



## ACCUR8

*Architectural Design for a diamond factory*

Client:	Mr. Aagam Sanghvi
Site Location:	Gem and Jewellery Park, Icchapore, Surat
Plot Size:	1,680 sq m
Construction Area:	1,643 sq m / 17,689 sq ft
Cost of Project:	Confidential
Year of Completion:	2024
Services:	Architecture Design, Interior Design, Landscape Design, MEP Integration, Art Integration
Firms Involved:	EssTeam, OBL/QUE



## THE PROJECT:

The clients for this diamond factory are two brothers—one at the helm of Accur8 Diamonds Private Limited, a company renowned for its diamond craftsmanship, and the other leading Responcity Systems Private Limited, a pioneer in smart city technology. The design of the factory is a bold and cohesive expression, thoughtfully crafted to address the unique challenges of the site, particularly its west-facing orientation. Reflecting the diverse expertise of the two companies—one rooted in the precision and artistry of diamond craftsmanship, the other in cutting-edge technology software—the design emphasizes a harmonious blend of innovative problem-solving and synergy. It is a space where tradition meets innovation, encapsulating the spirit of both enterprises while creating an environment that is as functional as it is inspiring.

## THE SITE:

The plot is located in a 250-acre Gem and Jewellery Park, dedicated to the Gem and Jewellery sector. Both companies aim to house their operations within a single building in the well-established industrial campus of Gems and Jewellery Park in Icchapore, Surat.

## CLIENT ASPIRATION:

The client, a modernist, wanted a structure that links the green environment to the office and is bold and modern in its expression.

## DESIGN DRIVERS:

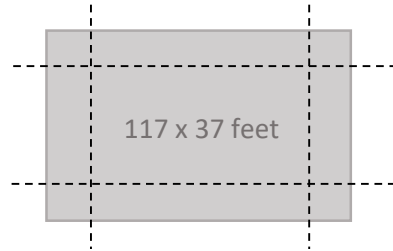
**Modern Form:** The facade was conceptualized as a cuboidal shell made from form-finished concrete and glass, symbolizing a modernist approach. The cuboidal volumes subtly jutting in and out, create a play of light and shadow.



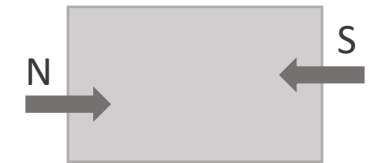
**Building Performance:** The building aims to reduce its energy consumption through sunshade. This will reduce incident heat and increase the quality of indoor workspaces through well-daylit spaces and clean breathing air, thus taking care of the well-being of the people working here.



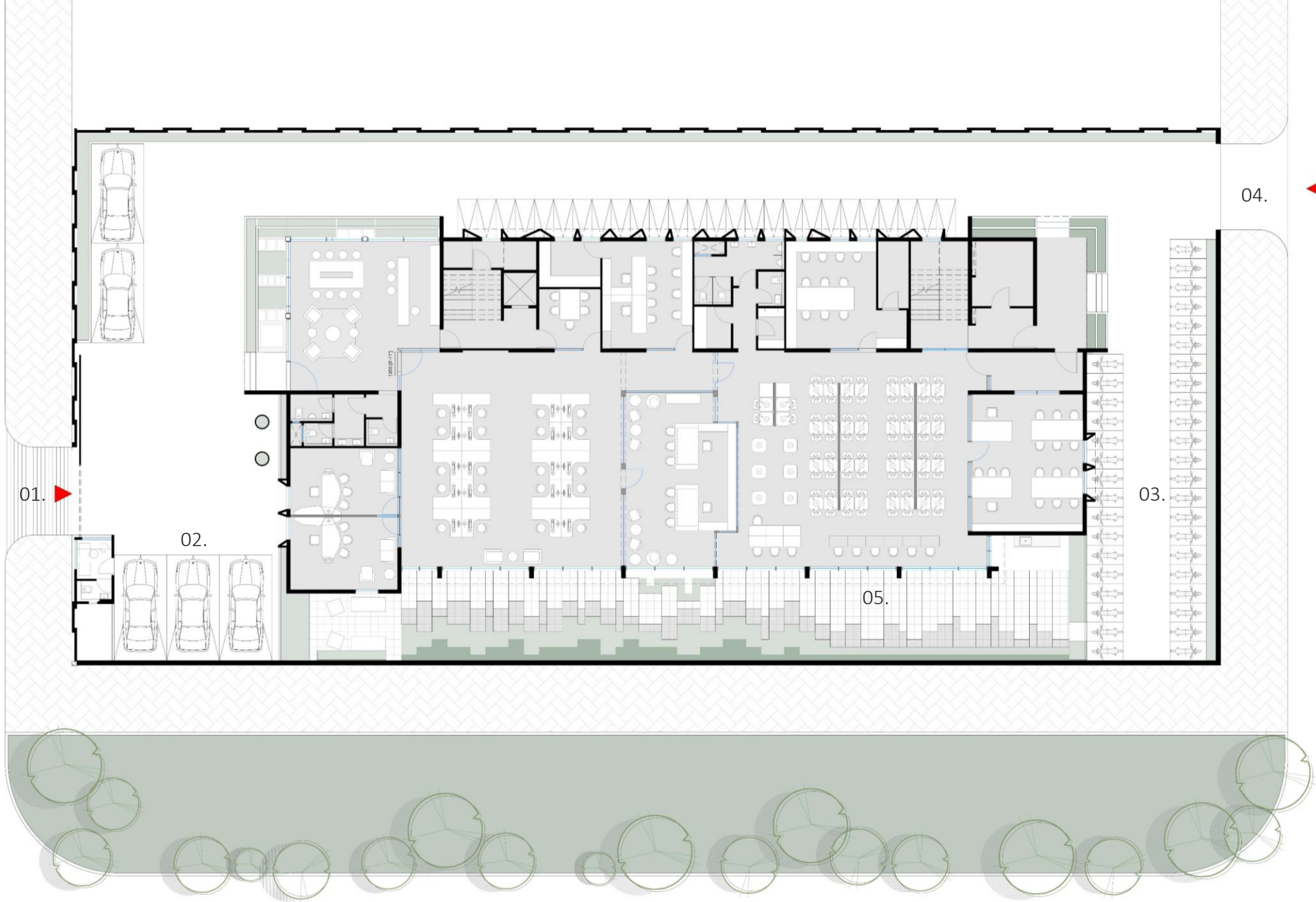
**Flexibility in Internal Layout Planning:** Large column-free spans on both levels for cabins and utilities will ensure flexibility and adaptability to accommodate future changes and expansions with minimum structural alterations.



