



SHAIRU GEMS

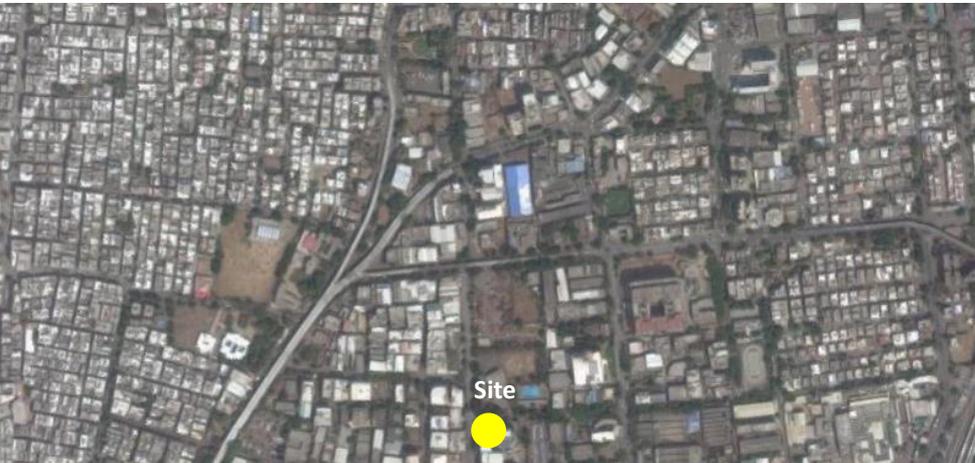
Architectural Design for a Diamond Factory

Client:	Mr. Sidharth Mehta
Site Location:	166/A2, Vasta Devdi Road, Opp. Katargam Swimming Pool, Katargam, Surat
Plot Size:	8,420 sq yards
Construction Area:	69,500 sq ft / 21,150 sq m
Cost of Project:	Confidential
Year of Completion:	2012
Services:	Architectural Planning, Interior Design, Landscape Design, MEP Integration, Art Integration
Firms Involved:	EssTeam, Oblique



“I am concerned about the Cost to the Planet, and not the Cost to the Project.”

Shairu Gems Diamonds Pvt. Ltd. is one of the largest diamond companies of the world, the director looking after the manufacturing in Surat, is Mr. Siddharth Mehta-our client. He is a very sensible, sensitive and motivated individual. The most striking thought of his was, ‘It should cost low to the planet, not to the project’. This entire spirit of his persona is reflected everywhere in the building with his enthusiasm in leading and becoming a trend- setter always.



The building is a part of a campus, consisting of Rushabh Gems- their old factory building and Shairu Gems- their new factory building. Shairu Gems was designed as a green building and we got a Gold rating and was later certified as a Net Zero Energy Building. But then we also ended up retrofitting and modifying Rushabh Gems that got certified as a Platinum rated building. Technically Shairu Gems is the first of its kind in the entire region. The green diamond factory building is a direct reflection of the client's approach to life- full of sensitivity, straight-forwardness, and clarity.

