

6 August 1958

**ADVANCED RESEARCH PROJECTS AGENCY**

**(Information to accompany requests for construction funds  
both Industrial Facilities and MCP)**

A preliminary proposal shall accompany each request for construction funds (five copies) and shall contain the information listed below as applicable:

- a. General description of work shall consist of a concise but comprehensive statement outlining the purpose of the installation, its location, the over-all concept and layout, and the types of facilities involved.
- b. Justification of basic need shall consist of a comprehensive, but brief, discussion of the need for the installation and an explanation of the factors used in establishing the size, capacity and type of equipment and structures required.

Where pertinent, information should be given on the initial and ultimate planned capacity; number of locations or persons to be served; radius or physical extent of service for communications systems; type of feed, process flow diagrams, material balance flow sheet, and product specifications; number of operating personnel; health, safety, accountability, and security requirements; and other factors which influence the design and operation of the installation. Where a technical installation is involved, diagrams showing the processing or operations to be carried out therewith should be furnished, including the reasons why the selected process or type of facility is considered best.

Where pertinent, this section of the preliminary proposal shall also indicate whether consideration was given to utilization of existing structures and the reasons why they cannot be used.

- c. Preliminary plans shall consist of a plot plan, and building plans showing significant dimensions, equipment layout, partitioning, elevations, cross sections, space utilization, outside utility and site work, etc.
- d. Outline specifications for buildings shall consist of a statement showing the principal materials to be used for construction, the structural frame, and interior finishes. The extent of special features, such as air conditioning, ventilation, acoustical treatment,

hung ceilings, sprinklers, crane runways, etc. , should be indicated or described. As a minimum, an order of magnitude statement is required instead of such statements as "to the extent required," "as needed," etc.

Indicate what major operating equipment is needed and include the estimated electrical load in KVA for building services and operating equipment. For major items of mechanical equipment (air conditioning, ventilating, heating, etc.) give type, functional requirements, and estimated capacity. For tele-communications equipment give type and estimated size, number, power or capacity.

e. Preliminary estimate of cost should be prepared as accurately as is possible from the preliminary information at hand. It should be broken down as follows:

1. Engineering design and inspection.
2. Construction (include removal costs, less salvage, where applicable).
  - (a) Improvements to land (landscaping, roads, walks, paved areas, fences, etc. ).
  - (b) New building construction or remodeling, including related mechanical work (plumbing, heating, electrical work, etc. ) within buildings.
  - (c) Other structures.
  - (d) Utility work (water, gas, sewer, electrical services) beyond a point 5 feet outside buildings.
  - (e) Equipment.
3. Contingencies (for unpredictable conditions).
4. Indirect costs (If the indirect costs are prorated into Items 1 and 2, give the total amount. )
5. Total project estimate (the sum of Items 1 through 3, and including item 4 if indirect costs are not prorated into costs under items 1 and 2).

The above breakdown shall include available quantities and unit costs showing how totals were reached. For example, for buildings, give dimensions, the gross area and volume, and the estimated cost on a square foot and cubic foot basis; for utilities, roads, etc., give length and sizes or specifications, with price per unit listed. Give originating organization, basis of estimate, date made, status of plans, and any allowances made for isolation or speed-up if other than normal working hours are planned. Explain any unusually high unit costs.

The cost or estimated value of any government-owned materials or equipment transferred to the project should be stated separately. Such costs should be included in the total project estimate.

f. Proposed starting and completion dates shall be indicated for working drawings and specifications and construction.

g. Proposed method of accomplishment shall include contractual breakdown and scope by participants, types of contracts, and proposed schedule for performance if appropriate.