A RESEARCH MODEL FOR EXTRACTING COMPLEX INTERACTIVE PATTERNS AT A FUR TRADE POST ON THE UPPER GREAT LAKES: FORT ST. JOSEPH, ONTARIO, 1796-1829

by

Ellen Lee

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ABSTRACT

The objectives of this thesis are to develop a model for a particular site which will provide the linkages between historical and cultural data and archaeological remains and thereby facilitate the interpretation of the archaeological remains within a meaningful and organized framework. To this end, a model of the cultural system of Fort St. Joseph, Ontario is reconstructed by examining the four groups of people who occupied the site in light of the following variables: seasonality, duration of occupation, size and composition of group, range of activities and space and building requirements. The different values of these variables are operationalized into units of observation by predicting their physical manifestations in terms of the archaeological record. These units of observation are divided into functional categories which can be used to group the elements of the archaeological record. The post-occupational history of the site is examined to determine the non-cultural transformations which the archaeological record has undergone. The product of these

three steps is a body of predictions concerning the patterning of the archaeological record at Fort St. Joseph. These include particularistic, historical predictions which concern activities and space and building requirements of the groups which inhabited the community and the identification and location of functional areas and structures as well as generalized predictions which concern behavior associated with the deposition and patterning of archaeological remains, the impact of recycling and curation on the archaeological record, and the impact of post-occupational human and non-human factors which have altered the archaeological record.

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I would like to dedicate this thesis to St. Joseph Island and its people, past and present. I spent many happy hours in their company and I will always have a soft spot for them in my heart.

INTRODUCTION

> "... I have not seen half a Doz^{n} of white fish since my arrival. this is (the) most barren place I believe in the whole Western Country, Doct. Richardson praised this place on Account of Ducks Rabbits Hares & pheasants but they must have all been eat by him, for I have not cast my eyes on any yet." (Excerpt of a letter from John Askin Jr., newly appointed Indian Department storekeeper at Fort St. Joseph to his father, John Askin Sr., 1 September 1807. Askin 1931: 569-570).

One of the most difficult tasks of archaeology is the interpretation of archaeological finds in a way which is both plausible and meaningful. The primary reason for this is the fact that "the structure of archaeological remains is a distorted reflection of the structure of material objects in a past cultural system" (Schiffer 1976: 42). Two kinds of site formation processes account for this distorted reflection. The first concerns the original deposition of artifacts and how these manifest the past cultural system. Some of the processes included are construction, discard, loss, abandonment and recycling. The second kind of site formation processes concern how the archaeological record is distorted through post depositional disturbance. Interpretation of the archaeological record is complicated by the fact that many different site formation processes may be

responsible for the same distribution of archaeological data across the site.

In other words, a particular patterning of archaeological remains may be produced by several different events. To give an example, the presence of military buttons in a civilian residence at a particular site may have several possible explanations.

1. The building may have been occupied by military personnel.
2. The building may have been a brothel visited by military men.
3. A military coat may have been bought, stolen, given to or inherited by the civilian occupant of the house.
4. The occupant of the house may have collected military buttons as a hobby.
5. Military refuse may have been dumped in the house after its abandonment.
6. The occupant of the house may have been a tailor who made or repaired military uniforms.

It is obvious from this incomplete example that an exhaustive list of possible explanations for one small pattern could be quite long.

It is important to consider all of the reasonable, possible explanations for a particular pattern before deciding which is the most probable. In simple terms, this means looking at the patterning of archaeological remains (artifacts, structural features, soil stratigraphy and their interrelationships) and asking such questions as: how did they get here, or, what events happened to create this pattern. The answers to these questions can range from very

simple mechanical explanations with little cultural meaning or interpretation to complex explanations which help to shed considerable light on the history, culture and everday life of the people who left the remains. The task, then, involves two basic steps: 1) generating all reasonable, probable explanations, and 2) developing a systematic format for examining the explanations to determine which is the most probable.

Without historical data, answering these questions means considering an almost infinite number of possible explanations with very little basis for choosing between them. However, when dealing with a site for which there exists historical information, this information can be used to build a model which will generate a range of explanations and provide a rational and systematic framework within which the relevance, plausibility and probability of the explanations can be examined. In order to do this, it is important to examine the feed-back mechanism between historical events and processes and the generation of archaeological remains.

There is considerable variation in the amount of historical documentation available concerning the social history of any archaeological site from the historic period. While general trends in the culture of a particular group of people during a particular period in history are

often known from comparative data, the ways in which this culture manifests itself and interacts with a particular geographic and social environment are usually unique. Since historic records are always selective, large segments of the population of a site can be under-represented or completely unrepresented in the documents. Added to this is the fact that many details of daily life are never recorded. Often questions concerning these details never arise until an attempt is made to reconstruct a model of the site in question. Looking at historical data from an archaeological perspective often brings out different kinds of information than those which many historians focus on. This is due in part to the anthropological background of most North American archaeologists and in part to their necessary orientation towards the physical and spatial manifestations of culture. In the same way that historians do not simply accept historical data as fact, but evaluate and interpret it according to various criteria, archaeologists must also interpret their data.

