

ANNEXURE - I

ESTABLISHMENT OF 5000 MT CAPACITY COLD STORAGE AT CHHAYGAON, DIST. KAMRUP, ASSAM.

SPECIFICATIONS OF COLD STORAGE (Item no 196 of Tender Document)

Supplying all necessary materials, installation, testing, commissioning and providing integrated solution to establishment of 5000 MT Cold Storage with the following components to complete the cold storage in all respect including one trial run, as per the specification, NHB guidelines and complete in all respect as directed and specified. (All works to be executed as per relevant code of practice and as specified)

1) PRE-ENGINEERED BUILDING

Design and supplying of all required materials and erection of PEB structure as per enclosed drawings and specifications as per code of practice referred to and listed herewith. All materials, workmanship should fulfill the provisions of standard code of practice and design under following predefined conditions.

- i) Column of PEB structure should be vertical in both the sides with maximum width of 500 mm from top to bottom.
- ii) Inside side cladding members (Z or rectangular in shape) should design to be sufficient to support the RPUF panels of the cold storage and to maintain the inner dimensions of cold chambers should unchanged (refer drawings).
- iii) Rafter, purling, cladding members should fulfill all the design criteria to accommodate roof slope of 1:10 and wind speed as per code of practice and local conditions. Single skin 0.45 to 0.50 mm thick pre coated coloured roofing sheet for roof and side cladding depending on the design and spacing of purling and cladding.
- iv) A net drop of 5.0 M is specified for side cladding with a L-bend till RPUF panels of cold storage (refer sectional drawing). All joints of roof and side cladding should be water tight and if necessary sealant could be applied.
- v) Turbo ventilator planning should be sufficient to meet up 05-08 air change per hour and to provide ventilation to the area in between RPUF ceiling and roofing sheet. The ventilation system should fulfill the IS:3103: 1975 (reaffirmed 2004).
- vi) Canopy should fulfill all the design criteria for a net cantilever of 5.50 M and two grid of column (refer drawing). Necessary horizontal girder if required has to be taken in consideration.

Design Code AISC/MBMA (American)

- ❖ Loads are applied in accordance with:

The 2005 Edition of Low Building Systems Manual Metal Building Manufacturers Association (MBMA)

- ❖ Hot rolled and Built up sections are designed in accordance with :

- ❖ Manual of Steel Construction, 9 Edition American Institute of Steel Construction (AISC).

Cold-formed members are designed in accordance with :

- ❖ 1996 Edition of Cold Framed Steel Design Manual American Institute of Steel Construction (AISC)

Welding is applied in accordance with :

American welding Society (AWS D1.198) Structural welding Code-Steel.

Design Code IS (Indian)

- Loads are applied in accordance with:

IS-875 Part I: Code of practice for Design Dead Loads for Building and Structures

IS-875 Part II: Code of practice for design Imposed Loads for Building and Structures

IS-875 Part III: Code of practice for Design Wind Loads for Building and Structures

- IS-1893 (2002): Criteria for Earthquake Resistance Design of Structures.

Hot rolled and built up sections are designed in accordance with:

- ISO - 800(1984): Code of Practice for General Construction in Steel

ISO - 800(2007): Code of Practice for General Construction in Steel Latest Revision

- Cold-formed members are designed in accordance with:

ISO - 801(1975): Code of Practice for use of Cold-Formed Light Gauge Steel Structure.

Welding is applied in accordance with:

ISO - 816(1969): Code of Practice for use of Metal Arc Welding for General Construction.

2) INSULATION

Specifications for cold room insulations should fulfill IS 661 :2000 and manufacturer should registered under ISO 9001: 2008, ISO 14001:2004 and preference will be given to green building certified products (UNFCC green manufacturing unit). Insulations are to be selected to obtain Energy Optimization and Efficiency. All the rooms shall be constructed using self supported Rigid Prefabricated Poly Urethane Foam (RPUF) Insulated panels of minimum Density 38/+ 2 Kg/m³ laminated with Pre-Painted Galvanized Steel (PPGS) lamination on both sides with micro rib serrations for the **Walls & Ceiling**. The thickness of the panels should fulfill the requirement of freezer rooms, Chiller room, pre-cooling room & ante room (probable thickness 120 for Freezer Room, 100 mm for Chiller Room, pre-cooling room ,Ante Room & Other areas depending upon density of RPUF panels). All necessary suspension arrangement for ceiling shall be provided, & supports shall be taken from the truss/purling member on top.

The Floor insulation should be of suitable thick PUF block of minimum Density 38+/- 2 Kg/ m³ laminated with polythene sheet of minimum 250 micron lamination acting as vapor barrier on both sides (probable thickness 120 for Freezer Room 100 mm for Chiller Room, pre-cooling room ,Ante Room & Other areas depending upon density of PUF panels).

The **Doors** shall be manual sliding type/swing type (depending upon the need and to be finalized by the vendor) with density and lamination similar to wall panels. Doors shall be frame mounted with accessories like mounting rails, frames and caps, long handles, push plates, pad lock, lock defeat mechanism from inside, resting pads etc to complete the door opening and closing system smooth, easy and simple.

2 Nos. Duck arrangements are provided for carrying loading & unloading.

3) REFRIGERATION SYSTEM

The refrigeration system should be multi-compressor Freon Based Rack type system for cold rooms, freezer rooms and evaporator units located inside and should be connected with interconnecting piping & cabling to condensing units as required. The basis of design for Ref system could be summarized as under:-

i) FREEZER ROOM : 2 Nos

Product to be stored:	Frozen Products
Ambient Temperature	43 deg C
Room Sizes:	As per Drawing
Wall lamination	PPGS
Ceiling	PPGS
Size of door	2400x3600 mm (Refer Reach Truck specifications also)
Storage Capacity:	5000 Kg Per Day
Pull down time	30.00 hrs.
Designed Specific heat (CP)	3kj/kg K
Designed Room Temperature:	-20 Deg C (± 2 deg C)
Product Incoming Temperature:	Incoming -12 Deg C and final -18 Deg C
Refrigeration system	Rack Type
Type of cooling	DX Type (Direct Expansion)
Capacity	14x2 kwt/room
Type of Refrigerant	R404a
Type of Compressor	Semi-hermetic (Frascold / BOCK / GIA make)
Type of Condenser	Air Cooled (COMPAK ASP053)
Number of condensing unit	1 for 2 Rooms.
Model of Evaporator unit	EUN14ZT or Similar
Number of Evaporator unit	2 X 14 Kwt. per room
Type of Evaporator unit	Forced air cooled
MOC for Evaporator unit	PPGS
Temperature indicator	Micro processor based
De-frost system	Electric and hot gas
Power Supply	415 V 50 Hz AC – 3 Phase.