**Segregated and Secured access points:** Strategic entrance placements at the ends of the building (North and South) will promote a more hospitable as well as secure inflow and outflow of people.



The architectural exterior of the diamond factory is ideated as a study in minimalist elegance. The concept of a cuboidal shell symbolizes the unity between the two companies and the brothers behind them. A creative approach towards the sunshade designs enhances the aesthetics as well as the building performance.

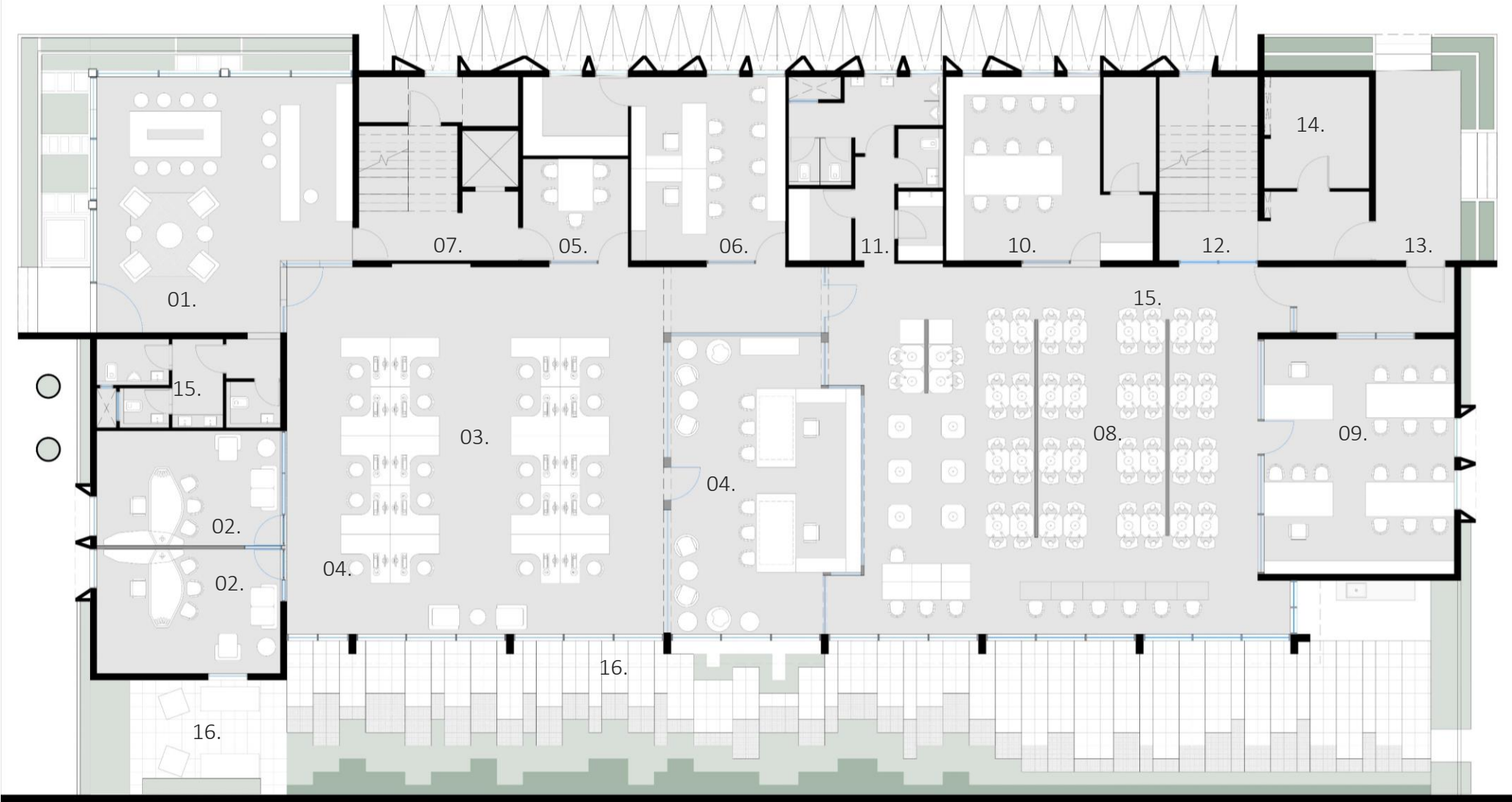


- LEGENDS:
- 01. Executive Entrance
  - 02. Executive Parking
  - 03. Staff Parking
  - 04. Staff Entrance
  - 05. Landscaping

