

ESTIMATE

**Name of Work :- Proposed Construction of Fruit Processing Plant Shed In G.no.180/3
Paiki, For Farmer's Delight Agro Producer Co. ltd, At- Chale, Tal-Pandharpur, Dist:
Solapur (MH)**

Estimated Cost of Works (Rs.) :- 4221673.00

Rupees forty-two lakhs twenty-one thousand six hundred seventy-three and paise nil only



SAI CONSULTANT'S

Consulting Civil Engineer ,Builders & Developers,
Approved Valuers,Chartered Engineer & Govt.Contractors.

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Ref no.

Date:-

Name of Work :- Proposed Construction of Fruit Processing Plant Shed In G.no.180/3 Paiki, For Farmer's Delight Agro Producer Co. ltd, At- Chale, Tal-Pandharpur, Dist: Solapur (MH)

RECAPITULATION SHEET

1	Work Portion (Part A)	Rs.	3479749.00
2	Add Royalty	Rs.	66491.00
3	Add Testing Charges	Rs.	14280.00
4	Add. 1.00 % Insurance on Part A	Rs.	34797.00
5	Add.18.00 % GST Part A	Rs	626356.00
Total Rs.			4221673.00
Say Rs.			4221673.00

Rupees forty-two lakhs twenty-one thousand six hundred seventy-three and paise nil only


Chartered Engineer
Gaurav Rajendra Bhaskar
B.E.(Civil) A.M.I.E.
Chartered Engineer
AM3023322


Consulting Engineer
SAI CONSULTANT
Consulting Civil Engineer
Rahuri, Dist. Ahmednagar



Name of Work :- Proposed Construction of Fruit Processing Plant Shed In G.no.180/3 Paiki, For Farmer's Delight Agro Producer Co. Ltd, At- Chale, Tal-Pandharpur, Dist: Solapur (MH)

ABSTRACT

Quantity	I.No	Item of work	Rate	unit	Amount
23.66	1	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m.beyond the building area & stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering Including shoring and strutting etc. complete. (LIFT UPTO 1.5 M.) By Mechanical Means	207.00	Cubic Metre	4897.62
14.20	2	Excavation for foundation in Hard murum in cluding removing the excavated material upto adistance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and. necessary backfilling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means	284.00	Cubic Metre	4032.80
76.05	3	Providing dry trap/ granite/ quartzite/ gneiss rubble stone soiling 15 cm to 20 cm thick including hand packing and compacting complete. Spec.No. : Bd.A.12 Page No. 264 ;	1382.00	Cubic Metre	105101.10
37.86	4	Filling in plinth and floors with approved excavated material in 15cm. to 20cm. layersincluding watering and compacting etc. complete.	120.00	Cubic Metre	4543.20
135.50	5	Filling in plinth and floors with contractors material/ brought from outside and approved by Engineer in charge in layers of 15 cm to 20 cm including watering and compaction etc.complete.	795.00	Cubic Metre	107722.50
19.01	6	Providing and filling in the foundation with sand of approved quality including watering, compacting etc. complete. (To be executed with prior approval of Superintending Engineer)	2160.00	Cubic Metre	41061.60
37.43	7	Providing and laying Cast in situ/ Ready Mix cement concrete in M-10 of trap/granite/quartzite/ gneiss metal for foundation and bedding including bailing out water, Steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete ,with fully automatic microprocess or base dPLCwith SCADA enable dreversible Drum Type mixer/ concrete Batch mix plant (Panmixer) etc.complete. With fine aggregate (Crushed sand VSI Grade)	5830.00	Cubic Metre	218216.90



Quantity	I.No	Item of work	Rate	unit	Amount
5.23	8	Providing and laying in situ cement concrete of M-25 grade of trap / granite/quartzite/gneiss metal for R.C.C. work like raft, grillages, strips, foundations and footings of R.C.C.columns and steel stanchions including bailing-out water manually, including centering formwork of plywood / steel, compaction, covering newly laid concrete by gunny bag, plastic or tarpaulin, finishing the formed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc complete. (Excluding reinforcement) The cement mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. (Wooden planks / shuttering will not be allowed) Spec.No.:Bd.F.2 Page No. 298 /IS 456 (1978)	7287.00	Cubic Metre	38111.01
5.94	9	Providing and laying Cast in situ/Ready Mix cement concrete M-25 of trap / granite /quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete,(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand / Crushed sand VSI Grade finely washed etc)	13967.00	Cubic Metre	82963.98
12.78	10	Providing and laying Cast in situ/Ready Mix cement concrete M-25 of trap / granite /quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand / Crushed sand VSI Grade finely washed etc)	12452.00	Cubic Metre	159136.56
1.77	11	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.	89703.00	Metric Tonne	158774.31



