National Audubon Society

Owner's Project Requirement

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Table of Contents

1. Introduction **2**

2. Key Commissioning Process Owner's Project Requirements **3**

3. General Project Description **4**

4. Project Objective **4**

5. Functional Usages **5**

6. Occupancy Requirements **6**

7. Performance Requirements **6**

7.1 General Requirements……..8
7.2 Indoor Environmental Quality (IEQ) Requirements……8
7.3 Operational Requirements ...……...8
7.4 System Requirements……...8

1. Introduction

The Owner's Project Requirements (OPR) document is a condensed collection of vital information about the construction project. The intent of this document is to provide the owner's intent in this project for wide audience, including owner, design team, construction team, operation and maintenance staff, future renovation teams, and anyone who needs access to the original project information. The OPR document is not a substitute for traditional architectural programming. It does contain some programming information, such as space usage, but it also contains the owner's goals, expectations, performance criteria, and (if necessary) records of decision and trade-offs made during design and construction. Therefore, the OPR can be a living document because it is updated during design, construction and occupancy phase. This document is provided to the building owner upon completion for the project, so the original intent of the owner's requirements and information contains not lost over time.

This Owner's Project Requirements is companion to the Basis of Design (BoD) document, which provides information on how OPR is achieved, either through the development of the design documents or implementation during construction or operation phase.

2. Key Commissioning Process Owner's Project Requirements

This project has several key Owner's Project Requirements and they are as follow:

1. Team Commissioning: An overall Owner's Project Requirements is to have a fully functional office space at the completion of construction that meets the needs of the National Audubon Society's employees, clients and operations and maintenance staff. This will be accomplished by using a fully integrated team working process within the guidelines of the Commissioning Process.

2. Commissioning Requirements: The requirements for achieving, documenting and verifying the design, construction and operations will be implemented with the Commissioning Team. This will be implemented with workable and clear requirements in the construction documents.

3. Limited Changed Order: The goal is to have zero to few change orders. This will be achieved through a focused review of the design documents and included as an achievable goal in the project documentation and specifications.

4. Quality Verification of Design and Construction: The Owner's Project Requirements is to implement quality assurance tools to achieve the level of quality desired by the owner for the constructed office space. This will be accomplished using statistical quality sampling and 100% verification when required, with peer sampling and the use of computer based construction checklists.

5. Fully Trained Operations Staff: The intent of this project is to have a fully trained and knowledgeable operating staff. The training will meet the needs of the maintenance staff for the operations of the equipments and systems designed to support the operating of this office space. This will be achieved through clear, detailed construction specification requirements.

6. Useable System Manual: Operations and maintenance manuals are to be tailored to the systems and components of the constructed office space and be easy to use and effective. This will be implemented by combining the O&M documentation into a System Manual, with system and operations narratives.

7. LEED CI 2.0 Commissioning Requirements: One of the intent of this project is to have the project achieved the requirements stated in the USGBC LEED CI Rating System 2.0, Fundamental Commissioning and Enhanced Commissioning. This will be achieved by contracting a qualified and independent 3rd party commissioning authority to direct and satisfying the credit requirements.

8. Continuous Improvement: The Owner's Project Requirements is to capture the best of the Commissioning Process and to learn from past mistakes. This will be achieved through a preliminary Commissioning Report at the end of the project, with a final Commissioning Report after eight (8) months of occupancy.

3. General Project Description

The National Audubon Society is relocating its existing office space to a new location at 225 Varick Street. This new office work space offers high ceiling and full-height window and large floor plates will accommodate 122 staff members to be on one floor. The new space will showcase Audubon's commitment to environment and sustainable design.

4. Project Objective

There are several key objectives that the owner's wishes to achieve as a result of this project. These included:

1. Provide a healthy environment for the staff.
2. The space is designed and function as a model consistent with the environmental mission
3. Innovative features include:
    a. Energy efficient systems
    b. Under floor air distribution system (UAD)
    c. Open space
    d. Sufficient daylight penetration for the entire floor
    e. Sophisticated sensors and controls
    f. Use of recycle and locally produced materials
    g. High indoor environmental quality
4. Achieve a USGBC LEED Platinum certification.

5. Functional Usages

The functional uses of the new National Audubon facility include those typical of an office space in a commercial building. The functional and support areas included:

1. Conference rooms – Conference room is needed within the floor to allow for group meetings of office staff.

2. Offices – Staff offices are need on limited basis. The office spaces are used by various office staff.

3. Storage space – Lockable storage space is a necessity for the many occupants, and certain groups may require specific types of storage.

