7.7. HOSPITAL & ANNEX BLOCK FURNITURE

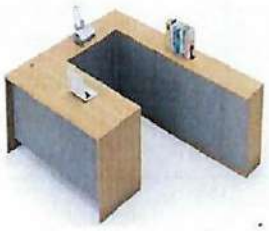
7.7.1. TECHNICAL SPECIFICATION – FURNITURE'S

S.No.	Item Name	Specification of the Item	Reference Image
1	Matrix 3 Seater Lounge Chair	Supplying and fixing of Matrix Lounge Chair as per the following specifications. DIVANO LITE/TANDEM PUBLIC 3 SEATER/TANDEM SEATING/1735L X 720W X 800H, Seat Perfo - 1.2 mm thk, Seat Bracket - 1.2 mm, Back Perfo - 1.2 mm, Back Bracket- 1.2 mm, Seat Clamp & Back Clamp- 4.0 mm, Solid Center beam- 2.0 mm Handle- 1.2 mm, Handle Bracket- 2.0 mm, Leg- 1.2 mm, Leg Plate- 4.0 mm, Leg Bush-2.0 mm, Leveller Cup - 0.6 mm The above entire unit shall be manufactured as per specifications ,Line Sketches & as per the approval of the Engineer-In-Charge.The rate including all material, labour, taxes, transportation etc to complete.	
2	Matrix 4 Seater Lounge Chair	Supplying and fixing of Matrix Lounge Chair as per the following specifications. DIVANO LITE/TANDEM PUBLIC 4 SEATER/TANDEM SEATING/2290L X 720W X 800H, Seat Perfo - 1.2 mm thk, Seat Bracket - 1.2 mm, Back Perfo - 1.2 mm, Back Bracket- 1.2 mm, Seat Clamp & Back Clamp- 4.0 mm, Solid Center beam- 2.0 mm, Handle- 1.2 mm, Handle Bracket- 2.0 mm, Leg- 1.2 mm, Leg Plate- 4.0 mm, Leg Bush-2.0 mm, Leveller Cup - 0.6 mm. The above entire unit shall be manufactured as per specifications ,Line Sketches & as per the approval of the Engineer-In-Charge.The rate including all material, labour, taxes, transportation etc to complete.	
3	Diva 7046R Chair	Supplying and fixing of Chair as per the following specifications.Nexa Chair with foam seating, pushback mechanism, fixed armrest and 50mm twin-wheel Nylon castors mounted on 600 dia Nylon base. Chair back is ergonomically designed , made of Hot pressed Plywood and PU foam of density 50-55 kg/m³and upholstered with 100% Polyester Fabric. The above entire unit shall be manufactured as per specifications ,Line Sketches & as per the approval of the Engineer-In-Charge.The rate including all material, labour, taxes, transportation etc to complete.	

S.No.	Item Name	Specification of the Item	Reference Image
4	Enterprise Table with Pedestal (1200W x600 Dx728 H mm)	Supplying and fixing of Table as per the following specifications. Main Table 1200Lx6000Dx750H, Pedestal - 400W x 450D x 675H, TABLETOP & GABLE END to be made of 25 mm thick Prelaminated particle board with machine pressed PVC edge band on all sides.MODESTY PANEL @725H to be made of 18 mm thick Prelaminated particle board with machine pressed PVC edge bind on all sides. Pedestal - TOP: 18mm Thick Prelaminated Partical Board with 2MM PVC edge band on all edges. CARCASS (Body/ Shutter / Back) : 18MM thick Prelaminated Partical Board with PVC edge band on all exposed edges. HARDWARE : Hettich Hinges, Lock. The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
5	Premium L42 2 Seater Sofa	Supplying and fixing of Matrix Lounge Chair as per the following specifications. The seat shall be made of Mild Steel. The back shall be made of SS tubular frame. Size shall be in 78.5 cm. (B) x 210.0 cm. (L) x 63.8 cm (H) & SEAT HEIGHT size shall be in 42.0 cm (SH). The above entire unit shall be manufactured as per specifications ,Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
6	Mayfair Table with ERU and Pedestal (1200W x750 Dx750 H mm)	Supplying and fixing of Table as per the following specifications. Main Table 1200Lx750Dx750H, Side Combo Storage 1050Lx450Dx750H, TABLETOP & GABLE END to be made of 25 mm thick Prelaminated particle board with machine pressed PVC edge band on all sides.MODESTY PANEL @725H to be made of 18 mm thick Prelaminated particle board with machine pressed PVC edge bind on all sides. STORAGE - TOP: 25mm Thick Prelaminated Partical Board with 2MM PVC edge band on all edges. CARCASS (Body/ Shutter / Back) : 18MM thick Prelaminated Partical Board with PVC edge band on all exposed edges. SHELF : made of 18MM thick Prelaminated Partical Board with PVC edge band on al edges SHUTTERS : Lockable Swing shutters with Flush Handle / Finger Groove handle. HARDWARE : Hettich Hinges, Lock The above entire unit shall be manufactured as per specifications, Line Sketches & as per	

S.No.	Item Name	Specification of the Item	Reference Image
		the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
7	Thrill Full Back Chair	Supplying and fixing of Chairs as per the following specifications. MID BACK SIZE shall be in 60.0 cm. (L) x 60.0 cm (B) x 100.0 cm. (H) & SEAT HEIGHT shall be in 50.0 cm (SH) {Adjustable). The seat and back shall be made up of 1.2 cm. thick hot-pressed plywood, upholstered with fabric and moulded Polyurethane foam, together with moulded seat and back covers. The back foam is designed with contoured lumbar support for extra comfort. The Polyurethane foam is moulded with density of 45 +/- 2 kg/m and Hardness of 20 +/- 2 on Hampden machine at 25% compression. The armrest top should be made of moulded polyurethane (Polyurethane) and mounted on to a drop lift height adjustable type Mild Steel tubular armrest support chrome plated. The armrest height should be adjustable up to 6.5cm in 5 steps & also should have swivel adjustment on both sides. The Knee tilt synchro mechanism should be designed with the following features - 360° revolving type, Tilt tension adjustment, 4-position locking with anti-shock feature, Seat back tilting ratio of 1 :2 (11 ° Seat Tilt /22° back tilt).The backrest consists of a sliding up down mechanism, which should be adjusted in the range of 7.5 cm and should be locked in 4 positions for correct position of lumber support.The pneumatic height adjustment has an adjustment stroke of 9.0 cm.The twin wheel castors shall be injection moulded in black Nylon. The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
8		**Supply and Fixing of Chair For Visitors** Dimensions: 60.90 Lx 64.20 D x 98.20 H x 44.80 seat Ht. in CM Frame Tubular Stain less Steel High Density Polyurethane Foam combined with Premium Leatherette. Sturdy PU Soft Arms. Seat and back rest with comfort cushion Legs with Nylon heavy duty bushes Certificates: ISO 9001, BIS/ CE The above entire unit shall be manufactured as per	

S.No.	Item Name	Specification of the Item	Reference Image
		specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
9	CH 18C Chair w/ Desklet	Supplying and fixing of Writing Pad Chair as per the following specifications. The seat shall be made of moulded Polyurethane foam and 12mm thick Recycled composite board upholstered with replaceable fabric cover. The back shall be made of MS tubular frame insitu moulded with Polyurethane foam and upholstered with fabric/Leatherite cover. Chair size shall be in 55.0 cm. (B) x 60.0 cm (L) x 90.0 cm. (H) & SEAT HEIGHT shall be in 42.0 cm (SH) (Fixed). The Polyurethane foam is moulded with density = 45 ±2 kg/m3 and Hardness for back foam is 16 (+0/-2) & that for seat foam is 20 (+/-2) at 25% compression. Armrest has a two piece construction and is mounted on to the tubular frame structure. It is injection moulded in talc filled PP. The powder coated tubular frame structure shall be made of 48 mm x 18.5 mm x 2.5 mm thk M.S. ERW oblong tube. The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
10	Pisa 2 Seater Sofa	Supplying and fixing of Waiting Saba 2 Seater as per the following specifications. Three seater Sofa Set size shall be in seat height 860 mm, Seat width 600mm, Length of seater 1300mm and seat height 400 mm. Base Frame shall be made of Dymetrol stretchable fabric (100 S), M.S. pipe Legs made of Rubber wood, P.U. Foam (Hardness 20, Density 45 kg/ cubic m) &18 mm thick partical board. armrest shall be made of Lining cloth cover placed on moulded P.U. Foam. (Hardness 20, Density 45 kg/cubic m) M.S. pipe, Recron fibre (200 grade-chemical bonded). Backrest shall be made up of Lining cloth cover placed on moulded P.U. Foam. (Hardness 14, Density 45 kg/cubic m) M.S. pipe - Recron fibre (200 grade chemical bonded). Seat shall be made up of cloth cover placed on moulded P.U. Foam. (Hardness 20, Density 45 kg/cubic m) Recron fibre (200 grade-chemical bonded). The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	

S.No.	Item Name	Specification of the Item	Reference Image
11	Pisa Center Table	Supplying and fixing of Centre Table as per the following specifications. PISA TABLE 1200Lx600Dx420HT, Top: Table Top with rectilinear form with rounded boundaries and chamfered edges give it crisp and formal visual appearance. 12mm thick black tinted or toughned Glass top is scratch resistant. Understructure: 12mm MS rod or SS (202 GRADE) rod. Understructure provides structural stability with a lighter look to the entire product. The above entire unit shall be manufactured as per specifications ,Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
12	Pisa Side Table	Supplying and fixing of Centre Table as per the following specifications. 600Lx600Dx420HT, Top: Table Top with rectilinear form with rounded boundaries and chamfered edges give it crisp and formal visual appearance. 12mm thick black tinted or toughned Glass top is scratch resistant. Understructure: 12mm MS rod or SS (202 GRADE) rod. Understructure provides structural stability with a lighter look to the entire product. The above entire unit shall be manufactured as per specifications ,Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
13	Cignus Executive Table with ERU and Pedestal (1650x1950x750mm)	Supplying and fixing of Table as per the following specifications. TABLETOP & GABLE END made of 25 mm thick Prelaminated particle board with machine pressed PVC edge band on all sides. MODESTY PANEL @725H made of 18 mm thick Prelaminated particle board with machine pressed PVC edge bind on all sides. PRELAM 3 DRAWER (2B+1F) PEDESTAL UNIT 400Wx450Dx670H (With Castor) - madeup of 18mm thick Prelaminated Particle Board with PVC Edge band and the telescopic slides for mobility of drawers and filers. The drawer is made up of 0.7 mm thick CRCA steel. with Centre Locking Mechanism considered. Side Finger Groove Handle is considered. STORAGE - TOP: 25mm Thick Prelaminated Partical Board with 2MM PVC edge band on all edges. CARCASS (Body/ Shutter / Back) : 18MM thick Prelaminated Partical Board with PVC edge band on all exposed edges. SHELF : made of 18MM thick Prelaminated Partical Board with PVC edge band on al edges SHUTTERS : Lockable Swing shutters with Finger Groove handle. HARDWARE : Hettich Hinges, Lock The above	

S.No.	Item Name	Specification of the Item	Reference Image
		entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
14	Marvel High Back Chair	Supplying and fixing of Chairs as per the following specifications. MID BACK SIZE shall be in 60.0 cm. (L) x 60.0 cm (B) x 100.0 cm. (H) & SEAT HEIGHT shall be in 50.0 cm (SH) {Adjustable). The seat and back shall be made up of 1.2 cm. thick hot-pressed plywood, upholstered with fabric and moulded Polyurethane foam, together with moulded seat and back covers. The back foam is designed with contoured lumbar support for extra comfort. The Polyurethane foam is moulded with density of 45 +/- 2 kg/m and Hardness of 20 +/- 2 on Hampden machine at 25% compression. The armrest top should be made of moulded polyurethane (Polyurethane) and mounted on to a drop lift height adjustable type Mild Steel tubular armrest support chrome plated. The armrest height should be adjustable up to 6.5cm in 5 steps & also should have swivel adjustment on both sides. The Knee tilt synchro mechanism should be designed with the following features - 360° revolving type, Tilt tension adjustment, 4-position locking with anti-shock feature, Seat back tilting ratio of 1 :2 (11 ° Seat Tilt /22° back tilt).The backrest consists of a sliding up down mechanism, which should be adjusted in the range of 7.5 cm and should be locked in 4 positions for correct position of lumber support. The pneumatic height adjustment has an adjustment stroke of 9.0 cm. The twin wheel castors shall be injection moulded in black Nylon. The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	

S.No.	Item Name	Specification of the Item	Reference Image
15		**Supply and Fixing of Chair For Visitors** Dimensions: 60.90 Lx 64.20 D x 98.20 H x 44.80 seat Ht. in CM Frame Tubular Stain less Steel High Density Polyurethane Foam combined with Premium Leatherette. Sturdy PU Soft Arms. Seat and back rest with comfort cushion Legs with Nylon heavy duty bushes Certificates: ISO 9001, BIS/ CE The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
16	Mingle Unitized Meeting Table(3600W X 1500D X 740H)	Supplying and fixing of Meeting Table 15seater as per the following specifications. TABLETOP & GABLE END made of 25 mm thick Prelaminated particle board with machine pressed PVC edge band on all sides. MODESTY made of 18mm thick Prelaminated particle board with machine pressed PVC edge band on all sides. WIRE MANAGEMENT The Vertical (snake) & Horizontal(Switch mounting box) wire carriers are placed below worktop, made up of CRCA with Powder Coating & Fixed to the understructure with specially designed brackets. Provision of placing switch plates in the cable tray which is easily accessible through a Access Flap (450L) . The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
17	Oxbo Visitor Chair	Supply and Fixing of Chair For Visitors Dimensions: 60.90 Lx 64.20 D x 98.20 H x 44.80 seat Ht. in CM Frame Tubular Stain less Steel High Density Polyurethane Foam combined with Premium Leatherette. Sturdy PU Soft Arms. Seat and back rest with comfort cushion Legs with Nylon heavy duty bushes Certificates: ISO 9001, BIS/ CE The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the	

S.No.	Item Name	Specification of the Item	Reference Image
		Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
		BILL OF QUANTITY (MEDICINE STORE)	
1		**Supply and Fixing of L Angular Rack**Size: 2130 (H) X 1080 (W) X 380 (D) mm Rack with 5 Compartments of 6 nos. of shelves. Distance between each shelf will be 410 mm. These 6 shelves should be hanging arrangement (adjustable). Racks shall be manufactured from Slotted M.S angle 14 SWG. Shelves shall be manufactured from 18 SWG thick sheet. The rack shall be assembled with G I bolt, nuts and washers. Slotted angle and M.S sheet shall be made of cold rolled with anti-rust treated and shall be finished with powder coating (color: Prince Gray). H/D Rubber bushes shall be provided to the bottom of legs of slotted angle racks. The quality of M.S sheet which is used for racks shall be free from any defects, Undulations, and old paints and surface corrosion, etc. Certificates: ISO 9001, BIS/CEThe above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
2		**Supply and Fixing of ALMIRAH SS** 1 Internal Size of Almirah: 1850 (H) X 900 (W) X 450 (D) mm 2 Leg Size of Almirah: 150 (H) X 120 (W) X 450 (D) mm 3 Rack with 5 Compartments. 4 Distance between each shelf will be 360 mm. 5 These 4 shelves should be hanging arrangement (adjustable). 6 One shelf should have internal door and lock 7 Standard lock and 2 sets of keys. 8 The thickness of the Almirah sheet shall be 18 SWG. 9 The body of the Almirah shall be manufactured from cold rolled MS sheet (C. R. Sheet) with Antirust treatment and shall be finished with powder coating The quality of used M.S sheet for making Almirah shall be free from any pitting and corrosion etc. 10 H/D Rubber bushes shall be provided to the bottom of legs of Almirah. Certificates : ISO 9001 and BIS/Notified CE	

		BILL OF QUANTITY (MEDICINE STORE)	
		The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
3		**Supply and Fixing of Almirah with glass door**Steel almirah with Toughened GlassSize: Height 1980mm, Width 915mm, Depth 480mm Mmanufactured from CRCA sheet conforming to IS 513-1994 grade D material. The CRCA sheet of uniform thickness and of 22 gauge for the body, 20 gauge for doors duly cut and bend with the help of CNC machines. The almirah shall be equipped with four fixed shelves, manufactured from 22 gauge CRCA sheet, thereby making five compartments in the Almirah. The steel shelf shall be capable of carrying a uniformly distributed load of 70kgms.Certification: Manufacturer should have ISO: 9001, BIS/ CEThe above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
4		**Supply and Fixing of Table for clerk** WORKTOP - Made of 25 mm thick Prelaminated particle board with machine pressed PVC edge band on all sides. UNDERSTRUCTURE- C LEG constructed of Vertical of 50X50X1.6 mm & Horizontal of 40mm X 40mm X 1.6mm thick MS Pipe with caps & levellers . Cross member is made of 40mm X 40mm X 1.6mm MS pipes. . powder coated finish of 50 to 60 Microns DFT. The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	

		BILL OF QUANTITY (MEDICINE STORE)	
5		**Supply and Fixing of Table for Computer** Contemporary & Modern Style Computer Desk Set-up for Study & Home Office with Storage Space W x H x D: 1003.3 mm x 749.3 mm x 508 mm (3 ft 3 in x 2 ft 5 in x 1 ft 8 in) With CPU Compartment Built-in Keyboard Tray Certificates: BIS/CE, ISO 9001 The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
6		**Supply and Fixing of Revolving Chair** Material: Fire retardant breathable mesh inbuilt into the backrest and Polyester fabric integrated into the seat. (BM Mesh & 5060 fabric seat).Base: 700 mm diameter Nylon base with 50 mm castors for stability and easy movement.Arms: Fixed Polypropylene inbuilt arms.Centre tilt: Adjust your work posture by using the tilt to recline on the chair for meetings / phone calls and more. Use the tilt lock for upright posture like keyboarding.Pneumatic height: Change the height of the chair relative to the floor by 100 mm.Certificates: ISO 9001, Notified CE/BISThe above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
7		**Supply and Fixing of Chair For Visitors** Dimensions: 60.90 Lx 64.20 D x 98.20 H x 44.80 seat Ht. in CM Frame Tubular Stain less Steel High Density Polyurethane Foam combined with Premium Leatherette. Sturdy PU Soft Arms. Seat and back rest with comfort cushion Legs with Nylon heavy duty bushes Certificates: ISO 9001, BIS/ CE The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	

		BILL OF QUANTITY (MEDICINE STORE)	
8		**Supply and Fixing of Attender stool** Approx. size:- 300mm square 18G double bent top of MS Height 510mm. Framework of MS press bent 25mm x 25mm x 3mm angles and 'C' channe riveted to angles made from 18G. MS CRCA sheet superimposed press bent argon arc welded top made from 0.6mm thick 304 grade S.S. sheet riveted with MS Drive on MS. Top. Legs fitted with PVC angle shoe Certificates : Manufacturer should have ISO:900, notified CE/BIS The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	
		BILL OF QUANTITY (NURSE STATION)	
1		Supply and fixing of Nurse station table as per the drawing & detail. The whole structure is formed of 19mm thick ply finished with approved laminate. Table top is formed out of 19mm thick ply finished with laminate cladding on both sides. The Table to have twin level table top at 750mm & 1050mm level of approved laminte finish as per approval of the architect. The depth of table top at 750mm level is 500mm deep and table top at 1050mm level is 600mm deep. below 750mm to be provided with openable storages Counter top to be formed out of 19mm thick ply finished with approved laminate The table to have a 1 Nos of fully extendable drawer pedestal unit at every 2m intervals on ball bearing drawer guides and finished with laminate of approved colour and shade as per details. Drawer to be complete with hardware installed as directed to consist of the following: 1 no multi purpose lock as specified,100mm SS handle, keyboard tray, Space for CPU unit etc complete as per details and Architect's approval.All internal surfaces to be finished with 0.8mm thick balancing laminate of approved shade. Cost to include Borer/Antitermite treatment for wood/plywood Hardware: All hardware shall be as per the approved model/make mentioned in finishing schedule.The above entire unit shall be manufactured as per specifications, Line Sketches & as per the approval of the Engineer-In-Charge. The rate including all material, labour, taxes, transportation etc to complete.	

8. ENGINEERING PERSONNEL OF CONTRACTOR

The contractor should ensure to deploy all the following Engineering personnel permanently for the work:

Sl. No.	Position	Nos.	Education Qualification	Minimum Number of Years	
				Similar Positions	Total Work Experience
1	Project Manager - Civil	1	Master's in Civil / Construction management / Structural Engg. Bachelor's in Civil Engg.	15 years	30 years
2	Construction Manager-Civil (1 Nos. at each Location)	3	Master's in Civil / Construction management / Structural Engg. Bachelor's in Civil Engg.	12 years	20 years
3	Construction Manager – E&M (1 Nos. at each Location)	3	Bachelor's in Electrical/ Mechanical Engg.	12 years	20 years
4	Material Engineer cum QC Engineer (1 Nos. at each Location)	3	Bachelor's in Civil Engg.	10 years	15 years
5	Planning Engineer (1 Nos. at each Location)	3	Master's in Civil / Construction management Bachelor's in Civil Engg. Hands on experience in Prima-vera software	8 years	12 years
6	Environmental, Health & Safety (1 Nos. at each Location)	3	Master's / Bachelor's in Environmental Engineering	8 years	12 years

The above requirement are minimum and the Engineer reserves the right the instruct for additional man-power deployment as per the work requirement.

9. MINIMUM REQUIREMENT OF CONSTRUCTION EQUIPMENT

The contractor should ensure to mobilize the following construction equipments to the site immediately after the commencement of the work:

No.	Equipment Type and Required Performance Characteristics	Minimum Requirement per Site location (Number of Units)	Minimum Requirement for the work (Number of Units)
1	Centralized concrete batch mix plant of capacity 30 cum per hour (fully automatic with computer control) within the site.	1	3
2	Excavator cum loader (JCB 3D model or equivalent).	3	9
3	Builders hoist	2	6
4	Pile Rig Machine	2	6
5	Compressor machine minimum 20 CFM with rock Breaker.	5	15
6	DG set of minimum capacities of 62.5 KVA.	5	15
7	Mini batching plant Portable (6 cum/hr)	2	6
8	Boom Placer	1	3
9	Transit mixers.	As per requirement	As per requirement
10	Welding machine 400 Ampere 20	20	60
11	Water tanker (Minimum capacity of 5000 litres)	8	24
12	Power driven earth rammer (Soil compactor)	4	12
13	Reinforcement cutting machine.	10	30
14	Total Station Machine	3	9
15	Reinforcement bending machine.	10	30

No.	Equipment Type and Required Performance Characteristics	Minimum Requirement per Site location (Number of Units)	Minimum Requirement for the work (Number of Units)
16	Dumper/Tipper	10	30
17	Automatic Ring making machine (Reinforcement)	3	9
18	Plate Vibrator	10	30
19	Screed leveller.	10	30
20	Needle Vibrators	10	30
21	Concrete pump	4	12
22	Centrifugal mono block water pump minimum capacity 2 HP	20	60
23	Road roller 8 to 10 tons	3	9
24	Vibratory roller	4	12
25	Drilling machine	5	15
26	Double steel scaffolding and staging materials	8000 Sqm	24000 Sqm
27	Shuttering Material including Beam, Column Slabs etc.	8000 Sqm	24000 Sqm
28	Air compressor	6	18
29	Floor grinding/polishing machines	6	18
30	Granite cutting machine	6	18
31	Ceramic tile cutting machine	20	60
32	Granite polishing machine	4	12
33	Granite hand polishing machine	10	30

No.	Equipment Type and Required Performance Characteristics	Minimum Requirement per Site location (Number of Units)	Minimum Requirement for the work (Number of Units)
34	Mobile tower crane	2	6
35	Sprinklers	2	6

The above said equipments and quantities are minimum requirement and the Engineer reserves the right to instruct for mobilization of additional equipments as per the work requirement.

10. LIST OF DRAWINGS TO BE PROVIDED BY THE CONTRACTOR

During the execution of the contract, the Engineer shall issue all the approved Good for Construction (GFC) drawings to the contractor for the execution. However, contractor has responsibility of obtaining the shop drawings as shown in the Annexure-A enclosed to this Technical Specification. These shop drawings has to be submitted to the Engineer prior to execution of the work for his approval.

11. ENVIRONMENTAL MANAGEMENT

11.1. SPECIAL CONDITIONS FOR ENVIRONMENT PROTECTION

Construction Stage-

All vehicles, equipment and machinery to be procured for construction shall conform to the relevant Bureau of India Standard (BIS) norms

The contractor shall follow all the requirements of Environmental Management Plan (EMP) & Environmental Monitoring Plan (EMoP), Which specifically includes all environmental impacts and their mitigation measures related to construction and demolition activities of Building, prior to commencement of any works under the Contract. & In EMP should also briefly include the Integrated Waste Management Plan.

The Contractor shall undertake monitoring of various environmental aspects through an agency approved by NABL/MoEF&CC / CPCB / SPCB.

The Contractor shall comply at all times with all relevant national and state legislation regarding environmental and social protection, pollution prevention and control, waste management and other relevant environmental and social matters

The Contractor shall follow all the recommendation and guidelines mentioned in the Environmental Clearance (EC) & Consent to establish/Consent to operate(CTE/CTO) taken by the employer for commencement of this project from competent authorities.

The Contractor shall ensure appointment of competent Environmental Officer(s), who shall work in coordination with Employer, PMC and his staff, for effective environment management and implementation of EMP & EMoP.

If a batching plant is needed to produce concrete, SPCB clearances for its establishment and operation must be obtained in accordance with regulations.

Emission from the vehicles must conform to environmental norms & must have valid PUC certificate

Dust produced from the vehicular movement and other site activities is to be mitigated by sprinkling of water.

Construction Wastes Disposal

The pre-identified dump locations will be a part of solid waste management plan to be prepared by the Contractor in consultation with the Engineer.

Contractor shall identify the location of disposal site and get it approved from the competent authority i.e the Engineer prior to commencement of the excavation/demolition work.

Contractor shall ensure that any spoils of material will not be disposed off in any municipality solid waste collection bins.

Procurement of Construction Materials

All vehicles delivering construction materials to the site shall be covered to avoid spillage of materials and maintain cleanliness of the roads.

Wheel Tyers of all vehicles used by of the contractor, or any of his sub-contractor or materials supplies shall be cleaned and washed clear of all dust/mud before leaving the project premises. This shall be done by routing the vehicles through tyre washing tracks.

Contractor shall arrange for regular water sprinkling at least twice a day (i.e. morning and evening) for dust suppression of the construction sites and unpaved roads used by his construction vehicles.

Water Pollution

The Contractor shall take all precautionary measures to prevent the wastewater during construction to accumulate anywhere.

The wastewater arising from the project is to be disposed off in the manner that is acceptable to the Engineer.

Air and Noise Pollution

Contractor shall use dust screens and sprinkle water around the construction site to arrest spreading of dust in the air and surrounding areas.

Contractor shall ensure that all vehicles, equipment and machinery used for construction are regularly maintained and confirm that emission levels comply with environmental emission standards/norms.

All vehicles and equipment used in construction will be fitted with exhaust silencers.

Servicing of all construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective will be replaced.

The Contractor shall be provided the noise shields around the construction site. The noise shields can be any physical barriers, which provide adequate attenuation of noise levels.

At the surface of the construction site, the Contractor shall use only equipment that operating under full load meets the noise limits specified in Table:

Noise Emission Limits for Construction Equipment Measured at 50 feet From Construction Equipment:

Equipment Category	Lmax Level dB(A)
Backhoe	80
Bar Bender	80
Chain Saw	85
Compactor	80
Compressor	80
Concrete Mixer	85
Concrete Pump	82
Crane	85
Dozer	85
Front End Loader	80
Generator	82
Gradall	85
Grader	85
Paver	85
Pneumatic Tools	85
Roller	85
Tractor	84

The construction activities shall be limited to the Ambient Noise Standards measured at the nearest affected sensitive receptor

The Ambient Noise Standards are as given in Table:

Category of Area	Limits in dB (A)	
	Day Time #	Night Time #
Industrial	75	70
Commercial	65	55
Residential	55	45
*Silence	50	40

Day time mean from 6.00 a.m. to 10.00 p.m. and Night Time shall mean from 10.00 p.m. to 6.00 a.m.

*Silence zone is an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.

While installing any DG set (manufactured after January 2005), the maximum permissible sound pressure shall be 75dB(A) at 1m from the enclosure surface. Only Acoustic type DG should be use at project site.

Vibration Level

The Project location is close to residential / commercial structures, the Contactor shall prepare a monitoring scheme prior to construction at such locations. This scheme for monitoring vibration level at such residential / commercial sites shall be submitted to the PMC for his approval. This scheme shall include:

(i) Monitoring requirements for vibrations at regular intervals throughout the construction period.

(ii) Pre-construction structural integrity inspections of sensitive structures in project activity.

(iii) Information dissemination about the construction method, probable effects, quality control measures and precautions to be used.

(iv) The vibration level limits at the Site adjacent to the alignment shall conform to the permitted values of Peak Particle Velocity (PPV) as given in Directorate General Mining and Safety (DGMS) (Tech) S&T) Circular Vo.7 of 1997.

Personal Safety, Hygiene Measures for Labour

Contractor will provide the following items for safety of workers employed by contractor and associate agencies:

Protective footwear and gloves to all workers employed for the work on mixing, cement, lime mortars, concrete etc. and openings in water pipeline/sewer line.

