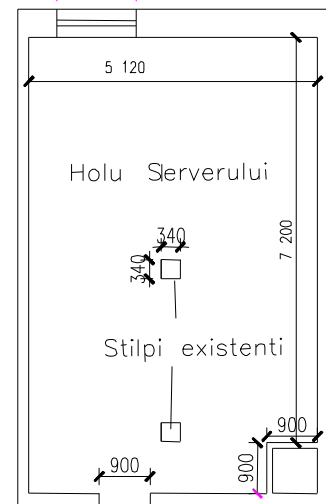# DESCRIPTION OF NECESSARY WORKS

FUNCTIONAL RECONSTRUCTION WORKS

The Server Hall

The Server Hall is a room located in the basement of the building and has a surface of 41 m^2 and a height of 2,75 m. The following works must be performed with regard to the Server Hall:
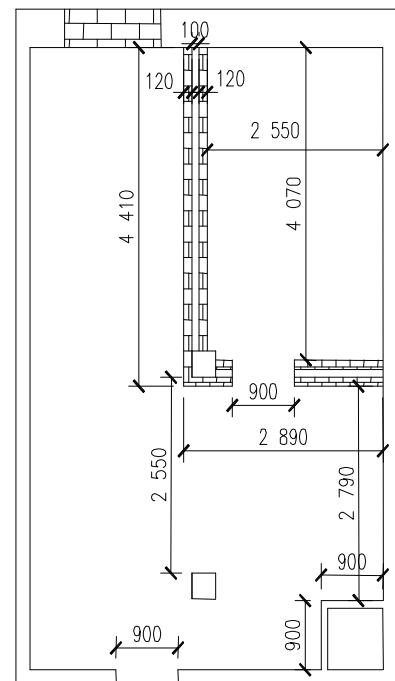
- The Server Hall has a window of 0,80x1,40 m, which must be plugged up and treated to ensure a complete resistance to dust and water. It must also be well insulated thermally and be resistant against any burglary or other criminal acts. The protective metal bars must be replaced.
- The access door must be cleaned and painted and the locking system must be replaced with a more advanced one. In addition to the first access door, it is necessary to install another (a second) metallic door 2,3x0,90 m. This door must be:
    - Dust-proof
    - Thermally insulated
    - Fire-proof
    - Water-proof (flooding prevention)
    - Equipped with a sophisticated security lock

The Server Room

The Server Room shall be located *inside* the Server Hall within a spot of around 10 m^2 through the following arrangements:

- Erection of a double brick wall filled with mineral wool inside as a thermal insulation layer. The walls shall be completely waterproof hermetic and fire-resistant. They shall possess good heat/cold insulation properties. The Room should be:
    - Scrubbed
        - all walls should be cleared of previous paint and washed
        - the floor should be cleaned and washed
    - all holes, damages, door frames and windows frames should repaired / filled and sealed
    - prepared with a waterproof sealer. The Server Room should be moisture free.
    - puttied and painted in two coats of white paint.

- Installation of a metallic door, with the following properties:
    - Dust-proof
    - Thermally insulated
    - Fire-proof
    - Fully Water Proof Hermetic (flooding prevention)

- Equipped with a sophisticated security lock system

- The Server Room should be fitted with a raised floor by 40 cm above the existent floor similar to the one shown on the below pictures. A tile lifter should be part of the installation.

A network access hole needs to be made in the ceiling for the subsequent installation of cables. It should be 20cm wide. The hole should be lined with a PVC pipe.
- All the walls, ceiling and floor shall be anti-incendiary and anti-moisture treated from inside.

INTERNAL NETWORK

a) Electrical network
The power supply to the room needs to be upgraded / replaced. This should be done in coordination with the CEC Building Administration and CEC. All materials and work should be done according to European and applicable national standards.
A cable of relevant capacity 5x6 should be connected from the main building supply to the Server Room Power Distribution Board (PDB). The PDB should be connected to the building main supply with an isolation switch at the main building supply. The Main Supply cable may need to go through walls and ceilings.
A Power Distribution Board (PDB) should be installed in the Server Hall Room. The PDB should have:
- 1 x Main Isolation 110A Circuit Breaker (CB)
- Earth Leakage CB

- 2 x 20A CB for Air Conditioners
- 2 x 15A CB for Server Rack

- 1 x 10A CB for power extension plug
- 1 x 10A CB for fire and intruder alarms

- 1 x 10A CB for lights

From the PDB cables and power connection points / plugs should be provided to any point within the Server Room according to the *List of Works*. The location of the air conditioners and Server Racks will be determined at a later stage.

Fluorescent lights need to be provided and connected up with a light switch. The Server Room should be fitted with an emergency light for when power fails.

b) The Air Conditioning System

The Server Room shall be equipped with air-conditioning split system not less than 2600 BTU capable of maintaining non-stop stable temperature and humidity regime inside the room, including under extreme local climate conditions. The air-conditioning system shall have at least three years warranty, and Chisinau-based warranty and post-warranty service center.

c) The Alarm System

The Server Room should be fitted with an Alarm System with an intruder, fire, smoke and flood sensors in the Server Hall and the Server Room. A Visible and Audio Alarm should be connected. The movement of hot air from the Servers should be taken into account for the Intruder Alarm.

d) The Anti-Incendiary System

The Server Room and Server Hall shall be equipped with two 3kg, universal B, C and E type fire extinguishers each, valid at least for 1 year.

Interested bidders are invited to inspect the site in advance to ensure full understanding of the work to be done, and accuracy of quoted price. The inspection may be arranged through a phone call to phone number + (373 22) 838331 or e-mail to veaceslav.balan@undp.org