Quantity	I.No	Item of work	Rate	unit	Amount
6.73	12	Providing Brick masonry in cement mortal 1.6 using second Class Burnt Bricks in foundation and plinth of inner walls/ in plinth of external walls including bailing out water manually, striking joints on unexposed faces ,watering and scaffolding complete Bd. G. 1, Page No.313,	7755.00	Cubic Metre	52191.15
29.90	13	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints, watering and scaffolding etc. Complete	7994.00	Cubic Metre	239020.60
209.18	14	Providing sand faced plaster externally in cement mortar using approved screened sand, in all positions including base coat of 15 mm thick in cement mortar 1:4 using waterproofing compound at 1 kg per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8 mm thick in cement mortar 1:4 finishing the surface by taking out grains and curing for fourteen days scaffolding etc.complete.	639.00	Square Metre	133666.02
21.60	15	Providing and fixing steel window of various sizes as per detailed drawing without hotdip zinc coating, with out ventilators, including fabricating/ glazing with plain/ obscured glass panels of approved type and quality, iron oxidised fixtures and fastenings, finishing with oil painting two coats complete (with guard bars 12 mm square at 10 cm c/c.)	4874.00	Square Metre	105278.40
209.18	16	Providing and applying white-wash in one coat on old/ new plastered or masonry surfaces and asbestos cement sheets including scaffolding and preparing the surface by brushing and brooming down etc. complete.	8.00	Square Metre	1673.44
209.18	17	Providing and applying plastic emulsion paint of approved quality, colour and shade to old and new surfaces in two coats including scaffolding, preparing the surface. (excluding the primer coat) etc. complete.	80.00	Square Metre	16734.40
21.90	18	Providing and fixing rolling shutter fabricated from steell at hsofminimum thickness 0.9mm with lock plate of 3.15 mm thickness reinforced with 35x35x5mm angle section fitted with sliding bolts and handles for both sides, deep M.S.channel section of depth and thickness not less than 65mm and 3.15mm respectively with hold fastarr angements, M.S.Bracket plate 300x300x3.15mm minimum size and shape with square bar, suspension shaft of minimum 32mm diameter, hood cover of M.S. sheet not less than 0.9mm thickness and of any size attopand safety device sincluding mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade castir on or mild steel and one coat of redlead primer etc. complete.(I.S.62481979) (Without mechanical gear)	5308.00	Square Metre	116245.20



Quantity	I.No	Item of work	Rate	unit	Amount
356.59	19	Providing and laying vitrified matt finish tiles having size 590mm to 605mm x to 605mm of 8 to 10mm thickness and confirming IS.15622-2006 (Group Bla) of approved make, shade and pattern for flooring in required position laid on a bed of 1:4 cement morar including neat cement float, filling joints, curing and cleaning etc.complete.	1600.00	Square Metre	570544.00
6.03	20	Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anti corrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.	119459.00	Metric Tonne	719941.17
472.54	21	Providing and fixing colour coated Zinalume (R) AZ 150 (min 150 gms /sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45mm Base Metal Thickness (BMT) (0.5mm TCT), High strength steel with min. 550 MP a yield strength, metallic hot dip coated with Aluminium- Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLOR BOND (R) steel quality super durable polyester paint coat (with in organic pigment). The paint shall have a total coating thickness of nominal 35um, comprising of nominal 25 um exterior coat on top surface and nominal 10um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five panel nominal 180-250 mm center-to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked at a regular interval. Including fasteners with min. fastened with min. 25um Zinc-Tin alloy coated, Hexhead, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram / Square Metre.)	1173.00	Square Metre	554289.42
3.00	22	Turbo ventilator 24" MATERIAL RATES FOR SSR For Year 2021-22, Page no. 374, Building (Bd-R : Roofing and ceiling)	9702.00	No.	29106.00
10.35	23	Providing and fixing UPVC Roof made up of 3 layers roofing material of thickness 2mm having width of 1130mm and of required Length having Tensile strength not less than 330 Kilo gram/ cm ² , including fastening with self drilling screw having washers made of stainless steel etc. complete.	1594.00	Square Metre	16497.90
				Total Rs.	3479749.28
			Part A)	Say Rs.	3479749.00
87.45	24	Royalty Charges for sand	237.37	Cum	20758.01
211.55		Royalty Charges for Rubble and HM	216.18	Cum	45732.88
				Total Rs.	66490.89
			Part B)	Say Rs.	66491.00