Welder’s protective eye-shields to workers who are engaged in welding works.

Safety helmet and Safety harness/ belt.

Provide adequate sanitation/safety facilities for construction workers to ensure the health and safety of the workers during construction, with effective provisions for the basic facilities such as sanitation, drinking water and safety equipment’s or machinery.

All the workers should be wearing helmet and shoes all the time on site.

Masks and gloves should be worn whenever and wherever required.

Adequate drinking water facility should be provided at site, adequate number of decentralized latrines and urinals to be provided for construction workers.

If allowed and full time workers are residing on site, then they should be provided with clean and adequate temporary hutment.

First aid facility should also be provided.

Overhead lifting of heavy materials should be avoided. Barrow wheel and hand-lift boxes should be used to transport materials onsite.

Tobacco and cigarette smoking should be prohibited onsite.

All dangerous parts of machinery are well guarded and all precautions for working on machinery are taken.

Maintain hoists and lifts, lifting machines, chains, ropes and other lifting tackles in good condition. Provide safety net of adequate strength to arrest falling material down below.

Use of durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.

Ensure that walking surfaces or boards at height are of sound construction and are provided with safety rails and belts. Provide protective equipment's such as helmets.

Provide measure to prevent fire. Fire extinguisher and buckets of sand to be provided in fire-prone area and elsewhere.

Provide sufficient and suitable light for working during night.

Ensure that measures to protect workers from materials of construction, transportation, storage and other dangers and health hazards are taken

Ensure that the construction firm/division/company have sound safety policies.

Comply with the safety procedure, norms and guidelines (as applicable) as outlined in NBC 2016.

Adopt additional best practices and prescribed norms as in NBC 2016

Contractor is required to get existing top soil tested for fertility. If test finds it fertile, then top soil preservation is required. For preservation, top layer of soil (150mm- 300mm from the top) must be stripped off the site areas where construction activity will be carried out and kept separately for preservation. The preserved top soil must NOT be mixed with subsoil (soil excavated below 150mm – 300mm depth). The top soil should be preserved from erosion by wind/rain water by planting plants or grass on it. The preserved top soil stack height should not be more than 400mm – 600mm. The area used for preserved top soil should

be barricaded from all the sides & nothing should be dumped on it during the construction process. There should be regular water sprinkling on the preserved top soil for its compaction & to maintain its fertility by adding organic manure as per the direction of horticulturist. Top-soil fertility test must be carried out before preservation and post construction to ensure and maintain its fertility. The soil fertility should be enhanced by organic means only if required. Preserved top soil must be spread back to landscaped areas after the construction activity is completed as per the direction of site in charge. Top soil fertility test must be done from an ICAR or NABL accredited laboratory for the following parameters- P.H.,Mineral Content, Organic Matter (%), Nitrogen (kg/Hec), Phosphorus (kg/Hec), Potassium (kg/Hec), Free Lime content) %), Iron (ppm), Maganese (ppm), Bauxite (ppm), Copper (ppm), Texture (%), Bulk Density (Mg m3), Particle Density (Mg m3), Maximum Water Holding Capacity (%), Exchangeable Sodium (Mg/100g)

Identify roads on-site that would be used for vehicular traffic. Update vehicular roads (if these are unpaved) by increasing the surface strength by improving particle size, shape and mineral type that make up the surface base. Add surface gravel to reduce source of dust emission. Limit amount of fine particles (smaller than 0.075mm) to 10 -20%. Limit vehicular speed on site 10km/h. Nothing extra will be payable for this.

All material storages should be adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust/particulate emissions.

Spills of dirt or dusty materials shall be cleaned up promptly so the spilled material does not become a source of fugitive dust and also to prevent of seepage of pollutant laden water into the ground aquifers. When cleaning up the spill, ensure that the clean - up process does not generate additional dust. Similarly, spilled concrete slurries or liquid wastes should be contained/cleaned up immediately before they can infiltrate into the soil/ground or runoff in nearby areas.

The contractor shall ensure that water spraying is carried out by wetting the surface by spraying water on:

Any dusty material.

Areas where demolition work is carried out.

Any unpaved main-haul road and.

Areas where excavation or earth moving activities are to be carried out.

The contractor shall ensure the following:

Cover and enclose the site by providing dust screen, sheeting or netting to scaffold along the perimeter of a building.

Covering stockpiles of dusty material with impervious sheeting.

Covering dusty load on vehicles by impervious sheeting before they leave the site.

Transferring, handling/storing dry loose materials like bulk cement and dry pulverized fly ash inside a totally enclosed system.

Clear vegetation only from areas where work will start right away.

Vegetate/mulch areas where vehicles do not ply.

Apply gravel / landscaping rock to the areas where mulching/paving is impractical.

Adopt measures to prevent air pollution in the vicinity of the site due to construction activities. There is no standard reference for this. The best practices should be followed (as adopted from international best practice documents and codes).

The contractor shall provide experienced personnel with suitable training to ensure that these methods are implemented. Prior to the commencement of any work, the method of working, plant equipment and air pollution control system to be used on -site should be made available for the inspection and approval of the Engineer to ensure that these are suitable for the project.

Employ measures to segregate the waste on-site into inert, chemical or hazardous wastes. Recycle the unused chemical/hazardous wastes such as oil, paint, batteries and asbestos. The inert waste is to be disposed off to Municipal Corporation/local bodies dump yard and landfill sites.

To preserve the existing landscape and protect it from degradation during the process of construction. Proper timing for construction activity shall be selected to minimize the disturbance such as soil pollution due to spilling of the construction material and its mixing with rainwater. The construction management plan including soil erosion control management plan shall be prepared accordingly for each month. The application of erosion control measures includes construction of gravel pits and tyre washing bays of approved size and specification for all vehicular site entry/exits, protection of slopes greater than 10%. Sedimentation Collection System and run-off diversion systems shall be in place before the commencement of construction activity. Existing vegetation shall be preserved and protected by not-disturbing or damaging to specified site areas during construction.

The contractor should follow the construction plans proposed by the Engineer / landscape consultant to minimize the site disturbance such as soil pollution due to spilling. Use staging and spill prevention and control plan to restrict the spilling of the contaminating material on site.

Spill prevention and control plans should clearly state measures to stop the source of the spill. Measures to contain the spill and measures to dispose the contaminated material and hazardous wastes. It should also state the designation of personnel trained to prevent and control spills. Hazardous wastes include pesticides, paints, cleaners and petroleum products.

A soil Erosion and Sedimentation Control Plan (ESCP) should be prepared prior to construction and should be applied effectively.

The contractor shall prepare and submit 'Spill prevention and control plans' before the start of construction, clearly stating measures to stop the source of the spill, to contain the spill, to dispose the contaminated material and hazardous wastes, and stating designation of personnel trained to prevent and control spills. Hazardous wastes include pesticides, paints, cleaners, and petroleum products.

The contractor shall ensure that no construction leaches (e.g. cement slurry) is allowed to percolate into the ground. Adequate precautions are to be taken to safeguard against this including reduction of wasteful curing processes, collection, basic filtering and reuse. The contractor shall follow requisite measures for collecting drainage water run-off from construction areas and material storage sites and diverting water flow away from such polluted areas. Temporary drainage channels, perimeter dike/swale, etc. shall be constructed to carry the pollutant -laden water directly to the treatment device or facility (municipal sewer line).

All lighting installed by the contractor around the site and at the labour quarters during construction shall be CFL/ LED bulbs of the appropriate illumination levels. This condition is a must, unless specifically prescribed otherwise.

All the building materials and systems used on site must be as per the specifications and approved makes by the Engineer-In-Charge.

All required certificates explaining the properties of the building material/system needs to be obtained from the manufacturer/vendor as required by the green building rating authority. The purchase orders of all the materials made with the manufacturers / authorized vendors should be maintained and shall be provided for the process with due diligence upon request.

All paints, adhesives and sealants should comply with the VOC limits prescribed as follows:

Table 1- VOC limits for paints, adhesives and sealants

Description	VOC Limit (g/l)	Description	VOC Limit (g/l)
PAINTS		ADHESIVE	
Non-flat	150	Wood flooring	100
Flat (Mat)	50	Tile	65
Anti-corrosive /anti-rust	250	Indoor Carpet	50

COATINGS		Structural Glazing	100
Varnish	350	Multipurpose Construction	70
Lacquer	550		
Floor Coatings	100		
Stains	250		

Water saving measures need to be followed on site. If bore well water is used for construction, it must be metered. For waste water use in construction, record must be maintained of all tankers used at site. All sources of water use during construction must be regularly monitored.

The contractor / subcontractor shall prepare and submit a Site Management Plan (SMP) within 10 days of start, for approval by the Engineer. This SMP shall indicate the locations of go down, stockpiles, barricading, waste storage, offices, vehicular movement routes etc. In short this SMP would comprehensively represent how the site activities shall be managed. Contractor will be penalized @ Rs. 500 per day of delay on non-submission of SMP beyond due date to be recovered from next RA bill.

Any other site management measures suggested by the Engineer shall be followed on site.

The contractor & his team shall put adequate efforts to minimize construction waste generation at site. This shall include collection and segregation of all construction waste at site like broken bricks, tiles, glass, pavers, Steel scrap, Concrete debris, Plastic bags, drums, packaging cardboard, Timber scrap, Cement bags etc.

The contractor must keep record of all the construction waste being recycled or reused at site and also maintain receipts/records of waste sold from site. The contractor must ensure that no waste from the site is sent to landfill sites, either all waste is reused within the site or sent for recycling. Track the waste sent off the site to its final destination. Contractor must keep record as gate passes/ challans for all the waste material sent out for selling.

The contractor shall submit to the Engineer after construction of the buildings, a detailed as built quantification of the following within 10 days of recording of completion. Contractor will be penalized @ Rs. 500 per day of delay on non-submission of SMP beyond due date to be recovered from the Final bill:

- Total materials used
- Total waste generated,
- Total waste reused,

- Total water used,
- Total electricity consumed, and
- Total diesel consumed.

Evidence for the implementation of the all the above required measures shall be provided in the form of photographs and templates as required which is required for the submission to the authorities

The contractor shall provide potable water for all workers. The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site. The contractor shall ensure cleanliness of workplace with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable standard. Adequate toilet facilities shall be provided for the workman within easy access of their place of work. The total no. to be provided shall not be less than 1 per 30 employees in any one shift. Toilet facilities shall be provided from the start of building operations, connection to a sewer shall be made as soon as practicable. Every toilet shall be so constructed that the occupant is sheltered from view and protected from the weather and falling objects. Toilet facilities shall be maintained in a sanitary condition. A sufficient quantity of disinfectant shall be provided. Natural or artificial illumination shall be provided.

In compliance to the Hon'ble National Green Tribunal (NGT) and Office Memorandum no. DG/SE/CM/CON/Misc./02 dated 16.03.2016 following preventive/corrective measures to be taken at site in order to control Air pollution from construction and demolition activity: –

The contractor shall not store/dump construction material or debris on metaled road.

The contractor shall get prior approval from Engineer for the area where the construction material or debris can be stored beyond the metaled road. This area shall not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.

The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot /area using CGI sheets or plastic and /or other similar material to ensure that no construction material dust fly outside the plot area.

The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes/or are carrying construction material like cement, sand and other allied material are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned and dust free to ensure that enroute their destination , the dust, sand or any other particles are not released in air/contaminate air.

The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.

The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable to dust emission.

The contractor shall ensure that C&D waste is transported to the C&D Waste site only and due record shall be maintained by the contractor.

The contractor shall compulsory use of wet jet in grinding and stone cutting.

The contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010.

The contractor shall carry out on-Road-Inspection for black smoke generating machinery. The contractor shall use cleaner fuel.

The contractor shall ensure that all DG sets comply emission norms notified by MoEF.

The contractor shall use vehicles having pollution under control certificate. The emissions can be reduced by a large extent by reducing the speed of a vehicle to 20 kmph. Speed bumps shall be used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to nearby paved areas.

The contractor shall ensure that the construction material is covered by tarpaulin. The contractor shall take all other precaution to ensure that no dust particles are permitted to pollute air quality as a result of such storage.

The paving of the path for plying of vehicles carrying construction material is more permanent solution to dust control and suitable for longer duration projects.

In case of non Availability of the C& D waste Material / Product, the contractor shall make arrangement of substitute materials/Products with out any cost adjustment.

Any Penalty imposed by Civic bodies/ NGT for Non Compliance of their guidelines issued by them from time to time shall be borne by the contractor.

The contractor shall comply with the safety procedures, norms and guidelines (as applicable) as outlined in the Part 7 of National Building code 2016 of India, Bureau of Indian Standards. A copy of all pertinent regulations and notices concerning accidents, injury and first-aid shall be prominently exhibited at the work site. Depending upon the scope & nature of work, a person qualified in first-aid shall be available at work site to render and direct first-aid to causalities. A telephone may be provided to first-aid assistant with telephone numbers of the hospitals displayed. Complete reports of all accidents and action taken thereon shall be forwarded to the competent authorities.

The contractor shall ensure the following activities for construction workers safety, among other measures:

Guarding all parts of dangerous machinery.

Precautionary signs for working on machinery

Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition.

Durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.

Ensuring that walking surfaces or boards at height are of sound construction and are provided with safety rails or belts.

Provide protective equipment; helmets etc.

Provide measures to prevent fires.

Fire extinguishers and buckets of sand to be provided in the fire-prone area and elsewhere.

Provide sufficient and suitable light for working during night time.

Where possible, the contractor shall select materials / vendors, harvested and manufactured regionally, within a 800-km radius of the project site. Contractor shall collect & submit the relevant material certificates for materials with high recycled (both post-industrial and post-consumer) content, including materials like RMC mix with fly-ash, glass with recycled content, calcium silicate boards etc. Contractor shall collect the relevant material certificates for rapidly renewable materials such as bamboo, wool, cotton insulation, agri-fiber, linoleum, wheat board, strawboard and cork etc.

The contractor shall ensure that a flush out of all internal spaces is conducted prior to handover. This shall comprise an opening of all doors and windows for 14 days to vent out any toxic fumes due to paints, varnishes, polishes, etc.

Apart from the above conditions, the Environmental Management Plan to be followed by the contract before and during Construction Phase and during operation phase is enclosed as Annexure-B.

11.2. ENVIRONMENTAL MONITORING

During the construction phase and operation phase of this project the contractor is required to carryout environmental monitoring and reporting as per environmental monitoring plan enclosed at Annexure-C. The filling in the monitoring form shall be done by the contractor on a quarterly basis during construction and same annually after the completion of the project during defect liability period i.e., 24 Months, provided that there is no outstanding environmental issue during operation. The reporting forms are enclosed at Annexure-D the reporting is to be strictly done as per the given formats.

In case the contractor fails to monitor and report the environmental items indicated in the

monitoring plan mentioned above the same shall be got done by Environmental Expert and suitable deductions shall be carried from contractors account for above default.

PENALTY FOR NON-COMPLIANCE WITH ABOVE ENVIRONMENTAL REQUIREMENT:

In case of non-compliance/delay in compliance to the above Environmental protection / monitoring requirements, a recovery @ Rs. 5000/- per day will be imposed which will be recovered from the immediate next R/A Bill of the Contractor.

CONSTRUCTION WASTE

The contractor shall prepare and make himself conversant with the Site Waste Management Program Manual and actively contribute to its compilation by estimating the nature and volume of waste generated by the process/installation in question.

Contractor shall ensure that wastage of construction material is minimum . Subject to the suitability, all construction debris shall be used for road preparation, back filling, etc, as per the instructions of the Engineer in Charge, with necessary activities of sorting, crushing, etc. No construction debris shall be taken away from the site, without the prior approval of the Engineer in Charge. If and when construction debris is taken out of the site, after prior permissions from the Engineer in Charge, then the contractor shall ensure the safe disposal of all wastes and will only dispose of any such construction waste in approved dumping sites.

Contractor shall collect all construction waste generated on site. Segregate these wastes based on their utility and examine means of sending such waste to manufacturing units which use them as raw material or other site which require it for specific purpose. All construction debris generated during construction shall be carefully segregated and stored in a demarcated waste yard. Clear, identifiable areas shall be provided for each waste type. Employ measures to segregate the waste on site into inert, chemical, or hazardous wastes. Typical construction debris could be broken bricks, steel bars, broken tiles, spilled concrete and mortar etc.

Water spray, through a simple hose for small projects, to keep dust under control. Fine mists should be used to control fine particulate. However, this should be done with care so as not to waste water. Heavy watering can also create mud, which when tracked onto paved public roadways, must be promptly removed. Also, there must be an adequate supply of clean water nearby to ensure that spray nozzles don’t get plugged.

Contractor shall be required to provide an easily accessible area that serves the entire building and is dedicated to the separation, collection and storage of materials for recycling including (at a minimum) paper, corrugated cardboard, glass, plastics, and metals. He shall coordinate the size and functionality of the recycling areas with the anticipated collections services for glass, plastic, office paper, newspaper, cardboard, and organic wastes to maximize the effectiveness of the dedicated areas. Consider employing cardboard balers, aluminum can

crushers, recycling chutes, and collection bins at individual workstations to further enhance the recycling program.

Staging (dividing a construction area into two or more areas to minimize the area of soil that will be exposed at any given time) should be done to separate undisturbed land from land disturbed by construction activity and material storage.

The storage of material shall be as per standard good practices as specified in Part 7, Section 2 in Planning Aspects, NBC 2016 and shall be to the satisfaction of the Engineer in Charge to ensure minimum wastage and to prevent any misuse, damage, inconvenience or accident. There should be a proper planning of the layout for stacking and storage of different materials, components and equipment's with proper access and proper maneuverability of the vehicles carrying the materials. While planning the layout, the requirements of various materials, components and equipment's at different stages of construction shall be considered.

The contractor shall provide for adequate number of garbage bins around the construction site and the workers facilities and will be responsible for the proper utilization of these bins for any solid waste generated during the construction. The contractor shall ensure that the site and the workers facilities are kept litter free. Separate bins should be provided for plastic, glass, metal, biological land paper waste and labelled in both Hindi and English with suitable symbols.

The Contractor shall remove from site all rubbish and debris generated by the Works and keep Works clean and tidy throughout the Contract Period. All the serviceable and non-serviceable (Malba) material shall be segregated and stored separately. The Malba obtained during construction shall be collected in well-formed heaps at properly selected places, keeping in a view safe condition for workmen in the area. Materials which are likely to cause dust nuisance or undue environmental pollution in any other way, shall be removed from the site at the earliest and till then they shall be suitable covered. Glass & steel should be dumped or buried separately to prevent injury. The work of removal of debris should be carried out during day. In case of poor visibility artificial light may be provided.

Annexure-B : Environmental Management Plan

Environmental Management Plan Before and during Construction Phase

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
Pollution	Air quality	Impact on air quality due to operation of construction machineries and traveling of the construction vehicles is expected. During construction phase, particulate matter will be main pollutant followed by SOx, NOx and CO from construction machineries and vehicles.	- To utilize fuel-economy/ low-emission construction vehicle and machineries. - To sprinkle water around the project site dust is generated especially during dry season. - To maintain construction vehicles and construction machineries adequately. - To install temporal enclosure around the construction site. - To give guidance for drivers about idling stop and avoiding excessive load operation such as quick acceleration and overloading.	Contractor	PMU & PMC
	Water pollution	Impact on water quality due to leakage of oil from machineries	-To install appropriate drainage system in the construction site before construction	Contractor	PMU & PMC

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
		and construction chemical are expected.	activities commence. -To check leakage of oil and chemical products periodically. To install impermeable material around the oil and chemical storage and oil handling area. -To train operators of construction machineries in daily maintenance to prevent oil leakage -To collect waste oil into the designated container separately and hand over to authorized third party for treatment and disposal.		
	Solid Waste	The excavated solid waste as well as construction related waste will be main component of solid waste.	-To handle wastes within the project site and store them with cover until handed over to authorized third party. -Especially for the demolishing the existing facilities built with Asbestos materials, the waste shall be handled in	Contractor	PMU & PMC

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
			compliance with Construction and Demolition Waste Management Rules, 2016. -To segregate waste and recycle or sell to third party as applicable. The waste must not contain hazardous substances.		
	Soil Contamination	It is possible that oil leakage may cause soil contamination during construction phase.	-Same as water pollution	-	-
	Noise and vibration	Various machineries such as concrete mixer, crane, and track generate noise nearly 90 (dB) as well as project related traffics may generate noise in and around project site.	-To install temporal fence. -To strive to introduce low-nose and low-vibration machineries. -To avoid construction at nighttime as much as possible. -To avoid intensive operation of construction machineries that generate noise and vibration.	Contractor	PMU & PMC

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
	Ground Subsidence	There is potential risk of ground subsidence if it is planned that the construction activities at some target facilities utilize ground water for construction activities.	-To monitor groundwater level and ground subsidence status periodically and adopt other source such as tanker water supply in case significant declines are observed.	Contractor	PMU & PMC
	Offensive Odor	Inadequate management of waste and wastewater can be the source of odor.	Same as "solid waste"	-	-
Social Environment	Hydrology	Construction of drainage inside and around the site will modify the hydrology of site.	-To install proper drainage system in the project site.	Contractor	PMU & PMC
	Water usage	Usage of ground water is planned during construction phase that might affect water usage of surrounding community.	Same as ground subsidence	-	-
	Existing social infrastructures	Conceivable major impact on existing social infrastructures and services during the construction	-To plan timing and route for construction related traffic.	Contractor	PMU & PMC

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
	and service	phase is traffic congestion because of traffic construction related vehicles.	-To deploy traffic controller -To inform foreseen activities to the public as needed.		
	Landscape	It is expected that the project implementation would impact landscape around the project site in some extent.	-To install temporary enclosure wall during construction works.	Contractor	PMU & PMC
	Occupational health and safety	Handling of Asbestos for demolishing existing buildings may cause health issues of workers. In general, various occupational risks are foreseen as the construction works involve various machineries operations, and buildings with multi stories are designed.	-To provide safety and health training to workers when employed and enforce norm of safety demolition and construction, including isolation of the area built with Asbestos using polyethylene sheets or equivalent. To promote use of appropriate personal protective equipment (eye protections, helmet, protective shoes, glove, etc.). -To establish the system for safety and health management at the construction site, and to clarify the responsible person	Contractor	PMU & PMC

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
			and reporting system. -To apply good practices for similar construction.		
	Community Health and Safety	Some negative impacts on public. health, such as spread of infectious diseases due to influx of construction workers are anticipated, since the project includes large-scale construction works.	-To provide training about public health and infectious diseases for construction workers.	Contractor	PMU & PMC
Others	Trans boundary impacts including Climate Change	GHGs emission from operation of the construction machines and traveling of the vehicles are expected.	-To adopt fuel-economy/ low-emission construction vehicle and machineries as applicable and economically feasible. -To control idling operation of machineries.	Contractor	PMU & PMC

Environmental Management Plan during Operation Phase

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
Pollution	Air quality	Impact on air quality due to diesel generator (DG) sets and increased project related transportation is expected.	-To utilize low-pollutant fuel as applicable and financially feasible. -To maintain generator periodically to sustain high performance for long term. Apply same measures as in construction phase.	Contractor & PIU - PWD	PIU – PWD / PMU
	Water pollution	Treated wastewater to be discharged through rainwater drainage will be main source of pollution from project operation. Another potential impact would be medical effluent, which may contain hazardous elements.	-To monitor quality of treated wastewater and check compliance with standards prescribed by SPCB. -To install ETP designed for medical institute, and properly operating them following instruction by SPCB. -To inspect the rainwater drainage system and maintain it periodically.	Contractor & PIU - PWD	PIU – PWD / PMU
	Solid Waste	Various medical, non- medical, hazardous, and non- hazardous wastes will be generated.	-To segregate waste by type and hazard level of them in proper container, collect and store them in sealed storage until hand over to authorized third party. -To develop manual for waste handling to all	Contractor & PIU	PIU – PWD / PMU

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
			medical staff and enforce it to practice.		
	Soil Contamination	Negative impact is expected due to varying contaminates from oil and grease, inorganic and organic chemical compounds.	-To develop management rules for chemical products, and to practices the rules with relevant medical workers and educational staff. -To prepare action plans in case of leakage of chemical substance. -To collect solid and liquid wastes with infectious or chemical substances separately, store them in sealed container or storage until handed over to authorized third parties for disposal or treatment. -To inspect the containers and storages regularly and to maintain them in good condition to prevent accidental leakage. -To conduct mitigation measures listed for water pollution and solid waste	Contractor & PIU	PIU – PWD / PMU
	Noise and vibration	Generation of noise because of increased traffic volume with ambulance, cars of visitors and	-To install low-noise type system, to inspect them regularly to maintain them in good condition.	Contractor & PIU - PWD	PIU – PWD / PMU

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
		project personnel, operation of boiler system and emergency generator are expected.	-To prepare concrete enclosure around the facilities that may generate noise and vibration as needed.		
	Offensive Odor	Inadequate management of waste, wastewater and sludge from wastewater treatment plant can be the source of odor.	Same as "solid waste"	-	-
Social Environment	Existing social infrastructures and service	It is expected that visitor's transportation would be conceivable impact on existing social infrastructures and services during operation phase.	-To separate the traffic route for visitor and non-visitor (staff and third parties) for smooth traffic management in and around the project site. Take same measures as construction phase if appropriate.	Contractor & PIU - PWD	PIU – PWD / PMU
	Landscape	It is expected that the project implementation would impact landscape of the project site.	-To maintain green zone in order to buffer the appearance of buildings that can be seen from boundaries of project site	Contractor & PIU - PWD	PIU – PWD / PMU
Health and Safety	Occupational Health and Safety	Various potential occupational risks are foreseen associated with medical treatment utilizing equipment such as physical injuries	-To formulate the safety manual for hospital operation, update it regularly and to enforce it to all relevant staff. To provide the safety training for all employees, to formulate the	Contractor & PIU - PWD	PIU – PWD / PMU

Field	Items	Identified Potential Negative Impact	Mitigation Measures	Implementing Organization	Responsible Organization
		with blades and needles, infectious accident, exposure to radiation are expected.	health and safety education plan and to implement it. -To provide annual health check for all employees. -To monitor occupational risk associated with medical activities such as radiation exposure level, solvent handling and worker's injuries and provide additional health check to prevent irreversible health damage of staff.		
Others	Trans boundary impacts including Climate Change	Conceivable major activities that emit GHGs during the operation phase are 1) Operation of wastewater treatment system, 2) increase of traffic caused by the project operation, 3) usage of diesel generator and 4) (if adopted) biogas production with solid waste.	-To introduce vehicles and machineries that would generate less GHGs, and to maintain them adequately.	Contractor & PIU - PWD	PIU – PWD / PMU

Annexure-C : Environmental Monitoring Plan for Category 8(a) and 8(b) facilities

Environmental Monitoring Plan (Construction Phase)

Category	Monitoring item	Monitoring site	Frequency
Air Pollution (Ambient air)	PM10, PM2s, SOx, NOx and CO	Near the project site	Monthly
Water Pollution	Water quality (BOD, COD, pH, oil & grease, total coliform, TSS, TN, TP, etc.)	Open well located at southern part of the project site	Monthly
	Maintenance situation of temporary drainage, temporary storm water reservoir, and septic tank	Construction Site	Monthly
Solid waste	Generation and treatment amount of construction and general waste	Construction Site	Monthly
	Status of waste management (if covered or stored properly etc.)	Construction Site	Monthly
Soil Contamination	Oil leakage (daily maintenance record of relevant machineries, record of oil leakage accidents etc.)	Construction Site	Monthly
Noise and Vibration	Noise level, Vibration level	Several points on boundary of the project site	More than monthly, when noise generating activities are conducted
Offensive Odor	Record of unusual smell	In and around construction site	When sensed
Ground subsidence/ Hydrology/ Water Usage	Groundwater level, ground level	Well and several point close to well	Monthly

Category	Monitoring item	Monitoring site	Frequency
Existing Social Infrastructures and Services	Number of traffic accident that involved construction related vehicles	Project Site and its surrounding area	Monthly
	Placement of traffic guard in the exit of the construction site	Construction Site	Monthly
Occupational Health and Safety	Implementation of safety training/ safety driving trainings for the construction workers	Project Site	Monthly
	Workers' accidents	Project Site	Monthly
	Safety situation in the construction site	Project Site	Everyday
Community Health and Safety	Implementation of training of public health and safety for the construction workers	Project Site	Monthly
Common	Complaints from neighbors	Project site and its surrounding	Monthly

Proposed Environmental Monitoring Plan (Operation Phase)

Category	Monitoring item	Monitoring site	Frequency
Common	Implementation of environmental mitigation plan	Project Site and its surroundings	Monthly
	Complaints from neighbors	Project Site and its surroundings	Monthly
Air Pollution	PM10, PM2s, SOx, NOx and CO	Near the project site	Monthly
(Stack Emissions from DG set)	PM, SOx, NOx, HC and CO	Outlet of stack	Once in a month (half year after construction,

Category	Monitoring item	Monitoring site	Frequency
			while generator is operated)
Water Pollution	Water quality (BOD, COD, pH, oil & grease, total coliform, TSS, TN, TP, etc.)	Open well located at southern part of the project site	Biannually (once in dry and rainy season)
	pH, BOD, TSS, COD, TN, TP, and total Coliform	Outlet of STP	Monthly
		Outlet of ETP	Monthly
Solid Waste	Amount of generated waste by each category	Project Site (waste storage)	Monthly
	Status of waste storage (if there is no leakage, contamination with other categories, etc.)	Project Site (waste storage)	Monthly
Soil Contamination	Oil leakage (daily maintenance record of relevant facilities, record of oil leakage accidents etc.)	Project Site	Monthly
	Leakage of chemical/hazardous liquids	Project Site	Monthly
Noise and Vibration	Implementation status of periodic check of noise generating facilities and the emergency power supply	Project Site	Monthly (while facilities are operated)
Offensive Odor	Record of unusual smell	In and around construction site	When sensed
Existing Social Infrastructures and Services	Traffic accident, status of traffic congestions	In and around Project Site	Monthly
Occupational Health and	Implementation of safety training/ safety driving	Project Site	Annual

Category	Monitoring item	Monitoring site	Frequency
Safety	trainings for the employees		
	Employees' radiation dose	Project Site	Monthly (Safety and Health Committee)
	Occupational accidents	Project Site	Monthly (Safety and Health Committee)
	Implementation status of employees health check	Project Site	Annual
	Safety condition of working environment	Project Site	Everyday

Annexure-D : Environmental Monitoring Form

The latest result of the monitoring items shall be submitted to the part of Quarterly Progress Report throughout the construction phase.

