APPENDIX II

DATA RECOVERY PLAN

INTRODUCTION

This report presents a data recovery plan, schedule, and budget for an historic archaeological data recovery project at Block 1191, bounded by King, Second, French, and Front Streets, in Wilmington, Delaware. The data recovery plan follows the opinion of the State Historic Preservation Officer's staff that a no adverse effect determination would be appropriate upon recovery of significant archaeological resources as per 36 CFR 800.4(c), and the Advisory Council's "Treatment of Archaeological Properties: A Handbook." Significant archaeological resources were discovered in this area by an earlier testing program (Cunningham et at. 1983).

Background

Block 1191 is located within the Wilmington Boulevard Historic District, determined eligible for the National Register on February 8, 1980. It is the next block east from the eastern boundary of the Wilmington Boulevard Project archaeological survey and mitigation conducted by Middle Atlantic Archaeological Research, Inc. (MAAR) in 1978-1979 (phases I and II), and by Soil Systems, Inc. (SSI) in 1980-1981 (phase III) (Figure 1). In both of these projects, investigators were able to recover large quantities of artifacts from both looted and intact features. The SSI program of trenching provided data from generalized occupation levels, illuminated feature and refuse disposal distribution patterns. Test excavations were conducted on Block 1191 in 1981 by the Delaware Department of Transportation (DelDOT), and these tests determined the presence of intact archaeological resources relating to the block's late eighteenth and early nineteenth century occupations (Figure 2).

Historic Context

Block 1191 falls within the geographical boundaries of all temporal periods defined for the study of Wilmington (Guerrant n.d.). Wilmington's periodic chronology is listed, here, in Table 1. The area containing Block 1191 is inside the settlement limits for the pre-Wilmington small plantations along the banks of the Christina River during the 1630-1730 Agricultural Period (Guerrant n.d.:Figure 16). The earliest structures were probably ephemeral wattle and daub construction, but by 1730, brick and stone structures are known to have been built along the Christina. At the founding of Wilmington, a grid plan was established for the city with Block 1191 falling just northeast of the Market Street - Front Street - Water Street core area (Guerrant n.d.:Figure 18). During this period, the Mercantile (1730-1820), the block contained both residential and commercial structures. This mixed occupancy pattern is characteristic of Block 1191 from this time, forward. Settlement during the

Table 1

Periodic Chronology of Wilmington History

Agricultural Period

1630-1730	Colonial settlement and development; pre-Wilmington plantations

Mercantile Period

1730-1740	Initial settlement of Wilmington and mercantile development
1740-1775	Mercantile stabilization (Colonial)
1775-1820	Mercantile growth (Federal)

Industrial Period

1820-1840	Transportation revolution
	(1837-1870 Manufacturing)*
1840-1860	Industrial Transformation
	(1837-1870 Early Industrial)*
1860-1910	Industrial Maturation
	(1870-1890 Mature Industrial)*

Corporate Period

1910-present	Corporate development (transportation and communication revolutions)

(Source: Guerrant n.d.; * refers to Klein and Garrow [1983] periodization)

Mercantile Period established a pattern of overall heterogeneity without spatial segregation of occupants or activities either on the basis of socio-economic status or on the basis of function (see Klein and Garrow 1983:52-82, Figures 9, 10, 14-19, 21, 22). Internally, lots probably had separate structures or areas for domestic and craft activities, as well as space set off for livestock. During the post-Revolutionary War boom in the flour trade, increased population density led to increased subdivision of blocks, and thus less open space and a greater number of structures. By the end of the period, Block 1191 lay at the edge of the mixed residential/commercial and residential zones of the city (Guerrant n.d.:43-57; Figure 20).

With the expansion of Wilmington's core area in the Industrial Period (1820-1860), Block 1191 was swallowed by the industrial/manufacturing zone focused on the waterfront. A gradual trend throughout the city toward spatially segregated socio-economic neighborhoods began in this period, but Block 1191, in this and the subsequent period of Industrial Maturation (1860-1910), retained its previously established heterogeneity of function, although residents probably belonged to the lower socio-economic strata.

