

## Part IV - Appendix B

### Information on Radiation Shielding Required for Plan Review.

The following information must be provided to the Department for review and acceptance of a shielding plan:

1. Plans shall show, at a minimum, the following:

(a) The normal location of the x-ray system's radiation port; the port's travel and traverse limits; general direction(s) of the useful beam; locations of any windows and doors; the location of the operator's booth; the location of the x-ray control panel, and the location of the wall bucky or chest board, if applicable.

(b) The structural composition and thickness or lead equivalent of all walls, doors, partitions, floor, and ceiling of the room(s) concerned.

(c) A scale drawing of the room(s) concerned.

(d) The type of occupancy of all adjacent areas inclusive of space above and below the room(s) concerned. If there is an exterior wall, show distance to the closest area(s) where it is likely that individuals may be present.

(e) The type of x-ray equipment and the maximum technique factors.

(f) The type of examination(s) or treatment(s) which will be performed with the equipment.

(g) Location of the darkroom and the area where the film will be stored. Any shielding which will be used to protect the film must be noted. The use of filmless systems shall be indicated in writing.

2. Information on the anticipated workload of the x-ray system(s). Give the number of individual exposures per week. This is the total number of exposures (not patients) taken each week. This figure should include allowances for future growth so that the shielding will continue to remain adequate.

3. The most common exam and the average technique factors for this exam must be included. The mA, kVp, exposure time, and number of exposures per week (workload) will allow the workload of the facility to be calculated. If exposures are phototimed, include manual backup techniques.

4. Include all source-to-image distance (SIDs) used and the percent of time each will be used. Include the percent of time the beam will be directed toward the table and the chest board, upright bucky, or head unit, if applicable.

5. Individual barrier radiation shielding specifications and descriptions of all assumptions that were used in the shielding calculations.