

NATIONAL REGISTER OF HISTORIC PLACES

Chatham Manufacturing Company – Western Electric Company

Winston-Salem, Forsyth County, FY0781, Listed 8/4/2011

Nomination by Heather Fearnbach

Photographs by Heather Fearnbach, September 2010



Overall view
1904 Mill Building



Rear view – 1946 addition and 1904 building on right

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Chatham Manufacturing Company – Western Electric Company
other names/site number National Carbon Company

2. Location

street & number 750 and 800 Chatham Road **N/A** not for publication
city or town Winston-Salem **N/A** vicinity
state North Carolina code NC county Forsyth code 067 zip code 27101

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set for in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date
North Carolina Department of Cultural Resources

State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See Continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:	Signature of the Keeper	Date of Action
<input type="checkbox"/> entered in the National Register. <input type="checkbox"/> See continuation sheet	_____	_____
<input type="checkbox"/> determined eligible for the National Register. <input type="checkbox"/> See continuation sheet	_____	_____
<input type="checkbox"/> determined not eligible for the National Register.	_____	_____
<input type="checkbox"/> removed from the National Register.	_____	_____
<input type="checkbox"/> other, (explain:) _____ _____ _____	_____	_____

5. Classification

Ownership of Property
(Check as many boxes as apply)

Category of Property
(Check only one box)

Number of Resources within Property
(Do not include previously listed resources in count.)

- private
- public-local
- public-State
- public-Federal

- building(s)
- district
- site
- structure
- object

Contributing	Noncontributing	
7	1	buildings
0	0	sites
2	1	structures
0	0	objects
9	2	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)
N/A

Number of Contributing resources previously listed in the National Register
0

6. Function or Use

Historic Functions
(Enter categories from instructions)

INDUSTRY: Manufacturing Facility

Current Functions
(Enter categories from instructions)

VACANT: Not in use

7. Description

Architectural Classification
(Enter categories from instructions)

Moderne
Other: Heavy Timber Mill Construction

Materials
(Enter categories from instructions)

foundation BRICK
walls BRICK
METAL
ASBESTOS
roof ASPHALT
RUBBER
other

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Areas of Significance

(Enter categories from instructions)

Architecture

Industry

Period of Significance

1907-1961

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property
- G** less than 50 years of age or achieved significance within the past 50 years.

Significant Dates

1907

1944

1951

Significant Person

(Complete if Criterion B is marked)

N/A

Cultural Affiliation

N/A

Architect/Builder

Unknown

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- Previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record _____

Primary location of additional data:

- State Historic Preservation Office
- Other State Agency
- Federal Agency
- Local Government
- University
- Other

Name of repository: North Carolina State Archives, Raleigh

Chatham Manufacturing Company - Western Electric Company
Name of Property

Forsyth County, NC
County and State

10. Geographical Data

Acreege of Property Approximately 6 acres

UTM References

(Place additional UTM references on a continuation sheet.)

1	<u>17</u> Zone	<u>567100</u> Easting	<u>3995520</u> Northing	3	<u> </u> Zone	<u> </u> Easting	<u> </u> Northing
2	<u> </u>	<u> </u>	<u> </u>	4	<u> </u>	<u> </u>	<u> </u>

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Heather Fearnbach
organization Fearnbach History Services, Inc. date 3/28/2011
street & number 3334 Nottingham Road telephone 336-765-2661
city or town Winston-Salem state NC zip code 27104

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items

(Check with the SHPO or FPO for any additional items.)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Henry A. Brown, Jr. and Patricia T. Brown, Twin City Warehouses, Inc. (1 of 2 owners – see cont. sheet)
street & number 3300 Old Lexington Road telephone 336-784-2111
city or town Winston-Salem state NC zip code 27107

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listing. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P. O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20303.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 1

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Section 7. Narrative Description

Setting

Located approximately one-half mile northwest of downtown Winston-Salem's central commercial district, Chatham Manufacturing Company - Western Electric Company occupies a triangular 5.96-acre parcel bounded by the Southern Railway tracks to the south and west, Peters Creek to the north, and Chatham Road to the east. The site at 800 Chatham Road includes a series of interconnected one- to five-story heavy timber frame, brick, steel, and concrete industrial buildings constructed between 1907 and 1951; a 1907 coal trestle; two small buildings erected in the 1940s (a brick fire pump house and a concrete block workshop); an electrical substation put into service between 1948 and 1954; and a concrete block boiler house and a cylindrical metal fuel-storage tank built around 1975. The one-story brick office building that Chatham Manufacturing Company erected in 1937 is southeast of the 1907 mill on a contiguous tax parcel at 750 Chatham Road.

The site's gently rolling topography, which decreases in elevation to the north, east, and west in proximity to Peters Creek, allows some buildings to have basements that are partially above grade. The 1907 mill stands at the property's highest point and does not have a basement, but later additions to the complex effectively utilized the change in elevation to create additional space.

The industrial complex was originally situated on approximately nine acres, but three acres on the north end (north of Peters Creek and adjacent to Northwest Boulevard) and a three-tenths-of-an-acre parcel at the property's southeast corner have been subdivided since Western Electric closed their plant at this location in 1966. The smaller parcel that fronts Chatham Road just north of the railroad contains the 1937 Chatham Manufacturing Company office, now separated from the main mill by a tall chain-link fence. That parcel is included within the proposed National Register boundary. The northern three acres, which once served as the industrial complex's parking lot, encompass two long rectangular commercial buildings constructed in 1972 on two of the parcels facing Northwest Boulevard. The other parcels are vacant. This acreage has been excluded from the proposed National Register boundary.

The Chatham Manufacturing Company - Western Electric Company complex retains excellent integrity, with minimal resource loss over the years. When the United States government began marketing the Chatham Road plant in January 1967, the General Services Administration advertised that the facility's twenty-six buildings encompassed almost 345,000 square feet of "production, administration, maintenance, and storage" space.¹ The vast majority of those buildings are still intact.

¹ Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 2

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Resources that have been demolished due to their poor condition or obsolete function include Building 16—a brick and frame storage structure erected north of the main mill’s boiler house and engine room in 1931—and the adjacent water tower, which were removed around 1985. The water reservoir located at the complex’s center was filled in to create additional parking about the same time. Other edifices removed from the site in the 1980s include Building 2, the two-story, hip-roofed, frame structure constructed south of the main mill in 1912 to serve as Chatham Manufacturing Company’s recreation building and later as offices; Building 20, a garage that stood west of Building 2; Building 17, a small one-story, flat-roofed edifice erected by the National Carbon Company at Building 6’s north end in 1944 to serve as an administration building; a small frame guard house that stood north of Building 17; Building 19, a one-story, asbestos-sided, frame, gable-roofed storage building erected north of Building 21 in 1944; and most of the small free-standing fire hose houses throughout the property, also constructed in 1944. Building 5—a one-story, flat-roofed, triangular-shaped, corrugated metal-sided, frame, 1936 warehouse that was located south of the railroad spur line at the loading shed’s north end—was dismantled around 1995.²

Chatham Manufacturing Company - Western Electric Company is adjacent to the National Register-listed West End Historic District, which is primarily residential and includes a few modest dwellings that were erected to house the company’s mill workers in an area that became known as Chatham Heights. The Hanes Dye and Finishing Company plant, which was constructed in the 1940s and expanded in 1953 and 1965, stands on the east side of Chatham Road. Commercial development lines Northwest Boulevard north of the industrial sites.

Building 1: Chatham Manufacturing Company Office, 1937, Contributing Building

This flat-roofed, one-story, brick building is executed in five-to-one common bond. A pointed parapet tops the Art Moderne-style entrance bay, which is flanked by a stepped surround. A semi-circular, metal-edged canopy surmounts the double-leaf entrance and transom. Two flights of concrete and brick stairs with metal railings lead to a central landing outside the entrance. The façade encompasses four tall metal casement windows on either side of the entrance bay. A soldier-course brick band wraps around the building above the metal casement windows and terra cotta tile coping caps the parapet walls.

The site’s grade, which slopes to the east, allows for a tall raised basement with exterior access. A flat-roofed, two-tier porch shelters the central entrances to the east elevation’s basement and main floor. Steel stairs with steel-pipe railings extend north and south of the stair landing. Six metal casement windows (three on either side of the porch) pierce the main floor’s east elevation. The basement window configuration is similar, but the northernmost bay contains a roll-up garage door accessed by a concrete ramp. The west elevation’s fenestration is almost identical, although concrete and brick steps

² Ibid.; Henry A. “Hal” Brown and Mike Hollman, interview with Heather Fearnbach, September 29, 2010.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 3

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

with a metal railing provide access to the west elevation's central main floor entrance. The basement entrance is partially below grade at the elevation's north end.

According to General Services Administration records, Western Electric added air-conditioning to the office in 1957 and the building included three wood-paneled offices, three restrooms, and a fireproof safe in 1967. The former office now serves as a private residence, but the interior is substantially intact. The building stands on a three-tenths-of-an-acre parcel at the complex's southeast corner. A tall chain-link fence encloses the lot, which fronts Chatham Road just north of the railroad.

Buildings 3-11: Main Mill and Later Additions, 1907-1962, Contributing Building

Although the main mill, warehouses, and later additions are physically linked, creating one large building encompassing approximately 330,000 square feet, the following description is broken down into an inventory list and keyed to a site plan that references each section by the number it was given by Western Electric. The company's numbering begins at the complex's southeast corner and moves west and north.³ The inventory list is arranged by building relationship, beginning with the main mill and additions, then moving to the warehouses, and concluding with the buildings at the property's north end. As a few of the resources once encompassed in the complex have been demolished, the number sequence is not continuous.

The main mill and subsequent additions angle slightly to the west rather than having a true north/south orientation, but, for the sake of clarity, the following description is written as though the main mill's northwest elevation faces due north.

Main Mill (Building 4), 1907, early 1930s, 1944, 1956, 1962

The April 1907 Sanborn map indicates that "Chatham Manufacturing Company Mill No. 2," a woolen factory, was under construction at that time. The 1907 mill is a three-story, heavy timber frame and brick edifice executed in seven-to-one common bond with segmental-arched window and door openings and a very low-pitched gable roof. Documentary photos illustrate that the window openings originally contained paired, double-hung, eight-over-eight sash windows surmounted by eight-light transoms. The majority of the building's window openings were partially enclosed and smaller aluminum-framed windows installed in 1962. A few window and door openings near the south elevation's center and on the west elevation's first story have been enclosed with brick, while most of the openings on the south elevation are covered with metal siding or painted plywood.

³ Small plaques above interior doorways delineate some building numbers, but the Western Electric Company's March 1953 revised isometric view of the Chatham Road Plant serves as the most comprehensive primary source of building numbers.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 4

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

The original mill was fifteen bays wide (in the east-west direction) and five bays deep (in the north-south direction). The west elevation's northern bay is blind. An original brick stair tower projects from the north elevation. In the early 1930s, Chatham Manufacturing Company demolished the one-story, four-bay-wide, 1920s brick addition that extended from the east elevation and constructed a new three-story, five-bay-wide wing that matches the original mill as well as the stair and elevator tower at the building's southeast corner. The company also expanded the original north stair tower with a full-height (three-story) restroom addition on its west elevation about the same time. In 1944, the Cleveland-based National Carbon Company, who utilized the complex from 1943 until 1945, reconfigured the north tower to create larger restrooms on each floor and erected new wooden stairs between the floors as part of their facility improvement campaign. The company also renovated the 1907 dye house and constructed the additions and passageways that obscure much of the main mill's north elevation, particularly the east end's first and second floors.⁴

A frame stair tower, constructed by Western Electric in 1956, extends from the south elevation. An enclosed flight of steel stairs rising to the west provides access from the ground level to the second floor, where the stair tower becomes one bay deep and two bays wide. The Browns, who purchased the property in 1972, sheathed the tower in metal siding.⁵

The circa 1939 loading shed that projects from the main mill's west elevation has a flat roof supported by open-web steel joists and posts resting on a formed concrete foundation.⁶ A metal pipe secures the west and north elevations. A covered walkway extends between the loading shed on the coal trestle's south side and the loading platform south of Buildings 12 and 13 on the coal trestle's north side. The steel plates that span the coal trestle may be detached from the shed and platform so that the bridge can be moved as needed to facilitate product delivery and loading.

The 1907 mill's open interior features wood floors, exposed brick walls, chamfered square wood posts, and substantial wood beams. Steel braces and girders reinforce some areas, most likely to compensate for the weight and vibration of heavy equipment. Metal-clad fire doors slide on metal tracks and are held open by weighted pulleys. Fluorescent lights and sprinkler system pipes have been dropped from the ceilings throughout the mill.

The southeast stair tower has frame railings sheathed with painted wood panels. Vinyl tile covers the landings. Wooden handrails, textured rubber stair treads, and fire-proof doors separating the tower

⁴ National Carbon Company, Inc., "Building Alterations, 2nd and 3rd Floors," January 14, 1943.

⁵ Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

⁶ The loading shed does not appear in a 1938 photo, but is illustrated on the 1942 Sanborn map. As Chatham Manufacturing Company began moving their operation to Elkin in January of 1940, it appears that they erected the loading shed just before the move.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 5

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

from the mill serve as safety mechanisms. Freight elevators located north of the southeast stair tower and near the building's southwest corner served to transport equipment and product between the floors.

National Carbon Company used the main mill's first floor as a machine shop and assembly area and created a storage room at the northeast corner and a shipping and receiving center at the northwest end. The company renovated a portion of the first floor's western end to create a large women's cloak room, a garment room, and a rest room and changing room for African American men, and constructed new restrooms on the second and third floors.⁷

During Western Electric's tenure, the main mill's first floor contained the receiving department, offices, a packing room, and a large testing area. The second floor housed the drafting department and a cable storage area at the west end. Western Electric added air-conditioning to a small area of the second floor in 1957. The third floor served as the Navy projects department.⁸

National Carbon Company Addition (Building 3), 1944

Construction drawings indicate that National Carbon Company erected the three-story, three-bay-wide, five-bay-deep, heavy timber frame addition at the main mill's east end in 1944. The addition was sheathed with asbestos shingles and is now covered with metal siding. The windows—large, paired, double-hung, six-over-six and eight-over-eight sash surmounted by multi-light transoms—were similar to those of the original mill building and are intact behind the metal siding.

During Western Electric's tenure, the building's first floor contained an "RS 152 Assembly" room, a small library, and spaces labeled "telephone," "Wenoca," and "Wenoca store." The Wenoca Club, Western Electric's employee organization, sponsored athletic, educational, and social programs, including events to benefit local charities. The second floor housed the drafting and reproduction departments, and the third floor the Navy projects department and "test set maintenance."⁹

In the early 1980s, the first floor was converted into windowless offices with sheetrock walls above a parged brick kneewall, dropped acoustical tile ceilings, and commercial carpeting.¹⁰ Warehouse space with a rollup-door and loading dock on the east elevation occupies first floor's northern end. The second and third floors retain open floor plans, wood floors, frame exterior walls with horizontal-board wainscoting, and square, braced, wood posts supporting wood beams.

