

Ford Motor Company Assembly Plant /  
Quartermaster Depot /Charlotte Army  
Missile Plant



**1. Name and location of the property:** The property known alternatively as the Ford Motor Company Assembly Plant, Army Quartermaster Depot, and Charlotte Army Missile Plant is located at 1776 Statesville Ave., 1101 Woodward Ave., 901 Woodward Ave., and 1701 Graham Street.

**2. Name, address and telephone number of the present owners of the property:** The owners of the properties are:

**1776 Statesville Avenue**  
Parcel Id# 07903105  
Eckerd of North Carolina, Inc.  
PO Box 4689  
Clearwater, FL 33518

**1776 Statesville Avenue**  
Parcel Id# 07903102  
Bancroft Realty Co.  
PO Box 4689  
Clearwater, FL 34618

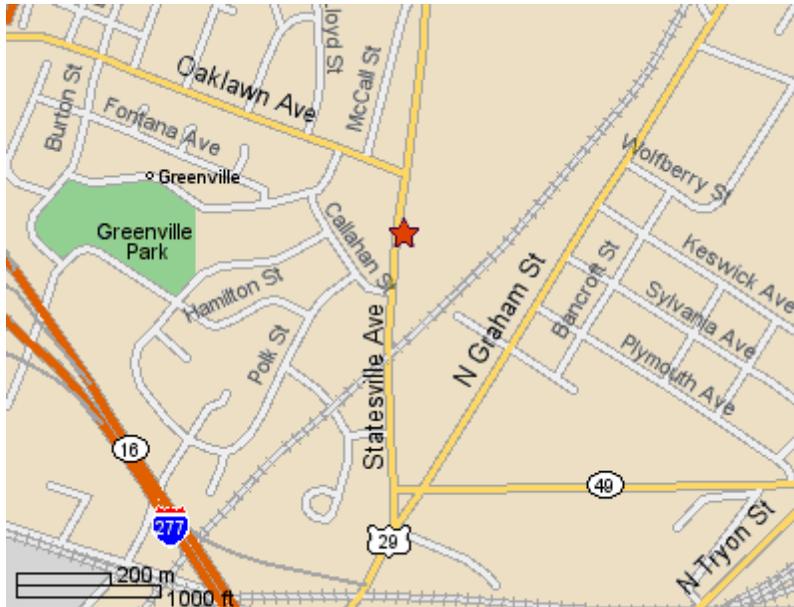
**1101 Woodward Avenue**  
Parcel Id# 07903101  
Eighteen Thirty Statesville  
PO Box 36799  
Charlotte, NC 28236-6799

**1701 North Graham Street**  
Parcel Id # 07903103  
Godley Management Company  
Fred D. Godley  
6132 Brookshire Blvd., Ste. C  
Charlotte, NC 28216-2410

**901 Woodard Avenue**  
Parcel Id# 07903104  
Jerry and Joyce Dellinger  
506 Maymount Drive  
Cramerton, NC 28032

**3. Representative photographs of the property:** This report contains representative photographs of the property.

**4. A map depicting the location of the property:** This report contains a map depicting the location of the property. The UTM coordinates are: 17 515172E 3900190N



**5. Current Deed Book Reference to the property:** The most recent deeds to these properties are listed in the Mecklenburg County Deed Books: #03982/233; #07845/163; 03811/916; 10191/479; 05332/801. The tax-parcel ID #s are: 07903101; 07903102; 07903103; 07903104; 07903105.

**6. A brief historical sketch of the property:** This report contains a brief historical sketch of the property prepared by Ryan L. Sumner.

**7. A brief architectural description of the property:** This report contains a brief physical description of the property prepared by Ryan L. Sumner.

**8. Documentation of how and in what ways the property meets the criteria for designation set forth in N.C.G.S. 160A-400.5:**

**a. Special significance in terms of its historical, prehistorical, architectural, or cultural importance:** The Commission judges that the property known alternatively as the Ford Motor Company Assembly Plant, Army Quartermaster Depot, and Charlotte Army Missile Plant does possess special significance in terms of Charlotte-Mecklenburg. The Commission bases its judgment on the following considerations: 1.) The Ford Motor Company Assembly Plant was an important component of Charlotte's industrial and commercial infrastructure in the early twentieth century. 2.) The original Ford building is the work of Albert Kahn, an industrial architect of national importance. 3.) As the Quartermaster Depot during World War II, the complex and the Charlotteans employed at the site played an important role in the war effort by processing and distributing supplies, and repatriating war dead. 4.) As one of two plants in the United States manufacturing missiles for the Nike Program and the only one making the Nike Hercules, the Charlotte Army Missile Plant and its local civilian employees played a major role in the national defense of this country during the Cold War.

**b. Integrity of design, setting, workmanship, materials, feeling, and/or association:** The Commission contends that the physical description by Ryan L. Sumner,

which is included in this report, demonstrates that the essential form of the site meets this criterion.

**9. Ad Valorem Tax Appraisal:** The Commission is aware that designation would allow the owner to apply for an automatic deferral of 50% of the Ad Valorem taxes on all or any portion of the property that becomes a "historic landmark." The current appraised value of the combined 74.202 acres of land is \$3,176,270. The current appraised value of the improvements is \$9,969,500. The total current appraised value is \$13,145,770. The property is zoned I-2.