Date of record: / / (Day /Month/ Year)

Note:*) baseline values should be filled based on the result of site measurement for EIA study under SPCB or result of national monitoring program if applicable. If these are not available, baseline result can be left blank.

Construction Phase

1. Response/ Action to Comments and Instruction from Authorities and the Public

Comments or Instructions		Response/ Action which was taken by contractor
Authority (Government)		
Public (Residents)		

2. Pollution

Air quality

Parameter		Unit	Measured Value	NAAQ Standard Value	Baseline* (mean value during Dry season)	Location (Measured point, Source, Implant Recipients	Note (Frequency etc.)
Near Project Site	PM10	µg/m3		100			
	PM2.5	µg/m3		60			
	SO2	µg/m3		80			

Parameter		Unit	Measured Value	NAAQ Standard Value	Baseline* (mean value during Dry season)	Location (Measured point, Source, Implant Recipients	Note (Frequency etc.)
	NOx	µg/m3		80			
	CO	µg/m3		2			

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*) baseline values should be filled based on the result of site measurement for EIA study under SPCB or result of national monitoring program if applicable. If these are not available, baseline should be left blank.

Water Quality

Parameter		Unit	Measured Value	Tolerance limits for discharge of trade effluent into Inland Surface Water	Baseline * (During Dry season)	Location (Measured point, Source, Implant Recipients)	Note (Frequency etc.)
Open well located at southern part of the site	BOD	mg/L		30			
	COD	mg/L		250			
	pH	-		5.5 to 9.0			
	Oil and grease	mg/L		10			
	Total Coliform	MPN / 100 mL		-			
	TDS	mg/L		2100			
	TN	mg/L		100			
	TP	mg/L		-			

Waste (Generation of Waste)

Item	Unit	Volume	Period		Explanation of status (Example XXXXm3 Surplus soil has carried to the contractor's stock yard)	Note (Frequency, data source etc.)
Generated Construction waste	m3		From	To		
Treated Construction waste	m3					
Generated General waste	m3					
Treated General waste	m3					

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Waste (Status of waste management)

Item	Description / Photo of the disposal site	Observations (e.g. Distance from the residence, messy/ tidy)	Note (Frequency, data source etc.)
Status of the storage site			
Status of			

the disposal site			

Soil Contamination

Item	Description	Observations	Note (Frequency, responsible person etc.)
Maintenance record of relevant machineries	(List of machineries utilizing oil, frequency of maintenance, status of oil handling area)		
Record of oil leakage accidents	(date, time, source of leakage etc)		(measures to prevent accidents)

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Noise & Vibration (Several points on boundary of the project site, number of points can be modified)

Parameter	Unit	Measured Value	SPCB Permissible Limits		Baseline *	Location (Measured points, Source, Implant Recipients)	Note (Frequency etc)
			Residential area	Commercial area			
Noise 1	dB	(Leq)	55 (Daytime)	65 (Daytime)			
Noise 2	dB	(Leq)					
Noise 3	dB	(Leq)					

Noise 4	dB	(Leq)					
Parameter	Unit	Measured Value	Max. Acceptable Limit of ISO 2372 & VDI 2056 Group G				
Vibration 1	mm/s		1.81 to 4.5				
Vibration 2	mm/s						
Vibration 3	mm/s						
Vibration 4	mm/s						

Offensive Odor (Record of unusual smell)

Item	Description	Observations, cause of odor	Note
Record of unusual smell	(date, time, source of smell etc)		(measures to prevent generation of odor, responsible person)

Ground subsidence/ Hydrology/ Water Usage

Location	Groundwater level(m)	Observations (variation from last measurement)	Note (necessity of suspending pumping up ground water, operation plan)
Well 1			
Well 2			
	Ground level(m)	Observations (variation from last measurement)	
Point 1			
Point 2			

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*) baseline values should be filled based on the result of site measurement for ElA study

under SPCB or result of national monitoring program if applicable. If these are not available, baseline should be left blank.

2. Pollution

Existing Social Infrastructure and Service

Item	Location	Description	Measures to be taken	Note(Frequency etc)
Number of traffic accident that involved construction related vehicles				
Placement of traffic guard				
Complain from surrounding communities				

Occupational Health & Safety: Safety training

Item	Contents of training	Date of training, number of participants, reaction	Note
Record of training			

Worker's Accidents

Record of accident (date, place, number of involved people)	Causes of accident	Note (Preventive measures etc

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Record of site situation (related to occupational health) : Daily observations and record

Date	Description of site condition (case of nearly accidents etc)	Points to be improved (if there are any), responsible person

Common: Complaints from Neighbors

Description of Complaints	Date, time, duration of cause of complaints etc)	Note(Contact person etc.)

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Date of record: / / (Day / Month / Year)

Operation Phase

1. Response/ Action to Comments and Instruction from Authorities and the Public

Comments or Instructions		Response/ Action which was taken by project proponent
Authority (Government)		
Public (Residents)		

2. Pollution

Air quality

Parameter		Unit	Measured Value	NAAQ Ambient Standard Value	Baseline* (Dry season, mean value)	Location (Measured point, Source, Implant Recipients	Note (Frequency etc.)
Near Project Site	PM10	µg/m3		100			
	PM2.5	µg/m3		60			
	SO2	µg/m3		80			
	NOx	µg/m3		80			
	CO	µg/m3		2			

Water Quality (surface water)

Parameter		Unit	Measured Value	Tolerance limits for discharge of trade effluent into Inland Surface Water	Baseline * (During Dry season)	Location (Measured point, Source, Implant Recipients)	Note (Frequency etc.)
Open well located at	BOD	mg/L		30			
	COD	mg/L		250			
	pH	-		5.5 to 9.0			
	Oil and grease	mg/L		10			
	Total Coliform	MPN / 100 mL		-			

	TDS	mg/L		2100			
	TN	mg/L		100			
	TP	mg/L		-			

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Water quality (Effluent from Sewage/Effluent treatment plants)

Parameter		Unit	Measured value	SPCB Standards (Applicable to all mode of disposal for Mega and Metropolitan cities)	Observation/ record of operation	Note
Outlet of Sewage Treatment Plant (STP)	pH	-		5.5 to 9.0		
	BOD	Mg/I		10		
	TSS	Mg/I		20		
	COD	Mg/I		50		
	TN	Mg/I		10		
	TP	Mg/I		1.0		
	Fecal Coliform	MPN /100 mL		Desirable-100 Permissible -230		
Outlet of Effluent Treatment Plant (ETP)	pH	-		5.5 to 9.0		
	BOD	Mg/I		10		
	TSS	Mg/I		20		
	COD	Mg/I		50		
	TN	Mg/I		10		

	TP	Mg/I		1.0		
	Fecal Coliform	MPN /100 mL		Desirable-100 Permissible -230		

Waste (Generation of Waste by category)

Item	Volume	Unit *	Authorized third party to hand over / disposal method (in case of general wastes)	Note (Frequency, data source etc.)
Bio-Medical wastes		m3		
Hazardous wastes (chemical)		m3		
Radioactive material		m3		
Bio degradable wastes		m3		
General wastes		m3		

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*) baseline values should be filled based on the result of site measurement for EIA study under SPCB or result of national monitoring program if applicable. If these are not available, baseline should be left blank.

Waste (Sludge) Sludge from STP

Item	Unit	Volume	Period		Explanation of status (Example XXXX m3 sludge recycled as xxxxxx XXXX m3 Temporary stocked in the site.)	Note
Generated	m3		From	To		

Item	Unit	Volume	Period		Explanation of status (Example XXXX m3 sludge recycled as xxxxxx XXXX m3 Temporary stocked in the site.)	Note
sludge						
Recycled sludge volume	m3					
Surplus	m3					

Sludge from ETP

Item	Unit	Volume	Period		Explanation of status (Example XXXX m3 sludge recycled as xxxxxx XXXX m3 Temporary stocked in the site.)	Note
Generated sludge	m3		From	To		
Recycled sludge volume	m3					
Surplus	m3					

Waste (Status of waste management)

Item	Description / Photo of the disposal site	Observations	Additional Note
Status of the waste storage			
Status of segregation			

Soil Contamination (Record of Oil leakage)

Item	Description	Observations	Note (Responsible person etc.)
Maintenance record of relevant facilities	(name of facility, date, frequency, possible source of leakage etc if there were any)		
Record of oil leakage accidents	(date, time, source of leakage etc if there were any)		(measures to prevent accidents)
Leakage of chemical / hazardous liquids	(date, time, source of leakage etc if there were any)		(measures to prevent accidents)

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Noise and Vibration (Status of periodic check of Noise / Vibration generating facilities)

Item	Description (date, frequency, running condition)	Observations	Note (Responsible department/person etc.)
Maintenance record of air conditioning system			
Maintenance record of Diesel Generator sets			
Maintenance record of XXX (possible source of Noise / Vibration)			

Offensive Odor (Record of unusual smell)

Description (date, time, source of smell etc)	Observations, cause of odor	Note (measures to prevent generation of odor, responsible person)

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*) baseline values should be filled based on the result of site measurement for EIA study under SPCB or result of national monitoring program if applicable. If these are not available, baseline should be left blank.

3.Social

Existing Social Infrastructure and Service

Item	Location	Description (time, frequency etc)	Measures to be taken	Note
Number of traffic accident that involved project related vehicles				
Status of Traffic congestions caused by project related vehicles				
Complain from surrounding communities				

Occupational Health & Safety: Record of safety training

Date / Period	Contents of training	Number of participants, reaction	Note

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*) baseline values should be filled based on the result of site measurement for EIA study under SPCB or result of national monitoring program if applicable. If these are not available, baseline should be left blank.

Occupational Health & Safety: Record of accident

Date	Place (section / department)	Detailed description including causes of accident	Note (Preventive measures etc)

Occupational Health & Safety: Record Employee's health check

Department / Unit	Contents of health check	Coverage of Health check inside the Department / Unit	Note

Occupational health & Safety: Record of Employee's Radiation Dose (Limited to workers at relevant departments/Units)

Department/Unit	Name of Employee	Duration of Exposure to radiation	Type of Radiation and exposure	Exposure limit (National/International standards)	Cumulative / lifetime exposure	Note

Common: Complaints from Neighbors

Description of Complaints	Date, time, duration of cause of complaints etc.)	Note (Contact person etc.)

Description of Complaints	Date, time, duration of cause of complaints etc.)	Note (Contact person etc.)

End

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*) baseline values should be filled based on the result of site measurement for EIA study under SPCB or result of national monitoring program if applicable. If these are not available, baseline should be left blank.

8. LIST OF APPROVED MAKES / BRANDS

NOTE: -

1) A List of Preferred Brand Names of Various Materials / Products are shown below for usage in execution of Work. However, Approved equivalent material of any other Specialized Companies / Firms may also be used, in case it is established that the Brands Specified below are not available in the market or in other unavoidable circumstances and subject to Approval of the alternate Brand by the Engineer-In- charge. However, in case, the equivalent model so approved, is cheaper than the model already mentioned in item/approved makes list, the price adjustment will be made based on the difference in market rate. In case, the rate of subsequently approved model is more, no extra payment will be made on this account.

2) It must be ensured, in general, that all materials to be used in the works shall bear BIS Certification mark. In cases where for a particular material/product, BIS Certification Mark is not available, then the material proposed to be procured can be used subject to the condition that it should conform to CPWD Specifications and relevant BIS codes. In such cases written approval of the Engineer-in - Charge shall be obtained before use of such material in their works.

3) The list given below does not absolve the Executing Agency from their responsibility for using these products. It is only after, they are satisfied about the quality and performance, the products shall be used. To achieve this, proper check on the quality of the product, actually to be used, should be exercised.

4) The Competent Authority reserves the right to add or delete any materials and brands in the list of approved makes. However, in case, the equivalent model so approved, is cheaper than the model already mentioned in item/ approved makes list, the price adjustment will be made based on the Difference in market rate. In case, the rate of subsequently approved model is more, no extra payment will be made on this account.

Sl. No.	Material	Approved Makes/ Brands
CIVIL/ INTERIORWORKS		

Sl. No.	Material	Approved Makes/ Brands		
1	Cement (OPC/ PPC/ White Cement)	ACC	Ultratech	J.K Cement
		Lafarge	Ambuja Cement	Ramco Cement
		Valley Strong	Amrit Cem	Shree Cement
		Star	Birla Soft	and equivalent
2	A. Reinforcement Steel (TMT–Fe500/ Fe500D)	TATA	SAIL	RINL
		JSW	Shyam Steel	
3	Structural Steel/ M.S. Tube	TATA	RINL	SAIL
		BANSAL	NEZONE	UTKARSH
4	Anti-Termite Treatment	Tricel	Premis	or equivalent
5	Plasticizer, Super Plasticizer, Admixtures, Other construction chemicals	CICO	FOSROC	MYK Arment
		SIKA	Chocksy	Brighton
		Firstchoice Ready Mix	Saint Globle	Penetron
		Berger	Mapei	Asian paints
		and equivalent		
6	Roofing Sheet (PPGI Sheet / PPGL Sheet)	Tata Bluescope	JSW	Durokolor
		Spectrum	Dyna Roof	Stellar
		Dura Roof	Taj Roofing	Magnum roofing
		Prestar	Indo roof	Mega roof
		Colour max	and equivalent	
FINISHING PAINTS AND COATING				

Sl. No.	Material	Approved Makes/ Brands		
7	Paint	Asian paints	Berger	ICI
		J&N paint	Luxol	Nerolac
		Unicen	Duco paint	Brighton
		ARIA paint	Flixopaint	Dulux
		and equivalent		
8	Texture Paint	Spectrum	BULWARK CONCHEM	or equivalent
9	Epoxy Paint	Pidilite	Berger	FOSROC
		Sikka	Cico	Asian paints
		Nerolac	Shalimar	and equivalent
10	Wall Putty	Birla Wall Care	JK White	Asian Paints
		Berger	Dulux	Vinyl wall care
		Fosroc	Firstchoice Ready Mix	and equivalent
11	Polyster Powder Coating Paints	Nerolac	Berger	Akzonobel
		and equivalent		
12	Water Based Melamine Polish	Asian paints	Pidilite	ICIDulux
		Berger	and equivalent	
13	Fire Retradant Paint	Asian	Berger	Shalimar
		Viper FRS881	Nullifire	Brighton
		and equivalent		
14	Gypsum Plaster	Ferrous Crete	Elite(90)	Ultratech
		ArdexEndura	BULWARK CONCHEM	and equivalent

Sl. No.	Material	Approved Makes/ Brands		
FLOORINGS				
15	Floor/ Wall Tiles (Ceramic / Vitrified)	Somany	NITCO	Varmora
		Kajaria	AGL	Simonza
		Orient Bell	Johnson	Qutone
		Bonzer 7	Marbito	Oasis
		Sattvik Ceramik	Bajaj	NITCO
		VITERO by APARNA	RAK Ceramics	and equivalent
16	Parking Tiles	Johnson	NITCO	Marbito
		AGL	Somany	Varmora
		Sattvik Ceramik	RAK	and equivalent
17	Paver tiles	SUNROCK-Hi CTS	MULTIWYN	OMI's
		RAK	and equivalent	
18	Vinyl Flooring	Tarkett	Armstrong	Wonderfloor
		Gerfloor	and equivalent	
19	Anti bacterial Tiles	Johnson	Orient Bell	NITCO
		AGL	Somany	and equivalent
20	Tac tiles	Durotect	AGL	Johnson
		and equivalent		
21	Wooden floor tiles / Carpet flooring	Armstrong American exotics	Welspun	and equivalent
22	Bamboo wood floor	Epitome	Maisang	ESES

Sl. No.	Material	Approved Makes/ Brands		
	tiles	and equivalent		
23	Broadloom carpet tiles	WELSPUN	and equivalent	
24	Dash / Anchoring Fasteners	Hilti	Fisher	Bosch
		Anchor	and equivalent	
25	Floor hardener	Ironite	Fosroc	Brighton
		Firstchoice Ready Mix	Mapei	Hardonite
		and equivalent		
26	Composite Marble / Granite / Engineered Stone	Asian	Johnson	Kalinga
		and equivalent		
27	Heat Resistant Tiles	Swastik	Thermax	and equivalent
28	Facade Tiles	Clayton	Terreal	Hunter Douglus
		Faveton	and equivalent	
29	Venetian Blinds	Mac Décor	Vista	Hunter Douglas
30	Paver Block & Kerb Stone	NITCO	Unitile	Ultra
		KKManholes	Unistone	and equivalent
31	Clamp System For Dry Stone Cladding	Hilti	Fischer	Bosch
		and equivalent		
32	Heat Resistant Tiles	Swastik	Thermax	ArdexEndura
		and equivalent		
WATERPROOFING				
33	Integral Waterproofing Crystalline Admixture	Fosroc	Dr. Fixit	Penetron
		Pidilite	Asian paints	Brighton

Sl. No.	Material	Approved Makes/ Brands		
		Firstchoice Ready Mix	Berger	MYK Arment
		Mapei	and equivalent	
34	Polyurethane, Liquid Applied Waterproofing Membrane	Asian paints	BASF	SOPREMA
		MAPEI	Brighton	BULWARK CONCHEM
		MYK Arment	Berger	Penetron
		and equivalent		
35	Liquid Applied , Acrylic Elastomeric Membrane	MYK Arment	SIKA	FOSROC
		Chocksy	Dr. Fixit	BULWARK CONCHEM
		Brighton	Berger	Mapei
		Asian paints	and equivalent	
36	Waterproofing Self Adhesive (HDPE) Membrane	MYK Arment	STP	FOSROC
		Brighton	Berger	Mapei
		Asian paints	and equivalent	
37	SBS Membrane	MYK Arment	SIKA	FOSROC
		BULWARK CONCHEM	Berger	Brighton
		Mapei	Asian paints	and equivalent
38	PVC Water Stops	MYK Arment	Supreme	Oriplast
		Brighton	Mapei	and equivalent
EPOXY COATING FLOORING				
39	Polyurethane Concrete	Pidilite	MYK Arment	MAPEI

Sl. No.	Material	Approved Makes/ Brands		
	Flooring	Brighton	Berger	Asian paints
		and equivalent		
40	Food Grade Epoxy Coating	MAPEI	STP	MYK Arment
		BULWARK CONCHEM	Berger	Brighton
		Asian paints	and equivalent	
41	Anti Static Flooring	STP	FOSROC	MAPEI
		MYK Arment	Berger	Brighton
		Asian paints	and equivalent	
GROUTS/ CHEMICALS				
42	Grouting Admixture	FOSROC	ARDEXENDURA	MYK Arment
		SIKA	BULWARK CONCHEM	Berger
		Brighton	Firstchoice Ready Mix	Mapei
		Asian paints	and equivalent	
43	Zinc Panels	VM Zinc	Halcor	Leqsa
		Cinkarna	and equivalent	
44	Fibre Cement Panels	Equitone "Mineralis"	Swiss pearl	FibreC by Rieder
45	Rebarring Chemical	Hilti	3M India	and equivalent
46	Fire Sealant	Hilti	3M India	Fischer
		and equivalent		
47	Parallel Threaded	Dextra	Halfen	G-Tech

Sl. No.	Material	Approved Makes/ Brands		
	Couplers (CompliantoIS:16172: 2014)		Moment	
		and equivalent		
48	AAC Block	Superlite	Utralyte	Genex
		and equivalent		
49	Bricks	1st class clay bricks	Jhama Bricks	Solid 2 to 3 hole no 1 red bricks
50	Building Blocks	Plastic embedded light weight brick of Zerund Brand	Cellular Concrete Blocks	and equivalent
51	Poly sulphide Sealant	Fosroc	Wacker	BASF
		Brighton	Berger	Dow Corning
		Asian paints	and equivalent	
52	Adhesive for Wood Work	Dunlop	Fevicol	Vamicol
		Brighton	Pidilite	Araldite
		and equivalent		
WOODEN WORK				
53	Moisture Resistant Board	SaintGobin	Gyprox	USGBoral
		Anakon	and equivalent	
54	Veneered Particle Board	Duro	ActionTESA	and equivalent
55	Laminated Particle Board/ Laminates	Merino	Greenlam	Century
		Ventura	KPI	ActionTesa
		Virgo	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
56	MDF	ActionTesa	Greenply	Archidply
		Greenpanel	Ventura	KPI
		JainDoors	and equivalent	
57	PRE Laminate MDF	ActionTesa	Green ply	Archidply
		Greenpanel	Ventura	KPI
58	Metalic Laminates	Merino	Century	Metlam
		Ventura	and equivalent	
59	Flush door shutters	Duro	Greenply	KPI
		Century	Archidply	Merino
		JainDoors	and equivalent	
60	Plywood/ Veneer/Laminate	Fiden	Century	Austin ply
		Green ply	Archid ply	BWR
		Jain Doors	and equivalent	
61	Extruded Polysterene Board	STP	Supreme	Ownescorning
		Shalimar	and equivalent	
62	Glass Wool	Rockwool	UP Twiga	Lioyd Insulation
		and equivalent		
63	Glass Fibre Acoustical Ceiling Tile	Anutone	Decosonic	Armstrong
		Anakon	and equivalent	
64	Acoustic Wooden Perforated Slat	Anutone	Armstrong	Decosonic
		Anakon	and equivalent	
65	Acoustical Fabric	Anutone	Armstrong	Decosonic

Sl. No.	Material	Approved Makes/ Brands		
	(With Glasswood) Wall Panels	Anakon	and equivalent	
DOORHARDWARE'S/FITTING'S				
66	Hardware for Fire Check Door	Dorma	Becker Fire Solution	Dorset
		Bhawani Fire	and equivalent	
67	Stainless Steel	TATA	Jindal Alloys	SAIL
		and equivalent		
68	Stainless Steel Hardware	Dorma	Kich	Ozone
		Godrej	Dorset	and equivalent
69	UPVC Doors &Windows	Fenesta	Encraft	WINSTA-Koemmerling
		Futureview-AluPlast	Finesse-Prominance	Deceunik
		NCL VEKA	Duroplast	Okotech by APARNA
		and equivalent		
70	Door/WindowFittings	Godrej	Ozone	Doorset
		Dorma	and equivalent	
71	DoorCloser	Godrej	Ozone	Doorset
		Dorma	and equivalent	
72	DieCastPatchFittings	Dorma	Geze	Ozone
		Hettich	Hardwyn	and equivalent
73	Fire rated doors & its hardwares	Navair	Tata Parvez	Promat
		Shakti Hormann	Sukriti	Saint Gobain

Sl. No.	Material	Approved Makes/ Brands		
		JainDoors	Bhawani Fire	and equivalent
73	Floor Springs	Godrej	Ozone	Doorset
		Dorma	and equivalent	
74	SS Mortise lock with one dead bolt and pair of SS handles steel grade – SS304	Godrej	Ozone	Doorset
		Dorma	and equivalent	
75	GrabbarsandDisabled Hardware	Dorma	Ozone	D-line
		and equivalent		
76	SS Mortise latch & lock with six levers and pair off SS handle ssteel grade–SS304	Godrej	Ozone	Doorset
		Dorma	and equivalent	
77	SS Tower bolt	Godrej	Ozone	Doorset
		Dorma	and equivalent	
78	SS Butt hinges with ball bearing grade–SS304	Godrej	Ozone	Doorset
		Dorma	and equivalent	
79	MagicEye	Dorma	Godrej	Ingersoll Rand
		and equivalent		
80	Stainless Steel sliding door blots	Godrej	Ozone	Doorset
		Dorma	and equivalent	
81	Pull handle back to back of length 150mm of steel Grade- SS304	Godrej	Ozone	Doorset
		Dorma	and equivalent	
82	Aluminium level handles	Hardima	Godrej	Everite
		Classic	EBCO	and equivalent

Sl. No.	Material	Approved Makes/ Brands		
83	Anodised Aluminium Hardware (Heavy Duty)	Hardima	Godrej	Everite
		Classic	EBCO	and equivalent
84	Automation Systems for Windows	UCS	WindowMaster	Essmann
		Rivalu	Securistyle	and equivalent
85	Lever handle in SS 304 finish	Godrej	Ozone	Doorset
		Dorma	and equivalent	
86	Friction Stay Hinges	Dorma	LGSysmac	Dorset
		and equivalent		
87	Dash/ Anchoring Fasteners	Hilti	Fisher	Bosch
		Anchor	and equivalent	
88	Welding Electrodes	Advani	Oerlikon	Modi
		L&T	ICI	and equivalent
89	Expansion Joint– Modular	C.S	Herculus	Z-Tech
		Vexcolt	Fischer	Herrlich Alumin
		and equivalent		
90	Aluminium Bldg. Expansion Joint	Vexcolt	Z-TechIndia	C/S Expansion Joint
		and equivalent		
GLAZINGS/ FACADE				
91	Anodised Aluminum Hardware (Heavy Duty)	Hardima	Alualpha	LGFSysmac
		Everite	Godrej	Halco
		Bhagwati Sai	Herrlich Alumin	and equivalent

Sl. No.	Material	Approved Makes/ Brands		
92	Aluminum Structural Members–Windows, Glazing And Partitions	Jindal	Indalco	Hindalco
		Nalco	Bhoruka	Halco
		Bhagwati Sai	Herrlich Alumin	and equivalent
93	Aluminum Sheet roofing Top 0.9mm thick AA 3004 aluminium alloy and 2nd layer Bare Galvalume sheet, 0.5mmTCT	KalZip	Tata Blue Scope	Kingspan Jindal Pvt. Ltd.
		Virgo	and equivalent	
94	Pre-coated Galvanised Steel Sheet	Tata BlueScope	Dyna roof	Spectrum
		and equivalent		
95	Glazing Structural/ Suspanded/ Skylight	SaintGobain	Pilkington	Glaverbal
		Halco	Bhagwati Sai	Herrlich Alumin
		and equivalent		
96	Clear/ Float/ FrostedGlass/ Mirror	SaintGobain	AIS	Pilkington
		MODIGuard	Atul	Gold Plus
		and equivalent		
97	Fire-Rated Glass	Saint Gobin	Schott	Bhawani Fire
		and equivalent		
98	Glass Spider Fittings	Dorma	HAFALE	OZONE
		and equivalent		
99	Stainless Steel Railing, Accessories etc in	Dorma	D-line	Geze
		Ozone	Q-railing	Halco

Sl. No.	Material	Approved Makes/ Brands		
	Grade SS OR 316	Bhagwati Sai	and equivalent	
100	Firerate dvision Panels	Pilkington	SCHOTT	FERILITE
		Saint Gobain	Glaverbel	Bhawani Fire
		and equivalent		
101	G. I Steel door frame/Pressed Steel Door frame	Synergy Thrislington	Navair	Shakti
		TataParvez	and equivalent	
102	EPDM Gasket	Hanu	Anand	Osaka/ Alps
		Anand Reddiplex	EnviroSeals	and equivalent
103	Mirror Glass	Asahi India Safety Glass Ltd	ModiGuard	Saint Gobain
		Halco	Bhagwati Sai	Herrlich Alumin
		Gold Plus	and equivalent	
104	Aluminum Louvers	Lindner	Chicago Metals	Harsons Green
		Hunte Douglas	Faveton	Wonder Alu Board
		Bhagwati Sai	Timexbond	Herrlich Alumin
		and equivalent		
105	Aluminium composite Panels	Aludecor	Alstrong	Durabuild
		Wonder Alu Board	Virgo	Timexbond
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
106	Friction Stay Hinges	Dorma	LG Sysmac	Dorset
		and equivalent		
107	Ceramic panel Cladding	Hunter Douglas	Neolith	Terreal
		Anakon	and equivalent	
108	Pre-Cast GRC Jali	Unistone	Dalal Tiles Industries	Ecovision
		and equivalent		
FALSECEILING				
109	False Ceiling–Gypsum	SaintGobain	USGBoral	Lindner
		IndiaGypsum	Lafarge	Anakon
		and equivalent		
110	False Ceiling–Mineral fibre ceiling	Armstrong	AMF	USGBoral
		SaintGobain	HunterDouglas	Anakon
		and equivalent		
111	False Ceiling–Calcium Silicate Boards/ Tiles/ Cement Fiber Board & Designer	Aerolite	Hilux	Saint Gobain (Gyproc)
		Anakon	Everest	and equivalent
112	False Ceiling–Metal	Amstrong	HunterDouglus	USG Boral
		Anakon	and equivalent	
113	Gyp Board	SaintGobain	USGBoral	Lindner
		BoralGypsum	Lafarge	IndiaGypsum
		Anakon	and equivalent	
114	False Ceiling–	Armstrong	Durlum	HunterDouglas