ii) CHILLER ROOM : 7 Nos

Product to be stored:	Frozen Products (Fruit & Vegetable)
Ambient Temperature	43 deg C
Room Sizes:	As per Drawing
Wall lamination	PPGS
Ceiling	PPGS
Size of door	2400x3600 mm (Refer Reach Truck specifications also)
Storage Capacity:	5000 Kg Per Day.
Pull down time	24 hrs.
Designed Specific heat (CP)	3kj/kg K
Design Room Temperature:	+2 Deg C
Product Incoming Temperature:	Normal and Final 4 Deg C
Refrigeration system	Split Type
Type of cooling	DX Type (Direct Expansion)
Capacity	20x2 kwt/room
Refrigerant	Freon (R404a)
Type of Compressor	Semi-hermetic / SCROLL (Copeland or equivalent make)
Type of Condenser	Air Cooled (COMPAK ASP070)
Number of condensing unit	Total 4 Nos.
Model of Evaporator unit	EUP20ZTHH
Number of Evaporator unit	2 X 14 Kwt. per room
Type of Evaporator unit	Forced air cooled
MOC for Evaporator unit	PPGS
Temperature indicator	Micro processor based
De-frost system	Electric and hot gas
Power Supply	415 V 50 Hz AC – 3 Phase

iii) PRE COOLING ROOM : 2 Nos

Product to be stored:	Fruits & Vegetables
Ambient Temperature	43 deg C
Room Sizes:	As per Drawing
Wall lamination	PPGS
Ceiling	PPGS
Size of door	2400x3600 mm (Refer Reach Truck specifications also)
Type of door	Sliding Door with PPGS lamination
Pull down time	8 hrs.
Specific heat (CP)	3kj/kg K
Design Room Temperature:	- 1.2 Deg C
Product Incoming Temperature:	initial 30 Deg C and final 4 Deg C
Qty. of Product Store per Day	10,000.00 Kg/batch
Refrigeration system	Split Type
Type of cooling	DX Type (Direct Expansion)
Capacity	22x2 kwt/room
Refrigerant	R404a
Type of Compressor	Semi-hermetic / SCROLL (Copeland or equivalent make)
Type of Condenser	Air Cooled (COMPAK ASP088)
Number of condensing unit	1 Unit
Model of Evaporator unit	EUP22ZTHH
Number of Evaporator unit	2 X 14 Kwt. per room
Type of Evaporator unit	Forced air cooled
MOC for Evaporator unit	PPGS
Temperature indicator	Micro processor based
De-frost system	Electric and hot gas
Power Supply	415 Volt 50 Hz AC – 3 Phase.

iv) ANTE ROOM:-

Ambient Temperature [in °C]	43 Deg C
Designed Room Temperature[± 2 °C]	Positive 2 Deg C
Product to be stored	Fruits &Vegetable
Product Incoming Temperature [°C]	Incoming at 30 Deg C, Final 4 Deg C
Pull down time [Hrs]	24 Hrs
Room Size	As per Drawing
Wall Lamination In/Out	PPGS
Ceiling [In/Out]	PPGS
Size of Door	2400 x 3600 mm (Refer Reach Truck specifications)
Type of refrigeration system	Split Type
Type of Cooling	DX Type (Direct Expansion)
Capacity of Refrigeration system [KW]	40 KW
Type of Refrigerant	R404a
Model of Evaporator unit	EUP10ZP
No of Evaporator	Units 4Nos Working
Electrical Panel for Ref System	Inbuilt in the condensing unit
Type of evaporator units	Forced Air Cooled
MOC for evaporator units	PPGS
Temperature indicator cum controller	Microprocessor based
Lighting Inside the rooms	Suitable for 5W /Sqmt
Defrost System	Electric & Hot Gas
Power Supply	415 V 50 Hz AC 3 Phase

3.1. FREON BASED SYSTEM:-

Freon based Rack system should be with Hermetic / Semi-Hermetic Compressor racks, Air cooled condensing unit, and evaporator units located inside the room with interconnecting copper piping & cabling works. The key features of the Refrigeration systems are as below:

- Hermetic / Semi-Hermetic compressor based Rack system with capacity control options.
- Air-Cooled condenser.
- Matching Direct Expansion type Evaporator Units.
- Interconnecting Copper Piping with required Insulation.
- Interconnecting Electrical Wiring.

The Compressor Racks should be complete with Hermetic / Semi-Hermetic compressors, suction and discharge isolation valves, anti vibration mounts, solid metal frame, motor protection device, insulated suction inlet stubs, suction gas return filter shells and filter cores insulated suction gas header, accumulator, insulated suction gas return pipes to the compressor, discharge pipes with heavy duty copper pipe, pipe clamps to common discharge header, solid clamped discharge header piped to the oil separator, Oil Separator with oil reservoir and oil level sight glasses, low level float, heaters and thermostat, electronic oil flow with individual isolation and filters, equipped with safety compressor cut out and protection, liquid receiver mounted on the frame with liquid level sight glasses, inlet and outlet isolation valves and pressure relief valve, protective charge to the system, large liquid filter drier shell with filter cores, liquid line sight glass and moisture indicator, liquid header and split liquid outlet stubs and insulated, isolation valves etc. The evaporator cabin should be constructed using powder coated GI casing. All the refrigerant tubes should be with copper construction & aluminum fins. The evaporator should be provided with suitable fin spacing to allow sufficient frost build up to enable longer operation hrs. between defrost.

The interconnecting copper piping should be generously designed to minimize the pressure drop in the system. The suction line should be insulated with nitrile rubber to avoid sweating. A PVC / GI drain pipe with necessary U trap should be provided to take out the condensate water outside the cold room. The compressor on/off based on the load should be controlled by a micro processor based digital temperature controller which should also control the defrost cycle, on/off of fans, fault indications etc, thereby controlling the entire refrigeration system.