In the archaeology of historic sites the researcher usually has the advantage of having some, if not considerable, information about the site and its inhabitants, such as who lived there, what kinds of activities were carried out, etc. Cultural site formation processes can be inferred from general historic documentation by constructing

a model of how the site would have been used and examining and reorganizing the historical data from an anthropological or archaeological point of view. From this model, predictions can be made concerning how various known activities can be recognized or will be manifested in the archaeological record.

The objectives of this thesis are: 1) to construct a model of the cultural system of a particular site using historical data, 2) to develop predictions concerning the physical manifestations of the community system via cultural site formation processes, and 3) to develop predictions concerning the distortions of the cultural deposition patterns by non-cultural site formation processes and the resulting archaeological record.

The site I have chosen is a British military/fur trade post on the Upper Great Lakes which was occupied from 1796 to 1829 (Vincent 1978a). The model of the community system will be developed by comparing and contrasting the four groups of people who occupied the site according to such variables as their social status, the seasonality of their occupation of the site, their activities, the overall length of time they spent on site, and their space and building requirements. From this model assumptions and predictions can be made concerning cultural site formation processes and the patterns which could be expected to be

produced in the archaeological record. Non-cultural site formation processes will be discussed in the light of how they may have altered the archaeological record.

CHAPTER II

BACKGROUND

A. Geographical and Historical Setting

Fort St. Joseph is located near the juncture of the three Upper Great Lakes. It stands on the southwest tip of St. Joseph's Island, overlooking the navigation channel of the St. Mary's River which joins Lake Huron and Lake Superior (Fig. 1). St. Joseph Island lies in the transition zone between the Boreal Forest Region to the north and the Great Lakes-St. Lawrence Region to the east and south, and its climate is moderated by the influences of the lakes. As a result the inhabitants of this area had access to an abundant supply of a variety of plant and animal food resources.

The British had controlled the upper Great Lakes militarily since the defeat of the French in 1763, and Fort Michilimackinac, inherited from the French, had been their major post in the area since that time. Under the terms of the Treaty of Paris which ended the American Revolution, the British were to relinquish all territory south of the Great Lakes to the Americans. The southern tip of St. Joseph Island was chosen as the site of the replacement for Fort

Michilimackinac primarily because of its location, as it lay at the juncture of the Ottawa River and lower Great Lakes fur trade transportation routes. Michilimackinac controlled the fur trade in the area south and west of Lake Michigan and south of Lake Superior, and the British wished to maintain their sphere of influence which was largely dependent on the control of the fur trade.

Construction of Fort St. Joseph was begun by the military in 1796, and within two years a settlement comprised mainly of fur traders had begun to develop around the fort. The military and diplomatic functions at Fort St. Joseph were performed by the military garrison and the Indian Department representatives, respectively. The latter branch of the government had been created in 1755 to look after Indian affairs and its main role was to maintain British-Indian alliances through annual gift-giving ceremonies and other diplomatic gestures. The gifts involved were basically the same as the goods involved in the fur trade; from the one side came the usual European goods along with such status goods as chief's coats, medals and guns, and from the other side came the Native goods including furs, corn, wild rice, maple sugar, fish and other provisions (Vincent 1978a).

As a replacement for Michilimackinac, Fort St. Joseph was intended to become:

> "... A Rendez-vous for the Indian Traders (returning with furs from their wintering grounds round Lake Michigan and near the Mississippi) where they met the merchants or their agents from Lower Canada, and receive a fresh supply of goods for the ensuing winter; this commerce has hitherto been carried on at Michilimackinac during the whole of the month of June, at which time about eight hundred persons are thus assembled, besides Indians of various tribes who resort to the Rendezvous for presents or for news and sometimes to make Peace under the King's protection" (D. Lee 1966: 3).

It seems, however, that despite these intentions, Fort St. Joseph was never to become as important a fur trade centre as Michilimackinac (Table 1). The North West Company was never happy with the location of Fort St. Joseph, and while they applied for building lots there and built a house and a store, their major centre of operations for that area was Sault Ste. Marie. Most of the independent traders, particularly those who worked areas adjacent to the south end and west side of Lake Michigan, continued to operate out of Michilimackinac as long as no obstacles were placed in their way by the American government.

