

**Agency of Natural Resources  
Department of Environmental Conservation**

**Facilities Engineering Division  
Laundry Building  
802-241-3734**

**MEMORANDUM**

To: EJCDC Documents Users  
From: Don Robisky  
Date: April 23, 2008  
Subject: Use of EJCDC (Engineering Agreement) Documents

---

Standard Engineering Agreement Forms prepared by the Engineers Joint Contract Documents Committee (EJCDC ) are becoming increasingly used in Vermont for both USDA Rural Development and State of Vermont funded Water Supply and Water Pollution Control projects. This guidance applies to the use of these forms for projects funded by the U.S. Environmental Protection Agency (EPA) and State of Vermont Department of Environmental Conservation (DEC).

**Use of the Agreement Form**

The Engineers Joint Contract Documents Committee (EJCDC) E-510 Standard Form of Agreement Between Owner and Engineer for Professional Services, Funding Agency Edition (EJC Agreement), provides a complete and fair contractual document for both clients and consultants, and thus satisfies the fiduciary responsibilities of federal and state agencies providing grant and loan funds for work performed under these agreements. As one works with these forms it becomes apparent that they require choices and additions in a number of places. The purpose of this memorandum is to assist document users in recognizing those places, and what factors should be considered in those choices. After some general comments a series of specific comments keyed to Article or Section number follow.

The core EJC Agreement should be used in its entirety, with the exception of Article 8, in which choices must be made. Exhibits A, B and C must be included in all agreements. Exhibit H is not to be included in any DEC or EPA funded agreement. The remaining exhibits are to be considered depending on the services covered by the agreement.

Exhibit A should appear in its entirety with necessary additions and clarifications regardless of the step, phase or portion of the project being covered at the time of the agreement. The content of Exhibit C will make it clear what particular work is being covered and paid for. This will also allow additional work, steps and phases to be added to the agreement by simple amendment as

provided for in Exhibit J, without the need of preparing a new Exhibit A or attempting to add pages to the existing Exhibit A.

Exhibit A describes the services the engineer is to provide. The basic language provided covers all the essential services associated with a civil engineering project. As such this language should remain intact. However, it does not provide all the particulars of services that might be included in an individual project. These can be added at indicated points in the form or may be appended to the article and referenced at the appropriate sections or subsections, using Exhibit I.

Exhibit A breaks engineering services into six pieces as opposed to the three steps long established in the U.S. EPA and state funding programs.

A.1.01 Study and Report Phase is essentially the Planning or Preliminary Engineering (Step I).

A.1.02 Preliminary Design Phase is the beginning tasks of Final Design (Step II).

A.1.03 Final Design Phase is the preparation of plans and specifications, and contract documents, the bulk of Final Design (Step II).

[For small or progressing projects Preliminary and Final Design Phases may be continuous]

A.1.04 Bidding or Negotiating Phase includes the first tasks of Construction (Step III).

A.1.05 Construction Phase is the physical construction portion of Construction (Step III).

A.1.06 Post-Construction Phase includes the start-up, training, and documentation provided toward the end of Construction (Step III) and during the warranty period. For projects requiring a first year or 11<sup>th</sup> month (Corrective Period) performance evaluation and final engineering certification, the post construction phase begins on the date of initiation of operations.

A.1.01 A.4. - List or specify the number of alternatives which will be evaluated.

A.1.01 A.6.d. - List other tasks to be done or reference an attached Scope of Services which contains these additional or further delineated services.

A.1.01 A.7. - State the number of copies to be furnished and the time of delivery.

A.1.01 A.8. - State the number of copies to be furnished and the time of delivery.

A.1.02 A.6. - List other tasks to be done or reference an attached Scope of Services which contains these additional or further delineated services.

A.1.02 A.7. - State the number of copies to be furnished and the time of delivery.

A.1.02 A.8. - State the number of copies to be furnished and the time of delivery.

A.1.03 A.4. - List other tasks to be done or reference an attached Scope of Services which contains these additional or further delineated services.