1. CLIMATICALLY RESPONSIVE

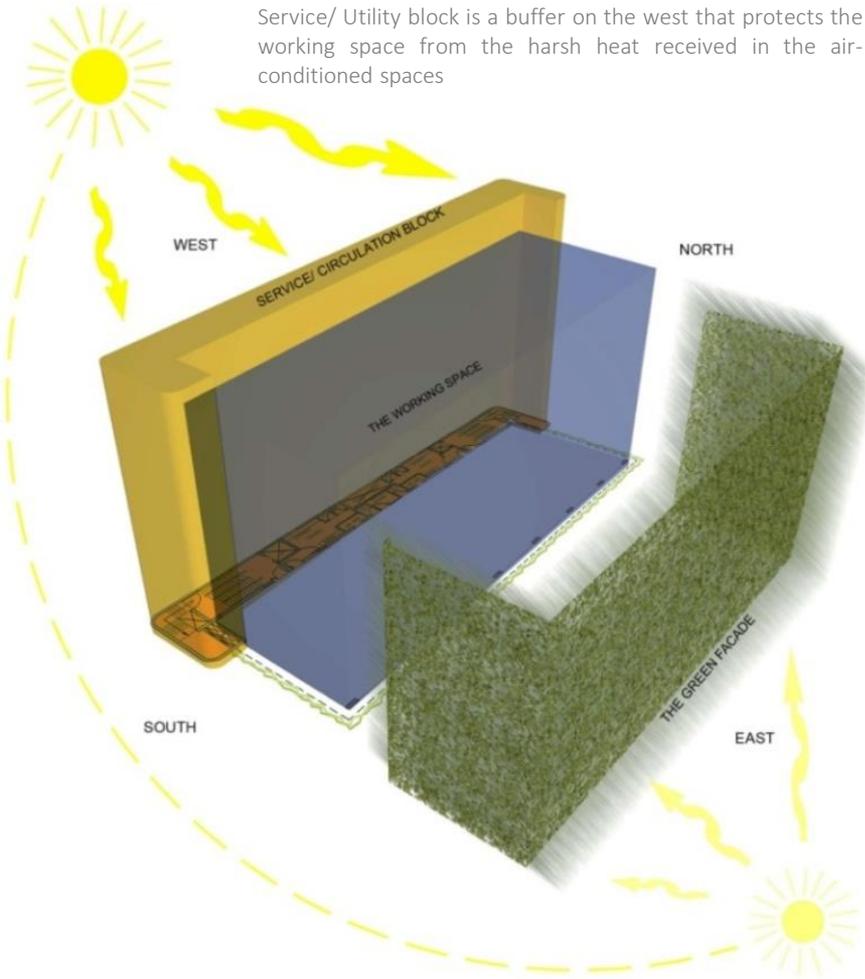
2. FLEXIBILITY

3. HIGH ENERGY AND WATER EFFICIENCY

4. HUMBLE NATURE

5. ART INTEGRATION

Service/ Utility block is a buffer on the west that protects the working space from the harsh heat received in the air-conditioned spaces



Creepers grown over the vertical cable covering the entire façade



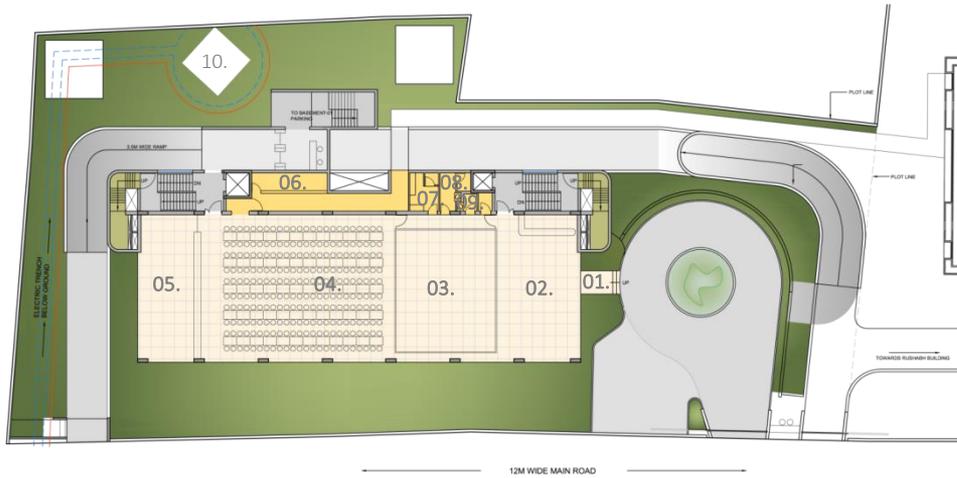


It's a simple painted brick and concrete building but we created an additional green skin which filters the harsh sunlight onto the space and it prevents and reduces the heating of the walls and the heat load decreases. Thereby the air conditioning becomes more efficient. The façade has full heighted suspended twisted cables tied at regular intervals on ground and at the terrace level with a considerable distance from the face of the building. The creepers are then allowed to grow along the directed path on these vertical twisted cables from the ground and from the terrace level, thereby making a skin full of growing creepers on three sides of the building. This skin when ages, becomes dense and will effectively turn into a barrier from the heat transfer through direct sunlight to the building with the ever growing creepers, it generates surfaces, textures and voids which when comes in contact with light, creates a play of shadow.



