUDECOR, category-AL 33 series exterior & thickness-3 mm) with acrylic face on front and having Samsung 5630 LED's (Shape- Lens type, operating voltage- 12 V DC, carrying current-80 mA, power Dissipation- 0.96 watt, working hours-50000, case material-ABS, protection-IP68) inside for illumination letters in English, Hindi, Bengali or regional language complete with all materials including provision of erection structure made of MS angle/channel/flat duly painted	Square Foot	300	1349.99	404997
	with aluminium paint over a coat of red oxide primer with CC foundation (1:3:6) of cement, sand and stone chips as required at site and as per instruction of Engineer incharge at site.				
127	Supply, installation, testing & commissioning of Sine wave Inverter 5500 VA suitable for operation on 230 volt AC, with supply of 04 nos. 12 volt @ 150 Ah SMF battery including inverter battery trolley as per instruction of Engineer incharge at site.	Set	2	90305.52	180611.04



128	Supply & testing of GI octagonal pole 6 mt long with foundation bolt, loop box of bakelite sheet with one 6A SP MCB and 16 sq mm stud type connector etc. The octagonal pole shall be hot dip galvanized in single dip. Technical specification of pole as following:- Height - 6 mt Top dia (A/F) - 70 mm Bottom dia (A/F) - 130 mm Sheet thickness - 3 mm Base plate (L x B x T) - (200 x 200 x 12) mm Foundation Bolt size (no.x dia) - 4 x 20 dia mm Pitch Circle Dia (PCD) - 200 mm Bolt length - 600 mm Projected Bolt Length - 100 mm .	Numbers	30	10702.75	321082.5
129	Erection of Street light pole (Octagonal pole) with CC foundation including digging & refilling of earth to a suitable height above ground level in ratio 1:3:6 by cement sand & Chips 19 mm & down including excavation of earth including fixing of SA/DA bracket etc.	Numbers	30	1395.6	41868
130	Supply & fixing of 1 mtr GI Single arm bracket (header) and holder with Nut & bolt	Numbers	20	1216.15	24323
131	Supply & fixing of double arm bracket 1 mt long with nut & bolt for GI octagonal pole as per instruction of Engineer incharge at site.	Numbers	10	1682.57	16825.7
132	Supply, installation, testing & commissioning of 100 watt LED street light luminaire with heat resistant glass with connecting lead (IP protection- IP 66 class-I, System efficacy 105 lm/w, Housing- Pressure die cast aluminium powder coated, THD<10%, p.f.>0.95, Surge protection- 5 kV) as per instruction of Engineer incharge at site.	Numbers	35	9096.71	318384.85
133	Supply , erection, testing & commissioning of 16 mt long High Mast Tower with 8 nos. x 250 watt LED luminaries in symmetrical arrangement complete with all accessories (Double drum winch, SS wire rope, integral power tool motor, head frame, junction box, foundation bolt, LED aviation light, Fedder pillar with single dial timer & raising lowering mechanism etc.) including shallow foundation with M20 grade concrete etc. as per instruction of Engineer Incharge at Site.	Set	2	558207.15	1116414.3
134	Laying , commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement.	Metre	1500	41.32	61980
135	Excavation of cable trench (0.3 x 1) mtr below ground level for laying of cable & refilling the soil after digging the earth as per instruction of Engineer incharge at site. Cable should be laid on bedding of height 75 mm sand at the bottom of trench, and covering it with additional sand of height 75 mm and thereafter protecting it by mean of bricks before refilling the soil as per IS 1255.	Metre	700	111.51	78057



136	Supply, fixing , testing & commissioning of LT heat shrinkable cable end termination kit outdoor/indoor type cables with jointing materials 3/3.5/4 core, 400 sq mm XLPE/PVC cables	Numbers	8	9167.33	73338.64
137	b.3/3.5/4 core, 185-300 sq mm XLPE/PVC cables	Numbers	8	6660.06	53280.48
138	c.3/3.5/4 core, 70-150 sq mm XLPE/PVC cables	Numbers	8	6455.11	51640.88
139	Supply, installation, testing & commissioning of submersible pump motor set of 25 HP / 18.7 kW, Head- 92-46 mtr, Discharge- 660-1200 LPM, Full load current- 26.0 amp, Rated voltage-415 volt	Numbers	1	63403.73	63403.73
140	Supply of submersible pump motor set of 25 HP / 18.7 kW, Head- 92- 46 mtr, Discharge- 660-1200 LPM, Full load current-26.0 amp, Rated voltage-415 volt	Numbers	1	59268.37	59268.37
141	Automatic Star-Delta starter in SS housing for 25 HP / 18.5 kW motor rating at 415 volt, 3 Ph, 50 Hz	Numbers	2	10519.6	21039.2
142	Supply, fixing & insertion, testing and commissioning of 3 meter long GI coloumn pipe 100 mm dia Heavy gauge. The pipe should be threaded at both ends as per length requirement and as per instruction of Engineer incharge at site.	Numbers	10	3071.76	30717.6
143	Supply, installation, connecting & testing of M.S/G.I Flanges suitable for 100 mm (4 inch) pipe.	Numbers	20	830.73	16614.6
144	GI bend 150 mm	Numbers	5	2819.98	14099.9
145	Supply, installation, testing & commissioning of GM non-return valve of 75 mm / 80 mm dia. (Horizontal)	Numbers	1	6172.53	6172.53
146	Supply, installation , testing & commissioning of GM sluice valve (Gate valve) of 50 mm dia as per instruction of Engineer incharge at site. (SSE/P/NJP)	Numbers	2	3390.59	6781.18
147	Supply, erection & commissioning of steel rope 10 mm dia with PVC insulation coating for protection of pump against falling with U bolt as per instruction of Engineer incharge at site.	Metre	200	133.9	26780
148	Supply and laying of 3 core, 10 sq mm, Flat Three Core PVC Insulated & PVC Sheathed Industrial Cable, 1100 Volts conforming to conforming to IS: 694 for Submersible Pump Motors as per instruction of Engineer incharge at site.	Metre	200	275.28	55056



149	Supply, installation, testing & commissioning of Aquaguard Institutional Water cooler-cum-Purifier with Storage Capacity 120 Ltrs. & Option for Cold & Normal Purified Water. a) Approx. Dimensions : 750 mm (W) x 570 mm (D) x 1350 mm (H) b) Power rating : 850 $\pm$ 10% watt c) Water flow capacity : 80 LPH d) Operating power supply : 170-260 VAC, 1 ph e) No. of stages for filter-cum-purifier : 3 nos. f) Storage capacity : 120 Ltr g) Nos. of Faucets : 03 nos. h) Body material: Front SS 304 and the rest in Pre-coated steel i) Refrigerant used: Freon 22 or latest	Set	4	76159.35	304637.4
150	SITC of 5 HP centrifugal pump motor set for dewatering of water , operating at supply 3 Phase , 415 V $\pm$ 10%,50Hz $\pm$ 3%Hz .Suction Pipe size (Nominal):80 millimeter Delivery pipe size (Nominal):80 millimeter	Set	2	28679.44	57358.88
151	Supply, installation, testing & commissioning of Fully automatic Starter, Star-Delta, 3 Ph, 415 Volt, 50 Hz with Ammeter & Voltmeter, 3 position (Auto-Manual) selector switch in SS housing for 5 HP Pump-motor as per instruction of Engineer Incharge at Site.	Set	2	9533.4	19066.8
152	Supply & fixing of MCCB FP 100 amps, 35 kA, Ics=100% Icu with Metal Enclosure	Set	4	6197.88	24791.52
153	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	1	25065.74	25065.74
154	a. MCCB FP 200 amps, 25 kA, Ics=100% Icu	Set	1	11227.7	11227.7
155	b.MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	4	5483.65	21934.6
156	c.Digital voltmeter (0-500) volts and Digital ammeter (0-500) amps with s/switch and CTs	Set	1	4249.59	4249.59
157	d. Copper bus bar 200 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	1	986.87	986.87
158	Supply, installation, testing and commissioning of Air Circuit Breaker (ACB) 630 A, 50 kA, EDO, 4P, Microprocessor Based breaking capacity Icu=Ics=Icw (1 sec) as per instruction of Engineer incharge at site.	Numbers	4	237145.25	948581



159	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components): MCCB FP 125 amps, 36 kA, Ics=100% Icu	Numbers	3	6266.14	18798.42
160	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- MCCB TP 63 A, 10 kA, C-curve as per IS/IEC 60898-1 2002	Numbers	8	1848.05	14784.4
161	Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	2	2676.91	5353.82
Sub Total					30351606.73
Schedule	8-VANDE BHARAT Electrical TRD (NS ITEM)				
Item - 1	Electrical TRD (NS ITEM)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)



1	Design, supply, erection, installation, testing and commissioning of Retractable Overhead Conductor-rail System (ROCS) of overall length 600m x 1 along with transition arrangement from Retractable OHE to conventional OHE including all connected accessories required as per site requirements, conforming to IS, IEC, International standard(if applicable) & IE rules. Details as	Kilometre	0.6	94499956.91	56699974.15
2	Preparation and Submission of design & drawing of OHE Layout plan & CSD.	Track Kilometre	1.5	7656.94	11485.41
3	Preparation of Sectioning Diagram for Board as per modification if any of 25 KV OHE Sectioning diagram in Size, as per Board including yards and open route with including of SP, SSP & TSS showing BM, CB, SS, SM, Isolator, Section Insulator AT & PT etc. showing stations and halts for Printing of Board in High resolution drawing.	Numbers	1	3430.57	3430.57
4	Making and Supply of Board for 25 KV OHE Sectioning diagram, Printing of Drawing On Vinyl and pasting on poly-carbonic sheet and Iron frame with Side molding beat aluminum and Fixed to wall.	Square Foot	24	212.02	5088.48
5	Providing and laying of concrete for foundation and plinth in all types of Soils using M-10 grade concrete for main foundation and M-15 grade concrete for grouting and muffing including nominal reinforcement required as per RDSO drawings.	cum	100	7687.69	768769
6	"Supply of rolled / fabricated masts, Portal & TTC for OHE."	MT	15	95303.49	1429552.35
7	"Erection of rolled / fabricated masts, Portal & TTC for conventional OHE."	MT	15	7757.59	116363.85
8	Supply of fabricated steel work, DA, SPS etc.	MT	4	109658.51	438634.04
9	Erection of fabricated steel work, DA, SPS etc.	MT	4	9514.62	38058.48
10	Supply of a single bracket assembly with accessories and stay & bracket insulators porcelain type.	Numbers	50	22744.58	1137229
11	Erection of a single bracket assembly with accessories and stay & bracket insulators porcelain type.	Numbers	50	1954.95	97747.5
12	Supply of contact wire	MT	1.71	900046.47	1539079.46
13	Supply of Cadmium copper Catenary wire	MT	1.17	900046.47	1053054.37
14	"Supply and Erection of Over Head Equipment i.e. contact & catenary wire (excluding cost of supply of contact & catenary wires), jumper wire, dropper wire, contact/catenary clips, fasteners, and all other material required at turn out/overlaps/diamond crossings etc. Final checking of OHE and adjustment, inspection to be done by tower wagon for commissioning of conventional OHE."	Track Kilometre	1.5	54555.47	81833.21
15	Supply and erection of standard galvanized wire bond in place of MS flat bond at designated location.	Numbers	215	1726.8	371262
16	Supply of Longitudinal bond (including black painted MS Flat and required nut, bolts spring washer.	Numbers	350	522.46	182861
17	Erection of Longitudinal bond (including black painted MS Flat and required nut, bolts spring washer.	Numbers	350	427.89	149761.5



18	Supply of structure bond (including black painted MS Flat and required nut, bolts spring washer)	Numbers	150	851.36	127704
19	Erection of structure bond (including black painted MS Flat and required nut, bolts spring washer)	Numbers	150	371.58	55737
20	Supply of cross/transverse bond and special bond (including black painted MS Flat and required nut, bolts, spring washer)	Numbers	100	840.46	84046
21	Erection of cross/transverse bond and special bond (including black painted MS Flat and required nut, bolts, spring washer)	Numbers	100	544.63	54463
22	Supply of Small Jumper - Dia 50 sqmm (Annealed copper).	Kg	400	863.92	345568
23	Supply of Large Jumper - Dia 105 sqmm (Annealed copper)	Kg	400	890.02	356008
24	Supply of Stay Arm Porcelain insulator (CD-1050mm) for replacement of composite type insulator.	Each	150	2376.07	356410.5
25	Supply of Bracket Porcelain insulator (CD-1050mm) for replacement of composite type insulator.	Each	150	2128.78	319317
26	Stenciling of OHE parameter on OHE structure with stenciling of direction of emergency telephone sockets.	Numbers	100	94.28	9428
27	Supply of regulating equipment (3 pulley type ATD) with counter weight assembly for conventional OHE.	Numbers	4	69132.02	276528.08
28	Erection of regulating equipment (3 pulley type ATD) with counter weight assembly for conventional OHE.	Numbers	4	4624.25	18497
29	Supply of material for termination of conductor of conventional OHE/ terminating assembly (FTA)	Numbers	5	7234.17	36170.85
30	Erection of material for termination of conductor of conventional OHE/ terminating assembly (FTA)	Numbers	5	1808.53	9042.65
31	Supply of Guy Rod assembly.	Numbers	10	9510.39	95103.9
32	Erection of Guy Rod assembly.	Numbers	10	1726.58	17265.8
33	Earthing with 3 meter long, 50mm dia, G.I. pipe class 'B' earth electrode, adding the charcoal or coke and salt, providing masonry enclosure and cover plate with lifting arrangement etc. including connections with 4 mm G.I. wire from earth electrode to switch board / electrical equipment as required.	Job	4	3371.97	13487.88
34	Supply & making of retro-reflective structure number plate Spec. ETI/OHE/33A(12/97) Rev-6. as per instruction of site engineer.	Numbers	100	602.78	60278
35	Transportation Charges for OHE Masts/ structures from depot to site.	MT-Km	2000	83.68	167360
36	Dismantling of OHE	Track Kilometre	0.5	48991.73	24495.87
37	Dismantling of OHE Mast/structure by cutting from ground level	Each	5	4817.48	24087.4
38	Supply & erection Enameled Dead section caution board (power block working limit) as per RDSO specification ET/OHE/33(8/85) & RDSO drawing no. ETI/OHE/P/7574 Rev 'B' or latest.	Numbers	20	553.22	11064.4



39	Supply & erection Enameled caution board for special location (caution clearance to OHE nearby restricted) as per RSDO specification No. ETI/OHE/33(8/85) or latest.	Numbers	20	439.21	8784.2
40	Supply & erection Dead section caution board (Retro reflective type) Electrical Engine STOP as per RSDO spec. ETI/OHE/33A rev.6 or latest.	Numbers	20	2601.98	52039.6
41	Supply & erection Dead section caution board (Retro reflective type) Caution unwired turnouts) as per RSDO spec. ETI/OHE/33A rev.6 or latest.	Numbers	20	2664.31	53286.2
42	Supply & erection Enameled warning board (caution live wire) as per RSDO spec. ETI/OHE/33(8/85) or latest.	Numbers	20	919.27	18385.4
43	Supply & erection General caution board (enameled) for staff as per RSDO spec. No ETI/OHE/33(8/85) or latest.	Numbers	20	364.38	7287.6
44	Supply of a 25 KV Single Pole Isolator Without earth contact assembly	Numbers	2	43085.04	86170.08
45	Erection of a 25 KV Single Pole Isolator Without earth contact assembly	Numbers	2	4757.4	9514.8
46	Extra for supply of an Earth contact Assembly in an Isolator	Numbers	2	11549.25	23098.5
47	Extra for Erection of an Earth contact Assembly in an Isolator	Numbers	2	311.38	622.76
48	Supply & Erection of Anti-creep with cadmium copper wire with porcelain insulators 1050mm CD	Numbers	1	52651.76	52651.76
49	Erection of Anti-creep with cadmium copper wire with porcelain insulators 1050mm CD	Numbers	1	3764.36	3764.36
50	Supply of Large Span Wire for OHE as per RSDO specification	Metre	600	991.01	594606
51	Supply of 160 sqmm copper jumper wire	Metre	100	1294.26	129426
52	Supply of A Section Insulator assembly with all accessories.	Numbers	4	37736.26	150945.04
53	Erection of A Section Insulator assembly with all accessories.	Numbers	4	3430.56	13722.24
Sub Total					67790552.24
Schedule	9-VANDE BHARAT S&T (NS ITEM)				
Item - 1	Indoor Signalling work (NS ITEM)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)



1	Modification of design and supply of equipment required for modification of existing Electronic Interlocking System (Kyosan make) to suit modified yard layout of NJP station. The scope of work will include (a) Supply of all EI component e.g. input/output bits cards etc, (b) All interface relays, interconnecting cables, connectors, terminals, mounting arrangements, fixtures and accessories to make EI system functional, (c) Redesign of logic and interface circuit as per approved SIP, (d) FAT and SAT of EI System, (e) Installation, programming, testing and commissioning of complete yard for data Input and configuration, simulation and functional testing and commissioning of electronic Interlocking system as per interlocking plan, (f) Supply of as made documents as per NFR practice station in both soft and hard copy.	Station	1	14172034.87	14172034.87
2	Validation, Networking and testing of data logger with COA updation as per approved SIP. This includes updation of fault logic as well.	Station	1	87029.52	87029.52
3	Preparation of SIP (Scale 1:1000), PD, RCC, SWRD in AutoCAD as per standard format adopted in NFR. Softcopy in AutoCAD to be submitted with six print copies of each in PDF format. The scope of work includes subsequent modification and revision in SIP, PD, RCC, SWRD till commissioning of projects and required documents for sanction of CRS and PCSTE Sanction	Station	1	175808.18	175808.18
4	Preparation and supply of six sets of all completion drawings with tracing copy of circuit diagrams, Cable coreage plan, cable Route Plan, Track bonding plan, cable termination plan, relay deposition chart etc. as per TS	Station	1	113552.47	113552.47
5	Point Contactor Unit with base plates, connectors and tag block cover, conforming to IRS: S-46 or with latest amendment/specification, operative on 24V DC	Numbers	8	70354.6	562836.8
6	Key locked rotary relay KLCR working on 24 V DC (AC Immunized). Materials to be purchased from RDSO approved firm	Numbers	8	22589.19	180713.52
7	Supply and Installation of KLCR box for fixing of EKT/KLCR inside box, including supply of all materials like board, handle, hinges, Godrej type padlock, glass sheets, supporting brackets etc.	Numbers	8	7939.46	63515.68
8	16/0.2mm size tinned flexible single core indoor wire to IRS:S- 76/89, PVC coated in different colours and to be supplied in coils of 100 meters. Materials to be procured by RDSO approved firm with manufacturer test certificate	Numbers	100	1588.06	158806

Sub Total

15514297.04

Item - 2	Supply of Signalling material (NS ITEM)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	4.6 mtr Post with base, ladder. Ladder base, platform for CLS unit as per IRS specification No. IRS; S 6-81 and Drg. no. SA-23153 (Adv) S-2011/M or latest	Numbers	1	34526.74	34526.74



2	3.6 mtr Post with base, ladder. Ladder base, platform for CLS unit as per IRS specification No. IRS; S 6-81 and Drg. no. SA-23150 (Adv) S-2011/M or latest	Numbers	4	28627.97	114511.88
3	Colour light signal 4 aspect unit FRP TYPE to Drg. no. IRS:S-26/64, SA 23001 A/M (Adv.) or with latest amendment without CLS transformers, lenses, lamps, lamp holders.	Numbers	3	80982.83	242948.49
4	Colour light signal 2 aspect unit FRP TYPE to Drg. no. IRS: S- 26/64, SA 23003 A/M (Adv.) or with latest amendment without CLS transformers, lenses, lamps, lamp holders.	Numbers	2	61173.58	122347.16
5	FRP Shunt Signal (Position light type) RDSO drg No. SA - 23840 (Adv.) with latest amendment for independent type complete with Signal unit, bracket, signal post of minimum 1 m length, surface base, terminals etc but without lenses, lamps and lamp holders.	Numbers	8	38585.17	308681.36
6	FRP Shunt Signal (Position light type) RDSO drg No. SA - 23840 (Adv.) with latest amendment for dependent type complete with Signal unit, bracket, terminals etc. but without lenses, lamps and lamp holders.	Numbers	2	25869.05	51738.1
7	Offset bracket for colour light signal with fixing U clamps and nuts etc for Main Signal	Numbers	1	3612.72	3612.72
8	Off set bracket for colour light signal with fixing U clamps and nuts etc for Shunt /Co-On	Numbers	3	2993.18	8979.54
9	Electric Point Machine IRS type 220 mm throw, high thrust rotary locking type, non-trailable to operate on 110V DC (with IP-67 type 160 V AC Immunised motor) as per specification No. IRS: S- 24/2002 Amd-1 or latest and assembly Drawing No. RDSO-S- 11000 and RDSO/S-3454 ALT A ver.1 or latest complete with lock and detector slide, cable termination box, clamp Point lock 60 Kg TWS (RDSO S-3395A or latest), along with ground connection such as switch Extension Bracket (P-bracket), Insulation Plate R.H, Insulation Plate L.H, IRS Point M/C-Detector rod (long and short). Lock rod (long and short), Drop Lug, special MS Plate.	Numbers	4	323984.24	1295936.96
10	ELECTRIC POINT MACHINE (ROTARY LOCKING TYPE) Spec. No.: IRS:S-24/2002 withAmendent-1 or latest 110 V DC, 143 mm stroke complete with junction box and two nos. of telescope pipes for each machine. (with 160 AC immunised with IP- 67 protection)	Numbers	6	207956.67	1247740.02
11	Ground connections complete set (threaded type) for 143 mm stroke, Rotary Locking Point Machine, suitable to the point layout of 60 Kg. / 52 Kg Rails as per yard layout for BG and for all make of the Point Machines	Set	6	18347.57	110085.42
12	Point machine ground connection insulation complete set including for P Bracket and L bracket insulation as per IRS:S-40/84.	Set	12	1364.64	16375.68



13	Track feed resistance (15/30 ohm) PBT base as per Drg. No. SA 20161-66/M	Numbers	10	1109.72	11097.2
14	B Type Choke Coil for single rail track circuits on 25 KV 50 Hz AC electrified sections as per specification IRS: S-65/83 amend.3 or latest	Numbers	20	8964.97	179299.4
15	Track lead junction box FRP type fitted with 2-way in box size 120 mm x 220 mm x 90 mm x6mm thick as per TS and as per drawing RST-11509	Numbers	50	6018	300900
16	ARA terminal block 6 Way made of PBT/poly carbonate as per specification No. IRS:S 75/2006 (Rev.2) and drg No. 23756 or latest	Numbers	50	813.5	40675
17	Disconnect Terminal block for Four conductor with screw less Cage Clamp type/sliding switch disconnect as per RDSO Specification No. RDSO/SPN/189/2004 version 1.2, for each conductor size up to 2.5 sq. mm. Equivalent of M6 Terminals. Each Terminal block equipped with two markers on top and bottom, an end plate, 2 end clamps and adequate length rails for fitting terminal blocks.	Numbers	500	406.72	203360
18	Apparatus cases Full made of 10 SWG sheets with miniature E Type Locks of same wards as that available on existing location box of station with keys as per RDSO Drg. No. S-11500 with latest amendments.	Numbers	5	39641.56	198207.8
19	Supply of Earth electrode for outdoor equipment consisting of 2.5 meter G.I pipe medium .GI pipe shall consist of spike at one end and a lug at the other for connecting the earth lead wire.	Numbers	10	4502.81	45028.1

Sub Total

4516051.57

Item - 3	Execution of outdoor Signalling work (NS item)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Excavation, ramming, Casting Cement Concrete foundation for Colour Light Main Signal Post in the ratio of 1:3:6 Aggregate not exceeding 3: 8 cm, as per IRSEM drg No. 19-D3, complete with contractor's material including cement, sand, aggregate, anchor bolts and nuts and curing of casted foundation, refilling & ramming of loose soil around foundation and disposal of loose dugged soil from site.	Numbers	5	18596.27	92981.35
2	Excavation, ramming, Casting Cement Concrete foundation for Position Light Shunt Signal Post in the ratio of 1:3:6 aggregate not exceeding 3: 8 cum, as per IRSEM drg. No. 19-D4, complete with contractor's material including cement, sand, aggregate, anchor bolts and nuts and curing of casted foundation, refilling & ramming of loose soil around foundation and disposal of loose dugged soil from site.	Numbers	8	8475.86	67806.88



3	Assembling, erection, installation, taking of cable inside unit through post, termination and wiring of CLS complete with all accessories of CLS unit, post, base, ladder, ladder guards, platform and MS supporting bracket in the middle of the ladder, hoods, pinnacles, offset brackets, Junction/stencil type route indicators (if any) - 1 way to 6 way, etc including fixing & wiring of LED units lamps with contractor's wiring material. for 2 Aspect CLS	Numbers	2	18051.5	36103
4	Assembling, erection, installation, taking of cable inside unit through post, termination and wiring of CLS complete with all accessories of CLS unit, post, base, ladder, ladder guards, platform and MS supporting bracket in the middle of the ladder, hoods, pinnacles, offset brackets, Junction/stencil type route indicators (if any) - 1 way to 6 way, etc including fixing & wiring of LED units lamps with contractor's wiring material. for 3 /4 Aspect CLS	Numbers	3	18415.56	55246.68
5	c. for independent shunt signal	Numbers	8	7089.41	56715.28
6	d. for dependent shunt signal	Numbers	2	4983.04	9966.08
7	Fabrication, Supply and fixing of Retro-reflective Signal number plates of approved type as per technical specifications (Contractor has to arrange all hardware and other requirement to fix the plate on signal at his own cost)	Numbers	10	814.09	8140.9
8	Supply and fixing of Universal Lock suitable for fixing on CLS units, MACLS calling on signal unit, route indicator unit and Position light type Shunt Signal units & sufficient No of Keys.	Numbers	10	331.83	3318.3
9	Excavation of trench 1.0 Meter deep and 0.3 Meter wide trenches in all type of soils except rocky area including clearing of roots of trees and bushes and temporary obstruction and refilling of the trench by the excavated soil and ramming after laying of the required quantity of cables as per instruction of site in charge.	Metre	2800	159.34	446152
10	Laying of S&T Cable of different sizes as per cable route plan in the already dug trench with or without DWC pipe	Metre	9800	10.43	102214
11	Supply and fixing of GI pipes of all sizes & diameters/ troughing on culverts, bridges & any other loc. etc. complete with contractor's material including clamps, nuts and bolts and other fixing arrangements as directed by Engineer in charge.	Kilometre	90	1911.38	172024.2
12	Manual Boring at the depth of 1m across the track/road as per technical specification. DWC/HDPE pipe will be supplied by Railway.	Metre	120	637.22	76466.4
13	Transportation of HDT machine with accessories including handling of store materials, preparation of site and boring (200 mm boring up to the length of 150 Meter) for placing of different sizes of signalling cable together at bridges/Culvert/Track/Pucca road crossing /Yard area /station area, boring trench shall be minimum 3 meters below the river bed below the river bed and minimum 1.5 meter below surface in other patches/track/road/pucca platform. It includes Pulling of Signalling and telecom cables as per instruction of site-in-charge	Metre	550	3539.56	1946758



