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Archeological 1A  
Technical Study  
for the

# Newark City Subway Extension and Vehicle Base Facility

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ID7707

Federal Transit Administration  
New York, New York  
and  
New Jersey Transit  
Newark, New Jersey

Prepared For:  
BRW RAIL LINK TEAM  
Newark, New Jersey

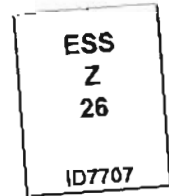
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October, 1995



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SF: 2120A.17  
WBS: NES 139



# ARCHEOLOGICAL 1A TECHNICAL STUDY

for

Newark City Subway Line Extension  
and  
Vehicle Base Facility

October 1995

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# ARCHEOLOGICAL 1A TECHNICAL STUDY

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# INTRODUCTION

Documentary research for the Vehicle Base Facility (VBF) site and study area was undertaken to determine whether archeological sites or features listed, or eligible for listing, on the National Register of Historic Places would be impacted or adversely affected by the proposed construction. The study area for the Newark City Subway (NCS) Line Extension and VBF is located in Belleville, Bloomfield, and Newark (Figure 1).

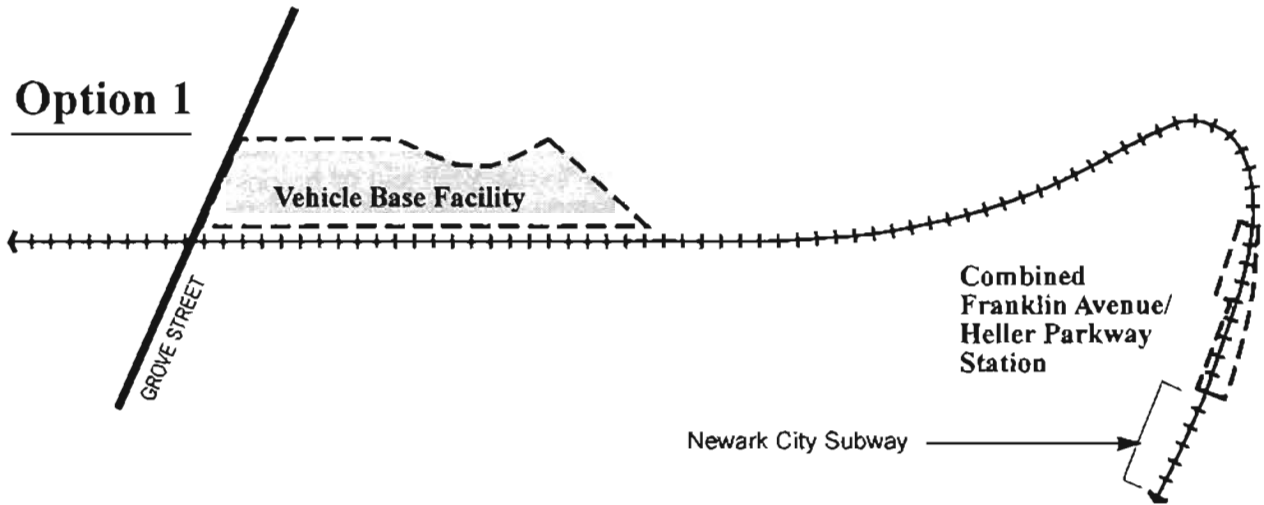
In addition to the Vehicle Base Facility, construction of one to three stations is proposed within the study area, one of them with an associated park-and-ride. Among them is the combined Heller-Franklin Station, an expansion and relocation of an existing station that will become a side-platform facility at the current termination of the Newark City Subway line north of Heller Parkway (Option 1 on Figure 2). Another option is a Grove Street Station with platform and a park-and-ride on the present Bloomfield Township Department of Public Works (DPW) site located between Grove and Berkeley Streets (Option 2 on Figure 2). Another option under consideration is a side-platform Belmont Avenue Station located on either side of Belmont Avenue just west of Franklin Street (Option 3 on Figure 2).

Archeological resources are protected under the same federal and state laws and are subject to the same guidelines and procedures as historic architectural resources. They are also specifically protected under the Archeological and Historic Preservation Act of 1974 and the Archeological Resources Protection Act of 1979. Criterion D as set forth in the National Park Service's guidelines for evaluation of a site's significance is most often applicable to archeological resources. This criterion considers sites that "have yielded, or may be likely to yield, information important in history or prehistory."

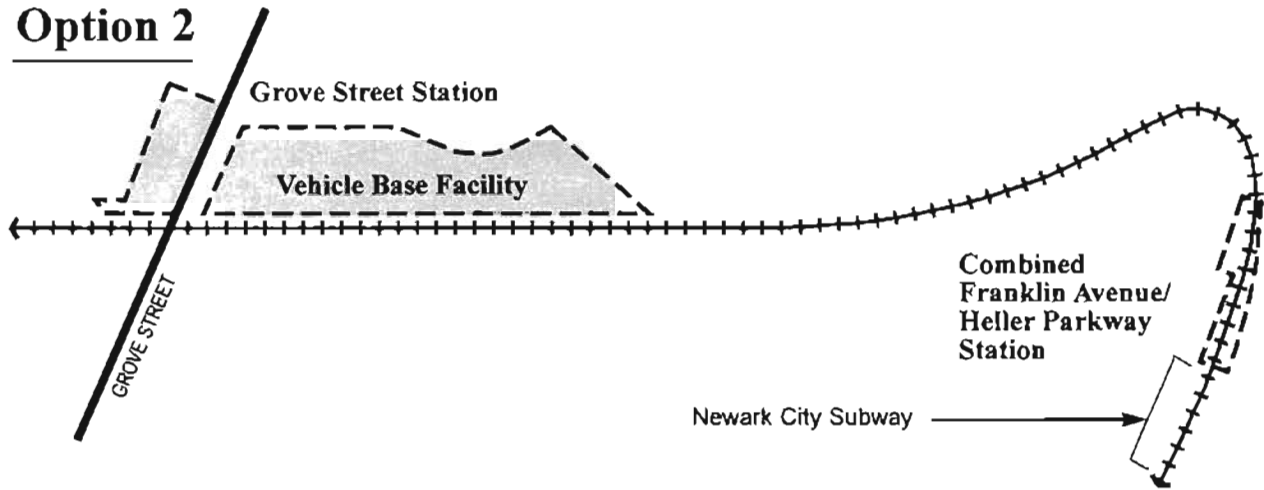
## METHOD

Collection of information entailed researching published and unpublished reports and records, including those found in federal, state, county, city, and township agencies and offices. Primary among the report repositories was the New Jersey Office of Historic Preservation. Research also considered map data found at research institutions such as the Newark Public Library, the New Jersey Room of the Jersey City Library, the New York Public Library, and the Belleville and Bloomfield Libraries. Several tours were made of the proposed VBF study area to photograph selected existing conditions.

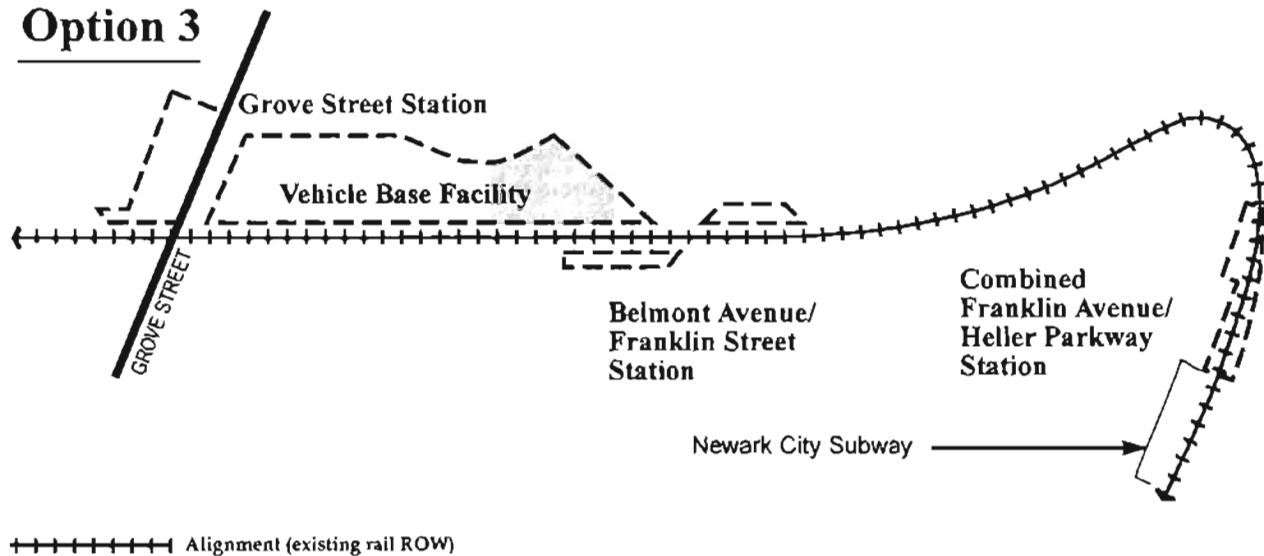
### Option 1



### Option 2



### Option 3



++++ Alignment (existing rail ROW)

Research focused on those parts of the study area that will be directly affected by the proposed construction, and on those sites that are believed to be of historical or archeological significance. Only in a few instances was an assessment made of properties within the study area that are not directly affected by the proposed construction. These are mainly former house lots in proximity to the VBF site or proposed station sites that were developed early enough to predate indoor sanitary facilities and have not been subjected to subsequent development. Backyard features--privy pits, cisterns, and wells--in use prior to the advent of municipal services often contain archeologically and historically significant artifacts and materials that are relevant to Criteria D of the National Park Service's guidelines for determining eligibility.

This information was used to assess potential impacts and to determine what legislative requirements must be met. Areas of identified or potential historical/archeological concern or interest were assigned numbers keyed to a location map and a descriptive table.

## PROJECT DESCRIPTION

At this writing, the VBF site is partially vacant land adjacent to the proposed light rail alignment (see Figures 1 and 3). Development has been limited to large, 1-story commercial buildings and associated parking lots.

Unlike the seventeenth century English settlements of Newark and Elizabeth to the south, the Second River settlement, located just north of the study area, was originally a Dutch enclave. Although known as Second River, it initially included Belleville and Nutley, a large part of Bloomfield, and other sections that were then part of Newark (Rankin 1930: 23). The neighborhood is said to have maintained its Dutch character well into the eighteenth century, although other nationalities were by then represented. Among them were several descendants of Newark's seventeenth-century New England Puritan founders (Geismar 1995:13; WPA 1939:10), many of whom settled in the study area.

As noted previously, the NCS Line Extension and VBF study area is now situated partly in Belleville, partly in Bloomfield, and partly in Newark; this was an area that was mainly agricultural until the third quarter of the nineteenth century when its development as a Newark suburb began. This development was industrial as well as residential. Today it is a mixed residential/commercial neighborhood that retains few obvious traces of its historic past. The major historical/archeological feature remaining within the study area is the Morris Canal, a buried historical resource listed on the State Register since 1973 and National Register of Historic Places since 1974. The Newark City Subway, which terminates at a station and turn around in the study area, now runs above ground along the canal right-of-way adjacent to Branch Brook Park. The park, another National Register property located partly within the study area, lies just east of this line.



Newark City Subway Extension and Vehicle Base Facility Environmental Assessment



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VBF site looking northwest from near  
Belmont Ave. and railroad ROW, 1995

Figure 3



Like the towns of Newark and Elizabeth, the Belleville-Bloomfield area was settled in part because of its proximity to water. This included the Passaic River, the lesser Second River, and its even smaller tributaries. Among the latter was Branch Brook, a stream that once served as a boundary between Newark and Belleville but was culverted in this century. The Second River and its feeder streams and brooks fostered many mill ponds. One was Silver Lake, or Sunfish Pond, located just beyond the study area to the south (e.g., see Figure 10 later in the text). This long, narrow, man-made pond was created in the eighteenth century. The sole reminder of its existence is its name given to the developed neighborhood where it was once located and to the Silver Lake Station on the Conrail Orange Branch.

# NATIVE AMERICAN CONSIDERATIONS

Human occupation has been a possibility in the study area since the retreat of the last glacier 10,000 to 13,000 years ago (Marshall 1982; Gibbs et al. 1993). Max Schrabisch, writing in 1913, identified the Passaic River valley as a likely location for Indian use and occupation, yet archeological confirmation of this assessment has been limited (Skinner and Schrabisch 1913:35).

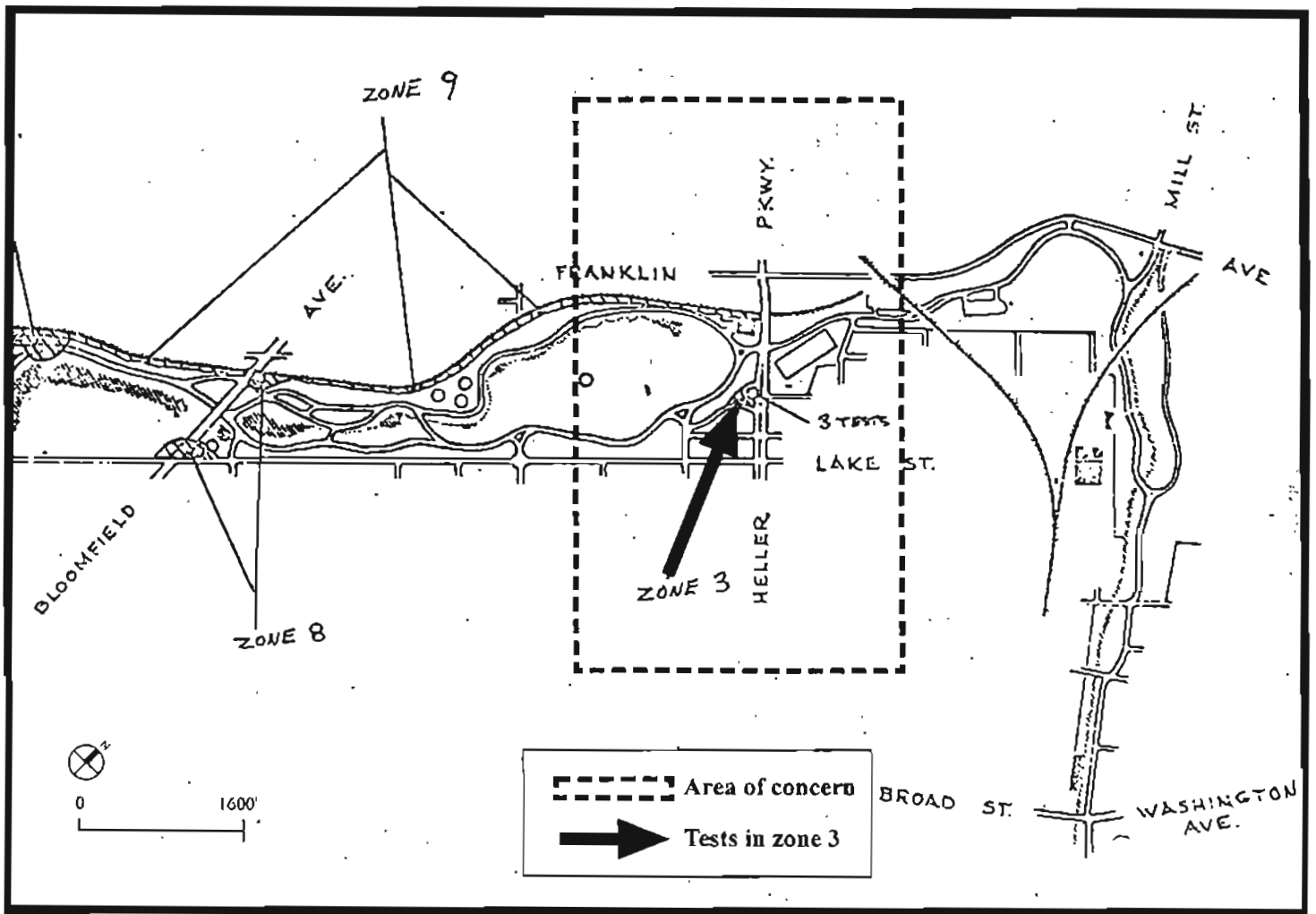
A literature search, that included researching relevant reports and contact with the Archeology/Ethnology Bureau of the New Jersey State Museum, has determined that there are no known prehistoric sites documented directly within the study area. However, since it includes a former stream or streams, it is possible that undeveloped sections might yet harbor evidence of use by Native American hunters and gatherers or foragers.