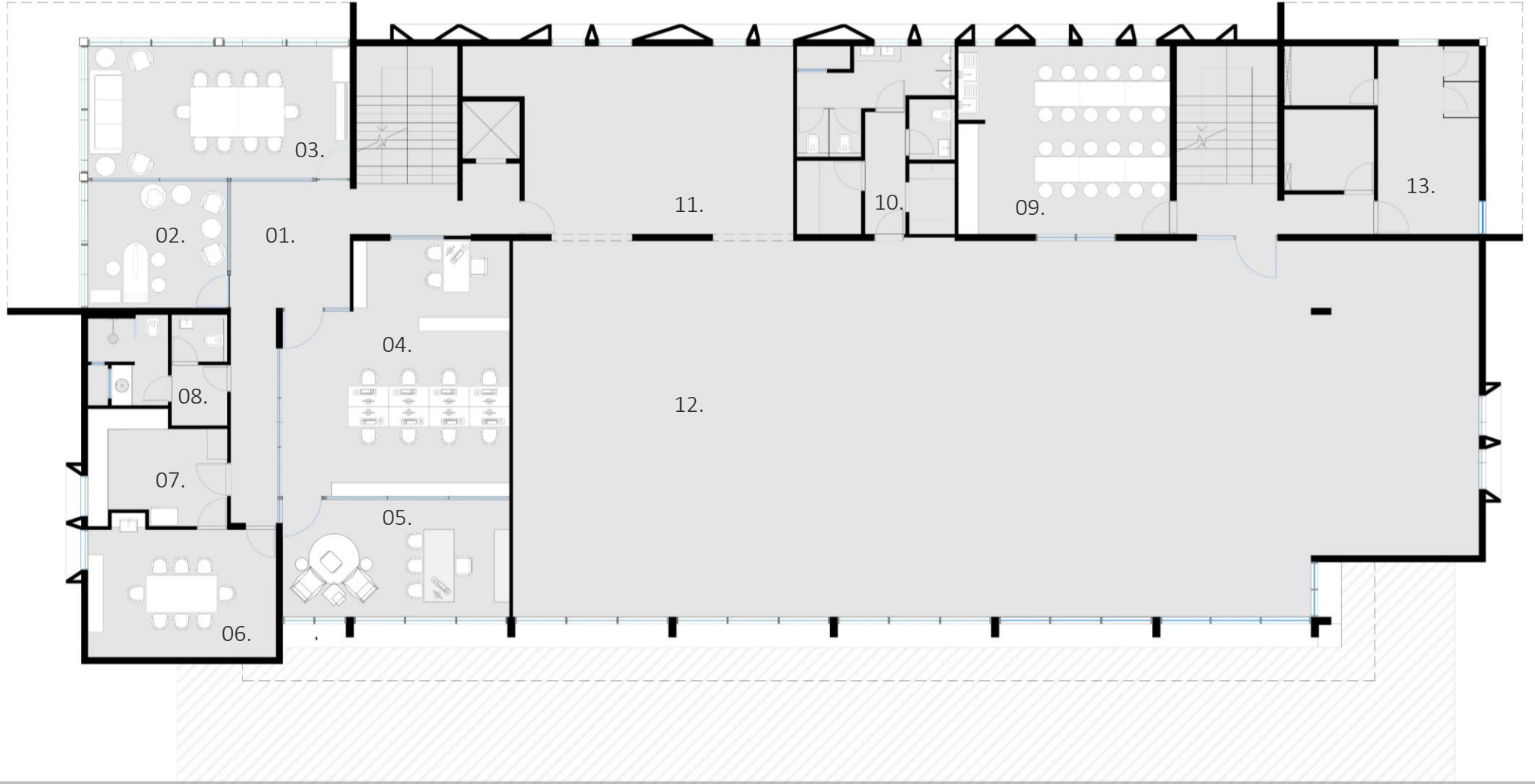


LEGENDS:

- 01. Reception + Waiting/Cafe
- 02. Senior Director Chambers
- 03. Working Station
- 04. Director Chambers
- 05. Meeting Room
- 06. Accounts Cabin
- 07. Executive Staircase
- 08. Polishing Department
- 09. Assortment Room
- 10. Grading Dept.
- 11. Staff Toilet + Drinking Water + Boilroom
- 12. Staff Staircase
- 13. Staff Entrance Porch
- 14. Electrical Room
- 15. Toilets
- 16. Outdoor Landscape and Sit-Out area



GROUND FLOOR PLAN



- LEGENDS:
- 01. Vestibule
  - 02. Director's Cabin
  - 03. Conference Room
  - 04. Working Station
  - 05. CA's Cabin
  - 06. Executive's Dining
  - 07. Executive Kitchen
  - 08. Executive Washroom
  - 09. Staff Dining + Kitchen
  - 10. Staff Toilet + Drinking Water + Boilroom
  - 11. Future Expansion
  - 12. Future Expansion
  - 13. Electrical Room + Server Room + Changing Room

