

**DEPARTMENT OF AGRICULTURE****Rural Utilities Service****7 CFR Part 1724**

RIN 0572-AA48

**Electric Engineering, Architectural Services and Design Policies and Procedures**

AGENCY: Rural Utilities Service, USDA.

ACTION: Final rule.

**SUMMARY:** The Rural Utilities Service (RUS) is amending its regulations on engineering and architectural services. These policies and procedures are presently contained in seven RUS bulletins, which will be rescinded after this regulation becomes effective. This rule simplifies and codifies RUS policy and procedures to be followed by electric borrowers relating to architectural and engineering services. This rule also simplifies and codifies RUS requirements for the planning and design of electric distribution, transmission, and generation systems and facilities owned by RUS borrowers.

**DATES:** Effective Date: July 29, 1998.

Incorporation by Reference:

Incorporation by reference of certain publications listed in this final rule is approved by the Director of the Federal Register as of July 29, 1998.

**FOR FURTHER INFORMATION CONTACT:** Mr. Fred J. Gatchell, Deputy Director, Electric Staff Division, Rural Utilities Service, U.S. Department of Agriculture, Stop 1569, 1400 Independence Ave., SW., Washington, DC 20250-1569. Telephone: (202) 720-1398. FAX: (202) 720-7491. E-mail: fgatchel@rus.usda.gov.

**SUPPLEMENTARY INFORMATION:****Executive Order 12372**

This rule is excluded from the scope of Executive Order 12372, Intergovernmental Consultation, which may require consultation with State and local officials. A Final Rule Related Notice entitled "Department Programs and Activities Excluded from Executive Order 12372," (50 FR 47034) exempted RUS loans and loan guarantees from coverage under this order.

**Executive Order 12866**

This rule has been determined to be not significant for the purposes of Executive Order 12866 and, therefore, has not been reviewed by the Office of Management and Budget (OMB).

**Executive Order 12988**

This rule has been reviewed under Executive Order 12988, Civil Justice

Reform. RUS has determined that this rule meets the applicable standards provided in section 3 of the Executive Order.

**Regulatory Flexibility Act Certification**

The Administrator of RUS has determined that a rule relating to the RUS electric loan program is not a rule as defined in the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) and, therefore, the Regulatory Flexibility Act does not apply to this rule.

**National Environmental Policy Act Certification**

The Administrator of RUS has determined that this rule will not significantly affect the quality of the human environment as defined by the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*). Therefore, this action does not require an environmental impact statement or assessment.

**Catalog of Federal Domestic Assistance**

The program described by this rule is listed in the Catalog of Federal Domestic Assistance programs under No. 10.850, Rural Electrification Loans and Loan Guarantees. This catalog is available on a subscription basis from the Superintendent of Documents, the United States Government Printing Office, Washington, DC 20402-9325.

**National Performance Review**

The regulatory action is being taken as part of the National Performance Review program to eliminate unnecessary regulations and improve those that remain in force.

**Information Collection and Recordkeeping Requirements**

The recordkeeping and reporting burdens contained in this rule will be submitted to OMB for approval. The paperwork contained in this rule will not be effective until approved by OMB.

Send questions or comments regarding any aspect of this collection of information, including suggestions for reducing the burden, to F. Lamont Heppe, Jr., Director, Program Development and Regulatory Analysis, Rural Utilities Service, U.S. Department of Agriculture, Stop 1522, 1400 Independence Ave., SW., Washington, DC 20250-1522.

**Unfunded Mandates**

This rule contains no Federal mandates (under the regulatory provision of Title II of the Unfunded Mandates Reform Act of 1995) for State, local, and tribal governments or the private sector. Thus, this rule is not

subject to the requirements of sections 202 and 205 of the Unfunded Mandates Reform Act of 1995.

**Background**

RUS has promulgated regulations pertaining to the design and construction of RUS electric borrower's systems. These regulations are contained in 7 CFR chapter XVII, part 1724, Electric Engineering, Architectural Services and Design Policies and Procedures, which describes policies and procedures pertaining to RUS electric borrower procurement of architectural and engineering services for planning, design, and construction management of buildings and electric utility plant such as distribution and transmission lines, substations, communications and control systems, and generating plants.

The policies and procedures covered by this rule are presently contained in RUS Bulletins 41-1, Engineering Services for Electric Borrowers; 42-1, Architectural Services for Electric Borrowers; 60-1, Standards for the Preparation of Circuit Diagrams, Electrical Data Sheets, and Other Drawings for Systems of Electrical Borrowers; 60-2, Electric System Capacity; 80-11, Reports of Progress of Construction and Engineering Services; 81-9, Preparation of Plans and Specifications for Distribution and Transmission Facilities; and 86-2, Pre-Construction Activities for Headquarters Facilities for Electric Borrowers. The previous policies and procedures are being changed and updated by this rule. Upon the effective date of this rule, RUS Bulletins 41-1, 42-1, 60-1, 60-2, 80-11, 81-9, and 86-2 will be superseded and rescinded.

The major substantive changes are as follows:

(a) This rule eliminates the requirement for RUS approval of the borrower's selection of the architect and of the engineer.

(b) This rule eliminates the requirement for RUS approval of architectural services contracts and distribution and transmission engineering services contracts for all facilities, and generation engineering services contracts if the facilities are not financed by RUS.

(c) This rule eliminates the requirement for RUS approval for closeout of architectural or engineering services contracts.

(d) This rule eliminates the requirement for submittal of progress reports to RUS for facilities not financed by RUS.

(e) This rule eliminates the requirement for RUS approval of many

plans and specifications. However, many requirements, such as the National Electrical Safety Code (NESC), Occupational Safety and Health Act of 1970 (29 U.S.C. 651 *et seq.*), building accessibility standards, RUS standards, specifications, and use of acceptable materials, etc., apply regardless of the source of financing.

(f) Design data that have been approved by RUS may be used for new facilities without further approval.

(g) This rule will simplify and clarify RUS requirements regarding system design.

(h) This rule combines seven bulletins and three contracting forms.

### Comments

On August 4, 1997, RUS published a proposed rule at 62 FR 41883. Comments were received from 13 parties, including one cooperative association, 2 engineering associations, 3 distribution borrowers, 3 power supply borrowers, and 4 engineering firms. RUS considered all comments. All substantive comments are addressed herein.

Some commenters suggested that RUS eliminate the requirement that RUS borrowers use RUS standards and RUS accepted materials, especially when the project is financed from sources other than RUS, and to eliminate all RUS approvals when the project is financed from sources other than RUS. RUS disagrees with this approach. Any project that is part of a borrower's interrelated electrical system can impact the collateral that serves as security for loans and guarantees made by RUS. Inadequate design or materials in one part of the system, regardless of how financed, can adversely affect the entire system. RUS considers the requirements that RUS borrowers use RUS standards and accepted materials and for RUS approvals as proposed are in the government's best interests as lender.

One commenter suggested that RUS clarify the applicability of prior editions of the National Electrical Safety Code (NESC). Since the NESC itself specifically addresses facilities that comply with prior editions of the NESC, no change is needed in the rule.

Some commenters suggested that RUS allow non-licensed engineers to do certain work and not require all employed engineers to be registered. Nothing in the proposed rule requires each and every person doing engineering work to be registered. Generally, the rule allows the a borrower to use qualified non-licensed subordinates to do engineering work to the same extent as allowed by applicable State engineering regulations.

Several commenters suggested that RUS allow more than 6 months for inspection of work order construction. RUS disagrees with this comment. Inspection of work order construction is important to the safety of the public and the borrower's employees, and should be completed as expeditiously as possible. Where special circumstances (e.g., unusual weather conditions) preclude inspection within six months, the borrower may request a waiver of this time requirement.

Several commenters suggested that RUS not require that inspected work orders be noted and initialed on the RUS Form 219. In response to this comment, RUS has eliminated the requirement that the inspected work orders be noted and initialed, requiring only that the inspected work orders be indicated on the RUS Form 219.

One commenter suggested that RUS not require RUS Form 219 to be used for work on facilities not financed by RUS. It is not RUS' intent to require RUS Form 219 for work on facilities not financed by RUS. The final rule clarifies this point.

One commenter suggested that RUS not prohibit the borrower's manager from certifying the RUS Form 219. RUS believes that its long-standing requirement for separation of responsibility continues to have merit while causing little borrower inconvenience. No change has been made in the final rule.

One commenter suggested that RUS allow as-built drawings as a substitute for staking sheets in connection with work order inspection. In response to this comment, RUS has changed the final rule accordingly.

Some commenters suggested that RUS allow borrowers to use either an architect or an engineer for the design of buildings and that RUS should allow the borrower, instead of the architect or engineer, to do the construction management. One commenter noted that RUS Form 220 requires electrical, mechanical, and structural expertise that an architect may not have. It is RUS' intent that all work be done by individuals and organizations well qualified to do the work. This could include having an engineer design buildings with architectural assistance, the borrower doing construction management with engineering or architectural assistance, or an architect obtaining additional electrical, mechanical, and structural expertise. Since nothing in the rule is contrary to this interpretation, no change is needed in the rule.

One commenter suggested that there should be specific time limits placed on

RUS in connection with the approval process. RUS understands the commenter's concern, but disagrees with the commenter's solution. While RUS makes every effort to support the borrower's schedule by providing timely approvals, an automatic approval after a given period of time is not consistent with the purpose of RUS approval. No change has been made in the final rule.

Some commenters suggested that RUS use a standard form of engineering services contract based on one prepared by the Engineers Joint Contract Documents Committee in lieu of the RUS standard form, while another commenter suggested that RUS rewrite the standard form of engineering services contract to conform to current business practices. Other commenters noted that the proposed rule's requirement that the engineer's documents comply with all environmental regulations could be construed as a warranty or guarantee of services and RUS should modify the proposed rule to eliminate this express warranty or guarantee. Other commenters suggested that RUS not require engineers to provide construction management services nor to "supervise" construction. One commenter suggested that RUS not require the engineer to "inspect" construction, and that the engineer's obligation should be to "observe" construction. RUS believes that the RUS standard form of engineering services contract, based on many years of successful use by RUS borrowers, is still fundamentally sound. Certain specific comments have been addressed and changes made in the standard form of engineering services contract to clarify certain provisions of the contract.

One commenter noted that RUS stated that only 3 contract forms are required, but § 1724.70 lists 12 forms. The forms listed in § 1724.70 are available from RUS, but only those so indicated are required to be used. The others forms are available for use by borrowers but are not required. The final rule clarifies this point.

Some commenters suggested that RUS not require borrowers to use the standard contract forms for small jobs (e.g., less than \$75,000 or 5 percent of total utility plant.) RUS disagrees with this comment. A small engineering job can have a significant impact on a much larger project. Also, the standard contract forms are only required for RUS financed facilities, which tend to be larger projects. No change has been made in the final rule.

Several commenters suggested that RUS not require professional liability insurance of \$1, 000,000. In response to

this comment, RUS has changed the required amount of insurance to \$500,000.

One commenter suggested that RUS allow computer generated forms in lieu of the standard printed version, since "reasonable modifications and additions" to the standard forms are permitted. RUS disagrees with this. RUS believes that the most effective means of maintaining accurate and recognizable forms is to continue to use the preprinted version. No change has been made in the final rule.

One commenter suggested that RUS eliminate the sample compensation schedule from the RUS Form 220. RUS has determined that the sample compensation schedule is not necessary and has been eliminated.

One commenter suggested that the RUS Forms 220 and 236 require the engineer to get the owner's permission to open bids if three or fewer bids are received, as is the case in the RUS Form 211. This commenter also suggested that RUS Form 220 should require the architect to inspect materials and equipment prior to incorporation into the project, and to reject those not in conformance with the specification, as is the case in the RUS Forms 211 and 236. RUS agrees that the standard forms of contract should be consistent in these areas and has modified the forms accordingly.

#### List of Subjects in 7 CFR Part 1724

Electric power, Incorporation by reference, Loan programs—energy, Reporting and recordkeeping requirements, Rural areas.

In view of the above, RUS hereby amends 7 CFR chapter XVII by revising part 1724 to read as follows:

### PART 1724—ELECTRIC ENGINEERING, ARCHITECTURAL SERVICES AND DESIGN POLICIES AND PROCEDURES

#### Subpart A—General

Sec.

- 1724.1 Introduction.
- 1724.2 Waivers.
- 1724.3 Definitions.
- 1724.4 Qualifications.
- 1724.5 Submission of documents to RUS.
- 1724.6 Insurance requirements.
- 1724.7 Debarment and suspension.
- 1724.8 Restrictions on lobbying.
- 1724.9 Environmental compliance.
- 1724.10–1724.19 [Reserved]

#### Subpart B—Architectural Services

- 1724.20 Borrowers' requirements—architectural services.
- 1724.21 Architectural services contracts.
- 1724.22–1724.29 [Reserved]

#### Subpart C—Engineering Services

- 1724.30 Borrowers' requirements—engineering services.
- 1724.31 Engineering services contracts.
- 1724.32 Inspection and certification of work order construction.
- 1724.33–1724.39 [Reserved]

#### Subpart D—Electric System Planning

- 1724.40 General.
- 1724.41–1724.49 [Reserved]

#### Subpart E—Electric System Design

- 1724.50 Compliance with National Electrical Safety Code (NESC).
- 1724.51 Design requirements.
- 1724.52 Permitted deviations from RUS construction standards.
- 1724.53 Preparation of plans and specifications.
- 1724.54 Requirements for RUS approval of plans and specifications.
- 1724.55 Dam safety.
- 1724.56–1724.69 [Reserved]
- Appendix A to subpart E of part 1724—Hazard Potential Classification for Civil Works Projects

#### Subpart F—RUS Contract Forms

- 1724.70 List of RUS contract forms for architectural and engineering services.
- 1724.71 Use of printed forms.
- 1724.72–1724.73 [Reserved]
- 1724.74 Engineering service contract for the design and construction of a generating plant, RUS Form 211.
- 1724.75 Architectural service contract, RUS Form 220.
- 1724.76 Engineering service contract—electric system design and construction, RUS Form 236.
- 1724.77–1724.99 [Reserved]

**Authority:** 7 U.S.C. 901 *et seq.*, 1921 *et seq.*, 6941 *et seq.*

#### Subpart A—General

##### § 1724.1 Introduction.

(a) The policies, procedures and requirements in this part implement certain provisions of the standard form of loan documents between the Rural Utilities Service (RUS) and its electric borrowers.

