



HIGHLAND PARK PLANNING COMMISSION

Robert B. Blackwell Municipal Building

12050 Woodward Avenue

Highland Park, MI48203

Office: (313) 252-0050, Ext. 227 · Facsimile (313) 852-7320

HIGHLAND PARK HISTORIC DISTRICT **STUDY COMMITTEE**

(MARCH 2014)

Ford Highland Park Plant Historic District Committee Report

-and-

Highland Park Historic District City Ordinance

COMMITTEE MEMBERS:

Frank Ross, Chairman, HP Planning Commission

Paul Motley, Commissioner, HP Planning Commission & Chairman of the Planning Commission's
Historic District Commission Subcommittee

Rodney Patrick, HP City Council & Board member - Woodward Avenue Action Association

Louis Stark, Project Manager, HP Department of Community & Economic Development

Debbie Schutt, CEO, Woodward Avenue Action Association (WA3)

Janese Chapman, Detroit Historic District Commission

Patricia Volker, Director of Planning, Bloomfield Township

Timothy Boscarino, Board Member, Preservation Detroit

Ford Highland Park Plant Historic District Study Committee Report Cover Form

Historic District Name: Ford Highland Park Plant Historic District
City: Highland Park
County: Wayne
Date Transmitted: December 2013
Report Type: Final Report

Total Number of Resources:
Historic: 10
Non-Historic: 9
Percentage: 53%

District is Significant Under the Following National Register Criteria:

Criterion A, Significant Events

Reason: As the headquarters and principal production facility, from 1910-1927, of the Ford Motor Company, and the site at which the moving assembly line and the five dollar work day were first implemented.

Criterion C, Design and Construction

Reason: As an outstanding example of industrial architecture as designed by nationally significant architect Albert Kahn.

Legal Boundary Description: Ten parcels as described in the report.

Charge of the Committee: The Highland Park City Council appointed a Historic District Study Committee on October 21, 2013, for the purposes of studying and recommending the establishment of a local historic district ordinance and designation of the Highland Park Ford Plant as a local historic district. The study committee worked with the consulting firm Quinn Evans Architects in the development of the report.

Committee Members: Frank Ross, Paul Motley, Rodney Patrick, Lauren Hood, Debbie Schutt, Janese Chapman, Patricia Volker, and Timothy Boscarino

**Ford Highland Park Plant Historic District
Highland Park, Michigan**

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Composition of the Committee: The following citizens were appointed to the Study Committee:

- Frank Ross, Chair of the Highland Park Planning Commission
- Paul Motley, Commissioner, Highland Park Planning Commission and Chair of the Planning Commission's Historic District Commission Subcommittee
- Rodney Patrick, Highland Park City Council Member and Board Member of the Woodward Avenue Action Association.
- Lauren Hood, Project Manager, Highland Park Department of Community and Economic Development
- Debbie Schutt, CEO, Woodward Avenue Action Association
- Janese Chapman, Detroit Historic District Commission
- Patricia Volker, Director of Planning, Bloomfield Township
- Timothy Boscarino, Board Member, Preservation Detroit

The study committee worked with the consulting firm of Quinn Evans Architects in the development of the study committee report.

Historic District Studied: Ford Highland Park Plant Historic District, Highland Park, Wayne County, Michigan.

Boundaries of Proposed District:

Legal Boundary Description: The district consists of ten parcels:

PIN: 82 43 002 04 0001 315
PIN: 82 43 002 04 0001 316
PIN: 82 43 002 04 0001 317
PIN: 82 43 002 04 0001 320
PIN: 82 43 002 04 0001 321
PIN: 82 43 002 04 0001 322
PIN: 82 43 002 04 0001 323
PIN: 82 43 002 04 0001 324
PIN: 82 43 002 04 0003 004
PIN: 82 43 009 08 0016 300

See Appendix 1 for full parcel descriptions and a parcel map.

Boundary Justification: The district is bounded by the former Detroit Terminal Railroad right-of-way on the north, Oakland Avenue on the east, Manchester Street on the south, and Woodward Avenue on the west. This boundary encompasses the historic area of the plant's principal operations, and includes all remaining historic resources related to the Ford Highland Park Plant.

Visual Boundary Description: See attached maps, pages 24 and 25.

History of the Proposed District:

The significance of the Highland Park Ford Plant can hardly be overstated. The plant, located in the city of Highland Park, produced the vast majority of Ford's Model Ts, the first widely available and affordable automobile, often called the car that "put America on wheels." It was at the Highland Park plant that Henry Ford inaugurated two key innovations: the moving assembly line, and the five dollar daily wage, developments that would change America, and the world, forever. For 17 years, Highland Park was the hub of Ford's operations and growth, a continually evolving site that the company eventually outgrew.

Episode 1: Ford and Highland Park before 1910

The story of Henry Ford and the founding of the Ford Motor Company is well known. Born in 1863 near Dearborn, Michigan, young engineer and entrepreneur Henry Ford had built his first car in 1896. Two early attempts at organizing a manufacturing company failed, but in 1903 he successfully launched the Ford Motor Company. From almost the beginning of the company, Ford saw its future in producing inexpensive, durable vehicles that would appeal to a wide range of customers. Starting in the company's first plant, in rented quarters on Detroit's Mack Avenue, Ford and his employees focused on refining engineering and production techniques to produce cars quickly, efficiently, and cost effectively. As production – and demand – increased, the company quickly outgrew its first quarters and in 1905 moved into its first purpose-built factory, a plant at the corner of Piquette and Beaubian streets, also in Detroit. It was at the Piquette plant that the company produced its early vehicles, including the Model N, precursor to the Model T. In 1907 at the Piquette plant, Ford and his engineers designed the Model T, the car that would change the world. Initial production of the Model T began the following year, 1908, at the Piquette plant, although Ford already had plans well underway to move to larger quarters. It was at the Piquette plant that Ford first developed and began experimenting with the concept of assembly line production.

The explosive growth of the Ford Motor Company in its first several decades would create an almost perpetual need for more space. Within a year of the company's founding on Mack Avenue, Ford made plans to move to larger quarters on Piquette Avenue; within

a year of moving into the Piquette plant, Ford was looking for more space. He found it in Highland Park, a small community along Woodward Avenue just north of Detroit.