THE SOUTH- EAST FAÇADE

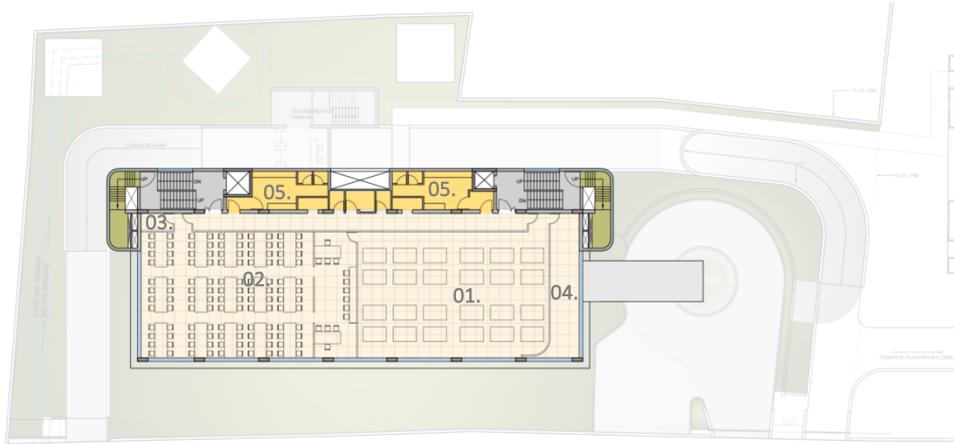
01. CLIMATICALLY RESPONSIVE



01. Entrance porch
02. Reception
03. Accounts/Hardware/
Building
Maintenance
Department
04. Dining area
05. Kitchen
06. Kitchen store
07. Toilets
08. Visitor's toilet
09. Store
10. Existing tower

At a Diamond factory, things change very dynamically thereby they need to change layouts time and again. So this is a very flexible design in terms of changing layouts. Ground floor has reception and waiting area after the entrance porch, accounts, hardware and building maintenance department, dining area with kitchen and storage. Separate toilets are provided for male and female staff and for visitors. First floor has laser room with an administration department, storage, stabilizer room and toilets.

