Archaeological Phase I and II Investigations

The Detroit River International Crossing Study

MDOT
Michigan Department of Transportation

REDACTED

In Michigan, archaeological site locations are considered confidential and are not disclosed to the general public. At the request of the State Historic Preservation Office, information regarding archaeological site locations has been removed from this report.

February 2008

ARCHAEOLOGICAL PHASE I AND II INVESTIGATIONS OF THE DETROIT RIVER INTERNATIONAL CROSSING (DRIC) PROJECT DETROIT, WAYNE COUNTY, MICHIGAN

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ABSTRACT

Commonwealth Cultural Resources Group, Inc. was contracted by The Corradino Group (Corradino) to conduct a Phase I/II archaeological field study and literature evaluation of the proposed Detroit River International Crossing (DRIC) project area in southwest Detroit, Wayne County, Michigan. Field investigations of the project were concentrated on the plaza and upper river crossing bracketing the northern and eastern margins of National Register of Historic Places-listed Fort Wayne Historic District. Phase I/II archaeological field studies of the DRIC study plaza component did not encounter any evidence of prehistoric site use, inclusive of [redacted] reported to have been extant up through the third quarter of the nineteenth century. Historic-period middens (Features 1, 2, and 3 [redacted] were encountered [redacted]. Taken as a group, these three sites are recommended as being eligible for National Register of Historic Places listing under Criterion D, based on the information they may potentially offer relative to urban fringe householder lifeways in Detroit during the last two decades of the nineteenth century.

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1.0 INTRODUCTION

1.1 Purpose of Analysis and Background

In December 2005, the Michigan Department of Transportation (MDOT), through its consultant, The Corradino Group of Michigan, Inc. (Corradino), contracted Commonwealth Cultural Resources Group, Inc. (CCRG) to conduct archaeological investigations in support of the Detroit River International Crossing (DRIC) study, City of Detroit, Wayne County, Michigan. The DRIC study is regulated by the Federal Highway Administration and, as such, it is subject to review under the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA) of 1966, as amended (Public Law 89-665), and the NHPA implementing regulations (36 CFR 800). In Section 106, the NHPA requires that proposed projects be evaluated for effects they may have on cultural resources listed in or eligible for listing in the National Register of Historic Places (NRHP).

Prior to conducting fieldwork, CCRG, in consultation with MDOT and the Michigan State Historic Preservation Office (SHPO), identified the Area of Potential Effect (APE), i.e., that area where the project could have direct or indirect effects on historic resources. Direct effects includes impacts that could physically alter the resource; indirect effects are primarily impacts to a resource's setting and include visual or noise intrusions and changes to traffic (vehicular and pedestrian) patterns. The DRIC APE was developed to encompass the Area of Concern (possible plaza locations) and the Area of Potential Acquisition (property possibly required for bridge pier siting and the connection of the planned plaza to the existing surface streets and I-75 where a new interchange will be constructed) (see Demeter and Weir 2006).

The archaeological APE encompasses the potential construction footprint of the proposed plaza and the proposed upriver X-11 bridge routing (Figure 1.0-1). Two proposed downriver crossings span the former location of the Solvay Process Company. These were omitted from the present study due to the high probability of encountering hazardous wastes or interfering with ongoing remediation plans. The APE acquisitions extending from the plaza to the north of I-75 exhibited only limited pre-1910 development. This situation, combined with the tendency toward post-World War I industrialization, had earlier identified this district as a zone of low archaeological potential (Demeter 1984). Much of the area has subsequently been subjected to demolition and reconstruction episodes, with numerous buildings either vacant or abandoned (see Demeter and Weir 2006).

A significant proportion of the archaeological APE consists of open tract cleared by earlier demolition activities that have been ongoing over the past quarter century. Much of this area realized its initial development during the last quarter of the nineteenth century. Phase I/II archaeological testing in this component of the project was carried out with the use of a rubber-tired backhoe. Over 1,000 feet (305 m) of trench was excavated. Although this study was largely focused upon area historical development, other efforts were also directed towards the rediscovery of two prehistoric mound locations that were presumably destroyed during the mid- through late nineteenth century.

The DRIC archaeological report was primarily authored by C. Stephan Demeter, CCRG's principal historical archaeologist. Other contributors include Kent C. Taylor, who authored the artifact analysis; Beverly Smith, faunal remains; and Daniel Hayes and G. William Monaghan, Ph.D., who were responsible for the geoarchaeological aspect of the study. Donald J. Weir served as project manager. Nancy F. Demeter edited the report, James Montney prepared graphics, and Cynthia White coordinated report production.

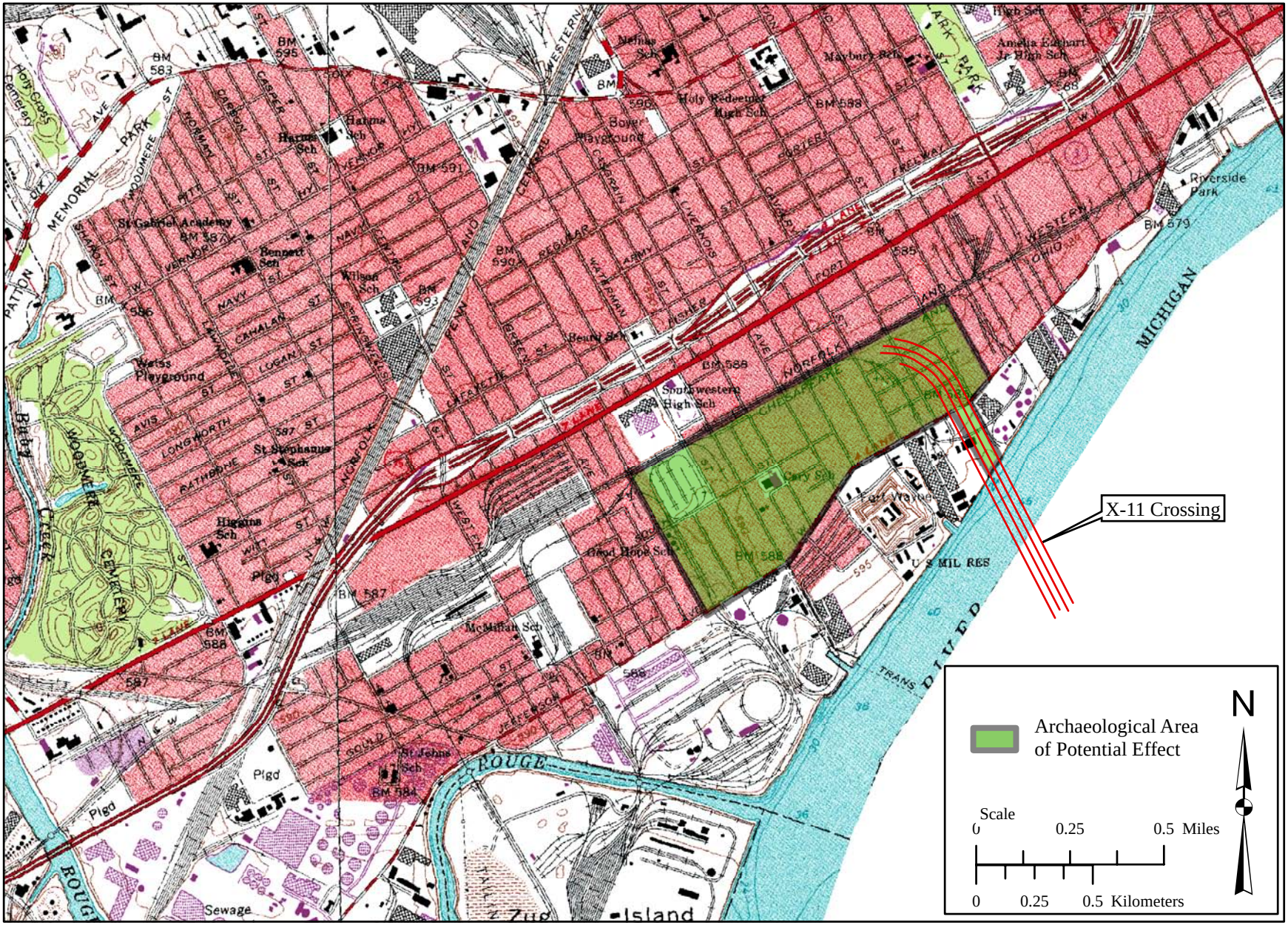


Figure 1.0-1. Detroit River International Crossing Archaeological Resources Project Location

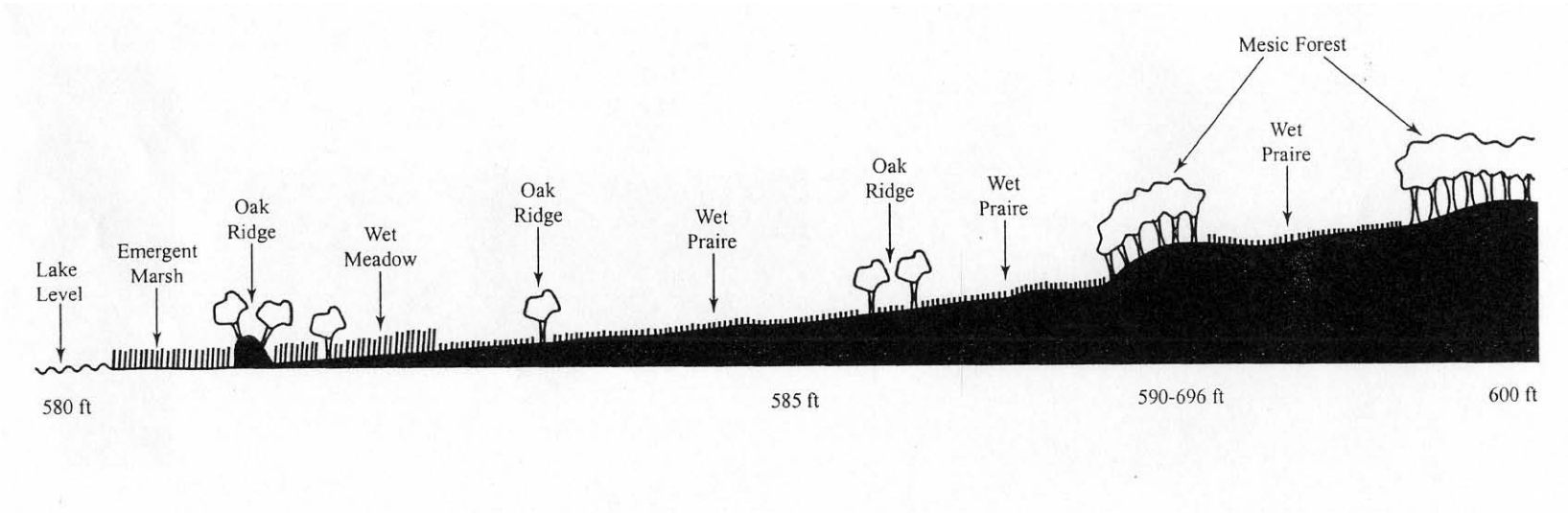
1.2 Physiographic Overview

The DRIC study area encompasses an urbanized environment characterized by fragmented residential neighborhoods, open space, and monolithic buildings defining the city's old industrial center. In terms of ecosystem classifications, Detroit and its suburbs (extending towards Ann Arbor, Monroe, and Mt. Clemens) are categorized as the Detroit Subdistrict (Washtenaw District-Region I: Southern Lower Michigan), possessing a higher heat sum than the surrounding subdistricts and a correspondingly longer growing season (175 days). The Detroit Subdistrict has been dubbed with the alternative designation, "Heat Island" (Albert et al. 1986:14). Prior to urban industrialization, this zone would have been classified as part of the Maumee Subdistrict dominated by an extensive lake plain running along the eastern shore of the Lower Peninsula from the western end of Lake Erie to Mackinac (Albert et al. 1986:8, 14, 17, 18, 19, 23). This undulating clay plain is dissected by sandy glacial drainageways and narrow fossil beach ridges. Vegetation cover originally ranged from mesic to swamp forest species along with oak savannah, oak-hickory forest, and both wet and dry prairie plant groups (Albert et al. 1986:14; Albert 1991) (Figure 1.2-1).

At the time of initial Euroamerican settlement, the southwest Detroit region was a mosaic of wetland and forest habitats interspersed between the higher fossil beaches of the Lower Rouge (580 feet [176.8 m] amsl), Higher Rouge (590 feet [179.9 m] amsl), Elkton (610 feet [186 m] amsl), and Grassmere (635 feet [193.6 m] amsl) shorelines (Sherzer 1916). Behind these beach ridges, a network of seasonally inundated low grounds gave rise to extensive grassland or wet prairie zones nominally referred to in the project vicinity as the Prairie Ronde (Figures 1.2-2, 1.2-3, and 1.2-4).