However, several traders followed the military garrison to Fort St. Joseph, as the commanding officer reported that twelve people (of whom at least six were probably traders) were building or preparing to build outside the fort in 1798, and the following year at least three more traders were added to the list (Vincent 1978a: 93-95). Some of these traders may have traded locally,

using Fort St. Joseph as a base of operations, and some of them may have maintained houses at both Michilimackinac and Fort St. Joseph, in an attempt to keep a foot in both camps.

After 1805, it became more difficult for the British traders to operate out of Michilimackinac, as the American government first banned them from trading beyond the Mississippi in the Louisiana Purchase which had not been included in the Jay Treaty, then began to establish government run trading posts at such places as Chicago and Michilimackinac. A group of Montreal traders, some of whom were also connected with the North West Company, formed the Michilimackinac Company and made an agreement with the North West Company to divide their operations along the Canadian-U.S. border. With one exception at the extreme west end of Lake Superior, this was an area in which competition between the North West Company, the X Y Company and the previously independent traders from Michilimackinac (now the wintering partners of the Michilimackinac Company) had been fairly intense before 1806.

The newly formed company was not particularly successful to begin with, and then in December of 1807 the American government placed an embargo on all goods brought into American territory. This made operations out of Michilimackinac impossible and the Michilimackinac Company began to move to St. Joseph Island, building storehouses on

the point east of the fort. In the spring of 1808 agents of the Montreal fur traders managed to persuade the American government to lift the embargo. The Montreal partners bought out the winterers in 1810 because of serious financial difficulties. They then merged their company with John Jacob Astor's American Fur Company to form the South West Company in the hopes of being able to evade future embargoes by having a company with half American interests. These hopes were dashed as the embargo was reimposed in 1811. Since most of the company's goods were from Montreal, they were not exempt from the embargo. Incoming trade goods piled up at Fort St. Joseph and during that summer the South West Company traders smuggled £10,000 worth of goods into the Mississippi Valley (Vincent 1978a: 133).

The history of the fur trade at Fort St. Joseph can be divided into two periods: from 1796 to 1806 when only local trade was taking place, and from 1806 to 1812 when the community took on some of Michilimackinac's role as the major distribution centre of the trade network of the Upper Great Lakes. During this second period it became a supply depot and warehouse facility where goods could be accumulated until such time as they could be sent off into the trade network. Provisions from around the lakes were also collected here to be redistributed to other posts.

As a military fort, St. Joseph's was poorly constructed and maintained. Its palisade blew over in the

TABLE 1: Chronology of Events in the Occupation of Fort St. Joseph

Year	Event
1796	Construction of fort begun.
1798	Military contingent occupied completed buildings - blockhouse, old bakehouse, guardhouse, stores building. Fur traders begin to build in community.
1802	Old bakehouse burned to the ground.
1804	New bakehouse, powder magazine, military kitchens built.
1805	American government limited activities of Canadian traders south of the border. Michilimackinac Co. formed.
1807	Embargo on goods brought into American territory imposed. Michilimackinac Company began erecting storehouses on Rains Point, St. Joseph Island.
1808	Montreal fur traders persuaded American government to lift embargo.
1810	Montreal partners bought out wintering partners of Michilimackinac Company and merged with Astor to form South West Company.
1811	Embargo reimposed. SW Company traders smuggled £10,000 of goods into Mississippi Valley.
1812	War declared; Fort St. Joseph garrison occupied Michilimackinac. St. Joseph left with small guard.
1814	Fort St. Joseph burned by American forces. Treaty signed returning Michilimackinac to the Americans.
1815	Fort St. Joseph briefly reoccupied by British garrison, pending move to Drummond Island.
1815-1829	British garrison on Drummond Island maintained small contingent at the ruins of Fort St. Joseph to guard cattle and powder magazine.
1829-1926	Fort St. Joseph remained military reserve until transferred to Canadian National Parks Branch

wind and its earthworks had never been raised. The garrison was small, consisting of fifty men at the most, but sometimes considerably fewer (Vincent 1978a). As soon as word of the declaration of the War of 1812 reached them, the garrison with the assistance of a large contingent of Indians and traders attacked, captured and reoccupied Michilimackinac for the British. Fort St. Joseph was put to the torch by the Americans in 1814 and never regained its former importance. The British military briefly re-occupied Fort St. Joe Point for a few months in 1815 before moving to Drummond Island. From 1815 until 1829 their presence at Fort St. Joseph consisted of a few cattle, the powder magazine and the corporal's guard stationed there to watch over them.