Archaeological Context

Beginning in 1964, several archaeological excavations were conducted within Wilmington (listed in Table 2). The Wilmington Boulevard Project, which began in 1979, was the first investigation to be conducted within the city under the guidance of an overall research design (Klein and Garrow 1983). The present project will draw on the former project's experience and results in designing the Block 1191 research program.

Block 1191--Previous Archaeological Investigations:

In June 1979, Middle Atlantic Archaeological Research, Inc. (MAAR) field-checked the King Street and Second Street frontages of Block 1191 during the Phase II project for the South Wilmington Boulevard study. The results of the work on this block are not included in the final report of their survey (Thomas et al. 1980), but the field notes were made available. Lots examined and features located are (Figure 2):

Lot 6--A birck-lined, four-foot diameter well, partially looted; a possible trash disposal area, also looted. The MAAR notes indicate that both these features may contain indisturbed deposits below the looter activity.

Lots 4 and 5--Another brick-lined well, of the same diameter, was found straddling the boundary between these two lotes. The feature appeared to have been looted and re-filled.

Table 2

Archaeological Investigations in Wilmington

1964	Lea-Derrickson House Brandywine Academy	dating of architectural features
1965	Peter Alrich House	salvage after demolition
1974	Jacob and Obadiah Dingee Houses	first comprehensive excavation
1979	Wilmington Boulevard Project	first research design
	Mendenhall House privy	salvage of looted feature

Bureau of Archaeology and Historic Preservation testing program

(Source: Guerrant n.d.: 26-34)

Lot 4--A feature which appeared to be concrete-capped privy was located, but not explored.

Lot 3--This lot contained both a brick-lined well and a possible privy pit. The former is noted as having been looted.

The basements of properties 3 through 7 were examined. No access was possible to the basements of Lots 3, 4, and 7. Those of Lots 5 and 6, located under additions, had been looted.

On Second Street, the MAAR team was unable to examine Lot 345 because it was still inhabited, but they noted the possibility of finding undisturbed features on this property. A brick cistern was located on Lot 343, only partially looted. Lot 346 had been disturbed by an unsuccessful attempt at looting and may still contain undisturbed features. A brick-lined well was found in the backyard of Lot 247, partially looted.

The MAAR field notes were incorporated into the report of the DelDOT survey and testing project on Block 1191 in 1980. A report of these activities has been abstracted from a larger report (Cunningham et al. 1983), and references here will be to the abstracted Block 1191 package only. In addition to the features found by MAAR, the DElDOT team recorded several other features pointed out by local informants. Both sets of features,

as well as DelDOT's excavations, are mapped in Figure 2 in the present document. The map shows a total of twelve features on nine out of the sixteen properties.

DelDOT's testing program concentrated on areas away from known looter activities. Specifically, the project was designed to test Lots 4, 5, 6, 8, 10 and 347 in order to assess the extent of disturbance which may have occured in these areas. Data concerning the present stratigraphy, extent of disturbance, and probable data range of likely contexts were recovered (Cunningham et al. 1983). Subsquently, in August 1980, the basement of Lot 7 (Ace's Restaurant) was examined, using a 2' x 2' test pit, nine shovel scrapes, and nine shovel tests. These last excavations yielded no artifacts or features at all (Cunningham 1980).

The stratigraphic profiles of the trenches and squares excavated by DelDOT show that the heaviest disturbance lies within the southern quarter of the block. The DOT archaeologists recommended that no further work be conducted in the southernmost 70 feet of the block (Cunningham et al. 1983:3). The line of demarcation between the heavily disturbed section to the south and the beginning of ground containing less disturbed deposits lies somewhere within the east-west extension of the Lot 6 boundaries (Figure 2). According to descriptions in the report cited above, Trenches 3, 7, and 8 exhibited the greatest amount of disturbance, but the north profile of Trench 8 indicated the presence of intact nineteenth century strata.