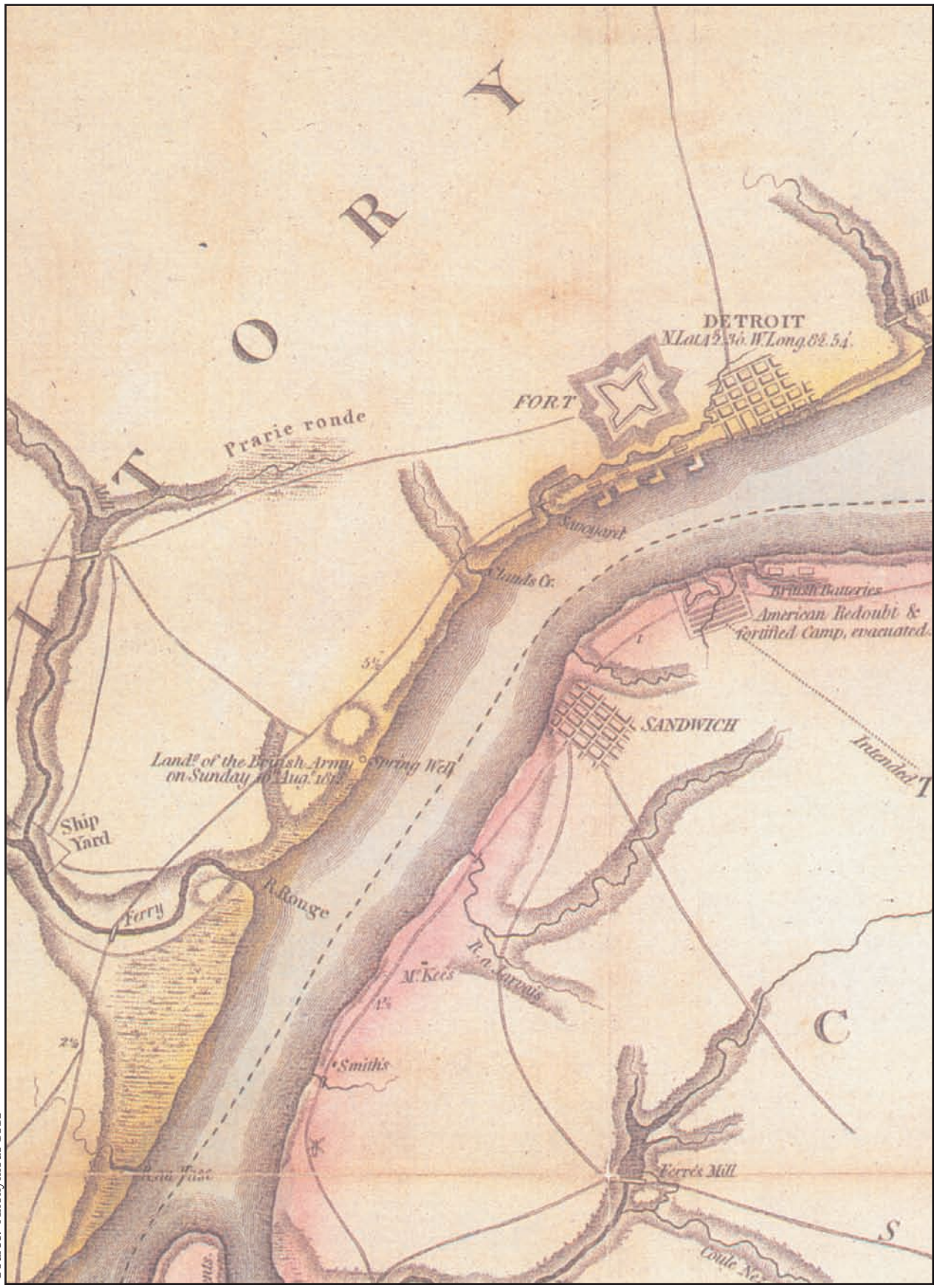
High ground components in the near vicinity of the project, exceeding 595 feet (181.4 m) amsl (above mean sea level), occur along a line running from the Ambassador Bridge to the railroad yard at the Dix-Vernor-Livernois intersection and in association with historic Fort Wayne. The lands forming the DRIC study area are flat with little to no variation in surface contour. The point is amply illustrated by its roadways. The north-south grade of Junction Avenue, for instance, stands at 585 feet (178.4 m) amsl at both its West Fort and West Jefferson intersections, a distance of nearly 2,400 feet (731.7 m). At Waterman Avenue the West Fort and West Jefferson intersections are separated by a distance of nearly 3,200 feet (975.6 m), but remain fixed at a more or less constant 588 feet (179.7 m) amsl. Early maps offer a composite view of the area as consisting of open meadows and wet prairies bracketed by scattered woodlots, with intermittent streams outflowing into the Detroit and Rouge Rivers. The nature of these grounds was thoroughly changed with the creation of an artificial drainage channel, the Prairie Ronde Drain which collected runoff into both river systems (Figures 1.2-3 and 1.2-5). The maintenance of this open ground habitat was the result of both natural and human factors. Seasonal burn-overs, due to lightning strikes and hunting practices followed by Indian peoples, served to reduce forest growth and expand area grasslands. Early accounts provide a useful perspective of the magnitude of human impact upon this environment prior to the introduction of drainage modifications, stock raising, and plow agriculture. In hunting the wet prairies of northwestern Ohio, between the Portage and Maumee Rivers, native peoples are commonly reported to have gathered in the fall to conduct a *ring hunt*.

> This is made by setting fire to the leaves and grass in a circle of fifteen or twenty miles; and the fire drives all the game into a pound, where they are shot down in immense quantities. Sometimes as many as five hundred deer have been killed on one of these occasions [Finley 1868:384].