Fort St. Joseph was designated as a National Historic Site in 1926. The park consists of an 800 acre former military reserve on the southwest tip of St. Joseph Island (Fig.2). Within the park are three prominent points of land which jut out into the lake. These are LaPointe Point, Rains Point and Old Fort St. Joseph Point (also called Old Fort St. Joe Point). All three of these points were occupied for some time during the military occupation of Fort St. Joseph from 1796 to 1829. LaPointe Point was the site of a temporary camp occupied by the military while they were building Fort St. Joseph from 1796 to 1798. Rains

Point was occupied by the Southwest Company off and on between 1807 and 1812. Old Fort St. Joe Point was the site of the military fort and the civilian community which grew up around it. While the contribution of Rains and LaPointe Points to the history of the Fort St. Joseph community cannot be ignored, this study will focus solely on the Fort St. Joseph core community and will therefore deal only with the physical area of Old Fort St. Joe Point.

Historically, the community of Fort St. Joseph was located on a kidney shaped point of land attached to the island by a narrow neck of land. It consisted of a roughly square palisaded fort in the centre of the point, surrounded by civilian building lots on the three water sides. Garden plots and fields occupied the neck on the land side (Fig.3).

Documentary sources concerning the occupation of Fort St. Joseph vary in the amount of detail they offer concerning the occupants and their daily lives. Much of the information concerning the general history of the post has been reported by Vincent (1978a, b). The Canadian Public Archives offer considerable information on the activities of military personnel and the Indian Department. The John Askin Papers (Askin 1931) are invaluable for their discussions of daily affairs of John Askin who was the Indian Storekeeper for five years. Unfortunately, the activities of the fur traders and Indians who frequented the post are

much more difficult to document. Most of the traders were independents or small companies and did not keep the kind of business records or post journals for which the North West and Hudson's Bay companies were so well known. As a result, not only is the information concerning the fur traders' activities somewhat sketchy, there is also very little information concerning their dealings with the Indians. Most of the information concerning the Indians who frequented the post is found in the records of the Military and Indian Departments.

B. Previous Archaeological Research

Archaeological research at Fort St. Joseph was begun in 1963-64 by the University of Toronto under contract to Parks Canada (Emerson, Devereux and Ashworth 1977). Under the direction of Helen Devereux in 1963, the investigation of the blockhouse was begun, both reentrant angles and one of the shoulder angles of the west bastion were located and the northwest palisade curtain was tested. Other features which were excavated or tested included the stores building, the guardhouse, the south half of the southwest ravelin, the land gate, water gate, some of the angles of the south bastion and the southeast palisade curtain. The walls of the old bakery were also uncovered (Devereux 1965).

In 1964, Michael Ashworth continued the excavation of the blockhouse, tested the chimney structure and located

the remaining angles of the west bastion. Additional work included the complete excavation of the old bakery and the location of three of the angles in the east bastion, as well as the remaining angles in the south bastion and the two reentrant angles and one shoulder angle of the north bastion. A survey of the area outside the fort located a total of 32 possible foundation outlines of fur traders' and other civilian buildings (Ashworth 1964).

After a lull of ten years, Parks Canada renewed the archaeological investion of Fort St. Joseph. In 1974, the blockhouse and powder magazine were completely excavated and an unidentified chimney structure, the northwest palisade wall and the west bastion were tested under the direction of Karlis Karklins (E. Lee 1976). The following year Karklins directed the excavation of the new bakehouse complex and ten civilian semi-subterranean buildings (Karklins 1980). In 1977, the excavation of the old bakehouse, the guardhouse, the stores building, a military kitchen and two semi-subterranean civilian buildings, plus the testing of an above ground civilian building and the historical road leading to the land gate of the fort was directed by the author, as were the excavation of two aboveground civilian buildings, a lime kiln and blacksmith shop in 1978 (E. Lee 1982a). A survey of all unexcavated archaeological features visible on the surface was carried out on Old Fort St. Joe , Rains and LaPointe Points in 1978-79 as part of the on-going historic

resource management program for the park (E. Lee 1982b).

As a result of the archaeological investigations of Fort St. Joseph National Historic Park, a total of eight military buildings, the defensive works consisting of the palisade, gates, bastions and ravelins, a lime kiln, a blacksmith shop, an historical road, and twelve semi-subterranean and two above ground civilian buildings have been excavated on Old Fort St. Joe Point. Unexcavated features which have been mapped include ten semi-subterranean and fourteen above ground civilian buildings and various other mounds, pits and depressions on Old Fort St. Joe Point, four masonry building foundations, a lime kiln and fourteen depressions of varying shapes on Rains Point, and on LaPointe Point, the remains of a 1930s hunting camp and the probable remains of the 1796-1798 military camp occupied during the construction of Fort St. Joseph.

On Old Fort St. Joe Point itself, all of the military structures have been excavated or tested, but only twelve of the twenty-two semi-subterranean and two of the sixteen above-ground civilian buildings have been excavated (Fig. 4). The locations of several of the functions and activities known to have been carried out on site have never been found. Many questions remain to be answered and there is considerable potential for further archaeological research at the site.