Local streets that now run on what are believed to be former Indian paths suggest the early Native American presence, and it is confirmed by Indian relics found east of the study area during the last century. Most were discovered in the vicinity of River Road (now the route of McCarter Highway). Stone "hatchets" and "arrow points" recovered north of Grafton Avenue near the river are said to be in the collections of the New Jersey Historical Society (Hine 1909:62), and other finds, including possible Indian burials, were made in this same area in the 1890s during sewer excavations (Hine 1909:9).

In his *History of the Municipalities of Hudson County*, Folsom notes that "Tradition fixes Second River as the much-valued abode of the Indians prior to its settlement by the whites" (II 1925:657), and Branch Brook Park, which borders the eastern part of the study area, has been identified as a possible location for prehistoric sites (Church & Gimigliano 1978:83, see Figure 4).

When the original 1668 Indian deed for the Second River tract was destroyed by fire, its signed duplicate indicated that Native Americans were still to be found in or near the study area in 1744 (Folsom II 1925:691). It is said that the last known local aboriginal set out for Canada in 1761 (Folsom II 1925:656).

The only relevant Native American site documented in the records of the Archeology/Ethnology Bureau at the New Jersey State Museum is identified as a possible Indian Burial Ground and ceremonial site located about a half-mile northwest of the western limit of the VBF study area. This site, perhaps dating from Native American-European contact, is now a graded, sandy knoll or island in Watsessing Park in Bloomfield. Named



Indian Knoll, it has apparently been known since 1930 (*Independent Press* cited in Site No. 28-ex-92). Research undertaken for this assessment did not reveal any additional information. The site was reported in 1961 (N.J. State Archives 1961:Old N.J. Site No. 450.28), and has recently been reevaluated as a potential resource (N.J. State Archives 1993:Site No. 28-ex-92), but its integrity has not been determined (Sandy 1994:personal communication).

Despite documentation of intensive disturbance throughout Branch Brook Park (Church & Gimigliano 1978:49, 83), zones of possible prehistoric sensitivity were identified in 1978; one (Zone 3) was located south of Heller Parkway just beyond the study area in the vicinity of the mid-eighteenth century Sidman (Sydenham) house (Church & Gimigliano 1978:83-84; Figure 4), a National Register property. This and other potential zones within the park were tested for archeological sites or features, but no evidence of prehistoric use or occupation was uncovered (Church & Gimigliano 1978:83). However, the possibility of unknown sites in the general project area have been noted (Sandy 1994:personal communication), and filled or undeveloped areas near former streams, or the many springs located throughout the Branch Brook valley, should be considered potentially sensitive.

## HISTORICAL CONSIDERATIONS

Seventeenth-century settlement along the Second River north of the study area not only predates that of nearby Newark and Elizabeth, but, as noted previously, it was also a Dutch rather than an English enclave. Settlement occurred in the immediate study area mainly if not entirely in the eighteenth rather than the seventeenth century. It was undertaken in part by members of Newark's English-born founding families, most if not all of them Puritans from Branford, Connecticut. Among them was a grandson of Jasper Crane, a noteworthy Newark settler who was an integral member of Robert Treat's Puritan band (Cunningham 1988:32; Rankin 1927:64). Others were descendants of Samuel Dodd, a young orphan who, with several siblings, had joined the Newark settlers.

Newark, originally encompassing approximately 62 sq. miles, once included modern Bloomfield and Belleville (Rankin 1927:24; Cunningham 1988:24). By about 1720, Newark industries had spread northward and, in the early part of the nineteenth century, what is now the southern part of Branch Brook Park was extensively quarried (Church & Gimigliano 1978:36).

The history of the VBF study area includes early residential and industrial development that is often the making of a city of grander proportions than Belleville or Bloomfield ever became. Like Newark and Elizabeth, and most successful early settlements, Second River was a self sufficient community. The Second River and its tributaries fostered typical rural industries--milling, fishing, and farming among them. But it was the discovery of copper on the east side of the Passaic River in Hudson County that spurred local development in and around the study area (WPA 1939:5). This discovery, reportedly made in 1715 by a slave belonging to Arent Schuyler, set off an intensive search for additional sources of copper ore throughout the region.

Beginning in 1743, agreements were made that began to separate Newark and the Second River settlement. Among the controversies that prompted this split was administration of laws governing handling of the poor (Folsom II 1925: 665; WPA 1939:37; *Newark Town Records* [NTR] 1864:136). In 1797, the village of Second River changed its name to Belleville, meaning beautiful city in French, and, in 1812, it became part of the Township of Bloomfield when it broke away from Newark. Belleville was organized as a separate township in 1839, and the western part of the VBF site remained part of Bloomfield (Folsom II 1925:653). In 1869, the eastern part of the study area temporarily separated from Newark and was known as Woodside (Figure 5), but this municipality was short lived, lasting only until 1871 when it again became part of the City of Newark (Hine 1909).



Initially the settlement's main transportation routes were the Second River north of the study area and the Passaic River to the east. While its homes and farms were located on these waterways, they faced the road to Newark (WPA 1939:3). Referred to as Old Bloomfield Road in the nineteenth century to distinguish it from what is now Bloomfield Avenue, this route is now Franklin Street west of North 6th Street, and Heller Parkway east of the North 6th Street intersection (Figure 6). The old houses of Bloomfield and Belleville were "strung" along this road (Folsom II 1925:688). Watsessing Avenue, known as "the Old Road," was also a transportation artery by this time (Sidney 1849). Several structures along these routes were located within the study area; most were homes but one on the north side of Old Bloomfield Road was a Methodist church and to the northwest, possibly just beyond the study area, was a public school built in 1758 that stood until 1852 (Shaw 1884; see Figure 7). These buildings are indicated and their owners identified on mid-nineteenth century maps (Sidney 1849, 1850; Walling 1859; see No. 1 on Table 1 and Figures 5, 7, and 8). The only survivor within the study area, a home at 167 Franklin Street, was built in 1833 (Salzano 1995: personal communication; Figure 9; also Figures 19 and 25 No. 12 later in the text). J. Everson was its owner in 1849; none is identified in 1850, and J. Simmons is the name shown in 1859 (see Figures 5 and 7).

As an Indian trail, the Old Bloomfield Road led from Newark to Stone House Plains on Third River and on to the Orange Mountains (Shaw 1884:186; WPA 1939:5). What is now Bloomfield Avenue was run as the Newark-Pompton Turnpike in 1806. The earlier road ran from North Broad Street in Newark through Bloomfield to Pompton (Lane 1939:150). It was one of several turnpikes built in northern New Jersey about this time and a major link in a growing network of nineteenth-century transportation routes (Lane 1939:153-154). A toll booth may have stood where the Morris Canal was later crossed by a small bridge, now the site of the Heller Parkway bridge (Hine 1909:94, see below).

As was the case in Elizabeth and Newark, the Revolutionary War caused upheaval to, and dissention within, the families living in the Second River area (WPA 1939:13-20). After the War, the Second River settlement, but not the immediate VBF study area, underwent the industrial expansion experienced elsewhere during the late eighteenth century. Colonial restrictions on manufacturing were lifted, and, mainly because of the nearby copper mines, the Bloomfield-Belleville area became a seat of industry and invention.

One memorable development was the local manufacture of a steam pump to accommodate copper production (one from England had been used before this). The American version was created by Nicholas Roosevelt who had established a copper works with others at "Soho," a property located northeast of the VBF study area. This accomplishment led to backing by Chancellor Robert Livingston of New York to develop a marine engine to power a boat. A trial run in 1798 of a one-cylinder, engine-driven vessel--the 60-ft. long, locally built boat named the *Polacca*--was successful (WPA 1939:21). Later, Roosevelt became involved with the creation of the steamboat that made Robert Fulton famous.



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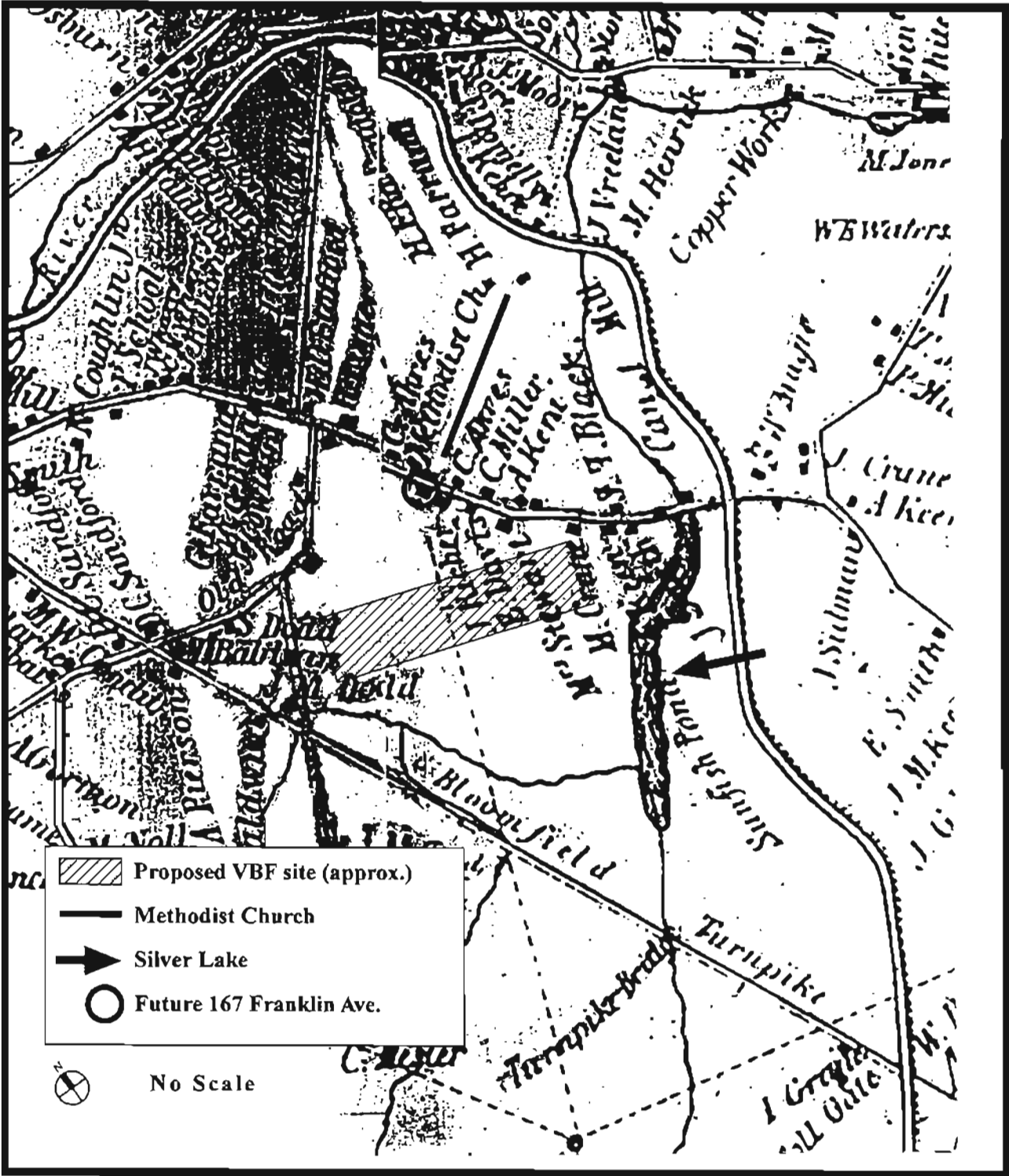