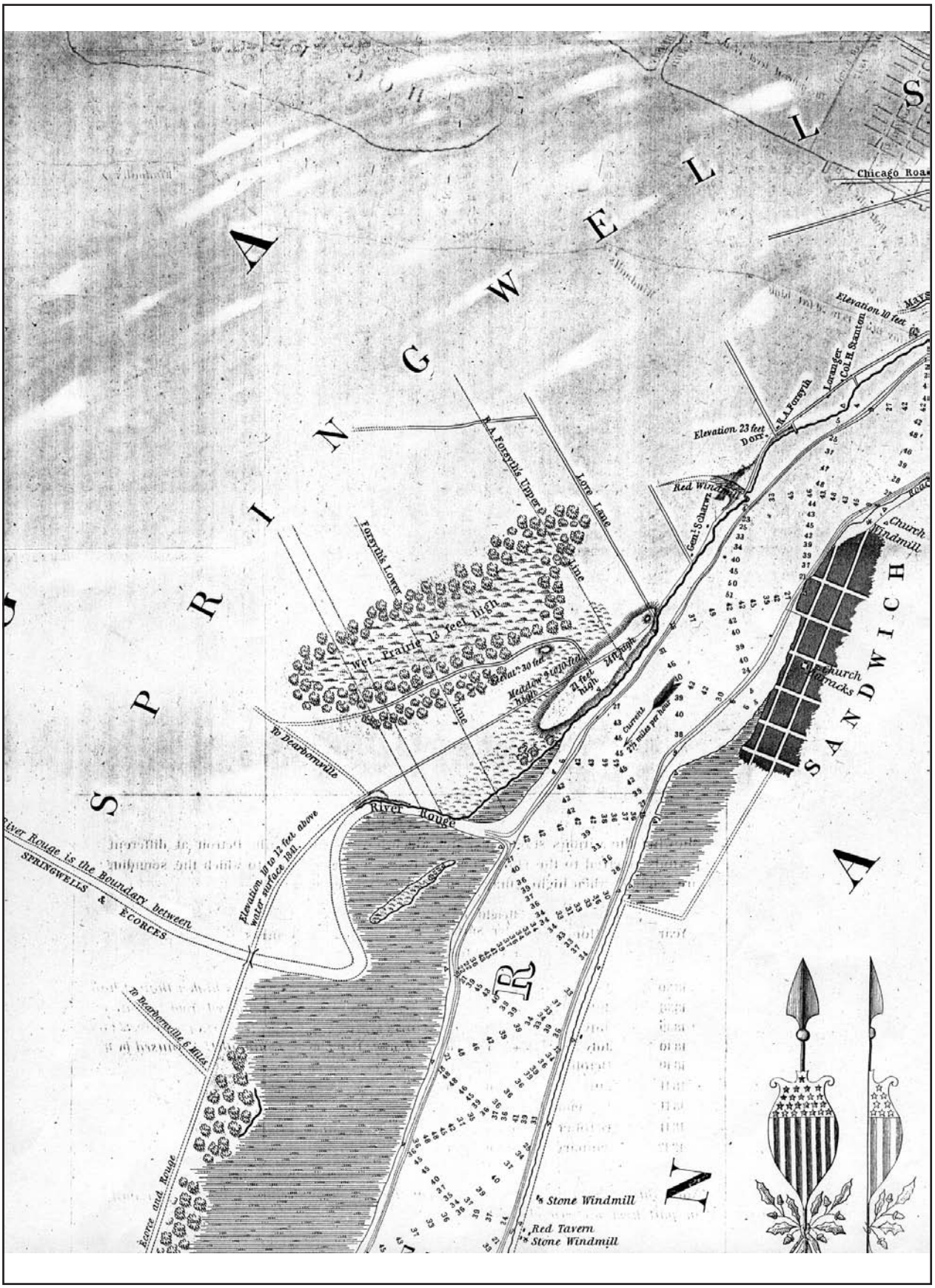
Source: Albert 1991

Figure 1.2-1. Presettlement Lakeplain Habitat



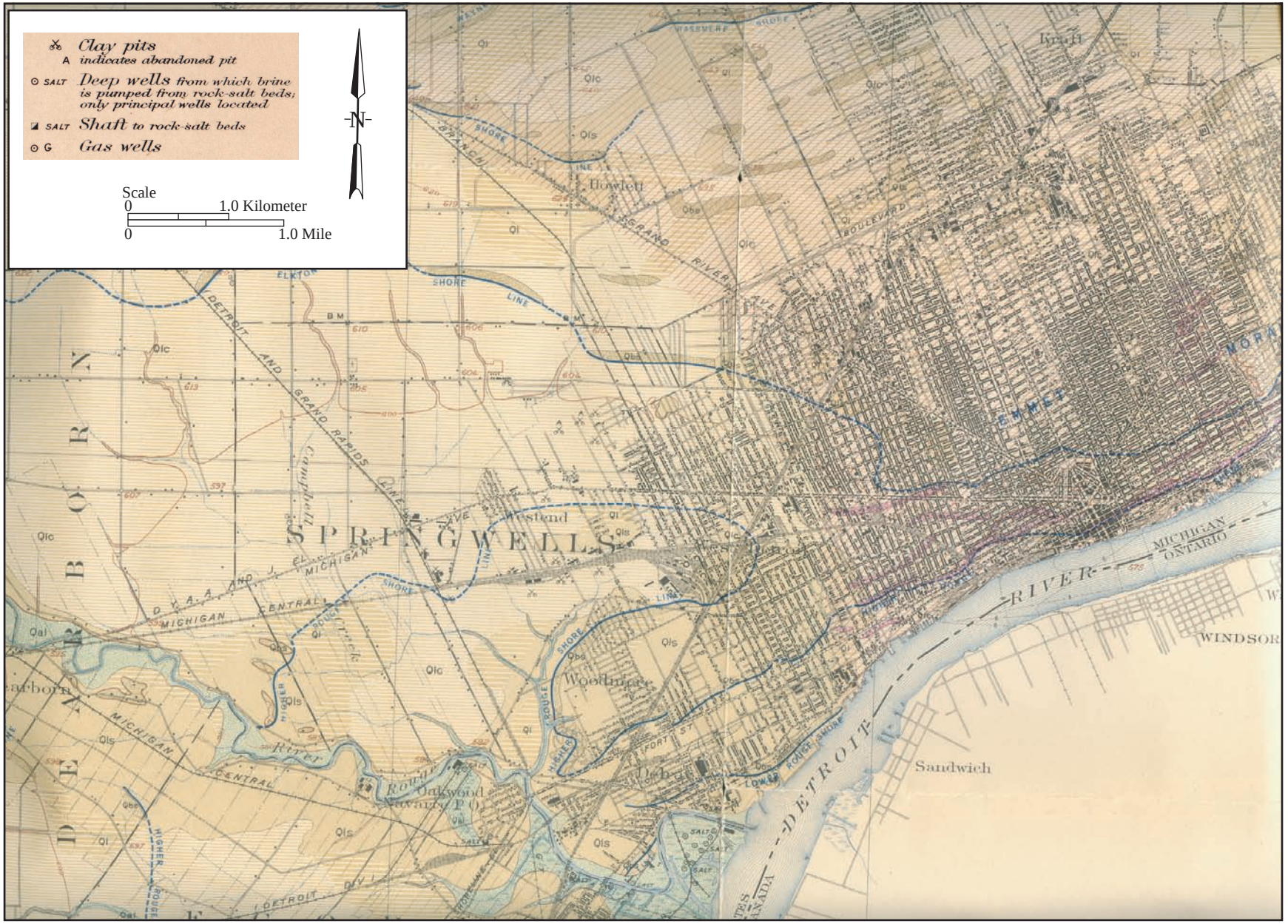
Source: Anonymous 1813

Figure 1.2-2. DRIC Project Vicinity, 1813



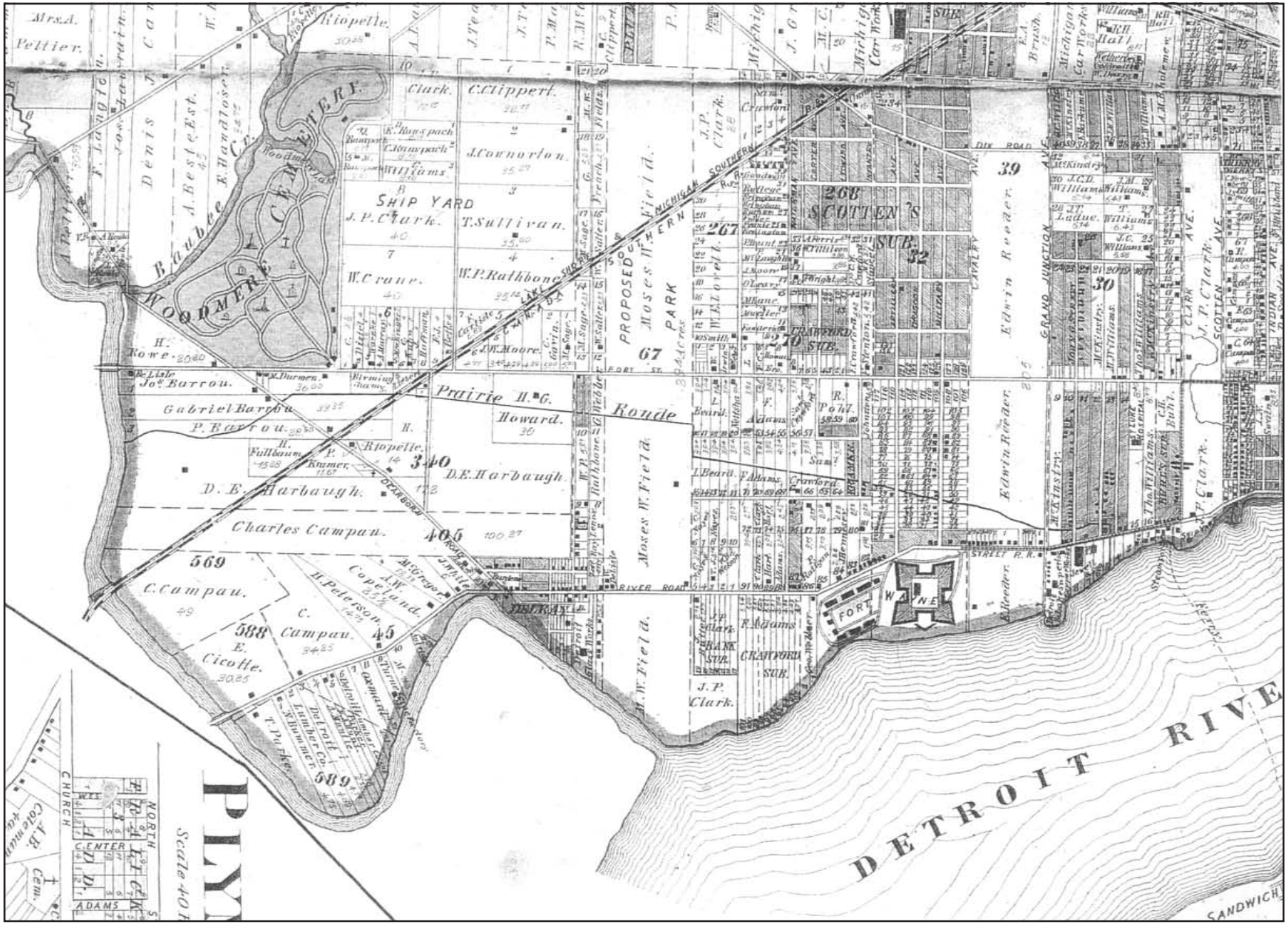
Source: Macomb and Warner 1841

Figure 1.2-3. DRIC Project Vicinity, 1841



Source: Sherzer 1916

Figure 1.2-4. DRIC Project Vicinity Drainage and Soil Features, 1904



Source: Belden 1876

Figure 1.2-5. DRIC Project Vicinity, 1876

The use of these lands for agricultural purposes and as hunting range made them appealing to both Native Americans and early European settlers. Seasonal burning as an approach to hunting or clearing intrusive forest and dead growth was practiced by both groups (Albert 1991:4; Demeter 1993). Although the territorial legislature had attempted to curtail the use of fire in more heavily populated areas as early as 1817, it continued to remain an important land management tool well into the 1830s. Writing about his experiences as a boy in Detroit during this period, Friend Palmer (1906:25) later stated that:

> The county around the mouth of the River Rouge was low, flat and marshy, covered with a most luxuriant growth of wild grass (marsh hay), that any one could cut if he so desired. What was not cut was usually set fire to in the winter and would burn for days, giving the people of the city quite a scene, at night illuminating the sky above the marsh and showing vividly the flames leaping through the dry grass.

Early accounts referred to the existence of those open grounds as being both a hindrance and benefit to the Detroit settlement. Cadillac had offered his superiors a glowing account of Detroit in 1702 describing the landscape as consisting of "large clusters of trees surrounded by charming meadows." These meadows supported a growth of grasses "so high that a man can scarcely be seen" (Michigan Pioneer and Historical Society [MPHS] 1904[33]:133, 135). Six years later, Francois D'Aigremont forwarded yet another view of the settlement which was far less than glowing. Cadillac's meadow lands were depicted in an entirely different light.

> The officers of Detroit who have sent you word . . . that there was no better or more beautiful country in the world have imposed on you. The whole surface of the land, for about nine or ten inches in depth, is nothing but sand; and under this sand is a clay soil, so strong and so unbroken in its extent that water never passes through it. From this it follows that places which are quite on a level could never be drained, and that the further parts of the woods, where the slope leads down, are completely soaked, as well as the greater part of the prairies which are of enormous extent, and should rather, for this reason, be called marshes [MPHS 1904 (33):442].

Over a half century later, in 1768, John Lee visited the recently acquired British post. His account of the community validated Cadillac's earlier optimistic view. Lee depicted Detroit as the major provision center for the upper Great lakes, producing an abundance of wheat flour and Indian corn, in quantities "never known to fail." The farm frontages along the river were "Flatt, and the Wood not thick" (Burton 1911:41). His further observation referring to the interior as "a great extent of very fine clear plain, a little behind the first Woods" provides added substance to Cadillac's earlier description. By the early 1790s the conversion of the Detroit river margin to pasture land was well underway. Jacob Lindley's (1910:597-598) observations relative to farm development in 1793 fully confirm this transition.

> From Lake Erie up to this place, is eighteen miles. Each farm is laid out about forty perches on the river – mostly improved, with houses, gardens, and orchards; and extending back, where the land is level, and abounds with grass, and where hundreds of cattle thrive exceedingly, producing beef, butter, cheese, veal, etc., in plenty. Their winters are about four months, in which it is requisite to feed stock. The country, at present, is excellently adapted for raising live stock. The soil is mixed, and various, clay, gravel, sand etc. Here are fine fields of wheat and peas, but too wet for corn. The whole country is level, to a fault, without a stone.

Agricultural development of the riverfront had been initiated during the early eighteenth century as a result of European and Native American village habitations. Later eighteenth-century European land use was more intensive in terms of populational demands, producing a far greater impact upon natural plant communities and soil regimes due to plow cultivation. The conversion to this means of production was, however, not actually completed until well into the nineteenth century.

By the 1830s, newcomers into the region were more fully aware of the potentials of wet prairie farming. Such grounds were described in Lanman's (1839:11) early history of the newly admitted State of Michigan as consisting of:

> tracts which are generally in part or in whole covered with water; and they produce a long coarse grass that is only favorable for winter stock, and make a fine ranging ground for horses and cattle in the spring. When drained, these wet prairies may be converted into valuable meadow land.

1.3 Prehistoric Background

1.3.1 Paleoindian (10,000 B.C. to 8000 B.C.)

Paleoindian groups are the earliest known inhabitants of North America. Paleoindian occupation of the area probably began as early as 10,000 B.C. These populations expanded into the Great Lakes region following the retreat of the Wisconsinan glaciers and the drop in glacial lake levels. By about 10,500 B.C. in the Lake Erie basin, the retreat of glacial ice from the isostatically depressed Niagara peninsula opened an outlet for Lake Erie below the elevation of the present lake level, which resulted in the draining of the entire lake basin east of Sandusky Bay (Coakley and Lewis 1985). Lake levels remained low until approximately 5050 B.C., and the Maumee Bay remained a dry plain traversed by the rivers and creeks that currently flow through the region (Brose and Essenpreis 1973:71; Coakley and Lewis 1985; Forsyth 1973). This drop in the elevation of Lake Erie provided a variety of shoreline environments that were progressively colonized by new plants. The changing environmental conditions also resulted in an increase in plant and animal diversity along river valleys and inland lakes as well as the lake margins (Fitting 1975:37). Though it is likely that some Paleoindian sites are now underwater, several major sites in Michigan and Ontario are located away from relict shorelines (Ellis and Deller 1990:50).

Although Paleoindian populations are traditionally viewed as possessing a focal subsistence pattern based on the exploitation of Pleistocene megafauna, other resources were also exploited. A review of Paleoindian hunting and land-use practices characterized these early groups as generalists in relation to large terrestrial faunal resources (including caribou and elk), and opportunists in relation to all other food resources (Kelly and Todd 1988:223).

Two adaptations are recognized for this period. The early Paleoindian hunters exploited the recently deglaciated environment that has been characterized as spruce parkland and/or a mosaic of diverse microhabitats (Brown and Cleland 1969). Large fluted, lanceolate projectile points, often with concave bases, as well as large chopping implements, gravers, and unifacial scrapers represent the material culture of the period prior to 8500 B.C.

Late Paleoindian hunters expanded across frontiers that opened as the glacial fronts retreated northward. Fluctuations in the Great Lakes water levels provided a variety of shoreline environments, which were progressively colonized by new plants. The changing environmental conditions also resulted in an increase in plant and animal diversity along river valleys and inland

lakes, as well as the lake margins (Fitting 1975:37). In response to changes in the faunal and floral composition of the region, further adaptational shifts were necessary. Projectile points such as Hi-Lo and unfluted lanceolate styles appear at this time, and prehistoric tool assemblages reflect a regional subsistence orientation based on local resource availability and scheduling.

Paleoindian sites are sparse in the immediate vicinity of the project area and in southeast Michigan in general. The nearest well-documented Paleoindian occupation in southeast Michigan is the Holcombe Beach complex of Paleoindian occupations. These are located just south of the Thumb in Macomb County (Fitting et al. 1966). The Holcombe Beach site probably dates to the beginning of the Late Paleoindian period.

1.3.2 Archaic (8000 B.C. to 550 B.C.)

Early Archaic (8000 B.C. to 6000 B.C.)

An apparent transition in artifact assemblages that defines the Early Archaic period takes place ca. 8000 B.C. The actual timing of this change is still poorly understood, with some late Paleoindian point styles persisting in certain areas to ca. 7500 B.C. A direct transition is suggested by some side-notched points in Ontario, which, except for the notches, are identical to Hi-Lo points (Ellis et al. 1990:71). The most recognizable artifacts, however, are projectile points of the Kirk, MacCorkle, LeCroy, St. Albans, Kanawha Stemmed, St. Charles, Thebes, and Decatur types. Other artifacts from the period include groundstone implements, choppers, knives, and scrapers.

This diversity of projectile point forms hints at increased regional population segmentation and/or modifications in subsistence activities. A more generalized form of subsistence involving a greater balance of hunting, fishing, and gathering of plant foods appears to be established. Sites tend to be small and ephemeral, although some rather extensive sites, such as Nettling in southern Ontario, are known (Ellis et al. 1990:70).

Although reference is oftentimes made to the hypsithermal warming (also altithermal and xerothermic) as the primary environmental variable driving Archaic shifts in subsistence (see e.g., Branstner 1990), the exact nature, timing, and duration of climatic shifts is a matter of debate (see e.g., Cavallo 1987). Assuming that such shifts in the biotic regime and climate were periodic rather than singular, Arnold's (1977) view of Early Archaic adaptations in the River Raisin drainage basin, southeast of the project area, is most appropriate. Arnold's analysis suggests that Early Archaic foragers exploited a wide area in small groups and utilized a variety of resources. Although this model is somewhat general, it underscores an adaptation that anticipated spatial and temporal variability in resource distribution.

Middle Archaic (6000 B.C. to 3000 B.C.)

Middle Archaic site densities in southeastern Michigan and throughout the state would appear to diminish. The paucity of Middle Archaic sites between about 6000 B.C. and 3000 B.C. is in part due to a lack of sites producing Stanly Stemmed, Eva, and Morrow Mountain projectile points, which are diagnostic of this period. It should be pointed out, however, that the geographic distribution of these points is primarily south and east of Michigan and that, with one exception (see below), diagnostic artifacts are poorly known for this time period.

In 1981, Michigan State University excavated the Weber I [redacted] site in Saginaw County. The site dates as early as 4280 B.C. (Lovis 1989). Large side-notched points with ground haft elements

were recovered. These points are comparable to variously named side-notched types that date to between 2500 B.C. and 5000 B.C. throughout the Northeast and Midcontinent (Lovis and Robertson 1989). Other excavated Middle Archaic sites like Weber I, unfortunately, are lacking in southeastern Michigan.

In southwestern Ontario, broad-bladed side- and corner-notched points are assumed to date to the same period as those from Weber I and are not associated with "Laurentian assemblages" like those in southeastern Ontario (Ellis et al. 1990:92). Towards the end of the Middle Archaic period, Brewerton points begin to appear. Recent dates suggest that such points may date to as early as 3000 B.C. to 4000 B.C. (George and Davis 1986).

If Weber I can be used as an example of the Middle Archaic adaptation in southeastern Michigan, then a continuation of the diffuse subsistence pattern of the Early Archaic may be posited. Weber I yielded artifactual and subsistence remains suggestive of a small, late summer/fall campsite indicative of continued high residential mobility at this time (Robertson 1987). Subsistence remains from the site include wapiti, deer, goose, raccoon, turtle, fish, walnut, acorn, blackberry, grape, elderberry, and mustard seed (Egan 1988:92; Smith and Egan 1990).

Late Archaic (3000 B.C. to 550 B.C.)

In contrast to earlier Archaic periods, Late Archaic period adaptations have received considerable attention. Although most research has centered on Saginaw Valley sites northwest of the project area, inferences regarding typology, subsistence, and settlement can generally be applied in establishing the cultural context for southeastern Michigan.

The chronology for the Late Archaic has been synthesized by Lovis and Robertson (1989). In their synthesis, a gap in projectile point types exists between 3000 B.C. and 2500 B.C. Based on research in New York (Ritchie and Funk 1973:50) and Ontario (Ellis et al. 1990:86), Brewerton points appear to persist to at least 2500 B.C. Subsequently, Brewerton points are replaced by a broad-bladed point phase termed Satchell, which dates to ca. 2500 B.C. to 1550 B.C. A terminal Late Archaic small point phase follows, lasting some 1,000 years. Point styles include small notched forms, small expanding stemmed forms, and narrow-point forms (Lovis and Robertson 1989:236-237). In contrast, a chronology for southern Ontario places narrow-point forms before broad-point styles (Ellis et al. 1990:93), which is more consistent with Mid-Atlantic and New England chronologies.

By the Late Archaic period, modern forest communities were well established (Holman 1990; Lovis 1989), and the elevation of Lake Erie and Lake Huron had stabilized at their present elevation (Brose and Essenpreis 1973:71; Coakley and Lewis 1985; Forsyth 1973). Within this dynamic environmental context, Archaic populations continued to develop an increasingly "diffuse" subsistence pattern (Cleland 1976) and a larger and more varied tool kit. Groundstone tools are a common element of Late Archaic artifact assemblages. As with the Middle Archaic, grooved axes were still present; however, chisel-shaped celts of similar rock types are also found. Slate was also a common raw material. A variety of abstract forms, termed bannerstones and birdstones, are often found in conjunction with these sites. Fabrication of copper tools first appears during the Late Archaic.

Development of ceremonial burial complexes also occurs during the Late Archaic period (Fitting 1975:81-90; Mason 1981:181-235). Subsumed under archaeological constructs such as Glacial Kame, Red Ocher, and Old Copper, formal burials of these "cultures" are associated with exotic

grave goods including Turkey-tail points, red ochre, copper and shell artifacts, and/or elaborate groundstone forms.

