**By Debra Valine**
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With a sound similar to that of a large thunderclap, Bldg. 501 at Fort Myer, Va., will be reduced to rubble. The implosion, scheduled for sunrise in early June will take approximately 15 seconds.

Imploding Bldg. 501, Tencza Terrace, is part of an effort to reduce the number of outdated buildings on Army installations. Imploding the building will save $100,000 and at least a month of time compared to traditional demolition methods.

The Installation Management Agency and Fort Myer turned to the U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville, for guidance on the best way to accomplish the mission. As the Installation Support Center of Expertise for facilities demolition and reduction, Huntsville Center supports the planning, management and execution of the Army-wide facilities reduction program.

"The demolition of Tencza Terrace demonstrates the great partnership between the Installation Management Agency and the U.S. Army Corps of Engineers," said Col. Thomas A. Allmon, commander of the Fort Myer Military Community. "We in the Fort Myer Military Community lean heavily on the Corps' expertise for all our major projects. The partnership we've established between our installation staff and the Corps working our demolition is fabulous. An effort of this magnitude requires a synchronized effort by all involved for it to be a success, and I know the team we've established is up to the task."

Bldg. 501 is a 150,449 gross square foot, 13-story family housing facility built in 1966 for junior noncommissioned officers. The cost to remove the building is estimated at $1.6 million and will be complete by June.

"We worked with IMA to develop a contracting tool that did a couple of things — it got better prices for what was being done and met environmental goals of the Army," said Michael Norton, a project manager in the Facilities Reduction Program.

IMA had found that installation Directorates of Public Works were using historic data — how much it cost to demolish a building before — rather than looking at demolition experts and nationwide costs for demolishing buildings, Norton said.

"We awarded an Indefinite Delivery, Indefinite Quantity contract initially for the IMA Northeast Regional Office (NERO) to one small business: Bhate Environmental Associates, Inc., of Birmingham, Ala. This firm demonstrated that it has the knowledge and means to demolish buildings using industry demolition best practices," Norton said. These industry best practices reduce the cost of demolition often as much as 50 percent from what installations have been paying.

"Bringing down the building should take about 15 seconds and sound like a large thunderclap," said Tom Peck, a professional engineer with Bhate Associates. "It will sound like the grand finale at an inexpensive fireworks display."

There will be a test blast the Friday before the implosion actually takes place, said Raymond Zukowski, a field operations manager with Controlled Demolition, Inc., of Phoenix, Md. "We put the dynamite in place on Friday and do a test blast. On Saturday we go back in and install the caps and other items needed for Sunday. Once the sun comes up on Sunday, the building will come down."

Bldg. 501 is constructed of brick and concrete and is located on a sloped site. Once the building is imploded, the brick and concrete will be crushed on-site, rather than removed to a landfill and the resulting rubble used to level the slope. Most of the materials that normally would have gone to a landfill will be recycled or reused, Norton explained.

"The new Army waste diversion standard is 50 percent by weight," Norton said. "That is important because the diversion standard is by weight, not volume. We will exceed that goal. Baltimore District is providing the contracting officer representative and quality assurance services for us. They have someone on the ground watching the contractor to ensure he is accomplishing his approved work plan."

Work will be accomplished in two phases. In Phase 1, utilities will be disconnected and rerouted; asbestos abatement will be conducted; and soft demolition performed.

"Utilities such as water, sewerage, gas, TV, electricity, just like in a house, will have to be turned off," Norton said. "When you tear a building down, you do not want a broken gas line, etc. The next part of it is that there is asbestos in the building — in the floor tile, in the adhesive, and on the hot water tank in the basement — that is considered hazardous. That asbestos has to go away, completely out of the building. It is critical that all asbestos- containing material be removed so when the remaining rubble is crushed to use as fill material, it is not considered contaminated.

"Soft demolition is the stripping or gutting of the inside of the building," Norton continued. "We will remove sheetrock, doors, cabinets, windows, piping, fixtures, metal, etc. Most of these materials will be recycled or salvaged. Bhate has even found a company to recycle the sheetrock. The goal of Phase 1 is to reduce the building to a structural skeleton, so that when the building is imploded, the leftover rubble is suitable for crushing into material which is reusable.

In Phase 2, the contractor will implode the building and come in with a crusher to crush the brick and concrete rubble to a small diameter so that it can be used as fill and compacted. The metal rebar will be removed and recycled. The compacted debris will provide the right foundation to allow the Fort Myer DPW to use the site to build roads or small structures. The new slope shouldn't erode and shouldn't need a retaining wall, Norton said.