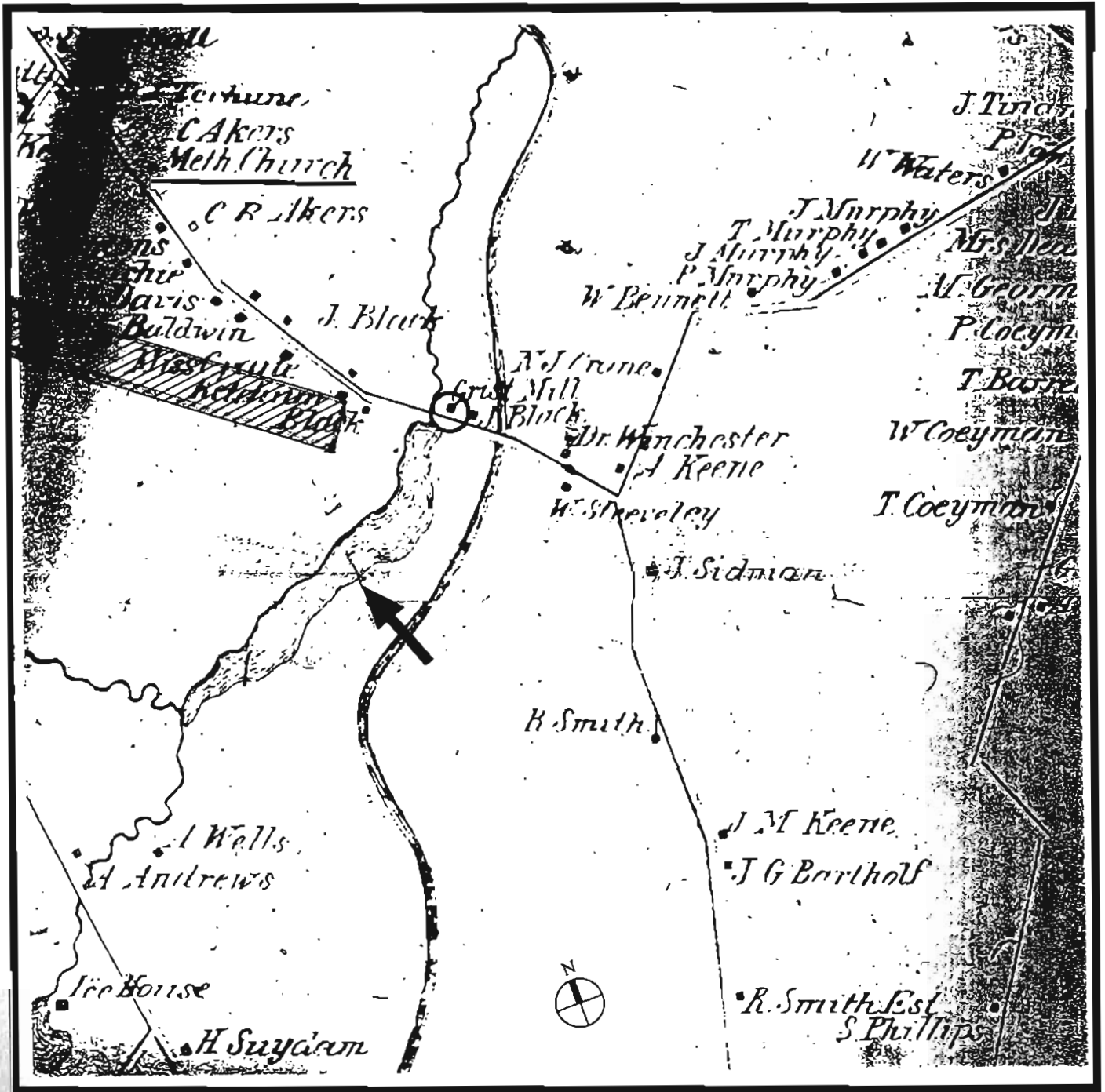
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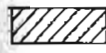



Franklin St.-Heller Parkway intersection,  
view east from Franklin Street, 1995.

Figure 6







-  Proposed VBF site (approx.)
-  Grist Mill
-  Silver Lake
-  Methodist Church (underlined)

0 1/4 1/2 miles



This altered survivor of the 19th C. homes on Old Bloomfield Rd. was built in 1833.

At the turn of the nineteenth century, an attempt was made to meet Newark's growing need for a dependable water supply through the creation of the Newark Aqueduct Co. This company was chartered in 1800 to supply water to a private association of Newark citizens (Church & Gimigliano 1978:36). At the time, many of the springs located in what is now Branch Brook Park were tapped to fill the various reservoirs built by the company within what is now the park's Southern Division located beyond the study area (Church & Gimigliano 1978:36-37; see below).

# NINETEENTH CENTURY TRANSPORTATION

In addition to the turnpikes and roads introduced in the nineteenth century, two major transportation links crossed the study area. One was the Morris Canal built between 1824 and 1832, the other the Watchung Branch of the Montclair and Greenwood Lake Railroad, a line initiated in the 1870s that was subject to many name changes over the years that reflected numerous reorganizations.

Some thought had been given to ending the Morris Canal at Belleville or running it through the Second River valley to bypass Newark (Kalata 1983:163; WPA 1939:33). Instead, it was run through the eastern part of the study area and crossed into Newark at Abington Street (WPA 1939:33). It was bridged at its intersection with the Old Bloomfield Road east of North 6th Street (e.g., Hopkins 1873; Weir 1886; Scarlett & Scarlett 1889; Map of Heller Parkway 1922; Figures 10 to 13), and crossed by a railroad bridge by 1876 (see below).

A canal basin is indicated north of Heller Parkway (e.g., see Figures 11 and 12); this may have served as a docking area for local industries, perhaps among them the Newark Ice Co. established in 1866 (Rankin 1927:65; 1929). The canal was basically abandoned in 1912 and was filled throughout most of its route in 1924. In Newark its filled bed was excavated in the 1930s to create the Newark City Subway (Figure 14). In the VBF study area, this line runs above ground and, therefore, above the filled canal.




The bridge that originally crossed east of North 6th Street is identified on canal documents as MCF141B and is described as a "through plate girder" with a solid floor (Bridges in Essex County 1919). This has been replaced by a larger bridge that now crosses the Heller Parkway Station of the Newark City Subway (Figure 15) before it terminates at the Franklin Street Station (Figures 16 and 17).

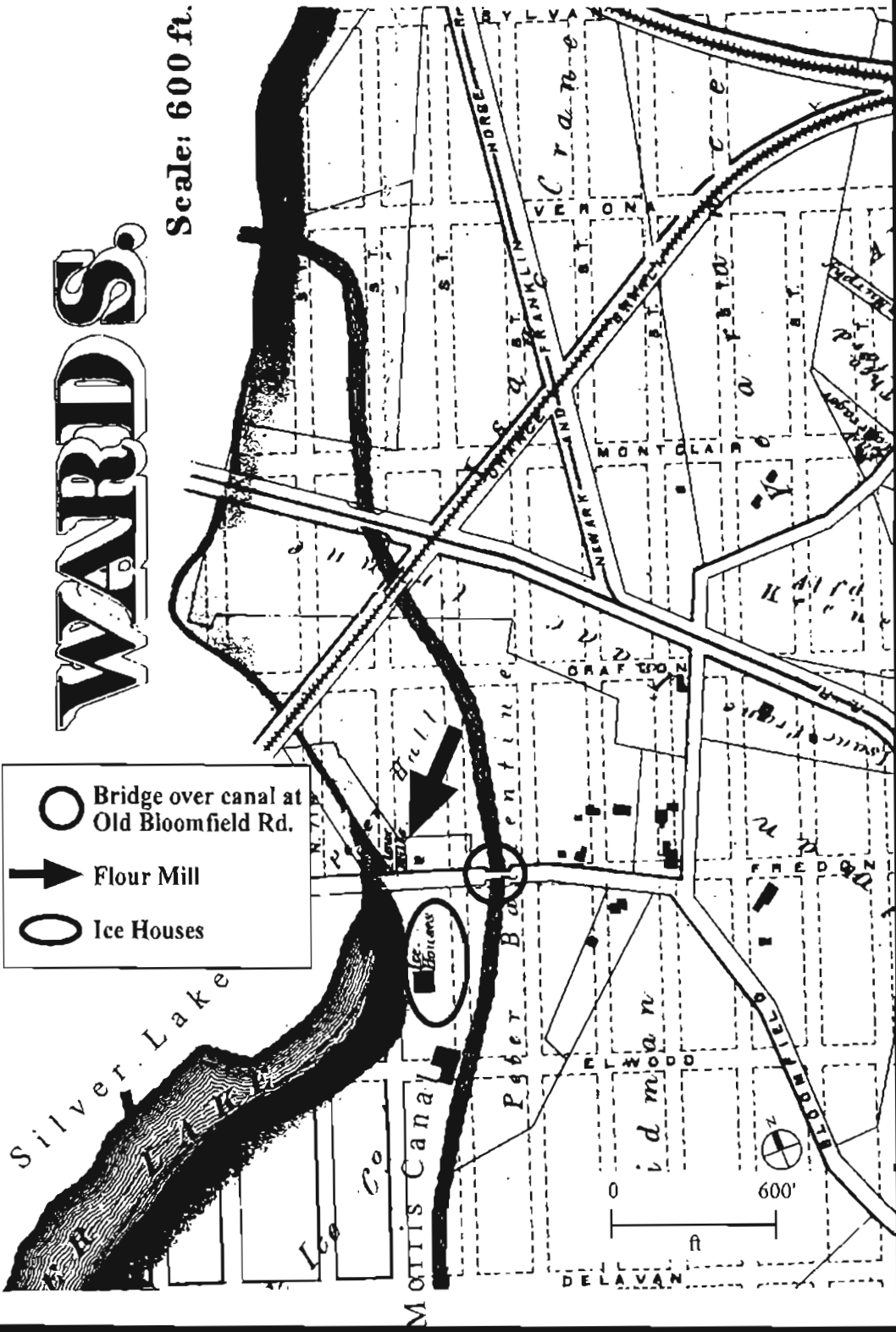
The former canal towpath persists as an earthen, grass-covered berm that forms the western boundary of Branch Brook Park (Church & Gimigliano 1978:87) and parallels the eastern side of the subway line (see Figure 17). In 1973, the filled canal (and its associated features) was placed on the National Register of Historic Places, becoming a buried historic resource.

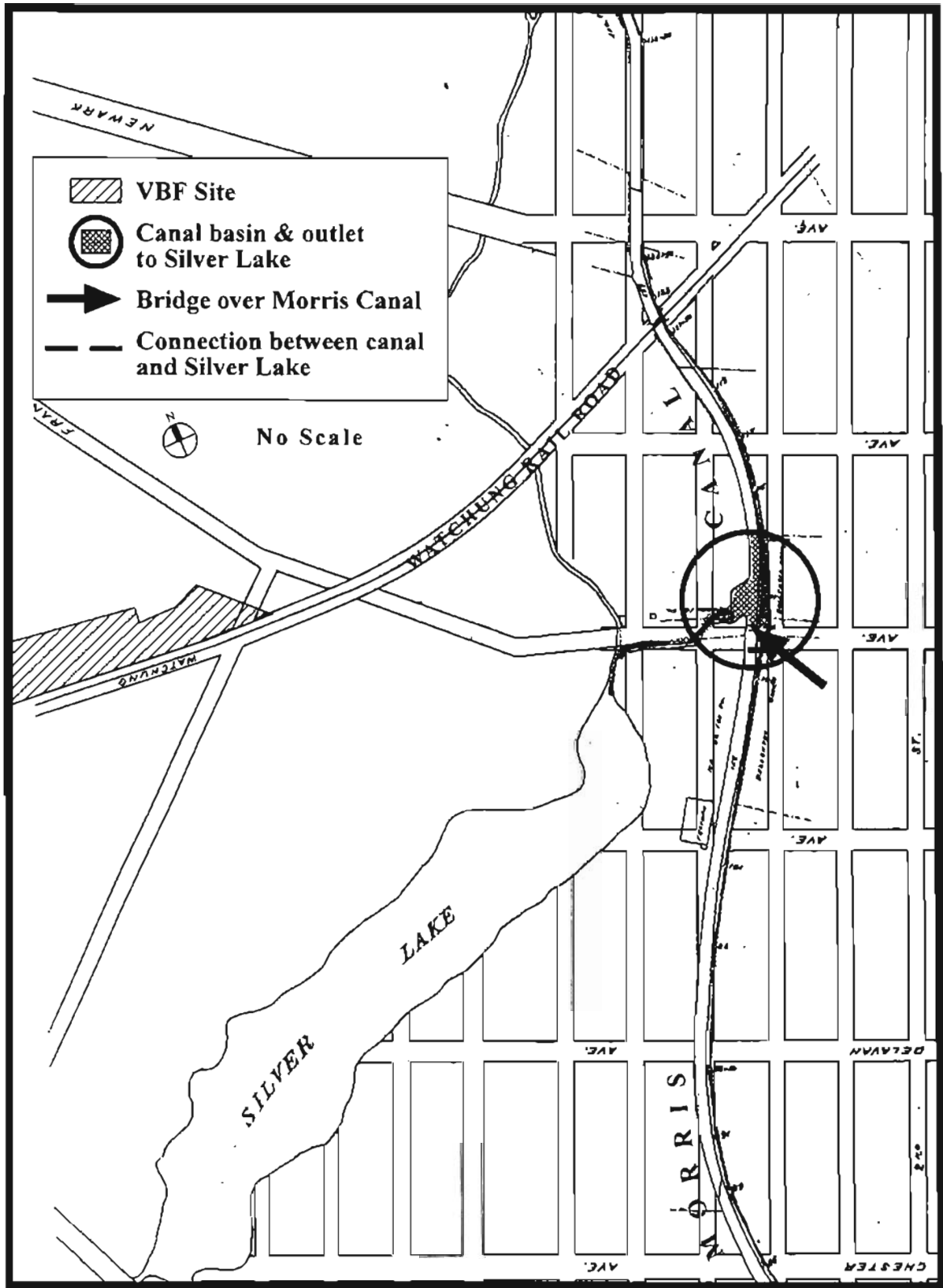
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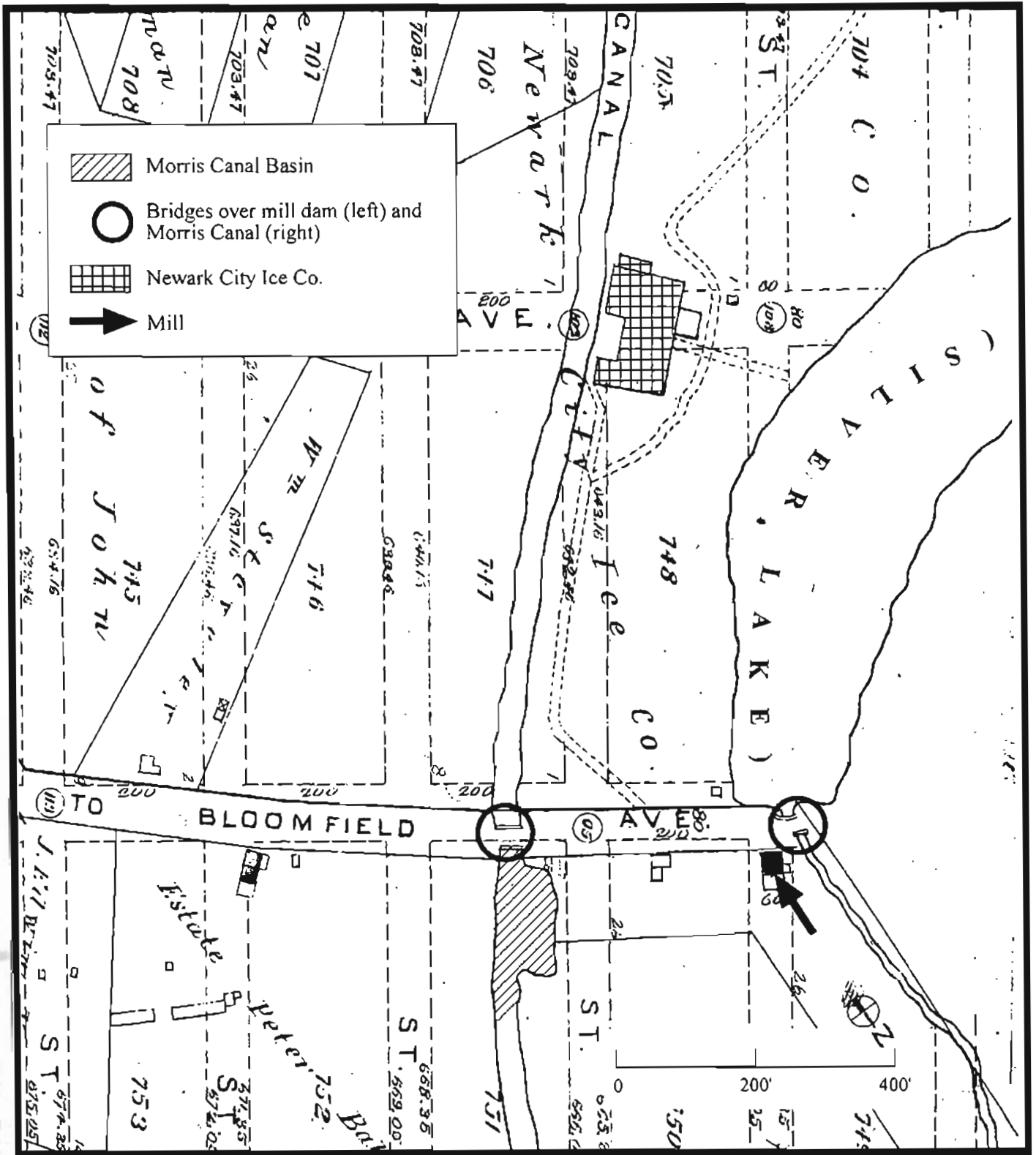
# WARDS.

