



BUFFALO

BY MEGHAN HOGAN / PHOTOGRAPHS BY JET LOWE /

re-booting industrial america

HISTORIC AMERICAN ENGINEERING RECORD





PREVIOUS PAGES: Three grain elevators: the Perot, the Marine "A", and the American. ABOVE: The Great Northern Elevator with the Merle M. MC Curdy and tug boat.



ABOVE: The circa 1897 Electric Grain Elevator, looking southwest. The Electric, demolished in 1984, was one of the world's first electrically powered grain elevators.



JUST TAKE A TRIP ON ONE OF THE CANAL BOAT TOURS AND YOU CAN SEE A VERITABLE MUSEUM COLLECTION OF GRAIN ELEVATORS, HULKING SKYWARDS LIKE ABANDONED SKYSCRAPERS.

For the Irish immigrants who had to hand-deliver the grain from the docks to the canal, the process was slow, laborious, and often dangerous, given the explosive nature of grain dust. Off-loading could take hours and the city's harbor was perpetually clogged until 1842, when Buffalo entrepreneur Joseph Dart revolutionized grain transport yet again. With the help of engineer Robert Dunbar, he invented the world's first grain elevator, an ingenious structure with an elevating "marine leg" mechanism and a belt-bucket system that allows for the continuous movement of grain up into the elevator for storage. The idea was spun off from a system used with textile and flour mills. It was a big hit with grain shippers, desperate to speed things up.

The immigrants became "scoopers" who, after the marine leg was lowered into the ship hold, scooped the grain up into the elevator with help from a complex system of ropes and pulleys. It was a very prominent job around the turn of the century, says Lorraine Pierro, president of the Industrial Heritage Committee, Inc., adding that Buffalo was the last American city to employ them. Explosions remained common, and many of the elevators, made of wood, were lost to fire. Eventually they gave way to a "Concrete Atlantis," as architecture critic Reyner Banham called it, the cluster of concrete and steel towers rising in their place. "Fantastic and unreal!" noted the *Buffalo Morning Express* in 1899 of their rapid ascent. "They seem like monstrous mushroom growths, sprung in a moment from the water's edge, and ready as suddenly again to disappear."

Grain processing got a big boost when nearby Niagara Falls began producing cheap electrical power, and in 1897 the Electric and the Great Northern, the world's first electrically powered grain elevators, further modernized the industry. The boom didn't last, however. In 1932, Ontario's Welland Canal, large enough to handle boats directly from the Great Lakes, greatly reduced grain shipments to Buffalo. The death knell was the opening of the St. Lawrence Seaway—big enough to accommodate ocean vessels—in 1959. Most grain processors eventually left the region, along with other affected industries, leaving a rust belt economy struggling to make a comeback.

The Buffalonian view of the structures still standing is mixed. Some would like them to disappear; others hope they last forever. "The idea that they are going to last as long as the pyramids is kind of a rosy view," says Thomas Leary, a Youngstown State University professor and a historian for some of the HAER documentation. Saving the elevators—despite the steep cost of demolition—is going to be hard. They sit on prime waterfront property. Five have been lost to the wrecking ball since 2000. The 75-year-old H-O Oats Elevator was replaced with a Seneca casino

in 2006, the same year the H.R. Wait-designed elevator, once home to George Meyer Malt & Grain, the largest maltster on the East Coast, was torn down due to extensive deterioration. Last spring, part of the GLF Elevator Complex came down, called a safety hazard by its owner despite some reports to the contrary. Demolition attempts have repeatedly been made on the Great Northern—the last “big box” grain elevator still standing in North America, operated by Archer Daniels Midland—with only the city’s preservation board standing in the way. It remains one of the nation’s largest flourmills.

Most elevator owners are not receptive to adaptive re-use, given the cost, but projects around the country have shown it can be done. Thirty-six Quaker Oats silos in Akron, Ohio, were transformed into a luxury hotel featuring 196 perfectly round guest rooms; a Philadelphia elevator is now a mix of offices and penthouses; and a grain complex in Carrollton, Texas, has become the tallest indoor climbing gym in North America. Just using the ground floor and sealing off the rest is an option, points out Tim Tielman, Executive Director of the Campaign for Greater Buffalo History, Architecture, and Culture: “The galleries are magnificent architectural spaces that are also very flexible.”