The Late Archaic period is also characterized by an increase in site frequency and, in turn, a seeming increase in population size, compared with the previous periods. In southeast Michigan, these sites are found in both the lake plain and interior uplands (Brose and Essenpreis 1973; Peebles et al. 1979). Closer to the present project area, physiographic differences in the settlement localities may be correlated with the scheduling of seasonal resource use (Ozker and Shott 1978:58).

1.3.3 Woodland (600 B.C. to A.D. 1600)

Early Woodland (600 B.C. to 200 B.C.)

The Woodland period in Michigan is distinguished from the Archaic period by several traits, including ceramics, burial mounds, new artifact types, and stylistic shifts (Mason 1981:202). Pottery first appears between about 600 B.C. and 500 B.C. in southern Michigan (e.g., Fitting 1972; Garland 1986), northern Ohio (Shane 1967) and southern Ontario (Spence and Fox 1986).

The early ceramics are crude, thick-walled, poorly fired, with massive temper. The interior and exterior surfaces are often cordmarked. Early ceramic types in southern Michigan and northern Ohio include Marion Thick, Schultz Thick, Leimbach Thick, and Leimbach Cordmarked (Fischer 1972:142-147; Garland 1986:62; Mason 1981:201-235; Shane 1967:105-113). The Leimbach ceramic types are particularly noteworthy because they include traits characteristic of forms found in the northeastern Great Lakes. Shane (1967:112) suggests that the Leimbach assemblage and the lacustrine orientation of the site, "undoubtedly reflects its position at the periphery of the western Great Lakes area, adjacent to the Ohio Valley and the Northeast." Ties to the Adena phase of the Scioto tradition, however, are also seen (Shane 1967:117).

The Early Woodland period is also characterized by a shift in lithic technology. Projectile points of this period are most commonly stemmed forms such as Schultz Stemmed (Kramer pointed) and Adena Stemmed points (Fitting 1975:92-93; Justice 1987). These attributes suggest influence from Illinois coming into western Michigan and extending eastward into southeastern Michigan and northwestern Ohio. Influences from the Ohio Valley can also be seen, as suggested by the Robbins Stemmed point from the Stone School site [redacted] (Wobst 1965:63).

To the east, in Ontario, Early Woodland ceramics are more closely related to the Vinette ceramics of New York and southern Quebec, and Meadowood points predominate (Spence and Fox 1986). Interaction is clearly with eastern manifestations (Spence and Fox 1986; Spence et al. 1990:131) and is suggestive of a sociopolitical boundary falling along the St. Clair River. Kramer points are rare in Ontario, although some do appear in the southwestern portions of the province (Spence et al. 1990:131). Conversely, Meadowood components are not widely distributed in Michigan, although they do occur in Monroe County (Brose and Essenpreis 1973) and may be associated with the slightly earlier (terminal Late Archaic) and/or aceramic Meadowood occupations (Lovis and Robertson 1989). Interaction and/or movement between Michigan and Ontario is suggested by the Conservation Park site, where Meadowood points are often made on Onondaga chert (Beld 1991).

Interpretations of Early Woodland settlement/subsistence patterns are variable and daunted by the limited number of well-documented sites. The Schultz site [redacted] in the Saginaw Valley and the Wymer [redacted] and Eidson [redacted] sites in southwestern Michigan are among the few sites for which there are detailed subsistence data. These sites reflect persistence of a hunting and

gathering adaptation. Cultigens (squash [*Cucurbita pepo*] and sunflower [*Helianthus annuus*]) first appear during the terminal Archaic and Early Woodland (Garland and Clark 1990; Ozker 1982), although their importance in the local economy is debatable.

Middle Woodland (200 B.C. to A.D. 500)

The Middle Woodland period in Michigan is often defined as exhibiting a definite Hopewell cultural influence through ceramic stylistic elements and elaborate burial procedures. Large conical burial mounds are associated with the Middle Woodland period. These structures are often located adjacent to villages and may reflect territorial markers.

Middle Woodland artifact assemblages include ceramics exhibiting dentate and rocker stamping, incising, trailing, punctating, and zonation (Fischer 1972:152-179; Mason 1981:248; Stothers et al. 1979:51). A wide variety of expanding stemmed and corner-notched projectile point forms, exotic grave goods, copper tools, marine shell artifacts, and specialized tools such as bladelettes made from nonlocal cherts, are also found at Middle Woodland sites. Although Hopewellian artifacts have been found at several Middle Woodland sites in southern Michigan and northern Ohio, it is noteworthy that they are not found in the same quantities and contexts as they are at sites in the Hopewellian heartlands of Ohio and Illinois. This suggests interaction and trade rather than a direct socio-economic relationship.

Subsistence and settlement changes are also characteristic of the Middle Woodland period. Recent analyses of Middle Woodland subsistence assemblages from the Saginaw Valley suggest that there was an increasing reliance on wetland and aquatic resources and potential use of native cultigens (Egan 1990, 1993; Stothers et al. 1979:54). In addition, maize appears for the first time in the Great Lakes at the Eidson site, in a feature dating to A.D. 300 (Garland and Clark 1990:415). Associated with these shifts in the subsistence pattern is a shift in the settlement pattern toward the use of base camps (e.g., Schultz site [redacted], Fletcher site [redacted], and Dodge site [Ohio]), which were occupied for multiple seasons and supported by satellite extractive camps from which seasonally available resources were exploited (Stothers et al. 1979:54).

In southwestern Ontario, Middle Woodland manifestations at this time have been designated as the Couture complex. The complex extends over an area defined by the drainages for the St. Clair River and the northwest shore of Lake Erie. This area corresponds roughly to the northern limits of the Carolinian biotic province (Spence et al. 1990:144). Thus, similar environments were being exploited, and interaction with groups in both Ohio and Michigan probably occurred on a regular basis (Spence et al. 1990:147). Spence, et al (1990:168-169), suggest continuity between the Couture complex and the Late Woodland Western Basin materials of Michigan, Ohio, and southwestern Ontario, whereas relationships with the Saugeen complex to the north and east are less than clear. Stothers et al. (1979), however, would lump all southeastern Michigan, southwestern Ontario, and northwestern Ohio Middle Woodland groups into a Western Basin Middle Woodland taxon.

Late Woodland (A.D. 500 to A.D. 1600)

The Late Woodland period is characterized by an increase in population as well as in the size and number of aboriginal sites. The assumption is that agriculture facilitated a shift to permanent village life, with task-specific camps established outside of the main village sites. Evidence suggests that the introduction of more productive, tropical cultigens played an important role in the evolution of the Late Woodland settlement system and social organization (Brashler and Holman 1985; Fitting 1975:144; Krakker 1983).

The Late Woodland cultural sequence in southeastern Michigan, northwestern Ohio, and southwestern Ontario centering around the drainages of western Lake Erie, the Detroit River, Lake St. Clair, the St. Clair River, and lower Lake Huron can be collectively referred to as the Western Basin tradition (Prahl et al. 1976; Stothers 1975). Although there is disagreement over precise terminology, classifications, and distinctions, the basic Late Woodland cultural sequence, particularly as it applies to Michigan, ultimately rests on Fitting's (1965, 1975) distinctions between the Wayne and Younge traditions.

The Wayne tradition is defined ceramically by Wayne ware, a transitional Middle to early-Late Woodland pottery style that is globular in form. The bodies of these vessels are cordmarked and the rims are plain. Current debate centers on whether Wayne wares represent a distinct cultural manifestation (Brashler 1981; Halsey 1976) or if they are simply a common Woodland ceramic type used by several groups throughout the region (Krakker 1983; Lovis 1990).

Projectile points at this time are predominantly notched forms, such as Jack's Reef corner-notched. Small pentagonal bifaces also occur. Other artifacts characteristic of the early-Late Woodland period are rolled copper beads, copper awls, small celts, and marine shell beads. Most Wayne tradition sites in southeast Michigan are burial sites, indicative of the Wayne mortuary tradition, dating to ca. A.D. 500 to A.D. 1000 (Fitting 1965; Halsey 1976, 1981). Wayne decorated wares represent the dominating ceramic type recovered during the 1944/1945 excavation of the Fort Wayne Mound [redacted].

Settlement and subsistence adaptations during the Wayne tradition in southeastern Michigan (Krakker 1983), northwestern Ohio (Stothers and Yarnell 1977), the Saginaw Valley (Brashler and Holman 1985:145), and Ontario (Murphy and Ferris 1990:233) were probably broadly similar to those of the preceding periods, although there is some evidence for maize horticulture as early as the Riviere au Vase phase (Krakker 1983; Schurr and Redmond 1991). Analysis of osteological collections from the Gard Island 2 site [redacted], indicates that early-Late Woodland, Riviere au Vase populations were involved in incipient maize horticulture (Schurr and Redmond 1991). Krakker's (1983) analysis of Late Woodland settlement and subsistence data from southeastern Michigan indicates, however, that there is little direct (archaeobotanical) evidence for maize agriculture before A.D. 1000, nor is there any indication of an obvious shift in settlement location toward sites with greater access to arable land until after A.D. 1300.

A cultural shift approximately 1,000 years ago is indicated when Younge tradition ceramics begin to replace Wayne tradition ceramic styles. Younge tradition ceramics are characteristically large, globular to elongated vessel forms that are usually collared and often castellated, exhibiting complex rim and shoulder designs. One variety, Springwells net-impressed, was defined on the basis of sherds recovered from intrusive deposits in the Fort Wayne Mound [redacted]. Triangular Levanna points also appear and are subsequently replaced by Madison projectile points.

Far-reaching changes in diet and settlement, attributable to the use of corn and other domesticates, occurred at this time. In southeastern Michigan, populations gradually shifted towards locations where soil conditions were more suited to agricultural production. In addition, late Younge tradition villages are significantly larger sites than those of the preceding phases, suggesting shifts in social organization to accommodate these subsistence changes (Krakker 1983). Camps were also occupied to facilitate exploitation of seasonally available natural resources that were not available within the immediate vicinity of the villages. Thus, while villages were located in close proximity to easily tilled soils, seasonal camps were located along headwaters of river systems in upland areas (Stamps

and Zurel 1980:139). These upland settlements were strategically located to take advantage of habitats that included starchy roots and tubers, deer, small mammals, and waterfowl.

During the Wolf phase of the Younge tradition, Upper Mississippian influence, if not its presence, was felt in this region. Parker Festooned ceramics reflect an abrupt shift in style (Fitting 1975:159) that may be the result of Upper Mississippian influence (Mason 1981:346-350). Stothers and Pratt (1981:99), in fact, contend that the Wolf phase should be considered a separate and intrusive Upper Mississippian-influenced phase unrelated to the Younge tradition. Regardless, the effects of this influence on settlement and subsistence are unknown because very little research has been conducted for this portion of the Late Woodland period (Krakker 1983; Mason 1981:246-350).

1.4 Historic Background

1.4.1 Native American Settlement

Information relative to Native American land use in the Detroit region prior to the establishment of Fort Pontchartrain is conjectural. Incessant warfare between the Iroquois and the western tribes over control of the regional fur trade had resulted in large scale displacement of Native peoples throughout the last half of the seventeenth century. With the implementation of a French-negotiated peace between the warring factions in 1701, a degree of stability was achieved. Iroquois acquiescence to the French occupation of the Straits (of Detroit) also opened the region to settlement by other Native groups such as the Wyandot/Huron, Ottawa, and Miami. These movements into new territories and the opening of alternative economic opportunities tended, however, to create their own sets of problems as traditional boundary networks were reshaped or discarded in order to take advantage of new situations.

The intrusion of allied Fox and Mascouten into the region at the invitation of the French in 1712 threatened to set aside one such priority arrangement with regard to the position of the lower lakes groups as middlemen in the interior trade. The fact that these new settlers also reportedly aimed at bypassing the French supply monopoly, by dealing directly through the Iroquois for English goods, soon led to open warfare. The destruction of the Fox-Mascouten at Detroit set the stage for a long period of intermittent, and sometimes concerted, hostilities between the French and Fox-Mascouten groups in the Wisconsin region. The threat of reprisals led to a certain amount of shifting in settlement among native peoples involved in this conflict.

It was at this time that the Potawatomi from the southeast of Lake Michigan abandoned their villages and began to appear in increasing numbers around Detroit. As of 1714, they were reported to be residing in a village between the fortified French and Huron settlements having “not as yet had time to erect one” (Thwaites 1902:309). Four years later, the number of Potawatomi warriors at Detroit was estimated at 180 (Thwaites 1902:370). A later description, made in 1730, noted that:

> Two leagues up this strait [Detroit River] are the settlements of the French and the savages. You begin by seeing the first village of the Poutouatamis on the south side of the river; afterwards, that of the Hurons, near which is another small village of Poutouatamis which is only a few arpents away from the French Fort. On the other bank of the river are two Outaouas villages which we may recon as containing three hundred men. The Hurons number a hundred and fifty, and the Poutouatamis as many or more [MPHS 1905:76].

The "small village" of the Potawatomi referred to in this instance was likely that occupied by the tribe in 1714, located in the vicinity of present-day Cobo Hall. The "first village" was positioned farther to the south, or down river from the French fort, in the area immediately adjacent to the Ambassador Bridge. It was depicted as the only Potawatomi village extant along the Detroit River as illustrated on the ca. 1735 De Boishebert map (Figure 1.4.1-1). It continued to be depicted on maps of the Detroit area over the next half century (Figures 1.4.1-2, 1.4.1-3, and 1.4.1-4). In 1796 these lands were depicted in the McNiff map as tract "17," a 4-arpent (769 feet [242.6 m]) wide farm owned by Robert Navarre (Figure 1.4.1-5). Fourteen years later, with the confirmation of Navarre's title by the federal government, the property was designated as Private Claim (P.C.) 20 (Figure 1.4.1-6). Although the village had been abandoned by this period, the general area of the Detroit riverfront extending to the Rouge River continued to be popularly designated as the "Coast of the Potawatomies" through at least the first decade of the nineteenth century (MPHS 1886:579).