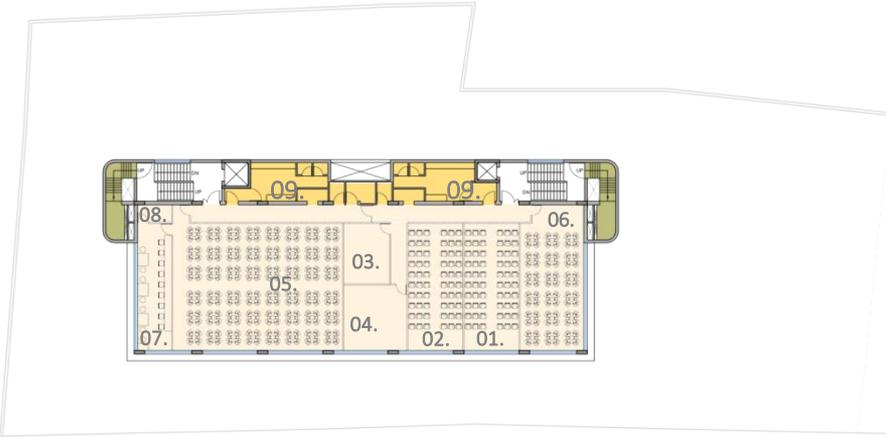
GROUND FLOOR PLAN



01. Laser room
02. Laser Administration
Department
03. Store
04. Stabilizer room
05. Toilets

FIRST FLOOR PLAN

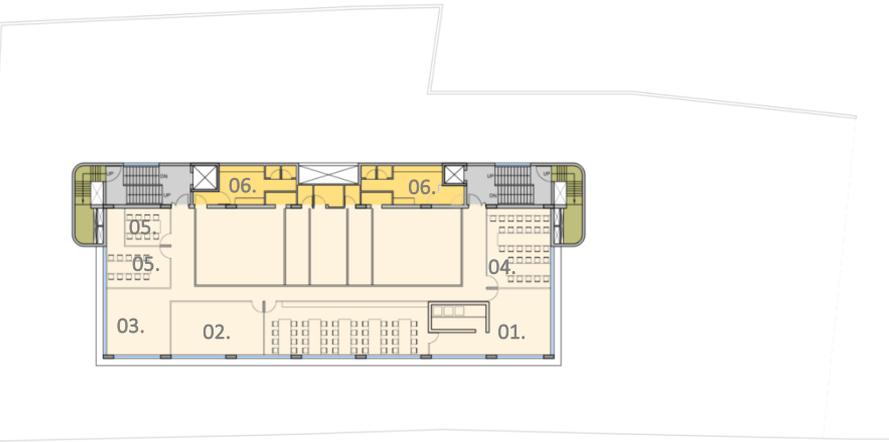




- 01. Training room 01
- 02. Training room 02
- 03. Meeting room 01
- 04. Meeting room 02
- 05. Polishing mills for Designers
- 06. Polishing mills for Laser Department
- 07. Administration for Polishing Mills
- 08. Store
- 09. Toilets

Second floor has polishing mills for designers and laser department, training rooms, meeting rooms, administration for polishing mills, storage and toilets. Third floor has 9 different working areas for 9 different groups and toilets for working staff.

SECOND/ THIRD FLOOR PLAN

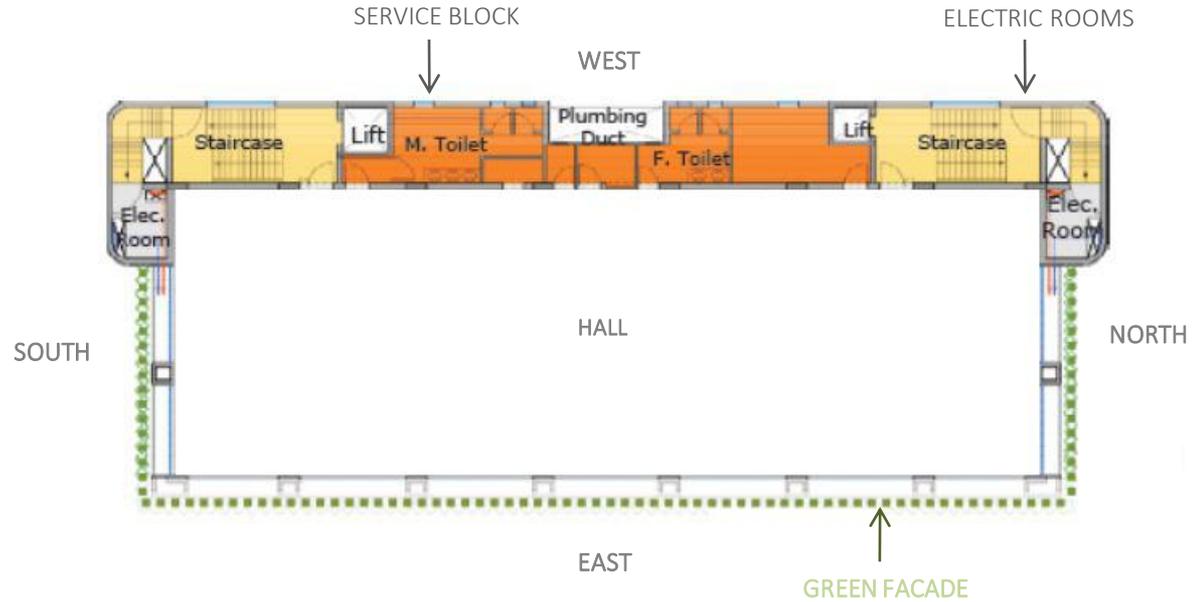
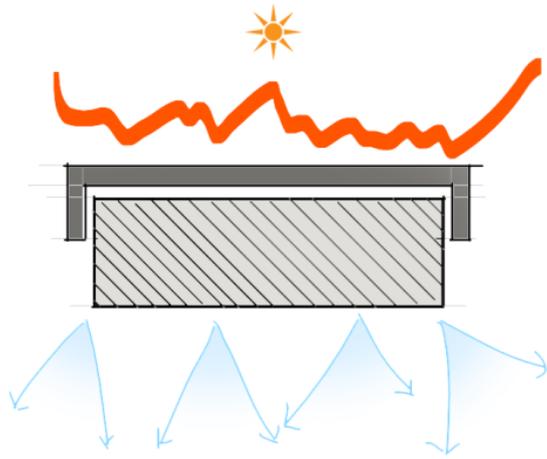


