

SUGGESTED FORMAT  
(for use with 1910-1-FA, 1997 Edition)

This is **EXHIBIT A**, consisting of \_\_\_\_\_ pages, referred to in and part of the **Standard Form of Agreement between OWNER and ENGINEER for Professional Services -- Funding Agency Edition**, dated \_\_\_\_\_, \_\_\_\_\_.

Initial:  
OWNER \_\_\_\_\_  
ENGINEER \_\_\_\_\_

**ENGINEER's Services**

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**PART 1 -- BASIC SERVICES**

A.1.00 ENGINEER shall provide the following Basic Services.

**A.1.01 Study and Report Phase.**

A. ENGINEER shall:

1. Consult with OWNER to define and clarify OWNER's requirements for the Project and available data.
2. Identify, consult with, and analyze requirements of governmental authorities having jurisdiction to approve the portions of the Project designed or specified by ENGINEER, including but not limited to mitigating measures identified in the environmental assessment.
3. Identify and evaluate alternate solutions as listed below available to OWNER and, after consultation with OWNER, recommend to OWNER those solutions which in ENGINEER's best judgment meet OWNER's requirements for the Project. The following alternate solutions will be evaluated:

4. Prepare a Preliminary Engineering Report (the "Report") in accordance with AGENCY guidance. This Report will be accompanied by ENGINEER's opinion of Total Project Costs for each solution which is so recommended for the Project with each component separately itemized.
5. Prepare applications and supporting documents for private or governmental grants, loans or advances in connection with the Project.
6. Prepare feasibility studies and rate schedules if required for the Project.
7. Perform or provide the following additional Study and Report Phase tasks or deliverables:

8. Furnish review copies of the Report to OWNER and AGENCY within \_\_\_ days of authorization to begin services and review it with OWNER and AGENCY.

9. Revise the Report in response to OWNER's, AGENCY's, and other parties' comments, as appropriate, and furnish final copies of the revised Report to the OWNER and AGENCY within \_\_\_ days of completion of reviewing it with OWNER and AGENCY.

B. ENGINEER's services under the Study and Report Phase shall be considered complete and subject to payment on the date when the Report is approved by OWNER, AGENCY, and other governmental authorities having jurisdiction. Unless ENGINEER is otherwise notified in writing payment for ENGINEER's services under the Study and Report Phase shall be made within \_\_\_\_\_ days of submission of final copies of the revised Report.

#### **A.1.02 Preliminary Design Phase.**

A. After acceptance by OWNER and AGENCY of the Report, selection by OWNER of a recommended solution and indication of any specific modifications or changes in the scope, extent, character or design requirements of the Project desired by OWNER, and upon written authorization from OWNER, ENGINEER shall:

1. On the basis of the above acceptance, selection, and authorization, prepare Preliminary Design Phase documents consisting of final design criteria, preliminary drawings, outline specifications and written descriptions of the Project.

2. Provide necessary field surveys and topographic and utility mapping for design purposes.

3. Provide three copies of maps showing the general location of required construction easements and permanent easements and the land to be acquired.

4. Advise OWNER if additional reports, data or other information or services of the types described in Exhibit B are necessary and assist OWNER in obtaining such reports, data or other information and services.

5. Based on the information contained in the Preliminary Design Phase documents, submit a revised opinion of probable Construction Cost and any adjustments to Total Project Costs known to ENGINEER, which will be itemized as provided in paragraph A1.01.A.5.

6. Perform or provide the following additional Preliminary Design Phase tasks or deliverables:

7. Furnish the Preliminary Design Phase documents for review by and with OWNER and AGENCY.

8. Submit \_\_\_ final copies of the Preliminary Design Phase documents and revised opinion of probable Construction Cost to OWNER and AGENCY within \_\_\_ days of authorization to proceed with this phase.

B. ENGINEER's services under the Preliminary Design Phase shall be considered complete and subject to payment when the Preliminary Design Phase documents are approved by OWNER, AGENCY and other governmental authorities having jurisdiction.

#### **A.1.03 Final Design Phase.**

A. After acceptance by OWNER and AGENCY of the Preliminary Design Phase documents and revised opinion of probable Construction Cost as determined in the Preliminary Design Phase, but subject to any OWNER-directed modifications or changes in the scope, extent, character or design requirements of or for the Project, and upon written authorization from OWNER, ENGINEER shall:

1. On the basis of the above acceptance, direction, and authorization, prepare final Drawings and Specifications showing the scope, extent and character of the work to be performed and furnished by Contractor. Specifications will be prepared, where appropriate, in general conformance with the 16 division format of the Construction Specifications Institute.

