

**INTERNATIONAL COMPETITIVE BIDDING No. 1/2025**

**International Competitive Bidding for the ADMINISTRATIVE CONCESSION FOR  
THE CONSTRUCTION, EQUIPMENT, OPERATION, MAINTENANCE AND SERVICE  
PROVISION OF THE HOPE HEALTH COMPLEX**

**ANNEX 5**

**MINIMUM GUIDELINES FOR PROJECTS AND WORKS**

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## 1. INTRODUCTION

- 1.1. This ANNEX delineates the obligations and guidelines pertinent to the preparation of the ARCHITECTURE/ENGINEERING PROJECTS, encompassing the BASIC and EXECUTIVE PROJECTS, of the construction systems, materials, and ancillary facilities of the HOPE HEALTH COMPLEX.
- 1.2. The requirements presented in this ANNEX are to be regarded as the minimum mandatory and binding parameters for the execution of the ARCHITECTURE/ENGINEERING PROJECTS for the WORKS of the HOPE HEALTH COMPLEX.
  - 1.2.1. In order to execute the designated ARCHITECTURE/ENGINEERING PROJECTS, the CONCESSIONAIRE may propose the utilization of parameters recognized as higher than the minimums indicated in this ANNEX, provided that it is at its expense and responsibility, and these parameters will be evaluated by the INDEPENDENT VERIFIER and the GRANTING AUTHORITY when analyzing the BASIC PROJECT and EXECUTIVE PROJECT, under the terms of ANNEX 3 – CONCESSION PHASES.
  - 1.2.2. Without prejudice and subject to the provisions of the item above, the CONCESSIONAIRE may, in a reasoned manner, recommend to the GRANTING AUTHORITY, within the scope of the preparation of the ARCHITECTURE/ENGINEERING PROJECTS, the making of adjustments and adaptations in the

APPENDIX 5.1 – NEEDS PLAN, which, in his view, can add more benefits to the HOPE HEALTH COMPLEX, upon non-objection by the GRANTING AUTHORITY, provided that the guidelines set forth in this ANNEX are observed. It shall be up to the GRANTING AUTHORITY to decide whether to accept any propositions to be presented by the CONCESSIONAIRE.

- 1.3. The CONCESSIONAIRE will be responsible for providing all human resources, projects, equipment, machinery, vehicles, materials and inputs necessary for the execution of the WORKS.
- 1.4. As a general basic premise, the CONCESSIONAIRE must conduct planning so that the HOPE HEALTH COMPLEX is built without separation between its components HOSPITAL COMPLEX and LACEN. This means that all activities related to the development of the WORKS, such as the demolition of the existing infrastructure in the CONCESSION AREA, the implementation of the foundation, going through the engineering disciplines until the completion of the WORKS, must be carried out continuously and without interruptions. For this reason, the ARCHITECTURE/ENGINEERING PROJECTS must be planned, executed and made compatible to meet this premise.
- 1.5. The execution of the WORKS will be supervised by the GRANTING AUTHORITY, with the support of the INSPECTION SUPPORT, and by the INDEPENDENT VERIFIER, according to their attributions under the terms of ANNEX 3 – CONCESSION PHASES and ANNEX 9 – INSPECTION AGENTS.
- 1.6. As provided for in item 1.5, the GRANTING AUTHORITY shall, among other needs, verify that the ARCHITECTURE/ENGINEERING PROJECTS and WORKS are being executed in accordance with the CONTRACT and its ANNEXES, issue warnings about the CONCESSIONAIRE's failures, and apply fines or other penalties provided for in the CONTRACT.

## 2. APPLICABLE RULES AND LEGISLATION

- 2.1. The CONCESSIONAIRE shall submit the ARCHITECTURE/ENGINEERING PROJECTS and other relevant documents to all legal approval procedures with the competent bodies to obtain the permits, authorizations, licenses necessary for the demolition of the existing infrastructure in the CONCESSION AREA, construction and operation of the HOPE HEALTH COMPLEX.
- 2.1.1. The CONCESSIONAIRE will be responsible for making any adjustments to the ARCHITECTURE/ENGINEERING PROJECTS requested by the competent bodies, observing the provisions of ANNEX 3 – CONCESSION PHASES.
- 2.2. ARCHITECTURE/ENGINEERING PROJECTS must comply with the content and guidelines of this ANNEX and be aligned with the applicable technical standards and legislation, such as the ABNT NBR 16636-2 Standard and the Resolution of the Collegiate Board of ANVISA/MS – RDC nº 50/2002, according to their updates or replacements, in addition to the regulations issued by the competent bodies, including, but not limited to, a: National Health Surveillance Agency (ANVISA); Ministry of Health (MS); Occupational Safety requirements; Regulatory Standards of the Ministry of Labor; requirements of the National Nuclear Energy Commission (CNEN); ABNT standards; municipal, state and federal legislation; and other regulatory and inspection bodies.
- 2.3. The CONCESSIONAIRE will be responsible for preparing all the documentation necessary for the legal and normative procedures, with the public service concessionaires (water, sewage, energy), for the INFRASTRUCTURE DEPLOYMENT.
- 2.4. The CONCESSIONAIRE must implement a plaque containing the names of the 272 victims, according to Law No. 23,591/2020, with the following characteristics: (i) dimension of 60cm (sixty centimeters) x 80 cm (eighty centimeters); (ii) brushed stainless steel material, ASI 3042 quality, thickness 1.2mm, UV (ultraviolet) digital printing; (iii) black color directly on the sheet and fixing with 4 castle screws.

### **3. PREPARATION OF ARCHITECTURE/ENGINEERING PROJECTS**

- 3.1. The ARCHITECTURE/ENGINEERING PROJECTS must be submitted for evaluation by the INDEPENDENT VERIFIER and not objection/approval by the GRANTING AUTHORITY under the terms of ANNEX 3 – CONCESSION PHASES.
- 3.2. For the preparation of ARCHITECTURE/ENGINEERING PROJECTS, the CONCESSIONAIRE must consider the provisions of this ANNEX.
- 3.3. APPENDIX 5.I – NEEDS PLAN is mandatory and binding, with the exception of the descriptions of each area ("Description" column) which must be considered as references and guidelines for the preparation of ARCHITECTURE/ENGINEERING PROJECTS, and the CONCESSIONAIRE is also responsible for framing it under all relevant rules and legislation.
- 3.4. The finding of material changes in the original implementation costs due to modifications requested by the GRANTING AUTHORITY under the "Description" column, with repercussions on the implementation of the ARCHITECTURE/ENGINEERING PROJECTS, may give rise to a claim for economic and financial rebalancing for the benefit of the CONCESSIONAIRE, under the terms of this CONTRACT and as detailed in item 8 of this ANNEX.
- 3.5. It establishes binding minimum parameters, so that any proposed changes may only be made by mutual agreement between the PARTIES, and it is up to the party that may be harmed to request the economic and financial rebalancing linked to the adjustments, if the need is verified, under the terms of this ANNEX and CONTRACT.
- 3.6. Or APPENDIX 5.II – INFRASTRUCTURE DEPLOYMENT SCHEDULE it will be considered merely referential and guideline, and the CONCESSIONAIRE is responsible for the preparation and presentation of the ARCHITECTURE/ENGINEERING PROJECT to the GRANTING AUTHORITY at its own risk, considering the engineering solution it deems most appropriate.
  - 3.6.1. If the CONCESSIONAIRE chooses to use water sources, the location(s) and name(s) must be included in the scope of the process of presentation and approval of the ARCHITECTURE/ENGINEERING PROJECTS by the GRANTING AUTHORITY.
- 3.7. In view of the provisions of the items above, any claims for economic and financial rebalancing that are based on compliance with APPENDIX 5.II – INFRASTRUCTURE DEPLOYMENT SCHEDULE will not be accepted, considering it to be a merely referential document.
- 3.8. The ARCHITECTURE/ENGINEERING PROJECTS must be prepared, developed and made compatible in order to ensure harmony and feasibility between the disciplines and solutions of architecture and engineering, considering the premises set forth below in order to ensure the functionality, efficiency and sustainability of the HOPE HEALTH COMPLEX. The following guidelines should be observed:
  - 3.8.1. Functionality, safety of PATIENTS, USERS, professionals and full adequacy to the public interest and to the FINALISTIC SERVICES performed at the HOPE HEALTH COMPLEX;

- 3.8.2. Application, in the WORKS, of construction methodologies that seek to eliminate waste and costs, optimizing the civil construction process, without compromising quality, maintaining a strict deadline for the execution of the WORKS;
- 3.8.3. Economy and quality in the execution, conservation and maintenance of the building and the technological park, with the guarantee of full operation with efficiency, adopting, whenever possible, a component modulation system;
- 3.8.4. Modulation and flexibility of spaces, always bearing in mind potential future needs for adaptation to meet and accommodate innovative technologies and changes to workflows;
- 3.8.5. Use of materials, components and technical solutions appropriate to the regional reality, with a focus on ease of acquisition, execution, conservation and greater durability, based on sustainability criteria such as, for example, resistance, workability, safety, health and hygiene, economy and traceability;
- 3.8.6. Application of concepts of constructive sustainability and energy efficiency, with measures, for example, such as the application of biophilia, implementation project aimed at optimizing luminosity and ventilation, possibility of water reuse, protection elements and increased thermal comfort, and the use of technologies and materials that reduce environmental impact and electricity consumption;
- 3.8.7. Reduction of consumption by avoiding waste, minimizing the need for air conditioning, ventilation and artificial lighting systems, including the application of elements of protection and thermal environmental comfort (such as louvers, gardens, pilotis and terraces) and the use of technologies and materials that reduce environmental impact and electricity consumption;
- 3.8.8. Sectorization by related activities, contiguities, considering the flows of external and internal public, USERS, technicians, employees, suppliers, inputs, vehicles, waste and others, considering the current regulations, observing the requirements of safety, functionality and operability;
- 3.8.9. Implementation of safe and facilitated paths for maintenance activities, minimizing inconvenience to USERS and professionals of the FINALISTIC SERVICES, and any impacts during interventions;
- 3.8.10. Use of green areas and outdoor socializing, providing healthy spaces for USERS;
- 3.8.11. Possibility of capturing rainwater for reuse in gardens and outdoor areas;
- 3.8.12. Dimensioning of the reservoirs providing for a contingency of additional operation, according to regulations for a minimum reserve of 48 (forty-eight) hours plus fire reserve;
- 3.8.13. Implementation of water and energy efficiency systems and sustainable technologies to be employed;
- 3.8.14. Evaluation of the geological and geotechnical conditions of the CONCESSION AREA and, if applicable, proposal of appropriate solutions in the BASIC PROJECT;
- 3.8.15. Acoustic insulation in the HOPE HEALTH COMPLEX, when necessary, due to areas close to areas of high noise, such as railroads, noisy vehicle traffic and other noise generators, meeting the requirements of

NBR 15575 and 10152 regarding sound pressure levels in indoor environments;

- 3.8.16. Implementation of solutions that ensure the thermal comfort of environments, such as efficient air conditioning systems, use of thermal insulating materials, and architectural solution that favors natural ventilation and internal temperature control, when possible;
- 3.8.17. The CONCESSIONAIRE shall adopt compatible processes and prepare the ARCHITECTURE/ENGINEERING PROJECTS on a BIM platform - *Building Information Modelling* - as provided for in Federal Law 14,133/2021, article 19, paragraph 3, in the State Decree of Minas Gerais No. 48,146/2021 and the most recent ABNT governing standards.
- 3.8.17.1. A plan for the implementation of the BIM methodology must be prepared and kept updated, and its execution by the CONCESSIONAIRE must allow an efficient adoption of BIM, in all PHASES OF THE CONCESSION, so that the BIM concept can be used by the teams focused on the implementation of the PROJECT. It is important to note that the uses of BIM to be used must at least meet those provided for in the state decree mentioned in the previous sub-item in its article 11, in the ABNT standards in their most recent versions and in the BIM project notebooks published or indicated by the GRANTING AUTHORITY.
- 3.8.17.2. The CONCESSIONAIRE shall also consider the following guidelines:
- 3.6.17.2.1. Adoption of a data management and synchronization system capable of storing and indexing all data from projects and disciplines, Geographic Information System (GIS) and digital twin, controlling versions, sharing and collaborating on projects and files with people from the CONCESSIONAIRE and GRANTING AUTHORITY teams, creating and monitoring the generated process flows. The system will have to ensure data security, including regular backups and permission-based access control.
- 3.6.17.2.2. The GRANTING AUTHORITY team must have access to the management system with permissions compatible with its attributions, as defined in the CONTRACT and its ANNEXES. Permissions shall be configured to allow viewing, editing, and approval of documents as defined between the PARTIES.
- 3.6.17.2.3. The CONCESSIONAIRE must deliver the BIM Execution Plan (BEP), which will define the strategy and processes for implementing the BIM methodology for the ARCHITECTURE/ENGINEERING PROJECTS. In the BEP, roles and responsibilities, and workflow will be established between the PARTIES, observing the guidelines of the CONTRACT and its ANNEXES, in addition to standards and technologies to be used.
- 3.6.17.2.4. The ARCHITECTURE/ENGINEERING PROJECTS developed in BIM must be organized in a structured and disciplined manner, keeping in a single file, drawing, model and documentation of each ARCHITECTURE/ENGINEERING PROJECT. The file structure should follow a pattern defined in the BEP to facilitate navigation and management of the data.
- 3.6.17.2.5. ARCHITECTURE/ENGINEERING PROJECTS shall be modeled in an interoperable version to ensure compatibility between different software and platforms used by the PARTIES.
- 3.6.17.2.6. ARCHITECTURE/ENGINEERING PROJECTS must be designed in such a way as to guarantee the

compatibility of the BIM model; this includes *clash detection* and coordination between the different disciplines (architecture, structure, installations, etc.).