Scale: 600 ft.

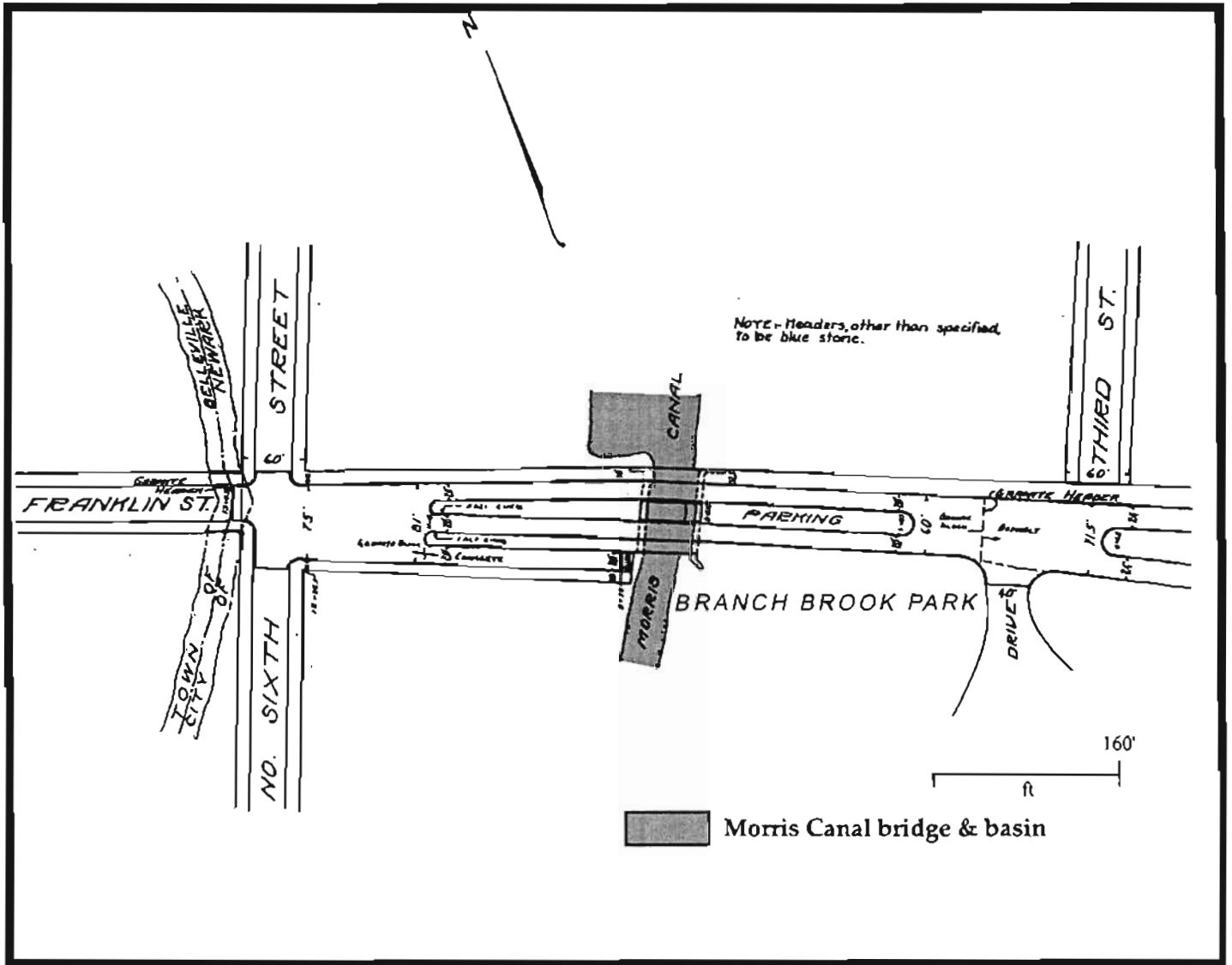
-  Bridge over canal at Old Bloomfield Rd.
-  Flour Mill
-  Ice Houses





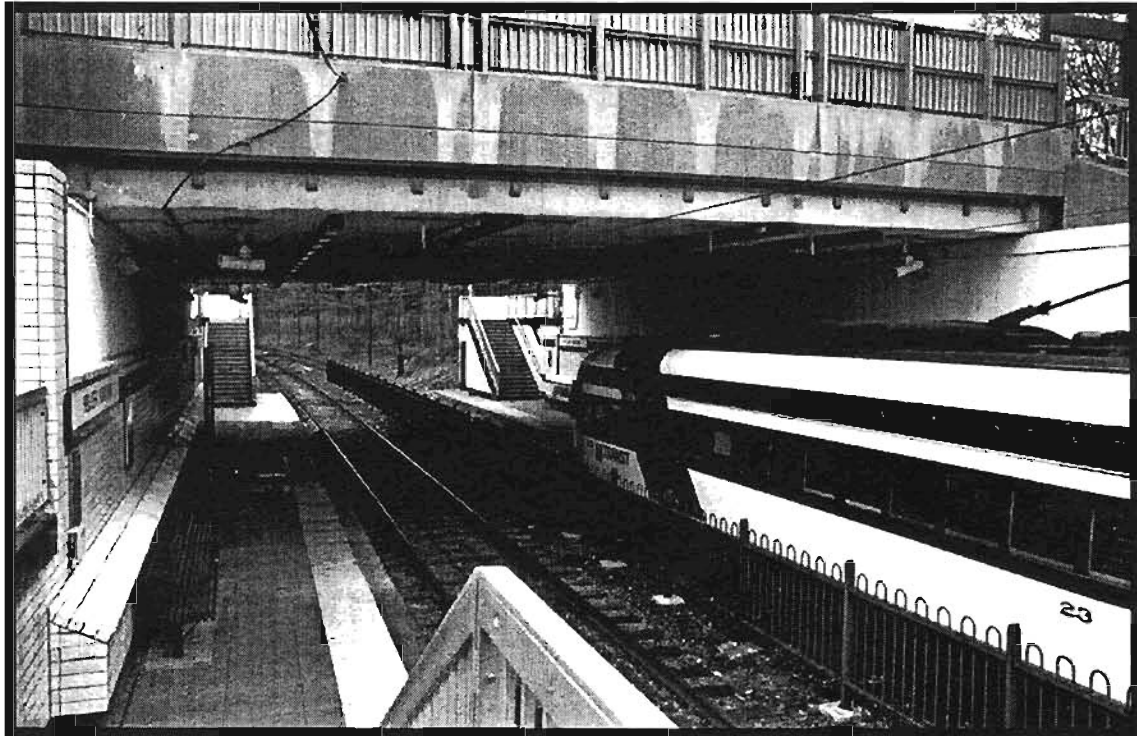








Excavations for the City Subway in former Morris Canal bed in Newark in the 1930s.







➔ Morris Canal towpath

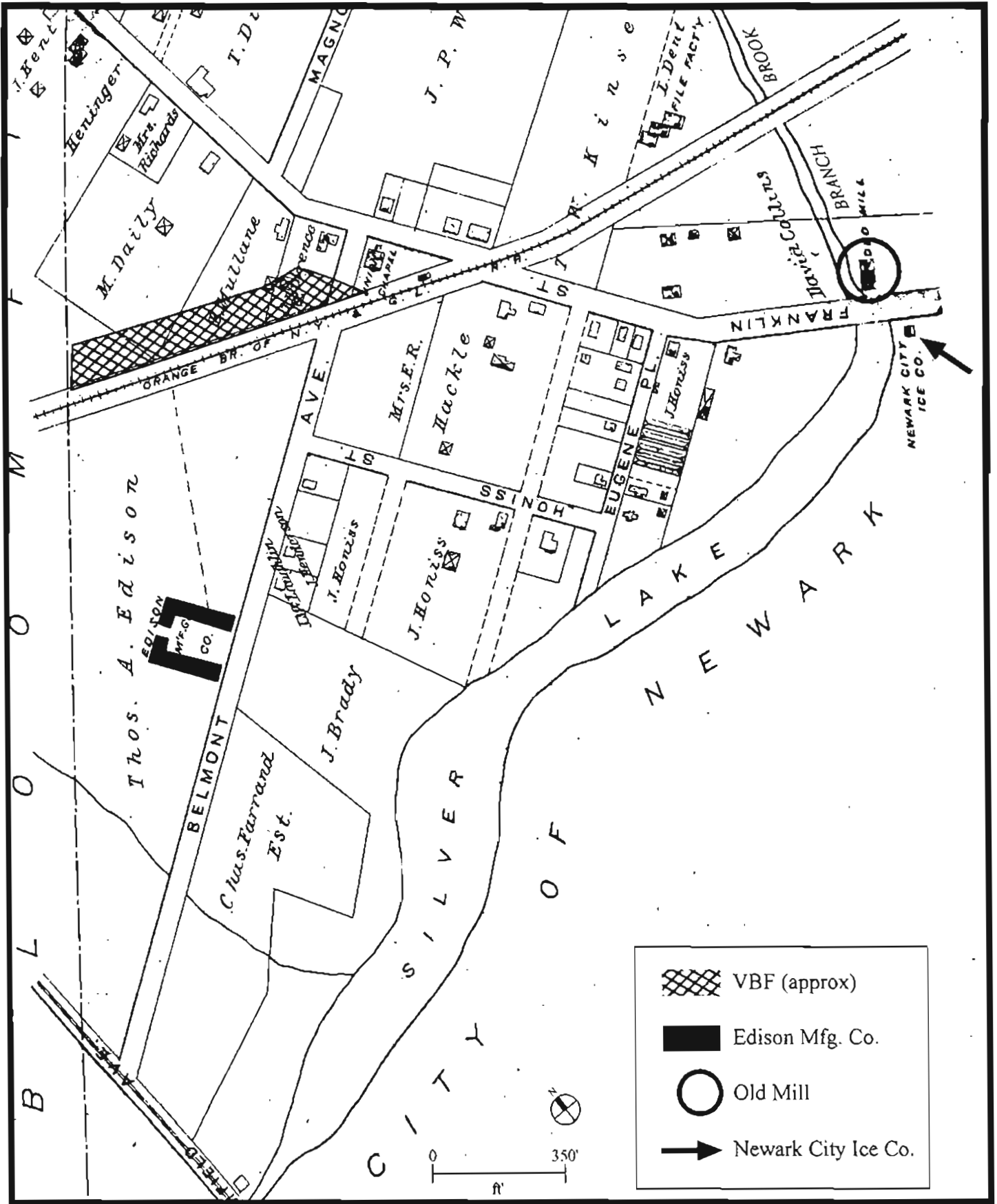
The railroad line that crosses the VBF study area on what will be the south side of the proposed VBF was first opened on July 10, 1876 (Francis 1994:personal communication). Originally the Watchung Branch of the Montclair and Greenwood Lake Railroad, this line was suspended about one year later. It reopened in 1881 as the Orange Branch of the Greenwood Lake Railroad (Francis 1994:personal communication; Robinson 1890). Local deeds later refer to it as the Watchung Railroad (e.g., Liber of Deeds [LD] 1925 Q:234).





## SILVER LAKE AND THE GRIST MILL

The Silver Lake Station is still found on maps (e.g., Hagstrom 1991), the only reminder of what had been Newark's largest man-made lake or mill pond. This long, narrow, and reportedly beautiful lake (Anon. 1923) was situated on or near the boundary between the City of Newark and Belleville Township. Its northern shore may have terminated just south of the study area near Franklin Avenue, but the lake was mainly situated just to the south (Robinson 1890; Figure 18; see also Figure 11). Branch Brook, a tributary of Second River, was its feeder stream (e.g., Commissioner's Map 1934:27; Mueller 1906; Figure 19). This stream formed Silver Lake. When the dam broke, Branch Brook continued to flow through the study area as it had before the mill pond was created. The brook is indicated on a Sanborn Map as late as 1938, but it has long been culverted.