Sl. No.	Material	Approved Makes/ Brands		
	Aluminium	Anakon	and equivalent	
115	Curtain Rod/ Drapery Rod	Vistawork	MacDécor	HunterDouglas
		Anakon	and equivalent	
116	Fabric Blinds	HunterDouglas	Mac	Vista
		Anakon	and equivalent	
117	Rolling Shutter	Rama	Prakash	Dura Ultima
		and equivalent		
118	Tensile Fabric	Mehler	Verseidag	Heytex
		and equivalent		
119	Polycarbonate Sheet	Palram	Gallina	Danpalon
		DPIDaylighting	and equivalent	
120	Modular Furniture	Godrej	Durian	Wipro
		Featherlite	SOS	and equivalent
PLUMBING WORKS				
SANITARY FIXTURES & CP BRASS FITTINGS				
121	Sanitary Fixtures	Cera	Hindware	Parryware
		Jaquar	Kerovit by Kajaria	Midas
		Kingston	and equivalent	
122	CP Brass Fittings & Accessories	Jaquar	Roca	Kohler
		Kingston	RAK	and equivalent
123	PVC Water Stops	BASF	Supreme	Oriplast

Sl. No.	Material	Approved Makes/ Brands		
		and equivalent		
124	Kitchen Sinks	Neelkanth	Jayna	Hindware
		Nirali	Kingston	RAK
		and equivalent		
125	Water Cooler	BlueStar	Usha	Voltas
		EurekaForbes	and equivalent	
126	Electric Storage Type Geyser	Venus	AOSmith	Racold
		Havells	and equivalent	
127	Hand Drier	Euronics	Jaquar	Utec
		and equivalent		
128	RO Purifier Units	Kent	ION Exchange	Eureka Forbes
		Blue Star	and equivalent	
SOIL,WASTE,VENT&RAINWATERPIPES				
129	Hubless Centrifugally cast (spun) Iron pipes & Fittings SS304 grade coupling with EPDM rubber gasket	Neco	Kapilansh	Hepco
		SKF	RPMF	BIC
		and equivalent		
130	GI Pipes	JindalHissar	PrakashSurya	Tata
		and equivalent		
131	GI Pipe Fittings	ZolotoM	DRP	New
		Unik	and equivalent	
132	GI clamps with EPD Mrubber	Intellotech	Indotech	Hilti
		CAMRY	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
133	Brass Clean Out Plugs	Neer	Vijay	GMGR
		and equivalent		
134	Stainless Steel Gratings	Chilly	Camry	Kamal
		and equivalent		
135	uPVC Pipes &Fittings	Ashirvad	Finolex	Astral
		AKG	Prince	and equivalent
WATERSUPPLYSYSTEM				
136	CPVC Pipes&Fittings	Ashirvad	Finolex	Astral
		AKG	Supreme	Prince
		and equivalent		
137	GI Pipes	JindalHissar	PrakashSurya	Tata
138	GIPipeFittings	ZolotoM	DRP	New
		Unik	and equivalent	
139	Water Meter	Kranti	Toshaniwal	Capstan
		Anand	and equivalent	
140	DI Pipes & Fittings	Electrosteel	Kesoram	Tisco
		and equivalent		
141	Forged Brass Ball Valves	Giacomini	Zoloto	Sant
		DRP	New	and equivalent
142	CI Butterfly Valves	Zolato	Audco	Sant
		DRP	and equivalent	
143	Pipe Insulation	Armaflex	K-Flex	Thermaflex

Sl. No.	Material	Approved Makes/ Brands		
		Kaiflex	and equivalent	
144	Motorised Valves	Zoloto	Sant	AIP
		and equivalent		
145	Single Acting Air Release Valve	Giacomini	Zoloto	Sant
		DRP	and equivalent	
146	Central RO Plant	Ion Exchange	Thermax	Pentair
		EurekaForbes	and equivalent	
147	Polyethylene StorageTank	Sintex	Supreme	Sheetal
		Prince	and equivalent	
HOTWATERSYSTEM(HEATPUMP)				
148	Heat Pumps	AOSmith	Cristopia	Bluebox
		Climaveneta	Klima	and equivalent
149	Hot Water Recirculation & Return Pumps	Willo	Grundfoss	KSB
		Xyllum	and equivalent	
SEWERAGE & DRAINAGE SYSTEM				
150	HDPE Double Wall Corrugated (DWC)	Finolex	Astral	Ashrivad
		Supreme	and equivalent	
151	SFRC Manhole Cover &Frame	KKManholes	SKPrecastConcrete	Advent Concreteovision
		RPMF	and equivalent	
152	Foot Rests	KJM	Deesawala	Surya
		Sinecos	and equivalent	
153	Grease Seperator	ACO	Kessel	Klaro

Sl. No.	Material	Approved Makes/ Brands		
		and equivalent		
154	RCC Pipes	Jain Spun Pipes	KK Concrete Products	Usha Spun Pipes
		Indian Hume Pipe	Pragati	Daya
		Dewan Spun	ConcreteUdyog	and equivalent
WATERSUPPLY, BOREWELL, DRAINAGE PUMPS & WATER TREATMENT EQUIPMENTS				
155	WaterSupplyPumps	Willo/	Grundfoss	KSB
		Xyllum	and equivalent	
156	DrainagePumps	Willo	Grundfoss	KSB
		Xyllum	and equivalent	
157	BorewellPumps	Willo	Grundfoss	KSB
		CromptonGreaves	and equivalent	
158	Hydropneumatic System	Willo	Grundfoss	KSB
		Xyllum	and equivalent	
159	Water Filters	Ion Exchange	Thermax	Pentair
		and equivalent		
160	Water Softeners	Ion Exchange	Thermax	Pentair
		and equivalent		
161	Chemical Dosers (Cholorinators)	AsiaLMI	Toshcon	Chloromax
		and equivalent		
162	Electrical Panels	As per Electrical Make List		

Sl. No.	Material	Approved Makes/ Brands		
163	GI Pipes	JindalHissar	PrakashSurya	Tata
		and equivalent		
164	GI Fittings	ZolotoM	DRP	New
		Unik	and equivalent	
165	CIButterflyValves	Zolato	Audco	Sant
		DRP	and equivalent	
166	CIDualPlateCheckValves	Zolato	Audco	Sant
		DRP	and equivalent	
167	CIStrainers	Zolato	Audco	Sant
		DRP	and equivalent	
168	VibrationEleminators/ Rubber Bellow	Resistoflex	D'wren	Kanwal
		and equivalent		
169	Electric Wires &Cables	As per list of Electrical make		
SEWAGE TREATMENT PLANT				
170	AirBlowers	Beta	Everest	Kulkarni
		TMVT	and equivalent	
171	Air Diffussion System	Airfin	UshaRuba	Rehau
		and equivalent		
172	Air Vent Valve	Oventrop(Germany)	CIM	RapidControl
		and equivalent		
173	Bar Screen	KSP	AWMS	PAMM
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
174	Centrifuge	Apollo	United	B.AEngineering
		and equivalent		
175	Chemical Cleaning Pump	WILO	Grundfos	Xylem
		KSB	and equivalent	
176	Chemical Cleaning tank	Polycon	Sintex	Vectus
		Supreme	and equivalent	
177	Electrical Panel	As per list of Electrical make		
178	Flow Meter(Digital)	Aster(Totalized)	VATS	Scientific
		and equivalent		
179	Flow Rota Meter for Suction Pump	UKL	Aster	Scientific
		and equivalent		
180	Foot Valve	Sant	Zoloto	Advance
		DRP	and equivalent	
181	G.I. fittings (malleable cast iron)	Unik	Zoloto	New
		DRP	and equivalent	
182	Level Controller	Aster	Cirrus Engineering	Rockwell Automation
		and equivalent		
183	Level Indicator	Aster	Cirrus Engineering	Rockwell Automation
		and equivalent		
184	Level Switch	Aster	Cirrus Engineering	Rockwell Automation
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
185	MBRModule	G.E	Siemens	Mitsubishi
		and equivalent		
186	MBR Permeate Suction Pump	WILO	Grundfos	Xylem
		KSB	and equivalent	
187	Media	Cooldeck	UshaRuba	MMAqua
		Pharmatech	and equivalent	
188	Multiport Valve	Pharer(U.S.A)	ORG	Astar
		and equivalent		
189	PH Meter	VATS	Hanna	Aster
		digital	and equivalent	
190	PLC/HMI	Schneider	Allenbradley	Mitsubishi
		and equivalent		
191	Semi Auto Fine Screen	Toro	KSP	AWMS
		PAMM	and equivalent	
192	UV Systems	AlphaUV	CreativeUV	Pentair
		EurekaForbes	and equivalent	
193	VFD	Danfoss	AllenBredly	Siemens
		ABB	and equivalent	
194	STP Vendors	BSEnviro	Degrimont	Thermax
		UEM	DOSHION	and equivalent
FIREFIGHTINGSYSTEM				
195	Gas Based Fire	Honeywell	Fike	Nohmi

Sl. No.	Material	Approved Makes/ Brands		
	Suppression System	Firetrax	and equivalent	
196	Delugevalve/Solenoid valve/ Spray nozzle/ Installation Control Valve	Victaulic	SmithCopper	Anvil
		and equivalent		
197	Fire Pumps	Mather&Platt (WILO)	Grundfos	Kirloskar
		KSB	and equivalent	
198	Fire Buckets	Safegaurd	Lifegaurd	Swastik
		Minimax	and equivalent	
199	Fire Extinguishers	Safegaurd	Lifegaurd	Swastik
		Minimax	EEC	and equivalent
200	Fire Hydrant Valves/ Fire RRL Hose Pipes / Fire Hose Reels/FireMan'sAxe/short branch pipe/ 2/ 3/4 FB inlet/ draw Out connection/Hose Box/ Hose reel drum /Nozzle/ blank Caps& Chains / Coupling	Minimax	Safex	Newage (Surendranagar)
		EEC	and equivalent	
201	Flow switch	Potter	Rapidflow	Danfoss
		Viking	Honeywell	and equivalent
202	Pipecoatmaterial (pipeprotection)	Pypcoat	Makphalt	and equivalent
203	Pipe Hangers/ Clamps/Supports	Chilly	GMGR	CAMRY
		Hilti	and equivalent	
204	Mild Steel Pipes	JindalHissar	PrakashSurya	Tata

Sl. No.	Material	Approved Makes/ Brands		
		SAIL	and equivalent	
205	Weld Electrodes	Advani	ESAB	L&T
		Victor	and equivalent	
206	Pressure Gauge	Fiebig	H.GURU	HD
		BRC	and equivalent	
207	PushButtons/ Indicating lamps LED	As per list of Electrical make		
208	Single Phase Preventer	As per list of Electrical make		
209	Solenoidvalve/ Spraynozzle	HD	Tyco	Danfoss
		Honeywell	and equivalent	
210	Sprinkler Heads (Sidewall/ Upright/ Pendant)	Grinnel-Tyco	Viking	HD
		and equivalent		
211	Sprinkler Flexible Drops	Victaulic	SmithCopper	Anvil
		and equivalent		
212	MS Forged Fittings	New	DRP	VS
		SS	and equivalent	
213	Popup Connecting Assembly	RainBird	Dura	Lasco
		and equivalent		
214	Popup Spray Head	RainBird	Toro,USA	Nelson,
		and equivalent		
215	Powder Coating Material pure Polyester	Jotun	Berger	GoodlassNerolac
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
216	RQRCHydrant	Harvel	Alprene	RainBird,USA
		and equivalent		
217	RQRCKey	Harvel	Aqua	Drip&Drip
		and equivalent		
218	CI Butterfly Valves/ Sluice Valves	Zolato	Audco	Sant
		DRP	and equivalent	
219	CI Dual Plate Check Valves	Zolato	Audco	Sant
		DRP	and equivalent	
220	CI Strainers	Zolato	Audco	Sant
		DRP	and equivalent	
221	Vibration Eliminators/ Rubber Bellow	Resistoflex	D'wren	Kanwal
		and equivalent		
222	Electric Wires & Cables	As per list of Electrical make		
ELECTRICALWORKS				
223	AIR CIRCUIT BREAKER (MODEL SHALL BE AS PER TENDER SPECIFICATION & BOQ)	SCHNEIDER(MVS)	L&T(UPower)	ABB(E-Max)
		SIEMENS(3WL)	Hager	Mitsubishi Electric (AE-SW)
		and equivalent		
224	MCCBS BREAKER (MODELSHALLBE AS PER TENDER SPECIFICATION & BOQ)	SCHNEIDER(CVS)	L&T(D-Sine)	ABB (T-Max)
		SIEMENS(3VA)	Mitsubishi Electric (AE-	and equivalent

Sl. No.	Material	Approved Makes/ Brands		
			SW)	
225	SFU/FSU/HRC/ HBC FUSES & BASES	L&T	SIEMENS	SCHNEIDER
		ABB	and equivalent	
226	MCB/ ELCB/ RCCB/ RCBOS /DISTRIBUTION BOARDS(DOUBLE DOOR IP43 DBs)	LEGRAND	HAGER	SIEMENS
		SCHNEIDER	ABB	L&T
		and equivalent		
227	AUTOMATIC TRANSFER SWITCH/ CHANGE OVER SWITCH(OFFLOAD/ ON LOAD)	HAVELLS	SOCOMEC	ASCO
		L&T	ABB	HAGGER
		and equivalent		
228	METAL CLAD SHEET STEEL ENCLOUSER SOCKET/ PLUG BOX	L&T	SCHNEIDER	SIEMENS
		ABB	LEGRAND	BS
		and equivalent		
229	LOADBREAK SWITCHES	L&T	SIEMENS	SCHNEIDER
		and equivalent		
230	FRLS/ XLPE INSULATED COPPERWIRES/ CABLES (ARMOURED OR OTHERWISE)	POLYCAB	FINOLEX	HAVELLS
		RR KABAL	KEI	BONTON
		and equivalent		
231	MODULAR PLATE SWITCHES AND SOCKETS	LEGRAND	SCHNEIDER	MK
		WIPRO (Northwest)	HAVELLS	and equivalent
232	TRIVECTORMETER/ AMP METER/ VOLTMETER/	NEPTUNE	SECURE	CONZERV
		SCHNEIDER	SOCOMEC	TRINITY

Sl. No.	Material	Approved Makes/ Brands		
	ENERGY METER/ MFM	and equivalent		
233	FAÇADE&EXTERNAL LIGHTING	HAVELLS	BAJAJ	TRILUX
		PHILIPS	LT	
234	TELE COMMUNICATION/ TV CABLE	FINOLEX	POLYCAB	HAVELLS
		and equivalent		
235	MAIN LT PANEL/ APFC PANELS (TTAIS:8623-1)	CONQUERENT - ABB	L&T	Excel Electric Co (Mak Engineers)
		CROMPTO N	SCHNEIDER	SIEMENS
		and equivalent		
236	BUSBAR	JINDAL	HINDALCO	CENTURY
		and equivalent		
237	PVC CONDUIT/ FLEXIBLE CONDUIT & ACCESSORIES (ISI MARKED)	BEC	AKG	POLYCAB
		CAP	WELKM	and equivalent
238	STEEL CONDUIT/ FLEXIBLE & ACCESSORIES (ERW) (ISI MARKED)	RMCON	BEC	NIC
		MKAY	and equivalent	
239	LT PANEL/ PCC/ MCC/ MCBS/ DG SYNCHRONIZING PANELS/ PANELS/ CONTROL PANELS/ FEEDER PILLARS/ SERVICEPILLAR/H. T. PANEL	ABB	L&T	SIEMENS
		CROMPTO N	CONQUERENT	RYBNE
		KRATOS	LOTUS CONTROL	TRICOLITE
		SPC Electrotech	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
		Pvt. Ltd.		
		1)PANELMANUFACTURURMAKEAPPROVALS HALLBE TAKENBYUNITINCHARGEBEFOREORDERTHE PANEL.		
		2) FABRICATIONFACILITYUPTOIP54/55.		
		3) 9TANKPRETREATMENTFACILITIESFORSHEET.		
		4)EQUIPPEDWITHLATESTCNCBENDING,POWDER COATING, BUSBARBENDING&PUNCHINGMACHINE,AND COMPRESSOR ETC.		
240	CONVENTIONAL BUSTRUNKING & RISING MAINS	SAME MAKE AS THAT OF THE LT PANELS		
241	SANDWITCH BUSDUCT (FCLASS)	SCHNEIDER	L&T	C&S
		EAE	GODREJ	SPC Electrotech Pvt. Ltd.
		and equivalent		
242	BAKELITESHEET	HYLAM	FORMICA	GREENLAM
		and equivalent		
243	VOLTAGE TRANSFORMERS	SIEMENS	GE/AREVA	KIRLOSKAR
		ABB	and equivalent	
244	HTPANEL	SIEMENS	L&T	ABB
		SCHNEIDER	SPC Electrotech Pvt. Ltd.	and equivalent
245	CEILING FAN/	CROMPTON	BAJAJ	USHA

Sl. No.	Material	Approved Makes/ Brands		
	EXHAUSTFAN	HAVELS	ORIENT	and equivalent
246	TAGBLOCK	KRONE	ERICSON	TVAR&M
		and equivalent		
247	TRANSFORMERS	ARIVA	PVJ	CROMPTON
		KIRLOSKAR	TECHNOVEL	POWER STAR
		and equivalent		
248	AUTOMATION POWER FACTOR CONTROL RELAY	L&T	SIEMENS	SCHNEIDER
		ABB	and equivalent	
249	CAPACITORS &REACTORS	L&T	SIEMENS	SCHNEIDER
		ABB	and equivalent	
250	CABLE GLANDS (DOUBLE COMPRESSION WITHEARTHING LINKS)	DOWELLS	COMET	GRIPWELL
		and equivalent		
251	BI-METALLIC CABLESLUGS/PVC GLANDS	DOWELLS	ACTION	JAINSONS
		KABEL	and equivalent	
252	CABLE JOINTINGKITS	RAYCHEM	JAINSONS	3M
		DENSONS	and equivalent	
253	G.I CABLE TRAYS FACTORY FABRICATED) / RACEWAYS	NPES	KAMBOJ ELECTRO CONTROL	ADITYASTEEL
		SLOTCO	LEGRAND	SPC Electrotech Pvt. Ltd.
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
254	BATTERY (SEALED MAINTENANCE FREE)	AMCO	EXIDE	AMARARAJA
		LUMINUS	and equivalent	
255	BATTERYCHARGER	AMARARAJA	STATCON	CROMPTON GREAVES
		and equivalent		
256	DG SET	POWER CONTROL SYSTEM & SWITCHGEAR VIDYUT ENTERPRISES	CUMMINS	MAHINDRA
		CATERPILLAR	PERKINS	JAKSON
		MITSUBISHI	KIRLOSKAR	and equivalent
257	DGSETALTERNATOR	STAMFORD	LERROY SOMMER	CROMPTON
		and equivalent		
258	CONTROLGEAR (CONTRACTORS ETC.)	L&T	SIEMENS	SCHNEIDER
		ABB	C&S	and equivalent
259	PROTECTIONRELAYS MICROPROCESSER BASED	AREVA	L&T	ABB
		SIEMENS	SCHNEIDER	and equivalent
260	EARTHLEAKAGE RELAY	L&T	PIC	MINILEC
		EATON	and equivalent	
261	SINGLEPHASING DEVICE	L&T	SIEMENS	MINILEC
		and equivalent		
262	PUSH BUTTONS	L&T	SIEMENS	SCHNEIDER

Sl. No.	Material	Approved Makes/ Brands		
		ABB	and equivalent	
263	TIME RELAY DEVICE	L&T	SIEMENS	SCHNEIDER
		ABB	and equivalent	
264	SELECTORSWITCHES &ROTARYSWITCHES	L&T	SIEMENS	SCHNEIDER
		ABB	and equivalent	
265	INDICATINGLIGHTS	L&T	SIEMENS	SCHNEIDER
		ABB	and equivalent	
266	TERMINALS	ELMEX	ESSEN	DEINKI
		WAGO	and equivalent	
267	MS SWAGED TUBLAR POLE STREETLIGHT POLES	PHILLIPS	ORIENTS	KESELEC
		BAJAJ	SKIPPER	and equivalent
268	TELEPHONEOUTLETS	AS PER SWITCH/SOCKET MAKE		
269	MOTORS	ABB	CROMPTON	SIEMENS
		KIRLOSKAR	and equivalent	
270	IPBAX &TELEPHONE SYSTEM	SIEMENS	ERICSSON	MITEL
		ALCATELLUCENT	and equivalent	
271	MULTI-METER & MEGGARS	ESCROP	MOTWANI	and equivalent
272	PROGRAMMABLE LOGICCONTROLLER	SIEMENS	WOODWARD	ALLEN BRADLEY
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
273	SMART SURGEON CONTROLPANEL/OT'S PANEL	AS PER SPECIFICATIONS		
274	EARTHING/LIGHTNING PROTECTION UNIT	ARICO	LPI	JMV
		ABB	and equivalent	
275	UPS	SCHNEIDER	EMERSON	TATALIBERT
		NUMERIC	GEPOWER	3EM
		ORION	RELIO	ELNOVA
		APC	and equivalent	
276	FIRE ALARM SYSTEM (All COMPONENTS SHALL BE UTILISTED & CONFIRM TO NFPASTANDARD)	HONEYWELL NOTIFIER	NOHMI	ADVANCED
		ASES Security	and equivalent	
277	PA SYSTEM	HONEYWELL	BOSE	NOHMI
		NOTIFIER	and equivalent	
		TANOY	FUNKTION	JBL
		ASES Security	and equivalent	
278	PUMPS	WILLO	KIRLOSKAR	KSB
		XYLLUM	CG	and equivalent
279	AVIATION OBSTRUCTIONLIGHT	WIPRO	PHILLIPS	CROMPTON
		BAJAJ	INSTAPOWER	and equivalent
280	HIGH MAST	PHILLIPS	BAJAJ	CROMPTON

Sl. No.	Material	Approved Makes/ Brands		
	LIGHTINGSYSTEM	INSTAPOWER	TRANSRAIL	and equivalent
281	LTSERVOAUTOMATIC VOLTAGE STABILIZER	AE	LOGICSTAT	LD POWER TRANSFORMER S (PVT.)LTD.
		and equivalent		
282	D.G.SET ACCOUSTIC ENCLOSURE	AS PER D.G. APPROVED BY OEM		
283	M.S.PIPE	TATA	JINDAL	SAIL
		PRAKSHSURYA	HISSAR	and equivalent
284	BUTTERFLY / BALANCINGVALVE	ZOLOTO	AUDCO	SANT
		DRP	and equivalent	
285	COOLING TOWER	BELL	PAHARPUR	DELTA
		and equivalent		
286	POTSTRAINER/ Y STRAINER	ZOLOTO	EMERALD	SANT
		DRP	and equivalent	
287	CCTV CAMERA/ DVR / NVR	HONEYWELL	SONY	BOSCH
		HIKVISION	SAMSUNG	PANASONIC
		SIEMENS	JONSON	PELCO
		and equivalent		
288	ACCESSCONTROL	BOSCH	TYCO	HONEYWELL
		and equivalent		
289	CAT6A	CISCO	D-LINK	NETGEAR

Sl. No.	Material	Approved Makes/ Brands		
		and equivalent		
290	MINERAL INSULATED COPPER CABLE FOR PA AND FDA	DRAKA	PYROTENAX	RSCC
		and equivalent		
291	FIRE SUPPRESSION SYSTEM	HONEYWELL	FIKE	NOHMI
		and equivalent		
292	RESIDENTIAL SILENCER	NELSON	CUMMINS	PKENGINEERING
		and equivalent		
293	TEMPERATURE GAUGES	H GURU	FEIBIG	WIKA
		BELL	and equivalent	
294	VIBRATOR ELIMINATOR	KANWAL	RESISTROFLE X	D'WREN
		and equivalent		
295	INSULATION	UP TWIGA	KIMCO	LLYOD
		and equivalent		
296	WELDELECTRODES	ADVANI	ESAB	L&T
		VICTOR	and equivalent	
297	BOOMBARRIER	FAAC	GODREJ	SOMFY
		and equivalent		
298	DWCHDPE PIPE	FINOLEX	ASTRAL	ASHIRVAD
		SUPREME	and equivalent	
298	INVERTER	MICROTEK	LUMINOUS	SU-KAM
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
299	NURSECALLSYSTEM	SCHRACK SECONET	HONEYWELL	RAULAND-BORG
		PIECO	and equivalent	
300	SEMI ROTARY TYPE HAND FUEL FILLING PUMP	ROTODEL	KITTY	GROZ
		and equivalent		
301	SOLARPVMODULE	ADANI	VIKRAM	TATA
		and equivalent		
302	SOLARINVERTER	DELTA KOTAK	NEOWATT	SCHNEIDER
		URJA	and equivalent	
303	DCCABLE	POLYCAB	HAVELLS	FINOLEX
		and equivalent		
304	MC4CONNECTOR	SYNERGY	SETLLAR	SCHNEIDER
		and equivalent		
305	Fire fighting & electrical Control Panels, Tube bases gas fire suppression system, Fire door	ASES Security	and equivalent	
306	Insulated copper wire & cables, PVC Conduit, Flexible Conduit, Steel Conduit, GI Cable tray, PVC insulated single core Unsheathed Industrial cable	Finolex	RR kabel	KEI
		LEGRAND	POLYCAB	Bonton
		and equivalent		
HSDWORKS				

Sl. No.	Material	Approved Makes/ Brands		
307	BUTTERFLY/ CHECKVALVES	ZOLOTO	AUDCO	SANT
		DRP	and equivalent	
308	BALLVALVE	GIACOMINI	ZOLOTO	SANT
		DRP	NEW	and equivalent
309	LEVELCONTROLS	LEVCON	MINILEC	FEMACK
		and equivalent		
310	FUEL OIL PUMP/ OILFLOWMETER	REACTOR	KESHCO	TUSHACO
		KENT	and equivalent	
311	ALLPOWER AMPLIFIERS	BOSE	POWERSOFT	ELECTROVOICE
		BOSCH	and equivalent	
312	ALLLOUDSPEAKERS, LINE ARRAYS AND SUBWOOFERS IN CLASS ROOMS AND	BOSE	MARTIN AUDIO	D&B AUDIOTECHNIC
		BOSCH	ELECTO VOICE	and equivalent
313	CEILING SPEAKER (AUDIO/ VIDEO)	BOSE	MARTIN AUDIO	D&B AUDIOTECHNIC
		BOSCH	ELECTO VOICE	and equivalent
314	STAGE LIGHTING	CANARA LIGHTING	MARTIN LIGHTS	ROBE
		and equivalent		
315	NETWORK SWITCH	CISCO	D-LINK	NETGEAR
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
316	ALL SWITCHING & CONTORLS, RECEIVERS, TRANSMITTERS, SCALER EXTENDER	KRAMER	CRESTRON	EXTRON
		and equivalent		
317	PROJECTOR	BARCO	CHRISTIE	DIGITAL PROJECTION
		and equivalent		
318	ELEVATORS	KONE	OTIS	MITSUBISHI
		SCHINDLER	JONHSON	ECE
		and equivalent		
319	LIGHTFIXTURES(LED)	LEGERO	INSTAPOWER	PHILIPS
		TRILUX	NEXTRAY	CROMPTON
		LT	and equivalent	
320	MOTORIIZEDSCREEN IN CLASS ROOMS	DALITE	DRAPER	SUVIRA
	AND AUDITORIUMS	and equivalent		
321	FLAT PANAL DISPLAY	CHRISTIE	NEC	PLANAR
		and equivalent		
322	DOCUMENT CAMERA	ELMO	LUMENS	WOLFVISION
		and equivalent		
323	HIGH DEFINITION VIDEO CONFERENCING	CISCO	POLYCOM	SONY
		and equivalent		
324	CAMERA	LUMENS	POLYCOM	SONY