3.6.17.2.7. The architectural project, as well as complementary projects, must be developed in an integrated manner with professionals from different areas to develop the project as a whole and in a uniform manner, identifying potential conflicts of norms and disciplines between the different areas.

3.6.17.2.8. The CONCESSIONAIRE shall ensure the continuous updating of the BIM models throughout all CONCESSION PHASES.

3.6.17.2.9. The CONCESSIONAIRE must deliver to the ARCHITECTURE/ENGINEERING PROJECTS the 3D modeling of the ARCHITECTURE/ENGINEERING PROJECTS, including detailed information about the WORKS, 4D planning, where the information and data that can be extracted at any time will be, producing detailed information of the defined construction elements, providing the use and management of resources in a more comprehensive way than just the components of project preparation, also including the use of BIM in the management of facilities of the facilities.

3.6.17.2.10. The CONCESSIONAIRE shall use the BIM platform in the management of building maintenance activities, employing digital models to monitor, operate and maintain the HOPE HEALTH COMPLEX throughout the CONCESSION TERM. These models should include information on specifications, locations, scheduled maintenance and repair history, allowing an integrated and computerized management of these activities.

3.6.17.2.11. The CONCESSIONAIRE shall provide professionals with the following positions and responsibilities for BIM:

3.6.17.2.11.1. BIM Manager: Manages the virtual construction process of the project and documentation of contractual documents about BIM. In addition, he leads the coordination/compatibility meetings.

3.6.17.2.11.2. Project Team: Performs the development, detailing and materialization of the design solutions produced by the initial team in BIM models and design, engineering and construction documents.

3.6.17.2.11.3. Estimators: Manipulate BIM models for quantity extraction and cost analysis for budgeting.

3.6.17.2.11.4. Planners: Create 4D planning models to manage the physical progress schedule of the WORKS.

3.6.17.2.12. The CONCESSIONAIRE must have professionals, its own or subcontracted, qualified and with experience in the development of ARCHITECTURE/ENGINEERING PROJECTS on a BIM platform.

#### **4. PROJECTS AND REQUIRED DOCUMENTATION**

- 4.1. The BASIC PROJECT must demonstrate the technical feasibility of the HOPE HEALTH COMPLEX based on the information contained in the

APPENDIX 5.1 – NEEDS PLAN, enabling the evaluation of the costs of the WORKS, as well as allowing the definition of the construction methods and deadlines for the execution of the WORKS.

- 4.2. In the BASIC PROJECT, interferences between the systems and components of the buildings of the HOPE HEALTH COMPLEX must be solved.
- 4.3. The BASIC PROJECT must include preliminary studies, situation and location plans, information and documents required for approvals by the competent bodies, architectural, structural and installation projects, descriptive memorial at the level of BASIC PROJECT, quantitative spreadsheet, INFRASTRUCTURE DEPLOYMENT SCHEDULE considering the analysis of interferences.
- 4.4. The EXECUTIVE PROJECT must be prepared from the BASIC PROJECT that has obtained approval from the GRANTING AUTHORITY, according to ANNEX 3 – CONCESSION PHASES.
- 4.5. The EXECUTIVE PROJECT must present all the elements necessary for the complete execution of the WORKS in accordance with the governing regulations (especially in relation to the Resolution of the Collegiate Board of ANVISA/MS – RDC nº 50, of February 21, 2002, and its updates and current content), detailing all the interfaces of the systems and their components.
- 4.6. The EXECUTIVE PROJECT must include detailed projects of architecture, engineering, utilities, technical specifications, construction details, complete descriptive memorial, quantity of materials and equipment, structural calculations, detailed quantitative spreadsheet and other related projects.
- 4.7. The following items present the content of the main documents that make up the BASIC and EXECUTIVE PROJECTS, which must be prepared by the CONCESSIONAIRE:
  - 4.7.1. Architectural design;
  - 4.7.2. Interior design;
  - 4.7.3. Demolition project and necessary licenses for its execution;
  - 4.7.4. Earthmoving and containment project;
  - 4.7.5. Structural design of foundations, infrastructure and superstructure;
  - 4.7.6. Waterproofing project;
  - 4.7.7. Design of electrical installations;
  - 4.7.8. Lighting design;
  - 4.7.9. Industrial kitchen project;
  - 4.7.10. Hydro sanitary installation projects;
  - 4.7.11. Air conditioning project;
  - 4.7.12. Fire and panic safety plan projects;
  - 4.7.13. Structured cabling network design;

- 4.7.14. Visual communication and signage project;
- 4.7.15. Acoustic design;
- 4.7.16. Landscaping project;
- 4.7.17. Irrigation project;
- 4.7.18. Urbanization project;
- 4.7.19. Design of elevator and freight elevator equipment;
- 4.7.20. Pneumatic conveying design;
- 4.7.21. Design of the internal road system and external interconnection;
- 4.7.22. Design of facilities for medical gases and LPG;
- 4.7.23. Complementary projects that may not have been indicated in this ANNEX but are necessary for the approval of the ARCHITECTURE/ENGINEERING PROJECTS with the competent bodies or the INFRASTRUCTURE DEPLOYMENT.
- 4.8. When preparing each project indicated in item 4.7, in accordance with the legislation and governing rules, the CONCESSIONAIRE shall consider:
  - 4.8.1. The harmonization and compatibility of the guidelines and contents between all the projects indicated in item 4.7, developing an integrated solution for the HOPE HEALTH COMPLEX.
  - 4.8.2. The planned sizing for the HOSPITAL COMPLEX and LACEN, considering the information presented in the

APPENDIX 5.1 – NEEDS PLAN, and other characteristics identified or estimated by the CONCESSIONAIRE, considering the entire operation of the HOPE HEALTH COMPLEX.

- 4.9. All projects mentioned in item 4.7 must present:
- 4.9.1. Descriptive memorial: detailed document that describes all the characteristics and technical specifications of the project, including the objective, scope of work, context of the project, materials and construction methods, applicable standards and regulations, description of systems and components, construction methodology, among other relevant aspects.
  - 4.9.2. Quantitative spreadsheets: document that typifies, details and quantifies the materials, services, equipment and labor necessary for the execution of the project, identifying each item with a detailed description and reference code, total quantities and units of measure, calculation methods and memorial, and a general summary of the total quantities by category (structures, installations, finishes, etc.) to be presented in a synthetic and analytical format.
  - 4.9.3. SPECIFICATION BOOKLET: document that aims to standardize the materials and equipment to be used in the execution of the WORKS, including the description of materials and components, applicable standards and regulations, quality and performance criteria, and complementary documentation such as technical drawings, manufacturers' manuals and certificates of conformity.
  - 4.9.4. Implementation Manual: technical document that guides the execution of the WORKS with the construction processes, the macro stages, aligned with NR-18, that is, the safety and health standards at work applicable to civil construction. This document includes methods and techniques of execution, quality control, and supplementary documentation such as technical drawings, manufacturers' manuals, and certificates of conformity.
- 4.10. The CONCESSIONAIRE will be responsible for the cadastral surveys necessary for the WORKS in the CONCESSION AREA.
- 4.10.1. The documents referring to the cadastral survey of the CONCESSION AREA made available by the GRANTING AUTHORITY within the scope of the BIDDING are referential and do not exempt the CONCESSIONAIRE from the responsibility to conduct its own surveys and analyses.
  - 4.10.2. The CONCESSIONAIRE shall:
    - 4.10.2.1. Evaluate the existing documentation related to the CONCESSION AREA, such as: cadastral plans and mappings, registration certificates, topographic surveys, geotechnical studies, land use and occupation guidelines, municipal master plans and urban standards;
    - 4.10.2.2. Conduct a topographic survey, containing all the physical elements present in the CONCESSION AREA, including the characteristics of the existing utility networks, obtaining the coordinates, elevations and other geometric characteristics of the CONCESSION AREA;
    - 4.10.2.3. Conduct a survey of INTERFERENCES in the records available in the public database and prepare a technical report with the list of risks and impacts related to the INTERFERENCES surveyed;

- 4.10.2.4. To search with official agencies, information, data or surveys pertinent to the CONCESSION AREA, such as aerial photogrammetric restitutions, aerial photographic coverings, coordinate vertices and level references of systematic mapping of the area;
- 4.10.2.5. Research with energy, water and sewage concessionaires, information or survey about local infrastructure. It is also necessary to consult the municipal body responsible for local urban infrastructure (access roads, urban drainage, local traffic, etc.);
- 4.10.2.6. Conduct the geotechnical studies necessary for the WORKS, including, but not limited to, the subsoil reconnaissance survey, as well as the performance of soil absorption and resistivity tests, for analysis of foundation solutions and other requirements such as drainage;
- 4.10.2.7. Analyze the environmental impacts associated with the WORKS, considering the specific local conditions of the CONCESSION AREA and any mitigating measures, observing the provisions of ANNEX 4 – MINIMUM SOCIO-ENVIRONMENTAL GUIDELINES.

#### 4.11. Architectural design

- 4.11.1. The architectural project must include all the detailed information for approvals in the various administrative and regulatory bodies, as well as the perfect understanding of the execution of the WORKS in accordance with the current standards.
- 4.11.2. The architectural project must be developed in an integrated manner with professionals from different areas to develop the project as a whole and in a uniform way, identifying potential conflicts of norms and disciplines between the different areas by interdisciplinary compatibility.
- 4.11.3. The architectural project must comply with the requirements of this ANNEX, including rules and accessibility criteria for the areas of the HOPE HEALTH COMPLEX, in accordance with the laws and standards in force, especially NBR 9050 – Accessibility to buildings, furniture, spaces and urban equipment and the Resolution of the Collegiate Board of ANVISA/MS – RDC n° 50, of February 21, 2002.
- 4.11.4. The architectural project will be the basis for the development of the other complementary projects and documents provided for in this ANNEX. Through the architectural project, it should be possible to define the construction methods and execution deadlines for each stage of the WORKS.
- 4.11.5. The architectural project must follow the modularity process, which allows meeting the technical, operational and legal needs, with flexibility, allowing the minimization of impacts on the operation and functioning of the HOPE HEALTH COMPLEX, as well as costs and deadlines for any physical adaptations that may be necessary throughout the CONTRACTUAL TERM, when the need for adjustments arises, due to contingency situations, for example.
  - 4.11.5.1. The project module should observe the structural axes of 8.4 meters by 8.4 meters, and these structural axes will be divided into architectural axes of 1.2 meters by 1.2 meters. The CONCESSIONAIRE may submit duly justified proposals to change these modularity premises, for analysis and approval

by the GRANTING AUTHORITY.

4.11.6. The architectural project must contain, at least:

4.11.6.1. Description and justification of the architectural solution and the proposed construction system, relating it to the

APPENDIX 5.1 – NEEDS PLAN, the characteristics of the CONCESSION AREA and its surroundings.

- 4.11.6.2. Elements according to technical standards and applicable legislation, including NBR 6492 and NBR 16636.
- 4.11.6.3. The functional characteristics of the HOPE HEALTH COMPLEX, in particular: the activities that will house, flows (of people, services, vehicles, materials), furniture, facilities and equipment, as well as compartmentalization and preliminary dimensioning, including spatial proximity scale.
- 4.11.6.4. Internal and external rendered images of the HOPE HEALTH COMPLEX, allowing a visualization of the architectural project.
- 4.11.6.5. The Situation Plan, which will represent the INFRASTRUCTURE DEPLOYMENT in the CONCESSION AREA, in particular, accesses, position, orientation and number of buildings and main architectural elements (parking, borders, distances, etc.), setbacks and distances, elevations and main levels and general table of areas (total, by sector, pavement, block). The Situation Plan must contain the design of all architectural elements, such as buildings, accesses, walls, among others.
- 4.11.6.6. The Floor Plan, which will define in detail the configuration, in the horizontal plane, of the internal compartmentalization of the building(s), indicating the designation, location, interrelationship and dimensioning (elevations and levels) of all floors, environments, circulations, accesses and openings. They represent the structure, masonry (bone or finished), lowered ceilings, ceilings, fillings and coatings, frames (with opening system), sanitary sets, fixed equipment and elements of complementary projects, in particular, installations (sockets, light points, etc.).
- 4.11.6.7. The Layout Plans, which will contain the representation of all environments, including positioning of fixed components such as sanitary ware, countertops, as well as beds, EQUIPMENT, JOINERY AND FURNITURE, as well as hot water and steam generation equipment, electricity supply equipment, medical gas equipment, air conditioning equipment, storage places, among others.
- 4.11.6.8. The Reflected Ceiling Plans, which will define in detail the pagination of lowered ceilings and ceilings indicating all their elements. They represent the structure (pillars and beams), masonry and elements of the complementary projects (lighting fixtures, air fuses and sprinklers, for example).
- 4.11.6.9. The Floor Plans, which will define in detail the type, pagination of paving and raised floors for all areas, including, but not limited to, bathrooms, kitchens, laundry rooms, dressing rooms, circulation areas, hospitalization rooms and other areas, indicating all their elements. They represent the structure (pillars), masonry, frames and elements of the complementary projects (floor and drain takes, for example).
- 4.11.6.10. The Roof Plans, which will define in detail the configuration indicating the location and final dimensions (elevations and finished levels) of all its elements and typology, representing, as the case may be, roofs, slabs, terraces, lanterns, domes, gutters and conductors, waterproofing, expansion joints, inclination, water tank and fixed equipment.