The origin of Navarre's title to this property is generally viewed as originating in a "deed of gift" executed by the Potawatomi chiefs and ratified by the British Commandant of Detroit, Major Henry Basset, on July 15, 1772[1-1]. Its provisions granted Navarre "...this land forever, that he may cultivate the same, light a fire thereon, and take care of our dead..." (Lowrie and Clarke 1832:277). As surveyed two weeks later, the farm was described as "situate on the river Detroit, at the ancient village of the Pattawatamies, joining on the E.N.E. Jacques Godfroy [P.C. 727 and P.C. 729], and on the W.S.W. vacant land..." (Lowrie and Clarke 1832:277). Four years later the tribe gifted their interpreter Isidore Chene, an adjoining 3-arpent (576.75 feet [175.8 m]) wide parcel. This instrument, registered May 27, 1776, identified the subject lands as bounded "...between that given by us to Robiche [i.e., Navarre] and that also given to the widow Du May..." The lands were given "forever," conceding to Chene the right to "cultivate the same, and take care of our dead buried there on" (Lowrie and Clarke 1832:278). Chene's lands were later sold to Joseph Portier Benac, on October 3, 1778, and on January 29, 1781, to Pierre Descontes, dit. Labadi. Recognition of the Labadi's right of title was confirmed by the federal government as P.C. 21 on July 15, 1807 (Lowrie and Clarke 1832:309) (Figures 1.4.1-5 and 1.4.1-6).

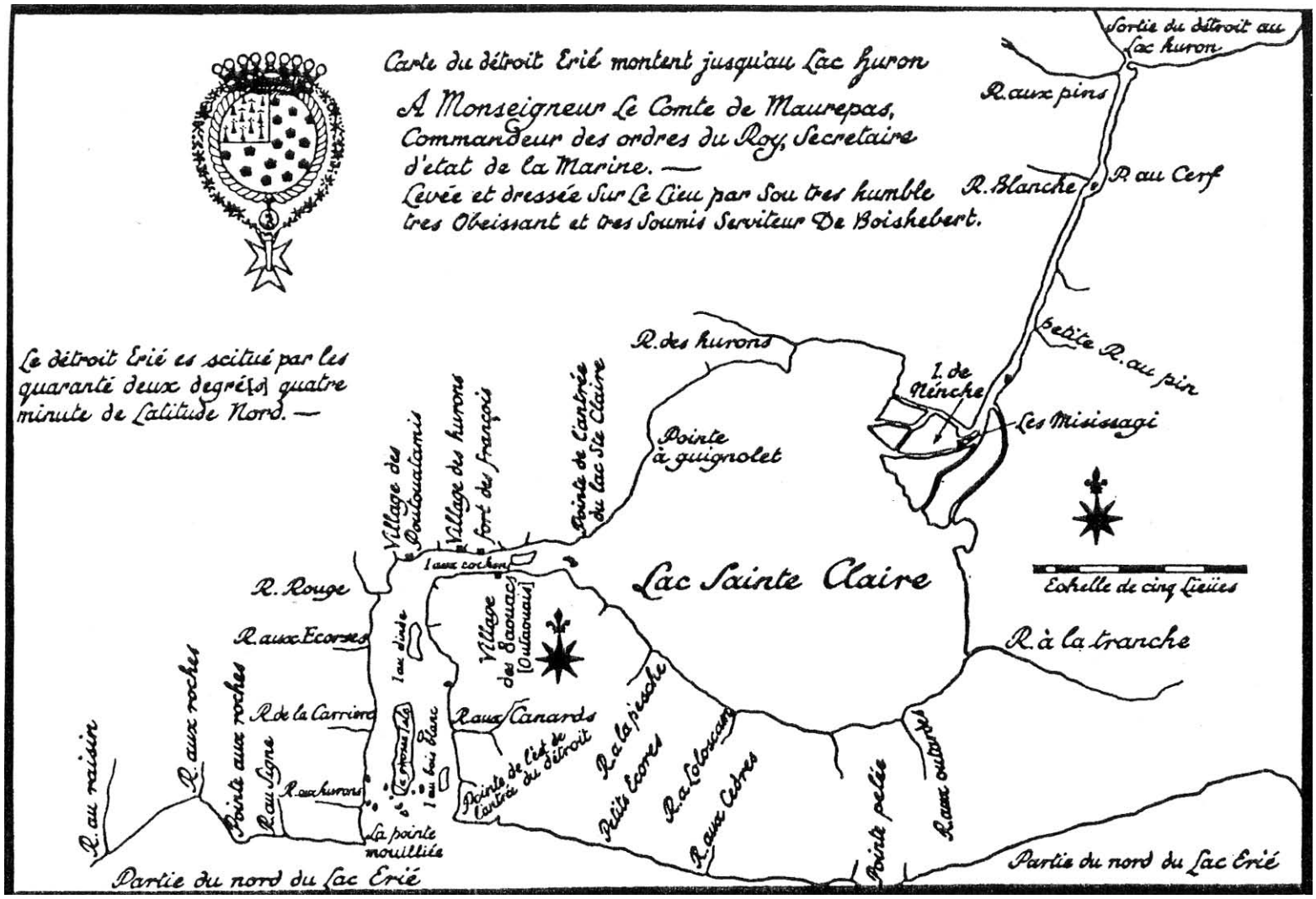
The conferring of these two farms upon Navarre and Chene is generally taken as evidencing the period of village abandonment by the Potawatomi. Other data, however, such as a survey of the area conducted by James Sterling in October 1776, continue to illustrate the existence of the village on the Chene Farm between the "Robt. Navarre, Jun" and "Widow Dumai" tract (Figure 1.4.1-7). More significantly, in 1780, the commandant of Detroit, Major Arent De Peyster, received

> ...a grant from the whole Pottawatimis Nation of Five Thousand Acres of excellent land upon the River from near the River Rouge to the Pottawatimis Village, exclusive of other Lands heretofore granted to different People, which they are desirous to have settled [MPHS 1892:553].

The village, it would seem, still existed at this point in time. The extent of occupation was likely only a vestige of its former size and may have represented a sporadic use area occupied by members of the tribe while trading in Detroit or organizing war parties against the frontier settlements of Pennsylvania and Virginia during the Revolutionary War.

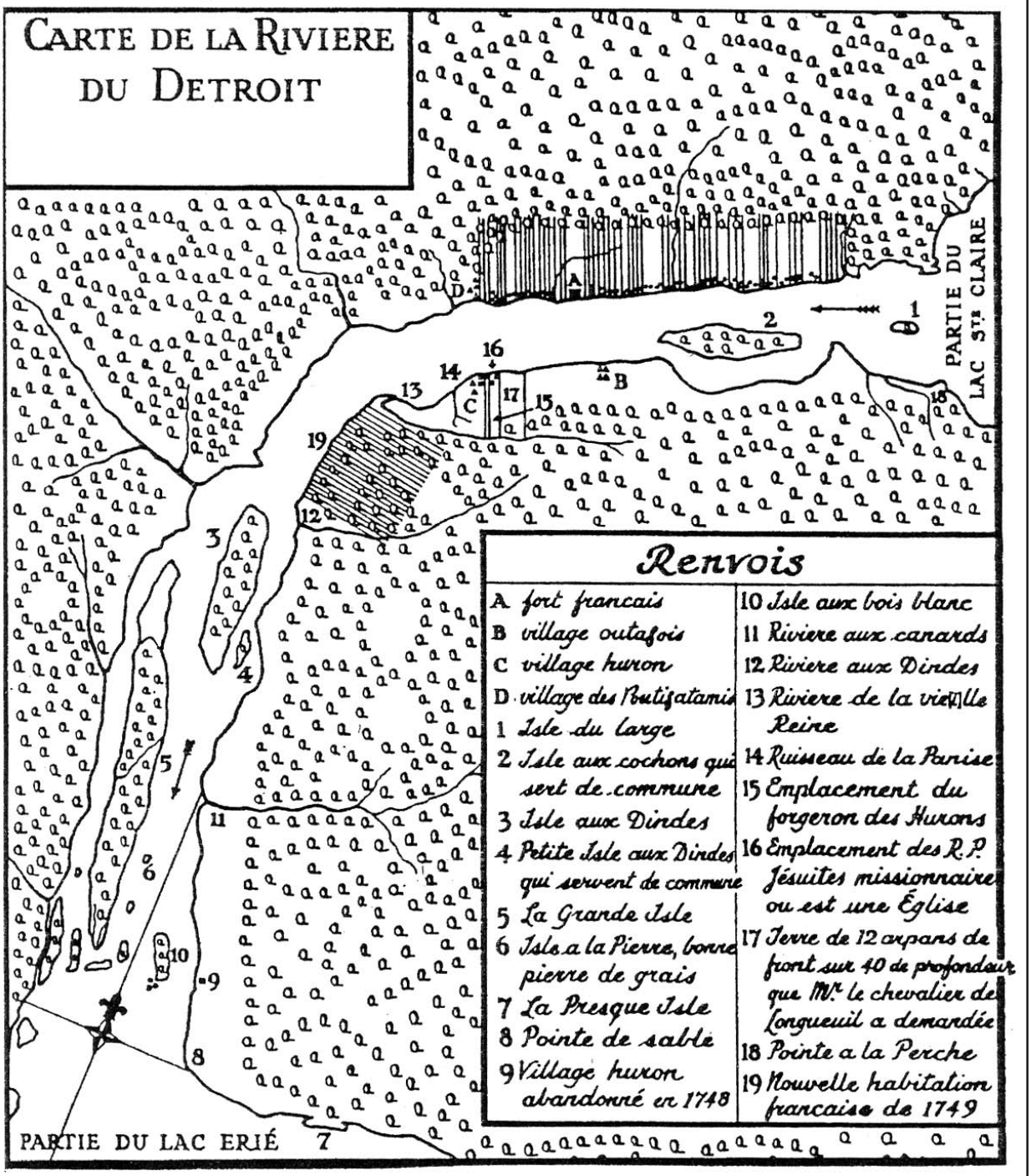
Attacks on British traders by the Potawatomi of southwestern Michigan and Illinois had occurred throughout the 1760s following the close of the French and Indian War and the Pontiac rebellion. In

[1-1]Farmer (1890:52) dates the deed to May 26, 1771.



Source: Bigony 1977

Figure 1.4.1-1. Detroit Region Native American and French Settlements in ca. 1735

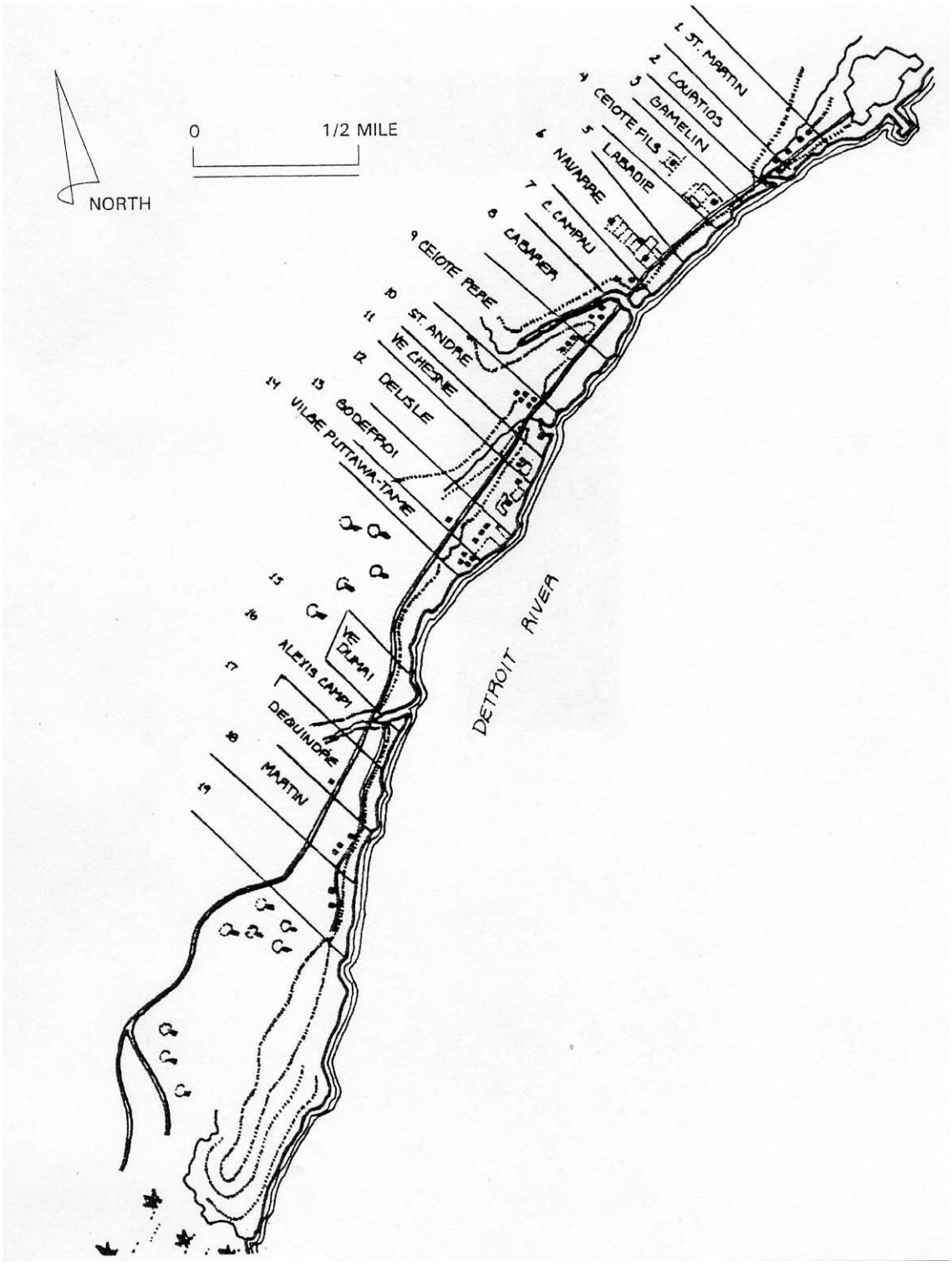


Source: Bigony 1977

Figure 1.4.1-2. Native American and French Settlements on the Detroit River in 1749