His group is of the mind that reuse isn’t necessary for preservation. “The Coliseum of Rome hasn’t had a use for 2,000 years,” he says. Indeed, the elevators inspired early modernist architects like Erich Mendelsohn and Walter Gropius just as the monuments of the old world did for their predecessors. “They do have an almost Egyptian monumentality in many cases, and in abandonment and death they evoke the majesties of a departed civilization,” writes Banham in *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture*. “They deserve far more respect and honor than they commonly receive in America, for—as much as the work of a Richardson or a Wright—they represent the triumph of what is American in American building art.” And today, because of Mendelsohn’s influence, “all the German students know about our grain elevators,” says Pierro in reference to the sellout boat tours her organization has offered for the last 26 years.

“The first question people ask is whether they can go inside,” she says. The answer is no, they can’t, but the many images online suggest that where there’s a will, there’s a way. Pierro’s group, which funded the HAER work—which was used to mount an exhibition—is working on a waterfront trail so that Elevator Alley, as the area is known, can be seen on foot.

“There’s a big thrill in going into a place that feels like a time capsule,” says Steve Duncan, a New York City-based urban historian who explores and photographs derelict sites around the world, once visiting Buffalo as host for the Discovery Channel’s *Urban Explorers* program. He not only paid a visit to the Concrete Central Grain Elevator, but also the Art Deco-style Central Station, closed since 1979; the Gothic-style Church of the Transfiguration, closed since 1993; and the drain underneath the Scajaquada Creek. Duncan says “industrial boomtowns” like Buffalo, ripe with vacant infrastructure, are rich with attractions. Indeed, the city has a reputation for its wealth of abandoned structures, a magnet for urban exploration, or “urbex.” And while the trend remains somewhat controversial in the preservation community—urban explorers do sometimes vandalize and steal—Duncan points out that there’s a good thing about people wanting to explore historic ruins, even if just for the thrill. Many who

start out “hopping fences” go on to become preservationists. The photos and stories they collect, as part of a burgeoning online community, have created a virtual encyclopedia for audiences who wouldn’t otherwise seek out written histories—or even care—about these places. “It’s a shallower approach, but it’s more digestible,” Duncan says of such documentation. Unfortunately, the attention comes too late for one of the nation’s iconic industrial sites, but thanks to the Historic American Engineering Record its story lives on.



RIGHT: A view of the mushroom columns inside the Superior Elevator.

THEY SEEM LIKE MONSTROUS MUSHROOM GROWTHS, SPRUNG IN A MOMENT FROM THE WATER'S EDGE, AND READY AS SUDDENLY AGAIN TO DISAPPEAR. —THE RISE OF THE GRAIN ELEVATORS. IN THE WORDS OF THE BUFFALO MORNING EXPRESS, 1899





ABOVE: Dismantling a gas line at the Bethlehem Steel Plant, outside Buffalo. The plant, shuttered in the early 1980s, fell victim to the nation's declining steel industry.



WITH FUNDS FROM THE BUFFALO AND ERIE COUNTY HISTORICAL SOCIETY, THE HISTORIC AMERICAN ENGINEERING RECORD DOCUMENTED THE SITE AT TIMES RIGHT IN FRONT OF THE WRECKING BALL.

On the southern outskirts of Buffalo, in the suburb of Lackawanna, once stood the Bethlehem Steel Plant, the region's steelmaking king. With funds from the Buffalo and Erie County Historical Society, the Historic American Engineering Record documented the site at times right in front of the wrecking ball.

Started as the Lackawanna Steel Company, the 1,500-acre complex was built in 1902, something of a trendsetter for the steel plants that would materialize around the waters of the Great Lakes. Before then, steel plants had been situated inland in cities such as Scranton, Pennsylvania—where the company previously owned an operation—but officials were lured to western New York by the lakes and the rail lines, which promised ease of shipment for materials raw and finished. As one official noted on the process of steelmaking, "It takes both water and rail facilities and Buffalo has both."

The complex, designed with transportation as a chief concern, was impressive. A 4,000-foot-long ship canal into the site provided 8,000 feet of dock frontage, with the coke ovens to the west, and the ore yards, blast furnaces, open hearths, rolling mills, and shops to the east. "All the equipment necessary for the various stages of iron and steel production was aligned in a series of parallel rows conforming to the flow of materials through the plant," notes Leary in *From Fire to Rust*, a chronicle of the plant's rise and fall written with Elizabeth C. Sholes. Ten miles of narrow-gauge track, for use by 32 locomotives, quickly transferred materials. The complex boasted "technology on the cutting edge of early 20th-century engineering," write the authors. Waste gas was recycled for other operations, saving heat and fuel. "The steelworker of but ten years ago will feel himself lost when he makes a visit to the colossal plant now being constructed," marveled a Buffalo journalist in 1900. Unfortunately, the company was not good at staying state-of-the-art, which led to decreased productivity and, eventually, demise. By 1922, when Bethlehem Steel acquired the complex for \$60 million, it was "antiquated." The steel giant poured \$40 million into modernizing and in the years ahead became one of the world's largest steelmaking companies. World War II was particularly lucrative for Bethlehem's operations. The Buffalo plant, employing 20,000 workers, was a backbone of the economy "not just for Lackawanna but the entire surrounding area," says Michael Malyak, a tally clerk from 1959 to 1967 and now director of the town's Steel Plant Museum.

