US Department of Agriculture (USDA)

"Statement of Work"

2026 Campus Arc Flash Assessment

United States Department of Agriculture-National Centers for Animal Health

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Ames, Iowa 50010

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Project
2026 Campus Arc Flash Assessment 2026

General Information

1.0 Scope of Work

The Contractor shall perform an Arc Flash Hazard Assessment Update for the electrical distribution system across 91 buildings (total 663 electrical panels) at the Government site. This work updates the 2022 arc flash study by incorporating current data, confirming protective device settings, and recalculating incident energy values using the latest applicable standards.
The Government will provide: the 2022 SKM PowerTools project file, 2022 electrical one-line diagrams, and facility access and escorts. Minimal system changes have occurred since 2022; therefore, only limited field spot-verification is required.

2.0 Background

The Standard for Electrical Safety in the Workplace, NFPA 70E states in Article 130.5 that an arc flash risk assessment should be reviewed every five years or whenever there is a significant change in the electrical system. In 2022, a complete Arc Flash Hazard Assessment was performed on the NCAH campus in Ames, Iowa.

3.0 Technical Requirements / Tasks

Task 1 — Review 2022 Documentation

a. Review SKM files, drawings, and prior results
b. Identify any discrepancies or system updates

Task 2 — Field Spot Verification

a. Confirm select breaker/fuse settings
b. Verify new or modified panels
c. Document findings with photos

Task 3 — SKM Model Update

a. Update the existing 2022 model with verified field data
b. Update utility fault parameters
c. Add/remove panels as needed

Task 4 — System Analysis

a. Perform short-circuit analysis
b. Update coordination (as needed)
c. Conduct arc flash calculations per IEEE 1584
d. Determine incident energy and arc-flash boundaries

Task 5 — Arc Flash Labeling

a. Provide updated NFPA 70E and NEC 110.16 compliant labels
b. Provide digital and print-ready label files

Task 6 — Reporting

a. Provide an Arc Flash Assessment Update Report including executive summary, updated one-line diagrams, updated SKM model, PPE levels, boundaries, and incident energy tables
b. Recommended mitigations following NFPA 70E hierarchy of controls

Task 7 — Quality Assurance & Closeout

a. Internal QA/QC of all deliverables
b. Draft report submission
c. Incorporation of Government comments
d. Final report delivery

The Contractor will develop a construction bid which itemizes the level of effort identified in this SOW and per the bid construction documents.

4.0 General Requirements / Tasks

1. Pursuant to FAR 52.236-7 Permits and Responsibilities, the Contractor shall obtain all required permits, licenses, and authorizations to perform work under this contract and comply with all the applicable Federal, State, and local laws and regulations.
2. All work must comply with all applicable federal, state & local building/construction codes.
3. The Contractor shall manage the total work effort associated with the services required to meet the objectives and standards. Such management includes but is not limited to planning, scheduling, cost accounting, report preparation, establishing and maintaining records, and quality control. The Contractor shall provide a staff with the necessary management expertise to assure performance objectives and standards are met. The Contracting Officer may at any time require samples, Material Safety Data Sheets (MSDS) or manufacturer's data sheets of materials used in this contract.
4. Tasks that are unclear in this SOW must be confirmed with the Contracting Officer (CO) prior to incurring costs. If clarification is required for items identified in this SOW and per the final construction drawings and specifications, it should be brought to the attention of the CO, Contracting Officer's Representative (COR), Engineering Project Manager (EPM), and Architecture Engineering (A/E) Firm, if applicable.
5. The contractor shall be solely responsible for coordinating work with all subcontractors and ensuring that all items of joint use in conjunction with installations are completed.
6. The Contractor is responsible for verifying site conditions, measurements, quantities, and materials needed to complete this project prior to submitting a proposal. The contractor shall carefully examine the entire site and shall make all necessary investigations to become thoroughly aware of the existing conditions and all difficulties involved in the completion of the work in accordance with the contract documents prior to the submission of bid.
7. The scope of the project shall be performed in a neat, workmanlike manner and shall be sequenced for efficient workflow and to minimize interruption to the daily activities and ongoing research at the facility to the greatest extent possible.
8. The contractor shall coordinate all work with the Contracting Officer's Representative.
9. Contractor shall provide all means and methods to protect the facility and its installations from all project activities, including protecting the facility from environmental elements as the improvements are completed.
10. The Contractor shall furnish all labor, materials, equipment, supplies, transportation, supervision, safety equipment*, and incidentals for all elements of the work to provide a complete and properly functioning installation in accordance with this Statement of Work.
    a. * Note: Contractor is solely responsible for safety measures and conformance to applicable requirements in accordance with FAR clauses referenced in Solicitation package
11. Anything mentioned in the Scope of Work and not shown on the drawings or shown on the drawings and not mentioned in the Scope of Work, shall be of like effect as if shown or mentioned in both.
12. The finished product and all components shall provide a complete operational and functional system per this Scope of Work and the manufacturer's specifications.
13. Contractor shall provide company Safety policy for review and approval by Contracting Officer's Representative within ten (10) days of the award of the contract.
14. Contractor shall provide a quality control plan for review and approval by Contracting Officer's Representative within ten (10) days of the award of the contract.