(b) All borrowers, regardless of the source of financing, shall comply with RUS' requirements with respect to design, construction standards, and the use of RUS accepted material on their electric systems.

(c) Borrowers are required to use RUS contract forms only if the facilities are financed by RUS.

##### § 1724.2 Waivers.

The Administrator may waive, for good cause on a case-by-case basis, requirements and procedures of this part.

##### § 1724.3 Definitions.

Terms used in this part have the meanings set forth in § 1710.2 of this chapter. References to specific RUS

forms and other RUS documents, and to specific sections or lines of such forms and documents, shall include the corresponding forms, documents, sections and lines in any subsequent revisions of these forms and documents. In addition to the terms defined in § 1710.2 of this chapter, the following terms have the following meanings for the purposes of this part:

*Architect* means a registered or licensed person employed by the borrower to provide architectural services for a project and duly authorized assistants and representatives.

*Engineer* means a registered or licensed person, who may be a staff employee or an outside consultant, to provide engineering services and duly authorized assistants and representatives.

*Force account construction* means construction performed by the borrower's employees.

*NESC* means the National Electrical Safety Code.

*Repowering* means replacement of the steam generator or the prime mover or both at a generating plant.

*RUS approval* means written approval by the Administrator or a representative with delegated authority. RUS approval must be in writing, except in emergency situations where RUS approval may be given orally followed by a confirming letter.

*RUS financed* means financed or funded wholly or in part by a loan made or guaranteed by RUS, including concurrent supplemental loans required by § 1710.110 of this chapter, loans to reimburse funds already expended by the borrower, and loans to replace interim financing.

##### § 1724.4 Qualifications.

The borrower shall ensure that:

(a) All selected architects and engineers meet the applicable registration and licensing requirements of the States in which the facilities will be located;

(b) All selected architects and engineers are familiar with RUS standards and requirements; and

(c) All selected architects and engineers have had satisfactory experience with comparable work.

##### § 1724.5 Submission of documents to RUS.

(a) *Where to send documents.*

Documents required to be submitted to RUS under this part are to be sent to the office of the borrower's respective RUS Regional Director, the Power Supply Division Director, or such other office of RUS as designated by RUS. (See part 1700 of this chapter.)

(b) *Contracts requiring RUS approval.* The borrower shall submit to RUS three copies of each contract that is subject to RUS approval under subparts B and C of this part. At least one copy of each contract must be an original signed in ink (i.e., no facsimile signature). Each contract submittal must be accompanied by a certified copy of the board resolution awarding the contract.

(c) *Contract amendments requiring RUS approval.* The borrower shall submit to RUS three copies of each contract amendment (at least one copy of which must be an original signed in ink) which is subject to RUS approval. Each contract amendment submittal to RUS must be accompanied by a certified copy of the board resolution approving the amendment.

#### **§ 1724.6 Insurance requirements.**

(a) Borrowers shall ensure that all architects and engineers working under contract with the borrower have insurance coverage as required by part 1788 of this chapter.

(b) Borrowers shall also ensure that all architects and engineers working under contract with the borrower have insurance coverage for Errors and Omissions (Professional Liability Insurance) in an amount at least as large as the amount of the architectural or engineering services contract but not less than \$500,000.

#### **§ 1724.7 Debarment and suspension.**

Borrowers shall comply with the requirements on debarment and suspension in connection with procurement activities as set forth in part 3017 of this title, particularly with respect to lower tier transactions, e.g., procurement contracts for goods or services.

#### **§ 1724.8 Restrictions on lobbying.**

Borrowers shall comply with the restrictions and requirements in connection with procurement activities as set forth in part 3018 of this title.

#### **§ 1724.9 Environmental compliance.**

Borrowers shall comply with the requirements of part 1794 of this chapter, Environmental Policies and Procedures for Electric and Telephone Borrowers.

#### **§§ 1724.10–1724.19 [Reserved]**

### **Subpart B—Architectural Services**

#### **§ 1724.20 Borrowers' requirements—architectural services.**

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) Each borrower shall select a qualified architect to perform the

architectural services required for the design and construction management of headquarters facilities. The selection of the architect is not subject to RUS approval unless specifically required by RUS on a case by case basis. Architect's qualification information need not be submitted to RUS unless specifically requested by RUS on a case by case basis.

(b) The architect retained by the borrower shall not be an employee of the building supplier or contractor, except in cases where the building is prefabricated and pre-engineered.

(c) The architect's duties are those specified under the Architectural Services Contract and under subpart E of this part, and, as applicable, those duties assigned to the "engineer" for competitive procurement procedures in part 1726 of this chapter.

(d) If the facilities are RUS financed, the borrower shall submit or require the architect to submit one copy of each construction progress report to RUS upon request.

(e) Additional information concerning RUS requirements for electric borrowers' headquarters facilities are set forth in subpart E of this part. See also RUS Bulletin 1724E-400, Guide to Presentation of Building Plans and Specifications, for additional guidance. This bulletin is available from Program Development and Regulatory Analysis, Rural Utilities Service, U.S. Department of Agriculture, Stop 1522, 1400 Independence Ave., SW., Washington, DC 20250-1522.

#### **§ 1724.21 Architectural services contracts.**

The provisions of this section apply only to RUS financed electric system facilities.

(a) RUS Form 220, Architectural Services Contract, must be used by electric borrowers when obtaining architectural services.

(b) The borrower shall ensure that the architect furnishes or obtains all architectural services related to the design and construction management of the facilities.

(c) Reasonable modifications or additions to the terms and conditions in the RUS contract form may be made to define the exact services needed for a specific undertaking. Such modifications or additions shall not relieve the architect or the borrower of the basic responsibilities required by the RUS contract form, and shall not alter any terms and conditions required by law. All substantive changes must be approved by RUS prior to execution of the contract.

(d) Architectural services contracts are not subject to RUS approval and

need not be submitted to RUS unless specifically requested by RUS on a case by case basis.

(e) *Closeout.* Upon completion of all services and obligations required under each architectural services contract, including, but not limited to, submission of final documents, the borrower must closeout that contract. The borrower shall obtain from the architect a final statement of cost, which must be supported by detailed information as appropriate. For example, out-of-pocket expense and per diem types of compensation should be listed separately with labor, transportation, etc., itemized for each service involving these types of compensation. RUS Form 284, Final Statement of Cost for Architectural Service, may be used. All computations of the compensation must be made in accordance with the terms of the architectural services contract. Closeout documents need not be submitted to RUS unless specifically requested by RUS on a case by case basis.

#### **§§ 1724.22–1724.29 [Reserved]**

### **Subpart C—Engineering Services**

#### **§ 1724.30 Borrowers' requirements—engineering services.**

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) Each borrower shall select one or more qualified persons to perform the engineering services involved in the planning, design, and construction management of the system.

(b) Each borrower shall retain or employ one or more qualified engineers to inspect and certify all new construction in accordance with § 1724.32. The engineer must not be the borrower's manager.

(c) The selection of the engineer is not subject to RUS approval unless specifically required by RUS on a case by case basis. Engineer's qualification information need not be submitted to RUS unless specifically requested by RUS on a case by case basis.

(d) The engineer's duties are specified under the Engineering Services Contract and under part 1726 of this chapter. The borrower shall ensure that the engineer executes all certificates and other instruments pertaining to the engineering details required by RUS.

(e) Additional requirements related to appropriate seismic safety measures are contained in part 1792, subpart C, of this chapter, Seismic Safety of Federally Assisted New Building Construction.

(f) If the facilities are RUS financed, the borrower shall submit or require the engineer to submit one copy of each

construction progress report to RUS upon RUS' request.

#### **§ 1724.31 Engineering services contracts.**

The provisions of this section apply only to RUS financed electric system facilities.

(a) RUS contract forms for engineering services shall be used. Reasonable modifications or additions to the terms and conditions in the RUS contract form may be made to define the exact services needed for a specific undertaking. Any such modifications or additions shall not relieve the engineer or the borrower of the basic responsibilities required by the RUS contract form, and shall not alter any terms and conditions required by law. All substantive changes to the RUS contract form shall be approved by RUS prior to execution of the contract.

(b) RUS Form 236, Engineering Service Contract—Electric System Design and Construction, shall be used for all distribution, transmission, substation, and communications and control facilities. These contracts are not subject to RUS approval and need not be submitted to RUS unless specifically requested by RUS on a case by case basis.

(c) RUS Form 211, Engineering Service Contract for the Design and Construction of a Generating Plant, shall be used for all new generating units and repowering of existing units. These contracts require RUS approval.

(d) Any amendments to RUS approved engineering services contracts require RUS approval.

(e) *Closeout.* Upon completion of all services and obligations required under each engineering services contract, including, but not limited to, submission of final documents, the borrower must closeout the contract. The borrower shall obtain from the engineer a completed final statement of engineering fees, which must be supported by detailed information as appropriate. RUS Form 234, Final Statement of Engineering Fee, may be used. All computations of the compensation shall be made in accordance with the terms of the engineering services contract. Closeout documents need not be submitted to RUS unless specifically requested by RUS on a case by case basis.

#### **§ 1724.32 Inspection and certification of work order construction.**

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) The borrower shall ensure that all field inspection and related services are performed within 6 months of the

completion of construction, and are performed by a licensed engineer, except that a subordinate of the licensed engineer may make the inspection, provided the following conditions are met:

(1) The inspection by the subordinate is satisfactory to the borrower;

(2) This practice is acceptable under applicable requirements of the States in which the facilities are located;

(3) The subordinate is experienced in making such inspections;

(4) The name of the person making the inspection is included in the certification; and

(5) The licensed engineer signs such certification which appears on the inventory of work orders.

(b) The inspection shall include a representative and sufficient amount of construction listed on each RUS Form 219, Inventory of Work Orders (or comparable form), being inspected to assure the engineer that the construction is acceptable. Each work order that was field inspected shall be indicated on RUS Form 219 (or comparable form.) The inspection services shall include, but not be limited to, the following:

(1) Determination that construction conforms to RUS specifications and standards and to the requirements of the National Electrical Safety Code (NESC), State codes, and local codes;

(2) Determination that the staking sheets or as-built drawings represent the construction completed and inspected;

(3) Preparation of a list of construction clean-up notes and staking sheet discrepancies to be furnished to the owner to permit correction of construction, staking sheets, other records, and work order inventories;

(4) Reinspection of construction corrected as a result of the engineer's report;

(5) Noting, initialing, and dating the staking or structure sheets or as-built drawings and noting the corresponding work order entry for line construction; and

(6) Noting, initialing, and dating the as-built drawings or sketches for generating plants, substations, and other major facilities.

(c) *Certification.* (1) The following certification must appear on all inventories of work orders:

I hereby certify that sufficient inspection has been made of the construction reported by this inventory to give me reasonable assurance that the construction complies with applicable specifications and standards and meets appropriate code requirements as to strength and safety. This certification is in accordance with acceptable engineering practice.

(2) A certification must also include the name of the inspector, name of the

firm, signature of the licensed engineer, the engineer's State license number, and the date of signature.

#### **§§ 1724.33–1724.39 [Reserved]**

#### **Subpart D—Electric System Planning**

##### **§ 1724.40 General.**

Borrowers shall have ongoing, integrated planning to determine their short-term and long-term needs for plant additions, improvements, replacements, and retirements for their electric systems. The primary components of the planning system consist of long-range engineering plans and construction work plans. Long-range engineering plans identify plant investments required over a long-range period, 10 years or more. Construction work plans specify and document plant requirements for a shorter term, 2 to 4 years. Long-range engineering plans and construction work plans shall be in accordance with part 1710, subpart F, of this chapter. See also RUS Bulletins 1724D–101A, Electric System Long-Range Planning Guide, and 1724D–101B, System Planning Guide, Construction Work Plans, for additional guidance. These bulletins are available from Program Development and Regulatory Analysis, Rural Utilities Service, U.S. Department of Agriculture, Stop 1522, 1400 Independence Ave., SW., Washington, DC 20250–1522.

#### **§§ 1724.41–1724.49 [Reserved]**

#### **Subpart E—Electric System Design**

##### **§ 1724.50 Compliance with National Electrical Safety Code (NESC).**

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) A borrower shall ensure that its electric system, including all electric distribution, transmission, and generating facilities, is designed, constructed, operated, and maintained in accordance with all applicable provisions of the most current and accepted criteria of the National Electrical Safety Code (NESC) and all applicable and current electrical and safety requirements of any State or local governmental entity. Copies of the NESC may be obtained from the Institute of Electrical and Electronic Engineers, Inc., 445 Hoes Lane, Piscataway, NJ 08855. This requirement applies to the borrower's electric system regardless of the source of financing.

(b) Any electrical standard requirements established by RUS are in addition to, and not in substitution for or a modification of, the most current and accepted criteria of the NESC and

any applicable electrical or safety requirements of any State or local governmental entity.

(c) Overhead distribution circuits shall be constructed with not less than the Grade C strength requirements as described in Section 26, Strength Requirements, of the NESC when subjected to the loads specified in NESC Section 25, Loadings for Grades B and C. Overhead transmission circuits shall be constructed with not less than the Grade B strength requirements as described in NESC Section 26.

#### § 1724.51 Design requirements.

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) *Distribution.* All distribution facilities must conform to the applicable RUS construction standards and utilize RUS accepted materials.

(b) *Transmission lines.* (1) All transmission line design data must be approved by RUS.

(2) Design data consists of all significant design features, including, but not limited to, transmission line design data summary, general description of terrain, right-of-way calculations, discussion concerning conductor and structure selection, conductor sag and tension information, design clearances, span limitations due to clearances, galloping or conductor separation, design loads, structure strength limitations, insulator selection and design, guying requirements, and vibration considerations. For lines composed of steel or concrete poles, or steel towers, in which load information will be used to purchase the structures, the design data shall also include loading trees, structure configuration and selection, and a discussion concerning foundation selection.

(3) Line design data for uprating transmission lines to higher voltage levels or capacity must be approved by RUS.

(4) Transmission line design data which has received RUS approval in connection with a previous transmission line construction project for a particular borrower is considered approved by RUS for that borrower, provided that:

(i) The conditions on the project fall within the design data previously approved; and

(ii) No significant NESC revisions have occurred.

(c) *Substations.* (1) All substation design data must be approved by RUS.