14	Excavation, ramming, Casting Cement Concrete foundation for Apparatus cases/Location boxes Full in the ratio of 1:3:6 Aggregate not exceeding 3: 8 cm, as per approved drawing with contractor's material including cement, sand, stones, anchor bolts and nuts and curing of casted foundation, refilling & ramming of loose soil around foundation and disposal of loose dugged soil from site. It includes installation of apparatus cases on CC foundation on grouted bolts, including filling the space enclosed below the location box	Numbers	5	17627.16	88135.8
15	Supply and Installation of Hylum sheet (Size 1200 mm X 1200 mm) for termination of main/tail cable including supply of terminal board as per TS	Numbers	5	6998.72	34993.6
16	Termination of signalling cable/wire for Apparatus case (Full)	Numbers	5	3911.51	19557.55
17	Charging of Secondary cells 80AH with Contractor's own charging equipment including supply of Sulphuric acid conforming to IS:266-1977, distilled water conforming to IS:1069-1964, installation, supply and application of acid proof foam spray of approved type, on the terminals of charges batteries, all activities as per Technical specifications and according to standard adopted for initial charging and installation of charged batteries in battery room in groups as per instructions of Engineer at site including supply of 5 Nos. of Hydrometer and 5 Nos. of Hydrometer stand make of superior quality wood as per instruction of site supervisors	Numbers	30	636.75	19102.5
18	a. Installation and commissioning of DC track circuits including fixing of continuity bonds on rail joints and making rail connections of lead wires, installation and fixing of track lead junction box on MS angle for track feed end, track relay end and BX Jumpers, connections to tail cable, termination of tail cables on TLJB terminals etc., insertion of insulated block joints and also fixing jumper cables as per insulation diagram/track bonding plan, charging and adjustment of track circuit, all activities as per standard practice and technical specifications. T.C. not involving pt. zone (1 NOS MEANS = Per TC)	Numbers	2	15356.43	30712.86
19	b. Pt. zone T.C. (1 NOS MEANS = Per TC)	Numbers	8	19312.14	154497.12
20	Installation, fixing and wiring of DC track circuits equipment, track battery charger, resistances/chokes, track relays, batteries etc. in apparatus cases, location huts, relay rooms etc. including wiring and extension of potential free contact of track battery charger to ASM room, with contractor's wiring material, termination of tail cables on terminals/fuse blocks, supply and making track circuit history cards, all activities as per standard practice and technical specifications. (1 NOS MEANS = Per TC)	Numbers	10	12627.23	126272.3



21	Modification in existing MSDAC system (G. G. Tronics make). It includes shifting and re-orientation and re-designing of existing MSDAC system	Job	1	328294.49	328294.49
22	Installation, wiring and associated work such as drilling of switch, installation and adjustment of ground connections and insulations of 110 V DC 220 mm throw IRS clamp type point machine for 60 Kg thick web switch with removal of existing Point machine as per standard practice and approved drawing and direction of supervisor in charge. supply and fixing of GI pipes (Gland pipe) with flange for taking cable into point machine, termination of tail cable in point machine/ junction boxes, adjusting opening of the switches and adjusting the point machine with crank handle (including all smithy and fitting works required at site for complete installation and fitting insulation for gauge tie plate and William stretcher bar if. any etc.. All the required consumable stores viz lugs of suitable sizes, nuts, bolts, washer etc. for completion of the entire work should be supplied by the contractor.	Numbers	4	43239.33	172957.32
23	Installation, wiring and associated work such as drilling of switch, installation and adjustment of ground connections and insulations of 110 V DC 143 mm throw IRS clamp type point machine for 60 Kg thick web switch with removal of existing Point machine as per standard practice and approved drawing and direction of supervisor in charge. supply and fixing of GI	Set	6	23618.55	141711.3
	pipes (Gland pipe) with flange for taking cable into point machine, termination of tail cable in point machine/ junction boxes, adjusting opening of the switches and adjusting the point machine with crank handle (including all smithy and fitting works required at site for complete installation and fitting insulation for gauge tie plate and William stretcher bar etc.. All the required consumable stores viz lugs of suitable sizes, nuts, bolts, washer etc. for completion of the entire work should be supplied by the contractor.				
24	Installation of Earth Electrode including supply of MS flat (with peripheral earthing of apparatus case) for signalling equipment as apparatus cases, signal, relay rack etc.	Job	10	6009.03	60090.3
25	Supply of paints, primers, varnish and other painting material, complete painting and varnishing, lettering, numbering of all signalling gears, including signal posts and fittings, apparatus cases, point machines, junction boxes, signal machine, rail post, other gears etc. complete at a station/mid-section gates/huts, letter writing on terminal Nos. apparatus cases, point machine, Signal Nos. and other details as per S.E.M., instructions of Engineer at site and as per Technical specifications.	Station	1	128298.53	128298.53
26	Miscellaneous expenses for pre NI and NI work	Job	1	1127840.18	1127840.18



27	Taking the all types of cables inside station relay rooms, location boxes and junction boxes etc. and sealing of cable entry pit etc. as per Technical specifications, complete with contractor's material.	Job	1	26338.66	26338.66
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Sub Total

5532695.58

Item - 4

Provision of CCTV at maintenance cum workshop depot

S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Installation, testing and commissioning of IP Bullet Camera/ Full HD Fixed Colour & Full HD P/T/Z (Pan/Tilt/Zoom) IP Colour Camera:	Numbers	22	3102.01	68244.22
2	Supply, Installation of PVC Box water proof at Camera end	Numbers	22	1229.58	27050.76
3	Supply and installation of fully functional multipurpose digital key board (Joy stick) compatible with PTZ cameras as per RDSO Specification No. RDSO/SPN/TC/65/2021 Rev 6.0	Numbers	2	31183.51	62367.02
4	Supply and Installation of 32 Channel NVR with minimum 08 SATA interfaces (Should support minimum 10 TB HDD in one slot) as per RDSO/SPN/TC/65/2021 Version 6.0 or latest.	Numbers	1	250378.78	250378.78
5	Supply and installation of 10 TB NVR Ready Surveillance Hard Disk as per TS of ANNEXURE-Make: Toshiba/Westen Digital/Seagate or Similar	Numbers	8	46914.68	375317.44
6	Supply, Installation, Testing and commissioning of Video System software (Per Camera basis) for the server hardware as per TS.	Numbers	22	4355.91	95830.02
7	Supply of CAT-6, STP Patch cord 2 Mtr Long. Make- D link, Finolex or similar	Numbers	100	300.61	30061
8	Supply & installation of 6 U Industrial Rack, Make- Enter or similar	Numbers	4	7920.88	31683.52
9	Supply of HDPE duct 40/33 mm as per RDSO/SPN/TC/45/2013 Rev2.0 with latest amendments. For each Km of HDPE duct following items are to be supplied a) End Plug - 2nos , b) cable sealing plug-2 no c) Plastic couplers slip fit / push fit type-2 nos d) End plugs to be provided along with drum-2 nos	Kilometre	2	138820.03	277640.06
10	Supply & testing of "Swaged type GI tubular pole 9 mt long" conforms to IS - 2713/1980 with following technical specification : - a) Length of section : - Bottom - 5 mt, Middle - 2 mt, Top - 2 mt b) Outside diameter and thickness of section : - Bottom - 114.3 x 4.50 mm, Middle - 88.9 x 4.05 mm , Top - 76.1 x 3.25 mm.	Numbers	18	33295.34	599316.12
11	Supply and installation of 5 KVA on line UPS with minimum 2 Hrs backup time as Specification: 1) IGBT-PWM within built isolation transformer. 2) I suitable for single phase AC input 160v-260v and single phase AC output 230V+/-1% 50Hz, 3) Min VHA: 16000VAH, 4) SMF-VRLA confirming to JISC:8702 (Pt. I, II, III) without trolley but with rack Make:-APC/Delta/Microtek or similar.	Numbers	1	274737.54	274737.54
12	Supply Installation testing and Commissioning of 24 port rack mounted Fibre full loaded LIU with 24 SC adopter 4x6 fully loaded SC- SM Fibre LIU/FMS Box Single mode, Make D-link/Digisol or similar.	Numbers	5	20748.07	103740.35



13	Supply of OFC patch cord, SC- LC, Single mode, 5 mtr. Long	Numbers	10	149.88	1498.8
14	Supply of ACDB for AC distribution Box with Lock and key arrangements and ISI Mark MCBs of various ratings as per TS.	Set	5	4898.99	24494.95
15	Supply, Installation, Testing and commissioning of Type-II (Aggregator Switch) switches and all accessories required for their installation as per TS	Numbers	2	297689.6	595379.2
16	Supply, Installation, Testing and commissioning of Layer 2 switches and all accessories required for their installation as per TS	Numbers	2	297689.6	595379.2
17	Supply and installation of Earthing arrangement for Telecom equipment as per RDSO specification RDSO/SPN/197/2016 Version 1.0 or latest	Set	2	43217.11	86434.22
18	Micro boring as per technical specification. This includes transportation of HDT machine with accessories to site, preparation of site, boring and placing of HDPE pipe/Pulling of cable etc. Cost of fuel and all other accessories to be borne by the contractor.	Metre	1200	2176.85	2612220
19	All works of excavation of cable trench 1.0 Meter deep, 0.3 Meter wide on pucca platform/on Road for road crossing and restoration of the platform/Road surface to original condition with contractor's material, after laying of GI/DWC pipes and then re-filling the trench.	Metre	600	722.27	433362
20	Erection, concreting of flange mounted hot dip galvanised octagonal pole of 7.0 mtrs. Length made from 4mm thick MS sheet, complete with window at a suitable height (with accessories internal cable terminal, loop-in loop out arrangement 7& 5A MCB suitable for light fitting) from the base with flush cover for cable termination block etc. and galvanised base plate of size 310mmx20mm and 2 nos, of 12mm dia G.I. earth bolt with 2 nos, washer and nut welded at a height of pole as per required, on the RCC Pedestal.	Numbers	18	7719.96	138959.28
21	Supply and fixing of PVC conduit pipe 25 mm with accessories such as bend, tee, coupling, elbow, saddle, clamp, screw, PVC/ wooden plugs etc. on walls, angle or on rail of platform shelter etc. MS clamp made of 3 mm MS flat to be manufactured and supplied and fixed to clamp the PVC pipe or angle/ rail run of platform shelter. The clamp should be painted with red oxide primer over which two coats of aluminium paint to be given. Where ever necessary jumper holes to be made in wall and above PVC pipe threaded and wall to be repaired to its original condition.	Kilometre	1	63723.24	63723.24

Sub Total

6747817.72

Item - 5	Provision of OFC based Railnet				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)



1	Supply of 8 ports GPON-OLT Device for Central Distribution Points. GPON-OLT should be complies with ITU-T G.984/G.988 and meets requirements about GPON OLT in Network Access Technical Requirements. It should support the Asymmetric uplink 1.25Gbps /downlink 2.5Gbps PON transmission rate as per TS-1. All the uplink ports should be 10GE. Its coupling ratio should be up to 1:128	Numbers	1	305681.94	305681.94
2	Supply of GPON ONT/ONU Device for End User Premises having 1GE+1FE+1POTS+WIFI AC (Support 2.4Ghz and 5Ghz) and designed for fulfilling FTTH. It should be fully compliant with technical regulations such as IEEE802.3ah and technical requirement of GPON	Numbers	60	6603.14	396188.4
3	Supply of C++ GPON SFP Module For GPON-OLT. It should be compliant with ITU-T G.984.2 standard	Numbers	60	5380.56	322833.6
4	Supply of Ratio Coupler for Optical Power Splitter on main core having 95:05/90:10/80:20/70:30/50:50 as per site requirement	Numbers	100	282.4	28240
5	Supply of PLC splitter for Optical Power Splitter on edge having ratio 2:2/2:4/2:8/1:8 as per site requirement	Numbers	20	1835.08	36701.6
6	Supply of Patch cord for Pigtail to connect SFP modules or ONT of the type SC-SC / SC-LC as per site requirement	Pair	90	149.88	13489.2
7	Supply of 19 U Racks for GPON OLT for Central Location	Numbers	1	35113.45	35113.45
8	Supply of 6 U Rack for L2 Switch and ONT at remote locations	Numbers	2	9038.32	18076.64
9	Supply of Shielded Twisted Pair CAT-6 24 AWG 100 MHZ Armoured (CAT6 STP cable that supports Gigabit Ethernet (1000 Base-T) standard. Operates at a bandwidth up to 250 Mhz. Complies TIA/EIA-568.C.2 Category 6 ISO/IEC Class E as per TS-11 .Make- D-Link, DIGISOL & FINOLEX.	Metre	1220	92.39	112715.8
10	Supply of Joint Closure box (Unloaded) to terminate OFC link for end user and forward link. It is require for keeping Ratio coupler and splitter properly	Numbers	10	6584.07	65840.7
11	Supply of Joint Closure Box (2 ports) for ONT with dust-proof device to prevent dust from entering fiber optic panels	Numbers	12	940.87	11290.44
12	Supply of 2 core Optical fibre Cable (Armoured) for end user connectivity from splitter.	Metre	1500	45.51	68265
13	Supply of 2 core Optical fibre Cable (Unarmoured) for end user connectivity from splitter	Metre	1500	15.96	23940
14	Supply of X-Clamp OFC Loop Holder to roll the excess fibre after fibre laying	Numbers	4	4501.92	18007.68
15	Supply of Ceramic cup for passing the fiber through its hole and to tie with electrical pole wherever required	Numbers	10	18.27	182.7
16	Supply of Tie for Ceramic Cup used to hold the fibre as support while laying fibre overhead as per TS-19. (Set/Package of 100 pieces)	Set	30	341.74	10252.2
17	Supply of Joint Closure Box for midway joining of OFC	Numbers	15	188.03	2820.45



18	Supply of Installation of 1 KVA/ Online UPS System, back up time 1 Hours, 1 Phase input & 1 Phase output with 3x100AH/130AH SMF external battery all accessories set with trolley and instruction of Engineer in charge at site.	Numbers	2	86433.3	172866.6
19	Supply of Automatic Changeover for 2 (Two) UPS	Numbers	2	10127.51	20255.02
20	Supply & Installation of Chemical Earthing for Equipment using Earthing Electrode, Back Fill Compounds(BFC) GI Strip	Numbers	1	46817.87	46817.87
21	Supply and installation of NMS for the GPON system with licence along with supply of high end Desktop for installation of NMS	Numbers	1	564624.01	564624.01
22	Supply of 2MB Trunk card compatible with Avaya Digital Exchange Model	Numbers	2	36639.93	73279.86
23	Supply OFC power metre	Numbers	2	9809.16	19618.32
24	Over Head OFC laying	Metre	1000	36.98	36980
25	Splicing of OFC	Numbers	300	256.3	76890
26	Installation of Active Items	Numbers	40	1709.32	68372.8
27	Installation of Passive Items	Numbers	65	854.36	55533.4
28	Installation of Racks	Numbers	4	854.36	3417.44
29	Indoor wiring of Cat-6 & OFC through casing capping/PVC conduit pipe of suitable size as per site requirement. All the materials required for this Job is to be supplied by contractor	Numbers	90	801.07	72096.3
30	Testing & Commissioning GPON- OLT	Numbers	1	42728.18	42728.18
31	Trenching in normal soil to a depth of 1.2 metre and 300 mm wide and backfilling after laying of OFC/pipe/duct as technical specification	Metre	1500	175.49	263235

Sub Total

2986354.60

Schedule	10-VANDE BHARAT Mechanical (NS ITEM)				
Item - 1	VANDE BHARAT Mechanical (NS ITEM)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply,installation and Commissioning of EOT crane,Cap 25/5 Ton.	Numbers	2	6614413.92	13228827.84
2	Supply,installation and Commissioning of Automatic Coach Washing Plant (ACWP) (On Turnkey Basis).	Numbers	1	21345069.75	21345069.75
3	Drop Pit Table	Numbers	1	38412318.83	38412318.83
4	Supply,installation and Commissioning of Set of synchronized lifting jacks electrically operated of 25 T capacity.	Set	4	3560166.14	14240664.56
5	Supply,installation and Commissioning of Rotary screw electrical driven air compressor (500cfm) 10 kg/cm2,piping,dryer etc.	Set	1	2789109.1	2789109.1
6	Supply, installation and Commissioning of Automated Computerized -SCADA Based Rake Test ring.	Numbers	1	347134.93	347134.93
7	Supply,installation and Commissioning of Computerized SCTR.	Numbers	1	1145202.58	1145202.58
8	Supply, installation and Commissioning of Diesel Hydraulic Road Mobile Crane, Articulating type,15 T	Numbers	1	2716968.89	2716968.89
9	Supply, installation and Commissioning of Fork lift truck capacity -3 Ton.	Numbers	1	1203898.29	1203898.29



10	Supply, installation, Commissioning and of 50 KLD capacity Sewage Treatment plant under turnkey basis.	Numbers	1	2286001.41	2286001.41
Sub Total					97715196.18
Schedule	11-Next Generation Freight Maintenance				
Item - 1	Execution of work as per DSR 2021 Ver-2				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1	All kinds of soil.	cum	16400	200.94	3295416
2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	5000	177.9	889500
3	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	2515	1513.97	3807634.55
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
4	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	1075	5159.44	5546398
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
5	Foundations, footings, bases for columns	Sqm	870	215.72	187676.4
	REINFORCED CEMENT CONCRETE				
	CAST IN SITU				
6	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15 degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with, 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	90	7509.1	675819
	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form for				



7	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	8500	215.72	1833620
8	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	875	426.17	372898.75
	STEEL REINFORCEMENT				
	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
9	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	930500	62.8	58435400
	DESIGN MIX CONCRETE				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified				
	minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works upto plinth level				
10	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	8175	6083.19	49730078.25
	All works above plinth level upto floor V level				
11	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	40	7219.72	288788.8
	MASONRY WORK				
	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
12	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	100	4664.25	466425
	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
13	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	680	5962.91	4054778.8
	STEEL WORK				
14	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	224115	78.42	17575098.3



	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators, side /top/centre hung, with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, including priming coat of approved steel primer, but excluding the cost of other fittings, complete all as per approved design, (sectional weight of only steel members shall be measured for payment).				
15	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Kg	22500	123.05	2768625
	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
16	Hot finished seamless type tubes	Kg	410500	118.35	48582675
17	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	Kg	42000	61.99	2603580
18	Providing and fixing bolts including nuts and washers complete.	Kg	9600	98.17	942432
	Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows, all complete with :				
19	4.0 mm thick glass panes (weight not less than 10 kg/sqm)	Sqm	1120	658.7	737744
	FLOORING				
20	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete.	cum	4230	5575.2	23583096
	ROOFING				
	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
21	110 mm diameter	Metre	2590	223.99	580134.1
	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Shoe (Plain)				
22	110 mm Shoe	Each	172	81.22	13969.84



	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel roovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866. The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
23	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	Sqm	3600	826.09	2973924
24	Providing and fixing pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer- in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	9420	470.44	4431544.8
	Providing & fixing at all heights, levels and locations colour finish Aluminium alloy roofing sheets of alloy IS designation 31500, temper Hx8 conforming to IS 737 and dimensions as per IS code 2676 with characteristics of good formability and corrosion resistance. The profile sheets shall be fixed to truss members in slope or required pitch or curvature with Hex cap headed self drilling/tapping Stainless steel screws M6, 50 mm long with 3 mm EPDM seal washer etc. all inclusive of labour, scaffolding, T&P and sundries etc. complete as per				
	directions of the Engineer-In- Charge. (Cost of truss/frame work shall be paid separately).				
25	0.91 mm, Aluminium Color coated troughed profile with center to center pitch of 200 mm, depth of 32 mm, overall profile width 1092 mm, cover width 1000mm.	Sqm	29900	1166.58	34880742



	Providing and fixing of Pre-coated colour or mill finish Aluminium Roofing Accessories in 0.71 mm thickness ,Alloy 31500 (IS designation) [Aluminium Alloy (AA) 3004 (ISO designation)] For color, coating shall be 5-7 microns epoxy primer on both sides of the sheet and polyester top coat 15-18 microns, using self drilling/tapping SS screws of size 6 x 50mm with 3mm thick EPDM seal and SS plain washer complete :				
26	Precoated/mill finish aluminium Ridges plain (500- 600mm)	Metre	600	679.15	407490
27	Precoated/mill finish aluminium North light curves	Metre	3600	680.59	2450124
28	Precoated/mill finish aluminium Gutter (600 mm over all girth)	Metre	1200	1132.04	1358448
	FINISHING				
	CEMENT PLASTER (IN COARSE SAND)				
	12 mm cement plaster of mix :				
29	1:4 (1 cement: 4 coarse sand)	Sqm	4320	215.23	929793.6
	EXTERIOR FINISHING				
	Finishing walls with Acrylic Smooth exterior paint of required shade :				
30	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	Sqm	2160	116.88	252460.8
	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
31	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture	Sqm	1120	98.11	109883.2
	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat,				
	preparation of surface, etc. complete.				
32	On concrete work	Sqm	2160	138.98	300196.8
	ROAD WORK				
	ROADS				
33	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	Sqm	6000	126.45	758700
	Supplying and stacking at site.				
34	90 mm to 45 mm size stone aggregate	cum	1380	1357.33	1873115.4
35	63 mm to 45 mm size stone aggregate	cum	600	1138	682800
36	53 mm to 22.4 mm size stone aggregate	cum	450	1287.03	579163.5
37	Moorum	cum	600	622.28	373368



38	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density	cum	3030	606.51	1837725.3
	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.				
39	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	2400	125.74	301776
	Providing and applying tack coat using bitumen emulsion conforming to IS:8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.				
	Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702, prepared by using mastic cooker and laid to required level and slope, including providing antiskid surface with				
	bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface protruding 1 mm to 4 mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification).				
40	40 mm thick	Sqm	6000	814.78	4888680
	MISCELLANEOUS				
	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.				
41	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	450	7014.53	3156538.5



	Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D- 4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the				
	cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).				
42	Overhead informatory road signage	Sqm	20	3929.61	78592.2
43	Providing and applying 2.5 mm thick road marking strips (retro- reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	Sqm	360	436.99	157316.4
44	Supplying and stacking of hard stone (for stone pitching) 22.5 cm thick at site.	cum	8460	743.11	6286710.6
45	Dry stone pitching 22.5 cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20 cm including preparing the bedding surface etc. all complete. (Payment for Stone to be made separately).	Sqm	28200	380.28	10723896



46	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately). (Note:- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately).	cum	5640	5798.6	32704104
	WATER SUPPLY				
	C.P.V.C. PIPES				
	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc.-Internal work - Exposed on wall				
47	25 mm dia nominal bore	Metre	320	344.09	110108.8
48	32 mm dia nominal bore	Metre	320	394.82	126342.4
49	40 mm dia nominal bore	Metre	240	507.98	121915.2
50	50 mm dia nominal bore	Metre	1800	625.71	1126278
	C.I. SLUICE VALVES/ FIRE HYDRANTS & FIXTURES				
	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :				
	100 mm diameter				
51	Class I	Each	3	2870.67	8612.01
	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :				
52	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	3	7077.01	21231.03
	AIR VALVE & WATER METER (BULK TYPE)				
	Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket :				
53	100 mm dia pipes	Joint	40	67.36	2694.4
	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :				
54	100 mm dia C.I. Double Flanged Pipe	Metre	200	1287.63	257526
	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329				



55	100 mm dia Ductile Iron Class K-7 pipes	Metre	100	785.35	78535
Sub Total					341322123.73
Schedule	12-Next Generation Freight Maintenance				
Item - 1	Execution of work as Schedule.(EARTH WORK)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, platforms etc. with contractor's own earth conforming to Soil Quality Class SQ1/SQ2/SQ3, after preparation of foundations as applicable, benching in existing banks wherever required, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as per RDSO Specifications: RDSO/2020/GE: IRS-0004 with latest correction slips. Note: 1) Foundation preparation, Benching including additional earthwork on account of this, wherever required, shall be paid extra under relevant schedule item for benching. 2) Payment for Earthwork under this item shall be made based on the cross section measurements calculated (i) with original ground profile of existing bank based on initial ground levels before doing benching and (ii) final profile of the bank worked out with final levels as per prevailing guidelines.				
1	Using Soil Class SQ1	cum	128500	256.24	32926840
Sub Total					32926840.00
Schedule	13-Next Generation Freight Maintenance				
Item - 14	Execution of work as Schedule (Blanketing)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Manufacturing of blanketing material by wet mixing of naturally available suitable soil including additional blending with naturally available or manufactured material as required to achieve specified gradation, in designed proportion in Pug mill or wet mix plant to have uniform gradation including all incidental transportation, laying over finished formation in uniform layer(s) with motor grader, compaction with suitable vibratory roller to specified density and finishing to correct profile, complete as per RDSO Specification No. RDSO/2020/GE: IRS-0004 with latest correction slips.	cum	22500	1832.41	41229225
Sub Total					41229225.00
Schedule	14-Next Generation Freight Maintenance (civil)				



Item - 1 Next Generation Freight Maintenance (Soil Investigation)					
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30cm), including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed where necessary in River bed area including standing/flowing water with all necessary arrangements except making of platform under water which shall be paid under relevant item of SOR.				
1	0m to 10m	Metre	40	2460.6	98424
2	10m to 20m	Metre	40	2522.8	100912
3	20m to 30m	Metre	40	2741.32	109652.8
4	30m to 40m	Metre	4	2788	11152
	Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:1888 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit.				
5	Plate size 45cm x 45cm	Each	1	180843.48	180843.48
6	Conducting in situ Vane shear test for soil as per IS:4434	Each	2	2922.8	5845.6
7	Conducting determination of California Bearing Ratio as per IS:2720	Each	2	1924.75	3849.5
8	Conducting standard penetration test as per IS:2131 at approximate 1.5m intervals in bore holes, as directed by the Engineer in charge	Each	2	471.14	942.28
9	Collection of water samples at required intervals	Each	2	987.01	1974.02
	Conducting laboratory Tests on collected soil samples as per relevant IS code				
10	Moisture Content/Dry Density	Each	2	1209.3	2418.6
11	Atterberg Limits	Each	2	1322.71	2645.42
12	Specific Gravity	Each	2	787.4	1574.8
13	Grain size analysis including Hydrometer analysis	Each	2	1992.16	3984.32
14	Direct Shear Test	Each	2	2865.12	5730.24
15	Natural Density	Each	2	2333.69	4667.38
16	Consolidation Test	Each	2	2981.11	5962.22
17	Unconfined Compression Test	Each	2	3263.68	6527.36
18	Tri-axial Test	Each	2	3126.93	6253.86
19	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	2	8353.6	16707.2
20	Dewatering of natural or accumulated water from any location. Payment to be done for Horse power of pump multiplied by pumping hours.	HP Hour	1000	66.78	66780