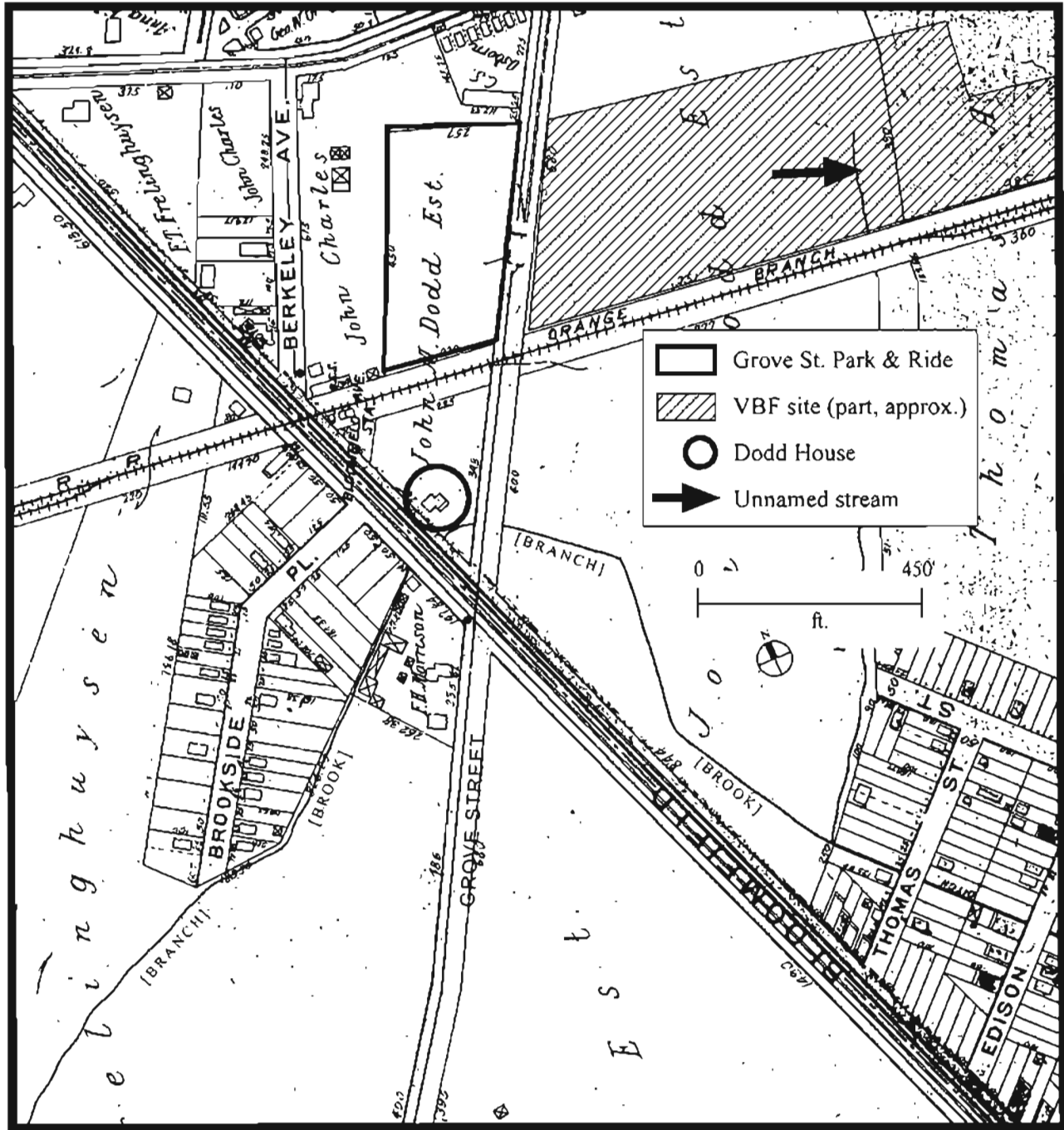
The lake's history is told by Rankin (1927:63-65; 1929): it was created in the eighteenth century to power a turning mill on the property of Jasper Crane whose grandfather was the Newark founder of the same name. The mill dam was at Old Bloomfield Avenue, apparently on the west side of Franklin Avenue (e.g., Sanborn 1906, 1938; Commissioner's Map 1934:27). The mill was located on the west side of Franklin Avenue just above Franklin Street within the project study area (e.g., see Hopkins 1873; Robinson 1890; see Figures 12 and 18). Reportedly 300 ft. wide and 1/2 mile long, late-nineteenth century maps indicate the lake or pond was only about 90 ft. wide in the project vicinity (Commissioner's Map 1934:27; Scarlett & Scarlett 1889; Robinson 1890; see Figures 12 and 18). Several late-nineteenth century maps indicate a connection between the lake and the Morris Canal (e.g., Weir Map 1886; see Figure 11; also Morris Canal Survey 1892; Figure 20).

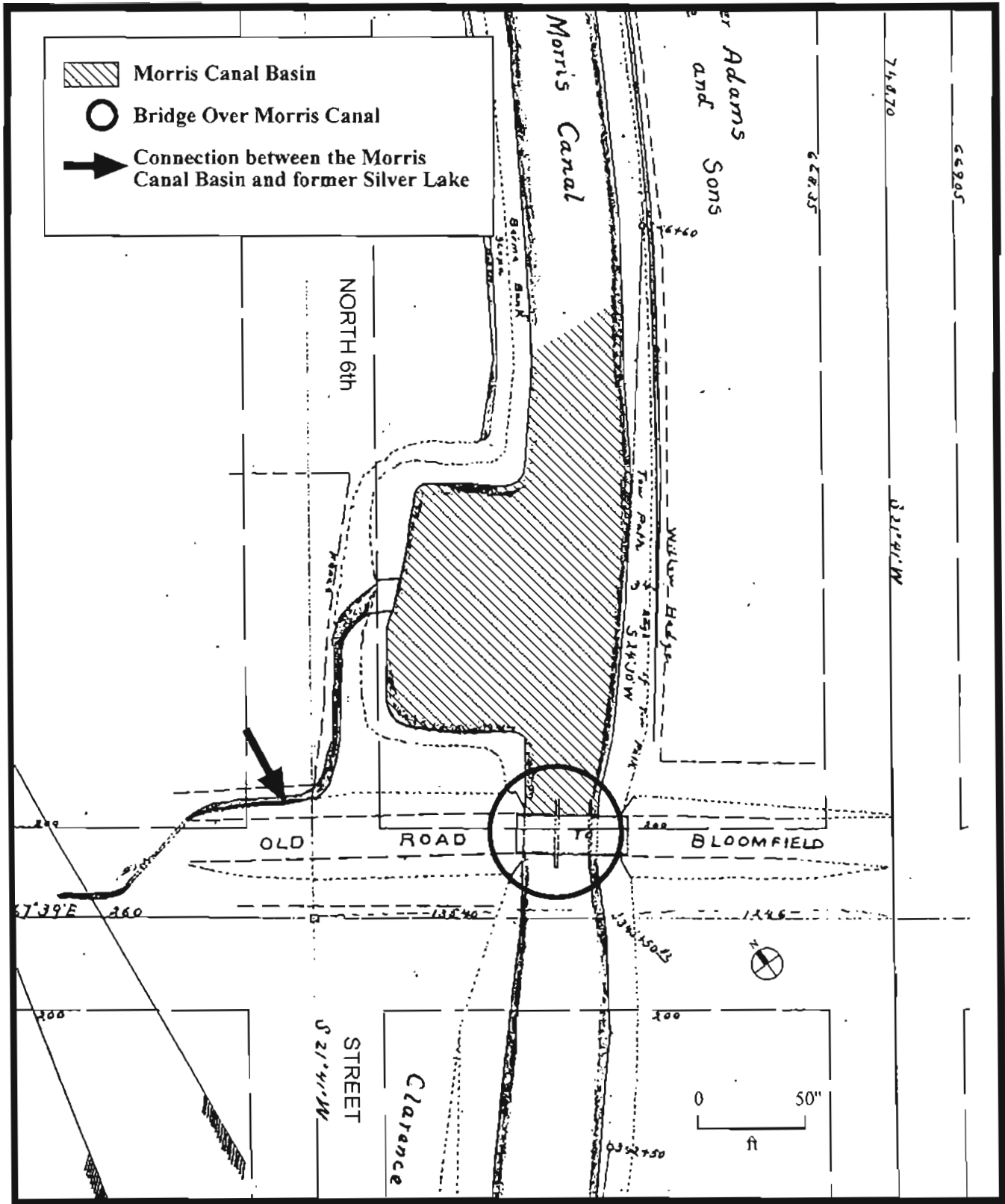
The mill property changed hands many times and was subdivided over the years. In 1839, it was reassembled as a single tract and, in 1866, was purchased by the Newark Ice Co. Then, on July 30, 1889, a great storm washed away the dam, and Silver Lake was history. The mill, which had been in disuse since the Civil War, was undermined during the storm and in time its ruins were also carried away (the 1890 Robinson atlas is the last map to indicate its whereabouts [see Figure 18]). The Newark City Ice Co. ice houses later burned to the ground. Streets were graded and houses built. In 1927, Rankin noted "all has vanished but the stream and the name which still clings to the neighborhood" (Rankin 1927:64). Now, the stream too has been altered through channeling.



	VBF (approx)
	Edison Mfg. Co.
	Old Mill
	Newark City Ice Co.







## LATE NINETEENTH CENTURY DEVELOPMENT

The Silver Lake area remained attractive to industry and inventors. Among them was Thomas Alva Edison who acquired land in 1888 and 1889 that was, or had been, held by local families for generations. Among Edison's purchases was a large tract that included the VBF site and its surrounding area (deeds cited in LD 1925 Q 73:234). This acquisition was made soon after he had perfected the Edison-Laland primary battery (Cunningham 1954:142). At the time, there were four residences on Franklin Street in the study area, and substantial homes are documented in the vicinity of, but not directly on, the VBF site, (Robinson 1890; see Figure 18). Edison himself did not live here, nor was it his primary laboratory (both were then in Llewellyn Park in West Orange), but he did establish a factory at 83 Belmont Avenue as early as 1889 (e.g., Robinson 1890; see Figure 18). It was here that thirty employees manufactured the zinc and copper-oxide plates and prepared the caustic soda and oil required to produce the glass jar, copper-zinc type batteries used mainly for railroad signal work (NPL Vertical Files 1934). This was all taken by horse-drawn truck to the main factory in West Orange where the batteries were assembled and shipped (WPA 1939:61).

The battery factory changed hands and expanded over time, extending as far north as Franklin Street, but the buildings are no longer standing. All that remains of this once-thriving industry is a sludge pond, an area of potential soil contamination. Commercial buildings or vacant land now cover or surround the former Edison factory site. Adjacent to it are mixed commercial and residential properties.

The two major late nineteenth century landholders in this area were Edison, a newcomer to the neighborhood, and John Mingus Dodd whose family were longtime Bloomfield residents. Dodd, who died in New York City in 1888, was the great, great grandson of the aforementioned Samuel Dodd who, as a young orphan, had come to Newark in 1667 with Robert Treat's Puritan Band (Dodd 1940:4). By the mid-nineteenth century, fourth and fifth generation members of this family owned much of the VBF site area.

The property of John Mingus Dodd included houses on and near Old Bloomfield Road and Bloomfield Avenue, one of them on Watsessing Avenue east of Grove Street where Hoffmann Parts (formerly the Chevrolet Plant of General Motors) is currently located. Except for the minimal development of homestead and house properties, the extensive Dodd holdings remained undeveloped until the advent of the railroad in 1876. Edison's battery factory, dating from 1889, was the only other major development prior to the early twentieth century.

Incorporated into John Mingus Dodd's property was the site of the industrial complex that now houses the Bloomfield Township Department of Public Works (DPW) on Grove Street (Figure 21). In 1913, Dodd heirs sold the property to the Condensite Company of America (LD U53:316). This was a company located in Glen Ridge that had been formed by J. W. Aylsworth, a consulting chemist for Thomas Edison. The plastic it produced was suitable for manufacturing photograph records (Savino 1947:10). At least three buildings were erected on the present DPW site soon after the company made its Bloomfield purchase (Factory Insurance Association 1954; see Figure 22 for construction dates).

Nine years later, in 1922, Aylsworth's company joined with the Redmanol Products Co. and the Bakelite Corporation; this latter company, which had been located in Perth Amboy, acquired the former Dodd property in 1923 (LD W 1923:491; LD Z75 1923:483). The buildings currently standing on the site comprise two structures built between 1923 and 1928 that were later joined by an overhead bridge. Whether these structures incorporated or replaced even earlier structures remains unknown. After 1923, the industrial complex on the site was the Bakelite Corporation that, in 1939, became a division of the Union Carbide and Carbon Corporation (Cook & Slessor 1992:34). The property ultimately changed hands many times before becoming the DPW facility (Pisauro 1995:personal communication).

This industrial complex was the seat of production of a phenolic resin used in the manufacture of many industrial applications in addition to Edison's phonograph records. Originally developed by Belgian-born Leo Baekeland, "Bakelite" was the first totally synthetic thermosetting plastic ever to be developed. While other plastics will return to a viscous state when heated, synthetic thermosetting plastic will be decomposed by great heat but will not become viscous (Cook & Slessor 1992:introduction).

Baekeland was interested in photography as well as plastics and is credited with the invention of Velox photographic paper that could be developed in artificial light (Cook & Slessor 1992:34). In 1905, the monetary rewards of this invention allowed Baekeland to resume research on phenolic resins, a growing field that he had temporarily abandoned. In 1907, he took out "heat and pressure" patents on "Bakelite." The preparation methods described in the patents have remained the basic principle of production to this day (Cook & Slessor 1992:34).

