ENGINEERING SPECIFICATIONS

SCHEDULE - I

General details of standard conventional godown of 300 Metric tonne capacity (MTC)

(A) Details for 10.71 m C/C span godown (capacity = 300 MT, compartment = 1 No.):

- Godown size (Centre to Centre) = 16.16m x 10.71m
- Godown size (Outer to Outer) = 16.39m x 10.94m
- Godown size excluding Verandah = 16.39m x 10.94m
- Godown size including one Verandah (1.83m) = 16.39m x 12.77m

General details:

- 1. Front Road side Verandah Width: 1.83m
- 2. Plinth level: 0.61m depending upon the topography of plot.
- 3. 300 MT godown: One compartment.
- 4. Compartments C/C length (4 panels): 16.16m.
- 5. Total No. of stacks (size = $6.10m \times 9.14m$): 2 stacks.
- 6. Godown height on each side: 4.88m from plinth/floor level.
- 7. Verandah Truss height on road side: 3.48m from plinth/floor level.
- 8. No. of Rolling shutters/doors: 2 Nos.
- 9. Size of rolling shutters (clear opening): 1.83m x 2.44m.
- 10. Bottom ventilators (V6) size 0.60m x 0.60m: 6 Nos. (Both long walls).
- 11. Top ventilators size 1.50m x 0.60m: 8 Nos. (Both long walls and one in each panel).
- 12. In place of rolling shutters, garage doors may also be used.

NOTE:

- (i) Continuous platform of 1.83 meter shall be provided on front side of the godowns. On the back side, 0.23 mt projected RCC nosing is provided only in front of rolling shutters or 0.90 mt wide platform is provided in front of rolling shutters openings only as per site requirement.
- (ii) Any details not mentioned above will be as per the CWC existing specifications for conventional godowns. In case CWC does not have any specifications, then relevant IS code 607 of 1971 for construction of godowns will be followed.
- (iii) Tubular Trusses: As per the wind speed zone (33m/sec to 50m/sec) as classified in the relevant latest BIS code.
- (iv) Carpet area of godown: $16.34m \times 10.41m = 170.10 \text{ Sqm}$.
- (v) Ancillaries Required: Compound wall, office block alongwith sanitary, electrification & water supply work as per the requirement.

SCHEDULE-II

SPECIFICATIONS FOR THE CONSTRUCTION OF CONVENTIONAL TYPE GODOWNS

GODOWN

1. Normal Size of Godown of 300 MT capacity. Internal dimensions of the godown:

 $16.34 \text{m} \times 10.41 \text{m} = 170.10 \text{ sq.mt}$

- 1. **FOUNDATION:** The depth of foundation is proposed for Ordinary Soils at 1.30 M for columns and 1.20 M for panel walls (foundation design is based on for soil capacity of 10 tonnes per sq.mt). For expensive soils/black cotton soils, foundation should be suitably designed alongwith requirement of pile foundations as per site requirement.
- PCC 1:5:10 (1 cement: 5 coarse sand: 10 stone aggregate of 40 mm nominal size) is provided under columns and panel walls respectively. R.R. Masonry/Brick Masonry in cement mortar 1:6 (1 cement: 6 coarse sand) is proposed for the foundation and superstructure. The excavated good quality of earth shall be reused to fill in the wall- trenches and remaining earth is used for filling under floors. Blanket course of sand/moorum under bed concrete are provided for black cotton soils/poor soils to increase soil bearing capacity. Design of footings of structure should be in accordance with the bearing capacity of soil at site.
- 2. **PLINTH BEAM, TIE BEAM & COLUMNS:** All RCC works shall be executed in design mix of M 25 or nominal mix of 1:1½:3 (1 cement: 1½ coarse sand: 3 stone aggregate of 20 mm nominal size). 0.15m thick RCC tie beam is provided on all the walls at a height of 4.73m from floor level in the godown. Grade beam at ground level & an additional beam at door level are to be provided in earthquake Zone iii & iv as per design to withstand the bearing loads & earthquake forces.
- 3. **SUPER STRUCTURE:** All the walls are to be provided with 23 cm thick brick masonry or 38 cm thick RR masonry in cement mortar 1:6 (1 cement: 6 coarse sand).
- 4. **FINISHINGS:** 12mm thick cement plaster in cement mortar 1:6 (1 cement: 6 fine sand) on one side and 15mm thick plaster on the other side of the walls, 6mm thick plaster in cement mortar 1:3 (1cement:3 fine sand) on exposed surface of columns is provided. 2 or more coats of white wash on inner side of walls & colour wash/ snowcem on external side of walls are to be provided.
- 5. **PLATFORM:** Covered verandah of 1.83 m wide with cantilever Truss on road side to be provided.