The area now known as Highland Park had its origins in the 1805 fire that destroyed the city of Detroit. Following the fire, Judge Augustus Woodward created a new plan for the city based on radiating hubs and spokes of streets. Along the central axis of Woodward Avenue, about six miles north of the then-city limits on a plot of land known as the "Ten Thousand Acre Tract," Woodward purchased land and platted a village, naming it "Woodwardville." Settlement, however, remained sparse throughout the early to mid-nineteenth century. In the 1880s, Captain William H. Stevens of Colorado bought a large area of the tract and renamed it "Highland Park" in reference to the village's situation on high ground at Woodward and Highland. Envisioning Highland Park as a rival to Detroit, Stevens built a school, waterworks, and hotel, as well as platting the first subdivisions and offering them for sale. An electric railroad line was developed to bring people to the new village, incorporated in 1889.

Another of Stevens' ventures was a horse racing track, located at Woodward and Manchester near his hotel. The venue was constructed in 1894 as a half mile track for the Gentlemen's Driving Club, with its first race taking place in June of 1895. The following year, it was sold to a new group of investors who reorganized as the Highland Park Club in 1897. After acquiring more land, they rebuilt the racetrack into a one-mile course, with the first races held in June of 1897. Along with Hamtramck and Grosse Pointe, this was one of metropolitan Detroit's earliest race tracks.

Just north of the racetrack, on the same side of Woodward Avenue, the St. Francis Home for Orphan Boys built a new orphanage between 1906 and 1908. Originally located in Monroe, the new facility was built in Highland Park as a jubilee gift to the Detroit Diocese's Bishop John S. Foley. The three and a half story H-shaped building featured a sweeping semicircular driveway fronting on Woodward, and cost upwards of \$70,000.

When Henry Ford began scouting for land to build a new plant, he was attracted to Highland Park by several factors, including its proximity to railroad lines, lower taxes than in the city of Detroit, and the larger land areas available. As early as 1906, he identified the land on which the hotel and race track sat as a suitable site, with sufficient size to build a large plant and with room for expansion to the north and east. The race track could also be used as a vehicle test track. In 1907, he purchased his first 60 acres of land at the southwest corner of Woodward and Manchester, and began plans for the new, greatly expanded plant.

The Piquette Plant had been designed by the well-established Detroit firm Field, Hinchman and Smith (later Smith, Hinchman and Grylls, now SmithGroup) in the New England mill style, a traditional design that, in addition to being too small, did not accommodate itself well to Ford's new assembly techniques. For the Highland Park plant, Ford needed a designer who was willing to be as innovative as he was himself in order to create an environment where the first assembly line could go into full production. He found that designer in Albert Kahn.

A native of Germany, Albert Kahn had immigrated to Detroit in 1880 and spent his early career working for the Detroit firm of Mason and Rice, with the exception of a year-long stint abroad. After several short-lived partnerships, Kahn established his own firm in 1902. Like many architects of his generation, Kahn was adept in working in the multitude of revival styles popular in the late nineteenth and early twentieth centuries. It was his industrial work, however, that would transform his architectural practice. In the same year that Henry Ford founded the Ford Motor Company, 1903, Kahn was commissioned to design a series of industrial buildings for the Packard Motorcar Company on Grand Boulevard in Detroit. At first these buildings followed the typical mill construction, but that changed with the design of Building 10. Kahn utilized a new method of reinforcing concrete developed by his brother, Julius Kahn, in 1903 and first used in the construction of the Engineering Building at the University of Michigan. Known as the Kahn Bar System and marketed by the Trussed Concrete Steel Company (TRUSCON), a company founded by the Kahn brothers, it became the most widely exported American concrete reinforcement system.¹ The use of reinforced concrete in the construction of industrial buildings would prove to be a revolutionary development. Traditional mill-type buildings were limited in many ways by their construction methods and materials. Their heavy load-bearing masonry walls and timber roofs and floor structures set a practical limit on the size of the building, kept windows small (and interiors consequently dark), and limited open floor areas. Reinforced concrete structures, however, could easily be multiple stories tall, with large window areas and fewer internal columns, with the added bonus of greater protection from fire.

In designing these new factories, Kahn went beyond simply altering the structural design of the buildings to create a new aesthetic vocabulary. In an era when revival styles dominated and even industrial buildings utilized ornament to hide their essential nature, Kahn abandoned that aesthetic in favor of clean, simple buildings that clearly expressed their function. It was a seeming contradiction from an architect who was at the same time producing residential, commercial, and institutional buildings in a variety of European revival styles. Kahn, however, was never a slave to style. In 1927, he wrote “Purity of style in modern work is therefore of secondary importance. The best designers are those who, thoroughly grounded in the work of the past and familiar with the principles underlying same, apply them to new problems, adding what they can of their own individuality and creating something characteristic of our day.” In Kahn’s view, styles of the past were natural sources for traditional buildings – houses, religious buildings, etc. Industrial buildings, however, were an entirely new type, ones which required new solutions that were not and didn’t need to be grounded in the past. He thus felt free to design the buildings that would meet the new needs of his industrial clients.

Kahn’s willingness to find new solutions for industry made him a natural fit to design Ford’s new plant at Highland Park. Ford’s ultimate goal was the complete vertical and horizontal integration of the manufacturing process, bringing as much as possible of the administration, production, and assembly under one roof. Kahn utilized a consistent structural grid throughout the plant, providing flexibility for expansion in any direction.

¹ Jeffery Cody, *Exporting American Architecture 1870-2000* (New York, NY: Routledge, 2003).

The design principles he had already established at the Packard plant - large, flexible open space, abundant light, and multiple stories – were integrated into the design of the initial factory buildings at Highland Park, providing optimal space to accommodate both the machinery and the workers. Midway through the design of the first factory building, Kahn instituted a significant change. The original drawings show wood sash windows, typical for the era. Kahn instead substituted steel sash, in what he later claimed was the first use of such windows in America, at least as a “standard factory type.” Indeed, so new were these sash that Kahn and Ford had to import them from England. The extensive use of steel sash windows in large expanses would become a hallmark of the Highland Park Ford Plant, dubbed the “Crystal Palace” in reference to the iron and plate glass building erected for England’s Great Exhibition of 1851.

The initial designs appear to have been completed by the late summer of 1908, when bid drawings were issued, and construction on the first building – factory “A” – commenced almost immediately. Ford had already begun production of the Model T at the Piquette plant in 1908, but waited until the buildings at Highland Park were sufficiently completed to move production there.