A.1.03 A.5. - State the time of delivery.

A.1.03 A.6. - State the number of copies to be furnished and the time of delivery.

A.1.03 D. - State the number of contracts for the project.

A.1.04 A.6. - List other tasks to be done or reference an attached Scope of Services which contains these additional or further delineated services.

A.1.05 A.3. - If testing services are to be part of the engineer's services directly or by subcontracting that should be stated here and in Item 19 of this subsection.

A.1.05 A.14. - This item is to be lined out in state funded projects. The state will not accept the engineer settling disputes between the owner, its client, and the construction contractor.

- A.1.05 A.19. - List other tasks to be done or reference an attached Scope of Services which contains these additional or further delineated services.
- A.1.06 A.6. - List other tasks to be done or reference an attached Scope of Services which contains these additional or further delineated services.
- A.1.06 B. - State the total hours to be furnished.
- A.1.06 C. - For state funded projects certain services will be provided during, and at the end of the one year warranty period; so state here.
- A.2.01 - Line out any of these services which are included in the services delineated in A.1.0\_ sections. This provides a good checklist for special services that the client and engineer may desire for the project.

Exhibit B defines the responsibilities and duties of the owner. If any of these are to be provided by the engineer, those should be lined out, and included as additional services in the appropriate section of Exhibit A. This Exhibit should be brought to the attention of the owner and the specific work tasks anticipated for the project discussed.

- B.2.01 R. - List any other tasks expected to be preformed by the owner.

Exhibit C covers compensation for the services covered by the contract. Services are divided into three large categories, Basic, Resident Project Representative and Additional. There are three methods of billing for services: lump sum; hourly; and percent of construction costs. The owner and engineer must decide which of these billing methods to use throughout the period of the agreement. Currently no engineer working in the Vermont drinking water or water pollution control state funded programs uses the lump sum or percentage of construction cost billing methods as defined in the EJC format. Unless the engineer is willing to forego monthly billing based on hours worked, only the Standard Hourly Rates method of billing should be used. What some Vermont engineers term Lump Sum is really a Not-to-Exceed Hourly Rate. If an owner and engineer wish to use the Lump Sum or Percent of Construction Costs method they should contact the Department for discussion. All further commentary on this Exhibit will be on the Standard Hourly Rates Method of Payment provisions of the EJC Agreement.

- C.2.01 A.2. - The engineer may fill in the Reimbursable Expenses and Standard Hourly Rates Schedules, Appendices 1 and 2, provided, or substitute its own such schedules.
- C.2.01 A.3. - Each term of services uses the definitions and delineation of those services as found in Exhibit A. The costs for each of these covered by the contract is to be placed on the appropriate line, with the sum of them placed on the first line. If not all of these categories of services are to be provided, no cost should be filled in for them. The engineer should arrange the service costs according to the definitions in Exhibit A. If the services for the complete project are not included at the time of the agreement, those future service categories are left blank. When amendments are made to the agreement for future tasks, they will be added by formal amendment, including revision of this sheet. A Scope of Services and a Level of Effort must be prepared. They may be appended to the Agreement or submitted as supporting documentation. The Department will continue to approve professional service agreements with a break out of particular categories of work tasks.

C.2.01 A.7. - Provide the date or line out this item if no increase will be charged.

C.2.02 C. - No mark-up is allowed for reimbursable expenses.

C.2.03 A. - If the engineer includes administrative work in overhead or directly bills the time spent on it this factor is 1.0. If not, an administration fee for managing subcontracts may be charged, not to exceed 8%. Documentation of actual costs may be required on audit.

C.2.04 A.1. - Fill in the estimated resident services cost.

C.2.04 B. 3. - No mark-up is allowed for reimbursable expenses.

C.2.04 B.4. - Provide the date or line out this item if no increase will be charged.

C.2.05 B. 3. - No mark-up is allowed for reimbursable expenses.

