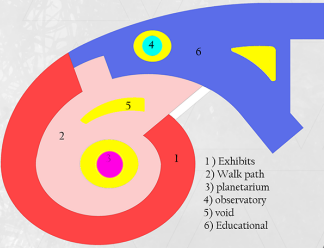


### Idea Development

From Our Galaxy The Milky Way, the natural Motion as planets orbits the sun, the Museum was designed to follow similar motion with the Planetarium in its center like the sun, and the exhibits around it like the planets. the floor plan divided into two sections

- 1) museum
- 2) Educational / Administration



- 1) Exhibits
- 2) Walk path
- 3) planetarium
- 4) observatory
- 5) void
- 6) Educational



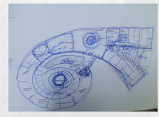
Planetarium section



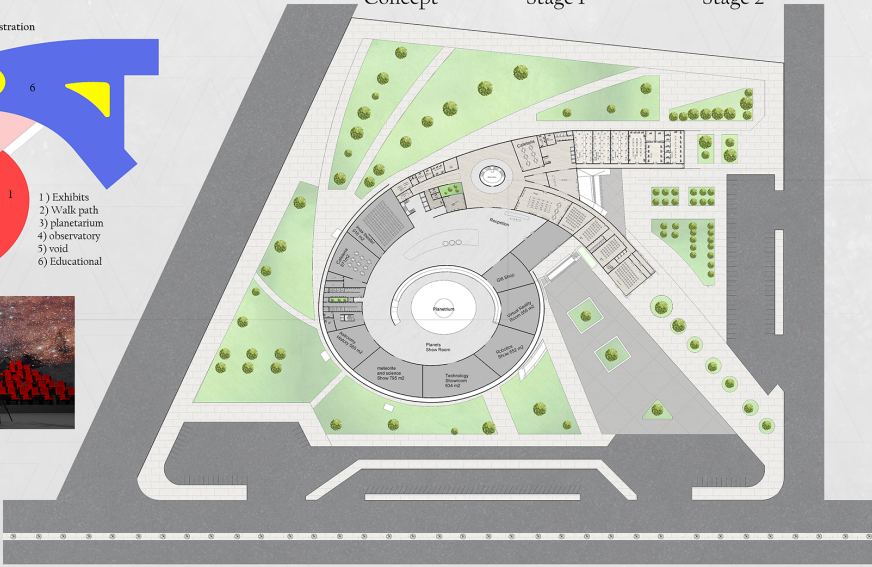
Concept



Stage 1

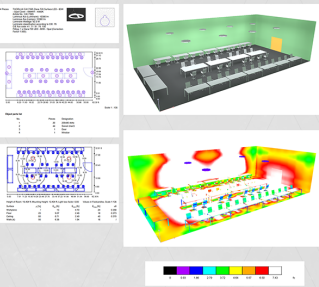


Stage 2



Ground floor plan

### Lighting Calculation Laboratories 20m x 10m



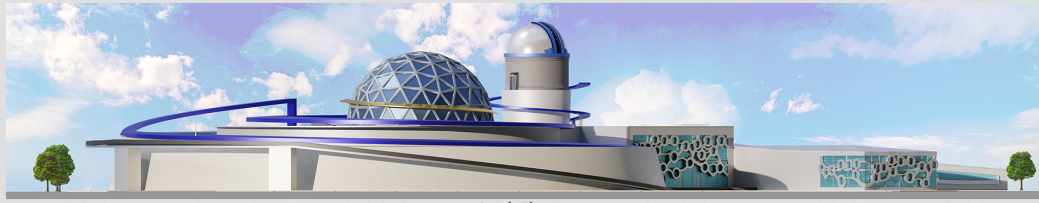
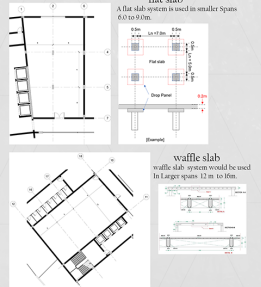
### Acoustics Calculations

