01 9113 – General Commissioning Requirements

1. Description

    a. If this project is to be LEED certified, than it must follow the Harvard University Green Building Standards.

    b. Commissioning intent is to follow the guidelines of this HMS Standard and Construction Document Specifications.

    c. Contract documents shall also include:

        i. Divisions of the specifications with special attention to:

            1. See Division 01 for General Conditions.

            2. See Division 21 for Fire Protection

            3. See Division 22 for Plumbing.

            4. See Division 23 for HVAC

            5. See Division 25 for Buildings Building Automation System (BAS)

            6. See Division 26 for Electrical.

2. Commissioning Process: Pre-Design and Design Phase

    a. Establish the owners commissioning team which should consist of the Project manager and appointed facilities staff.

        i. Commissioning level determined by Harvard Green Building Standards Tier level and LEED certification status.

    b. Perform a review of the Owner's Project Requirements (OPR). OPR is developed by the Project Manager and space assignee.

    c. Perform a review of the Basis of Design (BOD) compared to the OPR. BOD is developed by the design engineer.

    d. For design review with comments requirements, please see the Flow Chart in Section 6.a of this Commissioning Standard.

    e. Commissioning specifications please refer to the Flow Chart in Section 6.a of this Commissioning Standard.

  f. Develop a project specific preliminary commissioning plan during design MEP phase.

  g. Perform an evaluation of the HVAC and BAS in the existing space and support areas around the space prior to the construction demolition phase starts

3. Commissioning Process: Construction Phase

  a. Develop project specific construction checklists

  b. Perform a review of the contractor submittals for they systems to be commissioned

  c. Perform inspections of the project systems to be commissioned periodically throughout the construction process and document through a field report to the owner and commissioning team

  d. Develop the functional performance testing scripts

  e. Update the commissioning plan in preparation for the functional performance testing

4. Commissioning Process: Commissioning Phase

  a. Perform functional performance verification

    i. Static commissioning of the components

    ii. Dynamic commissioning of the sequences of operations

  b. Issue bi-weekly status reports for the systems commissioned

  c. Issue and maintain a corrective actions log sheet

  d. Perform a detailed review of the programmed sequences of operations and graphics for the systems and areas that are commissioned.

    i. Each review should have screen captures to document in the final commissioning report.

    ii. Each review should have 24 hour rends/graphs to confirm equipment operation (critical System points).

    iii. Each review should have a copy of any custom Powers Process Control Language (PPCL) code written for equipment operation.

  e. Issue the final commissioning Pre-occupancy Report.

5. Commissioning Process: Acceptance Phase

a. Perform a final evaluation of the supporting areas around the project to confirm that the current project did not alter their operations

b. Verify that all open action items have been answered

c. Verify that owner training had been completed

d. Issue a final commissioning report

e. Review and collect final O&M manuals for the systems commissioned.

f. Perform a 10 month follow-up and review of the systems commissioned

g. Perform deferred seasonal testing (if required)

6. Commissioning Standard Table

a. Table to be inserted at a later date.