	Hiring of machinery for minor miscellaneous works for short duration including operator/driver, fuel, lubricants and consumable. The contractor shall arrange all statutory permits as required by rules and regulations prevailing in the area of work. Payment shall be made for actual working hours at site.				
21	JCB Backhoe Loaders 3DX Plus or similar with minimum 1.10 cum bucket capacity	Hour	100	946.34	94634
22	Hydra or similar tyre mounted Pick-n-Carry crane of 12T capacity for misc. works of handling of material	Hour	200	1756.97	351394
23	Tractor with Trolley for local transportation or other misc. works.	Hour	200	417.98	83596
Sub Total					1166471.08
Schedule	15- Next Generation Freight Maintenance (civil P.WAY)				
Item - 1	Next Generation Freight Maintenance (P.WAY)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	Insertion of rails of all types & length in track, laid on any type & density of sleeper to the specified gauge under traffic block. Rates include fastening of rail with sleepers with standard set of fastenings and fixing of fish plates and bolts or, if required, providing gap for welding and stacking of released material without infringement within 250m as directed by Engineer-in-Charge. Note: Rail drilling and cutting to be paid separately.				
1	For Through Rail Renewal work	TRM	6000	41.92	251520
	Through Sleeper Renewal (TSR) with PSC sleepers involving removal existing sleepers of any type along with fittings from track, insertion of PSC sleepers lying along the cess / formation / slope / toe within 5 metres height with all fittings to specified spacing, gauge and squareness, one round of through packing to make track fit for 20 kmph speed, dressing of ballast to standard profile, all in accordance with the latest provisions of IRPWM and stacking of all released material neatly at specified places within an average lead of 100 m as directed by Engineer in-charge.				
2	For PSC wider base sleepers - For location of work involving deep screening. (deep screening to be paid separately)	Each	200	181.22	36244
3	Lubrication of ERCs and its liner contact area by removal of ERCs and Metal / GFN liners in rail panel, cleaning of rust / scale of ERC, Metal / GFN liners & SGCI insert by using wire brush, scrapper / sand emery paper etc supply and application of graphite grease, as	ERC	36960	5.05	186648



	prescribed by Railway for under side of liners & corresponding area of rail foot & SGCI insert with ERCs and re-fixing the same as per procedure prescribed in latest edition of IRPWM with contractors grease and all other tools & plants complete and as directed. Note: Each ERC in this item shall constitute 1 ERC and its Liner Contact area.				
	Under Traffic Block: Dismantling of existing BG turnouts, diamond crossings and derailing switches with all types of rails and sleeper layout, removing rails, switches, crossings, sleepers & fastenings, leveling of ballast to correct profile & stacking all the released materials, sleepers, fastenings, rails, switches & crossings including segregating & stacking at specified locations in a neat and countable manner, within the lead of 250m & all lift, clear of infringements, crossing of track, if any complete, as directed. Note: 1. This item shall be operated only when existing turnout is replaced either with new turnout in case of TTR or with plain track when existing turnout is no more required at that location. 2. Rail cutting will be paid extra under relevant item. 3. Laying of new turnout or plain track on prepared ballast bed, as required, shall be paid separately under relevant item.				
4	1 in 8½ Turnout (Under Traffic Block)	Set	2	28719.5	57439
	Assembling all types of Switches on staging, clear of infringements, to correct gauge and alignment as per standard drawings with all types of rail sections over PSC sleepers at specified locations, duly leading rails, special sleepers, switches with a maximum lead of 500m, all lift & crossing of track as required including cutting, drilling, fixing of all components, fittings etc. with housing of tongue rails as per requirement of signaling including lubrication of fittings/fastenings, complete in all respect. Note: Required P.Way fittings shall be supplied at SSE/P.Way stores.				
5	1 in 8½ Turnouts	Set	4	16828.4	67313.6
6	1 in 12 Turnouts	Set	7	19343.76	135406.32
7	Derailing Switch	Set	5	7819.76	39098.8
	Laying and linking of turnouts of all types including diamond crossings & Derailing switches with 52Kg / 60Kg rail section on PSC sleepers on prepared ballast bed for New lines or during total closure of section at indicated location as per standard drawing, duly leading sleepers, rails, switches, crossings, fastenings including rail cutting, drilling, fixing of all components, fittings with housing of tongue rails as per requirement of signaling, preparing ballast bed, filling and spreading of ballast as required, linking of turnout with track, attending track parameters including lifting, providing one round of packing to make track fit for 20 kmph speed including lubrication of				



	fittings/fastenings, complete as directed by Engineer in-charge.				
8	1 in 8½ Turnouts	Set	4	41190.64	164762.56
9	1 in 12 Turnouts	Set	7	47770.49	334393.43
10	Derailing Switch	Set	5	9096.23	45481.15
	Manual deep screening of Plain track/turnouts as per procedure prescribed in IRPWM, June 2020 or latest, on PSC sleepers of any density and throwing away screened muck arising out of screening on toe of bank or on cess, if low or on spoil banks above top of cutting (including throwing and leveling, if required beyond minimum 5m from the edge of cutting which are up to 3m deep or alternatively carting it up to 50m for disposing it off beyond cutting or platforms) as per direction of Engineer in-charge, including cutting cess for effective drainage on both sides, one round of kutcha packing with screened ballast and further attending to track parameter to make track fit for 20 kmph speed complete in all respect. Note : Payment shall be made for length along main line only for turnouts.				
11	Depth of 300 mm below bottom of sleeper - For Plain Track :	TRM	4000	527.15	2108600
12	Lifting and packing for regrading the existing PSC sleeper track to required height / level in stages not exceeding 75mm or part thereof at a time, providing permissible ramp for the track, insertion of moorum / sand / stone ballast uniformly under the existing track and placing the same to safe approved gradient, gauge, cushion including levelling and one round of through packing to allow train movement at restricted speed of 30 kmph for a specified length with all leads & lifts and fixing, marking, painting rail level pegs at every 30m interval. Note: Lifting of track shall be done in stages as per procedure prescribed in latest edition of IRPWM to get the proposed final level as per approved working profile, as directed by Engineer in- charge.	TRM	1000	162.08	162080
13	Extra for additional lift over 75mm for every 50mm lift or part thereof up to 275mm for item nos. 083010 for each TRM.	TRM	1000	25.13	25130



14	Boxing and profiling of ballast as per procedure prescribed in latest edition of IRPWM including cess dressing on both sides of track. The work will include removing excess ballast from track and putting the same in crib and shoulder by leading to a maximum of 50m including crossing of track, dweeding on ballast section etc and as directed by Engineer-In charge.	TRM	3000	23.81	71430
15	25mm gap 'in-situ' welding during traffic block using Railway's welding portion & Welder and finishing of weld to meet the prescribed tolerances and pass all stipulated tests with all required labour, materials, consumables, tools, equipments etc. to complete the work in all respect as per IR's "Manual for Fusion Welding of Rails by Alumino - Thermic Process" with latest correction slips, including marking of welded joint, painting weld collar with anticorrosive paint, restoration of track near weld joint to original position and fixing of joggled fish plate at new weld, to be removed after passing of weld in USFD test as directed by Engineer in charge. Note: 1. Only welding portion and related accessories as per Annexure - I and Welder shall be supplied by Railways. 2. Hydraulic Weld trimmer shall be used for chipping and profile Grinder for finishing. 3. Required nos. of Joggled fish plates shall be supplied by Railway at nearest P. Way Stores and the same shall be returned at nearest P. Way Store or at other location as per direction of Engineer-in-Charge after release from track.	Each	500	1491.57	745785
16	Dismantling of existing LWR/SWR track of any structure, removing rails, sleepers, fish plates, cutting of rails, segregation and stacking of released Rails, Sleepers and fitting at nominated location in countable manner within a free lead of 500m, levelling of ballast to correct profile for laying new track over it, all as per direction of Engineer-in-Charge.	TRM	1000	169.71	169710
	First or Second Through Packing of track of all sleeper density including giving a general lift, as desired to eliminate sag after Deep Screening work, lifting of track, lowering of track and major realignment of curves and formation rehabilitation as per procedure prescribed in latest edition of IRPWM. Note: General lift is normally 25 mm and isolated lift may be up to 50 mm.				
17	For PSC Sleeper Track with Sleeper Density of 1540	TRM	4000	113.34	453360
	Third or subsequent Through Packing of track for all sleeper density including picking of slacks, as required after second through packing, subsequent to Deep Screening work as per procedure prescribed in latest edition of IRPWM. This item can also be used after lifting/regrading/realignment works also. Note: General lift is normally 25 mm and isolated lift may be up to 50 mm.				
18	For PSC Sleeper Track with Sleeper Density of 1540	TRM	4000	87.19	348760



	Pulling back of rails / panels on running track for creep adjustment or other incidental activities by removing and re-fixing all the fittings, and fastenings including squaring of sleepers and slack picking of displaced sleepers, as directed.				
19	For rails up to 13 metre length	TRM	1000	32.66	32660
	Slewing and realigning of curves under traffic line block condition, as directed by Engineer in-charge with contractor's labour, tools & plants, as required with general lift up to 25mm including one round of through packing, ballast profiling, loosening/tightening of P.Way fittings, if required and other incidental works. Note: Payment will be made based on average slew calculated in each 50m length of track by averaging absolute values of positive and negative value of slews.				
20	PSC Sleeper track - Maximum slew up to 50mm	TRM	1000	113.67	113670
21	PSC Sleeper track - Maximum slew more than 50mm and up to 100mm	TRM	500	143.33	71665
22	PSC Sleeper track - Maximum slew more than 100mm and up to 150mm	TRM	500	165.63	82815
23	PSC Sleeper track - Maximum slew more than 150mm	TRM	500	189.94	94970
24	Replacing existing glued joint rail with cut rails or with glued joint rail or insertion of glued joint by cutting existing track under traffic condition by cutting rails, refixing with all rail sleeper fastenings and providing required gaps for carrying out welding as an alternative to drilling holes or joining rails with fish plates duly drilling holes as required including stacking of released material and as directed by engineer in-charge. Note: (1) Drilling holes & rail cutting will be paid separately. (2) Transportation of materials to the site of work from supply points, if more than 250m, shall be paid separately.	Each	120	1632.39	195886.8
	Anti-corrosive painting of rail on running track of any sleeper density on web, foot etc. including liner contact area (excluding bottom of foot) and fishing plane as per requirement with two coats of thickness of 100 microns each by bituminous black paint confirms to IS-9862 of reputed make including painting of liners, ERCs and including surface preparation, as a complete job as per procedure prescribed in latest edition of IRPWM Note: 60% of payment shall be made if painting on only gauge face side is done.				
25	For 52 Kg Rails	TRM	6000	77.32	463920
	Quick cutting with abrasive rail cutter of all types of rail sections including wear resistant, head hardened rails up to 110 UTS, with contractors tools & plants, equipment, consumable with all lead & lift etc. complete as directed by Engineer in-charge. Abrasive Rail Cutter will be as per RDSO Specification No. TM/SM/1 (Rev. 01 of 2012) with latest status of RDSO; Rail				



	Cutting Wheel Abrasive Disc will be as per RDSO				
	Specification No.TM/SM/2 (Rev. 01 of 2020)				
26	52 Kg - 90 UTS - Outside Track	Each	10	241.83	2418.3
27	52 Kg - 90 UTS- On Running Line	Each	20	269.46	5389.2
	Drilling holes of 16 mm to 32 mm dia. with Rail Drilling machine including chamfering with appropriate chamfering tools in all types of rail section with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Rail Drilling Machine will be as per RDSO Specification No. TM/SM/3, dated 24.04.1991.				
28	On Running Line	Each	800	65.37	52296
	Loading of rails of any section and length up to 13 metres in Wagons / Truck / trailer including lead up to 50 metres and lift up to 5 metres.				
29	In Wagon where mechanical handling is possible and traffic block is not required or in Truck/trailer.	MT	312	139.04	43380.48
	Loading of tongue rail, stock rail, switch assembly and crossings of any section and length, SEJ, Glued joint etc. with / without P.Way fittings and fastenings, in Wagon / Truck / trailer including lead up to 250 metre and lift up to 5 metre.				
30	In Wagon where mechanical handling is possible and traffic block is not required or in Truck/trailer.	MT	300	135.01	40503
	Loading, leading and unloading of 52Kg / 60Kg rail up to 13 metre length by Railway's Rail Dolly / Dip Lorry to the nominated location under traffic with line protection in case road carriage is not possible with different lead with a lift up to 5 metre during block period.				
31	For lead up to 500 metre.	MT	312	347.09	108292.08
32	For lead beyond 500 metre and up to 1 Km.	MT	312	448.01	139779.12
	Unloading of rails of any section and length up to 13 metre, in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/trailer including lead up to 50 metre, lift up to 5 metre and stacking in prescribed manner.				
33	From Wagon where mechanical handling is possible and traffic block is not required or in Truck / trailer.	MT	312	101.85	31777.2

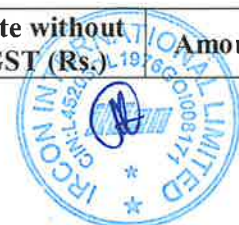


	Loading of 52kg / 60kg PSC normal line and special sleepers up to 2.75 metre length in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track with free lead up to 250 metre and lift up to 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
34	In Wagon where mechanical handling is possible and traffic block is not required or in Truck / trailer	MT	1400	111.23	155722
	Loading of 52kg / 60kg PSC line and special sleepers beyond 2.75 metre length including existing fittings and fastenings in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/trailer with crane or any other means including crossing of one track with free lead up to 250 metre and lift up to 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
35	In Wagon/Truck / trailer where mechanical handling is possible and traffic block is not required.	MT	480	134.65	64632
	Loading, leading and unloading of all types of P.Way fittings and all other miscellaneous material except Rails, sleepers, switches, crossings, SEJs and Glued Joints by road vehicles for different leads. Note: Lead shall be the shortest motorable road length between the points of loading and unloading.				
36	Lead up to 5 Km	MT	120	150.34	18040.8
37	Lead beyond 100 Km and up to 150 Km	MT	120	834.57	100148.4
	Transportation of Rails, sleepers, switches, crossings, SEJs and Glued Joints by road vehicles for				
	different leads. Note: 1. Lead shall be the shortest motorable road length between the points of loading and unloading. 2. Loading and unloading shall be paid extra under relevant items.				
38	Lead up to 5 Km	MT	2200	45.99	101178
39	Lead beyond 20 Km and up to 30 km	MT	2200	191.55	421410



	Unloading of 52kg / 60kg PSC line and special sleepers up to 2.75 metre length in Depot / Station / Mid-section between stations in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track and lead up to 250 metre & lift up to 5 metre with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
40	From Truck / Trailer	MT	1400	97.44	136416
	Unloading of 52kg / 60kg PSC special sleepers beyond 2.75 metre length in Depot / Station / Mid-section between stations in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track and lead up to 50 metre & lift up to 5 metre with contractor's labour, tools & plants, machinery, consumables etc. Note: In case of any damage to sleeper during loading, penalty @ 50% of the all inclusive cost of sleeper shall be levied.				
41	From Truck / Trailer	MT	480	104.73	50270.4
	Unloading of Switches / Crossings / SEJ Rails / Glued Joints of any rail section and length with or without P.Way fittings & fastenings in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with lead up to 250 metre & lift up to 5 metres.				
42	From DMT - Not involving traffic block or on lines, not opened to traffic	MT	300	151.76	45528
	Hiring of machinery for minor miscellaneous works for short duration including operator/driver, fuel, lubricants and consumable.				
	The contractor shall arrange all statutory permits as required by rules and regulations prevailing in the area of work. Payment shall be made for actual working hours at site.				
43	JCB Backhoe Loaders 3DX Plus or similar with minimum 1.10 cum bucket capacity	Hour	100	666.82	66682
44	Manufacturing and fixing buffer stop with Railway supplied rails, cutting, including bending of rails as per plan, with all contractor's labour, materials, tools, plants etc. and all lead and lift including crossing of track where necessary and as directed by Engineer in charge at site. Note: Excavation, fixing rails in cement concrete, drilling of holes will be paid separately.	Each	6	14681.2	88087.2
Sub Total					8130698.84

Schedule	16-Next Generation Freight Maintenance (civil NS ITEM)				
Item - 1	Execution of work as per NS ITEM (PEB Shed)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)



1	Providing and fixing air roof ventilator wind driven turbine ventilator of approved brand and quality size of roof ventilator is 22" x 28" and fan size 28" ring size 29". Rate includes cost of ventilator with all necessary accessories, materials, tools, plants, , transportation, taxes etc. complete in all respect as per direction of Engineer-in-charge or his authorised representative at site. Roof ventilator shall be approved component authority before installation of air roof ventilator.	Each	348	3093.15	1076416.2
2	Designing, providing, fabricating, painting, transporting, erecting and securing in position structural steel work for pre-engineered building and workshops complete as per specifications, approved shop drawings and / or instructions. Work under this item would generally cover all structural steel work in the Buildings/Workshops, including but not being limited to , columns, stanchions, beams, rafters, purlins, canopy, steel work for cladding & louvers above 4.80m high from floor level, gantry girders bracings, catwalk, ladders & stairs inside & outside, provision for fixing Electrical, Mechanical and S & T equipments. All structural steel	MT	1583	84514	133760719
	shall be supplied painted as per specification of the painting as per Clause 2.0 of Specifications for PEB. Work to include all intermediate stages of activities not defined herein, but otherwise implied for completion of work under this item. Cost to include but not be limited to, all materials including wastage, all consumables, fasteners of all types for both temporary and permanent stages of work, all temporary stays, labour, temporary works including staging, scaffolding, tools, plant and costs of all incidentals and necessary testing of material, workmanship etc. including cost of painting as per specifications. Note:- The above description of item includes the cost of:- 1. Designing, providing and fixing of rainwater gutters and down takepipe of 0.50 TCT pre- painted Galvalume/Zinacalume steel in approved colour all along all edges of the building based on the available surface area and rainfall data. Provision of ventilation system including designing, supply and fixing at required location for 600mm throat edge ventilators along ridge for full length of the shed with required numbers of 600mm dia Turbo vents shall be provided on both side slopes to achieve minimum 5 (five) air changes per hour as per the design approved by railway. 3. Planning and providing architectural and engineering drawings with all details of Workshop including facade, plan, elevation, section, details of gantry girders & crane rail to suit installation of EOT crane, details of roofing, wall cladding, rolling shutters, flooring, cable duct, water supply, drainage, doors, windows, grills, louvers etc as per requirement of individual shed in consultation with Eng - in - charge.				



	Designing and providing detailed drawing of RCC footings, columns, tie beams, beam/plinth beam, flooring, cable ducts, drains, water supply, cubicles, embedded tracks, gas pipe line, roofing, solar light pipe & poly carbonate sheets, wall cladding, industrial flooring, etc as per requirement of individual shed in consultation with Eng - incharge. (The payment for actual executed quantities for note 4. above will be made separately in relevant items. Soil investigation report shall be made available by Railway.) 5. Designing and providing complete structural, fabrication and erection details drawing of all Pre - Engineered - Structures duly proof checked by IIT. 6. Designing, fabricating, providing, Holding Down MS Bolts including all assemblies and accessories that are embedded in concrete work under scope of this work. Bolts shall be of sufficient length to ensure that a minimum 40mm length of threaded portion is embedded in concrete. Threaded portion to be left projecting outside the concrete surface shall be as per requirement. Detailed Description Kept at SN- 488 at PEB specification document				
3	Providing and fixing cast iron water hydrant two way for carriage washing lines including cost of including cost of jointing complete as per approved drawing (Engg drawing no. 250 (INR) used for analysis	Each	300	875.2	262560

Sub Total

135099695.50

Schedule	17-Next Generation Freight Maintenance (civil NS ITEM P.WAY)
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Item - 1	Next Generation Freight Maintenance (NS ITEM P.WAY)
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S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Manufacturing and supplying of 50mm size machine crushed ballast of approved variety (Pakur variety) with all lead. lifts. crossing railway track and stacking on available space/at site as per direction of the Engineer - In-Charge. The rate includes all taxes royalty other incidental charge etc. which may be levied during transportation of ballast up to depot. with contractors labour, tools and equipments all complete.	cum	6000	3862.98	23177880
2	Spreading of ballast in track with all lead, lifts descents crossing of running track etc. uniformly in track with a lead of 250 m. on either side and making standard ballast profile for single line BG and double line BG respectively as per Manual of instruction of long welded rails and as per annexure- 2/2 (A) & 2/2 (C) para 212 of IRPWM/2020 and as per direction of the Engineer-In-Charge at site with contractors labour, tools and equipments.	cum	6000	153.84	923040

Sub Total

24100920.00

Schedule	18-Next Generation Freight Maintenance Electrical General (NS ITEM)
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Item - 1	Execution of work as per Schedule.
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S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply, wiring, testing & commissioning of FL point/ Lamp point/Fan point (loop wiring) with ceiling rose/ angle/ batten holder by FR-LSH PVC insulated and unsheathed single core, 2.5 sq mm flexible copper cable with earth continuity by 1.5 sq mm copper wire to be drawn through rigid PVC conduit pipe not less than 20 mm dia medium gauge including bends, joints etc. as per instruction of Engineer incharge at site. (For Highbay light + Fan)	Numbers	1400	338.2	473480
2	Supply, fixing & laying of 3 Core, 4 sq mm PVC insulated and FR PVC Round Sheathed, Copper Conductor (flexible) industrial cable, 1100 Volt, conforming to IS 694 as per instruction of Engineer Incharge at Site.	Metre	2000	273.75	547500
3	Supply, fixing & laying of 3 Core, 2.5 sq mm PVC insulated and FR PVC Round Sheathed, Copper Conductor (flexible) industrial cable, 1100 Volt, conforming to IS 694 as per instruction of Engineer Incharge at Site.	Metre	2500	180.64	451600
4	Supply, installation, testing & commissioning of 120 watt energy saving, environment friendly & robust Highbay LED with PDC housing suitable for ceiling (Surface/Suspended) mounting with system efficacy upto 150 lm/W as per instruction of Engineer Incharge at Site.	Numbers	900	7882.97	7094673
5	Supply, fixing, testing & commissioning of Polycarbonate/ thermoplastic junction box / loop box of size (155 x 210 x 92) mm, IP 66/67 with terminals and fixed alongwith pole by MS clamp, nut, bolt etc for made connection for loop wiring as per instruction of Engineer Incharge at Site.	Numbers	400	946.97	378788
6	Supply, making and Fixing of GI cage (Antitheft arrangement) by providing GI angle, GI net and GI sheath on top of aprox size (2 ft x 2 ft x 1 ft) with CC work. (for protection of Knee height light)	Numbers	300	572.96	171888
7	Supply, fixing, testing & commissioning of Polycarbonate/ thermoplastic junction box / loop box of size (155 x 210 x 92) mm, IP 66/67 with terminals and fixed alongwith pole by MS clamp, nut, bolt etc for made connection for loop wiring as per instruction of Engineer incharge at site.	Numbers	300	989.15	296745
8	Supply, installation, testing & commissioning of 100 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 65, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection.	Numbers	300	6752.17	2025651
9	Supply, installation, testing & commissioning of 100 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 65, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection.	Numbers	300	1577.23	473169
10	Supply, installation, testing & commissioning of 100 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 65, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection.	Set	200	14694.82	2938964



11	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 400 Amp./415 Volt copper bus bar with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site.	Numbers	40	7107.08	284283.2
12	Supply & erection of Welding terminal housed inside metal clad water proof box having hinged type front cover and provision of screw type connectors with insulating FRP base and AL round bar to be fix on pole with clamp above 01 feet from ground level. (Painting of the box to be done completely. The face of terminal to be coloured with red & black paint)	Set	400	533.97	213588
13	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 320 Amp./415 Volt copper bus bar with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site.	Numbers	300	7107.08	2132124
14	Laying , commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement.	Metre	24500	40	974855
15	Excavation of cable trench (0.3 x 1) mtr below ground level for laying of cable & refilling the soil after digging the earth as per instruction of Engineer incharge at site. Cable should be laid on bedding of height 75 mm sand at the bottom of trench, and covering it with additional sand of height 75 mm and thereafter protecting it by mean of bricks before refilling the soil as per IS 1255.	Metre	1000	107.43	107430
16	Horizontal machine boring of 300 mm dia hole across track/Road/High drain etc. at a depth of 1.0 mtr below of ground level with suitable boring instruments & necessary arrangement and as per technical procedure.	Metre	300	1848.59	554577
17	Supply , laying , commissioning & testing of CI Pipe 200 mm dia Class LA type (IS 1536-2001) to be laid partly along the pole and partly through ground under railway track/road in cable trench for protection of cable with suitable fixing arrangement by MS clamp, nut,bolt,washer etc.as per instruction of Engineer incharge at site.	Metre	200	1169	233800
18	Supply, laying, commissioning & testing of GI pipe 100 mm medium guage with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut, bolt etc. (For protection of cable) as per instruction of Engineer incharge at site.	Metre	600	670.04	402024
19	Supply, laying, commissioning & testing of HDPE pipe 110 mm dia PN-6 grade to be laid partly along the pole /underground with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer and required bend, joints.	Metre	1600	279.32	446912



20	Supply , laying , commissioning & testing of HDPE pipe 50 mm dia, PN-6 grade to be laid partly along the pole/wall with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer etc as per instruction of Engineer Incharge at site.	Metre	3000	51	152790
21	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	3	24120	72360
22	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(a) MCCB FP 400 amps, 36 kA, Ics=100% Icu]	Numbers	12	19191.76	230301.12
23	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated	Numbers	3	38403	115210



	cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(b) Supply & fixing of onload changeover switch 400 amps Four Pole, 415 V 50 Hz, with Sheet Steel Enclosure (with front handle) as per IS/IEC 60947-1&3]				
24	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(c) Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs]	Set	3	4089.5	12268.5
25	Supply, : fabrication, erection, testing, commissioning & painting of floor mounted powder coated	Set	3	5188	15565



	cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(d) Supply, Fixing & Testing of Copper bus bar 800 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)]				
26	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	9	24120	217080
27	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double	Numbers	9	19192	172726



	door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(a) MCCB FP 400 amps, 36 kA, Ics=100% Icu (Main)]				
28	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(b) MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals]	Numbers	18	22296.08	401329.44
29	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(c) MCCB FP 250 amps, 36 kA, Ics=100% Icu]	Numbers	27	11828	319346



30	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(d) MCCB FP 200 amps, 25 kA, Ics=100% Icu]	Numbers	45	10804.27	486192.15
31	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(e) Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs]	Set	9	4090	36806



32	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(f) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)]	Set	9	2575.93	23183.37
33	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	9	24120	217080



34	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(a) MCCB FP 200 amps, 25 kA, Ics=100% Icu]	Numbers	9	10804.27	97238.43
35	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(b) MCCB FP 100 amps, 25 kA, Ics= 100% Icu]	Numbers	18	5964	107358



36	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(c) MCCB FP 63 amps, 25 kA, Ics=100% Icu]	Numbers	27	5276.8	142473.6
37	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(d) MCB FP 40 amps, C-curve, 10 kA, ISI marked, conforms to IS/IEC 60898-1:2002]	Numbers	27	1762	47570



38	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(e) Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs]	Set	9	4089.5	36805.5
39	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(f) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)]	Set	9	2576	23183



40	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	6	24120	144720
41	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(a) MCCB FP 63 amps, 25 kA, Ics=100% Icu]	Numbers	6	5276.8	31660.8



42	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(b) Copper bus bar 100 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)]	Set	6	653.33	3919.98
43	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(c) Supply & installation of Digital Time Switch (Daily and weekly programmable) with 3 pole (3NO) Contactor 140 amp. fitted on mounting plate/DIN rail as per instruction of Engineer Incharge at Site.]	Set	12	27605.51	331266.12



44	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof, rust proof, dust proof, water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(d) MCB SP 6-32 amps, 1 module, 10 kA, Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit)]	Numbers	24	177	4259
45	Supply, fixing, testing & commissioning of IP 66/67 thermoplastic cable junction box / loop box of size (300 x 450 x 170) mm with knockouts & 04 nos terminals	Numbers	90	7282.15	655393.5
46	Supply, fixing, testing & commissioning of IP 66/67 thermoplastic cable junction box / loop box of size (210 x 310 x 116) mm with knockouts & 04 nos terminals	Numbers	25	3982.86	99571.5
47	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	150	2046.74	307011
48	Supply and erection of GI strip of size 25 mm x 6 mm (For earthing connection)	Metre	2500	77.19	192975
49	Supply, erection & commissioning of earth spike made of 16 mm dia 1.8 mt long GI rod & connection metal body with the earth spike rod by 6 SWG GI earth wire with nut, bolt & washer etc	Numbers	300	249.88	74964
50	Supply, installation, testing & commissioning of Wall Air Circulator Fan (Industrial fan), 600 mm sweep (Speed- 1440 RPM, Max. wattage-180 Watt, Air delivery > 16000 CMH, Aerodynamically designed aluminum alloy single piece blades for high air delivery > 16500 CMH, conforms to IS 2997-1964 standards) with suitable fixing arrangement on wall as per instruction of Engineer incharge at site.	Numbers	300	4746.02	1423806
51	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 320 Amp./415 Volt copper bus bar with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site.	Numbers	25	7107.08	177677