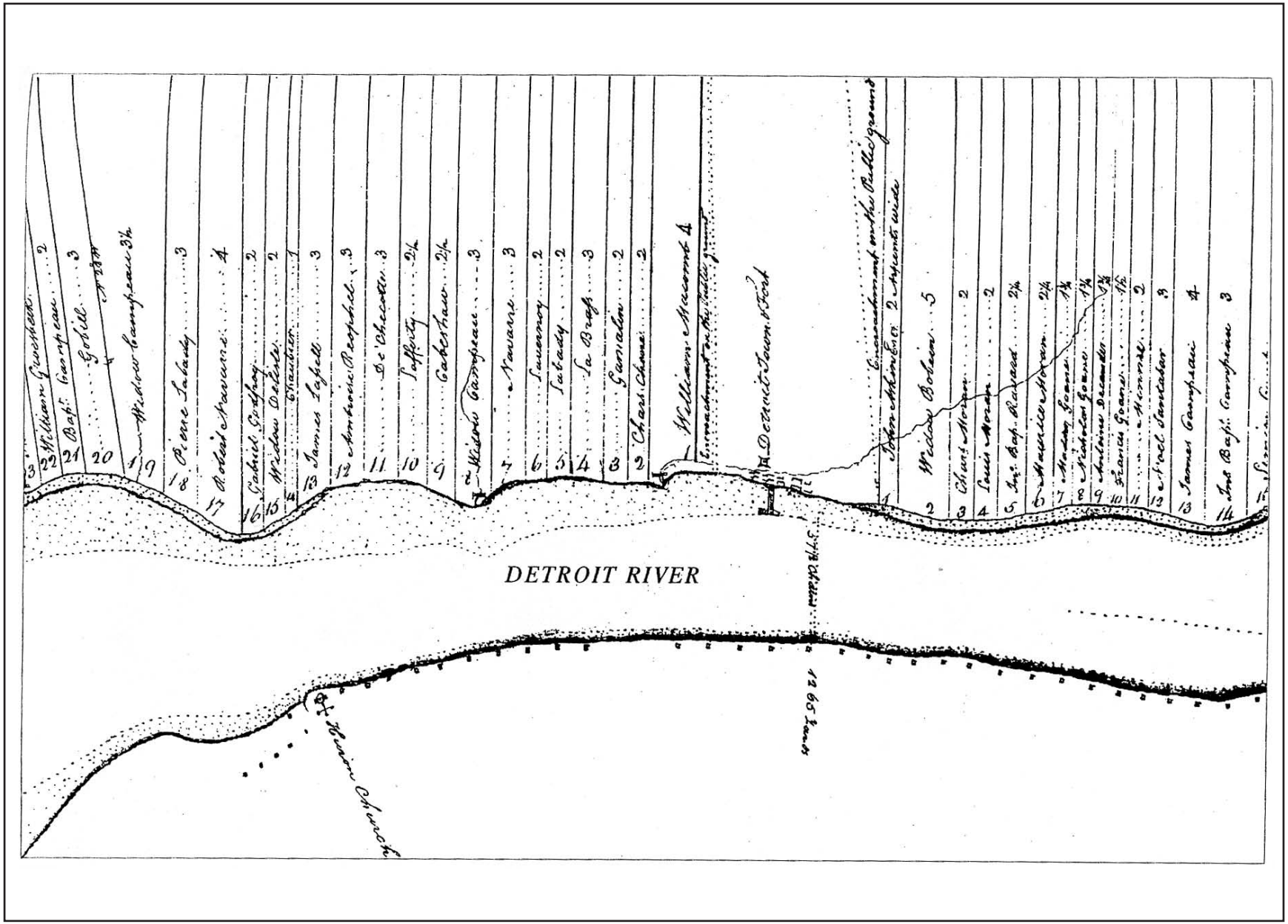
Source: Bigony 1977

Figure 1.4.1-3. Native American and French Settlements on the Detroit River in 1763



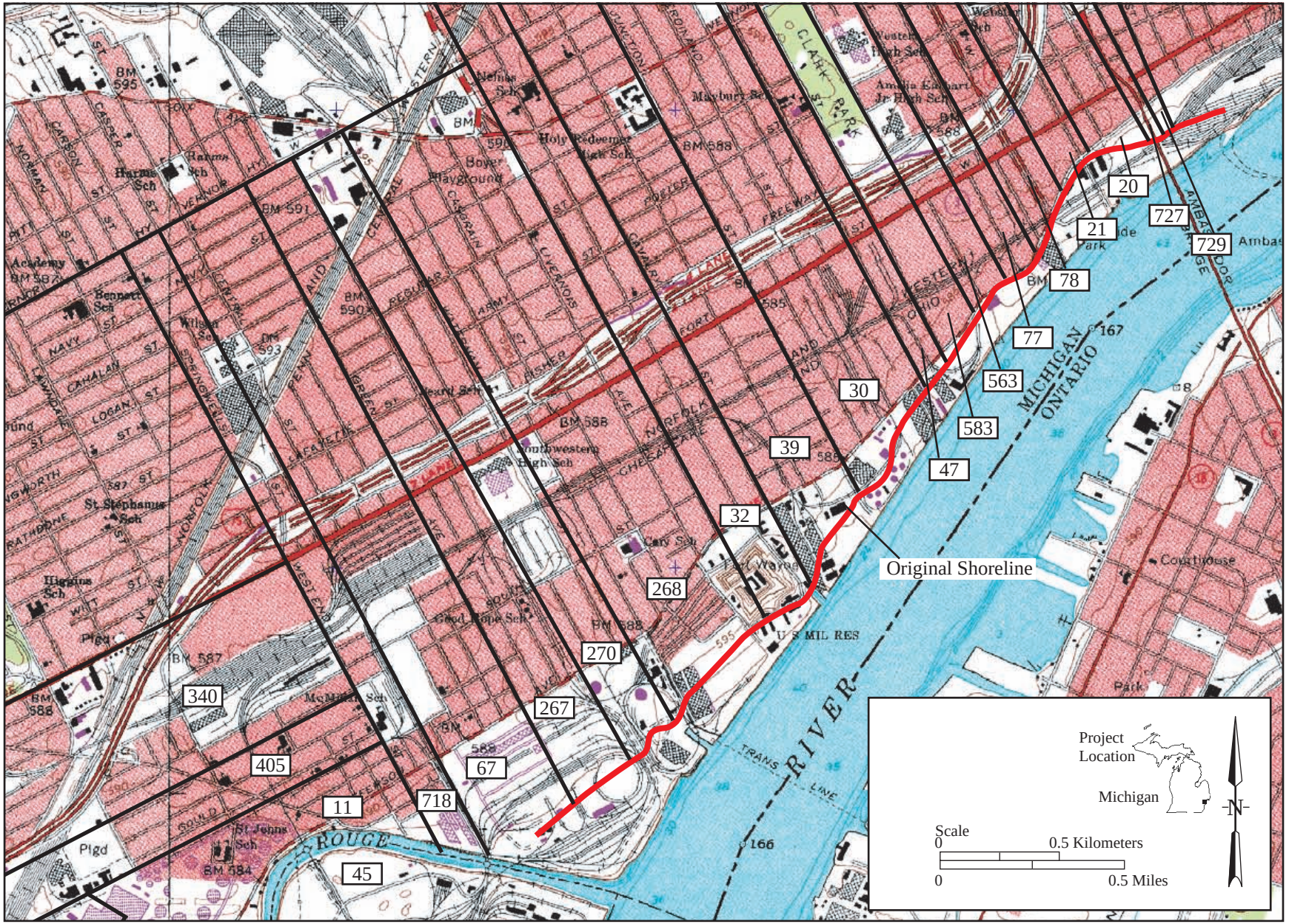
Source: Collot 1796

Figure 1.4.1-4. Native American and French Settlements on the Detroit River in ca. 1770



Source: Bald 1948

Figure 1.4.1-5. French Farms along the Detroit River in 1796



Source: Delorme 2004

Figure 1.4.1-6. DRIC Vicinity Private Claims

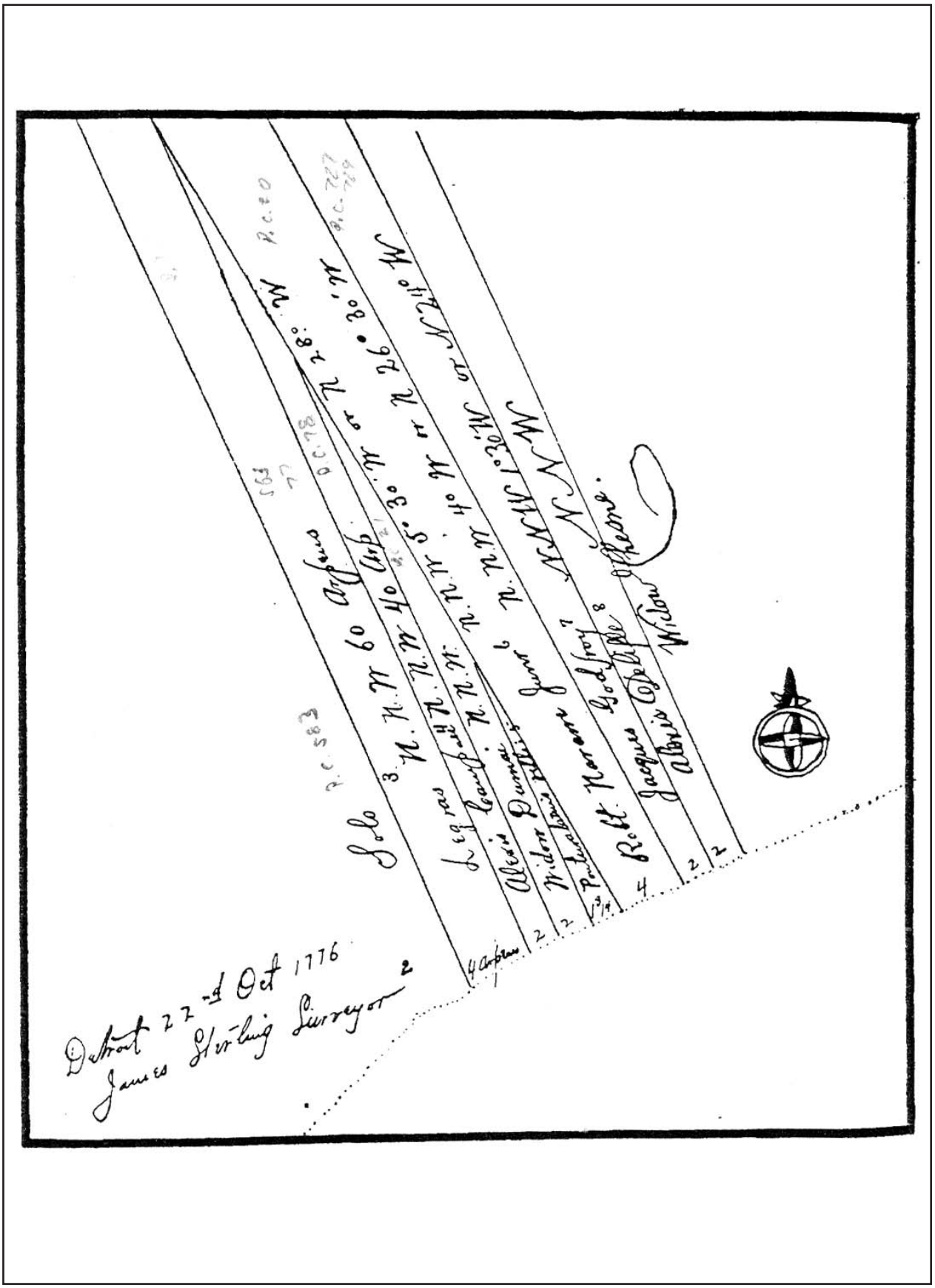


Figure 1.4.1-7. Claims in 1776

November 1767, a council held by the British under the lead of noted trader George Croghan attempted to gain the support of the Detroit Potawatomi in securing a peace with this more westerly component of the tribe (Edmunds 1987:98). The inability of the former to influence their kinsmen and the fear of possible British reprisals likely led to the dispersal of the Detroit band. An account provided by one British merchant in August 1768 indicates that the Detroit Potawatomi had already shifted their village to a new location "about 40 miles in the woods behind the fort..." (Burton 1911:39). This new village was on the upper reaches of the Huron River, in present-day Ypsilanti.

Throughout the period of Navarre's tenure over P.C. 20, and extending into the early 1820s, the lands comprising the farm continued to be used by the Potawatomi. As later (1879) recounted by a granddaughter, Mary Ann Brevoort Bristol:

> When I attained the age of ten years, I remember how they came to bury their dead, and took possession of the house. We gave them food, beds, etc.; we had to do it – it was the agreement [Bristol 1908:300].

Over the next 40 years the agreement proved less than binding. During Detroit's post-Civil War urbanization, construction exposed a number of interments and associated artifacts:

> In 1867 and 1868, when the water and gas pipes were laid, and the street paved in front of the old [Navarre-Brevoort] house – it was formerly called the river road, now changed to Woodbridge street – they found bones, remains of many Indians, and old Indian relics, such as red paint, vermillion, bunches of hair, pipes, stone axes, brass kettles, bottles, some filled with whiskey just as dark as brandy – the best whiskey ever drank, as the laborers said. No Indians were buried there in recent times. After my grandfather, Robert de Navarre, purchased of the Indians, they were permitted to bury their dead on the place, but not in the street. These relics, thus unearthed, were in the ground over a hundred years. They also found silver brooches and silver bracelets, of which we have a number [Bristol 1908:297-298].

An additional comment by Farmer (1890:52) estimated the number of burials encountered at that time at from 25 to 30 individuals, with the added notation that "Other remains have been found within the last few years."

1.4.2 European Settlement And Rural Land Use

European settlement of the southwest Detroit area was initiated during the mid-eighteenth century. The 1752 DeLery map of the farm tracts along the Detroit River indicates that the westerly margin of the grounds taken up at that time actually extended to the area of P.C. 727 in the vicinity of the Ambassador Bridge (Figures 1.4.1-2 and 1.4.1-6).

The only other documented French concession of lands extending towards the Rouge River consisted of an 8-arpent by 40-arpent tract awarded to "Dequindre" by the Governor and Intendant of Canada on May 16, 1753. This individual was Louis Cesar Dagnmeau Douville, Sieur de Quindre, Colonel of the Detroit Militia, who is believed to have settled at the post as early as 1736 (Thwaites 1908:234). Farmer (1890:20) equates the location of the Dequindre grant with P.C. 77 and P.C. 78 (Figure 1.4.1-6). As of ca. 1770, P.C. 77 was in the possession of the Dequindre heirs.

