

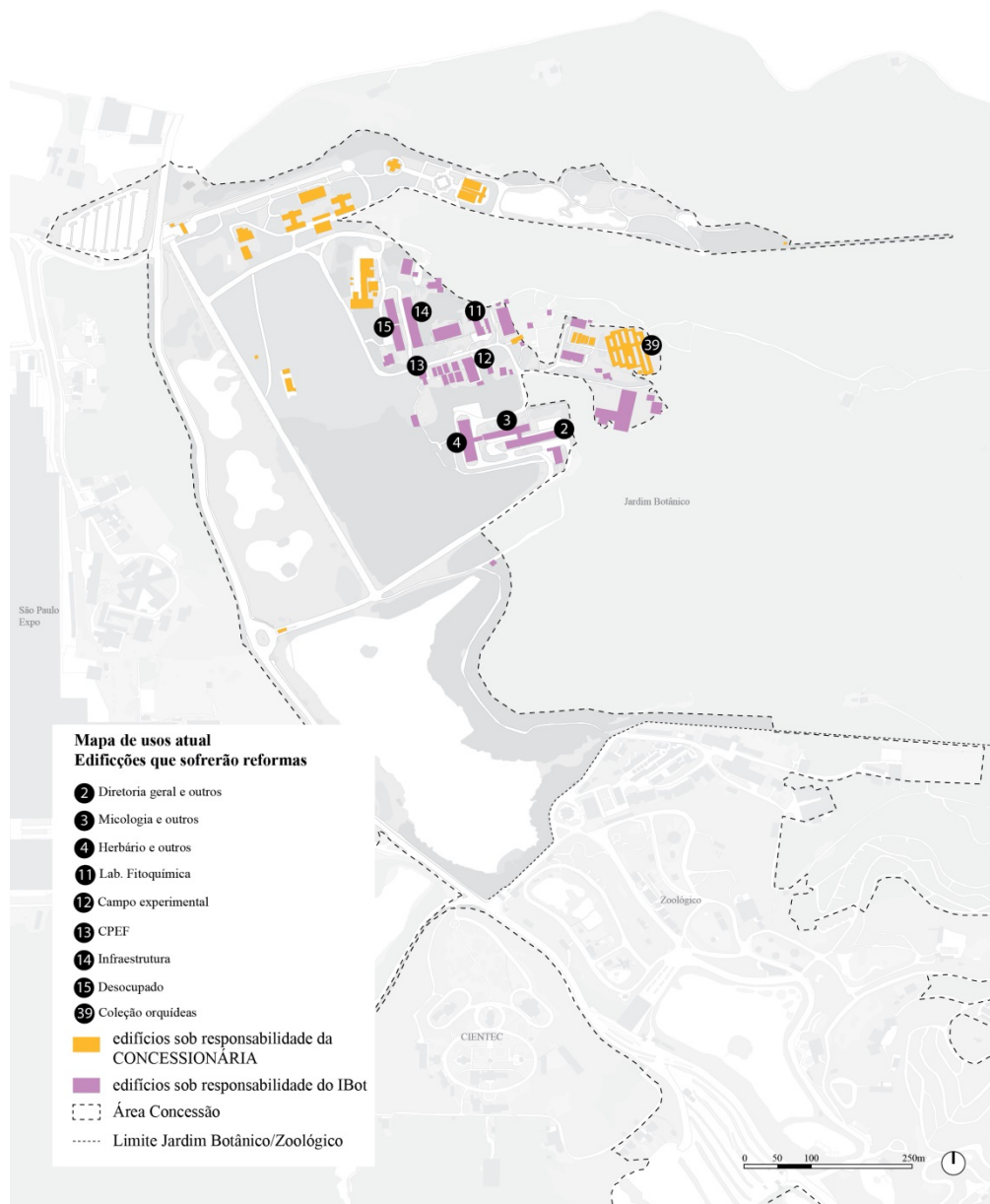


STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

**ANNEX XVII – GUIDELINES FOR CONSTRUCTION, RENOVATION, IMPROVEMENTS AND
ADAPTATION OF BOTANIC GARDEN AND *INSTITUTO DE BOTÂNICA* BUILDINGS**

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

This ANNEX provides guidelines to be met by the CONCESSIONAIRE for the construction, renovation, improvement and adaptation of the FLORA SECTOR buildings.



IN THE IMAGE

Current usage map

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

Buildings planned to undergo renovation

General management

Herbarium and others

Phytochemistry Laboratory

Experimental field

Facilities

Vacant

Orchid collection

Buildings under the CONCESSIONAIRE's responsibility

Buildings under the *INSTITUTO DE BOTÂNICA*'s responsibility

Concession Area

Botanic Garden/Zoo Perimeters

Building no. 2 – General Management and Others:

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- II. renovations needed to secure the AVCB.