3.2. Defrost System :

The defrost system is constructed of SS pipe with inline pattern spray nozzles to assure even water distribution over entire coil area. The water supply left is self draining type to avoid any water trapping after defrost. The water supply for the same is to be operated manually.

3.3. Refrigeration Evaporator :

The freezing is provided by all SS variable fin plate fin coil to assure even frost built throughout the depth of the coil, for maximum defrost time intervals.

3.4. Tube Axial Fans :

The Cold air is circulated by heavy duty axial fans directly driven Nadi/ Nicotra / Kruger make along with ABB / BBL or Equivalent motor of 5.5 KW each. Fan should be high efficiency and constant air delivery, to assure proper air flow at all time. The propeller blades are of aerofoil and capable of creating 70 – 80 mm static for fluidization.

3.5. Freezer Enclosure :

The Enclosure panels should be placed directly on the floor or in a sunken floor construction. The walls and ceiling of the freezer enclosure should be of SS finish inside & PPGS outside. Enclosure insulation is 6" thick high density foam urethane for maximum efficiency.

4. DOCK SHELTER :

Dock Shelters should be made with Polyester / PVC covering sheets and the front flaps are made. It should satisfy every requirement of avoiding heat exchange between inside and outside of the Cold Storage. Dock Shelters should have the quality of not transmitting the vehicle's force of impact to the warehouse structure. The sealing portal should be surrounded by a metal profile that provides a pleasing aesthetic finish.

5. RACK STORAGE SYSTEM AND REACHED TRUCK

Double deep Palletized storage **Racking** System is considered inside the facility and a sample Drawing is enclosed here with obtained from Godrej storage solution, the leading storage solution provider in the country. Racking system should design to accommodate at least 5000 Mt of storage material at 100% utilization. **Looking to the wider range of design of palletized storage system vendor has the freedom to provide suitable design for palletize storage system and at the same time consideration of Reach Truck of 2000 kg to handle the materials of the facility should be taken care of. While designing the racking system special care should be taken for free movement and easy handling of storage materials. Under any circumstances the mismatch of racking system and Reach Truck specification will not be excepted.** The PSS should be designed as per international standards for Static Design, carried out on structural analysis software after creating model of the structure. The standards followed and details of each component are as follows:

The racking components are designed as per Indian / European Standards as described below:

Indian Standard-

IS 800 – General construction in steel

IS 801 – Code of practice for use of cold formed light gauge steel structure members in building construction.

The above codes are used for general steel building design, if the same does not cover the critical design parameters of racking system the same to be designed as per European standard specific to Rack design.

European Standards for design-

FEM: 10.2.01: Terminology and description of storage systems.

FEM: 10.2.02: EN 15512 Design code for Racking

EN 15635: 2007- Steel static storage system; Adjustable pallet racking guidelines for safe use.

EN 15878 -Steel Static Storage System - Adjustable pallet racking - Terms and definition. The components of the PSS are manufactured from superior quality cold rolled/ hot rolled sheets of steel confirming to EN 10025/ EN 10327 with minimum yield stress of 250 N/mm². The corresponding IS code for steel used is IS:10748 , IS: 513 etc. All fasteners like nuts, bolts are as per IS 1363.

The proposed pallet storage system consists of Upright, horizontal & diagonal struts, beams and various components for imparting structural stability to the entire system. The uprights frames should be fastened to floor using base plate and anchor fasteners if necessary or of free standing design. The beams should be Box type construction, made with roll forming and should be manufactured from single sheet having twin top profiles using latest technology. The Struts should be made of C-Section with four bends of galvanized materials. All fasteners supplied will be electro-galvanized conditions confirming to IS Codes.

6. PALLETS

Standard Pallets should be considered to fit with the Racking system. Many times it comes along with materials to be stored and sometimes products are coming in bags or in special packing. here the scope of supply of pallets are restricted to **1150** numbers only.

Annexure - II

6. TECHNICAL SPECIFICATIONS FOR 2TON REACH TRUCK

- Capacity: 2000 Kgs @ L/C 600mm
- Lift Height: Depending upon the design of Racking system.
- Closed Mast Height: Depending upon the design of Racking system.
- Free Lift: Depending upon the design of Racking system.
- Residual Capacity: Depending upon the design of Racking system.
- Residual Capacity: Depending upon the design of Racking system.
- Battery : Suitable for the vehicle and as per code of Practice.

NOTE:

The phrase "**8.50 M lift height and**" in Item No. 197 (Reach Truck 2 Ton:) of BOQ is hereby deleted.

Annexure - III

7. TECHNICAL SPECIFICATIONS FOR 60 TON WEIGH BRIDGE:

SPECIFICATIONS	PARTICULARS
Construction Type	Pit less
Platform Type	Mild Steel IS 2062
MS Platform Size	9 M X 3 M
Weigh Bridge Assembly Capacity	60 MT
Readability ("e" Value – Verification Interval)	10 KG
No. of Load Cells	Six Nos.
Type / Capacity of Load Cell	Stainless Steel load Cell of slandered make (ISI marked)
Indicator	Latest technology
Accuracy	2 e of full Scale Capacity
e Bridge Soft ware (for Data Management)	Standard
Type of Weighbridge	Fully Electronic

8. TECHNICAL SPECIFICATIONS OF DIESEL GENERATOR:

Make :	Cummins / Kriloskar or
Prime Power Rating KVA :	Equivalent 500 KVA
Output Voltage and Frequency :	415 Volts, 50 Hz
Power Factor :	0.8 (lag)
No. of phases :	3 phase

Annexure - IV

9. ELECTRICAL DETAILS OF COLD STORAGE :

All electrical work inside the Cold Storage Building should be as per the relevant IS code of practice and to fulfill the APDCL norms (Electrical authority in Assam).