Rahurkar
Chartered Engineer
Gaurav Rajendra Bhaskar
B.E.(Civil) A.M.I.E.

Zadha
Consulting Engineer
SAI CONSULTANT
Consulting Civil Engineer

Name of Work :- Proposed Construction of Fruit Processing Plant Shed In G.no.180/3 Paiki, For Farmer's Delight Agro Producer Co. ltd, At- Chale, Tal-Pandharpur, Dist: Solapur (MH)

MEASUREMENT SHEET

I.No.

- 1 Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m.beyond the building area & stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering Including shoring and strutting etc. complete. (LIFT UPTO 1.5 M.) By Mechanical Means
- | | | | | | | | | | | |
|-------------------------|----|---|------|---|------|---|------|---|------------------|--------------------|
| For RCC Coloumn Type C1 | 14 | x | 1.30 | x | 1.30 | x | 1.00 | = | 23.66 | Cum |
| | | | | | | | | | Total Qty | = 23.66 Cum |
- 2 Excavation for foundation in Hard murum in cluding removing the excavated material upto adistance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary backfilling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means
- | | | | | | | | | | | |
|-------------------------|----|---|------|---|------|---|------|---|------------------|--------------------|
| For RCC Coloumn Type C1 | 14 | x | 1.30 | x | 1.30 | x | 0.60 | = | 14.20 | Cum |
| | | | | | | | | | Total Qty | = 14.20 Cum |
- 3 Providing dry trap/ granite/ quartzite/ gneiss rubble stone soiling 15 cm to 20 cm thick including hand packing and compacting complete. Spec.No. : Bd.A.12 Page No. 264 ;
- | | | | | | | | | | | |
|--------------------------------|----|---|-------|---|-------|---|------|---|------------------|--------------------|
| For RCC Coloumn Type C1 | 14 | x | 1.30 | x | 1.30 | x | 0.20 | = | 4.73 | Cum |
| Cleaning & Grading Shed Plinth | 1 | x | 27.43 | x | 13.00 | x | 0.20 | = | 71.32 | |
| | | | | | | | | | Total Qty | = 76.05 Cum |
- 4 Filling in plinth and floors with approved excavated material in 15cm. to 20cm. layersincluding watering and compacting etc. complete.
- | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|---|------------------|--------------------|
| Qty As per Exavated Quatity | | | | | | | | = | 37.86 | cum |
| Item no.1 & 2 | | | | | | | | | | |
| | | | | | | | | | Total Qty | = 37.86 cum |
- 5 Filling in plinth and floors with contractors material/ brought from outside and approved by Engineer in charge in layers of 15 cm to 20 cm including watering and compaction etc.complete.
- | | | | | | | | | | | |
|--------------------------------|---|---|-------|---|-------|---|------|---|------------------|---------------------|
| Cleaning & Grading Shed Plinth | 1 | x | 27.43 | x | 13.00 | x | 0.38 | = | 135.50 | cum |
| | | | | | | | | | Total Qty | = 135.50 cum |
- 6 Providing and filling in the foundation with sand of approved quality including watering, compacting etc. complete. (To be executed with prior approval of Superintending Engineer)
- | | | | | | | | | | | |
|--------------------------------|----|---|-------|---|-------|---|------|---|------------------|--------------------|
| Cleaning & Grading Shed Plinth | 1 | x | 27.43 | x | 13.00 | x | 0.05 | = | 17.83 | cum |
| For RCC Coloumn Type C1 | 14 | x | 1.30 | x | 1.30 | x | 0.05 | = | 1.18 | |
| | | | | | | | | | Total Qty | = 19.01 cum |
- 7 Providing and laying Cast in situ/ Ready Mix cement concrete in M-10 of trap/granite/quartzite/ gneiss metal for foundation and bedding including bailing out water, Steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete ,with fully automatic microprocess or base dPLCwith SCADA enable dreversible Drum Type mixer/ concrete Batch mix plant (Panmixer) etc.complete. With fine aggregate (Crushed sand VSI Grade)
- | | | | | | | | | | | |
|-------------------------|----|---|------|---|------|---|------|---|------|-----|
| For RCC Coloumn Type C1 | 14 | x | 1.30 | x | 1.30 | x | 0.08 | = | 1.77 | cum |
|-------------------------|----|---|------|---|------|---|------|---|------|-----|