CHAPTER III

GENERALIZATIONS AND ISSUES IN THE STUDY OF ARCHAEOLOGICAL SITE FORMATION PROCESSES

A. Cultural Formation Processes

Within the last decade, site formation processes has become a subject of considerable discussion and debate. The concept is not new in archaeology, as it concerns some of the most basic principles and assumptions upon which the interpretation of archaeological finds is based. Indeed, since most of what passes for archaeological theory is really theory derived or borrowed from anthropology, history, geography, etc., the development of theories concerning the formation of the archaeological record may be one of the few potential areas of truly archaeological theory. While few archaeologists today would deny that it is important to consider how the archaeological record was formed and disturbed prior to being studied, the number of archaeological reports which assume a direct, one-to-one relationship between the patterning of archaeological remains and the structure of the cultural system under study is still too great. This almost invariably unwarranted assumption is what Schiffer calls the "equivalence transformation" (Schiffer 1976: 44). As he states,"in most instances, variables in the archaeological structure have been

transformed considerably from their values in the systemic (cultural) structure" (Schiffer 1976: 44). The studies which deal with the subject as it relates to cultural processes seem to cluster in three categories: a) attempts to develop general laws of site formation through both cultural and non-cultural processes (Schiffer 1976), b) attempts to elicit the formation processes of specific sites through the use of the method of multiple working hypotheses (Smith 1977: 598-617; 1978: 161-177), and c) those which attempt to develop generalizations concerning the nature of deposition through ethnoarchaeological research (Binford 1978: 330-361).

The most comprehensive work to date concerning site formation processes is Behavioral Archaeology by Michael Schiffer (1976). Schiffer divides site formation processes into two kinds: a) cultural formation processes or c-transforms and b) non-cultural formation processes or n-transforms. The rationale behind using these terms concerns the transformation of durable and consumable items between and within the systemic (or cultural) and the archaeological contexts. According to Schiffer, these transformations operate in four different directions: S-A processes move artifacts from the systemic to the archaeological context and include discard, disposal of the dead, loss and abandonment; S-S processes move artifacts from one systemic context to another and include recycling,

lateral cycling, secondary use and conservatory processes; A-S processes move artifacts from the archaeological context back into the systemic context and include such processes as scavenging, pot hunting and collecting, and archaeological excavation and surface collecting; and A-A processes transform or disturb artifacts from one archaeological context to another and include such processes as land modification, erosion, and the freeze-thaw cycle (Schiffer 1976: 29-41).

Schiffer discusses four kinds of transformation models, that is, ways of modeling the transformations which artifacts undergo before being recovered archaeologically. These are: flow models for consumable and durable elements; behavioral chains, "the sequence of all activities in which an element participates during its systemic context"; the pathway model, which is a more formalized, quantified version of the behavioral chain, used to generate simulated data "for evaluating analytic techniques and testing other transformation models"; and the Reid transformation model, a more generalized model which is "directed toward establishing relationships between the systemic context and archaeological context relevant to the solution of research problems on a specific body of archaeological data" (Schiffer 1976: 49-55).

The flow models which Schiffer constructs for durable items consist of activities grouped into basic processes which he calls procurement, manufacture, use,

maintenance, discard and refuse, while the models for consumable items consist of the processes he calls procurement, preparation, consumption, discard and refuse. Both models have points at which storage and/or transport can interrupt the flow, and items can be rerouted at various points by lateral or recycling processes (Schiffer 1976: 46-47). Elements of Schiffer's flow model will be used in discussing the processes involved in the various activities which were carried on at Fort St. Joseph, although the processes will not be specifically separated into those associated with durable as opposed to consumable items.

Schiffer's behavioral chains are made up of activities which are defined by the following seven components:

1. a specific behavioral description of the activity;
2. the nature of the constituent human and non-human energy sources;
3. element(s) conjoined or associated with the one under consideration;
4. time and frequency of activity performance;
5. the locus of activity performance;
6. points at which other elements integrate with or diverge from the element under consideration;
7. the pathways created to the archaeological record by the outputs of activity performance (Schiffer 1976: 49).

Schiffer's behavioral chain is oriented towards activities which have artifacts associated with them, as opposed to

activities which are directly associated with human behavior (and may not therefore have any physical outputs). However, at a complex site like Fort St. Joseph, the effect of interrelationships between the various site inhabitants was a determining factor in the participation by an individual in a particular activity. Many behavior patterns which may not have had any direct physical outputs would have had an indirect effect on those behaviors which did. In such a case, therefore, only looking at those behaviors which directly produced artifacts would give an incomplete picture or explanation of both the deposition of artifacts and the behavior of the site's inhabitants.