Main Power & Motor Control Panel (PMCP) Panel shall be totally enclosed cubicle type free standing, floor-mounting, compartmentalized and modular in construction, expandable on both sides, fabricated out of 14 gauge CRCA sheet steel duly pretreated and painted with 2 coats of red-oxide zinchromate primer and painted with powder coated. Panel shall have separate incomer section with door interlock and isolated horizontal / vertical bus –bar chambers. Bakelite / acrylic shrouds with danger Louver shall be provided as required to cover live parts and bus-bars for safety purpose. Separate cable-alleys shall be provided. Component layout in individual modules shall be spacious with adequate clearances for ease of operation and maintenance. Capacitor modules when provided shall have adequate cooling arrangement such as louvers at rear and sides. Cable entry shall be top or bottom as per site conditions. Aluminum anodized labels shall be provided for components and feeders. 25 x 6 mm GI earth Bus-bar shall be provided along panel length with terminal brought out at both ends. Necessary foundation frame / pedestal / mounting structure, sheet metal blanking covers, foundation bolts and all required material / accessories etc. shall be included. Blank modules – 3 nos. blank modules without any components suitable for 3.7 KW. Motor starters shall be provided. Vendor shall submit detailed SLD, G.A. & dimensional drawings, BOM and wiring diagram for Owner's approval.

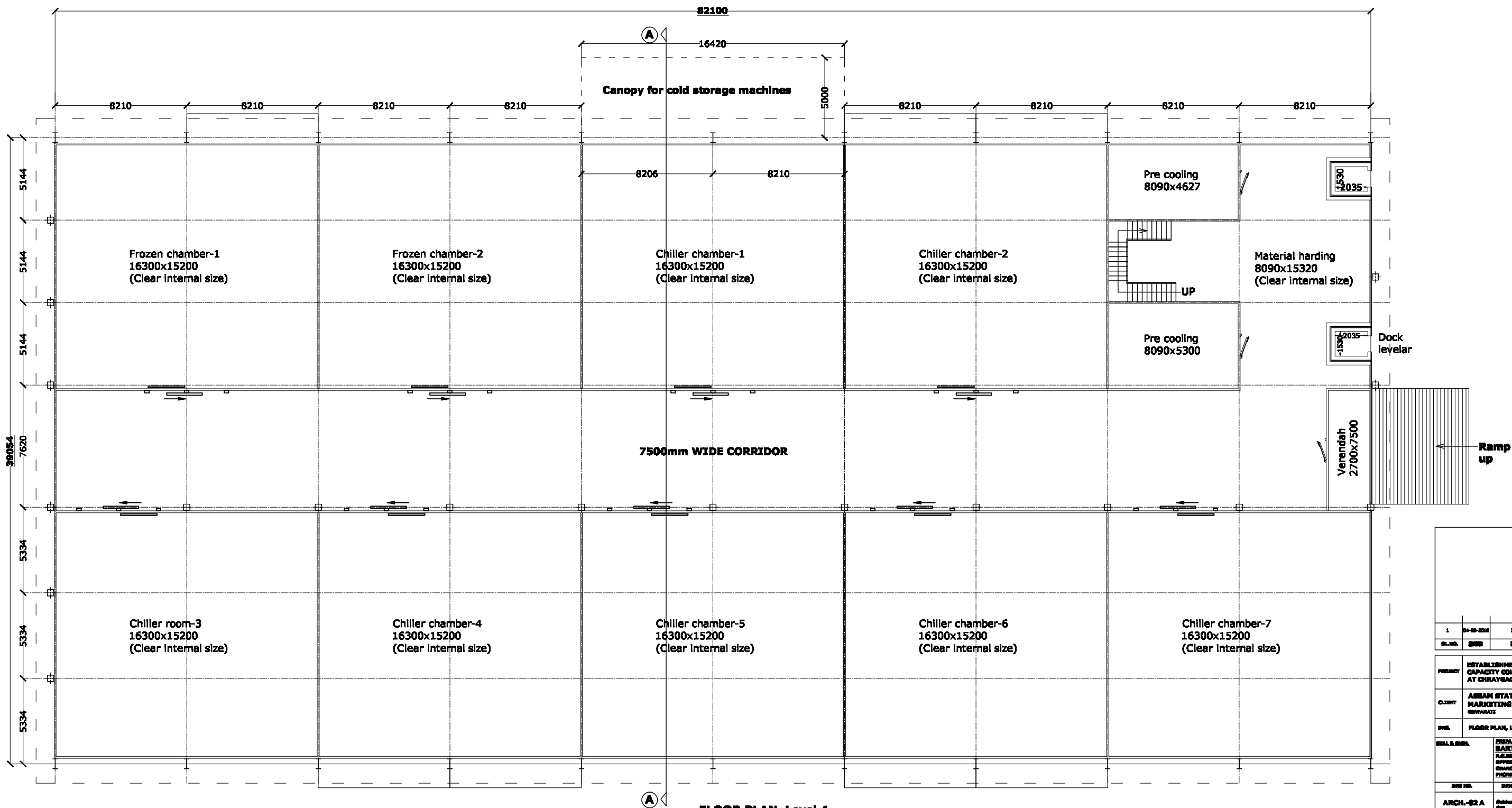
Panel shall be manufactured and tested in an approved manner as per IS : 8623 and other applicable standards. Panel shall consist of following feeders:

- (i) Incomer Amps as per final load condition TPN with fuses, operating handle and door interlock, etc. **-1 no.**
- (ii) 0 to 500 V voltmeter, voltmeter selector switch, 3 nos. HRC fuses etc. **– 1 set**
- (iii) 0 to 200 AMP ammeter, ammeter selector switch, 3 nos. 315 / 5 Amp, 10 VA CTs, shorting links etc. **– 1 set**
- (iv) Supply on LED type indication lamp with HRC fuse etc. **– 1 set**
- (v) Copper neutral link **– 1 set**
- (vi) Bus-bar – As per current rating main copper bus-bars with red, yellow, blue, black colour heat shrinkable PVC sleeves and mounted on epoxy / SMC insulator supports of tested quality as per IS. Other vertical copper bus-bar shall be rated for total compartment rating with current density of 1.5 AMP per sq. mm. Minimum size 25 x 3 mm. Minimum clearance on all sides of each bus-bar shall be 25mm (incoming cable size 958 Sq.mm x 3.5 C AYFY out going Feeders **– 1 set**

- (vii) Motor rating up to 7.5 KW – DOL starter comprising of TP – MCB, SPPR (only for compressor and condenser motors), 1 no. contactor, 1 no. OLR, control MCB, start / stop pushbuttons, selector – switches, motor ON indication lamp, terminal etc.
- (viii) Motor rating above 7.5 KW – Star delta starter comprising of TPMCB, SPPR (only for compressor and condenser motors) – 3 nos. contractor, 1 no. OLR, electronic star delta timer, control MCB, start / stop push-button, selector –switches, motor ON indication lamp, terminals etc.
- (ix) TP-MCB shall be suitable for motor duty and rating shall be coordinated with OLR rating as per manufacturer's recommendations.
- (x) Contactor shall be AC₃ duty with current rating at least 10% more than motor FLC. Minimum contactor rating 12 amp.