Cleaning & Grading Shed Plinth	1	x	27.43	x	13.00	x	0.10	=	35.66
Total Qty									= 37.43 cum

- 8 Providing and laying in situ cement concrete of M-25 grade of trap / granite/quartzite/gneiss metal for R.C.C. work like raft, grillages, strips, foundations and footings of R.C.C.columns and steel stanchions including bailing-out water manually, including centering formwork of plywood / steel, compaction, covering newly laid concrete by gunny bag, plastic or tarpaulin, finishing the formed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc complete. (Excluding reinforcement) The cement mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. (Wooden planks / shuttering will not be allowed) Spec.No.:Bd.F.2 Page No. 298 /IS 456 (1978)

1st Step of Footing

For RCC Coloumn Type C1	14	x	1.00	x	1.00	x	0.30	=	4.20 cum
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2nd Step of Footing

For RCC Coloumn Type C1	14	x	0.70	x	0.70	x	0.15	=	1.03
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Total Qty = 5.23 cum

- 9 Providing and laying Cast in situ/Ready Mix cement concrete M-25 of trap / granite /quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete,(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand / Crushed sand VSI Grade finely washed etc)

For RCC Coloumn Type C1	14	x	0.23	x	0.45	x	4.10	=	5.94 cum
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Total Qty = 5.94 cum

- 10 Providing and laying Cast in situ/Ready Mix cement concrete M-25 of trap / granite /quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand / Crushed sand VSI Grade finely washed etc)

Long Wall Ground Beams	12	x	4.42	x	0.23	x	0.38	=	4.64
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Short Wall Ground Beams	2	x	13.00	x	0.23	x	0.45	=	2.69
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Long Wall Lintel Beams	12	x	4.42	x	0.23	x	0.30	=	3.66
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Short Wall Lintel Beams	2	x	13.00	x	0.23	x	0.30	=	1.79
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Total Qty = 12.78 cum

- 11 Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.

For RCC Footing	5.23	@	70.00	Kg	=	366.10	Kg
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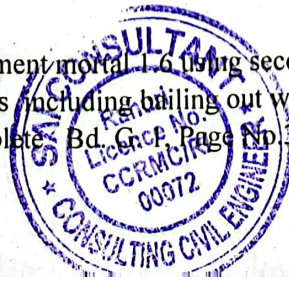
For RCC Coloumn	5.94	@	75.00	Kg	=	445.50	Kg
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For RCC Beam	12.78	@	75.00	Kg	=	958.50	Kg
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Total Qty = 1770.10 Kg

Say = 1.77 MT

- 12 Providing Brick masonry in cement mortar 1:6 using second Class Burnt Bricks in foundation and plinth of inner walls/ in plinth of external walls including bailing out water manually, striking joints on unexposed faces ,watering and scaffolding complete. Bd. Spec. Page No. 313,



Long Wall Ground Beams	12	x	4.42	x	0.23	x	0.42	=	5.12	cum
Short Wall Ground Beams	2	x	13.00	x	0.23	x	0.27	=	1.61	
							Total		6.73	
							Total Qty	=	6.73	cum

- 13 Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints, watering and scaffolding etc. Complete

Long Wall Ground Beams	12	x	4.42	x	0.23	x	2.40	=	29.28	cum
Short Wall Ground Beams	2	x	13.00	x	0.23	x	2.40	=	14.35	
							Total	=	43.63	
Deduction										
Deduction For RS	2	x	3.00	x	0.23	x	2.40	=	3.31	
Deduction For W1	12	x	1.50	x	0.23	x	1.20	=	4.97	
Lintel Beam	12	x	4.42	x	0.23	x	0.30	=	3.66	
	2	x	13	x	0.23	x	0.30	=	1.79	
									13.73	
							Total	=	29.90	
							Total Qty	=	29.90	cum

- 14 Providing sand faced plaster externally in cement mortar using approved screened sand, in all positions including base coat of 15 mm thick in cement mortar 1:4 using waterproofing compound at 1 kg per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8 mm thick in cement mortar 1:4 finishing the surface by taking out grains and curing for fourteen days scaffolding etc. complete.