⁷ Ibid.; National Carbon Company, Inc., "Equipment Plan for NC-2, First Floor Layout," March 9, 1943.

⁸ Western Electric Company, Inc., North Carolina Works, Factory Planning and Plant Engineering, "Floor Level Layout," Chatham Road Plant, 1962; Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

⁹ Ibid.; Public Relations Department of the North Carolina Works, Western Electric Company, Winston-Salem, N.C., "Western Electric Large Electronics Plants in Three Cities," *The E.S.C. Quarterly*, Winter-Spring 1954, page 7.

¹⁰ Henry A. Brown, Jr., telephone conversation with Heather Fearnbach, September 21, 2010.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 6

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

National Carbon Company Addition (Building 6), 1944, 1946

The National Carbon Company constructed the four- and five-story, flat-roofed, brick addition that extends north from the main mill's northeast corner and Building 3's north elevation in the summer of 1944, greatly increasing the plant's overall size.¹¹ The trapezoidal-shaped addition is sixteen bays long and narrows to three bays wide at the north end as the edifice conforms to the property line's eastern edge. The addition's eastern section contains four floors, while the western section includes an L-shaped fifth story. A stair tower projects from the western elevation's center. The wing's northern end also contains a stair tower with an exterior double-leaf glass door. The large, paired, six-over-six sash windows surmounted by six-light transoms that illuminated the interior were covered with foam in the early 1970s but are intact.

The building's lower four floors have open plans reflecting their most recent use as warehouse space. The exterior walls are exposed brick. The concrete block and frame central partition walls were later additions. Twin City Records Management installed the modular office on the third story's western side and the record storage vault at the floor's northern end in the 1980s.

Like Building 15, Building 6's structural system consists of concrete floors and steel post and beam construction. Metal-clad fire doors slide on metal tracks and are held open by weighted pulleys. Fluorescent lights and sprinkler system pipes have been dropped from the ceilings throughout the building. Twin City Records Management added a climate control system and the requisite ductwork to the third floor.

The fifth floor's northern end encompasses a side hall that was originally more of a breezeway, as it featured large windowless openings on the west elevation. Metal casement windows, many of which are now covered with foam, illuminate the large northern room and the three smaller rooms to the south. The southern section, which extends to the east, contains restrooms, a large storage room, and two small rooms at the east end. Several doors provide roof access. National Carbon Company's construction drawings indicate that a rooftop garden and snack bar were to be built at this location, but it does not appear that the plans were executed.¹²

During Western Electric's tenure, the building's first floor contained offices, a vault, and a small hospital. The second floor housed the kitchen, serving, dining, and storage areas. The third floor functioned as offices, and the fourth encompassed mechanical and electrical laboratories and "film"

¹¹ The wing is not illustrated on the 1942 Sanborn map but appears in the April 1946 photograph of the Western Electric job applicant line. National Carbon Company, Inc., "Winston-Salem Plant Expansion Part 2, 4 Story Addition to Mfg. Bldg.," June 24, 1944.

¹² National Carbon Company, Inc., "General Arrangement and Details, Snack Bar and Roof Garden, Building No. 6," March 26, 1945.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 7

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

and “system” areas. The fifth floor included offices, a classroom, a “secret file” room, and a pent house, which Western Electric erected in 1946.¹³

Dye House (Building 8), 1907, 1944, 1956, 1962

The 1907 Sanborn map illustrates a one-story-on-basement, rectangular, brick dye house located north of the main mill’s stair tower, which connects the two buildings. By 1917 the building housed a wool picker room as well as wool washing, drying, and dyeing operations. The building’s function is not specified in the 1942 Sanborn map update.

The dye house’s low-pitched gable roof projects slightly above the surrounding additions. Western Electric removed the central monitor-roofed skylight that originally illuminated the interior after 1946, most likely as a part of their 1956 renovation. Documentary photographs illustrate that the dye house was four bays deep, approximately seven bays wide, and had large eight-over-eight sash windows surmounted by eight-light transoms (identical to the main mill’s original windows) on all four elevations, but they have been enclosed by the later additions. Some original window sash and transoms are intact on the north and west elevations and are visible from the interior.

The building’s roof system features conventional joists supported by built-up triple-member beams reinforced with underslung steel rods. The dye house interior encompasses wood floors, plywood sheathing covering most walls, a dropped acoustical tile ceiling, circa 1956 ceiling vents, and fluorescent lighting. The National Carbon Company constructed the small, metal-lined corner room around 1944 to test their underwater detonators. The room retains a thick steel door hung on steel strap hinges, wire mesh covering the walls, and a ventilation system designed to move exhaust from explosions out of the building. Western Electric renovated this space in 1956 and 1962 to serve as the “RS-201” production area and a storeroom.¹⁴

A 1946 photograph shows that a shed-roofed frame passage had been constructed along the dye house’s north elevation. A long band of horizontally-sliding, eight-pane, wood-sash windows located just below the eaves lights the interior. The National Carbon Company utilized the building as a cafeteria and erected the passage as well as the frame storage room that extends from the dye house’s west elevation in 1944. The two spaces are constructed in a similar manner and simply finished with

¹³ Western Electric Company, Inc., North Carolina Works, Factory Planning and Plant Engineering, “Floor Level Layout,” Chatham Road Plant, 1962; Department of the Navy, “Report of Excess Real Property,” filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

¹⁴ Ibid.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 8

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

wood floors and plywood sheathing on the exterior walls. A double-leaf door on the storage room's north elevation provides access from the passage, which continues to the west.¹⁵

“Whiting” Room (Building 7), erected between 1912 and 1917

The small rectangular space east of the stair tower between the main mill and the dye house was enclosed with a hip roof and a floor system between 1912 and 1917. As the 1917 Sanborn map labels the space “whiting,” the building likely contained the plant's wool-bleaching operation until the company constructed two long, narrow bleach houses north of the complex's central water reservoir in the 1920s.

In 1944, National Carbon Company used Building 7 as an “acid room,” where batteries were filled and inspected. Western Electric utilized the space as a laboratory.¹⁶

Engine Room (Building 9) and Boiler Room and Pump House (Building 11), 1907, 1944, 1956, 1962

A one-story engine room projects from the main mill's north elevation. The boiler room and pump house extend from its northwest corner. An eighty-foot-tall brick chimney stood just north of the boiler room, and a coal trestle supplied fuel to the engine and boiler rooms. A small brick addition with a concrete floor and exposed brick walls was constructed on the pump house's northeast corner in 1944 (after the chimney was removed). A long, narrow, frame passage was erected north of the boiler room and pump house the same year, extending from the boiler room's northwest corner to the dye house's northeast corner. The boiler room's large, segmental-arched window openings have been infilled with brick, but the substantial metal-clad fire doors are intact. The space has a concrete floor and a high ceiling. Exposed concrete I-beams, installed by either National Carbon Company or Western Electric, support the replacement roof.

The pump house, which also has a concrete floor, retains an Allis-Chalmers pump and associated pipes and has a replacement wood rafter roof system. The bottom third of the window opening on the east elevation has been enclosed with brick. It appears that the original transom may have been removed and the original eight-over-eight wood sash reused in the smaller opening.

National Carbon Company used the engine room as a steel electrode manufacturing area. The boiler room and pump house retained their original function.¹⁷

¹⁵ National Carbon Company, Inc., “Equipment Plan for NC-2, First Floor Layout,” March 9, 1943. A small addition extended from the dye house's northwest corner by April 1942. The other frame additions were constructed after April 1946, based on a documentary photo that shows that elevation.

¹⁶ Ibid.; Western Electric Company, Inc., North Carolina Works, Factory Planning and Plant Engineering, “Floor Level Layout,” Chatham Road Plant, 1962.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 9

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Machine Shop (Building 10), 1913

A door on the boiler room's south elevation leads into a small room which originally functioned as a machine shop and served as a maintenance shop through Western Electric's tenure.¹⁸ The space has exposed brick walls, a concrete floor, and a central heavy timber post supporting a central heavy timber girder and floor beams. The segmentally-arched window opening and eight-over-eight wood sash window on the west elevation appear to be original, but the exterior door north of the window is a later addition. The room now contains a metal tank and pipes in addition to a work bench and sink.

National Carbon Company Passage Addition, 1944, 1952

National Carbon Company erected this passage during their 1944 construction campaign. The long, narrow, asbestos-clad, frame edifice connects Building 6, the dye house (Building 8), the 1907 mill (Building 4), the boiler and engine rooms (Buildings 9 and 11), and Building 12. The western end has a gabled roof, while the eastern end's shed roof projects from the dye house's north elevation. Horizontally-sliding eight-pane wood-sash windows illuminate the interior. An April 1946 photograph shows the passage's double-leaf entrance, but not the central loading dock. According the General Service Administration records, Western Electric renovated the building in 1952. The passage was known as "Michigan Boulevard" by 1962, perhaps in reference to its heavy use and lack of climate control.¹⁹

Wood piers elevate the passage to the same height as the second floors of Buildings 6 and 12. Wood steps lead to the double-leaf rear entrance, which is sheltered by a shallow roof overhang supported by square wood posts. A ramp near the passage's west end provides access to the main mill.

Coal Trestle, 1907, 1941, 1957, Contributing Structure

A heavy timber trestle, which appears on the 1907 Sanborn map, supports the short railroad spur that leads from the main track to the boiler and engine rooms. The timbers are bolted together at key locations and sawn lumber braces provide addition reinforcement. General Service Administration records indicate that the coal trestle was improved in 1941, which may be the date that the lumber

¹⁷ National Carbon Company, Inc., "Equipment Plan for NC-2, First Floor Layout," March 9, 1943.

¹⁸ Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

¹⁹ Ibid.; Western Electric Company, Inc., North Carolina Works, Factory Planning and Plant Engineering, "Floor Level Layout," Chatham Road Plant, 1962. The passage is shown on the 1948 aerial photograph. By 1930, a one-story, frame, L-shaped platform extended from Building 13 to the dye house's northwest corner and then north to a bleach house, but it appears the platform was removed before the passage was erected. The platform is visible on the 1930 and 1935 aerial photographs and the 1942 Sanborn map.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 10

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

braces were added. Western Electric installed the steel rolling bridge over the coal trestle in 1957 to facilitate access between the loading shed on the coal trestle's south side and the loading platform south of Buildings 12 and 13 on the coal trestle's north side.²⁰

Buildings 12-15, Warehouses, 1917-1961, Contributing Building

Warehouse (Buildings 13 and 14), 1917, late 1930s addition, 1944, 1961

This warehouse footprint appears on the 1917 Sanborn map with the notation "from plans," indicating that it was soon to be constructed. A central fire wall divides the large, two-story, flat-roofed edifice in half, with each section originally being three bays wide. The warehouse has a heavy timber frame with exterior brick walls executed in six-to-one common bond. One segmental-arched door opening and two later loading bays pierce the south elevation. A one-bay-wide brick addition was constructed on the building's west elevation in the late 1930s, and is set back approximately five feet from the 1917 warehouse's south elevation to accommodate the small frame shed that projects from the 1917 building's west elevation. A large casement window pierces the 1930s addition's south elevation.²¹ Large double-hung windows originally illuminated the 1917 warehouse's interior, but the segmental-arched window openings have been bricked-up, likely in 1944 when National Carbon Company erected the additions that wrap around the warehouse's east, north, and west elevations. The site's grade slopes to the north and west, allowing for a third story on the 1944 additions.

The warehouse's open interior features wood floors, exposed brick walls, square heavy timber posts, and substantial heavy timber beams. Wood braces fortify the posts supporting the beams between Building 13's first and second floors. The steel I-beams inserted between some heavy timber posts on Building 14's first floor also provide supplemental structural reinforcement. Metal-clad fire doors slide on metal tracks and are held open by weighted pulleys. Fluorescent lights and sprinkler system pipes have been dropped from the ceilings throughout the building.

Documentary images show that a loading platform extended across the warehouse's south elevation, but the extant formed concrete loading dock is a later replacement. The 1907 coal trestle separates the loading platform from a covered concrete loading shed erected on the main mill's west elevation around 1939.

²⁰ Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

²¹ The addition does not appear on the 1935 aerial view but is shown on the 1942 Sanborn map, indicating that Chatham Manufacturing Company erected it before moving their operations back to Elkin in 1940.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 11

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

During Western Electric's tenure, Building 13 and 14's first and second floors functioned as storerooms. A silk screening workshop occupied Building 13's northwest corner. The company updated the interior in 1961.²²

National Carbon Company Warehouse Addition (Building 12), 1944

The National Carbon Company constructed the two frame warehouses (Buildings 12 and 15) that wrap around the 1917 brick warehouse's east, north, and west elevations in 1944, more than doubling the factory's storage space. The buildings, which are sheathed with asbestos siding, were erected in the summer of 1944.²³

The L-shaped Building 12 projects from the 1917 warehouse's east end. The southern section is two-stories tall and four bays deep in a north-south direction. The south wall is in line with the older building's south elevation. A sliding plywood door on a metal track opens into the shallow, one-story, shed-roofed, frame addition that extends from the east elevation's first floor. A single-leaf door provides access to the basement on the south elevation just west of the machine shop's exterior door.

Building 12's northern section, which is also four bays deep in the north-south direction, extends east-west the width of the two earlier warehouses. Given the site's grade, which slopes down to the north and west, the eastern elevation has two stories but the west and north elevations rise to three stories in height. The large, paired, eight-over-eight sash windows that illuminated the interior were covered with foam in the early 1970s but are intact. Eight-pane transoms surmount the north elevation's second-story windows.

A frame passage connects Building 12's second story to Building 23's (the 1951 Western Electric building) second story (top floor). A sliding interior door at Building 12's northeast corner provides access to the wide passage, which has a sloped floor to accommodate the difference in the two buildings' floor levels. The area below the passage serves as storage and is open to the outside on the east elevation and secured with a chain-link gate.

The recessed first-story entrance bay on the warehouse's north elevation at the ground level has a concrete floor, a sliding metal-clad door at the west end, and an enclosed window at the east end. The entrance bay's fenestration has changed over time, as the original openings have been infilled with

²² Western Electric Company, Inc., North Carolina Works, Factory Planning and Plant Engineering, "Floor Level Layout," Chatham Road Plant, 1962; Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

²³ National Carbon Company, Inc., "Winston-Salem Plant Expansion, 2 Story Addition to Warehouse," May 15, 1944, and "Winston-Salem Plant Expansion Part 2, 3 Story Addition to Warehouse," May 1 and 15, 1944. The warehouse additions appear on the 1948 aerial photograph.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 12

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

terra cotta block, likely in the 1950s. Several loading bays pierce the north elevation. The building rests on a brick foundation.