**Date of Preparation of this Report:** July 1, 2002

**Prepared by:** Ryan L. Sumner  
Assistant Curator  
Levine Museum of the New South  
200 E 7TH St.  
Charlotte, NC 28202

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### **Historical Background Statement**

Ryan L. Sumner

**May 30, 2002**

#### **Detroit in Dixie: Ford Motor Company of Charlotte**

Ford began operations in the Queen City during the company's early years. In his book, The Ford Factory, historian Lorin Sorensen indicates that the Ford Motor Company opened a factory service branch at 222 North Tryon Street in 1914 to supply service parts to Ford dealers throughout the Carolinas.<sup>[1]</sup> However, during its first year of operation, the popularity of the T Model prompted Ford to begin assembling bodies in Charlotte onto chassis shipped in from Michigan.<sup>[2]</sup> In its first three months, the modified distribution facility produced 1,717 cars and in 1915, the facility's forty employees built about 6,850 cars. By December 1915, the plant had the capacity to produce eighty-five cars per day.<sup>[3]</sup>

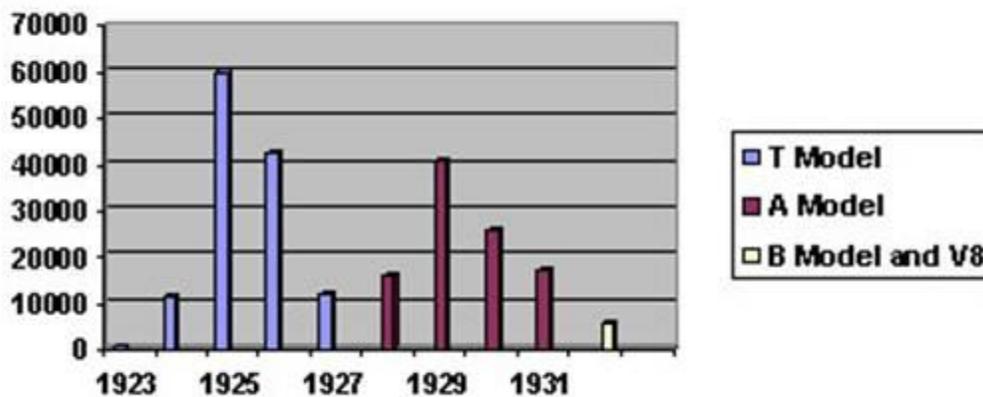
As demand grew for the "Tin Lizzy," the Charlotte branch outgrew its North Tryon Street location and moved to a pre-existing building at 210 East Sixth Street. At this larger four-story and basement facility, bodies and chassis were "completely assembled."<sup>[4]</sup> Again, increased automobile sales soon outstripped the plant's ability to produce, prompting Henry Ford to build a new factory specifically designed for the mass-production of automobiles.

To build Charlotte's newest manufacturing facility, Henry Ford turned to renowned industrial architect Albert Kahn and building contractor the McDevitt-Fleming Company of Charlotte. J. A. Jones Construction of Charlotte and the American Sign Company of Kalamazoo, building the

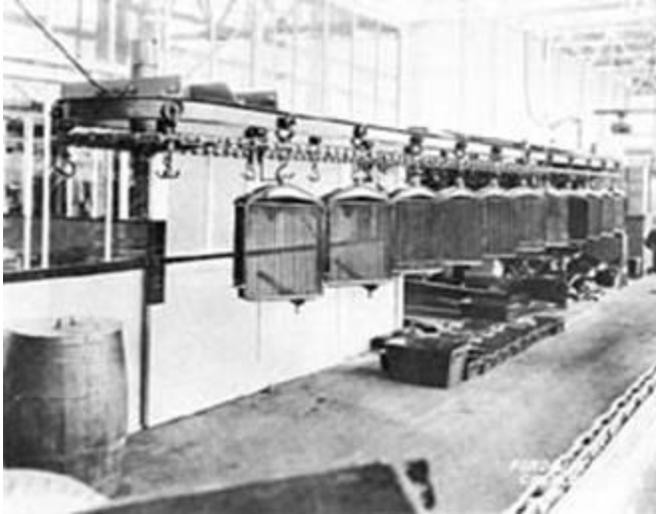
oil tanks and water tower, respectively.<sup>[5]</sup> Construction began on the Hutchison Farm at Statesville and Derita Roads<sup>[6]</sup> in January 1924.

A series of photographs in the collection of the Henry Ford Museum and Greenfield Village Research Center document the construction of the Charlotte facility.<sup>[7]</sup> The first photo, dated January 18, 1924, shows a cleared field where the factory was eventually built. By February 29<sup>th</sup>, steam-powered cranes and workers with mule-drawn wagons were preparing the foundation. In May, the steel-frame structure of the building and its service roads were nearly finished. The plant was complete enough to begin manufacturing cars by September 14, 1924, despite a lack of final additions.<sup>[8]</sup> Images from August and September 1924 show the construction of the plant's powerhouse. The completed assembly plant, water tower with emblazoned script "Ford," is seen in the final photo dated January 26<sup>th</sup>, 1925. Throughout the series, African Americans are shown as the main labor force in the construction of the plant, though it is unknown to what extent Jim Crow laws and Charlotte's Southern "traditions" allowed blacks to be employed in manufacturing at the facility.

The total costs for the erection of the Statesville Avenue Ford plant were: land and improvements: \$130,442.07; buildings fixtures and structures: \$1,485,968.84; tools, machinery, and equipment: \$353,947.94; total investment: \$1,970,358.85.<sup>[9]</sup> The completed facility was 300 feet wide by 800 feet deep and boasted 240,000 square feet—approximately six acres—of production floor space.<sup>[10]</sup> 500 Charlotteans were employed at the Ford Motor Company during its first year of production,<sup>[11]</sup> when they assembled as many as 300 vehicles a day.<sup>[12]</sup> The plant produced up to 60,032 automobiles in a single year (1925), manufacturing a total of 231,066 cars and trucks from 1924 to 1932.