Serial	Item	Type	Description	Absorbent Factor	Area	A
1	Flooring	Wool for carpet	Absorbent	0.35	915	324
2	Walls	Acoustic panels	Gypsum board 1 cm thickness	0.7	1404	1124
3	Ceiling	Acoustic panels	Gypsum board 1 cm thickness	0.7	915	693.6
4	Chair	Polyester		0.6	187	149.6
5	People			0.6	187	112.2
Summation						2571.4

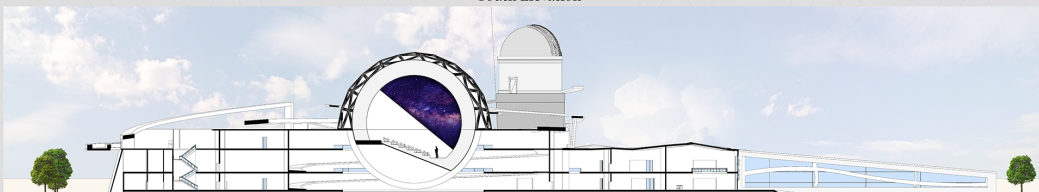
$$R.T = 0.16 \times V / \text{Total A}$$

$$R.T = 0.16 \times 9150 / 2571.4 = 0.62 > 0.9 \text{ second}$$

### Structural System

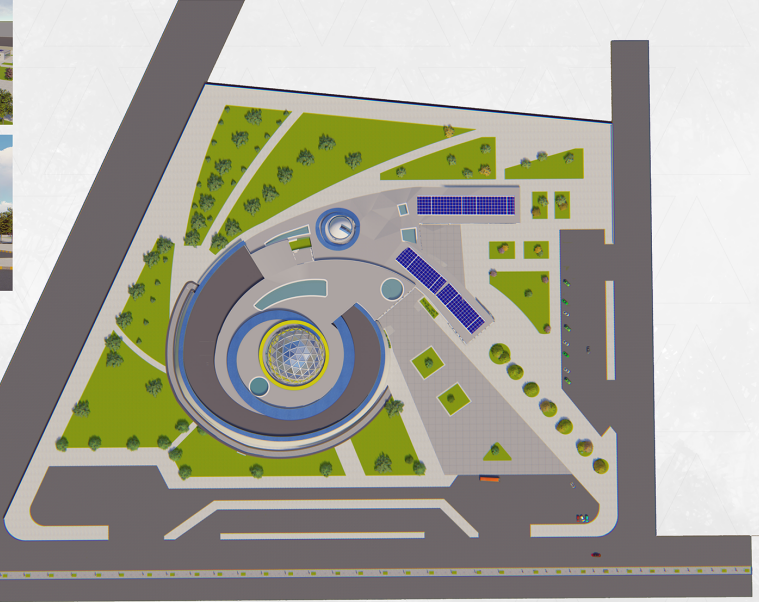
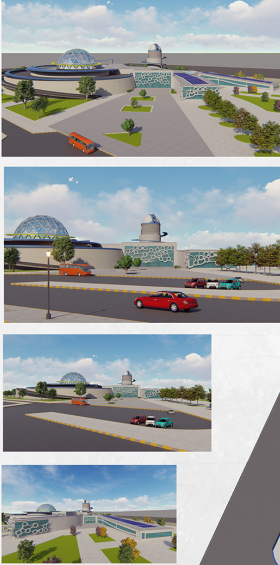


