Police Department Firing Range / EOC Facility - Commissioning Agent
Scope of Work

Projects Overview

Village of Orland Park (Owner) seeks the consulting services for a commissioning agent (CA) for the Police Department Firing Range / EOC Facility project. The Police Department Firing Range located at 14650, is currently under construction with an anticipated competition date in April, 2025.

Please note that the CA will report directly to the owner. The Owner's Representative on the project is Mike Mazza, Operations Manager (mmazza@orlandpark.org / 708-403-6108).

Scope of Work

The Village of Orland Park appreciates the importance of commissioning this building to guarantee that all HVAC systems are installed and operating as intended. The commissioning process will systematically document that the specified components and systems have been designed, installed and properly started up and then functionally tested to verify and document proper operation through all modes and conditions. Commissioning must be performed on all HVAC systems and related controls, valves, ducts, pipe insulation, and domestic hot water recirculation.

The areas of expertise required to perform commissioning services identified in this RFP include, but are not limited to, the following:

- Prepare a commissioning plan and conduct a scoping meeting where the commissioning process is reviewed. CA will schedule additional meetings, as necessary, throughout project phases to plan, scope, coordinate, and schedule future activities and resolve problems
- Hot water system (boilers, hot water pumps, valves, piping)
- Air handling units (supply fans, return fans, coils, valves, variable frequency drives (VFD), ducts, dampers, filters)
- Packaged air conditioning (AC) or heat pump (HP) units (supply fans, return fans, coils, valves, VFD, ducts, dampers, filters, compressors, condensers)
- Terminal units and re-heats.
- Unit heaters
- Domestic hot water system (heaters, valves)
- Building automation system
- Testing and Balancing verification of all air/fluid systems.

A complete list of HVAC system assets as well as the complete Issue for Construction plans/specification have been provided for review.

The commissioning agent will be required to complete the following services:

1. Create a Commissioning Plan

The CA is to create a commissioning plan as early as possible and this should be completed during the design phase. The commissioning plan is to include the following sections:

- A brief overview of the commissioning process
- A list of all commissioned features and systems
- Identification of the primary commissioning participants & their responsibilities
- A description of the management, communication and reporting of the plan
- An outline of the commissioning scope, including: submittal review, observation, start-up and testing
- A list of the expected written work products
- A time schedule of the items to be commissioned
- A description of the rigor and scope of testing

2. Review in Construction Document Phase

The CA must review the construction documents to ensure that each commissioned feature or system meets the design intent relative to functionality.

Item #2 not in scope

3. Focused Review of Submittals

The CA must provide written proof that they have reviewed contractor standard submittals of commissioned features and systems to make sure that the features and systems will meet the specifications, especially as they relate to environmental and economic performance.

4. Verify Installation & Functional Performance

The following shall be completed on each commissioned component:

Installation Observation: The CA must sufficiently observe the installation of each type of commissioned feature and system to ensure that they are properly installed according to contract documents and manufacturer's instructions, and that other building systems or components will not compromise the performance of the feature.

Start Up & Check Out: The CA performs the start-up and initial check out results. These are to be clearly documented according to the manufacturer's written instructions and the contract documents.

Sampling: The CA applies appropriate sampling techniques to verify that start-up and initial check-out of all commissioned equipment is successfully completed.

The CA must use the appropriate sampling techniques to be reasonably sure that all sensors have been calibrated in order to ensure that the reported value in the control system represents the actual or local value. The CA must become reasonably sure, using appropriate sampling techniques that all actuators have been adjusted to fully open and close dampers and valves, and that reported values in the control system are correct by verification through visual operation.

At a minimum, a sampling (15%) of each type of equipment/sensor/actuator/control point with the same model number (where applicable) must be conducted. For example if there are 100 VAV boxes of a particular type (and model number) then 15 of these VAV boxes must be selected and tested.