Episode 2: The Model T at Highland Park: 1910 to 1927

On January 1st of 1910, Ford operations moved to the Highland Park Plant, and Model Ts began rolling out of the new factory (building A). In addition to the factory, buildings completed by that time or within the first year included an oil house (building “P”), a foundry (building “K”), and the first two stories of the Ford administrative offices (building “O”).

Although the initial factory was enormous compared to the previous plants on Mack and Piquette, it was only a fraction of the facility already being planned. A 1910 concept drawing showed the plant much as it developed in the first five years. Fronting on Woodward as its “public face” were the administrative offices and a stand-alone showroom. Connected to the office building by a one-story garage was the long façade of the first factory building, parallel to Woodward. Stretching to the east between Manchester Avenue to the south and the Detroit Terminal Railway tracks to the north were a series of factory buildings, machine shops, and craneways. Railroad tracks at the east end of the site would bring materials directly into the assembly buildings for distribution throughout the system. This concept drawing would hew closely to the facility as it developed in those early years, demonstrating the forethought of Ford’s and Kahn’s planning.

At the Highland Park Plant, Kahn stepped away from the severe lack of ornament he had employed at the Packard Plant. He almost certainly shared the design process with Ernest Wilby, his associate from 1903 to 1918. Recognizing the importance of the factory’s public face along Woodward, the plain concrete façade was enhanced by periodic vertical towers and the use of ornamental brickwork and concrete details, which relieved the extreme length of the building. The public buildings along Woodward Avenue, the administrative offices and showroom, were more highly decorated, utilizing brickwork

and tile to create a more consciously decorative style. The power house later constructed along Woodward, while not a public building, would also present a more high style face to Woodward, highlighting the immense power of the Ford complex.

As the complex grew, it also created another public façade along Manchester Street. The long expanse of multiple buildings eventually ran the entire length of Manchester from Woodward east to Oakland Avenue. The factory's main entrance along Manchester was where the thousands of workers entered and exited the factory every day. Many of the most iconic pictures of the plant show workers and cars packing Manchester Street, demonstrating both the sheer size and the manpower needed to operate the factory.

Behind these two public facades on Woodward and Manchester, a more strictly utilitarian design prevailed. Ornament was used sparingly, if at all, and these buildings derived their character from their more functional aspects, such as large open spaces, sawtooth or monitor roofs, and the extensive use of glass to bring daylight into the buildings.

The extent of Albert Kahn's continuing role in the design of the Ford Highland Park plant after the design of the initial buildings in 1909-10 is unclear. The name of his associate, Ernest Wilby, appears on the documents associated with the later buildings. In 1927, Edward Gray, chief engineer for the Ford Motor Company from 1910 to 1915, claimed that Ford engineers designed the principal additions to the plant and then handed the specifications to Kahn's firm for completion. Undoubtedly, the design process for the later buildings was a cooperative effort between Albert Kahn, Ernest Wilby, and the Ford engineers.

From its very beginning, the Highland Park plant was under continual construction. For the first five to six years, the focus was on building out the plant on its original 60 acres. The first buildings were very soon followed by a machine shop (B) and a craneway (C) in 1911, with a further machine shop (E), craneway (F), and factories (G, H, and M) in 1912, all to the east of building A. Ancillary buildings to house heat treating facilities and foundry stock were added in 1912 and 1913. Although generally the larger factories, machine shops, and craneways would endure, many of these smaller, specific use buildings would appear and then disappear on the site as their locations were needed for expansion or as changes were made in the production process.

The most significant change in the production process, one that would fundamentally change the industry, came on October 1st of 1913, when Ford inaugurated the continuously moving assembly line. Since the company's founding 10 years previously, Ford had been steadily working toward a more efficient assembly process, reorganizing materials and workers to minimize the time they spent acquiring material and moving between the various parts of the manufacturing and assembly process. The culmination of this was the invention of a moving assembly line, in which conveyors continuously moved the parts of the vehicle assembly through the factory, with each worker repetitively performing one task as it moved past, whether it was placing a part or tightening a bolt, until the fully assembled car rolled off the line. The improvement in

production was astonishing; the moving assembly line immediately brought the time to complete an entire car down from 728 to 93 minutes.

More cars, produced faster and more efficiently, brought prices down and increased demand. The Model T, which had cost \$850 to build in 1908, eventually came down in price to \$260 by 1924. It seemed that nearly everyone could afford a Ford Model T, which had the added advantage of being a sturdy and reliable vehicle that could serve as well on a working farm as it could driving the family on vacation. Ford would shake the industrial world again a few months after the moving assembly line debuted, when he announced he would pay his workers five dollars per day - a healthy wage for the average industrial worker of the day. Now many of Ford's workers could afford to actually purchase the cars they were producing...creating more demand and more profit for Ford.

The phenomenal growth of Ford and its Highland Park plant in the 1910s resulted in similarly impressive growth for the village of Highland Park. In 1900, its population was a mere 427 people. The Ford plant would double that number in 1908, before it even opened for production. By 1910, the population had risen by ten times, to 4,210, and ten years later it stood at 46,499. Highland Park incorporated as a city in 1918. Along with population growth came new homes, businesses, and institutions. Many of the neighborhoods in the area would reference Ford in their names, such as Ford Park, Ford View, and Ford Plains. In providing for itself and its own growth, the Ford Motor Company would directly benefit the city as well, investing in infrastructure such as water treatment and distribution systems, and opening a bank on the corner of Woodward and Manchester opposite the factory. This bank would later become Manufacturer's National Bank of Detroit, one of the premier financial institutions in Michigan, until it merged with Comerica in 1992. The city also benefited from the influx of commercial and retail businesses that catered to the company and its workers.

In addition to the five dollar work day, Ford directly benefitted its workers in many other ways. The company set up a number of services on site. Some were simply necessary to cater to the health and safety of so many workers, over 36,000 by 1917. Departments were set up to handle sanitation, security, and fire safety. A hospital and first aid station responded to on-the-job medical emergencies, while lunch facilities fed the workers. In an age of widespread corporate paternalism, Ford provided a school to teach English, etiquette, hygiene, and civics to its workers, many of whom were immigrants. Workers could visit the plant post office, tailor shop, and grocery stores, and the company even sponsored an employee band. Henry Ford founded a trade school for youths, taking over the former orphanage on the north end of the factory complex (after the orphanage relocated to Linwood and Fenkell around 1916) and providing apprenticeships and vocational training. Not surprisingly, the Ford Motor Company was of tremendous interest, and visitors from all over the world came to see and learn from the company's innovations.