Long Wall up to Plinth	2	x	27.89			x	1.00	=	55.78	Sqm
Short Wall up to Plinth	2	x	13.46			x	1.00	=	26.92	
Long Wall Above Plinth	2	x	27.89			x	2.40	=	133.87	
Short Wall Above Plinth	2	x	13.46			x	2.40	=	64.61	
							Total		281.18	
Deduction										
Deduction For RS Both Side	4	x	3.00			x	2.40		28.80	
Deduction For W1	24	x	1.50			x	1.20		43.20	
							Total		72.00	
							Total Qty	=	209.18	Sqm

- 15 Providing and fixing steel window of various sizes as per detailed drawing without hotdip zinc coating, with out ventilators, including fabricating/ glazing with plain/ obscured glass panels of approved type and quality, iron oxidised fixtures and fastenings, finishing with oil painting two coats complete (with guard bars 12 mm square at 10 cm c/c.)

W1	12	x	1.50			x	1.20	=	21.60	Sqm
							Total Qty	=	21.60	Sqm

- 16 Providing and applying white-wash in one coat on old/ new plastered or masonry surfaces and asbestos cement sheets including scaffolding and preparing the surface by brushing and brooming down etc. complete.

Qty. As per Item no.17								=	209.18	Sqm
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						Total =	507.49
Deduction For Turbo Ventilator & Sky light Upvc roof	3.00	x	3.00	x	1.15	=	10.35
Deduction For RS	2.00		3.00		4.10		24.60
						Total	34.95
						Total Qty =	472.54 Rmt

- 22 Turbo ventilator 24" MATERIAL RATES FOR SSR For Year 2021-22, Page no. 374, Building (Bd-R : Roofing and ceiling)

At Roof Level Ventilation						=	3.00 No.
						Total Qty =	3.00 No.

- 23 Providing and fixing UPVC Roof made up of 3 layers roofing material of thickness 2mm having width of 1130mm and of required Length-having Tensile strength not less than 330Kilo gram/ cm², including fastening with self drilling screw having washers made of stainless steel etc. complete.

	3.00	x	3.00	x	1.15	=	10.35 Sqm
						Total Qty =	10.35 Sqm

- 24 Royalty Charges

	Material		Qty			Qty of Material	Cum
6	Providing and filling in the foundati	1	x	19.01	x	1.000	= 19.01 Cum
7	Providing and laying Cast in situ/ R	1	x	37.43	x	0.470	= 17.59
8	Providing and laying in situ cement	1	x	5.23	x	0.425	= 2.22
9	Providing and laying Cast in situ/Rc	1	x	5.94	x	0.425	= 2.52
10	Providing second class Burnt Brick	1	x	12.78	x	0.425	= 5.43
14	Providing sand faced plaster extern	1	x	209.18	x	0.033	= 6.90
12	Providing Brick masonry in cement	1	x	6.73	x	0.320	= 2.15
13	Providing second class Burnt Brick	1	x	29.90	x	0.320	= 9.57
14	Providing sand faced plaster extern	1	x	209.18	x	0.033	= 6.90
19	Providing and laying vitrified matt f	1	x	356.59	x	0.043	= 15.16
						Sand Total Qty =	87.45 Cum
3	Providing dry trap/ granite/ quartzite	1	x	76.05	x	1.00	= 76.05
5	Filling in plinth and floors with con	1	x	135.50	x	1.00	= 135.50
				Hm and Rubble		Total Qty =	211.55 Cum

Rohakkar
Chartered Engineer

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Name of Work :- Proposed Construction of Fruit Processing Plant Shed In G.no.180/3 Paiki, For Farmer's Delight Agro Producer Co. ltd, At- Chale, Tal-Pandharpur, Dist: Solapur (MH)