Building no. 3 – Mycology and Others:

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- II. renovations needed to secure the AVCB

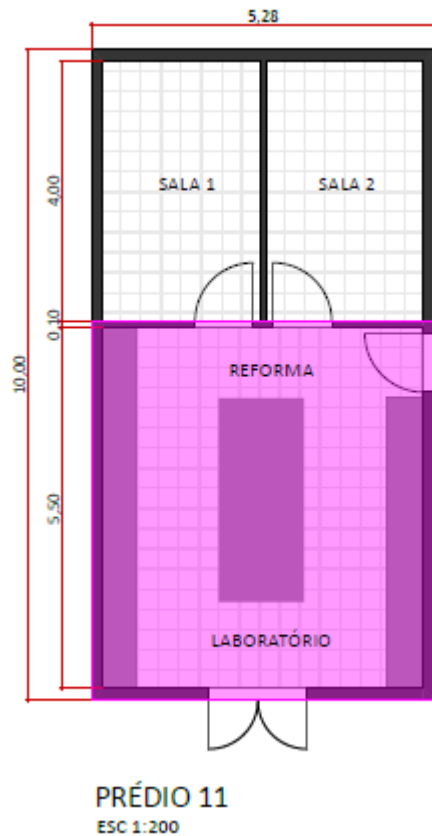
Building no. 4 – Herbarium and Others:

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- II. renovations needed to secure the AVCB

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

Building no. 11 – Phytochemistry Laboratory:

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- II. laboratory renovation and adaptation to set up Ornamental Plants Research Center (NPPO) equipment, as per the sketch below:

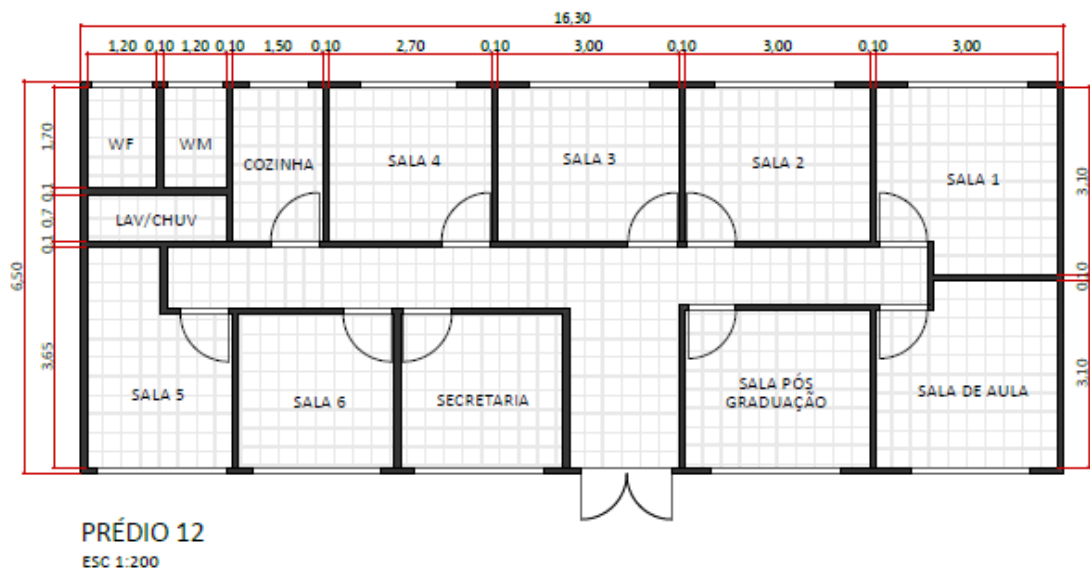


IN THE IMAGE:
ROOM 1 - ROOM 2
RENOVATION
LABORATORY
BUILDING 11
Scale 1:200

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

Building no. 12 – Experimental Field – Ornamental Plants:

- III. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- IV. renovation and adaptation of the Experimental Field space to build rooms for NPPO's six Scientific Researchers, as per the sketch provided below:



IN THE IMAGE:

Women's Restroom

Men's Restroom

Lavatory/Shower

Kitchen

Rooms 4 – 3 – 2 – 1 – 5 – 6

Office

Postgraduate Room

Classroom

BUILDING 12

SCALE 1:200

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

Building no. 13 – Ecology and Physiology Research Center (CPEF):

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- II. renovation and adaptation of the space for setting up the NPPO tissue culture laboratory, as per the sketch provided below:



IN THE IMAGE:

TISSUE CULTURE ROOM

AUTOCLAVE
CONTROLLED DRUGS TEST ROOM

BUILDING 13
SCALE 1:200

Building no. 14 – Facilities:

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

- II. renovation and adaptation of the space for setting up the CERAD and the Environmental Education center.