- 4.11.6.11. The General Courts, which will define in detail the configuration, in the vertical plane, of the internal compartmentalization of the building(s) and the architectural configuration of the roof, indicating the designation, location, interrelationship and final dimensioning (heights and finished levels) of floors, environments, circulations and architectural elements. They represent the structure, masonry, lowered ceilings, coatings, frames (with opening system) and roofs, lanterns, sheds, domes, gutters, water tank and fixed equipment and elements of complementary projects (air conditioning and exhaust, for example).
- 4.11.6.12. The Facade Plans, which will define in detail the pagination of the wall coverings, indicating all its elements, such as difference in materials, expansion joints. They represent structure (beams and slabs), masonry, frames and shading elements such as louvers and biophilic façade.
- 4.11.6.13. The Details, which will complement the information contained in the other documents of the architectural project. They represent in plans, sections, elevations and/or perspectives, all the architectural elements necessary for the execution of the WORKS, in particular, walls, planters, benches and other landscaping elements; stairs and ramps; panels of hollow elements; glass bricks and special masonry; thresholds, window sills, baseboards and other finishes; roofs (structure and roofing), domes, lanterns and sheds; Frames; countertops, counters, cabinets, bookshelves, shelves and counters; ceilings, wainscoting and partitions; railings, railings and gates; guardrails and handrails; furniture (counters, various cabinets, bins, medical record holders, tables, drawers, etc.).
- 4.12. Interior design
- 4.12.1. For the interior design, the CONCESSIONAIRE must present a detailed project that includes the definition of all interior design elements, such as FURNITURE, JOINERY, finishes, colors, lighting (in alignment with the lighting project) and decoration, aiming to create a humanized, functional, safe and aesthetically pleasing environment for USERS, professionals and other people who circulate through the HOPE HEALTH COMPLEX.
- 4.12.2. The CONCESSIONAIRE must present:
- 4.12.2.1. Layouts of FURNITURE and JOINERY, indicating the arrangement of all elements in the HOPE HEALTH COMPLEX;
- 4.12.2.2. The plans with the arrangement and positioning of the elements that will be presented in the architectural project, item 4.11;
- 4.12.2.3. Technical specifications of the materials and finishes to be used;
- 4.12.2.4. Perspectives and 3D renderings for visualization of the proposed environment;
- 4.12.2.5. Detailing of interior architecture elements.
- 4.12.3. For the preparation of the interior design, the CONCESSIONAIRE must consider:
- 4.12.3.1. The functionality and ergonomics of the spaces, ensuring that the FURNITURE and JOINERY meet the

operational and comfort needs of USERS and professionals;

4.12.3.2. The safety of the USERS and professionals of the FINALISTIC SERVICES and the SERVICES, using materials and finishes that meet safety and hygiene standards;

4.12.3.3. The durability and ease of maintenance and replacement of materials and finishes;

4.12.3.4. Accessibility, ensuring that all environments are accessible to people with disabilities, in accordance with current accessibility standards;

4.12.3.5. The visual identity of the HOPE HEALTH COMPLEX;

i. The visual identity will be prepared by the CONCESSIONAIRE and delivered to the GRANTING AUTHORITY within 180 (one hundred and eighty) days from the beginning of PHASE 1 - PLANNING for evaluation and issuance of approval by the GRANTING AUTHORITY.

ii. The GRANTING AUTHORITY may request adjustments within fifteen (15) business days of receipt of the visual identity, but if it does not respond within this period, the CONCESSIONAIRE may consider the visual identity approved.

iii. If there are notes, the CONCESSIONAIRE must make the requested adjustments within fifteen (15) days and send them for new analysis by the GRANTING AUTHORITY.

4.12.3.6. The integration of interior elements with existing infrastructure systems, such as electrical, hydraulic, air conditioning, furniture and other utilities.

4.13. Demolition project

4.13.1. The CONCESSIONAIRE shall:

4.13.1.1. Prepare a demolition plan for existing buildings containing an indication of all the elements that will be demolished by the CONCESSIONAIRE in the CONCESSION AREA, the form of execution of the demolitions, equipment to be used, protections, removal of materials, presenting elevations and legends, volume and blistering.

4.13.1.2. Obtain all necessary licenses, permits and authorizations from all relevant local authorities with respect to the execution of the demolition, loading and transportation actions necessary for the INFRASTRUCTURE DEPLOYMENT, including the disposal in regular landfill pertinent to the type of waste.

4.13.1.3. Comply with environmental regulations related to waste management and protection of air and water quality and ensure that the work is conducted in accordance with the established safety standards, observing the provisions of ANNEX 4 - MINIMUM SOCIO-ENVIRONMENTAL GUIDELINES.

4.14. Earthmoving and containment project

4.14.1. The CONCESSIONAIRE shall, for the preparation of the earthmoving and containment project, design and execute all earth movement (cut or fill) necessary for the leveling of the CONCESSION AREA, accessibility slopes, at the levels established in the BASIC PROJECT, for the INFRASTRUCTURE

DEPLOYMENT.

4.14.2. The CONCESSIONAIRE must present:

4.14.2.1. General plans, with plan altimetric survey of the CONCESSION AREA and the indication of the earthmoving services to be performed.; and

4.14.2.2. Cross-sections, in spacing compatible with the conformation of the embankment, with indication of the slope adopted and the final earthwork elevations, definition of the recommended types of treatment and other characteristics of cuts and embankments.

4.14.3. The CONCESSIONAIRE shall design and execute all the necessary containments to ensure the stability and safety of the CONCESSION AREA, with the objective of preventing landslides, erosion and ensuring the integrity of the structures to be implemented.

4.14.4. The CONCESSIONAIRE must present:

4.14.4.1. Containment projects with detailed drawings of the containment structures, including all the necessary artifices to conduct these with typology and construction method;

4.14.4.2. Structural calculations that prove the stability and safety of the containment structures, considering the acting loads and the characteristics of the soil; and

4.14.4.3. Projects of surface and deep drainage systems, associated with containments, to avoid the accumulation of water and reduce hydrostatic pressure on the structures.

4.15. Structural design of foundations, infrastructure and superstructure

4.15.1. For the design of foundations, infrastructure and superstructure, the CONCESSIONAIRE must present the design of all the parts of the structural scheme adopted and the precise location of its elements, including all the construction details necessary for the execution (concrete structure) or fabrication and assembly (metallic structure) of the structure, compatible with the utilities.

4.15.2. The CONCESSIONAIRE must present:

4.15.2.1. Formwork, frame and details of the concrete structure of all levels of the buildings of the HOPE HEALTH COMPLEX;

4.15.2.2. Plans and details of the metallic structure, if the solution is adopted, of all levels of the buildings of the HOPE HEALTH COMPLEX;

4.15.2.3. Floor plans, sections and details of the stairs;

4.15.2.4. Plans of form, frame and details of the concrete structure of the lower and upper reservoirs (water castle);

4.15.2.5. Location plan of the lower and upper reservoirs;

4.15.2.6. Plans, sections and details of the stairs and upper reservoirs installed in the body of the buildings of

the HOPE HEALTH COMPLEX, on an appropriate scale;

- 4.15.2.7. Plan with location of foundations and pillars, blocks and footings;
- 4.15.2.8. Plans of the forms and reinforced structures of superficial and deep foundations (radier, footings, pipes, precast piles, continuous helix, metallic, etc.), pillars, beams, slabs and stairs;
- 4.15.2.9. Floor plans, roof, reservoirs and, if applicable, retaining walls;
- 4.15.2.10. Detailing, including specification of gauges and stirrup of foundations, foundation blocks, braces, beams, pillars and slabs, and moorings, of foundations, slabs, stairs, reservoir and other reinforced structures; and
- 4.15.2.11. Sections where necessary for the correct understanding of the structure, with indication of dimensions, levels and details.
- 4.15.3. The final definition of the typology of the superstructure is the responsibility of the CONCESSIONAIRE, and it can be executed in reinforced concrete in accordance with NBR 6118, with complements in a prefabricated or precast structure at the construction site or in a metallic structure (with proper fire protection), with reinforced concrete or steel deck floor slabs, provided that it respects the minimum conditions of flexibility and functional adaptability as provided for in the architectural project, highlighting the passages of utilities through the structural elements.
- 4.15.4. For the preparation of the foundation project, the CONCESSIONAIRE shall consider:
  - 4.15.4.1. Evaluate all the facilities and utilities to be implemented in the HOPE HEALTH COMPLEX, which are conditioning factors in the choice and dimensioning of the structural scheme;
  - 4.15.4.2. Consider the flexibility of use in the HOPE HEALTH COMPLEX, so that any changes in internal distribution are not made unfeasible by structural issues;
  - 4.15.4.3. The definition of the structural construction system;
  - 4.15.4.4. The calculation of the loads, considering the overloads required by the sectors of the HOPE HEALTH COMPLEX, considering the loads from the MEDICAL-HOSPITAL EQUIPMENT and LABORATORY EQUIPMENT;
  - 4.15.4.5. The geotechnical studies conducted, with studies and execution of surveys in the CONCESSION AREA;
  - 4.15.4.6. Acceptable deformations under working conditions, adequate safety for the collapse of the foundation soil ("external" stability) and adequate safety for the collapse of structural elements ("internal" stability).
  - 4.15.4.7. Situations and constraints in the surroundings of the CONCESSION AREA.
- 4.16. Waterproofing project
  - 4.16.1. For the waterproofing project, the CONCESSIONAIRE must present a project that includes the definition of all the areas to be waterproofed, the materials to be used, the application methods and the

technical specifications, ensuring, for example, the protection against infiltrations and humidity of the structures of the HOPE HEALTH COMPLEX.

4.16.2. The CONCESSIONAIRE must present:

4.16.2.1. Technical specifications of the waterproofing materials to be used;

4.16.2.2. Methods and techniques for applying waterproofing materials;

4.16.2.3. The plans related to the waterproofing project must be integrated with the other projects, and may have their information already presented in other documents, especially the architectural project and the structural design of foundations, infrastructure and superstructure;

4.16.2.4. Planned construction details.

4.16.3. For the preparation of the waterproofing project, the CONCESSIONAIRE must consider:

4.16.3.1. The identification and analysis of critical areas subject to infiltrations and humidity, such as foundations, basements, slabs, external walls and wet areas (bathrooms, kitchens, laundries, etc.);

4.16.3.2. The choice of waterproofing materials suitable for the specific conditions of each area, ensuring the necessary resistance and durability;

4.16.3.3. The compatibility of the waterproofing materials with the other construction materials used in the WORKS;

4.16.3.4. The application of waterproofing techniques that meet the technical standards and regulations in force;

4.16.3.5. The performance of quality control tests and trials during and after the application of waterproofing materials;

4.16.3.6. The integration of the waterproofing system with the surface and deep drainage systems and rainwater runoff, avoiding water accumulation and ensuring the efficiency of the system.

4.17. Electrical Installations Design

4.17.1. For the design of electrical installations, the CONCESSIONAIRE must present the sizing of the main components of the electrical system adopted and the location of its elements, including all the construction details necessary for the execution of the electrical installations of the HOPE HEALTH COMPLEX.

4.17.2. The CONCESSIONAIRE shall consider the following systems in the development of the electrical installation project:

4.17.2.1. Medium voltage energy input and measurement;

4.17.2.2. Transformer substations;

4.17.2.3. Emergency power generation system (Generator Sets);

- 4.17.2.4. Uninterruptible power system (UPS's);
- 4.17.2.5. Medium and low voltage power distribution systems, with redundancy and contingency in cases of transformer or panel failures;
- 4.17.2.6. Photovoltaic Solar Energy System (if installed) and/or other renewable energy generation solutions;
- 4.17.2.7. Lighting systems and outlets for general use, ensuring compliance with NBR 13248 and NBR 16442 regarding the specification of non-halogenated wires and cables for areas of high occupancy density in the HOPE HEALTH COMPLEX, considering the normative need for embedded or apparent execution for care and laboratory environments.
- 4.17.2.8. Emergency lighting systems (Clearing and Escape Route);
- 4.17.2.9. Lightning Protection Systems (SPDA) and grounding;
- 4.17.2.10. Other systems related to electrical installations indicated in this ANNEX, such as air conditioning, communication and data network, fire detection and alarm, protection systems, among others.
- 4.17.3. The CONCESSIONAIRE must present:
  - 4.17.3.1. Electrical distribution plans of all levels of the buildings of the HOPE HEALTH COMPLEX, indicating the location of distribution boards, outlets, switches, lighting points and other electrical devices;
  - 4.17.3.2. Single-line and multi-line diagrams detailing the electrical schematic, including the interconnection between the various components of the system;
  - 4.17.3.3. Plans and details of low and medium voltage installations, including power input, transformers, generators and protection systems;
  - 4.17.3.4. Plans and details of the grounding system and Lightning Protection System (SPDA), ensuring safety against electrical discharges;
  - 4.17.3.5. Plans and details of the emergency lighting and safety signaling system, ensuring compliance with safety standards;
  - 4.17.3.6. Plans and details of renewable energy system installations, if adopted, such as solar panels and energy storage systems; and
  - 4.17.3.7. Sizing calculations of electrical installations, considering the electrical loads necessary for the operation of the HOPE HEALTH COMPLEX, demand and safety factors.
- 4.17.4. The CONCESSIONAIRE must consider the following guidelines for electrical installations:
  - 4.17.4.1. Prepare the project of electrical installations according to NBR 5410 and NR 10 standards, as well as technical standards of the electricity distributor in the CONCESSION AREA, such as ND.5.3 – Supply of electricity in medium voltage.
  - 4.17.4.2. The SPDA and grounding must have the following characteristics:

