

Owner's Project Requirements (Example Format)

Facilities Condition Assessment

1. Introduction

The Client has retained Fluent Engineering to perform inspections and accurate analyses of reasonably accessible components and elements of designated facilities requiring maintenance and/or planned action. The mechanical, electrical, plumbing facilities condition assessment (FCA) will encompass the _ campus. This document outlines the Owner's Requirements for a successful project and will be reviewed/ accepted by the Owner prior to the next design milestone. Some document headings have been left within the document noted in parentheses and smaller font to describe the intent of the section.

2. General Project Description

The MEP Conditions Assessment (FCA) shall include inspections and accurate analyses of reasonably accessible components and elements of designated facilities requiring maintenance and/or planned action. The results of the Facilities Condition Assessments shall be detailed in a PE signed and stamped Facilities Condition Assessment Report.

3. Objectives

1. Identify and highlight any condition requiring immediate action (safety concern)
2. Capture and record MEP characteristics and systems information
3. Identify the current physical condition of each component or element and any deficiencies
4. Identify maintenance projects for the individual facilities required to return the asset to functionality or to a minimum standard condition in order to preserve asset value

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3.1 General Scope- Overall:

Evaluate Campus MEP Systems on the site. Individual building evaluations are not intended. Evaluation is for Heating, Cooling, Power, and Domestic Water systems. Storm & Sanitation systems are not currently included. Surface/Hardscape systems (Roadways, parking surfaces, etc.) are not currently included.

For example, evaluate the electrical power system from the utility meter to the MDP, past MDP is not intended.

For example, evaluate the domestic water system from the well source to the 1st building distribution split point. Include backflow, mixing valve, etc. prior to the distribution pipe split. Include hot water heat exchanger and tanks.

3.2 System Scope-

Mechanical Systems

3.2.1 Air-Handlers rated 2001CFM or above

3.2.1.1 Dampers

3.2.1.2 Coils

3.2.1.3 Connections

3.2.2 Hydronic piping from source to coil

3.2.3 Controls (DDC/Pneumatic)- indicate what buildings have what type of system.

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Electrical

3.2.9 Resource

3.2.9.1 Grid

3.2.9.2 Geothermal Power Generation

3.2.10 Distribution System Analysis (including transformers)- 12kV system

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Plumbing

3.2.15 Distribution Systems 1st building distribution split point

3.2.15.1 Backflow prevention

3.2.15.2 Mixing Valve

3.2.15.5 Main Line Equipment

3.2.16 Valves

3.2.17 Pumps

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3.3 Site Scope-

Tunnel System

3.3.1 MEP System in Tunnels

Note: Team Shall Follow _ Confined Space Permit/Safety Program

Geothermal Systems (prioritized)

3.3.2 Well #5

3.3.5 Well #7

3.3.6 Injection wells (including _ injection house area with new pumps)

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Domestic Water

3.3.10 Resource

3.3.10.1 Well #1

3.3.10.2 Well #4

3.3.11 Adsorption media

3.3.12 Chlorination System

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4. Budget Considerations and Limitations

Budget is not to exceed _ not including any allowances for additional testing and/or additional services that may be required. Work must be completed no later than the fall of 2018.

5. OPR Process and Tracking

Prior to creation of this document, major stakeholders met to develop the size, scope, and budget of this project. At the site kickoff meeting, this document will be reviewed for accuracy and updated as needed. This is to be considered a “living” document and any changes will be reviewed by the major stakeholders prior to incorporation. This document may be referenced at each design milestone. Weekly project status updates will be shared between Fluent Engineering and the designated Owner’s representative.

6. Owner and Occupancy Space and Use Requirements

In addition to an initial kickoff meeting on site, it is anticipated that Fluent Engineering and its sub-consultants will need approximately 30 days of access to various areas of the campus. The team will strive to provide a schedule for planned site visits at least 2 weeks prior to arrival. No systems will be reviewed which would noticeably impact occupants in order to perform analysis with the exception of the inspection of the AHU’s which will be coordinated with _ Facilities Dept.

7. Process

The design process and milestones have been laid out by Fluent Engineering and its sub-consultant and is detailed in the Process Flow Chart. Any additional process and/or milestone requirements will need to be discussed prior to incorporating into the process flow.

8. Heating, Ventilating and Air Conditioning

The HVAC system, including Large Air-Handlers (2001 CFM+): Dampers, Coils, Connections, Etc., Hydronic piping from source to coil, Campus _ Controls, Chiller Heat Exchangers, Boilers (College Union), Chillers, Campus Cooling Towers, Campus Chilled Water Valves, Chilled Water Pumps, Chilled Water Piping, Chilled Water Materials will be reviewed by _ for system conditions.