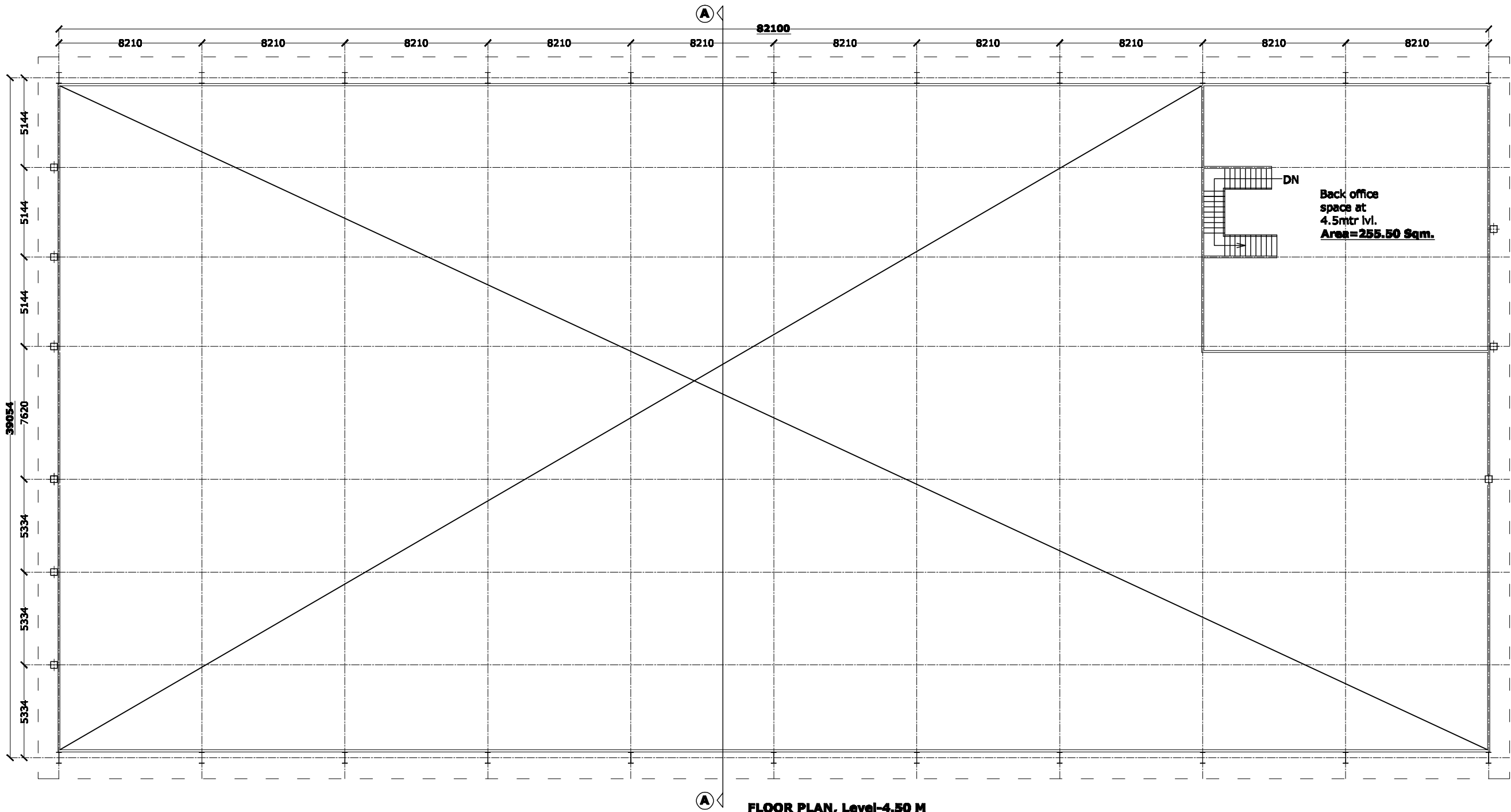
NOTE:

Unless otherwise specified, all products should either be ISI marked or the manufacturer should ISO 9001:2008 certified.