5.0 Special Provisions

1. The Contractor must make all necessary provisions to keep the operational part of the Facility safe and cooperate to keep noise, dirt, and other interferences to a minimum. To accomplish this, the Contractor must submit a

Construction Schedule for review within ten (10) days of award and approval to allow for progression of work with limited impact on the animals and employees. The Contractor must repair all damages caused by construction operations.

2. Do not disturb portions of the site beyond areas in which the work is approved. If land is disturbed due to staging or other reasons, the contractor is required to return the condition back to pre-construction condition or better at no cost to the government.
3. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work must be in a condition equal to or better than that which existed before new work started.
4. Keep driveways, entrances, walkways, and doorways serving premises clear and available to the Government, employees, visitors, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
5. Any damage resulting from the contractor's operation shall be brought to the attention of the Contracting Officer's Representative immediately.
6. Finished surfaces of existing facilities that are affected, marred, scratched, or damaged by the contractor shall be refinished to match original condition.
   a. Patching material shall be of the same type, style, and thickness, and shall be finished to match existing adjacent surface construction in color and texture.
   b. Patching material, paint color, paint material and paint application methods shall be approved in advance by the Contracting Officer's Representative.
7. No building structural members shall be cut or altered without prior approval of the Contracting Officer's Representative.
8. The contractor shall take all necessary and reasonable measures to keep the work site clean of trash and debris. Work areas shall be cleaned immediately as work in that area is completed, and before moving to a new work area. Place all trash and debris in OSHA approved containers, remove, and dispose of trash off site daily.
9. The contractor shall move all materials and equipment, including ladders and scaffolding from the site at the completion of each day's operation unless otherwise approved by the Contracting Officer's Representative. All equipment shall be secured at the end of the day.
10. The contractor shall provide proper safety equipment to workmen and ensure a safe environment for employees and the public at all times. The contractor shall work to ensure free, unobstructed, and safe access to and about the work area.
11. The Contractor shall ensure that any materials that are delivered by FedEx, UPS, etc. are delivered to the jobsite and NOT to the USDA warehouse dock at Building 24 or to the north warehouse, Building 11. The USDA and/or the COR will not be responsible for receiving any materials for the project. USDA reserves the right to refuse any unscheduled deliveries that arrive at either warehouse or at the main gate.

6.0 Government Furnished

1. Documents available: site maps, submittal form, request for information (RFI) form, site entry acceptable identifications document, security policy, inclement weather /safety document, and any other requested and approved forms or documents needed for the project.
2. The 2022 SKM PowerTools project file, 2022 electrical one-line diagrams, and facility access and escorts.

7.0 Submittals

1. The Contractor must provide product data submittals including manufacturing specifications. Submittals shall be provided within 10 days of award of the contract. Submittals shall include:

   a. Updated SKM model
   b. Updated one-line diagrams (PDF + CAD)
   c. Arc flash calculation files
   d. Label dataset
   e. Final Arc Flash Report
   f. Field verification notes
   g. Complete panel dataset (all 663 panels)

8.0 Deliverables / Schedule

1. The contractor shall submit a project schedule for approval by the COR, reflecting the duration of the project from award to acceptance by the USDA. **Project Schedule shall be submitted to the COR, copied to CO and EPM no later than ten (10) days after award of the contract.**