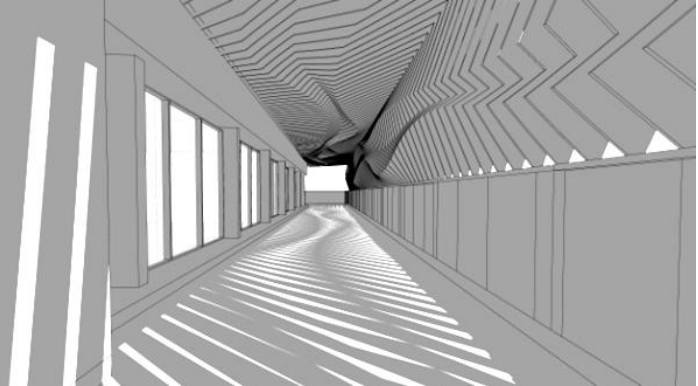


FIRST FLOOR PLAN

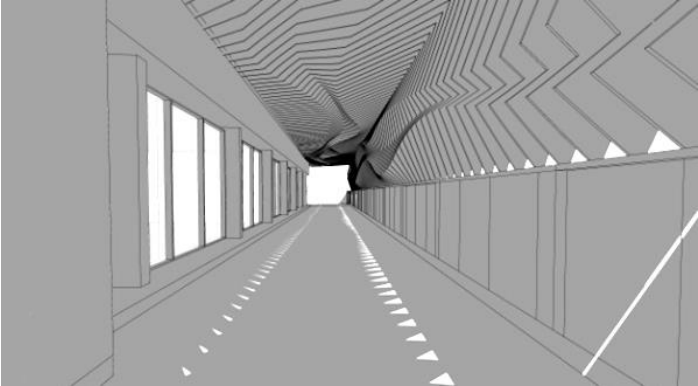


As per the plan, the western facade is the longest facade that also faces the main road. Hence it was crucial to place most of the work areas along the western edge to capture views of the vast open space and landscape in the campus. Though one of the major concerns was the harsh sunlight and glare that would hit the facade and heat the entire space the whole day. To negate this issue, a screen was conceptualized that would allow permeability for views, diffused sunlight and ventilation. Research through the BIM software showcased the sun movement and sunlight incident angles throughout the day for the entire year. This helped simulate design solutions that reduces the total incident direct sunlight on the facade of the working space on a daily basis and further reduce glare.

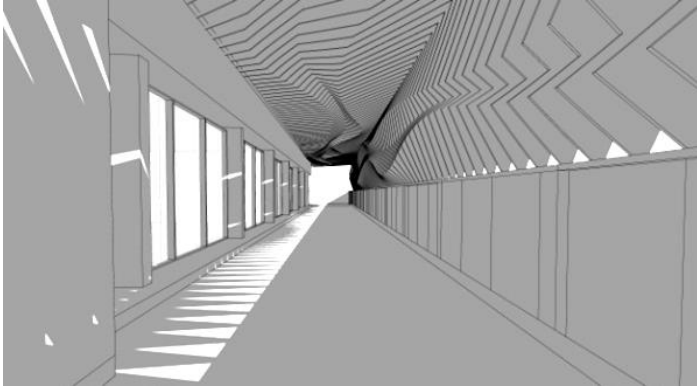
MAY



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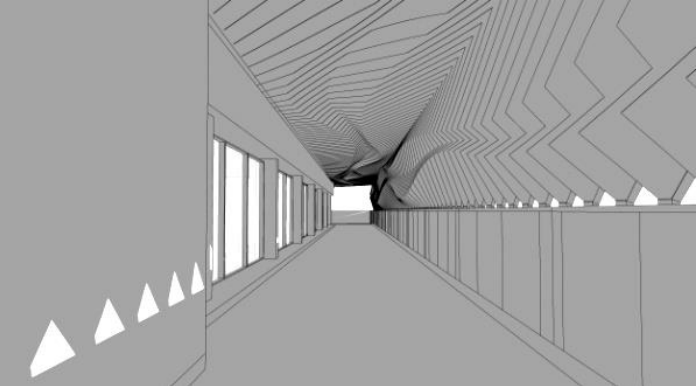


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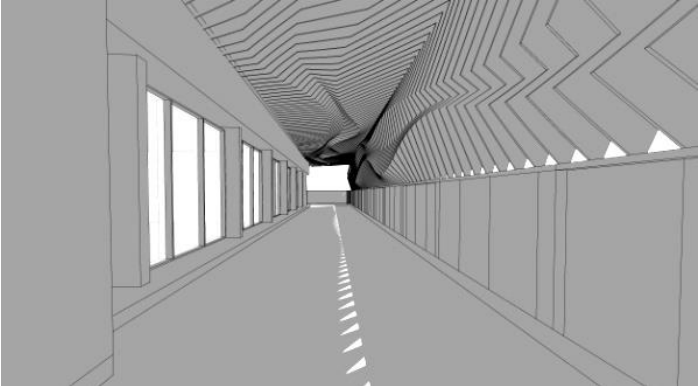


