

The Rise, Fall, and Impending Reincarnation of Norman Fosters' Harmon Tower: How Las Vegas has the opportunity to set a new precedent in construction waste management through architectural autopsy

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Images courtesy of University of Nevada Las Vegas, University Libraries (Implosion to make way for CityCenter Las Vegas)

INTRODUCTION

Las Vegas understands excess as a cultural imperative, but it is still learning about waste's role in its urban/suburban ecosystem. While Fresh Kills Landfill in New York is closed, Apex Landfill of Las Vegas is the nation's new largest dump equaling its Big Apple counterpart in area (2,200 acres) and exceeding it in daily refuse (+15,000 tons/day) during times of the city's rapid expansion including construction and demolition debris. In anticipation of one of the world's most costly and contentious court cases surrounding modern architecture, we are examining the circumstances that have led up to CityCenter's situation with the impending implosion of Harmon Tower, designed by Foster + Partners and constructed by Perini Building Company, without having ever opened its doors to the public due to unacceptable reinforced concrete columns. Before absolving to bury The Harmon, we analyze the opportunities for lessons to be gained in removal from its current condition. As its fate is all but determined (a court date is set for the summer of 2013, and the judge has approved the demolition of the tower...), we want to exhume the reinforcement buried within each column in lieu of exploding the entire structure in order to construct a virtual "as built" model for postmortem study. Through careful autopsy of the architecture, calculations and simulations based on the exact placement of rebar (or lack thereof) could help determine the relationship between fear of building failure and indisputable evidence of its breaking point.

DYNAMITE AND DESIGN

Over the last several decades, Las Vegas has matter-of-factly imploded architecture to make way for the next generation of architecture (occasionally only a single generation into the life of the structure). The lifecycle of building

along "The Strip" illustrates a hyper-condition as a backdrop for reinventing a paradigm of waste management and ecological issues. While one can easily argue against the environmental instability of the "build it up, tear it down, build it up again model", it may be necessary to reconsider the commas in a contemporary condition. They provide a moment to pause and a time to reconsider our actions and reactions toward architectural life cycles.

To reestablish the status quo, an overview of iconic Las Vegas demolitions was revisited. The predecessor, the implosion, and the property today are presented as a means of recognizing what the population sees but more importantly of suspending our understanding of what is happening behind the scenes; including how the debris was managed, where the waste was taken, and a sense of the materials' economic equivalent in the marketplace (if had it been considered as a resource).

FRESH KILLS VS. APEX LANDFILL

Nearly all demolition debris from Las Vegas implosions has been trucked from The Strip to Apex Landfill about fifteen miles north of the valley where it sits amongst the garbage picked up from area households and businesses twice weekly. To provide a better sense of the nation's largest landfill, a comparative analysis with Fresh Kills Landfill of New York City is offered. Once touted as the largest landfill, Staten Island's Fresh Kills Landfill servicing New York City was established in 1947 and grew to a staggering scale before it was closed in 2001. At 2,200 acres it was coincidentally the largest man-made structure. Now, that

honor (or ominous title) goes to Apex Landfill of Las Vegas, Nevada—the country's largest landfill. Currently, it matches Fresh Kills' 2,200 acres but includes room to expand to 12,000 acres. At the height of operations, Fresh Kills received up to 13,000 tons of garbage per day. Apex routinely hit 15,000 tons during the economic boom preceding the recession. Fresh Kills exceeded the height of the Statue of Liberty by several meters and might have become the highest point on the East Coast if it continued operations. Apex quietly fills a valley surrounded by mountains, which shield views from travelers on Interstate 15. The layered growth of garbage is set to continue for the next 200 years based on current dumping rates.

While doing calculations to determine the anticipated weight of the Harmon Tower's debris upon arrival to Apex Landfill, I was reminded of the film, "How Much Does Your Building Weigh, Mr. Foster?" tracing Norman Foster's quest to improve the quality of life through design. There was a realization, at that moment, that architectural redesign, reduction, or redevelopment of demolition, waste management, material economies, etc. could play a more profound role in improving quality of life than any fireworks or fanfare (associated with most other Vegas implosions) and possibly even more than the initial building design itself.

The ensuing explorations do not seek a solution to the problem but invite more provocative proposals of how architecture can elicit greater consciousness of contemporary conditions.



Images courtesy of Google Maps (comparison Apex Landfill vs. Freshkills Landfill)



BURN IT

Burning Man is an annual gathering of tens of thousands of people in the Black Rock Desert of Northern Nevada. "More like a city than a festival" it promotes gifting, self-reliance, leaving no trace, and participation among its ten principles. With particular interest in leaving no trace, Burning Man also attempts to leave a site better than it was found. CityCenter's connection to environmental design, brownfield redevelopment, and sustainable urbanism might suggest that The Harmon essentially functions as "the burning man" of Las Vegas Boulevard. Whether ceremoniously engulfed by flames or adapted to smolder on site in a scheme to repurpose the tower as a co-generation plant. The Harmon could not only harness energy from its own demise but also develop clean energy from the waste produced by its fellow facilities. Like the centerpiece of Burning Man, The Harmon stands to symbolize the need for leaving no trace after the follies of the future have run their course.

BURY IT

After \$9 billion of research, development, and partially constructed containment areas within the mountain ridge just 100 miles north of Las Vegas, Yucca Mountain represents one of the world's most studied pieces of geology. After being the topic of discussion since 1983, it was finally defeated in 2009. We boast the largest landfill but loathe the biggest nuclear dump. Secretary of Energy, Steven Chu said, "Yucca was supposed to be everything to everybody, and I think, knowing what we know today, there's going to have to be several regional areas." Similarly, \$9.2 billion CityCenter was envisioned as many things to many different people. Ultimately, it took the creation of a "city within a city" to help the public recognize that Las Vegas was a city with center(s) before CityCenter. As strides are made toward clean renewable energies and disarmament of nuclear weapons continues, reliance on the promise of Yucca's mega-storage subsides. It can function as the "boutique" storage facility of the federal government. Like the downsizing and apparent "defuncting" of the boutique hotel, one could still argue for and against life safety surrounding the Yucca Mountain nuclear Waste Repository.

SEND IT

For sixty years, **the town of St. Thomas** laid below the waters of Lake Mead. The Colorado River gave rise to settlers inhabiting the area along the bank around the turn of the last century, but as the water levels rose with the construction of the dam, the Colorado consumed the small town. For several decades, reunions of the townspeople were reminders of mankind's relationship with the Mojave Desert. With water elevations that haven't been seen since shortly after the coming of the dam, St. Thomas is once again on dry land. The second coming of the town calls for consideration, but its context falls outside of the consciousness of most citizens, today. It has been "out of sight, out of mind" for over half a century, and its original construction wasn't significant enough to cause major concern for its loss. The significance of The Harmon has captured the attention of a global audience, and the integration of its demolition with the drying of Lake Mead may signal the synthesis of natural ecologies with constructed systems. Whether a somber tool for the relative measurement of water levels or a cold reminder of the depths design has traversed, a tower site within the trenches of the slot canyons would allow for inhabitation and evaluation amidst the water/land; a great learning tool.