The warehouse interior retains an open floor plan with wood floors, frame exterior walls with horizontal-board wainscoting and plywood sheathing, and square wood posts with wood braces through-bolted to wood joists. Metal-clad fire doors slide on metal tracks and are held open by weighted pulleys. Fluorescent lights and sprinkler system pipes have been dropped from the ceilings throughout the building.

Western Electric used most of Building 12's southeast section as storage, with spare parts packing and inspection rooms at the south end. The north wing contained offices, a classroom, and the electrical lab department. The third floor housed a box shop, shipping and cable department areas, and a spray paint room.²⁴

National Carbon Company Warehouse Addition (Building 15), 1944, 1956

Building 15 extends from the west elevations of the 1917 warehouse (Buildings 13 and 14) and Building 12. The National Carbon Company warehouses (Buildings 12 and 15) are similar in appearance with the exception of the windows, as Building 15 has smaller six-over-six sash with six-pane transoms at the second story. The structural systems are quite different, however, as Building 15 has concrete floors and steel post and beam construction. The three-story building is sheathed with asbestos siding.

On the west elevation, a steel stair with a railing composed of an L-shaped handrail above a thin metal bar provides access to a central second-story entrance sheltered by a metal canopy supported by metal posts. The building's west and south elevations are angled to accommodate the railroad tracks. The south elevation intersects the circa 1930s addition to the 1917 warehouse. A shed-roofed canopy shelters the large door and windows on that elevation. A narrow concrete loading dock occupies the space between the warehouse and the coal trestle.

The warehouse interior is open. A freight elevator occupies the southeast corner. Metal-clad fire doors slide on metal tracks and are held open by weighted pulleys. Fluorescent lights and sprinkler system pipes have been dropped from the ceilings throughout the building.

²⁴ Western Electric Company, Inc., North Carolina Works, Factory Planning and Plant Engineering, "Floor Level Layout," Chatham Road Plant, 1962; Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 13

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

During Western Electric's tenure, a sheet metal shop, a plating room, and a spray paint room occupied Building 15's first floor (lowest level). The second floor contained the Nike "B" guided missile assembly room, and the third floor a large box shop. The company renovated the building in 1956.²⁵

Building 18: Fire Pump House, 1944, Contributing Building

This small, one-story, rectangular, hip-roofed, brick building stands at Building 15's northwest corner, a few feet east of Building 22. Paneled, double-leaf, wood doors on the west elevation provide access to the one-room interior. The six-over-six sash windows on the north, east, and south elevations and the transom above the door have been boarded up. The small, gable-roofed, asbestos-sided, frame, shed addition that projects from the west elevation north of the door served as "Hose House #6" according to Western Electric's 1953 plan of the Chatham Road plant.²⁶

Building 21: National Carbon Company Paint Manufacturing and Paint Storage Building, 1945, Contributing Building

Building 21 stands north of the warehouses (Buildings 12-15) and west of Building 23 (the 1951 Western Electric building). The two-story, flat-roofed building has a formed concrete structure (columns, joists, and floor system) with terra cotta block filling the spaces between the concrete columns on the first story's exterior walls. On the second story, concrete columns support the steel beams below the frame roof system. Corrugated cement siding is attached to frame studs on the exterior walls, which have no interior sheathing. Large metal casement windows illuminate the interior. Brick infill flanks the first-floor window openings on the north and west elevations.

A concrete ramp with a metal pipe railing leads to a door opening on the first-floor's west elevation that has been enclosed with terra cotta block. The sliding door north of the ramp has been boarded-up, creating a central single-leaf entrance. A metal ladder on the elevation's north end rises to a shallow wood platform below a narrow wood door.

A one-story shed addition with plywood-paneled exterior walls and a metal roof was erected on the south elevation's second story using the original concrete loading platform as a floor. The sliding door that provided access to the interior has been boarded-up. A concrete ramp south of this entrance slopes down to the west. The south elevation, which also serves as a retaining wall, has always been blind at the first floor level. The window openings on the building's east elevation have been infilled with concrete block or painted.

²⁵ Ibid.

²⁶ The pump house is not illustrated on the 1942 Sanborn map but appears on the 1948 aerial photograph. National Carbon Company's construction drawings do not give a complete date, only the month and year (9-10), but were likely created in 1943. The Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967 gives a 1944 construction date.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 14

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Building 21's first floor plan is open. A concrete ramp at the first floor's northeast corner leads to the concrete block hyphen, constructed in the early 1970s, that extends east to Western Electric Building 23. The second floor encompasses a large room at the west end, with frame partition walls sheathed with plywood panels creating narrower rooms on the building's south and east ends. Fluorescent lights and sprinkler system pipes have been dropped from the ceilings throughout the building.

This building is not illustrated on the 1942 Sanborn map but appears on the 1948 aerial photograph. National Carbon Company plans indicate the building was erected in 1945.²⁷ A small, one-story, gable-roofed building stood to the north until the early 1970s.

Building 22: Workshop, 1947, Contributing Building

Western Electric erected this one-story, rectangular, gable-roofed, concrete block building, which stands at the complex's northwest corner.²⁸ Double-leaf doors, metal casement windows, and roll-up doors pierce the south and east elevations. The metal casement windows on the west elevation have been boarded-up. The interior has a concrete floor, an acoustical tile ceiling, and fluorescent lighting. The south end is lined with wooden shelves, while most of the north end is open.

Building 23: Western Electric Laboratory and Offices, 1951, Contributing Building

This large, rectangular, two-story-on-basement brick building, which stands at the northeast corner of the Building 12, is an excellent example of mid-twentieth-century industrial architecture. The edifice is four bays wide and eleven bays long and was designed primarily with its function—in this case, as office and laboratory space—in mind. The building's steel structural post-and-beam frame supports curtain walls consisting of red brick screens below bands of steel casement windows with continuous concrete sills. The basement is illuminated by only a central window grouping on the north elevation. Some of the windows have been painted, but most are intact and appear to be functional.

The roof features a deep overhang in the gable ends above vertical board siding. An internal elevator tower projects from the roof near the north elevation's center. The building rests on a formed concrete foundation.

A frame shed-roofed canopy shelters the loading dock at the north elevation's center.²⁹ The double-leaf entrance on the east elevation's south end was once sheltered by a similar canopy. A loading dock

²⁷ National Carbon Company, Inc., "Paint Manufacturing and Paint Storage Building," April 17, 1945.

²⁸ The workshop is not illustrated on the 1942 Sanborn map but appears on the 1948 aerial photograph. The Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967 gives a 1947 construction date.

²⁹ A 1968 photograph illustrates that a flat-roofed canopy originally projected above the loading dock.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 15

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

with a roll-up garage bay and a single leaf entrance were added near the east elevation's north end in the 1980s. Wooden steps with a wooden railing lead to the entrance.

Two shallow, one-story, plywood-sided, shed-roofed additions project from the north elevation just south of the electrical substation.

The building's open interior features wood floors, painted brick exterior walls, and steel columns supporting steel beams and girders. As most of the interior was not air-conditioned, the large windows were imperative sources of light and ventilation. Frame partition walls have been added to create offices and storerooms in the basement's northwest corner and the first floor's northeast corner. On the second floor, exposed steel trusses carry the load of low gable roof, which allows for a floor plan devoid of support posts. The elevator tower is the room's only enclosed space. Metal stairs adjacent to the elevator tower provide access to the roof, and a ramp constructed in 1975 leads to Building 12's northeast corner. Full-height towers at the Building 23's east and west ends contain steel stairs with steel-pipe railings. Fluorescent lights and sprinkler system pipes have been dropped from the ceilings throughout the building.

During Western Electric's tenure, a round centrifuge chamber and an adjacent vibration room occupied the basement's northeast corner, with a test area, storage, an impact room, and another vibration room to the west. The basement's southern half served as a machinery room and a machine shop. The majority of the first floor functioned as a test area with atmospheric chambers, and the second floor contained offices.³⁰

Electrical Substation, erected between 1948 and 1954, Contributing Structure

A chain-link fence surrounds the electrical substation, which is located north of Western Electric Building 23. The substation contains steel and wooden posts carrying the electric lines to transformers and into Building 23.

Boiler House, circa 1975, Noncontributing Building

This two-story, rectangular, gable-roofed, concrete block building housed two boilers and thus has two roll-up service doors on each gable end. Vertical board siding sheathes the gable ends below the metal roof. Adele Knits erected the boiler house to furnish power for their equipment.³¹

³⁰ Western Electric Company, Inc., North Carolina Works, Factory Planning and Plant Engineering, "Floor Level Layout," Chatham Road Plant, 1962.

³¹ Henry A. "Hal" Brown and Mike Hollman, interview with Heather Fearnbach, September 29, 2010.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 16

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Fuel Storage Tank, circa 1975, Noncontributing Structure

A cylindrical fuel storage tank stands at the substation's west end south of the concrete block garage. Adele Knits erected the tank at the same time as the adjacent boiler house.³²

³² Ibid.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 17

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Section 8. Statement of Significance

The Chatham Manufacturing Company - Western Electric Company complex meets National Register of Historic Places Criterion A for industry and Criterion C for architecture. Chatham Manufacturing Company, which ultimately became an internationally-recognized woolen blanket producer with sales offices throughout the United States, began as a small Surry County, North Carolina enterprise. The corporation expanded their operations to Winston, the industrial center of neighboring Forsyth County, in 1906. During the next three decades, Chatham Manufacturing Company dominated North Carolina's woolen industry and became one of the largest wool weavers in the nation. After the corporation consolidated their manufacturing and finishing plants in Elkin in 1940, the United States government leased and then purchased the company's Winston-Salem facility. The Cleveland-based National Carbon Company utilized the complex from 1943 until 1945, erecting several large additions to facilitate their submarine battery and underwater detonator manufacture for the United States Navy. Western Electric occupied the plant from 1946 until 1966, initially producing military communications equipment and gradually transitioning to the fabrication of switches and circuits for national telephone networks. Western Electric was one of Forsyth County's leading industrial concerns during this period, operating four plants with over seven thousand employees—approximately ten percent of the county's work force—by 1960. The complex's period of significance begins in 1907, with the construction of the original Chatham Manufacturing Company mill, and continues to 1961. Although Western Electric continued to use the facility until 1966, the period after 1961 is not of exceptional significance.

The Chatham Manufacturing Company - Western Electric Company complex is also significant architecturally, as it contains one of Winston-Salem's oldest mills associated with textile manufacturing as well as other intact industrial buildings erected through the early 1950s. The 1907 mill's heavy timber frame, seven-to-one common bond brick walls, very low-pitched gable roof, segmental-arched window and door openings, and large, eight-over-eight, double-hung, wood sash surmounted by eight-light transoms are representative of late-nineteenth and early-twentieth-century fire-resistant industrial architecture. The National Carbon Company and Western Electric Company additions to the former Chatham Manufacturing Company plant, constructed from 1944 through 1951, manifest the ongoing use of heavy timber frame construction in industrial buildings as well as the steel and concrete structural systems frequently utilized during this period. The United States government's ownership of the complex and the defense-related production of the companies who leased it allowed for the complex's expansion when construction materials and labor were in short supply during World War II and the Korean War.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 18

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Historical Background

Chatham Manufacturing Company's story begins in 1877, when Alexander Chatham and his brother-in-law Thomas Lenoir Gwyn expanded their entrepreneurial endeavors in Surry County, enlarging the Richard Ransome Gwyn and Company grist mill and store to encompass a woolen mill. The entire complex, located approximately one mile north of Elkin on Big Elkin Creek, was eventually dedicated to the production of wool yarn used to weave jean, flannel, and cashmere fabrics. Both men had previously worked in the Gwyn family's cotton mills, the first of which, the Elkin Manufacturing Company, was established in 1847. Chatham and Gwyn recruited mechanical engineer Gilvin T. Roth of Philadelphia in 1878 to install new mill equipment and train and supervise their workers.³³

Alexander and his sons Richard Martin Chatham and Hugh Gwyn Chatham purchased Thomas Gwyn's interest in the 1877 Elkin Woolen Mill in 1893 and established the Chatham Manufacturing Company. Gilvin T. Roth became their partner and the company's vice-president. The corporation constructed a one-story brick plant on Standard Street in Elkin, close to the railroad and the Yadkin River, the same year. The new mill featured the latest technology, with steam engines powering electric generators and allowing for the installation of electric lights. The company began manufacturing wool blankets in 1893 and added a tailoring department offering custom-made men's suits in 1895. The purchase of new blanket looms and other equipment that year dramatically increased production, resulting in the need for a second-story addition in 1899.³⁴

Chatham Manufacturing Company began acquiring property in Winston, the industrial center of neighboring Forsyth County, in 1906, and soon erected a mill one-half mile north of the downtown commercial center. Upon the company's 1907 reorganization, Hugh Chatham recruited influential Winston businessmen to become involved in the corporation's administration. Tobacco magnate Richard J. Reynolds served as first vice-president and Winston businessmen and industrialists R. G. Norfleet, J. L. Gilmer, H. R. Starbuck, W. M. Nissen, C. J. Ogburn, F. H. Fries, A. S. Hanes, and W. A. Blair became directors on the company's board.³⁵

³³ Pam Green, "First Industry Was Cotton Mill," North Carolina Collection Clipping File Through 1975, Reel 28, pp. 454-455, Wilson Library, UNC-Chapel Hill; Laura A. W. Phillips, *Simple Treasures: The Architectural Legacy of Surry County* (Winston-Salem: Winston Printing Company, 1987), 34, 91, 104; The Town of Elkin Joint Committee for the Collection of Historical Information, *Elkin, 1889-1989: A Centennial History* (Elkin: Town of Elkin, 1989), 6-7.

³⁴ *Ibid.*; *Elkin, 1889-1989: A Centennial History*, 17-18, 20. A devastating July 16, 1916 flood severely damaged Chatham Manufacturing Company's Elkin plant, causing an estimated \$100,000 in damage and requiring several months of clean-up. The company began planning a new facility located on higher ground, and shifted operations to the three-story brick plant by 1919. The 1890s plant was subsequently restored, but was damaged in a 1940 flood and later burned. The company demolished the ruins in the early 1970s.

