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From Eyesore to Urban Asset

The Transformation of Abandoned Railroad Structures in American Cities

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Robert M. Lau received his Bachelor of Architecture degree from the Illinois Institute of Technology (host institution for the CTBUH) and his Master of Business Administration at the Chicago School of Real Estate at Roosevelt University.

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He has written several articles for the CTBUH Journal. He presented the paper 'A Platonistic Program for Block 37 in Chicago's Loop' at the December 2001 CTBUH conference, Building for the 21st Century, London and the paper 'Financial Aspects That Drive Design Decisions' at the CTBUH 2005 conference in New York City. He was also a member of the NY conference's committee that reviewed the papers to be presented.

In addition to practicing architecture in Chicago, he is a Construction Committee member with the Windy City Habitat for Humanity (local affiliate).

...frog

"The building was a prince, it turned into a frog, and we have to turn it back into a prince again."

John Gering, Managing Partner of HLW International on the UN Headquarters first major refurbishment. From "UN Headquarters Gets $1.8 Billion Facelift," Architectural Record, Sept 20, 2010.

"As is the case with the High Line in New York City, the City of Milwaukee benefits from its Crossroads Project transformation with increased tax revenues from previously vacant buildings."

The 19th century was a time of dramatic urbanization in America. The vehicles which allowed and propelled this rapid urbanization were the interstate railroads and intracity rail transits. Cities boomed at rail terminals, feeding off of the efficient transportation and developing into major centers of transportation and industry. As cities continued to evolve in the early 20th century, the conflicts of street traffic (specifically automobiles) with rapid transit quickly intensified, driving railroads to elevate their train lines. Then, with the introduction of the commercial airline and interstate highway system, the airplane began replacing the railroad as the standard for passenger service and the trucking industry began competing for freight service. The empire created by the railroads evolved into airplane passenger service, rail and highway freight service, and intracity rapid transit.

As important as these structures were at one time, many of them are now decaying eyesores for the communities in which they exist. As these remnants of the railroad age often exist in the center of growing American cities, local governments have significant incentive to revitalize these "dead zones" into vibrant neighborhoods. Besides attracting new economy-stimulating developments, cities can anticipate an increased tax base that justifies their involvement in these redevelopment projects.

This paper will discuss the recent transformations of railroad structures in New York City and Milwaukee as well as future plans currently being developed. With careful forethought and community support, these historic structures and spaces can be redeveloped into positive pieces of American cities which stimulate new developments and revitalize neighborhoods.

The High Line in New York City

In 1847, New York City authorized a railroad to run parallel to the Hudson River along the west side of Manhattan (High Line, 2010). This railroad was to access the warehouses and factories along the riverfront in the Meatpacking District. By the end of the 19th century this industrial area had become one of the busiest on the North American continent. As the automobile became a major part of American life, the 1920s saw a dramatic increase in accidents between cars and trains. A significant number of these occurred on New York City's west side railroad. In an attempt to rectify the issue, the city and state of New York negotiated the West Side Improvement Project with the New York Central Railroad in 1929. This agreement created 20.8 kilometers (12.92 miles) of elevated railroad above the grade-level traffic. The elevated railroad was designed midblock, as opposed to over the streets, allowing better access to buildings (see Figure 1).

By the 1950s, the High Line was in decline due to the creation of the interstate highway system and the introduction of trucks as an efficient method of moving commodities. In the 1960s, the southern portion of the railroad structure was demolished and finally, in 1980, the last train ran along the High Line and it was abandoned.

In response to calls for the demolition of the entire elevated structure, an organization called "Friends of The High Line" was formed in

Figure 1. High Line as originally conceived, 1934 © Friends of the High Line

1999 by Joshua David and Robert Hammond. The purpose of the organization was to determine possible reuses for the abandoned structure, as alternatives to removing it completely. In the following years, studies were conducted to determine viable uses for the High Line. In 2004, landscape designer James Corner Field Operations and architect Diller Scofidio+Renfro won a competition to redevelop the High Line. Finally, in 2005 the City of New York and CSX Transportation, the railroad owner, agreed to reuse the High Line from Gansevoort Street to 30th Street as open green space. Construction began in 2006 and Section 1, from Gansevoort to 20th Street, was completed in 2009 (see Figure 2). While many were skeptical, the Parisian Promenade Plantee in Paris served as an example of what the High Line could become.