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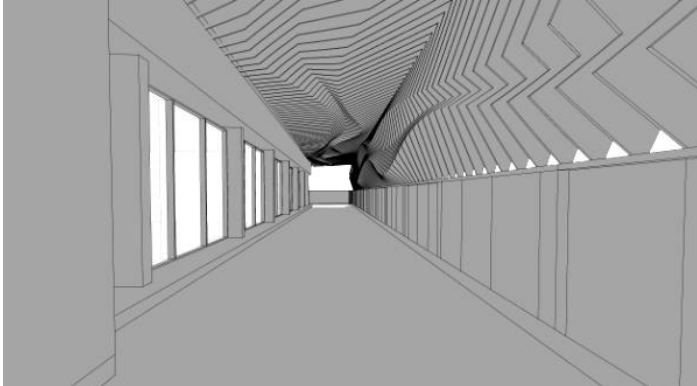
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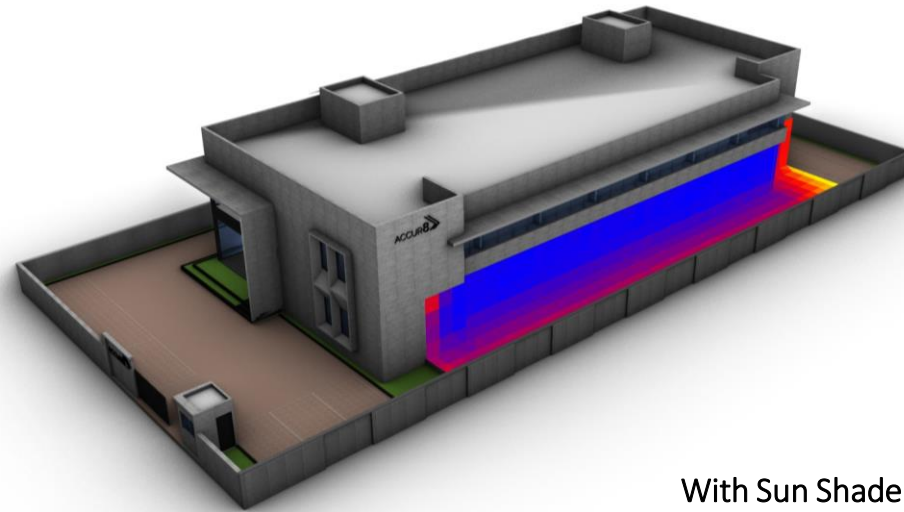
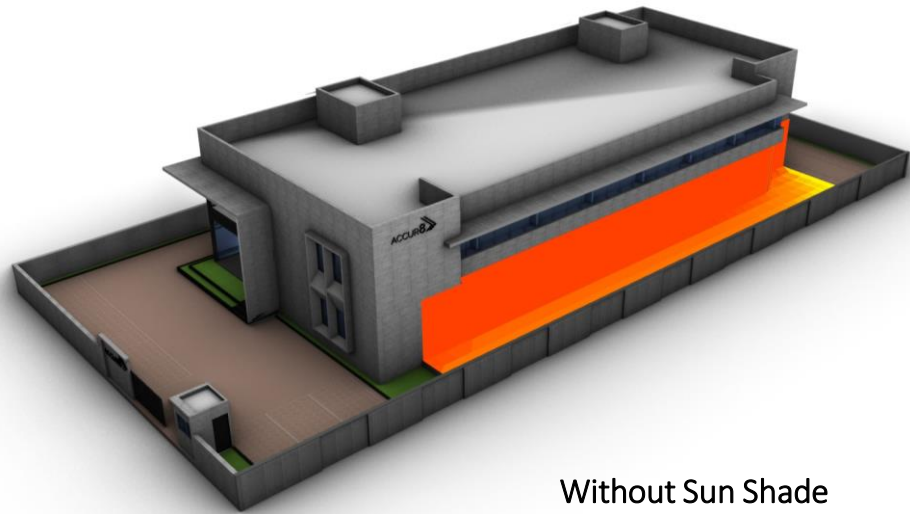


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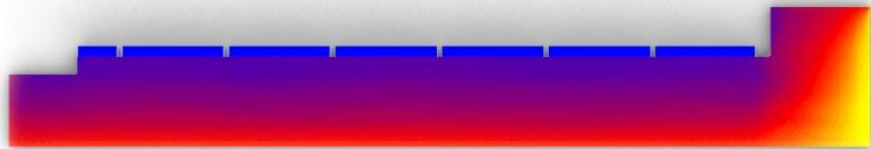
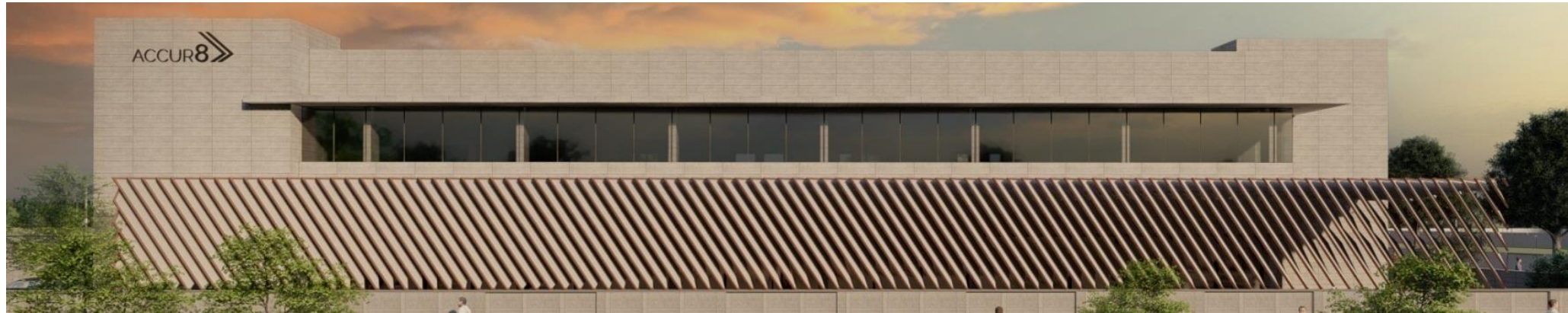