6. FLOORING:

(A) In Ordinary soils:

(a) Rammed Earth filing as per requirement. (b) 150 mm thick sand filling (c) WBM with 150 mm thick stone aggregate of grade II in two layers and 75mm thick layer of stone aggregate of grade III (d) 50mm thick C.C flooring 1:2:4 (1 cement: 2 coarse sand: 4 coarse aggregate 20 mm nominal size) with a floating coat of neat cement. Total crust thickness of flooring is 27.5 cm. In place of WBM of 22.5cm thickness, Plain cement concrete of 15cm thickness in the mix of 1:5:10 (1 cement: 5 coarse sand: 10 stone aggregate of 40mm nominal size).

(B) In Expansive soils/Black cotton soils:

(a) WBM with 150 mm thick stone aggregate of grade I, 100 mm thick layer of stone aggregate grade II and 75 mm thick layer of stone aggregate grade III (b) 50 mm thick CC flooring 1:2:4 (1 cement: 2 coarse sand: 4 coarse aggregate 20 mm nominal size) with a floating coat of neat cement.

Total crust thickness of the flooring is 37.5 cm.

An additional 235 mm thick blanket course of moorum underneath the WBM grade-I is provided in such soils.

- 7. **ROOFING:** Tubular trusses on RCC columns to support Pre-painted polyester coated sheets/GI/Galvalume sheeting shall be provided. Fibre glass (Translucent) sheets are provided for about 2% of the roofing area for natural light. Inside height of godown from Plinth level to Bottom of Trusses is 4.88m from plinth/floor level. Pre-engineered steel structures with pre-painted polyester coated sheets with turbo ventilators, translucent sheets etc. are also used in the warehouses.
- 8. **WINDOWS**, **VENTILATORS**, **ROLLING SHUTTERS AND STEEL DOORS**: Previously we were providing Rolling shutters (clear opening) of size 1.83m x 2.44m in the godowns. Now 1.83x2.44m size steel garage doors are provided in place of rolling shutters and these doors are to be fixed on outer edge of the walls for easy and full opening of the doors. Windows of size 0.60m X 0.60m and ventilators of size 1.50m X 0.60 m with angle iron frame as shown in the relevant drawing fixed on inner edge of the walls. Top ventilators are also covered with semi barrel type expanded metal grill for checking the entry of birds.

9. ROADS:

(A) In ordinary soils:

(a) WBM with 100 mm thick layer of stone aggregate grade I and 20 cm thick cement concrete in the mix of $1:1\frac{1}{2}:3$ (1 cement: $1\frac{1}{2}$ coarse sand:3 stone aggregate of 40mm nominal size) Total crust thickness of road is 30 cm.

(B) In Expansive soils/Black cotton soils:

(a) WBM with 230 mm thick layer of stone aggregate grade I and 20 cm thick cement concrete in the mix of 1:1½:3 (1 cement: 1½ coarse sand: 3 stone aggregate of 40mm nominal size) Total crust thickness of road is 43 cm.

An additional 300 mm thick blanket course of moorum beneath the WBM of grade-I is provided in such soils.

- 10. **WEIGHBRIDGE & CABIN ROOM:** Electronic Lorry weigh Bridge of 40/60 MT capacity (as per CWC requirement) with platform size 9 m x 3 m or more of reputed make shall be installed with suitable cabin room.
- 11. **COMPOUND WALL:** 1.83 m high boundary wall in brick/RR masonry above Ground level with 0.6m high, 6 rows of barbed wire/concertina coils with angle iron posts 1.02m C/C on top of wall is to be provided. 15mm thick plastering in cement mortar 1:6 on rough side of the wall and 12mm thick plastering with cement mortar 1:6 on plain side of the wall is to be provided.
- 12. **BOUNDARY WALL GATE & WICKET GATE:** 4.90 m wide main steel gate and 0.91m wide wicket gate are provided as per drawing.
- 13. **OFFICE BUILDING:** Office space is provided as per the requirement of the staff/external customers alongwith all allied facilities of toilets, drinking water etc.