52	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 320 Amp./415 Volt copper bus bar with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site. [(a) MCCB FP 200 amps, 25 kA, Ics=100% Icu]	Numbers	25	10804	270107
53	Supply and fixing of Junction box (SHEETMETAL BUSBARS WITH FOUR BARS), door type with 320 Amp./415 Volt copper bus bar with cable entry hole in minimum two side as per instruction of Engineer Incharge at Site. [(b) Supply, fixing, connection & testing of LED indication lamp RYB]	Set	30	171.89	5156.7
54	Supply, laying, installation and commissioning of Cable tray 105/450 MM with all Supporting & Jointing Accessories as per instruction of Engineer Incharge at Site.	Metre	2500	1247.77	3119425
55	"Supply & testing of GI octagonal pole 6 mt long with foundation bolt, loop box of bakelite sheet with one 6A SP MCB and 16 sq mm stud type connector etc. The octagonal pole shall be hot dip galvanized in single dip. Technical specification of pole as following:- Height - 6 mt Top dia (A/F) - 70 mm Bottom dia (A/F) - 130 mm Sheet thickness - 3 mm Base plate (L x B x T) - (200 x 200 x 12) mm Foundation Bolt size (no.x dia) - 4 x 20 dia mm Pitch Circle Dia (PCD) - 200 mm Bolt length - 600 mm Projected Bolt Length - 100 mm . "	Numbers	30	10298.95	308968.5
56	Erection of Street light pole (Octagonal pole) with CC foundation including digging & refilling of earth to a suitable height above ground level in ratio 1:3:6 by cement sand & Chips 19 mm & down including excavation of earth including fixing of SA/DA bracket etc.	Numbers	30	1139.56	34186.8
57	Supply & fixing of 1 mtr GI Single arm bracket (header) and holder with Nut & bolt	Numbers	20	1170.28	23405.6
58	Supply & fixing of double arm bracket 1 mt long with nut & bolt for GI octagonal pole as per instruction of Engineer incharge at site.	Numbers	10	1619.4	16194
59	Supply, installation, testing & commissioning of 100 watt LED street light luminaire with heat resistant glass with connecting lead (IP protection- IP 66 class-I, System efficacy 105 lm/w, Housing- Pressure die cast aluminium powder coated, THD<10%, p.f.>0.95, Surge protection- 5 kV) as per instruction of Engineer incharge at site.	Numbers	50	8753.55	437677.5
60	Supply , erection, testing & commissioning of 16 mt long High Mast Tower with 8 nos. x 250 watt LED luminaries in symmetrical arrangement complete with all accessories (Double drum winch, SS wire rope, integral power tool motor, head frame, junction box, foundation bolt, LED aviation light, Fedder pillar with single dial timer & raising lowering mechanism etc.) including shallow foundation with M20 grade concrete etc. as per instruction of Engineer Incharge at Site.	Set	2	537149.53	1074299.06



61	Laying , commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1.5 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement.	Metre	2800	39.79	111412
62	Excavation of cable trench (0.3 x 1) mtr below ground level for laying of cable & refilling the soil after digging the earth as per instruction of Engineer incharge at site. Cable should be laid on bedding of height 75 mm sand at the bottom of trench, and covering it with additional sand of height 75 mm and thereafter protecting it by mean of bricks before refilling the soil as per IS 1255.	Metre	1100	107.43	118173
63	Dismantling, carrying, shifting and re- installation of existing 16 Mtr. High Mast Tower with Lights, Panels and all accessories.	Numbers	1	85756.91	85756.91
64	Uprooting/Dismantling of HT/LT rail/tubular/octagonal pole without damaging the pole by excavation of earth & refilling of the excavated place with soil as per instruction of Engineer incharge at site.	Numbers	20	296.83	5936.6
65	Dismantling of existing panel board with all accessories like Change over, ACB, MCCB, MCB, bus bar, meter etc without damaging the materials & shifting to SSE store/actual work site by contractor's own arrangement as per instruction of Engineer incharge at site.	Numbers	8	9539.77	76318.16
66	Dismantling of existing LT cable of different sizes without damaging the material and deposition to SSE store through proper challan. All cables to be marked as it to be re- used.	Metre	2000	33	65260
67	Dismantling and removing of old electrical cable junction boxes and deposit the same at SSE/P/IC/NJP's Store.	Numbers	20	54.11	1082.2
68	Dismantling and removing of old welding terminal boxes and deposit the same at SSE/P/IC/NJP's Store.	Numbers	20	42.97	859.4
69	Dismantling and removing of old electrical light fittings and deposit the same at SSE/P/IC/NJP's Store.	Numbers	20	32.63	652.6



70	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	2	24120	48240
71	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(a) MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals]	Numbers	2	22296	44592



72	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(b) Supply & fixing of onload changeover switch 400 amps Four Pole, 415 V 50 Hz, with Sheet Steel Enclosure (with front handle) as per IS/IEC 60947-1&3]	Numbers	2	38403.4	76806.8
73	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(c) MCCB: FP 200 amps, 25 kA, Ics=100% Icu]	Numbers	4	10804	43217



74	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(d) MCCB FP 63 amps, 25 kA, Ics=100% Icu]	Numbers	8	5276.8	42214.4
75	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(d) Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs]	Set	2	4090	8179



76	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(e) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)]	Set	2	2575.93	5151.86
77	Dismantling of existing 2 x 250 KVA capacity BTPN S/S with all electrical accessories panel, transformer etc without damaging the materials & shifting/deposited to SSE store by contractor's own arrangement as per instruction of Engineer incharge at site.	Job	1	16579.22	16579.22
78	Supply & execution of transformer bed by CC foundation (1:3:6) of size (3.0 m x 4.0 m x 3.0 m) including plastering by mortar ratio (1:4) including digging of soil/surface as per instruction of Engineer incharge at site. (For installation of transformer)	cum	36	3248.37	116941.32
79	Supply & testing of 3 Core, 120 sq mm, HT 11 kV (E) Cable : Stranded Compact Circular aluminium Conductor, Conductor Screen with Extruded Semi Conducting Compound, XLPE insulated, insulation screening with extruded Semi Conducting Compound in combination with copper tape, Cores laid up, Innersheath of PVC tape, Galvanised Steel Flat Strip Armoured, and Overall PVC sheathed Cable conforming to IS 7098 / (Part-II) 1985 with latest amendment . [(a) Laying , commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement]	Metre	6300	40	250677
80	Supply, erection , testing & commissioning of HT 11 kV (E) cable termination Kit out door, heat shrinkable type for 3 core, 120-185 sq mm XLPE insulated PVC armoured cable complete with jointing materials as per instruction of Engineer incharge at site.	Set	40	12375.92	495036.8



81	Horizontal machine boring of 300 mm dia hole across track/Road/High drain etc. at a depth of 1.0 mtr below of ground level with suitable boring instruments & necessary arrangement and as per technical procedure.	Metre	3500	1848.59	6470065
82	Supply , laying , commissioning & testing of CI Pipe 200 mm dia Class LA type (IS 1536-2001) to be laid partly along the pole and partly through ground under railway track/road in cable trench for protection of cable with suitable fixing arrangement by MS clamp, nut,bolt,washer etc.as per instruction of Engineer incharge at site.	Metre	500	1169	584500
83	Supply, laying, commissioning & testing of HDPE pipe 110 mm dia PN-6 grade to be laid partly along the pole /underground with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer and required bend, joints.	Metre	4000	279.32	1117280
84	"Supply & testing of ""Swaged type GI tubular pole 9 mt long"" conforms to IS - 2713/1980 with following technical specification : -a) Length of section : - Bottom - 5 mt, Middle - 2 mt, Top - 2 mt b) Outside diameter and thickness of section : - Bottom - 114.3 x 4.50 mm, Middle - 88.9 x 4.05 mm , Top - 76.1 x 3.25 mm"	Numbers	28	16134.3	451760.4
85	"Supply & testing of ""Swaged type GI tubular pole 9 mt long"" conforms to IS - 2713/1980 with following technical specification : - a) Length of section : - Bottom - 5 mt, Middle - 2 mt, Top - 2 mt b) Outside diameter and thickness of section : - Bottom - 114.3 x 4.50 mm, Middle - 88.9 x 4.05 mm , Top - 76.1 x 3.25 mm" [(b) Supply of "Base plate and GI cap" for above tubular pole as per instruction of Engineer incharge at site.]	Numbers	28	1358.39	38034.92
86	"Supply & testing of ""Swaged type GI tubular pole 9 mt long"" conforms to IS - 2713/1980 with following technical specification : - a) Length of section : - Bottom - 5 mt, Middle - 2 mt, Top - 2 mt b) Outside diameter and thickness of section : - Bottom - 114.3 x 4.50 mm, Middle - 88.9 x 4.05 mm , Top - 76.1 x 3.25 mm" [(c) Erection of tubular pole to 1/5 th of its height with CC foundation from base block (30 cm x 30 cm x 15 cm) including digging & refilling of earth to a height of 30 cm above ground level as per drawing no.CEE/OH@47'40@FGA) in ratio 1:3:6 by cement sand & Chips 19 mm & down including excavation of earth]	Numbers	28	1236.64	34625.92
87	Supply & erection of 11 kV, 400 amps, 3 Pole vertical type Gang Operated Air Break off load, disconnecting switch, Rocking Tilting type complete with galvanised steel base, HT insulators, non-ferrous knife, spring loaded contacts, GI pipe, operating handle, Dropout Fuse set etc as per instruction of Engineer incharge at site. (3 no in a set)	Numbers	16	27930.18	446882.88
88	Supply, erection, testing & commissioning of 11 kV lightning arrestor polymer type with all accessories. Lighting arrestor must conform to IEC-60099-4 IS: 3070 (Part-III) (3 no in a set) as per instruction of Engineer incharge at site.	Set	16	3754.48	60071.68



89	Supply & fixing of MS channel bracket (75 x 40 x 40 x 5) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50x 16 mm MS nut,bolt & washer including drilling of holes	Metre	250	234.76	58690
90	Supply & fixing of MS angle bracket (50 x 50 x 6) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50x 16 mm MS nut,bolt as per instruction of Engineer Incharge at Site. To be cut and hole provision done as per requirement in assorted size.	Metre	250	200	49935
91	(a) Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	2	24120	48240
92	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(b) Supply, installation, testing and commissioning of Air Circuit Breaker (ACB) 1250 A, 50 kA, EDO, Microprocessor Based breaking capacity Icu=Ics=Icw (1 sec) as per instruction of Engineer incharge at site.]	Numbers	2	257485	514970



93	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(c) Supply, installation, testing and commissioning of Air Circuit Breaker (ACB) 630 A, 50 kA, EDO, 4P, Microprocessor Based breaking capacity Icu=Ics=Icw (1 sec) as per instruction of Engineer incharge at site.]	Numbers	6	228199.42	1369196.52
94	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(d) MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals]	Numbers	6	22296	133776



95	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(e) MCCB FP 125 amps, 36 kA, Ics=100% Icu]	Numbers	4	6029.61	24118.44
96	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(f) MCB TP 63 A, 10 kA, C-curve as per IS/IEC 60898-1 2002]	Numbers	4	1877	7509



97	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(g) Digital Voltmeter (0-500) volts and Digital Ammeter (0-500) amps with s/switch and CTs]	Set	2	4089.5	8179
98	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(h) Supply, Fixing & Testing of Copper bus bar 1000 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)]	Set	2	5188	10377



99	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof, rust proof, dust proof, water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):- [(i) Supply, installation and Casing in box of 3 PH energy meter including testing charges of AC Three Phase LT/CT Multifunction Net meter DLMS Complains of Accuracy Class 0.5s, 3 X 240V, 50Hz with Optical & RS232 Port, Backlit LCD Display, (Measures Import kWh, kVAh, Export kWh, kVAh, Net kWh, kVAh, V, I, kW, 6 months history of Energy, Load survey, TOD, Tamper detection & logging, Power On/Off Events, instantaneous parameters of Rating - /5A with display in absence of power.]	Set	2	13097	26195
100	Supply, installation, testing & commissioning of 500 kVAR Automatic Power Factor Correction (APFC) Panel having heavy duty cylindrical capacitor, Rated Voltage 415V AC, 3Ø, 50Hz with all accessories as per instruction of Engineer Incharge at Site.	Numbers	1	1322145.41	1322145.41
101	Supply & erection of FRP fencing of S/stn (Aprox fencing size- 15 Ft x 20 Ft) with corrosion resistant, acid proof, fire retardant, non-magnetic, high quality fiber glass FRP with gate and locking arrangement. [Note sqft = Square foot]	Square Foot	300	396.64	118992
102	Supply and erection of earthing with copper earth plate of size 600 x 600 x 6 mm thick with all accessories including masonry work like construction of earth pit and cover etc and earth continuity by copper strip of size 40 x 5 mm of minimum 15 mtr length to secured by nut & bolts to the earthing plate. Earthing terminal should be connected to neutral terminal of Transformer also.	Set	12	21066	252787
103	Supply, erection of HT galvanized stay set comprising of 20 mm dia, 1.8 mt long stay rod, anchor plate (23 cm x 23 cm x 6 mm), 16 mm dia turn buckle, thimble, stay clamp, 7/10 SWG GI stay wire, strain insulator etc in CC foundation with ratio 1:3:6 of cement, sand & stone chips of size 19 mm & down including excavation & refilling as per instruction of Engineer incharge at site.	Set	10	1681.47	16814.7



104	Supply, wiring, testing & commissioning of concealed point wiring by FR PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site.Existing wall should be cut and re-mended to original finish by contractor's own material. [(a) FL Point/LED Tube Point with C/rose]	Numbers	650	584.1	379665
105	Supply, wiring, testing & commissioning of concealed point wiring by FR PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re- mended to original finish by contractor's own material. [(b) Lamp Point/Inverter Point with angle holder]	Numbers	45	516	23205
106	Supply, wiring, testing & commissioning of concealed point wiring by FR PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re-mended to original finish by contractor's own material. [(c) Fan point with c/rose and 5 step fan regulator 2 M]	Numbers	150	1062.36	159354



107	Supply, wiring, testing & commissioning of concealed point wiring by FR PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm, single core multi strand copper wire concealed on wall through PVC rigid conduit pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re-mended to original finish by contractor's own material. [(d) Exhaust fan point with c/rose]	Numbers	40	590.47	23618.8
108	Supply, wiring, testing & commissioning of 2 x 6 amps plug point on separate board complete with 2 nos. 6 amps switch with 2 nos. 6 amps 5 pin socket fitted on half flash MS board with hylem sheet top (Concealed Wiring by Sub-main wire 2.5 sq mm)	Numbers	120	109	13082
109	Supply, wiring, testing & commissioning of Power plug point on separate half flush MS board with hylem sheet top complete with 16 A flush type controlling switch & 6/16 amps socket as per instruction of Engineer incharge at site. (Wiring by Sub-main wire 2.5 sq mm concealed)	Numbers	100	159.15	15915
110	Supply, installation, testing & commissioning of modular power unit complete with 32 Amp mini MCB DP "C" series 3kA, 25 amps starter, 25 Amp Socket and 25 Amp plug to be mounted on 6 module GI box, 6 module combined plate concealed on wall and wiring by 6 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts with earth continuity wire by 1 sq mm copper cable Conforming to IS: 694 to be drawn through Rigid PVC conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Set	35	874.56	30609.6
111	Supply, wiring, testing & commissioning of concealed call bell point wiring by FR-LSH PVC insulated and unsheathed 1.5 sq mm, single core flexible copper wire concealed on wall through PVC rigid conduit pipe/Polyethylene pipe of dia not less than 20 mm dia with all types of joints and bends as required complete with 6 amps bell push controlling switch fitted on half flush MS board with hylem sheet top and earth continuity wire by PVC insulated and unsheathed 1 sq mm, single core multi strand copper wire complete to be concealed in wall including supply, fixing, testing & commissioning of call bell "Ding Dong / Multitune door bell".	Numbers	12	314.33	3771.96
112	Supply and fixing of computer point on separate board complete with 04 nos. 5-pin 6 amps socket and 4 nos. 6 amps switch fitted on half flush MS board with hylem sheet top. (Board should be completely concealed in wall with hylem sheet top to wall surface level). Concealed wiring extra	Set	60	240.33	14419.8



113	Supply, inatalation, testing & commissioning of LED Signage Utility Board Dual Face Printing with high power LEDs Driver including suitable fixing arrangements as per instruction of Engineer incharge at site. (Size - 24" x 24")	Numbers	50	9810	490517
114	Supply, wiring & testing of main wire by 2.5 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 concealed in wall through PVC rigid conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	10000	54.11	541100
115	Supply, wiring & testing of main wire by 4 sq mm, Single Core FR- LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 concealed in wall through PVC rigid conduit pipe not less than 20 mm dia	Metre	8000	63.66	509280
116	Supply, wiring & testing of main wire by 6 sq mm, Single Core FR- LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 through PVC rigid conduit pipe/polythene pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	6000	81.96	491760
117	Supply, drawing, commissioning & testing of 10 sq mm, Single Core FR-LSH or HRFR PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts Conforming to IS: 694 as per instruction of Engineer incharge at site.	Metre	4000	71.62	286480
118	Supply, installation, testing & commissioning of 4 way VTPN MCCB DB (MCCB+12 modules) with IP 43 grade protection, metal door with wire sets, busbar, earth bar, blanking plates, cable ties etc with supply and fixing of following MCCB/MCB as per instruction of Engineer incharge at site.	Set	10	8531.53	85315.3
119	b.MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	10	5276.8	52768
120	c.MCB SP 6-32 amps, 1 module, 10 kA, Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit)	Numbers	120	177.46	21295.2
121	a.Supply, installation, testing & commissioning of 12 way SPN Distribution Board, Flush/Surface mounting, IP 43 grade protection with copper bus bar, fully shrouded neutral bar, earth bar, cable ties, metal double door as per IS 8623 - III with supply and fixing of following RCBO/MCB's	Set	30	1463.44	43903.2
122	b.MCB DP 16-32 amps, 2 module, 10 kA, Conforms to IS/IEC 60898 - 1:2002 (For AC circuit/16 A plug point circuit) (32 Amp)	Numbers	30	398.68	11960.4
123	c.MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit) (6-16 Amp)	Numbers	300	177.46	53238



124	Supply, laying and testing of 3 core, 10 sq mm Flat copper cable, PVC insulated and PVC sheathed, 1.1 kV grade, conforming to IS:694 as per instruction of Engineer incharge at site.	Metre	1000	298.41	298410
125	Supply, fixing, connection & testing of indoor LED tube batten with 20 watt LED T8 tubular lamp with extruded aluminium body and PC diffuser complete with inbuilt driver (System wattage-20 Watt, System efficacy > 105 lm/W, Power factor 0.90) with suitable fixing arrangement as per instruction of Engineer incharge at site.	Numbers	600	716.2	429720
126	Supply and testing of Electric ceiling fans, Decorative 4 blade, 1200 mm, mettalic paint finish suitable for operation on single phase, 230 Volt, 50Hz AC supply	Numbers	120	5164.6	619752
127	Supply, installation, testing & commissioning of 250 mm sweep (PVC/plastic body) exhaust fan complete with suitable size, bolts & nuts grouted on wall against defective one	Numbers	30	2069.02	62070.6
128	Supply, installation, testing & commissioning of wall mounted bracket fan 400 mm sweep complete with all accessories to be fixed on wall by suitable fixing arrangement including connection by 2 core, 1.5 sqmm PVC insulated and FR PVC Round Sheathed, Copper Conductor (flexible) industrial cable as per instruction of Engineer Incharge at site.	Numbers	40	3309.64	132385.6
129	Supply, installation, testing & commissioning of Surface/Recessed LED luminaire with slim line CRCA sheet metal body, square type, (System wattage-18 Watt, Nominal system efficacy 100 lm/watt) suitable for 600 x 600 mm modular ceiling as per instruction of Engineer incharge at site	Numbers	100	1681.47	168147
130	a. Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof, rust proof, dust proof, water proof having internal rubber gasket. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	4	24120	96480
131	b. MCCB FP 200 amps, 25 kA, Ics=100% Icu	Set	4	10804.27	43217.08
132	c. MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	16	5276.8	84428.8
133	d. Supply, installation and testing of Astro (Analog) time switch with 3 pole 63 amp contractor and suitable thermoplastic box and fitted on mounting plate/DIN rail.	Set	8	7164.38	57315.04
134	e. Digital voltmeter (0-500) volts and Digital ammeter (0-500) amps with s/switch and CTs	Set	8	4089.5	32716



135	f. Copper bus bar 200 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	8	949.36	7594.88
136	Supply, installation , commissioning & testing of LED indication station name board (Length of board will be as per proportion of letter so that all the 4 side of the board will have extra space) with channel letters with 3.75 ft. in lenght with suitable widen and 4 mm projection size which inside ACP board (Brand- ALUDECOR, category- AL 33 series exterior & thikness-3 mm) with acrylic face on front and having Sumsung 5630 LED's (Shape- Lens type, operating voltage- 12 V DC, carring current-80 mA, power Dissipation- 0.96 watt, working hours-50000, case material-ABS ,protection-IP68) inside for illumination letters in English, Hindi, Bengali or regional language complete with all materials including provision of erection structure made of MS angle/channel/flat duly painted with aluminium paint over a coat of red oxide primer with CC foundation (1:3:6) of cement, sand and stone chips as required at site and as per instruction of Egnineer incharge at site.	Square Foot	400	1299	519484
137	Supply, installation, testing & commissioning of Sine wave Inverter 5500 VA suitable for operation on 230 volt AC, with supply of 04 nos. 12 volt @ 150 Ah SMF battery including inverter battery trolley as per instruction of Engineer incharge at site.	Set	10	86898.85	868988.5
138	Supply of 1000 KVA ,11KV/433 Volt ,3 Phase , 50 C/S, AC, Energy efficient Level-2 (revisedstar-1) , outdoor Distribution Transfomer as per IS : 1180 (Part - I) 2014 or as per latest MSEDCL guidelines.	Numbers	2	976848.19	1953696.38

Sub Total

55269458.01

Schedule	19-Next Generation Freight Maintenance Electrical TRD (NS ITEM)				
Item - 1	Schedule-A (General OHE work)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Preparation and Submission of design & drawing of OHE Layout plan & CSD.	Track Kilometre	4.5	9009.81	40544.15
2	Preparation of Sectioning Diagram for Board as per modification if any of 25 KV OHE Sectioning diagram in Size, as per Board including yards and open route with including of SP, SSP & TSS showing BM, CB, SS, SM, Isolator, Section Insulator AT & PT etc. showing stations and halts for Printing of Board in High resolution drawing.	Numbers	1	4036.7	4036.7
3	Making and Supply of Board for 25 KV OHE Sectioning diagram, Printing of Drawing On Vinyl and pasting on poly-carbonic sheet and Iron frame with Side molding beat aluminum and Fixed to wall.	Square Foot	24	249.49	5987.76



4	Providing and laying of concrete for foundation and plinth in all types of Soils using M-10 grade concrete for main foundation and M-15 grade concrete for grouting and muffing including nominal reinforcement required as per RDSO drawings.	cum	350	9045.99	3166096.5
5	Supply of rolled / fabricated masts, Portal & TTC for OHE.	MT	50	112142.18	5607109
6	Erection of rolled / fabricated masts, Portal & TTC for conventional OHE.	MT	50	9128.24	456412
7	Supply of fabricated steel work, DA, SPS etc.	MT	10	129033.51	1290335.1
8	Erection of fabricated steel work, DA, SPS etc	MT	10	11195.7	111957
9	Supply of contact wire	MT	4.56	1059071.07	4829364.08
10	Supply of Cadmium copper Catenary wire	MT	1.95	1059071.07	2065188.59
11	Supply of Large Span Wire for OHE as per RDSO specification	Metre	500	1107.41	553705
12	Supply & making of retro-reflective structure number plate Spec. ETI/OHE /33A(12/97) Rev-6. as per instruction of site engineer.	Numbers	200	872.28	174456
13	Supply of Longitudinal bond (including black painted MS Flat and required nut,bolts spring washer.	Numbers	100	614.78	61478
14	Erection of Longitudinal bond (including black painted MS Flat and required nut,bolts spring washer.	Numbers	100	503.49	50349
15	Supply of structure bond(including black painted MS Flat and required nut,bolts spring washer	Numbers	100	1001.79	100179
16	Erection of structure bond(including black painted MS Flat and required nut,bolts spring washer	Numbers	100	437.23	43723
17	Supply of cross/tranverse bond and special bond (including black painted MS Flat and required nut, bolts, spring washer)	Numbers	50	988.95	49447.5
18	Erection of cross/tranverse bond and special bond (including black painted MS Flat and required nut, bolts, spring washer)	Numbers	50	640.85	32042.5
19	Stenciling of OHE parameter on OHE structure with stenciling of direction of emergency telephone sockets.	Numbers	100	110.94	11094
20	Supply of Guy Rod assembly.	Numbers	22	11190.73	246196.06
21	Erection of Guy Rod assembly.	Numbers	22	2031.64	44696.08
22	Supply of Small Jumper - Dia 50 sqmm (Annealed copper).	Kg	600	1016.57	609942
23	Supply of Large Jumper - Dia 105 sqmm (Annealed copper)	Kg	750	1047.27	785452.5
24	Supply of 160 sqmm copper jumper wire	Metre	600	1522.93	913758
25	Erection of a 25 KV Single Pole Isolator Without earth contact assembly	Numbers	5	5508.57	27542.85
26	Extra for supply of an Earth contact Assembly in an Isolator	Numbers	5	13372.84	66864.2
27	Extra for Erection of an Earth contact Assembly in an Isolator	Numbers	5	360.55	1802.75
28	Earthing with 3 meter long, 50mm dia, G.I.pipe class 'B' earth electrode, adding the charcoal or coke and salt, providing masonry enclosure and cover plate with lifting arrangement etc. including connections with 4 mm G.I. wire from earth electrode to switch board / electrical equipment as required.	Job	5	3967.75	19838.75



29	Dismantling of OHE	Track Kilometre	1	57647.83	57647.83
30	Dismantling of OHE Mast/structure by cutting from ground level	Each	10	5668.66	56686.6
31	Supply & erection Enameled Dead section caution board (power block working limit) as per RDSO specification ET/OHE/33(8/85) & RDSO drawing no. ETI/OHE/P/7574 Rev 'B' or latest.	Numbers	10	650.96	6509.6
32	Supply & erection Enameled caution board for special location (caution clearance to OHE nearby restricted) as per RDSO specification No. ETI/OHE/33(8/85) or latest.	Numbers	10	516.81	5168.1
33	Supply & erection Dead section caution board (Retro reflective type) Electrical Engine STOP as per RDSO spec. ETI/OHE/33A rev.6 or latest.	Numbers	10	3061.71	30617.1
34	Supply & erection Dead section caution board (Retro reflective type) Caution unwired turnouts as per RDSO spec. ETI/OHE/33A rev.6 or latest.	Numbers	10	3135.06	31350.6
35	Supply & erection Enamelled warning board (caution live wire) as per RDSO spec. ETI/OHE/33(8/85) or latest.	Numbers	10	1081.69	10816.9
36	Supply & erection General caution board (enameled) for staff as per RDSO spec. No ETI/OHE/33(8/85) or latest.	Numbers	10	428.77	4287.7
37	Supply and erection of standard galvanised wire bond in place of MS flat bond at designated location.	Numbers	200	2031.89	406378
38	Transportation Charges for OHE Masts/structures from depot to site.	MT/Km	2000	98.46	196920
39	Supply of a 25 KV Single Pole Isolator, Without earth contact assembly	Numbers	5	49888.05	249440.25
Sub Total					22425420.75

Item - 2	Schedule-B (Conventional OHE work) NS ITEM				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply of a single bracket assembly with accessories and stay & bracket insulators porcelain type for conventional OHE	Numbers	60	26763.2	1605792
2	Erection of a single bracket assembly with accessories and stay & bracket insulators porcelain type for conventional OHE.	Numbers	60	2300.37	138022.2
3	Supply and Erection of Over Head Equipment i.e. contact & catenary wire (excluding cost of supply of contact & catenary wires), jumper wire, dropper wire, contact/catenary clips, fasteners, and all other material required at turn out/overlaps/diamond crossings etc. Final checking of OHE and adjustment, inspection to be done by tower wagon for commissioning of conventional OHE.	Track Kilometre	2.5	64194.6	160486.5
4	Supply of regulating equipment (3 pulley type ATD) with counter weight assembly for conventional OHE.	Numbers	6	81346.6	488079.6
5	Erection of regulating equipment (3 pulley type ATD) with counter weight assembly for conventional OHE.	Numbers	6	5441.28	32647.68



6	Supply of material for termination of conductor of conventional OHE/ terminating assembly (FTA)	Numbers	4	8204.39	32817.56
7	Erection of material for termination of conductor of conventional OHE/ terminating assembly (FTA)	Numbers	4	2051.09	8204.36
8	Supply of A Section Insulator assembly with all accessories for conventional OHE	Numbers	5	44403.69	222018.45
9	Erection of A Section Insulator assembly with all accessories for conventional OHE	Numbers	5	4036.69	20183.45
10	Supply & Erection of Anti-creep with cadmium copper wire with porcelain insulators 1050mm CD	Numbers	2	61954.53	123909.06
11	Erection of Anti-creep with cadmium copper wire with porcelain insulators 1050mm CD	Numbers	2	4429.47	8858.94

Sub Total

2841019.80

Item - 3 Schedule-C (OHE work for Tramway Type) (NS ITEM)

S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply & Erection of contact wire regulated with bridle wire & all other material required at turn out/overlaps/ diamond crossings etc. manually for Tramway OHE and checking of TOWER WAGON. (Excluding supply of contract wire)	Track Kilometre	2	37699.58	75399.16
2	Supply of a single bracket assembly suitable for Tramway type OHE(Regulated) without insulator.	Numbers	50	15777.3	788865
3	Erection of a single bracket assembly suitable for Tramway type OHE(Regulated) without insulator.	Numbers	50	904.5	45225
4	Supply of porcelaine insulators (long creepageCD-1050 mm) for single bracket assembly for tramway	Set	50	8029.54	401477
5	Supply of regulating equipment (3 pulley type) with counter weight assembly for tramway type OHE(Regulated).	Numbers	6	77513.56	465081.36
6	Erection of regulating equipment (3 pulley type) with counter weight assembly for tramway type OHE(Regulated).	Numbers	6	4180.75	25084.5
7	Supply of material for termination of tramway OHE (Regulated).	Numbers	6	9643.15	57858.9
8	Erection of material for termination of tramway OHE (Regulated).	Numbers	6	1361.17	8167.02
9	Supply of section insulators for tramway OHE with all accessories.	Numbers	4	43585.11	174340.44
10	Erection of section insulators for tramway OHE with all accessories.	Numbers	4	3798.44	15193.76

Sub Total

2056692.14

Schedule 20-Next Generation Freight Maintenance Mechanical (NS ITEM)

Item - 1 Execution of work as per Schedule.

