

SPICER MANUFACTURING COMPANY, SOUTH PLAINFIELD
WORKS, BUILDING 17
(Trim Shed)
333 Hamilton Avenue
South Plainfield
Middlesex County
New Jersey

HAER NJ-144-K
HAER NJ-144-K

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

SPICER MANUFACTURING COMPANY, SOUTH PLAINFIELD WORKS, BUILDING 17

(Spicer Manufacturing Company, South Plainfield Works, Trim Shed)

HAER No. NJ-144-K

Location: 333 Hamilton Avenue
Borough of South Plainfield
Middlesex County
New Jersey

U.S. Geological Survey Plainfield Quadrangle
UTM Coordinates 18.549712.4491934

Dates of Construction: c1917-1923

Present Owners: DSC of Newark Enterprises, Inc.
70 Blanchard Street
Newark, NJ 07105

Present Use: Demolished

Significance: The South Plainfield Works, originally developed by the Spicer Manufacturing Company beginning in 1910, was a nationally-significant center for the manufacture of universal joints and propeller shafts for automobiles and aircraft. The Trim Shed was most likely used for mechanized removal of excess material from forgings made in the adjacent Drop Forge building.

Project Information: Surviving structures of the former South Plainfield Works were part of the Cornell-Dubilier Electronics Superfund Site, and were demolished in 2007-2008 as part of site remediation activities outlined in the September 2004 Record of Decision as administered by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers. Federal authority brought the project under the purview of federal acts and regulation protecting significant cultural resources from adverse project effects.* Prior to demolition, the Spicer Manufacturing Corporation structures were determined eligible for inclusion on the National Register of Historic Places by the New Jersey State Historic Preservation Office, because of the South Plainfield Works' significance in American transportation history. Documentation of the plant to standards of the Historic American Engineering Record was completed to mitigate the removal of the significant resources.

*

National Historic Preservation Act of 1966 (PL 89-655), the National Environmental Policy Act of 1969 (PL 91-190), the Archaeological and Historical Preservation Act (PL 93-291), Executive Order 11593, Procedures for the Protection of Historic and Cultural Properties (36 CFR Part 800).

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Drop forging operations at the South Plainfield Works produced roughly-shaped yokes and journals for the Spicer joints and shafts. The next phase of operation on these parts was removal of “fins” or superfluous metal in large punch presses fitted with trimming dies, to which forgings were moved with wheelbarrows (Spicer Manufacturing Corporation 1920; Oberg and Jones 1945: 1427). Although no plans or historical photographs show trimming operations at the plant, trimming prior to World War I may have been done in the Forge Shop first built near the Lehigh Valley Railroad tracks c1910. Expansion of the plant during or immediately following World War I included enlargement of the Forge Shop, and construction of a separate Trim Shed immediately northwest of the Forge Shop (Figures 1-4; cf. Spicer Manufacturing Company 1913, Dunham-Clarín Company 1917 and Spicer Manufacturing Corporation 1923).

Removal of vinyl siding in 2007 revealed the Trim Shed as a 26.8-foot-wide, steel-framed, wood-sided, end-gable, wood-roofed structure with 14.4-foot-high walls originally built only on the long sides, and a roof peak 20 feet above the adjacent paved surface. As originally built, the Trim Shed was 60 feet long on the south side and 65 feet long on the north side, with the west end enclosed by the brick wall of adjacent Building 3 (HAER NO. NJ-144-E) and the east end most likely the exterior wall of the Forge Shop. When the Forge Shop was removed after 1929, a new east wall was built with a garage door, creating the rectangular structure documented in 2007 (Figures 3-5).

Original Trim Shed components included a rough-aggregate 5-inch-thick concrete slab foundation, continuous with 2-foot-square piers for 14-foot-high steel columns at 10-foot centers. The 8-by-4-inch I-beam columns supported riveted steel trusses with 2-inch angles for all members except the 4-inch-channel upper chords. Truss members meeting columns were bolted to flanges at column tops (Figure 5).

The original finished floor appears to have been removed, and a garage door added to the east end, following the SMC period of occupation. An 8-by-4-inch I-beam chain hoist support hung between two trusses, and an unidentified, filled 8-by-6-foot depression near the southwest corner appeared to be the only possible surviving remains of original operating facilities. The depression, edged with 6-inch-wide steel plates, may have represented part of an undocumented belowground disposal system for steel chips generated by trimming operations (Figure 5).