³⁵ Forsyth County Register of Deeds, Deed Book 81, page 378; Book 82, page 256; Book 83, pages 89, 128, and 192; Ruby Bray Canipe, ed. *Early Elkin-Jonesville History and Genealogy* (Jonesville, North Carolina: Tarheel Graphics, 1981), 38.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 19 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

The April 1907 Sanborn map indicates that Winston's first blanket-manufacturing plant was under construction, illustrating a three-story brick factory on the Southern Railway line's north side. A one-story engine room projects from the factory's north elevation, with a pump house to the north and a boiler house at its northwest corner. An eighty-foot-tall brick chimney stood just north of the boiler house, and a coal trestle supplied fuel to the engine room and boiler house. A three-story stair and elevator tower extended from the main mill's north elevation east of the engine room, separating the factory from a one-story dye house with a clerestory roof.³⁶

By April 1912, the main mill's first floor encompassed a large weaving room and a smaller picker room at the west end, the second floor was utilized for spinning and carding, and the third floor for storage. A small one-story blacksmith shop and a one-story dye house had been erected west of the boiler house, a 160,000-gallon reservoir stood north of the factory, and a two-story bleach house with a one-story wing had been constructed east of the reservoir. The factory, which remained Winston-Salem's only woolen mill, produced \$450,000-worth of wool blankets in 1916.³⁷

The company employed hundreds of mill workers by the 1910s and purchased additional acreage to the south, upon which they constructed modest bungalows to house their employees. As this area is slightly higher in elevation than the adjacent industrial complex, the neighborhood became known as Chatham Heights.³⁸

Chatham Manufacturing Company president Hugh Chatham and his wife Martha Lenoir, called "Mattie," also resided near the mill, boarding at the Zinzendorf Hotel for several years. By 1912, they occupied a dwelling at 832 W. Fourth Street in the West End neighborhood. Carl C. Poindexter, who began working for the company in 1906, moved to Winston to serve as Hugh Chatham's private secretary in 1907 and became the Winston plant superintendent in 1910. Hugh's brother and company treasurer Richard M. Chatham and vice-president Gilvin Roth remained in Elkin.³⁹ The Chatham family continued to spend time at their country estate, Klondike Farm, near Elkin, as well as in

³⁶ Ibid.; *Elkin, 1889-1989: A Centennial History*, 32; Winston-Salem Chamber of Commerce, *Winston-Salem: Half-Century of Progress, 1885-1935* (Winston-Salem: Winston-Salem Chamber of Commerce, 1935), 19; 1907 Sanborn Map.

³⁷ 1912 Sanborn Map; Harris Copenhaver, "An Industrial Survey of Winston-Salem, North Carolina," University of North Carolina at Chapel Hill Master's Thesis, 1917, page 10.

³⁸ The bungalow at 811 North Spring Street in 1917 and the almost identical residence erected at 806 Eighth Street around 1924, both of which are now encompassed within the West End Historic District boundaries, were owned by Mattie T. Chatham or the Chatham Manufacturing Company until 1944. Gwynne Taylor and Laura Phillips, "West End Historic District," National Register of Historic Places nomination, 1986.

³⁹ Ernest H. Miller, compiler, *Winston City Directory* (Asheville, North Carolina: Piedmont Directory Company, 1910); "Went With Company in Year 1906," *Elkin Tribune*, February 8, 1940.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 20 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Roaring Gap, a summer resort in Alleghany County that Hugh Chatham and other investors established in the 1890s after he discovered the locale's scenic beauty during a wool-buying expedition.⁴⁰

In addition to his primary occupation, Hugh Chatham was politically active and became well-known for his philanthropic efforts. He was a member of the Wachovia Bank and Trust Company's executive board and served as president of both the North Carolina and the Alleghany railroad companies. North Carolina voters elected Chatham to serve in the state senate in 1914 and he became a member of the Council of National Defense, which met in Washington, D. C. The United States government subsequently conscripted Chatham Manufacturing Company to produce blankets for the military during World War I. The need for additional storage resulting from this commission may have prompted the construction of an expansive brick warehouse at the Winston-Salem plant around 1917.⁴¹

Hugh and Mattie Chatham had two children, Richard Thurmond, born in 1896, and Dewitt, born in 1899. Thurmond attended the Salem Boy's School, Woodbury Forest School in Orange, Virginia; the University of North Carolina at Chapel Hill (1915-1916), and Yale University (1916-1917), before enlisting in the United States Navy in May 1917. After two years in the service he returned to Winston-Salem in July 1919, and began working full-time at Chatham Manufacturing Company, where he had previously been employed during summer breaks from school. Thurmond married Lucy Hodgin Hanes, the daughter of John W. and Anna H. Hanes, on October 29, 1919.⁴² The union joined Winston-Salem's leading textile-manufacturing families.

By 1921, Thurmond was secretary of Chatham Manufacturing Company and resided with his wife at 953 West Fourth Street. His sister Dewitt completed her studies at Salem College, and, on April 24, 1923, further aligned the Chatham and Hanes families by marrying Lucy's brother, Ralph P. Hanes. Both couples soon erected expansive homes designed by nationally-recognized architects. In 1925, Thurmond and Lucy Chatham commissioned Philadelphia architect Charles Barton Keen to design the stuccoed, two-story, Renaissance Revival-style house they constructed at 112 North Stratford Road in Stratford Place, a subdivision at the northwest corner of the Five Points intersection in Winston-Salem on property that had belonged to Lucy's father, John W. Hanes. Philadelphia landscape architect Thomas Sears created the Stratford Place neighborhood plan as well as the Chathams's residential

⁴⁰ Lillian Britt Phillips Shelton, "Modestly Grand:" *The Wake Forest President's House, Built by Ralph and Dewitt Hanes, 1929*, MA Thesis, Wake Forest University, May 2006, 41-42.

⁴¹ William S. Powell, ed., *Dictionary of North Carolina Biography, Volume 1, A-C* (Chapel Hill: University of North Carolina Press, 1979), 357. The 1917 Sanborn map illustrates the warehouse footprint with the notation "from plans," indicating that it was soon to be erected.

⁴² *Ibid.*, 43; "Biographical Sketch," Thurmond Chatham Papers, 1776-1956, Private Collection 1139, North Carolina State Archives, Raleigh; "Richard Thurman [sic] Chatham," *North Carolina Biographical Dictionary* (New York: Somerset Publishers, Inc., 1993).

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 21

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

landscape.⁴³ New York architect Geoffrey Platt designed Thurmond and Lucy's country house at Klondike Farm.⁴⁴

Winston-Salem experienced tremendous growth and development in the early decades of the twentieth century, becoming North Carolina's largest and richest city by 1926. Chatham Manufacturing Company, with the capacity to produce one million blankets a year by 1921 and employ between six and eight hundred mill workers at their Elkin and Winston-Salem plants, generated a significant amount of revenue. The company purchased approximately ninety percent of the wool offered by the North Carolina Wool Sales Cooperative between 1921 and 1923 in addition to wool from Australia, England, and India. In 1924, Chatham Manufacturing Company was one of seven woolen mills in North Carolina, contributing to a total annual production valued at approximately \$3,636,771. The booming economy prompted factory upgrades during the 1920s, when the company spent approximately \$800,000 on new equipment.⁴⁵

The corporation also revamped their advertising and sales approach in the 1920s. Rather than continuing to market their products through a commission house, the company organized their own sales department in 1923 and opened offices in New York, Chicago, San Francisco, and New Orleans by 1929. Popular magazine campaigns and showroom displays promoted affordable new blankets, sheets, and tweed and homespun fabrics nationwide. Given the seasonal nature of blanket sales, goods were finished and stored in Winston-Salem from March until October, when they were shipped to retailers.⁴⁶

The company initially utilized vacant tobacco warehouses to meet their overflow storage needs, but erected a large brick warehouse north of the Southern Railway spur line at their Winston-Salem factory

⁴³ Ernest H. Miller, compiler, *Winston-Salem City Directory* (Asheville, North Carolina: Piedmont Directory Company, 1921); Gwynne Stephens Taylor, *From Frontier to Factory: An Architectural History of Forsyth County* (Raleigh: North Carolina Department of Archives and History, 1981). John Wesley Hanes passed away in 1903. The Five Points intersection is at the junction of West First, Runnymede, Stratford, Country Club, and Miller streets. The former Pleasant Henderson Hanes estate stood to the southeast at what is now 1920 and 2000 West First Street until 1963, when it was demolished to make way for commercial development on Stratford Road. Hanes family members erected other houses in the vicinity, including two to the west in Stratford Place, and three to the north in West Highlands. Dewitt Chatham and her husband Ralph P. Hanes and James G. Hanes, Ralph's brother, constructed residences on her parent's approximately one-hundred-acre hobby farm adjacent to the Reynolds estate—north of Brookstown Road (now Robinhood Road) and west of Reynolda Road.

⁴⁴ Lillian Britt Phillips Shelton, "Modestly Grand:" *The Wake Forest President's House, Built by Ralph and Dewitt Hanes, 1929*, Master's Thesis, Wake Forest University, May 2006.

⁴⁵ Chatham Manufacturing Company, "From Wool to Blankets: Season 1921," Elkin and Winston-Salem, N. C., Thurmond Chatham Papers, 1776-1956, North Carolina State Archives, Raleigh; Charles N. Siewers, *Forsyth County: Economic and Social* (Chapel Hill, University of North Carolina, Department of Rural Social Economics, May 1924), 35; Ralph C. Maultsby, "Aggressive Merchandising Has Contributed to Success of Chatham Blankets," *Textile World*, August 17, 1929.

⁴⁶ *Ibid.*; "Woolen Mills," *North Carolina Yearbook* (Raleigh: *News and Observer*), 1924, p. 67.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 22 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

in 1917. The main mill's third floor also served as inventory storage, and the company expanded the building with a one-story addition on the main mill's east end in the 1920s. The complex continued to grow during this period, as two long, narrow bleaching houses and several smaller gable-roofed buildings stood north of the reservoir and water tower by 1930. The company constructed a triangular-shaped frame warehouse on the Southern Railway spur line's south side in the late 1930s.⁴⁷

Chatham Manufacturing Company purchased most of their wool from sheep farmers located throughout the United States and offered producers an alternative to simply selling wool at a low market cost. The corporation entered into cooperative agreements with many of their suppliers, turning their raw wool into blankets and other merchandise. Blanket manufacture required approximately five pounds of wool per 74-inch by 84-inch blanket, while automobile robes necessitated between eight and ten pounds of wool each. Chatham Manufacturing Company charged a small processing fee to clean the wool, provide the cotton warp, and produce and ship the desired product. Maryland's Cooperative Extension Service promoted the exchange opportunity, and sheep farmers in twenty of the state's twenty-three counties participated in the program in 1920-21. Attorney and ranch owner E. C. Gaines and his wife of Austin, Texas, who exchanged 225 pounds of wool and \$108 for forty blankets and two automobile robes in 1921, were also satisfied customers. They intended to keep twelve blankets so that they would "have a supply of this article of the very best for life" and sell the remainder.⁴⁸

Thurmond Chatham became president of Chatham Manufacturing Company upon his father Hugh's death in 1929. Thurmond continued to diversify the family's business investments, purchasing a large lot between North Cherry and North Marshall streets in 1929 and erecting a streamlined, two-story, limestone-veneered commercial block with classical and Art Deco features at what is now 301-311 West Fourth Street the next year.⁴⁹

In 1930, twelve textile mills operated in Winston-Salem, employing 3,232 workers. Chatham Manufacturing Company remained the only blanket producer.⁵⁰ Although sales decreased during the early 1930s as a result of the economic depression, the corporation remained solvent. Thurmond

⁴⁷ Ibid.; 1917 and 1950 Sanborn maps. The factory rendering on the 1920s company letterhead in the Thurmond Chatham Papers, 1776-1956, at the North Carolina State Archives in Raleigh; an aerial photograph in *Winston-Salem, North Carolina: Booklet No. III*, compiled by Major A. R. Lawrence for the Industrial Commission of Winston-Salem, Inc. in 1930; and an aerial photograph in the *Winston-Salem: Half-Century of Progress, 1885-1935*, published by the Winston-Salem Chamber of Commerce, provide three-dimensional images of the complex.

⁴⁸ Chatham Manufacturing Company, "From Wool to Blankets: Season 1921."

⁴⁹ Frank A. Smith, who sold men's apparel, and Ideal and Montaldo's department stores occupied the Chatham Block from its opening until the 1970s and early 1980s. The Chatham family rehabilitated the building in 1984. Laura A. W. Phillips and Gwynne S. Taylor, "Downtown Winston-Salem Historic District," National Register of Historic Places nomination draft, 1989.

⁵⁰ Major A. R. Lawrence, compiler, *Winston-Salem, North Carolina: Booklet No. IV* (Winston-Salem: Industrial Commission of Winston-Salem, Inc., 1930), 12.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 23 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Chatham was determined to keep the Elkin and Winston-Salem plants in operation, even if they generated a product surplus, and consequently his facilities retained most of their employees.⁵¹

As the country slowly recovered from the Great Depression, Chatham Manufacturing Company diversified their product offerings and increased plant capacity. The company reinvented their automobile robe line in the 1930s by updating the design and marketing the robes as “gauchos” in the tradition of the Spanish garment. Promotional materials touted the gauchos as ideal cold-weather outdoorwear, suitable for myriad occasions.⁵²

In 1935, Chatham Manufacturing Company’s capital was valued at \$2,500,000 for both the Elkin and Winston-Salem plants. The corporation operated 500 wool looms and 280 cotton looms in Elkin and finished blankets in Winston-Salem, where it was one of six textile manufacturing businesses including Arista Mills, which primarily produced chambray fabric and encompassed 534 looms and 18,000 spindles. Indera Mills, Winston-Salem’s smallest knitting plant at that time, owned 98 circular knitting machines, while P. H. Hanes Knitting Company operated 400 such machines and Hanes Hosiery Mills 2,000.⁵³

Chatham Manufacturing Company developed a new “Airloom” blanket in 1936, so named due to its lighter cotton warp and long-staple, virgin wool weft. The blankets were available in ten “jewel-like” colors and three sizes. Black Mountain College ordered three hundred Airloom blankets for their campus in August 1936 and, a month later, reported that the new blankets were “dispensing with a great amount of lint.” Company sales representative John Eller promised to visit to inspect the blankets and provide advice as to the best manner to clean and store them.⁵⁴

In the spring of 1937, the United States government awarded Chatham Manufacturing Company a \$1,500,000 contract to supply 250,000 blankets for the Civilian Conservation Corps, a New Deal relief program. The company began manufacturing fabric for the Packard Motor Company’s car seats in August 1937 and soon cultivated Chrysler, Ford, Hudson, Studebaker, Nash, and General Motors as clients. These contracts undoubtedly contributed to the construction of a new brick office building at the Winston-Salem plant in 1937 and the expansion of the Elkin factory soon after. By February 1940,

⁵¹ *Elkin, 1889-1989: A Centennial History*, 75.

⁵² Chatham Manufacturing Company, “Introducing the Chatham ‘Gauchos,’” Thurmond Chatham Papers, 1776-1956, North Carolina State Archives, Raleigh.

⁵³ *North Carolina Yearbook*, 1935, pages 107 and 115.