The High Line is now used as an elevated walkway and park through the city (High Line, 2010). Access is provided through a number of street entries with stairs and/or elevators. The design features areas for sitting and relaxing within the landscape, a sun terrace, woodland, grassland, a wildflower field along with a public art program and places to assemble. "Since Section 1 has opened just over a year ago (2009), we have welcomed over three million visitors from New York and around the world," comments Kate Lindquist, Director of Marketing and Communications for Friends of the High Line. "We anticipate the park's popularity will only increase when Section 2 of the park opens next spring (2011). Section 2 runs from West 20th to West 30th Street. Its completion will double the size of the park (see Figure 3)." Section 3 is the final section, running north to 34th Street into the rail yard. This section is still controlled by CSX and, as of 2010, had not been the subject of negotiations.

One of the most interesting aspects of the High Line project is its development through public/private initiatives. Without the City of New York's interest in renewing the area, the project would not have been considered. In addition, a large number of concerned citizens provided professional and financial support to make the High Line a reality. "Friends of the High Line is the non-profit, private partner to the New York City Department of Parks & Recreation," says Lindquist. "The organization works to build and maintain an extraordinary park on the High Line. We provide over 70% of the High Line's annual operating budget and are responsible for maintenance of the park…"

As an economic asset, the High Line has already attracted new developments to the Meatpacking District and West Chelsea neighborhoods as the area sheds it former industrial "persona" in exchange for New York's service economy. The 18-story Standard Hotel, New York, is a new development constructed over the High Line itself between 12th and 13th Street (Schliemann et al, 2010). Additionally, a new 22-story residential building at 100 11th Ave., designed by Jean Nouvel, was completed in 2010. Several other significant high-rise developments are in the planning stages as this brownfield neighborhood of low-rise industrial buildings attracts a new breed of investors. Additionally, the city is anticipating an increase in its tax base as these new high-rise developments replace the vacant, low-rise buildings of the past.

Crossroads Project/Marsupial Bridge in Milwaukee

Like many American cities, Milwaukee has seen much of its industrial and manufacturing base decline. Historically, many industrial companies were located north of downtown, along the Milwaukee River, which provided efficient transportation in the 19th century. The neighborhoods of Brewer's Hill and Beerline B (northwest of the river) as well as the East

Figure 2. Gansevoort Plaza and Stair, Gansevoort Street and Washington Street, looking north to the Standard Hotel © Iwan Baan

Figure 3. The High Line's only lawn "peels up" at 23rd Street, where the High Line widens, providing crosstown views of the Manhattan skyline and the Hudson River © The City of New York

Figure 4. Holton Viaduct, Milwaukee with the Marsupial Bridge suspended below © Jim Brozek

Figure 5. Reading Viaduct, Philadelphia © Robert Hakalski and the Reading Viaduct Project

Side and Brady Street areas (southeast of the river) were home to industry and working class housing (Neighborhoods, 2010). The breweries of Schlitz, Blatz, and Pabst are just a few of the companies which have moved on from these Milwaukee neighborhoods.

In the 1920s, the Holton Viaduct was constructed to allow trolley traffic to navigate between the two banks of the Milwaukee River. At the time of its construction, the viaduct included a bascule section to open for river traffic. By the end of the 20th century, the industrial neighborhood surrounding the viaduct had begun to decline. "In a gesture of civic optimism, a coalition of neighborhood groups sought a transformative intervention to activate the brownfield zone surrounding the Holton Street Viaduct, an area previously characterized by neglected spaces, empty storefronts, abandoned industrial sites, and poorly planned traffic patterns," said Grace La of La Dallman Architects in Milwaukee, designers of the Marsupial Bridge. "As a result of this community intervention, the Crossroads project was born."

"The intent of this multi-phased project was to revitalize such a zone surrounding the Milwaukee River's 1925 Holton Street Viaduct," continued La. "Crossroads has stimulated a declining area of Milwaukee and has provided a much-needed series of gathering spaces and connections. What once was a wasteland of worn industries has now become home to many relocating residents, community events and has stimulated an overall appreciation of this area in the city."

Construction on the project began in 2005. "The site for this project was for years treated as a back alley to the city, a place of abandoned industrial infrastructure, tanning factories, rail lines, coal storage yards and other defunct uses. The project consists of three interwoven components along, within, and through the historic viaduct: a Bus Shelter that serves as a gateway into the project (along); an urban plaza that acts as a civic connector and media garden (within); and a 'Marsupial' Bridge that offers a new pedestrian and bicycle connection joining the east and west banks of the river (through)," states La. The 198-meter (649.6-foot) long Marsupial Bridge is a green highway (pedestrian and bicycle) suspended beneath the Holton Viaduct (see Figure 4).