Working with steel was dangerous, even as technology made equipment safer. In 1969 alone, as *From Fire to Rust* documents, workers made more than 58,000 emergency visits to the local clinic, and labor disputes regarding safety were rife. Business boomed into the 1960s, but—much as with grain—the heyday of steel was on the wane. Bad management, poor business strategies, strikes, and the rise of cheaper imported steel all played into the decline across America. "It was a sign of the times," says Malyak. "The nations that had been destroyed by World War II were coming back and were able to compete." Bethlehem Steel was losing in the competition. In 1977, the plant reduced its workforce, setting

off a regional fiscal crisis. After a record loss of \$1.5 billion in 1982, the company closed the Lackawanna plant, a devastating blow "because of the trickle down to all of the mom and pop businesses," Malyak says.

Saving one of the oldest buildings didn't pan out. On top of the difficulty in preserving such a structure, says Leary, "there's a tendency in industrial preservation to zero in on the physical structures and exclude interpretation. It's like the skeleton of the dinosaur in a museum that just stands there. There's still the question of how it functioned." Buffalo, he says, allows visitors to "follow several different industrial areas all in one thread." The city still has its Albert Kahn-designed Pierce Arrow auto factory, an industrial landmark, and the expansion of the transportation museum shows the city hasn't forgotten its roots. The Western New York Railway Historical Society and the Steel Plant Museum will move from cramped quarters in the basement of the Lackawanna library to the soon-to-be Heritage Discovery Center, a circa 1917 power plant renovated for their use.

The city, with unemployment lower than the national average, is optimistic about the future. "We weathered the great recession better than most metros," Magavern says. While Buffalo isn't growing, its past may prove prologue. On the very land where Bethlehem Steel stood is the recently constructed Steel Winds, one of the world's largest urban wind farms. Eight 400-foot-tall windmills stand at the site, their continuously rotating blades representing the area's hope for a future where it is known as the Buffalo Green Belt, rather than a rust belt. With its industrial infrastructure, close source of hydropower, and plenty of sun and wind, the city could become the nation's renewable energy hub, with projects such as a green development zone on the impoverished west side, where the nonprofit PUSH Buffalo is transforming abandoned homes into sustainable housing, and Honeywell Research Lab's production of a new environmentally friendly air conditioning coolant. The banking industry is thriving while the University at Buffalo, one of the city's four state colleges, has become a world-class research campus, part of a burgeoning "Eds and Meds" economy.

At the center of it all are the gems of greatness, from over a thousand acres of Frederick Law Olmsted-designed parkland to several Frank Lloyd Wrights to a magnificent Art Deco-style City Hall, all part of the tourist draw. But the city's own people may prove the most important ingredient in a revival. Many younger residents have stayed, or have been lured back by the inexpensive cost of living. "A lot of them are very interested in the grassroots projects," Magavern says. "There's been a real surge of energy and historic preservation is definitely a part of their vision."

This year's National Preservation Conference features a number of industrial heritage sessions developed by the National Park Service and the National Trust for Historic Preservation as part of a new initiative with the J.M. Kaplan Fund, a major philanthropic entity emphasizing "places and phenomena either too local or too international to be addressed adequately by national governments."

During the conference, Lowe's photos will be on view at Buffalo's CEPA Gallery.

contact points web HAER http://memory.loc.gov/ammem/collections/habs_haer/index.html Erie Canalway National Heritage Corridor www.eriecanalway.org/ Niagara Falls National Heritage Area www.nps.gov/nifa/index.htm Lackawanna Steel Plant Museum <http://steelpltmuseum.org/> Partnership for the Public Good www.ppgbuffalo.org/ Industrial Heritage Committee www.buffaloindustrialheritage.com/ Campaign for Greater Buffalo History, Architecture & Culture <http://greaterbuffalo.blogs.com/>

ABOVE: The Bethlehem Steel Plant in the midst of demolition.





THE STEELWORKER OF BUT TEN YEARS AGO WILL FEEL HIMSELF LOST WHEN HE MAKES A VISIT TO THE COLOSSAL PLANT NOW BEING CONSTRUCTED.

-BUFFALO JOURNALIST MARVELLING AT THE COMPLEX IN 1900