The above specifications are general specifications and these are not exhaustive. These specifications would vary as per need of the site and as per the design requirement at a particular site.

ABSTRACT OF COST/BILL OF QUANTITIES FOR THE CONSTRUCTION OF 300 MT CAPACITY GODOWN

(CIVIL WORK)

PARTICULARS	QNTY.	UNIT	RATE	AMOUNT	REMARKS
means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil					CPWD DSR 2012 Rate
directed, within a lead of 50m. All kinds of soil.	55.00	Cum			2.8.1 P - 72
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 50m and lift up to 1.5m.	55.00	Cum.			2.25 P – 75
Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering – All work up to plinth level. 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size).	39.00	Cum.			4.10 P – 85
Supplying and filling in plinth with fine sand under floors including, watering, ramming consolidating and dressing complete.	79.00	Cum.			2.27 P – 75
Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand) Cement mortar 1:6 (1 cement : 6 coarse sand)	22.00	Cum.			6.1.2
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. All kinds of soil. 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 50m and lift up to 1.5m. Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering – All work up to plinth level. 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size). Supplying and filling in plinth with fine sand under floors including, watering, ramming consolidating and dressing complete. Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. All kinds of soil. 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 50m and lift up to 1.5m. Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering – All work up to plinth level. 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size). Supplying and filling in plinth with fine sand under floors including, watering, ramming consolidating and dressing complete. 79.00 Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand) Cement mortar 1:6 (1 cement : 6 coarse	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. All kinds of soil. 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 50m and lift up to 1.5m. Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering – All work up to plinth level. 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size). Supplying and filling in plinth with fine sand under floors including, watering, ramming consolidating and dressing complete. 79.00 Cum. Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand) Cement mortar 1:6 (1 cement : 6 coarse	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. All kinds of soil. 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 50m and lift up to 1.5m. 55.00 Cum. Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering – All work up to plinth level. 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size). 39.00 Cum. Supplying and filling in plinth with fine sand under floors including, watering, ramming consolidating and dressing complete. Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand) Cement mortar 1:6 (1 cement : 6 coarse	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. All kinds of soil. 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 50m and lift up to 1.5m. 55.00 Cum. Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering – All work up to plinth level. 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size). 39.00 Cum. Supplying and filling in plinth with fine sand under floors including, watering, ramming consolidating and dressing complete. Brick work with common burnt clay F.P.S (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand) Cement mortar 1:6 (1 cement : 6 coarse

6.	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement – All work up to plinth level. 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size).	5.50	Cum.		5.1.2 P – 96
7.	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement. 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size).	5.30	Cum.		<u>5.2.2</u> P – 96
8.	Reinforced cement concrete work in beam suspended floors, roofs having slope up to 15degree landings, balconies, shelves, chajjas, lintels bands plain window gills, staircases and spiral staircases up to floor five levels excluding the cost of centering, shuttering, finishing and reinforcement with. 1:1.5:3 (1 cement: 1.5 coarse: 3 graded stone aggregate 20mm nominal size.	2.85	Cum.		5.3+(5094.85- 4703.90)
9 (a)	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. TMT bars.	1350.00	Kg		5.22.6 P – 99
10.	Centering and shuttering including strutting, propping etc. and removal of form for.				5.9.1
(A)	Foundations, footings, bases of columns, etc. for mass concrete.	19.00	Sqm.		<u>3.9.1</u> P – 97
(B)	Columns, Pillars, Piers, Abutments, Posts and Struts.	85.10	Sqm.		5.9.6 P – 97