However, the behavioral chain has applications at different levels of analysis. For example, Schiffer mentions two types of behavioral chains, one of which is called site-continuous, "in which the life history of an element occurs entirely at one site" and the other site-discontinuous, "in which only part of the element's life history occurs at one site" (Schiffer 1976: 53). While the behavioral chain model would be useful for detailing all of the possible outputs of various activities on a simple site, following it through comprehensively for a complex site like Fort St. Joseph would require several volumes and is therefore impractical for application in this case.

The pathway model is expressed by Schiffer as a quantitative formula for determining numbers of elements (or

artifacts) used up and therefore potentially available for discard into the archaeological context.

As previously described, the Reid transformation model is intended for general usage, and is based on the assumption that "transformation procedures must explicitly identify and model the processes responsible for the archeological remains under study with specified analytic units" (Schiffer 1976: 55). This model is intended to apply general concepts and procedures to specific archaeological problems in the following manner:

> Research problems are framed within the systemic context of information, which includes specific behavioral and cultural variables of the past that are the objects of archaeological descriptions and explanations. These variables, not directly observable in the archeological record, are related through systemic transformations to specific units of analysis, which, in turn, are operationalized to units of observation in the archeological context by identification transformations. Systemic transformations relate systemic context information to units of analysis, and are facilitated by the use of correlates, c-transforms, and n-transforms. Units of analysis are the materials produced by specific formation processes that have been argued to be relevant - by systemic transformations - to the systemic context information. Identification transformations relate units of analysis to units of observation within the archeological context; it is through identification transformations that units of analysis are operationalized. Units of observation are the units of space and material remains recognizable in the archaeological record from their formal, spatial, quantitative and relational attributes (Schiffer 1976: 55-56).

Schiffer's work has been further elaborated upon by several short articles which concern specific cultural and

non-cultural transforms such as discard behavior and principles governing artifact loss and recovery. Two particularly useful references are "Discard Location: The Ethnographic Data" (Murray 1980: 490-502) and "A Conceptual Framework for the Study of Artifact Loss" (Fehon and Scholtz 1978: 271-273). Murray examines variations in the discard behavior of 79 different cultural groups and arrives at the following postulates to describe discard behavior at family living spaces within habitation sites:

1. Use location will not equal discard location for elements used in activities within family living spaces that are (a) enclosed and either permanent or occupied for at least one season or (b) enclosed and occupied for less than one season.

2. Use location will equal discard location for elements used in activities within family living spaces that are (a) not enclosed and (b) occupied for less than one season (Murray 1980: 479).

Through the examination of the principles of the probabilities of loss and recovery of artifacts Fehon and Scholtz conclude that "the extent to which loss will contribute materials to the archaeological record is dependent upon the probability of occurrence of two separate events in the systemic context - loss and recovery of the lost object. Therefore, both attributes of objects and of their systemic environments will affect the presence or absence and patterning of loss refuse" (Fehon and Scholtz 1978: 273). The two c-transforms which they offer as a result of their discussion are as follows:

> "if a given class of objects has a high [probability of loss], which remains constant throughout the use-life of this class, and [the probability that an object is not recovered given that it is lost] varies wherever these objects occur in systemic context, then variation in the frequency of occurrence of these lost objects in archaeological context reflects variations in the environment [or the probability that an object is not recovered given that it is lost] of systemic context; if a given environment in systemic context has a high [probability that an object is not recovered given that it is lost], and all objects occurring in that environment have loss potential, then variation in the range of classes of objects that occur in archaeological context will reflect variation in the range of objects present in systemic context" [brackets mine] (Fehon and Scholtz 1978: 272).

The two c-transforms which they devised in order to arrive at probability statements which account for the various combinations and permutations of loss and probability of finding lost objects are somewhat convoluted and difficult to follow. However, a simple paraphrase is offered, as follows: i) if the probability of loss of artifacts is constant, then their occurrence in the archaeological record reflects variation in the systemic environment, and ii) if the systemic environment is constant, then the occurrence of the artifacts in the archaeological record reflects the variation in the occurrence of the objects in the original systemic context.

Several of the steps of the method that Bruce Smith proposes implicitly involve the examination of site formation processes (Smith 1977: 598-617). Those steps are:

1. the generation of observational predictions ("statements concerning predicted patterning of cultural debris in archaeological sites"),

2. plausibility considerations ("assessment of the prior probability of hypothesized relationships of human activity to cultural debris usually involves consideration of documented ethnographic and ethnohistoric situations where the behavior pattern and/or pattern of cultural debris is described"),

3. definition of the attribute class ("defining the alternative behavior patterns and the pattern of cultural debris . . . under consideration"),

4. definition of the reference class (appropriate analog situations),

5. establishing bridging arguments between hypotheses and observational predictions (Smith 1977: 606).