⁵⁴ Black Mountain College Correspondence, “Chatham Manufacturing Company,” North Carolina State Archives, Raleigh. The folder includes a 1936 color Airloom blanket catalog complete with color swatches, advertisements, and price sheets.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 24 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Chatham devoted 150 looms to the production of wool upholstery material. The Getsinger-Fox Company of Detroit marketed the finished product to the automobile industry.⁵⁵

Thurmond Chatham campaigned for industrial and agricultural causes during his tenure on the North Carolina Board of Conservation and Development, as president of the North Carolina Dairymen's Association, and as a spokesman for the National Association of Wool Manufacturers in the late 1930s. In his congressional committee testimony regarding wool importation tariffs in 1938, Chatham stated that less than fifty United States firms produced wool blankets at that time, and fewer than ten operated more than one hundred looms. Chatham Manufacturing Company was one of the largest of these concerns, employing approximately 2,100 workers. Most wool mills were located in New England and in New York, New Jersey, and Pennsylvania. Demand for domestic wool products dropped during the economic depression of the 1930s, and, coupled with increased importation of wool blankets and fabrics from the United Kingdom, the Netherlands, Italy, and, after 1936, Japan, the domestic wool industry suffered great losses. Chatham thus advocated for higher tariffs on imported goods.⁵⁶

Despite the economic challenges of the 1930s, Chatham Manufacturing Company continued to successfully promote their products and streamline their organization. In 1939, the Chatham Blanket Shop in the Consumer's Building at the New York World's Fair sold wares to thousands of visitors. Chatham Manufacturing Company also embarked on a major facility upgrade that year, announcing in late March that they would close the Winston-Salem plant and consolidate operations in Elkin upon the construction of a 145,000-square-foot plant and a 50,000-square-foot warehouse to replace the Winston-Salem finishing and shipping complex. The Winston-Salem plant would continue to serve as storage for several years.⁵⁷

Thurmond Chatham estimated that up to 650 employees and their families might move to Elkin, potentially increasing the small town's population by as many as 2,400 people. Chatham Manufacturing Company did not plan to erect dwellings for their relocating employees, as they felt that Elkin had sufficient housing stock. The company's loyal workforce included nearly fifty Winston-Salem employees who had labored for Chatham Manufacturing for at least twenty-five years, some of whom, such as Winston-Salem plant superintendent R. W. Harris, had been steadily promoted. Harris

⁵⁵ "Chatham Receives \$1,500,000 Order From Government," *Elkin Tribune*, April 1, 1937; *Elkin, 1889-1989: A Centennial History*, 78; "Manufacture of Auto Upholstery Growing Business at Chatham," *Elkin Tribune*, February 8, 1940.

⁵⁶ "Paragraph 1111 – Blankets and Similar Articles," 1938, Thurmond Chatham Papers, 1776-1956, North Carolina State Archives, Raleigh.

⁵⁷ "Chatham Blanket Shop Ad," Thurmond Chatham Papers, 1776-1956, North Carolina State Archives, Raleigh; "Chatham Manufacturing Company To Move Plant in Winston-Salem Here; Plan \$500,000 Building," *Elkin Tribune*, March 23, 1939; "Mill News," *Textile Bulletin*, November 15, 1940 and January 1, 1941, Wilson Library, UNC-Chapel Hill.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 25 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

was hired in 1920 to work in the weaving department and became general superintendent of the finishing department in 1926 and a director on the company's board in 1934. He continued to work for the company in the same capacity in Elkin.⁵⁸

The *Elkin Tribune* reported that Chatham Manufacturing Company began installing the machinery and equipment from the Winston-Salem factory in the new four-story Elkin plant on January 17, 1940. The newspaper printed a special issue commemorating the move. The company soon took advantage of their increased production capacity, as they received "one of the largest single military contracts made since the defense program went into action" on October 23, 1940. The Elkin plant subsequently manufactured thousands of blankets valued at \$1,923,750.⁵⁹

Thurmond Chatham volunteered for another tour of duty in the U. S. Navy in February 1942, serving in the Bureau of Ordnance, the Secretary of the Navy's office, and then in combat in Europe and the Southwest Pacific until November 1945, during which time he received numerous commendations. He retired from his position as Chatham Manufacturing Company president in 1944 and became chairman of the board. After his return to North Carolina, he lost his first bid for a legislative seat but then successfully campaigned for election as a democratic representative in the Eighty-first Congress and three subsequent terms from 1949 until 1956. Ralph J. Scott defeated Chatham in the 1956 election, ostensibly due to Chatham's refusal to sign the "Southern Manifesto," a document drafted by legislators opposed to racial integration mandated by the U. S. Supreme Court's 1954 *Brown v. Board of Education* decision. Both North Carolina senators and eight of twelve representatives endorsed the manifesto; Chatham was among the four non-signatories and one of three representatives to fail in their re-election attempts. Thurmond Chatham passed away in Durham on February 5, 1957, one month after completing his fourth congressional term, and was buried in Winston-Salem's Salem Cemetery. He endowed the Chatham Foundation to facilitate educational opportunities for high-achieving youth.⁶⁰

Given Thurmond Chatham's military and political connections, it is not surprising that Chatham Manufacturing Company leased and then sold their vacant Winston-Salem factory to the United States Navy in 1944. The property was one of thousands across the nation acquired in an effort to augment industrial production in support of the United States' participation in World War II. America's goal to

⁵⁸ "Chatham Manufacturing Company To Move Plant;" "Employees Boast of Long Service" and "Harris Heads Finish Plant," *Elkin Tribune*, February 8, 1940.

⁵⁹ "Chatham Manufacturing Company To Move Plant;" "Mill News," *Textile Bulletin*, November 1, 1940, Wilson Library, UNC-Chapel Hill.

⁶⁰ "Biographical Sketch," Thurmond Chatham Papers, 1776-1956, North Carolina State Archives, Raleigh; "Richard Thurman [sic] Chatham," *North Carolina Biographical Dictionary* (New York: Somerset Publishers, Inc., 1993), William S. Powell, ed., *Dictionary of North Carolina Biography, Volume 1, A-C*, 357-358; Tom Wicker, "Congressmen Mourn Death of Chatham," *Winston-Salem Journal*, February 7, 1957; Marjorie Hunter, "Chatham: Versatile, Personable, Determined," *Winston-Salem Journal*, May 20, 1956.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 26

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

become “the arsenal of democracy” benefited large corporations—more than half of the \$175 billion-worth of government contracts awarded between 1940 and 1944 went to thirty-three nationally-known firms who had demonstrated their capacity to produce large quantities of quality goods—as well as small businesses, finally remedying the high unemployment rates that lingered after the Great Depression. Industrial jobs increased by seventy-five percent in the South over the course of World War II, with traditionally underemployed groups such as women, African Americans, and the elderly receiving invaluable education, training, and experience. In Winston-Salem, P. H. Hanes Knitting Company and R. J. Reynolds Tobacco Company accelerated their production of garments and cigarettes to meet the needs of servicemen and women and Allied Aviation manufactured weapons for the military. Output soared after May 1943, when President Franklin D. Roosevelt established the Office of War Mobilization to coordinate a diverse array of support endeavors including manufacturing, scientific research, and agricultural production.⁶¹

It was in this economic climate that the Cleveland-based National Carbon Company, a United States Navy subcontractor, began producing submarine batteries and underwater detonators at the former Chatham Manufacturing Company plant in 1943. The company expanded the complex by constructing the three-story frame addition at the main mill’s east end, the large five-story brick wing that extends north from the frame addition, the elevated one-story passage, the two- and three-story warehouse additions that wrap around the 1917 warehouse, and the two-story concrete and frame paint manufacturing and storage building. Although National Carbon Company’s domestic battery production increased dramatically in the late 1940s, their Winston-Salem operation was short-lived, as the factory closed in 1945 when the company’s military product demand declined at World War II’s end.⁶²

Winston-Salem Chamber of Commerce director Harry J. Krusz subsequently facilitated negotiations between the city’s industrial leaders, the United States Navy (who classified the former Chatham Manufacturing Company complex as a naval weapons industrial reserve plant), and Western Electric to lease the complex. Western Electric had opened a Burlington, North Carolina, plant in early 1946 and was interested in establishing a Winston-Salem operation due to the large potential labor force and

⁶¹ Marilyn M. Harper, et. al. *World War II and the American Home Front* (Washington, D. C.: The National Historic Landmarks Program, October 2007), 3, 13-16; Frank V. Tursi, *Winston-Salem: A History* (Winston-Salem: John F. Blair, Publisher, 1994), 229.

⁶² James Howell Smith, *Winston-Salem in History, Volume 8: Industry and Commerce, 1896-1975* (Winston-Salem: Historic Winston-Salem, Inc., 1977), 47; Thomas Pepper, “Electronics—New Industry, People,” *Winston-Salem Journal*, April 10, 1966; Fambrough L. Brownlee, *Winston-Salem: A Pictorial History* (Norfolk, Virginia: Donning Company, 1997), 194; “Agency History,” Eveready Company Papers Finding Aid, Rutherford B. Hayes Presidential Center Library, Fremont, Illinois, <http://www.rbhayes.org/hayes/mssfind/285/eveready.htm#Scope and Content>. National Carbon Company, which was established in 1886 and acquired the American Every Ready Company in 1914, eventually became the Energizer Corporation.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 27 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

available industrial square footage. At that time, the company fabricated communications equipment for use in national and international defense installations.⁶³

Western Electric Company, Inc., founded in 1872, initially manufactured telegraph equipment for Western Union, becoming the United States' largest electrical parts supplier before its 1881 acquisition by Bell Telephone, which became American Telephone & Telegraph (A T & T) in 1899. Western Electric then served as AT & T's sole telephone manufacturer. Telephone demand declined during the depression years, but increased significantly beginning in 1939, when the telephone was marketed as a "weapon of preparedness."⁶⁴

Western Electric leased the Chatham Road facility and began interviewing for their first nine hundred Winston-Salem plant positions on April 29, 1946. Approximately 2,500 applicants formed a line that wound down Chatham Road to Northwest Boulevard. The company soon began manufacturing military communications equipment such as radar and telephone components and systems. By October they employed 1,600 workers in their Winston-Salem division and had expanded into a former tobacco warehouse on Oak Street. Increased production soon resulted in the growth of the Chatham Road facility and the acquisition of additional properties including the former Butner Roller Mill on Church Street, a textile mill on Brookstown Avenue, the Star and Liberty warehouses on North Cherry Street, and the former Nissen Wagon Works factory in Waughtown.⁶⁵

The United States government augmented Western Electric's defense contracts during the Korean War, when the company produced technical publications to guide operations for all military branches and manufactured sophisticated equipment and weapons including Nike guided missiles and anti-aircraft apparatus. Western Electric's field engineering division moved its headquarters from New York to Winston-Salem in 1952 to be in closer proximity to their production facility, although many of their military experts were stationed internationally. The engineering division utilized the top floor of a newly-constructed building at the Chatham Road plant, where analysts processed data from systems around the world and dispensed technical assistance. Supervisors coordinated the division's military interaction from this location and trained engineers before their deployment to military installations. Several guided missile systems were set up on the Chatham Road property to serve instructional purposes. Western Electric also purchased the former Security Life and Trust Building on West Fourth Street to function as classrooms and faculty offices. The Winston-Salem engineer training school was one of only three such facilities that the company operated nationwide.⁶⁶

⁶³ Ibid.

⁶⁴ http://www.porticus.org/bell/westernelectric_history.html.

⁶⁵ James Howell Smith, *Industry and Commerce*, 47.

⁶⁶ Ibid.; Adelaide L. Fries, et. al., *Forsyth: The History of a County on the March* (Chapel Hill: University of North Carolina Press, 1976), 238, 345; "Electronics Industry Brought New Ideas, Methods to Winston-Salem," *Winston-Salem Journal and Sentinel*, April 10, 1966, page L12; Jackie Owen, "WE Field Engineers: Godfathers of Defense,"

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 28

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Western Electric attained record sales of \$1.5 billion in 1953, including military equipment contracts valued at \$400 million, a sizable percentage of which was manufactured at their North Carolina Works in Burlington, Greensboro, and Winston-Salem. Western Electric's field engineering division encompassed approximately six hundred employees at seventy-seven United States locations and eleven international offices that year, but the vast majority of the company's 102,000 employees operated sixteen manufacturing plants throughout the United States. Western Electric's North Carolina payroll expenditure for approximately 9,400 workers and 700 supervisors was \$40 million in 1953.⁶⁷

The company continued to increase their Winston-Salem production and occupied an expansive new Lexington Road manufacturing plant and office building, which encompasses almost seven hundred thousand square feet on a sixty-acre parcel, in late 1954. The impact on the local economy was enormous, both in terms of direct employment and subcontracts. In 1955, Western Electric ordered \$9.2 million-worth of goods and services from several thousand North Carolina vendors including the Winston-Salem-based Superior Manufacturing Company. Approximately thirty percent of that firm's production was for Western Electric.⁶⁸

Although the company continued leasing the former Chatham Manufacturing complex, where they began their Winston-Salem operations, they obtained funding from the Mary Reynolds Babcock Foundation to construct a plant on Reynolda Road in 1960. The new facility housed Western Electric's technical publications and engineering services divisions.⁶⁹

At that time, Western Electric was one of Forsyth County's leading industrial concerns, operating four plants with over seven thousand employees earning approximately forty-one million dollars a year. As military equipment demand declined, Western Electric increased production of switches and circuits for national telephone networks, and, in 1962, converted the Lexington Road plant into a telephone manufacturing operation. They also completed some renovations, including the replacing many of the windows in the Chatham Road plant's original mill building, that year. The company closed the Chatham Road facility in 1966, but the Lexington Road plant employed thousands through 1988, when

Winston-Salem Journal and Sentinel, July 6, 1958; Harold Ellison, "Western Electric Revitalizes Tired City," *Winston-Salem Journal*, September 21, 1958.

⁶⁷ Public Relations Department of the North Carolina Works, Western Electric Company, Winston-Salem, N.C., "Western Electric Large Electronics Plants in Three Cities," *The E.S.C. Quarterly*, Winter-Spring 1954, page 6.

⁶⁸ *Ibid.*; Chester Davis, "Western Electric and Winston-Salem...How an Industry Found a Home," *Winston-Salem Journal and Sentinel*, April 29, 1956.