A 1938 Sanborn map documenting the Bakelite Corporation just prior to its becoming part of Union Carbide indicates a profusion of underground tanks and one-story storage buildings west of the DPW building and a densely developed part of the complex to the north (Figure 22). This is where storage and recycling bins are now kept along with work vehicles (Marcucci 1994: personal communication). Records in the Bloomfield Township tax assessor's office indicate that buildings on the site underwent extensive expansion and alteration during the 1940s, including the construction of the aforementioned bridgeway that joined two 1920s industrial buildings (Pisauro 1995:personal communication). A



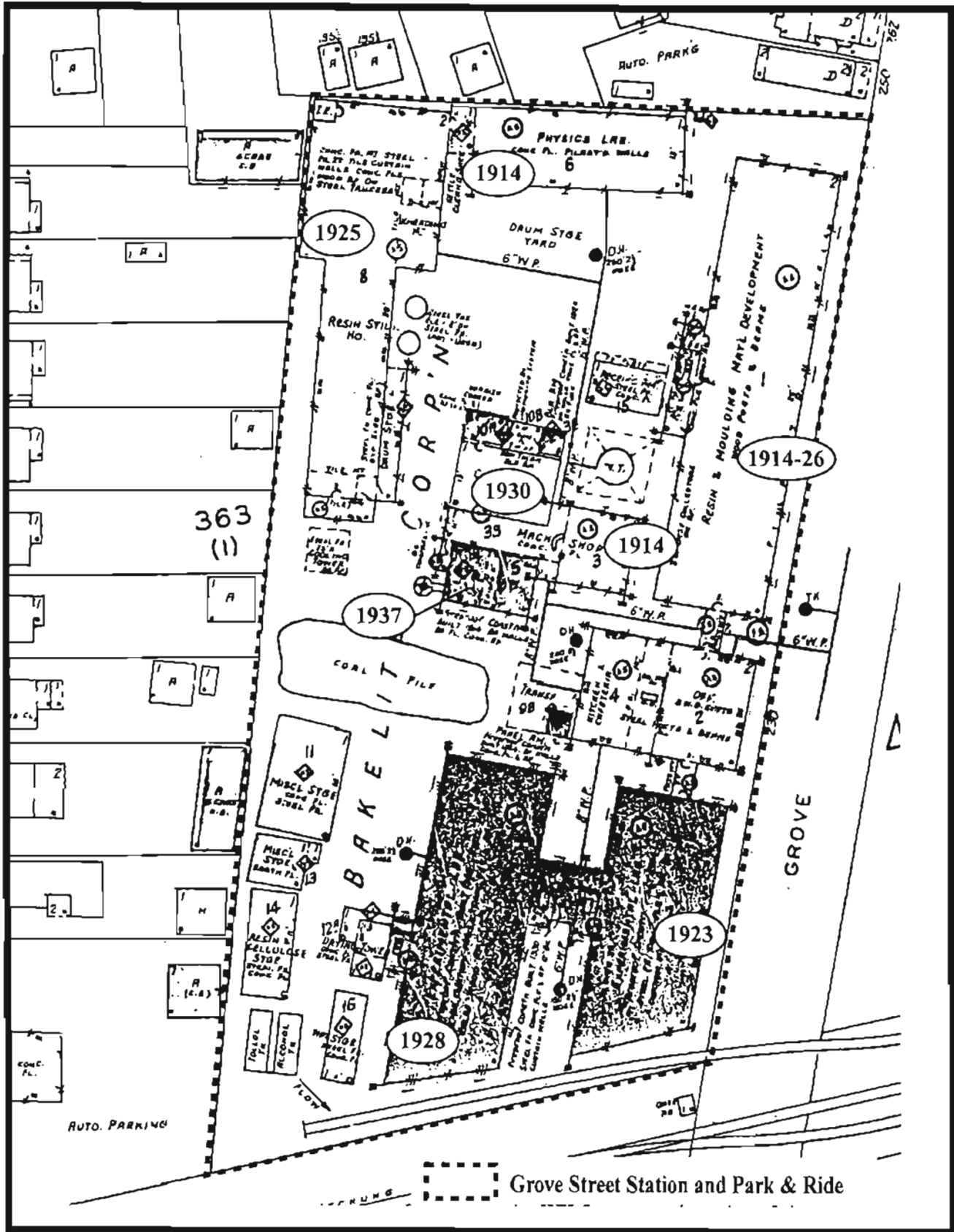
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Bloomfield DPW building and parking/  
storage facilities looking south on Grove St.,  
1995.

Figure 21



1954 map documents this industrial complex fifteen years after it had become part of the Union Carbide corporation (Coppola 1994, 1995:personal communication; Factory Insurance Association 1954). Both the 1938 and 1954 maps provide details about the layout of this former industrial complex where the Grove Street station and parking facility are proposed. In addition, the 1954 insurance map provides construction dates for most of the buildings then standing on the site. Available dates are indicated on Figure 22.

Shortly after the demise of Silver Lake and the advent of Edison's battery factory, a plan for Branch Brook Park, a Newark City park, was implemented. This park had been under consideration as early as 1867; among its initial planners were Olmstead and Vaux, the designers of Central Park in New York City. The park was ultimately created in 1895 out of the swamp fed by Branch Brook and the many springs in the area (Church & Gimigliano 1978; this report is recommended for details of the park's history and development).

Prior to the park's development, the southern part was the property of the Newark Aqueduct Co. (see Figures 12 and 18), and much of it had been subjected to "previous excavation by quarrying operations, reservoir and pipe placements, and tenement house construction" (Church & Gimigliano 1978:46). A circular reservoir, built in 1873 and located south of the study area, was the last of several such constructions remaining. It had been filled and, until recently, served as an ice skating rink (Church & Gimigliano 1979:57-58). Now it has been altered and covered over to create a roller skating rink (Talmadge 1995:personal communication).

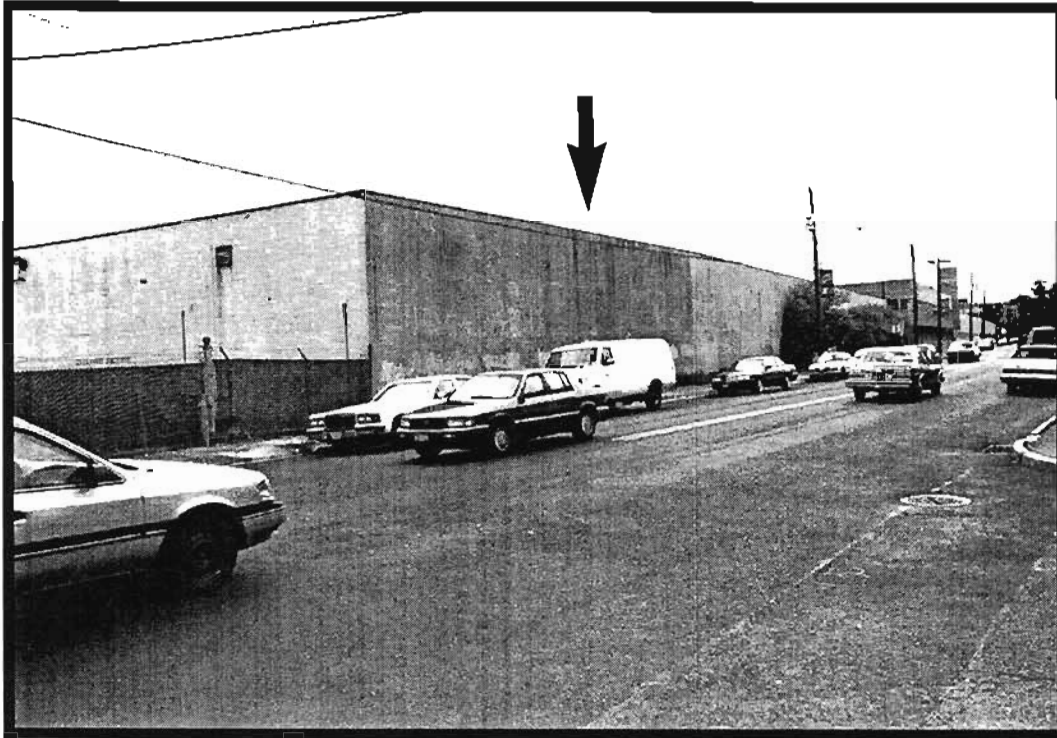
South of Bloomfield Avenue, and perhaps extending into what would become the southern part of the park, was the site of Camp Frelinghuysen. This was a Civil War military camp where thousands of soldiers camped while waiting to be mustered into Union troops (National Register Nomination Application 1979:1; Church & Gimigliano 1978; Urquhart 1913:272-273). All this "previously disturbed terrain was landscaped into a romantic style dominated by geometrically patterned gardens and arbors surrounding existing reservoirs" (Church & Gimigliano 1978:46). Its creators were not Olmstead and Vaux, however, but Nathan F. Barrett and John Bogart, winners of a design competition entered by five teams or individual architects, among them Olmstead, Olmstead & Eliot, a successor firm to Olmstead and Vaux (Kelsey 1905 cited in Church & Gimigliano 1978:45).

Most germane to the study area was the introduction of an "effective and ubiquitous" drainage system comprising 2- to 10-inch clay pipes that drained swamps and allowed the creation of the park. This system, which would have entailed extensive ground disturbance, is apparently documented on maps in the archives of the Essex County Park Commission (Church & Gimigliano 1978:49).

During the 1890s and the decades immediately after the turn of the century, many topographical and historical features were lost in the study area or were altered beyond recognition: Branch Brook, which had fed Silver Lake, was culverted; as noted above, swamp land was filled and landscaped to become Branch Brook Park; the Morris Canal was filled and a subway line built along its route; large farms and estates were subdivided and a residential suburb created (e.g., Figure 23), but industries and other commercial properties also continued to develop (e.g., Figure 24).







## POTENTIAL ARCHEOLOGICAL IMPACTS

Assessment of the VBF study area identified four locations or zones of possible prehistoric sensitivity and eleven of historic-era potential, two of them located just beyond the study area. The prehistoric considerations are indicated as A-D and the historic-era locations as 1-11 in Table 1 and on Figure 25. Two areas are potentially sensitive for both prehistoric and historical archeological material (see A/1 and B/3 on Table 1 and Figure 25; also Figure 9). These include Old Bloomfield Road (Franklin Street), the conjectural route of an Indian trail (A) and the location of historic-era eighteenth to mid-nineteenth century house sites (1), including an altered survivor at 167 Franklin Street (No. 12 on Table 1 and Figure 25). Three other possible prehistoric sites or zones of potential sensitivity within the study area include the route of Branch Brook (B), Branch Brook Park (C), and possibly an unnamed stream (D) that may have run in the vicinity of the VBF site (Mueller 1906 Plate 15; see Figure 19); it should be noted that this stream and its location were identified from a single map source and are somewhat questionable. Culverted drainage ditches are apparently located throughout the area (Coppola 1995:personal communication) and may include remnants of this stream. However, a large, 1-story commercial building (the former Potemkin Cadillac Service Department) now stands on this part of the site. This structure does not have a basement and, depending on the location of foundation piers or footings, former ground surfaces may remain. All of the potential prehistoric zones relate to available fresh water sources where Native Americans may have camped or hunted during the millennia following the retreat of the last glacier.

Of the nine solely historic-era sites or zones located within the study area and noted in Table 1, only two--the Morris Canal (10), a resource listed on the National Register of Historic Places, and the Bakelite Plant site, now the Bloomfield Township DPW--may be impacted by construction of stations and parking for the light rail system in the study area. Other potential historical sites listed in the table include three house sites near the VBF site that may have intact or partially intact yards (Nos. 7, 8, 9, and 12 on Table 1 and Figure 25). However, as planned, the construction of the VBF and its proposed station sites will not impact these properties. Nor will it impact the site of the former Thomas Edison Battery Factory complex, a site that undoubtedly contains contaminated soil.

Another potential historical site is the former location of the eighteenth-century grist mill and mill dam (3 on Figure 25) on the west side of North Franklin Avenue just north of Franklin Street. The dam was destroyed by a storm on July 30, 1889, and the mill, which had been in disuse for decades, was ultimately washed away, but evidence of it may still survive. However, its former location lies west of the impact area.

**Table 1**

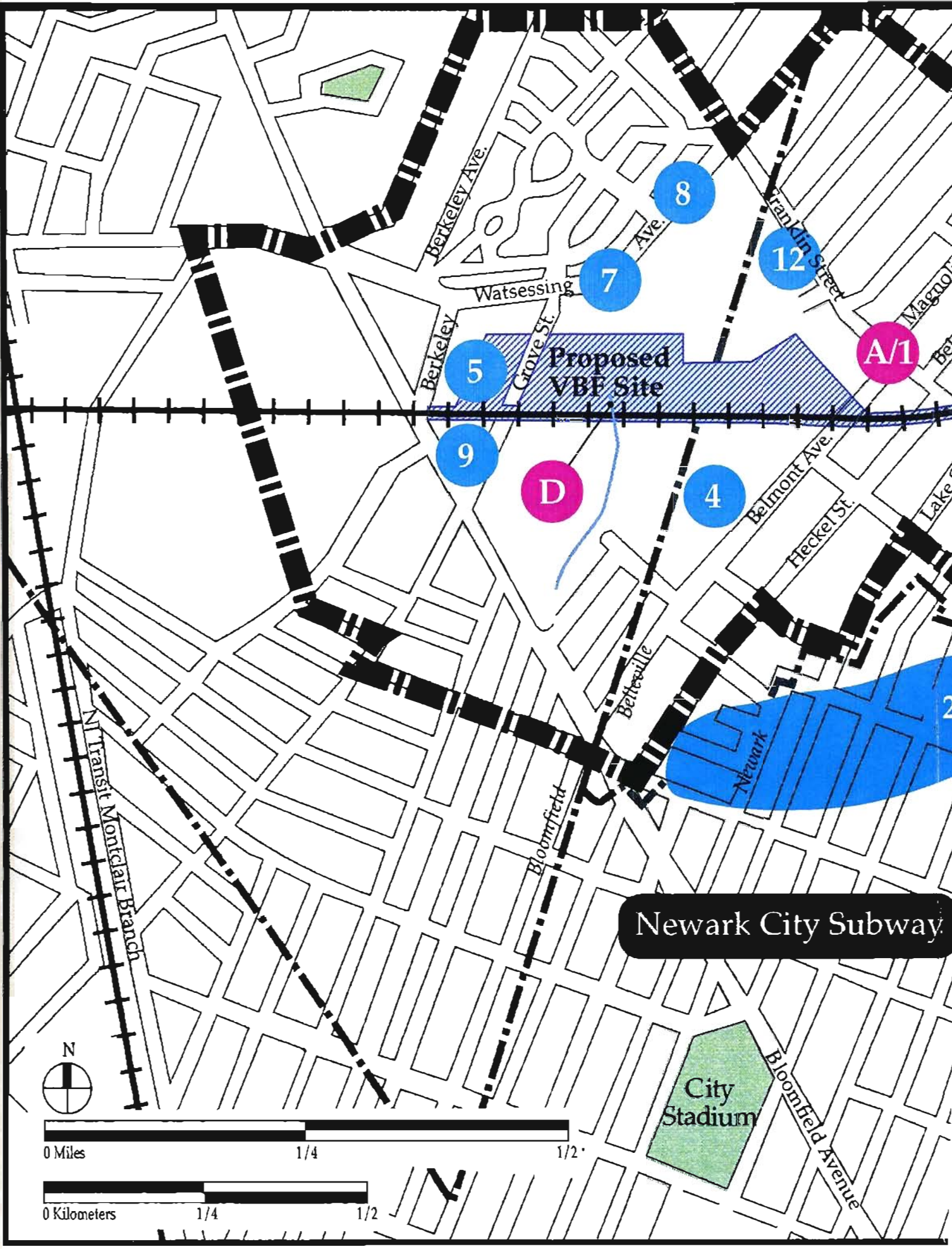
**VBF Identified/Potential Archeological/Historical Sites**

