As featured in Demolition magazine

After the Boom: Busting Out the Heavy Artillery.

Wrecking Corporation of America puts DC Convention Center cleanup in full swing.

Largely because of its status as the nation's capital and a world political center, it takes a lot to get the attention of the citizens of Washington, DC. But on December 18th of last year, for 20 seconds the city came to a temporary standstill as Tennessee-based Demolition Dynamics, subcontracting to Wrecking Corporation of America (WCA), leveled the city's old convention center. No sooner had the smoke cleared on the implosion, then WCA was at work removing the estimated 10,000 tons of structural steel and rebar and processing the 50,000 cubic yards of concrete debris left in the wake of the demolition. And, with WCA's eight attachment-equipped Hitachi excavators providing the bulk of the cleanup and processing muscle, the area hasn't seen this much orange since Syracuse University was in town.

Out With the Old

The massive pile of debris facing WCA's crew was once a prominent, 400,000 square foot multi-level structure, home to countless Washington-area conventions, expos, fairs and monster truck rallies. However, due to a lack of sufficient exhibition space, it was seen as outdated almost from the time of its completion, and was replaced in October of 2003 by a new, 2.3 million sq. ft. convention center less than two blocks away. According to Bill Zell, WCA's senior project manager, the Alexandria, VA-based firm has called upon an arsenal of equipment to clear the site and make it ready for commercial and residential development.

"This project, though fairly sizeable, is pretty typical for the work we do in and around the DC area. We've done the overwhelming majority of structures of seven stories or more in the DC area in the last decade or so. It's really our bread and butter."

Razing the Roof

Long before the implosion, WCA personnel were onsite doing advance work which included stripping the interior of almost anything combustible. Abatement, made necessary by the discovery of asbestos in a mastic used on all the mechanical insulation and ductwork, moved forward as well. A more formidable challenge arose in dealing with the center's roof which consisted of two layers of rubber with asbestos

sandwiched between those two layers. The firm obviously didn't want to risk any material becoming airborne in the implosion, so, using cranes, they painstakingly lifted off the entire 400,000 sq. ft. of roofing and removed it for transport and disposal. With the abatement and interior work completed, the site was ready for the implosion and WCA's subsequent cleanup.

"Even the implosion was a bit out of the ordinary," says Zell. There are a couple of adjacent buildings — including the Office of Homeland Security — that were a little too close for comfort. So we ended up leaving two bays, about 44,000 square feet, standing on the south side of the site and leveled the rest. We will take those bays down the old-fashioned way — with a wrecking ball — and then tackle the debris as we are now. We've found that, even with all our attachments and modern equipment, there are still times when there's no substitute for the ball."

As a result of the blast, the remaining roof structure collapsed onto the first floor slab, which, in turn collapsed onto the slab on grade, says Zell. "Right now we are getting all the steel out, after which we will work on processing the first floor slab and columns. At that point we will try to work on the slab on grade as long as possible until we finally process it and the footings."

An Impressive List

To make all that happen in a timely and efficient manner, WCA is relying upon its fleet of Hitachi excavators equipped with a broad range of hydraulic attachments, each providing its own contribution to the cleanup effort.

"We are using a Zaxis 270 with a bucket and thumb, primarily for loadout of material; a pair of EX330s with a bucket and thumb and a grapple, again for material handling; a Zaxis 330 with a LaBounty CP 80 concrete pulverizer for downsizing concrete and freeing it from rebar; a trio of 450s: a Zaxis 450 with a new LaBounty100HDR grapple, and a pair of EX450s with another concrete pulverizer and a LaBounty MSD 70R mobile shear, for cutting structural steel; and finally a Zaxis 600 with a LaBounty MSD 100R mobile shear for our heavier steel processing. For many of the footings and heartier concrete areas, we are getting great results using a Gradall Model XL 5200 excavator with a Magnum 5000 ft./lb. impact hammer. We find that the Gradall unit, because the hammer at the end can be rotated, affords us a lot more versatility than we can get with a standard excavator/hammer combination. In situations in which there is an obstruction in the way, for example, we can simply 'scope out the boom, rotate the hammer and get access to the concrete. That has really benefited us in several areas of the site already."

Keeping it Out of the Ground

Wrecking Corporation of America is slated to be at the Convention Center cleanup site for about six months. Because the structure was stripped prior to implosion, Zell estimates that about 95% of the material left behind will be either be recycled or reused onsite. "The steel, of course, is being sent to the mill for recycling," he says. "The concrete is a different story entirely. Because this site is being made ready for development, we are going to have to fill in the void left from the center's basement areas. So we will bring a crushing and screening plant onsite, run all that concrete through and create a nice fill product with it. While a 95% material recovery rate seems impressive, we have the attachments — the shears, the hammers, the grapples, the concrete pulverizers — to get those numbers. But an attachment is only as good as the unit that's powering it, and we've been really pleased with the level of performance we've gotten out of our Hitachi machines. They've been making it happen for us day in and day out."