(C)	Lintels, beams, plinth beams, girders,				5.9.5
(C)	bressumers and cantilevers.	29.00	Sqm.		9.5.5 P – 97
11.	Brick work with F.P.S. bricks of class	27.00	oqiii.		1)/
11.	designation 35 in superstructure above				
	plinth level up to floor V level in all				
	shapes and sizes.				
	Cement mortar 1:6 (1 cement : 6 coarse				<u>6.4.2</u>
	sand).	64.00	Cum.		$\frac{0.4.2}{P - 109}$
12.	"Supplying & fixing rolling shutter of	04.00	Cuiii.		1 - 109
12.	approved make of Regd. Size of				
	80x1.25mm M.S. laths interlocked				
	together their entire length and joined				
	together at the end locks" mounted on				
	specially designed pipe shaft. With				
	brackets side guides and arrangements				
	for inside and outside locking with push				
	& pull operation completer including				
	the cost of providing & fixing 3nos. of				
	27.5 cm long wire springs grade no.2				
	and M.S. top cover 1.25 mm thick for				
	rolling shutters, including extra locking				
	arrangements at threshold as per				35AOR
	drawing no. CWC/PG/241.	10.61	Sqm.		<u>3371010</u>
13.	Providing and fixing steel glazed	10.01	5qiii.		
13.	ventilators of steel sections of 40x40x6				
	mm size Angle iron, 40x40x6 mm Tee				
	Section for ventilators frame and				
	25x25x4 mm. Angle iron for ventilator				
	shutter with 15x3 M.S. flat, Beading,				
	Joints mitered with M.S. fittings and				
	40x6mm M.S. hold fast 30cm. long				
	embedded in cement concrete block of				
	size 35x10x10 cm of C. Conc. Mix				
	1:3:6 (1 cement : 3 coarse sand : 6				
	graded stone aggregate 20mm nominal				
	size) including providing and fixing of				
	glass panes of nominal thickness 4mm				
	(weighing not less than 10.00kg)/sqm.)				
	with glazing clips and special metal sash				
	putty of approved quality and				
	manufacture complete including a				
	priming coat with ready mixed Zinc				
	Chromate yellow primer of approved				
	brand and manufacture with necessary				
	M.S. pivot/hinges 50mm projecting type				
	catchers/handles, M.S. Tower bolts				
	100mm long and necessary eyes welded				2012 AOR of
	to frame.	7.20	Sqm.		CWC
	to frame.	7.20	Sqm.		CWC

14.	Providing and fixing metal mesh frame with expanded metal 20x6mm strands 3.25mm wide and 1.6mm thick, weighing not less than 4.078kg/sqm and frame made of 25x4mm M.S. flat sub divided into three equal panels with 25x4mm M.S. flat expanded metal to be fixed with 19x3mm M.S. beading tack welded, 4 nos. of M.S. cleats of size 50x50x4mm size with holes for 12mm dia bolt i/(c) and manufacture complete as per drg. No.CWC/PG/382 and as per instructions of Engineer in charge. The whole frame with expanded metal mesh is to be fixed on the other side of V4 openings with 12mm dia 250mm long bolts with nuts and washers embedded in C.Conc. Blocks of size 75x75x125mm of C. Conc. 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) in brick bands/RCC lintel if any of the				
	ventilators. NOTE: Payment for Cement Conc. Blocks, bolts, shall be paid separately under relevant items, payment for M.S. frame shall be paid on area basis of outer to outer dimension of frame.	9.90	Sqm.		21 AOR
15.	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.	3600	kg		10.2 P – 176
16.	Providing and fixing percoated galvanized iron profiles sheets (size, shape and pitch for corrugation as approved by Engineer –in –charge) 0.55 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 polyster 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 (5.5 x5.5 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 of size and shape wherever required.	237.00	Sqm.		<u>12.50</u> P – 212
17	Providing and fixing precoated galvanized steel sheet roofing accessories 0.50mm (+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 street and polyster top coat 15-18 microns using self drilling /self tapping screws complete. a)Ridges plain (500 -600mm)	17.00	Mtr.		12.51.1 P – 212
18.	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 a) 50 mm thick with 20 mm nominal size stone aggregate	197.00	Sqm.		36 AOR
19	Providing and fixing glass strips in joints terrazzo/cement concrete floors. A) 50mm wide and 4mm thick.	278.00	RMT		23 AOR
20	Providing and fixing M.S. round holding down bolts with nuts and washer plates complete.	104.00	Kg.	 	10.19 P – 179
21	Providing and fixing bolts including nuts and washers complete.	80.00	Kg.		10.20 P – 179
22	12 mm cement plaster of mix. 1:6 (1 cement : 6 fine sand)	312.00	Sqm.		$\frac{13.1.2}{P-222}$
23	20 mm cement plaster of mix 1:6 (1 cement : 6 fine sand)	343.00	Sqm.		13.3.2 P – 222

