



## Layout To The Port

Scale 1:3000

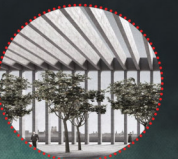


The spaces between the contour layers of the walkway were used as public terraces, including resting sessions, and others as a staircase around the entire walkway.



warehouse with a high technology system with advanced layers of protection against explosion, by the presence of accurate sensors when there are alarms that work on the light closure of the warehouse and the entire electrical and heat system changes.

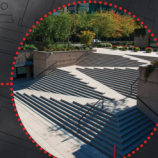
An advanced shading system for buildings that helps ventilation and natural lighting, and they are dynamic retractors that respond to the movement of the sun, foldable, made of aluminum.



The hydraulic car building is an advanced system that helps to store a larger capacity of cars in an organized manner, through a system designed for the rise and fall of specific cars only.



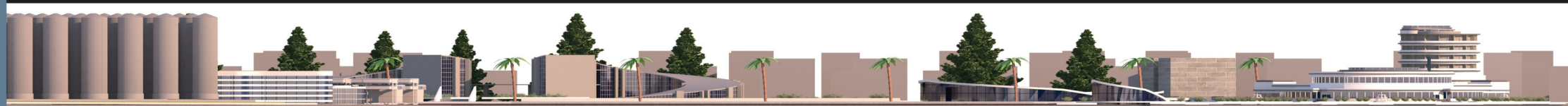
An advanced environmental shade system for pedestrian comfort With solar cells to absorb and generate light at night.



Ladder was designed that simulates the walkway in a natural way as if they were one piece, taking into account the connected ramp for the movement of wheelchairs.



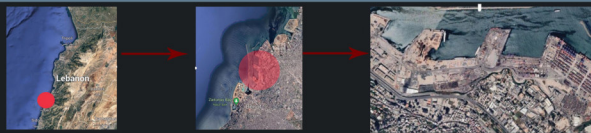
Elevation 1



Elevation 2



Section 1-1



# 3D Shots

# Important Projects

## Redesign of the port of Beirut

A large explosion occurred in the port of Beirut, which occurred in two stages in Warehouse No. 12 in the port of Beirut, which led to significant damage in the port and the destruction of the glass facades of buildings and homes in most neighborhoods of the Lebanese capital, Beirut. The damage extended to thousands of homes, kilometers away from the site of the explosion.

## Climatic studies

The weather in Beirut is generally mild, with a Mediterranean climate, with hot and humid summers, mild spring and autumn, and cold, rainy winters. The direction of the wind is west, that is, it blows from the sea to the land, but at night the direction changes to the east, that is, it blows from the land towards the sea.

As this affected the exploitation of wind direction sites in the signing of recreational and economic buildings to suit them with users and their comfort

## Temperature Range



## Wind Velocity Range



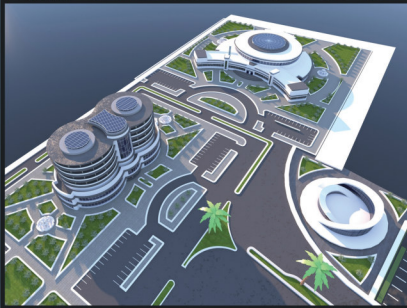
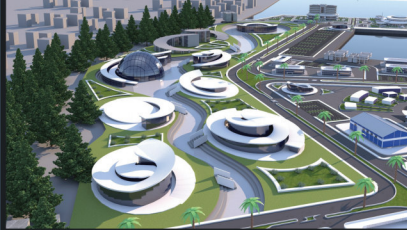
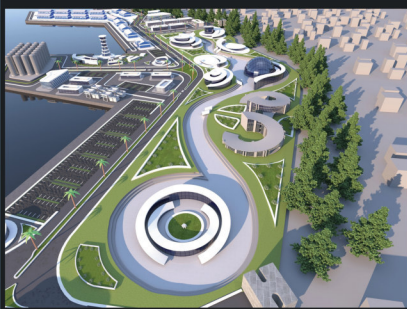
## Packaging types

### wooden packing

Wooden containers, one of the oldest packaging materials, are widely used for packing heavy and large brittle loads due to their toughness and durability, and for fresh fruits and vegetables due to their breathability products.

### glass packaging

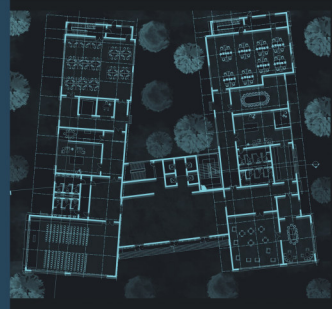
The main component of glass is sand. However, since materials made of pure silica glass, obtained by melting sand only, are very brittle, soda is added to increase strength and reduce the melting temperature. By adding materials such as glass, the resistance of the product to entering the glass increases



Hotel [Ground Floor Plan]  
Scale 1:100



Hotel [Typical Floor Plan]  
Scale 1:100

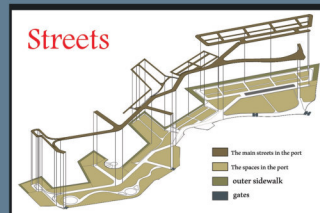
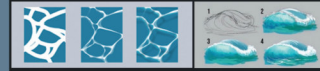


Plans For Administrative Buildings  
Scale 1:100



## Concept used: "Go with the flow"

The general site was designed in the form of sea waves, to match the port, where the site was designed to harmonize with the sea waves and their shape, and the corridors and roads were designed to match the meanders of the water.