Production Numbers from Statesville Avenue Plant  
Adapted from Information Supplied from Henry Ford Museum<sup>[13]</sup>



Grills Move Down the Assembly Line,  
Statesville Avenue Ford Plant, 1925.  
Collection of Levine Museum of the New South



Finished T Model Fords Roll Off the Line,  
Statesville Avenue Ford Plant, 1925.  
Collection of Levine Museum of the New South

The Stock Market Crash of October 1929 and subsequent Great Depression took their toll on the automobile industry and spelled the beginning of end for Ford production in Charlotte. As Southerners' purchasing power declined, so did production at the Statesville Avenue Plant, plummeting from 40,947 units in 1929 to just 5,937 in 1932.<sup>[14]</sup> Consequently, production ceased in 1932, with all service stock, office and plant equipment relocated to other Ford facilities.<sup>[15]</sup> The site was reopened in November 1934 as a sales and service branch. The property was sold to the US Army in June 1941,<sup>[16]</sup> with the company retaining space for branch operations temporarily,<sup>[17]</sup> until operations were moved to 1000 West Morehead Street.<sup>[18]</sup>

### **Albert Kahn: The Architect of Industry**

Albert Kahn (b.1860—d.1942),<sup>[19]</sup> America's foremost industrial architect, came from humble beginnings. Kahn was born the son of poor Jewish immigrants to the United States, which curtailed his formal schooling at the age of eleven. He dreamed of being an artist, until a young Albert discovered he was colorblind.<sup>[20]</sup>

Kahn entered the world of architecture in 1884, when the fifteen-year-old was given a non-paying job with architectural firm of Mason and Rice. Here George Mason taught the boy to draft and sketch. Kahn later won a scholarship to study architecture in Europe, touring Italy, France, Belgium, and Germany.<sup>[21]</sup>



*Architect Albert Kahn,*

*Courtesy of Albert Kahn Assoc.*

In 1895, Kahn founded his own firm, Albert Kahn Associates. His early work included designs of Detroit's first large auto plants for the Packard Motor Car Company. The architect garnered attracted great attention and admiration for his 1903 design of the first concrete-reinforced automobile factory for Packard.<sup>[22]</sup> <sup>[23]</sup> His building was a remarkable improvement over the dangerous, inefficient, timber-framed plants used by other automakers. Kahn's design was remarkably strong, fireproof, inexpensive to construct, and was opened up by eliminating heavy obstructive columns.<sup>[24]</sup>

Kahn's work for Packard attracted the attention of Henry Ford. For the next thirty years, these two self-made men collaborated very closely and redefined the industrial process, despite Ford's widely-reported anti-Semitism.<sup>[25]</sup> The first of 1,000 collaborations between the two was the Ford Motor Company's Highland Park Plant, which was defined by good lighting and ventilation. However, Kahn's greatest achievement was the 1917 design of the Ford Rouge Plant—a half-mile-long, glass walled plant, where production lines flowed continuously on one level, and 120,000 employees worked from raw materials to finished car.<sup>[26]</sup>

Albert Kahn, built about two thousand factories for the automotive, aeronautical, and other industries between 1900 and 1940<sup>[27]</sup>—20 percent of all architect-designed factories in the U.S.<sup>[28]</sup> Today, Albert Kahn is widely recognized as a revolutionary industrial-use architect, but he never achieved recognition from his peers, who had little respect for utilitarian buildings that did not fit within the canon of public, civic, and residential architecture. His Detroit firm still operates under the name [Albert Kahn Associates](#).

### **Queen City at War: Quartermaster Corps Depot**

Although the Japanese attack at Pearl Harbor was a surprise, the US military had long foreseen entanglement in the Second World War and had begun to prepare for conflict. In Charlotte, these preparations included the establishment of Charlotte Army Airbase (later called Morris Field) and huge Quartermaster Depot.

The Charlotte Quartermaster Corps (QMC) Depot was activated on May 16, 1941, initially with a staff of three army officers and thirty-two civilians under the command of Lieutenant Colonel Clare W.

Woodward. Even before the site was officially purchased, the QMC was setting up shop and soliciting construction bids as Ford was moving their materials out.<sup>[29]</sup>



*Aerial Photograph Showing the former Ford Plant and Additional Warehouses Built by the Army, Circa Mid-1940s – 1950s. Collection of Levine Museum of the New South*

The QMC wasted no time expanding the facility and adapting it for their uses. On June 3, 1941, the War Department awarded a general contract for construction of the first three [of an eventual five additional] fireproof warehouses to the William Muirhead construction firm of Durham. William Olsen and William Deitrich, both of Raleigh acted as the structural engineer and the architect for this initial expansion. The sense of urgency to prepare for a coming war is evidenced by the fact that the Muirhead Company was allowed “one day – today – to get ready to start this work, because we must have it completed with the least possible delay.”<sup>[30]</sup> The Charlotte News reported these first three additional warehouses to be 180 by 12,000 feet.<sup>[31]</sup> Two smaller warehouses, 180 by 600 feet, were added later and creating a combined floor area of 1,000,000 square feet.<sup>[32]</sup>

Mechanized equipment played a large role in the work done at the QMC Depot. Extensive rail lines connected the six buildings together and to the Southern Railroad – the facility saw a daily turnover of forty boxcar loads. It even had its own diesel-electric GMC locomotive to move cars around the facility. Gasoline-driven tractors and hoisting equipment were used to move and stack heavy

cargoes, such as crates of canned goods weighing of 1,000 pounds. In addition, small tractors were used to pull long trains of “flatcars” about the warehouses. While the operation was mostly train based, the QMC maintained a motorpool of about 50 to 100 trucks for highway shipping.<sup>[33]</sup>

The QMC Depot grew well beyond its original mission to supply US Army posts in the two Carolinas and Virginia. The needs of the war saw the depot’s 2,500 civilian employees and 80 Army officers processing “everything from toothpicks to battle gear”<sup>[34]</sup> for thirty-seven posts, camps, and stations in North and South Carolina, Virginia, and West Virginia.<sup>[35]</sup> While the primary purpose of the depot was as a distribution unit, it was called upon numerous times during World War II to send emergency supplies overseas. In January 1944, the QMC Depot sent 745 tons of materials through ports of embarkation, but by November of the same year, export tonnage rose to 5,941 tons.<sup>[36]</sup> The Charlotte operation became the Zone Inspection Headquarters, supervising QMC units throughout the Southeast. Further, the depot administered the Greenville, SC, Price Adjustment Office and handled negotiations and contracts.