(2) Design data consists of all significant design features, including, but not limited to, a discussion of site considerations, oil spill prevention

measures, design considerations covering voltage, capacity, shielding, clearances, number of low and high voltage phases, major equipment, foundation design parameters, design loads for line support structures and the control house, seismic considerations, corrosion, grounding, protective relaying, and AC and DC auxiliary systems. Reference to applicable safety codes and construction standards are also to be included.

(3) Substation design data which has received RUS approval in connection with a previous substation construction project for a particular borrower is considered approved by RUS for that borrower, provided that:

(i) The conditions on the project fall within the design data previously approved; and

(ii) No significant NESC revisions have occurred.

(d) *Generating facilities.* (1) This section covers all portions of a generating plant including plant buildings, the generator step-up transformer, and the transmission switchyard at a generating plant. Warehouses and equipment service buildings not associated with generation plants are covered under paragraph (e) of this section. Generation plant buildings must meet the requirements of paragraph (e)(1) of this section.

(2) For all new generation units and for all repowering projects, the design outline shall be approved by RUS, unless RUS determines that a design outline is not needed for a particular project.

(3) The design outline will include all significant design criteria. During the early stages of the project, RUS will, in consultation with the borrower and its consulting engineer, identify the specific items which are to be included in the design outline.

(e) *Headquarters.* (1) *Applicable laws.* The design and construction of headquarters facilities shall comply with all applicable Federal, State, and local laws and regulations, including, but not limited to:

(i) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. 794), which states that no qualified individual with a handicap shall, solely by reason of their handicap, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance. The Uniform Federal Accessibility Standards (41 CFR part 101-19, subpart 101-19.6, appendix A) are the applicable standards for all new or altered borrower buildings, regardless of the source of financing.

(ii) The Architectural Barriers Act of 1968 (42 U.S.C. 4151), which requires that buildings financed with Federal funds are designed and constructed to be accessible to the physically handicapped.

(iii) The Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7701 *et seq.*), and Executive Order 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction (3 CFR 1990 Comp., p. 269). Appropriate seismic safety provisions are required for new buildings for which RUS provides financial assistance. (See part 1792, subpart C, of this chapter.)

(2) The borrower shall provide evidence, satisfactory in form and substance to the Administrator, that each building will be designed and built in compliance with all Federal, State, and local requirements.

(f) *Communications and control.* (1) This section covers microwave and powerline carrier communications systems, load control, and supervisory control and data acquisition (SCADA) systems.

(2) The performance considerations for a new or replacement master system must be approved by RUS. A master system includes the main controller and related equipment at the main control point. Performance considerations include all major system features and their justification, including, but not limited to, the objectives of the system, the types of parameters to be controlled or monitored, the communication media, alternatives considered, and provisions for future needs.

#### § 1724.52 Permitted deviations from RUS construction standards.

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) *Structures for raptor protection.* (1) RUS standard distribution line structures may not have the extra measure of protection needed in areas frequented by eagles and other large raptors to protect such birds from electric shock due to physical contact with energized wires. Where raptor protection in the design of overhead line structures is required by RUS; a Federal, State or local authority with permit or license authority over the proposed construction; or where the borrower voluntarily elects to comply with the recommendations of the U.S. Fish and Wildlife Service or State wildlife agency, borrowers are permitted to deviate from RUS construction standards, provided:

(i) Structures are designed and constructed in accordance with

"Suggested Practices for Raptor Protection on Powerlines: The State of the Art in 1996" (Suggested Practices for Raptor Protection); and,

(ii) Structures are in accordance with the NESC and applicable State and local regulations.

(2) Any deviation from the RUS construction standards for the purpose of raptor protection, which is not in accordance with the Suggested Practices for Raptor Protection, must be approved by RUS prior to construction.

"Suggested Practices for Raptor Protection on Powerlines: The State of the Art in 1996," published by the Edison Electric Institute/Raptor Research Foundation, is hereby incorporated by reference. This incorporation by reference is approved by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of this publication may be obtained from the Raptor Research Foundation, Inc., c/o Jim Fitzpatrick, Treasurer, Carpenter Nature Center, 12805 St. Croix Trail South, Hastings, Minnesota 55033. It is also available for inspection during normal business hours at RUS, Electric Staff Division, 1400 Independence Avenue, SW., Washington, DC, Room 1246-S, and at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

(b) *Transformer neutral connections.* Where it is necessary to separate the primary and secondary neutrals to provide the required electric service to a consumer, the RUS standard transformer secondary neutral connections may be modified in accordance with Rule 97D2 of the NESC.

(c) *Lowering of neutral conductor on overhead distribution lines.* (1) It is permissible to lower the neutral attachment on standard construction pole-top assemblies an additional distance not exceeding two feet (0.6 m) for the purpose of economically meeting the clearance requirements of the NESC.

(2) It is permissible to lower the transformer and associated neutral attachment up to two feet (0.6 m) to provide adequate clearance between the cutouts and single-phase, conventional distribution transformers.

(3) It is permissible to lower the neutral attachment on standard construction pole-top assemblies an additional distance of up to six feet (2 m) for the purpose of performing construction and future line maintenance on these assemblies from bucket trucks designed for such work.

#### **§ 1724.53 Preparation of plans and specifications.**

The provisions of this section apply to all borrower electric system facilities regardless of the source of financing.

(a) *General.* (1) The borrower (acting through the engineer, if applicable) shall prepare plans and specifications that adequately represent the construction to be performed.

(2) Plans and specifications for distribution, transmission, or generating facilities must be based on a construction work plan (as amended, if applicable), engineering study or construction program which has been approved by RUS if financing for the facilities will at any time be requested from RUS.

(b) *Composition of plans and specifications package.* (1) Whether built by force account or contract, each set of plans and specifications must include:

(i) *Distribution lines.* Specifications and drawings, staking sheets, key map and appropriate detail maps;

(ii) *Transmission lines.* Specifications and drawings, transmission line design data manual, vicinity maps of the project, a one-line diagram, and plan and profile sheets;

(iii) *Substations.* Specifications and drawings, including a one-line diagram, plot and foundation plan, grounding plan, and plans and elevations of structure and equipment, as well as all other necessary construction drawings, in sufficient detail to show phase spacing and ground clearances of live parts;

(iv) *Headquarters.* Specifications and drawings, including:

(A) A plot plan showing the location of the proposed building plus paving and site development;

(B) A one line drawing (floor plan and elevation view), to scale, of the proposed building with overall dimensions shown; and

(C) An outline specification including materials to be used (type of frame, exterior finish, foundation, insulation, etc.); and

(v) *Other facilities (e.g., generation and communications and control facilities).* Specifications and drawings, as necessary and in sufficient detail to accurately define the scope and quality of work required.

(2) For contract work, the appropriate standard RUS construction contract form shall be used as required by part 1726 of this chapter.

#### **§ 1724.54 Requirements for RUS approval of plans and specifications.**

The provisions of this section apply only to RUS financed electric system facilities.

(a) For any contract subject to RUS approval in accordance with part 1726 of this chapter, the borrower shall obtain RUS approval of the plans and specifications, as part of the proposed bid package, prior to requesting bids. RUS may require approval of other plans and specifications on a case by case basis.

(b) *Distribution lines.* RUS approval of the plans and specifications for distribution line construction is not required if standard RUS drawings, specifications, RUS accepted material, and standard RUS contract forms (as required by part 1726 of this chapter) are used. Drawings, plans and specifications for nonstandard distribution construction must be submitted to RUS and receive approval prior to requesting bids on contracts or commencement of force account construction.

(c) *Transmission lines.* (1) Plans and specifications for transmission construction projects which are not based on RUS approved line design data or do not use RUS standard structures must receive RUS approval prior to requesting bids on contracts or commencement of force account construction.

(2) Unless RUS approval is required by paragraph (a) of this section, plans and specifications for transmission construction which use previously approved design data and standard structures do not require RUS approval. Plans and specifications for related work, such as right-of-way clearing, equipment, and materials, do not require RUS approval unless required by paragraph (a) of this section.

(d) *Substations.* (1)(i) Plans and specifications for all new substations must receive RUS approval prior to requesting bids on contracts or commencement of force account construction, unless:

(A) The substation design has been previously approved by RUS; and  
(B) No significant NESC revisions have occurred.

(ii) The borrower shall notify RUS in writing that a previously approved design will be used, including identification of the previously approved design.

(2) Unless RUS approval is required by paragraph (a) of this section, plans and specifications for substation modifications and for substations using previously approved designs do not require RUS approval.

(e) *Generation facilities.* (1) This paragraph (e) covers all portions of a generating plant including plant buildings, the generator step-up transformer, and the transmission



switchyard at a generating plant. Warehouses and equipment service buildings not associated with generation plants are covered under paragraph (f) of this section.

(2) The borrower shall obtain RUS approval, prior to issuing invitations to bid, of the terms and conditions for all generating plant equipment or construction contracts which will cost \$1,500,000 or more. Unless RUS approval is required by paragraph (a) of this section, plans and specifications for generating plant equipment and construction do not require RUS approval.

(f) *Headquarters buildings.* (1) This paragraph (f) covers office buildings, warehouses, and equipment service buildings. Generating plant buildings are covered under paragraph (e) of this section.

(2) The borrower shall obtain RUS approval of the plans and specifications for all headquarters buildings prior to issuing invitations to bid. The borrower shall also submit two copies of RUS Form 740g, Application for Headquarters Facilities. The application must show surface area and estimated cost breakdown between office building space and space for equipment warehousing and service facilities. This form is available from Program Development and Regulatory Analysis, Rural Utilities Service, U.S. Department of Agriculture, Stop 1522, 1400 Independence Ave., SW., Washington, DC 20250-1522.

(g) *Communications and control facilities.* (1) This paragraph (g) covers microwave and powerline carrier communications systems, load control, and supervisory control and data acquisition (SCADA) systems.

(2) The borrower shall obtain RUS approval, prior to issuing invitations to bid, of the terms and conditions for communications and control facilities contracts which will cost \$500,000 or more. Unless RUS approval is required by paragraph (a) of this section, plans and specifications for communications and control facilities do not require RUS approval.

(h) Terms and conditions include the RUS standard form of contract, general and special conditions, and any other non-technical provisions of the contract. Terms and conditions which have received RUS approval in connection with a previous contract for a particular borrower are considered approved by RUS for that borrower.

#### **§ 1724.55 Dam safety.**

(a) The provisions of this section apply only to RUS financed electric system facilities.

(1) (i) Any borrower that owns or operates a RUS financed dam must utilize the "Federal Guidelines for Dam Safety," (Guidelines), as applicable. A dam, as more fully defined in the Guidelines, is generally any artificial barrier which either:

(A) Is 25 feet (8 m) or more in height; or

(B) Has an impounding capacity at maximum water storage elevation of 55 acre-feet (68,000 m<sup>3</sup>) or more.

(ii) The "Federal Guidelines for Dam Safety," FEMA 93, June, 1979, published by the Federal Emergency Management Agency (FEMA), is hereby incorporated by reference. This incorporation by reference is approved by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the "Federal Guidelines for Dam Safety" may be obtained from the Federal Emergency Management Agency, Mitigation Directorate, PO Box 2012, Jessup, MD 20794. It is also available for inspection during normal business hours at RUS, Electric Staff Division, 1400 Independence Avenue, SW., Washington, DC, Room 1246-S, and at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

(2) The borrower shall evaluate the hazard potential of its dams in accordance with Appendix E of the U.S. Army Corps of Engineers Engineering and Design Dam Safety Assurance Program, ER 1110-2-1155, July 31, 1995. A summary of the hazard potential criteria is included for information as Appendix A to this subpart. The U.S. Army Corps of Engineers Engineering and Design Dam Safety Assurance Program, ER 1110-2-1155, July 31, 1995, published by the United States Army Corps of Engineers, is hereby incorporated by reference. This incorporation by reference is approved by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the U. S. Army Corps of Engineers Engineering and Design Dam Safety Assurance Program may be obtained from the U. S. Army Corps of Engineers, Publications Depot, 2803 52<sup>nd</sup> Ave., Hyattsville, MD 20781. It is also available for inspection during normal business hours at RUS, Electric Staff Division, 1400 Independence Avenue, SW., Washington, DC, Room 1246-S, and at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

(3) For high hazard potential dams, the borrower must obtain an independent review of the design and critical features of construction. The

reviewer must have demonstrated experience in the design and construction of dams of a similar size and nature. The reviewer must be a qualified engineer not involved in the original design of the dam or a Federal or State agency responsible for dam safety. The reviewer must be approved by RUS.

(4) The independent review of design must include, but not necessarily be limited to, plans, specifications, design calculations, subsurface investigation reports, hydrology reports, and redesigns which result from encountering unanticipated or unusual conditions during construction.

(5) The independent review of construction shall include:

(i) *Foundation preparation and treatment.* When the foundation has been excavated and exposed, and before critical structures such as earth embankments or concrete structures are placed thereon, the borrower shall require the reviewer to conduct an independent examination of the foundation to ensure that suitable foundation material has been reached and that the measures proposed for treatment of the foundation are adequate. This examination must extend to the preparation and treatment of the foundation for the abutments.

(ii) *Fill placement.* During initial placement of compacted fill materials, the borrower shall require the reviewer to conduct an independent examination to ensure that the materials being used in the various zones are suitable and that the placement and compaction procedures being used by the contractor will result in a properly constructed embankment.

(6) If the reviewer disagrees with any aspect of the design or construction which could affect the safety of the dam, then the borrower must meet with the design engineer and the reviewer to resolve the disagreements.

(7) *Emergency action plan.* For high hazard potential dams, the borrower must develop an emergency action plan incorporating preplanned emergency measures to be taken prior to and following a potential dam failure. The plan should be coordinated with local government and other authorities involved with the public safety and be approved by the borrower's board of directors.

(b)(1) For more information and guidance, the following publications regarding dam safety are available from FEMA:

(i) "Emergency Action Planning Guidelines for Dams," FEMA 64.



(ii) "Federal Guidelines for Earthquake Analysis and Design of Dams," FEMA 65.

(iii) "Federal Guidelines for Selecting and Accommodating Inflow Design Floods for Dams," FEMA 94.

(iv) "Dam Safety: An Owner's Guidance Manual," FEMA 145, August, 1987.

(2) These publications may be obtained from the Federal Emergency Management Agency, Mitigation Directorate, PO Box 2012, Jessup, MD 20794.