Cornell-Dubilier Electronics Corporation, Inc. may have rebuilt most other wall and floor components. The rough-aggregate concrete floor seen in 2007 was approximately 2 inches below exterior concrete sills, suggesting removal of the original finished floor. The 5-inch-thick insulated exterior walls were framed with vertical 2-by-4 lumber at 15-to-21-inch centers, and enclosed with 1-by-8-inch exterior and 1-by-12-inch interior horizontal boards. There were two 5.25-foot-high, 3-by-6 fixed-steel-sash windows near the west end of each long wall. The fenestration did not appear to match what is visible in a 1923 bird’s-eye view, and the wall construction matched that of the east end wall which post-dated 1929. An enclosed former door opening at the southwest corner, surrounded by a post-1929 wood-framed bathroom, may represent an original opening from which trim forgings were transported by wheelbarrow to the sand-blasting room in the Heat Treating & Sand Blast Building which once stood approximately 20 feet to the southwest (Figures 3-5).

SOURCES OF INFORMATION/BIBLIOGRAPHY

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Dunham-Clarín Company

- 1917 Map of Property Situated at South Plainfield, Middlesex County, New Jersey, Property of Spicer Manufacturing Corporation, July, 11, 1917. Original in the collections of The History Factory, Chantilly, Virginia. Archive Number 11-0-0-6-3942.

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Spicer Manufacturing Company

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Spicer Manufacturing Corporation

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- 1923 South Plainfield Works of the Spicer Manufacturing Corporation, South Plainfield, New Jersey. Copy in the collections of The History Factory, Chantilly, Virginia. Archive Number 05050000102021301.
- 1926 Department and Building Location Plan, Spicer Manufacturing Corporation, South Plainfield, New Jersey. Original in the collections of The History Factory, Chantilly, Virginia. Archive Number 5-4-0-0-(432).