Functional Testing: The CA will test included components and systems for their functionality. These tests must be documented to clearly describe the individual systematic test procedures, the expected system response or acceptance criteria for each procedure, the actual response or findings and any relevant discussion concerning any discrepancies identified.

Sequence Testing: After the initial checkout has been approved by the CA, test each sequence in the sequence of operations and other significant modes. Sequence and control strategies include: start-up, shutdown, unoccupied, and manual modes, modulation up and down the unit's range of capacity, power failure, alarms, component (unit and pump) staging and backup upon failure, interlocks with other equipment, and sensor and actuator calibrations.

Test All Larger Equipment Individually: To be performed after the initial checkout has been approved by the CA. Similar units that are numerous (e.g. many smaller rooftop packaged units, air terminal units and exhaust fans) require a specific sampling strategy as outlined above. Heating equipment must be tested during the winter and air conditioning must be tested during the summer, as appropriate to each large piece of equipment to demonstrate performance under near design conditions.

5. Complete a Commissioning Report

A commissioning report must be presented to the Owner after all but seasonally deferred functional testing is complete. The report must include a list of each commissioned feature or system, and the opinion of the CA regarding the feature or system's compliance with the contract documents.
Required components of the commissioning report are as follows:

- Meeting Specifications
- Ensuring Proper Installation and
- Functional Performance & Efficiency

In addition a written list of all outstanding commissioning issues and any testing that is scheduled for a later date must be included. All outstanding operationally, environmentally, or economically responsive feature deficiencies must be corrected and/or listed in the commissioning report. All completed functional tests should be listed in an appendix to the commissioning report.

6. Operations & Maintenance & Recommissioning Management Manual

The CA will produce both an "Operations and Maintenance Manual" and a "Commissioning Manual". Both manuals should be indexed, labeled and bound. The O&M manual should include the name, address, telephone number and web address of the manufacturer, or vendor, and installation contractor, submittal data, operations and maintenance instructions with the model and features for the project clearly marked. The manual should include information for equipment that was actually installed. The following data should be present for each model and feature:

- Installation Instructions
- Operations Manual
- Maintenance Instructions/Manual
- Replacement
- Start-up
- Special maintenance and replacement sources
- Parts list
- List of special tools
- Performance data
- Warranty Information

In addition, the O&M manual should include a documentation package on as-built controls, including a narrative for normal operation, shutdown, unoccupied operation, seasonal changeover, manual operation, control setup and programming, troubleshooting alarms, control drawings and schematics and final sequences of operations.

The Commissioning Management Manual must include:

- Final version of the design requirements and design basis narratives, including brief descriptions of each system
- As-built sequences of operation for all equipment; control drawings
- A list of time of day schedules and a schedule frequency to review them for relevance and efficiency
- Seasonal start-up and shutdown, manual and restart operation procedures, recommendations regarding seasonal operational issues that effect energy use
- Recommendations for recalibration frequency of sensors and actuators by type and use
- A list of all user adjustable set points and reset schedules with a brief discussion of the purposes of each and the range of reasonable adjustments with energy usage implications
- Plans for continuous commissioning or recommended frequency for recommissioning, by equipment type with reference to tests conducted during initial commissioning
- A schedule frequency to review the various set points and reset schedules to ensure they are at current relevant and efficient values.
- A list of diagnostic tools with use descriptions to assist facility staff

- A copy of the commissioning report

7. Near-warranty End/Post-Occupancy Review

The CA will be under contract to return to the site 10 months into the warranty period to review current building operations with the facility staff and to address the condition of the outstanding issues related to the original and seasonal commissioning.

The CA will solicit problems or concerns from the facility staff to determine if the building is performing as was originally intended. The CA will provide suggestions for improvement and record these changes in the O&M and Recommissioning Management Manuals. The CA should identify problems that are covered under warranty or the original construction contract.

Finally, the CA must assist facility staff in the development of reports, documents, and requests for services to remedy any outstanding problems.