- 4.17.4.3. Consider that no point in the CONCESSION AREA may be outside the protection field of the lightning rod.
- 4.17.4.4. Franklin Catchers and/or Faraday Cage - system of catchers formed by horizontal conductors interconnected in the form of a mesh, forming a modular network of conductors involving all sides of the volume to be protected (roof and facades), thus creating a kind of "cage", properly designed and positioned on the roof slab of the technical areas;
- 4.17.4.5. The grounding mesh may be in the structural hardware of the foundations and structural elements to be built, or composed of bare copper cables and grounding rods;
- 4.17.4.6. Provide for a main equipotential bus (BEP) at the main substation;
- 4.17.4.7. Provide for local equipotential (BEL) buses, positioned in each electrical, air conditioning, gas and telecommunications technical room.
- 4.17.4.8. The Risk Analysis Memorial must be prepared to determine the class of structural SPDA to be implemented for the HOPE HEALTH COMPLEX. This system must meet at least the NBR 5419 and NBR 5410 standards;
- 4.17.4.9. The SPDA should be designed to minimize the impact of the effects of lightning strikes that can cause fires, explosions, material damage and even risk to the lives of people and animals. The system must contain devices for Capture, Descents, Equalization and Grounding;
- 4.17.4.10. Standardization of installation, materials and equipment aiming at ease of assembly, maintenance and stock of spare parts;
- 4.17.4.11. Application of sustainability and energy efficiency concepts, with the use of technologies and materials that reduce the consumption and cost of electricity;
- 4.17.4.12. Provide independent internal electrical panels, with multimeters of electrical quantities, to supply the loads of the subsystems, such as:
  - i. Internal lighting;
  - ii. Taken;
  - iii. Water heating;
  - iv. Exhaust, ventilation and air conditioning;
  - v. Generators;
  - vi. Irrigation;
  - vii. Motors and pumps;
  - iv. Outdoor lighting.
- 4.17.4.13. Provide for at least 2 (two) groups of No Breaks, one to serve the critical loads of the HOPE HEALTH

COMPLEX and the other dedicated to the Data Center, to meet the loads that will operate with zero power interruption time, that is, they will not turn off even during the load transfer period from the network of the public electricity service concessionaire to the generators, when there is a power outage in the network;

- 4.17.4.14. Provide for an emergency power generation system (Motorcycle Generator Sets) according to the needs of the HOPE HEALTH COMPLEX, requirements of current legislation, and provide for 4+1 redundancy.
- 4.17.4.15. Provide for a Medical IT (*Isolated Transformer*) system in group 2 environments, according to NBR 13534 standards and Resolution of the Collegiate Board of ANVISA/MS – RDC n° 50, of February 21, 2002, including:
  - 4.17.4.16. Emergency rooms;
  - 4.17.4.17. Operating rooms (small, medium and large);
  - 4.17.4.18. Surgical delivery rooms;
  - 4.17.4.19. Adult ICU (intensive care unit) beds;
  - 4.17.4.20. Pediatric ICU (intensive care unit) beds;
  - 4.17.4.21. Neonatal ICU (intensive care unit) beds;
  - 4.17.4.22. APR (post-anesthetic recovery) beds in the obstetric center;
  - 4.17.4.23. PAR (post-anesthetic recovery) beds in the operating room;
  - 4.17.4.24. Endoscopy room and RPA (post-anesthetic recovery) of endoscopy;
  - 4.17.4.25. Other areas with similar occupation, indicated in the architectural project.
- 4.17.4.26. The Medical IT (*Isolated Transformer*) systems in the operating rooms, ICU (intensive care unit), RPA (post-anesthetic recovery), Emergency and Endoscopy beds should be composed of: isolation transformers, electrical circuit distribution panel, DSI (isolation supervisor device), STD (transformer supervisor device) and alarm announcer panel installed inside each room and fault locator system;
- 4.17.4.27. At least 1 (one) repeater alarm announcer must be installed in each of the Service and Nursing Stations of the following sectors described below:
  - 4.17.4.28. Surgical center;
  - 4.17.4.29. Obstetric Center;
  - 4.17.4.30. Emergency room;
  - 4.17.4.31. adult, pediatric, neonatal ICUs;
  - 4.17.4.32. Endoscopy;

- 4.17.4.33. APR (post-anesthetic recovery) rooms;
- 4.17.4.34. Predict repetition of all announcers in the monitoring room for the building maintenance SERVICE, with identification of the respective locations where failures are occurring;
- 4.17.4.35. Provide, in the necessary environments, dimmable luminaires for the good performance of the professional activity or environmental comfort for the USERS, including bedside light and baseboard porthole light;
- 4.17.4.36. Provide for emergency luminaires of the autonomous block type, powered by alternating current circuits, single-phase of 220V, originating in the lighting panel;
- 4.17.4.37. The infrastructure of the electrical circuits of the emergency luminaires must be secondary distribution cable trays, metal conduits in exposed sections or interlinings, and PVC (polyvinyl chloride) conduits embedded in the wall sections;
- 4.17.4.38. Air conditioning equipment (Fan Coils, cassettes, evaporators, etc.), fans and exhaust fans, must be fed from the distribution boards of air conditioning circuits to be distributed throughout the building;
- 4.17.4.39. The primary equipment (chiller, pumps, condensing units, etc.) must be supplied by the general low voltage panel of the central air conditioning substation;
- 4.17.4.40. For chillers and condensing units, independent electrical circuits must be provided, derived directly from the general low voltage panel. For the pumps, circuits must be provided to feed the power panels and be provided for in the air conditioning project;
- 4.17.5. The CONCESSIONAIRE must, after the development of feasibility studies, implement solutions, systems and technologies that reduce the environmental impact, in line with the principles of energy efficiency and sustainability.
- 4.17.6. The definition of the implementation of a photovoltaic system will be optional, at the discretion of the CONCESSIONAIRE.
- 4.17.7. The electrical system must have the connection points as well as other necessary equipment previously dimensioned to enable the subsequent connection of photovoltaic generation, even after the start of operation of the HOPE HEALTH COMPLEX.
- 4.18. Lighting project
  - 4.18.1. For the lighting project, the CONCESSIONAIRE must present a detailed project that includes the definition of all internal lighting systems (HOSPITAL COMPLEX and LACEN) and external lighting (covering the entire CONCESSION AREA), the materials to be used and technical specifications, in order to ensure energy efficiency, safety and visual comfort of USERS and professionals.
  - 4.18.2. The CONCESSIONAIRE must present:
    - 4.18.2.1. Lighting projects for external and internal lighting, including lighting calculations, light distribution simulations and compliance checks with the levels of the required lighting requirements, such as

illuminance, glare and uniformity;

- 4.18.2.2. Sections and construction details of the lighting systems, showing the installation of recessed, pendant, wall and floor luminaires, as well as the integration with other construction elements;
- 4.18.2.3. Technical specifications of the lighting materials and equipment to be used, including types of lamps, luminaires, drivers, lighting control systems, and accessories.
- 4.18.3. For the preparation of the lighting project, the CONCESSIONAIRE must consider:
  - 4.18.3.1. Energy efficiency solutions and technology for lighting systems, prioritizing the use of high-efficiency LED technology lamps and luminaires, and evaluating the possibility of implementing lighting control systems, such as dimming and sensors;
  - 4.18.3.2. The safety of USERS and professionals, using lighting systems that meet current standards;
  - 4.18.3.3. NBR 5101 for external lighting covering the entire CONCESSION AREA;
  - 4.18.3.4. Illuminated baseboard-type wake lamp for inpatient care environments;
  - 4.18.3.5. ABNT NBR ISO/CIE 8995-1 and having as a complementary standard ABNT NBR 5461, for the internal lighting of the HOSPITAL COMPLEX and LACEN;
  - 4.18.3.6. The durability and ease of maintenance of lighting systems.
- 4.19. Industrial kitchen project
  - 4.19.1. For the industrial kitchen project, the CONCESSIONAIRE must present a project with the definition of the equipment and other materials to be used, considering the proposed workflow in the kitchen, as well as materials to be used, installation methods and technical specifications, considering the scope for the Nutrition and Dietetics Service (SND) described in ANNEX 7 – SCHEDULE OF RESPONSIBILITIES.
  - 4.19.2. The CONCESSIONAIRE must present:
    - 4.19.2.1. Plans, sections and details of the industrial kitchen, including the layout of all equipment and work areas, as well as power, water, gas and exhaust points;
    - 4.19.2.2. Technical specifications of the kitchen equipment to be used, such as industrial stoves, ovens, hoods, refrigerators, freezers, countertops, sinks, dishwashers, among others;
    - 4.19.2.3. Projects of electrical, hydraulic, gas and exhaust installations, integrated with the other projects indicated in this ANNEX.
  - 4.19.3. For the preparation of the industrial kitchen project, the CONCESSIONAIRE must consider:
    - 4.19.3.1. The functionality and ergonomics of the spaces, ensuring that the arrangement of equipment and work areas meet the operational and comfort needs of the team working on site;
    - 4.19.3.2. Food safety, using materials and finishes that meet hygiene and food safety standards, such as surfaces that are easy to clean and disinfect;

- 4.19.3.3. Adequate ventilation and exhaust, ensuring the effective removal of vapors, smoke and odors, in accordance with occupational health and safety standards;
- 4.19.3.4. The integration of kitchen systems with existing infrastructure systems, such as electrical, hydraulic, air conditioning, fire detection and fighting, and information technology.
- 4.20. Hydro sanitary Installation Projects
  - 4.20.1. For the design of hydro sanitary installations, the CONCESSIONAIRE must present the sizing of the main components of the hydraulic and sanitary systems adopted and the location of their elements, including all the constructive details necessary for the execution of the installations of the HOPE HEALTH COMPLEX.
  - 4.20.2. The CONCESSIONAIRE shall consider, in the development of the hydro sanitary installations project, the following systems:
    - 4.20.2.1. Reception system, cold water reservation and distribution of cold and hot water;
    - 4.20.2.2. Sanitary sewage system;
    - 4.20.2.3. Rainwater system;
    - 4.20.2.4. Water reuse system;
    - 4.20.2.5. Firefighting system.
  - 4.20.3. The CONCESSIONAIRE must present:
    - 4.20.3.1. Plans and details of the hydraulic supply and distribution systems of all levels of the buildings of the HOPE HEALTH COMPLEX, indicating the location of pipes, reservoirs, pumps, valves and other hydraulic devices, including reserves;
    - 4.20.3.2. Diagrams and details of the cold and hot water systems, including the interconnection between the various components of the system;
    - 4.20.3.3. Plans and details of sanitary sewer and rainwater installations, including the conduction and removal of discharges;
    - 4.20.3.4. Plans and details of rainwater drainage systems, ensuring the proper conduction of rainwater outside the building boundaries;
    - 4.20.3.5. Plans and details of firefighting systems, including hydrants, sprinklers and other safety devices;
    - 4.20.3.6. Calculations of sizing of the hydro sanitary installations, considering the consumption demands, flows and pressures necessary for the operation of the HOPE HEALTH COMPLEX.
  - 4.20.4. The CONCESSIONAIRE shall consider the following guidelines for hydro sanitary installations:
    - 4.20.4.1. Forecast of reserve capacity for future expansion of water use in the HOPE HEALTH COMPLEX;
    - 4.20.4.2. Standardization of facilities, materials and equipment aiming at ease of assembly, maintenance

and stock of spare parts;

- 4.20.4.3. Application of sustainability and water efficiency concepts, using technologies and materials that reduce water consumption and cost;
- 4.20.4.4. The water distribution network must be designed to allow connection to the network of the public water and sewage service concessionaire;
- 4.20.4.5. Evaluate the possibility of providing upward pressurization systems, through pumps with integrated frequency converters, to maintain a constant pressure with continuous adjustment of the speed of the pumps, properly monitored by the system;
- 4.20.4.6. Provide for the conduction of rainwater outside the limits of the buildings in the HOPE HEALTH COMPLEX, when not reused;
- 4.20.4.7. Shaft *systems* for maintenance of the main plumbs;
- 4.20.4.8. Logging systems that section all branch lines;
- 4.20.4.9. Definition of materials that enable the disinfection of the supply line in accordance with the ordinances of the Ministry of Health.
- 4.20.4.10. Meet, observing the legislation and regulations in force, the requirements and parameters applicable to each area of the HOPE HEALTH COMPLEX, including, for example, the NB3 laboratory at LACEN and the area for hospitalization of highly contaminating diseases at the HOSPITAL COMPLEX. The final disposal of effluents must follow COPASA's Non-Domestic Effluent Reception and Control Program (PRECEND).
- 4.20.5. The CONCESSIONAIRE shall develop feasibility studies for the implementation of water reuse and rainwater harvesting systems. The reuse of water for non-potable purposes must follow the limits, guidelines and standards according to the National Council of Water Resources (CMRH).
- 4.20.6. The treated water for use and reuse can be used in activities that do not require water within potability standards, such as irrigation of gardens, washing of floors and sidewalks.
- 4.20.7. The drainage system is intended exclusively for the collection and conduction of rainwater, and no interconnections with other building installations are allowed, especially those of sanitary sewage.
- 4.20.8. All drainage effluents will be discharged directly into the public network, or into the gutter of the public roads of the CONCESSION AREA. The launch will take place exclusively by gravity.
- 4.20.9. The water supply and distribution system must be designed to guarantee and provide the supply of cold drinking water and hot water, where necessary, to the various points of consumption of the HOPE HEALTH COMPLEX.
- 4.20.10. The supply of the HOPE HEALTH COMPLEX will be provided by drinking water from the public water service concessionaire and the reserve must have a minimum autonomy of 2 (two) days or more if required by current legislation or regulations.