The elements that were put in place to develop and design Beirut Port after the explosion are

## Economic Zone:-

The economic zone is designed for the purpose of recycling and making use of sea water And refining ship oils by extracting it and making other things that can be used, which saves energy and money significantly.

## Building :-

The shapes of the buildings are ovals in the recreation area overlooking the tourist walkway, and there are regular buildings such as the administrative buildings.

## service area:-

The service area consists of a police building, a fire station building, a cafeteria and a hospital. The most important feature of this area is the traffic path that separates the buildings and leads to the whole port to serve all people.

## Passenger reception area:-

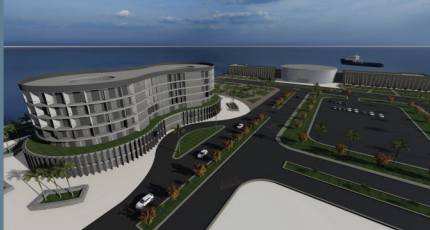
The passenger reception area is an area located on the far left directly on the sea It contains hotels with a very distinctive character and shape that tourists can visit, whether for a visit or for business. It has a very large green area, a service part and a small recreation area.

## Factory area:-

The factories area is an area full of a group of packaging factories, because the city of Beirut is considered rich in foodstuffs, so we will export it to increase the return on money and compensate for the losses

## Green hydrogen:-

is committed to the goals of environmental protection and combating global warming, as it depends on the removal of carbon and the reduction of its percentage in the air. Green hydrogen is a carbon-free fuel, the source of its production is water, and the production processes witness the separation of hydrogen molecules from oxygen molecules with water, by means of electricity generated from renewable energy sources.



Hotel Shots



Shots Of Administrative Buildings



Section 4-4



Section 3-3



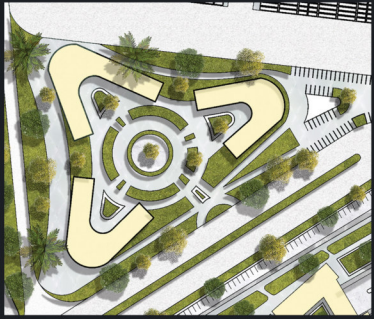
Section 2-2

## Ship oil refinery

Second, used oils are used in oils and impurities, while the standard specifications of diesel differ from the standard specifications of diesel circulating in the standard specifications of diesel circulating in the standard specifications of diesel. The first is the purification of used oils in water and impurities with the addition of synthetic additives. Synthetic additives operate as oils and greases again. The proportion of pure base oil quantities obtained from oils used in used cars received from ships reaches 85% - 88%. The idea of the project is summed up in receiving ready-made ships, ships, used, second-hand, recycling in two ways:



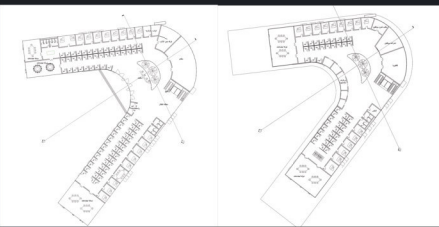
# building customs



3d shoot



plans



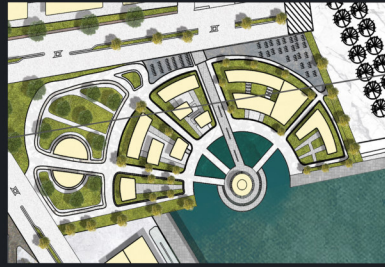
elevations



sections



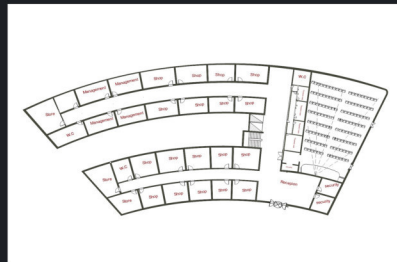
# Recreational part and memorial building



3d shoot



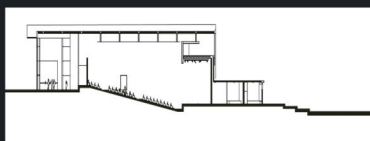
plans



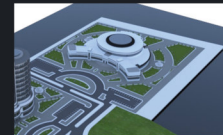
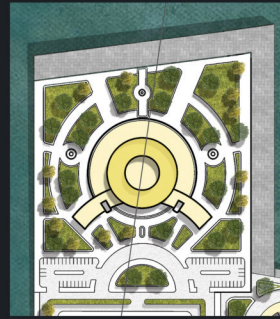
elevations