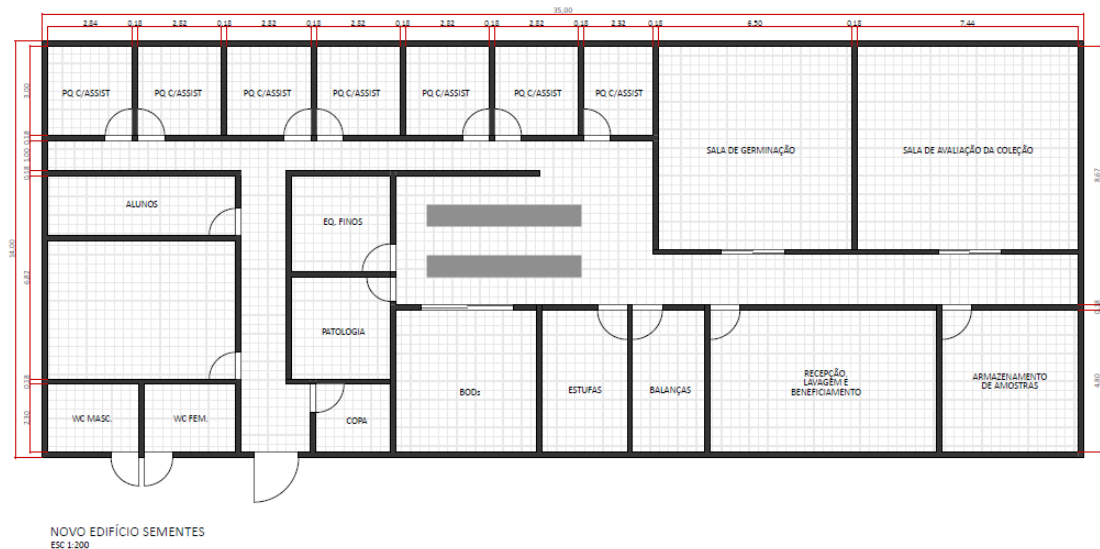
Building no. 15 – Vacant:

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- III. renovation and adaptation of the space for setting up the Subfleet, the Green Area Maintenance and Facilities.

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

Building no. 17a – New Building:

- I. construction of the new building, adjacent to existing building 17, with an overall area of 448m², pursuant to the sketch provided below:



IN THE IMAGE:

Research assistant room
 Students
 Germination room
 Collection evaluation room
 Sample storage room
 Collection, washing and processing
 Men's restroom
 Women's restroom
 Weighing scales
 Greenhouses
 Pantry room
 Pathology
 Eq. Fino
 New seed research center building

- II. Fiber optic cabling to be installed connecting all of building 17 to the *INSTITUTO DE BOTÂNICA*'s data center, and structured cabling to be installed in all premises with at least 1 structured point per room, and at least 4 access points for the future Wi-Fi network. All points are to be provided with power outlets;
- III. Administrative rooms (left-hand side of the building) shall have electrical and hydraulic facilities, as well as lining suited to their intended use (offices);
- IV. All rooms comprising the laboratory require high-resistance flooring (PI5), wall lining, individualized and sized power grid considering individualized power grids for each

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

equipment (greenhouses, autoclave, B.O.D.s, etc.), sized and individualized hydraulic facilities and sewer system, laboratory furnishings with naval plywood and granite seal worktops;

- V. The germination room shall have air conditioning, thermal lining and be waterproof;
- VI. The building shall provide accessible features, escape routes and safety devices, and shall be adapted for washing and disposal of reagents in accordance with the legislation, shall have an exhaust gas system for the chapel, an energy generator for emergency situations, and air conditioning units for 10 rooms;
- VII. Worktops and germination rooms shall have LED lighting systems;
- VIII. The building requires grounding and a lightning protection system;
- IX. Special worktops to support weighing scales;
- X. Temperature and humidity control system for germination rooms;
- XI. Plastic thermal insulated curtains for germination rooms (similar to the cold chamber);
- XII. Non-slip coating for the laboratory floor;
- XIII. Greenhouse area with irrigation system, ventilators, exhaust and cooling;
- XIV. Making the growth chamber soundproof.

Building no. 39 – Orchid Collection:

- I. general renovation aimed at achieving building quality standards, pursuant to the guidelines specified in ANNEX XII;
- II. replacement of bamboo for stainless steel tubes for collection purposes;
- III. replacement of shading screens for there to be no openings in collections' shading;
- IV. renovation of the fiberglass roof structure, aimed at protecting collections from thermal variations during fall/winter, relating to lower temperatures;
- V. renovation of the water tank, with replacement of the current lid, which is currently in poor conditions;
- VI. renovation of the irrigation system to make the system operational;
- VII. greenhouse renovation;
- VIII. renovation of lateral facades in fiberglass roof-covered areas, aimed at reducing the inflow of sunlight shining on orchids laterally, all the while allowing for the necessary ventilation to provide orchids with proper air circulation;

STATE SECRETARIAT FOR INFRASTRUCTURE AND ENVIRONMENT

- IX. replacement of support beams and supporting rafters, in addition to using galvanized steel columns to support quarantine area rafters;
- X. Expansion of the orchidarium, planning for 3 new 7x15 dimension greenhouses to house the bromeliad collection, which shall minimally provide the same technical features as those existing in current Ornamental Plants Research Center greenhouses, these being: worktop to support vases and the irrigation system.