Appendix - I
Lead Chart

Sr. No.	Description	Rubble	Murum	Crush metal	Crush metal 40 mm above	Sand	Cement	Steel	Asphalt
1	2	3	4	4	4	5	6	7	8
	Source	Restricted	Local	Restricted	Restricted	Restricted	Local	Local	
1	Average lead as per Quarry chart in km	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	Lead charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	Extra lead charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	Extra lead charges per bag of cement						0.00		


 Chartered Engineer
Gaurav Rajendra Bhaskar
 B.E.(Civil) A.M.I.E.
 Chartered Engineer
 AM3023322


 Consulting Engineer
SAI CONSULTANT
 Consulting Civil Engineer
 Rahuri, Dist. Ahmednagar



Name of Work :- Proposed Construction of Fruit Processing Plant Shed In G.no.180/3 Paiki, For Farmer's Delight Agro Producer Co. Ltd, At- Chale, Tal-Pandharpur, Dist: Solapur (MH)

TESTING CHART

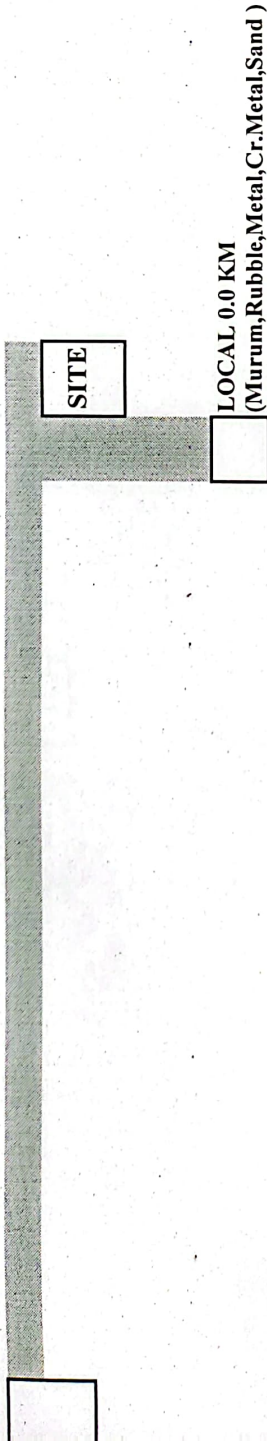
Item	Qty	Soil/HM	Bitumen	Metal	Agg.	Tests	Frequency	Total Test	At Site	At Lab	Rate	Amt
Concrete												
		Cement	Sand		Agg							
M10	37.43	8.23	17.59		35.18	Comp. Strength- Cube		9	5	4	690.00	2760.00
M20	35.66	13.37	1.52		32.09							
M25	23.95	8.98	1.02		21.56							
Total	97.04	30.59	20.13		88.83	Crush Metal-Basic Test	1/1000 Cum	3	2	1	2600.00	2600.00
		MT	Cum		Cum	Gradation	1/100 Cum	3	2	1	745.00	745.00
						Comboned Flakiness & Elongation of single metal	1/400 Cum	2	1	1	850.00	850.00
						Cement-Fineness, consistency, Setting time, Compressive strength, Specific Gravity	1/50 MT	1	1	1	3770.00	3770.00
						Sand-Fineness Modulus, Silt Content	1/ Source	1	1	1	1380.00	1380.00
						Water Absorption (Set of 5 Bricks), Compressive Strength (Set of 5 Bricks), Efflorescence (Set of 5 Bricks).	Set of 5 Bricks	1	1	1	2175.00	2175.00
Total											14280.00	

Rishabh
Chartered Engineer
Gaurav Rajendra Bhaskar
B.E. (Civil) A.M.I.E.
Chartered Engineer
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Saetha
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Quarry Chart



LEAD STATEMENT

Material	Quarry	Lead in Km.
Rubble	Local	0.00
Metal	Local	0.00
Crushed Metal	Local	0.00
Murum	Local	0.00
Sand	Local	0.00

CERTIFICATE.

- 1 Certified that the quarries shown on the quarry chart for metal & murum are inspected by me & they are nearest & economical to the work & contain sufficient & good quality material required for the work.
- 2 Certified that lead for quarries shown and accounted in the estimate is as per nearest route.
- 3 Certified that leads considered are found to be correct.

Rajendra Bhaskar
Consulting Engineer

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