In the area to the north of the demarcation line, it is possible to construct a generalized profile of the block's stratigraphy. Modern asphalt and fill levels comprise the first one to two and a half feet below ground surface. Below the fill appear several strata containing organic materials and artifacts. The artifacts recovered were identified primarily as belonging to the nineteenth century, but Trench 1, Square 1 produced a stratum of late eighteenth-early nineteenth century material, and one eighteenth century delftware sherd was noted in Trench 6. The intrusion of Trench 11 into the Lot 347 besement revealed that the basement had been filled to a depth of approximately six feet with demolition rubble. An intact barrel privy was located in the east wall of Trench 11 and preserved for future excavation. The late-eighteenth and nineteenth century occupation layers are composed of a sequence of fill deposits overlying the original land surface. This zone of highly organic "marsh muck" is the original occupation surface in the eighteenth century (Cunningham et al. 1983). The looted features inspected by MAAR reportedly contain artifacts dating from ca.1830 to ca. 1890 (Thomas et al. 1980).

In summary, Block 1191 can be expected to yield artifacts dating from Eighteenth Century to the late Nineteenth Century. A few undisturbed features remain, although most previously identified privies and wells have been looted. The portion of

the block containing undisturbed occupation levels (the north three-quarters) is covered by one to two and a half feet of modern fill and demolition rubble. It is possible that, in addition to sealing historic occupational strata, the modern fill and rubble may have protected other depostional features from being looted. Also, historic fill episodes would have covered features dug into previous levels. Therefore it appears likely that remains could be found on Block 1191 for the entire span of Wilmington's history. Archaeological data pertaining to the pre-Wilmington Agricultural Period are less likely, but possible.

RESEARCH DESIGN AND RESEARCH METHODS

General Research Design

The Block 1191 project will be viewed as an intensive and extensive excavation of a single block, with these excavations based on the DelDOT test excavations. The testing and excavation program on the seven blocks to the west provides a wider contextual basis. Much of Block 1191's cultural resources have already been destroyed by past demolition and rebuilding of structures on the block and recent demolition for urban renewal. Therefore, the primary strategy for the excavation is total salvage of information from the remaining intact archaeological contexts present on Block 1191.

Research will generally focus on the block's interior--areas that would have been the backyards of structures facing the streets, and which have been shown by other investigators (Fairbanks 1975) to contain large quantities of artifacts and faunal remains with good contexts and minimal disturbance. Backyard privies, wells and middens are especially important on urban sites where many artifact-bearing contexts have been destroyed by demolition activities.

Even though the main project goal is salvage of significant data, excavations must be directed by a research design. In this way, even though the excavator's intent may be total recovery, significant contexts and categories of remains can be identified and the best use may be made of the data which are recovered. There is an infinite variety of questions that may be asked in any given project, but "one of the most uniquely productive and important aspects of historical archaeology is its ability to test principles of archaeological interpretation under controlled conditions" (Deagan 1982:164). Given the large amount of documentation potentially available for use in studying urban inhabitants, we have chosen to focus the Block 1191 research on exploring the material cultural correlates of various social and economic characteristics of the inhabitants of the block through time.

Current research in historical archaeology on urban sites has combined documentary and archaeological evidence to classify

groups of people and their assemblages into contrasting socio-economic and ethnic status categories. Changes in artifact and faunal assemblages through time are usually viewed as related to changes in status and lifeways brought about by urbanization and industrialization (see Staski 982). Several of these studies, including the Wilmington Boulevard Project (Klein and Garrow 1983), proceed from the fundamental assumption that analyses of artifacts, especially ceramics, can be used to place the owners of those artifacts into various socio-economic categories. In the Block 1191 Project, we shall make use of the opportunities provided by access to documentary evidence to develop a series of research questions to test this assumption by using the documents as an independent control over the archaeological data. In other words, rater than interpret economic and social status from artifact assemblages, we will observe socio-economic characteristics directly in the historical record, and then compare known status to the material remains.

In developing this approach further it is useful to summarize the hypotheses and results of the Wilimington Boulevard Project (Klein and Garrow 1983) and show how the Block 1191 Project will be similar to and different from their procedure. The Wilmington Boulevard Project was directed toward data collection to support four hypotheses. Hypotheses 1 and 2 use both historical and archaeological data to investigate land use and residence patterns. Hypothesis 1 addresses the relationships between residential and commerical occupations of lots. Historical research found that, in the porject area, multi-use structures, both residential and commerical, were most common from before 1800 until the middle of the nineteenth century, with an increase in single-use structures after the Civil War. Residential use of the lots within the project area predominated before 1800, but commericial use increased throughout the nineteenth century. By 1880, commerical uses predominated, but residential use persisted in structures adjoining commercial properties or in combined residential/commercial structures. The artifacts collected from the sample lots also reflected the mixed residential/commercial pattern in the project area (Klein and Garrow 1983:371-379).