*Above: View of QMC Depot Railroad Yards, 1942  
Charlotte News, 1942.*



*Diesel-Electric GMC Locomotive used to Move  
Freight Cars.  
Charlotte News, 1942*

From the end of the war to January 1949, the QMC Depot was used to repatriate the war dead. The American Graves Registration Division (AGR) took over the depot in August 1946, and returned the bodies of 5,170 deceased service personnel to next of kin in North and South Carolina, Virginia, Tennessee, and Georgia. At the peak of AGR's work, the depot employed an escort attachment of 144 Army Ground Forces, 22 Air Force personnel, 10 Naval seamen, and 30 Marines. A plaque that honored these casualties of war was dedicated at the depot's main building by the Quartermaster General, Major General Herman Feldman.<sup>[37]</sup> However, this was not the end of the old Ford Plant's patriotic duty.



*Interior View of QMC Depot, Charlotte News, 1942*

### **Gods and Monsters: Cold War-era Guided Missile Production in Charlotte**

The Nike Project, named for the Greek goddess of victory, was the United States' and many of her allies' primary air defense system during the tense years of the Cold War.<sup>[38]</sup> In the final days of the Second World War, threats posed by advances in offensive aircraft technology became obvious to the Army Ordnance Department, which set about developing a guided missile system<sup>[39]</sup> capable of destroying high-speed, high-altitude, maneuverable bombers far beyond the range of conventional anti-aircraft artillery.<sup>[40]</sup>

After being green lighted in 1953, the Nike Ajax Weapon System was deployed in March 1954, becoming the first land-based air defense guided missile system to be deployed in America. The Douglas Aircraft Company (DAC) was the principal production source for the Ajax Missile<sup>[41]</sup>. Ajax was capable of maximum speeds of over 1,600-mph and could reach targets at altitudes of up to 70,000 feet within a range of about 25 miles. Initial production began at DAC's plant in Santa Monica, California, but the War Department announced in December 1954 that the former Quartermaster Depot on Statesville Road would be used for the manufacture of the Army's Nike guided missile.<sup>[42]</sup>



*Nike Ajax Missile on Launcher,  
Boeing Corporate Archives*

Adaptation of the former QMC Depot into a guided-missile factory fell Charlotte Engineers Incorporated<sup>[43]</sup> who did the design work for the project and to the Wilmington District Army Corps of Engineers. Several different contractors did construction work for different phases of the conversion, the largest being Thompson Street Construction Company of Charlotte.<sup>[44]</sup> The military slated production to begin in July 1955, but unanticipated problems rehabilitating the structures delayed the start until 1956.<sup>[45]</sup> The site, designated the Charlotte Ordnance Missile Plant (COMP) and later the Charlotte Army Missile Plant (CAMP), was operated by Douglas Aircraft, who transferred thirty-five key executives and technicians from Santa Monica. The plant hired about 1,500 personnel from Charlotte, adding diversified employment to an area known primarily as a textile center.<sup>[46]</sup>

Under the leadership of General Manager Sheldon P. Smith, the plant preformed admirably. COMP delivered its first Nike Ajax missile ahead of schedule in July 1956, the beginning of a sustained flow of missiles form the factory doors to deployment installations. The division won regard by never failing to meet deadlines – delivering most of their quotas ahead of time. The transfer of Nike Ajax design control to Charlotte in 1956 shows the increasing importance of the Charlotte division.<sup>[47]</sup> Between the two plants, DAC built 13,714 Nike Ajax missiles for deployment at the 350 missile batteries in the US and overseas.<sup>[48]</sup>

In 1957, Douglas Aircraft began to “tool up” and install new facilities for the production of the next generation of Nike missile – the Hercules. The upgrades cost the Department of Defense \$21.5 million (\$ 9 million for plant rehab and \$7.5 million in machinery).<sup>[49]</sup>

The Nike Hercules, or Nike B, was a far more capable defensive weapon than the earlier Ajax and better equipped to defend against smaller and faster targets, such as supersonic planes and tactical ballistic missiles. This two-stage missile contained a simplified solid fuel sustainer motor and was designed to carry a nuclear warhead. Hercules had an increased range of ninety miles, maximum range of 3,200 miles per hour, and the capability to hit targets flying at altitudes over 100,000 feet.