§§ 1724.56—1724.69 [Reserved]

#### Appendix A to Subpart E of Part 1724—Hazard Potential Classification for Civil Works Projects

The source for this appendix is U. S. Army Corps of Engineers Engineering and Design Dam Safety Assurance Program, ER 1110-2-1155, Appendix E. Appendix E is available from the address listed in § 1724.55(a)(2).

Category <sup>1</sup>	Low	Significant	High
Direct Loss of Life <sup>2</sup>	None expected (due to rural location with no permanent structures for human habitation).	Uncertain (rural location with few residences and only transient or industrial development).	Certain (one or more extensive residential, commercial or industrial development).
Lifeline Losses <sup>3</sup> ....	No disruption of services—repairs are cosmetic or rapidly repairable damage.	Disruption of essential facilities and access.	Disruption of critical facilities and access.
Property Losses <sup>4</sup> ..	Private agricultural lands, equipment and isolated buildings.	Major public and private facilities .....	Extensive public and private facilities.
Environmental Losses <sup>5</sup> .	Minimal incremental damage .....	Major mitigation required .....	Extensive mitigation cost or impossible to mitigate.

#### Notes:

<sup>1</sup> Categories are based upon project performance and do not apply to individual structures within a project.

<sup>2</sup> Loss of life potential based upon inundation mapping of area downstream of the project. Analysis of loss of life potential should take into account the extent of development and associated population at risk, time of flood wave travel and warning time.

<sup>3</sup> Indirect threats to life caused by the interruption of lifeline services due to project failure, or operation, i.e., direct loss of (or access to) critical medical facilities or loss of water or power supply, communications, power supply, etc.

<sup>4</sup> Direct economic impact of value of property damages to project facilities and down stream property and indirect economic impact due to loss of project services, i.e., impact on navigation industry of the loss of a dam and navigation pool, or impact upon a community of the loss of water or power supply.

<sup>5</sup> Environmental impact downstream caused by the incremental flood wave produced by the project failure, beyond which would normally be expected for the magnitude flood event under a without project conditions.

#### Subpart F—RUS Contract Forms

##### § 1724.70 List of RUS contract forms for architectural and engineering services.

The following RUS contract forms for architectural and engineering services are available:

(a) RUS Form 179, Rev. 9-66, Architects and Engineers Qualifications (optional form);

(b) RUS Form 211, Rev. 6-98, Engineering Service Contract for the Design and Construction of a Generating Plant (required form);

(c) RUS Form 215, Rev. 5-67, Engineering Service Contract—System Planning (optional form);

(d) RUS Form 220, Rev. 6-98, Architectural Services Contract (required form);

(e) RUS Form 234, Rev. 3-57, Final Statement of Engineering Fee (optional form);

(f) RUS Form 236, Rev. 6-98, Engineering Service Contract—Electric System Design and Construction (required form);

(g) RUS Form 241, Rev. 3-56, Amendment of Engineering Service Contract (optional form);

(h) RUS Form 244, Rev. 12-55, Engineering Service Contract—Special Services (optional form);

(i) RUS Form 258, Rev. 4-58, Amendment of Engineering Service Contract—Additional Project (optional form);

(j) RUS Form 284, Rev. 284, Final Statement of Cost for Architectural Service (optional form);

(k) RUS Form 297, Rev. 12-55, Engineering Service Contract—Retainer for Consultation Service (optional form); and

(l) RUS Form 459, Rev. 9-58, Engineering Service Contract—Power Study (optional form).

##### § 1724.71 Use of printed forms

(a) Persons wishing to obtain forms referred to in this part should contact: Program Development and Regulatory Analysis, U.S. Department of Agriculture, Stop 1522, 1400 Independence Ave., SW., Washington, DC 20250-1522. These forms may be reproduced as needed.\*

(b) If a RUS contract form is required by this part, the borrower shall use the form in the format available from RUS (photocopying or other exact reproduction is acceptable.) The RUS contract forms are not to be retyped, changed, modified, or altered in any manner not specifically authorized in this part or approved by RUS in writing. Any modifications approved by RUS must be clearly shown indicating that they are different from the standard form.

§§ 1724.72—1724.73 [Reserved]

##### § 1724.74 Engineering service contract for the design and construction of a generating plant, RUS Form 211.

The contract form in this section shall be used when required by this part.

#### ENGINEERING SERVICE CONTRACT FOR THE DESIGN AND CONSTRUCTION OF A GENERATING PLANT

AGREEMENT, made \_\_\_\_\_, \_\_\_\_\_, between \_\_\_\_\_ (hereinafter called the "Owner") and \_\_\_\_\_ of \_\_\_\_\_ (hereinafter called the "Engineer").

Whereas, the Administrator of the Rural Utilities Service (hereinafter called the "Administrator") of the United States of America (hereinafter called the "Government") has approved the making of a loan or loan guarantee of not in excess of \$\_\_\_\_\_ by the Government to the Owner pursuant to the Rural Electrification Administration Act of 1936, as amended, approximately \$\_\_\_\_\_ of which is intended to finance, in whole or in part, the construction and operation of an electrical generating plant which is estimated to cost \$\_\_\_\_\_ and consists of \_\_\_\_\_ in the State of \_\_\_\_\_, having the Rural Utilities Service project designation of \_\_\_\_\_, (hereinafter called the "Project"), located at such place as the Owner with the approval of the Administrator shall designate;

Now, therefore, in consideration of the mutual undertakings herein contained, the parties hereto agree as follows:

**Article I***General Obligation of Engineer*

In accordance with the normal standards and practices used in the profession, the Engineer shall diligently and competently render all engineering services which shall be necessary or advisable for the expeditious, economical, and sound design and construction of the Project with due consideration to applicable ecological and environmental requirements. The enumeration of specific duties and obligations to be performed by the Engineer hereunder shall not be construed to limit the general undertakings of the Engineer.

**Article II***Design of Project*

Section 1. The Engineer shall prepare and within \_\_\_\_\_ days after the approval hereof by the Administrator submit in duplicate to the Owner for approval and to the Administrator for approval, if approval of the Administrator is required, a "Project Design Manual" which shall consist of, but not necessarily be limited to, the following items:

(a) A detailed statement covering the procedures to be followed by the Engineer in the performance of this Agreement, including, without limitation, such matters as the routing and distribution of copies of correspondence and reports, the furnishing of lists of plans and specifications, procedures relating to the awarding of construction and equipment contracts, identification of persons to be called by telephone with respect to various subject matters, contract closeouts, and meetings.

(b) A design outline which includes all design criteria for the Project, including, without limitation, plant site, equipment, building requirements, environmental equipment and other environmental factors, civil, electrical, and mechanical requirements. The outline shall comply with the requirements of RUS Environmental Policies and Procedures.

(c) Evaluation studies which support the economic basis for the design and selection of equipment, including, without limitation, turbine throttle and exhaust conditions, boiler feed pump, air quality equipment, and condenser.

(d) Testing procedures which outline the responsibilities to be assumed by the Owner, Engineer, and contractor and include, without limitation, acceptance testing, concrete tests, laboratory testing, radiographic inspection, electrical checkout, and testing.

Section 2. In addition, the Engineer shall prepare and within \_\_\_\_\_ days after the approval hereof by the Administrator submit in duplicate to the Owner for approval and to the Administrator for approval, if approval of the Administrator is required, preliminary plans (hereinafter called the "Preliminary Plans") which shall consist of:

(a) A single-line diagram of proposed main and auxiliary electrical connections, including all major equipment, switching and substations.

(b) A single-line flow diagram of proposed steam, water, gas, oil, and air connections, including all major equipment.

(c) A schedule, in a form acceptable to the Owner and Administrator, showing by months the estimated time required for each major subdivision of the Project for design, fabrication, and installation, and the estimated date the project will be available for commercial service. Such schedule shall specify, in percentages, the portion of the total design performance of the Engineer under this Agreement which each item of design represents.

(d) The Engineer's estimate of the total cost of the completed Project, by components, together with the forecast of the amounts of money needed by the Owner each month until completion of the Project.

Section 3. Promptly upon receipt of approval by the Owner and by the Administrator, if the approval of the Administrator is required, of the Project Design Manual and Preliminary Plans, the Engineer shall proceed with preparation of and shall submit, in duplicate, to the Owner and to the Administrator, if approval of the Administrator is required, complete and detailed plans and specifications, drawings, maps, and other engineering documents required for the construction of the Project (all of the foregoing being hereinafter sometimes collectively called the "Plans and Specifications"). In the preparation of the Plans and Specifications, the Engineer shall consult with the Owner to the end that the Project shall serve the purposes intended by the Owner. The Engineer shall diligently make such necessary changes in the Plans and Specifications as may be required by the Owner and the Administrator. The Plans and Specifications shall include the following:

(a) Detailed drawings showing the complete design and layout of the Project.

(b) The form of construction contract (hereinafter called the "Construction Contract") to be entered into between the Contractor and Owner for the construction of the Project, including forms of notice and instructions to bidders, material and construction specifications, contractor's proposal, bidder's qualifications, contractor's bond, and construction drawings. If the Owner or the Administrator shall direct that the Project shall be constructed under more than one contract, the Engineer shall submit forms of all necessary Construction Contracts and shall also prepare and submit in connection with each such contract all that is hereinabove required of the Engineer in connection with the Construction Contract. All maps, drawings, plans, specifications, estimates, and other documents required to be prepared or submitted by the Engineer under this section or other sections of the Agreement shall conform to applicable environmental requirements related to the project, including those commitments contained in the RUS Final Environmental Statement, standard specifications, and other forms prescribed by the Administrator, unless deviation therefrom shall be permitted by the Administrator in writing.

Section 4. The Engineer shall also proceed to procure and submit to the Owner and to the Administrator, if approval of the Administrator is required, forms of other contracts and documents for the equipment and materials proposed to be purchased by

the Owner for use in connection with the construction of the Project or any services necessary or desirable in connection therewith.

Section 5. The Engineer, immediately upon receipt of notice from the Owner and from the Administrator, if approval of the Administrator is required, of their approval for bidding purposes of the form of Construction Contract or any contracts for materials, equipment, and services, as the case may be, shall, unless otherwise instructed by the Owner with the prior approval of the Administrator, take all appropriate and necessary action to procure full, free, and competitive bidding for the award of such contracts. In fulfilling this responsibility, the Engineer shall prepare and submit to the Owner for approval a recommended bidders' list. Upon approval of such list by the Owner, the Engineer, in collaboration with the Owner, shall fix a date for the opening of bids for such contracts. The Engineer shall be available to each prospective bidder for consultation with respect to the details of the Plans and Specifications and all other matters pertaining to the preparation of the Proposals for the construction of the Project or the supply of materials, equipment, or services therefor.

Section 6. The Engineer shall attend all openings of bids for the construction of the Project, or any part thereof, or for the furnishing of materials, equipment, and services therefor. In case fewer than three (3) bids are received for the construction of the Project or component parts of the Project, the Owner shall be notified immediately and such bids shall remain unopened unless permission is obtained from the Owner for the opening of such bids. If bids are opened, the Engineer shall carefully check and prepare tabulations of all bids received and shall render to the Owner all such assistance as shall be required in connection with consideration of the bids so that contracts may be prudently and properly awarded. The Engineer shall submit in writing to the Owner its first, second, and third choice of bidders, materials, and equipment to be used in each case, with its recommendation and reasons for the selection. When the Owner has indicated its choice of bidders, materials, and equipment, the Engineer shall forward a tabulation of the bids, copies of the recommendation, and the Owner's selection to the Administrator, if approval of the Administrator is required. If requested by the Administrator, the Engineer shall forward one complete copy of all original bids received. Upon approval by the Administrator, if approval of the Administrator is required, of the selection of a bidder, materials, and equipment, the Engineer shall prepare three counterparts of the contract to be executed by the Owner and the Contractor and shall forward such executed counterparts to the Administrator for approval, if approval of the Administrator is required.

Section 7. The Engineer shall furnish to the Owner all engineering information, services, data, and drawings required for procuring all necessary or desirable permits, licenses, franchises, titles, rights, and authorizations

and shall cooperate with the Owner's attorney in the procuring thereof.

### Article III

#### *Construction Management*

Section 1. The Engineer shall supervise the construction of the Project and shall make a diligent effort to ensure the expeditious and economical construction thereof in accordance with the Plans and Specifications and the terms of the Construction Contract and equipment or material contracts and the loan contract (hereinafter called the "Loan Contract") entered into between the Owner and the Government or any other lenders specifying the terms upon which the Project shall be constructed and financed. The Engineer shall carefully inspect all materials and equipment prior to their incorporation in the Project and shall promptly reject those not in compliance with the Specifications. The Engineer shall also supervise and inspect the incorporation of the materials in the Project and the workmanship with which such materials are incorporated. The Engineer, as representative of the Owner, shall have sole responsibility for requiring the Contractor to perform the Construction Contract in accordance with its terms and the Plans and Specifications, and, in performing the duties incident to such responsibility, the Engineer shall issue to the Contractor such directives and impose such restrictions as may be required to obtain reasonable and proper compliance by the Contractor with the terms of the Construction Contract and the Plans and Specifications in the construction of the Project; provided that the Engineer shall not be required to exercise any actual control over employees of the Contractor. The term "supervise" when used herein shall not confer upon the Engineer responsibility for the Contractor's construction means, methods, or techniques. The obligations of the Engineer hereunder run to and are for the benefit of only the Owner and the Administrator.

Section 2. If, after the Construction Contract has been approved by the Administrator, if approval of the Administrator is required, it shall be determined that any change or changes in the Plans and Specifications are advisable, the Engineer shall prepare and submit to the Owner and the Contractor all necessary details in connection with such change or changes. The execution of such changes by the Engineer shall be within the intent of the Engineer's general undertakings as outlined elsewhere in this contract. Upon approval of the change or changes by the Owner and the Contractor, the proposed change or changes shall be submitted by the Engineer to the Administrator, if approval of the Administrator is required, in the form of a contract amendment.

Section 3. The Engineer shall prepare all estimates, certificates, reports, and other documents required to be executed by the Engineer pursuant to the terms of the Construction Contract, equipment or material contracts, or the Loan Contract. When any bid specification is forwarded to RUS for review, an updated cost estimate for the proposed contract shall also be included. After all major equipment contracts have

been awarded and all permits have been received, and after approximately forty percent (40%) of the project design has been completed and construction has commenced, the Engineer shall update, on a quarterly basis, unless more frequently requested by the Owner, the information required under Article II, Section 2(d) hereof.