24	(1tf			1	12.16.1
24.	6 mm cement plaster of mix 1:3 (1 cement : 3 fine sand)	50.00	Sqm.		13.16.1 P – 223
	1.5 (1 cement . 5 time said)	30.00	Sqiii.		1 – 223
25	White washing with lime to give an				
	even shade				13.37.1
	New work (three or more coats)	312.00	Sqm.		$\overline{P - 295}$
	,				
26	Applying one coat of cement primer of				
	approved brand and manufacture on				
	wall surface				13.43.1
	Cement primer	375.00	Sqm.		P – 225
27	Finishing with with a fin				
21	Finishing walls with water proofing cement paint of required shade.				
	New work (two or more coats applied @				13.44
	3.84 Kg/10Sqm)	375.00	Sqm.		$\frac{13.44}{P - 225}$
	2.0. 125, 100qm)	2,2.00	~9		
28	Painting with synthetic enamel paint of				
	approved brand and manufacture to give				
	an even shade.				<u>13.61</u>
	Two or more coats on new work.	140.00	Sqm.		P - 227
29	Making plinth protection 50mm thick of				
	cement concrete 1:3:6 (1 cement : 3				
	coarse sand : 6 graded stone aggregate				
	20mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size				
	well rammed and consolidated and				
	grouted with fine sand including				4.17
	finishing the top smooth	35.00	Sqm.		$\frac{\overline{P-88}}{P-88}$
			1		
30.	Antitermite treatment in foundations				
	trenches, flooring with approved				
	chemicals including the cost of				
2.1	materials and labour.	212.00	Sqm.		
31	Providing gola 75x75 mm in cement				
	concrete 1:2:4(1 cement :2 coarse sand :				
	4 stone aggregate 10 mm and down gauge), including finishing with cement				1221
	mortar 1:3 (1 cement :3 fine sand) as				P 207
	per standard design.	17.00	mtr		1 201
32	Steel work in single section for air inlet,	17.00	11101		
	made of the frame of M.S. Angle				
	30x30x5 mm joints mitred welded with				
	4 Nos. 15 cm long lugs of M.S Flat				
	20x6mm to act as hold to be fixed in				
	cement concrete blocks of size				
	200x100x100 mm in cement concreter				

mix of 1:2:4(1 cement : 2 coarse sand :				
4 stone agg. 12.5 mm nominal size)				
including providing & fixing G.I. wire				
fabric to be fixed with 15x3 mm M.S.				
flat beading, tack welding including				
applying priming coat of zinc chromate				
yellow prime cleats are to be provided				
on inner side to withhold/support the				
covering. Slanted M.S. flat strips of size				
40x40 mm to be provided as per the				
drawing. Complete air inlet to be				
manufactured and fixed in position as				
per drawing no. CWC/PG/414 an as per				
direction of Engineer-in- charge.	71.20	kg		37 AOR
Note: Cement concrete blocks shall be		Ü		
paid separately under relevant item.				

ABSTRACT OF COST/BILL OF QUANTITIES FOR THE CONSTRUCTION OF 300 MT CAPACITY (ELECTRICAL WORK)

S. No.	Description of work	Quantity	Unit	Rate	Amount	Remarks
1.	Supplying and fixing of following sizes of PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.(ISI Marked) (a) 25mm	58.00	Meter			DSR 2012(EL) P-5 I-21.2
2.	Supplying and drawing following sizes of FR PVC insulated copper conductor, single core cable in the existing surface/recessed steel/PVC conduit as required.					DSR 2012 (EL) P-4
	(a) 3x1.5 sqmm	26.00	Meter			I-1.17.3
	(b) 4x1.5 sqmm	13.00	Meter			I-1.17.4
	I 5x1.5 sqmm	5.00	Meter			I-1.17.5
	(d) 6x1.5 sqmm	16.00	Meter			I-1.17.6
3	Supplying and fixing 12/13 mm flexible metal conduit including connection, painting etc on surface/recessed as per direction of Engineer in Charge.	3.00	Meter			Market rate
4	Supplying and fixing 3 pin,5 amp. Ceiling rose on the existing junction box/wooden block including connection etc as required	9.00	Meter			I-1.33/P-8