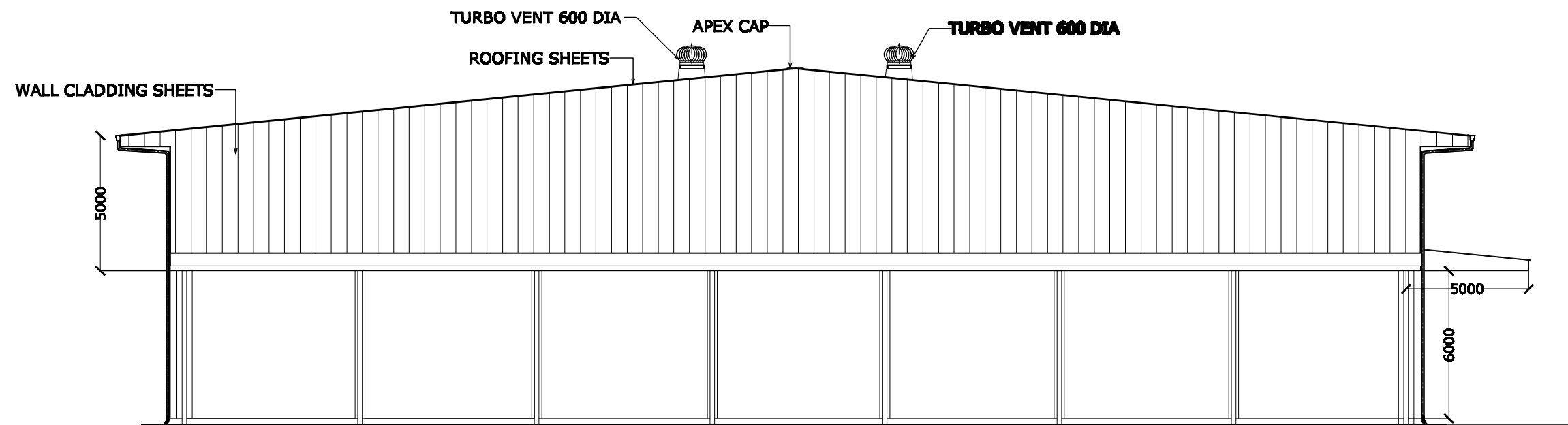
FLOOR PLAN, Level-1

1			
04-08-2018	ISSUED FOR TENDER		
01.10.18	02.08.18	03.08.18	04.08.18
ESTABLISHMENT OF 8000 MT CAPACITY COLD STORAGE AT CHHAYASAH, KAMRU, ASSAM.			
ASSAM STATE AGRICULTURAL MARKETING BOARD AT SILBARI, CHHAYASAH.			
FLOOR PLAN, Level-1 (COLD STORAGE)			
PREPARED BY: BARTHAKEUR & ASSOCIATES P.L. BARTHAKEUR ROAD OPP. STATE COMMISSIONER OFFICE CHHAYASAH, KAMRU-781123 PHONE NO.: 9861-945888			
01.10.18	02.08.18	03.08.18	04.08.18
ARCH-02 A	01.10.18		

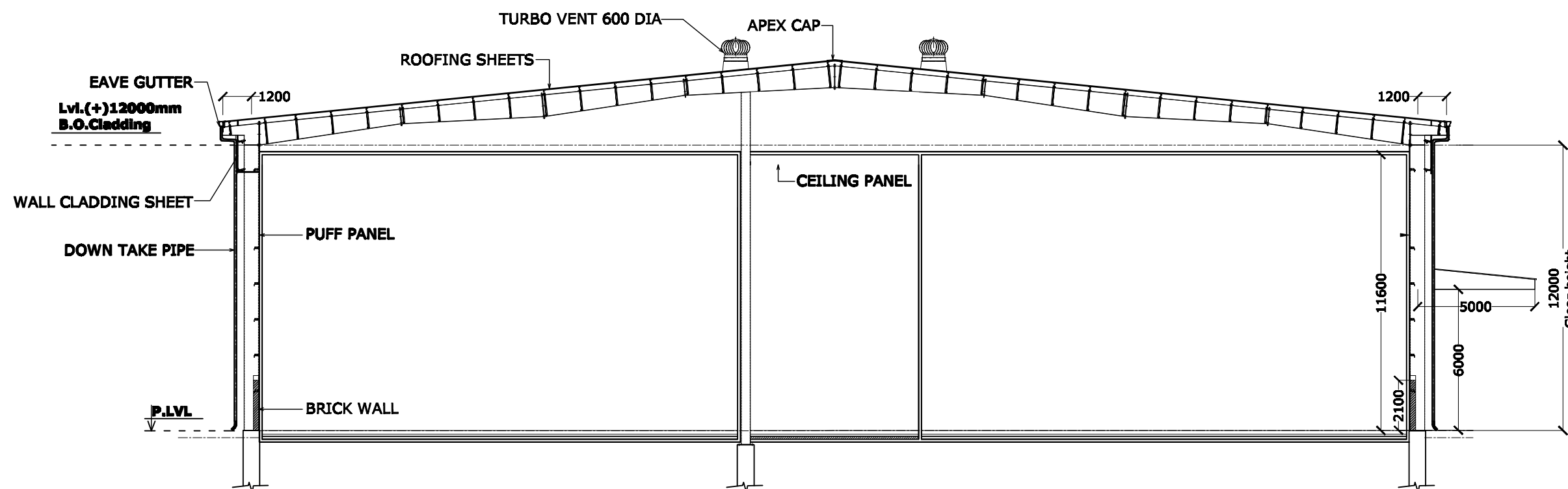


FLOOR PLAN, Level-4.50 M

1	04-05-2016	ISSUED FOR TENDER	
CL. NO.	0000	REVISION/REVISION	01/01
PROJECT	ESTABLISHMENT OF 5000 MT CAPACITY GOLD STORAGE AT CHHAYBACH, KAMRUJ, ASSAM.		
CLIENT	ASSAM STATE AGRICULTURAL MARKETING BOARD AT SILBARI, CHHAYBACH.		
DWG.	FLOOR PLAN, Level-2 (GOLD STORAGE)		
DESIGN & DRAWN	PREPARED BY: BARTHAJUR & ASSOCIATES P.L. BARTHAJUR ROAD OPP. STATE COMMISSIONER COLLEGE CHHAYBACH, KAMRUJ-781002 PHONE NO.: 9861-945588		
DWG. NO.	DWG. BY.	CHECK BY.	SCALE
ARCH-02 B	04/05/2016		