Section 4. The Engineer shall, upon completion of construction of component parts of the Project, make a complete inspection and conduct, utilizing the Owner's operating personnel and/or the manufacturer's representatives, such component and system tests as shall be necessary to assure conformance with the Plans and Specifications, the standards required by the Construction Contract, equipment and materials contracts, and the guarantees given in connection therewith.

Section 5. The Engineer shall schedule and coordinate the start-up activities for placing the plant in service. This shall include preparation of system operating schedules, written system start-up procedures, and operating manuals describing the various plant systems and operating procedures.

Section 6. The Engineer shall prepare written procedures for final acceptance tests of major equipment, such procedures being subject to the Owner's concurrence. Furthermore, the Engineer shall conduct, utilizing the Owner's operating personnel, final acceptance tests of major equipment. Such tests shall be made in the presence of duly qualified representatives of the Owner and the Administrator, if the Administrator elects to attend, and the time and procedure of such tests shall be agreed upon by the Engineer, the Owner, and the Administrator. After completion of each final acceptance test, the Engineer shall prepare copies of the test results and recommendations as to acceptability of equipment and submit them to the Owner for review.

Section 7. A competent resident engineer with full authority to act for the Engineer shall be maintained by the Engineer at the site of the Project during the entire period of any construction activity. The Engineer shall maintain at the site of the Project and under the direct supervision of the resident engineer a sufficient number of qualified engineering field inspectors to fully discharge the responsibilities of the Engineer pursuant to Article III, Section 1 hereof.

### Article IV

#### *Final Documents*

The Engineer shall, upon the completion of the inspection and tests in respect of the Project provided in Sections 4 and 6 of Article III, obtain or prepare and deliver to the Owner the following:

(a) A nameplate inventory and summary in triplicate of all equipment and facilities incorporated in the Project together with a breakdown of contract costs arranged by Standard List of Retirement Units, RUS Bulletin 181-2.

(b) Two complete sets of final inventory (record) drawings showing the location and layout of the Project in accordance with revisions to design drawings and field records of construction. All information required by this Agreement to be included in

the maps and drawings shall be included in the record drawings. One complete set of the record drawings shall be in reproducible form satisfactory to the Owner. The Engineer shall also provide the Owner with any other original manufacturer's equipment drawings not otherwise available to the Owner.

(c) An itemized statement in triplicate of the amounts payable by the Owner under all contracts for the construction of the Project and the furnishing of materials, equipment, and services thereof.

(d) A certificate in triplicate to the effect that the Project has been fully constructed substantially in accordance with the Plans and Specifications if and as amended.

(e) A detailed report in duplicate of all tests, in a form satisfactory to the Owner.

(f) All maps, tracings, and drawings prepared or used by the Engineer in connection with the performance of the duties of the Engineer under this Agreement.

(g) Operating and maintenance manuals received from manufacturers.

When the Owner has determined that the Project is available for commercial service, the Engineer shall report to the Owner and the Administrator, for depreciation purposes, the estimated total contract cost of the Project, plus the Owner's other related overhead cost, as obtained from the Owner, showing as a separate item the cost of land (a non-depreciable item).

### Article V

#### *Compensation*

Section 1. The Owner shall pay the Engineer for the services performed hereunder as indicated in the attached Schedule A.

Section 2. The total compensation to be paid in connection with this Agreement shall not exceed \$\_\_\_\_\_ (\_\_\_\_\_ Dollars.)

Section 3. The Engineer shall submit to the Owner each month a certified statement in duplicate of the amounts due for services hereunder, which statement shall be in accordance with the applicable reports of engineering progress required by Article VI, Section 1 hereof, and shall be in such detail and contain such supporting data as the Owner may request. The Owner shall review and approve each statement within thirty (30) days or inform the Engineer of the reasons the statement cannot be approved. Upon approval of each such statement by the Owner, ninety (90) percent of the amount thereof shall be due and payable. The balance of the compensation payable under Section 1 hereof shall be due and payable within thirty (30) days after completion of the Project. The Project shall be deemed complete for the purposes of the Agreement when all required final documents, including a certificate of completion, have been submitted by the Engineer and approved by the Owner and by the Administrator, if approval of the Administrator is required.

Section 4. In the event that this Agreement at any time be terminated pursuant to Article VI, Section 2 hereof, the compensation which shall be payable by the Owner to the Engineer for services rendered prior to such termination shall be computed as follows:

(a) Compensation for services in respect of the Design of the Project shall be determined

in accordance with Section 1 of this Article V, using the final report of engineering progress referred to in Article VI, Section 1 hereof to determine the percentage of completion of the services in respect of design of the Project as of the effective date of termination.

(b) Compensation for services in respect of supervision and inspection of construction of the Project and all other services shall be computed at the rate of \$\_\_\_\_\_ per staff hour of supervision and inspection of construction performed by the Engineer prior to the effective date of termination, but in no event shall such compensation exceed an amount computed in accordance with the provisions of Section 1 of this Article V. The Engineer shall submit to the Owner, in duplicate, a statement of the staff hours of supervision and inspection of construction in such detail and with such supporting data as may be requested by the Owner.

Section 5. Compensation payable to the Engineer under any of the Articles of this Agreement shall be in addition to taxes or levies (excluding Federal, State, and Local Income Taxes) which may be assessed against the Engineer by any State or political subdivision directly on services performed or payments for services performed by the Engineer pursuant to this Agreement. Such taxes or levies which the Engineer may be required to collect or pay, shall, in turn, be added by the Engineer to invoices submitted to the Owner pursuant to this Agreement.

Section 6. At or prior to the time when any payments shall be made to the Engineer pursuant to this Agreement, the Engineer if requested by the Owner shall furnish to the Owner, as a condition precedent to such payment, a certificate to the effect that all salaries or wages earned by the employees of the Engineer in connection with the Project have been fully paid by the Engineer up to and including a date not more than fifteen (15) days prior to the date when such payment shall be made. At or before the time when the final payment provided to be made hereunder shall be made to the Engineer by the Owner, the Engineer shall also furnish to the Owner, as a condition precedent to such payment, a certificate in form satisfactory to the Administrator that all the employees of the Engineer have been paid for services rendered by them in connection with the Project and that all other obligations which might become a lien on the Project have been paid.

Section 7. Interest at the rate of \_\_\_\_\_ percent ( \_\_\_\_\_ %) per annum [percentage is not to exceed any applicable State usury laws] shall be paid by the Owner to the Engineer on all unpaid balances due the Engineer, commencing thirty (30) days after the due date, provided that the delay in payment beyond the due date shall not have been caused by any condition within the control of the Engineer. Such compensation shall be paid ten (10) days after the amount of the interest has been determined by the Engineer and the Owner.

## Article VI

### Miscellaneous

Section 1. The Engineer shall prepare and execute in such form and detail as the Owner

and the Administrator shall direct all estimates, certificates, reports, and other documents required to be executed by the Engineer pursuant to the Construction Contract or the Loan Contract, including, without limitation, a monthly report of engineering progress on the form of schedule referred to in Article II, Section 2(c) hereof, showing the percentage of completion of each of the subdivisions thereof and the overall percentage of completion of engineering services in respect of the design and construction of the Project as of the date of each such report; Monthly Cost Estimates and Forecasts of Cash Requirements in the form referred to in Article II, Section 2(d) hereof, which shall contain explanations of changes, if any, from prior Monthly Cost Estimates and Forecasts of Cash Requirements. From time to time the Engineer shall prepare and submit to the Owner for approval and to the Administrator for approval, if approval of the Administrator is required, all necessary changes in the schedule referred to in Article II, Section 2(c) hereof; provided, however, that no changes shall be made in the percentages assigned to each item of design in the original schedule approved by the Owner and by the Administrator, if approval of the Administrator is required, pursuant to Article II, Section 2(c) hereof.

Section 2. The Owner may at any time terminate this Agreement by giving notice to the Engineer in writing to that effect, delivered or mailed to the Engineer's last known address not less than twelve (12) calendar days prior to the effective date of termination specified in the notice. From and after the effective date specified in such notice, this Agreement shall be terminated, except that the Engineer shall be entitled to receive compensation for services hereunder as provided in Section 3 of Article V hereof, and the Engineer shall be obligated forthwith to deliver to the Owner all maps, tracings, and drawings of the Project and all other letters, documents, and other material including all records pertaining thereto. If this Agreement shall be terminated, the Engineer shall prepare and submit to the Owner and the Administrator a final report of engineering progress as of the date of termination.

Section 3. Insurance. The Engineer shall take out and maintain throughout the period of this Agreement insurance of the following types and minimum amounts:

(a) Workers' compensation and employers' liability insurance, as required by law, covering all of the Engineer's employees who perform any of the obligations of the Engineer under the Agreement. If any employer or employee is not subject to the workers' compensation laws of the governing State, then insurance shall be obtained voluntarily to extend to the employer and employee coverage to the same extent as though the employer or employee were subject to the workers' compensation laws.

(b) Public liability insurance covering all operations under the Agreement shall have limits for bodily injury or death of not less than \$1 million each occurrence, limits for property damage of not less than \$1 million each occurrence, and \$1 million aggregate for

accidents during the policy period. A single limit of \$1 million of bodily injury and property damage is acceptable. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.

(c) Automobile liability insurance on all motor vehicles used in connection with the Agreement, whether owned, nonowned, or hired, shall have limits for bodily injury or death of not less than \$1 million per person and \$1 million per occurrence, and property damage limits of \$1 million for each occurrence. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.

(d) Errors and Omissions (Professional Liability) Insurance in an amount at least as large as the maximum compensation specified in Article V, Section 2, but not less than \$500,000.

The Owner shall have the right at any time to require public liability insurance and property damage liability insurance greater than those required in subsections "b" and "c" of this Section. In any such event, the additional premium or premiums payable solely as the result of such additional insurance shall be added to the total compensation to be paid under this Agreement.

The Owner shall be named as Additional Insured on all policies of insurance required in subsections "b" and "c" of this Section.

The policies of insurance shall be in such form and issued by such insurer as shall be satisfactory to the Owner. The Engineer shall furnish the Owner a certificate evidencing compliance with the foregoing requirements which shall provide not less than thirty (30) days prior written notice to the Owner of any cancellation or material change in the insurance.

The Engineer shall also follow the requirements of 7 CFR part 1788, RUS Fidelity and Insurance Requirements for Electric and Telephone Borrowers.

Section 4. The obligations and duties to be performed by the Engineer under this Agreement shall be performed by persons qualified to perform such duties efficiently. The Engineer, if the Owner shall so direct in writing, shall replace any resident engineer or other persons employed by the Engineer in connection with the Project. For the information of the Owner and the Administrator, the Engineer shall file with the Owner and the Administrator a statement, signed by the Engineer, of the qualifications, including specific experience of each engineer and inspector assigned to the Project and the duties assigned to each.

Section 5. Approvals, directions, and notices provided to be given hereunder by the Administrator to the Engineer or the Owner shall be deemed to be properly given if given by the Administrator or by any person authorized by the Administrator to give such approvals, directions, or notices.

Section 6. The Engineer shall follow all applicable RUS rules and regulations.

Section 7. This Agreement may be simultaneously executed and delivered in three or more counterparts, each of which so executed and delivered shall be deemed to be

an original, and all constitute but one and the same instrument.

Section 8. The obligations of the Engineer under this Agreement shall be assigned without the approval in writing of the Owner and of the Administrator.

Section 9. This Agreement shall be effective only from and after the time when it shall be approved by the Administrator in writing. Neither this Agreement nor any provision thereof shall be modified, amended, rescinded, waived, or terminated without the approval of the Administrator.

Section 10. The Engineer shall comply with applicable statutes pertaining to engineering and warrants that \_\_\_\_\_ (Name of Engineer) who will be in responsible charge of the Project possesses license number \_\_\_\_\_ issued by the State of \_\_\_\_\_ on the \_\_\_\_\_ day of \_\_\_\_\_.

*In witness whereof*, the parties hereto have caused this Agreement to be duly executed.

\_\_\_\_\_ Owner

By \_\_\_\_\_ President

ATTEST: \_\_\_\_\_ Secretary

\_\_\_\_\_ Engineer

\_\_\_\_\_ President, Partner [Strike out inapplicable designation.]

ATTEST: \_\_\_\_\_ Secretary

Schedule A—Compensation

[End of clause]

**§ 1724.75 Architectural service contract, RUS Form 220.**

The contract form in this section shall be used when required by this part.

**ARCHITECTURAL SERVICES CONTRACT**

AGREEMENT, made \_\_\_\_\_, \_\_\_\_\_, between \_\_\_\_\_ (hereinafter called the "Owner") and \_\_\_\_\_ of \_\_\_\_\_ (hereinafter called the "Architect").

*Whereas*, the Owner owns and operates a rural electric or telecommunications system, having the Rural Utilities Service designation of \_\_\_\_\_, financed in whole or in part with loans made or guaranteed by the United States of America acting through the Administrator of the Rural Utilities Service (hereinafter called the "Administrator"). If the project is financed wholly or in part by the Rural Telephone Bank, an agency of the United States of America, the references in this Agreement to the "Administrator" shall mean the "Governor" of the Rural Telephone Bank as well; and

*Whereas*, the Owner desires to \_\_\_\_\_ (hereinafter called the "Project") at an estimated cost of construction not to exceed: \_\_\_\_\_ dollars (\$ \_\_\_\_\_) for new work, and/or \_\_\_\_\_ dollars (\$ \_\_\_\_\_) for remodeling, which aggregate \_\_\_\_\_ dollars (\$ \_\_\_\_\_), hereinafter called the "Anticipated Cost," is exclusive of the cost of land, legal, architectural, accounting, or other professional services, or of interest.

*Now, therefore*, in consideration of the mutual undertakings herein contained, the parties hereto agree as follows:

**Article I**

*General Obligation of Architect*

The Architect shall render, diligently and competently in accordance with the normal standards used in the profession, all architectural services which shall be necessary or advisable for the expeditious, economical, and sound design, construction, and satisfactory completion of the Project. The enumeration of specific duties and obligations to be performed by the Architect hereunder shall not be construed to limit the general undertakings of the Architect. The obligations of the Architect hereunder run to, and are for the benefit of, only the Owner and the Administrator and shall not relieve the Contractor of its own responsibility under its agreement with the Owner.

**Article II**

*Preconstruction Period*

Section 1.