S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply ,installation and commissioning Battery cum electric operated Rail cum Road shunting Vehicle(Cap 2000 T).	Numbers	1	38084428.47	38084428.47
2	Supply ,installation and commissioning of EOT crane ,Cap 20 T.	Numbers	8	6012514.17	48100113.36



3	Supply and commissioning of Huck bolting machine .	Numbers	4	1944194.94	7776779.76
4	Supply, installation and commissioning of Rotary screw electrical driven air compressor (500 cfm) 10 Kg/cm2 with Air Dryer .	Numbers	2	2693994.25	5387988.5
5	Supply, installation and commissioning Door Straightening machine (Hydraulic Press) Size-1700X980 mm.	Numbers	2	4012868.33	8025736.66
6	Supply, installation and commissioning Fork lift Truck , Cap 03 T.	Numbers	2	1047622.41	2095244.82
7	Supply, installation and commissioning Road mobile crane (10 T capacity)	Numbers	1	1997706.32	1997706.32
8	Supply, installation and commissioning Computerized Rake Test Rig.	Numbers	8	359315.61	2874524.88
9	Supply, installation and commissioning Self - propelled battery operated scissor lift (Cap -500Kg,Lifting Height -4.5 m).	Numbers	6	484880.18	2909281.08
10	Supply, installation and commissioning DG set 500 KVA (for cranes)	Numbers	1	6448906.33	6448906.33
11	Supply, installation and commissioning Lister truck (platform truck) 03 T cap.	Numbers	6	514942.75	3089656.5
12	Supply, installation and commissioning Set of Synchronized lifting jacks electrically operated screw jacks(set of 05 jacks),Cap 25 T	Set	2	3685089.33	7370178.66

Sub Total

134160545.34

Schedule 21-AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL)

Item - 1 Execution of work as per Schedule (Warehouse)

S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1	All kinds of soil.	cum	200	202.04	40408
2	Excavating, supplying and filling of local earth (including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation etc. complete.	cum	156	259.67	40508.52
3	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	500	1522.28	761140
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				



4	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources: 6 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	22	4698.31	103362.82
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
5	Foundations, footings, bases for columns	Sqm	550	216.91	119300.5
6	Columns, piers, abutments, pillars, posts and struts	Sqm	22	566.49	12462.78
	DAMP-PROOF COURSE				
7	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources: 4 graded stone aggregate 12.5mm nominal size derived from natural sources)	Sqm	660	261.22	172405.2
	REINFORCED CEMENT CONCRETE				
	CAST IN SITU				
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
8	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	175	5891.47	1031007.25
9	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15 degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	50	7550.33	377516.5
	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form for				
10	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	400	216.91	86764
11	Suspended floors, roofs, landings, balconies and access platform	Sqm	528	539.93	285083.04
12	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	50	428.5	21425
13	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	200	566.49	113298
	PRE-CAST RCC				
14	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but , excluding cost of reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	5.5	6813.71	37475.41
	STEEL REINFORCEMENT				



	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
15	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	48400	63.15	3056460
	MASONRY WORK				
	HALF BRICK MASONRY				
	Half brick masonry with common burnt clay F.P.S. (non modular)				
	bricks of class designation 7.5 in foundations and plinth in :				
16	cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	40	590.16	23606.4
	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
17	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	40	717.08	28683.2
	EXPOSED BRICK WALL				
	Brick work with common burnt clay selected F.P.S. (non modular) bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand)				
18	From ground level upto plinth level	cum	150	4824.57	723685.5
19	Above plinth level upto floor V level	cum	80	6033.58	482686.4
	CLADDING WORK				
	STONE WORK DRY CLADDING				
20	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer- in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	11	749.06	8239.66
	WOOD AND P.V.C. WORK				
	FRAMES AND TRUSSES				
	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).				
21	Sal wood	cum	4.1	75170.74	308200.03
	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory				
	windows, fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)				



	Second class teak wood				
22	30 mm thick shutters	Sqm	11	2367.17	26038.87
	Providing and fixing 25 mm thick shutters for cup board etc. :				
	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
23	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	11	1985.26	21837.86
	MISCELLANEOUS-WOOD WORK				
	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
24	Fixed to openings /wooden frames with rawl plugs screws etc.	Kg	440	139.25	61270
	COPER OXIDISED MILD STEEL FITTINGS (COPPER OXIDISED AS PER IS: 1378)				
	Providing and fixing ISI marked oxidised M.S. tower bolt black finish, (Barrel type) with necessary screws etc. complete : (copper oxidized as per IS: 1378)				
25	200x10 mm	Each	11	43	473
26	150x10 mm	Each	11	37.37	411.07
	STAINLESS STEEL FITTINGS				
	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete :				
27	125x64x1.90 mm	Each	11	67.27	739.97
28	100X58X1.90 mm	Each	11	60.68	667.48
	ANODISED ALUMINIUM FITTINGS (ALL FITTINGS SHALL BE ISI MARKED)				
	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :				
29	125 mm	Each	11	42.3	465.3
	GYPSUM BOARD PARTITIONS				
30	Providing and fixing factory made P.V.C. door frame of size 50x47 mm with awall thickness of 5 mm, made out of extruded 5mm rigid PVC foam sheet, mitred at corners and joined with 2 Nos of 150 mm long brackets of 15x15 mm M.S. square tube, the vertical door frame profiles to be reinforced with 19x19 mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100 mm size, complete as per manufacturer's specification and direction of Engineer- in-Charge.	Metre	11	287.56	3163.16



31	Providing and fixing Fiber Glass Reinforced plastic (FRP) Door Frames of cross-section 90 mm x 45 mm having single rebate of 32 mm x 15 mm to receive shutter of 30 mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiber glass from all sides. M.S. stay shall be provided at the bottom to steady the frame.	Metre	4	494.89	1979.56
STEEL WORK					
32	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	12000	78.85	946200
33	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2 mm and braced with flat iron diagonals 20x5 mm size, with top and bottom rail of T-iron 40x40x6 mm, with 40 mm dia steel pulleys, complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	Sqm	22	6619.2	145622.4
	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.				
34	80x1.25 mm M.S. laths with 1.25 mm thick top cover	Sqm	20	2119.3	42386
	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
35	Hot finished seamless type tubes	Kg	7000	119.01	833070
36	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar, bent to shape with hooked ends in R.C.C. slabs or beams during laying, including painting the exposed portion of loop, all as per standard design complete.	Each	11	130.98	1440.78
FLOORING					
	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete.				



37	40 mm thick with 20 mm nominal size stone aggregate	Sqm	110	383.88	42226.8
	TILE FLOORING				
	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).				
38	Light shade pigment using white cement	Sqm	22	868.52	19107.44
	VITRIFIED FLOOR TILES				
	Providing and laying Vitrified tiles in floor in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only. Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily.				
	Double charge vitrified tile polished finish of size				
39	Size of Tile 800 x 800 mm	Sqm	22	966.96	21273.12
	ROOFING				
	CEILING				
	Providing and fixing plain multipurpose cement board(Hight pressure steam cured) with suitable screws for cement particle board in ceiling etc. complete (frame work to be paid seperatately).				
40	6 mm thick Cement fiber board as per IS: 14862	Sqm	50	544.76	27238
	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Bend 87.5 degrees				
41	110 mm bend	Each	192	92.98	17852.16
	Shoe (Plain)				
42	110 mm Shoe	Each	25	81.67	2041.75



	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel roving incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866. The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
43	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	Sqm	200	830.63	166126
44	Providing and fixing pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer- in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	550	473.02	260161
	FINISHING				
	CEMENT PLASTER (IN FINE SAND)				
	12 mm cement plaster of mix :				
45	1:4 (1 cement: 4 fine sand)	Sqm	770	207.68	159913.6
	15 mm cement plaster on the rough side of single or half brick wall of mix :				
46	1:4 (1 cement: 4 fine sand)	Sqm	770	239.27	184237.9
	6MM CEMENT PLASTER				
47	Neat cement punning.	Sqm	165	47.76	7880.4
	Extra for plastering:				
48	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	770	150.95	116231.5
	Distemping with oil bound washable distemper of approved brand and manufacture to give an even shade :				
49	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	1100	114.5	125950
	EXTERIOR FINISHING				
	Finishing walls with Acrylic Smooth exterior paint of required shade :				



50	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	Sqm	1100	117.52	129272
	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
51	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture	Sqm	110	98.65	10851.5
	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :				
52	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution	Sqm	110	105.79	11636.9
	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
53	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	Sqm	550	14.69	8079.5
	DISMANTLING AND DEMOLISHING				
	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
54	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	11	1413.74	15551.14
	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in- charge.				
55	In cement mortar	cum	1	1196.33	1196.33
	SANITARY INSTALLATIONS				
	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:				
56	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	Each	1	4072.2	4072.2
	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:				
57	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	Each	1	1602.44	1602.44
58	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	Each	1	1056.59	1056.59



59	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Each	1	993.96	993.96
	Providing and fixing sand cast iron S&S off sets as per IS: 1729				
	76 mm off sets				
60	With 100 mm dia pipe	Each	10	360.81	3608.1
	Cutting chases in brick masonry walls for following diameter sand cast iron/centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 12.5 mm nominal size), including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :				
61	100 mm dia	Metre	50	433.68	21684
	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.				
62	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	Each	1	422.87	422.87
	WATER SUPPLY				
	PP-R PIPES				
	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes conforming to IS:15801 UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, including trenching, refilling & testing of joints complete as per direction of Engineer-in-Charge. - External work				
63	PN - 16 Pipe, 25 mm OD (SDR-7.4)	Metre	50	188.91	9445.5
64	PN - 16 Pipe, 40 mm OD (SDR-7.4)	Metre	55	295.3	16241.5
65	PN - 10 Pipe, 50 mm OD (SDR-11)	Metre	55	400.5	22027.5
66	PN - 10 Pipe, 90 mm OD (SDR-11)	Metre	265	862.08	228451.2
	C.P.V.C. PIPES				
	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.-External work				
67	20 mm dia nominal bore	Metre	55	222.12	12216.6
	BRASS FITTINGS				
	Providing and fixing brass bib cock of approved quality :				
68	15 mm nominal bore	Each	11	214.02	2354.22
	Providing and fixing brass stop cock of approved quality :				
69	15 mm nominal bore	Each	11	214.02	2354.22
	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
70	25 mm nominal bore	Each	4	374.97	1499.88



71	20 mm nominal bore	Each	11	325.25	3577.75
72	40 mm nominal bore	Each	5	498.2	2491
73	50 mm nominal bore	Each	2	618.61	1237.22
	Providing and fixing uplasticised PVC connection pipe with brass unions :				
	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :				
74	100 mm diameter	Each	1	117.18	117.18
	C.I. SLUICE VALVES/ FIRE HYDRANTS & FIXTURES				
75	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 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.	Litre	6000	6.83	40980
	AIR VALVE & WATER METER (BULK TYPE)				
	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge. -Male Thread Connector/ Adapter				
76	For 42.70 mm outer dia x 40 mm nominal dia threaded	Each	14	687.96	9631.44
77	For 48.60 mm outer dia x 50 mm nominal dia threaded	Each	14	1074.33	15040.62
	ALUMINIUM WORK				
	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be				
	smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
78	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	Kg	110	374.59	41204.9



	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):				
79	With float glass panes of 4.0 mm thickness (weight not less than 10kg/sqm)	Sqm	22	718.32	15803.04
Sub Total					11704424.63

Item - 2	Execution of work as per Schedule (Renovation & Extension of compressor Room and ETP Plant)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1	All kinds of soil.	cum	100	202.04	20204
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
2	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	50	5187.78	259389
3	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources: 6 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	12	4698.31	56379.72
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
4	Foundations, footings, bases for columns	Sqm	30	216.91	6507.3
	REINFORCED CEMENT CONCRETE				
	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form for				
5	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	75	216.91	16268.25
6	Suspended floors, roofs, landings, balconies and access platform	Sqm	60	539.93	32395.8
7	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	75	428.5	32137.5
8	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	75	566.49	42486.75
	PRE-CAST RCC				



9	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but, excluding cost of reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	2	6813.71	13627.42
	STEEL REINFORCEMENT				
	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
10	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	1200	63.15	75780
	DESIGN MIX CONCRETE				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works upto plinth level				
11	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	20	6116.59	122331.8
	All works above plinth level upto floor V level				
12	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	10	7259.35	72593.5
	MASONRY WORK				
	HALF BRICK MASONRY				
	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :				
13	cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	10	590.16	5901.6
	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
14	Cement mortar 1:4 (1 cement :4 coarse sand)	Sqm	80	717.08	57366.4
	EXPOSED BRICK WALL				



	Brick work with common burnt clay selected F.P.S. (non modular)				
	bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand)				
15	From ground level upto plinth level	cum	30	4824.57	144737.1
16	Above plinth level upto floor V level	cum	40	6033.58	241343.2
	WOOD AND P.V.C. WORK				
	FRAMES AND TRUSSES				
	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).				
17	Sal wood	cum	1	75170.74	75170.74
	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows, fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)				
	Second class teak wood				
18	30 mm thick shutters	Sqm	5	2367.17	11835.85
	Providing and fixing 25 mm thick shutters for cup board etc. :				
	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
19	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	4	1985.26	7941.04
	MISCELLANEOUS-WOOD WORK				
	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
20	Fixed to openings /wooden frames with rawl plugs screws etc.	Kg	200	139.25	27850
	ANODISED ALUMINIUM FITTINGS (ALL FITTINGS SHALL BE ISI MARKED)				
	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :				
21	300x16 mm	Each	2	183.35	366.7
	STEEL WORK				



22	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	100	78.85	7885
	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.				
23	80x1.25 mm M.S. laths with 1.25 mm thick top cover	Sqm	32	2119.3	67817.6
	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
24	Hot finished seamless type tubes	Kg	1000	119.01	119010
	FLOORING				
	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but				
	excluding the cost of nosing of steps etc. complete.				
25	40 mm thick with 20 mm nominal size stone aggregate	Sqm	5	383.88	1919.4
	CERAMIC GLAZED TILES				
26	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in colours White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement: 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.	Sqm	50	804.96	40248
	ROOFING				
	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
27	110 mm diameter	Metre	5	225.22	1126.1



	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Bend 87.5 degrees				
28	110 mm bend	Each	2	92.98	185.96
29	Providing and fixing pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	200	473.02	94604
	Providing and fixing pre-coated galvanised steel sheet roofing accessories 0.50 mm (+0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete :				
30	Ridges plain (500 - 600mm)	Metre	20	317.39	6347.8
31	Gutter (600 mm over all girth)	Metre	30	782.27	23468.1
	FINISHING				
	CEMENT PLASTER (IN FINE SAND)				
	12 mm cement plaster of mix :				
32	1:4 (1 cement: 4 fine sand)	Sqm	200	207.68	41536
	15 mm cement plaster on the rough side of single or half brick wall of mix :				
33	1:4 (1 cement: 4 fine sand)	Sqm	200	239.27	47854
	6MM CEMENT PLASTER				
	6 mm cement plaster of mix :				
34	1:3 (1 cement : 3 fine sand)	Sqm	10	178.24	1782.4
	Extra for plastering:				
35	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	400	150.95	60380
	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :				
36	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	250	114.5	28625
	EXTERIOR FINISHING				



	Finishing walls with Acrylic Smooth exterior paint of required shade :				
37	New work (Two or more coat applied @ 1.67 ltr/10 sqm over	Sqm	250	117.52	29380
	and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)				
	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
38	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/10 sqm of approved brand and manufacture	Sqm	50	102.06	5103
	Applying priming coat:				
39	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	Sqm	20	43.28	865.6
	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
	Distempering with 1st quality acrylic distemper (Ready mix) having VOC content less than 50 grams/ litre of approved brand and manufacture to give an even shade :				
40	Old work (one or more coats)	Sqm	500	40.01	20005
41	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	Sqm	500	14.69	7345
	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :				
42	Old work (one or more coats)	Sqm	50	54.38	2719
	Finishing walls with water proofing cement paint of required shade :				
43	Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litres/10 sqm complete including cost of Priming coat.	Sqm	200	66.32	13264
	Finishing walls with Acrylic Smooth exterior paint of required shade :				
44	Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface	Sqm	200	78.61	15722
	DISMANTLING AND DEMOLISHING				
	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead :				
45	Of area 3 sq. metres and below	Each	2	83.33	166.66



	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of:				
46	G.S. Sheet	Sqm	150	95.79	14368.5
47	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	Sqm	250	31.73	7932.5
	SANITARY INSTALLATIONS				
	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :				
48	W.C. pan with ISI marked white solid plastic seat and lid	Each	2	3902.58	7805.16
	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required :				
49	Single half stall urinal with 5 litre P.V.C. automatic flushing cistern	Each	2	7134.05	14268.1
	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:				
50	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	Each	1	1602.44	1602.44
	Providing and fixing vitreous china dual purpose closet suitable for				
	use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat & lid fixed with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fitting and brackets, 40 mm flush bend, 20 mm over flow pipe, with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required:				
51	White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.	Each	2	7273.76	14547.52
	WATER SUPPLY				
	PP-R PIPES				



	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes conforming to IS:15801 UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, including trenching, refilling & testing of joints complete as per direction of Engineer-in-Charge. - External work				
52	PN - 16 Pipe, 20mm OD (SDR-7.4)	Metre	50	150.66	7533
53	PN - 16 Pipe, 25 mm OD (SDR-7.4)	Metre	50	188.91	9445.5
54	PN - 10 Pipe, 50 mm OD (SDR-11)	Metre	50	400.5	20025
55	PN - 10 Pipe, 75 mm OD (SDR-11)	Metre	50	619.45	30972.5
	BRASS FITTINGS				
	Providing and fixing brass bib cock of approved quality :				
56	15 mm nominal bore	Each	5	214.02	1070.1
	Providing and fixing brass stop cock of approved quality :				
57	15 mm nominal bore	Each	5	214.02	1070.1
Sub Total					2090613.71

Item - 3	Execution of work as per Schedule (Construction of Cover Shed)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
1	All kinds of soil	cum	10000	144.71	1447100
2	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	1400	1522.28	2131192
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	50	5187.78	259389
4	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	610	4813.22	2936064.2
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
5	Foundations, footings, bases for columns	Sqm	7271	216.91	1577152.61



6	Columns, piers, abutments, pillars, posts and struts	Sqm	1000	566.49	566490
	REINFORCED CEMENT CONCRETE				
	CAST IN SITU				
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
7	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	300	5891.47	1767441
	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form for				
8	Suspended floors, roofs, landings, balconies and access platform	Sqm	2400	539.93	1295832
	PRE-CAST RCC				
9	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but , excluding cost of reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	5	6813.71	34068.55
	STEEL REINFORCEMENT				
	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
10	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	400000	63.15	25260000
	DESIGN MIX CONCRETE				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				



	All works upto plinth level				
11	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	4882	6116.59	29861192.38
	All works above plinth level upto floor V level				
12	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	360	7259.35	2613366
	STEEL WORK				
13	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	44735	78.85	3527354.75
14	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	Kg	19000	62.33	1184270
15	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	Kg	3000	431.25	1293750
	ROOFING				
	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes,				
16	110 mm diameter	Metre	540	225.22	121618.8
	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Bend 87.5 degrees				
17	110 mm bend	Each	36	92.98	3347.28
	Shoe (Plain)				
18	110 mm Shoe	Each	36	81.67	2940.12



	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel roovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866. The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
19	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	Sqm	1200	830.63	996756
	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete :				
20	Ridges plain (500 - 600mm)	Metre	127	317.39	40308.53
21	Gutter (600 mm over all girth)	Metre	254	782.27	198696.58
	FINISHING				
	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade :				
22	Two or more coats on new work	Sqm	3000	97.1	291300
	Painting with aluminium paint of approved brand and manufacture to give an even shade .				
23	Two or more coats on new work	Sqm	14000	85.55	1197700
	WATER SUPPLY				
	PP-R PIPES				
	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes confirming to IS 15801, UV stabilized & anti -				
	microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer-in-Charge. -Internal Exposed on walls				
24	PN - 16 Pipe, 32mm OD (SDR-7.4)	Metre	500	252.8	126400



	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes conforming to IS:15801 UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, including trenching, refilling & testing of joints complete as per direction of Engineer-in-Charge. - External work				
25	PN - 10 Pipe, 110 mm OD (SDR- 11)	Metre	250	1190.03	297507.5
	C.I. SLUICE VALVES/ FIRE HYDRANTS & FIXTURES				
26	Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.	Each	600	830.2	498120
Sub Total					79529357.30

Item - 4	Execution of work as per Schedule (Construction of Office and Building of diesel shed)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
1	All kinds of soil	cum	500	144.71	72355
2	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	57	1522.28	86769.96
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
3	1:1.5:3 (1 Cement: 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	15	5482.55	82238.25
4	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources: 6 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	25	4698.31	117457.75
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
5	Foundations, footings, bases for columns	Sqm	100	216.91	21691
	DAMP-PROOF COURSE				
6	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources: 4 graded stone aggregate 12.5mm nominal size derived from natural sources)	Sqm	200	261.22	52244
	REINFORCED CEMENT CONCRETE				



	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form for				
7	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	100	216.91	21691
8	Suspended floors, roofs, landings, balconies and access platform	Sqm	800	539.93	431944
9	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	200	428.5	85700
10	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	200	566.49	113298
11	Stairs, (excluding landings) except spiral-staircases	Sqm	50	463.29	23164.5
	PRE-CAST RCC				
12	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but, excluding cost of reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	1	6813.71	6813.71
	STEEL REINFORCEMENT				
	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
13	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	25000	63.15	1578750
	DESIGN MIX CONCRETE				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works upto plinth level				
14	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	110	6116.59	672824.9
	All works above plinth level upto floor V level				



15	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	150	7259.35	1088902.5
	MASONRY WORK				
	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
16	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	120	4689.86	562783.2
	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
17	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	250	5838.05	1459512.5
	HALF BRICK MASONRY				
	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :				
18	cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	260	590.16	153441.6
19	Extra for half brick masonry in superstructure, above floor V level for every four floors or part thereof by mechanical means.	Sqm	500	8.87	4435
	WOOD AND P.V.C. WORK				
	FRAMES AND TRUSSES				
	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).				
20	Kiln seasoned and chemically treated hollock wood	cum	0.56	52263.88	29267.77
	Providing and fixing 25 mm thick shutters for cup board etc. :				
	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
21	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	36	1985.26	71469.36
	MISCELLANEOUS-WOOD WORK				
	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :				
22	20 mm dia (heavy type)	Metre	50	107.52	5376
	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
23	Fixed to openings /wooden frames with rawl plugs screws etc.	Kg	560	139.25	77980
	Providing and fixing fly proof galvanized M.S. wire gauge to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm all complete.				