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SUN SHADE ANALYSIS – SHADOW RANGE AT DIFFERENT TIMES



ANNUAL HOURS



PLAN



ELEVATION

FACADE ANALYSIS – DIRECT SOLAR INCIDENCE STUDY

At the end, the facade design finalized is a striking architectural interpretation of the company's logo. It not only serves as a powerful visual symbol but also plays a critical role in mitigating the harsh sunlight from the West. The design features a series of repetitive fins, which embody a sense of ORDER from the exterior, while conveying a sense of DYNAMISM from within.



3D RENDER – WESTERN FACADE

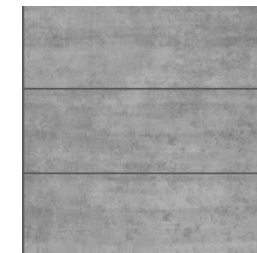


3D RENDER – SOUTH WEST FACADE





EVEREST HEAVY  
DUTY CEMENT  
BOARD



FORM FINISH  
CONCRETE



GLASS WINDOWS

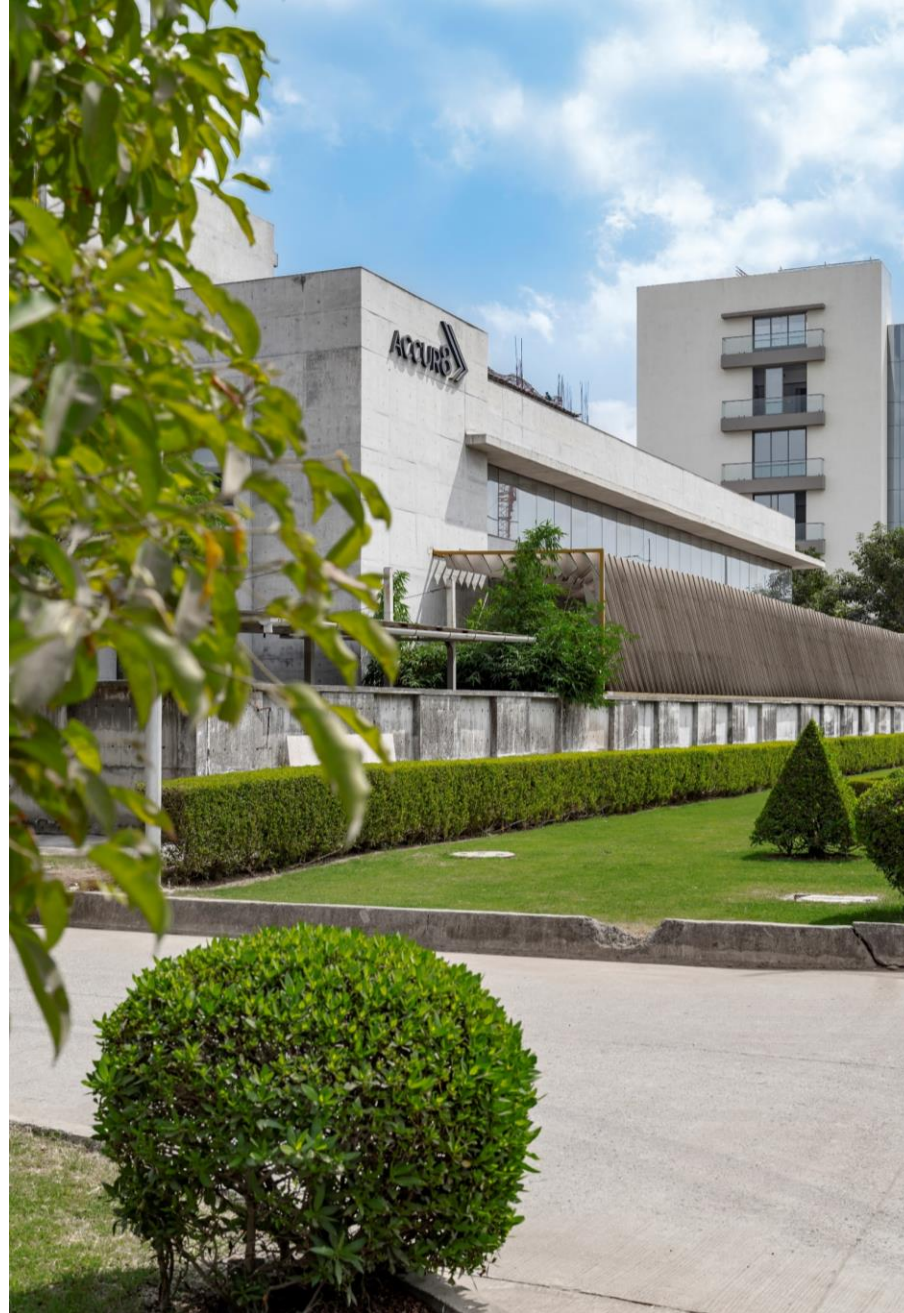


BLACK ANODISED  
ALUMINIUM



STEEL GREY GRANITE  
FLOORING

The architectural exterior of the diamond factory is a study in minimalist elegance.