- 01. Cabin 01
- 02. Cabin 02
- 03. Cabin 03
- 04. Polish QC and Polish dispatch department
- 05. Meeting rooms
- 06. Toilets

Fourth floor has 3 cabins, polish department, meeting rooms and toilets.

FOURTH FLOOR PLAN





The west sun is harsh so we put the entire linear service block on the west side, it insulates the main air conditioned areas on the floors against the heat. The electric rooms are on the two ends and through the façade we are able to run the electric lines in order to change and modify things whenever needed. As it is a column-free hall, one can bring services wherever they want. This climatically sensitive building is very high on the functionality quotient with immaculate space utilisation and well worked out utilities. When you go there, you would be presently surprised with the green cover on the three sides of the building held by an interesting fabrication grid.

02. FLEXIBILITY



WORK STATION

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WORK STATION



TRAINING ROOM



PASSAGE



EXECUTIVE CABIN



CONFERENCE ROOM



CONFERENCE ROOM



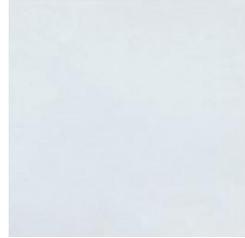
TEAK VENEER



BEIGE ITALIAN
STONE



TEAK WOOD



GLASS



RECEPTION AREA



RECEPTION AREA



RECEPTION AREA- EXECUTIVE AREA



RECEPTION AREA- EXECUTIVE AREA



DIRECTOR'S CABIN 1



DIRECTOR'S CABIN 1



DIRECTOR'S CABIN 1

04. HUMBLE NATURE



DIRECTOR'S CABIN 1



DIRECTOR'S CABIN 2



Five men in silver and black trying to pull a rope symbolic of the good and evil powers of the universe and how they're trying to win over each other is depicted in the artwork. The struggle of the entire world is depicted here and all these figures are made out of building waste- air-conditioning ducts waste, corrugated sheets, pipes etc.

05. ART INTEGRATION- 'TUG OF WAR'



The following artwork is portraying a rock out of which a person is coming out and sculpting his own- self, the philosophy of how one can work on their own self to become better. It is artistically made out of broken waste tiles.

05. ART INTEGRATION- 'SCULPTING SELF'



This is a mural designed with names of each and every key person including their suppliers, customers, bankers, consultants, project teams, staff members and everyone who has worked on this building/ project, as a gesture of gratitude towards them by the client. It is located right in the entrance of the building to give the importance it needs. A very thoughtful piece of art suggested by the clients and executed by us.

05. ART INTEGRATION- 'GRATITUDE'



The hardest substance in the world- Diamond, used to express the most tender of human emotions- Love. It is an interesting artwork made out of metal foil, depicting how a diamond is found from the mine.

05. ART INTEGRATION- 'DIAMOND'

DIAMOND FACTORY- SHAIRU GEMS IGBC NET ZERO ENERGY BUILDING RATING SYSTEM	POINTS AVAILABLE	POINTS ACHIEVED
ENERGY PERFORMANCE	REQUIRED	ACHIEVED
THERMAL COMFORT, INDOOR TEMPERATURE AND RH	REQUIRED	ACHIEVED
EXCELLENCE IN ENERGY PERFORMANCE- SIMULATION APPROACH	75	30
RENEWABLE ENERGY	25	25
TOTAL POINTS	100	55



FINAL RATING ACHIEVED – GOLD



FINAL RATING ACHIEVED – NET ZERO ENERGY BUILDING



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