Key Deliverables

Item No.	Deliverable / Item Title	Description	Frequency	Delivery Format	Due By
1	Project Schedule	Provide a schedule of dates with description of tasks	Once	Electronic	Within ten (10) days of the award of the contract
2	Company Safety Policy	Submit contractor's company safety policy	Once	Electronic	Within ten (10) days of the award of the contract
3	Quality Control Plan	Submit contractor's company quality control plan	Once	Electronic	Within ten (10) days of the award of the contract
4	Review 2022 Documentation	Review SKM files, drawings, and prior results and identify any discrepancies or system updates	Once	Electronic	End of contract
5	Updated one-line diagrams	Update the existing one-line diagrams to reflect the changes in the electrical system	Once	Electronic/Hard copy	End of contract
6	Arc flash calculation files	Update the arc flash calculation files to reflect any changes in the electrical system.	Once	Electronic	End of contract
7	Label dataset	Create and install new labels on all electrical equipment included in this assessment.	Once	Applied to equipment	End of contract
8	Final Arc Flash Report	Create a new arc flash report that details any changes needed to the system and any adjustments	Once	Electronic	End of contract
9	Field Verification notes	Provide any and all field verification notes	Once	Electronic	End of contract
10	Complete panel dataset	Create dataset for any new and existing panels in the electrical system	Once	Electronic	End of contract

9.0 Regulatory Requirements

1. The equipment materials, installation, workmanship, and operation shall conform to the most stringent applicable requirements of the most recent editions of the associated publications, in the below section unless otherwise noted:

    a. NFPA 70E – Standard for Electrical Safety in the Workplace
    b. IEEE 1584 – Guide for Performing Arc Flash Hazard Calculations
    c. OSHA 29 CFR 1910 Subpart S – Electrical
    d. OSHA 1910.132(d) – Hazard Assessment and PPE requirements
    e. NFPA 70 (NEC), Article 110.16 – Arc Flash labeling requirements
    f. NFPA 70B – Electrical Equipment Maintenance Standard

10.0 Contractor's Key Personnel

1. The Contractor shall confirm to the Contracting Officer the List of Key Personnel and their qualifications are provided as part of the proposal. The contractor will provide any additional information requested by the Contracting Officer to certify their qualifications.
2. All work must be performed by qualified personnel. Qualifications of personnel include, but are not limited to:

    a. Documented experience with NFPA 70E and IEEE 1584 arc flash studies
    b. OSHA 1910 Subpart S–compliant electrical safety training
    c. Proficiency with SKM PowerTools
    d. Formal training in NFPA 70, 70B, and 70E
    e. Preferred: NETA-certified technicians or equivalent

3. The Contractor shall provide experienced, qualified, and capable personnel to perform the work in this contract. Personnel shall be fully knowledgeable of all safety and environmental requirements associated with the work they perform. Competent personnel shall be provided as required.
4. OSHA training requirements shall be strictly enforced prior to the commencement of work. The job superintendent must be an OSHA certified "competent person" with 30 hours of training and all other employees working on the project must have a minimum of 10 hours of OSHA training.
5. The job superintendent/OSHA certified competent person needs to always be on site when work is ongoing.
6. Contractor employees and Subcontractor employees shall conduct themselves in a proper, efficient, courteous and businesslike manner.
7. The Contractor shall ensure that all employees present a professional appearance that is appropriate for their position. The Contracting Officer's Representative reserves the right to determine the acceptability of any clothing worn. All Contractor/Subcontractor employees working under this contract shall be identified by a distinctive nameplate, emblem, or patch attached in a prominent place on an outer garment. Employee identification shall not be substituted for required passes or badges.
8. The Contractor shall remove from the site any individual whose continued employment is deemed by the Contracting Officer's Representative to be contrary to the public interest or inconsistent with the best interests of USDA.

11.0 Site / Security Requirements

1. Access to the construction site is controlled by a security fence and visitor/contractor check-in/check-out system. All contractor/subcontractor employees shall sign-in and out at the main site entrance gate and always wear a contractor/visitor identification badge while on the site. The ID badges will be turned in at the end of the workday. A current government-issued identification with a picture ID is required for entry (REAL ID required).
2. A minimum of 5 days of advanced registration is required for all personnel entering the site that are foreign nationals, and 3 days for all other workers.
3. Construction vehicles will be allowed access to the contracted buildings; contractor employees' personal vehicles shall be parked in the facility parking areas designated by the COR. Appropriate vehicle badges shall be displayed at all times while the contractor is on site.
4. The Contractor shall use only the service roads and access routes approved by the Contracting Officer's Representative.
5. Unless accompanied by a NCAH/USDA employee, the Contractor, subcontractors, and their employees shall not enter buildings or facilities not specifically part of this project. Reasons included, but not limited to, disease control and health requirements.

