

mars desert research station

comprehensive test / 7th April 2016. 10.00 K.211 - 11th April 2016 12.00 Dept. Library

Site: Egypt, Kharga Oasis
Plot area: irrelevant
Built in ratio: irrelevant
Building type: free standing
Building height: irrelevant

Due to the program a Mars Desert Research Station has to be designed, which includes the research laboratory, the backlabs and backoffices, an artificial pond used in cultivation of algae and a small visitor centre.

GPS coordinates of the site: 25.464171, 30.614478 New Valley Governorate Egypt

Further information about the project:

<http://mdrs.marssociety.org/home/mission>

<http://mdrs.marssociety.org/home/about-mdrs>

Further information about algae farms:

https://en.wikipedia.org/wiki/Raceway_pond

<http://www.sapphireenergy.com/locations/green-crude-farm.html>

<http://www.cyanotech.com/company/facility.html>

<http://microbioengineering.com/products/> - technological details

Design program:

- parking places for 30 cars
- bus stop for 4 buses
- space and trackway (backlabs and laboratory) for heavy trucks
- foyer and exhibition space: with a block of toilets for visitors (for 50 people and 1 for disabled). There will be an exhibition of the local attractions, including the huge maquette of the Mars (cca. 5.0 diameter) – 200 m²
- administration, offices: a manager's office and an administration office (1+2 people)
- 5 offices for 5x2 people
- conference room for 16 people
- IT room incl. 20 workstations
- projector/education room access from the foyer or from the exhibition space for 50 people
- 1000 m² special tempered storage divided into 4 different spaces
- 400 m² storage
- 400 m² workshop connected to the storages
- 2000 m raceway pond with oil refinery – suggested on the site plan only

All spaces, blocks of toilets, corridors must be accessible for the disabled. The brief arrangement of the plans must show the special needs of function and the users.

The workers and the visitors arrive by bus, or by their own car, or minibus. The developing of entrances, parking places, their fully unhindered use is very important. The Mars Research Station has to be separated visually from the backlabs and other facilities.

Submission:

2 pcs of 'A1' (594x840 mm, vertical orientation) sheet on hardboard

Site plan showing the layout and the use of the site	1:2000 and 1:500
Floor plan(s)	1:200
Sections: min. 2 perpendicular to each other	1:200
Elevations	1:200
Axonometric, perspective views, fotomontages, drawings representing the architectural character	

Evaluation aspects:

When designing the site plan one must take especially care of the correct dimensioning and unhindered developing of roads, covered areas, buildings. At the evaluation functioning, forming of the building's façade and volume, it's architectural, aesthetic appearance, the connection with the surroundings and ambitious elaboration is all important. When giving the marks the designer's behaviour and rationality and the harmony of architectural consequences derived from these will be considered.

7th April 2015.

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