Sl. No.	Material	Approved Makes/ Brands		
	SECONDARY	and equivalent		
325	MULTI FORMAT PRESENTATION SWITCHER WITH CONTROL PROCESSOR IN CLASS ROOMS AND AUDITORIUMS	AMX	CRESTRON	EXTRON
		BOSCH	and equivalent	
326	WIRELESSTOUCH PANEL WITH ACCESSORIES IN CLASS ROOMS AND AUDITORIUMS	AMX	CRESTRON	EXTRON
		BOSCH	and equivalent	
327	CONFERENCE SYSTEM IN CLASS ROOMS AND AUDITORIUMS	BOSCH	BRAHLER	SCHINDLER
		and equivalent		
328	DELEGATEAND CHAIRMAN MICROPHONES	BEYERDYAN MIC	BRAHLER	BOSCH
		and equivalent		
329	HANDHELD AND LAPEL MICROPHONES	BEYERDYAN MIC	BRAHLER	BOSCH
		and equivalent		
330	DIGITALSIGNAL PROCESSOR	BOSCH	BRAHLER	SENNHEISER
		and equivalent		
331	VGAWITHAUDIO PATCH CABLE	KREMER	CRESTRON	EXTRON
		and equivalent		
332	DIGITALVIDEO CABLE NON-PLENUM	KREMER	CRESTRON	EXTRON
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
333	CONTROLCABLE	BELDEN	CRESTRON	EXTRON
		and equivalent		
334	MICROPHONECABLE	KRYSTAL	CRESTRON	EXTRON
		BELDEN	and equivalent	
335	AUDIOAND STEREO CONTROL CABLE	BELDEN	CRESTRON	EXTRON
		KRYSTAL	and equivalent	
336	SHIELEDCHIELDED CAT6A/FIBRE CABLE	CISCO	D-LINK	NETGEAR
		and equivalent		
337	BULKCONNECTORS	NEUTRIK	SWITCHCRAF T	AMPHENOL
		and equivalent		
338	EQUIPMENTRACH	CHIEF	MIDDLE ATLANTICA	VALRACK
		and equivalent		
339	LIGHTING CONTROLLER/ MANAGEMENT SYSTEM	LUTRON	ZUMTOBEL	HONEYWELL
		and equivalent		
340	SMARTPODIUM	PEOPLELINK	AHA	LUMIN
		and equivalent		
341	INTERATIVE WHITE BOARD	PROMETHEAN	HITEVISION	SMART
		and equivalent		
342	COUNTDOWN CLOCK	BIGTIMECLOCKS	ULTRAK	BANGGOOD
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
343	COMPUTER	HP	DELL	IBM
		and equivalent		
344	MONITOR	SAMSUNG	PANASONIC	CHRISTIE
		DELTA	and equivalent	
345	12BAYNAS	NETGEAR	DELL	HP
		CISCO	and equivalent	
346	10G CORE SWITCH	NETGEAR	DELL	HP
		CISCO	and equivalent	
347	L3POEPLUSSWITCH	NETGEAR	DELL	HP
		CISCO	and equivalent	
348	DUALBAND11 AC ACCESS POINT	NETGEAR	DELL	HP
		CISCO	and equivalent	
349	10GSINGLEMODE SFP+ MODULE	NETGEAR	DELL	HP
		CISCO	and equivalent	
350	SECURE NETWORK SERVER	CISCO	DELL	HP
		and equivalent		
HVAC SYSTEM WORKS				
CHILLERS				
351	Water Cooled Centrifugal Chillers With VSD (AHRI Certified)	Carrier	Daikin	Trane
		York	Kirloskar	and equivalent
352	Rotary Screw Water-cooled Water Chilling Machine	Carrier	Daikin	Trane
		York	Kirloskar	and equivalent

Sl. No.	Material	Approved Makes/ Brands		
	(AHRICertified–200TR & Above)			
353	VRV/VRF System (Outdoor /Indoor Units, Copper Y Joints And Fittings, Central & Remote Controller)	Daikin	Toshiba	Mitsubishi
		and equivalent		
354	Air-cooled Ductable Split Unit	Daikin	Hitachi	Carrier
		and equivalent		
355	Air-cooledPackagedUnit	Daikin	Hitachi	Carrier
		and equivalent		
356	Air Cooled Hi-wall/ Cassette Unit	Daikin	Hitachi	Carrier
		and equivalent		
357	Air Cooled Precision AC Unit	Emerson	APC	Stulz
		BlueBox	and equivalent	
358	Horizontal Split Casing / VerticalInline/ End Suction /MonoblockPumpSets(For Primary CHW Pumps & Condenser Water Pumps & Hot Water Pumps)	ITTXylem	Armstrong	Grundfoss
		and equivalent		
359	Variable Speed Pumping System(For Secondary Chilled Water Pumps Motors)	ITTXylem	Armstrong	Grundfoss
		and equivalent		
360	Variable Frequency Drive (For Pumps,CoolingTower	Danfoss(FC102)	ABB(ACH 550)	Siemens (Sinamics G120P)

Sl. No.	Material	Approved Makes/ Brands		
	& AHU)	VTS	and equivalent	
361	ExpansionTank	Xylem-ITT	Armstrong	Grundfos
		Anergy	and equivalent	
362	Cooling Tower (CTI/ JCI Approved & Certified)	Paharpur	DVR	Advance
		Bell	and equivalent	
363	Air & Dirt Separator, Automatic Air Vent, Vacuum Degasser	Spirotech	Spirotherm	Anergy
		Caleffi	and equivalent	
364	Hot Water Generator & Pan Humidifier	KEPL	Emerald	Rapid Cool
		and equivalent		
365	Electrochemical Water Treatment & Disinfection System(For ACPlant)	Elgressy	Terragon	ENPAR Technologies
		and equivalent		
366	Air Handlers Unit	Flaktwood	Systemair	Ultrapure
		Edgetech	and equivalent	
367	Fan Coil Unit	Flaktwood	Systemair	Ultrapure
		Edgetech	and equivalent	
368	AHU Fans (AMCA Certified for Sound & Performance)	Krugger	Wolter	Nicotra
		Greenheck	and equivalent	
369	Heat/ Energy Recovery Wheel	DRI	Greenheck	Flaktwood
		and equivalent		
370	Air-washer & Wet Scrubber	Ultrapure	Systemair	Flaktwood
		Edgetech	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
371	Dry Scrubber	Trion	Rydair	and equivalent
372	Scrubber & Air-washer Fans (AMCA Certified for Sound & Performance)	Krugger	Greenheck	Nicotra
		and equivalent		
373	Acoustically Insulated Box Type Inline Fans	Ostberg	Krugger	Wolter
		Saksham	and equivalent	
374	Axial Fan / Centrifugal Fan (AMCA Certified for Sound & Performance)	Greenheck	Airflow	Krugger
		Systemair	Flaktwood	and equivalent
375	PropellerFan	GE	Usha	Bajaj
		and equivalent		
376	Three phase motors	ABB	CG	Siemens
		Marathon	and equivalent	
377	Three phase motors(250°C for 2 Hours)	Marathon	Havells-Lafert	Baldor
		and equivalent		
378	Water Piping Upto 150mm dia	Tata	SAIL	Jindal Hissar
		Prakash Surya	and equivalent	
379	Water Piping Above 150mm dia	Tata	MSL	Jindal
		Prakash Surya	and equivalent	
380	Y-strainer/ Pot–strainer	Emerald	Sant	Rapid Cool
		Zoloto	and equivalent	
381	Butterfly Valve (Manual & Motorized)	Advance	DRP	Zoloto
		Leader	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
382	Actuator for Motorised Butterfly Valve	Belimo	Siemens	Danfoss
		Honeywell	and equivalent	
383	Manual Balancing Valve	Advance	Zoloto	Leader
		and equivalent		
384	Dual Plate Check Valve	Advance	Zoloto	Leader
		and equivalent		
385	FCU Valve Station	Calefi	CNM	ATS
		and equivalent		
386	Pressure Independant Control cum Balancing Valves /High Rangebility Valve	DANFOSS	JOHNSON CONTROL	SIEMENS
		ANERGY	and equivalent	
387	Thermostat/ Humidistat	DANFOSS	JOHNSON CONTROL	SIEMENS
		ANERGY	and equivalent	
388	Globe/ Ball Valve (With or Without Strainer)	Advance	AIP	Zoloto
		Leader	and equivalent	
389	Auto Air Vent Valve	Calefi	Spirotech	Anergy
		and equivalent		
390	Pressure Gauges	Feibig	Emerald	H Guru
		Taylor	and equivalent	
391	Industrial Type Thermometer (Alcohal Filled V form)	Feibig	Emerald	H Guru
		Taylor	and equivalent	
392	GSS Sheet	Sail	Tata	Jindal

Sl. No.	Material	Approved Makes/ Brands		
		and equivalent		
393	Factory Fabricated Duct	Zeco	Ductofab	Waves
		Projtech	and equivalent	
394	Aluminium Sheet	Hindalco	Balco	Nalco
		and equivalent		
395	Vibration Isolation Spring& Flexible Pipe Connector	Easy flex	Resisto flex	Dunlop
		Kanwal	and equivalent	
396	VAV Boxes	Trox	Zenesty	Johnson
		Trane	and equivalent	
397	CAV	Zenesty	Trox	Trane
		and equivalent		
398	Fire & Smoke Damper	SystemAir	Zenesty	Trox
		Titus	and equivalent	
399	Fire Damper Actuator	Belimo	Siemens	Honeywell
		and equivalent		
400	Extruded aluminum grills/ Diffusers	SystemAir	Zenesty	Titus
		and equivalent		
401	Pre Filters, Fine Filters & Hepa Filters	Thermodyne	Spectrum	Mechmark
		and equivalent		
402	Closed Cell Fire Retardant XPE (For Duct Insulation)	Paramount	Supreme	Trocyllene
		and equivalent		
403	Nitrile Rubber For	Armacell	Supreme	Kflex

Sl. No.	Material	Approved Makes/ Brands		
	Pipe/ Duct Insulation (With echanical & UV Protection)	ALP Aeroflex	and equivalent	
404	V Belt	Dunlop	Fenner	Hilton
		and equivalent		
405	Fibre Glass Rigid Board	U.P.Twiga	Owencorning	Kimco
		and equivalent		
406	Paints	ICI	Asian	Berger
		Nerolac	and equivalent	
407	Tarfelt/ CPRX compound	Shalimartarproduct	and equivalent	
408	Dash Fasteners	Fisher	Hilti	Bosch
		and equivalent		
409	Welding Rods	Advani	L&T	Esab
		and equivalent		
410	Insulated Flexible Duct	Atco	Caryaire	Zenesty
		and equivalent		
411	Duct/ Pipe Support	Easyflex	Gripple	Resistoflex
		Hilti	and equivalent	
412	Copper Refrigerant Piping	Mandev	Rajco	ShreeShyam
		Mexflow	and equivalent	
413	Copper Refrigerant Pipe Insulation	Armacell	ALPAeroflex	Kflex
		Supreme	and equivalent	
414	Duct Mounted Bio-	Ruks	Trimed	PlasmaAir

Sl. No.	Material	Approved Makes/ Brands		
	polar Ionization System	and equivalent		
415	Intelligent Air Filtration System with UVC/UVGI	Yumito	Zenesty	Flowhex
		and equivalent		
416	Imported AHU/ UVC/ CoiloTron/ UVGI	Ruks	Trimed	Pureair
		and equivalent		
417	Pre insulated Ducting for Conditioned Air	Easy (mecheasy)	P3	ALP
		and equivalent		
418	Smart Anti Fouling Condenser System	CET	Energeo	CQM
		and equivalent		
419	Heater Bank	DasPass	Escorts	KEPL
		and equivalent		
420	UV & Weather Protective Coating	Pidilite	Foster	Amicon
		and equivalent		
421	Magnehelic Gauges	Mitbraus Instruments	Dwyer	Omicron
		and equivalent		
422	Electrical Panel, Console Panel & Sub-Panels	RYBNE,	KRATOS	LOTUS CONTROL
		TRICOLITE	SPC Electrotech Pvt. Ltd.	and equivalent
423	Air-Circuit Breaker	As per list of Electrical make		
424	M.C.C.B.	As per list of Electrical make		
425	MCB	As per list of Electrical make		

Sl. No.	Material	Approved Makes/ Brands		
426	Starters,Contactors,Push Buttons, Overload Relay	As per list of Electrical make		
427	Single Phase Preventer	As per list of Electrical make		
428	Current Transformer	As per list of Electrical make		
429	Rotary Switches	As per list of Electrical make		
430	Change Over Switch	As per list of Electrical make		
431	Voltmeter/ Ammeter	As per list of Electrical make		
432	Indicating Lamps	As per list of Electrical make		
433	Time Delay Device	As per list of Electrical make		
434	Control Cable & Accessories	As per list of Electrical make		
435	MS Conduits ISI Approved	As per list of Electrical make		
436	GI Cable Tray (Factory Fabricated)	As per list of Electrical make		
438	TDRs	LT-LK	BCH	and equivalent
439	Vacuum Degasser	Spirotech Anergy	Comfort	Spirotherm
		Omicron	and equivalent	
440	BMS System	As per specifications		
441	Software	Honeywell-Webs	DELTA	ABB
		Omicron	and equivalent	
442	Network Area Controller	Honeywell-Webs	DELTA	ABB
		Omicron	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
443	Third Party Integrator	Honeywell-Webs	DELTA	ABB
		Omicron	and equivalent	
444	Central and DDC Controllers	Honeywell-Webs	DELTA	ABB
		Omicron	and equivalent	
445	Ultrasonic BTU/ FlowMeters	ForbesMarshall	Landis & Gyr	Fuji
		Omicron	and equivalent	
446	Immersion TemperatureSensor	Honeywell	DELTA	ABB
		Omicron	and equivalent	
447	Return Air Temperature Sensor	Honeywell	DELTA	ABB
		Omicron	and equivalent	
448	Network/ Remote Operator Terminal	Honeywell	DELTA	ABB
		and equivalent		
449	Smoke Sensor	Honeywell	DELTA	ABB
		Omicron	and equivalent	
450	TemperatureplusRHSensor	Honeywell	DELTA	ABB
		Omicron	and equivalent	
451	Differential Pressure Switch- Air	Honeywell	DELTA	ABB
		Omicron	and equivalent	
452	Differential Pressure Switch- Water	Honeywell	DELTA	ABB
		Omicron	and equivalent	
453	Computer	ZENIBM	HP	Dell
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
454	Laser Printer	HP	Sharp	Canon
		and equivalent		
455	CAT-6Cable	Molex	FusionPolymer	belden
		R&M	and equivalent	
456	Signal Cable	Polycab	Skytone	Versha
		and equivalent		
457	CO2 Sensor	Honeywell	Omicron	Vishala
		and equivalent		
458	CO Sensor (Electro Chemical Gel Based)	Honeywell	Omicron	Vishala
		and equivalent		
459	Level Switch	Honeywell	Omicron	Vishala
		and equivalent		
460	Current Relay	Honeywell	Omicron	Vishala
		and equivalent		
461	DC Voltage Transducer	ABB	Honeywell	Seto
		Mosibus	and equivalent	
462	Multifunction Meter with Communication Port	AVK-SEGC	and equivalent	
463	Lux Level Sensor	Honeywell	ALC	ABB
		Omicron	and equivalent	
464	Differential Pressure Transmitter-Air	Honeywell	ALC	ABB
		Omicron	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
465	Pressure Transmitter-Water	Honeywell	ALC	ABB
		Omicron	and equivalent	
466	Digital Thermostat / Humidistat	Honeywell	ALC	ABB
		Omicron	and equivalent	
467	Video Conferencing System	POLYCOM	TANDBERG	SONY
		and equivalent		
468	Quad BRI module for Video conferencing unit	POLYCOM	TANDBERG	SONY
		and equivalent		
469	Plasma / LCD / LCD-LED Display Panel / TV	PANASONIC	SONY	SAMSUNG
		BOSE VIDEO WAVE	and equivalent	
470	LCD / DLP/ LED Projector	CHRISTIE	SONY	NEC
		EPSON	and equivalent	
471	Audio / Video/ Computer signal processing equipment - Switcher , Distribution amplifier , Scaler	KAMER	EXTRON	BOSE
		and equivalent		
472	Manual Pull down / Motorized Projection Screen	LIBERTY	DRAPER	and equivalent
473	Motorized ceiling Lift	LIBERTY	DRAPER	and equivalent
474	Projector Mount	ANSON	LIBERTY	DRAPER
		and equivalent		
475	Low noise shielded	KAMER	EXTRON	BOSE

Sl. No.	Material	Approved Makes/ Brands		
	Video signal cable	GOTHAM	KLOTZ	and equivalent
476	VGA to HDMI converter / scaler	KAMER	EXTRON	BOSE
		and equivalent		
477	Table Pop up box with VGA /HDMI/ RJ 45 / Power / Audio	KAMER	EXTRON	MAGNUM
		BOSE	and equivalent	
478	VGA , BNC , RCA connector	KAMER	EXTRON	BOSE
		and equivalent		
479	Pan / Tilt / Zoom - Dome / Robotic camera	SONY	SAMSUNG	and equivalent
480	Digital Twisted pair Audio / Video encoder transmitter / receiver	KAMER	EXTRON	and equivalent
481	Digital Video Recorder	SONY	SAMSUNG	BOSCH
		and equivalent		
482	Professional grade CD/ DVD player	TASCAM	PANASONIC	SONY
		and equivalent		
483	Low noise composite video cable	KAMER	EXTRON	BOSE
		GOTHAM	KLOTZ	and equivalent
484	Digital Interactive Pen display	WACOM - JAPAN	QOMO	and equivalent
485	Document Camera	QOMO	LUMENS	and equivalent
486	Wall plates with VGA / HDMI / Analog Audio	KAMER	EXTRON	MAGNUM
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
487	Skew free data cables	KAMER	EXTRON	and equivalent
488	wired/ wireless touch screen control system pack for controlling audio, video, lighting & other electrical equipment	CRESTRON	AMX	and equivalent
489	Video Wall & video wall processor	VTRON	CHRISTIE	and equivalent
490	In Ceiling / In Wall Speaker	JBL	BOSE	FUNKTION
		TANOY	and equivalent	
491	Professional Audio Amplifier / Mixer amlifier	CROWN	BOSE	BITTNER
		QSC	OHM	and equivalent
492	Table embedded Microphone	CROWN	AKG	SENNHEISER
		SHURE	and equivalent	
493	Boundary Layer Microphone	CROWN	AKG	SENNHEISER
		SHURE	and equivalent	
494	Dynamic Microphones for Vocal / Musical instrument	CROWN	AKG	SENNHEISER
		SHURE	and equivalent	
495	UHF cordless Microphone - Handheld/ Lapel /Headworn	CROWN	AKG	SENNHEISER
		SHURE	and equivalent	
496	Digital Programmable audio processor with Mic, Line input , Auto echo cancellation , auto adjustable noise	BIAMP-USA	BOSE	BSS -LONDON
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
	threshold			
497	Analog Audio mixer with pahatom power	BOSE	AKG	CROWN
		SOUNDCRAFT	ALLEN HEATH	and equivalent
498	Automatic Feedback suppressor with programmable Fixed & Live filters	DBX	BOSE	SHURE
		and equivalent		
499	Automatic audio mixer with AGC , Compressor , Phantom power , Gain adjustment	AKG	SHURE	SOUND CRAFT
		BIAMP	MAKIE	ALLEN HEATH
		BOSE	and equivalent	
500	Loudspeaker management processor	DBX	BOSE	and equivalent
501	Audio Conferencing system Wired/ Wireless	BOSE	SHURE	AKG
		SENNHEISER	CROWN	and equivalent
502	Low noise two core speaker cable	KRAMER	EXTRON	KLOTZ
		GOTHAM	BOSE	and equivalent
503	Low noise two core audio signal cable	KRAMER	EXTRON	KLOTZ
		GOTHAM	BOSE	and equivalent
504	Professional grade patch cord for VGA / HDMI / Audio	BANDRDGE	KRAMER	and equivalent
505	Audio XLR / RCA / Phono/ BNC connector	NEUTRIK	AMPHENOL	and equivalent
506	Equipment Rack	APW	VALRACK	and equivalent

Sl. No.	Material	Approved Makes/ Brands		
507	Online / Off Line UPS system	APC	NEUMERIC	ORION
		and equivalent		
508	Servo controlled stabilizer	VERTEX	MAX	and equivalent
509	Dimmable Ballast - (Analog, DALI , DSI) for Crestron/ AMX control	OSRAM	PHILIPS	TRIDONIC - ATCO
		and equivalent		
510	Analog to DSI converter for Dimmable Ballast	OSRAM	PHILIPS	TRIDONIC - ATCO
		and equivalent		
511	ISI Marked casing 'n' capping	AKG	PRESTO PLAST	POLYCAB
		WELKM	J PLAST	PLAZA
		PRECISION	RICHA	and equivalent
512	FLUSH TYPE SWITCH	ANCHOR PENTA/GOLD MEDAL /KOLOR KANY.KOM/ HAVELLS andequivalent		
513	CEILING ROSE	ANCHOR/GOLD MEDAL /KOLOR KANY.KOM and equivalent		
514	2MM THICK / HEAVY RIGID PVC IS:9537 PART - III CONDUIT	BERLIA/ AKG / PRECISION and equivalent		
515	MS CONDUIT	AKG /BEC/ SUPREME and equivalent		
516	G.I CONDUIT	AKG	TATA	and equivalent
517	METAL BOXES	18 S.W.G	and equivalent	
518	PLAIN PENDENT HOLDER	ANCHOR PENTA PC CHERRY OR EQUIVALENT /GOLD MEDAL /KOLOR		

Sl. No.	Material	Approved Makes/ Brands
		KANY.KOM/HAVELLS and equivalent
519	BATTEN HOLDER	ANCHOR PENTA PC CHERRY OR EQUIVALENT /GOLD MEDAL /KOLOR KANY.KOM/HAVELLS and equivalent
520	BUS BAR CHAMBER	HPL/ GECO and equivalent
521	METAL CLAD SWITCH FUSE UNIT	HPL/ GECO / ANCHOR and equivalent
522	SWITCH GEAR & PROTECTION	ABB, SCHNEIDER MG, LEGRAND, HAGER and equivalent
523	MCB (CONFORM TO IS / IEC 60898-1:2002) / MCCB (CONFORM TOIS/IEC 60947-2) RCCB (CONFORM TOIS/IEC 12640 / 61008) RCBO B SERIES, MCB	SCHNEIDER MG, LEGRAND, HAGER, ABB, L&T and equivalent
524	C SERIES, MCB	SCHNEIDER MG, LEGRAND, HAGER, ABB, L&T and equivalent
525	D SERIES, MCB	SCHNEIDER MG, LEGRAND, HAGER, ABB, L&T and equivalent
526	RCCB	SCHNEIDER MG, LEGRAND, HAGER, ABB, L&T and equivalent
527	RCBO	SCHNEIDER MG, LEGRAND, HAGER, ABB, L&T and equivalent
528	SURGE PROTECTION & OVER VOLTAGE PROTECTOR	SCHNEIDER MG, LEGRAND, HAGER, ABB, L&T and equivalent

Sl. No.	Material	Approved Makes/ Brands
529	MCCB WITH THERMAL & MAGNETIC RELEASE, 25 KA 415V 50 HZ 3P MCCB	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
530	35/36 KA 415V 50 HZ 3P MCCB	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
531	50 KA 415V 50 HZ 3P MCCB	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
532	25 KA 415V 50 HZ 4P MCCB	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
533	35/36 KA 415V 50 HZ 4P MCCB	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
534	50 KA 415V 50 HZ 4P MCCB	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
535	36KA, 3P MCCB WITH MICROPROCESSOR RELEASE	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
536	50KA	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
537	3P MCCB WITH MICROPROCESSOR RELEASE	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
538	36KA	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
539	50KA	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
540	70KA	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent

Sl. No.	Material	Approved Makes/ Brands
541	4P MCCB WITH MICRO PROCESSOR RELEASE 36KA/ 50KA/ 70KA	SCHNEIDER, LEGRAND, SIEMENS, ABB, L&T, HAGER and equivalent
542	CHANGE OVER	ABB, SCHNEIDER, LEGRAND, L&T and equivalent
543	SWITCH DISCONNECTOR FUSE UNIT	ABB, SCHNEIDER, LEGRAND, L&T and equivalent
544	READYMADE PANEL (BOX ONLY)	LEGRAND/ L&T/ ABB/ SCHNEIDER and equivalent
545	SUPPLY ONE COMPOSITE CONTROL PANEL FOR UNMANNED OPERATION	CATERPILLER/ ABB/ SCHNEIDER/ JAKSON and equivalent
546	CONTROL PANEL, MADE OF RUGGED, CORROSION-RESISTANT ENCLOSURES, MADE OF HOT-DIP GALVANIZED SHEET STEEL ACCORDING TO STANDARDS: ISO 1461, IEC 60439-1AND IEC 60439-5 FOR ENVIRONMENT CLASSED C1 AND C2 TO, ISO 12944-2	ABB/SCHNEIDER/ L& T/ SIEMENS/ LEGRAND and equivalent
547	SPECIAL OUT DOOR FEEDER PILLAR	ABB/SCHNEIDER/ L& T and equivalent

Sl. No.	Material	Approved Makes/ Brands
548	ADVANCED LIGHTNING PROTECTION SYSTEM	ABB or equivalent
549	LUMINAIRIES	PHILLIPS / WIPRO/ JAQUAR / NEXTRAY/ CROMPTON GREAVES and equivalent
550	LED INDOOR	PHILLIPS / WIPRO/ JAQUAR / NEXTRAY/ CROMPTON GREAVES and equivalent
551	HIGH MAST	BAJAJ/VALMONT/ PHILIPS and equivalent
552	SECURITY SEARCH LIGHT	SIGMA and equivalent
553	LIGHT WITH POLE	K - LITE and equivalent
554	FAN	USHA / CROMPTON and equivalent
555	AIR CARTAIN	CROMPTON GREAVES/VEE-DEE and equivalent
556	AIR CONDITION	CARRIER AIRCON/ VOLTAS/ DAIKIN/ MITSUBISHI and equivalent
557	VOLTAGE STABILIZER	VERTEX/ INDO/ VENUS and equivalent
558	U G CABLE (HT)	HAVELLS/ RPG/CCI/POLYCAB/ GLOSTER/ FINOLEX / NICCO and equivalent
559	U G CABLE (LT)	HAVELLS/ RPG/CCI/POLYCAB/ GLOSTER/ FINOLEX / NICCO and equivalent
560	CABLE GLAND,	COMET/ DOWELLS and equivalent
561	TERMINAL,	COMET/ DOWELLS and equivalent
562	TRAY,	LEGRAND/ AKG /STRUTFAST and equivalent

Sl. No.	Material	Approved Makes/ Brands		
563	FLOOR RACEWAY	MK/ LEGRAND and equivalent		
564	CABLE KITS	MS - SEAL/ RAYCHEM RPG and equivalent		
565	CABLE JUNCTION BOX	HENSEL/ BCH/ SINTEX and equivalent		
566	TRANSFORMER	RAYCHEM/KOTSONS/ DANISH/ NUCON/ TECHNOVEL/ POWER STAR/ Kirloskar/ Crompton and UPTO 250 KVA LOCAL MAKE (AS PER CEA		
567	GALVANIZED POLE	BANSAL/SRP and equivalent		
568	OCTAGONAL POLE	BAJAJ/ PHILIPS/ VALMONT and equivalent		
569	GEYSER	RACOLD/ KINGSTON/ Crompton/ JAQUAR and equivalent		
570	MOTOR PUMP SET	CROMPTON GREAVES/ CRI/ SIEMENS and equivalent		
571	DOL STARTER	CROMPTON GREAVES/ L& T / SIEMENS and equivalent		
572	SUBMERSIBLE PUMP SET	TEXMO / CROMPTON GREAVES/ CRI/ SIEMENS and equivalent		
573	DIESEL GENERATOR	CATERPILLAR	JACKSON	and equivalent
574	DECORATIVE BRACKET LIGHT.	PHILIPS	JAQUAR	and equivalent
575	PENDENT LIGHT.	PHILIPS	JAQUAR	and equivalent
576	CEILING FITTING LIGHT.	PHILIPS	JAQUAR	and equivalent
577	CHANDELIER FITTINGS.	JAQUAR	and equivalent	
578	RISING MAIN	LEGRAND	L&T	and equivalent

Sl. No.	Material	Approved Makes/ Brands		
579	AIR CIRCUIT BREAKER	ABB EMAX	L & T U POWER	MASTER PACT NW
		SIEMENS 3 WL	SCHNEIDER	and equivalent
580	MODULAR SWITCH	LEGRAND	SCHNEIDER	and equivalent
581	CABLE MANAGEMENT SYSTEM	RR EUBIQ	MK	SCHNEIDER
		LEGRAND	and equivalent	
582	EPABX	SIEMENS	and equivalent	
583	MONITORS	PELCO	PHILIPS	SAMSUNG
		NEC	and equivalent	
584	ACCESS CONTROL SYSTEM	HONEYWELL	SIEMENS	SCHNEIDER
		JOHNSON CONTROL	and equivalent	
585	POWER SUPPLY UNIT	EUROPLEX	SIEMENS	SEMCO
		JOHNSON	and equivalent	
586	ADDRESSABLE FIRE ALARM & DETECTION SYSTEM	MORLEY	FIRELITE	APOLLO
		HONEYWELL	and equivalent	
587	CONVENTIONAL FIRE ALARM	AGNI	APOLLO	NOTIFIER
		SYSTEM SENSOR	MORLEY	and equivalent
588	LIFT	OTIS	KONE	MITSHUBISHI
		and equivalent		
589	INVERTER	SU-KAM	MICROTECH	LUMINOUS
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
590	BATTERY	EXIDE	LUMINOUS	and equivalent
591	COMPACT SUB-STATION	ABB	SCHNEIDER	CROMPTON
		GREAVES	POWER STAR	and equivalent
592	LAN WORK	DIGILINK	FINOLEX	LEGRAND
		and equivalent		
593	RACK FOR LAN WORKS	APW	and equivalent	
594	AVR	ANDREW YULE	and equivalent	
595	DEAD BODY CABINET	BLUE STAR	and equivalent	
596	AUTOMATION	PHILIPS	ABB	SCHNEIDER
		PANASONIC	HAVELS	LEGRAND
		HAGER	and equivalent	
597	APFC	ABB	SCHNEIDER	CROMPTON
		SIEMENS	L&T	and equivalent
598	SOLAR POWER	MNRE APPROVED MANUFACTURER.		
599	CEILING FAN BOX	AKG	WELKM	and equivalent
600	HT PANEL	ABB	SCHNEIDER	CROMPTON
		SIEMENS	and equivalent	
601	VCB	ABB	SCHNEIDER	CROMPTON
		SIEMENS	and equivalent	
602	P.V.C. INSULATED SINGLE CORE	FINOLEX	RR KABEL	NICCO

Sl. No.	Material	Approved Makes/ Brands		
	UNSHEATHED INDUSTRIAL (MULTISTRAND) CABLE FR CONFORMING TO IS-694: 1990 WITH FLEXIBLE BRIGHT ANNEALED ELECTROLYTIC COPPER CONDUCTOR FOR VOLTAGE GRADE UP TO 1100 VOLTS	BONTON	and equivalent	
603	P.V.C. INSULATED SINGLE CORE UNSHEATHED INDUSTRIAL FLEXIBLE CABLE CONFORMING TO IS-694: 1990	FINOLEX	RR KABEL	NICCO
	WITH FLEXIBLE BRIGHT ANNEALED COPPER CONDUCTOR FOR VOLTAGE GRADE UP TO 1100 VOLTS	BONTON	and equivalent	
604	P.V.C. INSULATED SINGLE CORE UNSHEATHED INDUSTRIAL (MULTISTRAND) CABLE HFFR CONFORMING TO IS-694: 1990 WITH FLEXIBLE BRIGHT ANNEALED ELECTROLYTIC COPPER	FINOLEX	RR KABEL	NICCO
		BONTON	and equivalent	

Sl. No.	Material	Approved Makes/ Brands		
	CONDUCTOR FOR VOLTAGE GRADE UP TO 1100 VOLTS			
605	CONTRACTORS	ABB	SIEMENS	L& T
		SCHNEIDER	CUTLER HAMMAR	and equivalent
606	RELAYS	ALSTOM	SIEMENS	L& T
		AVK-SEGC	and equivalent	
607	METERS	ALSTOM	SIEMENS	L& T
		AVK-SEGC	and equivalent	
608	OVER LOAD RELAY	CONNSERVE (MULTIFUNCTION METER FOR CURRENT, VOLTAGE, POWER, P.F , KWH.	and equivalent	
AIR CONDITIONER MATERIALS				
609	G.I .SHEET	SAIL	TATA	JINDAL
		BHUSAN	and equivalent	
610	STRUCTURAL SECTION	SAIL	TATA	ESSAR
		and equivalent		
611	FRESH AIR LOUVER	DYNACRAFT	CARRYAIRE	RAVISTAR
		and equivalent		

Sl. No.	Material	Approved Makes/ Brands		
612	T.F. QUALITY EXPANDED POLYSYRENE	BEARDSELL	TOSIBA	and equivalent
613	ENERGY RECOVER VENTILATOR	DRI Rotor	EQV	and equivalent
614	AIR WASHER	AMBASSADOR	ROOT COOLIING	ZECO
		and equivalent		
615	REFRIGERANT PIPES	VEDANTA	NIPPON TUBES	ZECO
		and equivalent		
616	FLEXIBLE COUPLING	RESISTOFLEX	FENNAR	KANWAL
		and equivalent		
617	Any Missing Item	Prior Permission is required from Employer		
NOTE:	1. All makes shall further confirm to standard specifications of each items as mentioned in technical specifications of tender documents.2. "And equivalent" means the simillar material/ product with same technical specification approved by the competent authority of CPWD.			

