

**§ 39.32 Plan preparation.**

The State or Tribal Organization must prepare Establishment, Expansion, and Improvement Project plans and specifications in accordance with the requirements of this section for review by the VCGS. The plans and specifications must be approved by the VCGS prior to the State's or Tribal Organization's solicitation for construction bids. Once the VCGS approves the plans and specifications, the State or Tribal Organization must obtain construction bids and determine the successful bidder prior to submission of the application. The State or Tribal Organization must establish procedures for determining that costs are reasonable and necessary and can be allocated in accordance with the provisions of Office of Management and Budget (OMB) Circular No. A-87. Once the Establishment, Expansion, and Improvement Project preapplication and the project's plans and specifications have been approved, an application for assistance must be submitted in compliance with the uniform requirements for grants-in-aid to State and local governments prescribed by OMB Circular No. A-102, Revised.

(a) *General.* These requirements have been established for the guidance of the State or Tribal Organization and the design team to provide a standard for preparation of drawings, specifications, and estimates.

(b) *Technical requirements.* The State or Tribal Organization should meet these technical requirements as soon as possible after VA approves the Establishment, Expansion, and Improvement Project preapplication.

(1) *Boundary and site survey.* The State or Tribal Organization shall provide a survey of the site and furnish a legal description of the site. A boundary and site survey need not be submitted if one was submitted for a previously approved project and there have been no changes. Relevant information may then be shown on the site plan. If required, the site survey shall show each of the following items:

(i) The outline and location referenced to boundaries of all existing buildings, streets, alleys (whether public or private), block boundaries, easements, encroachments, the names of

streets, railroads, and streams, and other information as specified. If there is nothing of this character affecting the property, the Surveyor shall so state on the drawings.

(ii) The point of beginning, bearing, distances, and interior angles. Closure computations shall be furnished with the survey, and error of closure shall not exceed 1 foot for each 10,000 feet of lineal traverse. Boundaries of an unusual nature (curvilinear, off-set, or having other change or direction between corners) shall be referenced with curve data (including measurement chord) and other data sufficient for replacement, and such information shall be shown on the map. For boundaries of such nature, coordinates shall be given for all angles and other pertinent points.

(iii) The area of the parcel in acres or in square feet.

(iv) The location of all monuments.

(v) Delineation of 100-year floodplain and source.

(vi) The signature and certification of the Surveyor.

(2) *Soil investigation.* The State or Tribal Organization shall provide a soil investigation of the scope necessary to ascertain site characteristics for construction and burial or to determine foundation requirements and utility service connections. A new soil investigation is not required if one was done for a previously approved project on the same site and information from the previous investigation is adequate and unchanged. Soil investigation, when done, shall be documented in a signed report. The investigation shall be adequate to determine the subsoil conditions. The investigation shall include a sufficient number of test pits or test borings as will determine, in the judgment of the architect, the true conditions. The following information will be covered in the report:

(i) Thickness, consistency, character, and estimated safe bearing value where needed for structural foundation design of the various strata encountered in each pit or boring.

(ii) Amount and elevation of ground water encountered in each pit or boring, its probable variation with the seasons, and effect on the subsoil.

(iii) The elevation of rock, if known, and the probability of encountering quicksand.

(iv) If the site is underlaid with mines, the elevations and location of the tops of the mine workings relative to the site, or old workings located in the vicinity.

(3) *Topographical survey.* A topographical survey in 1-foot contour intervals shall be prepared for projects establishing new cemeteries and for significant expansion projects in previously undeveloped land.

(c) *Master plan.* A master plan showing the proposed layout of all facilities—including buildings, roadways, and burial sections—on the selected site shall be prepared for all new cemetery establishment projects for approval by the VCGS. If the project is to be phased into different year programs, the phasing shall be indicated. The master plan shall analyze all factors affecting the design, including climate, soil conditions, site boundaries, topography, views, hydrology, environmental constraints, transportation access, etc. It should provide a discussion of alternate designs that were considered. In the case of an expansion project or improvement project, the work contemplated should be consistent with the VA-approved master plan or a justification for the deviation should be provided.

(d) *Preliminary or “design development” drawings.* Following VA approval of the master plan, the State or Tribal Organization must submit design development drawings that show all current phase construction elements to be funded by the grant. The drawings must comply with the following requirements:

(1) Site development and environmental plans must include locations of structures, demolition, parking, roads, service areas, walks, plazas, memorial paths, other paved areas, landscape buffer and major groupings, and interment areas (including quantity of gravesites in each area). A grading plan including existing and proposed contours at 1-foot intervals of the entire area affected by the site work must be submitted. A site plan of the immediate area around each building shall be drawn to a convenient scale and

shall show the building floor plan, utility connections, walks, gates, walls or fences, flagpoles, drives, parking areas, indication of handicapped provisions, landscaping, north arrow, and any other appropriate items.