Throughout the 1910s, the plant continued to expand exponentially. In 1914, the two upper floors were added to the office building (O) and the first two of the gigantic, six-story factories, W and X, were constructed along with their associated craneways. Other

buildings completed in 1914 and 1915 included a dry kiln, loading dock, and clay shed. In 1916, the major construction project was the addition of factories Y, Z, and craneway Y/Z, the second two of the six-story factories. The massive power house along Woodward Avenue (D) was also completed in 1916, along with numerous sheds, loading docks, and shops. Throughout 1916, 1917, and 1918, buildings were being completed at the rate of one to two every month, although many of these would be in the nature of simple metal sheds and shops. The construction of the major buildings was directed by Albert Kahn and his associates, who utilized outside contractors. Some of the smaller or temporary buildings may have been constructed by Ford's own workers.

By 1917 and 1918, the construction of buildings began to nudge northwards. Previously, expansion of the site had been from the original factory (A) east toward Oakland Street, but it had generally stayed south of the railroad tracks running east to west through the center of the block. Now, buildings began to be placed along Woodward between the power plant and the Henry Ford Trade School. The first of these was a machine shop, considered an extension to the "A" building. This building, now known as "AA" had a very similar appearance to the other factory buildings on the site, again maintaining that slightly more decorative façade along Woodward. This was followed in 1918 by several stock buildings, including J, JJ, and S, as well as a number of sheds and other ancillary buildings. In general, however, the entire northeast quadrant of the site was reserved for piles of raw materials (stock), including coal, sand, iron, and other materials waiting to be used in the foundries, forging and casting shops, and power house. The complex also began moving east of Oakland Avenue, where a number of stock sheds were constructed alongside the multiple rail lines leading into the site from the east.

By the end of World War I, less than ten years after the Highland Park Plant opened, Ford was already at work on his next facility. Although he had initially moved to Highland Park because of its potential for expansion, it seems even he had not anticipated the company's rapid growth, and he could already foresee that the complex would soon have nowhere to go. Ford had also concluded that multiple story buildings were not the most efficient environment for manufacturing cars. Although craneways and moving belts could quickly move materials between floors, he soon recognized that keeping everything on one level would be even more efficient. This, in turn, would require even more area to accommodate this new layout, area that Highland Park did not offer. In looking for a new location, Ford looked for one final amenity – water. Never one to accept being beholden to one mode of transportation (in this case, railroads), Ford chose a site on the River Rouge just upstream from the Detroit River. Construction began on the Rouge plant, which was also designed by Albert Kahn, as early as 1917, although it would be another ten years before the company could begin vehicle production there.

Meanwhile, the plan to open a new plant did not diminish production or construction at the Highland Park plant. Construction of buildings at Highland Park continued into the early years of the 1920s, including more offices, sheds, and shops. The most significant of these buildings was the sales and service building (OO), just north of the power plant along Woodward Avenue. This building, and its adjacent garage, NN, mirrored the arrangement of A, O, and N buildings south of the power plant, with OO, very similar in

design to O, presenting a public face to Woodward, and NN, the garage, connecting OO and AA at the first floor level. OO contained a showroom and service area on the first floor and offices above.

Despite the now-apparent limitations of the Highland Park Plant's design, production times continued to decrease. By 1920, the plant could produce a Model T every minute, and the car would account for nearly 56% of total world car sales, making every other automobile in the world a Model T. Production would reach its zenith in 1925, with an astonishing rate of one vehicle being finished every ten seconds.

Finally, after nearly 20 years in production, the last of the Model Ts rolled off the line at Highland Park in 1927. Sales of the Model T had begun to plummet when Ford's competitor General Motors introduced design to the automobile industry with the hiring of designer Harley J. Earl in 1927. Earl's introduction of color and a low slung, aerodynamic auto body was instantly popular with the public. Edsel Ford, who had served as the President of Ford Motor Company since 1919, finally convinced his father to retire the venerable but outdated black, upright Model T in 1928. Edsel Ford replaced it with the Model A, a more stylish successor of his own design. The Model A was well received and became an American icon when Edsel presented one to President Franklin Delano Roosevelt. The Model A was produced at the Rouge Plant, which now served as Ford's headquarters. With the removal of automobile production to that location, the prominence of the Highland Park plant ended.

Episode 3: Highland Park after the Model T, 1927-1960

Although Highland Park would never produce another automobile, it was not abandoned by the Ford Motor Company. The company had invested enormously in the facilities at Highland Park, and decided to continue production at the facility, moving some of its truck and tractor production there, as well as various trim operations. For the next 30 years or so, the plant retained most of its buildings and facilities, although incremental changes occurred to accommodate the new uses.

One of the earliest casualties of the change was the Henry Ford Trade School. A branch school had opened at the Rouge Plant in 1927, but with the focus of the company shifted there, the Rouge school grew in importance, and finally, in 1931, the Highland Park school closed, moving to the Rouge complex. In 1932, the former school building was leased to the newly founded Lawrence Institute of Technology, which would later become Lawrence Technological University. LIT would remain there until 1955; shortly after it moved out, the school building was demolished.

Although cars were not being produced at Highland Park, the site retained some of its automotive connection. In the 1930s and 1940s, both the showroom in front of the power house and the showroom in the Sales and Service building (OO) housed used car showrooms. A "Lincoln" sign is visible over the main entry to OO in some 1930s photographs, suggesting that it was a Lincoln dealership at some point. Ford continued to

maintain the neat public façade of the complex along Woodward Avenue, replacing the sidewalks in 1937, improving the parking lot at OO in 1940, and keeping the lawn areas adjacent to Woodward Avenue mown and neat.

Like many of Ford's plants, and industrial sites across America, Highland Park played its part during World War II. During the war, Ford converted the Highland Park plant to wartime production, manufacturing military tanks and aircraft engine parts. A track was constructed east of Oakland Avenue for testing the tanks being produced there.