2. Prepare and provide technical criteria, written descriptions, design data and forms for OWNER's use in filing applications for permits from or approvals of governmental authorities having jurisdiction to review or approve the final design of the Project, and assist OWNER in consultations with appropriate authorities.

3. Advise OWNER of any adjustments to the opinion of probable Construction Cost and any adjustments to Total Project Costs known to ENGINEER, itemized as provided in paragraph A1.01.A.5.

4. Perform or provide the following additional Final Design Phase tasks or deliverables:

5. Prepare and furnish Bidding Documents for review and approval by OWNER, its legal counsel and other advisors, as appropriate, and AGENCY, and assist OWNER in the preparation of other related documents. Bidding Documents will comply with AGENCY's requirements in effect as of the date of this Agreement.

6. Submit \_\_\_ final copies of the Bidding Documents and a revised opinion of probable Construction Cost to OWNER and AGENCY within \_\_\_ days of authorization to proceed with this phase.

B. In the event that the Work designed or specified by ENGINEER is to be performed or furnished under more than one prime contract, or if ENGINEER's services are to be separately sequenced with the work of one or more prime contractors (such as in the case of fast-tracking), OWNER and ENGINEER shall, prior to commencement of the Final Design Phase, develop a schedule for performance of ENGINEER's services during the Final Design, Bidding or Negotiating, Construction and Post-Construction Phases in order to sequence and coordinate properly such services as are applicable to the work under such separate prime contracts. This schedule is to be prepared and included in or become an amendment to Exhibit A whether or not the work under such contracts is to proceed concurrently.

C. The number of prime contracts for Work designed or specified by ENGINEER upon which the ENGINEER's compensation has been established under this Agreement is \_\_\_\_\_.

D. ENGINEER's services under the Final Design Phase shall be considered complete when the final Bidding Documents are approved by OWNER, AGENCY, and other governmental authorities having jurisdiction.

#### **A.1.04 Bidding or Negotiating Phase.**

A. After acceptance by OWNER and AGENCY of the Bidding Documents and the most recent opinion of probable Construction Cost as determined in the Final Design Phase, and upon written authorization by OWNER to proceed, ENGINEER shall:

1. Assist OWNER in advertising for and obtaining bids or negotiating proposals for the Work and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, attend pre-Bid conferences, if any, and receive and process Contractor deposits for accessing the Bidding Documents.

2. Issue Addenda as appropriate to clarify, correct or change the Bidding Documents.

3. Consult with OWNER as to the acceptability of subcontractors, vendors, suppliers and other persons and entities proposed by Contractor for those portions of the Work as to which such acceptability is required by the Bidding Documents.

4. Determine the acceptability of substitute materials and equipment proposed when substitution is necessary because the specified item is incompatible with the Project or fails to comply with applicable codes.

5. Perform or provide the following additional Bidding or Negotiating Phase tasks or deliverables:

6. Attend the Bid opening, prepare Bid tabulation sheets and assist OWNER in evaluating Bids or proposals and in assembling and awarding contracts for the Work.

B. The Bidding or Negotiating Phase shall be considered complete upon commencement of the Construction Phase or upon cessation of negotiations with prospective Contractors (except as may be required if Exhibit F is a part of this Agreement).

#### **A.1.05 Construction Phase.**

A. Upon successful completion of the Bidding and Negotiating Phase, and upon written authorization from OWNER, ENGINEER shall:

1. *General Administration of Construction Contract.* Consult with OWNER and act as OWNER's representative as provided in the General Conditions. The extent and limitations of the duties, responsibilities and authority of ENGINEER as assigned in said General Conditions shall not be modified, except as ENGINEER may otherwise agree in writing. All of OWNER's instructions to Contractor will be issued through ENGINEER who shall have authority to act on behalf of OWNER in dealings with Contractor to the extent provided in this Agreement and said General Conditions except as otherwise provided in writing.

2. *Selecting Independent Testing Laboratory.* Assist OWNER in the selection of an independent testing laboratory to perform the services identified in paragraph B.1.00.O.

3. *Pre-Construction Conference.* Along with the Resident Project Representative, participate in a Pre-Construction Conference prior to commencement of Work at the Site.

4. *Baselines and Benchmarks.* As appropriate, establish baselines and benchmarks for locating the Work which in ENGINEER's judgment are necessary to enable Contractor to proceed.