⁶⁹ James Howell Smith, *Industry and Commerce*, 47-48. Architect Nils F. Larson, the son of Wake Forest University's chief architect Jens Fredrick Larson, designed the Reynolda Road facility. Adelaide L. Fries, et. al., *Forsyth: The History of a County on the March*, 345; Tursi, *Winston-Salem: A History*, 268; Larry Edward Tise, *Winston-Salem in History, Volume 9: Building and Architecture* (Winston-Salem, NC: Historic Winston, 1976), 46.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 29 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

AT & T announced plans to move production to Burlington. Only four hundred employees worked at the Winston-Salem facility at the end of 1989.⁷⁰

The United States government began marketing the Chatham Road plant in January 1967, advertising that the facility's twenty-six buildings encompassed almost 345,000 square feet of "production, administration, maintenance, and storage" space. The General Service Administration's real property office in Atlanta accepted sealed bids for the plant. Chicago investors H. Rubin and Sons, Inc. acquired the Chatham Road property on June 15, 1967 and hired Winston-Salem residents Ken Hamilton and Stan Kelly to manage it. The men resided in the former Chatham Manufacturing Company office (Building 1) and began salvaging and selling metal and other materials from the property before leasing the space for warehouse and manufacturing use. They created the business entity RCS, Inc. and purchased the complex from H. Rubin and Sons, Inc. on November 12, 1970.⁷¹

Henry A. Brown Jr., known as "Hal," and his wife Patricia were among their first tenants. The couple rented five thousand square feet of Building 12 to house their new company, Adele Knits, in 1970. They constructed an office near the building's north end, and, as the business grew and the company required additional square footage, the Browns purchased the entire complex in 1972. Although the property went from being almost fully leased to forty-percent vacant in 1974, they continued to cultivate warehouse clients and soon served as a storage and distribution center for businesses including Hanes Hosiery, Piedmont Airlines, R. J. Reynolds Tobacco Company, and Western Electric, who utilized portions of Buildings 3, 4, 6, and 12. The New Jersey-based GSB Fabrics Corporation, a Hanes Dye and Finishing Company customer, leased the fourth floor of Building 6 for fabric storage for about ten years beginning in the late 1970s. Texas Pete stored barrels of peppers on Building 6's third floor for a short time.⁷²

Other parts of the complex housed a variety of fledgling entrepreneurial endeavors, many of which grew to become successful businesses. Watson Wood Works, an architectural millwork producer, occupied 1,800 square feet of the Chatham Road complex from 1984 until 1987 and now operates a 40,000 square foot facility on Megahertz Drive in Winston-Salem. Carolon, a compression bandage, stocking, and hosiery manufacturer, utilized the first floors of Buildings 3 and 4 from around 1975

⁷⁰ Bill East, "6,000,000 in New Construction is Scheduled in Forsyth for 1955," *Winston-Salem Sentinel*, January 3, 1955, page 1B and 4B; "Electronics Industry Brought New Ideas, Methods to Winston-Salem;" Tursi, *Winston-Salem: A History*, 292; Harold Ellison, "Western Electric Revitalizes Tired City," *Winston-Salem Journal*, September 21, 1958.

⁷¹ Forsyth County Deed Book 1030, pages 7-11, referenced in Department of the Navy, "Report of Excess Real Property," filed with the General Services Administration in Atlanta, Georgia on January 11, 1967; Henry A. "Hal" Brown and Mike Hollman, interview with Heather Fearnbach, September 29, 2010; Tom Edmonds, "Discovering new uses for old buildings," *Triad Business*, November 13-20, 1989, page 8.

⁷² Henry A. "Hal" Brown and Mike Hollman, interview with Heather Fearnbach, September 29, 2010. The United States government conveyed a 10.322-acre parcel encompassing all of the former Chatham Manufacturing Company and Western Electric Company buildings at the Chatham Road site to RCS, Inc. via a Quit Claim deed dated March 1, 1972 (Forsyth County Deed Book 1030, pages 7-11).

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 30 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

until 1990, when they moved to Rural Hall. Thermcraft, Inc, an industrial and laboratory oven, furnace, and ceramic heater producer still based in Winston-Salem, was another tenant.⁷³

The Browns only made a few changes to the Chatham Road complex over the years. In an effort to keep the wood window sashes in place, they covered many of the property's window openings with foam around 1974. Facility manager Mike Hollman began working for the company in 1979, and soon thereafter coated the foam with a sealant to keep it from deteriorating. Building 16 and the adjacent water tower were removed around 1985 and the central water reservoir was filled in to create additional parking about the same time. Other edifices removed from the site in the 1980s include Building 2, the two-story, hip-roofed, frame structure that served as Chatham Manufacturing Company's recreation building and later as offices; Building 20, a garage west of Building 2; Building 17, a one-story, flat-roofed edifice at Building 6's north end; the small guard house that stood north of Building 17; Building 19, the one-story gable-roofed building that stood just north of Building 21; and most of the small free-standing fire hose houses throughout the property. Building 5—a one-story, flat-roofed, triangular-shaped, frame, late 1930s warehouse that was located south of the railroad spur line at the loading shed's north end—was demolished around 1995.⁷⁴

The Browns continued to use Buildings 12, 13, and 14 for Adele Knits production and yarn storage. They also diversified their business interests through ventures such as purchasing six hundred Simmons caskets and storing them on Building 15's first floor before selling and delivering them to funeral homes throughout the southeast. After several years of warehousing toiletries and linens for Holiday Inn, the Browns also began storing the local franchise's business records in Building 8. They soon incorporated this new endeavor as Twin City Records Management. Their first records storage clients were Western Electric and the law firm of Bell, Davis, and Pitt, who rented one hundred square feet of Building 8. As the demand for records storage space increased, Twin City Records Management occupied additional square footage in the Chatham Road complex and expanded their operation to other Winston-Salem locations and facilities in High Point, Greensboro, Charlotte, and Raleigh.⁷⁵

Hal and Patricia Brown's sons Andy and Bruce, who now manage the family's businesses, purchased the former Western Electric plant on Old Lexington Road in 1995 and gradually moved Twin City Warehouses and Records Management and Adele Knits into that facility. Around 2002, they rented Western Electric's basement computer room to a small online data storage company that they subsequently purchased, thus creating a new company called Data Chambers, which provides a full range of information technology and records management services. Twin City Warehouses stored

⁷³ Ibid.; "Watson Wood Works," <http://watsonwood.com>; "Carolyn Health Care Products," http://www.carolon.com/index.php?option=com_frontpage&Itemid=3; "Thermcraft, Incorporated," <http://www.thermcraftinc.com/>.

⁷⁴ Henry A. "Hal" Brown and Mike Hollman, interview with Heather Fearnbach, September 29, 2010.

⁷⁵ Ibid.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 31

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

records at the Chatham Road complex until 2005 and is still in operation. Adele Knits continues to produce specialty industrial fabrics.⁷⁶

Industrial Architecture Context

North Carolina's early textile operations depended on waterpower, making locations along the Haw, Deep, and Catawba rivers, where slate formations create falls and rapids, ideal for manufacturing. German merchant Michael Schenck erected a sawmill, gristmill, and several ironworks in Lincoln County before hiring ironworkers Absolom Warwick and Michael Beam to construct North Carolina's first cotton mill in 1813. Only a few other entrepreneurs attempted textile manufacturing before the late 1820s, when the North Carolina legislature approved approximately fifteen new companies' incorporations. It was not until the late 1830s that industrialists including Charles Mallet, Francis Fries, John Motley Morehead, John Trollinger, Henry Humphreys, Benjamin Elliot, and Edwin Michael Holt capitalized on the piedmont's available sites, transportation, and labor force to establish spinning mills. Henry Humphreys was the first North Carolina manufacturer to experiment with steam power, installing a system in his Greensboro cotton mill in 1828, but most textile factory owners relied upon water as their primary power source through the late nineteenth century.⁷⁷

Industrial architectural design during this period was influenced by the need to accommodate the necessary machinery in a manner that would allow for the most efficient interaction with the power source and utilization of natural light and ventilation. Chatham Manufacturing Company, like many of North Carolina's early textile producers, expanded an existing frame building to serve as their first Surry County woolen mill. Such structures, which usually had rough-sawn wood floors and wood shingle roofs, often resembled large residential or agricultural buildings as they were typically located in rural settings along the rivers and streams that generated their power. As frame mills were extremely susceptible to fire and rarely had interior firewalls or other fire safety features, few nineteenth-century North Carolina examples survive.⁷⁸

During the late nineteenth century, steam and electric power generation allowed textile mills to move to urban areas in close proximity to railroad lines and a large pool of potential mill workers. Textile mill construction evolved from a vernacular process whereby mill owners worked with builders who erected edifices based on mutually understood norms, to a field dominated by professionally-trained mill engineers who designed industrial buildings and supervised their construction. Mill engineer David Dyer's 1868 plans for Mechanics Mill in Fall River Massachusetts contributed to the popularity of flat rather than gabled industrial building roofs. The textile mill engineering firm of Lockwood,

⁷⁶ Ibid.

⁷⁷ Brent D. Glass, *The Textile Industry in North Carolina: A History* (Raleigh: Division of Archives and History, North Carolina Department of Cultural Resources, 1992), 4-10, 14.

⁷⁸ Historian William Pierson, analysis by Betsy Hunter Bradley in *The Works: The Industrial Architecture of the United States* (Oxford: Oxford University Press, 1999), VIII, 16-17.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 32 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Greene & Company's design for the Piedmont Manufacturing Company Mill in Greenville County, South Carolina—a three-story, brick building with a low-pitched gable roof and arched window openings erected around 1873—became a prototype for southern textile mill construction. The firm influenced mill design though the twentieth century.⁷⁹

By the time Chatham Manufacturing Company constructed new mills in Elkin in 1893 and Winston in 1907, most industrial buildings were of “slow-burn” masonry construction, with brick walls, heavy timber framing, thick plank floors, and low-pitched gable or flat roofs. Mill engineers found that heavy timber framing members that were at least twelve inches square with chamfered edges effectively slowed the progress of fire, particularly when used in combination with a floor system that encompassed three- to four-inch thick plank decking covered with waterproof paper and topped with hardwood floors. The floor system was left exposed underneath in order to avoid the use of flammable ceiling materials and finishes. Chamfering the corners of beams, posts, and girders removed splinters that could ignite easily.⁸⁰

In further efforts to minimize fire risk, stairwells, which could serve as conduits for fire movement between floors, were located in projecting stair towers. Brick interior walls and galvanized-sheet-metal-clad, solid-core-wood doors, known as kalamein doors, separated the mill sections where fires might start or spread rapidly. Chatham Manufacturing Company's Winston-Salem factory retains kalamein doors between most spaces, including the engine and boiler rooms that project from the main mill building. These heavy doors would automatically close in the case of a fire, as the heat would melt a soft metal link in the door's counterweight assembly and the door would slide shut on the sloped metal track.

As an additional precaution, water reservoirs and elevated water tanks supplied automatic sprinkler systems in many industrial complexes. The 1917 Sanborn map shows that Chatham Manufacturing Company's Winston-Salem plant included fire safety features such as a 160,000-gallon water reservoir, water towers, a sprinkler system, chemical fire extinguishers, and large quantities of water pails. The no-longer-extant, eighty-foot-tall, brick chimney was freestanding (it was located north of the boiler house), further reducing fire risk.⁸¹

Standards imposed by machinery manufacturers and insurance companies also guided the evolution of industrial architecture in the late nineteenth and early twentieth centuries. Large operable windows, transoms, and monitor roofs provided mill workers with light and ventilation. North Carolina industrialists benefited from the contributions of engineers who disseminated specifications dictating

⁷⁹ Bradley, *The Works: The Industrial Architecture of the United States*, 15-21; “Piedmont Manufacturing Company,” http://www.nps.gov/history/nhl/DOE_dedesignations/Piedmont.htm.

⁸⁰ Sara E. Wermiel, “Heavy Timber Framing in Late-Nineteenth-Century Commercial and Industrial Buildings,” *APT Bulletin: Journal of Preservation Technology*, Volume 35, No. 1, 2004, 56.

⁸¹ Glass, *The Textile Industry in North Carolina*, 38; 1917 Sanborn Map.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 33

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

best practices in mill layout and design. South Carolina native Daniel A. Tompkins, sent by the Pittsburgh-based Westinghouse Engine Company to Charlotte in the early 1880s to sell and coordinate the installation of the company's equipment in the region, became a driving force in the southern textile industry. Tompkins partnered with Charlotte grain merchant R. M. Miller in 1883 to establish the D. A. Tompkins Company, an engineering firm. His myriad other endeavors included speaking and publishing on topics ranging from plant organization and funding to mill, factory, and worker housing design. The company created plans for over one hundred mills in addition to other industrial buildings. Besides his design accomplishments, Tompkins, whose engineering degree was from the Rensselaer Polytechnic Institute, successfully advocated for the creation of textile engineering and chemistry programs at North Carolina State College in Raleigh and Clemson College in South Carolina. His auxiliary undertakings included purchasing the *Charlotte Observer* and using the newspaper to endorse New South industry.⁸²

Thomasville, North Carolina native Stuart Cramer, who began his career with the D. A. Tompkins Company, was another highly-influential mill engineer. Cramer set up his own Charlotte firm in 1895, and by 1915 had designed almost one-third of the new mills erected in the south during that period. Cramer's innovations in textile mill climate control garnered him international recognition, and he is credited with conceiving the term "air conditioning."⁸³

Although the architect of Chatham Manufacturing Company's Winston-Salem plant is unknown, the simply-executed, utilitarian, early-twentieth-century buildings reflect the design principles espoused by Tompkins and Cramer as well as the transition from heavy timber to structural steel framing. The main mill and dye house's heavy timber frames, seven-to-one common bond brick walls, very low-pitched gable roofs, segmental-arched window and door openings, and large, eight-over-eight, double-hung, wood sash surmounted by eight-light transoms are representative of industrial architecture from that period.

Iron and steel structural systems were employed in industrial buildings during the nineteenth century, but their high cost greatly limited their use. The ability to withstand the weight and vibrations of heavy machinery without failing contributed to the popularity of structural steel construction, as did the ease of fabricating framing systems from standard, factory-generated components. Steel posts and beams could be riveted together and tended to be smaller and lighter than wood or iron framing members, thus allowing for wider and taller buildings with more square footage for equipment.⁸⁴

By the early twentieth century, timber scarcity in urban areas and the popularity of monitor roofs resulted in an increased use of structural steel framing. Distinctive sawtooth roof monitors, which were

⁸² Thomas W. Hanchett, *Sorting Out the New South City: Race, Class, and Urban Development in Charlotte, 1875-1975* (Chapel Hill: University of North Carolina Press, 1998), 50.

⁸³ *Ibid.*, 107.