After World War II, truck and tractor production resumed at the plant. In 1946, Henry Ford's grandson Henry Ford II formed a subsidiary, Dearborn Motors, to take over distribution of the Ford 9N tractor from Irish businessman Harry Ferguson, who had previously had an informal agreement with Ford. Dearborn Motors had its offices in OO building, the former sales and service building, and by 1947, Highland Park had become the company's principal facility for manufacturing Ford tractors. However, it also appeared that Ford had room to spare at Highland Park during the 1940s and 1950s; it was leasing space in the factory building, AA, to the Standard Tube Company (now Michigan Seamless Tube), the garage, NN, was leased to the Works Progress Administration and the Old Tube Company, and other companies were leasing space in a number of other buildings on the site, while others stood vacant.

In 1943 Henry Ford's only son, Edsel, who had served as the company president since 1919, died. In 1945 Henry Ford passed the reins of the company to his grandson, Henry Ford II. Henry Ford, the company's founder and patriarch, died in 1947 at the age of 83. Over the next two decades, the plant at Highland Park gradually declined. Beginning around 1952, elements of the site were being demolished or removed, including the old Henry Ford Trade School and the railroad tracks and buildings east of Oakland Avenue. In 1957, truck production was abandoned at Highland Park, although tractor and military vehicle production continued into the 1970s. The plant also continued to house trim plant facilities into the 1960s.

By 1960, the most dramatic change at the site had taken place, with the demolition of some of the oldest buildings on the site, including the powerhouse and its five iconic smokestacks, the original factory (A), the original administrative offices (O), and all the buildings west of the factory building H. Several of the southern bays of AA were also demolished, and the south wall infilled with brick. This area sat mostly vacant for the next forty years, except for an informal dirt test track at the corner of Manchester and Woodward.

Episode 4: 1961 to present.

Even as the Highland Park facility was on the decline and many of its most historic buildings were being lost, recognition of its historic significance was growing. The plant's first designation came even before the formal establishment of the National Historic Landmark Program or the National Register of Historic Places. In 1956, community leaders and representatives of Ford Motor Company gathered at the listing of

the plant on Michigan's State Register of Historic Sites. The historic marker, which had originally been placed in front of O building, was later moved to the front of OO after the demolition of O. In 1973, the site was listed on the National Register of Historic Places, and a few years later, in 1978, it was recognized as a National Historic Landmark.

After tractor production was pulled from Highland Park in 1974, the remaining factory buildings were chiefly used for storage and small scale production. By the late 1970s, it was clear that the Ford Motor Company wished to sell the facility. The city of Highland Park, already suffering from the general decline in industry of the 1970s, tried to take advantage of the opportunity presented by the site's availability, creating preliminary plans to redevelop the remaining 100+ acres. The city envisioned a new city hall and civic center in the "Historic Model T Ford Building" (probably OO building) and an industrial park on the rest of the site.

Although the city's plans never came to fruition, interest in redeveloping the site remained. In 1981, Ford Motor Company sold the property to HPF Associates, retaining leasing rights for 25 years (although that expired in 2006, Ford still leases space in a number of the buildings). Another redevelopment plan from this time proposed subdividing the property; buildings OO, NN, and AA would be renovated for office space, JJ would be used for heavy industry or as a warehouse, and WXYZ would be renovated to accommodate multiple tenants. The northeast quadrant would be cleared and subdivided for industrial development, H and its annex would be demolished, and the entire southwest quadrant would be developed for commercial and office use. While this plan also didn't succeed, some elements were carried out. The northeast quadrant is currently being utilized for industrial storage, and in 1997, the Model T plaza, a retail strip mall with two outbuildings (a CVS and a McDonald's restaurant) was built on the southwest quarter. Forman Mills, a retail clothing outlet, recently opened in JJ building. OO and NN are vacant and deteriorated, but AA was utilized for record storage by the Ford Motor Company until October of 2012. Today, the site remains in private ownership.

Conclusion

While some of the most historic buildings at the Ford Motor Company Highland Park Plant have been lost, large blocks of the complex remain to tell the story of the Model T, the car that changed the world. Although the first office and factory buildings were demolished, Buildings OO, AA, and NN continue to reflect the original arrangement of those buildings. The factory buildings H and WXYZ and their associated craneways housed the first moving assembly line, including the final assembly line, and remain much as they would have been during the period of significance, with their vast open spaces and light-filled rooms.

Statement of Significance for the Proposed District:

The Ford Motor Company Highland Park Plant is significant at the national level as the headquarters and principal production facility, from 1910 to 1927, of the Ford Motor Company. Although the first Model Ts were produced at Ford's Piquette Plant in Detroit, Henry Ford needed a great deal more space to continue his refinement and expansion of the production process. He found it in a large site in the city of Highland Park along Woodward Avenue. The plant, which began construction in 1908, was designed by innovative Detroit architect Albert Kahn, who would, with this facility, establish his reputation as America's preeminent industrial architect. After moving production to the Highland Park Plant in 1910, Henry Ford revolutionized the world by introducing at this site, in 1913, the first complete and efficient moving assembly line, which increased production exponentially, bringing the price of an automobile down drastically. Shortly after this, Ford also introduced the five dollar per day wage, which drew thousands to work for him and enabled his workers, for the first time, to be able to afford the very cars they were building. Together, these innovations made the Model T the "car that put America on wheels." Throughout the late 1910s and 1920s, Ford's engineers continually improved the production and assembly process, further increasing output and decreasing prices. In 1927, Ford retired the Model T and shifted production of its replacement, the Model A, to his new Ford Rouge Plant.

The Ford Motor Company Highland Park Plant was listed on the National Register of Historic Places on February 6, 1973, and designated as a National Historic Landmark on June 2, 1978. It was also listed on the State of Michigan Register of Historic Places on April 17, 1956, and a historic marker was erected on the site on May 11, 1956. The complex also holds a commemorative designation on the State Register of Historic Places, listed on July 17, 1997.

Criterion A: Association with Significant Events.

The Ford Motor Company Highland Park Plant is significant at the national level under Criterion A as the headquarters and principal production facility, from 1910-1927, of the Ford Motor Company. It was at this location that Henry Ford pioneered the moving assembly line and the five dollar work day, innovations that would bring the price of a motor vehicle within reach of the average citizen and, in the famous phrase, "put American on wheels". Many of the historic factory buildings in which production took place, including the final assembly building (Building H) and the six-story assembly line structures with craneways between (Building WXYZ), are still intact and retain integrity to convey their historic significance.