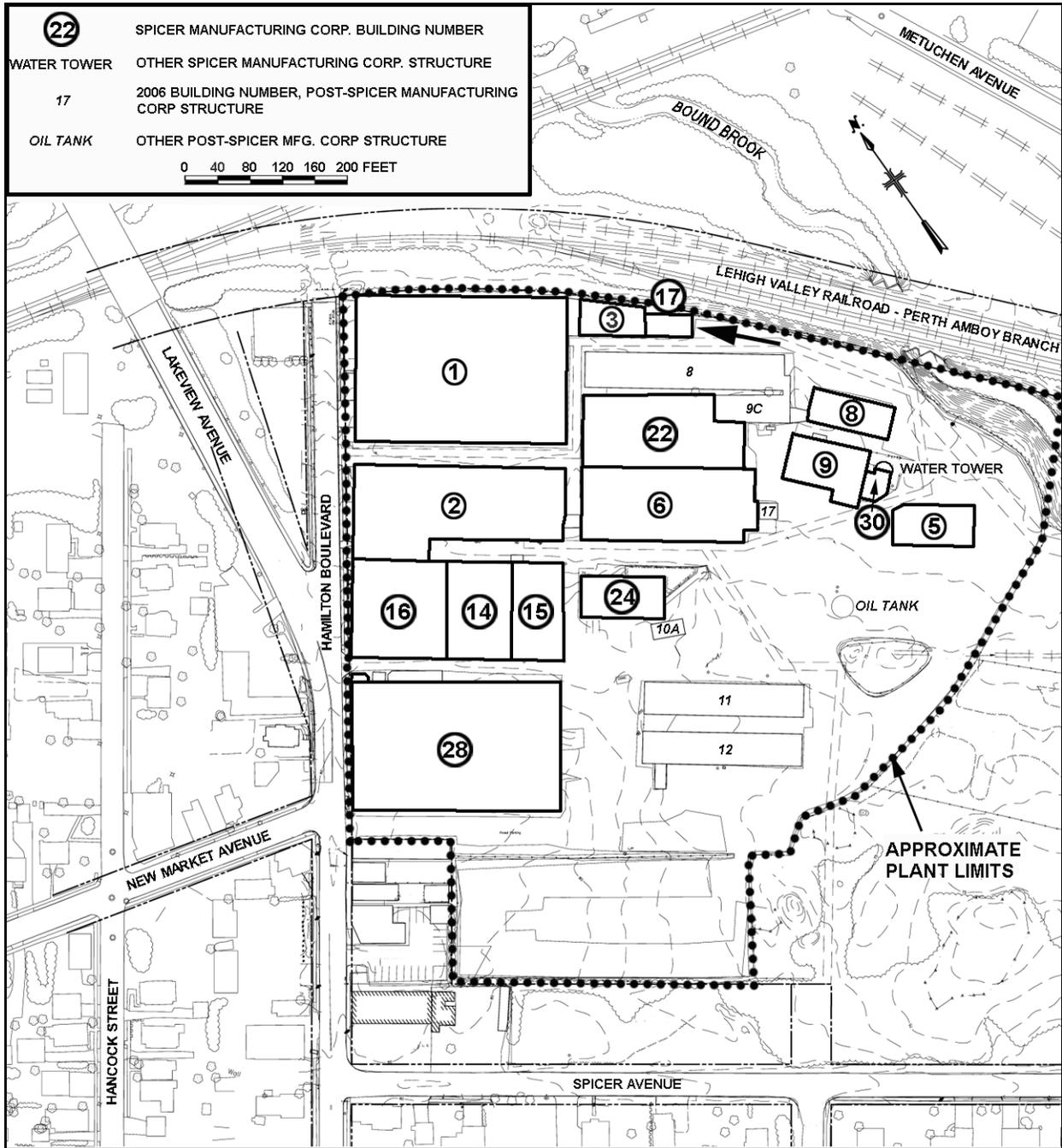


Figure 1. BUILDING 17 LOCATION AT FORMER SPICER MANUFACTURING CORP. PLANT

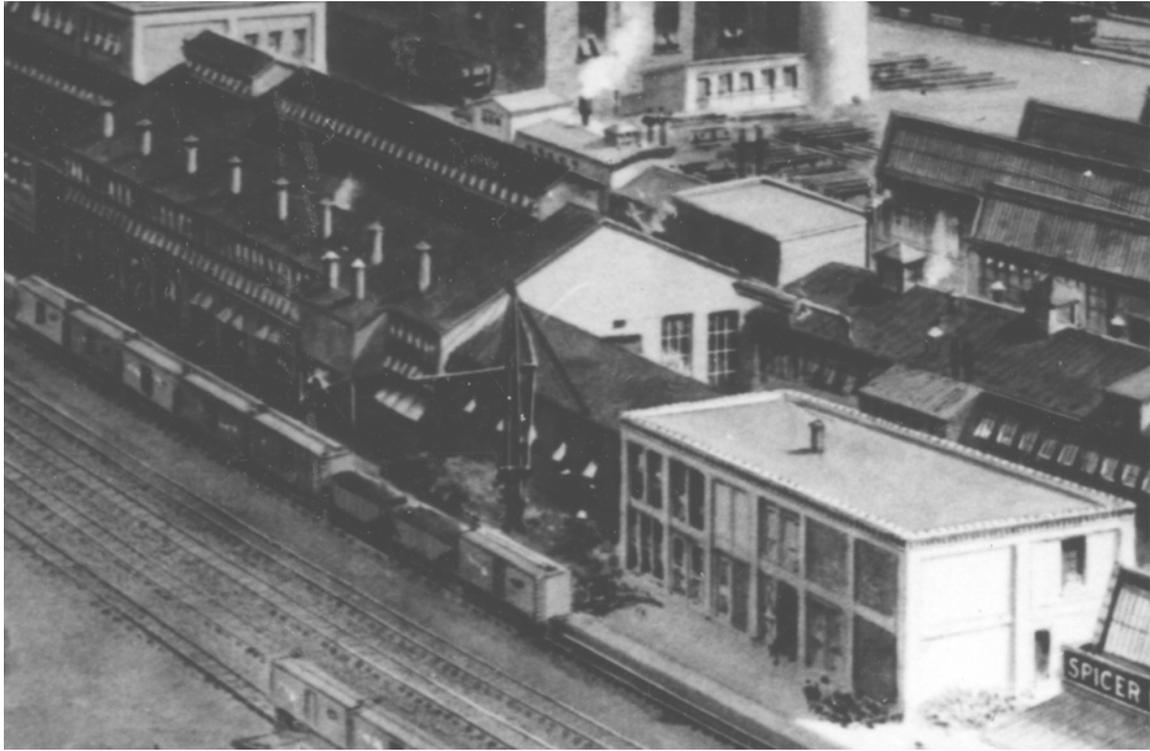


Figure 2. BUILDING 17 AND 1923 SOUTH PLAINFIELD WORKS
Source: Spicer Manufacturing Corporation 1923