<u>Prehistoric Sites</u>		<u>Source</u>
A	Old Bloomfield Rd; conjectured Indian trail leading from Newark to the Orange Mountains.	WPA 1939; Folsom 1925
B	Branch Brook; former north-south running stream on west side of Franklin Ave; Silver Lake source (see 2 below).	Sanborn 1938, 1906; Walling 1859; Sidney 1850, 1849; Church & Gimigliano 1978
C	Branch Brook Park; possible prehistoric sites or zones of sensitivity; archeological testing in 1978 did not reveal any prehistoric resources in the park.	Church & Gimigliano 1978
D	Unnamed stream in vicinity of VBF; identified from single-source map data.	Mueller 1906
<u>Historical Sites</u>		
1.	Old Bloomfield Rd to Newark; identification of mid-19th C properties along south side of road: J.Smith, A.Keen, M.Crane, Mrs.Stewart, E.Davis, J.Richer, J.Everson, C.Ferrand; on north side: J.F.Black (see 3 below), W.Stammers, A.Kent, C.Miller, C.Akers, Methodist Church, N.Coughlin, R.Fisher, W.D.Stafford, J.Baldwin, Terhune, S.S. Kimball, C.N. Wharry, J.Wharry a public school.	Rankin 1929; Walling 1859; Hine 1909 after Sidney 1849; Sidney 1850, 1849; Shaw 1884; Misc Liber of Deeds (LD)
2.	Silver Lake (also Sunfish Pond) c 1730 to 1889; former mill pond.	Rankin 1927; Robinson 1890
3.	18th C grist mill (flour mill in 1873) associated with Silver Lake; possibly Black's, Brandy's or Bloomfield Mill; in ruins by 1865; ultimately washed away.	Rankin 1927; Hine 1909; Mueller 1906; Robinson 1890; Hopkins 1873 LD; Rankin 1927
4.	Thomas Edison Battery Factory, built c 1888-1889; now parking lot for PathMark Shopping Center.	LD; Rankin 1927
5.	Bakelite Corporation, now Bloomfield DPW; parking areas former location of buildings and tanks related to industrial complex.	Sanborn 1938
6.	Newark City Ice Co structures, mid-19th C; defunct by 1895. Possibly 2 or more structures related to this complex.	Rankin 1927; Robinson 1890 Scarlett & Scarlett 1889

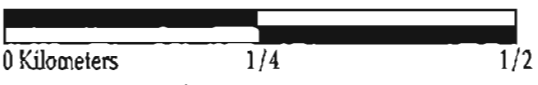
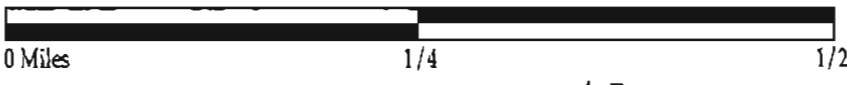
**Table 1 (continued)**

**VBF Identified/Potential Archeological/Historical Sites**

<u>Historic Sites (continued)</u>	<u>Sources</u>
7. 19th C structures (outbuildings and house) on the John M. Dodd Estate (now parking lot for Hoffman Parts).	Mueller 1906; Robinson 1890
8. House cluster probably of Charles Ferrand (1849, 1850, 1859); houses on property of Charles Ferrand Estate in 1890; John R. Hardin in 1906 (now 1-story garages on Watsessing Ave. of houses fronting on Lexington).	Mueller 1906; Robinson 1890; Sydney 1850, 1849
9. Triangle created by Bloomfield Ave, Erie RR tracks and Grove St; 1849 J.Dodd, 1850 John M. Dodd, John M. Dodd Estate in 1890 (now site of Roy Rogers and low commercial structures).	Robinson 1890; Sydney 1849, 1850
10. Morris Canal; National Register of Historic Places 1974; now route of City Subway.	Kalata 1983
11. Branch Brook Park; created in 1895, National Register of Historic Places 1981; Park Extension part of study area.	Church & Gimigliano 1978; Commissioners' Map 1934 updated to 1970
12. 167 Franklin St., an altered survivor of the early-19th C. homes built along Old Bloomfield Rd. (See Figure 9).	e.g., Sydney 1849; Municipal Record

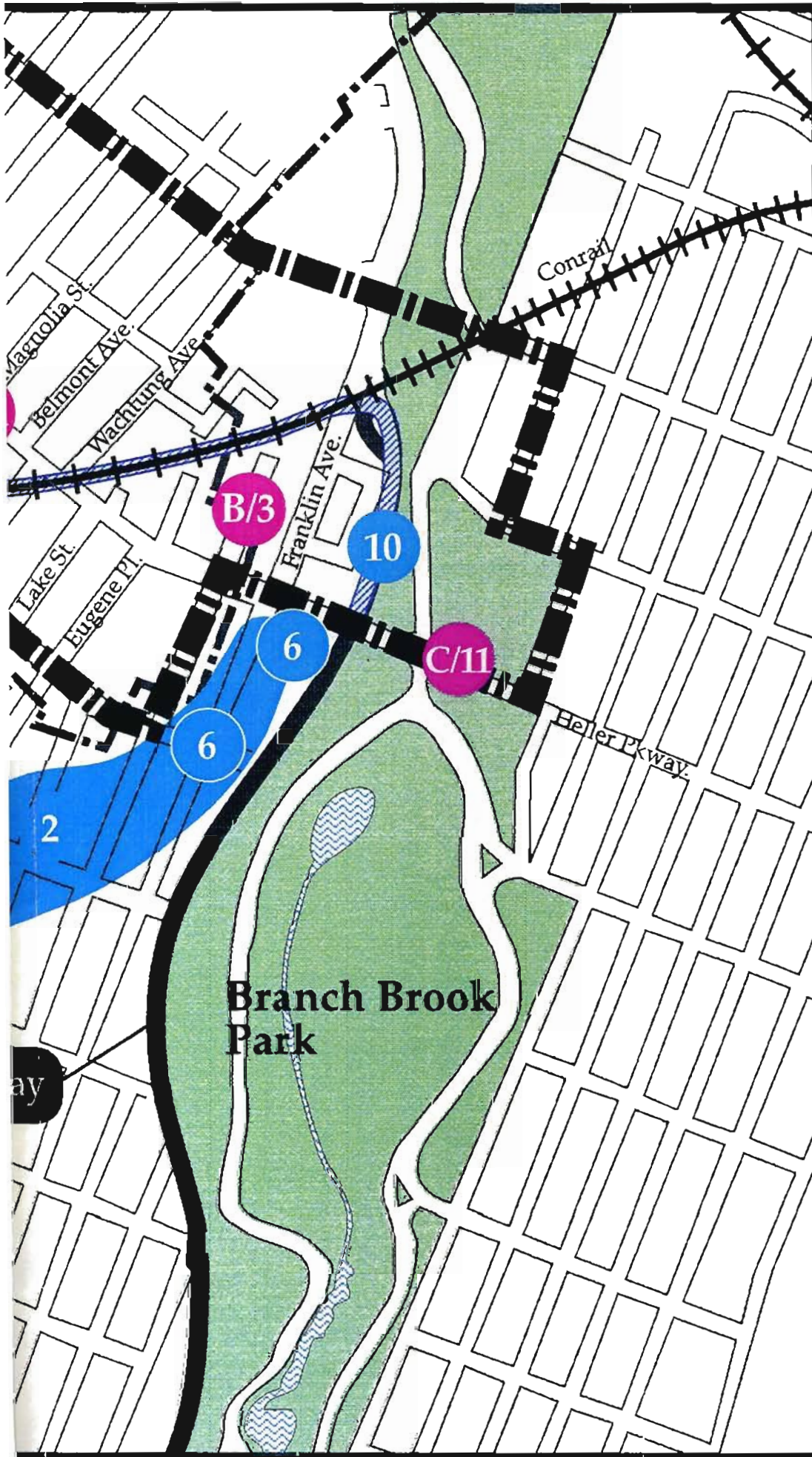


Newark City Subway



# Identification of Known and Potential Archeological/Historical Resources Sites

Figure 25



● Prehistoric Resource

● Historic Resource

--- Municipal Boundary

+ + Railroad

▬ EA Study Area

▨ Potential Construction Area

Refer to Table 1 for of Archeological Resources.

Environmental Assessment for the Newark City Subway Extension and Vehicle Base Facility



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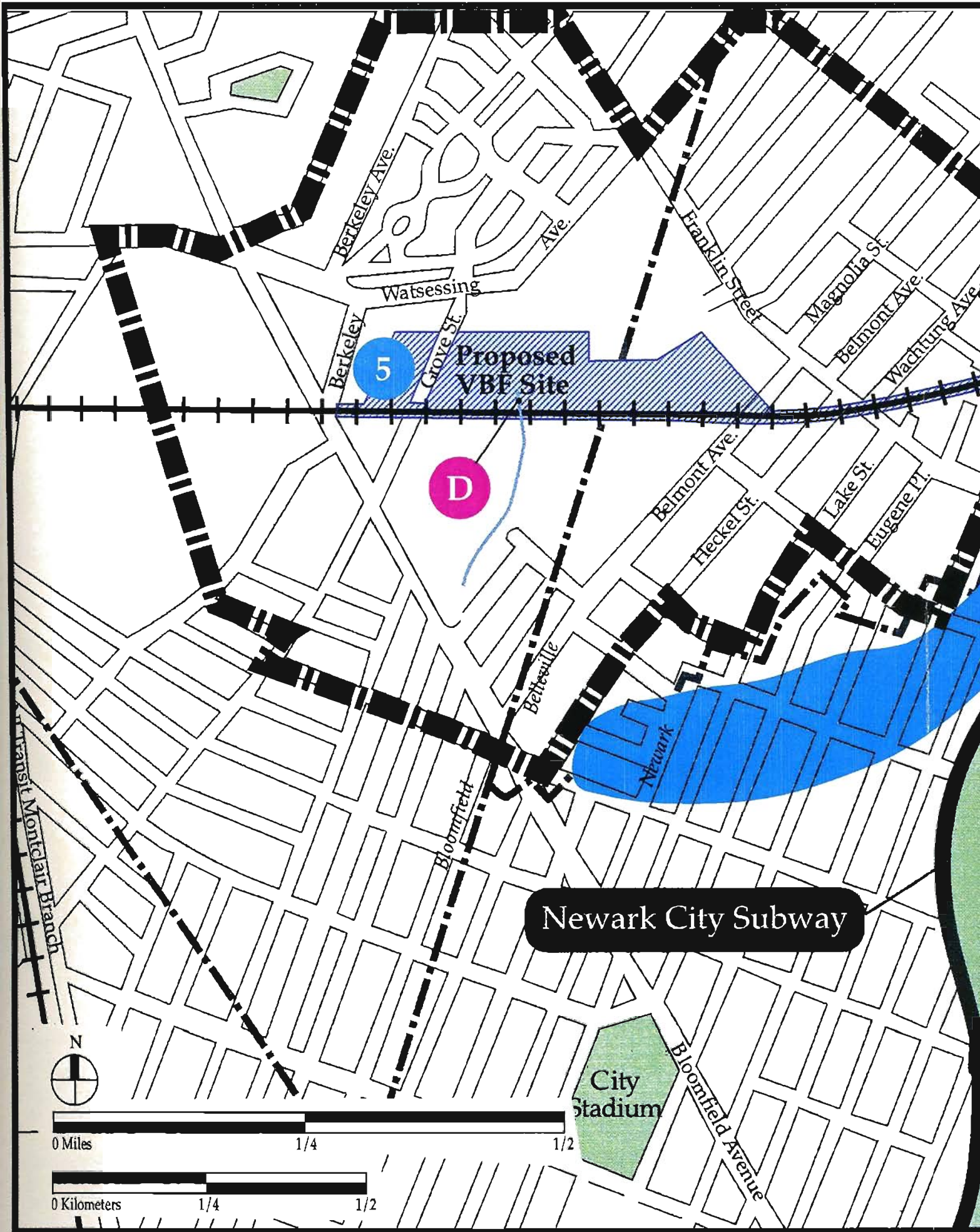
Construction of the Franklin Avenue/Heller Parkway Station may impact the buried Morris Canal (Figure 26 No. 10). The degree of this impact and the nature of the effect on this National Register-listed resource is dependent on the extent of subsurface disturbance that will accompany construction of a station for the at-grade light rail system. This includes the placement of the catenary poles and utilities needed to implement and support the system, and the reconstruction of multiple street-level shelters designated the combined Franklin Avenue/Heller Parkway Station. It should be noted that construction workers in Bayonne have found that the filled canal bed in that city continues to provide drainage and is often the location of active utility lines comprising cables and ducts (Rutsch and Leo 1979:78). This has created a hazardous situation regarding excavation, whether it be archeological or construction related.

In addition to the potential impact to the canal caused by station construction, there is the possibility that building the VBF may impact prehistoric resources in the vicinity of the former unnamed stream (see Figure 19), but this is questionable. At this writing there is no subsurface information or plans for a building to ???this site to assess the likelihood of this possible impact.

Construction of the proposed Grove Street Station and park and ride will adversely impact the two surviving structures of the former Bakelite factory and, at this writing, the Bloomfield Township DPW facility. These buildings have been found eligible for listing on the National Register of Historic Places during this study (Drobbin 1994:personal communication). Construction may also impact the remnants of former structures--buildings and vats--related to this industrial complex, now a potential industrial archeological resource. However, the significance and integrity of the resource as well as the nature of the impact remains to be determined.

← Not Yet.  
May be elig. pending  
review of supplemented  
info.