5. *Visits to Site and Observation of Construction.* In connection with observations of the Work of Contractor while it is in progress:

a. Make visits to the Site at intervals appropriate to the various stages of construction, as ENGINEER deems necessary, but at least monthly, in order to observe as an experienced and qualified design professional the progress and quality of the various aspects of Contractor's work. Such visits and observations by ENGINEER and the Resident Project Representative, if any, are not intended to be exhaustive or to extend to every aspect of the work in progress, or to involve detailed inspections of the work beyond the responsibilities specifically assigned to ENGINEER in this Agreement and the Contract Documents, but rather are to be limited to spot checking, selective sampling and similar methods of general observation of the work based on ENGINEER's exercise of professional judgment as assisted by the Resident Project Representative, if any. Based on information obtained during such visits and such observations, ENGINEER shall determine in general if such work is proceeding in accordance with the Contract Documents and ENGINEER shall keep OWNER informed of the progress of the work. The responsibilities of ENGINEER contained in this paragraph are expressly subject to the limitations set forth in this paragraph A.1.05.A.5 and other express or general limitations in this Agreement and elsewhere.

b. The purpose of ENGINEER's visits to and representation by the Resident Project Representative, if any, at the Site will be to enable ENGINEER to better carry out the duties and responsibilities assigned to and undertaken by

ENGINEER during the Construction Phase, and, in addition, by the exercise of ENGINEER's efforts as an experienced and qualified design professional, to express an informed professional opinion that the completed Work of Contractor will conform in general to the Contract Documents and that the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents has been implemented and preserved by Contractor. ENGINEER shall not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct or have control over Contractor's work nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures of construction selected by Contractor, for safety precautions and programs incident to the work of Contractor or for any failure of Contractor to comply with laws, rules, regulations, ordinances, codes or orders applicable to Contractor's furnishing and performing the Work. Accordingly, ENGINEER neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform its work in accordance with the Contract Documents.

6. *Defective Work.* During such visits and on the basis of such observations, ENGINEER shall have authority to recommend to OWNER that Contractor's work be disapproved and rejected while it is in progress if ENGINEER believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents.

7. *Clarifications and Interpretations; Field Orders.* Issue necessary clarifications and interpretations of the Contract Documents as appropriate to the orderly completion of the work. Such clarifications and interpretations will be consistent with the intent of and reasonably inferable from the Contract Documents. ENGINEER may issue Field Orders authorizing minor variations from the requirements of the Contract Documents.

8. *Change Orders and Work Change Directives.* Recommend Change Orders and Work Change Directives to OWNER, as appropriate, and shall prepare Change Orders and Work Change Directives as required.

9. *Shop Drawings and Samples.* Review and approve or take other appropriate action in respect to Shop Drawings and Samples and other data which Contractor is required to submit, but only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. Such reviews and approvals or other action will be completed within 14 days of receipt of Contractor's submittal by ENGINEER and will not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto.

10. *Substitutes.* Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor, but subject to the provisions of paragraph A.2.01.A.21 of this Exhibit A.

11. *Inspections and Tests.* Require such special inspections or tests of the work as deemed reasonably necessary, and receive and review all certificates of inspections, tests and approvals required by laws, rules, regulations, ordinances, codes, orders or the Contract Documents. ENGINEER's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests or approvals comply with the requirements of the Contract Documents. ENGINEER shall be entitled to rely on the results of such tests.

12. *Disagreements between OWNER and Contractor.* Render formal written decisions on all claims of OWNER and Contractor relating to the acceptability of the work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the work. In rendering such decisions, ENGINEER shall be fair and not show partiality to OWNER or Contractor and shall not be liable in connection with any decision rendered in good faith in such capacity.

13. *Applications for Payment.* Based on ENGINEER's observations as an experienced and qualified design professional and on review of Applications for Payment and the accompanying support documentation:

a. Recommend the amounts that Contractor be paid. Such recommendations of payment will be in writing and will constitute ENGINEER's representation to OWNER, based on such observations and review, that, to the best of ENGINEER's knowledge, information and belief, the work has progressed to the point indicated, the quality of such work is generally in accordance with the Contract Documents (subject to an evaluation of such work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and to any other qualifications stated in the recommendation), and the conditions precedent to Contractor's

being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the work. In the case of unit price work, ENGINEER's recommendations of payment will include final determinations of quantities and classifications of such work (subject to any subsequent adjustments allowed by the Contract Documents). The responsibilities of ENGINEER contained in paragraph A.1.05.A.5.a. are expressly subject to the limitations set forth in paragraph A.1.05.A.5.b. and other express or general limitations in this Agreement and elsewhere.