South Elevation

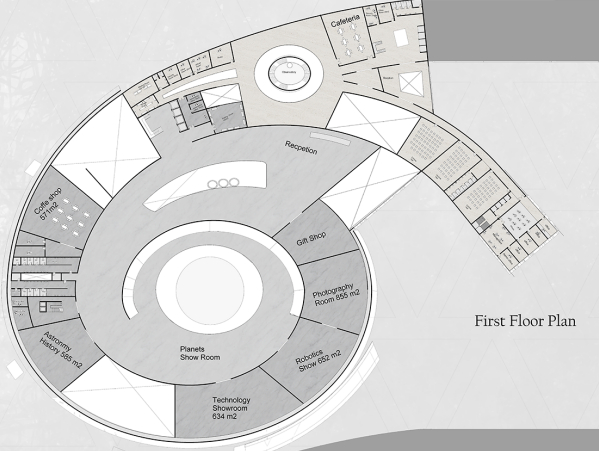


Section

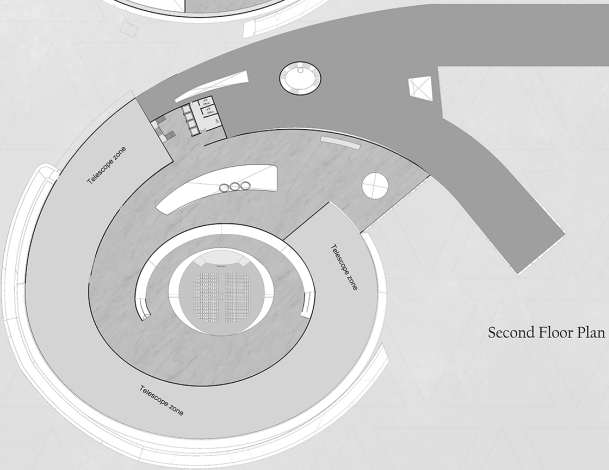




Site Plan



First Floor Plan



Second Floor Plan

IMAX Private Theatre Calculations  
Air condition capacity Calculations

1 opening - Door with insulation 2m x 2.5m  
 Room Size - 10065 cubic meter  
 Electrical equipment - 1 Imax screen 12000VA  
 Maximum Amount of people - 187  
 36.15483333 ton (refrigeration) - 433858 Btu

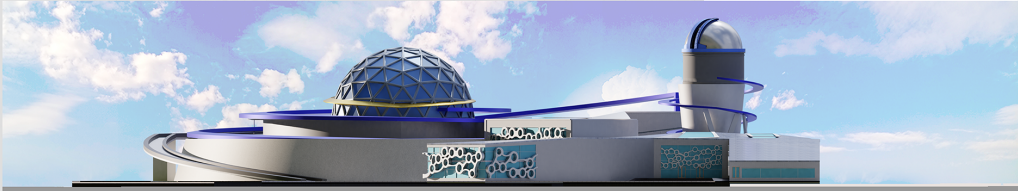
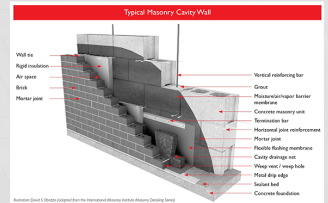
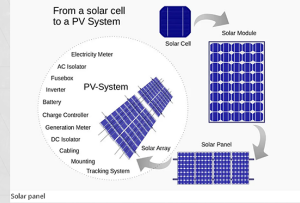
Mechanical Horsepower  
 433,858 Btu/h = 170.31565 hp(1)  
 Electric Horsepower  
 433,858 Btu/h = 170.443965 hp(2)  
 Metric Horsepower  
 433,858 Btu/h = 172.877517 hp(M)  
 Boiler Horsepower  
 433,858 Btu/h = 12.982047 hp(S)

CALCULATION	
Room BTU	307938
South Window BTU	0
North Window BTU	820
Windows BTU	820
Occupant BTU	82390
Equipment BTU	42000
Lighting BTU	0
Total Heat Load BTU	433858
Total Cooling Required BTU	433858
Required A.C. (Tons)	12.15
Required A.C. (kW)	127.12

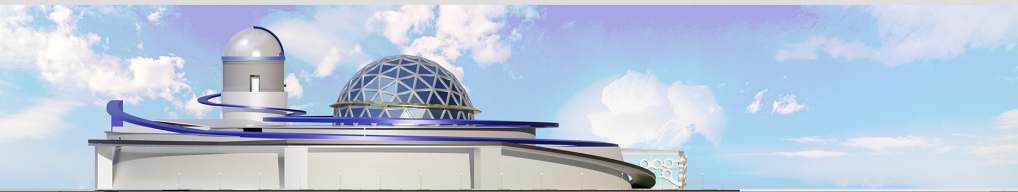
Screen	Screen material	Screen material
Screen	Screen material	Screen material
Screen	Screen material	Screen material

Power System	Power of the full system
Power System	Power of the full system
Power System	Power of the full system

Sustainability Study  
Solar panel



South East Elevation



West Elevation