Trim Shed at center, between Receiving Building at right and Forge Shop at left

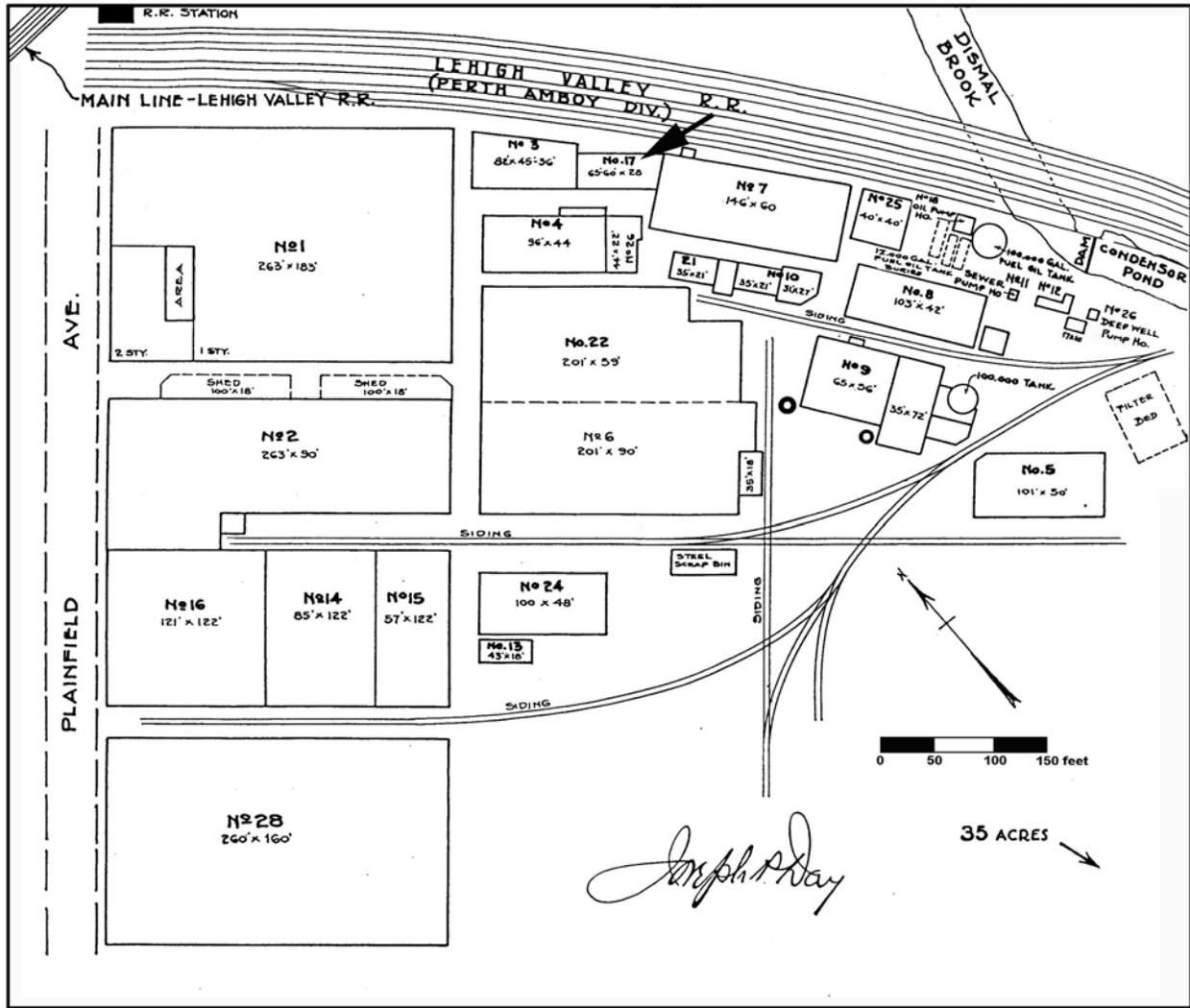