[Click here for a schematic drawing of the Hercules Missile.](#)

The Charlotte Ordnance Missile Plant was the sole production site for the Nike Hercules Missile. The major components for the missile consisted of the missile airframe (forward and aft body, the main and center fins, booster fins, and booster cluster), the warhead body assembly, and shipping containers. As in the Ajax program, Western Electric Company manufactured the guidance systems and ground equipment in their three North Carolina plants.<sup>[50]</sup>



[Nike Hercules in its firing position.](#)

[Click to launch.](#)

*Boeing Corporate Archives*

Although production of the Hercules Missile dominated the activities at CAMP through 1965, Nike was not the only project DAC and its workforce of 1,750 Charlotteans<sup>[51]</sup> were working on. Production began in 1962 on the [Honest John XM50 Rocket](#), as did research and development for the [Nike Zeus](#). The early sixties saw work done for other military agencies and NASA on aerospace vehicles, missilery, and military hardware – such as infantry-carried anti-tank weaponry.<sup>[52]</sup>

On August 13, 1965, the Assistant Secretary of the Army determined that retention of the plant could not be warranted under new policies set by the Defense Department earlier that year. Despite formal protest by the Hercules Project Manager, Secretary of Defense Robert S. McNamara announced the close and subsequent disposition of the installation. Missile production ended in May 1965, with repair parts production continuing on a phase out basis until the last equipment left the site in May 1967. After the close of the Charlotte plant, Hercules manufacture was subcontracted by McDonnell Douglas (formerly DAC) to the Mitsubishi Heavy Industries Company in Japan.<sup>[53]</sup>

Pat Hall Enterprises purchased the property after McDonnell Douglas’s military contracts expired.<sup>[54]</sup> Pat Hall then subdivided the property, selling parcels to the current owners for manufacturing and

warehouse space.<sup>[55]</sup>

## **Brief Architectural Description**

Ryan L. Sumner  
May 30, 2001

### **Site Description**

The property known as the Ford Motor Company Assembly Plant and later as the US Army Quartermaster Depot and Charlotte Army Missile Plant (hereafter referred to as “the plant,” “the site,” and “the complex”) is situated in central Mecklenburg County, just north of the uptown area. For the most part, the site fronts Statesville Avenue, which bounds property to the west, Woodward Avenue is to the north, North Graham Street on the east, and Armour Avenue to the south. The plant is located along the former Southern Railway Line; several spur tracks cross the site, linking the buildings to the main line. This proximity to the railway let Henry and Edsel Ford ship their newly assembled cars all over the Southeast and was obviously the determining factor in positioning the plant on this location. The complex is currently used as an office park by several companies and in its current condition consists primarily of six mammoth buildings, the boiler house, water tower, and associated smaller outbuildings.

The complex contains buildings erected and changed over a 35-year span of time. The oldest parts of the site are the original Ford Motor Company buildings designed by Albert Kahn and erected in 1924. Kahn’s factory consisted of the main manufacturing building ( Building No.1),<sup>[56]</sup> the boiler house (Building No.7), and a warehouse building (Building No.8, no longer extant). In preparation for the United State’s involvement in the Second World War, the Army Quartermaster Corps added five additional warehouse-type structures (Buildings No.2—No. 6)<sup>[57]</sup> to the site, using William Muirhead Construction as contractors, and William Olsen and William Deitrich as structural engineer and architect for the initial expansion. Buildings Nos. 3—4 are located north of the Ford structures, while Buildings Nos. 4—6 are located south of the original factory. The buildings were reshaped again for guided missile manufacturing in the 1950s by Charlotte Engineers Incorporated and The Wilmington District Army Corps of Engineer contracting mainly through Thompson Street Construction of Charlotte.<sup>[58]</sup> With the cessation of the missile program, Douglas’ equipment was removed and the site was returned to warehouse functionality.

## Building Descriptions



**The Front Façade of Building No.1, c.1920s  
Henry Ford Museum & Greenfield Village<sup>[59]</sup>**

### **Main Building (Building No.1):**

Building No.1 was erected on the site as the principal manufacturing space of Ford's Charlotte assembly operation. The one-story structure has a rectangular footprint and is approximately 300 feet wide (14 bays) by 850 feet deep.<sup>[60]</sup> The building is brick-faced in [running bond](#), steel-framed, with concrete floors and a concrete slab roof.<sup>[61]</sup>

Kahn was famous for opening up his manufacturing spaces to light and the Charlotte facility follows the conventions established at the Highland Park and Rouge Plants. The building's steel frame supports the weight of the roof, taking load-bearing responsibility off the walls to allow the north and west sides of the building to be defined by a band of multi-paned windows with metal muntins that run nearly the length and about half of the overall height of the structure. These windows are still mostly open on the north side of the building, but have been painted over on the south. Light is further directed into the space by two pairs of large wedge-shaped skylights that run west-to-east along the length of the roof. Both the skylights and wired glass windows opened for ventilation.



**Detail of the cornice from the northwest corner.**

The west forward-facing façade is slightly asymmetrical<sup>[62]</sup> and consists of a central block flanked by projecting pavilions. The facade runs the overall width of the building and wraps around the northwest and southwest corners to a depth of about 2 bays. As seen in the above photograph, 13 large windows once punctuated the west face of the building; The 5 on the southern end were for show-room display. Today these windows have been bricked-up, though their cast stone sills are still in place. The central entrance with its multi-pane wired-glass surround is still in place, but has been boarded over and obscured by the placement of several trees.

The front façade is defined by classical elements given an art deco twist. 15 brick pilasters with cast stone<sup>[63]</sup> caps visually support a cast stone architrave and frieze with decorative brick tile laid in a herringbone pattern above the pilasters and laid in a diamond motif across the spans. Above the frieze is a heavily corbelled cornice featuring a row of small diamonds.<sup>[64]</sup>

A large steel flagpole with a heavy concrete base is located in front of Building No. 1. Early photos of the Ford plant show the United States flag flown from atop the building's central block. Therefore, it is assumed that this large pole was added during the days of the plant's patriotic service.

## **Broiler House (Building No.7) and Water Tower:**

Building No. 7 was erected according to Kahn's design as part of Ford's Charlotte Assembly Plant. The boiler house sits atop an earthen plinth and has a footprint approximately 75 feet square (14 bays wide). The exposed steel-frame building is faced in horizontal cast stone bands and brick laid in [running bond](#), with concrete floors and slab roof.<sup>[65]</sup>

As with Building No.1, Kahn evokes elements from Ancient Greco-Roman design; at the corners of the building, vertical shafts of brick rise column-like terminating in plain concrete capitals to support frieze and cornice-inspired elements. The roof line appears to be slightly gabled, but this could be part of the decorative neo-classical motif.