C.2.05 B.4. - Provide the date or line out this item if no increase will be charged.

C.2.05 C.1. - If the engineer includes administrative work in overhead or directly bills the time spent on it this factor is 1.0. If not, an administration fee for managing subcontracts may be charged, not to exceed 8%. Documentation of actual costs may be required on audit.

Exhibit C, Appendix 1 - Fill in appropriate items or substitute engineers standard expense schedule.

Exhibit C, Appendix 2 - Fill in appropriate items or substitute engineers standard hourly rates schedule.

Exhibit C, Appendix 2, A.2. - Provide the date or line out the item if no increase will be charged.

Exhibit D must be included if the engineer is providing Resident Project Representative Services.

Exhibit E is not necessary for state projects since the state already has a standard forms for this.

Exhibit F should not be used without prior consultation with the Department, and agreement among the owner, engineer and funding agencies.

Exhibit G must be completed or replaced by the engineer's form containing the same information.

Exhibit H is not to be used on DEC or EPA funded projects.

Exhibit I should be used for any attachments to the standard contract, other than additions or modifications made within the body of the agreement or exhibits themselves. Be sure to identify and cross reference each modification to the appropriate location in the agreement.

Exhibit J is used for amendments to the agreement. Page 1 is a coversheet which must be completed in its entirety to tie the amendment to the parent agreement. Section 3 should list the items contained in the amendment.

Exhibit J, Attachment 1 is used for the actual amendment language. The instructions must be followed completely, and references to all modified portions of the agreement made. For additions of new phases or steps of the project engineering this should be stated and the sections of the standard agreement to be activated referenced. For these amendments and other substantial changes to the services an amended Section C.2.01 (Sheet C-4) should be provided with appropriate identification, so that it may be incorporated into the parent agreement.

### **Use of Agreement Form for Phases or Steps**

If an engineer is starting work on a project which the owner intends to culminate in a construction, and the owner intends to retain the services of the engineer throughout the project, the EJCDC Standard Engineering Agreement Form should be used.

If a project has reached the construction phase (step) the EJCDC Standard Engineering Agreement Form should be used. If the same engineer has performed the engineering work for previous phases (steps) on the project using agreements other than the EJCDC Form, that work should be wrapped into the EJCDC Form at the time of the construction phase (step) agreement, so that only one set of conditions apply to the contractual relationship between the owner and engineer for all engineering work on the project. The costs for all phases (steps) should be placed on the cost summary in C.201 A.3.

If an engineer is contracting for work on a project that was begun by another engineer, the EJCDC Standard Engineering Agreement Form should only include the work done, or to be done by the current engineer.

If an engineer is contracted to do investigation or feasibility work short of actual facility planning the EJCDC Standard Engineering Agreement Form need not be used. However, any engineering agreement must follow the principles of the EJCDC Form in regard the responsibility, liability and remedy provisions.

### **Scope of Service and Level of Effort**

A detailed Scope of Services and an associated Level of Effort are required for engineering agreement review and approval by DEC. These should define the specific work tasks necessary to complete the project covered by the EJC Agreement. The Scope of Services may be attached to the EJC Form Agreement or the individual tasks inserted at the appropriate points in the Form (Exhibit A) This is particularly important for A.1.01 Study and Report Phase and A.1.02 Preliminary Design Phase, in which work tasks are more likely particular to individual projects.

The Level of Effort should track the tasks listed and described in the Scope of Services. It must also include the hours of labor associated with services and their costs. Hourly rates for classes

of labor must track with the rate schedule included in the Standard Hourly Rates Schedule (C.2.01 A.2. Appendix 2).

### **Approval, Billing and Reimbursement**

Engineering Agreement approvals by DEC will specify services and fees approved, with a breakdown of categories that will be tracked. Reimbursement requests must include billing documentation which tracks with the approval categories. Hours and rates must be consistent with the approved Scope of Services, the associated Level of Effort, and the rate schedule. Reimbursements will not be made for billing outside the approval conditions.