Figure 4. BUILDING 17 AND 1929 SOUTH PLAINFIELD WORKS
 Source: Day 1929

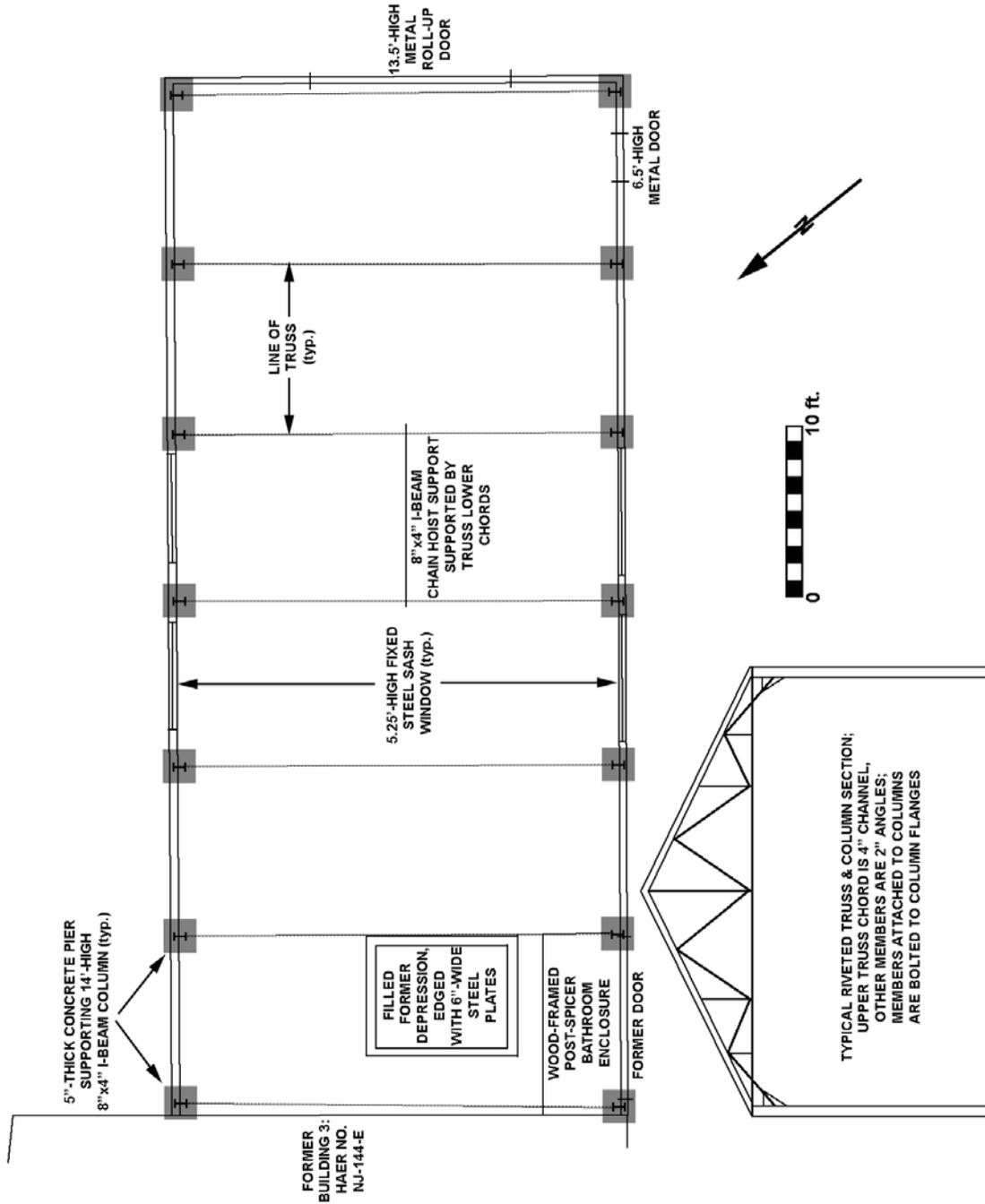


Figure 5. SKETCH PLAN AND TRUSS CROSS SECTION