Criterion C: Design/Construction

The Ford Motor Company Highland Park Plant is significant at the national level under Criterion C as an outstanding example of industrial architecture as designed by nationally significant architect Albert Kahn. A pioneer in industrial architecture, Kahn's design supported Henry Ford's goal of complete vertical and horizontal integration of the manufacturing process and also established design principles like large, flexible open spaces, abundant light through skylights and large expanses of steel sash windows, and multiple stories that would become standard in factory design across the country and around the world. Kahn's pioneering work in industrial architecture served as an inspiration to some of the world's greatest early modern architects including Le Corbusier, Ludwig Mies van der Rohe, and Walter Gropius.

Period of Significance for the Proposed District:

The period of significance for The Ford Motor Company Highland Park Plant is 1910 to 1927. This is the period of significance established in both the National Register of Historic Places and National Historic Landmark designations. This span of dates represents the period in which the Model T was being produced at the Highland Park Plant, and during which the Highland Park Plant was the world headquarters of the Ford Motor Company. It encompasses the introduction of the moving assembly line and the establishment of the five dollar work day.

Historic District Resources:

The district consists of the following resources:

Contributing:

Sites:

A number of historic landscape features remain in the historic core (northwest and southeast portions of the site), including patterns of circulation (sidewalks, drives, railroad tracks), unique surface features representing remnants of the industrial buildings and structures (foundations, utilities), and vegetation (open lawn areas). Together these contribute to one historic site.

Buildings:

AA (machine shop/factory)
NN (Executive Garage)
OO (Sales and Service Building)
JJ (Stock/Storage Building)
H (Factory)
WXYZ (Factory)
072 (Storage/Stock Shed)
XX (Factory addition)
WW (Power Plant)

Non-Contributing:

079-X1 and X2 (Factory)
Power House
Guard Shed (NC-1)
Storage Shed (NC-2)
Enclosed Transformer (NC-3)
Commercial Building (NC-4)
CVS Pharmacy
McDonald's Restaurant
Commercial Strip Mall

Percentages:

10 Contributing Resources (53%)
9 Non-contributing Resources (47%)

Photographs:

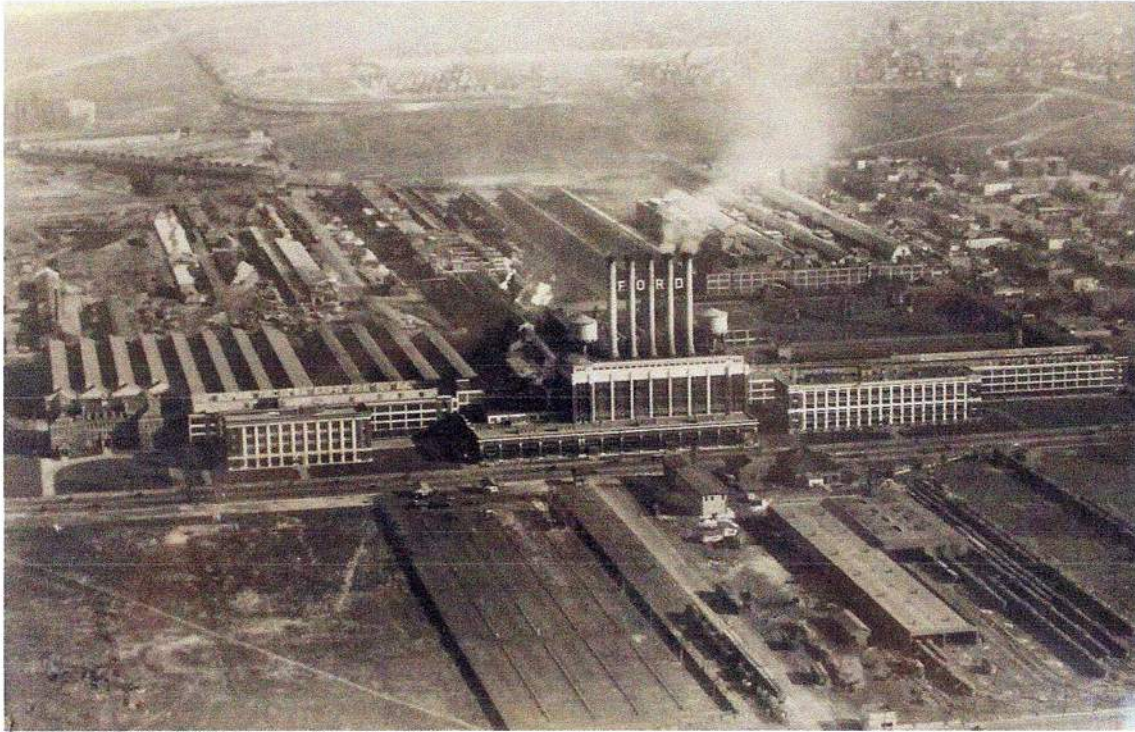


Figure 1: Ford Highland Park Plant at the height of its production, 1923, looking east (Source: Benson Ford Research Center, Acc 1660, Box 130).



Figure 2: Ford Highland Park Plant 1927, looking northeast; Manchester Street façade in center. (Source: Benson Ford Research Center, Acc 1660, Box 130).



Figure 3: Panoramic view of OO (center), Trade School (left) and Power House (right), looking east, ca. 1920s (Source: Benson Ford Research Center, Acc 833, Box 24).