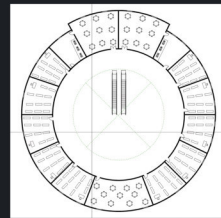
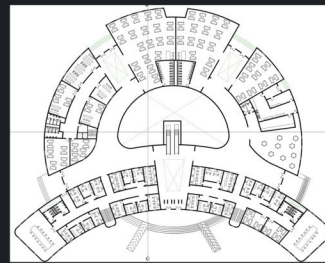
sections



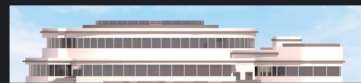
# Part of the hotel service and the station



plans



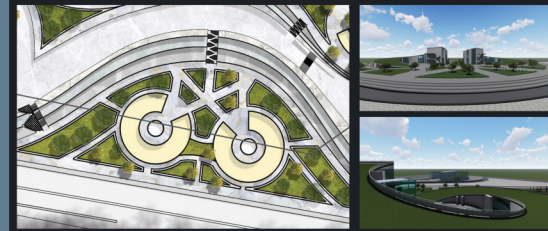
elevations



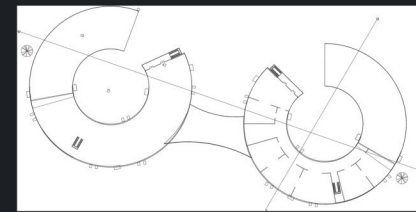
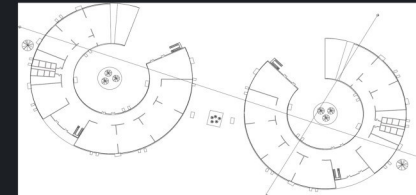
sections



# Exhibition part



plans



sections



elevations

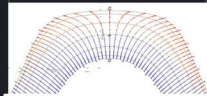


# Beirut Port

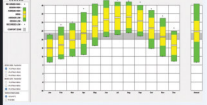
Group 13



SUN SHADING CHART



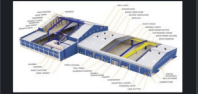
Temperature Range



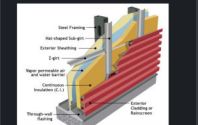
Wind Velocity Range



5. Intelligent warehouse management system structure: Intelligent logistics warehouse management system, using computer control and management technology to maximize the functions of the three-dimensional library, can provide enterprises with automated warehousing, transportation, automated production, finished product distribution, complete logistics automation solutions.



The pallet stacker speed is generally less than 180m/min, while the mileage can reach a maximum of 240m/hour, and the maximum reach times can reach 250 times/hour generally 200 times/hour



The height can be up to 30m, generally less than 24m, mainly 24m and 21m. The multi-layer shuttle has a storage capacity of 1000 times/hour. See Technical Features of Intelligent

Green hydrogen is a carbon-free fuel, the source of its production is water, and the production processes witness the separation of hydrogen molecules from oxygen molecules with water, by means of electricity generated from renewable energy



# Redesign Beirut Port

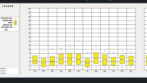
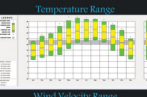
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Scale 1:3000



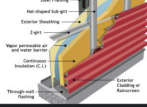
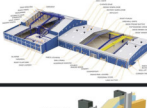
**Recreation of the port of Beirut**  
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**Packaging types**  
**wooden packing**  
 Wooden containers, one of the oldest packaging materials, are widely used for packing heavy and large brittle loads due to their toughness and durability and for fresh fruits and vegetable due to their breathability products.

**glass packaging**  
 The main component of glass is sand. However, since materials made of pure silica glass obtained by melting sand only are very brittle, soda is added to increase strength and reduce the melting temperature, by adding materials such as glass increases the resistance of the product to external forces.



**Ship oil refinery**  
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An advanced environmental shade system for pedestrian control with solar cells to absorb and generate light at night.



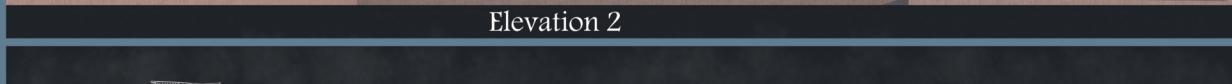
Ladder was designed that simulates the walkway in a natural way and that serves as a staircase and account the connected ramp for the movement of wheelchair.



Elevation 1



Elevation 2

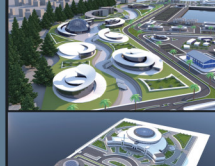


Section 1-1

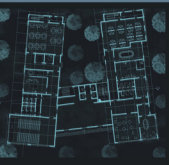


Section 2-2

## 3D Shots



## Important Projects



Hotel Shots

Shots Of Administrative Buildings



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Streets

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**Building** —  
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**The service area** consists of a police building, a recreation building, a cafeteria and a hospital. The most important feature of this area is the traffic paths that separate the buildings and leads to the whole port to serve all people.

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Section 4-4



Section 3-3



Section 2-2