(B) Details of construction necessary to ensure compliance with the requirements of this chapter, together with a full description of the complete installation, including installation methods, construction, and materials as required by the Authority Having Jurisdiction.

(C) A log of soil formations and groundwater level as determined by test holes dug in proximity to any proposed irrigation area, together with a statement of water absorption characteristics of the soil at the proposed site as determined by approved percolation tests.

Exception: The Authority Having Jurisdiction shall be permitted to use Table 16-2 in lieu of percolation tests.

1610.0 Inspection and Testing.

(A) Inspection.

(1) Applicable provisions of this chapter and of Section 103.5 of this code.

(2) System components shall be properly identified as to manufacturer.

(3) Holding tanks shall be installed on dry, level, well-compacted soil if underground or on a level 80mm (3 in.) concrete slab if above ground.

(4) Holding tanks shall be anchored against overturning.

(5) If a design is predicated on soil tests, the irrigation/disposal field shall be installed at the same location and depth as the tested area.

(6) Installation shall conform with the equipment and installation methods identified in the approved plans.

(B) Testing.

(1) Holding tanks shall be filled with water to the overflow line prior to and during inspection. Seams and joints shall be left exposed, and the tank shall remain water-tight.

(2) A flow test shall be performed through the system to the point of gray water irrigation/disposal. Lines and components shall be water-tight.

1611.0 Procedure for Estimating Gray Water Discharge.

(A) Single-Family Dwellings and Multi-Family Dwellings. The gray water discharge for single family and multi-family dwellings shall be calculated by water use records, calculations of local daily per person interior water use, or the following procedure:

(1) The number of occupants of each dwelling unit shall be calculated as follows:

First bedroom	2 occupants
Each additional bedroom	1 occupant

(2) The estimated gray water flow of each occupant shall be calculated as follows:

Showers, bathtubs, and wash basins	95L/day (25 gpd)/occupant
Laundry	57L/day (15 gpd)/occupant

(B) Commercial, Mosques, Industrial, and Institutional. The gray water discharge for mosques and commercial, industrial, and institutional occupancies shall be calculated based on the number of occupants, type of fixtures or the water use records minus the discharge of fixtures other than those discharging gray water.

(C) Daily Discharge. All gray water systems shall be designed to distribute the total amount of estimated gray water on a daily basis.

Example 1:

Single-family dwelling; 3 bedrooms with showers, bathtubs, washbasins; and laundry facilities connected to the gray water system:

Total number of occupants = 2 + 1 + 1 = 4

Estimated gray water flow = 4x(95+57) = 608L/day
(4x(25+15) =160 gpd)

Example 2:

Single-family dwelling; 4 bedrooms with only the clothes washer connected to the gray water system:

Total number of occupants = 2 + 1 + 1 + 1 = 5

Estimated gray water flow = 5 x 57 = 285L/day
(5 x 15 = 75 gpd)

1612.0 Required Area of Subsurface Irrigation/ Disposal Fields (See Figure 16-5).

Each valved zone shall have a minimum effective irrigation area in m^2 as determined by Table 16-3 for the type of soil found in the excavation, based upon a calculation of estimated gray water discharge pursuant to Section 1611.0 of this chapter, or the size of the holding tank, whichever is larger. The area of the irrigation/ disposal field shall be equal to the aggregate length of the perforated pipe sections within the valved zone multiplied the width of the proposed irrigation/disposal field. Each proposed gray water system shall include not less than three zones isolated by valves, and each zone shall be in compliance with the provisions of the section. No excavation for an irrigation/disposal field shall extend within 1.5m (5 ft.) vertical of the highest known seasonal groundwater, nor to a depth where gray water contaminates the ground-water or surface water. The applicant shall supply evidence of groundwater depth to the satisfaction of the Authority Having Jurisdiction.