Under the French regime, land tenure followed a customary pattern whereby title was ultimately vested in the Crown. Because Native settlement in the Detroit region had been initiated by invitation

of the French at the establishment of Fort Pontchartrain, there initially existed no question of Native land rights except those received from the Crown through Antoine de la Mothe, Sieur de Cadillac. As the expectant possessor of the lands extending from Lake Erie to Lake Huron, Cadillac later noted that when he:

> ...distributed the lands to the savage tribes, he explained to them that he gave to them as their property for so long as they might wish to possess them; but that if they changed their dwelling place, the lands they abandoned would revert to his domain. That is what they agreed to, and what is customary also in Canada, round about Quebec and Montreal; but the savages make no payment while they remain on their lands [MPHS 1904:648].

While Cadillac's reigniorial rights never materialized, the lands occupied by the various Indian groups settled around Detroit continued to be regarded as Crown lands. As late as 1804, Jean Bte. Barrois filed a claim to the old Potawatomi village site based on a deed given to Francois Barrois by Piquotee De Bellestre, the last French commandant at Detroit. Dated April 1, 1760, this document gave Barrois:

> ...a piece of land three arpents wide, or four arpents, if they be found...to begin from the boundary of the farm conceded to Navarre [Private Claim 20], near the Pattawatamies village, in going towards the land of Mr. Dequindre [Private Claims 77 and 78]...after the Pattawatamis have changed or abandoned their village, without which condition this present concession shall be void, not understanding [it] to dispossess the said Indians in any manner [Lowrie and Clarke 1832:273].

All claims dating to the 1760 French surrender of Detroit were later rejected by the British authorities (MPHS 1908:245). While the British initially treated the newly-won territory as a Crown holding acquired through conquest, as of 1768, with the Treaty of Fort Stanwix, recognition of a quasi-independent "Indian Country" beyond the Ohio River brought a new dimension to the question of land rights. Holding the country more as a protectorate than an actual colonial possession, the provisions of the earlier (1763) Quebec Act forbidding the settlement or purchase of Indian lands without Crown approval were seen by many administrators in both the colonial and home governments as no longer valid. A change in attitude was similarly noted among Detroit's Native American peoples. Whereas the various allotments parceled out by the French authorities at the post had previously been unchallenged, John Lees observed in 1768 that their legality was at that time "...frequently disputed by the Indians..." (Burton 1911:38).

As of April 8, 1771, General Thomas Gage directed the commandant at Detroit to annul all land concessions made by the French in 1760, along with "...every grant made by every British Commander, without exception, and all Indian Purchases whatever or Indian Deeds not obtained by the King's permission and authority" (MPHS 1908:245). Some provision for the sale of Indian lands to private individuals must have been implemented during the succeeding year, however, since the Receiver of the King's Domain at Detroit entered the "quit-rent and rent" payments for the Navarre farm (P.C. 20) into his books on January 2, 1773. These grounds were reported to have "...lately been confirmed...and conceded in the name of His Majesty, by Mr. Basset, Major commandant at Detroit, in conformity to the orders of His Excellency General Gage..." (Lowrie and Clarke 1832:277). Three years later the Potawatomi transferred the remaining lands of their village to Isidore Chene (P.C. 21) through a grant pre-approved by Lieut. Governor Henry Hamilton.

The 5,000-acre grant made by the Potawatomi in 1780 effectively opened the Rouge River area to European settlement. United States title to these grounds was confirmed through the treaty concluded at Greenville in 1795. Patent deed titles to lands settled prior to the 1796 American occupation of Detroit were largely confirmed as "Private Claims" between 1807 and 1811 (Figure 1.4.1-6 and 1.4.2-1). As of 1803, the settled tracts along the Rouge River extended inland from the Detroit River for a distance of about eight miles. Forty-three individual holdings were extant at that time, the majority (38) had been established immediately after the 1780 transfer of Native title. The farms along the south side of the Rouge were generally considered as more valuable. The soils on the north side were described as "poor, gray, sandy, and unproductive" (Lowrie and Clarke 1832:191). Their importance, as stressed in British naval correspondence of the period, was primarily as a source of oak timber for ship construction and repair (MPHS 1892:496).

During the eight-year period from 1771 to 1779, a total of eight ships (one brig, three schooners, four sloops) and one gunboat were built at Detroit by the Royal Navy. During the winter of 1797, the United States established its shipyard on a 586.11-acre reserve at the mouth of Baby Creek under the direction of Captain Peter Curry (Bald 1948:125; Dunnigan 2001:109) (Figures 1.4.1-6 and 1.4.2-1). By 1810, at least two additional yards had been opened on the Rouge River by Captain John Connelly, on the existing site of Fordson Island (P.C. 28) and Captain Jonathan Nelson, of the North West Company, on P.C. 671 (Figure 1.4.1-6). Jacques Baby's mills on Baby Creek (P.C. 60) and Rouge River (P.C. 11) had been established as early as 1793 and were quite likely devoted to both lumber and grain processing (Dunnigan 2001:98, 129) (Figures 1.4.1-6 and 1.4.2-1). By 1810, Charles Rouleau had also established a mill on the "Mill Creek" drainage through P.C. 29 (Figures 1.4.1-6 and 1.4.2-1).

Brick manufacturing emerged as a local industry at about this time. In 1799, John Askin's kilns near the mouth of the Rouge River produced 70,000 bricks, available at $8.00 per 1,000 at the brickyard or $10.00 delivered (Bald 1948:152). While the effort was short-lived and the exact location of the yard remains obscure, more extensive operations were later established by John Greusel (1847) on P.C. 39 adjacent to Fort Wayne (Figures 1.4.1-6 and 1.4.2-1) (Greusel 1915:378).

It is actually quite probable that both the Askin and Greusel operations were located on the same property. Prior to the awarding of federal patent deeds, virtually the entire southwest Detroit riverfront, consisting of P.C. 32, 39, 67, 267, 268, 269, 270, and 718, was widely recognized as being an Askin possession. Early use of these grounds was reportedly limited to cattle raising, or as a "pasture, for cutting firewood and hay" (Lowrie and Clark 1832:338). As of 1796, Askin had established three riverfront dwellings for rental use on the tract. These appear to have been located on what later became P.C.s 39, 32, and 718. Portions of P.C. 32 were originally designated under two separate headings as the Mill lot, or P.C. 271, and the Todd Claim, or P.C. 269. An adjacent lot fronting P.C. 39 was described in 1808 as being "formerly" the site of a "house and garden...on what is called the race ground" (Lowrie and Clark 1832:389). As depicted on the 1796 McNiff map of the Detroit region, this feature appears as a circular track that surrounded the Belle Fontain, or natural spring from which Springwells Township acquired its name (Figure 1.4.2-2). As of 1808, the location figured as the site of Fr. Gabriel Richard's short-lived "Spring Hill" school primarily designed to promote vocational training among area Indian children (Woodford and Hyma 1958:55).

As a well-known camping and gathering location it is probably not surprising that "Spring Wells" was later chosen, in 1815, as the site of the treaty establishing peace between the United States and hostile tribes at the close of the War of 1812 (Deloria and Kickingbird 1973:18-20). The point drove home yet another element of consideration: it was this location which had also witnessed the British landing that led to the fall of Detroit on August 5, 1812 (Figure 1.2-2).

Source: Greeley 1810

Figure 1.4.2-1. DRIC Project Vicinity Private Claims, 1810

Source: Dunnigan 2001

Figure 1.4.2-2. Askin's Springwells Tract, 1796

Settlement of the lands inland from the riverfront claims did not generally occur until after the sectional survey of this area following the close of the War of 1812. In 1818, the upriver and downriver areas bounding the east and west sides of Detroit were respectively reorganized as Hamtramck and Springwells townships. Over the following decade virtually all lands within the townships passed from federal to private ownership; however, the transition from wilderness to agricultural use was slow. It was not until the great wave of immigration during the mid-1830s that any significant shift in this direction emerged. As of 1837, Springwells Township, with its 960 residents, accounted for 4.1 percent of the total county population. Thirteen years later, in 1850, its 1,263 inhabitants accounted for only 2.5 percent of the total county population. During the same period, the population of Detroit increased from 8,273 to 21,019.

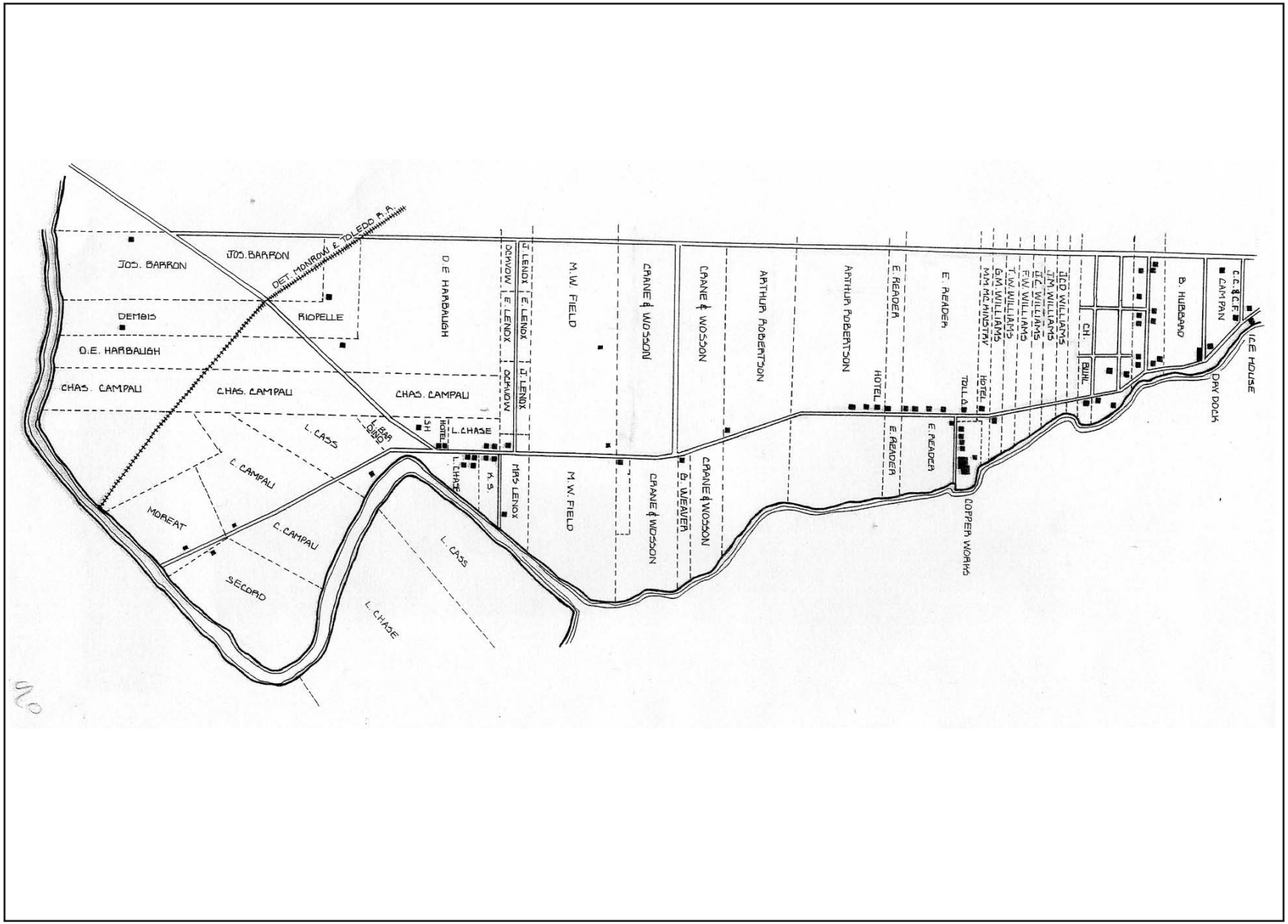
Prior to 1850, the primary nonagricultural developments in Springwells Township were either state or federally sponsored. These included the opening of the River Road (West Jefferson) to the Rapids of the Maumee (1817), the opening of the Military Road (Michigan Avenue) to Chicago in 1825, the establishment of the United States arsenal (1833) in nearby Dearborn Township, the construction of Fort Wayne (1842-48) on the Detroit River, and the state sponsored construction (1837) of the Michigan Central Railroad (MCRR). The military interest in the area had the immediate effect of sparking an expansion in local brick manufacturing as government contracts were let in order to meet the vast amounts of material required for the arsenal and fort facilities (Greusel 1915). The construction of the roads and railroad established the beginnings of a transportation network that, by the early 1870s, served to draw a substantial portion of Detroit's emerging industrial infrastructure both downriver and inland from the riverfront.

1.4.3 Urbanization, Industrialization and Planning

In 1850, the Waterbury and Detroit Copper Company established a smelter in Springwells Township at the foot of Junction Avenue on P.C. 30 (Figures 1.4.3-1 and 1.4.3-2). Several years later the Eureka Iron and Steel Works established its massive facility several miles farther downriver creating the community of Wyandotte. The trend towards industrialization of the Detroit riverfront was directly linked to the opening of Michigan's northern mineral ranges. The enabling technology that allowed for the procurement, processing, and movement of this mineral wealth was based on steam power. The steam engine not only lent itself to increased loading capacities, it offset the importance of wind and currents in lake shipping and eliminated the restrictions of seasonality in land transport. Mineral processing plants handling bulk ores shipped by lake freighters were typically located along the riverfront. Transport, and thus production, was constrained by winter conditions. The railroad offered the viable system that could operate on a year-round basis. While the process was not fully integrated into a working network until the last quarter of the century, its initiation in Springwells Township during the late 1850s offered an early advantage in promoting this potential.

