DESIGN CONSIDERATIONS & REQUIREMENTS

1. The PEB will be made from rolled structural steel fabrication with RCC footing, pedestals & columns with eve height as 5.0 Mtrs, Crane girder for 2 Ton crane with suitable support and block work masonry all-round the building superstructure masonry wall upto 1.00 Mtrs height. The steel structure shall be of Pre-Engineered Building system, and all fabrication shall be done factory with controlled atmosphere as per standards (No site fabrication is allowed). The building shall be provided with all-round Block/Brick wall, required door opening, required ventilator opening with weld mesh covering, electrical work, roof turbo ventilator, rainwater down taking system etc.

The tenderers shall visit the site and acquaint themselves with the conditions of the site prior to submission of tenders and no claims will be entertained later on the grounds of ignorance

2. Soil investigation and submission of report for economical & sound design of foundation, Structural members and PEB Structure.

3. All concrete to be used /prepared at site shall be Design Mix concrete/ RMC as per mix design approved by Engineer-in-charge.

4. Design criteria of RCC structural units shall conform to the Design requirements of Latest Version of IS:456-2000.

5. IS marked TMT bars of various grades shall be procured for works.

6. The permissible stresses for plain and reinforced concrete shall be in accordance with the requirements of Latest Version of IS:456-2000.

7. Basic load calculations shall be provided for all values of loads applied on all members.

8. Components of RCC structure shall be designed for loads in accordance with IS 875 (Parts l to 5) and IS 1893 (latest version). (Part 1). In addition, loads that might be expected during the construction shall also be considered in the design and considering provision for 5 Ton EOT crane.

9. Resistance to horizontal loading shall be provided by having moment resisting frames and/or shear walls.

10. For shrinkage, thermal effects and lateral loads provisions of expansion Joints as per IS 3414(Latest Version) shall be provided.

11. Frame members i.e. Beams & columns to be designed for shear moments and deflections and considering provision for 2 Ton EOT crane at pump room area as per the values obtained from model analysis. All other components of the building shall be designed with approved design programs.

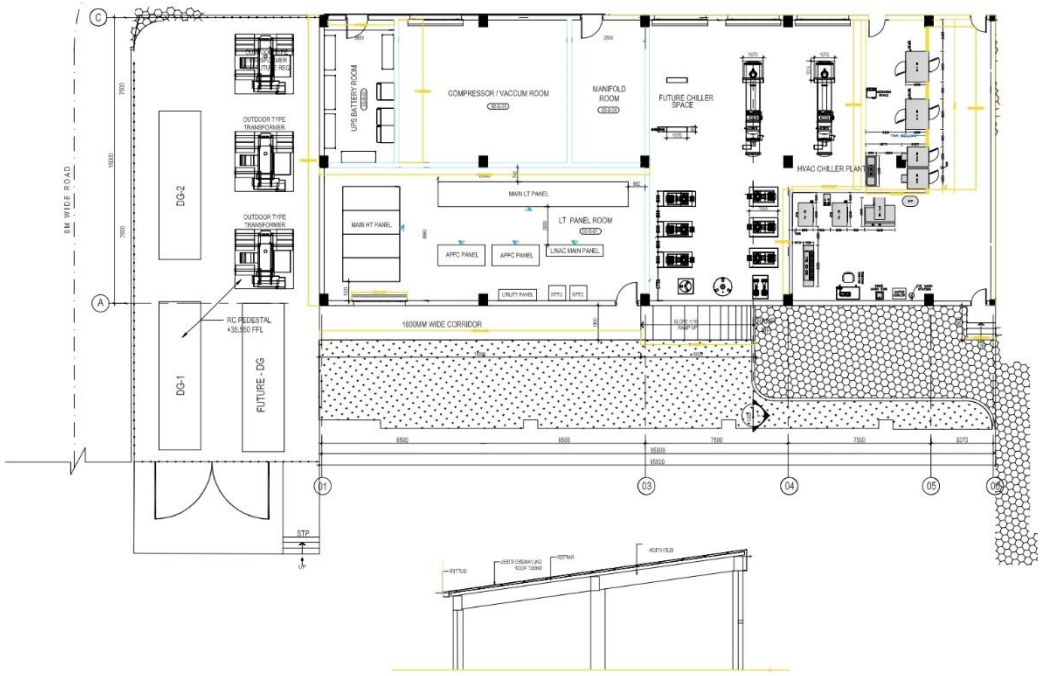
Design calculations shall be provided for all the components of the structure.