- 4.20.11. The sanitary sewer system must be composed of secondary and grease sewage, non-domestic sewage, air conditioning drain, wastewater and ventilation.
- 4.20.11.1. The pre-treatment and discharge of effluents into the public sewage system must comply with the provisions of ANNEX 4 – MINIMUM SOCIO-ENVIRONMENTAL GUIDELINES and this ANNEX.
- 4.20.11.2. The sewage system must be sub-classified into:
- 4.20.11.3. Grease Sewer: Sourced from sinks, dishwasher, cooking equipment, and floor grates from the kitchen wash area. This sewage will all be discharged into a grease trap. For the kitchen of the Nutrition and Dietetics Service (SND), a special grease trap must be provided.
- 4.20.11.4. Secondary Sewage: Coming from washbasins, shower drains, bathroom drains and air conditioning drains, which must join the primary sewage, coming from the toilets and which does not have hydraulic disconnectors that separate it from the gases coming from the external network.
- 4.20.11.5. Procedure Sewage: Coming from procedure sinks, purges, scopodromes, Cleaning Material Deposits (DML's) and laboratories, which must be discharged into siphon boxes indicated in the hydro sanitary installations project. From these boxes, the effluents will gather in an inspection box for monitoring and then be released into the domestic primary sewage network destined for the public network.
- 4.20.11.6. Sewage from the Central Sterile Supply Department (CSSD): For CSSD equipment (autoclaves, thermoisinfectors and washers), the manufacturer's specifications manual should be consulted to verify the need to install a cooling box before connecting to the sewage network.
- 4.20.11.7. Sewage from LACEN's NB3 and hospitalization of highly contaminating diseases in the HOSPITAL COMPLEX: Sewage from specific areas, such as LACEN's NB3 laboratories and hospitalization areas for highly contaminating diseases in the HOSPITAL COMPLEX, must be treated to inactivate infectious agents before being discharged into the public sewage system or an appropriate treatment system. Contaminated solid and liquid waste must be properly disinfected and disposed of in accordance with local regulations and biological waste management guidelines.
- 4.20.12. The CONCESSIONAIRE shall consider the following guidelines for the sewage system:
- 4.20.12.1. Observe the conditions of the existing public sewage network in the CONCESSION AREA and obtain information on the type of dumps to verify the need for special treatment, considering the waste generated in the HOPE HEALTH COMPLEX.
- 4.20.12.2. Have a system of separator boxes for water and oil in environments that use this input;
- 4.20.12.3. Obtain and consider information about the location, diameter, elevation, and availability of the existing collection network.
- 4.20.12.4. Define the flow rates that should be used for the sizing of the hydro sanitary installation.
- 4.20.12.5. Allow quick drainage of the dumps.

- 4.20.12.6. Facilitate unclogging and cleaning services, without having to damage or destroy part of the facilities.
  - 4.20.12.7. Do not interconnect the sanitary sewer system with other systems.
  - 4.20.12.8. The conduction of sanitary sewage to the receiving system should be done, whenever possible, by gravity.
  - 4.20.12.9. If the sewage cannot be drained by gravity, it must be sent to a collection box and then pumped.
  - 4.20.12.10. Inspection boxes, collectors and others, should preferably be in unbuilt areas and should not have recesses or corners that could be used for the accumulation and/or deposition of materials.
  - 4.20.12.11. When there are drainage areas below street level, the rainwater accumulated in them, coming from low yards and others, must be directed to one or more rainwater collection boxes and pumped.
  - 4.20.12.12. The supports for suspended pipes must be positioned and dimensioned in such a way as not to allow their physical deformation.
- 4.21. Air conditioning project
- 4.21.1. The CONCESSIONAIRE shall prepare the air conditioning project, which will consist of a set of plans, diagrams and graphic elements that aim to define and discipline the installation of an air capture, treatment, cooling and distribution system in the closed environments of the HOPE HEALTH COMPLEX.
  - 4.21.2. The CONCESSIONAIRE must consider the following guidelines for the air conditioning project:
    - 4.21.2.1. Know the activities planned for each environment of the HOPE HEALTH COMPLEX, the type and number of USERS and professionals, the layout of the EQUIPMENT, FURNITURE and other components of the space, to adopt a good distribution and movement of air;
    - 4.21.2.2. Know the characteristics of the outside air to be introduced into the system;
    - 4.21.2.3. Establish the temperature and humidity conditions that must be maintained in each environment through the recommendations of NBR 16401, according to the

APPENDIX 5.1 – NEEDS PLAN and other applicable standards;

- 4.21.2.4. Establish the conditions of air purity, which must be maintained in each environment, to correctly size the system's filters;
- 4.21.2.5. Install a CAG (Chilled Water Plant) that will be the main location of the air conditioning system, with the design of a CAG for all buildings of the HOPE HEALTH COMPLEX and with a minimum capacity of 2,200 TR, which will be able to effectively read the thermal demand of all buildings and rationalize the energy consumption of the HVAC (*heating ventilation and air conditioning*) system;
- 4.21.2.6. The air conditioning system to be adopted must be of the "indirect expansion" type (chilled water), with liquid cooling units type "water-chiller" with water condensation, cooling towers, chilled water pumps, condensation water pumps, AHUs (air handling units), air conditioning units of the "fan-coils" and "fanvests" type;
- 4.21.2.7. The HVAC (*heating ventilation and air conditioning*) system must ensure the quality of the indoor air, with the following processes:
  - 4.21.2.8. Adequate air filtration system (fine filters, Hepa), with low level of "by-pass";
  - 4.21.2.9. Control of air flows, considering:
    - 4.21.2.10. Direction from the cleanest area to the most contaminated;
    - 4.21.2.11. Low turbulence diffusers to prevent dispersion of contaminants;
    - 4.21.2.12. Adequate pressure gradients.
  - 4.21.2.13. Air renewal and mechanical exhaust, promoting:
    - 4.21.2.14. Removal and/or dilution of gases and odors;
    - 4.21.2.15. Air totally rejected to the outside in contaminated places and replaced with clean air.
  - 4.21.2.16. The mechanical exhaust system of environments without natural ventilation, the mechanical ventilation system, the pressurization system for safety stairs and smoke extraction (control), if any, should be part of the project.
  - 4.21.2.17. Dimensioning the machine room of the air conditioning and mechanical ventilation equipment, to ensure its performance characteristics, as well as allowing free access for inspection, maintenance and removal of the equipment;
  - 4.21.2.18. Size the doors of the equipment rooms, with measurements compatible with their dimensions, with the leaves opening outwards and sufficiently watertight to prevent air infiltration;
  - 4.21.2.19. Calculate the renewal rates according to the necessary classification of the enclosures, so that all air return must be made through ducts, and the return through an open system (plenum) is prohibited;

- 4.21.2.20. In environments where negative pressure is present, it must be equipped with mechanical pressure gauges (Magnehelic), for visual verification of differential pressures;
- 4.21.2.21. Systems that increase the overall efficiency of the installation, such as high-performance motors, soft-starters, power modules, etc., should be incorporated;
- 4.21.2.22. Define the power supply points required by the equipment and size them by the highest operational consumption;
- 4.21.2.23. Define the drainage points in the machine rooms of the equipment, as well as next to the condensers;
- 4.21.2.24. Design the duct network with a height compatible with the passage between beams and intersections with other utilities.
- 4.22. Fire and panic safety plan projects
  - 4.22.1. The CONCESSIONAIRE shall prepare the project of the fire and panic safety plan (PSCIP), which shall consist of a set of plans, diagrams and graphic elements that aim to define and discipline, at least, the following fire safety measures:
    - 4.22.1.1. Car access;
    - 4.22.1.2. Structural fire safety;
    - 4.22.1.3. Vertical compartmentalization;
    - 4.22.1.4. Horizontal compartmentalization;
    - 4.22.1.5. Emergency communication system;
    - 4.22.1.6. Evacuation system (stairs and escape routes);
    - 4.22.1.7. Emergency lighting system;
    - 4.22.1.8. Fire alarm and detection system;
    - 4.22.1.9. Emergency signaling;
    - 4.22.1.10. Smoke control (smoke exhaust);
    - 4.22.1.11. Fire extinguishers;
    - 4.22.1.12. Hydrants;
    - 4.22.1.13. Automatic showers (sprinklers);
    - 4.22.1.14. Gas detection system;
    - 4.22.1.15. Control of finishing and coating material (CMAR);
    - 4.22.1.16. Refuge areas;

- 4.22.1.17. Emergency stair pressurization;
- 4.22.1.18. Emergency elevators.
- 4.22.2. The CONCESSIONAIRE must develop and approve the PSCIP with the Military Fire Department of Minas Gerais (CBMMG), in accordance with the legislation applicable to the subject, including State Decrees No. 46,595/2014 and No. 47,998/2020, and State Law No. 14,130/2001, which provides for fire and panic prevention in the State and provides for other measures.
- 4.22.3. The CONCESSIONAIRE shall consider the following guidelines for the design of a fire and panic protection and fighting system:
  - 4.22.3.1. To meet the requirements set forth in ANNEX 4 – MINIMUM SOCIO-ENVIRONMENTAL GUIDELINES;
  - 4.22.3.2. Know the activities planned for each environment of the HOPE HEALTH COMPLEX, the type and number of USERS and professionals, the layout of equipment and other components of the space, to adapt the firefighting system to the needs of each environment;
  - 4.22.3.3. Verify the preventive aspects of an architectural, hydraulic, electrical and structural nature, according to CBMMG standards;
  - 4.22.3.4. Calculate the volume of water reserve necessary for firefighting, to be used in sprinkler and hydrant networks, ensuring that the storage capacity is sufficient to meet safety demands according to current standards;
  - 4.22.3.5. Channeling of the fire prevention network;
  - 4.22.3.6. Implementation of a network of automatic showers (sprinklers);
  - 4.22.3.7. Implementation of a fire detection and alarm system;
  - 4.22.3.8. Location signage and specification of fire extinguishers;
  - 4.22.3.9. Provide a minimum space necessary for maintenance in the eventual passage of pipes under ceiling beams, over ceiling or under false floors;
  - 4.22.3.10. Determine, depending on the areas of the building, the flows and pressures to be maintained, to carry out the dimensioning of the preventive network and automatic showers;
  - 4.22.3.11. Provide, in the distribution lines, all the devices and accessories necessary for the operation and maintenance of the systems, such as meters, valves and others;
  - 4.22.3.12. Provide a location, in the building's security monitoring and control room, with a fire alarm center with the fire detection system's signage board;
  - 4.22.3.13. Provide a place for the number of firefighters provided for in the rule, observing the provisions of ANNEX 7 – SCHEDULE OF RESPONSIBILITIES.
- 4.23. Structured cabling network design

- 4.23.1. This project will include the graphic elements that aim to define and discipline the installation of the structured cabling system to integrate the various means of transmission (cables, optical fiber, radio, etc.) to support multiple applications including voice, video, data, signaling and control in order to meet the specific needs of the HOPE HEALTH COMPLEX.
- 4.23.2. The CONCESSIONAIRE must present:
  - 4.23.2.1. Plan of each level of the buildings, with the indication of the location of all components belonging to the cabling system, such as equipment, distribution gutters, outlet, passage, distribution and general boxes, and the entire secondary and inlet piping network;
  - 4.23.2.2. Vertical installation scheme;
  - 4.23.2.3. Structure of the monitoring center;
  - 4.23.2.4. Specification of the equipment to be installed.
  - 4.23.2.5. Plans and details of the installations of special systems, such as fire alarm systems, electronic surveillance (CCTV), access control and building automation;
  - 4.23.2.6. Plans and details of telecommunications and information technology installations, including structured cabling, network points, telephony and other communication systems;
- 4.23.3. The CONCESSIONAIRE shall consider in the development of the cabling network, a single cabling platform, services and facilities for the following communications:
  - 4.23.3.1. Voice (telephone extensions, direct lines, fax, public telephones, modems, etc.);
  - 4.23.3.2. Data (Wi-Fi access points, microcomputers, printers, equipment, other LAN/WAN connectivity devices);
  - 4.23.3.3. Cable TV;
  - 4.23.3.4. CCTV (Closed Circuit TV);
  - 4.23.3.5. Nurse call system;
  - 4.23.3.6. Emergency communication system;
  - 4.23.3.7. Sound (Ambient sound system and emergency sound);
  - 4.23.3.8. Building Automation (Device Interconnections for Building Automation Systems);
  - 4.23.3.9. Building supervision (Interconnections with sensors and components for supervisory systems);
  - 4.23.3.10. Alarms (Interconnections of Sensors and alarm signaling devices);
  - 4.23.3.11. Access control (Connection to interfaces and devices for access control);
  - 4.23.3.12. Other specific communication systems.
- 4.23.4. The CONCESSIONAIRE shall consider the following general guidelines for the cabling network:

- 4.23.4.1. The requirements indicated do not ANNEX 7 – SCHEDULE OF RESPONSIBILITIES;
- 4.23.4.2. Use high-quality structured cabling, such as twisted-pair cables (Cat 6 or higher) and fiber optic cables, to ensure efficient and secure data transmission;
- 4.23.4.3. Define the connection points for equipment, switches, servers and other devices;
- 4.23.4.4. The structured cabling network must be designed to allow the internal and external connection of all voice, data, video, internet and electronic systems communications networks originating from and destined to the HOPE HEALTH COMPLEX;
- 4.23.4.5. Plan the routing of cables to minimize interference and ensure the physical protection of the cables, using cable trays, conduits and appropriate ducts;
- 4.23.4.6. Dimension and specify active and passive network equipment to be provided within the data center installed in the HOPE HEALTH COMPLEX;
- 4.23.4.7. The internal distribution of network points for voice and data must be conducted from a metallic network with UTP (*Unshielded Twisted Pair*) category 6 cable;
- 4.23.4.8. The internal backbones should be composed of 10 GB fiber optic cables, with 6 pairs. Provide for a radial network, originating in the data center and ending in the secondary technical distribution rooms. This network should be composed of a main cable and a redundancy cable;
- 4.23.4.9. For the distribution of network points and connection of backbones, 2 closed racks must be provided in each technical room. One rack for the installation of active equipment and the other for passive equipment, which will be the origin of the metallic cabling of the terminal points;
- 4.23.4.10. The telephone system must be of the VOIP (Voice over IP) type;
- 4.23.4.11. Implement protection measures against electromagnetic interference (EMI) and radio frequency (RFI), ensuring the integrity of video signals;
- 4.23.4.12. Consider redundancy in cabling to ensure system continuity in the event of failures, ensuring that each critical point in the system has an alternate cabling path. This includes, at a minimum, duplication of cabling paths for critical systems such as data networks, alarm systems, and fire detection, for example. Certification of structured cabling will be mandatory to ensure the quality and performance of the network in accordance with the applicable technical standards.
- 4.23.5. The CONCESSIONAIRE shall consider the following specific guidelines:
  - 4.23.5.1. Access Control System:
    - 4.23.5.2. Define the levels and types of access in each location of the CONCESSION AREA as provided for in ANNEX 7 – SCHEDULE OF RESPONSIBILITIES.
    - 4.23.5.3. Nurse Call System:
      - 4.23.5.4. Have call devices for people with special needs, adapting to the necessary requirements for

accessibility;

4.23.5.5. Have at least 1 (one) call activation point per bed, including extra beds, observation beds, recovery beds, and places where the PATIENT may need assistance, such as isolated beds, bathrooms for PATIENT use, and shower stalls in the wards. At least 1 (one) point must also be provided for in the other restrooms of the HOSPITAL COMPLEX;

4.23.5.6. Have mechanisms to end the call only at the opening location or in the control center;

4.23.5.7. Have waterproof call devices that are resistant to cleaning and disinfection products that are mandatory in the hospital and laboratory environment, considered chemical aggressive.