24	With 2nd class teak wood beading 62X19 mm	Sqm	200	820.52	164104
	ANODISED ALUMINIUM FITTINGS (ALL FITTINGS SHALL BE ISI MARKED)				
	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :				
25	300x16 mm	Each	20	183.35	3667
	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :				
26	200x10 mm	Each	50	63.96	3198
	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :				
27	125 mm	Each	50	42.3	2115
	Providing and fixing wire gauge shutters using stainless steel grade 304 wire gauge with wire of dia 0.5 mm and average width of aperture 1.4 mm in both directions for doors, windows and clerestory windows with necessary screws :				
28	Providing and fixing PVC Door Frame of size 50x47 mm with a wall thickness of 5 mm (+/- 0.2 mm), made out of single piece extruded PVC profile, with mitred cut joints and joint with 2 nos of PVC bracket of size 190 mm x 100 mm long arms of cross section size 35 x 15 mm & self driven self tapping screws, the vertical door profiles to be reinforced with 40x20 mm M.S. rectangular tube of 0.8 mm , including providing EPDM rubber gasket weather seal throughout the frame, including jointing 5 mm PVC frame strip with PVC solvent cement on the back of the profile. The door frame to be fixed to the wall using 8 x100 mm long anchor fasteners complete, all as per manufacturer's specification and direction of Engineer in-charge.	Metre	50	325.59	16279.5



	35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm (+/- 0.2 mm) thick, having styles & rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles & rails to be mitered cut & joint with the help of PVC solvent cement, self driven self tapping screws & M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner. Single piece extruded 5 mm thick solid PVC Lock rail of size 115 mm x 35 mm, out of which 75 mm to be flat and 20 mm to be tapered at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles & rails with the help of solvent and self driven self tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of Engineer-in-charge.				
29	Non decorative finish (matt finish)	Sqm	20	2442.18	48843.6
	FLOORING				
30	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete.	cum	8	5605.81	44846.48
	CERAMIC GLAZED TILES				
31	Providing and fixing 1st quality ceramic glazed floor tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer- in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	Sqm	400	661.05	264420
	VITRIFIED FLOOR TILES				
	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.				
32	Size of Tile 800x800 mm	Sqm	560	1324.18	741540.8



	Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing , curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.				
33	Polished Granite stone slab colour of Black, Cherry/Ruby Red or equivalent	Sqm	200	2753.23	550646
	ROOFING				
	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
34	110 mm diameter	Metre	150	225.22	33783
	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Single tee without door				
35	110x110x110 mm	Each	20	134.35	2687
	Bend 87.5 degrees				
36	110 mm bend	Each	20	92.98	1859.6
	FINISHING				
	CEMENT PLASTER (IN FINE SAND)				
	12 mm cement plaster of mix :				
37	1:6 (1 cement: 6 fine sand)	Sqm	6000	198.63	1191780
	15 mm cement plaster on the rough side of single or half brick wall of mix :				
38	1:6 (1 cement: 6 fine sand)	Sqm	5000	228.43	1142150
	Extra for plastering:				
39	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	5000	150.95	754750
	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :				
40	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	8000	114.5	916000
	EXTERIOR FINISHING				
	Finishing walls with Acrylic Smooth exterior paint of required shade :				



41	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	Sqm	10000	117.52	1175200
	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
42	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.75 ltr/10 sqm of approved brand and manufacture	Sqm	1000	102.06	102060
43	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture	Sqm	5000	98.65	493250
	SANITARY INSTALLATIONS				
	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :				
44	W.C. pan with ISI marked white solid plastic seat and lid	Each	4	3902.58	15610.32
	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :				
45	W.C. pan with ISI marked white solid plastic seat and lid	Each	2	4889.23	9778.46
	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I. clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :				
46	One urinal basin with 5 litre white P.V.C. automatic flushing cistern	Each	2	3711.21	7422.42
	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:				
47	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	Each	4	1602.44	6409.76



48	Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.	Each	2	1693.05	3386.1
	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :				
49	Rectangular shape 453x357 mm	Each	4	816.33	3265.32
	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.				
50	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	Each	4	422.87	1691.48
	WATER SUPPLY				
	PP-R PIPES				
	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes confirming to IS 15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer-in-Charge. -Internal Exposed on walls				
51	PN - 16 Pipe, 20mm OD (SDR-7.4)	Metre	500	179.58	89790
52	PN - 16 Pipe, 25mm OD (SDR-7.4)	Metre	150	222.65	33397.5
53	PN - 10 Pipe, 50mm OD (SDR-11)	Metre	150	469.57	70435.5
	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes confirming to IS:15801 UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, including trenching, refilling & testing of joints complete as per direction of Engineer-in-Charge. - External work				
54	PN - 16 Pipe, 20mm OD (SDR-7.4)	Metre	500	150.66	75330
55	PN - 10 Pipe, 90 mm OD (SDR-11)	Metre	200	862.08	172416
	C.P.V.C. PIPES				
	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.- Internal work - Exposed on wall				
56	40 mm nominal dia Pipes	Metre	100	474.99	47499
	BRASS FITTINGS				



	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
57	25 mm nominal bore	Each	12	374.97	4499.64
	Providing and fixing uplasticised PVC connection pipe with brass unions :				
	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :				
58	100 mm diameter	Each	8	117.18	937.44
	C.I. SLUICE VALVES/ FIRE HYDRANTS & FIXTURES				
59	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 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.	Litre	5000	6.83	34150
	C.P. BRASS FITTINGS				
	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :				
60	15 mm nominal bore	Each	100	305.84	30584
	ALUMINIUM WORK				
	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top,				
	bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
61	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	Kg	500	374.59	187295
	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):				
62	With float glass panes of 4.0 mm thickness (weight not less than 10kg/sqm)	Sqm	200	718.32	143664
Sub Total					15410851.97
Item - 5	Execution of work as per schedule (Evacuation plant & Boggie Washing).				



S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
1	All kinds of soil	cum	1200	144.71	173652
2	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	100	1522.28	152228
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	50	5187.78	259389
4	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	100	4813.22	481322
	Centering and shuttering including strutting, propping etc. and removal of form work for :				
5	Foundations, footings, bases for columns	Sqm	300	216.91	65073
	REINFORCED CEMENT CONCRETE				
	CAST IN SITU				
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
6	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	100	5891.47	589147
	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form for				
7	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	400	471.61	188644
8	Suspended floors, roofs, landings, balconies and access platform	Sqm	200	539.93	107986
9	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	100	428.5	42850
10	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	100	566.49	56649
	PRE-CAST RCC				



11	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor	cum	2	6813.71	13627.42
	blocks, plain window sills and the like, including the cost of required centering, shuttering but , excluding cost of reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).				
	STEEL REINFORCEMENT				
	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
12	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	25000	63.15	1578750
	DESIGN MIX CONCRETE				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works upto plinth level				
13	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	200	6116.59	1223318
	All works above plinth level upto floor V level				
14	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	100	7259.35	725935
	STEEL WORK				
15	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	Kg	400	62.33	24932



16	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	Kg	100	431.25	43125
	ROOFING				
	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
17	110 mm diameter	Metre	128	225.22	28828.16
	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Shoe (Plain)				
18	110 mm Shoe	Each	16	81.67	1306.72
	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400				
	TEX panel rovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
19	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	Sqm	200	830.63	166126



20	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer- in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	1200	473.02	567624
	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete :				
21	Ridges plain (500 - 600mm)	Metre	50	317.39	15869.5
22	Gutter (600 mm over all girth)	Metre	100	782.27	78227
	FINISHING				
	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade :				
23	Two or more coats on new work	Sqm	300	97.1	29130
	Painting with aluminium paint of approved brand and manufacture to give an even shade .				
24	Two or more coats on new work	Sqm	3000	85.55	256650
	WATER SUPPLY				
	PP-R PIPES				
	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes confirming to IS 15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer-in-Charge. -Internal Exposed on walls				
25	PN - 16 Pipe, 32mm OD (SDR-7.4)	Metre	150	252.8	37920
26	PN - 10 Pipe, 50mm OD (SDR-11)	Metre	150	469.57	70435.5



	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes conforming to IS:15801 UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, including trenching, refilling & testing of joints complete as per direction of Engineer-in-Charge. - External work				
27	PN - 10 Pipe, 110 mm OD (SDR- 11)	Metre	50	1190.03	59501.5

Sub Total

7038245.80

Item - 6 Execution of work as per Schedule (Construction of shed for wheel turning facilities)					
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	EARTH WORK				
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
1	All kinds of soil	cum	500	144.71	72355
	CONCRETE WORK				
	CEMENT CONCRETE (CAST IN SITU)				
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
2	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	14	5187.78	72628.92
	REINFORCED CEMENT CONCRETE				
	CAST IN SITU				
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
3	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	130	5891.47	765891.1
	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form for				
4	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	330	216.91	71580.3
5	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	330	471.61	155631.3
6	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	220	428.5	94270
7	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	110	566.49	62313.9



	STEEL REINFORCEMENT				
	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
8	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	28000	63.15	1768200
	DESIGN MIX CONCRETE				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland / Portland Slag cement, admixtures in recommended proportions as per				
	IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works upto plinth level				
9	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	135	6116.59	825739.65
	All works above plinth level upto floor V level				
10	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	55	7259.35	399264.25
	STEEL WORK				
11	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	60000	78.85	4731000
	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.				
12	80x1.25 mm M.S. laths with 1.25 mm thick top cover	Sqm	20	2119.3	42386
13	Providing and fixing ball bearing for rolling shutters.	Each	1	298.79	298.79



14	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	Kg	2500	62.33	155825
	FLOORING				
15	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete.	cum	110	5605.81	616639.1
	ROOFING				
	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
16	110 mm diameter	Metre	300	225.22	67566
	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
	Bend 87.5 degrees				
17	110 mm bend	Each	60	92.98	5578.8
	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel roovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866. The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
18	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	Sqm	350	830.63	290720.5



19	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer- in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	1400	473.02	662228
	FINISHING				
	CEMENT PLASTER (IN FINE SAND)				
	12 mm cement plaster of mix :				
20	1:6 (1 cement: 6 fine sand)	Sqm	280	198.63	55616.4
	15 mm cement plaster on the rough side of single or half brick wall of mix :				
21	1:6 (1 cement: 6 fine sand)	Sqm	280	228.43	63960.4
	EXTERIOR FINISHING				
	Finishing walls with Acrylic Smooth exterior paint of required shade :				
22	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	Sqm	200	117.52	23504
	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:				
23	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	Sqm	200	114.35	22870
	Painting with aluminium paint of approved brand and manufacture to give an even shade .				
24	Two or more coats on new work	Sqm	550	85.55	47052.5
	ROAD WORK				
	MISCELLANEOUS				
25	Supplying and stacking of hard stone (for stone pitching) 22.5 cm thick at site.	cum	200	747.19	149438
26	Dry stone pitching 22.5 cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20 cm including preparing the bedding surface etc. all complete. (Payment for Stone to be made separately).	Sqm	650	382.37	248540.5
	WATER SUPPLY				
	PP-R PIPES				



	Providing and fixing 3 layer PP-R (Polypropylene Random copolymer) pipes confirming to IS 15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer-in-Charge. -Internal Exposed on walls				
27	PN - 10 Pipe, 50mm OD (SDR-11)	Metre	110	469.57	51652.7
	BRASS FITTINGS				
	Providing and fixing brass bib cock of approved quality :				
28	15 mm nominal bore	Each	10	214.02	2140.2
	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
29	80 mm nominal bore	Each	5	1569.05	7845.25
Sub Total					11532736.50
Schedule	22-AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL)				
Item - 1	Execution of work as per Schedule. (USSOR) (Soil Exploration)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
	Exploratory drilling of boreholes down to required depth, drilling of 150mm dia. boreholes in all type of soils except hard rock & large boulders (boulder core more than 30cm) including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chiselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area.				
1	0m to 10m	Metre	10	1444.8	14448
2	10m to 20m	Metre	10	1481.33	14813.3
3	20m to 30m	Metre	10	1609.64	16096.4
4	Conducting in situ Vane shear test for soil as per IS:4434	Each	2	2059.43	4118.86
5	Conducting determination of California Bearing Ratio as per IS:2720	Each	2	1356.2	2712.4
6	Taking out 100mm dia. & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labeling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS:2720.	Each	2	618.74	1237.48



7	Taking out 100mm dia. & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labeling and transporting the samples to laboratory. Samples shall be collected as per IS:2720.	Each	2	726.5	1453
8	Conducting standard penetration test as per IS:2131 at approximate 1.5m intervals in bore holes, as directed by the Engineer in charge	Each	2	331.97	663.94
9	Collection of water samples at required intervals	Each	2	695.45	1390.9
	Conducting laboratory Tests on collected soil samples as per relevant IS code				
10	Moisture Content/Dry Density	Each	2	852.08	1704.16
11	Atterberg Limits	Each	2	932	1864
12	Specific Gravity	Each	2	554.82	1109.64
13	Grain size analysis including Hydrometer analysis	Each	2	1403.7	2807.4
14	Direct Shear Test	Each	2	2018.79	4037.58
15	Natural Density	Each	2	1644.34	3288.68
16	Consolidation Test	Each	2	2100.52	4201.04
17	Unconfined Compression Test	Each	2	2299.62	4599.24
18	Tri-axial Test	Each	2	2203.26	4406.52
19	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete / reinforcement including determination of pH value.	Each	2	6963.7	13927.4
20	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	2	5886.03	11772.06
Sub Total					110652.00

Schedule	23-AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) Warehouse NS ITEM				
Item - 1	Execution of work as per NS Item				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Laying heavy duty stilonite industrial flooring with provision of MS flat square of grating of size up to 30cmx30cm as per specification/ drawing with contractors own tools, plants, labour including vibrating during casting as well as proper curing. Stilonite as per requirement including liquid hardener 6mm down machine crushed aggregate, pakur variety granite as well as MS plate for making gratings are to be supplied by contractor at his own cost except cement which will be paid in separate item on actual consumption. Rate of flooring is also inclusive of fabrication of MS flat gratings as directed by the Engineer. Specification for flooring 1 part stilonite (Metallic substance) : 4 Part cement : 8 Part 6mm down crushed aggregates with liquid hardener @ 90 liter per 100 sqm area i.e. 12.5 Kg stilonite : 50 kg cement and 100 Kg down crushed	Sqm	600	872.88	523728



	agregates.Heavy duty stilonite industrial flooring				
2	Boring holes of adequate dia by hydraulic jet method of any other approved method for suitable 200/300 mm dia deep tube well with steel pipe and size of bore hole with selected pea gravel with all tools plants,equipments all complete as per direction of engineer incharge or his authorised representative at site	Metre	480	2223.92	1067481.6
3	Supplying,fitting,fixing and lowering 200mm dia steel pipe (ERW) of approved quality of 6mm thick including all fitting and accessories as required including taxes and transportation etc, complete in all respect as per direction of engineer incharge or his authorised representative at site.	Metre	240	1857.22	445732.8
4	Supplying,fitting,fixing and lowering 300mm dia steel pipe (ERW) of approved quality of 6mm thick including all fitting and accessories as required including taxes and transportation etc, complete in all respect as per direction of engineer incharge or his authorised representative at site.	Metre	120	2820.06	338407.2
5	Supplying,fitting,fixing and lowering 200mm dia ISI Marked brass strainer of approved quality of 6mm thick including all fitting and accessories as required including taxes and transportation etc, complete in all respect as per direction of engineer incharge or his authorised representative at site.	Metre	120	6671.77	800612.4
6	Trial boring hole of 50mm dia upto 150mm depth by contractors own tools and plants including supply of pipes for required depth for strata and yield of deep tube etc. complete in all respect.	Metre	600	93.06	55836
7	Electrical logging a pilot borehole to assess the groundwater potentiality of the alluvial formation with conductivity test.	Metre	4	5189.16	20756.64
Sub Total					3252554.64
Schedule	24-AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) cover shed NS ITEM				
Item - 1	Execution of work as per Schedule.(NS ITEM PEB COVER SHED)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)



1	Providing, Fabricating & laying of colour coated Galvalume (Proflex system roofing) material for self supported roofing system (Technology similar to Proflex system provided by M&B engineering Pvt.Ltd., Ahmedabad), Material shall be of following specification, BMT 1.60mm to 1.80mm, APT 0.95mm Tolerance +/- 0.02mm thick, width 605 mm or as decided by Railway (Tolerance +/- 2mm), including supplying, loading, transporting, unloading and staking at site, fabricating and laying with all contractors tools, plants, machineries materials and fixtures labours including all lead and lift and laps/ wastage if any etc complete. The colour of sheet will be decided by Railway. The rate is also inclusive of designing of roofing system, proof checking and providing execution drawing. Fabrication and installation of self supported roofing technology similar to Proflex System provided by M&B engineering Pvt.Ltd., Ahmedabad or decided by engineer. a) length 19 meter or as per site requirement. b) Arch length 23m or as per site requirement. Note :- The roofing system should be self supported roofing system i.e. without trusses, purlins or any ancillary supports shall be designed by the contractor through the consultant and got duly proof checked from VJTI/IIT Mumbai, any other Govt. agencies. Design and drawing will be approved by railways. For design of roofing system relevant load parameters of IS code of practice to be adopted. The cost of designing and proof checking of design and drawings will not be paid separately and these charges are deemed to be included in rates of this item. The rate shall also inclusive of preparation of necessary auto cad drawing required for execution of roofing system should be 100% leak proof, resistant to corrosion and maintenance free.	Sqm	9375	1782.72	16713000
2	Laying heavy duty stilonite industrial flooring with provision of MS flat square of grating of size up to 30cmx30cm as per specification/ drawing with contractors own tools, plants, labour including vibrating during casting as well as proper curing. Stilonite as per requirement including liquid hardener 6mm down machine crushed aggregate, pakur variety granite as well as MS plate for making gratings are to be supplied by contractor at his own cost except cement which will be paid in separate item on actual consumption. Rate of flooring is also inclusive of fabrication of MS flat gratings as directed by the Engineer. Specification for flooring 1 part stilonite (Metallic substance) : 4 Part cement : 8 Part 6mm down crushed aggregates with liquid hardener @ 90 liter per 100 sqm area i.e. 12.5 Kg stilonite : 50 kg cement and 100 Kg down crushed aggregates. Heavy duty stilonite industrial flooring	Sqm	10500	493.69	5183745



3	Providing and fixing air roof ventilator wind driven turbine ventilator of approved brand and quality size of roof ventilator is 22" x 28" and fan size 28" ring size 29". Rate includes cost of ventilator with all necessary accessories, materials, tools, plants, , transportation, taxes etc. complete in all respect as per direction of Engineer-in-charge or his authorised representative at site. Roof ventilator shall be approved component authority before installation of air roof ventilator.	Each	180	2516.02	452883.6
4	Designing, providing, fabricating, painting, transporting, erecting and securing in position structural steel work for pre-engineered building and workshops complete as per specifications, approved shop drawings and / or instructions. Work under this item would generally cover all structural steel work in the Buildings/Workshops, including but not being limited to, columns, stanchions, beams, rafters, purlins, canopy, steel work for cladding & louvers above 4.80m high from floor level, gantry girders bracings, catwalk, ladders & stairs inside & outside, provision for fixing Electrical, Mechanical and S & T equipments. All structural steel shall be supplied painted as per specification of the painting as per Clause 2.0 of Specifications for PEB. Work to include all intermediate stages of activities not defined herein, but otherwise implied for completion of work under this item. Cost to include but not be limited to, all materials including wastage, all consumables, fasteners of all types for both temporary and permanent stages of work, all temporary stays, labour, temporary works including staging, scaffolding, tools, plant and costs of all incidentals and necessary testing of material, workmanship etc. including cost of painting as per specifications. Note:- The above description of item includes the cost of:- 1. Designing, providing and fixing of rainwater gutters and down takepipe of 0.50 TCT pre-painted Galvalume/Zinacalume steel in approved colour all along all edges of the building based on the available surface area and rainfall data. Provision of ventilation system including designing, supply and fixing at required location for 600mm throat edge ventilators along ridge for full length of the shed with required numbers of 600mm dia Turbo vents shall be provided on both side slopes to achieve minimum 5 (five) air changes per hour as per the design	MT	1350	68745.11	92805898.5

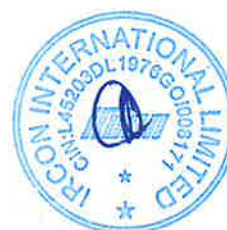


	approved by railway. 3. Planning and providing architectural and engineering drawings with all details of Workshop including facade, plan, elevation, section, details of gantry girders & crane rail to suit installation of EOT crane, details of roofing, wall cladding, rolling shutters, flooring, cable duct, water supply, drainage, doors, windows, grills, louvers etc as per requirement of individual shed in consultation with Eng - in - charge. Designing and providing detailed drawing of RCC footings, columns, tie beams, beam/plinth beam, flooring, cable ducts, drains, water supply, cubicles, embedded tracks, gas pipe line, roofing, solar light pipe & poly carbonate sheets, wall cladding, industrial flooring, etc as per requirement of individual shed in consultation with Eng - in charge. (The payment for actual executed quantities for note 4. above will be made separately in relevant items Soil investigation report shall be made available by Railway.) 5. Designing and providing complete structural, fabrication and erection details drawing of all Pre - Engineered - Structures duly proof checked by IIT. 6. Designing, fabricating, providing Holding Down MS Bolts including all assemblies and accessories that are embedded in concrete work under scope of this work. Detailed Description Kept at SN- 488 at PEB specification document				
5	Providing and fixing cast iron water hydrant two way for carriage washing lines including cost of jointing material complete as per approved drawing (Engg Drawing no 250 (inr) used for analysis Rate obtained from USSOR -2010 ITEM NO. 135020	Each	300	711.9	213570

Sub Total

115369097.10

Schedule	25-AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) Boggie washing plant NS ITEM				
Item - 1	Execution of work as per schedule.				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Laying heavy duty stilonite industrial flooring with provision of MS flat square of grating of size up to 30cmx30cm as per specification/ drawing with contractors own tools, plants, labour including vibrating during casting as well as proper curing. Stilonite as per requirement including liquid hardener 6mm	Sqm	1248	962.43	1201112.64



	down machine crusted aggregate, pakur variety granite as well as MS plate for making gratings are to be supplied by contractor at his own cost except cement which will be paid in separate item on actual consumption. Rate of flooring is also inclusive of fabrication of MS flat gratings as directed by the Engineer. Specification for flooring 1 part stilonite (Metallic substance) : 4 Part cement : 8 Part 6mm down crushed aggregates with liquid hardener @ 90 liter per 100 sqm area i.e. 12.5 Kg stilonite : 50 kg cement and 100 Kg down crushed aggregates. Heavy duty stilonite industrial flooring Heavy duty stilonite industrial flooring				
2	Providing and fixing air roof ventilator wind driven turbine ventilator of approved brand and quality size of roof ventilator is 22" x 28" and fan size 28" ring size 29". Rate includes cost of ventilator with all necessary accessories, materials, tools, plants, , transportation, taxes etc. complete in all respect as per direction of Engineer-in-charge or his authorised representative at site. Roof ventilator shall be approved component authority before installation of air roof ventilator.	Each	50	4904.81	245240.5
Sub Total					1446353.14
Schedule	26-AT-SGUJ Infrastructure construction of GE Loco Shed (CIVIL) NS ITEM Shed for wheel turning facilities.				
Item - 1	NS ITEM Shed for wheel turning facilities.				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Laying heavy duty stilonite industrial flooring with provision of MS flat square of grating of size up to 30cmx30cm as per specification/ drawing with contractors own tools, plants, labour including vibrating during casting as well as proper curing. Stilonite as per requirement including liquid hardener 6mm down machine crusted aggregate, pakur variety granite as well as MS plate for making gratings are to be supplied by contractor at his own cost except cement which will be paid in separate item on actual consumption. Rate of flooring is also inclusive of fabrication of MS flat gratings as directed by the Engineer. Specification for flooring 1 part stilonite (Metallic substance) : 4 Part cement : 8 Part 6mm down crushed aggregates with liquid hardener @ 90 liter per 100 sqm area i.e. 12.5 Kg stilonite : 50 kg cement and 100 Kg down crushed aggregates. Heavy duty stilonite industrial flooring Heavy duty stilonite industrial flooring	Sqm	1200	912.42	1094904



2	Providing and fixing air roof ventilator wind driven turbine ventilator of approved brand and quality size of roof ventilator is 22" x 28" and fan size 28" ring size 29". Rate includes cost of ventilator with all necessary accessories, materials, tools, plants, , transportation, taxes etc. complete in all respect as per direction of Engineer-in-charge or his authorised representative at site. Roof ventilator shall be approved component authority before installation of air roof ventilator	Each	30	4649.97	139499.1
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Sub Total

1234403.10

Schedule	27-AT-SGUJ Infrastructure construction of GE Loco Shed (Electrical General)				
Item - 1	Execution of work as per schedule (NS ITEM)				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply, installation, testing & commissioning of 120 watt energy saving, environment friendly & robust Highbay LED with PDC housing suitable for ceiling (Surface/Suspended) mounting with system efficacy upto 150 lm/W as per instruction of Engineer Incharge at Site.	Numbers	216	8436.22	1822223.52
2	Supply, installation, testing & commissioning of 60 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 66, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection as per instruction of Engineer incharge at site.	Numbers	372	4156.92	1546374.24
3	Supply, installation, testing & commissioning of Wall Air Circulator Fan (Industrial fan), 600 mm sweep (Speed- 1440 RPM, Max. wattage-180 Watt, Air delivery > 16000 CMH, Aerodynamically designed aluminum alloy single piece blades for high air delivery> 16500 CMH, conforms to IS 2997-1964 standards) with suitable fixing arrangement on wall as per instruction of Engineer incharge at site.	Numbers	187	5571.21	1041816.27
4	Supply, fixing, connection & testing of indoor LED tube batten with 20 watt LED T8 tubular lamp with extruded aluminium body and PC diffuser complete with inbuilt driver (System wattage-20 Watt, System efficacy> 105 lm/W, Power factor 0.90) with suitable fixing arrangement as per instruction of Engineer incharge at site.	Numbers	288	840.73	242130.24
5	Supply & erection of Welding terminal housed inside metal clad water proof box having hinged type front cover and provision of screw type connectors with insulating FRP base and AL round bar to be fix on pole with clamp above 01 feet from ground level. (Painting of the box to be done completely. The face of terminal to be coloured with red & black paint)	Set	80	627.74	50219.2



6	Supply, installation, testing & commissioning of outdoor type weather proof shedded feeder pillar box of suitable size made of powder coated 14 SWG MS/CRCA sheet, angle, flat etc. The feeder pillar box four legs should be grouted on CC foundation (1:3:6). Cable entry should have PVC glands. Feeder pillar box should have double door system with locking arrangement with fixing of rubber gasket for protection of entry of dust and water alongwith supply and fixing of following MCCB as per instruction of Engineer Incharge at site.	Set	66	4432.49	292544.34
7	a) MCCB FP 125 amps, 36 kA, Ics=100% Icu	Numbers	66	7077.98	467146.68
8	b) Copper bus bar 200 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	66	1114.43	73552.38
9	c) Supply, fixing, connection & testing of LED indication lamp RYB	Set	66	201.77	13316.82
10	d) Supply and fixing of Industrial socket 63 A, IP67, 5-Pin (Panel mounted)	Numbers	66	3074.26	202901.16
11	e) MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	66	6194.28	408822.48
12	f) MCCB FP 32 amps, 25 kA, Ics=100% Icu	Numbers	66	5478.73	361596.18
13	g) Supply, wiring, testing & commissioning of concealed 6/16 amps power plug point on separate board complete with modular 16 amps switch (with indicator) and 6/16 amps 5 pin combined shuttered socket to be mounted on modular GI inner plate 4M or suitable size with modular mounting frame to be concealed in wall as per instruction of Engineer Incharge at Site.	Numbers	66	735.17	48521.22
14	h) MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002	Numbers	66	208.32	13749.12
15	Supply, installation, testing & commissioning of outdoor type weather proof shedded feeder pillar box of suitable size made of powder coated 14 SWG MS/CRCA sheet, angle, flat etc. The feeder pillar box four legs should be grouted on CC foundation (1:3:6). Cable entry should have PVC glands. Feeder pillar box should have double door system with locking arrangement with fixing of rubber gasket for protection of entry of dust and water alongwith supply and fixing of following MCCB as per instruction of Engineer Incharge at site.	Set	48	4432.49	212759.52
16	a) Copper bus bar 100 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	48	766.93	36812.64
17	b) Supply, fixing, connection & testing of LED indication lamp RYB	Set	48	201.77	9684.96
18	c) MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	48	6194.28	297325.44
19	d) MCCB FP 32 amps, 25 kA, Ics=100% Icu	Numbers	48	5478.73	262979.04
20	e) Supply and fixing of Industrial socket 63 A, IP67, 5-Pin (Panel mounted)	Numbers	48	3074.26	147564.48
21	g) Supply, wiring, testing & commissioning of concealed 6/16 amps power plug point on separate board complete with modular 16 amps switch (with indicator) and 6/16 amps 5 pin combined shuttered socket to be mounted on modular GI inner plate 4M or suitable size with modular mounting frame to be concealed in wall as per instruction of Engineer Incharge at Site.	Numbers	48	735.17	35288.16