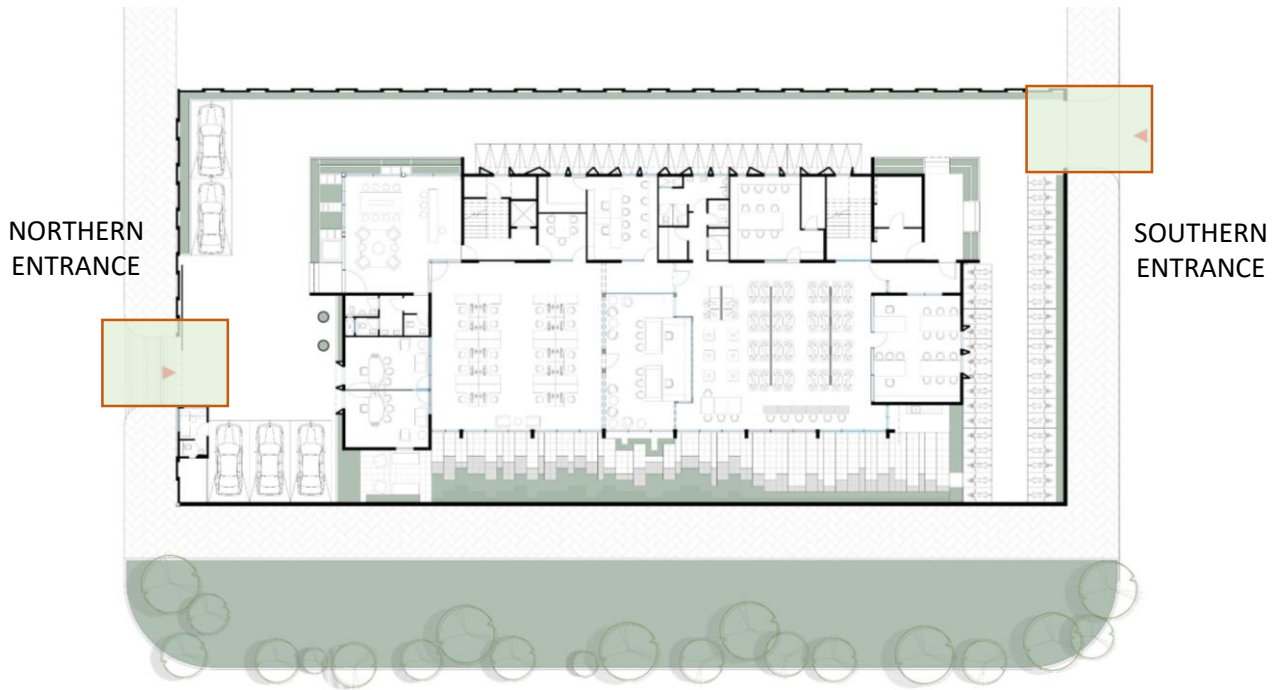
The surrounding landscape provides vibrant color contrasts against the grey concrete, adding a touch of liveliness to the industrial setting. A bold red gate serves as an unexpected focal point, standing out against the muted tones. The outer flooring continues the grey theme, ensuring a cohesive visual flow. Together, these elements create a modern exterior reflecting form and function.



ENTRANCE DESIGN



## ENTRY POINTS



The design of the entry and exit points for the diamond factory is thoughtfully orchestrated to reflect the distinct functions of the facility while ensuring both clarity and security. Entrances are strategically positioned at opposite ends of the building, each tailored to its specific purpose.

In contrast, the southern entrance is dedicated to the diamond staff, offering a secure and discreet point of access. This spatial arrangement not only reinforces functional clarity but also ensures that security is seamlessly integrated into the building's overall design. The careful zoning of these entry points enhances the operational efficiency and safety of the facility, while also maintaining a cohesive and elegant architectural expression.

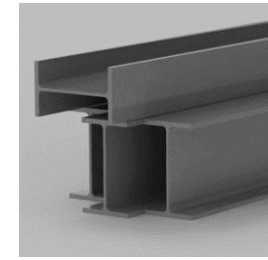




FACADE DESIGN

ACCUR8





GI PAINT



CEMENT SHEET

The dynamic sun shade system is designed to address the challenges posed by the glare to the west-facing working area. To mitigate this, a meticulously crafted, computer-aided sunscreen has been designed to shield the building, effectively reducing direct sunlight exposure by two-thirds. Its ever-changing pattern imbues a sense of movement, making it both a functional and artistic element of the building. Beneath the sunscreen, full-sized glass glazing allows for uninterrupted views of the verdant landscape, fostering a sense of well-being and boosting productivity among those within.