LIST OF APPROVED MAKES FOR MEDICAL GAS PIPELINE SYSTEM

S.No.	Item Description	List of Makes
1.	Medical Grade Copper Pipe	SAB INDIA/HELIX INDIA/AMBA MEDI NEX / BLAZE/Mex flow / Metal Gem / Cubex / Janya/ or Equivalent
2.	Gas Outlet Points/Terminal Unit	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) / Pneumatech or Equivalent

S.No.	Item Description	List of Makes
3.	Matching Probe/adopter	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
4.	Area Valve Box	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) Wika or Equivalent
5.	Medical Gas Alarm	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) Amico or Equivalent
6.	Fully Automatic Oxygen Control System	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA), Pneumatech or Equivalent
7.	Oxygen Manifold	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
8.	Emergency Oxygen Supply System	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
9.	Oxygen Flow meter with Humidifier Bottle	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
10.	Ward Vacuum Units	SAB INDIA/HELIX INDIA/AMBA MEDI NEX/Nippon Engineering Company/MDD Medical system/ AMICO/ Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent

S.No.	Item Description	List of Makes
11.	Nitrous Oxide Manifold	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Pneumatech/ Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
12.	Emergency Nitrous Oxide Supply System	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Pneumatech/ Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
13.	Duplex Medical Vacuum Plant	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Atlas Copco / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
14.	Bacterial Filter	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Johnson & Johnson / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
15.	Receiver	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
16.	Triplex Medical Air Plant	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Pneumatech / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
17.	Air Dryer	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Atlas Copco / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
18.	4Stage Air Filtration	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA)
		or Equivalent

S.No.	Item Description	List of Makes
19.	Pressure Reducing Station	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Atlas Copco / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
20.	Receiver of 3000liter	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
21.	Lockable line Medical valves	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system/ Wika /Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
22.	Horizontal/Vertical Bed Head Panel	SAB INDIA/HELIX INDIA/AMBA MEDI NEX /Nippon Engineering Company/MDD Medical system / Tri-Tech (USA) / Reanimed (Turkey) / Allied (USA) or Equivalent
23.	Anesthesia Gas Scavenging System (AGSS) Plant (Simplex) 520lpm	SAB INDIA/HELIX INDIA/AMBA MEDI NEX / BLAZE/ RB/RN/SIM/AUDCO / MEDILINE or Equivalent

LIST OF APPROVED MAKES FOR NURSE CALL SYSTEM		
1.	NURSE CALL SYSTEM	ZKR / AMBA MEDI NEX / HELIX / NIPPON ENGINEERING COMPANY/ CAREWELL / RELISON OR EQUIVALENT

LIST OF APPROVED MAKES FOR KITCHEN EQUIPMENTS		
1.	KITCHEN EQUIPMENTS	MPS / ADVANCE TECH HEALTH CARE/ GE PROJECTS/ VANYA INDUSTRIAL EQUIPMENT / KUBER TECHNO CRAFT / BESTEKLOZA/ NARAYAN EQUIPMENT/ THOMSON & THOMSONS OR EQUIVALENT

LIST OF APPROVED MAKES FOR SIGNAGES		
1.	SIGNAGES	MR LLUMINATIOL / RG CORPORATION / PROTECTOR/ or equivalent

LIST OF APPROVED MAKES FOR CUBICAL CURTAIN TRACK WITH IV HANGER, COLUMN & WALL GUARD		
	CUBICAL CURTAIN	INPRO CORP INDIA/ AMBA MEDI NEX /
1.	TRACK WITH IV HANGER, COLUMN &	ADISON EQUIPMENT COMPANY/ HITECH/ /
	WALL GUARD	MDD Medical System or Equivalent

LIST OF APPROVED MAKES FOR NON MEDICAL FURNITURES		
1.	NON MEDICAL FURNITURES	GODREJ INTERIO / SPICA/ FOCUS INFRA /MDD Medical System or Equivalent

LIST OF APPROVED MAKES FOR SOLID WASTE MANAGEMENT		
1.	SOLID WASTE MANAGEMENT - All Waste Collection Bins	POLYWEL/SRIKAMACHI TRADERS / RC VENTURES or Equivalent

9. LIST OF DRAWINGS

UDALGURI -DISTRICT HOSPITAL

ARCHITECTURAL

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	FLOOR PLANS & FURNITURE LAYOUT	GROUND FLOOR PLAN	PKG-2-DH-UDH-ARC-GFC - 90001-R00	SHOP DRAWING FOR ALL ALUMINIUM AND GYPSUM PARTITION WORK
2		FIRST FLOOR PLAN	PKG-2-DH-UDH-ARC-GFC - 90002-R00	
3		SECOND FLOOR PLAN	PKG-2-DH-UDH-ARC-GFC - 90003-R00	
4		THIRD FLOOR PLAN	PKG-2-DH-UDH-ARC-GFC - 90004-R00	
5		FOURTH FLOOR PLAN	PKG-2-DH-UDH-ARC-GFC - 90005-R00	
6		TERRACE FLOOR PLAN	PKG-2-DH-UDH-ARC-GFC - 90006-R00	
7		ROOF PLAN	PKG-2-DH-UDH-ARC-GFC - 90007-R00	
8		FURNITURE LAYOUT (GROUND FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90008-R00	
9		FURNITURE LAYOUT (FIRST FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90009-R00	
10		FURNITURE LAYOUT (SECOND FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90010-R00	
11		FURNITURE LAYOUT (THIRD FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90011-R00	
12		FURNITURE LAYOUT (FOURTH FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90012-R00	
13	BUILDING SECTIONS	SECTION - AA	PKG-2-DH-UDH-ARC-GFC - 90013-R00	
14		SECTION - BB	PKG-2-DH-UDH-ARC-GFC - 90014-R00	
15		SECTION - CC	PKG-2-DH-UDH-ARC-GFC - 90015-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
16	BUILDING ELEVATION	FRONT & SOUTH SIDE ELEVATION (ELEVATION A & B)	PKG-2-DH-UDH-ARC-GFC - 90016-R00	SHOP DRAWING FOR ALL GLAZING AND FAÇADE WORK
17		REAR & NORTH SIDE ELEVATION (ELEVATION C & D)	PKG-2-DH-UDH-ARC-GFC - 90017-R00	
18		SKIN SECTIONS - 1-1 & 2-2	PKG-2-DH-UDH-ARC-GFC - 90018-R00	
19		SKIN SECTIONS - 3-3 , 4-4 & 5-5	PKG-2-DH-UDH-ARC-GFC - 90019-R00	
20	STAIRCASE AND LIFT LOBBY DETAILS	STAIRCASE- 01 DETAILS	PKG-2-DH-UDH-ARC-GFC - 90020-R00	
21		STAIRCASE- 02 DETAILS	PKG-2-DH-UDH-ARC-GFC - 90021-R00	
22		STAIRCASE- 03 DETAILS	PKG-2-DH-UDH-ARC-GFC - 90022-R00	
23		STAIRCASE- 04 DETAILS	PKG-2-DH-UDH-ARC-GFC - 90023-R00	
24		STRETCHER LIFT- 01 DETAILS	PKG-2-DH-UDH-ARC-GFC - 90024-R00	SHOP DRAWING FOR ALL LIFTS WORK
25		STRETCHER LIFT- 02 DETAILS	PKG-2-DH-UDH-ARC-GFC - 90025-R00	
26		SERVICE LIFT- 03 DETAILS	PKG-2-DH-UDH-ARC-GFC - 90026-R00	
27	ENLARGED DETAILS	TYPICAL PARAPET WALL AND WATERPROOFING DETAILS & DRINKING WATER DETAILS	PKG-2-DH-UDH-ARC-GFC - 90027-R00	
28		RAMP DETAILS PLANS	PKG-2-DH-UDH-ARC-GFC - 90028-R00	
29		RAMP SECTIONS	PKG-2-DH-UDH-ARC-GFC - 90029-R00	
30		JOINERY DETAILS - 01	PKG-2-DH-UDH-ARC-GFC - 90030-R00	SHOP DRAWINGS FOR ALL ALUMINIUM, UPVC WINDOW WORK
31		JOINERY DETAILS - 02	PKG-2-DH-UDH-ARC-GFC - 90031-R00	
32		JOINERY DETAILS - 03	PKG-2-DH-UDH-ARC-GFC - 90031A-R00	
33		JOINERY DETAILS - 04	PKG-2-DH-UDH-ARC-GFC - 90031B-R00	
34		JOINERY DETAILS - 05	PKG-2-DH-UDH-ARC-GFC - 90031C-R00	
35		JOINERY DETAILS - 06	PKG-2-DH-UDH-ARC-GFC - 90032-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
36		JOINERY DETAILS - 07	PKG-2-DH-UDH-ARC-GFC - 90033-R00	
37		OVER HEAD WATER TANK PLAN DETAIL	PKG-2-DH-UDH-ARC-GFC - 90034-R00	
38	FALSE CEILING DETAILS	FALSE CEILING LAYOUT (GROUND FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90035-R00	SHOP DRAWING FOR FIXING DETAILS WORK
39		FALSE CEILING LAYOUT (FIRST FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90036-R00	
40		FALSE CEILING LAYOUT (SECOND FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90037-R00	
41		FALSE CEILING LAYOUT (THIRD FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90038-R00	
42		FALSE CEILING LAYOUT (FOURTH FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90039-R00	
43	FLOORING DETAILS	FLOORING & WALL FINISHING LAYOUT (GROUND FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90040-R00	
44		FLOORING & WALL FINISHING LAYOUT (FIRST FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90041-R00	
45		FLOORING & WALL FINISHING LAYOUT (SECOND FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90042-R00	
46		FLOORING & WALL FINISHING LAYOUT (THIRD FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90043-R00	
47		FLOORING & WALL FINISHING LAYOUT (FOURTH FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90044-R00	
48		FLOORING & WALL FINISHING LAYOUT (TERRACE FLOOR)	PKG-2-DH-UDH-ARC-GFC - 90045-R00	
49	TOILET DETAILS	STANDARD TOILETS DETAILS	PKG-2-DH-UDH-ARC-GFC - 90046-R00	
50		TOILET DETAILS - 01	PKG-2-DH-UDH-ARC-GFC - 90047-R00	
51		TOILET DETAILS - 02	PKG-2-DH-UDH-ARC-GFC - 90048-R00	
52		TOILET DETAILS - 03	PKG-2-DH-UDH-ARC-GFC - 90049-R00	
53		TOILET DETAILS - 04	PKG-2-DH-UDH-ARC-GFC - 90050-R00	
54	SITE DEVELOPMENT	SITE PLAN	PKG-2-DH-UDH-ARC-GFC - 90051-R00	
55		SITE SECTION ,ROAD AND	PKG-2-DH-UDH-ARC-	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		FOOT PATH DETAILS - 01	GFC - 90052-R00	
56		SITE SECTION ,ROAD AND FOOT PATH DETAILS - 02	PKG-2-DH-UDH-ARC-GFC - 90053-R00	
57		DRAIN LAYOUT	PKG-2-DH-UDH-ARC-GFC - 90054-R00	
58		COMPOUND WALL , FENCING AND GATE LOCATION PLAN	PKG-2-DH-UDH-ARC-GFC - 90055-R00	
59		COMPOUND WALL ,FENCING AND DRAIN SECTIONS DETAILS	PKG-2-DH-UDH-ARC-GFC - 90056-R00	
60		FRONT ENTRANCE GATE SECTION AND ELEVATION DETAIL	PKG-2-DH-UDH-ARC-GFC - 90057-R00	SHOP DRAWING FOR GATE WORK
61		LANDSCAPE LAYOUT	PKG-2-DH-UDH-ARC-GFC - 90058-R00	
62		SITE PLAN CO-ORDINATION (XY) PLAN	PKG-2-DH-UDH-ARC-GFC - 90059-R00	
63		TOPOGRAPHICAL SURVEY PLAN WITH PROPOSED BUILDING	PKG-2-DH-UDH-ARC-GFC - 90060-R00	
64	SIGNAGE DETAILS	SIGNAGE DETAILS (GROUND FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90061-R00	SHOP DRAWING FOR ALL SIGNAGE WORK
65		SIGNAGE DETAILS (FIRST FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90062-R00	
66		SIGNAGE DETAILS (SECOND FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90063-R00	
67		SIGNAGE DETAILS (THIRD FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90064-R00	
68		SIGNAGE DETAILS (FOURTH FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90065-R00	
69		SIGNAGE DETAILS (TERRACE FLOOR PLAN)	PKG-2-DH-UDH-ARC-GFC - 90066-R00	
70		EXTERNAL SIGNAGE	PKG-2-DH-UDH-ARC-GFC - 90067-R00	
71	ANCILLARY BUILDINGS	ESS BUILDING	PKG-2-DH-UDH-ARC-GFC - 90068-R00	
72		FLOOR PLAN,SECTION & ELEVATION OF MORGUE,BMW& SECURITY CABIN	PKG-2-DH-UDH-ARC-GFC - 90069-R00	
73		U.G SUMP -3.0 LAKHS LIT.(CAPACITY) POTABLE ,FIRE & RAW PUMP DETAIL	PKG-2-DH-UDH-ARC-GFC - 90070-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
74		STP 100 KLD PLAN & SECTIONS	PKG-2-DH-UDH-ARC-GFC - 90071-R00	
75		ETP 20 KLD PLAN & SECTIONS	PKG-2-DH-UDH-ARC-GFC - 90072-R00	

STRUCTURAL

SL NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
1	FOUNDATION	PILE LAYOUT PLAN	PKG-2-DH-UDH-STR-GFC - 90204-R00
2		RAFT & PEDESTAL LAYOUT PLAN	PKG-2-DH-UDH-STR-GFC - 90205-R00
3		STONE COLUMN LAYOUT PLAN	PKG-2-DH-UDH-STR-GFC - 90206-R00
4		PILE RAFT BOTTOM REINFORCEMENT IN 'X' DIRECTION	PKG-2-DH-UDH-STR-GFC - 90207-R00
5		PILE RAFT BOTTOM REINFORCEMENT IN 'Y' DIRECTION	PKG-2-DH-UDH-STR-GFC - 90208-R00
6		PILE RAFT TOP REINFORCEMENT IN 'X' DIRECTION	PKG-2-DH-UDH-STR-GFC - 90209-R00
7		PILE RAFT TOP REINFORCEMENT IN 'Y' DIRECTION	PKG-2-DH-UDH-STR-GFC - 90210-R00
8		PILE RAFT SECTION DETAIL	PKG-2-DH-UDH-STR-GFC - 90211-R00
9		GENERAL NOTES FOR PILE	PKG-2-DH-UDH-STR-GFC - 90212-R00
10	COLUMN AND SHEAR WALL	COLUMN & SHEAR WALL LAYOUT PLAN	PKG-2-DH-UDH-STR-GFC - 90213-R00
11		COLUMN REINFORCEMENT DETAIL -01 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90214-R00
12		COLUMN REINFORCEMENT DETAIL -02 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90215-R00
13		COLUMN REINFORCEMENT DETAIL -03 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90216-R00
14		COLUMN REINFORCEMENT DETAIL -04 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90217-R00
15		SHEAR WALL REINFORCEMENT DETAIL -05 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90218-R00
16		SHEAR WALL	PKG-2-DH-UDH-STR-GFC -

SL NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
		REINFORCEMENT DETAIL -06 (PART-01)	90219-R00
17		SHEAR WALL REINFORCEMENT DETAIL -07 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90220-R00
18		SHEAR WALL REINFORCEMENT DETAIL -08 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90221-R00
19		SHEAR WALL REINFORCEMENT DETAIL -09 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90222-R00
20		SHEAR WALL REINFORCEMENT DETAIL -10 (PART-01)	PKG-2-DH-UDH-STR-GFC - 90223-R00
21		COLUMN REINFORCEMENT DETAIL -01 (PART-02)	PKG-2-DH-UDH-STR-GFC - 90224-R00
22		COLUMN REINFORCEMENT DETAIL -02 (PART-02)	PKG-2-DH-UDH-STR-GFC - 90225-R00
23		SHEAR WALL REINFORCEMENT DETAIL -01 (PART-02)	PKG-2-DH-UDH-STR-GFC - 90226-R00
24		SHEAR WALL REINFORCEMENT DETAIL -02 (PART-02)	PKG-2-DH-UDH-STR-GFC - 90227-R00
25		SHEAR WALL REINFORCEMENT DETAIL -03 (PART-02)	PKG-2-DH-UDH-STR-GFC - 90228-R00
26		SHEAR WALL REINFORCEMENT DETAIL -04 (PART-02)	PKG-2-DH-UDH-STR-GFC - 90229-R00

WATER SUPPLY

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A-LOCATION PLAN	GROUND FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-UDH-PHE-GFC-90501-R00	
2		FIRST FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-UDH-PHE-GFC-90502-R00	
3		SECOND FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-UDH-PHE-GFC-90503-R00	
4		THIRD FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-UDH-PHE-GFC-90504-R00	
5		FOURTH FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-UDH-PHE-GFC-90505-R00	
6		TERRACE FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-UDH-PHE-GFC-90506-R00	
7	B-INTERNAL WATER SUPPLY LAYOUT	GROUND FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90507-R00	1. AS PER THE SITE CONDITION IF ANY CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS.
8		FIRST FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90508-R00	
9		SECOND FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90509-R00	
10		THIRD FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90510-R00	
11		FOURTH FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90511-R00	
12		TERRACE FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90512-R00	
13		FIRST FLOOR PLAN (ROOF RAIN WATER LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90513-R00	
14		TERRACE FLOOR PLAN (ROOF RAIN WATER LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90514-R00	
15		ROOF FLOOR PLAN (ROOF RAIN WATER LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90515-R00	
16	C-INTERNAL SANITARY LAYOUT	GROUND FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90516-R00	
17		FIRST FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90517-R00	
18		SECOND FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90518-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
19		THIRD FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90519-R00	
20		FOURTH FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90520-R00	
21		TERRACE FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90521-R00	
22	D- WATER SUPPLY DETAIL AND SCHEMATIC	ROOF FLOOR PLAN (SERVICE FLOOR PLAN)	PKG-2-DH-UDH-PHE-GFC-90522-R00	SHOP DRAWINGS
23		SERVICE FLOOR PLAN PART LAYOUT - DETAIL A	PKG-2-DH-UDH-PHE-GFC-90523-R00	SHOP DRAWINGS
24		SERVICE FLOOR PLAN PART LAYOUT - DETAIL B	PKG-2-DH-UDH-PHE-GFC-90524-R00	SHOP DRAWINGS
25		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 01,02,03, 05 & 07 DETAILS	PKG-2-DH-UDH-PHE-GFC-90525-R00	
26		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 04 & 09 DETAILS	PKG-2-DH-UDH-PHE-GFC-90526-R00	
27		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 08 DETAILS	PKG-2-DH-UDH-PHE-GFC-90527-R00	
28		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 06, 10 & 11 DETAILS	PKG-2-DH-UDH-PHE-GFC-90528-R00	
29		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 12 & 15 DETAILS	PKG-2-DH-UDH-PHE-GFC-90529-R00	
30		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 13 & 14 DETAILS	PKG-2-DH-UDH-PHE-GFC-90530-R00	
31		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 16, 17, 18 & 19 DETAILS	PKG-2-DH-UDH-PHE-GFC-90531-R00	
32		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 20, 21, 22, 23, 24 & 27 DETAILS	PKG-2-DH-UDH-PHE-GFC-90532-R00	
33		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 25, 26, 28, 29, 30, 31, 32 & 33 DETAILS	PKG-2-DH-UDH-PHE-GFC-90533-R00	
34		SCHEMATIC DIAGRAM-INTERNAL WATER	PKG-2-DH-UDH-PHE-GFC-90534-R00	1. AS PER THE SITE CONDITION IF ANY

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		SUPPLY ARRANGEMENT DETAIL - 1 (SHAFT- 1&2)		CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS.
35		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 2 (SHAFT- 3&4)	PKG-2-DH-UDH-PHE-GFC-90535-R00	
36		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 3 (SHAFT- 5&6)	PKG-2-DH-UDH-PHE-GFC-90536-R00	
37		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 4 (SHAFT- 8)	PKG-2-DH-UDH-PHE-GFC-90537-R00	
38		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 5 (SHAFT- 7&10)	PKG-2-DH-UDH-PHE-GFC-90538-R00	
39		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLYARRANGEMENT DETAIL - 6 (SHAFT- 9&12)	PKG-2-DH-UDH-PHE-GFC-90539-R00	
40		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 7 (SHAFT- 11&13)	PKG-2-DH-UDH-PHE-GFC-90540-R00	
41		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLYARRANGEMENT DETAIL - 8 (SHAFT- 14&15)	PKG-2-DH-UDH-PHE-GFC-90541-R00	
42		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 9 (SHAFT- 16&17)	PKG-2-DH-UDH-PHE-GFC-90542-R00	
43		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 10 (SHAFT-18&19)	PKG-2-DH-UDH-PHE-GFC-90543-R00	
44		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 11 (SHAFT-20&21)	PKG-2-DH-UDH-PHE-GFC-90544-R00	
45		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 12 (SHAFT-22&23)	PKG-2-DH-UDH-PHE-GFC-90545-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
46		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 13 (SHAFT- 24)	PKG-2-DH-UDH-PHE-GFC-90546-R00	
47		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 14 (SHAFT-25&26)	PKG-2-DH-UDH-PHE-GFC-90547-R00	
48		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 15 (SHAFT-27,28&29)	PKG-2-DH-UDH-PHE-GFC-90548-R00	
49		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 16 (SHAFT-30&31)	PKG-2-DH-UDH-PHE-GFC-90549-R00	
50		SCHEMATIC DIAGRAM-INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 17 (SHAFT-32&33)	PKG-2-DH-UDH-PHE-GFC-90550-R00	
51	E-SANITARY DETAIL AND SCHEMATIC	INTERNAL SANITARY ARRANGEMENT SHAFT - 01,02,03,05,06 & 07 DETAILS	PKG-2-DH-UDH-PHE-GFC-90551-R00	
52		INTERNAL SANITARY ARRANGEMENT SHAFT - 04, 09, 10 & 11 DETAILS	PKG-2-DH-UDH-PHE-GFC-90552-R00	
53		INTERNAL SANITARY ARRANGEMENT SHAFT - 08, 14 & 15 DETAILS	PKG-2-DH-UDH-PHE-GFC-90553-R00	
54		INTERNAL SANITARY ARRANGEMENT SHAFT - 12 & 13 DETAILS	PKG-2-DH-UDH-PHE-GFC-90554-R00	
55		INTERNAL SANITARY ARRANGEMENT SHAFT - 16,17,18,19,20 & 21 DETAILS	PKG-2-DH-UDH-PHE-GFC-90555-R00	
56		INTERNAL SANITARY ARRANGEMENT SHAFT - 23, 24, 25, 27&28 DETAILS	PKG-2-DH-UDH-PHE-GFC-90556-R00	
57		INTERNAL SANITARY ARRANGEMENT	PKG-2-DH-UDH-PHE-	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		SHAFT - 26, 29, 30 & 31 DETAILS	GFC-90557-R00	
58		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 1 (SHAFT- 1,2 & 3)	PKG-2-DH-UDH-PHE-GFC-90558-R00	
59		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 2 (SHAFT- 4 & 5)	PKG-2-DH-UDH-PHE-GFC-90559-R00	
60		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL-3 (SHAFT- 6,7,9,11)	PKG-2-DH-UDH-PHE-GFC-90560-R00	
61		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 4 (SHAFT- 8 & 10)	PKG-2-DH-UDH-PHE-GFC-90561-R00	
62		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 5 (SHAFT- 12 & 13)	PKG-2-DH-UDH-PHE-GFC-90562-R00	
63		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 6 (SHAFT- 14,15 & 16)	PKG-2-DH-UDH-PHE-GFC-90563-R00	
64		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 7 (SHAFT- 17,18 & 19)	PKG-2-DH-UDH-PHE-GFC-90564-R00	
65		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 8 (SHAFT- 20,21,22 & 23)	PKG-2-DH-UDH-PHE-GFC-90565-R00	
66		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 9 (SHAFT- 24,25,32,33)	PKG-2-DH-UDH-PHE-GFC-90566-R00	
67		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 10 (SHAFT- 26,27 & 28)	PKG-2-DH-UDH-PHE-GFC-90567-R00	
68		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 11 (SHAFT- 29,30 & 31)	PKG-2-DH-UDH-PHE-GFC-90568-R00	
69	ANCILLARY LAYOUT	BMW,MORGUE & SECURITY CABIN	PKG-2-DH-UDH-PHE-GFC-90569-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		(INTERNAL WATER SUPPLY & ROOF RAINWATER DETAIL DRAWINGS)		
70		UG SUMP, ESS & STP ROOF RAINWATER DETAIL DRAWINGS	PKG-2-DH-UDH-PHE-GFC-90570-R00	
71	F - EXTERNAL LAYOUT	EXTERNAL POTABLE WATER SUPPLY LAYOUT	PKG-2-DH-UDH-PHE-GFC-90631-R00	PUMP INSTALLATION SHOP DRAWINGS
72		EXTERNAL FLUSHING WATER SUPPLY LAYOUT	PKG-2-DH-UDH-PHE-GFC-90632-R00	
73		EXTERNAL SEWER (OVERALL LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90633-R00	1. AS PER THE SITE CONDITION IF ANY CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS.
74		EXTERNAL SEWER (PART LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90634-R00	
75		EXTERNAL ROOF RAIN WATER & SURFACE DRAIN (OVERALL LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90635-R00	
76		EXTERNAL ROOF RAIN WATER & SURFACE DRAIN (PART LAYOUT)	PKG-2-DH-UDH-PHE-GFC-90636-R00	
77		MANHOLE & CHAMBER DETAIL	PKG-2-DH-UDH-PHE-GFC-90637-R00	
76	STP 100KLD	ARCHITECTURAL LINE DIAGRAM		SHOP DRAWINGS SHALL BE PROVIDED BY CONTRACTOR
77	WTP	SPECIFICATION		1. AS PER THE SITE CONDITION IF ANY CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS. (CIVIL) 2. MECHANICAL EQUIPMENT AND PEDESTAL DETAILS. 3. PUDDLE FLANGE DETAILS FOR INTERNAL TANK 4. PUMP INSTALLATION SHOP DRAWINGS
78	POTABLE / DRAIN	SPECIFICATION		1. PUMP INSTALLATION