8. Supplemental Scope Items

The CA must make a minimum of six (6) trips to the project site. These trips should be strategically timed to coincide with critical design/construction phases and equipment installations and tests. This should be the same individual for each site visit. Staff substitutions require prior approval from the Owner's Representative.

The CA will provide a signed letter confirming that the commissioning plan has been successfully executed and the design intent of the building has been achieved.

DELIVERABLES

As a part of this RFP the Owner's Representative is including:

- Equipment types/counts
- A preliminary construction schedule (if available)

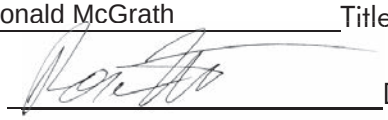
The Village is requesting firms provide a cost not to exceed fee to complete the Project as described above.

- Proposed Cost not to Exceed Fee: $ 36,910

Please include a completed "A-E Proposal Form" with submittal.

AUTHORIZATION & SIGNATURE

Name of Authorized Signee: Ronald McGrath Title: Principal Architect

Signature of Authorized Signee:  Date: 12/5/24

A-E FEE ITEMIZATION	Date/Scope:	Date of Estimate:
Project Title: **Police Dept. Firing Range / EOC Facility** Orland Park - Commissioning	Contract #: P.T.O. **BASIC RATES**	ECC:
Location:	A-E Firm: **Tria Architecture**	

SECTION A - DESIGN

	Item	No of DWGS	Professional Manhours	Professional Rate	Professional Cost	Sub-Professional Manhours	Sub-Professional Rate	Sub-Professional Cost
1	Principal Architect		10	250.00	2,500.00			
2	Project Manager		9	201.12	1,810.07			
5	Admin				0.00	8	125.00	1,000.00
6	Senior MEP Engineer		80	160.00	12,800.00			
7	MEP Enigneer		100	140.00	14,000.00			
8	MEP Engineer		40	120.00	4,800.00			
9	Totals	0	239		35,910.07	8		1,000.00

10	Total Direct Labor (Professional and Sub-Professional)			(rounded)	36,910
11	Overhead	x	$36,910	Overhead is built into hourly rates	0
12	Total Direct Labor and Overhead				36,910
13	Profit	x	$36,910	Profit is built into hourly rates	0
14	Total Fee for Design Services				$36,910

SECTION B - ENGINEERING SERVICES - REPRODUCTION - TRAVEL

1	Geotechnical & SubSurface Investigation	N/A	0
2	Topographic Survey	N/A	0
3	Field Investigation	In Design Services Above	0
4	Reproduction	Reimbursable Expense	0
5	Other Special Costs	None	0
6	Travel	In Design Fee Above	0
7	Total Fee for Engineering Services, Reproduction, and Travel		$0

SECTION C - POST CONSTRUCTION AWARD SERVICES

		Professional Manhours	Professional Rate	Professional Cost	Sub-Professional Manhours	Sub-Professional Rate	Sub-Professional Cost
1	Architect Construction Observation			0.00	0		0.00
6	Office Consultation/Submittal Review			0.00			0.00
7	As Built Drawing Review			0.00			0.00

8	Total Direct Labor				0
9	Overhead	0.00% x	$0	Overhead is built into hourly rates	0
10	Total Direct Labor & Overhead				0
11	Profit	0.0% Task Order	$0	Profit is built into hourly rates	0
12	Total Direct Labor, OH, and Profit				0

		Mandays	Rate	Cost
15	OTHER			0
16	Total Fee for Post Construction Award Services			$0

TOTAL FEE: DESIGN, ENGR. SVCS, REPRO, TRAVEL (SECTIONS A & B)	**$36,910**
GRAND TOTAL FEE: DESIGN, ENGR. SVCS, REPRO, TRAVEL, AND PCAS	**$36,910**

A-E Name: Tria Architecture	Date: 12/5/2024
A-E Signature:	