

to: Atussa Harmon / Senior Project Manager
from: Phillip Patton/Radiation Safety Department
date: 11/30/2025
subject: Structural Radiation Shielding Requirements for
OHV FSED Viera

Ms. Harmon,

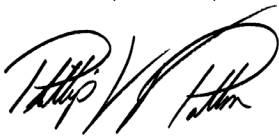
This memo is to document the shielding required for new OHV FSED in Viera. The shielding calculations were performed using NCRP 147. The shielding required was calculated using a weekly workload of 150 patients for the x-ray room and 100 patients in the CT room. The recommended shielding requirements for are in Table 1. The room diagram is shown in Figure 1.

In general, calculated shielding is often overestimated due to assumptions on workload, use factors, and occupancy factors. I have attempted to provide more realistic factors based on information from the facility and modified occupancy estimates. The workload is set high enough to allow for minor increases without requiring further shielding. **All lead sheeting should extend to a height of at least 7 feet above floor level. Nail heads do not need to be overlapped. Overlying drywall seams should be offset, and great care should be exercised in taping and plastering seams. No gaps in drywall are acceptable.** If you have any questions, please contact me at 321-841-4294.

References

- (1) National Council on Radiation Protection and Measurements (NCRP) Report 147, Structural Shielding Design for Medical X-ray Imaging Facilities, NCRP, 2004
- (2) Florida Administrative Code 64E-5, (Radiation Protection Regulations)

Sincerely Yours,



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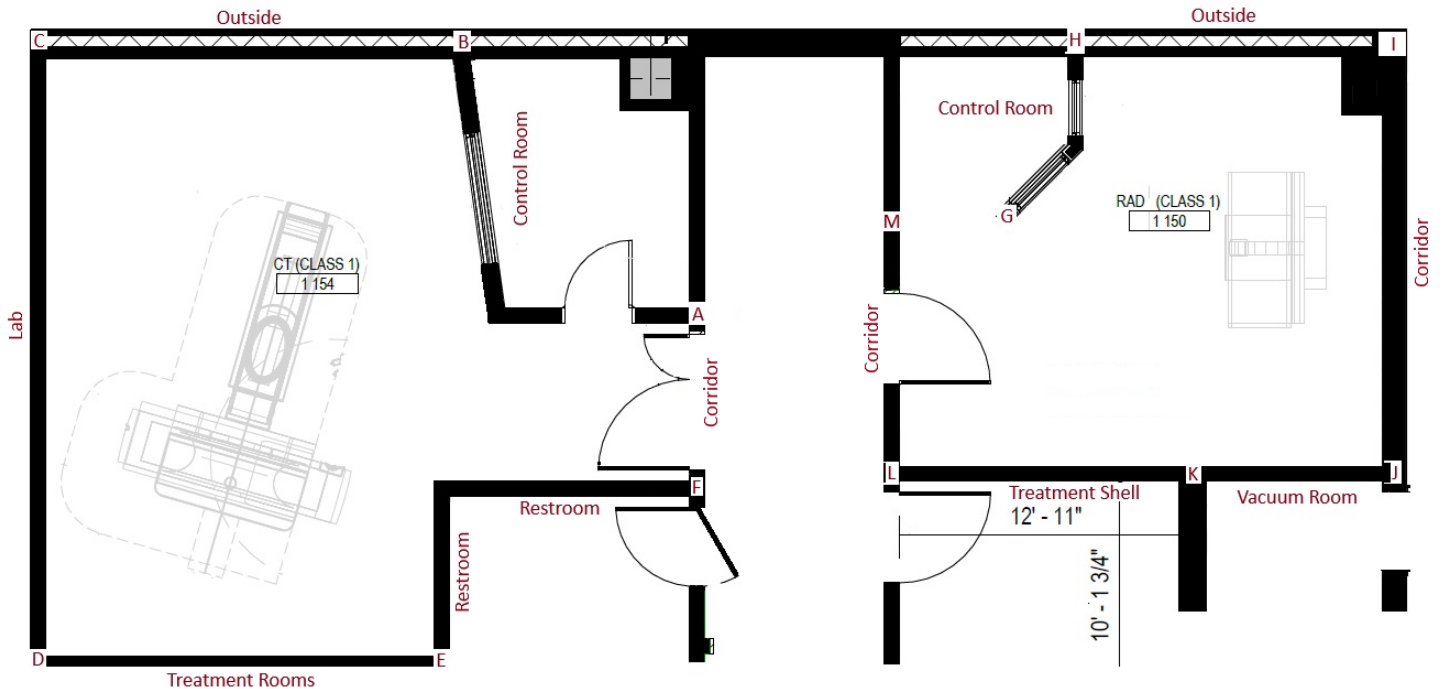


Figure 1: Rad room 1150 and CT room 1154 diagram.

Table 1. Shielding Requirements for the Rad room 1150 and CT room 1154.

Summary			
Barrier	Area Name	Type	Recommended Shielding
A-B	Control Room Wall, Door, & Glass	Restricted	Recommend 1/16" of lead in this barrier.
B-C	Outside Wall	Unrestricted	Recommend 1/16" of lead in this barrier.
C-D	Lab Wall	Unrestricted	Recommend 1/16" of lead in this barrier.
D-E	Treatment Room Wall	Unrestricted	Recommend 1/16" of lead in this barrier.
E-F	Restroom Wall	Unrestricted	Recommend 1/16" of lead in this barrier.
F-A	Corridor Wall & Door	Unrestricted	Recommend 1/16" of lead in this barrier.
G-H	Control Wall & Glass	Unrestricted	Recommend 1/16" of lead in this barrier.
H-I	Outside Wall	Unrestricted	No addition shielding needed due to concrete present.
I-J	Corridor Wall	Unrestricted	Recommend 1/32" of lead in this barrier.
J-K	Vacuum Room Wall	Unrestricted	Recommend 1/32" of lead in this barrier.
K-L	Treatment Wall	Unrestricted	Recommend 1/32" of lead in this barrier.
	Ceiling	Unrestricted	No additional shielding needed (1.5 inches of concrete).
	Floor	Unrestricted	No additional shielding needed (1.5 inches of concrete).