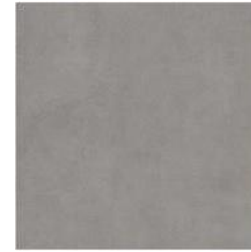




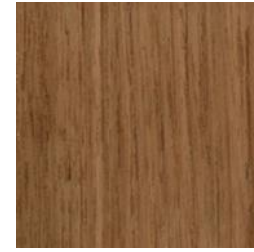
ENTRANCE CAFE



WORKING AREA



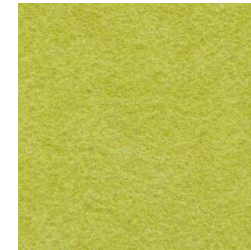
CONCRETE



TEAKWOOD



STEEL GREY  
GRANITE



AURA GREEN  
PANEL



BLACK ANODISED  
ALU



YELLOW LEATHER

Custom-designed hanging baffles serve a dual purpose, offering both sophisticated lighting solutions and acoustic control, which further enhances the sense of spaciousness. The flooring, finished in honed granite, is both durable and elegant, carefully chosen to minimize glare from the abundant natural light while maintaining a polished aesthetic. The design prioritizes openness and flexibility, with modular furniture that can adapt to various needs, fostering a dynamic and collaborative environment.



WORKING AREA



The functional layout of the interior is meticulously planned, with a strong focus on desk-oriented activities that require a well-lit and open environment. The working areas are thoughtfully oriented towards the landscaped setback zones, ensuring that employees have a continuous visual connection to the natural surroundings.



WORKING AREA

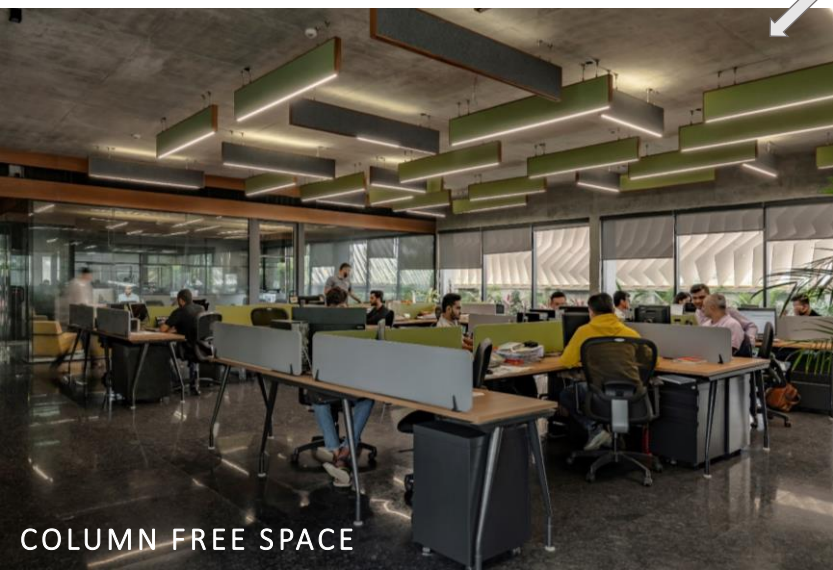


The design seamlessly incorporates advanced simulations and cutting-edge sustainable practices, resulting in an environment that is not only optimized for efficiency but also enhances the comfort and well-being of its occupants.

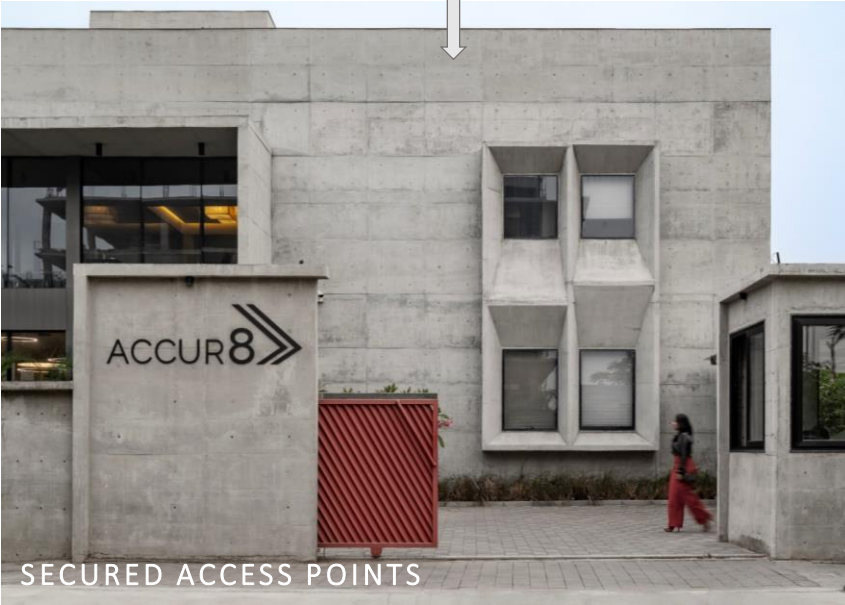
CONFERENCE ROOM



MODERN FORM



COLUMN FREE SPACE



SECURED ACCESS POINTS



BUILDING PERFORMANCE

CONCEPT INTEGRATED IN THE DESIGN



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