22	h) MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002	Numbers	48	208.32	9999.36
23	Supply, installation, testing & commissioning of outdoor type weather proof shedded feeder pillar box of suitable size made of powder coated 14 SWG MS/CRCA sheet, angle, flat etc. The feeder pillar box four legs should be grouted on CC foundation (1:3:6). Cable entry should have PVC glands. Feeder pillar box should have double door system with locking arrangement with fixing of rubber gasket for protection of entry of dust and water alongwith supply and fixing of following MCCB as per instruction of Engineer Incharge at site.	Set	17	4432.49	75352.33
24	a) Copper bus bar 300 amps TPN made of electrolytic grade copper consisting of 4 no bars (3 Ph & neutral)	Set	17	2024.28	34412.76
25	b) Supply, fixing, connection & testing of LED indication lamp RYB	Set	17	201.77	3430.09
26	c) Supply & testing of MCCB FP 250 amps, 36 kA, Ics=100% Icu.	Numbers	17	13884.12	236030.04
27	d) Supply & testing of MCCB FP 200 amps, 25 kA, Ics=100% Icu.	Numbers	17	12682.82	215607.94
28	e) MCCB FP 32 amps, 25 kA, Ics=100% Icu	Numbers	17	5478.73	93138.41
29	f) Digital voltmeter (0-500) volts and Digital ammeter (0-500) amps with s/switch and CTs	Set	17	4800.55	81609.35
30	Supply, installation, testing & commissioning of 300 mm sweep (metallic) heavy duty exhaust fan, 1400 RPM complete with fixing on wall by suitable size bolts & nuts grouted on wall.	Numbers	39	2428.77	94722.03
31	Supply, installation, testing & commissioning of 10 watt LED Bulkhead luminaires, IP65 as per instruction of Engineer incharge at site.	Numbers	360	1133.11	407919.6
32	Supply, fixing, testing & commissioning of rigid PVC conduit pipe of 32-50 mm dia, Medium mechanical strength. The pipe should be fixed with ramp/FOB shed structure at regular interval with clamps. as per instruction of Engineer incharge at site.	Metre	420	47.64	20008.8
33	Supply and fixing of Corrugated flexible conduit pipe (FRPP), 20 mm (3/4")	Metre	780	27.09	21130.2
34	Supply & wiring by 4 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts Conforming to IS: 694 to be drawn through double locked PVC casing capping of not less than 19 mm wide & 0.85 mm thick along with 1 sq mm single core FR PVC insulated and unsheathed copper wire for earth continuity	Metre	9840	58.85	579084
35	Supply, wiring & testing of main wire by 6 sq mm, Single Core FR- LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 through PVC rigid conduit pipe/polythene pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	11520	80.33	925401.6



36	Supply, drawing, commissioning & testing of 10 sq mm, Single Core FR-LSH or HRFR PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts Conforming to IS: 694 as per instruction of Engineer incharge at site. (Main line under PP shed)	Metre	10560	84.07	887779.2
37	Supply, wiring & testing of main wire by 2.5 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 concealed in wall through PVC rigid conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	9360	63.52	594547.2
38	Supply, wiring, testing & commissioning of FL point/ Lamp point/ Fan point (loop wiring) with ceiling rose/ angle/ batten holder by FR-LSH PVC insulated and unsheathed single core, 2.5 sq mm flexible copper cable with earth continuity by 1.5 sq mm copper wire to be drawn through rigid PVC conduit pipe not less than 20 mm dia medium gauge including bends, joints etc. from main line under PP shed/FOB shed without controlling switch	Numbers	560	210.18	117700.8
39	Supply, fixing, connection & testing of indoor LED tube batten with 20 watt LED T8 tubular lamp with extruded aluminium body and PC diffuser complete with inbuilt driver (System wattage-20 Watt, System efficacy> 105 lm/W, Power factor 0.90) with suitable fixing arrangement as per instruction of Engineer incharge at site.	Numbers	372	840.73	312751.56
40	Supply, wiring, testing & commissioning of concealed 6/16 amps power plug point on separate board complete with modular 16 amps switch (with indicator) and 6/16 amps 3 pin combined shuttered socket to be mounted on modular GI inner plate 4M or suitable size with modular mounting frame to be concealed in wall (Wiring measurement from Sr. No-11)	Numbers	216	735.17	158796.72
41	Supply and erection of GI strip of size 25 mm x 6 mm (For earthing connection)	Metre	540	90.61	48929.4
42	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	104	2402.61	249871.44
43	Supply, fixing, testing & Commissioning of 11 kV composite Pin insulator or real insulator of suitable size for Over head lines ,polymer type with all accessories as per instruction of Engineer incharge at site. Insulator must conform to IEC - 61109 with upto date ammendments.	Numbers	912	198.04	180612.48
44	Supply & fixing of MS angle bracket (50 x 50 x 6) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50x 16 mm MS nut,bolt	Metre	212	234.47	49707.64



45	a) Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof, rust proof, dust proof, water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	8	28313.78	226510.24
46	b) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	8	3023.81	24190.48
47	c) Digital Voltmeter (0-500) amps and Digital Ammeter (0-500) amps with s/switch and CTs	Set	8	4800.55	38404.4
48	d) LED Indication Lamp RYB	Set	8	201.77	1614.16
49	e) MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals	Numbers	8	26172.73	209381.84
50	MCCB FP 250 amps, 36 kA, Ics=100% Icu	Numbers	32	13884.12	444291.84
51	g) MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	16	12682.82	202925.12
52	MCCB FP 125 amps, 36 kA, Ics=100% Icu	Numbers	8	7077.98	56623.84
53	Supply and drawing of Round conduit PVC pipe of size 20 mm medium guage, to be sufaced on wall/underground with all necessary hardware, accessories such as inner / outer Elbows, bend, Tees, Junction boxes, screws etc as per instruction of Engineer incharge at site.	Metre	3372	46.71	157506.12
54	Supply, fixing, testing & commissioning of 63 amp Industrial plug & socket DB (CRCA/SS made) complete with metal Plug, socket (5P) & MCB DP 63 amp	Numbers	16	8129.82	130077.12
55	Supply, fixing, testing & commissioning of 20-32 amp Industrial plug & socket DB (CRCA/SS made) complete with metal Plug, socket (3P) & MCB DP 20 amp as per instruction of Engineer incharge at site.	Numbers	16	2296.11	36737.76
56	a) Supply, erection, testing ,commissioning & painting of Wall/floor mounted powder coated cubicle panel board (Modular look), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof, rust proof, dust proof, water proof having internal rubber gasket and connection by suitable size copper strip.	Set	18	12094.31	217697.58
57	b) Supply, Fixing & Testing of Copper bus bar 1000 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	2	5342.34	10684.68



58	c) Supply & fixing of onload changeover switch 800 amps Four Pole, 415 V 50 Hz, with Sheet Steel Enclosure (with front handle) as per IS/IEC 60947-1&3	Numbers	4	45080.66	180322.64
59	Supply, installation, testing & commissioning of 350 kVAR Automatic Power Factor Correction (APFC) Panel having heavy duty cylindrical capacitor, Rated Voltage 415V AC, 3Ø, 50Hz with all accessories as per instruction of Engineer Incharge at Site.	Numbers	3	490719.59	1472158.77
60	Supply, installation, testing & commissioning of 500 KVA, 11/0.433 KV transformer, 3 Phase, 50Hz, Outdoor type, copper wound, Delta/Star, Dyn11, ONAN cooled transformer with Off Ckt. Tap changer having range + 5% to -5% in steps of 2.5% each with first filling of oil and with all standardg fittings & accessories conforming to IS: 2026 (Part I to V) as per instruction of Engineer incharge at site.	Numbers	4	526581.22	2106324.88
61	Supply & execution of transformer bed by CC foundation (1:3:6) of size (3.0 m x 2.0 m x 2.0 m) including plastering by mortar ratio (1:4) including digging of soil/surface as per instruction of Engineer incharge at site. (For installation of transformer)	cum	90	3813.16	343184.4
62	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small)), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	4	28313.78	113255.12
63	Supply, fixing, testing & commissioning of onload changeover switch 1000 amps Four Pole, 415 V 50 Hz, with Sheet Steel Enclosure as per IS/IEC 60947-1&3 as per instruction of Engineer incharge at site.	Numbers	4	68936.73	275746.92
64	Supply, installation, testing and commissioning of Air Circuit Breaker (ACB) 800 A, 50 kA, EDO, Microprocessor Based breaking capacity Icu=Ics=Icw (1 sec) as per instruction of Engineer incharge at site.	Numbers	4	138444.21	553776.84
65	Supply, Fixing & Testing of Copper bus bar 1000 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	4	5342.34	21369.36



66	Supply, welding & erection of chain link fabric fencing of sub-station (Fencing approx size-4 mtr x 7 mtr x 3 mtr) by providing GI wire mesh, MS angle support, MS flat/patti etc. and provision of two fold gate with locking arrangement alongwith painting of whole structure with two coats of aluminium paints over primer. MS patti should be square around up & down side and crossed also in all side with CC work as required as per instruction of Engineer incharge at site.	Job	4	22753.78	91015.12
67	Supply of swaged type GI tubular pole 9 mt long conforms to IS - 2713/1980 with following technical specification : - a) Length of section : - Bottom - 5 mt, Middle - 2 mt, Top - 2 mt b) Outside diameter and thickness of section : - Bottom - 114.3 x 4.50 mm, Middle - 88.9 x 4.05 mm , Top - 76.1 x 3.25 mm	Numbers	12	11261.05	135132.6
68	Erection of Rail/Tubular/Octagonal pole to 1/5 th of its height with CC foundation from base block (30 cm x 30 cm x 15 cm) including digging & refilling of earth to a height of 30 cm above ground level as per drawing no.CEE/OH@47'40@FGA) in ratio 1:3:6 by cement sand & Chips 19 mm & down including excavation of earth.	Numbers	12	1451.66	17419.92
69	Supply & fixing of MS channel bracket (75 x 40 x 40 x 6) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50 x 16 mm MS nut,bolt & washer including drilling of holes as per instruction of Engineer Incharge at Site.	Metre	42	275.57	11573.94
70	Supply, erection, testing & commissioning of 11 kV , 200 amps, 3 Pole vertical type Gang Operated Air Break switch TILTING type complete with square shaft, operating pipe, handle, guide clamp etc (3 no in a set) as per instruction of Engineer incharge at site.	Set	12	9637.52	115650.24
71	Supply, installation, testing and commissioning of Drop Out Fuse 11 KV	Set	12	3488.08	41856.96
72	Supply, erection, testing & commissioning of 11 kV lightning arrestor polymer type with all accessories. Lighting arrestor must conform to IEC-60099-4 IS: 3070 (Part-III) (3 no in a set) as per instruction of Engineer incharge at site.	Set	12	4407.27	52887.24
73	Supply, fixing, testing & Commissioning of 11 kV composite Pin insulator polymer type with all accessories as per instruction of Engineer incharge at site. Insulator must conform to IEC - 61109 with upto date ammendments.	Numbers	64	198.04	12674.56
74	Supply, fixing, testing & Commissioning of 11 kV composite Ball & Socket type Disc insulator polymer type with all accessories as per instruction of Engineer incharge at site. Insulator must conform to IEC - 61109 with upto date ammendments	Numbers	64	209.25	13392
75	Supply & handover of HT 11 kV (E) cable termination Kit out door, heat shrinkable type for 3 core, 120-185 sq mm XLPE insulated PVC armoured cable complete with jointing materials as per instruction of Engineer incharge at site.	Set	70	19367.52	1355726.4



76	Supply, laying, commissioning & testing of GI pipe 100 mm medium guage with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut, bolt etc. (For protection of cable) as per instruction of Engineer incharge at site.	Metre	180	786.55	141579
77	Supply , laying , commissioning & testing of HDPE pipe 50 mm dia, PN-6 grade to be laid partly along the pole/wall with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer etc as per instruction of Engineer Incharge at site.	Metre	600	59.78	35868
78	Supply, installation, testing & commissioning of wire mesh cable tray of size (Depth- 54 x Width-150) mm, made of carbon steel (ASTM A510, Grade-1008 specified) finished by electrozinc plating (ASTM B 633 specified) alongwith all accessories like suitable type of splices, locking tab, divider coupler, preclick, SWK, clamp, Tee, bend, bracket, nut, bolts etc. as per instruction of engineer incharge at site.	Metre	2500	1337.69	3344225
79	Supply & handover of HT 11 kV (E) cable termination Kit out door, heat shrinkable type for 3 core, 120-185 sq mm XLPE insulated PVC armoured cable complete with jointing materials as per instruction of Engineer incharge at site.	Set	12	19367.52	232410.24
80	Supply, wiring, testing & commissioning of concealed point wiring by FR-LSH PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe/polythene pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re- mended to original finish by contractor's own material. A) FL point/LED tube point/Mirror light point with C/rose	Numbers	384	685.66	263293.44
81	Lamp point with angle holder	Numbers	360	605.33	217918.8
82	Supply & testing of insulation tester 500/600 Volt. Specifications Type-Hand Held Measurement Range-0.01 M Ohm to 10 G Ohm Measurement Accuracy-2 percent Measurement Resolution-0.01 megaOhm Test Voltage-2500 Volt Test Current-1.4 milliAmpere Safety rating-Category III 600 V of IEC 61010 Warranty-1 year	Numbers	4	17982.2	71928.8
83	Supply & testing of insulation tester 1000 Volt Specifications Type-Hand Held Measurement Range-0 to 1 T Ohm Measurement Accuracy-5 percent Measurement Resolution-1 megaOhm Test Voltage-2500 Volt Test Current-5 milliAmpere Safety rating-Category III1000 V of IEC61010	Numbers	6	18215.73	109294.38



84	Supply & testing of digital clamp on multi meter Specifications:- Type-Hand Held Display-3.5 digit Backlit LCD Measurement Type-True RMS count-4000 Resistance Measurement Range-10 kiloOhm Resistance Measurement Accuracy(+/-)-1 percent- Frequency Measurement Range-0.5 kiloHertz Frequency Measurement Accuracy(+/-)-0.5 percent AC Current Measurement Range-100 Ampere AC Current Measurement Accuracy(+/-)-2.5 percent	Numbers	6	9808.45	58850.7
85	Supply & testing of hand held digital infrared thermometer Specifications:- Lowest Measurable Temperature(Infrared Non-contact) -50 degree Celsius Highest Measurable Temperature(Infrared Non-contact) 2200 degree Celsius Display Resolution-0.1 degree Celsius Basic Accuracy (±)-1 degree Celsius Emissivity (W/m2) Continuously Adjustable from 0.1 to 1.00 Type of Display-LCD Back- light display-Yes Display Size(in inch)-2.5 to 2.9 Data Output to other devices-Yes Data point logging capability (onboard memory) -100	Numbers	2	28023.23	56046.46
86	Supply & testing of switch digital earth resistance meter. Specifications:- Display type-4 digit LCD display Measurable Earth resistance range selection Range selection through a switch Method for resistance measurement- 2-pole Counts-2000 Stakeless test(Clamp On)-Yes	Numbers	2	25218.23	50436.46
87	Supply & testing of digital light meter.3-1/2 digits LCD Readings with maximum value 1999 Digital Light Meter, Measuring Range Scale 0.1 - 19990 Lux. Technical Specification Power Source-1.5 AAA Angular Incident Light Characteristics- 30 degree Less than +/- 3%, 60 degree Less than +/- 10%, 80 degree Less than +/- 10% Light Sensor-Silicon Photo Diode Response Time-2.5 times/sec Operating Temperature Range-0 degC to 50 degC Storage Temperature Range-10 degC to 60 degC Display-3-1/2 digits LCD Readings with maximum value 1999 Relative Humidity-< 80% Current Consumption-2mA Reading Data Accuracy-3 % rdg+0.5FS Measuring Range Selection, Lux 200,2000,20000 Measurement Range Scale 0.1 - 19990 Lux	Numbers	2	14012.1	28024.2
88	Supply & testing of aluminum self support ladder 6-8 Feet. Specifications:- Reach Height, feet- 8 foot Ladder Closed Height-8 foot Ladder Open Height-8 foot Material-Aluminium Type-Self Supporting Strength Type-Medium Strong Number of Steps-1-20 Locking System-No	Numbers	10	9247.05	92470.5
Sub Total					26358330.11
Item - 2	Administrative Building and Service building with Ware House				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)



1	Supply, wiring, testing & commissioning of concealed point wiring by FR-LSH PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm, single core multi strand copper wire concealed on wall through PVC rigid conduit pipe/polythene pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re-mended to original finish by contractor's own material. a) FL point/LED tube point/Mirror light point with C/rose	Numbers	836	685.66	573211.76
2	b) Fan point with c/rose and 5 step fan regulator 2 M	Numbers	376	1247.08	468902.08
3	c) Exhaust fan point with c/rose	Numbers	55	693.13	38122.15
4	d) Wall bracket fan point	Numbers	10	685.66	6856.6
5	e) Emergency (inverter) light point with angle holder	Numbers	120	605.33	72639.6
6	f) Plug point 6 amps on board complete	Numbers	172	310.13	53342.36
7	h) Fixing, testing & commissioning of ceiling fan with supply & fixing of MS clamp with hook,nut,bolt,washer etc. (Fan will be supplied by Railway)	Numbers	376	39.23	14750.48
8	i) Supply and testing of wall mounted bracket fan 400 mm sweep complete with all accessories to be fixed on wall by suitable fixing arrangement including connection by 2 core, 1.5 sqmm PVC insulated and FR PVC Round Sheathed, Copper Conductor (flexible) industrial cable	Numbers	20	1718.81	34376.2
9	Supply, fixing, connection & testing of indoor LED tube batten with 20 watt LED T8 tubular lamp with extruded aluminium body and PC diffuser complete with inbuilt driver (System wattage-20 Watt, System efficacy> 105 lm/W, Power factor 0.90) with suitable fixing arrangement as per instruction of Engineer incharge at site.	Numbers	836	840.73	702850.28
10	Supply, installation, testing & commissioning of 300 mm sweep (metallic) heavy duty exhaust fan, 1400 RPM complete with fixing on wall by suitable size bolts & nuts grouted on wall as per instruction of Engineer Incharge at Site.	Numbers	51	2428.77	123867.27
11	Supply, installation, testing & commissioning of Surface/Recessed LED luminaire with slim line CRCA sheet metal body, square type, (System wattage-18 Watt, Nominal system efficacy 100 lm/watt) suitable for 600 x 600 mm modular ceiling as per instruction of Engineer incharge at site.	Numbers	40	1973.84	78953.6



12	Supply, wiring, testing & commissioning of concealed 6/16 amps power plug point on separate board complete with modular 16 amps switch (with indicator) and 6/16 amps 3 pin combined shuttered socket to be mounted on modular GI inner plate 4M or suitable size with modular mounting frame to be concealed in wall (Wiring measurement from Sr. No-11)	Numbers	129	735.17	94836.93
13	Supply, wiring, testing & commissioning of concealed plug point on separate board complete with 2 x 6 Amp modular socket and 6/10 amps modular switch to be mounted on modular GI inner plate 6M and 6M modular mounting frame with GI box to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re-mended to original finish by contractor's own material	Numbers	140	634.28	88799.2
14	Supply, installation, testing & commissioning of 120 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 65, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection as per instruction of Engineer incharge at site.	Numbers	12	9911.22	118934.64
15	Supply, installation, testing & commissioning of 45 watt LED street light luminaire with heat resistant glass with connecting lead (IP protection- IP 66 class-I, System efficacy 105 lm/w, Housing- Pressure die cast aluminium powder coated, THD<10%, p.f.>0.95, Surge protection- 5 kV) as per instruction of Engineer incharge at site.	Numbers	42	3298.44	138534.48
16	Supply, installation, testing & commissioning of Inverter Split Air Conditioners 1.5 Ton, (BEE star rating-5 star, Coil material-Copper, Eco-friendly refrigerant, Nominal cooling capacity in Ton / (kcal/hr)-1.5 Ton / 4500 kcal/hr) with all accessories as per OEM suitable for operation on 230V AC, single phase, 50 Hz as per instruction of Engineer incharge at site. Re-mending work should be done after installation of RAC. (with 1 pair outdoor wall stand)	Numbers	20	43017.14	860342.8
17	Supply, installation, testing & commissioning of modular power unit complete with 32 Amp mini MCB DP "C" series 3kA, 25 amps starter, 25 Amp Socket and 25 Amp plug to be mounted on 6 module GI box, 6 module combined plate concealed on wall and wiring by 6 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts with earth continuity wire by 1 sq mm copper cable conforming to IS: 694 to be drawn through Rigid PVC conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site. (Wiring measurement from sub-main 6 sq mm) (For AC & geyser point)	Set	20	1026.62	20532.4
18	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium gauge) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction	Numbers	16	2402.61	38441.76



	of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.				
19	Supply, installation , commissioning & testing of LED Glow name board (Length of board will be as per proportion of letter so that all the 4 side of the board will have extra space) with channel letters with 3.75 ft. in length with suitable width and 4 mm projection size which inside ACP board (Brand- ALUDECOR, category- AL 33 series exterior & thickness-3 mm) with acrylic face on front and having Samsung 5630 LED's (Shape- Lens type, operating voltage- 12 V DC, carrying current- 80 mA, power Dissipation- 0.96 watt, working hours-50000, case material-ABS ,protection-IP68) inside for illumination letters in English, Hindi, Bengali or regional language complete with all materials including provision of erection structure made of MS angle/channel/flat duly painted with aluminium paint over a coat of red oxide primer with CC foundation (1:3:6) of cement, sand and stone chips as required at site and as per instruction of Engineer incharge at site. (12 ft x 4 ft)	Square Foot	36	1524.52	54882.72
20	Supply, installation, testing & commissioning of Stationary storage type electric water heater (Geyser), Digital display, Type:- Vertical, Capacity (Ltrs)20:-25, Power input: 2000 watt, Class:-I, Star Rating: 5 Star suitable for operation on 230 Volts, single phase AC, 50 Hz. Storage electric water heater shall be complete in all respect with fittings as per general technical requirements and as per instruction of Engineer incharge at site.	Numbers	27	9728.13	262659.51
21	Supply, installation, testing & commissioning of Sine wave Inverter 5500 VA suitable for operation on 230 volt AC, with supply of 04 nos. 12 volt @ 150 Ah SMF battery including inverter battery trolley as per instruction of Engineer incharge at site.	Set	4	102008.08	408032.32
22	Supply, wiring, testing & commissioning of concealed point wiring by FR PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re- mended to original finish by contractor's own material.a)Inverter Point	Numbers	120	605.33	72639.6
23	Supply and fixing of Post LED gate light 45 watt. Material of Gate Lighting pole including lighting system Antique HLYT66150 IP-65 protected.(lantern/luminaire) (Note: Wherever GI, MS, CI materials used, materials shall be ISI Marked) Galvanised Iron Pole height including lantern/luminaire (in m)- 3 Type of light source - BEE star rating of LED Bulb SMD LED Chip	Numbers	16	18682.8	298924.8



24	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	16	2402.61	38441.76
25	Supply, installation, testing & commissioning of 4 way VTPN MCCB DB (MCCB+12 modules) with IP 43 grade protection, metal door with wire sets, busbar, earth bar, blanking plates, cable ties etc with supply and fixing of following MCCB/MCB as per instruction of Engineer incharge at site.	Set	8	10014.92	80119.36
26	Supply, installation, testing & commissioning of 18 way SPN Distribution Board, Flush/Surface mounting, IK 09, IP 43 grade protection with copper bus bar, fully shrouded neutral bar, earth bar, cable ties, Prefitted masking sheet, Reversible metal door as per IS 8623 - 1 & 3 as per instruction of Engineer incharge at site.	Set	8	2533.39	20267.12
27	Supply, installation, testing & commissioning of 8 way SPN distribution board, Flush/Surface mounting, IP 43 grade protection and having following MCB	Set	40	1649.69	65987.6
28	RCBO DP 63 Amp, 100 mA sensitivity, 4 module Conforms to IEC 61009-1(For Incoming circuit)	Numbers	8	3684.25	29474
29	RCBO DP 32 Amp, 100 mA sensitivity, 2 module Conforms to IEC 61009-1(For Incoming circuit)	Numbers	40	2693.13	107725.2
30	MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002 (For light/Fan/6 Amp Plug point circuit)	Numbers	352	208.32	73328.64
31	Supply, drawing, commissioning & testing of 10 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts Conforming to IS: 694 as per instruction of Engineer incharge at site.	Metre	5600	95.28	533568
32	Supply & wiring by 6 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts Conforming to IS: 694 to be drawn through double locked PVC casing capping of not less than 19 mm wide & 0.85 mm thick along with 1 sq mm single core FR PVC insulated and unsheathed copper wire for earth continuity as per instruction of Engineer Incharge at Site.	Metre	5000	71	355000
33	Supply & wiring by 2.5 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts Conforming to IS: 694 to be drawn through double locked PVC casing capping of not less than 19 mm wide & 0.85 mm thick along with 1 sq mm single core FR PVC insulated and unsheathed copper wire for earth continuity as per instruction of Engineer Incharge at Site.	Metre	9400	43.9	412660



34	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc.	Set	2	28313.78	56627.56
35	b) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	2	3023.81	6047.62
36	c) MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals	Numbers	2	25611.31	51222.62
37	MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	6	12682.82	76096.92
38	e) MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	4	6316.65	25266.6
39	f) MCCB FP 32 amps, 25 kA, Ics=100% Icu	Numbers	2	5478.73	10957.46
40	g) Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs	Set	2	4800.55	9601.1
41	h) Supply, installation, testing & commissioning of AC Three Phase LTCT Operated Static Energy meter of Accuracy Class 1.0, 3 X 240V, 50Hz, with Backlit LCD Display of rating - /5A. (Measures & displays kWh Only)	Set	2	5310.59	10621.18
42	i) Supply, installation and testing of Astro (Analog) time switch with 3 pole 63 amp contractor and suitable thermoplastic box and fitted on mounting plate/DIN rail.	Numbers	2	8410.06	16820.12
43	j) Supply, fixing, connection & testing of LED indication lamp RYB	Set	2	201.77	403.54
44	a) Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc.	Set	2	28313.78	56627.56
45	b) Copper bus bar 200 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	2	1114.43	2228.86
46	c) MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	2	16421.24	32842.48
47	d) MCCB FP 100 amps, 25 kA, Ics= 100% Icu	Numbers	6	7001.38	42008.28
48	e) MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	4	6316.65	25266.6
49	f) Digital voltmeter (0-500) amps and Digital ammeter (0-500) amps with s/switch and CTs	Set	2	4800.55	9601.1
50	g) Supply, fixing, connection & testing of LED indication lamp RYB	Set	2	201.77	403.54