6. The Contractor shall adhere to all Site, ARS, APHIS and USDA security policies and procedures including, but not limited to, Code of Federal Regulations Requirements, Standard Operating Procedures, Security Directives, Security Procedures, General Orders, Post Orders and any applicable Government Policies and Procedures.
7. Additional security requirements may be imposed when the Federal Government raises the Homeland Security Alert Level. Additional directions will be provided by the Contracting Officer's Representative if the situation occurs.
8. Failure to comply with access requirements shall be adequate grounds for removal of the contractor/ subcontractor employees from the site and barring further site access to individuals.
9. Coordinate use of premises under direction of the COR. Contractors shall confine construction equipment, storage of materials and equipment and operations of workers to areas permitted by law, ordinances, permits, or requirements of Contract Documents, and shall not unreasonably encumber premises with construction equipment or other material or equipment.
10. No pets or animals are allowed inside the Security Gate, even if left in a vehicle.
11. No firearms or weapons are allowed on site.
12. Owner will occupy the facility during entire period of construction for conduct of its normal operations.
13. Additional entry requirements may be added prior to the commencement of the project. The COR will advise of any updates during the project kickoff meeting.

12.0 Project Timeline / Hours of Operation

1. Contractor shall be given 180 days from the "Notice to Proceed" to complete the project.
2. Normal Work hours: Work hours for the site are 7:00AM to 3:30PM, Monday through Friday, excluding government holidays. Requests for exceptions to this schedule shall be made in writing forty-eight (48) hours in advance and approved by the CO and/or COR.
3. Work Outside Normal Work Hours: Work scheduled outside regular work hours including late hours, Saturdays, Sundays, and Government holidays requires COR approval in advance. Make application to the COR at least 5 calendar days prior to such work to allow arrangements to be made by the Government for access to the work area and inspection & monitoring arrangements. Requests shall include the exact dates, hours, location, and purpose of the exception. If approved, the COR will coordinate access with the site security office.
4. Recognized Holiday: The contractor is not required to provide work on federal holidays, except in emergency situations. 2026 Federal holidays are as follows:
    - **New Year's Day:** Thursday, January 1
    - **Martin Luther King, Jr. Day:** Monday, January 19
    - **Presidents' Day (Washington's Birthday):** Monday, February 16
    - **Memorial Day:** Monday, May 25
    - **Juneteenth:** Friday, June 19
    - **Independence Day (Observed):** Friday, July 3
    - **Labor Day:** Monday, September 7
    - **Columbus Day:** Monday, October 12
    - **Veterans Day:** Wednesday, November 11
    - **Thanksgiving Day:** Thursday, November 26
    - **Christmas Day:** Friday, December 25

13.0 Temporary Facilities

1. The existing USDA utilities at the site may be used by the Contractor for completion of the contract work at no cost to the Contractor. The Contractor shall be responsible for making and removing any utility connections.
2. The Contractor shall equip all his/her foremen and work leaders with cell phones as necessary to coordinate the work effort. The Government will not provide any phone service for the project.
3. The contractor may utilize the USDA toilet facilities for their employees.

14.0 Lockout /Tagout

1. The Contractor and/or subcontractor employees who will be working on the job will apply a lockout/tagout (LOTO) process to control dangerous energy sources.
2. The Contractor/subcontractor shall have a LOTO program established and use Contractor LOTO locks, tags, and procedures.

3. The Contractor/subcontractor shall submit their LOTO program for review and approval by the COR within 10 days of award of the contract.

15.0 Closeout Submittals / Warranty Documentation / Record Drawings

1. A warranty shall be issued in accordance with FAR 52.246.21 (Warranty of Construction). A standard one-year warranty shall be issued for all work.
2. The material shall be warranted as free from defects in material and workmanship for a period of (12) months from the date of installation.
3. Manufacturer's documentation for warranty and extended warranty. Include all required documentation that will meet the manufacturer's requirements for executing said warranty.
4. Provide a warranty binder containing one (1) signed & dated copy of all warranties of installed materials, devices, components, installed on the project in conformance to the construction drawings and specifications. An electronic copy of the Warranty Binder in a PDF file shall be submitted with the final close-out documentation.