Perhaps the most defining characteristic of this building is the extensive use of glass on each side of the building. On the front western-face of the building, three horizontal rows of windows span 12 columns with riveted steel beams between each and steel muntins between the lights. The top two rows are composed of 3-over-3 sash windows. The lower two thirds of the central row have the ability to tilt out for ventilation. The bottom band of windows are 3-over-4 sash. Light pours into the space from all four sides like a green house.

Western face of the Broiler House,  
Showing window sash, smoke stack, and  
100,000-gallon water tower.

While the structure is about as tall as a three-story building, inside it is completely open from floor to ceiling to accommodate the plant's massive boiler.

Attached to Building No. 7's northern side is the boiler house's smoke stack. The riveted steel cylinder is about 2 ½ times the height of the building and suffers from heavy oxidation. Early photos of the site show that the stack was painted white with a black cap.

Behind the boiler house, the Ford plant's original 100,000-gallon water tower rises up majestically on four steel legs. The round tank is currently painted black and has a wide conical top. Some early photos show the tower painted white with a large script "Ford" painted on it.

## **Building No. 2**

*Western Face of Building No. 2, seen from Statesville Road.*

Building No.2 was erected as part of the US Army Quartermaster Corps Depot. The one-story structure has a elongated rectangular footprint and is approximately 180 feet wide by 1200 feet deep.<sup>[66]</sup> The building is brick-faced in "[common bond](#) with six course headers," steel-framed, with concrete floors and a "high and low type" concrete slab roof.<sup>[67]</sup>

Unlike Albert Kahn's buildings which celebrate natural light and open-window ventilation, this structure is essentially a long brick box, with almost no visible fenestration in the walls except

for a few very small louvered openings that occasionally punch through the buildings imposing brick exterior. It appears from outside observation that the only way natural light enters the space is through a series of 10 clerestory skylights placed at regular intervals along the length of the building that transverse the building's width. These monitors appear to be constructed from pressed corrugated sheet-metal painted red with a bank of 15-pane-windows with steel muntins on the short sides (north and south) and a series of 4 / 2-sash windows along the long east and west sides.

Attached to the southwest corner of the building is a guardhouse-type structure that appears to function as a secured entrance. Many former employees of Douglas Aircraft have spoken about the high-level of secrecy that dominated the operations at the plant; a guardhouse reflects this desire for security.<sup>[68]</sup> This small wooden structure is two bays wide by 4 bays deep. A partial hip roof with modern asphalt shingles hangs over the guardhouse and the short flight of concrete steps that connect it to the ground.

Long concrete loading platforms abut the north side of Building No. 2, which faced spur rail tracks until recently.<sup>[69]</sup> It was from here that the Quartermaster's Corps received, processed, and distributed the supplies needed by the war effort. Photos published in the 1940s show the north face punctuated by numerous industrial service doors.<sup>[70]</sup>

A open steel-framed structure with a rectangular footprint and a slight gable spans the corridor between buildings No.2 and No.1. This structure does not appear in the early QMC Depot photos and was most likely built for DAC as part the overhead crane system used to lift the missiles in nuclear fall-out shielded containers onto flatbed train cars.<sup>[71]</sup>

### Building No.3

Building No.3 was erected for warehousing for the US Army Quartermaster Corps Depot. The one-story structure has an elongated rectangular footprint and is approximately 180 feet wide by 1200 feet deep.<sup>[72]</sup> The one-story building is about 27 feet high, with an east-west running monitor roof that raises its height about 7 additional feet. The structure is most likely steel framed and in early photographs appears to be brick faced—today aluminum or vinyl siding covers the much of the building's exterior.

The working side of this structure is the southern face, which once overlooked the site's rail yards and contains concrete loading platforms sheltered by broad eaves that run the full length of the building. Many of the original industrial loading doors seem to be present as does the original facing material. The overhead cranes abut this side of the building and connect it to building No. 2.

The western face of Building No. 1 is plain, but is characterized by 8 bays of overhead tractor-trailer loading doors, which are shaded by a rectangular metal canopy.

Building Nos. 4, 5, 6

The QMC Depot constructed Building Nos. 4, 5, and 6 as a matched set. They are one-story box-like structures brick-faced in “[common bond](#) with six course headers,” with elongated rectangular footprints, steel-framing, and concrete floors and roofs.<sup>[73]</sup> Multiple tall clerestory skylights rise from the roofs of each, crossing the widths of the buildings at several intervals.<sup>[74]</sup> These monitors are constructed from pressed corrugated sheet metal; buildings 4 and 5 have 15-pane-windows with steel muntins on the short sides (east and west) and a series of 4 / 3-sash windows along the long east and west. However, these windows on No.6 have been covered over.

All three buildings are about 180 feet wide, but there is tremendous variation in the buildings’ overall length. Building No. 4 is only about 700 feet long, giving it the smallest floor space on the site. Building No. 5 sprawls back 1200 feet, creating an area as large as gigantic Buildings 3 and 4. It appears that building No. 6 was expanded some time before 1955; this new addition contains the same steel framing and concrete floors, but the new addition is sided with aluminum or vinyl and has a 6-foot single monitor that runs the rest of the length from a mere 425 feet in length to over 1100ft.<sup>[75]</sup>

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<sup>[1]</sup> Sorensen, Lorin, [Ford Motor Company](#)

<sup>[2]</sup> Wadelington, Charles, *History of the Charlotte, North Carolina, Ford Motor Company Assembly Plant: 1914-1955* (Raleigh, NC: North Carolina Department of Cultural Resources, Historic Sites Section, 1999), pg 4. Courtesy of UNC Charlotte Special Collections.