4.23.5.8. Building automation and supervision system:

Monitor and control, by computerized system, the subsystems of electrical, hydraulic, air conditioning, gases, CCTV, access control, fire and panic protection and fighting system, among others, in an integrated manner with the Building Management System (BMS) provided for in ANNEX 7 – SCHEDULE OF RESPONSIBILITIES.

4.23.5.9. Sound:

4.23.5.10. Define criteria and procedures for communication to USERS or employees, for warnings, calls and evacuation by voice.

4.23.5.11. In addition to the other applicable standards, follow the requirements of the CEN EN 54-16-2008 standard (European standardization community).

4.24. Visual communication and signage project

4.24.1. The visual communication and signage project of the HOPE HEALTH COMPLEX must be prepared within the principles of the architectural project, including internal and external signage, including signs and general board, sector boards, indicative and directional signage of circulations, place signs (walls, partitions and doors), safety items (firefighter signage and emergency exit), as well as service signage (toilets, storage rooms, DML, etc.).

4.24.2. The CONCESSIONAIRE must present:

4.24.2.1. Detailing of all communication components for each location in the CONCESSION AREA;

4.24.2.2. Map of the location of the signs;

4.24.2.3. Layout of the plaques and totems with the specification of the treatments to be given to them and the type and size of letters to be used for their manufacture;

4.24.2.4. Details of the system of installation, fixation and/or foundations of the elements that make up the signaling;

4.24.2.5. Detailing the composition of messages, figures and pictograms;

- 4.24.2.6. Design, definition and dimensioning of parts, construction schemes, assembly and fixing.
- 4.24.3. The CONCESSIONAIRE shall consider the following guidelines for visual communication:
- 4.24.3.1. Ensure that all signage complies with the visual identity of the HOPE HEALTH COMPLEX, in accordance with item 4.12.3.5.;
- 4.24.3.2. Ensure that all signs are easily readable and understandable, using appropriately sized fonts and color contrasts that facilitate reading;
- 4.24.3.3. Implement accessible signage for PCD (people with disabilities) users, which include typologies including visual, tactile and audible, braille, embossed texts and tactile signage on the floor, pictograms and appropriate color contrasts;
- 4.24.3.4. Use durable materials that are resistant to environmental conditions, ensuring the longevity of the signs and facilitating maintenance;
- 4.24.3.5. Design signage that can be easily upgraded or replaced, allowing for future adaptations as needed;
- 4.24.3.6. Position the signs in strategic and visible locations, ensuring that the information is easily accessible to USERS;
- 4.24.3.7. Include safety signs in accordance with the applicable standards, technical instructions and regulations, such as firefighter signs, emergency exits, PATIENT safety signs and other safety items;
- 4.24.3.8. Consider integrating digital technologies, such as electronic and interactive signage, to improve communication and user experience.
- 4.25. Acoustic design
- 4.25.1. For the acoustic project, the CONCESSIONAIRE must present a project that includes the definition of all the acoustic solutions necessary to ensure sound comfort and privacy in all areas of the HOPE HEALTH COMPLEX. The project should address both acoustic insulation and internal acoustic treatment, aiming to minimize noise transmission and provide a quiet and adequate environment for USERS and professionals of FINALISTIC SERVICES and SERVICES.
- 4.25.2. The CONCESSIONAIRE must present:
- 4.25.2.1. Plans, sections and details of the proposed acoustic solutions, including the location and specification of materials and acoustic elements;
- 4.25.2.2. Technical specifications of the materials and acoustic systems to be used, such as acoustic panels, acoustic doors and windows, wall and ceiling coverings, among others;
- 4.25.2.3. Acoustic insulation projects for critical areas, such as operating rooms, ICUs, hospitalization rooms, offices and LACEN PLATFORMS;
- 4.25.2.4. Acoustic insulation projects for areas with the installation of equipment that emits excessive noise and vibration, such as pumps, compressors, engine rooms, generators, etc., when it is not possible

to position them far from care environments;

4.25.2.5. Internal acoustic treatment projects for living areas of USERS, professionals of FINALISTIC SERVICES and/or SERVICES, such as, for example, waiting rooms, cafeterias, auditorium and meeting rooms.

4.25.3. For the preparation of the acoustic project, the CONCESSIONAIRE must consider:

4.25.3.1. The identification and analysis of internal and external noise sources, including subway lines, railroad and vehicular traffic, around the CONCESSION AREA;

4.25.3.2. The choice of materials and acoustic solutions that meet the technical standards and regulations in force, such as NBR 10152;

4.25.3.3. Conducting acoustic simulations to verify the effectiveness of the proposed solutions and ensure that noise levels meet regulatory and functional requirements.

4.26. Landscaping project

4.26.1. The landscaping project will establish the interventions on the areas not occupied by buildings in the CONCESSION AREA, such as: enjoyment areas, external accesses, internal accesses, paths, gardens, free areas, green areas and other components. This project should also contain the vegetation elements associated with the facades of the buildings, such as biophilic facades and vertical gardens.

4.26.2. The CONCESSIONAIRE must present:

4.26.2.1. Implementation plan, containing the entire civil part of the infrastructure of the landscape project and, therefore, trees and shrubs will not be represented, but only the grassy areas. In this plan, the paths, stairs and ramps must be located, as well as all urban furniture, such as benches, tables and equipment;

4.26.2.2. General plans of squares, flowerbeds, planters and others, containing the representations of vegetation through symbols or numbering and their quantities. The expansions and project details must be presented in the scales compatible with the information to be represented.

4.26.3. The CONCESSIONAIRE shall consider the following guidelines for the landscaping project:

4.26.3.1. Consult the local responsible body regarding the guidelines that must be followed for the landscaping project of the HOPE HEALTH COMPLEX, including the implementation of a fruition area in accordance with applicable legislation and afforestation in the surroundings of the CONCESSION AREA, such as public sidewalks;

4.26.3.2. Prior to the preparation of this project, the CONCESSIONAIRE must inspect the CONCESSION AREA and conduct a survey of the existing vegetation;

4.26.3.3. To meet the requirements set forth in ANNEX 4 – MINIMUM SOCIO-ENVIRONMENTAL GUIDELINES;

4.26.3.4. When possible, and in line with the architectural project, take advantage of the natural topography of the land and the existing vegetation;

- 4.26.3.5. Select the species that best respond to the demands of the climate in the CONCESSION AREA, with specific functions such as providing shade, stopping or channeling winds, creating spaces and intervening in visual problems;
  - 4.26.3.6. The choice of vegetation should consider the size, growth time, type of root, flowering time, characteristics of flowers and fruits, size, toxicity, aromas to exhale, adaptation to the qualities of the soil, necessary care and suitability to the landscape of the CONCESSION AREA;
  - 4.26.3.7. Trees with fruits or flowers that are harmful to health or that, due to their size, pose a danger to USERS, professionals or damage to buildings should be avoided;
  - 4.26.3.8. Avoid species near care environments that may exude smells and perfumes;
  - 4.26.3.9. Use only of native species for the recovery of degraded areas, landscaping and mitigation structures;
  - 4.26.3.10. The implementation of the vegetation must consider the installed infrastructure, both aerial and buried. The roots should be far from the gutters, guides, etc. Trees with non-aggressive roots should be selected when close to sidewalks, always identifying areas of passages of service concessionaires' supply networks, such as the gas system, for example;
  - 4.26.3.11. To study the implementation of solar protection with tree species that are integrated into the architectural project and that best adapt to the conditions in the CONCESSION AREA;
  - 4.26.3.12. Provide the conservation and gardening service, as defined in ANNEX 7 – SCHEDULE OF RESPONSIBILITIES.
- 4.27. Irrigation project
- 4.27.1. The CONCESSIONAIRE shall prepare the irrigation project containing the set of plans, diagrams and graphic elements, which enable the understanding and detailing of the equipment and materials for irrigation.
  - 4.27.2. The CONCESSIONAIRE shall consider the following guidelines for the irrigation project:
    - 4.27.2.1. Use irrigation equipment (sprinklers, drippers and other devices) that ensure uniform water distribution;
    - 4.27.2.2. Ensure that all components of the irrigation system are easily accessible for maintenance and repairs;
    - 4.27.2.3. Ensure that the irrigation system is integrated into the landscaping project, considering the location of the plants and their specific water needs;
    - 4.27.2.4. Install, if applicable and necessary, an independent pressurization system for irrigation in the CONCESSION AREA, from the raw water and treated water reservoirs;
    - 4.27.2.5. If the feasibility studies of reuse water and rainwater use, as provided for in item 4.20.5, are viable,

these sources should also be used to feed the irrigation system;

- 4.27.2.6. Implement an irrigation system with an electronic controller with an automated timer, humidity sensor, and solenoid valve.
- 4.28. Urbanization project
  - 4.28.1. The urbanization project has as its object the external areas of the buildings, understood as such, those areas not occupied by buildings such as: external accesses, internal accesses, lanes, paths, staircases, free areas, green areas, parking lots, sidewalks, urban furniture and other components, delimited to the CONCESSION AREA.
  - 4.28.2. The CONCESSIONAIRE must present:
    - 4.28.2.1. Implementation plan, containing the entire civil part of the urbanization project, presenting the paths, paths, sidewalks, squares, stairs and ramps, as well as all urban furniture, such as benches, tables and equipment;
    - 4.28.2.2. General plans of sidewalks, sidewalks, squares, living spaces and others, containing the representations of the equipment to be installed in the CONCESSION AREA and their quantities. The expansions and project details must be presented in the scales compatible with the information to be represented.
  - 4.28.3. The CONCESSIONAIRE shall consider the following guidelines for the urban planning project:
    - 4.28.3.1. Consult the local responsible body regarding the guidelines that should be followed for the urbanism project of the HOPE HEALTH COMPLEX;
    - 4.28.3.2. When possible, and in line with the architectural project, take advantage of the natural topography of the land;
    - 4.28.3.3. Prepare an urbanization project integrated with the landscaping project and the irrigation system, providing for a harmonization between the paving elements, urban furniture and vegetation, respecting environmental conditions and sustainability guidelines;
    - 4.28.3.4. Define the treatment of pedestrian circulation, living spaces and vehicle parking lots, creating microclimates that avoid elevated temperatures and radiation reflected by the floor;
    - 4.28.3.5. Minimize the paved area, leaving as much permeable soil as possible, whenever possible, respecting the guidelines of the local responsible agency in relation to the minimum percentage of impermeable areas in areas of public enjoyment;
    - 4.28.3.6. The choice of floors should consider the different uses, considering in the specification the aesthetic quality, durability, ease of maintenance, permeability to rainwater, ensuring accessibility to the places. Whenever possible, the use of draining elements should be privileged, such as lawn, pebbles, articulated floors, etc.;
    - 4.28.3.7. Solutions for uneven access must be made with the construction of ramps, in accordance with

current legislation and standards, ensuring accessibility to people with physical disabilities;

4.28.3.8. Whenever the width of the sidewalks allows the implementation of "green sidewalks" to be evaluated. Green sidewalks are grassy areas along the sidewalks, which accompany the pedestrian circulation areas.

#### 4.29. Elevator and freight elevator equipment design

4.29.1. For the design of elevator and freight elevator equipment, the CONCESSIONAIRE must present the sizing of the main components of the vertical transport systems adopted and the location of their elements, including all the construction details necessary for the execution of the installations in the HOPE HEALTH COMPLEX.

4.29.2. The CONCESSIONAIRE shall consider the following systems in the development of the elevator and freight elevator project:

4.29.2.1. Electric elevators (preferably without a machine room): sizing and specification of electric elevators, which will work in interconnected groups, with advanced intelligence software for traffic supervision and automation. The software should include algorithms to optimize passenger flow, reduce waiting times and improve energy efficiency;

4.29.2.2. Emergency elevators: interconnection of emergency elevators to the generator set, intended for emergency evacuation in the event of a fire accident, ensuring the compartmentalization of the building and the possibility of escape;

4.29.2.3. Freight lift: dimensioning and specification of freight lifts intended for the transport of cargo between the various levels of the HOSPITAL COMPLEX and LACEN;

4.29.2.4. Control and automation systems: implementation of control and automation systems for efficient management of elevators and freight elevators, in an integrated manner with the Building Management System (BMS) provided for in ANNEX 7 – SCHEDULE OF RESPONSIBILITIES;

4.29.2.5. Security systems: installation of safety devices, such as alarms, intercoms, door sensors and rescue systems in case of failure;

4.29.2.6. Communication systems: integration of internal and external communication systems to support and operate elevators and freight elevators;

4.29.2.7. Emergency power systems: connection of elevators and freight elevators to emergency power systems (Generator Sets and UPS - *Uninterruptible Power Supply*) to ensure continuous operation in the event of a power failure.