In Prehistoric Patterns of Human Behavior: A Case Study in the Mississippi Valley, Smith (1978: 161-177) discusses "Patterned Human Behavior and the Resultant Patterning of Cultural Materials." He makes one fatal error, however, as indicated in the following statement: "Fortunately, however, the cause and effect relationship between many human activities that are termed technological and the cultural debris is so obvious and so universal that archaeologists need not provide detailed accounts of why they think certain patterns of cultural debris resulted from a certain activity" (Smith 1978: 162). While he qualifies this statement by adding that "when necessary, a number of alternative explanations of the patterns of cultural debris being discussed" will be provided, he generally ignores the

possibility of the influence of non-cultural formation processes except in one or two cases and fails to consider the kinds of behavior which might be responsible for the archaeological pattern. The problem is that rather than trying to first generate a model of how the site was used (ie. in terms of the environment and subsistence patterns of the particular area and time period) and then attempting to interpret his findings in terms of the model, Smith tries to work in the other direction, from the pattern to the model. Jochim, on the other hand, argues that this approach produces problems in that:

> "different spatial processes can produce the same spatial form. . . Research might more profitably proceed from process to pattern rather that the reverse. That is the multiple implications of a single hypothesized process could be explored. . ." If two different processes "could produce a similar pattern . . . then surely these two processes can be differentiated by their implications for other aspects of the archaeological record" (Jochim 1972: 103).

The procedure described by Smith is very similar to Schiffer's model of transformation, i.e. his "generation of observational predictions" becomes Schiffer's operationalization of units of analysis into units of observation. Smith's definition of attribute classes is similar to Schiffer's specific behavioral and cultural variables which are related through systemic transformations to specific units of analysis, and Smith's bridging arguments are similar to Schiffer's identification transformations.

However, the two procedures are not exactly the same, as Schiffer does not discuss plausibility considerations or reference classes. Also, Smith does not consider correlates, c- transforms or n-transforms, and he starts with units of analysis as seasonality, range of activities, etc., without really considering the first step in Schiffer's model which is to frame research problems "within the systemic context of information" (Schiffer 1976: 55). In other words, Smith is trying to develop a model of the settlement system or subsystem by moving from units of analysis to units of observation, without really considering the systemic context of the units of analysis.

The development of ethnoarchaeology and modern material cultural studies augurs well for the study of the nature of the deposition of archaeological material. Close examination by archaeologists of the processes by which human behavior creates the physical archaeological record will undoubtedly lead to considerable refinement in our understanding of site formation processes, particularly the cultural processes. A cautionary note should be added here; although the principle of uniformatarianism is essential to the utilization of ethnoarchaeological data to interpret site formation processes, we must keep in mind that modern behavior does not necessarily replicate historic or prehistoric behavior and that it is possible for many different

processes or behaviors to produce similar patterns in the archaeological record.

While many examples of the use of ethnoarchaeology in developing principles of deposition of archaeological materials can be found, one is particularly relevant to this study: "Dimensional Analysis of Behavior and Site Structure: Learning From an Eskimo Hunting Stand" (Binford 1978: 330-361). The purpose of Binford's article is "to describe the relationship between characteristic behaviors observed on hunting stands and the structured consequences of these behaviors in the archaeological record" (Binford 1978:330). His intent was to record behavior that "resulted in the discard or placement of items as they then entered the archaeological domain" (Binford 1978: 333). He examines the question of site function and how the archaeological remains at a site often do not directly represent the primary site function. By diagramming the use of space during various activities and recording the locations of the zones of various disposal modes (toss zone, drop zone, etc.), Binford attempts to isolate the "factors in the ongoing behavioral system that differentially condition the disposition and use of material items, . . . the . . . process of the transformation of material items from their 'systemic' context to their 'archaeological context', . . . the modes of disposal for items entering the archaeological record, . . . the resulting structure, the character of the internal

site structure that results from the production of an archaeological record . . . " (Binford 1978: 344). Several important conclusions are drawn by Binford:

1. there were different areas associated with the performance of different activities;

2. at any one time on the site the different activities conducted simultaneously are independently organized in space;

3. over time, there is a statistical tendency for given activities to be repeatedly localized in the same places, although these loci would not be reserved exclusively for a single activity;

4. the intensity of use was not evenly distributed among the recognized use areas;

5. the various activities were not evenly distributed among the several areas;

6. the degree that activities will be spatially separated at any one time can be expected to vary with the number of different activities simultaneously performed by different persons; and

7. disposal patterns result in a distribution that is essentially inversely related to the patterns of use intensity (Binford 1978: 350-356).

He hastens to point out that these are not universally applicable generalizations, only empirical observations which need further explanation in terms of the "causal relationships between activities and their organization in space" (Binford 1978: 360). The exploration of these conclusions for other sites should prove very useful. While Binford generated these observations in dealing with small scale, single occupation sites more

typical of many prehistoric campsites, they also have a potentially wider application to complex historic sites like Fort St. Joseph. These observations will be examined in Chapter VII in conjunction with a discussion of the artifact deposition patterns at Fort St. Joseph.