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
	PUMP			SHOP DRAWINGS 2. PUDDLE FLANGE DETAILS FOR INTERNAL TANK

FIRE FIGHTING

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A-MANUAL FIRE ALARM SYSTEM	GROUND FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM(HYDRANT,EXTINGUSHER,MCP)	PKG-2-DH-UDH-FF-GFC-90901-R00	SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR
2		FIRST FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM(HYDRANT,EXTINGUSHER,MCP)	PKG-2-DH-UDH-FF-GFC-90902-R00	
3		SECOND FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM(HYDRANT,EXTINGUSHER,MCP)	PKG-2-DH-UDH-FF-GFC-90903-R00	
4		THIRD FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM(HYDRANT,EXTINGUSHER,MCP)	PKG-2-DH-UDH-FF-GFC-90904-R00	
5		FOURTH FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM(HYDRANT,EXTINGUSHER,MCP)	PKG-2-DH-UDH-FF-GFC-90905-R00	
6		TERRACE FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM(HYDRANT,EXTINGUSHER,MCP)	PKG-2-DH-UDH-FF-GFC-90906-R00	
7		SCHEMATIC DIAGRAM INTERNAL MANUAL FIRE ALARM SYSTEM(HYDRANT,EXTINGUSHER,MCP)	PKG-2-DH-UDH-FF-GFC-90906A-R00	
8	B-AUTOMATIC FIRE	GROUND FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-UDH-FF-GFC-90907-R00	SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
9	ALAM SYSTEM	FIRST FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-UDH-FF-GFC-90908-R00	
10		SECOND FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-UDH-FF-GFC-90909-R00	
11		THIRD FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-UDH-FF-GFC-90910-R00	
12		FOURTH FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-UDH-FF-GFC-90911-R00	
13		SCHEMATIC DIAGRAM INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-UDH-FF-GFC-90912-R00	
14	C-AUTOMATIC SPRINKLER SYSTEM	GROUND FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-UDH-FF-GFC-90913-R00	SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR
15		FIRST FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-UDH-FF-GFC-90914-R00	
16		SECOND FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-UDH-FF-GFC-90915-R00	
17		THIRD FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-UDH-FF-GFC-90916-R00	
18		FOURTH FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-UDH-FF-GFC-90917-R00	
19		TERRACE FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-UDH-FF-GFC-90918-R00	
20		SCHEMATIC DIAGRAM INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-UDH-FF-GFC-90919-R00	
21	D-FIRE ESCAPE	GROUND FLOOR PLAN FIRE ESCAPE	PKG-2-DH-UDH-FF-GFC-90920-R00	
22		FIRST FLOOR PLAN FIRE ESCAPE	PKG-2-DH-UDH-FF-GFC-90921-R00	
23		SECOND FLOOR PLAN FIRE ESCAPE	PKG-2-DH-UDH-FF-GFC-90922-R00	
24		THIRD FLOOR PLAN FIRE ESCAPE	PKG-2-DH-UDH-FF-GFC-90923-R00	
25		FOURTH FLOOR PLAN FIRE ESCAPE	PKG-2-DH-UDH-FF-GFC-90924-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
26		STANDARD TYPICAL DRAWINGS	PKG-2-DH-UDH-FF-GFC-90925-R00	
27	E-EXTERNAL FIRE FIGHTING LAYOUT	EXTERNAL FIRE FIGHTING LAYOUT	PKG-2-DH-UDH-FF-GFC-90926-R00	SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR
28		UG SUMP - 3.0 LAKHS LIT. (CAPACITY) POTABLE, FIRE & RAW PUMP DETAIL	PKG-2-DH-UDH-FF-GFC-90927-R00	
29	F-ANCILLARY BUILDINGS	ESS BUILDING,BMW BUILDING,SECURITY CABIN & MORGUE -INTERNAL FIRE FIGHTING SYSTEM	PKG-2-DH-UDH-FF-GFC-90928-R00	

ELECTRICAL

S.NO	DRAWING TITLE	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A - LIGHTING LAYOUT	GROUND FLOOR LIGHTING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90701-R00	
2		FIRST FLOOR LIGHTING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90702-R00	
3		SECOND FLOOR LIGHTING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90703-R00	
4		THIRD FLOOR LIGHTING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90704-R00	
5		FOURTH FLOOR LIGHTING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90705-R00	
6		TERRACE FLOOR LIGHTING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90706-R00	
7	B - POWER LAYOUT	GROUND FLOOR POWER LAYOUT	PKG-2-DH-UDH-ELE-GFC-90707-R00	
8		FIRST FLOOR POWER LAYOUT	PKG-2-DH-UDH-ELE-GFC-90708-R00	
9		SECOND FLOOR POWER LAYOUT	PKG-2-DH-UDH-ELE-GFC-90709-R00	
10		THIRD FLOOR POWER LAYOUT	PKG-2-DH-UDH-ELE-GFC-90710-R00	
11		FOURTH FLOOR POWER LAYOUT	PKG-2-DH-UDH-ELE-GFC-90711-R00	
12		TERRACE FLOOR POWER LAYOUT	PKG-2-DH-UDH-ELE-GFC-90712-R00	
13	C - SITE PLAN	EXTERNAL LIGHTING	PKG-2-DH-UDH-ELE-	AS PER APPROVED

S.NO	DRAWING TITLE	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		LAYOUT	GFC-90713-R00	SUPPLIER SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
14		EXTERNAL EARTHING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90714-R00	
15		EXTERNAL HT/LT CABLE ROUTING LAYOUT	PKG-2-DH-UDH-ELE-GFC-90715-R00	
16	D-ELV LAYOUT	GROUND FLOOR ELV LAYOUT	PKG-2-DH-UDH-ELE-GFC-90716-R00	AS PER APPROVED SUPPLIER SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
17		FIRST FLOOR ELV LAYOUT	PKG-2-DH-UDH-ELE-GFC-90717-R00	
18		SECOND FLOOR ELV LAYOUT	PKG-2-DH-UDH-ELE-GFC-90718-R00	
19		THIRD FLOOR ELV LAYOUT	PKG-2-DH-UDH-ELE-GFC-90719-R00	
20		FOURTH FLOOR ELV LAYOUT	PKG-2-DH-UDH-ELE-GFC-90720-R00	
21		TERRACE FLOOR ELV LAYOUT	PKG-2-DH-UDH-ELE-GFC-90721-R00	
22	E-PA LAYOUT	GROUND FLOOR PA LAYOUT	PKG-2-DH-UDH-ELE-GFC-90722-R00	
23		FIRST FLOOR PA LAYOUT	PKG-2-DH-UDH-ELE-GFC-90723-R00	
24		SECOND FLOOR PA LAYOUT	PKG-2-DH-UDH-ELE-GFC-90724-R00	
25		THIRD FLOOR PA LAYOUT	PKG-2-DH-UDH-ELE-GFC-90725-R00	
26		FOURTH FLOOR PA LAYOUT	PKG-2-DH-UDH-ELE-GFC-90726-R00	
27		TERRACE FLOOR PA LAYOUT	PKG-2-DH-UDH-ELE-GFC-90727-R00	
28	F- CABLE TRAY	GROUND FLOOR CABLE TRAY LAYOUT	PKG-2-DH-UDH-ELE-GFC-90728-R00	
29		FIRST FLOOR CABLE TRAY LAYOUT	PKG-2-DH-UDH-ELE-GFC-90729-R00	
30		SECOND FLOOR CABLE TRAY LAYOUT	PKG-2-DH-UDH-ELE-GFC-90730-R00	
31		THIRD FLOOR CABLE TRAY LAYOUT	PKG-2-DH-UDH-ELE-GFC-90731-R00	
32		FOURTH FLOOR CABLE TRAY LAYOUT	PKG-2-DH-UDH-ELE-GFC-90732-R00	
33		TERRACE FLOOR CABLE	PKG-2-DH-UDH-ELE-	

S.NO	DRAWING TITLE	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		TRAY LAYOUT	GFC-90733-R00	
34	G-ELECTRICAL SLD LAYOUT	ELECTRICAL MAIN SLD	PKG-2-DH-UDH-ELE-GFC-90734-R00	AS PER APPROVED SUPPLIER SHOP DRAWINGS FOR HT,LT PANEL, TRANSFORMER, DG SET,UPS AND SOLAR SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR.
35		ELECTRICAL SLD - 1	PKG-2-DH-UDH-ELE-GFC-90735-R00	
36		ELECTRICAL SLD - 2	PKG-2-DH-UDH-ELE-GFC-90736-R00	
37		ELECTRICAL SLD - 3	PKG-2-DH-UDH-ELE-GFC-90737-R00	
38		PA SYSTEM SINGLE LINE DIAGRAM	PKG-2-DH-UDH-ELE-GFC-90738-R00	AS PER APPROVED SUPPLIER SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
39		EARTHING SYSTEMATICS	PKG-2-DH-UDH-ELE-GFC-90739-R00	
40	H - ANCILLARY LAYOUT	POWER HOUSE (ELECTRICAL LAYOUT)	PKG-2-DH-UDH-ELE-GFC-90740-R00	
41		UG SUMP (BASEMENT FLOOR ELECTRICAL LAYOUT)	PKG-2-DH-UDH-ELE-GFC-90741-R00	
42		UG SUMP (GROUND FLOOR ELECTRICAL LAYOUT)	PKG-2-DH-UDH-ELE-GFC-90742-R00	
43		STP (ELECTRICAL LAYOUT)	PKG-2-DH-UDH-ELE-GFC-90743-R00	
44		BMW (ELECTRICAL LAYOUT)	PKG-2-DH-UDH-ELE-GFC-90744-R00	
45		MORGUE (ELECTRICAL LAYOUT)	PKG-2-DH-UDH-ELE-GFC-90745-R00	
46		SECURITY CABIN- 1&2 (ELECTRICAL LAYOUT)	PKG-2-DH-UDH-ELE-GFC-90746-R00	

HVAC

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	HVAC FLOOR PLAN	GROUND FLOOR PLAN AIRCONDITIONING LOCATION PLAN	PKG-2-DH-UDH-HVAC-GFC-90801-R00	
2		FIRST FLOOR PLAN AIRCONDITIONING LOCATION PLAN	PKG-2-DH-UDH-HVAC-GFC-90802-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
3		SECOND FLOOR PLAN AIRCONDITIONING LOCATION PLAN	PKG-2-DH-UDH-HVAC-GFC-90803-R00	
4		THIRD FLOOR PLAN AIRCONDITIONING LOCATION PLAN	PKG-2-DH-UDH-HVAC-GFC-90804-R00	
5		FOURTH FLOOR PLAN AIRCONDITIONING LOCATION PLAN	PKG-2-DH-UDH-HVAC-GFC-90805-R00	
6		GROUND FLOOR PLAN AIRCONDITIONING AND VENTILATION DUCTING PLAN	PKG-2-DH-UDH-HVAC-GFC-90806-R00	SHOP DRAWINGS SHALL BE PROVIDED BY CONTRACTOR
7		FIRST FLOOR PLAN AIRCONDITIONING AND VENTILATION DUCTING PLAN	PKG-2-DH-UDH-HVAC-GFC-90807-R00	
8		SECOND FLOOR PLAN AIRCONDITIONING AND VENTILATION DUCTING PLAN	PKG-2-DH-UDH-HVAC-GFC-90808-R00	
9		THIRD FLOOR PLAN AIRCONDITIONING AND VENTILATION DUCTING PLAN	PKG-2-DH-UDH-HVAC-GFC-90809-R00	
10		FOURTH FLOOR PLAN AIRCONDITIONING AND VENTILATION DUCTING PLAN	PKG-2-DH-UDH-HVAC-GFC-90810-R00	
11		TERRACE FLOOR PLAN AIRCONDITIONING AND VENTILATION DUCTING PLAN	PKG-2-DH-UDH-HVAC-GFC-90811-R00	
12		GROUND FLOOR PLAN REFRIGERANT PIPING LAYOUT PLAN	PKG-2-DH-UDH-HVAC-GFC-90812-R00	
13		FIRST FLOOR PLAN REFRIGERANT PIPING LAYOUT PLAN	PKG-2-DH-UDH-HVAC-GFC-90813-R00	
14		SECOND FLOOR PLAN REFRIGERANT PIPING LAYOUT PLAN	PKG-2-DH-UDH-HVAC-GFC-90814-R00	
15		THIRD FLOOR PLAN REFRIGERANT PIPING LAYOUT PLAN	PKG-2-DH-UDH-HVAC-GFC-90815-R00	
16		FOURTH FLOOR PLAN REFRIGERANT PIPING LAYOUT PLAN	PKG-2-DH-UDH-HVAC-GFC-90816-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
17		TERRACE FLOOR PLAN REFRIGERANT PIPING LAYOUT PLAN	PKG-2-DH-UDH-HVAC-GFC-90817-R00	

MGPS

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A-MGPS	GROUND FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-UDH-MGPS-GFC-91031-R00	SHOP DRAWINGS SHALL BE PROVIDED BY CONTRACTOR
2		FIRST FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-UDH-MGPS-GFC-91032-R00	
3		SECOND FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-UDH-MGPS-GFC-91033-R00	
4		THIRD FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-UDH-MGPS-GFC-91034-R00	
5		FOURTH FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-UDH-MGPS-GFC-91035-R00	

NCS

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	NURSE CALL SYSTEM	GROUND FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-UDH-NCS-GFC-91021-R00	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
2		FIRST FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-UDH-NCS-GFC-91022-R00	
3		SECOND FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-UDH-NCS-GFC-91023-R00	
4		THIRD FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-UDH-NCS-GFC-91024-R00	
5		FOURTH FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-UDH-NCS-GFC-91025-R00	

SOLID WASTE MANAGEMENT

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
1	SOLID WASTE MANAGEMENT DETAIL FLOOR PLAN & EXTERNAL LAYOUT	GROUND FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-UDH-SWM- GFC - 91071-R00
2		FIRST FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-UDH-SWM- GFC - 91072-R00
3		SECOND FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-UDH-SWM- GFC - 91073-R00
4		THIRD FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-UDH-SWM- GFC - 91074-R00
5		FOURTH FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-UDH-SWM- GFC - 91075-R00
6		EXTERNAL LAYOUT- SOLID WASTE BIN MANAGEMENT DETAIL	PKG-2-DH-UDH-SWM- GFC - 91076-R00

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ARCHITECTURAL

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	FLOOR PLANS & FURNITURE LAYOUT	GROUND FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100001-R00	SHOP DRAWING FOR ALL ALUMINIUM AND GYPSUM PARTITION WORK
2		FIRST FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100002-R00	
3		SECOND FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100003-R00	
4		THIRD FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100004-R00	
5		FOURTH FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100005-R00	
6		FIFTH FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100006-R00	
7		TERRACE FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100007-R00	
8		ROOF PLAN	PKG-2-DH-SDH-ARC-GFC - 100008-R00	
9		FURNITURE LAYOUT - GROUND FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100009-R00	
10		FURNITURE LAYOUT - FIRST FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100010-R00	
11		FURNITURE LAYOUT - SECOND FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100011-R00	
12		FURNITURE LAYOUT -	PKG-2-DH-SDH-ARC-	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		THIRD FLOOR PLAN	GFC - 100012-R00	
13		FURNITURE LAYOUT - FOURTH FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100013-R00	
14		FURNITURE LAYOUT - FIFTH FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100014-R00	
15		FURNITURE LAYOUT - TERRACE FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100014A-R00	
16	BUILDING SECTIONS	SECTION 'A-A'	PKG-2-DH-SDH-ARC-GFC - 100015-R00	
17		BUILDING SECTIONS (SECTION BB)	PKG-2-DH-SDH-ARC-GFC - 100016-R00	
18		BUILDING SECTIONS (SECTION CC)	PKG-2-DH-SDH-ARC-GFC - 100017-R00	
19	BUILDING ELEVATION	FRONT SIDE ELEVATION (ELEVATION -A)	PKG-2-DH-SDH-ARC-GFC - 100018-R00	SHOP DRAWING FOR ALL GLAZING AND FAÇADE WORK
20		REAR SIDE ELEVATION (ELEVATION -B)	PKG-2-DH-SDH-ARC-GFC - 100019-R00	
21		EAST SIDE ELEVATION (ELEVATION -C)	PKG-2-DH-SDH-ARC-GFC - 100020-R00	
22		WEST SIDE ELEVATION (ELEVATION -D)	PKG-2-DH-SDH-ARC-GFC - 100021-R00	
23		SKIN SECTIONS - '1-1' &'2-2'	PKG-2-DH-SDH-ARC-GFC - 100022-R00	
24		SKIN SECTIONS - '3-3' & '4-4',	PKG-2-DH-SDH-ARC-GFC - 100023-R00	
25		SKIN SECTIONS - '5-5' & '6-6'	PKG-2-DH-SDH-ARC-GFC - 100024-R00	
26		SKIN SECTIONS - '7-7' & '8-8'	PKG-2-DH-SDH-ARC-GFC - 100025-R00	
27		SKIN SECTIONS - '9-9' & '10-10'	PKG-2-DH-SDH-ARC-GFC - 100026-R00	
28		SKIN SECTIONS - '11-11', '12-12' & '15-15'	PKG-2-DH-SDH-ARC-GFC - 100027-R00	
29		SKIN SECTIONS - '13-13' & '14-14'	PKG-2-DH-SDH-ARC-GFC - 100028-R00	
30	STAIRCASE AND LIFT LOBBY DETAILS	STAIRCASE- 01 DETAILS	PKG-2-DH-SDH-ARC-GFC - 100029-R00	
31		STAIRCASE- 02 DETAILS	PKG-2-DH-SDH-ARC-GFC - 100030-R00	
32		STAIRCASE- 03 DETAILS	PKG-2-DH-SDH-ARC-GFC - 100031-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
33		LIFT- 01 DETAILS BETWEEN GRID B1,B2 TO C1,C2	PKG-2-DH-SDH-ARC-GFC - 100032-R00	SHOP DRAWING FOR ALL LIFTS WORK
34		LIFT- 02 DETAILS BETWEEN GRID D7,D8 TO E7,E8	PKG-2-DH-SDH-ARC-GFC - 100033-R00	
35		LIFT- 03 DETAILS BETWEEN GRID F12,F13 TO K12,K13	PKG-2-DH-SDH-ARC-GFC - 100034-R00	
36	ENLARGED DETAILS	TYPICAL PARAPET WALL AND WATERPROOFING DETAILS	PKG-2-DH-SDH-ARC-GFC - 100035-R00	
37		GROUND & FIRST RAMP FLOOR PLANS	PKG-2-DH-SDH-ARC-GFC - 100036-R00	
38		SECOND & THIRD RAMP FLOOR PLANS	PKG-2-DH-SDH-ARC-GFC - 100037-R00	
39		FOURTH & FIFTH RAMP FLOOR PLANS	PKG-2-DH-SDH-ARC-GFC - 100038-R00	
40		RAMP SECTION 'A-A'	PKG-2-DH-SDH-ARC-GFC - 100039-R00	
41		RAMP SECTION 'B-B'	PKG-2-DH-SDH-ARC-GFC - 100040-R00	
42		JOINERY DETAILS - 01	PKG-2-DH-SDH-ARC-GFC - 100041-R00	SHOP DRAWINGS FOR ALL ALUMINIUM, UPVC WINDOW WORK
43		JOINERY DETAILS - 02	PKG-2-DH-SDH-ARC-GFC - 100042-R00	
44		JOINERY DETAILS - 03	PKG-2-DH-SDH-ARC-GFC - 100043-R00	
45		JOINERY DETAILS - 04	PKG-2-DH-SDH-ARC-GFC - 100044-R00	
46		JOINERY DETAILS - 05	PKG-2-DH-SDH-ARC-GFC - 100045-R00	
47		JOINERY DETAILS - 06	PKG-2-DH-SDH-ARC-GFC - 100046-R00	
48		JOINERY DETAILS - 07	PKG-2-DH-SDH-ARC-GFC - 100047-R00	
49		WATER TANK PLAN DETAIL OVER STAIR CASE 02,03,LANUDRY	PKG-2-DH-SDH-ARC-GFC - 100048-R00	
50	FALSE CEILING DETAILS	FALSE CEILING LAYOUT (GROUND FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100049-R00	SHOP DRAWING FOR FIXING DETAILS WORK
51		FALSE CEILING LAYOUT (FIRST	PKG-2-DH-SDH-ARC-GFC - 100050-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		FLOOR)		
52		FALSE CEILING LAYOUT (SECOND FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100051-R00	
53		FALSE CEILING LAYOUT (THIRD FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100052-R00	
54		FALSE CEILING LAYOUT (FOURTH FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100053-R00	
55		FALSE CEILING LAYOUT (FIFTH FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100054-R00	
56	FLOORING DETAILS	FLOORING & WALL FINISHING LAYOUT (GROUND FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100055-R00	
57		FLOORING & WALL FINISHING LAYOUT (FIRST FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100056-R00	
58		FLOORING & WALL FINISHING LAYOUT (SECOND FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100057-R00	
59		FLOORING & WALL FINISHING LAYOUT (THIRD FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100058-R00	
60		FLOORING & WALL FINISHING LAYOUT (FOURTH FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100059-R00	
61		FLOORING & WALL FINISHINGLAYOUT (FIFTH FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100060-R00	
62		FLOORING & WALL FINISHING LAYOUT (TERRACE FLOOR)	PKG-2-DH-SDH-ARC-GFC - 100061-R00	
63	TOILET DETAILS	TOILET STANDARD DETAIL	PKG-2-DH-SDH-ARC-GFC - 100062-R00	
64		TOILET DETAILS - 01	PKG-2-DH-SDH-ARC-GFC - 100063-R00	
65		TOILET DETAILS - 02	PKG-2-DH-SDH-ARC-GFC - 100064-R00	
66		TOILET DETAILS - 03	PKG-2-DH-SDH-ARC-GFC - 100065-R00	
67	SITE DEVELOPMENT	SITE PLAN	PKG-2-DH-SDH-ARC-GFC - 100066-R00	
68		SITE SECTION & ROAD FOOT PATH DETAILS-1	PKG-2-DH-SDH-ARC-GFC - 100067-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
69		SITE SECTION & ROAD FOOT PATH DETAILS-1	PKG-2-DH-SDH-ARC-GFC - 100067A-R00	
70		DRAIN LAYOUT	PKG-2-DH-SDH-ARC-GFC - 100068-R00	
71		COMPOUND WALL , FENCING AND GATE LOCATION PLAN	PKG-2-DH-SDH-ARC-GFC - 100069-R00	
72		COMPOUND WALL ,FENCING AND DRAIN SECTIONS DETAILS	PKG-2-DH-SDH-ARC-GFC - 100070-R00	
73		FRONT ENTRANCE GATE SECTION AND ELEVATION DETAIL	PKG-2-DH-SDH-ARC-GFC - 100071-R00	SHOP DRAWING FOR GATE WORK
74		LANDSCAPE LAYOUT	PKG-2-DH-SDH-ARC-GFC - 100072-R00	
75		SITE PLAN CO-ORDINATION (XY) PLAN	PKG-2-DH-SDH-ARC-GFC - 100073-R00	
76		TOPOGRAPHICAL SURVEY PLAN WITH PROPOSED BUILDING	PKG-2-DH-SDH-ARC-GFC - 100074-R00	
77	SIGNAGE DETAILS	GROUND FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100077-R00	SHOP DRAWING FOR ALL SIGNAGE WORK
78		SIGNAGE DETAILS FIRST FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100078-R00	
79		SIGNAGE DETAILS SECOND FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100079-R00	
80		SIGNAGE DETAILS THIRD FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100080-R00	
81		SIGNAGE DETAILS FOURTH FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100081-R00	
82		SIGNAGE DETAILS FIFTH FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100082-R00	
83		SIGNAGE DETAILS TERRACE FLOOR PLAN	PKG-2-DH-SDH-ARC-GFC - 100083-R00	
84		EXTERNAL SIGNAGE LAYOUT	PKG-2-DH-SDH-ARC-GFC - 100084-R00	
85	ANCILLARY BUILDINGS	ESS BUILDING	PKG-2-DH-SDH-ARC-GFC - 100085-R00	
86		MEDICAL GAS PLANT (MGPS)	PKG-2-DH-SDH-ARC-GFC - 100086-R00	
87		U.G SUMP 3.0LAKHS LIT.(CAPACITY)POTABLE,FIRE&RAWPUMP DETAIL	PKG-2-DH-SDH-ARC-GFC - 100087-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
88		STP 100 KLD PLAN & SECTION	PKG-2-DH-SDH-ARC-GFC - 100088-R00	
89		ETP 20 KLD PLAN & SECTION	PKG-2-DH-SDH-ARC-GFC - 100089-R00	
90		KITCHEN PLAN,SECTION & ELEVATION	PKG-2-DH-SDH-ARC-GFC - 100090-R01	

STRUCTURAL

S. NO.	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
1	FOUNDATION	PILE LAYOUT PLAN	PKG-2-DH-SDH-STR-GFC - 100204-R00
2		RAFT & PEDESTAL LAYOUT PLAN	PKG-2-DH-SDH-STR-GFC - 100205-R00
3		PILE RAFT BOTTOM REINFORCEMENT X DIRECTION	PKG-2-DH-SDH-STR-GFC - 100206-R00
4		PILE RAFT BOTTOM REINFORCEMENT Y DIRECTION	PKG-2-DH-SDH-STR-GFC - 100207-R00
5		PILE RAFT TOP REINFORCEMENT X DIRECTION	PKG-2-DH-SDH-STR-GFC - 100208-R00
6		PILE RAFT TOP REINFORCEMENT Y DIRECTION	PKG-2-DH-SDH-STR-GFC - 100209-R00
7		PILE RAFT SECTION DETAIL	PKG-2-DH-SDH-STR-GFC - 100210-R00
8		GENERAL NOTES FOR PILE	PKG-2-DH-SDH-STR-GFC - 100211-R00
9	COLUMN AND SHEAR WALL	COLUMN & SHEAR WALL LAYOUT PLAN	PKG-2-DH-SDH-STR-GFC - 100212-R00
10		COLUMN REINFORCEMENT DETAIL - 1 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100213-R00
11		COLUMN & SHEAR WALL REINFORCEMENT DETAIL - 1 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100214-R00
12		SHEAR WALL REINFORCEMENT DETAIL -3 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100215-R00
13		SHEAR WALL REINFORCEMENT DETAIL -4 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100215A-R00
14		SHEAR WALL REINFORCEMENT DETAIL -5 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100215B-R00
15		SHEAR WALL REINFORCEMENT DETAIL -6 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100215C-R00
16		COLUMN REINFORCEMENT	PKG-2-DH-SDH-STR-GFC -

S. NO.	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
		DETAIL - 1 (PART-02)	100216-R00
17		COLUMN REINFORCEMENT DETAIL - 2 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100217-R00
18		COLUMN REINFORCEMENT DETAIL - 3(PART-02)	PKG-2-DH-SDH-STR-GFC - 100218-R00
19		SHEAR WALL REINFORCEMENT DETAIL - 4 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100219-R00
20		SHEAR WALL REINFORCEMENT DETAIL - 5 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100220-R00
21		SHEAR WALL REINFORCEMENT DETAIL - 6 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100221-R00
22		SHEAR WALL REINFORCEMENT DETAIL - 7 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100221A-R00
23		SHEAR WALL REINFORCEMENT DETAIL - 8 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100221B-R00
24		SHEAR WALL REINFORCEMENT DETAIL - 9 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100221C-R00
25	GROUND FLOOR ROOF BEAM & SLAB	GROUND FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100235-R00
26		GROUND FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100236-R00
27		GROUND FLOOR ROOF BEAM REINFORCEMENT DETAILS-1 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100237-R00
28		GROUND FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100238-R00
29		GROUND FLOOR ROOF BEAM REINFORCEMENT DETAILS-3 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100239-R00
30		GROUND FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-02)	PKG-2-DH-SDH-STR-GFC - 100240-R00
31		GROUND FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL (PART-02)	PKG-2-DH-SDH-STR-GFC - 100241-R00
32		GROUND FLOOR ROOF BEAM REINFORCEMENT DETAILS-1 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100242-R00
33		GROUND FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100243-R00
34		GROUND FLOOR ROOF BEAM	PKG-2-DH-SDH-STR-GFC -

S. NO.	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
		REINFORCEMENT DETAILS-3 (PART-02)	100244-R00
35		GROUND FLOOR ROOF BEAM REINFORCEMENT DETAILS-4 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100245-R00
36	FIRST FLOOR ROOF BEAM & SLAB	FIRST FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100246-R00
37		FIRST FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100247-R00
38		FIRST FLOOR ROOF BEAM REINFORCEMENT DETAILS-1 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100248-R00
39		FIRST FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100249-R00
40		FIRST FLOOR ROOF BEAM REINFORCEMENT DETAILS-3 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100250-R00
41		FIRST FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-02)	PKG-2-DH-SDH-STR-GFC - 100251-R00
42		FIRST FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL (PART-02)	PKG-2-DH-SDH-STR-GFC - 100252-R00
43		FIRST FLOOR ROOF BEAM REINFORCEMENT DETAILS-1 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100253-R00
44		FIRST FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100254-R00
45		FIRST FLOOR ROOF BEAM REINFORCEMENT DETAILS-3 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100255-R00
46		FIRST FLOOR ROOF BEAM REINFORCEMENT DETAILS-4 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100256-R00
47	SECOND FLOOR ROOF BEAM & SLAB	SECOND FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100257-R00
48		SECOND FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100258-R00
49		SECOND FLOOR ROOF BEAM REINFORCEMENT DETAILS-1	PKG-2-DH-SDH-STR-GFC -