51	Laying, commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1.0 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement (Cable will be supplied by Railway)	Metre	1420	46.71	66328.2
52	Supply , laying , commissioning & testing of GI pipe 100 mm medium guage with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut , bolt etc (For protection of cable) as per instruction of Engineer incharge at site	Metre	90	786.55	70789.5
53	Supply, installation, testing & commissioning of submersible pump motor set of 15 HP / 11 kW, Head- 169-70 mtr, Discharge- 60- 480 LPM, Full load current-26.0 amp, Rated voltage-415 volt.	Numbers	6	64943.27	389659.62
54	Supply, installation, testing & commissioning of Fully automatic Starter, Star-Delta, 3 Ph, 415 Volt, 50 Hz with Ammeter & Voltmeter, 3 position (Auto-Manual) selector switch in SS housing for 15 HP Pump-motor	Set	6	14025.18	84151.08
55	Supply, laying and testing of 3 core, 10 sq mm Flat copper cable, PVC insulated and PVC sheathed, 1.1 kV grade, conforming to IS:694 as per instruction of Engineer incharge at site.	Metre	1500	553.94	830910
56	Supply, erection & commissioning of steel rope 10 mm dia with PVC insulation coating for protection of pump against falling with U bolt as per instruction of Engineer incharge at site.	Metre	1500	148.52	222780
57	Supply, installation, testing & commissioning of GI column pipe 75 mm dia of length 3 mt each & thickness 4.5 mm with thread on both ends	Numbers	630	4761.31	2999625.3
58	Supply, installation , testing & commissioning of GI bend 75 mm dia with flange on both sides & fixing with GI Pipe by welding with suitable size bolts & nuts , drilling of holes with fixing of suitable size 2 no rubber pad in between the flange as per instruction of Engineer incharge at site.	Numbers	1260	694.07	874528.2
59	Supply, fixing, testing & commissioning of rubber gasket 75 mm inner dia 6 mm thick to be fixed in between the flanges	Numbers	1260	29.89	37661.4
60	Supply, installation, testing & commissioning of GM sluice valve of 75 mm dia	Numbers	30	6795.87	203876.1



61	Design, Supply at site, fixing, installation testing and commissioning of 500 KWp "Grid Connected" (On-Grid) Rooftop Solar PV System including all required accessories (cost includes cost of Solar PV panels (with cell and modules), inverter (single/3 phase wherever applicable), balance of system e.g. cable, switches/ circuit breaker/ connectors/ junction box (ACDB & DCDB), mounting structure, earthing, lightening arrester, and civil works, CMC for 5 years, transportation, insurance, applicable taxes, etc.) as per MNRE Standard. Provision of web based smart monitoring in various visual & graphical formats / Data storage system and any charges of electricity board to be borne by contractor. Site to be surveyed and drawing to be submitted for approval before starting of work. >100 KW upto 500 KW (1 Set= 500 KWp X 40192 Rs/KWp= Rs 20096000/-)	Set	1	18772475.93	18772475.93
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Sub Total					31327433.69
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Item - 3	Wheel lathe ,Paint Shop, Water treatment shop, Bogie shop				
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply, fixing, connection & testing of indoor LED tube batten with 20 watt LED T8 tubular lamp with extruded aluminium body and PC diffuser complete with inbuilt driver (System wattage-20 Watt, System efficacy> 105 lm/W, Power factor 0.90) with suitable fixing arrangement as per instruction of Engineer incharge at site.	Numbers	60	840.73	50443.8
2	Supply, installation, testing & commissioning of 60 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 66, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection as per instruction of Engineer incharge at site.	Numbers	56	4156.92	232787.52
3	Supply, installation, testing & commissioning of 120 watt energy saving, environment friendly & robust Highbay LED with PDC housing suitable for ceiling (Surface/Suspended) mounting with system efficacy upto 150 lm/W as per instruction of Engineer Incharge at Site.	Numbers	40	8436.22	337448.8
4	Supply, installation, testing & commissioning of Wall Air Circulator Fan (Industrial fan), 600 mm sweep (Speed- 1440 RPM, Max. wattage-180 Watt, Air delivery > 16000 CMH, Aerodynamically designed aluminum alloy single piece blades for high air delivery> 16500 CMH, conforms to IS 2997-1964 standards) with suitable fixing arrangement on wall as per instruction of Engineer incharge at site.	Numbers	16	5571.21	89139.36
5	Supply, installation, testing & commissioning of 10 watt LED Bulkhead luminaires, IP65 as per instruction of Engineer incharge at site. (for dock line)	Numbers	40	1594.58	63783.2



6	Supply, wiring, testing & commissioning of 2 x 6 amps plug point on separate board complete with 2 nos. 6 amps switch with 2 nos. 6 amps 5 pin socket fitted on half flash MS board with hylem sheet top (Concealed Wiring by Sub-main wire 2.5 sq mm)	Numbers	40	169.08	6763.2
7	Supply, wiring, testing & commissioning of concealed point wiring by FR-LSH PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe/polythene pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re- mended to original finish by contractor's own material. FL point/LED tube point/Mirror light point with C/rose	Numbers	60	685.66	41139.6
8	Fan point with c/rose and 5 step fan regulator 2 M	Numbers	90	1247.08	112237.2
9	LED bulk head point concealed wiring by FR PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe/polythene pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch	Numbers	30	775.34	23260.2
10	Supply, wiring, testing & commissioning of concealed 6/16 amps power plug point on separate board complete with modular 16 amps switch (with indicator) and 6/16 amps 3 pin combined shuttered socket to be mounted on modular GI inner plate 4M or suitable size with modular mounting frame to be concealed in wall (Wiring measurement from Sr. No-11)	Numbers	30	735.17	22055.1
11	Supply & erection of Welding terminal housed inside metal clad water proof box having hinged type front cover and provision of screw type connectors with insulating FRP base and AL round bar to be fix on pole with clamp above 01 feet from ground level. (Painting of the box to be done completely. (Suitable for 200 Amp)	Set	12	860.34	10324.08
12	Supply, erection, testing ,commissioning & painting of Wall/floor mounted powder coated cubicle panel board (Modular look), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket and connection by suitable size copper strip.	Set	6	12094.31	72565.86
13	a) MCCB FP 125 amps, 36 kA, Ics=100% Icu	Numbers	6	7077.98	42467.88
14	b) MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	6	6316.65	37899.9



15	c) MCCB FP 32 amps, 25 kA, Ics=100% Icu	Numbers	6	5478.73	32872.38
16	d) MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002	Numbers	6	208.32	1249.92
17	e) Supply, fixing, connection & testing of LED indication lamp RYB	Set	6	201.77	1210.62
18	f) Supply, wiring, testing & commissioning of concealed 6/16 amps power plug point on separate board complete with modular 16 amps switch (with indicator) and 6/16 amps 3 pin combined shuttered socket to be mounted on modular GI inner plate 4M or suitable size with modular mounting frame to be concealed in wall (Wiring measurement from)	Numbers	6	735.17	4411.02
19	g) Copper bus bar 200 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	6	1114.43	6686.58
20	Supply, fixing, testing & commissioning of rigid PVC conduit pipe of 32 mm dia, Medium mechanical strength. The pipe should be fixed with ramp/FOB shed structure at regular interval with clamps.	Metre	320	47.64	15244.8
21	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	3	28313.78	84941.34
22	A) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	3	3023.81	9071.43
23	B) Digital Voltmeter (0-500) amps and Digital Ammeter (0-500) amps with s/switch and CTs	Set	3	4800.55	14401.65
24	C) LED Indication Lamp RYB	Set	3	201.77	605.31
25	D) MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals	Set	3	26172.73	78518.19
26	e) MCCB FP 250 amps, 36 kA, Ics=100% Icu	Numbers	12	13884.12	166609.44
27	f) MCCB FP 200 amps, 25 kA, Ics=100% Icu	Numbers	6	12682.82	76096.92
28	g) MCCB FP 125 amps, 36 kA, Ics=100% Icu	Numbers	3	7077.98	21233.94
29	h) Supply, fixing, connection & testing of LED indication lamp RYB	Set	3	201.77	605.31



30	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof, rust proof, dust proof, water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	2	28313.78	56627.56
31	A) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	2	3023.81	6047.62
32	B) Digital Voltmeter (0-500) amps and Digital Ammeter (0-500) amps with s/switch and CTs	Set	2	4800.55	9601.1
33	c) LED Indication Lamp RYB	Set	2	201.77	403.54
34	d) MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals	Numbers	2	26172.73	52345.46
35	MCCB FP 250 amps, 36 kA, Ics=100% Icu	Numbers	8	13884.12	111072.96
36	f) MCCB FP 125 amps, 36 kA, Ics=100% Icu	Numbers	4	7077.98	28311.92
37	g) MCCB FP 32 amps, 25 kA, Ics=100% Icu	Numbers	6	5478.73	32872.38
38	h) Supply, fixing, connection & testing of LED indication lamp RYB	Set	2	201.77	403.54
39	Supply, erection, testing & commissioning of 20 mt long High mast tower with 12 nos. x 200 watt LED luminaries in symmetrical arrangement complete with all accessories (Double drum winch, SS wire rope, integral power tool motor, head frame, junction box, foundation bolt, LED aviation light, Fedder pillar with single dial timer & raising lowering mechanism etc) including shallow foundation with M20 grade concrete etc.	Numbers	8	756653.34	6053226.72
40	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	60	2402.61	144156.6
41	Supply, installation, testing & commissioning of 3 phase battery charger 2 x 100 amps having input 415 volt +/- 10 % AC, 50 Hz, 3 phase, 4 wires, & out put 135/140 volt DC @ 2 x 100 amps maximum, ripple in output < 6% as per instruction of Engineer incharge at site.	Numbers	15	374640.55	5619608.25
42	Supply, & testing 12 volt @ 150 Ah SMF battery as per instruction of Engineer incharge at site.	Numbers	15	15693.55	235403.25



43	Supply , laying , commissioning & testing of HDPE pipe 50 mm dia, PN-6 grade to be laid partly along the pole/wall with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer etc as per instruction of Engineer Incharge at site.	Metre	880	59.78	52606.4
44	Supply , erection, testing & commissioning of 20 mt long High mast tower with 12 nos. x 200 watt LED luminaries in symmetrical arrangement complete with all accessories (Double drum winch, SS wire rope, integral power tool motor, head frame, junction box, foundation bolt, LED aviation light, Fedder pillar with single dial timer & raising lowering mechanism etc) including shallow foundation with M20 grade concrete etc.	Numbers	8	756653.34	6053226.72
Sub Total					20111988.57

Item - 4 Locomotive washing plant, compressor room & standby Power backup power supply system					
S No.	Description of Item	Unit	Qty	Rate without GST (Rs.)	Amount (Rs.)
1	Supply, fixing, connection & testing of indoor LED tube batten with 20 watt LED T8 tubular lamp with extruded aluminium body and PC diffuser complete with inbuilt driver (System wattage-20 Watt, System efficacy> 105 lm/W, Power factor 0.90) with suitable fixing arrangement as per instruction of Engineer incharge at site.	Numbers	40	840.73	33629.2
2	Supply, installation, testing & commissioning of 60 watt LED flood light luminaires complete with pressure die cast aluminium housing, IP 66, Luminous efficacy 100 lm/watt with heat sink feature, surge protection etc including wire connection as per instruction of Engineer incharge at site.	Numbers	32	4156.92	133021.44
3	Supply, installation, testing & commissioning of 120 watt energy saving, environment friendly & robust Highbay LED with PDC housing suitable for ceiling (Surface/Suspended) mounting with system efficacy upto 150 lm/W as per instruction of Engineer Incharge at Site.	Numbers	20	8436.22	168724.4
4	Supply, installation, testing & commissioning of Wall Air Circulator Fan (Industrial fan), 600 mm sweep (Speed- 1440 RPM, Max. wattage-180 Watt, Air delivery > 16000 CMH, Aerodynamically designed aluminum alloy single piece blades for high air delivery> 16500 CMH, conforms to IS 2997-1964 standards) with suitable fixing arrangement on wall as per instruction of Engineer incharge at site.	Numbers	12	5704.79	68457.48
5	Supply, installation, testing & commissioning of 10 watt LED Bulkhead luminaires, IP65 as per instruction of Engineer incharge at site.	Numbers	30	1133.11	33993.3



6	Supply, wiring, testing & commissioning of concealed point wiring by FR-LSH PVC insulated and unsheathed 1.5 sq mm, single core multi strand copper wire with earth continuity wire by PVC insulated and unsheathed 1 sq mm , single core multi strand copper wire concealed on wall through PVC rigid conduit pipe/polythene pipe of dia not less than 20 mm dia heavy duty including all types of joints and bends as required, complete with 6 amps flush type controlling modular switch to be mounted on modular GI inner plate and modular mounting frame of suitable module as per requirement complete to be concealed in wall as per instruction of Engineer Incharge at site. Existing wall should be cut and re- mended to original finish by contractor's own material. FL point/LED tube point/Mirror light point with C/rose	Numbers	40	685.66	27426.4
7	Lamp point with angle holder/Bulk head point	Numbers	30	605.33	18159.9
8	Plug point 6 amps on board complete	Numbers	18	310.13	5582.34
9	Supply, wiring, testing & commissioning of FL point/ Lamp point (loop wiring) with ceiling rose/ angle/ batten holder by FR- LSH PVC insulated and unsheathed single core, 2.5 sq mm multistranded copper cable to be drawn through rigid PVC conduit pipe not less than 20 mm dia medium gauge including bends, joints etc. from main line under PP shed/FOB shed and 1 sq mm single core FR PVC insulated and unsheathed copper wire for earth continuity without controlling switch under PP/FOB shed as per instruction of Engineer incharge at site.	Numbers	52	163.47	8500.44
10	Supply, wiring, testing & commissioning of concealed 6/16 amps power plug point on separate board complete with modular 16 amps switch (with indicator) and 6/16 amps 3 pin combined shuttered socket to be mounted on modular GI inner plate 4M or suitable size with modular mounting frame to be concealed in wall as per instruction of Engineer Incharge at Site. (Including Geyser Point)	Numbers	18	735.17	13233.06
11	Supply & erection of Welding terminal housed inside metal clad water proof box having hinged type front cover and provision of screw type connectors with insulating FRP base and AL round bar to be fix on pole with clamp above 01 feet from ground level. (Painting of the box to be done completely. The face of terminal to be coloured with red & black paint)	Set	8	627.74	5021.92
12	Supply, erection, testing,commissioning & painting of Wall/floor mounted powder coated cubicle panel board (Modular look), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket and connection by suitable size copper strip.	Set	4	12094.31	48377.24
13	a) MCCB FP 125 amps, 36 kA, Ics=100% Icu	Numbers	4	7077.98	28311.92
14	b) MCCB FP 63 amps, 25 kA, Ics=100% Icu	Numbers	4	6316.65	25266.6



15	c) MCCB FP 32 amps, 25 kA, Ics=100% Icu	Numbers	16	5478.73	87659.68
16	d) MCB SP 6-32 amps, 1 module, 10 kA, C-curve Conforms to IS/IEC 60898 - 1:2002	Numbers	16	208.32	3333.12
17	e) Supply, fixing, connection & testing of LED indication lamp RYB	Set	4	201.77	807.08
18	f) Supply and fixing of Industrial socket 63 A, IP67, 5-Pin (Panel mounted)	Numbers	4	4807.09	19228.36
19	g) Supply and fixing of Industrial Plug 32 A, IP67, 5 Pin	Numbers	4	2563.28	10253.12
20	h) Copper bus bar 200 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	16	1114.43	17830.88
21	Supply & fixing of 20 mm Corrugated/ Flexible Pipe.	Metre	190	34.56	6566.4
22	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	16	28313.78	453020.48
23	a) Supply & testing of MCCB FP 250 amps, 36 kA, Ics=100% Icu.	Numbers	16	13884.12	222145.92
24	b) Supply & testing of MCCB FP 200 amps, 25 kA, Ics=100% Icu.	Numbers	16	12682.82	202925.12
25	c) Supply & testing of MCCB FP 63 amps, 25 kA, Ics=100% Icu.	Numbers	32	6194.28	198216.96
26	d) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	16	3023.81	48380.96
27	e) LED Indication Lamp RYB	Set	16	201.77	3228.32



28	Supply, fabrication, erection, testing, commissioning & painting of floor mounted powder coated cubicle panel board (Modular look) of suitable size (neither big nor small) , outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof,rust proof,dust proof,water proof having internal rubber gasket with supply and fixing of following ACB/MCCB/Bus bar/Meter etc. (Connections to be made by copper strips, glands should be provided at cable entry and exit, components should be compartmentalized, Each compartment will be provided with the door and pad locking arrangement. The compartment illumination lamp with door operated switch shall be provided for each compartment. Panel board drawing approval must be obtained with clear indication of make of items of components):-	Set	2	28313.78	56627.56
29	MCCB FP 320 amps, 36 kA, Ics=100% Icu with spreader terminals	Numbers	2	26172.73	52345.46
30	a) Supply & testing of MCCB FP 250 amps, 36 kA, Ics=100% Icu.	Numbers	4	13884.12	55536.48
31	b) Supply & testing of MCCB FP 200 amps, 25 kA, Ics=100% Icu.	Numbers	2	12682.82	25365.64
32	c) Supply & testing of MCCB FP 63 amps, 25 kA, Ics=100% Icu.	Numbers	2	6194.28	12388.56
33	d) Copper bus bar 400 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	2	3023.81	6047.62
34	e) LED Indication Lamp RYB	Set	2	201.77	403.54
35	Supply, wiring & testing of main wire by 6 sq mm, Single Core FR- LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 through PVC rigid conduit pipe/polythene pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	800	80.33	64264
36	Supply, wiring & testing of sub- main wire by 4 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 through PVC rigid conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	960	74.73	71740.8
37	Supply, wiring & testing of main wire by 2.5 sq mm, Single Core FR-LSH PVC Insulated Industrial Grade Copper Conductor (Unsheathed) Flexible Cables, 1100 Volts and earth continuity wire by 1.0 sq mm FR-LSH PVC Insulated Industrial Grade Copper Conductor Conforming to IS: 694 concealed in wall through PVC rigid conduit pipe not less than 20 mm dia as per instruction of Engineer incharge at site.	Metre	980	63.52	62249.6



38	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium guage) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	14	2402.61	33636.54
39	supply testing and commissioning of DG set 1010 kva Voltage 415 V Noise Level Silent or Soundproof Frequency 50 Hz Number of Cylinder 10 Number Rated Speed 1500 RPM Engine Model DV10TA G1 Bore X Stroke 130 x 150 mm Fuel Tank Capacity 2000 Ltrs Aspiration TA Fuel Consumption 81.9 % Governing Class G3 Power Factor 0.8 lagging Overall Dimensions of Genset 5650x2000x2558 mm (LxWxH) Electrical Battery Starting Voltage 24 Volts-DC Cubic Capacity 19.90 Ltrs Rated Output Prime Continuous Rating 800 kW / 1100 HP or above Coolant Capacity 120 Ltrs Insulation Class Class H Alternator Efficiency 93.6 % Ingression Protection IP 23	Numbers	2	10275539.18	20551078.36
40	Supply, installation, testing & commissioning of 500 KVA, 11/0.433 KV transformer, 3 Phase, 50Hz, Outdoor type, copper wound, Delta/Star, Dyn11, ONAN cooled transformer with Off Ckt. Tap changer having range + 5% to -5% in steps of 2.5% each with first filling of oil and with all standardg fittings & accessories conforming to IS: 2026 (Part I to V)) as per instruction of Engineer incharge at site.	Numbers	4	526581.22	2106324.88
41	Supply, installation, testing & commissioning of 2000 KVA, 11/0.433 KV step up transformer, 3 Phase, 50Hz, Outdoor type, copper wound, Delta/Star, Dyn11, ONAN cooled transformer with Off Ckt. Tap changer having range + 5% to -5% in steps of 2.5% each with first filling of oil and with all standardg fittings & accessories conforming to IS: 2026 (Part I to V) as per instruction of Engineer incharge at site.	Numbers	2	2106324.86	4212649.72
42	Supply, testing & commissioning of 11 KV VCB, outdoor type, Rated voltage- 12 KV, Rated current- 1250 Amp, short circuit current- 25 kA rms	Numbers	4	233534.98	934139.92
43	Supply, testing & commissioning of 11 KV VCB, indoor type, Rated voltage- 12 KV, Rated current-630 Amp	Numbers	11	261559.18	2877150.98
44	Supply, testing & commissioning of 11 KV Vacuum Circuit Breaker (VCB), outdoor type, Rated voltage- 12 KV, Rated current-800 Amp	Numbers	15	210079.66	3151194.9
45	Supply, installation, testing and commissioning of 11 KV Indoor Control and relay Panel for VCB with O/C+E/F Protection	Numbers	15	198188.06	2972820.9
46	11 KV Current Transformer (CT), indoor type of CTR-100-50/5+5 A dual core	Numbers	45	11209.68	504435.6
47	11 KV Potential Transformer (PT), indoor type of PTR-11 KV/110 VAC dual core	Numbers	45	14012.1	630544.5
48	Supply, installation, testing & commissioning of 11 KV Isolator, 200 Amp	Set	4	6127.03	24508.12
49	Supply, installation, testing & commissioning of 11 KV Isolator, 400 Amp	Set	15	14679.07	220186.05



50	Supply & testing of 6 core, 2.5 sq mm LT power Cu cable, stranded, XLPE Insulated, Cores Laid Up, PVC tape Innersheathed, Armoured, Extruded PVC Type ST2 Sheathed, 650/1100 V Grade	Metre	1015	420.36	426665.4
51	Supply & testing of 4 core, 2.5 sq mm LT power Cu cable, stranded, XLPE Insulated, Cores Laid Up, PVC tape Innersheathed, Armoured, Extruded PVC Type ST2 Sheathed, 650/1100 V Grade	Metre	830	280.24	232599.2
52	Supply & testing of 2 core, 2.5 sq mm LT power Cu cable, stranded, XLPE Insulated, Cores Laid Up, PVC tape Innersheathed, Armoured, Extruded PVC Type ST2 Sheathed, 650/1100 V Grade	Metre	900	198.04	178236
53	Supply, erection, testing & commissioning of 11 kV lightning arrestor polymer type with all accessories. Lightning arrestor must conform to IEC-60099-4 IS: 3070 (Part-III) (3 no in a set) as per instruction of Engineer incharge at site.	Set	15	4407.27	66109.05
54	Supply & erection of earth by 80 mm dia 3 Mtr. Long (medium) GI earth electrode, 8 SWG GI wire, GI nuts, bolts including masonry materials for earthing pit, salt, charcoal etc and construction of earth pit covered with cement concrete plate having locking arrangement and watering pipe as per drg. No.- CEE/STD/1.	Numbers	60	2402.61	144156.6
55	Supply , laying , commissioning & testing of HDPE pipe 110 mm dia PN-6 grade to be laid partly along the pole /underground with suitable fixing arrangement by MS clamp made of MS flat of size 50x6 mm and suitable size nut , bolt, washer and required bend, joints	Metre	130	327.88	42624.4
56	Supply , drawing, strengthening and stringing of ACSR conductor 6/1/3.35 (Rabit)) in H T lines with laying conductor on ground, lifting on poles, tensioning with tension lamps, binding on insulator, jumpering with P.G. clamp including supply & fittings of tension clamps, nuts & bolts with standard sagging in each and every span.	Metre	720	27.09	19504.8
57	Supply & fixing of MS channel bracket (75 x 40 x 40 x 6) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50 x 16 mm MS nut,bolt & washer including drilling of holes as per instruction of Engineer Incharge at Site.	Metre	120	275.57	33068.4
58	Supply & fixing of MS angle bracket (50 x 50 x 6) mm to be clamped with the pole by clamp made of 50x5 mm MS flat and 50x 16 mm MS nut,bolt as per instruction of Engineer Incharge at Site. To be cut and hole provision done as per requirement in assorted size.	Metre	120	234.47	28136.4
59	Supply & execution of transformer bed by CC foundation (1:3:6) of size (3.0 m x 2.0 m x 2.0 m) including plastering by mortar ratio (1:4) including digging of soil/surface as per instruction of Engineer incharge at site. (For installation of transformer)	cum	60	3813.16	228789.6
60	Dismantling of defective VCB, isolator, control panel, angle, channel, etc without damaging the materials and deposition to SSE's Store by contractor's own arrangement.	Job	4	13283.47	53133.88



61	Supply & filling of sub-station with suitable size gravels as per instruction of Engineer incharge at site. (Outdoor switch-yard areas are usually covered with about 10cm of gravel of crushed rock of 40 mm size)	cum	240	1193.83	286519.2
62	Supply & testing of 12-36 Volt 30 Amp Transformer based "Battery Charger" for Lead acid & VRLA-SMF Battery, Input Voltage Range (VAC):- 160 volt to 270 volt with over voltage and surge protection	Numbers	15	10275.54	154133.1
63	Supply and testing of 12 Volt, 150 AH SMF battery	Numbers	15	15576.79	233651.85
64	Supply, erection, testing & commissioning of HT 11 kV (E) cable termination Kit out door, heat shrinkable type for 3 core, 95 sq mm XLPE insulated PVC armoured cable complete with jointing materials as per instruction of Engineer incharge at site.	Numbers	45	10339.99	465299.55
65	Supply, erection, testing, commissioning & painting of Wall/floor mounted powder coated cubicle panel board (Modular look), outdoor type with double door made of suitable size MS/GI angle 50 x 50 x 6 mm, MS/GI flat 50 x 6 mm, 14 SWG MS sheet/Powder coated CRCA sheet with provision of weather proof, rust proof, dust proof, water proof having internal rubber gasket and connection by suitable size copper strip.	Set	1	12094.31	12094.31
66	Supply & fixing of onload changeover switch 800 amps Four Pole, 415 V 50 Hz, with Sheet Steel Enclosure (with front handle) as per IS/IEC 60947-1&3	Numbers	1	45080.66	45080.66
67	Supply, Fixing & Testing of Copper bus bar 800 amps made of electrolytic grade copper consisting of 4 bars (3 Ph and Neutral) (Bus bar should have insulation cover)	Set	1	6090.59	6090.59
68	Laying, commissioning & testing of HT/LT XLPE/PVC cable of different sizes partly along the pole and partly through ground in cable trench by excavation of ground below 1 mt from ground level with suitable fixing arrangement by MS clamp of size 50x6 mm and suitable size nut, bolt. Loading, Unloading & Carrying of cable to actual work site by contractor's own arrangement.	Metre	950	46.71	44374.5
69	Supply, fixing, testing & Commissioning of 11 kV composite Pin insulator polymer type with all accessories as per instruction of Engineer incharge at site. Insulator must conform to IEC - 61109 with upto date ammendments.	Numbers	160	198.04	31686.4
70	Supply, fixing, testing & Commissioning of 11 kV composite Ball & Socket type Disc insulator polymer type with all accessories as per instruction of Engineer incharge at site. Insulator must conform to IEC - 61109 with upto date ammendments	Numbers	78	209.25	16321.5
Sub Total					44200807.24
Total Value of Work					1712370804.53
GST @ 18%					308226744.82
Total Value of Work With GST					2020597549.35

Signature Not Verified

Digitally signed by NITESH KUMAR
GANESHPRASAD ASATI
Date: 2026.02.24 13:19:43 IST
Location: eProcurement System for
Central PSUs