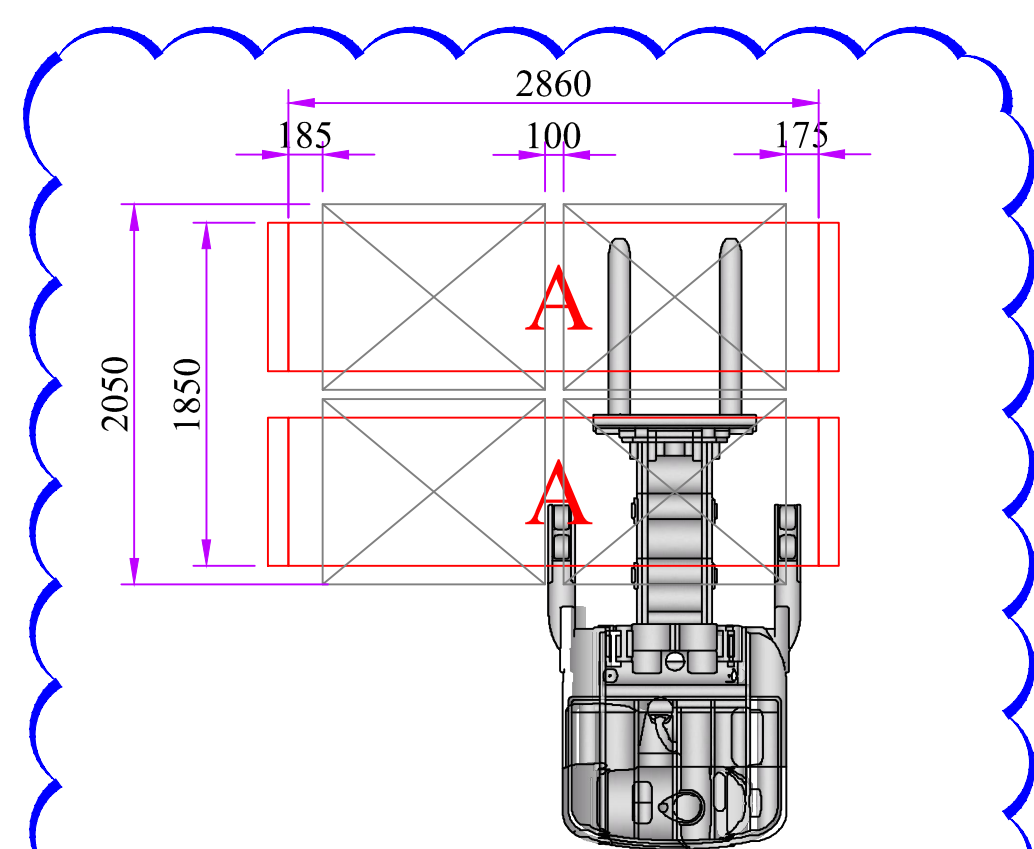
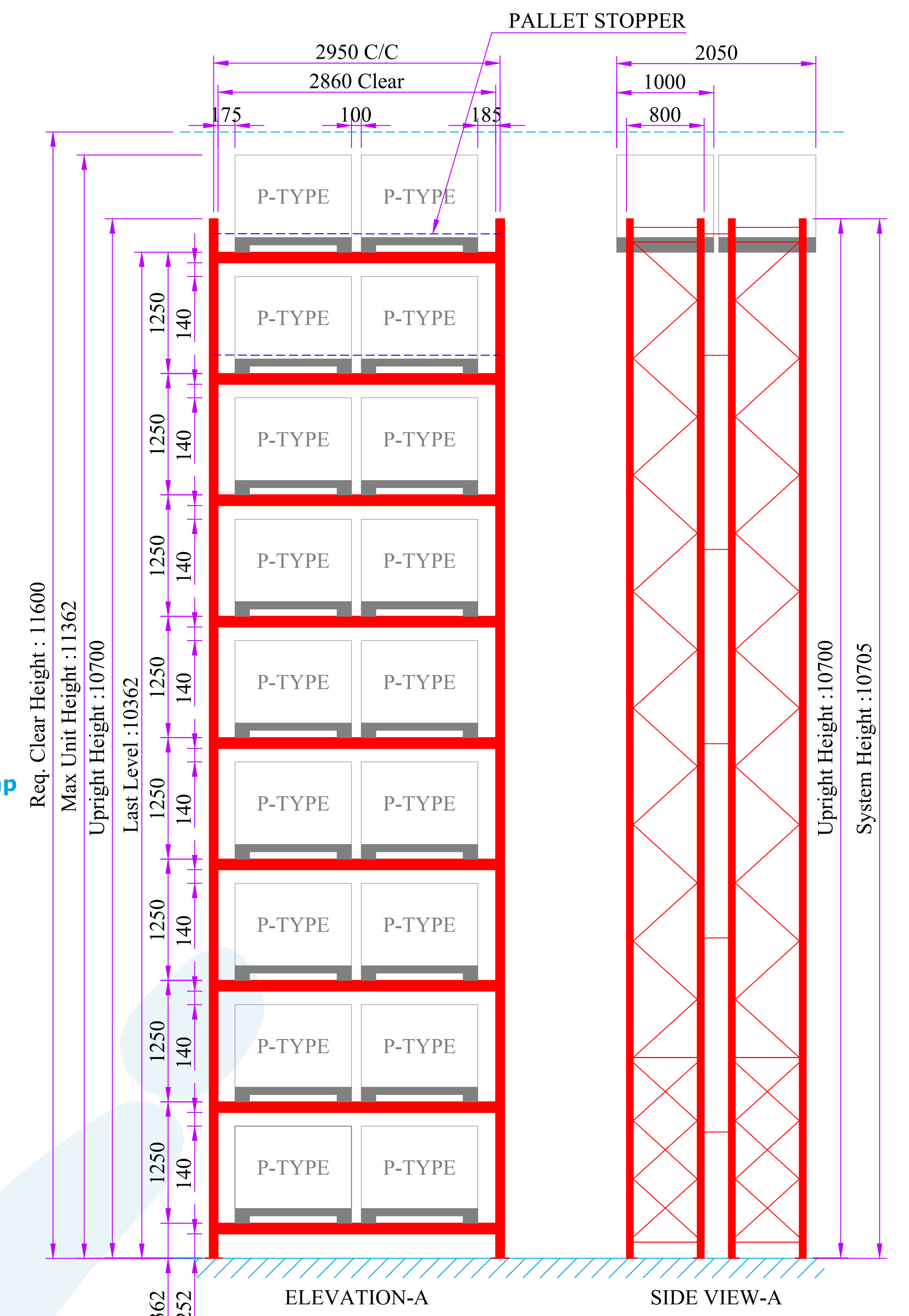
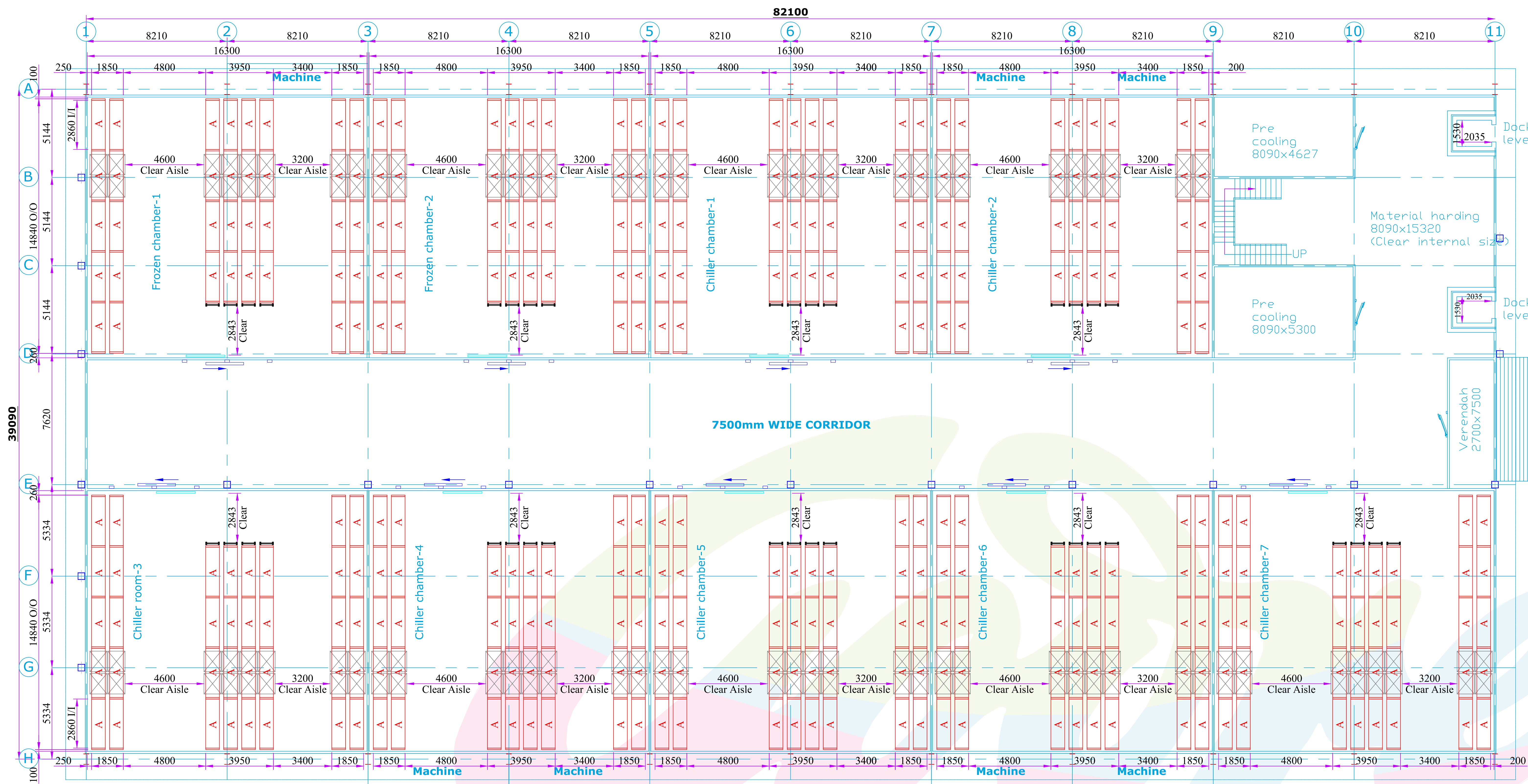