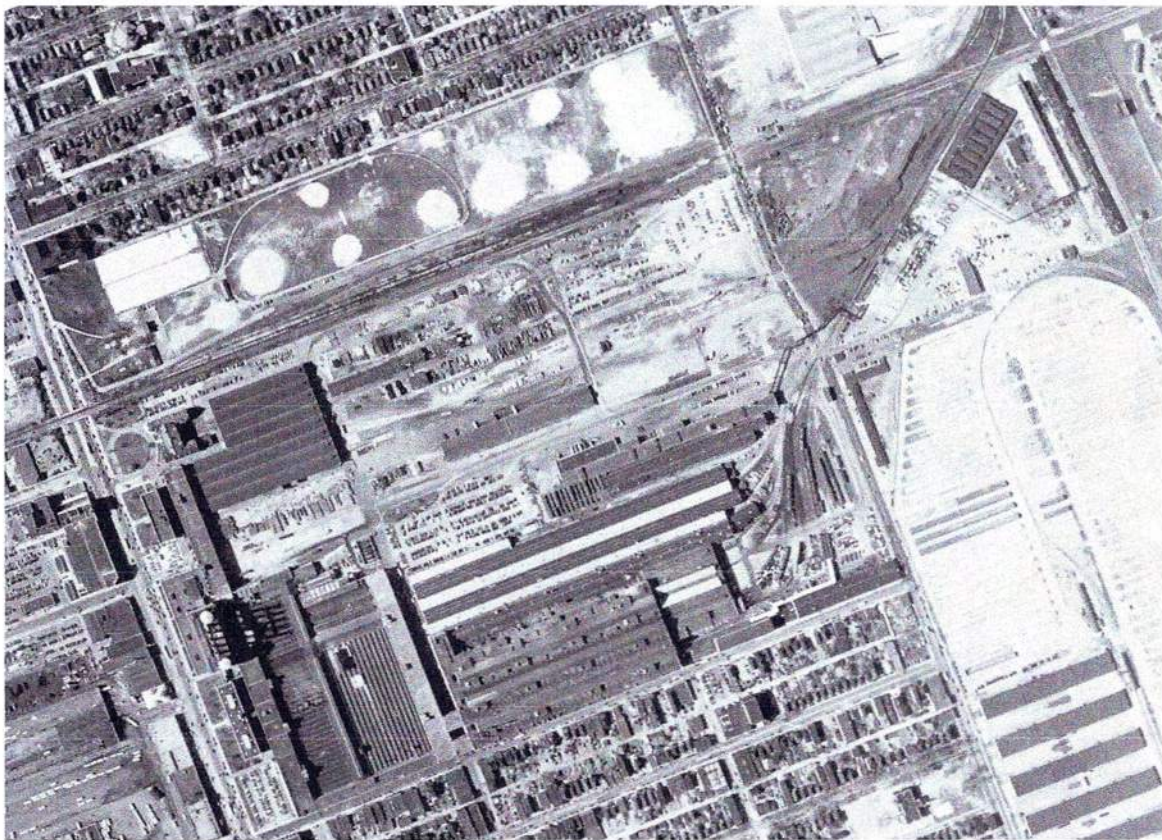


Figure 4: Aerial photograph of Highland Park Plant, April 1949 (DTE-Wayne State University Aerial photograph collection).



Figure 5: Buildings AA (left), NN (center), and OO (right), looking southeast (QEA 2012).

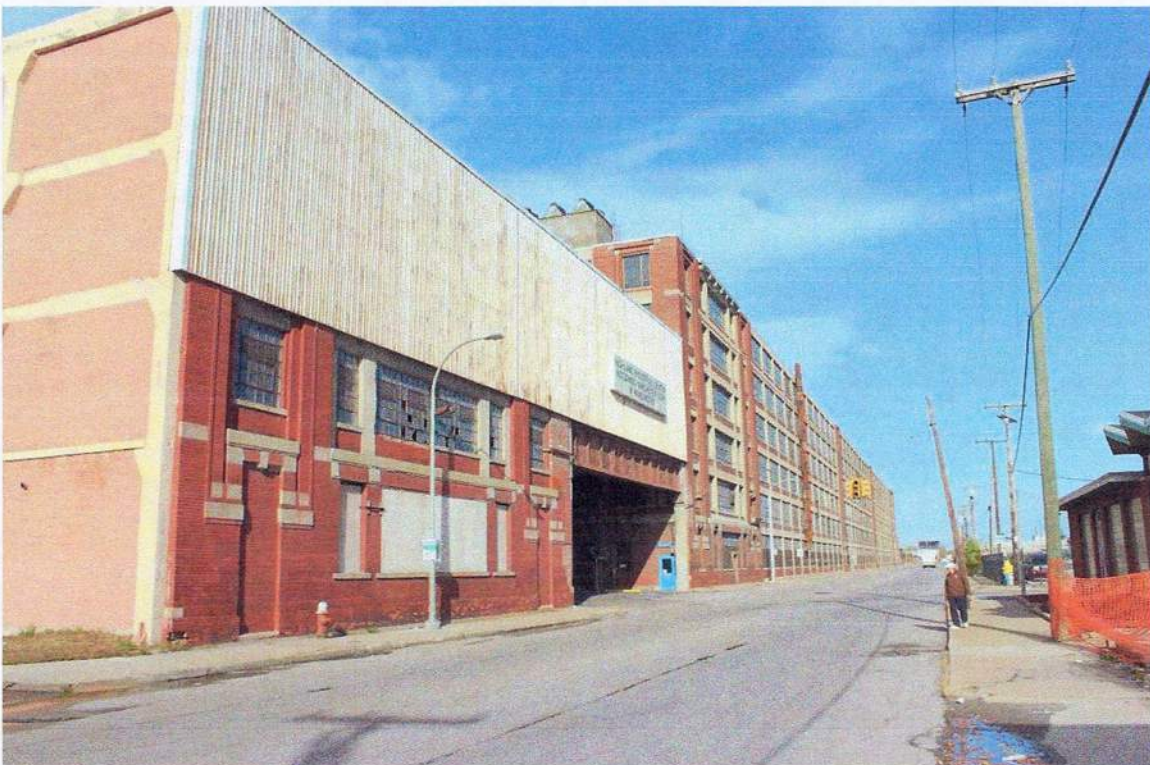


Figure 6: Building H (left) and WXYZ, façade along Manchester Street, looking east (QEA 2012).



Figure 7: Buildings H (right) and WXYZ (left), looking south (QEA 2012).



Figure 8: Site overall looking west towards buildings WXYZ (QEA 2012).



Figure 9: Building 072 (foreground) looking west along Manchester Avenue (QEA 2012)



Figure 10: Building JJ looking southeast (QEA 2012).



Figure 11: Commercial area, looking north (QEA 2012).



Figure 12: View along Oakland Avenue, looking southwest (QEA 2012).