In addition, Fluent Engineering will be reviewing the following systems: Geothermal Well #2, #5, #6, #7, Geothermal Injection Wells, Geothermal Temperature/Flow, Geothermal Distribution, Geothermal Distribution Materials, Geothermal Heat Exchangers, Geothermal Hydronic Piping from source to coil, Geothermal Heat Exchangers, Geothermal / Domestic Hot Water Storage Tanks, Tunnel Geothermal/Mechanical, Geothermal Valves-Pumps-Piping.

9. Electrical Systems

Fluent Engineering will be taking the lead on examining the condition of the following electrical systems: Grid- Resource, Geothermal Power Generation, Solar Power Generation, 12kV Distribution System, Site Lighting, MDP Condition, Emergency Power Generators, Building Transformers, Central Egress Lighting Inverters, and Tunnel Electrical

10. Plumbing Systems

_ will be reviewing the following systems: Confined Space, Domestic Water Well #1, #4, Chlorination System, Domestic Water Cross Connections/Backflow, Irrigation Intertie, Domestic Water Materials, Domestic Water Valves, Domestic Water Pumps, Domestic Water Storage Tank, Domestic Water Distribution System, Sumps/Lift Stations.

An alternate to evaluate the storm sewer and camera all of the wastewater lines was not accepted.

11. Fire Protection and Alarm

No impact to the existing Fire Protection and Alarm systems are anticipated. An alternate to evaluate the fire alarm systems was not selected.

12. Owner's Facility Management System

As part of this project, Fluent Engineering will be reviewing the need for and possibly make recommendations regarding the implementation of an Enterprise Asset Management System (EAM/CMMS). This system involves the management of the maintenance of the physical assets of an organization throughout each asset's lifecycle. EAM is used to plan, optimize, execute, and track the needed maintenance activities with the associated priorities, skills, materials, tools, and information. This covers the design, construction, commissioning, operations, maintenance, and decommissioning or replacement of plant, equipment, and facilities. As of August 30, 2018, EAM implementation work is not part of this project's scope.

13. Security and Access

Access to the facilities must be coordinated through _ and its designated point of contact. This will include the supplying of keys or access codes and if necessary, _ escorts, to perform the agreed-upon services. Keys will be surrendered back to _ upon the completion of services.

14. Deliverables

The owner will have an opportunity to review a draft version of the final report for completeness prior to the project conclusion. Fluent will review the Owner's comments to ensure all project requirements have been satisfied. In addition, Fluent will present its findings in-person through a presentation.

Facilities Condition Assessment Report

The Facility Condition Assessment Report shall be a thorough, detailed documentation of all activities completed during the performance of the MEP Facilities Condition Assessment. The report shall provide valuable and useful information, data, and metrics on all inspected elements that can assist the Owner in establishing baseline data, best practices and lessons learned, and in determining future maintenance and operations funds, Replacement Reserves, or alternatives for the next five years.

The following is a list of informational items to be included in the Facilities Condition Assessment Report. This list is not all-inclusive but indicates the minimal information to be provided in the report:

1. Executive Summary:

General information providing descriptions of property or facility, purpose, and scope of the work, type of assessments, overall conditions, corrective actions, estimated costs, recommendations, and analyses for short and long term replacement of deficient items.

2. Description:

Specific information about MEP Facilities Condition Assessment that shall include the information outlined above.

3. Summary & Analysis:

Detailed information on all inspected areas and system components including at a minimum the following:

- a. Identification of the existing condition and all deficiencies of all inspected elements.
- b. Rank and priority of all cited deficiencies by severity and anticipated life cycle.
- c. Recommendations for corrective action for any deficiencies found.
- d. Cost estimates for corrective action of any deficiencies found. Cost Estimates shall include the following information;
 - 1. Labor man-hours to correct the deficiency.

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Facilities Condition Assessment Reports must identify deficiencies.

15. Environmental and Sustainability Goals

We will endeavor not to have any negative impact on the environment. Suggested improvements to the overall sustainability will be included. The scope of this project is to enhance and better the overall sustainability of _ by determining existing MEP equipment conditions and capacities.

16. Building Occupant and O&M Personnel Requirements

Owner and Owners representatives will be briefed on the condition of the campus' systems at the conclusion of the project. The project deliverables will include any specific actions that will be required for the best interest of the assets.

17. Owner's Project Requirements Version History

(The following is a summary of the changes made to the Owner's Project Requirement document throughout Pre-Design, Design, Construction, and Occupancy and Operations. This information is critical to understand and document the trade-offs made and the resulting impact on the project).

Rev. No.	Date	Description of Revisions
1	8/30/20XX	OPR issued to Owner/Team