4.29.3. The CONCESSIONAIRE must present:

4.29.3.1. Schematic drawings of the plan and section of the buildings of the HOPE HEALTH COMPLEX, with the indication of the elevators and other transport equipment, their basic dimensions and main characteristics;

- 4.29.3.2. Location plans indicating the location of elevators and freight elevators on all levels of the buildings of the HOPE HEALTH COMPLEX, as well as identification and signage of emergency elevators;
- 4.29.3.3. Design of the elevators with indication of the main dimensions, minimum spaces for the installation of the equipment, and other determining characteristics of the installation;
- 4.29.3.4. Plans and construction details of the elevator shafts and the engine room, if provided for in the elevator and freight elevator equipment project;
- 4.29.3.5. Drawings of details of assembly, fixing, support and support of elevators and freight elevators, ensuring compliance with the manufacturers' indications;
- 4.29.3.6. Installation diagrams detailing the electrical and mechanical installations of elevators and freight elevators, including the interconnection between the various components of the system;
- 4.29.3.7. Specifications of control and automation systems, security systems (alarms, intercoms, door sensors and rescue systems) and communication systems;
- 4.29.3.8. Sizing calculations of elevators and freight elevators, considering workloads, transport capacity and safety factors.
- 4.29.4. The CONCESSIONAIRE shall consider the following guidelines for the design of elevators and freight elevators:
  - 4.29.4.1. Standardize the installation, materials and equipment, to facilitate the assembly, maintenance and stock of spare parts;
  - 4.29.4.2. Ensure the accessibility of elevators and freight elevators for people with disabilities, in accordance with current standards and regulations;
  - 4.29.4.3. Integrate elevators and freight elevators with building automation systems for centralized monitoring and control;
  - 4.29.4.4. Evaluate factors related to vertical transport in the HOPE HEALTH COMPLEX, such as type of cargo, traffic intensity, general layout of buildings, transport safety, architectural layout, number of elevators, speed of operation, selective service of transport, location of space for engine room (if provided for in the design of elevator and freight elevator equipment), type of doors and controls, capacity and dimensions of cabins, dimensions of equipment for transporting obese people;
  - 4.29.4.5. Engine room (if provided for in the elevator and freight elevator equipment project):
  - 4.29.4.6. Determine the dimensions of the engine room to guarantee its performance characteristics, as well as allow free access for inspection, maintenance and removal of equipment;
  - 4.29.4.7. Elevator box and shaft:
  - 4.29.4.8. Determine the dimensions of the elevator box and shaft to ensure the installation of the equipment, also considering:

- 4.29.4.9. Exclusive destination;
- 4.29.4.10. Access to the bottom of the well when required by its depth;
- 4.29.4.11. Emergency doors whenever required by the length of the route between stops;
- 4.29.4.12. Exclusive opening, with adequate dimensions, for the exit of gases and smoke, and for ventilation in the event of fire;
- 4.29.4.13. Provide for structural design, to ensure the alignment of elevator guides, counterweight guides and floor doors, as well as their operating and locking mechanisms;
- 4.29.4.14. Provide an exclusive piping network for the electrical installation of the elevator, and emergency key next to the shaft access door.
- 4.29.4.15. Elevators:
- 4.29.4.16. Dimensioning the passenger and cargo elevator system, to meet the requirements established by applicable legislation and standards, for traffic capacity and traffic interval in the HOPE HEALTH COMPLEX.
- 4.29.4.17. Fix the nominal speed and dimensions of the cabin according to the type of building, architectural arrangements and other conditions.
- 4.29.4.18. Calculate the transport capacity by elevator.
- 4.29.4.19. Implement an automation system to optimize calls and group elevators.
- 4.29.4.20. Forklift:
- 4.29.4.21. Dimensioning the freight lift system considering the conditions of use of this exclusive equipment for cargo transportation, and according to the characteristics and specific needs of use in LACEN;
- 4.29.4.22. Calculate the volume capacity to be transported per freight lift.
- 4.30. Cross-sector pneumatic conveying design
- 4.30.1. This project includes the graphic elements that aim to define and discipline the installation of the intersectoral pneumatic transport system to integrate the various sectors of the HOPE HEALTH COMPLEX, allowing the transport of inputs, materials and medicines.
- 4.30.2. The CONCESSIONAIRE must present:
  - 4.30.2.1. Plan of each level of the buildings of the HOPE HEALTH COMPLEX, (when possible its implementation) with the indication of the location of all components belonging to the pneumatic transport system, such as pipes, sending and receiving stations, distribution chutes, junction boxes and the entire piping network necessary for the operation of the system;
  - 4.30.2.2. Specification of the equipment to be installed, including electronic controllers, sensors, valves and safety devices.

4.30.3. The CONCESSIONAIRE shall consider the following guidelines for the intersectoral pneumatic conveying project:

4.30.3.1. Standardize the installation, materials and equipment aiming at ease of assembly, maintenance and stock of spare parts;

4.30.3.2. Ensure the accessibility of the pneumatic transport system for all sectors of the HOPE HEALTH COMPLEX, in accordance with current standards and regulations;

4.30.3.3. Integrate the pneumatic conveying system with building automation systems for centralized monitoring and control;

4.30.3.4. Install main control unit to control the shipping and compressor processes, supervising all system components, in addition to risk control. This unit shall have the following characteristics:

4.30.3.5. Real-time monitoring of the pneumatic system and its components;

4.30.3.6. Storage of all shipping data;

4.30.3.7. Customization for sending settings, including prioritization;

4.30.3.8. Slow programmed speed dispatch for sensitive materials such as laboratory samples and blood bags via frequency controller in each line (compressor) of the system;

4.30.3.9. Automatic control of essential functions to prevent the capsules from jamming at the stations;

4.30.3.10. Have a solid-state hard disk controller with an industrial-grade architecture, based on a stable and crash-proof operating system;

4.30.3.11. Contain an integrated uninterruptible power supply (UPS) and provided as a backup system with autonomy to save all data before shutting down the system. After the power supply is restored, the system automatically starts, and the system state should return to the operating mode as before.

4.31. Road system design

4.31.1. The road system project will establish the necessary interventions to ensure the proper circulation of vehicles and pedestrians in the spaces not occupied by buildings in the CONCESSION AREA, such as: external accesses, internal accesses, roads, parking lots and stops, sidewalks, bicycle paths and other components.

4.31.2. The road system is composed of sidewalks, streets and parking lots, including curbs, gutters, utility holes, surface and deep drainage, position, sizing, moorings in relation to the axes of the buildings, indication of levels of finished floors, rainwater falls, etc.

4.31.3. The CONCESSIONAIRE must present:

4.31.3.1. Implementation plan containing the entire civil part of the road project, representing the location of roads, parking lots, sidewalks, bike paths, ramps and other components. In this plan, the paths, stairs and ramps, as well as all urban furniture, such as benches, tables and equipment, must be indicated;

- 4.31.3.2. General plans containing detailed representations of roads, parking lots, sidewalks, bicycle paths and other road components through symbols or numbering and their quantities;
- 4.31.3.3. Geometric design of road elements, including curbs, gutters, utility holes, surface drainage, position, dimensioning, lashings in relation to the building axes, indication of finished floor levels and rainwater falls.
- 4.31.4. The CONCESSIONAIRE shall consider the following guidelines for the design of the road system:
  - 4.31.4.1. Consult the local responsible body as to the guidelines that should be followed for the road project of the HOPE HEALTH COMPLEX;
  - 4.31.4.2. Dimensioning the roads according to the type and volume of traffic of vehicles and people expected for the HOPE HEALTH COMPLEX, ensuring the safety and flow of traffic;
  - 4.31.4.3. Implement road safety measures, such as adequate signage, crosswalks, speed bumps and protective barriers;
  - 4.31.4.4. Implement vertical, horizontal and ground signaling compatible with the national traffic system;
  - 4.31.4.5. Ensure the accessibility of roads and sidewalks for people with different mobility conditions and perception of the environment in accordance with current standards and regulations, especially NBR 9050;
  - 4.31.4.6. Implement continuous, unobstructed and signposted routes that connect the external or internal environments of spaces and buildings and that can be used autonomously and safely by all people.
  - 4.31.4.7. The floors must have at least the following conditions:
    - 4.31.4.8. Regular, firm, stable and non-slip surface under any condition;
    - 4.31.4.9. Maximum transverse slope of 3% (three percent);
    - 4.31.4.10. Not present unevenness of any nature in the accessible routes and in the free circulation lane;
    - 4.31.4.11. Unevenness greater than 1.5 cm must be chamfered with an inclination of 1:2 (50%);
    - 4.31.4.12. Grids and expansion joints installed transversely on accessible routes, with spans of maximum size of 1.5 cm;
    - 4.31.4.13. Inspection and utility hole lids flush with the floor, with identification of the contents;
    - 4.31.4.14. Any roughness of the surface may not cause vibrations in wheelchairs, strollers and other locomotion equipment;
    - 4.31.4.15. Use paving materials that ensure durability, resistance and comfort, considering the permeability and drainage of rainwater;
    - 4.31.4.16. Implement parking areas in the CONCESSION AREA for at least 492 (four hundred and ninety-two) spaces, of which 90% (ninety percent) are destined for the exploitation of EXTRAORDINARY REVENUES

by the CONCESSIONAIRE;

- 4.31.4.17. Implement the vacancies pertinent to the obligations of the law (elderly, pregnant women, PCD, etc.);
- 4.31.4.18. Implement a parking area at LACEN, for the delivery and receipt of samples, in a total of 20 (twenty) spaces, in addition to the quantity indicated in item 4.31.4.16, with vacancies for vehicles of different sizes, such as minibuses, vans or vans, and small trucks (carriers);
- 4.31.4.19. Reserve 3 (three) vacancies for official LACEN vehicles, subtracting from the total number of vacancies indicated in the item 4.31.4.16;
- 4.31.4.20. Include paths for circulation and pedestrian flow in the CONCESSION AREA, considering the different entrances of people to the CONCESSION AREA, and respective entrances to LACEN and HOSPITAL COMPLEX.
- 4.32. Design of facilities for medical gases and LPG (Liquefied Petroleum Gas)
  - 4.32.1. For the design of gas installations, the CONCESSIONAIRE must present the sizing of the main components of the gas system adopted and the location of its elements, including all the construction details necessary for the execution of the gas installations of the HOPE HEALTH COMPLEX, providing for a possible monitoring system.
  - 4.32.2. The CONCESSIONAIRE shall consider in the development of the project the gases necessary for the operation of the HOPE HEALTH COMPLEX, as indicated in ANNEX 7 – SCHEDULE OF RESPONSIBILITIES.
  - 4.32.3. The CONCESSIONAIRE must present:
    - 4.32.3.1. Situation plan, indicating the precise location of all pipes and external installations, existing networks, supply center, regulator shelter and other system components with dimensions, lengths and elevations;
    - 4.32.3.2. Plan of each level of the HOPE HEALTH COMPLEX, containing indication of the pipes as to the dimensions, diameter and precise location of the consumption points and legend;
    - 4.32.3.3. Detail of all the necessary holes in the elements of the structure, for passage and support of the installation;
    - 4.32.3.4. Details of the gas plant installations, including the base of the equipment, indication of models, capacity and manufacturers;
    - 4.32.3.5. System flow chart if centralized system adopted;
    - 4.32.3.6. Isometric drawings of the gas lines, showing all the piping components and accessories, with indication of diameter, specification of materials, dimensions, elevations and consumption.
  - 4.32.4. The CONCESSIONAIRE shall consider the following guidelines for gas installations:
    - 4.32.4.1. Provide the minimum space necessary for maintenance in the eventual passage of pipes under

ceiling beams, over ceiling or under false floors;

- 4.32.4.2. Determine, depending on the points of consumption, the flows and pressures to be maintained, to conduct the sizing of the distribution network;
- 4.32.4.3. Provide, in the distribution lines, all the devices and accessories necessary for the operation and maintenance of the system, such as valves, registers and others;
- 4.32.4.4. Provide for the modular panel system (gas strip) for the care environments, optimizing gas therapy, lighting and outlets;
- 4.32.4.5. Determine the dimensions and location of equipment shelters (compressors, vacuum pumps, medical gas cylinders, etc.), in order to ensure their performance characteristics, as well as allow free access for inspection, maintenance and removal of equipment, considering the spaces established by the manufacturers;
- 4.32.4.6. Consider providing areas for housing equipment (pressure regulator, compressors, vacuum pumps, medical gas cylinders, etc.) for the installation of a central or sectoral facility;
- 4.32.4.7. Provide for protection and automatic electric activation in gas plant equipment, such as compressed air and vacuum pumps;
- 4.32.4.8. Provide for a double system so as not to compromise the supply of medical gas, from a central with an automated digital control panel, supported by the autonomous energy system;
- 4.32.4.9. Consider the need to use backup equipment;
- 4.32.4.10. Avoid buried gas pipes or, if this is not possible, adopt pipes embedded in ventilated channels;
- 4.32.4.11. Determine the need for filtration or special equipment for the points of consumption.

## 5. REQUIREMENTS FOR CERTIFICATION

- 5.1. The CONCESSIONAIRE must, in the preparation and implementation of the ARCHITECTURE/ENGINEERING PROJECTS, meet the requirements and obtain the EDGE (Excellence in Design for Greater Efficiencies) certification, the first certified level, for the design and WORKS of the HOPE HEALTH COMPLEX.
  - 5.1.1. EDGE is focused on reducing natural resource consumption and greenhouse gas emissions in buildings.
- 5.2. The CONCESSIONAIRE will be responsible for the costs and activities necessary to obtain EDGE certification at least at the first level, which requires a 20% (twenty percent) reduction in energy, water and materials compared to the local standard. The certification must be obtained during PHASE 3 – PARTIAL OPERATION and maintained in force throughout PHASE 4 – FULL OPERATION.
- 5.3. The requirements for EDGE certification are:
  - 5.3.1. Energy efficiency: Adopt technologies and practices that increase the energy efficiency of the complex, such as efficient lighting systems, high-performance air conditioning equipment, and adequate thermal insulation;
  - 5.3.2. Efficient use of water: Implement water reuse systems, low-consumption devices, and water management practices that reduce water consumption;
  - 5.3.3. Efficient use of materials: Use sustainable construction materials with low environmental impact, promoting the reduction of natural resource consumption and waste minimization;
  - 5.3.4. Quality of the indoor environment: Ensure the quality of the indoor environment, ensuring thermal comfort, air quality and adequate lighting.