(a) The Architect shall prepare: (1) preliminary drawings, (2) a general description of materials and types of construction, and (3) an overall estimate of the cost of construction (all of the foregoing hereinafter collectively called the "Preliminary Documents"), and not later than \_\_\_\_\_ days after the date of execution of this Agreement, shall submit them in triplicate to the Owner for approval. Any changes in the Preliminary Documents required as a condition of approval shall be promptly made by the Architect.

(b) After receipt of notice of approval of the Preliminary Documents from the Owner, the Architect will proceed with the preparation of:

(1) Detailed plans showing the complete design of the Project including, but not limited to, architectural, structural, electrical, mechanical, and site development features.

(2) Complete and detailed specifications describing the design requirements of the Project, including all matters referred to in subparagraph (1) above, and any materials to be incorporated therein.

(3) The Construction Contract, RUS Form 257, "Contract to Construct Buildings," (hereinafter called the "Construction Contract"), which includes the Notice and Instructions to Bidders, Bid Bond, Bidders' Proposal, Owners' Acceptance, and Contractors' Bond, to be entered into between a bidder and the Owner for the construction of the Project. (All of the foregoing, including any revisions thereof, being hereinafter collectively called the "Plans and Specifications.")

Within \_\_\_\_\_ days after receipt of such approval of the Preliminary Documents, the Architect shall prepare and submit to the Owner, in duplicate, for its approval, complete and detailed "Final" Plans and Specifications as required for the construction of the Project. All documents required to be prepared and submitted by the Architect hereunder shall be on the applicable standard forms prescribed by the Administrator. In the preparation of the Plans and Specifications, the Architect shall consult with the Owner to ascertain the requirements of the project. Upon approval by the Owner of the Plans and Specifications,

such approval being noted thereon under the corporate seal of the Owner attesting the approval thereof by the Owner, the Architect shall diligently make such changes in the Plans and Specifications as may be required as a condition of approval thereof.

Section 2. So far as it shall be necessary in the preparation of the Plans and Specifications and in the construction of the Project, the Owner shall furnish the Architect information and data in respect of the following:

(a) A complete and accurate survey of the building site, including grades and lines of streets, pavements, and adjoining properties;

(b) The rights, restrictions, easements, boundaries, and contours of the building site;

(c) Sewer, water, gas, electric, and telephone service, etc.; and

(d) Test borings and pits, and chemical, mechanical, and other tests.

Section 3. If the Owner shall direct that the Project shall be constructed under more than one contract, the Architect shall submit all necessary Construction Contract forms and shall also prepare and submit in connection with each such contract all of the information and documents that shall be required for construction of the Project.

Section 4. Immediately after the Architect has received approval of the Plans and Specifications from the Owner, the Architect, unless otherwise instructed by the Owner, shall take all appropriate and necessary action to procure full, free, and competitive bidding for the award of the Construction Contract. Any public notices which by law are required of the Owner shall be published at the expense of the Owner.

Section 5. The Architect shall prepare and furnish to each qualified bidder requesting them one set of the Plans and Specifications together with all necessary forms and other documents upon payment of the amount stipulated by the Architect, which payment will be refunded to each bona fide bidder within ten (10) days after the bid opening. The Architect shall also prepare and furnish to bidders requesting them additional sets of the Plans and Specifications together with all necessary forms and other documents upon payment of an amount stipulated by the Architect, which payment will not be subject to refund.

Section 6. The Architect shall address to each prospective bidder a written response to inquiries from any prospective bidder with respect to the details of the Plans and Specifications and all other matters pertaining to the preparation of proposals for the construction of the Project or the furnishing of materials or services therefor. Under some circumstances the Architect may request that the inquiries from the prospective bidders be submitted in writing. The Architect or a competent representative of the Architect shall attend all openings of bids for the construction of the Project or any part thereof. In case fewer than three (3) bids are received for the construction of the Project or component parts of the Project, the Owner shall be notified immediately and such bids shall remain unopened unless permission is obtained from the Owner for the opening of such bids. If bids are opened, the Architect shall carefully check and

prepare tabulations of all bids received and shall render to the Owner a recommendation and all such assistance as shall be required in connection with consideration of the bids received so that contracts may be prudently awarded in accordance with the policy and procedure prescribed by the Owner and the Administrator.

Section 7. The Architect shall furnish to the Owner all architectural information, data, and drawings required for procuring all necessary or desirable permits, licenses, franchises, and authorizations, and shall cooperate with the Owner's attorney in the procuring thereof.

Section 8. If, after the Construction Contract has been approved, it shall be determined by the Owner that any changes in the Plans and Specifications are advisable, the Architect shall prepare and submit to the Owner all necessary details in connection with such change or changes, the Construction Contract shall be amended accordingly, and the Architect shall immediately proceed in respect of any construction required thereby in like manner as though such construction were originally required under the Construction Contract.

### Article III

#### Construction Period

Section 1. The Architect shall conduct inspection activities, and for projects involving multiple construction contracts, shall provide project coordination and inspection activities, and shall make a diligent effort to secure for the Owner the expeditious and economical construction of the Project in accordance with the approved Plans and Specifications and the terms of the Construction Contract. The Architect, unless otherwise directed in writing by the Owner, shall have and exercise sole responsibility for the issuance of supplemental directives to the Contractor regarding the Contractor's performance in accordance with the terms of the Construction Contract. In fulfilling the above responsibility, the Architect shall:

(a) Issue to the Contractor such directives and impose such restrictions as may be necessary to obtain reasonable and proper compliance by the Contractor with the terms of the Construction Contract and the Plans and Specifications.

(b) Visit the Project site at intervals appropriate to the stage of construction, but in no event (except for periods of prolonged work stoppage or construction delay) less than once per week, to inspect construction of the Project, to inspect excavations prior to placing of concrete, and to inspect other work prior to it being covered from view.

(c) Make recommendations to the Owner concerning the selection of materials, colors, finishes, designs, or devices for use in the Project.

(d) Periodically inspect materials prior to their incorporation into the Project and promptly reject those not in compliance with the Specifications.

(e) Observe the manner of incorporation of materials into the Project and the workmanship with which such materials are incorporated.

(f) Review and if acceptable approve material and/or equipment substitutions for compliance with contract documents.

(g) Observe results of specified tests.

(h) Be available to the Owner and the Contractor during office hours for consultation.

(i) Review completed construction, direct the Contractor to correct observed defects, and approve payments to the Contractor for correctly completed construction.

(j) Prepare such change orders as may be required for the Project.

Section 2. The Architect shall review and, if acceptable, approve shop drawings, samples, schedules, and other submissions of the Contractor for conformance with the design concept of the Project and for compliance with requirements of the Plans and Specifications.

Section 3. The Architect shall prepare and execute all estimates, certificates, and other documents required to be executed by the Architect pursuant to the Construction Contract. Unless otherwise provided in the Construction Contract, the Architect will furnish to the Contractor, free of charge, copies of the Plans and Specifications as may be reasonably necessary for the execution of the work.

Section 4. The Architect shall prepare and submit to the Owner monthly construction progress reports.

Section 5. The Architect shall, upon notice by the Contractor of completion of the work and a request for a final inspection of the Project:

(a) Make a careful and thorough inspection to determine that the construction of the Project has been completed in accordance with the Plans and Specifications and the terms of the Construction Contract and any amendments thereto.

(b) Prepare and deliver to the Owner complete and detailed final documents, including, without limitation, the following:

(1) An itemized statement of the amounts payable by the Owner under all contracts for the construction of the Project and the furnishing of materials and services therefor.

(2) A Certificate of Completion on the form approved by the Administrator, to the effect that the Project has been fully constructed in accordance with the Plans and Specifications, if and as amended.

(3) One complete set of "as-constructed" Plans and Specifications of the Project in reproducible form satisfactory to the Owner.

(4) A Certificate of Architect and a Final Statement of Architect's Fee due hereunder.

(c) Use diligent efforts:

(1) To obtain from the Contractor releases of all liens and of rights to claim any lien from manufacturers, material suppliers, and subcontractors that have furnished materials or services for the construction of the Project.

(2) To obtain a Certificate of Contractor, on the form approved by the Administrator, to the effect that all labor has been paid.

(3) To obtain and deliver to the Owner all material and workmanship warranties or bonds required by the Plans and Specifications and service and operating manuals furnished by manufacturers or suppliers.

### Article IV

#### Compensation

Section 1. The Owner shall pay the Architect for all services performed

hereunder, except as provided in Section 3 hereof, a sum calculated as follows. (The Owner and Architect should agree upon the compensation schedule to be inserted in Tables Nos. 1 and 2 below.)

#### Table No. 1

NEW CONSTRUCTION  
COST OF NEW CONSTRUCTION \_\_\_\_\_  
COMPENSATION FOR ARCHITECTURAL  
SERVICES \_\_\_\_\_

#### Table No. 2

REMODELING WORK  
COST OF REMODELING WORK \_\_\_\_\_  
COMPENSATION FOR ARCHITECTURAL  
SERVICES \_\_\_\_\_

If a Project shall consist of new construction and remodeling work, the Architect and the Owner shall agree on an equitable distribution of the final cost of construction between new construction and remodeling work, which shall be used to determine the applicable compensation from the two tables in this Section 1. For the purpose of computing compensation due the Architect under this Agreement for services rendered, "remodeling," shall be defined for this project as follows: \_\_\_\_\_

The sum shall be due and payable as follows:

(a) Twenty percent (20%) thereof (using the Anticipated Cost in lieu of the Cost of Construction) within thirty (30) days after the date of approval of the Preliminary Documents.

(b) An additional fifty percent (50%) thereof (using the Anticipated Cost in lieu of the Cost of Construction) within thirty (30) days after the date of approval of the Plans and Specifications.

(c) An additional twenty percent (20%) thereof, as construction progresses, in monthly installments each bearing the same ratio to the total amount payable under this subsection (c) as the corresponding monthly payment to the Contractor bears to the total amount payable to the Contractor.

(d) The balance, if any, of the compensation due under this Section 1 and all other provisions of this Agreement, shall be payable within thirty (30) days after Completion of the Project in accordance with the provisions of Section 2 of this Article IV.

For the purpose of this Article, the term "Cost of Construction of the Project," shall mean the Construction Contract Price including amendments thereto, plus the cost of labor and materials furnished for the Project by the Owner and in respect of which the Architect shall have rendered services hereunder. Extra drafting or other services performed shall be paid for as provided in Section 3 of this Article IV.

The term "Completion of the Project" shall mean full performance of all obligations under this Agreement and all amendments and revisions thereof.

Section 2. Prior to the time when any payment shall be made to the Architect pursuant to this Agreement, the Architect, if requested by the Owner, shall furnish to the Owner, as a condition precedent to such payment, a certificate to the effect that all salaries or wages earned by the employees of the Architect in connection with the Project have been fully paid by the Architect up to

and including a date not more than fifteen (15) days prior to the date when such payment shall be due. Before the time when the final payment provided to be made pursuant to this Article IV shall be made to the Architect by the Owner, the Architect shall also furnish to the Owner as a condition precedent to such payment (a) a Certificate of Architect stating that all the employees of the Architect have been paid for services rendered by them in connection with the Project and that all other obligations which might become a lien upon the Project have been paid, and (b) a Final Statement of Architect's Fee showing the Cost of Construction of the Project and the amount due the Architect under this Agreement.

Section 3. If the Architect shall, at the request of the Owner, perform any of the services outlined in Section 2 of Article II or if, after approval of the Construction Contract the Architect shall perform extra drafting or other services because of changes ordered by the Owner or default of the Contractor, the Architect shall be paid, in respect thereof, a sum equal to the Architect's reasonable out-of-pocket expenses, plus \_\_\_\_\_ percent (\_\_\_\_%) (not to exceed fifty percent (50%)) thereof for office overhead plus reasonable subsistence, transportation, and communication expenses, if any, paid to, or on behalf of, employees; which amount shall be due and payable ten (10) days after approval by the Owner of the services performed and the invoice of the Architect. The compensation due the Architect under this paragraph shall be decreased by the amount of any increase in the compensation due the Architect under Section 1 of this Article IV. The Architect shall submit to the Owner a statement of out-of-pocket expenses in respect of extra drafting or other services to be compensated for pursuant to this Section 3. Out-of-pocket expenses shall be limited to money paid by the Architect for direct labor, labor taxes, labor insurance, prorated sick leave, vacation, holiday, retirement, and medical insurance benefits, all applicable to such direct labor, except that, in the case of services performed with the prior approval of the Owner by the following officers, partners, or others having ownership interests in the Architect, the rates corresponding to "direct labor" set forth below shall apply: \_\_\_\_\_.

Section 4. If this Agreement shall be terminated pursuant to the provisions of Section 1 or Section 2 of Article V hereof, the compensation for services rendered prior to such termination shall be computed as follows:

(a) One-fifth of the compensation set forth in Section 1 of this Article IV based upon the Anticipated Cost (or of the Cost of Construction of the Project if termination is effective after approval of the Construction Contract) shall represent compensation for the Preliminary Documents and such compensation shall be prorated on the basis of the percentage of completion of such Preliminary Documents as of the effective date of termination.

(b) One-half of the compensation set forth in Section 1 of this Article IV based upon the Anticipated Cost (or of the Cost of Construction of the Project if termination is

effective after approval of the Construction Contract) shall represent compensation for the Plans and Specifications and such compensation shall be prorated on the basis of the percentage of completion of such Plans and Specifications as of the effective date of termination.

(c) One-fifth of the compensation set forth in Section 1 of this Article IV based upon the Anticipated Cost shall represent compensation for the coordination and inspection of construction of the Project and such compensation shall be prorated on the basis of the percentage of such services determined by the value of the Project constructed prior to the effective date of termination.

(d) One-tenth of the compensation set forth in Section 1 of this Article IV based upon the Cost of Construction of the Project shall represent compensation for the services provided for in Section 5 of Article III and such compensation shall be prorated on the basis of the percentage of such services performed prior to the effective date of termination.

(e) Compensation for the services referred to in Section 2 of Article II, which may be performed by the Architect at the request of the Owner and for extra drafting and other services because of changes ordered by the Owner, shall be computed in accordance with the provisions of Section 3 of this Article IV.

Section 5. Interest shall be paid by the Owner to the Architect on all unpaid balances due the architect, commencing thirty (30) days after the due date, provided that the delay in payment beyond the due date shall not have been caused by any condition within the control of the Architect. Such interest shall be at the rate of \_\_\_\_\_ percent (\_\_\_\_%). [Percentage is not to exceed any applicable State usury laws.] Such compensation shall be paid ten (10) days after the amount of the interest has been determined by the Architect and the Owner.