12. Water retaining structures shall be designed in accordance with relevant provision of IS: 3370 (Part I to part-IV, Latest Version). In addition, Earthquake forces as per IS - 1893 latest version shall also be considered.

13. Proof checking: The contractor shall design and submit the complete structural drawings, calculations, soft copies on CDs and two set hard copies for proof checking. Proof check to be got done from any Government Institutes like IIT's / NIT's / IISc. After getting the proof checking done the contractor shall submit corrected and final structural design, drawings in two set soft copies on CDs and hard copies. The consultancy fees for proof checking shall be borne by the contractor.

Note: Whether specifically mentioned or not, all latest IS codes are to be used with amendments up to last date of submission of bid.

TENTATIVE DRAWINGS FOR TENDERING PURPOSE ONLY



ACCEPTABLE BRANDS OF MATERIALS

Sl.No.	Item	Brand/Make
1	Cement	M/s ACC/Ultratech/Birla
2	Ready Mix Concrete	M/s Ultratech/ RMC India /M PRO RMC/Nuvoco Vista/ L&T/Coromandel
3	Paints	M/s Asian Paints/Berger
4	Reinforcement steel	M/s Sail/Tisco/Tata
5	CPVC Pipes	M/s Finolex/Supreme/Astral/Ashrivadh
6	GI pipes	M/s Tata/Zenith
7	PVC	M/s Finolex/Supreme/Prince
8	White cement	M/s Birla/JK
9	Gully trap/Nahani trap	M/s Supreme/Finolex
10	Waterproofing compound	M/s. Fosroc/Roff/BASF
11	Mirror/Toughened/beveled glass	M/s Saintgobain/Modiguard
12	Ceramic/Vitrified tiles	M/s.Johnson/ Kajaria/ Nitco/RAK/Somany
13	Gypsum Board	M/s India Gypsum/Armstrong/Saintgobain
14	Ply wood/Block Board	M/s Archid/Greenply/Century/Kitply.
15	Laminate/Veneer	M/s Archid/Greenply/Century/Kitply.
16	Door closure	M/s Everite/Dorma/Ozone
17	Locks, mortice locks	M/s. Godrej/Europa
18	Plumbing fittings (Brass Chromium Plated Plumbing fittings)	M/s Parryware/Hindware/ESS ESS/Cera/Jaquar
19	Sanitary Fittings (EWC/IWC/Washbasin)	M/s Jaquar/Hindware/Parryware/Cera
20	Galvalume sheet	M/s Tata bluescope/JSW/LLYOD (India)
21	Polycarbonate sheet	M/s Danpalon, Alcox, Polygal, V.A Corporation, Alfa, GE, Lexon, Tuftile
22	CCTV Camera	M/s Hikvision/Sony/Panasonic/Samsung
23	PVC Tank	M/s Sintex/Ganga/Kaveri
24	FR PVC Copper wires	M/s Finolex/Anchor/Roma/Havells/Polycab
25	MCB's/MCCB's /ELMCB's/Industrial Switches/Electrical panels	M/s L&T/ABB/Legrand/Schneider/Merlin Gerin
26	XLPE power cable	M/s Anchor Roma /Finolex /Havells/Crabtree/ABB/Schneider/Polycab
27	Modular Switches/Sockets	M/s Anchor/Roma/Havells/Crabtree/ABB
28	Grid false ceiling	M/s Armstrong
29	LED Light Fittings	M/s Crompton Greaves/Philips/Wipro
30	Electrical panel/Control switch	M/s L&T/ABB/Legrand/Schneider/Merlin Gerin

31	AC	Carrier / Daikin
32	Telephone cable	Legrand /D-link
33	Fans /Exhaust fans	CG/ Havells / Usha
34	Fire alarm system	Honeywell /Siemens
35	MS Pipe	Jindal / TATA
36	Missing makes for any project item	To be confirmed with ACCF/MM by proposing equivalent three reputable makes