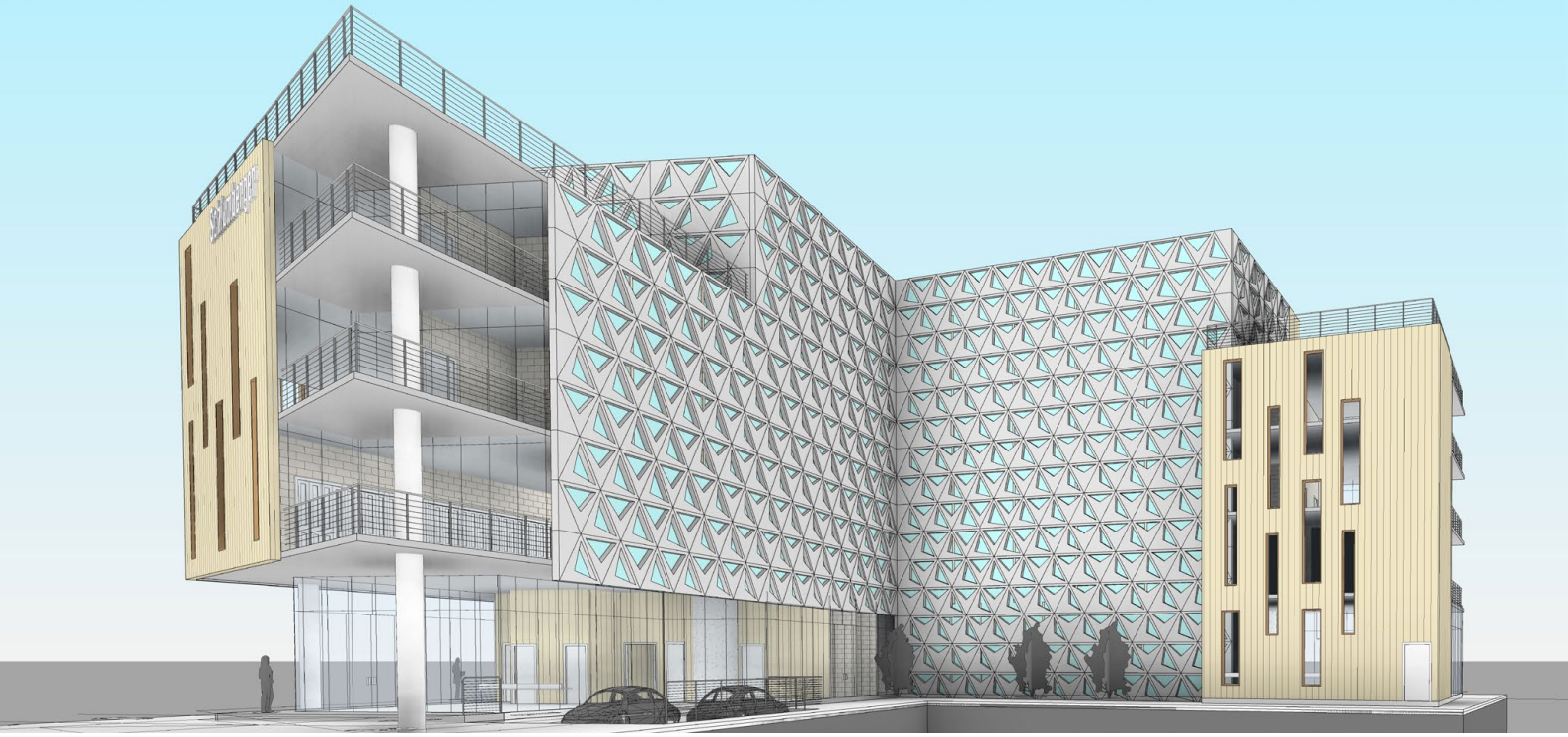


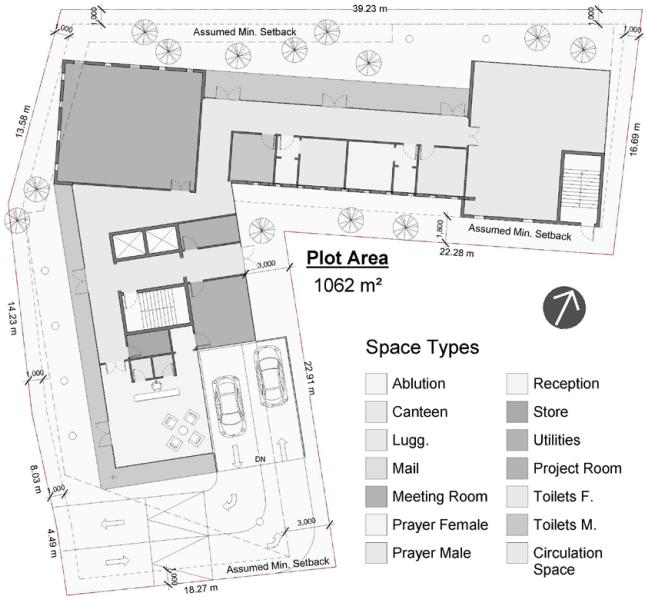
# 07 NAG HQ Offices // New Southern Facade

## G+4 Offices Facility

**Year:** 2015. **Use:** Office building. **Area:** 2,600 m2. **Client:** Schlumberger Limited. **Status:** Concept design . **Location:** Algiers, Algeria.

The building is designed as a headquarter for Schlumberger North Africa group of companies to represent the new sustainable energy direction which was adopted lately by Schlumberger after a recent oil crisis. It was designed to target LEED gold rating. Hence, some passive green building design strategies was applied at early stages. One of them was to minimize direct sunlight which penetrates the southern facade, by reducing the size of openings.
The first facade proposal was a simple grid of square openings. The second proposal was made recently based on triangular grid, which leaded to a couple of challenges : First was to draw adjacent triangles at both sides of the grid, to complete the rectangular shape of a wall, and they turnout to be symmetrical in case of odd number of columns. The second challenge was in case even number of columns, adjacent triangles become asymmetrical and must be drawn in a different order. However the first part was easy enough, but the second part took me almost 90 component to build a universal grasshopper definition, which is able to draw the adjacent triangles at any given number of rows and columns. To achieve this, I mainly used Modulus component to identify even number inputs, then Stream Filter component to trigger the second draw order solution.
Later, two parameters were assigned to control window offset from the panel and window height. Later, a point attractor was applied to both parameters. Finally, Perlin noise was Introduced to express the sense of systematic randomness.


Original southern facade




Ground floor layout