#### Article V

##### Miscellaneous

Section 1. The Owner may at any time terminate this Agreement by giving notice to the Architect in writing to that effect, delivered and mailed to the Architect's last known address not less than ten (10) days prior to the effective date of termination specified in the notice. From and after the effective date of termination specified in such notice, this Agreement shall be terminated, provided, however, that the Architect shall be entitled to receive compensation for services theretofore rendered pursuant to this Agreement, computed in accordance with the provisions of Article IV, Section 4, hereof.

Section 2. The Architect shall have the right, by giving to the Owner not less than thirty (30) days notice in writing, to terminate this Agreement if the Architect shall have been prevented by conditions beyond the control and without the fault of the Architect (a) from commencing performance of this Agreement for a period of twelve (12) months from the date of this Agreement, or (b) from proceeding with the completion of full performance of any

remaining services required of the Architect pursuant to this Agreement for a period of six (6) months from the date of last performance by the Architect of other services required pursuant to this Agreement. From and after the effective date specified in such notice this Agreement shall be terminated, except that the Architect shall be entitled to receive compensation for services performed hereunder, computed and payable in the same manner as set forth in Section 1 of this Article.

Section 3. Upon Completion of the Project or termination of this Agreement, the Architect shall be obligated forthwith to deliver to the Owner all maps, tracings, and drawings of the Project and all letters, documents, and other material including all records pertaining thereto.

Section 4. Insurance. The Architect shall take out and maintain throughout the period of this Agreement insurance of the following types and minimum amounts:

(a) Workers' compensation and employers' liability insurance, as required by law, covering all of the Architect's employees who perform any of the obligations of the Architect under the Agreement. If any employer or employee is not subject to the workers' compensation laws of the governing State, then insurance shall be obtained voluntarily to extend to the employer and employee coverage to the same extent as though the employer or employee were subject to the workers' compensation laws.

(b) Public liability insurance covering all operations under the Agreement shall have limits for bodily injury or death of not less than \$1 million each occurrence, limits for property damage of not less than \$1 million each occurrence, and \$1 million aggregate for accidents during the policy period. A single limit of \$1 million of bodily injury and property damage is acceptable. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.

(c) Automobile liability insurance on all motor vehicles used in connection with the Agreement, whether owned, nonowned, or hired, shall have limits for bodily injury or death of not less than \$1 million per person and \$1 million per occurrence, and property damage limits of \$1 million for each occurrence. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.

(d) Errors and Omissions (Professional Liability) Insurance in an amount at least as large as the maximum compensation specified in Article IV, Section 1, but not less than \$500,000.

The Owner shall have the right at any time to require public liability insurance and property damage liability insurance greater than those required in subsections "b" and "c" of this Section. In any such event, the additional premium or premiums payable solely as the result of such additional insurance shall be added to the total compensation to be paid under this Agreement.

The Owner shall be named as Additional Insured on all policies of insurance required in subsections "b" and "c" of this Section.



The policies of insurance shall be in such form and issued by such insurer as shall be satisfactory to the Owner. The Architect shall furnish the Owner a certificate evidencing compliance with the foregoing requirements which shall provide not less than thirty (30) days prior written notice to the Owner of any cancellation or material change in the insurance.

The Architect shall also follow the requirements of 7 CFR part 1788, RUS Fidelity and Insurance Requirements for Electric and Telephone Borrowers.

Section 5. The obligations and duties to be performed by the Architect under this Agreement shall be performed by persons qualified to perform such duties efficiently. The Architect, if the Owner shall so direct, shall replace any person employed by the Architect in connection with the Project.

For the information of the Owner and the Administrator, the Architect shall, upon request, file with the Owner and the Administrator, on forms approved by the Administrator, statements of the qualifications, including specific experience, of each person assigned to the Project and the duties assigned to each, and certifications of insurance coverage.

Section 6. The Architect shall follow all applicable RUS rules and regulations.

Section 7. This Agreement shall be simultaneously executed and delivered in three counterparts, each of which when so executed and delivered shall be deemed to be an original, and all shall constitute but one and the same instrument.

Section 8. The obligations of the Architect under this Agreement shall not be assigned without the approval in writing of the Owner.

Section 9. The Architect shall comply with applicable statutes pertaining to the practice of the profession. It is hereby warranted that the Architect possesses license number \_\_\_\_\_ issued by the State of \_\_\_\_\_ on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

*In Witness Whereof*, the parties hereto have caused this Agreement to be duly executed and their respective corporate seals to be affixed and attested by their duly authorized representatives all as of the date first above written.

\_\_\_\_\_  
Owner

By \_\_\_\_\_ President

ATTEST: \_\_\_\_\_ Secretary

\_\_\_\_\_  
Architect

By \_\_\_\_\_

\_\_\_\_\_  
Title

ATTEST: \_\_\_\_\_ Secretary

[End of clause]

**§ 1724.76 Engineering service contract—  
electric system design and construction,  
RUS Form 236.**

The contract form in this section shall be used when required by this part.

**ENGINEERING SERVICE CONTRACT**

**ELECTRIC SYSTEM DESIGN AND  
CONSTRUCTION**

AGREEMENT made \_\_\_\_\_, 19 \_\_\_\_,  
between \_\_\_\_\_ (hereinafter called the  
"Owner"), and \_\_\_\_\_ of \_\_\_\_\_  
(hereinafter called the "Engineer").

Whereas, the Owner has obtained loans made or guaranteed by the United States of America, acting through the Administrator of the Rural Utilities Service (hereinafter called the "Administrator"), to finance in whole or in part a rural electric system pursuant to the Rural Electrification Act of 1936, as amended, and plans the construction of a project designated \_\_\_\_\_, being hereinafter called the "Project," consisting of approximately the following facilities:

**Distribution and Transmission Lines:**

\_\_\_\_\_ miles (\_\_\_\_\_ km) of \_\_\_\_\_ kV  
line,

\_\_\_\_\_ miles (\_\_\_\_\_ km) of \_\_\_\_\_ kV  
line,

**Substations:**

Name \_\_\_\_\_ MVA \_\_\_\_\_ kV to  
\_\_\_\_\_ kV

\_\_\_\_\_ MVA \_\_\_\_\_ kV to  
\_\_\_\_\_ kV

**Switching Stations:**

Name \_\_\_\_\_ kV

Name \_\_\_\_\_ kV

**Other:**

\_\_\_\_\_ miles (\_\_\_\_\_ km) of line  
conversion, \_\_\_\_\_ miles (\_\_\_\_\_ km)  
of line removal, and the following:  
\_\_\_\_\_

Now, therefore, in consideration of the mutual undertakings herein contained, the parties hereto agree as follows:

**Article I**

**General Obligations**

In accordance with the normal standards and practices used in the profession, the Engineer shall render diligently and competently all engineering services which shall be necessary or advisable for the expeditious, economical, and sound design and construction of the Project, with due consideration given to applicable ecological and environmental requirements. The enumeration of specific duties and obligations to be performed by the Engineer hereunder shall not be construed to limit the general undertakings of the Engineer.

**Article II**

**Preconstruction Period**

Section 1. The Engineer shall give thorough consideration to aesthetics and the protection of the environment in all phases of construction of the Project, including line routing and station locations. Where RUS or the Owner has prepared an environmental document or the Owner must comply with the conditions of a Special Use Permit imposed by a Federal land management agency, the Engineer shall incorporate all environmental commitments of the applicable documents that specifically relate to the facilities to be constructed.

Section 2. The Engineer shall, within thirty (30) days after the date of execution of this Agreement, make a complete field inspection and investigation for the purpose of determining the most economical and practicable location of the proposed lines.

The Engineer shall cooperate with the Owner's right-of-way agent and attorney in

developing a schedule of right-of-way procurement and assist the Owner in developing suitable property maps for use by the Owner's easement solicitors.

Section 3. Prior to the preparation of Plans and Specifications by the Engineer, the Owner shall furnish to the Engineer the following as may be applicable:

(a) Copies of pertinent Engineering Studies, including Construction Work Plans when available, on which to base the design of the electrical facilities to be built; key maps of the Owner's present and proposed facilities and detail or vicinity maps showing location of existing lines, consumers served, and easements obtained.

(b) Detailed lists of materials, if any, on hand or on order which are to be furnished by the Owner in the construction of the Project, together with the quantity and the value of each item of such material.

(c) With respect to materials contained in the assembly units indicated for removal, a list showing values of individual material items for which the Contractor will be credited with respect to salvaged materials returned to the Owner if not included in item (b) above.

Section 4. Sufficient soil test data to ensure adequate foundation designs shall be provided by the \_\_\_\_\_ Owner \_\_\_\_\_ the Engineer [check one].

Section 5. If requested by the Owner, the Engineer shall prepare and submit to the Owner estimates of quantities of materials to be furnished by the Owner for use in connection with the construction of the Project. The Engineer shall procure and submit to the Owner forms of contracts and other documents for such materials and for such other services as may be necessary or desirable in connection with the construction of the Project.

Section 6. For transmission lines, the Engineer shall prepare and submit to the Owner for approval and to the Administrator for approval, if approval of the Administrator is required, a summary of transmission line and substation design data with supporting calculations. The Plans and Specifications and the Plan and Profile, if any, shall be based on the design data approved by the Owner and by the Administrator, if approval of the Administrator is required.

Section 7. The Engineer shall prepare and submit to the Owner for approval and to the Administrator for approval, if approval of the Administrator is required, plan and profile sheets for all transmission lines.

Section 8. In specifying right-of-way clearing for transmission lines where "feathering" and/or undulating boundaries are required, the Engineer shall mark all brush and trees to be removed unless such marking is the responsibility of another authority. The Engineer shall also compute all clearing units, and show all clearing units on the plan and profile drawings or on separate drawings prepared for this purpose.

Section 9. The Engineer shall prepare, and within \_\_\_\_\_ days after the date of execution of this Agreement submit to the Owner for approval and to the Administrator for approval, if approval of the Administrator is required, two copies of complete and detailed plans and specifications, drawings,

maps, and other documents required for the construction of the Project (all of the foregoing being hereinafter collectively called the "Plans and Specifications"). In the preparation of the Plans and Specifications, the Engineer shall consult with the Owner to the end that the Project shall serve the purpose intended by the Owner. Unless otherwise directed by the Owner, the Engineer shall use Construction Work Plans and Engineering Studies, as furnished by the Owner, as a basis for the preparation of the Plans and Specifications. The Engineer shall diligently make such changes in the Plans and Specifications as may be required by the Owner or the Administrator as a condition of approval thereof.

Section 10. The Engineer shall, for each substation, prepare and furnish for the Owner's approval and for the Administrator's approval, if approval of the Administrator is required, the following drawings and such others as may be necessary or desirable for the construction of the Project:

- One line diagram (relays, breakers, transformers, switches, etc.)
- Three line diagram (PT, CT, phasing, etc.)
- Plot plan (excluding land surveys and plots necessary in acquisition of property)
- Grading plan, fence layout and details
- Structure plan and details
- Structure elevations (with section views)
- Footing plan and details
- Grounding plan and details
- Cable trench and layout plan
- Lighting plan and details
- Control house plan and details
- Control house elevations and details
- Material lists

Section 11. All maps, drawings, plan and profile sheets, plans and specifications, contract forms, addenda, estimates, studies, and other documents required to be prepared or submitted by the Engineer under this Article II or other articles of this Agreement shall conform to the applicable standard specifications and other forms prescribed by the Administrator, unless deviation therefrom shall have been approved by the Administrator.

Section 12. The Engineer shall furnish to the Owner all engineering information, data, and drawings required for procuring all necessary or desirable permits, licenses, franchises, and authorizations from public bodies, and all necessary or desirable permits, licenses, or agreements with respect to the crossing of navigable streams, railroads, and power lines, and with respect to the paralleling or crossing of communications lines and signal circuits, and shall assist the Owner to the extent necessary to obtain such permits, licenses, franchises, authorizations, and agreements. The Engineer shall also furnish to the Owner all engineering information, data, and drawings required for procuring transmission line right-of-way through condemnation proceedings. If requested by the Owner, the Engineer shall attend, or appear as a witness in, hearings or other proceedings before public service commissions or other regulatory bodies in connection with procuring of the foregoing.

Section 13. When notified by the Administrator (if approval of the Administrator is required) and by the Owner of their approval of the form of Construction Contract, the Engineer shall immediately take all appropriate and necessary action to procure full, free, and competitive bidding for the award of such contract or contracts, and when requested assist the Owner with the purchase of material and equipment. The term "Construction Contract" as used herein shall also include right-of-way clearing contracts, equipment contracts, or materials contracts if such contracts are utilized in the construction of the project. In fulfilling this responsibility, the Engineer shall prepare and submit to the Owner for approval a recommended list of qualified bidders to construct the project. Upon approval of such list by the Owner, the Engineer, in collaboration with the Owner, shall fix a date for the opening of bids for such contracts. The Engineer shall prepare and furnish to the qualified bidders the Plans and Specifications and Construction Drawings together with all necessary forms and other documents.

Section 14. The Engineer shall be available to each prospective bidder for consultation with respect to the details of the Plans and Specifications and all other matters pertaining to the preparation of the proposals for the construction of the Project or the supply of materials or services therefor. The Engineer, or a competent representative of the Engineer, shall attend and supervise all openings of bids for the construction of the Project or for the furnishing of materials or services therefor. In case fewer than three (3) bids are received for the construction of the Project or component parts of the Project, the Owner shall be notified immediately and such bids shall remain unopened unless permission is obtained from the Owner for the opening of such bids. If bids are opened, the Engineer shall carefully check and prepare detailed assembly unit price tabulations of all bids received, and shall render to the Owner all such assistance as shall be required in connection with consideration of the bids received so that contracts may be prudently and properly awarded in accordance with the policy and procedure prescribed by the Owner and the Administrator.

Section 15. If any change is to be made in the Plans and Specifications after the Construction Contract has been approved by the Owner and by the Administrator, if approval of the Administrator is required, the Engineer shall prepare and submit the necessary details for a contract amendment in accordance with the procedure prescribed by the Owner and the Administrator.