Hypothesis 2 concerns the changing physical distance between residences occupied by different socio-economic groups, postulating increasing distance in the industrial period. As a corollary to spatial segregation of socio-economic groups, a decrease in the number of groups represented in the project area was proposed. The results of the historical research show that socio-economic group stratification was not reflected in the spatial distribution of these groups, and the decrease in number of groups represented does not become apparent until the 1880's and 1890's. The Miller (1980) analysis of ceramics, used to measure socio-economic status archaeologically, was inconclusive because of the small sample size. Therefore, the archaeological patterns could not be used to support the documentary patterns (Klein and Garrow 1983:379-381).

The Block 1191 Project will address the questions of land use and residential patterning directly by inspection of the relevant historical documents. Since this information will form the control data set for the archaeological research, it would not be appropriate to develop hypotheses to be tested on this data set. We sxpect, however, to find that, while reflecting the overall homogeneity found by Klein and Garrow, the occupations of Block 1191 residents and the commerical activities taking place there will be directly related to the economic focus of Wilmington's waterfront. For example, in the period of shipping and shipbuilding, most Block 1191 residents will have occupations allied to seafaring and ship construction and fitting. Commericial concerns will be engaged in manufacturing or services supporting shipping and ship construction. A similar pattern is to be expected when the economy was refocused on the railroad.

The Wilmington Boulevard Project's Hypotheses 3 and 4 apply to analyses of ceramic and faunal data respectively. The hypotheses and test implications are directed towards comparing the relative costs of ceramics and meat from households of contrasting socio-economic status. The cost differentials were expected to increase between the pre-industrial and industrial periods, especially in comparing the upper and middle level groups to the lower. The results of ceramic and faunal analyses were inconclusive in addressing the hypotheses, but the authors felt the "the Miller analysis...clearly demonstrated its utility in study of socio-economic levels." Four households' ceramic assemblages were measured by Miller's cost index and places, one each, into the lower level and middle level, and two into a middle to high level (Klein and Garrow 1983:328-389).

The data collected form Block 1191 will be compatible with the analytical methods used on the Wilmington Boulevard Project, but the focus will be shifted to the control of socio-economic variables by documentary research and comparison of assemblages where status is held constant. The overall hupothesis that socio-economic differences are reflected in the archaeological record shall be addressed by first exploring <u>how</u> known differences are manifested. The model for this type of investigation is John S. Otto's study of status differences at Couper Plantation in Georgia (Otto 1975, 1977, 1980). Otto used documentary sources to analyze status differences among planters, overseers, and slaves, and assessed the implications of these differences in terms of differential access to material goods and food. Ceramic type and shape analyses showed that the planter's ceramic assemblage differed markedly from those associated with the overseer and slaves--transfer-printed versus banded, edged, and undecorated, and flatwares versus primarily bowls. Analysis of the faunal remains further revealed a correspondence between ceramic shapes and dietary patterns reflecting roasted meats, vegetables, and soups, prepared by cooks and served at the planter's table, in contrast to the overseer's and slaves's stews, cooked in a single pot and eaten from bowls. Otto's

ability to associate these observed archaeological patterns with status differences depended on his ability to control for status independently. Of vital importance, as well, was the temporal control provided by the simultaneous occupation of the plantation by representatives of the three status groups (Otto 1977).

The Block 1191 occupants will be characterized in terms of the use they made of properties--as residences, business locations, or both--and direct observations of certain of their social and economic characteristics will be made. Our ability to do this will depend on our success in finding the appropriate information in documents available for Wilmington. Deeds, wills, census manuscripts, tax assessments, and the Wilmington City Directories will be searched to find names and occupations of household heads, household composition, employment of other household members, amount of taxable real and personal property, nativity, and length of tenure on the block. Occupation, wealth, and nativity were identified by Thernstrom (1974) as important measures of socio-economic status in urban environments. In addition, attempts will be made to explore the possibility of finding block residents on the membership roles of various voluntary associations in Wilmington because Hoffecker (1974) has identified city-wide voluntary associations, such as churches, intellectural uplift groups, ethnic clubs, and service associations, as partially responsible for Wilminton's continuous, high level of social cohesion. It may be that membership in these groups will supply clues to social status in the community.