S. NO.	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
		(PART-01)	100259-R00
50		SECOND FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100260-R00
51		SECOND FLOOR ROOF BEAM REINFORCEMENT DETAILS-3 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100261-R00
52		SECOND FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-02)	PKG-2-DH-SDH-STR-GFC - 100262-R00
53		SECOND FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL (PART-02)	PKG-2-DH-SDH-STR-GFC - 100263-R00
54		SECOND FLOOR ROOF BEAM REINFORCEMENT DETAILS-1 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100264-R00
55		SECOND FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100265-R00
56		SECOND FLOOR ROOF BEAM REINFORCEMENT DETAILS-3 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100266-R00
57		SECOND FLOOR ROOF BEAM REINFORCEMENT DETAILS-4 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100267-R00
58	THIRD FLOOR ROOF BEAM & SLAB	THIRD FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100268-R00
59		THIRD FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL (PART-01)	PKG-2-DH-SDH-STR-GFC - 100269-R00
60		THIRD FLOOR ROOF BEAM REINFORCEMENT DETAILS-1 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100270-R00
61		THIRD FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100271-R00
62		THIRD FLOOR ROOF BEAM REINFORCEMENT DETAILS-3 (PART-01)	PKG-2-DH-SDH-STR-GFC - 100272-R00
63		THIRD FLOOR ROOF BEAM LAYOUT PLAN AND SECTION DETAIL (PART-02)	PKG-2-DH-SDH-STR-GFC - 100273-R00
64		THIRD FLOOR ROOF SLAB LAYOUT PLAN AND REINFORCEMENT DETAIL	PKG-2-DH-SDH-STR-GFC - 100274-R00

S. NO.	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
		(PART-02)	
65		THIRD FLOOR ROOF BEAM REINFORCEMENT DETAILS-1 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100275-R00
66		THIRD FLOOR ROOF BEAM REINFORCEMENT DETAILS-2 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100276-R00
67		THIRD FLOOR ROOF BEAM REINFORCEMENT DETAILS-3 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100277-R00
68		THIRD FLOOR ROOF BEAM REINFORCEMENT DETAILS-4 (PART-02)	PKG-2-DH-SDH-STR-GFC - 100278-R00

WATER SUPPLY

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A-LOCATION PLAN	GROUND FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-SDH-PHE-GFC-100501-R00	
2		FIRST FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-SDH-PHE-GFC-100502-R00	
3		SECOND FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-SDH-PHE-GFC-100503-R00	
4		THIRD FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-SDH-PHE-GFC-100504-R00	
5		FOURTH FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-SDH-PHE-GFC-100505-R00	
6		FIFTH FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-SDH-PHE-GFC-100506-R00	
7		TERRACE FLOOR PLAN (WET AREA LOCATION)	PKG-2-DH-SDH-PHE-GFC-100507-R00	
8	B-INTERNAL WATER SUPPLY LAYOUT	GROUND FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100508-R00	1. AS PER THE SITE CONDITION IF ANY CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS.
9		FIRST FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100509-R00	
10		SECOND FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100510-R00	
11		THIRD FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100511-R00	
12		FOURTH FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100512-R00	
13		FIFTH FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100513-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
14		TERRACE FLOOR PLAN (WATER SUPPLY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100514-R00	
15		FIRST FLOOR PLAN ROOF RAIN WATER LAYOUT	PKG-2-DH-SDH-PHE-GFC-100515-R00	
16		TERRACE FLOOR PLAN ROOF RAIN WATER LAYOUT	PKG-2-DH-SDH-PHE-GFC-100516-R00	
17		ROOF FLOOR PLAN ROOF RAIN WATER LAYOUT	PKG-2-DH-SDH-PHE-GFC-100517-R00	
18	C-INTERNAL SANITARY LAYOUT	GROUND FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100518-R00	
19		FIRST FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100519-R00	
20		SECOND FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100520-R00	
21		THIRD FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100521-R00	
22		FOURTH FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100522-R00	
23		FIFTH FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100523-R00	
24		TERRACE FLOOR PLAN (SANITARY LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100524-R00	
25	D- WATER SUPPLY DETAIL AND SCHEMATIC	ROOF FLOOR PLAN (OVERALL SERVICE FLOOR PLAN)	PKG-2-DH-SDH-PHE-GFC-100525-R00	SHOP DRAWINGS
26		SERVICE FLOOR PLAN PART LAYOUT - DETAIL A	PKG-2-DH-SDH-PHE-GFC-100526-R00	SHOP DRAWINGS
27		SERVICE FLOOR PLAN PART LAYOUT - DETAIL B	PKG-2-DH-SDH-PHE-GFC-100527-R00	SHOP DRAWINGS
28		SERVICE FLOOR PLAN PART LAYOUT - DETAIL C	PKG-2-DH-SDH-PHE-GFC-100528-R00	SHOP DRAWINGS
29		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT - 01 DETAIL	PKG-2-DH-SDH-PHE-GFC-100529-R00	
30		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-02&03DETAIL	PKG-2-DH-SDH-PHE-GFC-100530-R00	
31		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-04&05 DETAIL	PKG-2-DH-SDH-PHE-GFC-100531-R00	
32		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-07 DETAIL	PKG-2-DH-SDH-PHE-GFC-100532-R00	
33		INTERNAL WATER SUPPLY	PKG-2-DH-SDH-PHE-	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		ARRANGEMENT SHAFT-06,08&09 DETAIL	GFC-100533-R00	
34		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-10, 11&12 DETAIL	PKG-2-DH-SDH-PHE-GFC-100534-R00	
35		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-13&15 DETAIL	PKG-2-DH-SDH-PHE-GFC-100535-R00	
36		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-14, 16&17 DETAIL	PKG-2-DH-SDH-PHE-GFC-100536-R00	
37		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-18, 19 & 20 DETAIL	PKG-2-DH-SDH-PHE-GFC-100537-R00	
38		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-21, 23&24 DETAIL	PKG-2-DH-SDH-PHE-GFC-100538-R00	
39	D- WATER SUPPLYDETAIL AND SCHEMATIC	INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-22&25 DETAIL	PKG-2-DH-SDH-PHE-GFC-100539-R00	
40		INTERNAL WATER SUPPLY ARRANGEMENT SHAFT-26, 27&28 DETAIL	PKG-2-DH-SDH-PHE-GFC-100540-R00	
41		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 01 (SHAFT-01&02)	PKG-2-DH-SDH-PHE-GFC-100541-R00	1. AS PER THE SITE CONDITION IF ANY CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS.
42		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 02(SHAFT-03&04)	PKG-2-DH-SDH-PHE-GFC-100542-R00	
43		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 03 (SHAFT-05&06)	PKG-2-DH-SDH-PHE-GFC-100543-R00	
44		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 04 (SHAFT-07&08)	PKG-2-DH-SDH-PHE-GFC-100544-R00	
45		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 05(SHAFT-09,10&11)	PKG-2-DH-SDH-PHE-GFC-100545-R00	
46		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 06(SHAFT-12&13)	PKG-2-DH-SDH-PHE-GFC-100546-R00	
47		SCHEMATIC DIAGRAM -	PKG-2-DH-SDH-PHE-	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 07(SHAFT-14&15)	GFC-100547-R00	
48		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 08(SHAFT-16&17)	PKG-2-DH-SDH-PHE-GFC-100548-R00	
49		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 09(SHAFT-18&19)	PKG-2-DH-SDH-PHE-GFC-100549-R00	
50		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 10(SHAFT-20&21)	PKG-2-DH-SDH-PHE-GFC-100550-R00	
51		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 11(SHAFT-22&24)	PKG-2-DH-SDH-PHE-GFC-100551-R00	
52		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 12 (SHAFT-23&25)	PKG-2-DH-SDH-PHE-GFC-100552-R00	
53		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 13(SHAFT-26&27)	PKG-2-DH-SDH-PHE-GFC-100553-R00	
54		SCHEMATIC DIAGRAM - INTERNAL WATER SUPPLY ARRANGEMENT DETAIL - 14(SHAFT-28)	PKG-2-DH-SDH-PHE-GFC-100554-R00	
55	E- SANITARY DETAIL AND SCHEMATIC	INTERNAL SANITARY ARRANGEMENT SHAFT - 01&03 DETAIL	PKG-2-DH-SDH-PHE-GFC-100555-R00	
56		INTERNAL SANITARY ARRANGEMENT SHAFT-02,03&04DETAIL	PKG-2-DH-SDH-PHE-GFC-100556-R00	
57		NTERNAL SANITARY ARRANGEMENT SHAFT-04,05,06&08 DETAIL	PKG-2-DH-SDH-PHE-GFC-100557-R00	
58		INTERNAL SANITARY ARRANGEMENT SHAFT-07,08,09&10 DETAIL	PKG-2-DH-SDH-PHE-GFC-100558-R00	
59		INTERNAL SANITARY ARRANGEMENT SHAFT-11,12,14,15&18 DETAIL	PKG-2-DH-SDH-PHE-GFC-100559-R00	
60		INTERNAL SANITARY ARRANGEMENT	PKG-2-DH-SDH-PHE-	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		SHAFT-13&16 DETAIL	GFC-100560-R00	
61		INTERNAL SANITARY ARRANGEMENT SHAFT-17,19&20 DETAIL	PKG-2-DH-SDH-PHE-GFC-100561-R00	
62		INTERNAL SANITARY ARRANGEMENT SHAFT-21,23,24&25 DETAIL	PKG-2-DH-SDH-PHE-GFC-100562-R00	
63		INTERNAL SANITARY ARRANGEMENT SHAFT-22,26,27&28 DETAIL	PKG-2-DH-SDH-PHE-GFC-100563-R00	
64		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 01 (SHAFT-01&02)	PKG-2-DH-SDH-PHE-GFC-100564-R00	
65		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 02 (SHAFT-03,04&05)	PKG-2-DH-SDH-PHE-GFC-100565-R00	
66		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 03 (SHAFT-06&07)	PKG-2-DH-SDH-PHE-GFC-100566-R00	
67		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 04 (SHAFT-08&09)	PKG-2-DH-SDH-PHE-GFC-100567-R00	
68		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 05 (SHAFT-10&11)	PKG-2-DH-SDH-PHE-GFC-100568-R00	
69	E- SANITARY DETAIL AND SCHEMATIC	SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 06 (SHAFT-12&13)	PKG-2-DH-SDH-PHE-GFC-100569-R00	
70		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 07 (SHAFT-14,15&16)	PKG-2-DH-SDH-PHE-GFC-100570-R00	
71		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 08 (SHAFT-17,18&19)	PKG-2-DH-SDH-PHE-GFC-100571-R00	
72		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 09 (SHAFT-20,21&22)	PKG-2-DH-SDH-PHE-GFC-100572-R00	
73		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL -	PKG-2-DH-SDH-PHE-GFC-100573-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		10 (SHAFT-23,24&25)		
74		SCHEMATIC DIAGRAM-INTERNAL SANITARY ARRANGEMENT DETAIL - 11 (SHAFT-26,27&28)	PKG-2-DH-SDH-PHE-GFC-100574-R00	
75	ANCILLARY LAYOUT	MGPS,ESS,UG SUMP & STP ROOF RAIN WATER DETAIL DRAWING	PKG-2-DH-SDH-PHE-GFC-100575-R00	
76		KITCHEN BUILDING INTERNAL WATER SUPPLY,SANITARY ARRANGEMENT & ROOF RAIN WATER DETAIL DRAWING	PKG-2-DH-SDH-PHE-GFC-100576-R00	
77	F - EXTERNAL LAYOUT	EXTERNAL POTABLE WATER SUPPLY LAYOUT	PKG-2-DH-SDH-PHE-GFC-100631-R00	PUMP INSTALLATION SHOP DRAWINGS
78		EXTERNAL FLUSHING WATER SUPPLY	PKG-2-DH-SDH-PHE-GFC-100632-R00	
79		EXTERNAL SEWER (OVERALL LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100633-R00	1. AS PER THE SITE CONDITION IF ANY CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS.
80		EXTERNAL SEWER (PART LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100634-R00	
81		EXTERNAL ROOF RAIN WATER (OVERALL LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100635-R00	
82		EXTERNAL ROOF RAIN WATER (PART LAYOUT)	PKG-2-DH-SDH-PHE-GFC-100636-R00	
83		MANHOLE & CHAMBER DETAIL	PKG-2-DH-SDH-PHE-GFC-100637-R00	
84	STP 100KLD	ARCHITECTURAL LINE DIAGRAM		SHOP DRAWINGS SHALL BE PROVIDED BY CONTRACTOR
85	WTP	SPECIFICATION		1. AS PER THE SITE CONDITION IF ANY CHANAGES REQUIRED CONTRACTOR TO BE PROVIDE THE DETAIL DRAWINGS. (CIVIL) 2. MECHANICAL EQUIPMENT AND PEDESTAL DETAILS. 3. PUDDLE FLANGE DETAILS FOR INTERNAL TANK 4. PUMP

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
				INSTALLATION SHOP DRAWINGS
86	POTABLE / DRAIN PUMP	SPECIFICATION		1. PUMP INSTALLATION SHOP DRAWINGS 2. PUDDLE FLANGE DETAILS FOR INTERNAL TANK

FIRE FIGHTING

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A-MANUAL FIRE ALARM SYSTEM	GROUND FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM (HYDRANT, EXTINGUSHER,MCP)	PKG-2-DH-SDH-FF-GFC-100901-R00	SHOP DRAWING SHALL BE PROVIDED BY THE CONTRACTOR.
2		FIRST FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM (HYDRANT, EXTINGUSHER, MCP)	PKG-2-DH-SDH-FF-GFC-100902-R00	
3		SECOND FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM (HYDRANT, EXTINGUSHER, MCP)	PKG-2-DH-SDH-FF-GFC-100903-R00	
4		THIRD FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM (HYDRANT, EXTINGUSHER, MCP)	PKG-2-DH-SDH-FF-GFC-100904-R00	
5		FOURTH FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM (HYDRANT, EXTINGUSHER, MCP)	PKG-2-DH-SDH-FF-GFC-100905-R00	
6		FIFTH FLOOR PLAN INTERNAL MANUAL FIRE ALARM SYSTEM (HYDRANT, EXTINGUSHER, MCP)	PKG-2-DH-SDH-FF-GFC-100906-R00	
7		SCHEMATIC DIAGRAM INTERNAL MANUAL FIRE ALARM SYSTEM (HYDRANT, EXTINGUSHER, MCP)	PKG-2-DH-SDH-FF-GFC-100906A-R00	
8	B-AUTOMATIC FIRE ALAM SYSTEM	GROUND FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-SDH-FF-GFC-100907-R00	SHOP DRAWING SHALL BE PROVIDED BY THE CONTRACTOR.
9		FIRST FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-SDH-FF-GFC-100908-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
10		SECOND FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-SDH-FF-GFC-100909-R00	
11		THIRD FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-SDH-FF-GFC-100910-R00	
12		FOURTH FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-SDH-FF-GFC-100911-R00	
13		FIFTH FLOOR PLAN INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-SDH-FF-GFC-100912-R00	
14		SCHEMATIC DIAGRAM INTERNAL AUTOMATIC FIRE ALARM SYSTEM	PKG-2-DH-SDH-FF-GFC-100912A-R00	
15	C-AUTOMATIC SPRINKLER SYSTEM	GROUND FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100913-R00	SHOP DRAWING SHALL BE PROVIDED BY THE CONTRACTOR.
16		FIRST FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100914-R00	
17		SECOND FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100915-R00	
18		THIRD FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100916-R00	
19		FOURTH FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100917-R00	
20		FIFTH FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100918-R00	
21		TERRACE FLOOR PLAN INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100919-R00	
22		SCHEMATIC DIAGRAM INTERNAL FIRE FIGHTING SPRINKLER SYSTEM	PKG-2-DH-SDH-FF-GFC-100920-R00	
23	D-FIRE ESCAPE	GROUND FLOOR PLAN FIRE ESCAPE	PKG-2-DH-SDH-FF-GFC-100921-R00	
24		FIRST FLOOR PLAN FIRE ESCAPE	PKG-2-DH-SDH-FF-GFC-100922-R00	
25		SECOND FLOOR PLAN FIRE ESCAPE	PKG-2-DH-SDH-FF-GFC-100923-R00	
26		THIRD FLOOR PLAN FIRE	PKG-2-DH-SDH-FF-	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		ESCAPE	GFC-100924-R00	
27		FORTH FLOOR PLAN FIRE ESCAPE	PKG-2-DH-SDH-FF-GFC-100925-R00	
28		FIFTH FLOOR PLAN FIRE ESCAPE	PKG-2-DH-SDH-FF-GFC-100926-R00	
29		STANDARD TYPICAL DRAWINGS	PKG-2-DH-SDH-FF-GFC-100927-R00	
30	E-EXTERNAL FIRE FIGHTING LAYOUT	EXTERNAL FIRE FIGHTING LAYOUT	PKG-2-DH-SDH-FF-GFC-100928-R00	SHOP DRAWING SHALL BE PROVIDED BY THE CONTRACTOR.
31		UG SUMP - 3.0 LAKHS LIT. (CAPACITY) POTABLE, FIRE & RAW PUMP DETAIL	PKG-2-DH-SDH-FF-GFC-100929-R00	
32	F-ANCILLARY BUILDINGS	ESS BUILDING,KITCHEN BUILDING & MGPS BUILDING INTERNAL FIRE FIGHTING SYSTEM	PKG-2-DH-SDH-FF-GFC-100930-R00	

ELECTRICAL

S.NO	DRAWING TITLE	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A - LIGHTING LAYOUT	GROUND FLOOR LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100701-R00	
2		FIRST FLOOR LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100702-R00	
3		SECOND FLOOR LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100703-R00	
4		THIRD FLOOR LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100704-R00	
5		FOURTH FLOOR LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100705-R00	
6		FIFTH FLOOR LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100706-R00	
7		TERRACE FLOOR LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100707-R00	
8	B - POWER LAYOUT	GROUND FLOOR POWER LAYOUT	PKG-2-DH-SDH-ELE-GFC-100708-R00	
9		FIRST FLOOR POWER LAYOUT	PKG-2-DH-SDH-ELE-GFC-100709-R00	
10		SECOND FLOOR POWER LAYOUT	PKG-2-DH-SDH-ELE-GFC-100710-R00	
11		THIRD FLOOR POWER	PKG-2-DH-SDH-ELE-	

S.NO	DRAWING TITLE	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
		LAYOUT	GFC-100711-R00	
12		FOURTH FLOOR POWER LAYOUT	PKG-2-DH-SDH-ELE-GFC-100712-R00	
13		FIFTH FLOOR POWER LAYOUT	PKG-2-DH-SDH-ELE-GFC-100713-R00	
14		TERRACE FLOOR POWER LAYOUT	PKG-2-DH-SDH-ELE-GFC-100714-R00	
15	C - SITE PLAN	EXTERNAL LIGHTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100715-R00	AS PER APPROVED SUPPLIER SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
16		EXTERNAL EARTHING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100716-R00	
17		EXTERNAL HT/LT CABLE ROUTING LAYOUT	PKG-2-DH-SDH-ELE-GFC-100717-R00	
18	D-ELV LAYOUT	GROUND FLOOR ELV LAYOUT	PKG-2-DH-SDH-ELE-GFC-100718-R00	AS PER APPROVED SUPPLIER SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
19		FIRST FLOOR ELV LAYOUT	PKG-2-DH-SDH-ELE-GFC-100719-R00	
20		SECOND FLOOR ELV LAYOUT	PKG-2-DH-SDH-ELE-GFC-100720-R00	
21		THIRD FLOOR ELV LAYOUT	PKG-2-DH-SDH-ELE-GFC-100721-R00	
22		FOURTH FLOOR ELV LAYOUT	PKG-2-DH-SDH-ELE-GFC-100722-R00	
23		FIFTH FLOOR ELV LAYOUT	PKG-2-DH-SDH-ELE-GFC-100723-R00	
24		TERRACE FLOOR ELV LAYOUT	PKG-2-DH-SDH-ELE-GFC-100724-R00	
25	E-PA LAYOUT	GROUND FLOOR PA LAYOUT	PKG-2-DH-SDH-ELE-GFC-100725-R00	
26		FIRST FLOOR PA LAYOUT	PKG-2-DH-SDH-ELE-GFC-100726-R00	
27		SECOND FLOOR PA LAYOUT	PKG-2-DH-SDH-ELE-GFC-100727-R00	
28		THIRD FLOOR PA LAYOUT	PKG-2-DH-SDH-ELE-GFC-100728-R00	
29		FOURTH FLOOR PA LAYOUT	PKG-2-DH-SDH-ELE-GFC-100729-R00	
30		FIFTH FLOOR PA LAYOUT	PKG-2-DH-SDH-ELE-GFC-100730-R00	
31		TERRACE FLOOR PA LAYOUT	PKG-2-DH-SDH-ELE-GFC-100731-R00	

S.NO	DRAWING TITLE	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
32	F - CABLE TRAY	GROUND FLOOR CABLE TRAY LAYOUT	PKG-2-DH-SDH-ELE-GFC-100732-R00	
33		FIRST FLOOR CABLE TRAY LAYOUT	PKG-2-DH-SDH-ELE-GFC-100733-R00	
34		SECOND FLOOR CABLE TRAY LAYOUT	PKG-2-DH-SDH-ELE-GFC-100734-R00	
35		THIRD FLOOR CABLE TRAY LAYOUT	PKG-2-DH-SDH-ELE-GFC-100735-R00	
36		FOURTH FLOOR CABLE TRAY LAYOUT	PKG-2-DH-SDH-ELE-GFC-100736-R00	
37		FIFTH FLOOR CABLE TRAY LAYOUT	PKG-2-DH-SDH-ELE-GFC-100737-R00	
38		TERRACE FLOOR CABLE TRAY LAYOUT	PKG-2-DH-SDH-ELE-GFC-100738-R00	
39	G - ELECTRICAL SLD LAYOUT	ELECTRICAL MAIN SLD	PKG-2-DH-SDH-ELE-GFC-100739-R00	AS PER APPROVED SUPPLIER SHOP DRAWINGS FOR HT,LT PANEL, TRANSFORMER, DG SET,UPS AND SOLAR SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR.
40		ELECTRICAL SLD - 1	PKG-2-DH-SDH-ELE-GFC-100740-R00	
41		ELECTRICAL SLD - 2	PKG-2-DH-SDH-ELE-GFC-100741-R00	
42		ELECTRICAL SLD - 3	PKG-2-DH-SDH-ELE-GFC-100742-R00	
43		PA SYSTEM SINGLE LINE DIAGRAM	PKG-2-DH-SDH-ELE-GFC-100743-R00	AS PER APPROVED SUPPLIER SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
44		EARTHING SYSTEMATICS	PKG-2-DH-SDH-ELE-GFC-100744-R00	
45	H - ANCILLARY LAYOUT	POWER HOUSE (ELECTRICAL LAYOUT)	PKG-2-DH-SDH-ELE-GFC-100745-R00	
46		UG SUMP (BASEMENT FLOOR ELECTRICAL LAYOUT)	PKG-2-DH-SDH-ELE-GFC-100746-R00	
47		UG SUMP (GROUND FLOOR ELECTRICAL LAYOUT)	PKG-2-DH-SDH-ELE-GFC-100747-R00	
48		ETP STP (ELECTRICAL LAYOUT)	PKG-2-DH-SDH-ELE-GFC-100748-R00	
49		MGPS (ELECTRICAL LAYOUT)	PKG-2-DH-SDH-ELE-GFC-100749-R00	
50		KITCHEN (ELECTRICAL LAYOUT)	PKG-2-DH-SDH-ELE-GFC-100750-R00	

HVAC

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	HVAC FLOOR PLAN	AIRCONDITIONING LOCATION PLAN - GROUND FLOOR	PKG-2-DH-SDH-HVAC-GFC-100801-R00	
2		AIRCONDITIONING LOCATION PLAN - FIRST FLOOR	PKG-2-DH-SDH-HVAC-GFC-100802-R00	
3		AIRCONDITIONING LOCATION PLAN - SECOND FLOOR	PKG-2-DH-SDH-HVAC-GFC-100803-R00	
4		AIRCONDITIONING LOCATION PLAN - THIRD FLOOR	PKG-2-DH-SDH-HVAC-GFC-100804-R00	
5		AIRCONDITIONING LOCATION PLAN - FOURTH FLOOR	PKG-2-DH-SDH-HVAC-GFC-100805-R00	
6		AIRCONDITIONING LOCATION PLAN - FIFTH FLOOR	PKG-2-DH-SDH-HVAC-GFC-100806-R00	
7		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - GROUND FLOOR	PKG-2-DH-SDH-HVAC-GFC-100807-R00	SHOP DRAWINGS SHALL BE PROVIDED BY CONTRACTOR
8		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - FIRST FLOOR	PKG-2-DH-SDH-HVAC-GFC-100808-R00	
9		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - SECOND FLOOR	PKG-2-DH-SDH-HVAC-GFC-100809-R00	
10		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - THIRD FLOOR	PKG-2-DH-SDH-HVAC-GFC-100810-R00	
11		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - FOURTH FLOOR	PKG-2-DH-SDH-HVAC-GFC-100811-R00	
12		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - FIFTH FLOOR	PKG-2-DH-SDH-HVAC-GFC-100812-R00	
13		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - TERRACE FLOOR	PKG-2-DH-SDH-HVAC-GFC-100813-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
14		(AIRCONDITIONING AND VENTILATION DUCTING PLAN) - ROOF FLOOR	PKG-2-DH-SDH-HVAC-GFC-100814-R00	
15		REFRIGERANT PIPING LAYOUT PLAN - GROUND FLOOR	PKG-2-DH-SDH-HVAC-GFC-100815-R00	
16		REFRIGERANT PIPING LAYOUT PLAN - FIRST FLOOR	PKG-2-DH-SDH-HVAC-GFC-100816-R00	
17		REFRIGERANT PIPING LAYOUT PLAN - SECOND FLOOR	PKG-2-DH-SDH-HVAC-GFC-100817-R00	
18		REFRIGERANT PIPING LAYOUT PLAN - THIRD FLOOR	PKG-2-DH-SDH-HVAC-GFC-100818-R00	
19		REFRIGERANT PIPING LAYOUT PLAN - FOURTH FLOOR	PKG-2-DH-SDH-HVAC-GFC-100819-R00	
20		REFRIGERANT PIPING LAYOUT PLAN - FIFTH FLOOR	PKG-2-DH-SDH-HVAC-GFC-100820-R00	
21		REFRIGERANT PIPING LAYOUT PLAN - TERRACE FLOOR	PKG-2-DH-SDH-HVAC-GFC-100821-R00	
22		REFRIGERANT PIPING LAYOUT PLAN - ROOF FLOOR	PKG-2-DH-SDH-HVAC-GFC-100822-R00	

MGPS

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	A-MGPS	GROUND FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-SDH-MGPS-GFC-101031-R00	SHOP DRAWINGS SHALL BE PROVIDED BY CONTRACTOR
2		FIRST FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-SDH-MGPS-GFC-101032-R00	
3		SECOND FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-SDH-MGPS-GFC-101033-R00	

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
4		THIRD FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-SDH-MGPS-GFC-101034-R00	
5		FOURTH FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-SDH-MGPS-GFC-101035-R00	
6		FIFTH FLOOR PLAN MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-SDH-MGPS-GFC-101036-R00	
7		PLANT & MANIFOLD ROOM MEDICAL GAS PIPE LINE SYSTEM	PKG-2-DH-SDH-MGPS-GFC-101037-R00	

NCS

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
1	NURSE CALL SYSTEM	GROUND FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-SDH-NCS-GFC-101021-R00	SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR
2		SECOND FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-SDH-NCS-GFC-101022-R00	
3		THIRD FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-SDH-NCS-GFC-101023-R00	
4		FOURTH FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-SDH-NCS-GFC-101024-R00	
5		FIFTH FLOOR PLAN (NURSE CALL SYSTEM)	PKG-2-DH-SDH-NCS-GFC-101025-R00	

SOLID WASTE MANAGEMENT

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
1	SOLID WASTE MANAGEMENT DETAIL FLOOR PLAN & EXTERNAL LAYOUT	GROUND FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-SDH-SWM- GFC - 101071-R00
2		FIRST FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-SDH-SWM- GFC - 101072-R00
3		SECOND FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-SDH-SWM- GFC - 101073-R00
4		THIRD FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-SDH-SWM- GFC - 101074-R00
5		FOURTH FLOOR PLAN (SOLID WASTE MANAGEMENT DETAIL)	PKG-2-DH-SDH-SWM- GFC - 101075-R00
6		FIFTH FLOOR PLAN (SOLID WASTE	PKG-2-DH-SDH-SWM- GFC -

S.NO	DRAWING NAME	DRAWING TITLE	DRAWING NUMBER
		MANAGEMENT DETAIL)	101076-R00
7		EXTERNAL LAYOUT- SOLID WASTE BIN MANAGEMENT DETAIL	PKG-2-DH-SDH-SWM- GFC - 101077-R00