## 6. PROCEDURES FOR SERVICES AND WORKS

- 6.1. As provided for in ANNEX 3 – CONCESSION PHASES, the CONCESSIONAIRE must deliver to the GRANTING AUTHORITY the INFRASTRUCTURE DEPLOYMENT SCHEDULE.
- 6.2. The following documents must be issued, delivered and kept at the CONSTRUCTION site in an updated manner, without prejudice to the request of others:
  - 6.2.1. ARCHITECTURE/ENGINEERING PROJECTS, including with the appropriate approvals, as well as copies of the projects approved by the competent bodies, such as Sanitary Surveillance;
  - 6.2.2. Annotations and/or Registration of Technical Responsibility (ART/RRT) of the ARCHITECTURE/ENGINEERING PROJECTS and the WORKS, according to executive stages;
  - 6.2.3. Registry of Technical Victories;
  - 6.2.4. Occurrence Diary, preferably digital;
  - 6.2.5. Fire Department Inspection Certificate (AVCB);
  - 6.2.6. Emergency Response Plan (PAE);
  - 6.2.7. Risk Analysis Study (EAR);
  - 6.2.8. Risk Management Program (PGR);
  - 6.2.9. Fire Intervention Plan;
  - 6.2.10. Licenses and other authorizations for INFRASTRUCTURE DEPLOYMENT;
  - 6.2.11. Solid Waste Management Plan (PGRS);
  - 6.2.12. Hazardous Materials Management Plan;
  - 6.2.13. Chemical Safety Data Sheet (SDS) of the chemicals used;
  - 6.2.14. Environmental Management Plan for Works (PDAO);
  - 6.2.15. Assessment and Management of Safety Risks and Impacts;
  - 6.2.16. Medical Control and Occupational Health Program (PCMSO);
  - 6.2.17. Occupational Health Certificates (ASO);
  - 6.2.18. Occupational Health and Safety Management Program (PGSSO);
  - 6.2.19. Preliminary Risk Analysis (APR) and, when applicable, Work Permit (PT);
  - 6.2.20. Training Certificate in accordance with the Regulatory Standards provided for the civil construction industry;
  - 6.2.21. Control of Distribution of Personal Protective Equipment;
  - 6.2.22. Copy of document proving functional regularity.

## 7. OBLIGATIONS OF THE CONCESSIONAIRE

- 7.1. Without prejudice to the provisions of the other items of this ANNEX and other contractual provisions, the CONCESSIONAIRE is obliged to:
- 7.1.1. Execute and monitor, permanently and resolutely, the WORKS, with an architect and multidisciplinary engineer duly qualified by the respective professional body – Council of Architecture and Urbanism (CAU) or Regional Council of Engineering and Agronomy (CREA) –, who has proven experience in WORKS of the same size. This professional must continuously follow and monitor the evolution of the WORKS and be supported by a team of engineers and technicians in the various specialties that are part of the project.
  - 7.1.2. As for aspects related to Occupational Safety, designate an Occupational Safety Engineer on a permanent basis in the WORKS to prepare the Risk Management Program (PGR) and ensure its implementation in the WORKS, in accordance with the applicable rules and legislation.
  - 7.1.3. Prepare and keep updated during the WORKS period all the documents mentioned in item 6.2.
  - 7.1.4. Ensure good technique in the execution of construction services, complying with the definitions and specifications of the ARCHITECTURE/ENGINEERING PROJECTS, in addition to ensuring compliance with safety standards throughout the execution of the WORKS.
  - 7.1.5. Provide Personal Protective Equipment (PPE) and Collective Protective Equipment (CPE) and/or materials necessary to ensure the safety and transit of USERS and professionals of the HOPE HEALTH COMPLEX, in accordance with the relevant regulations.
  - 7.1.6. Teach courses, lectures and integration procedures, related to Occupational Health and Safety, and keep a record of these activities and of each incident and accident, with a view to complying with the Regulatory Standards.
  - 7.1.7. Assume full responsibility for the proper and efficient execution of the ARCHITECTURE/ENGINEERING PROJECTS and WORKS, according to the CONTRACT and its ANNEXES, as well as the other technical documents prepared by the CONCESSIONAIRE within the scope of the PROJECT.
  - 7.1.8. Issue the Technical Responsibility Annotations (ART's) for the WORKS, one in the name of the technical person in charge contained in the Certificate of Discharge and Registration of the Legal Entity with the CREA, and the other (s) in the name of the engineer(s) who will effectively execute the WORKS, according to the executive stage and respective technical qualification with the specific council. If the general Technical Person in Charge of the company is the engineer who will effectively command the WORKS, part of the other notes may be supplied, provided that the responsibilities are guaranteed in the permanence of the WORKS.
  - 7.1.9. Maintain an Occupational Safety Engineer at the WORKS site, responsible for training, safety signaling and personnel inspection, throughout PHASE 2 – CONSTRUCTION. This professional may be the same as indicated in the item 7.1.2.

- 7.1.10. Hire a Technological Control to monitor the entire evolution of the construction of the HOPE HEALTH COMPLEX WORKS, in the different laboratory tests of resistance and others, to guarantee the quality and safety of the project. Special attention should be taken to the concreting of the radiotherapy structure, which requires distinct and unconventional parameters for ready-mixed concrete, such as high concrete density and cooling during the concreting of large volumes.
- 7.1.11. Verify compliance with the rules of the responsible bodies on signaling of the WORKS, prioritizing pedestrian safety and demarcating the areas for truck and machine maneuvers.
- 7.1.12. After the issuance of the TERM OF ACCEPTANCE of PHASE 2 – CONSTRUCTION, make available to the GRANTING AUTHORITY the records of the ARCHITECTURE/ENGINEERING PROJECT (as built), according to the design standards in BIM systems, including technical Data Book and Manual for the use, operation and maintenance of buildings, according to the relevant ABNT NBR standard.
- 7.1.13. Consider mandatory during the execution of the WORKS, that any embedded installation (electrical, hydraulic, sewage, drainage, gases, special gases, air conditioning ducts, mechanical ventilation and exhaust, telephony and data/voice network, among others existing in the ENGINEERING PROJECT) may only be closed with masonry, partition panel, paving, floors and ceilings, after carrying out the tests provided for in the standard and approval by the GRANTING AUTHORITY and/or INDEPENDENT VERIFIER, by checking the survey and registration memory provided by the CONCESSIONAIRE.
- 7.1.14. Perform the commissioning of the facilities during the assembly phases of the facilities, systems and equipment, and before the start of PHASE 3 – PARTIAL OPERATION.
- 7.1.15. Prepare the Commissioning Plan, with the inclusion of acceptance tests, inspection plans, functional tests, aligned with the INFRASTRUCTURE DEPLOYMENT SCHEDULE, scope of commissioning, among other pertinent activities and, at the end, the Commissioning Report must be issued, which will be evaluated for the purpose of issuing the TERM OF ACCEPTANCE OF THE CONCESSION PHASES – PHASE 2 HOSPITAL COMPLEX and the TERM OF ACCEPTANCE OF THE CONCESSION PHASES – PHASE 2 LACEN.

## 7.2. TECHNICAL TEAM

- 7.2.1. The main technical team, at least, to be allocated by the CONCESSIONAIRE, or its subcontractors, in the WORKS shall be formed by:
  - 7.2.1.1. Engineer responsible for the works – Contract Manager with proven experience in large infrastructure works, preferably with experience in the execution of works in health environments;
  - 7.2.1.2. Civil Production Engineer and Civil Engineer with proven experience in large infrastructure works, preferably with experience in the execution of works in health environments;
  - 7.2.1.3. Electrical engineer with proven experience in large infrastructure works, preferably with experience in the execution of health environment works;

- 7.2.1.4. Mechanical engineer with proven experience in infrastructure works in large works;
- 7.2.1.5. Safety engineer with proven experience in large infrastructure works;
- 7.2.1.6. Sanitary and/or environmental engineer with proven experience in large-scale infrastructure works;
- 7.2.1.7. Urban architect with proven experience in infrastructure works in large works, preferably with experience in the execution of works in health environments;
- 7.2.1.8. Master of works with proven experience in infrastructure works in large works;
- 7.2.1.9. Building technicians with proven experience in large-scale infrastructure works.

### 7.3. CHANGES IN ARCHITECTURE/ENGINEERING PROJECTS

- 7.3.1. Subject to the provisions of this ANNEX, in particular the item 1.2.2, the CONCESSIONAIRE shall register all changes made to the construction site with the monitoring of the technical managers of the ARCHITECTURE/ENGINEERING PROJECTS, resulting in the *As-built* executive.
- 7.3.2. In the event of major changes, the CONCESSIONAIRE shall change the RRT and/or ART, if necessary, record the adjustments in the Construction Journal.

### 7.4. REGISTRATION OF MEETINGS

- 7.4.1. The minutes of the meetings between the PARTIES on any topic involving the INFRASTRUCTURE DEPLOYMENT shall be prepared and recorded by the CONCESSIONAIRE, containing, at least, the following basic elements:
  - 7.4.1.1. Numbering, which must be sequential without repetition, both document and of the content items;
  - 7.4.1.2. Date and matters to be discussed;
  - 7.4.1.3. Full name, contact and institutions of the participants;
  - 7.4.1.4. Annotation of the agenda points that do not present problems, making it clear that any problems are not relevant, in an itemized and numbered way;
  - 7.4.1.5. The reported problems/points of attention must present a solution forward, with the respective responsible for the follow-up, with the established deadlines, the form, cost and reason for the solution;
  - 7.4.1.6. Date of the next meeting or intermediary.
  - 7.4.1.7. Signature of the minutes by the participants, and the definitive version of the minutes is forwarded to the GRANTING AUTHORITY and the INDEPENDENT VERIFIER.

## **8. APPENDIX 5.1 – NEEDS PLAN**

- 8.1. APPENDIX 5.1 - NEEDS PLAN is available in a document/file separate to this ANNEX.
- 8.2. Pursuant to this ANNEX, APPENDIX 5.1 - NEEDS PLAN is a mandatory and binding document for the CONCESSIONAIRE with regard to the following aspects: (i) list of mandatory minimum areas for the planned environments of the HOPE HEALTH COMPLEX (in the "Environment" column) and (ii) the respective mandatory minimum quantities (in the "Quantity" column).
- 8.3. The functional definition (set forth in the "Description" column) of each environment established in APPENDIX 5.1 - NEEDS PLAN represents referential and guiding aspects, thus, they may undergo modifications, motivated by any of the PARTIES, in accordance with the deadlines for the preparation of the ARCHITECTURE/ENGINEERING PROJECTS, provided that such changes do not cause material changes in the estimated costs associated with APPENDIX 5.1 - NEEDS PLAN, and it is up to the PART that feels harmed to request measures of economic and financial restoration.
- 8.4. The mere change in the nomenclature of the minimum areas ("Environment" column) may be conducted by agreement between the PARTIES, without the need for economic and financial rebalancing.
- 8.5. The CONCESSIONAIRE shall comply with any changes proposed by the GRANTING AUTHORITY in relation to the description of each environment (set forth in the "Description" column) for the realization and implementation of the respective ARCHITECTURE/ENGINEERING PROJECTS, subject to the recognition of economic and financial imbalance by the GRANTING AUTHORITY, based on the evaluation in this regard by the INDEPENDENT VERIFIER according to item 8.8, which will be processed under the terms of the CONTRACT.
- 8.6. The CONCESSIONAIRE shall proceed with the development of the ARCHITECTURE/ENGINEERING PROJECTS within the premises of new descriptions eventually indicated by the GRANTING AUTHORITY, pursuant to item 8.5, being certain that the recognition of the imbalance may be given by mere awareness of the GRANTING AUTHORITY or other formalization of the right, under the terms provided for in the CONTRACT, an act that will occur prior to the development of the respective projects, the GRANTING AUTHORITY cannot claim the lapse of the deadlines for not having carried out the procedures that configure such economic and financial rebalancing.
- 8.7. Changes unilaterally invoked by the CONCESSIONAIRE in the aspects indicated in item 8.3 may occur at its own risk, without the need for economic and financial restoration measures in its favor, except for the rites of non-objection and approval of the ARCHITECTURE/ENGINEERING PROJECTS.
- 8.8. The INDEPENDENT VERIFIER shall be notified, simultaneously, by the PARTIES, in relation to the requests that may occur in accordance with item 8.3., being certain that it will have the prerogative to evaluate whether the requested modifications in the referential and guiding aspects of the NEEDS PLAN cause material changes in the original costs of implementation of the ARCHITECTURE/ENGINEERING PROJECTS and in the operation of the PROJECT, resulting in a claim for economic and financial rebalancing by the

injured PART.

- 8.9. The INDEPENDENT VERIFIER shall conduct its evaluation within fifteen (15) days of receipt of the respective notification, sending its binding evaluation to the PARTIES, and it is up to the PART that disagrees to use the dispute resolution mechanisms of the CONTRACT.
- 8.10. The INDEPENDENT VERIFIER may request an extension of another 15 (fifteen) days to issue its opinion, in which case the other associated deadlines will also be extended by the same magnitude.

## **9. APPENDIX 5.II – INFRASTRUCTURE DEPLOYMENT SCHEDULE**

- 9.1. APPENDIX 5.II – INFRASTRUCTURE DEPLOYMENT SCHEDULE is available in a document/file attached to this ANNEX.
- 9.2. It is a merely referential and guiding document.