5	Supplying of 1X28 watt T-5 lamp luminaries, prewired with electronic choke, and T-5 28 W lamp having powder coated CRCA M.S. Box complete with all accessories as required. Make surya –UNIARY-Cat/Sub 128 T-5 EB-I/P-3/Crompton cat ref. T-5 RSF 28 E/ or equivalent in Bajaj	5.00	Each	Market rate
6	Installation, testing and commissioning of prewired, fluorescent fitting/compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/wall/truss, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.	5.00	Each	DSR- 2012(E) I-1.41
7	Supplying, installation, testing commissioning of 36 w/40w LED warm white, street light fitting, operating voltage 90-270 V. A.C, beam angle 30/90, IP 65/66, lumen more than 4000, pole die 60mm, life span 50000 hour, antiglare, driver etc. complete with all accessories etc. (with manufacturer certificate) make –NTL-Pharox -40watts LED or equivalent in Bajaj and Crompton	3.00	Each	Market rate
8	Supplying and fixing GI Pipe bracket on wall, suitable for fixing above street light made out of 40mm OD B-class GI pipe up to 2.00 meter length along with 2 sets suitable clamps, nut bolts/fastners including bending the shape, smoke gray painted with primer etc. as required.	3.00	Each	Market rate

9.	Supplying and fixing following way, single pole and neutral, previewed, sheet steel, MCB distribution board, 240 volts on surface/recess, complete with tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required. (But without MCB/RCCB Isolator) a)2+12 way, Double Door	1	each		DSR2012 (EL) P-11
10	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. (a) 40 amps	1	Each		DSR2012 (EL) P-13
11	Supplying and fixing 5 amps to 32 amps rating, 240 volts, 'C' curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. (a) Single Pole	12.00	Each		DSR2012 (EL)p-13 I-2.10.1
12	Providing and fixing M.V. danger notice plate of 200 mm x 150 mm, made of mild steel at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red color on front side as required.	1.00	Each		DSR 2012 (EL)P-14 I-2.21

13	Earthing with G.I. earth pipe 4.5 meter			DSR 2012
13	long, 40 mm dia including accessories			(EL)P-24
	and providing masonry enclosure with			(EL)P-24
	cover plate having locking arrangement			I-5.2
	and watering pipe etc. with charcoal /	1.00	Set	
	coke and salt as required.			
	-			
14	Proving and laying earth connection			DSR 2012
	from earth electrode with 6 SWG dia			(EL)P-24
	G.I. Wire in 15mm dia G.I Pipe from			
	earth electrode including connection with G.I thimble excavation and re-			
	filling as required.	15.00	meter	I-5.12
	ining as required.	13.00	meter	1 3.12
	0.11.01.			
15	Supplying of aluminum conductor PVC			
	insulated, PVC sheathed/Xlpe inner sheathed flat steel strip armoured			
	power cable of 1.1 KV grade			
	conforming to IS:1554 (Part-I) 1988 or			
	latest amended following sizes etc.			
	Make-Havels/NICCO/GRANDLAY			Market
	(a) 2x16 sqmm	15.00	Meter	rate
				7.77.4014
16	Laying of one number PVC insulated			DSR 2012
	and PVC sheathed/XLPE power cable of 1.1 KV grade of size not exceeding			P-26
	25 Sq. mm direct in ground including			1 20
	excavation, sand cushioning, protective			
	covering and refilling the trench etc. as			
	required.			
				I-7.1.1
	Upto 35 sq mm	20.00	Meter	1-/.1.1
17	Laying of one number PVC insulated			DSR2012
	and PVC sheathed/XLPE power cable			(EL) P-26
	of 1.1 KV grade of size not exceeding 25 sq. mm in the existing			
	RCC/HUME/STONEWARE/METAL			
	pipe as required			I-7.5
	Upto 35 sq mm	10.00	Meter	
	· · · · · · · · · · · · · · · · · · ·			•

18	Providing and fixing G.I. Pipes complete with G.I. Fitting including trenching and refilling etc (external work)				DSR-2012 (C) P-314
	(a) 50 mm dia nominal bore	10.00	Meter		I-18.12.6
19	Supplying and fixing 20 amps, 415 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps "C" curve, SP,MCB in steel sheet enclosure on surface or in recess with chained metal cover for the socket out let and complete with connections, testing and commissioning etc as required	1	each		DSR-2012 (EL) P-14
20	Supplying and making indoor end termination with brass compression gland and aluminum lugs for following size of PVC insulated and PVC sheathed /XLPE aluminum conductor cable of 1.1 KV grade as required. a)2x16 sq. mm(22mm)	02	Each		I-9.1.3

NOTE:

- 1. The above quantification of items is for godown only and does not include office, boundary wall and road etc. These may vary from place to place as per the site conditions.
- 2. Cost estimate may be prepared by applying the local schedule of rates of PWD/CPWD or any other Govt. Authority.
- 3. Drawings of the godown, office block and the layout plan have also been uploaded for guidance.