⁸⁴ Bradley, *The Works: The Industrial Architecture of the United States*, 144-147.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 34 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

common in the northeastern United States and England but rarely utilized in North Carolina, consist of a sloped south face and an almost-vertical north face with bands of tall windows that allow more light to penetrate interior spaces. Winston-Salem's earliest extant industrial building with a sawtooth roof is the one-story, brick, 1911 section of the former Shamrock Hosiery Mills complex.⁸⁵

Many industrial buildings employed a combination of steel interior framing and load-bearing brick exterior walls before moving to engineered masonry (brick, concrete, or tile) curtain walls that provided structural bracing but did not carry any weight. Building materials and labor were in short supply during World War II, but when construction resumed after the war's end, steel-framed industrial edifices with masonry (brick, tile, or concrete) curtain walls predominated.⁸⁶ The transition from heavy timber frame to steel structural systems in North Carolina was slow, however, and due to wartime materials shortages heavy timber beams and posts continued to be used through the 1940s. The National Carbon Company's additions to the former Chatham Manufacturing Company complex in 1944 manifest this practice, as they used a combination of heavy timber and steel structural systems in the manufacturing buildings and warehouses they erected on the site.

Although some American industrial design began to reflect European architectural trends by the 1920s, the vast majority of manufacturing complexes continued to be planned with function rather than aesthetics in mind. Art historian Henry-Russell Hitchcock Jr. and architect Philip Johnson included only one American industrial edifice in their contemporary architecture exhibit in 1932 at the Museum of Modern Art in New York—the Starrett-Lehigh Building, a nineteen-story steel and reinforced concrete-framed structure that manifests the influence of European modernism in its curved corners and alternating bands of ribbon windows and brick veneer. The building, designed by New York architects Cory & Cory and completed in 1932, is an excellent example of what became known as the International Style given its European genesis and subsequent diffusion throughout the world. Hitchcock and Johnson profiled the movement's leading architects Walter Gropius and Ludwig Mies van der Rohe of Germany, Le Corbusier of France, and J. J. P. Oud of Holland, and explored the characteristics of their work: a focus on planar surfaces and cubic volumes rather than mass, regularity rather than symmetry (in structure and fenestration), and architectural detail rather than applied ornament.⁸⁷

Walter Gropius and Mies van der Rohe were among the European architects and designers who emigrated to the United States beginning in the late 1930s and espoused Modernist principles to a new audience. Gropius, the highly influential founder of the German design school known as the Bauhaus, began teaching at Harvard's Graduate School of Design and used his personal residence in Lincoln,

⁸⁵ Catherine Bishir and Michael Southern, *A Guide to the Historic Architecture of Piedmont North Carolina* (Chapel Hill: University of North Carolina Press, 2003), 384.

⁸⁶ Bradley, *The Works: The Industrial Architecture of the United States*, 146-147.

⁸⁷ Bradley, *The Works: The Industrial Architecture of the United States*, 250; Henry-Russell Hitchcock Jr. and Philip Johnson, *The International Style: Architecture since 1922* (New York, W. W. Norton & Company, 1932), 20.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 35

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Massachusetts, erected in 1937, to promote the central tenets of Bauhaus philosophy—maximum efficiency and simplicity of design.⁸⁸ American architects and engineers, who had long employed the same principles in their factory and office building commissions, began incorporating International Style elements into new construction an attempt to present a modern, up-to-date image.

American architect Frank Lloyd Wright was a proponent of the use of horizontal massing, geometric angles, deep overhanging eaves, and bands of windows, as well as the combination of contemporary materials including concrete and steel with traditional materials such as wood, stone, and brick. Wright's designs often manifested Japanese architectural features such as spare detailing, open plans, and expressed structural systems and espoused a functionalist approach, replacing traditional load-bearing walls with curtain walls that served as decorative screens rather than structural supports. Wright's most notable incorporation of these premises into a commercial setting was at the S. C. Johnson and Son, Inc., Administration Building (1936-1939) in Racine, Wisconsin, a sprawling concrete, steel, brick, and glass International Style complex.⁸⁹

Most of Wright's commissions were residential, but the work of his contemporary, Albert Kahn, one of only a few American architects who specialized in early-twentieth-century industrial building design, reflected the same focus on function. Kahn's Detroit office designed hundreds of factories for American industrialists including automobile manufacturers Packard, Chrysler, Ford, and General Motors, as well as for international clients. At the Packard Motor Car Company Forge Shop (1910) in Detroit, Kahn used a steel structural frame to support a traveling crane mounted to the roof trusses and glass curtain walls to allow for maximum light and ventilation. He minimized the exterior walls' bay articulation by using narrow steel columns of about the same size as steel window sashes. Kahn's firm continued to utilize bands of steel windows in conjunction with masonry or concrete screens to conceal steel structural framing in edifices such as the Industrial Works (ca. 1915) in Bay City, Michigan. The firm's design for the Dodge Half-Ton Truck Plant in Detroit, completed in 1937, was a much more sophisticated building with tall glazed curtain walls reminiscent of Walter Gropius's Bauhaus School (1926) in Dessau, Germany.⁹⁰

Although industrial buildings such as National Carbon Company's Paint Manufacturing and Paint Storage Building 21 and Western Electric Building 23 were designed to be functional and fire resistant rather than aesthetic masterpieces, they reflect many of the ideas promoted by Frank Lloyd Wright,

⁸⁸ "Gropius House," <http://www.historicnewengland.org/visit/homes/gropius.htm>.

⁸⁹ Peter Gossel and Gabriele Leuthauser, *Architecture in the Twentieth Century* (Koln, Slovenia: Taschen, 2001), 67-68; Hitchcock and Johnson, *The International Style*, 25-26; Mark Gelernter, *A History of American Architecture: Buildings in Their Cultural and Technological Context* (Hanover, New Hampshire: University Press of New England, 2001), 218-220; Henry-Russell Hitchcock Jr., *In the Nature of Materials: The Buildings of Frank Lloyd Wright, 1887-1941* (New York: Da Capo Press, Inc., 1942), 52, 92-93, Figures 99 and 328-338.

⁹⁰ "Art: Industrial Architect," *Time*, August 8, 1938; Bradley, *The Works: The Industrial Architecture of the United States*, 248, 248-258.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 36

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Albert Kahn, Walter Gropius, and other Bauhaus architects. Industrial architecture consistently utilizes new building materials, technology, and forms in an attempt to create edifices that epitomize efficiency, modernity, and economic progress, and these two buildings manifest that goal.

The two-story, flat-roofed Building 21, erected in 1945, serves as a good example of an edifice constructed to serve a specific manufacturing purpose using new and cost-effective materials. The building has a formed concrete structure (columns, joists, and floor system) with terra cotta block filling the spaces between the concrete columns on the first story's exterior walls. On the second story, concrete columns support the steel beams below the frame roof system. Corrugated cement siding is attached to frame studs on the exterior walls, which have no interior sheathing. Large metal casement windows illuminate the interior, which has an open plan.

The much larger two-story-on-basement Western Electric Building 23, constructed in 1951, is four bays wide and eleven bays long. The edifice was also designed primarily with its function—in this case, as office and laboratory space—in mind. The building's steel structural post and beam frame supports curtain walls consisting of red brick screens below bands of steel casement windows with continuous concrete sills. As most of the interior was not air-conditioned the large windows were imperative to provide light and ventilation. On the second floor, exposed steel trusses carry the load of low gable roof, which allows for a floor plan devoid of support posts.

Early-Twentieth-Century Winston-Salem Textile Mills

The 1907 Chatham Manufacturing Company factory is one of Winston-Salem's oldest extant textile mills. Arista Cotton Mill (1836, 1880; NR 1977) is the city's only surviving nineteenth-century textile manufacturing complex. Wachovia Knitting Mills, which became Indera Mills, erected a new factory in 1904 (NR 1999), and James G. Hanes commissioned the construction of a sawtooth-roofed building, which was the first textile factory built for the Hanes family, at Shamrock Mills (NR 1978) in 1911.

Arista Cotton Mill, located at the southwest corner of Brookstown Avenue and Factory Row (originally South Trade Street), consists of two principal buildings at the complex's east and west ends and a series of auxiliary buildings. The west building—a three-story, heavy timber frame edifice with load-bearing brick exterior walls executed in five-to-one common bond and segmental-arched window and door openings—is the original home of the Salem Manufacturing Company, constructed in 1836 by members of the Moravian congregation of Salem, who operated the mill until 1854. Large, double-hung, wood sash windows and a monitor roof illuminate the interior.⁹¹

⁹¹ Gwynne S. Taylor and Brent D. Glass, "Salem Manufacturing Company and Arista Cotton Mill (Fries Mill Complex)," National Register of Historic Places nomination, 1977; Michael O. Hartley and Martha B. Hartley, "Arista Cotton Mill Complex," *Town of Salem Survey*, 1999.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 37

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Francis Fries initially worked at the Salem Cotton Mill, but erected a woolen mill in 1840 and partnered with Henry in 1846 to establish F. and H. Fries Company, the entity that expanded the Salem Manufacturing Company complex by erecting the east building, Arista Mill, in 1880. The three-story building, which cost about \$125,000 for the structure and equipment, features load-bearing brick exterior walls with large, segmental-arched window and door openings and bracketed eaves. As in the 1836 Salem Manufacturing Company mill and the 1907 Chatham Manufacturing Company factory, chamfered heavy timber posts and beams, plank floors, metal-clad doors, stair towers, and a separate boiler and engine room contributed to Arista Mill's fire-resistant construction.⁹²

The textile manufacturing complex that became Indera Mills was another significant component of the industrial area that developed in the late nineteenth century between Winston and Salem. The complex, which stands at the southwestern corner of Wachovia and South Marshall Streets only a few blocks west of Arista Mill, encompasses four industrial buildings: a large, two-story, heavy timber frame and brick main mill with a low-pitched gable roof (circa 1904 with a 1916 addition) at the site's northeast corner; a small, one-story, brick boiler room (circa 1904) west of the main mill; and two long, flat-roofed, heavy timber frame and brick buildings (erected between 1907 and 1912) at the site's southwest corner. In 1916, the Winston-Salem architecture firm Northrup and O'Brien designed the two-story heavy timber frame addition on the main mill's south end, replicating the original building's five-to-one-common bond brick exterior walls, segmental-arched window openings with large multi-light sash and transoms, a low roof pitch, and exposed rafter ends.⁹³

Brothers Pleasant Henderson Hanes and John Wesley Hanes were Winston's leading tobacco manufacturers in the late nineteenth century, but in 1900 they sold their business to Richard J. Reynolds and used the proceeds to invest in the textile industry. John W. Hanes organized Shamrock Hosiery Mills (which later became Hanes Hosiery) on Marshall Street in 1901, and P. H. Hanes established a knitting company on Stratford Road, which initially produced cotton-ribbed men's underwear, in 1902. In 1911, James G. Hanes (John Wesley Hanes's son) commissioned the construction of a one-story, brick, sawtooth-roofed building at the Shamrock Hosiery Mills complex. The distinctive roof consists of a sloped south face and an almost-vertical north face that contains bands of six-foot-tall windows that illuminate the interior. Arched eight-light windows pierce the gable ends and two large arched windows with paired multi-light sash and transoms provide additional light to each of the seven sections on the east elevation. Identical windows continue across the south elevation.⁹⁴

⁹² Ibid.

⁹³ Sherry Joines Wyatt, "Indera Mills/Maline Mills," National Register of Historic Places nomination, 1998; Michael O. Hartley and Martha B. Hartley, "Indera Mills," *Town of Salem Survey*, 1999.

⁹⁴ Bishir and Southern, *A Guide to the Historic Architecture of Piedmont North Carolina*, 367, 384; James Howell Smith, *Industry and Commerce*, 9, 13-15. Adelaide L. Fries, et. al., *Forsyth: A County on the March* (Chapel Hill: University of North Carolina Press, 1949), 175-176.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 38

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Industrial Architecture in Winston-Salem from the 1920s through the 1950s

Winston-Salem's status as North Carolina's largest and wealthiest city in the 1920s was manifested in the construction of numerous industrial complexes. However, the three buildings in the P. H. Hanes Knitting Company (NR 2005), which tripled in size between 1921 and 1940, are among only a few extant industrial edifices constructed in downtown Winston-Salem during that period. The six-story, flat-roofed building erected at 675 N. Main Street in 1920-1921 is notable due to its reinforced concrete structure and the Beaux Arts architectural elements that embellish the exterior. The curtain walls consist of bands of large metal-frame windows and brick sheathing to allow for maximum light and ventilation. The five-story, flat-roofed mill building to the east at 101 East Sixth Street, completed in 1928, has a more austere exterior, with brick pilasters framing metal hopper-style windows. Brick and tile curtain walls enclose the concrete and steel structure. The six-story, flat-roofed warehouse and shipping building, erected in 1940, is purely functional in design, with a steel frame supporting the brick curtain walls. Large, sixteen-pane, metal hopper-style windows in tripartite groups illuminate the interior.⁹⁵

Corporate expansion and building construction slowed during the Great Depression, and the materials used to erect edifices such as those in the P. H. Hanes Knitting Company complex were difficult to obtain during World War II due to wartime materials shortages. Therefore, National Carbon Company used a combination of heavy timber and steel framing for their 1944 and 1945 additions to the former Chatham Manufacturing Company plant. New Forsyth County industrial building stock was scarce until the late 1940s, when building permit issuance escalated at a rate comparable to that of the 1920s. Winston-Salem served as the corporate headquarters of established companies including R. J. Reynolds Tobacco, Wachovia, and Hanes Hosiery, as well as newcomers such as Western Electric; McLean Trucking, which moved to Winston-Salem in 1943; and Piedmont Airlines, founded in 1948.⁹⁶ Altogether, they employed thousands of people and erected many new commercial and industrial edifices, most of which were sprawling complexes located outside the city's center.

Development slowed slightly when building materials such as steel were again diverted to military support during the Korean War (1950-1953), but local manufacturers benefited from increased product demand and expanded operations, resulting in the creation of approximately seven thousand industrial jobs in Winston-Salem between 1950 and 1955.⁹⁷ Western Electric's Building 23, erected in 1951, differs in appearance and structural system from most other industrial edifices constructed in the city during the war. The building has a steel frame, likely due to the fact that the United States government's ownership of the complex and the defense-related production of the companies who

⁹⁵ Sherry Joines Wyatt, "P. H. Hanes Knitting Company," National Register of Historic Places nomination, 2005.

⁹⁶ Frank V. Tursi, *Winston-Salem: A History*, 244-245, 264; Bishir and Southern, *A Guide to the Historic Architecture of Piedmont North Carolina*, 370; Larry Edward Tise, *Building and Architecture*, 46; Bill East, "6,000,000 in New Construction is Scheduled in Forsyth for 1955," *Winston-Salem Sentinel*, January 3, 1955, page 1B and 4B

⁹⁷ Ibid.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 39

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

leased it allowed for the complex's expansion even though construction materials and labor were in short supply. Building 23's design, with curtain walls of alternating bands of large steel-framed windows and brick veneer, is also notable, as most manufacturing buildings erected in Winston-Salem during the 1950s were windowless air-conditioned plants.

