

EXHIBIT “A”- SCOPE OF WORK

1. Project Services. Consultant agrees to perform professional services for a project known and described as Arc Flash Risk Assessment (“Project”). The Services are described in the following subtasks:

1.1 Arc Flash Risk Assessment. Perform an Arc Flash Risk Assessment to determine compliance with the National Fire Protection Association (NFPA) and the National Electric Code (NEC) requirements for labeling and identification of possible hazards and protection boundaries, as well as the required level of Personal Protection Equipment (PPE) when working on or around an electrical cabinet.

- A. On-site Collection of Data. Electrical Safety Specialists (ESS) will gather information regarding City’s electrical system hierarchy. Data collection includes documentation of wire size, wire length, transformer data, over-current protective devices such as breakers and fuses, and other miscellaneous data. Equipment included in the assessment will include main switch gear, panel boards, motor control centers, bus ducts and plugs, control panels, branch panels, disconnects, and downstream loads, as required by the NFPA 70E and IEEE 1584.
 - City will identify any areas that may have scheduling requirements or special clothing requirements.
 - City will ensure equipment is labeled per NEC before Consultant arrival identifying equipment names and load information.
- B. System Modeling. Using the data from the on-site data collection, ESS engineers will model City’s electrical distribution system in SKM Systems Analysis. Once the new single-line drawings are complete, Consultant PE will review the model to ensure accuracy. If requested, ESS can provide an electronic copy of this model before proceeding with the engineering analyses.
- C. Engineering Analyses. Engineering work will be completed including:
 - Short Circuit Analysis will provide a final report with a tabular listing of the available bolted short-circuit current levels at each designated point in the system. The short-circuit current analysis begins at the point where the local utility provides power and includes all alternative electrical power sources. It continues down through the low voltage terminals of the utility vault transformers, through the main switchgear to the switchboards, panel boards, and motor control centers further downstream. Motors 50 HP and greater will be documented as they may provide fault contributions within the system. Analysis will include industrial control panels as defined by NEC Article 409.09.
 - Overcurrent Protection Device Analysis.

This study analyzes the fault current levels in the system regarding the operating characteristics of the overcurrent protective devices at the designated points. The arc flash hazard level is directly related to the opening time of the overcurrent protective device protecting the faulted circuit. Therefore, the fuse and circuit breaker parameters have a dramatic impact on the potential arc flash hazard as they affect the arc flash incident energy and flash protection boundary calculations. The overcurrent protective device time-current characteristic must be known from the main service entrance overcurrent protective device(s) at each service entrance equipment location, continuing downstream to include all of the switchgear, switchboards, and panel boards.

- Selective Coordination Analysis

The electrical system's overcurrent devices were evaluated for selective coordination for the arcing faults associated with the Arc Flash incident energies in this report. This report evaluates trip times for backup protective devices beyond the branch containing the first protective device. Two conditions must be satisfied for the upstream backup protective device to be reported instead of the immediate protective device.

- Condition 1: The immediate protective device must carry 5% or more of the Cleared Fault Threshold value multiplied by the total bus fault current.
- Condition 2: The upstream backup protective device must trip faster and carry a fault current that is bigger or equal to the Cleared Fault Threshold value multiplied by the fault current through the immediate device.

This coordination evaluation only pertains to fault values that affect the incident energy calculations for an Arc Flash Risk Assessment.

- Incident Energy Analysis

- Arc Flash Evaluation Detail:

The Arc Flash Assessment will be conducted under the supervision of a licensed Professional Electrical Engineer with extensive experience in Arc Flash and Power system studies.

The Arc Flash Evaluation will be conducted using the Short Circuit Study and Protective Device Coordination Study results gathered in the previous steps. The arcing fault current through the protective devices is calculated from the bolted fault value and used to automatically find the time duration of the arc from the time current coordination (TCC) curves. Based on this information, the approach (shock) boundaries, incident energy, and arc flash boundary are calculated for each designated location in the power system following the NFPA 70E and IEEE 1584 standards. Series ratings of breakers and other equipment that are not gathered during arc flash assessment are not included in this proposal.

Once the incident energy is calculated at each designated location, the corresponding personal protective equipment (PPE) can be specified in

conjunction with the NFPA 70E guidelines. Incident energy levels and the corresponding PPE may be reduced by methods such as adjusting circuit breaker settings or by changing current-limiting fuses and circuit breakers. The arc flash hazard results are based on industry-accepted engineering calculations from NFPA 70E, "Standard for Electrical Safety in the Workplace," and IEEE 1584a, "Guide for Performing Arc-Flash Hazard Calculations."

D. Label Application, Change Documentation & Training.

Once the engineering analyses have been completed and the incident energy levels have been calculated, ESS will create an arc flash label for every necessary device in the City's facility. The values provided on each of the labels will be unique to that device and will be based on that device's specific calculations. If the device is fed from various enclosures, the label will represent the worst-case scenario for that item.

- Labels identifying possible hazards and protection boundaries as well as the required level of Personal Protection Equipment (PPE) will be applied to all electrical cabinets/devices.
- All changes/updates to the electrical system, studies, drawings, and/or calculations made between collection phase and label application phase will be documented in the final reports and drawings.
- Complimentary on-site arc flash training will be conducted.

E. Delivery of Report and Single Line Drawings.

- Delivery of Arc Flash report (delivered electronically as pdf)
- Delivery of Single Lines (pdf files, along with three prints in size D)

F. Deliverables.

- Arc Flash Labels on all equipment as identified by NFPA 70E and IEEE 1584
 - 100% printed and applied by ESS technicians
- Fresh arc flash single line drawings, specific to each facility and created using input data solely from the data collection tasking to ensure accuracy.
- Arc Flash Reports
- Arc Flash Risk Assessment 4-hour training

2. Schedule. The Services will commence upon receipt of an executed Agreement with an anticipated completion date of May 2026.

3. Assumptions.

- A. City's utility provider will be responsible for providing Consultant with utility information as needed.

- B. Consultant's on-site work will require an experienced facility escort to guide Consultant's team through the facility as on-site work is performed. The escort does not have to be an electrician or maintenance individual; anyone familiar with the layout of the facility who has access to all potentially locked areas and knowledge of the electrical equipment will suffice.
- C. If the City has a bus duct or other elevated equipment, Consultant will need access to a ladder and/or lift. If the City does not have these or does not permit their use by contractors, Consultant will arrange for rental equipment as needed. These costs will be then provided as a pass-through cost to City.

4. Services Not Included.

- A. Infrared Thermography
- B. Lockout Tagout
- C. Electrical Safety Written Program
- D. Hard copies of the arc flash reports
- E. Circuit tracing and/or NEC load labeling