### Article III

#### Staking

Section 1. The Engineer, with the approval of the Owner, shall determine when staking of the Project shall begin; provided, however, that the Engineer shall not commence staking until the Owner shall have certified that all right-of-way authorizations and easements reasonably required for the construction of the Project have been procured. The Owner shall furnish qualified persons to negotiate

with landowners or tenants with respect to such right-of-way authorizations and easements and the locations of meter poles or service entrances. The Engineer shall proceed diligently with such staking and continue therewith in such manner as not to retard the progress of construction of the Project.

The staking shall be done in a thorough and workmanlike manner and in accordance with the latest revision of the National Electrical Safety Code, applicable State codes, plans and specifications, and approved transmission line plan and profile sheets. The Engineer shall in no case stake lines other than those authorized by the Owner. The Engineer shall replace all stakes lost or removed prior to or during construction of the Project. All costs, including costs of stakes, equipment, and other material used in connection with the staking, shall be borne by the Engineer. All stakes shall be marked to show the pole number. Where practicable, all stakes shall be driven in such manner that the pole number shall be visible from the pole hauling truck when poles are being distributed. Each transmission structure stake shall be marked with the station number and the height and class of pole. Where it is probable that the Contractor will have difficulty in locating stakes, the Engineer shall drive a four-foot (1.2 m) building lath or equivalent in addition and adjacent to the stake. The Engineer shall give due consideration to the location of the consumer's load center and service termination in staking pole locations on or near the consumer's premises so that the service entrance cable or low voltage conductors to buildings will be as short as possible.

Section 2. The Engineer shall cause staking sheets or structure lists to be maintained in such form as the Owner shall require, on which shall be accurately entered all pertinent and useful information and directions concerning the construction of the Project. Five counterparts of the staking sheets or structure lists shall be supplied by the engineer to the Contractor and two copies shall be supplied to the Owner. When revisions in staking sheets or structure lists are necessary, the Engineer shall cause all copies of the staking sheets or structure lists to be corrected to reflect such revisions in the information or directions previously incorporated thereon.

Section 3. The Engineer shall prepare and submit to the Owner a report showing the quantity, kind, price, and extended total of all units of construction for each portion of the Project at the time such portion is released to the Contractor for construction.

Section 4. A competent resident engineer, with full authority to act for the Engineer, shall be maintained by the Engineer at the site of the Project at all times when staking is being performed.

### Article IV

#### Construction Management

Section 1. The Engineer shall supervise the construction of the Project and shall make a diligent effort to ensure the expeditious and economical construction thereof in accordance with the Plans and Specifications and the terms of the Construction Contract or

contracts and ensure that all specified environmental criteria are followed. The Engineer shall carefully inspect all materials and equipment prior to their incorporation in the Project and shall promptly reject those not in compliance with the Specifications. The Engineer shall also supervise and inspect the incorporation of the materials in the Project and the workmanship with which such materials are incorporated. Such inspection shall be deemed to be adequate if a reasonable percentage of all construction units are inspected at the time of installation. The Engineer, as representative of the Owner, shall have sole responsibility for requiring the Contractor to perform the Construction Contract in accordance with its terms and the Plans and Specifications; and, in performing the duties incident to such responsibility, the Engineer shall issue to the Contractor such directives and impose such restrictions as may be required to obtain reasonable and proper compliance by the Contractor with the terms of the Construction Contract and the Plans and Specifications, in construction of the Project; provided that the Engineer shall not be required to exercise any actual control over employees of the Contractor. The term "supervise" when used herein shall not confer upon the Engineer responsibility for the Contractor's construction means, methods, or techniques. The obligations of the Engineer hereunder run to and are for the benefit of only the Administrator and the Owner.

Section 2. The Engineer shall measure ground resistance at all substation ground fields prior to bonding the ground field to the substation structure. In addition, upon recommendation by the Engineer and authorization by the Owner, the Engineer shall measure the ground resistance at the following locations:

- (a) At all transmission structures with overhead ground wire prior to the installation of the overhead ground wire.
- (b) At all transmission structures with pole grounds prior to the installation of power conductor. The Engineer shall prepare a report of the ground resistance measurements mentioned above and submit such report to the Owner together with recommendations for changes, if any, required to ensure satisfactory operation. To the extent such changes are approved, the Engineer shall make appropriate changes in the Plans and Specifications in accordance with the provisions of Section 15 of Article II.

Section 3. The Engineer shall maintain at the site of the Project during the entire period of construction a competent resident engineer with full authority to act for the Engineer, unless specifically directed otherwise by the Owner in writing. When necessary to assure adequate inspection, one or more competent inspectors shall also be maintained when construction units are being installed or corrective work is being performed, the number of inspectors being subject to approval by the Owner. The Engineer shall report, in writing, defects in workmanship or materials to the Contractor and the Owner and shall instruct the Contractor to correct such defects immediately, in accordance with the terms of the Construction Contract. A resident

engineer shall be present during the final inspection of completed construction.

Section 4. The Engineer shall test all lines, immediately after they have been energized, for objectionable radio interference. All cases of radio interference due to faulty construction of or defective equipment in the Project shall be reported to the Contractor for correction.

#### Article V

##### Final Documents

Section 1. The Engineer shall prepare and, within twenty (20) days after the completion of construction of the Project by the Contractor, submit complete and detailed final documents to the Owner for approval and to the Administrator for approval, if approval of the Administrator is required.

#### Article VI

##### Compensation

Section 1. The Owner shall pay the Engineer for the services performed hereunder as indicated in the attached Schedule A.

Section 2. The total compensation to be paid in connection with this Agreement shall not exceed \$ \_\_\_\_\_ (\_\_\_\_\_ Dollars.)

Section 3. Compensation payable to the Engineer under this Agreement shall be in addition to taxes or levies (excluding Federal, State and local income taxes) which may be assessed against the Engineer by any State or political subdivision directly on services performed or payments for services performed by the Engineer pursuant to this Agreement. Such taxes or levies, which the Engineer may be required to collect or pay, shall, in turn, be added by the Engineer to invoices submitted to the Owner pursuant to this Agreement.

Section 4. Interest at the rate of \_\_\_\_\_ percent ( \_\_\_\_\_ %) per annum [percentage is not to exceed any applicable State usury laws] shall be paid by the Owner to the Engineer on all unpaid balances due the Engineer commencing thirty (30) days after the due date; provided that the delay in payment beyond the due date is not caused by any condition within the control of the Engineer. Such compensation shall be paid ten (10) days after the amount of interest has been determined by the Engineer and the Owner.

Section 5. Prior to the time when any payment shall be made to the Engineer pursuant to this Agreement, the Engineer, if requested by the Owner, shall furnish to the Owner, as a condition precedent to such payment, a certificate to the effect that all salaries or wages earned by the employees of the Engineer in connection with the Project, have been fully paid by the Engineer up to and including a date not more than fifteen (15) days prior to the date when such payment shall be made. Before the time when the final payment shall be made to the Engineer by the Owner, the Engineer shall also furnish to the Owner, as a condition precedent to such payment, a certificate that all the employees of the Engineer have been paid for services rendered by them in connection with the Project and that all other obligations which might become a lien upon the Project have been paid.

#### Article VII

##### Miscellaneous

Section 1. The Owner may at any time terminate this Agreement by giving notice to the Engineer in writing to that effect not less than ten (10) days prior to the effective date of termination specified in the notice. Such notice shall be deemed given if delivered or mailed to the last known address of the Engineer. From and after the effective date specified in such notice, this Agreement shall be terminated, except that the Engineer shall be entitled to receive compensation for services hereunder as provided in Section 2 of this Article VII.

Section 2. In the event that this Agreement at any time be terminated pursuant to Section 1 of this Article VII, the compensation which shall be payable to the Engineer by the Owner shall be computed so far as possible in accordance with the provisions of Article VI. To the extent that the provisions of Section 1 of Article VI cannot be applied because construction is incomplete at the effective date of such termination, the Engineer shall be paid for engineering services in respect of incomplete construction a sum which shall bear the same ratio of the compensation which would have been payable under the provisions of Section 1 of Article VI, if such construction had been completed, as the engineering services in respect of such incomplete construction bear to the engineering services which would have been rendered if construction had been completed.

If requested by the Owner, the Engineer shall submit to the Owner in duplicate a verified statement of actual expenses in respect of such incomplete construction. All compensation payable under this Section 2 shall be due and payable thirty (30) days after the approval by the Owner of the amount due hereunder.

Section 3. The Engineer shall have the right, by giving the Owner not less than thirty (30) days notice in writing, to terminate this Agreement if the Engineer shall have been prevented by conditions beyond the control and without the fault of the Engineer (a) from commencing performance of this Agreement for a period of twelve (12) months from the date of this Agreement, or (b) from proceeding with the completion of full performance of any remaining services required of the Engineer pursuant to this Agreement for a period of six (6) months from the date of last performance by the Engineer of other services required pursuant to this Agreement. From and after the effective date specified in such notice this Agreement shall be terminated, except that the Engineer shall be entitled to receive compensation for services performed hereunder, computed and payable in the same manner as set forth in Section 2 of this Article.

Section 4. Upon completion of the Project or termination of the Contract, the Engineer shall be obligated forthwith to deliver to the Owner all maps, tracings, and drawings of the Project and all letters, documents, and other material, including all records pertaining thereto.

The term "Completion of the Project" shall mean full performance of all obligations

under this Contract and all amendments and revisions thereof as evidenced by the approval of the final documents by the Owner and by the Administrator, if approval of the Administrator is required.

Section 5. The Engineer shall follow all applicable RUS rules and regulations.

Section 6. The Engineer shall prepare and execute in such form and detail as the Owner and the Administrator shall direct all estimates, certificates, reports, and other documents required to be executed by the Engineer pursuant to the terms of the Construction Contract or the Loan Contract, including progress reports of engineering services and reports of the progress of construction.

Section 7. The Engineer shall approve each monthly estimate of the Contractor prior to payment by the Owner. Such approval shall include a certification by the Engineer that all construction for which payment is requested has been completed in accordance with the terms of the Construction Contract and that all defective construction, of which the Contractor shall have received fifteen (15) or more days written notice, has been corrected. The Engineer shall also maintain at the site of the Project a cumulative inventory of all units of construction incorporated in the Project.

Section 8. The Engineer shall notify the Owner when the Project, or any section thereof, shall be ready to be energized. When requested by the Administrator, such notice shall also be given to the Administrator. The Engineer shall assist the Owner in causing the Project, or such section thereof, to be energized.

Section 9. Insurance. The Engineer shall take out and maintain throughout the period of this Agreement insurance of the following types and minimum amounts:

(a) Workers' compensation and employers' liability insurance, as required by law, covering all of the Engineer's employees who perform any of the obligations of the Engineer under the Agreement. If any employer or employee is not subject to the workers' compensation laws of the governing State, then insurance shall be obtained voluntarily to extend to the employer and employee coverage to the same extent as though the employer or employee were subject to the workers' compensation laws.

(b) Public liability insurance covering all operations under the Agreement shall have limits for bodily injury or death of not less than \$1 million each occurrence, limits for property damage of not less than \$1 million

each occurrence, and \$1 million aggregate for accidents during the policy period. A single limit of \$1 million of bodily injury and property damage is acceptable. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.

(c) Automobile liability insurance on all motor vehicles used in connection with the Agreement, whether owned, nonowned, or hired, shall have limits for bodily injury or death of not less than \$1 million per person and \$1 million per occurrence, and property damage limits of \$1 million for each occurrence. This required insurance may be in a policy or policies of insurance, primary and excess including the umbrella or catastrophe form.

(d) Errors and Omissions (Professional Liability) Insurance in an amount at least as large as the maximum compensation specified in Article VI, Section 2, but not less than \$500,000.

The Owner shall have the right at any time to require public liability insurance and property damage liability insurance greater than those required in subsections "b" and "c" of this Section. In any such event, the additional premium or premiums payable solely as the result of such additional insurance shall be added to the total compensation to be paid under this Agreement.

The Owner shall be named as Additional Insured on all policies of insurance required in subsections "b" and "c" of this Section.

The policies of insurance shall be in such form and issued by such insurer as shall be satisfactory to the Owner. The Engineer shall furnish the Owner a certificate evidencing compliance with the foregoing requirements which shall provide not less than thirty (30) days prior written notice to the Owner of any cancellation or material change in the insurance.

The Engineer shall also follow the requirements of 7 CFR part 1788, RUS Fidelity and Insurance Requirements for Electric and Telephone Borrowers.

Section 10. The obligations and duties to be performed by the Engineer under this Agreement shall be performed by persons qualified to perform such duties efficiently. The Engineer, if the Owner shall so direct, shall replace any resident engineer or other persons employed by the Engineer in connection with the Project. The Engineer shall file with the Owner and the Administrator a statement, signed by the Engineer, of the qualifications, including

specific experience of each engineer and inspector assigned to the Project and the duties assigned to each.

Section 11. Approvals, directions, and notices provided to be given hereunder by the Administrator to the Engineer or the Owner shall be deemed to be properly given if given by any person authorized by the Administrator to give approvals, directions, or notices.

Section 12. The Engineer shall establish and maintain an office at the site of the Project, with telephone service where available, when staking or construction is in progress. Any notice, instructions, or communications delivered to such office shall be deemed to have been delivered to the Engineer.

Section 13. This Agreement may simultaneously be executed and delivered in two or more counterparts each of which so executed and delivered shall be deemed to be an original, and all shall constitute but one and the same instrument.

Section 14. The obligations of the Engineer under this Agreement shall not be assigned without the approval in writing of the Owner.

Section 15. The Engineer shall comply with applicable statutes pertaining to engineering and warrants that \_\_\_\_\_ [Name of Engineer] who will be in responsible charge of the Project possesses license number \_\_\_\_\_ issued by the State of \_\_\_\_\_ on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

*In witness whereof*, the Parties hereto have caused this Agreement to be duly executed.

\_\_\_\_\_  
Owner

By \_\_\_\_\_ President

ATTEST: \_\_\_\_\_ Secretary

\_\_\_\_\_  
Engineer

By \_\_\_\_\_ President, Partner [Strike out inapplicable designation]

ATTEST: \_\_\_\_\_ Secretary

Schedule A—Compensation

[End of clause]

**§§ 1724.77–1724.99 [Reserved]**

Dated: June 17, 1998.

**Jill Long Thompson,**

*Under Secretary, Rural Development.*

[FR Doc. 98–16792 Filed 6–26–98; 8:45 am]

**BILLING CODE 3410–15–P**