The Crossroads Project and Marsupial Bridge development is perhaps even more impressive given the large number of partners involved. "The land is owned by the Milwaukee Metropolitan Sewerage District (MMSD), which it leases to the Milwaukee Department of Public Works (DPW). The Milwaukee County Transit Authority (MCTA) runs the bus routes, and the Milwaukee Department of City Development (DCD) oversees public projects and planning in the city. The project itself was funded by a coalition of Milwaukee Community Development Block Grants, the City of Milwaukee Arts Board, the MMSD and DPW as well as the Brady Street Business Improvement District and the Brady Area Foundation for Arts and Education," says La. In addition to these public partners, a private partner was also involved. La continues, "Clear Channel Outdoor, an advertising company, also contributed to the bus shelter project and provided an advertising sign that is integrated into the structure, providing part of the sheltering system and a portion of the lighting for the space. The US$3.6 million-Marsupial and urban plaza portion of the Crossroads project was fueled by a coalition of public/private partnerships, generating civic support from government officials and resulting in a federal Congestion Mitigation and Air Quality Grant of US$2.57 million dollars, US$650,000 in matching city funds. This portion of the project was overseen by the Milwaukee Department of Public Works as the owner and required interface with the Wisconsin Department of Transportation, the Department of Natural Resources, and the US Coast Guard on issues of infrastructure and waterways."

Significant fruits from the recent project have already begun to appear. "Only recently has this area begun its transformation, showing that the Crossroads Project has been a catalyst for further evolution and reuse. The hybridization of infrastructure systems and the introduction of new places for transportation, gathering and recreation have already helped to foster further development in the area," says La. "Today, this district is the densest in southeast Wisconsin, supporting a mixed-use and residential community of existing and emerging neighborhoods and commercial zones. The bridge has encouraged the

relocation of new commercial property as well as sustained support for the established merchants by improving their overall accessibility." As is the case with the High Line in New York City, the City of Milwaukee benefits from this Crossroads project transformation with increased tax revenues from previously vacant buildings.

Future Transformations

Other abandoned structures that are candidates for transformation are the Bloomingdale Trail in Chicago and the Reading Viaduct project in Philadelphia. The 2.6-kilometer (1.61-mile) long Reading Viaduct transported trains over grade-level traffic and through industrial neighborhoods to the Reading Headhouse Terminal in Center City (Reading, 2010). According to John Struble of the Reading Viaduct Project, "Only 1.5 hours away by car, The High Line offers 'the finished product' that is easy for Philadelphians to visit. Our group, which is community based, looks forward to a park of some sort" (see Figure 5).

The 6.4-kilometer (3.98-mile) elevated corridor along Bloomingdale Avenue originally connected the industry along the north branch of the Chicago River with the railroad routes to the west (Bloomingdale, 2010). The trail is undergoing preliminary planning stages for Phase I. "We became involved in 2005 to determine access points and purchase land at grade to access the elevated corridor," states Beth White of the Trust for Public Land (TPL), the program manager for the Bloomingdale Trail. "Working with the City of Chicago, the Chicago Park District and Friends of the Bloomingdale Trail, we identified a system of access points at grade level that included three existing parks and places for new parks at 1,000-meter (1,094-yard) distance along the Bloomingdale corridor. TPL then purchased the land for the new parks, which will provide badly needed open space for children as well as access points to the trail (see Figure 6). Phase I of the elevated trail will be almost 4.5 kilometers (2.80 miles) long traversing over 37 viaducts and through four neighborhoods. The engineering and community-driven design process will begin in early 2011 and negotiations with the Canadian Pacific railroad, owners of the right of way for the corridor, are continuing. The final length of the Bloomingdale Trail is planned to be almost 5 kilometers (3.11 miles)." White continues: "While the first new access park is nearing completion and we are finalizing the last land acquisition, we are envisioning an active elevated trail for hiking and biking that also includes passive gathering areas at wider nodes. All of these areas will be owned and maintained by the Chicago Park District, as public parks, with support from a community stewardship and fundraising effort that is in development."

Figure 6. Bloomingdale elevated corridor, Chicago adjacent to grade-level park © David Schalliol and Friends of the Bloomingdale Trail

Conclusion

In every case examined, these redevelopment projects rely on public and private collaboration and input. This collaboration, though often significantly complicating and lengthening the planning and design processes, appears to be the formula for success for the redevelopment of abandoned inner-city railroad infrastructure. Instead of remaining as damaging, economically hindering areas in American cities, or simply being removed from existence, new unique uses can be found for these historic pieces of Americana which stimulate the community, city and economy. The historic pieces of American infrastructure have therefore, once again, begun to feed the communities and cities in which they exist. Many similar transformations across America are possible. ■

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