(2) Floor plans of all levels at a convenient scale shall be double-line drawings and shall show overall dimensions, construction materials, door swings, names and square feet for each space, toilet room fixtures, and interior finish schedule.

(3) Elevations of the exteriors of all buildings shall be drawn to the same scale as the plan and shall include all material indications.

(4) Preliminary mechanical and electrical layout plans shall be drawn at a convenient scale and shall have an equipment and plumbing fixture schedule.

(e) *Final construction drawings and specifications.* Funds for the construction of any project being assisted under this program will not be released until VA approves the final construction drawings and specifications. If VA approves them, VA shall send the State or Tribal Organization a written letter of approval indicating that the project’s plans and specifications comply with the terms and conditions as prescribed by VA. This does not constitute approval of the contract documents. It is the responsibility of the State or Tribal Organization to ascertain that all State and Federal requirements have been met and that the drawings and specifications are acceptable for bid purposes.

(1) *General.* The State or Tribal Organization shall prepare final working drawings so that clear and distinct prints may be obtained. These drawings must be accurately dimensioned to include all necessary explanatory notes, schedules, and legends. Working drawings shall be complete and adequate for VA review and comment. The State or Tribal Organization shall prepare separate drawings for each of the following types of work: Architectural, equipment, layout, structural, heating and ventilating, plumbing, and electrical.

(2) *Architectural drawings.* The State or Tribal Organization shall submit drawings which include: All structures

and other work to be removed; all floor plans if any new work is involved; all elevations which are affected by the alterations; building sections; demolition drawings; all details to complete the proposed work and finish schedules; and fully dimensioned floor plans at 1/8" or 1/4" scale.

(3) *Equipment drawings.* The State or Tribal Organization shall submit a list of all equipment to be provided under terms of the grant in the case of an Establishment Project. Large-scale drawings of typical special rooms indicating all fixed equipment and major items of furniture and moveable equipment shall be included.

(4) *Layout drawings.* The State or Tribal Organization shall submit a layout plan that shows:

(i) All proposed features such as roads, buildings, walks, utility lines, burial layout, etc.

(ii) Contours, scale, north arrow, and legend showing existing trees.

(iii) A graphic or keyed method of showing plant types as well as quantities of each plant.

(iv) Plant list with the following: key, quantity, botanical name, common name, size, and remarks.

(v) Typical tree and shrub planting details.

(vi) Areas to be seeded or sodded.

(vii) Areas to be mulched.

(viii) Gravesite section layout with permanent section monument markers and lettering system.

(ix) Individual gravesite layout and numbering system. If the cemetery is existing and the project is expansion or renovation, show available, occupied, obstructed, and reserved gravesites.

(x) Direction the headstones face.

(5) *Structural drawings.* The State or Tribal Organization shall submit complete foundation and framing plans and details, with general notes to include: Governing code, material strengths, live loads, wind loads, foundation design values, and seismic zone.

(6) *Mechanical drawings.* The State or Tribal Organization shall submit:

(i) Heating and ventilation drawings showing complete systems and details of air conditioning, heating, ventilation, and exhaust; and

(ii) Plumbing drawings showing sizes and elevations of soil and waste sys-

tems, sizes of all hot and cold water piping, drainage and vent systems, plumbing fixtures, and riser diagrams.

(7) *Electrical drawings.* The State or Tribal Organization shall submit separate drawings for lighting and power, including drawings of:

(i) Service entrance, feeders, and all characteristics;

(ii) All panel, breaker, switchboard, and fixture schedules;

(iii) All lighting outlets, receptacles, switches, power outlets, and circuits; and

(iv) Telephone layout, fire alarm systems, and emergency lighting.

(8) *Final specifications.* Final specifications (to be used for bid purposes) shall be in completed format. Specifications shall include the invitations for bids, cover or title sheet, index, general requirements, form of bid bond, form of agreement, performance and payment bond forms, and sections describing materials and workmanship in detail for each class of work.

(9) *Cost estimates.* The State or Tribal Organization shall show in convenient form and detail the estimated total cost of the work to be performed under the contract, including provisions of fixed equipment shown by the plans and specifications, if applicable, to reflect the changes of the approved financial plan. Estimates shall be summarized and totaled under each trade or type of work. Estimates shall also be provided for each building structure and other important features such as the assembly area and shall include burial facilities.

(Authority: 38 U.S.C. 501, 2408)

(The Office of Management and Budget has approved the information collection requirements in this section under control number 2900-0559)

[75 FR 34005, June 16, 2010, as amended at 77 FR 4475, Jan. 30, 2012]

### § 39.33 Conferences.

(a) *Predesign conference.* A predesign conference is required for all Establishment, Expansion, and Improvement Projects requiring major construction, primarily to ensure that the State or Tribal Organization becomes oriented to VA procedures, requirements, and any technical comments pertaining to