In searching out these characteristics, we will seek to categorize the block's inhabitants according to social and economic differences and similarities. In doing this, contrasts among residents, based on historical ecidence, will be identified to point out where variation might be expected in the archaeological record. It is difficult to predict exactly how these socio-economic differences will be expressed in material culture, but precious research can be used to indicate analyses which may be useful (e.g., South's [1977] functional group analysis, Otto's [1975] type, shape and faunal analyses, Thompson's [1983] ceramic rank-order analysis, and Beidleman et al.'s [1983] analysis of function and type relationships.)

Further research interests relate to temporal changes in, and external influences on, the Block 1191 artifacts. The rise of domestic ceramic and glass factories in the nineteenth century (Barber 1971) increased the variety of tableware types and sources available. One effect of this may be seen in a gradual shift from local-artisan-made utilitarian wares to manufactured ones, such as the ovenproof yellow wares from Ohio and New Jersey factories. One reason for incorporating such questions into the research is to avoid the ad hoc attribution of observed differences in artifact assemblages to socio-economic differences.

In addition to comparing assemblages from Block 1191 with each other, we shall explore the possibilities of comparing Block 1191 to other sites in other cities. It is likely that interesting comparisons can be made with Birdgeboro, New Jersey, which remained an agricultural market center throughtout its history (Thompson and Beidleman 1983), and Philadelphia, Pennsylvania. Other cities which may provide comparable analyses include Alexandria, Virginia, Baltimore, Maryland, and Charleston, South Carolina.

Specific Research Methods

Some of the research questions noted above define the population characteristics that will be addressed in our search for material culture correlates. The ideal situation would be to have a priori documentation of the block's inhabitants on which to base hypotheses relating to the specific socio-economic characteristics present. Since the current conditions of the project will not accomodate the ideal, the research plan noted below was developed to allow collection of documentary and archaeological data sets independently after a certain point.

The sequence of research will be to first carry out deed and will research to delineate property boundaries through time. The boundaries of individual lots will have shifted through time according to changes in density of occupation and changing function of properties. Map research will also be carried out and will contribute to the research goals by pinpointing both lot boundary changes and changes in the size, shape, construction, and use of buildings on the lots.

It will be important to conduct the deed, will, and map research prior to, or with minimal overlap into, the excavation. The comparison of material culture with known socio-economic characteristics depends inpart on the ability to tie archaeological features to particular lots, and thus to those inhabiting the lots. We will be able to do this with much greater accuracy if we can physically lay out lot boundaries on the site, using remaining structural features as clues to actual boundary locations. The vagaries of historic property surveys, including inaccuracies, changing widths of streets and sidewalks, makes this difficult to accomplish on paper after the fact. In essence, it is imperative to know where features are located in relation to no longer extant structures and to property boundaries while excavations are in progress in order to make the best use of our resources in the field.

Field Methods

The design of the Block 1191 Project requires the opening of large areas of ground to expose as many subsurface features as possible. It may be necessary to use heavy machinery to remove

levels of rubble and fill from the site. The test trenches and squares excavated by Del DOT (Figure 3) will be reopened and their stratigraphic data used to peel off depositional horizons. An overall ten-foot grid of the block will be used, and excavation will be by minimum provenience units of quadrants of five-foot squares. Features will be dug as separate units with internal sub-proveniences where appropriate. Vertical provenience will follow natural/cultural strata, internally separated into arbitrary levels where necessary. Excavated material will be dry-screened or water-screened depending on soil conditions ecountered in the field. Flotation samples will be collected from contexts where the preservation of small floral remains is expected. Standard procedures and field forms will be used as for other University of Delaware/DelDOT projects.

Laboratory Methods

Artifacts will be processed and conserved, if necessary, in accordance with State of Delaware Bureau of Archaeology and Historic Preservation standards and will be placed on repository at the Island Field Museum, the official Delaware repository, along with field notes, maps, and all excavation records. Copies of the report will be distributed to the local archaeological community and libraries and additional copies will be on file at the Island Field Museum and the Bureau of Archaeology and Historic Preservation.