b. By recommending any payment ENGINEER shall not thereby be deemed to have represented that observations made by ENGINEER to check the quality or quantity of Contractor's work as it is performed and furnished have been exhaustive, extended to every aspect of the work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in this Agreement and the Contract Documents. Neither ENGINEER's review of Contractor's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment including final payment will impose on ENGINEER responsibility to supervise, direct or control such Work or for the means, methods, techniques, sequences or procedures of construction or safety precautions or programs incident thereto, or Contractor's compliance with laws, rules, regulations, ordinances, codes or orders applicable to Contractor's furnishing and performing the Work. It will also not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials or equipment has passed to OWNER free and clear of any liens, claims, security interests or encumbrances, or that there may not be other matters at issue between OWNER and Contractor that might affect the amount that should be paid.

14. *Contractor's Completion Documents.* Receive and review maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Contract Documents, certificates of inspection, tests and approvals, and marked-up record documents including Shop Drawings, Samples and other data approved as provided under paragraph A.1.05.A.9 and marked-up record Drawings which are to be assembled by Contractor in accordance with the Contract Documents to obtain final payment, but the extent of such review will be limited as provided in paragraph A.1.05.A.13.; and ENGINEER shall transmit these documents to OWNER.

15. *Record Drawings.* Prepare and furnish to OWNER a set of reproducible Project Record Drawings showing appropriate record information based on Project documentation received from RPR and Contractor.

16. *Substantial Completion.* Following notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with OWNER, AGENCY's representative, and Contractor, conduct an inspection to determine if the Work is substantially complete. If after considering any objections of OWNER, ENGINEER considers the Work substantially complete, ENGINEER shall deliver a certificate of Substantial Completion to OWNER, AGENCY, and Contractor.

17. Perform or provide the following additional Construction Phase tasks or deliverables:

18. *Final Notice of Acceptability of the Work.* In company with OWNER's and AGENCY's representatives, conduct a final inspection to determine if the completed Work of Contractor is acceptable so that ENGINEER may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, ENGINEER shall also provide a notice in the form attached hereto as Exhibit E (the "Notice of Acceptability of Work") that the Work is acceptable (subject to the provisions of paragraph A.1.05.A.13.b) to the best of ENGINEER's knowledge, information and belief and based on the extent of the services provided by ENGINEER under this Agreement.

B. Unless otherwise notified in writing by OWNER, ENGINEER shall provide the services of a Resident Project Representative (RPR) at the Site to assist ENGINEER and to provide more continuous observations of such work on a full-time basis unless part-time services are expressly approved by AGENCY and this Agreement is amended accordingly. ENGINEER will, prior to the pre-construction conference, submit a resume of the RPR's qualifications for approval by OWNER and AGENCY. The duties, responsibilities, and limitations of authority of the RPR are as set forth in Exhibit D. The furnishing

of such Resident Project Representative services will not extend ENGINEER's responsibilities or authority beyond the specific limits set forth elsewhere.

C. *Limitation of Responsibilities.* ENGINEER shall not be responsible for the acts or omissions of any Contractor, or any of their subcontractors, vendors, suppliers, or of any other individual or entity performing or furnishing any of the Work. ENGINEER shall not be responsible for any Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

D. *Duration of Construction Phase.* The Construction Phase will commence with the execution of the Construction Agreement for the Project or any part thereof and will terminate upon written recommendation by ENGINEER of final payment to contractor. If the Project involves more than one prime contract as indicated in paragraph A.1.03.C., Construction Phase services may be rendered at different times in respect to the separate Construction Agreements.

#### **A.1.06 Post-Construction Phase.**

A. Upon written authorization from OWNER during the Post-Construction Phase, ENGINEER shall:

1. Provide assistance to OWNER in connection with the refining and adjusting of any Project equipment or system, in training OWNER's staff to operate and maintain the Project, equipment, and system, and, in developing systems and procedures for control of the operation and maintenance of and record keeping for the Project.

2. Together with OWNER and AGENCY's representative, visit the Project to observe any apparent defects in the completed Work, assist OWNER in consultations and discussions with Contractor concerning correction of such defects, and make recommendations as to replacement or correction of defective Work.

3. Perform or provide the following additional Post-Construction Phase tasks or deliverables:

4. In company with OWNER (or OWNER's representative) and AGENCY's representative, perform a warranty inspection of the Project in the 11th month following Substantial Completion to ascertain whether items of Construction are subject to correction.