[3] Thompson, Edgar T., Agricultural Mecklenburg and Industrial Charlotte, Social and Economic: 1926 (Charlotte, NC: 1926), P145

[4] Wadelington, Charles, *History of the Charlotte, North Carolina, Ford Motor Company Assembly Plant: 1914-1955* (Raleigh, NC: North Carolina Department of Cultural Resources, Historic Sites Section, 1999). Courtesy of UNC Charlotte Special Collections.

[5] City of Charlotte, *Application for Building Permit No. 6122 (5/26/25)*; Henry Ford Museum and Greenfield Village Research Center, Accession #429, Box 1, “Charlotte Branch History;” Henry Ford Museum and Greenfield Village Research Center, Accession #721, box 7, “Charlotte Branch History Photos.”

[6] Kratt, Mary Norton, Charlotte: Spirit of the New South (Winston-Salem, NC: John F. Blair Publishing, 1992), p138

[7] Henry Ford Museum and Greenfield Village Research Center, Accession #721, box 7, “Charlotte Branch History Photos.”

[8] Charlotte Sunday Observer (September 14, 1924), *Ford’s Charlotte Plant as Viewed From an Airplane*, pg. 1A

[9] Based on records supplied to the Museum of the New South by the Henry Ford Museum and Greenfield Village Research Center.

[10] Charlotte Sunday Observer (September 14, 1924), *Ford’s Charlotte Plant as Viewed From an Airplane*, pg. 1A

[11] Ibid

[12] Wadelington, Charles, *History of the Charlotte, North Carolina, Ford Motor Company Assembly Plant: 1914-1955* (Raleigh, NC: North Carolina Department of Cultural Resources, Historic Sites Section, 1999). Courtesy of UNC Charlotte Special Collections.

[13] Production by Year at the Statesville Avenue Plant: 1924: 10463 Cars, 1111 Trucks. 1925: 51708 Cars, 8324 Trucks. 1926: 36945 Cars, 5466 Trucks. 1927: 10221 Cars, 1617 Trucks. 1928: 13905 Cars, 1751 Trucks. 1929: 35634 Cars, 5313 Trucks. 1930: 21339 Cars. 4470 Trucks. 1931: 13259 Cars, 3603 Trucks. 1932: 4945 Cars, 992 Trucks.

[14] See footnote #13

[15] Henry Ford Museum and Greenfield Village Research Center, Accession #429, Box 1, “Charlotte Branch History.”

[16] Mecklenburg County Deed Books, Book 1051, pg 239

[17] Henry Ford Museum and Greenfield Village Research Center, Accession #429, Box 1, “Charlotte Branch History.”

[18] Once World War II broke out, Ford ceased to operate in Charlotte altogether until they reopened a Parts Depot at 1000 W. Morehead Street in the mid-40’s. A new Parts Depot was built at the corner of Wilkenson Blvd. and Dixon Road, with the sales office, in 1952. the Charlotte District Sales Office was moved to 309 Sharon Amity in October 1968.

[19] For an in-depth examination of Albert Kahn’s life and career, see: Frederico Bucci’s Architect of Ford (Princeton: Princeton Architectural Press), 1994.

[20] Albert Kahn Associates, *History*, Available online: [www.albertkahn.com](http://www.albertkahn.com)

[21] Ibid

[22] Bergeron, Louis and Maria Teresa Maiullari-Pontois, Architecture Week, *The Factory Architecture of Albert Kahn*: 01 November 2000 (Pg C1.1)

[23] Albert Kahn Associates, *History*, Available online: [www.albertkahn.com](http://www.albertkahn.com)

[24] Ibid

[25] Bergeron, Louis and Maria Teresa Maiullari-Pontois, Architecture Week, *The Factory Architecture of Albert Kahn*: 01 November 2000 (Pg C1.1)

[26] Albert Kahn Associates, *History*, Available online: [www.albertkahn.com](http://www.albertkahn.com)

[27] Bergeron, Louis and Maria Teresa Maiullari-Pontois, Architecture Week, *The Factory Architecture of Albert Kahn*: 01 November 2000 (Pg C1.1)

[28] Bergeron, Louis and Maria Teresa Maiullari-Pontois, Architecture Week, *The Factory Architecture of Albert Kahn*: 01 November 2000 (Pg C1.1)

[29] Charlotte Observer, (2/28/50), *Charlotte’s QM Plant Hub of War Activity*; Charlotte Observer, (5/14/41), *QMC Depot | Officer, Staff Set to Arrive in Day or Two*.

[30] Greensboro News and Record, (6/4/41), *Army Depots Award Made at Charlotte*.

[31] Charlotte News (10/10/42), *Warehouses Cover 72 Acres*.

[32] *Ibid*.

[33] Interview of Capt. James Fancher, rtd, former military personnel at QMC Depot (9/2/02).

[34] Blythe, LeGette and Charles Brockman, Hornet's Nest: the Story of Charlotte and Mecklenburg County, (Charlotte: McNally of Charlotte for the Public Library of Charlotte and Mecklenburg County, 1961) p212-13.

[35] Charlotte Observer, (2/28/50), *Charlotte's QM Plant Hub of War Activity*

[36] *Ibid*

[37] *Ibid*; It is unknown if this plaque sill exists.

[38] For a comprehensive analysis of the Nike and other US missile programs see: John C. Lonquest and David F. Winkler, *To Defend and Deter: The United States Cold War Missile Program*. Available on Microfilm at Atkins Library, UNC Charlotte.

[39] Western Electric Company, a division of Bell Labs developed the initial feasibility, research, and design studies for this project under contract to the Army Ordnance Department.