4. Reception / Waiting area – Entrances with defined waiting area are needed in order to facilitate security goals and allow staff to work efficiently without interruptions.

5. Break area – Occupants require break area for storage, preparation, and consumption of meals. A designated break area avoids problems created when employees must consume meals in their work areas.

6. Copier room – Designated location for office equipment such as printers, copiers, and fax machines are needed for the staffs.

7. Restroom – Restroom are needed for use by occupants. The restrooms must be conveniently located, clearly marked, and accessible.

8. Mechanical room – Space must be designated within the floor to allow for installation of mechanical equipments. This space should be optimally located to allow for the simplest and most efficient mechanical design.

9. Electrical / Communication space – The floor design must contain adequate space for installation of electrical and communication equipments. These spaces must be located in coordination with the communications department to ensure that all user technology and utility needs are achieved.

6. Occupancy Requirements

The intent of the use of the space is for office work; typically the floor will be occupied 8 hours a day, the occupied hours are from 9 a.m. to 5 p.m., or 10 a.m. to 7 p.m., Monday through Friday. Depending on the activities of individual groups, the occupancy is occasionally extended late into evenings and throughout the weekend. The peak occupancy requirement for the space is:

- 122 Staff

7. Performance Requirements

The success of the project will be determined according to the following measureable performance criteria:

7.1 General Requirements

1. Professional and industry standards: All work meets or exceeds ASHRAE standard specified by the USGBC LEED CI 2.0 rating system, NFPA and all local and state codes.

2. Commissioning process: The owner, architect, engineer, contractors, and shall follow the direction of the CxA in the commissioning process.

7.2 Indoor Environmental Quality (IEQ) Requirements

1. Occupants: The Owner's Project Requirements is not to have complaints from more than 15% of the occupants due to comfort for the first year of operation. The goal is to provide comfort at a level where 85% of the occupants are comfortable at any given time. The following criteria has been set as guidelines in achieving this OPR:

    a. Temperature: Is individual controlled for each room to maintain 73oF during peak summer conditions and 68oF during peak winter conditions. The temperature within a space is not to vary +/- 2oF within the occupied space or between spaces that have thermostats set at the same temperature. The space room temperature will be adjustable by room occupants within a +/- 2oF range of the set-point.

b. Relative humidity: The relativity humidity within the occupied space shall not exceed 40% during summer operation. No minimum limit is required during winter operation.

c. Air distribution: The air distribution system is a uniform with no noticeable drafts or stagnant area for the under floor air distribution (UAD) system.

d. Air quality control: The indoor air quality shall meet the prerequisite credit for indoor environmental quality specified by the USGBC LEED Rating system CI-2.0. The carbon dioxide (CO_2) level shall not exceed a 700 ppm level differential between indoors and outdoors. Pollutants generated in the space shall be exhausted to the outdoors and not returned to the central air handling unit. The definition of pollutants includes, but is not limited to food orders, bathroom orders, printing orders (inks and toners), and excessive colognes and perfumes. There shall be no transfer of odors between spaces. Odors and fumes generated outside the building, such as vehicle exhaust or dumpster odors, shall not enter the mechanical system air intakes.

e. Noise level: The background noise level in the open type office area (without any people) should be between XX and XX RC. In the enclosed offices this valve should be between XX and XX RC. The background noise level in the office area must be controlled both in the design and installation of the building system.

7.3 Operational Requirements

1. Training: The maintenance personnel trained on the system by manufacturers shall be able to train their peers to demonstrate the training sessions were effective.

7.4 System Requirements

1. Control system: The control system shall function properly; maintenance staff shall be able to operate the system efficiently, and the operating values displayed on screen, by system gauges, or printed in reports shall be accurate.
2. Air Handling Unit: Provisions must be made both in the design and construction of the air handling system to avoid potential coil freezing.
3. Maintainability: The system shall be easily maintainable with easy, identifiable access to all components.

4. Valve chart: Accurate valve charts and graphics shall be provided in paper form for O&M manuals. They shall be framed and mounted in mechanical rooms, and in electronic format to facilitate future changes.
5. System integration: Interfaces between various systems shall work together properly.
6. System longevity: The major mechanical system components are expected last at least 20 years without replacement assuming routine and preventative maintenance is accomplished. Individual components shall maintain calibration for a minimum of 1 year and shall not require replacement for at least 10 years.

End of Owner's Project Requirements (OPR)