B. The ENGINEER shall provide a total of \_\_\_\_\_ hours of assistance and necessary reimbursable expenses in providing services during the Post-Construction Phase.

C. The Post-Construction Phase services may commence during the Construction Phase and will terminate one year after the date of Substantial Completion.

### **PART 2 -- ADDITIONAL SERVICES**

#### **A.2.01 Additional Services Requiring OWNER's Authorization in Advance.**

A. If authorized in writing by OWNER, and with AGENCY concurrence, ENGINEER shall furnish or obtain from others Additional Services of the types listed below. These services will be paid for by OWNER as indicated in Article 4 of the Agreement.

1. Preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by OWNER.
3. Services resulting from significant changes in the scope, extent or character of the portions of the Project designed or specified by ENGINEER or its design requirements including, but not limited to, changes in size, complexity, OWNER's schedule, character of construction or method of financing; and revising previously accepted studies, reports, Drawings, Specifications or Contract Documents when such revisions are required by changes in laws, rules, regulations, ordinances, codes, standards or orders enacted subsequent to the Effective Date of this Agreement or are due to any other causes beyond ENGINEER's control. Redesign to reduce Project costs to within the funds available as stated in Exhibit F shall not be considered Additional Services.
4. Services resulting from evaluation by ENGINEER during the Study and Report Phase at OWNER's request of alternative solutions in addition to those specified in Part 1.
5. Services required as a result of OWNER's providing incomplete or incorrect Project information, with respect to Exhibit B.
6. Providing renderings or models for OWNER's use.
7. Preparing documents for alternate bids requested by OWNER for Contractor's work which is not executed or documents for out-of-sequence work.
8. Undertaking investigations and studies including, but not limited to, detailed consideration of operations, maintenance and overhead expenses; the preparation of detailed cash flow and economic evaluations and appraisals; evaluating processes available for licensing and assisting OWNER in obtaining process licensing; detailed audits or inventories required in connection with construction performed by OWNER.
9. Furnishing services of ENGINEER's Consultants for other than Basic Services.
10. Services attributable to more prime construction contracts than specified in paragraph A.1.03.C.
11. Services (which are not part of Basic Services) during out-of-town travel required of ENGINEER other than for visits to the Site or OWNER's office.
12. Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, construction management, cost estimating, project peer review, value engineering and constructability review requested by OWNER; and performing or furnishing services required to revise studies, reports, Drawings, Specifications or other Bidding Documents as a result of such review processes.
13. Determining the acceptability of substitute materials and equipment proposed during the Bidding or Negotiating Phase when substitution prior to the award of contracts is allowed by the Bidding Documents, or when it is learned after completing of the Final Design phase that the specified material or equipment is no longer manufactured or cannot be delivered in sufficient time to permit its timely incorporation into the Work.
14. Assistance in connection with Bid protests, rebidding or renegotiating contracts for construction, materials, equipment or services. Rebidding or renegotiating contracts to reduce the contract costs to funds available as stated in Exhibit F shall not be considered Additional Services.
15. Providing construction surveys and staking to enable Contractor to perform work, other than required under paragraph A.1.05.A, and any type of property surveys or related engineering services needed for the transfer of interests in real property; and providing other special field surveys.
16. Providing Construction Phase Services beyond the Contract Times set forth in Exhibit C.
17. Preparation of operating, maintenance and staffing manuals to supplement Basic Services under paragraph A.1.06.A.
18. Preparing to serve or serving as a consultant or witness for OWNER in any litigation, arbitration or other dispute resolution process related to the Project.



19. Providing more extensive services required to enable ENGINEER to issue notices or certifications requested by OWNER under paragraph 6.01.G.
20. Services in connection with Work Change Directives and Change Orders to reflect changes requested by OWNER so as to make the compensation commensurate with the extent of the Additional Services rendered.
21. Services in making revisions to Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than "or-equal" items; and services after the award of the construction contract in evaluating and determining the acceptability of a substitution.
22. Additional or extended services during construction made necessary by (1) emergencies or acts of God endangering the Work, (2) work damaged by fire or other cause during construction, (3) a significant amount of defective, neglected or delayed work by Contractor, (4) acceleration of the progress schedule involving services beyond normal working hours, or (5) default by Contractor.
23. Evaluating an unreasonable claim or an excessive number of claims submitted by Contractor or others in connection with the Work.
24. Assistance provided by ENGINEER to OWNER in excess of the hours specified in paragraph A.1.06 (Post-Construction Phase).
25. Other services performed or furnished by ENGINEER not otherwise provided for in this Agreement.