[40] US Army Missile Command, Redstone Arsenal, *Historical Monograph—History of the Nike Hercules Weapon System* (Project Number AMC 75M, 19 April 1973), npg. Obtained from Freedom of Information Act Officer Ms. Vickie Weatherman, US Army Aviation and Missile Command, AMSAM-CIC, Redstone Arsenal, AL 35898, ph: 256.876.5763, fx: 256.876.2057

[41] Western Electric Company produced the Nike Ajax guidance and ground systems in their Winston-Salem, Greensboro, and Henderson, North Carolina plants. *Ibid*; Charlotte Observer (12/30/54), *Western Electric Gets Guided-Missile Contract*.

[42] Partial Newspaper Clipping from the Mecklenburg \_\_\_\_\_, dated December 30, 1954. Clipping File: "Ford Plant," Robinson-Spangler Carolina Room, Public Library of Charlotte and Mecklenburg County

[43] Located at the time at 3301/2 North Tryon Street.

[44] Charlotte Observer (12/21/55) *Contract Let in Nike Expansion*, 1B; Charlotte News (12/12/55), *Missile Plant Contract is Let*; Charlotte News (12/29/55), *Installation of Nike Batteries Stepped Up*; Charlotte Observer (1/18/58), *Missile Plant Building Plans Now Complete*.

[45] Douglas Aircraft Company Yearbooks, (1955) Boeing Aircraft Archives.

[46] Ibid

[47] Douglas Aircraft Company Yearbooks, (1955, 1956, 1957) Boeing Aircraft Archives.

[48] Redstone Arsenal Official Webpage, *History of Nike Ajax*, Available: [www.redstone.army.mil/history/nikesite/nikeajax.html](http://www.redstone.army.mil/history/nikesite/nikeajax.html) . This site include an abundance of technical data, as well as streamed video and audio materials.

[49] Douglas Aircraft Company Yearbooks, (1957) Boeing Aircraft Archives.

[50] US Army Missile Command, Redstone Arsenal, *Historical Monograph—History of the Nike Hercules Weapon System* (Project Number AMC 75M, 19 April 1973), npg. Obtained from Freedom of Information Act Officer Ms. Vickie Weatherman, US Army Aviation and Missile Command, AMSAM-CIC, Redstone Arsenal, AL 35898, ph: 256.876.5763, fx: 256.876.2057

[51] Employment figure from: Douglas Aircraft Company Yearbooks, (1961) Boeing Aircraft Archives.

[52] Douglas Aircraft Company Yearbooks, (1960, 1961, 1962, 1963, 1964) Boeing Aircraft Archives.

[53] US Army Missile Command, Redstone Arsenal, *Historical Monograph—History of the Nike Hercules Weapon System* (Project Number AMC 75M, 19 April 1973), npg. Obtained from Freedom of Information Act Officer Ms. Vickie Weatherman, US Army Aviation and Missile Command, AMSAM-CIC, Redstone Arsenal, AL 35898, ph: 256.876.5763, fx: 256.876.2057

[54] Mecklenburg County Deed Books (#2055, pg266), dated February 9, 1959.

[55] Charlotte Observer (1/3/76) *Eckerd Purchases old Douglas Site*, p8. See also list of most recent deeds at the top of document.

[56] This system of numbering the buildings is the one used by the Sanborn Fire Insurance Company and the US Army Corps of Engineers.

[58] This information is presented in greater detail with citations in the history section of this document.

[59] Photographic Collection of Henry Ford Museum & Greenfield Village  
833.Box4.Folder 7B P.833-70736

[60] Maps of the Sanborn Fire Insurance Co., Charlotte, (1929 edition—Corrected through 1955), p331. Mecklenburg Geographic Information System

[61] Ibid

[62] The southern pavilion is one bay wider than the northern one.

[63] That these elements are “cast stone” is reported in: Sarah A. Woodard and Sherry Joins Wyatt, *Industry, Transportation, and Education: The New South Development of Charlotte and Mecklenburg County* (David Gall Architect, 2001). Available online: [www.cmhpf.org/hlc/surveyindustrialsurvey.htm](http://www.cmhpf.org/hlc/surveyindustrialsurvey.htm)

[64] This frieze may have been created by the Detroit-based [Pewabic Pottery](#), a nationally renowned producer of ornamental art deco architectural tiles and one of Albert Kahn’s favorite vendors.

[65] Maps of the Sanborn Fire Insurance Co., Charlotte, (1929 edition—Corrected through 1955).

[66] Ibid

[67] Ibid

[68] Interview of Laurin Quillen, former Douglas Aircraft employee (9/9/02). Interview of RoyceMcNeil, former Douglas Aircraft employee (11/17/02). The plant was divided into several color-coded zones that corresponded to security clearance indicated by colored badges: yellow/hourly, green/salary, black/confidential, red/secret, unknown color/top secret. Before entering the plant, employees had to check in with the guards who checked identifications and conducted sporadic searches and FBI background checks.

[69] A 1996 hazardous materials survey by the US Army Corps of Engineers shows the tracks extant, but a they are not visible in a 2000 aerial photo of the site by the Mecklenburg Geographic Information Service.

[70] Charlotte News (10/10/42), *Warehouses Cover 72 Acres*.

[71] Interview of James B. Lisk, former Douglas Aircraft employee (9/9/02). Interview of RoyceMcNeil, former Douglas Aircraft employee (11/17/02).

[72] Ibid

[73] Maps of the Sanborn Fire Insurance Co., Charlotte, (1929 edition—Corrected through 1955).

[74] There are six monitors on building No.4, ten monitors on building No.5, four on No.6.

[75] Maps of the Sanborn Fire Insurance Co., Charlotte, (1929 edition—Corrected through 1955).