FARMSTEAD ENERGY IMPROVEMENT
(Nursery /Greenhouse)
INSTRUCTIONS FOR USE OF SPECIFICATION (374)

1. APPLICABILITY

This Construction Specification 374 (Nursery/Greenhouse) is applicable for installation of all types of energy improvements contracted under the Energy Improvement for Nursery and Greenhouses. Other enterprises are covered by separate specifications. This specification includes, but not limited to: CFL bulbs, LED bulbs, Linear Fluorescent, Pulse Start Metal Halide (PSMH), ventilation exhaust fans, ventilation HAF fans, variable speed drive, automatic controller system, motor upgrades, heating (building), building envelope – greenhouse screens, greenhouse - insulate unglazed walls and building envelope – sealant. In order for these to be eligible the following must have been completed:

- Energy audit provided by a TSP. Non-TSP audits require a PE and must be approved by the State Conservation Engineer or designee.
- All Energy audits require a functional review by the field office using the CAP review checklist for the current program year. This review verifies it is complete and the findings properly presented and detailed enough for contract development. Audit writer to address any issues prior to final approval.
- Changes to audit recommendations must be obtained in writing by the landowner from the audit writer prior to implementation.
- Drawings and Specifications must be approved by appropriate NRCS staff prior to any installation of contracted energy improvements.
- On more complex installations the qualified professional will provide additional details and product information for verification and "As-builts".

2. SELECTION CONSIDERATIONS

Listed below are some considerations for some, but not all of the options.

Building Envelope- Sealant

This improvement is the interior joint sealing of agricultural building. The improvement is not intended to provide additional insulation on the flat planes of the existing building panels. The improvement must seal the cracks which exist at the linear junctions of the flat planes and to seal miscellaneous holes with a foam product. In a greenhouse the typical sealing lines are the junction of the exterior walls with the footer plate and the junction of the ceiling with the endwalls. Large gaps, missing glass panels, openings under doors, improper closing or lack of louvers on exhaust fans would not be solved by this method, though recommended to be sealed by other means.

3. 3. ITEMS TO BE INCLUDED IN SECTION 6 AND/OR DRAWINGS

A. Cover Sheet
   a. Landowner Name
   b. Inspector sign off block
   c. Project designer
   d. Address of project
   e. NRCS design approval block
   f. Note Landowner to obtain all Federal, State, and Local permits.

B. Drawing or sketch
   a. Location where practices to be installed
   b. Description of practice to be installed as per Energy Audit.

c. Specifics for each practice as listed below for those applicable to this project.
    i. LED bulb wattage, with/without dimmable, and number
    ii. CFL bulb wattage, with/without dimmable and number
    iii. Type of Linear Fluorescent and number with ballast and with/without fixture or equal or better.
    iv. PSMH wattage and ballast number with fixture
    v. Ventilation Fan motor size and efficiency and/or cfm rating
    vi. Variable Speed Drive for what equipment and Hp
    vii. Details of Automatic control System
    viii. Hp of motor to be upgraded, phase, and on what equipment
    ix. Specific location for joint sealing and estimated length

C. Certification Sheet including a statement by the qualified professional similar too:
    a. *I have replaced or installed xx items for landowner. Work was completed on date. The items have been installed in accordance with the manufacturer's recommendations and local building code.*
    b. Include *signature and date*
    c. Each shall be customized for each project.

D. Pa One Call notification if any digging is required for work.