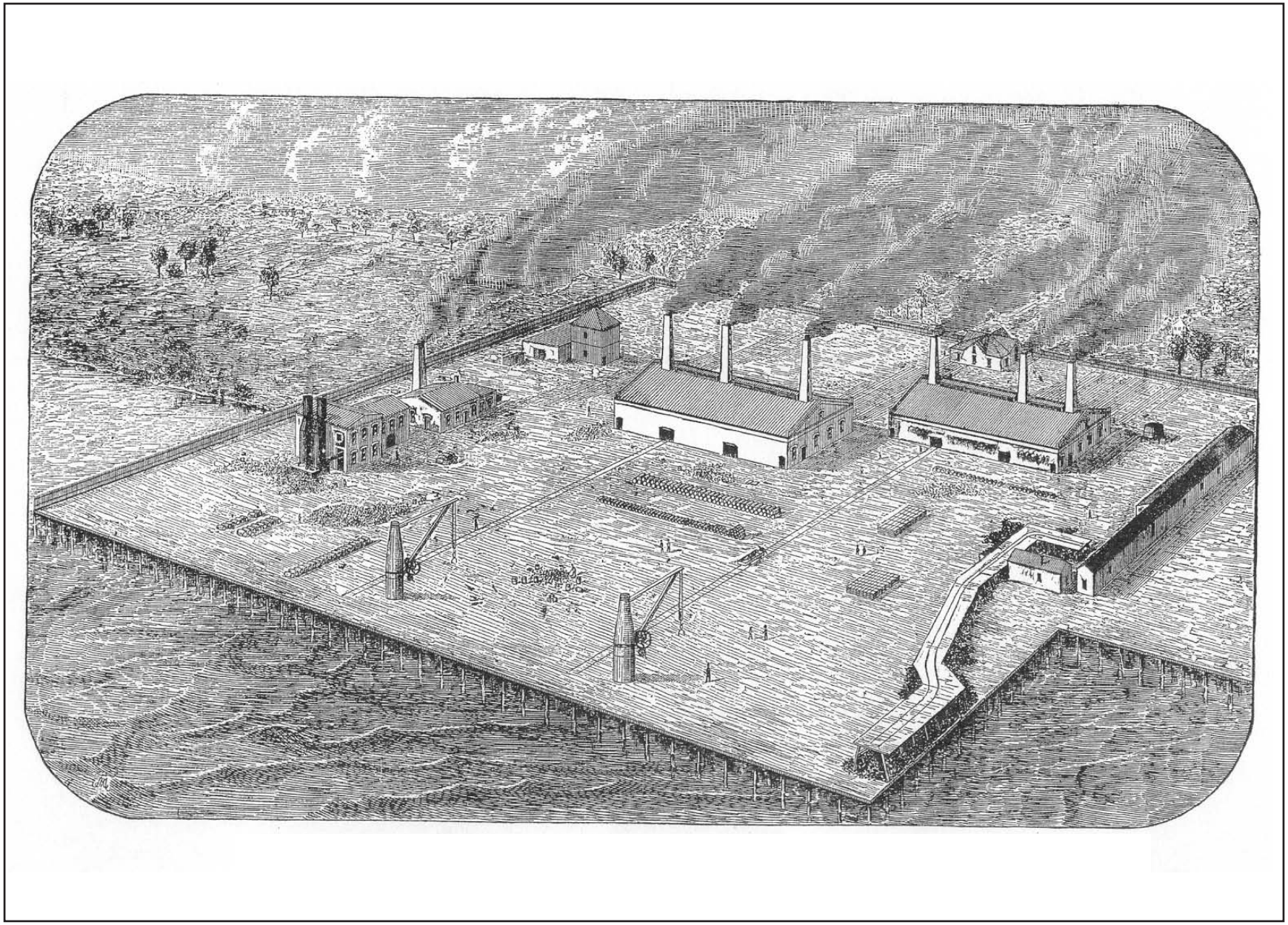
The establishment of the Ives dry dock at the foot of Swain and Joseph P. Clark's shipyard at the foot of Clark Avenue during the early 1850s was direct a spin-off of this emergent economic system. Similarly, the crossing of the Michigan Central Railroad (MCRR) at Junction Avenue by the Michigan Southern & Northern Indiana (i.e., Detroit, Monroe & Toledo Railroad) in 1856 represented yet another important step in this direction, one that was further enhanced with the subsequent routing of the Grand Trunk Railroad through the junction in 1859 (Figures 1.4.3-1 and 1.4.3-3).

Within the limits of the City of Detroit, which were extended to about 25th Street in 1857, the MCRR stimulated the growth of the local meat packing industry with the establishment (ca. 1855) of a



Source: Geil 1860

Figure 1.4.3-1. DRIC Project Vicinity, 1860



Source: Farmer 1890

Figure 1.4.3-2. Waterbury and Detroit Copper Company, 1850

10-acre stockyard on 20th Street. Among the first to take advantage of this location was the Hammond, Standish and Company packing house, which introduced the use of refrigerated railroad cars in 1868/1869.

In 1863 the Detroit Bridge and Iron Works established a factory on the west side of Foundry (21st) Street. After 1877, the east side of this street, along the railroad tracks, was dominated by the extensive plant of the Griffin Car Wheel Company. During the same period, the MCRR established (1872) a 130-acre repair yard on the west side of Livernois Avenue, with additional operations also opened near Junction Avenue by the Michigan Car Company (1872), the Detroit Car Wheel Company (1872), and the Detroit Steel and Spring Works (1879) (Farmer 1890:804, 806, 813, 899) (Figure 1.2-5).

Taking advantage of the increased loads that could be moved by rail, in combination with the discovery of a vast area of suitable clay deposits, the already well-established Springwells brick industry had, by 1853, begun to shift its operations inland towards Michigan and Junction Avenues (Ross and Catlin 1898). As of 1880, the 50-acre Richard H. Hall yard at this location was manufacturing upwards of 20 million bricks per year. Employment figures at the various yards are not well documented; however, small brick works, producing from 2.5 million to 3 million bricks per year, typically employed 15 to 20 seasonal workers as evidenced at the 9-acre yard of August Little at Michigan and Larkins and the 13-acre yard of Francis Hynes at Michigan and Martin (Edwards 1880:195, 223, 261, 263, 271).

The local clay industry received a significant boost with the reconstruction of Fort Wayne as a masonry structure during the Civil War (Phenix 1981). The war also fostered the further growth of the local iron and copper industries. Baugh's iron steam forge was established at this time at the foot of Clark Avenue. While much of its product was devoted to railroad usage, the adjacent Clark shipyard also benefited as it shifted its interests towards building steam driven vessels. Between 1868 and 1878 the yard launched five steamers ranging in size from 153.8 tons to 551.7 tons (Farmer 1890:914; Leake 1912:984). Farther downriver, at the foot of West End, the Detroit City Glass Works was established in 1868 likely taking advantage of area brine deposits along the Rouge River for the production of soda glass. The facility served as one of the founding industries of the Delray community platted several years earlier in 1860.

Although railroad corridor and river margin industrialization were pivotal to area growth, Springwells Township remained a predominantly farming district through the turn of the century. The pattern of agricultural land use was dominated by small tract farms. In 1876, township farms were described as, "Well tilled and for the most part devoted to market gardening, dairy purposes, etc., and, on account of their proximity to the city, are exceedingly valuable. Any one journeying in this direction...will be struck with the village-like aspect of the whole township" (Belden 1876:69).

The bucolic nature of the area was further enhanced by the creation of Woodmere Cemetery, Detroit's first rural cemetery, in 1868. Designed as a place of interment for the region's Protestants, it also served a fast growing urban Jewish population. The grounds of Holy Cross Chapel, established in 1835 as a satellite of St. Anne's Church, originally served the township's French Catholic community. By the 1860s other nationalities, especially Irish and German, also emerged as a prominent component among the church's parishioners. Drawn into the township as purchasers of small farming tracts, usually subdivided as 10-acre to 30-acre outlots, many of the new settlers also included those seeking employment in local industry.

Source: Lamson 1873

Figure 1.4.3-3. DRIC Project Vicinity, 1873

The establishment of the Michigan Car Works, for example, had an immediate impact on area land use as the demand for worker housing increased. An item offered in the May 23, 1873, issue of the *Detroit Free Press* noted that, "Cottages are springing up in every direction, and it is estimated that at least one thousand cottage houses will be built by fall" (Burton Historical Collections [BHC] 1873).

Worker housing development was concentrated near industrial properties. The 1876 atlas of Springwells Township points to the most intensively developed zones as having been adjacent to portions of Michigan Avenue, the riverfront, the railroad junction, and the area east of Junction Avenue (Figure 1.2-5). Between 1860 and 1870, census counts show that township population grew from 1,316 to 3,488. During the same period, Detroit's West Side 9th Ward, between 8th and 25th Streets, grew from 3,521 to 11,734 inhabitants. In 1870, the number of dwellings in Springwells Township stood at 627. The 9th Ward count stood at 2,404 (Walker 1872:176; Detroit Tribune 1872:71). Between 1860 and 1870 the number of individually owned Springwells Township farms increased from 69 to 150. Within the six surrounding townships of Detroit's downriver, the number of farms witnessed an overall increase of some 147 percent, from 484 to 1,195 tracts. Although not included as a part of this count, as late as 1884 upwards of 38 working farms continued to exist within the limits of the City of Detroit (Conant 1886:154-156). This growth in the number of Wayne County farms was fostered by increased consumer demand resulting from area urbanization. The process was directly driven by industrialization linked to railroad and riverfront development.

Where industrial workers tended to settle depended upon a variety of factors. While proximity to place of employment was of obvious significance, other considerations often intervened. The introduction of horse-drawn street cars in August 1863 had a dramatic impact on housing within the city and adjacent townships. As of November 1863, the Grand Trunk Junction was serviced by a 3.25-mile line extending down Michigan Avenue to the intersection of Jefferson and Woodward Avenues. Several years later, in 1866, the 12.5-mile long Fort Wayne-and-Elmwood line was completed to Fort Wayne, with its West Side stables and car shops being located on Clark Avenue. In 1873, the 3-mile long Congress-and-Baker Street line was established, running from Randolph Street to 24th Street. By 1880, the Fort Wayne-and-Elmwood line extended its routing along West Jefferson to Delray on the Rouge River. A spur line along Fort Street was added in 1886 running to Woodmere Cemetery. At about the same time, the Baker Street line was opened to Dragoon Avenue, where an extensive brick car shed was erected on the present site of Boyer Park (Farmer 1890:932). The population serviced by this transit network on the city's west side was extensive. As of 1880, Detroit's 9th and 12th wards, to the west of 8th Street, were respectively enumerated at 16,296 and 7,102 inhabitants. Springwells Township population stood at 7,960 (Walker and Seaton 1883:221).

By the close of the Civil War, industrial production had become a year-round activity. To the wage earner, this work environment offered a greater potential to accumulate wealth. It also allowed for the type of long-range planning and investment not possible when families had to fall back on savings during seasonally determined economic slack periods. The advent of year-round employment also furnished residential developers with a larger pool of potential buyers.

During the late 1850s, house lot purchases in new city subdivisions were often sold on a 10-year mortgage with a $10.00 down payment. In 1867, land contract sales of ready-made tract housing were first introduced. Consisting of one-story cottages, averaging some 20 feet by 40 feet, these structures sold from between $1,100 to $1,400. Although the cash down payment was set at $100, the monthly payment was often calculated to match the ability of the purchaser, who received a warranty deed upon fulfillment of the contract.

Both Silas Farmer (1890:4) and John Lodge (1949:34) credited the use of land contracts as chiefly responsible for Detroit's dynamic housing growth during the latter half of the nineteenth century. The simple single-family cottages that dominated large portions of the city's built environment during this period had the advantages of low cost and easy maintenance. Essentially designed as worker homes, many of the houses were let out for rental income by the original purchasers. This transition in use became quite noticeable during the late 1880s and 1890s as the need for unskilled labor multiplied with continued industrial expansion. At that time, the increased demand for housing, coupled with a shrinking pool of inexpensive building sites, led to the more widespread development of two-story flats and the introduction, in 1892, of multiple-family apartment units (Davies n.d.:51). During the same period, the construction of multiple dwellings on single lots became common in old neighborhoods to accommodate an ever growing population.

The combination of low-cost cottage housing and the implementation of a marketing strategy based on land contract sales had, by 1890, placed Detroit in a truly unique position in terms of urban working-class home ownership patterns. Census data for that year indicate that, in cities with populations numbering over 100,000, Detroit ranked third (41.67 percent), behind Rochester, New York (43.98 percent), and Milwaukee, Wisconsin (42.13 percent), in the percentage of home-owning residents. More startling is the fact that upwards of 26 percent of the city's population owned without mortgages. This represented the highest rate of unencumbered urban home ownership in the entire nation (Holmes and Lord 1896:32). A state survey undertaken by the Michigan Bureau of Labor in 1892 reported that approximately one-half of the city's married working men owned their own homes, and roughly one-third actually owned without mortgages or other related debts (Glazer 1965:69).

By sheer numbers, the rate of Detroit's growth during this period was considered phenomenal. Between 1854 and 1894, the city transitioned from a community of 3,144 dwellings to one of 44,222 dwellings. This represented a shift of from 44.6 percent to 79.5 percent of all Wayne County housing. The same period also witnessed a dramatic growth in industrial employment. In 1860, Detroit's population included only 1,363 persons who were classified under this heading. By 1880, industrial employment provided the livelihood of 38,000 city residents. As of 1899, the number of Detroit industrial workers was enumerated at 54,000. Between 1900 and 1910, Detroit's population grew from 285,704 to 465,766. The number of its inhabitants employed in industry similarly increased from 113,000 to 284,000. The number of annual building permits issued by the city during this period jumped from 1,964 to 5,498, with the value of new construction rising from $4,142,400 to $17,415,950 (Leake 1912:323). In 1900 Detroit was a city of 52,046 dwellings. Ten years, later the number of individual houses stood at 83,124 structures.

Subdivision of the Detroit River International Crossing (DRIC) study vicinity was well underway by the 1880s; however, the prime residential streets remained restricted to the area east of Junction, on the River Road (West Jefferson), and along the lower portions of Military and Waterman Avenues (Figures 1.4.3-4, 1.4.3-4a, 1.4.3-4b, 1.4.3-4c and 1.4.3-5) (Table 1.4.3-1). Institutional developments built in the area during this period included St. Lukes Hospital on West Fort, and the Zion German Reformed Church Zoar Asylum (1881) on the northeast corner of Cavalry and Harvey Avenues. In 1884 the riverfront portion of Moses W. Field's Delray area farm (P.C. 67) served as the site of the Michigan State Fair. Between 1889 and 1892 the location was redeveloped as a massive masonry building complex housing the Detroit International Fair and Exposition (Burton 1930:434; Leake 1912:202) (Figure 1.4.3-6).