Hanes Dye and Finishing Company, founded by Ralph P. Hanes in 1926, stands on the east side of Chatham Road directly opposite Chatham Manufacturing Company – Western Electric Company and serves as a good example of windowless industrial construction. Additions to the Hanes plant from 1953 through 1970 resulted in an expansive facility that currently contains approximately 755,000 square feet in twenty-six interconnected buildings on a 13.56-acre parcel.⁹⁸ Most of the edifices have concrete or steel structural systems and brick or concrete block exterior walls with no or only a few small windows, reflecting the reduced importance of natural light and ventilation after the transition to air-conditioned manufacturing plants.

Hanes Mill Company erected a similar one-million-dollar, one-story, steel-framed plant with brick exterior walls at their Stratford Road plant in 1958. The nearly-windowless edifice reflected the latest advances in climate-controlled mill engineering.⁹⁹

R. J. Reynolds Tobacco Company introduced its first filtered cigarettes—Winstons and Salems—in 1954 and 1956 and began constructing their state-of-the-art Whitaker Park plant in northwest Winston-Salem in 1958. The predominately windowless manufacturing facility, completed in 1961, has a steel frame and a precast concrete panel exterior. The original building and a large 1986 addition encompass approximately 1,300,000 square feet of manufacturing space on 55.63 acres off Reynolds Boulevard.¹⁰⁰

Western Electric selected a southeastern Winston-Salem site for their new plant and office building, which became operational in late 1954 and remains the city's most intact mid-century Modernist industrial complex. The Lexington Road facility encompasses almost seven hundred thousand square feet on a sixty-acre parcel. The long, low, blonde brick building's main block features a projecting central entrance bay with three double-leaf plate-glass doors below three rows of square green marbled panels and a band of tall, rectangular, clear glass panels, all slightly recessed within a granite surround. Horizontal bands of square plate-glass windows set in aluminum surrounds with cast-stone sills wrap around the building at the first- and second-story levels.

⁹⁸ Fries, et. al., *Forsyth: A County on the March*, 233; Forsyth County online property tax card, "Hanes Companies, Inc., Northwest Boulevard," accessed via Forsyth County, NC Geo-Data Explorer.

⁹⁹ Sherry Joines Wyatt, "P. H. Hanes Knitting Company," National Register of Historic Places nomination, 2005.

¹⁰⁰ Fries, et. al., *Forsyth: A County on the March*, 344.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 40

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 41

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 42

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Forsyth County, NC

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 43

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 44

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 45 Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 46

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 10 Page 47

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Section 10. Geographical Data

Verbal Boundary Description

The boundaries of the Chatham Manufacturing Company - Western Electric Company are indicated by the bold line on the enclosed map. Scale approximately 1" = 200'

Boundary Justification

The Chatham Manufacturing Company - Western Electric Company encompasses approximately six acres historically associated with the property. The area immediately outside the boundary to the east, west, and south is characterized by modern development.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 11 Page 48

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Section 11. Additional Documentation

Photo Catalog

Photographs by Heather Fearnbach, 3334 Nottingham Road, Winston-Salem, NC, in August and September 2010. Digital images located at the North Carolina SHPO.

1. Building 4 (Main Mill, 1907), southwest oblique
2. Building 4, third floor, looking west
3. Building 6 (1944 addition to main mill), west elevation; Building 4, north elevation; Building 8 (dye house, 1907) and passages (1944), northwest oblique
4. Building 14 (1917, late 1930s) and Building 15 (1944) (warehouses), south elevation
5. Building 12 (1944 warehouse), north elevation
6. Boiler House and Fuel Storage Tank (1975), west elevation, noncontributing building and structure; Building 21 (National Carbon Company Paint Manufacturing and Paint Storage Building, 1945), west elevation; Building 12, north elevation
7. Building 23 (Western Electric, 1951), southeast oblique
8. Building 23, third floor, looking east
9. Building 1 (Chatham Manufacturing Company Office, 1937), north elevation
10. Coal Trestle (1907), looking southwest

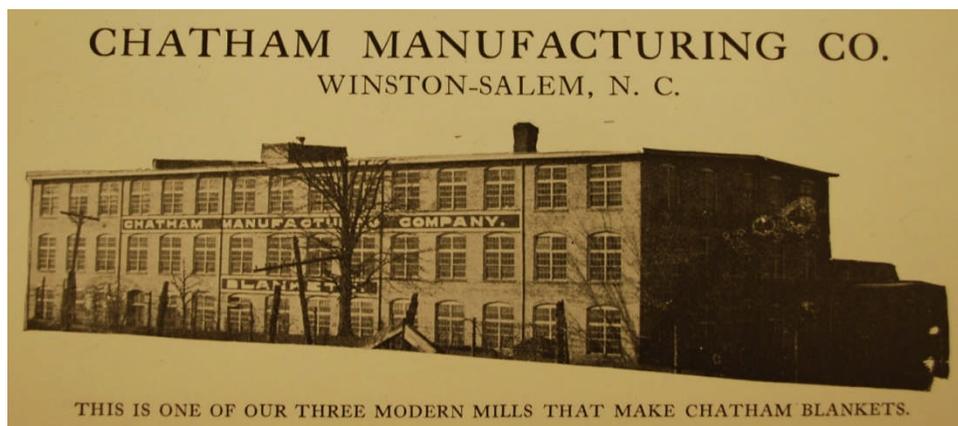
United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 11 Page 49

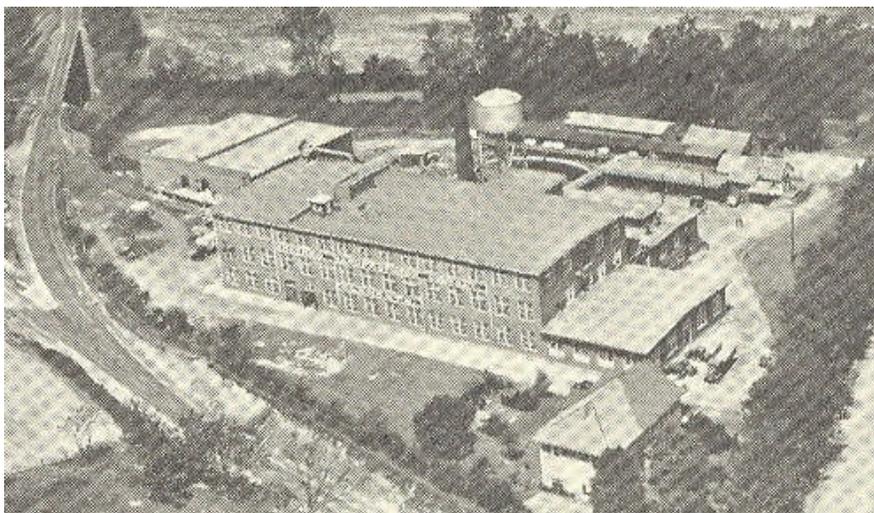
Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Historic Photographs



1907 Mill

Image from Chatham Manufacturing Company promotional brochure, "From Wool to Blankets: Season 1921," Elkin and Winston-Salem, N. C., in the Thurmond Chatham Papers, 1776-1956, at the North Carolina State Archives in Raleigh.



Chatham Manufacturing Company, circa 1930

Image from Major A. R. Lawrence, compiler, *Winston-Salem, North Carolina: Booklet No. IV*. Winston-Salem: Industrial Commission of Winston-Salem, Inc., 1930.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

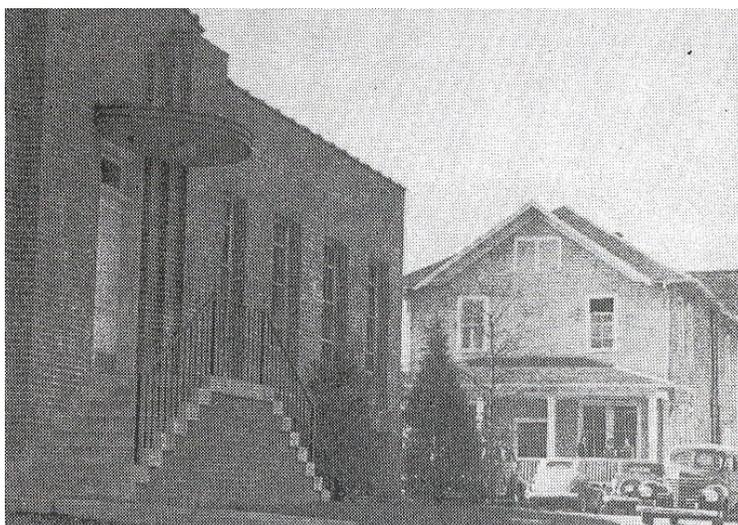
Section number 11 Page 50

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC



Chatham Manufacturing Company, circa 1935

Image from *Winston-Salem: Half-Century of Progress, 1885-1935*, published by the Winston-Salem Chamber of Commerce, Wilson Library, UNC-Chapel Hill.



**Chatham Manufacturing Company office, constructed in 1937 (foreground),
and recreation building, erected in 1912, undated photo**

Image from *A Pictorial Review: Chatham Manufacturing Company, Elkin, North Carolina*, circa 1983, p. 5.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 11 Page 51

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC



Chatham Manufacturing Company, Main Mill, Winston-Salem, May 1938
southwest oblique, looking north; Frank Jones, *Winston-Salem Journal* photographer
Image courtesy of the Forsyth County Public Library and may not be reproduced without permission



Western Electric's Chatham Road Plant (center) and Hanes Dye and Finishing Company (right), Winston-Salem, 1954, Frank Jones, *Winston-Salem Journal* photographer, image number uzz-mis-04331
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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 11 Page 52

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC



Western Electric Company, Chatham Road Plant, Winston-Salem, April 1968

northwest oblique, looking south, image number BR00044-4 (above)
and northeast oblique, looking west; image number BR00044-5 (below)

Billy Ray, photographer

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 11 Page 53

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC



Western Electric Company, Chatham Road Plant, Winston-Salem, April 1968

west elevation, 1944 addition, looking east, image number BR00044-3 (above)
and 1937 company office (foreground) and recreation building at left and main mill's south elevation, looking
west, image number BR00044-2 (below), Billy Ray, photographer
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United States Department of the Interior
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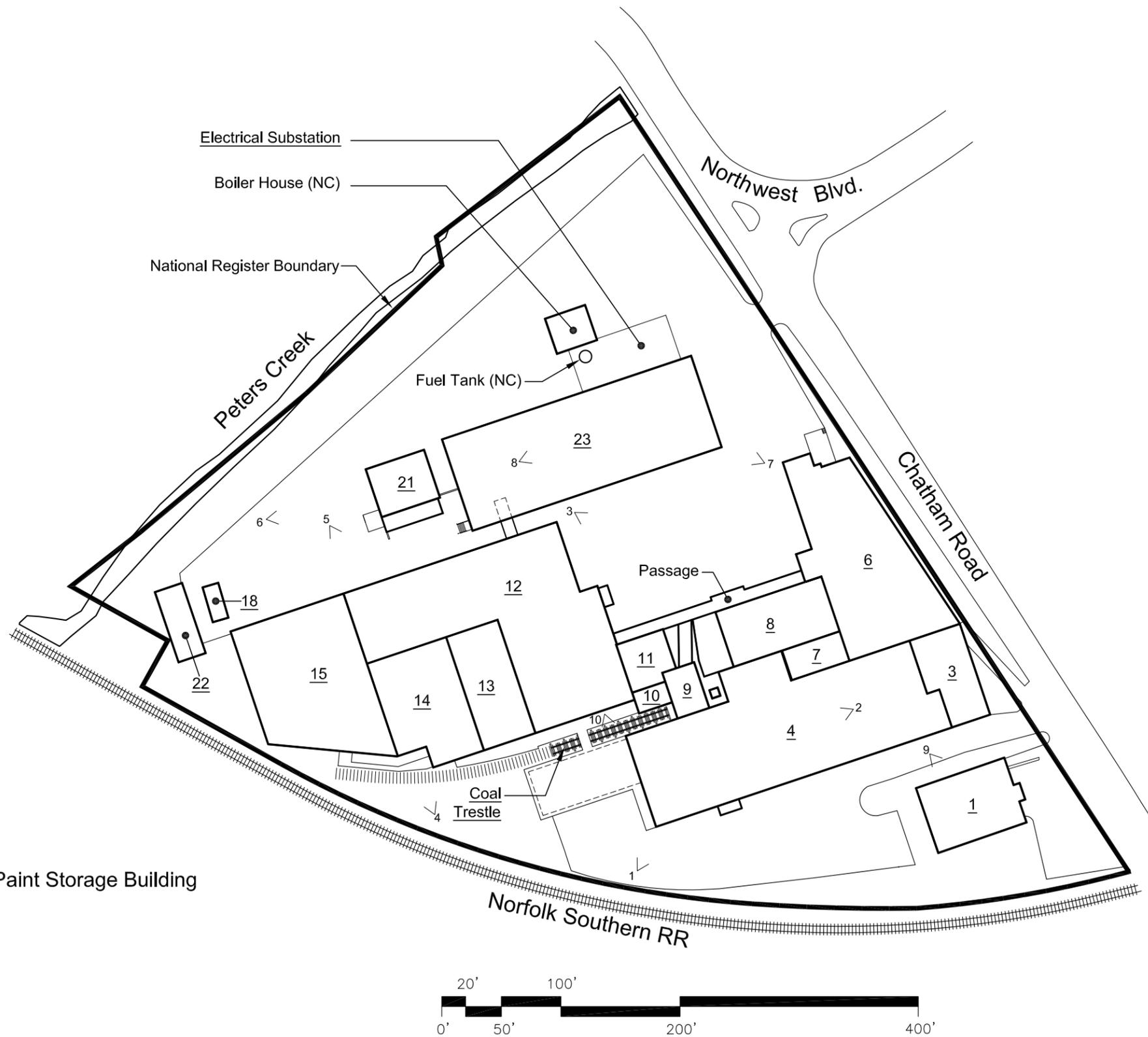
National Register of Historic Places Continuation Sheet

Section number 11 Page 54

Chatham Manufacturing Company – Western Electric Company
Forsyth County, NC

Property Owner (continued)

Chatham Manufacturing Company Office
Francis L. and Julia Byers Fry
750 Chatham Road
Winston-Salem, NC 27101



<u>Key</u>	<u>Description</u>
1<	Photo View
(NC)	Noncontributing Resource
<u>Bldg No.</u>	<u>Use or Function - Contributing Resources</u>
<u>1</u>	Chatham Manufacturing Company Office
<u>3 - 11</u>	Main Mill and Additions
<u>12 - 15</u>	Warehouse and Additions
<u>18</u>	Fire Pump House
<u>21</u>	National Carbon Company Paint Manufacturing and Paint Storage Building
<u>22</u>	Workshop
<u>23</u>	Western Electric Laboratory and Offices
	Coal Trestle
	Electrical Substation