END WALL ELEVATION (AS DRAWN)
END WALL ELEVATION (READ MIRROR)



TYPICAL CROSS SECTION A-A

1	04-03-2016	ISSUED FOR TENDER	
SL. NO.	DATE	REVISION/REMARKS	BY
PROJECT	ESTABLISHMENT OF 5000 MT CAPACITY COLD STORAGE AT CHHAYGAON, KAMRUP, ASSAM.		
CLIENT	ASSAM STATE AGRICULTURAL MARKETING BOARD AT ULUBARI, GUWAHATI		
DRN.	ELEVATION & SECTION.		
DESIGN & DRAWN	PREPARED BY: BARTHAKEUR & ASSOCIATES R.S. BORJAN ROAD OPPOSITE CONNOR COLLEGE CHANDIMAR, GUWAHATI-7 PHONE NO: 1 800-3456789		
DRN NO.	DRN BY.	CHKD BY.	SCALE
ARCH-02 B	Bartha Intha Das		



MHE DETAILS

MHE DETAILS	
90° Aisle (with pallet)	< 3200mm
Cross Aisle	< 2000mm
Max Fork Height	> 8950mm
Capacity @ MFH	> 1000kg
The customer should ensure MHE specs as per above table.	
MHE Type (Existing/New)	Double Deep Reach Truck
IMPORTANT NOTES ON FLOORING.	
1. Floor Load bearing capacity should ensure by the customer.	
2. For a min grid size of 1mx1m, the difference in floor level between any two survey points should be less than 4mm.	
3. The max variation between any two survey points should not exceed 10mm.	

DESIGN CONSIDERATIONS	
<ul style="list-style-type: none">Non-Seismic design considered.Max. load on floor-8000kg on base plate of 180x110mm	
NOTES:	
1. nil	

ACCESSORIES	
<ol style="list-style-type: none">Row Guards- in cross aisle end frames.Pallet Stopper -for top 2 levels.	

PALLET DETAILS	
Pallet Type	Type P
Achieved Capacity	5832 Nos.

CAPACITY DETAILS						
UNIT NAME	UNIT QTY	LEVELS/ UNIT	PALLETS/ LEVEL	PALLETS/ UNIT	TOTAL PALLETS	TOTAL CBM
A	324	9	2	18	5832	5949
					0	0
					0	0
					0	0
					0	0
					0	0
					0	0
TOTAL CAPACITY					5832 nos	5949 m³
					4666 ton	

DRAWING & PICTURE MAY NOT REPRESENT ACTUAL CONSTRUCTIONS.

CUSTOMER APPROVAL:

This drawing is the sole property of Godrej Storage Solutions. It must not be copied or disclosed to any third party without our written permission.

R06				
R05				
R04				
R03				
R02				
R01	change in elevation & layout & increase in loading level	24.Mar.2016	RITU	
REV NO	DESCRIPTION	DATE	NAME	
DRWN	RITU	24.Mar.2016	SHEET: A2	SCALE: 1:210
APPD	SHG	24.Mar.2016	ALL DIMNS ARE IN mm	
SYSTEM DOUBLE DEEP PALLET RACKING				
CUSTOMER RINAC INDIA LTD				
PROJECT SITE CHHAYGAON, ASSAM				
DRG.NO 61903.05-E-02R01				
<div><div><div><div></div><div>Godrej STORAGE SOLUTIONS</div></div></div><div><div>Godrej & Boyce Mfg Co Ltd, No.1 Sidco Ind. Estate, Ambattur, Chennai -600098, India</div><div>www.godrejstoragesolutions.com</div></div></div>				