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Maps of Location of Proposed District:

Highland Park Ford Plant
CRMP

Existing Conditions

Building Key	00 Office
01 Garage	02 Machine Shop
03 Stock	04 Factory
05 Power House Remnant	06 Fuel Tank
07 Saw Mill and Box Factory	08 Crainways
09 Dry Mill	10 Power House No. 2
11 Shipping Shed	12 Warehouse
13 Restaurant	14 Shipping Center Ship Mast
15 Guard Shed	16 Storage Shed
17 Enclosed Transformer	18 Electric Transformer
19 Remnants of Buildings or Structures	

Legend	--- N-E Boundary
[Solid Grey Box]	Building
[Dotted Grey Box]	Structure
[Thin Dotted Grey Box]	Remnant or Building/Foundation
[Thin Dotted Grey Box]	Railroad Remnant
[Dashed Line]	Fence
[Circle]	Power Pole
[Dashed Circle]	Unpaved Circulation
[Dotted Circle]	Stock Piles of Demolished Building Materials
[Tree Symbol]	Deciduous Tree
[Tree Symbol]	Coniferous Tree

Map Notes and Sources
2012 Google Maps Aerial
1981 Existing Conditions by Christopher Wozniy & Associates
Site Investigations, October 2012 by Brenda Williams and Lindsey Prodomak

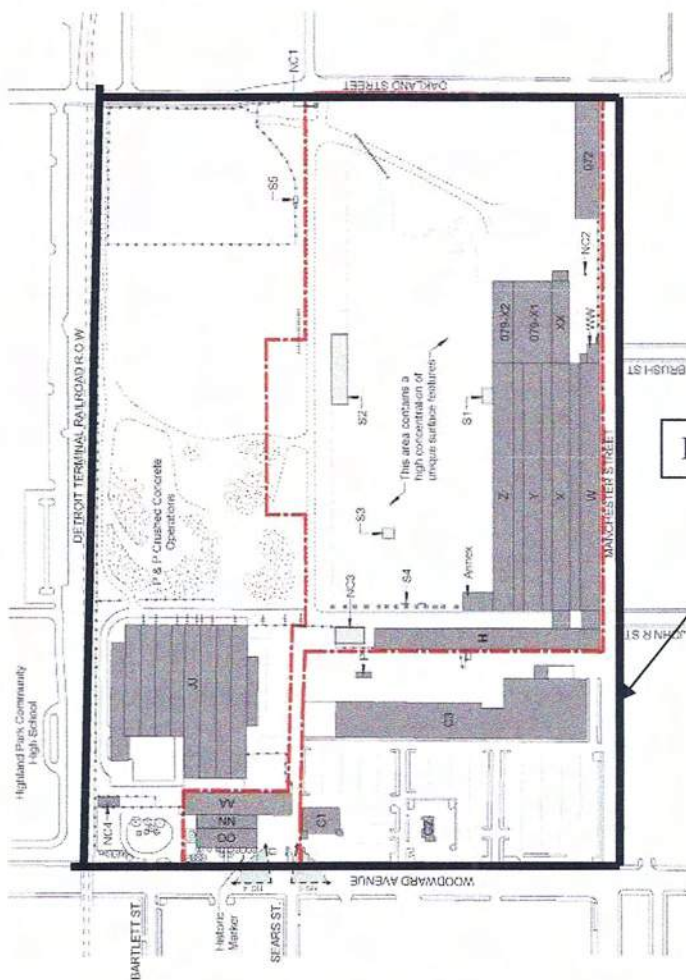


Drawn/Revised
January 2013



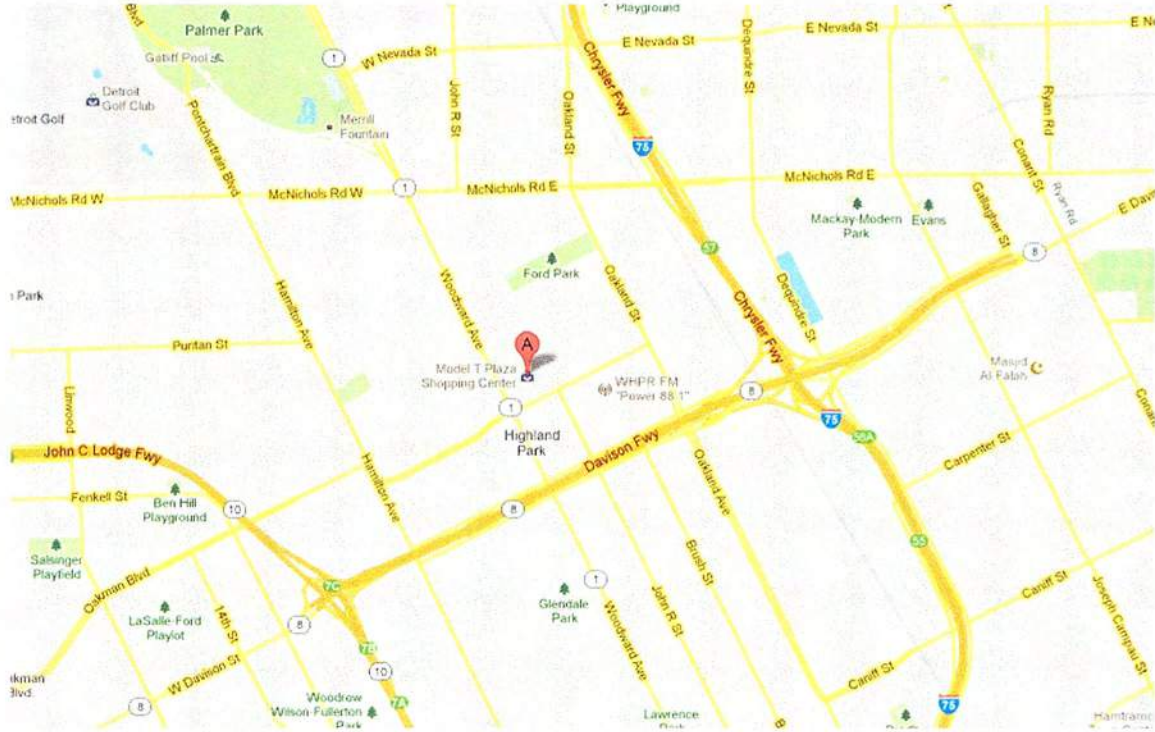
QUINN EVANS
ASSOCIATES

EC-1



District Boundary

Proposed Ford Highland Park Plant Historic District
Highland Park, Michigan
December 2013



**Location of Ford Highland Park Plant Historic District
Highland Park, Michigan
December 2013**

Appendix 1
Parcel Descriptions
Parcel Map