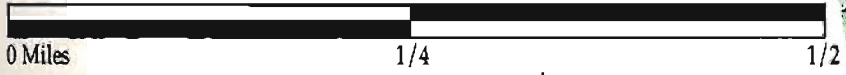
5

D

Proposed VBF Site

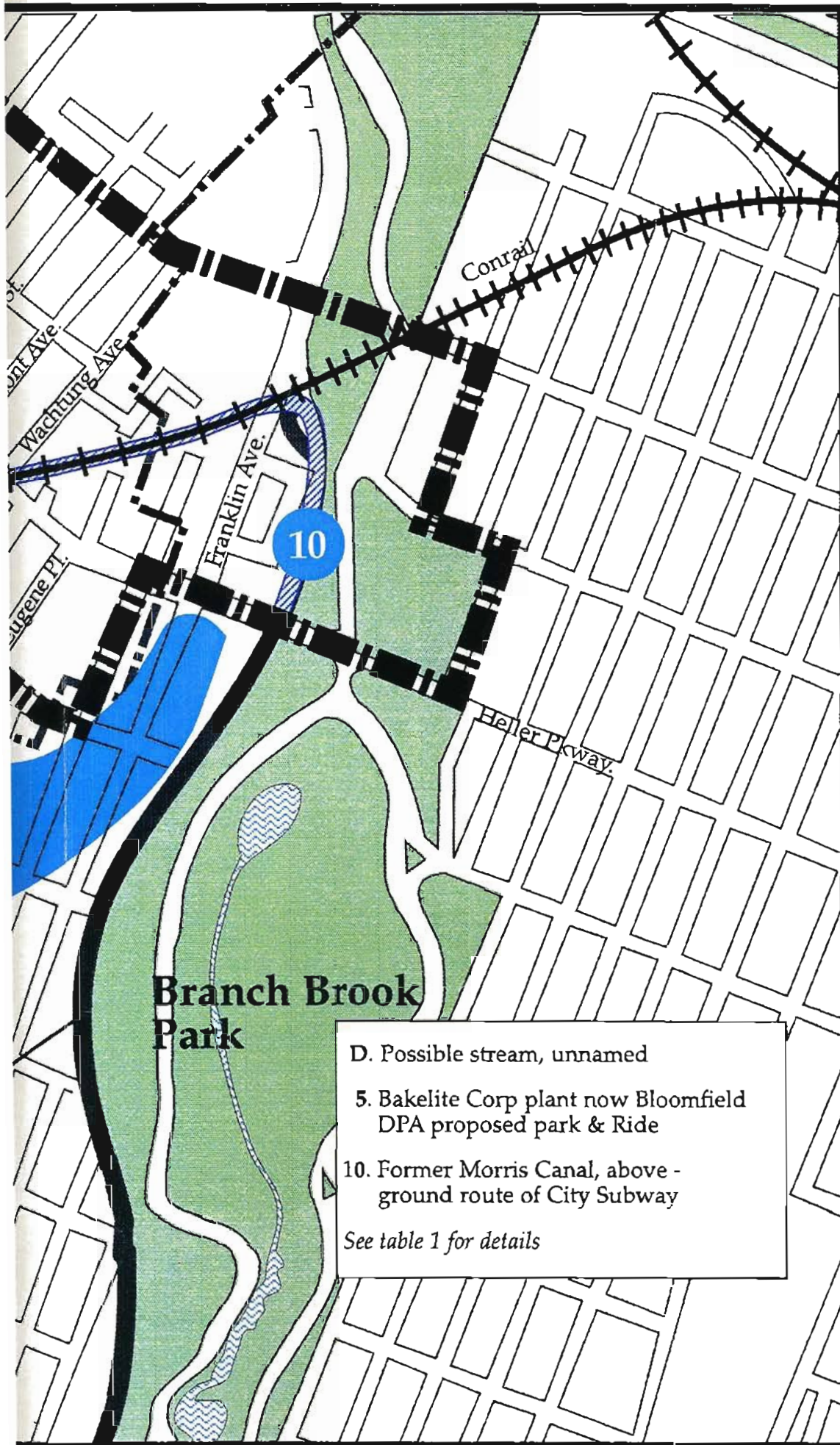
Newark City Subway

City Stadium



# Potential Impacts

Figure 26



- Prehistoric Resource
- Historic Resource
- Municipal Boundary
- +— Railroad
- EA Study Area
- Potential Construction Area

## Branch Brook Park

- D. Possible stream, unnamed
- 5. Bakelite Corp plant now Bloomfield DPA proposed park & Ride
- 10. Former Morris Canal, above-ground route of City Subway

See table 1 for details

Environmental Assessment  
for the Newark City Subway  
Extension and Vehicle Base  
Facility



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## RECOMMENDATIONS

A review of the foundation plans for the former Potemkin Cadillac Service Department building currently located on the western part of the VBF site is recommended. If no footings or foundation piers are located in the vicinity of the banks of the "unnamed stream" documented on Mueller's 1906 map (D on Figure 26), soil borings are recommended in this area. Soil borings are also recommended east of the standing building to determine subsurface conditions outside the structure.

It is recommended that impacts to the Morris Canal (No. 10 on Figure 26) be avoided if possible. If this is not possible, a testing or monitoring plan that entails recordation of the buried canal will be called for.

Available plans of the Bakelite Plant (No. 5 in Table 2 and Figure 26; see also Figure 22) suggest that recordation of underground features may not be called for as part of the HABS/HAER documentation of the building. However, the nature of any soil contamination on the site is being determined in order to develop an appropriate mitigation plan if warranted.

**Table 2**

**VBF Potentially Impacted Sites/Recommended Field Method**

Prehistoric Sites

D Unnamed stream in vicinity of VBF; identified from single-source map data. (B)

Historical Sites

5 Bakelite Corporation (DPW); parking areas former location of buildings and tanks related to industrial complex. (R)

10 Morris Canal; State Register 1973, National Register of Historic Places 1974; now route of City Subway. (A/D)

- 
- Letters/numbers correspond to those found in Table 1 and Figure 25
  - Recommended field methods
    - (B) = Soil borings
    - (R) = Recordation of buildings according to HABS/HAER specifications
    - (A/D) = Avoidance through design/excavation and documentation if impact is unavoidable

## BIBLIOGRAPHY

Anon. 1973. Historical Consideration of the Tidal Flow in the Hackensack Meadowlands. Prepared for the Hackensack Meadowlands Development Corporation. July 1973.

\_\_\_\_\_, 1923. Obliterated is Silver Lake. *Newark Evening News*. June 2, 1923. New Jersey Division (Belleville Folder), Newark Public Library.

Bridges in Essex County, 1919. Copied from "Lehigh Valley Railroad, Morris Canal Division, Map of Morris Canal in Passaic, Essex, and Hudson Counties, New Jersey. Showing Location of Bridges over Canal between Lincoln Park, New Jersey and Jersey City, New Jersey." Office of Bridge Engineer, Bethlehem, Pa. New Jersey State Archives, Trenton.

Church, Davis and Michael N. Gimigliano, with Herbert J. Githens and Thomas Vint, 1978. A Cultural Resources Survey for the Branch Brook Park Redevelopment Plan. Prepared for VEP Associates, Inc. and the Essex County Park Commission. Cultural Resource Management Services, Inc. Newton, New Jersey.

Commissioners Map, 1934. Updated Sheet 27. On File at the Newark Department of Engineering, Newark City Hall.

Cook, Patrick and Catherine Slessor, 1992. *Bakelite: an illustrated guide to collectable Bakelite objects*. Chartwell Books, Inc.

Coppola, Stephen, 1994, 1995. Personal Communication. Assistant Engineer, Bloomfield Township. Bloomfield Town Municipal Building, Bloomfield.

Cunningham, John T., 1988. *Newark*. The New Jersey Historical Society, Newark.

\_\_\_\_\_, 1954. *Made in New Jersey: The Industrial Story of a State*. Rutgers University Press, New Brunswick.

Dodd, Allison, 1940. *Genealogy and History of the Daniel Dodd Family*. Allison Dodd with the Rev. Joseph Fulford Folsom. Bloomfield.

Drobbin, Lynn, 1994. Personal Communication. Historic Preservation Consultant, NERL Project. Lynn Drobbin Associates, Pelham, New York.

Factory Insurance Association, 1954. Map of Union Carbide and Carbon Corp., Bakelite Division, Bloomfield, New Jersey. Eastern Regional Office, Hartford. Available at the Town Engineers Office, Bloomfield Municipal Building, Bloomfield.

## BIBLIOGRAPHY (continued)

Folsom, Joseph, 1925. *The Municipalities of Essex County 1666-1924*. Volume II. Lewis Historical Publications, New York.

Francis, Edward, 1994. Personal communication. Transportation Historian, Livingston, New Jersey.

Geismar, Joan H., 1995. Archeological 1A Technical Study, for the Newark-Elizabeth Rail Link. Prepared for FTA and NJ TRANSIT through the BRW Rail Link Team. October, 1995.

Gibbs, Nancy, Betsy Kearns and Ed Lenik, 1993. Stage 1A Cultural Resources Survey for an Environmental Impact Statement for the Newark International Airport Ground Access Automated People Mover - Northeast Corridor Connection Project. Prepared by Historical Perspectives, Inc., submitted to SWEC/BRW, A Joint Venture, and filed with the New Jersey State Historic Preservation Office (12/93).

Hagstrom, 1991. *Map of Essex County, New Jersey*. Hagstrom Map Company, Inc., Masbeth, New York.

Hine, C. G., 1909. *Woodside*. Hine's Annual 1909. Copies on file, Newark Public Library, New York Public Library, Belleville Public Library.

Hopkins, G. M., 1873. *Atlas of the City of Newark in the State of New Jersey*. G. M. Hopkins Company, Philadelphia.

Kalata, Barbara N., 1983. *A Hundred Years A Hundred Miles: New Jersey's Morris Canal*. Morris County Historical Society, Morristown, New Jersey.

Lane, Wheaton J., 1939. *From Indian Trail to Iron Horse*. Princeton University Press, Princeton.

Liber of Deeds (LD), misc. On file Essex County Court House, Newark.

Map of Heller Parkway, 1922. Map of Heller Parkway in the City of Newark, Essex County, N. J. Detail of road construction. Essex County Engineers Office, Verona, New Jersey.

Marcucci, Anthony, 1994. Personal communication. Bloomfield Township Engineer, Bloomfield Municipal Building.

## BIBLIOGRAPHY (continued)

Marshall, Sidney, 1982. Aboriginal Settlement in New Jersey During the Paleo Indian Culrer Period: ca 10,000 B.C. - 6,000 B.C. In *New Jersey's Archaeological Resources from the Paleo Indians to the present: a Review of Research Problems and Priorities*. Edited by Olga Chesler, Trenton, New Jersey, Office of Cultural and Environmental Service N.J.D.E.P.

Mueller, A. H., 1906. *Atlas of Essex County*. Plate 15. A.H. Mueller Company, Philadelphia.

National Register Nomination Application, 1979. Branch Brook Park. On File Newark Public Library.

Newark Town Records (NTR), 1864. *Records of the Town of Newark 1666-1836*. Volume VI. The New Jersey Historical Society, Newark.

New Jersey State Archives, 1993. Site No. 28-ex-92. Indian Knoll, Bloomfield. Bureau of Archeology/Ethnology, New Jersey State Museum, Trenton.

\_\_\_\_\_, 1961. Old New Jersey Site No. 450-28. Indian Knoll, Bloomfield. Bureau of Archaeology/Ethnology, New Jersey State Museum, Trenton.

NPL Vertical Files, 1934. *Lead-Acid Batteries for Autos and Radios...* Vertical Files, Newark, Chemical Industries. New Jersey Division, Newark Public Library.

Pisauro, Joseph, 1995. Personal Communication. Tax Assessor, Bloomfield Township, Bloomfield Municipal Building.

Rankin, Edward, 1930. *The Running Brooks and Other Sketches of Early Newark*. The Unionist-Gazette, Somerville, New Jersey.

\_\_\_\_\_, 1929. The Story of Silver Lake on Newark's Northern Line. May 5, 1929, *New Jersey Ledger*. Newark's Wards and Section Folder. New Jersey Division, Newark Public Library.

\_\_\_\_\_, 1927. *Indian Trails and City Streets*. The Globe Press, Montclair, New Jersey. (2nd printing 1928)

Robinson, E., 1890. *Atlas of Essex County New Jersey*. E. Robinson Publishers, New York.

## BIBLIOGRAPHY (continued)

Rutsch, Edward S., Michael N. Gimigliano, Ralph J. Leo. and Brian Morrell, 1978. Stage 1A Cultural Resource Survey for the Hudson County Sewerage Authority, 201 Wastewater Facility Plan--District II, Bayonne, Hudson County, New Jersey. Historic Conservation & Interpretation, Inc., Newton, N. J. For Malcolm Pirie, Inc., White Plains, N. Y. June 1978.

Rutsch, Edward S. and Ralph J. Leo, 1979. Stage 1B Cultural Resources Survey for the Hudson County Sewerage Authority, 201 Wastewater Facility Plan--District 1, Jersey City, North Bergen, Secaucus, and Kearny. Historic Conservation & Interpretation, Inc. for Havens and Emerson, Inc. and Hazen and Sawyer. August 1979.

Salzano, Thomas, 1995. Personal communication. Tax Assessor, Belleville Township. Belleville Town Hall.

Sanborn, misc. *Sanborn Insurance Maps*. The Sanborn Map Company, New York.

Sandy, William, 1994. Personal communication. Archaeologist HCI, Inc. Newton, New Jersey.

Savino, Guy, 1947. Plastic - Industrial Giant Launched 75 Years Ago in a Little Newark Plant. *Newark Sunday News*. April 6, 1947. New Jersey Chemical Industries Folder, Vertical File, Newark Public Library.

Scarlett & Scarlett, 1889. *Atlas of the City of Newark, New Jersey*. Scarlett & Scarlett, Newark.

Shaw, William H., 1884. *History of Essex and Hudson Counties, New Jersey*. Compiled by William H. Shaw. Volumes I & II. Everts & Peck, Philadelphia.

Sidney, J. C., 1850. *Map of Essex County, New Jersey*. Hiram A. Belding, Newark.

\_\_\_\_\_, 1849. *Sidney's Map of Twelve Miles Around New York, New York*. Tech Repro, Hackensack.

Skinner, Alanson and Max Schrabisch, 1913. A Preliminary Report of the Archeological Survey of the State of New Jersey. Department of Anthropology in the American Museum of Natural History. *State Geological Survey, Bulletin 9*. Trenton.

Talmadge, Quilla, 1995. Personal Communication. Management Specialist, Department of Parks, Recreation, and Cultural Affairs, Newark.



## BIBLIOGRAPHY (continued)

Urquhart, Frank J., 1913. *A History of the City of Newark, New Jersey; embracing practically two and one half centuries 1666-1913*. 2 volumes. The Lewis Historical Publishing Company, New York.

Walling, H.F., 1859. *Map of Essex County, New Jersey*. Baker and Tilden, New York.

Weir, 1886. Map No. 2. New Jersey State Archives. Trenton.

WPA, 1939. *A History of Belleville*. Compiled and written by the Federal Writers Project of the Works Progress Administration for the State of New Jersey. Reprinted by the Social Studies Department, Belleville High School. Typescript. n.d. Belleville Library.