B. Non-cultural Formation Processes

Non-cultural site formation processes refer to those natural or non-cultural events which in some way alter the nature and configuration of the archaeological record produced by cultural formation processes. Four articles which deal with non-cultural site formation processes have been selected. These are "The Size Effect: An Explanation of Variability in Surface Artifact Assemblage Content" (Baker 1978: 288-293); "Taphonomy and Paleoecology: A Critical Review of Archaeology's Sister Disciplines" (Gifford 1981: 365-438); "The Expanding Role of Surface Assemblages in Archaeological Research" (Lewarch and O'Brien 1981: 297-342); and "A Survey of Disturbance Processes in Archaeological Site Formation" (Wood and Johnson 1978: 315-381). Of these, Baker and Lewarch and O'Brien deal with one specific aspect of post-depositional disturbance as it relates particularly to surface assemblages and the nature of their relationship to sub-surface assemblages. Baker's basic argument is that surface assemblages cannot be considered to be representative of the total inventory of a site because of

various post-depositional processes which operate to select for a greater proportion of larger sized artifacts to remain on the surface while smaller artifacts are more likely to be buried. Lewarch and O'Brien, on the other hand, argue that an understanding of the formation processes of surface assemblages makes it possible for considerable information concerning a particular site to be gained from the examination of surface assemblages. While they would agree with Baker that in many cases, due to post-depositional disturbances, there is little congruence between surface and subsurface assemblages, they remind us that:

> few artifacts, surface or subsurface, are in situ in the traditional meaning of the term ... (and) all (classes of archaeological deposits) enter the archaeological context as surficial exposures, if for however brief amount of exposure time . . . In addition to factors affecting manufacture, use, reuse, and discard of artifacts, postdepositional cultural and natural processes constantly modify content, condition, and pattern of archaeological material. The question thus is one of evaluating all archaeological materials, both surface and subsurface, for potential biases relative to an explicit research problem, since there is some bias in all recovery contexts (Lewarch and O'Brien 1981: 312, parentheses mine).

In "Taphonomy and Paleoecology," Gifford traces the development of taphonomy in the discipline of paleontology, particularly as it relates to the study of fossilized bone, and discusses the implication for archaeology. She suggests that in order to understand taphonomy and use it to its fullest potential:

> that the search for meaning in the archaeological record begin with well-conceived and well-executed observations of the contemporary world (Gifford 1981: 425).

Wood and Johnson's article "A Survey of Disturbances in Archaeological Site Formation" is a detailed discussion of soil dynamics as they affect archaeological data. These can be divided into two processes:

> horizonation, where soil materials are differentiated into profiles having horizons, and homogenization . . . where horizon formation is impeded, or where horizons and their contents may be mixed or otherwise disturbed. . . . The various processes of homogenization are collectively termed pedoturbation (Wood and Johnson 1978: 317).

The nine processes of pedoturbation - faunalturbation (animals), floralturbation (plants), cryoturbation (freezing and thawing), graviturbation (mass wasting), argilliturbation (swelling and shrinking of clays), aeroturbation (gas, air, wind), aquaturbation (water), crystalturbation (growth and wasting of salts), and seismiturbation (earthquakes) - are described in detail with the implications for archaeological materials examined. Their final recommendation is that since "few archaeologists have the training to interpret soil dynamics as subtle as those . . . outlined", archaeologists should familiarize themselves with the processes and consult soil specialists when necessary. "Each instance of pedoturbation must be evaluated individually, especially for its effect on cultural remains" (Wood and Johnson 1978: 370).

It is obvious from this brief examination of the literature concerning non-cultural formation processes, that there are many physical or non-cultural factors which must be considered in developing explanations for the condition and horizontal and vertical location of artifacts and soil strata in combination with or in lieu of cultural explanations.

C. Proposed Approach

I would like to propose a procedure for the analysis of a particular site using the synthetic model discussed by Schiffer. He states that the following are the three basic properties of archaeological data:

1. they consist of materials in static spatial relationships;
2. they have been output in one way or another from a cultural system; and
3. they have been subjected to the operation of non-cultural processes. (Schiffer 1976: 12).

Because the particular site I wish to apply this procedure to is an early 19th century historic site with considerable historical documentation, the first step will be to attempt to reconstruct as completely as possible the cultural system of which the site is a product, using historical documents. In this way the systemic context is recreated and the cultural variables of the past can be established. The variables will be such characteristics as seasonality, the

size and composition of the cultural groups, the range of activities carried out, and the duration of occupation. The different values of these variables will be operationalized into units of observation by predicting what the outputs of these values would be in terms of the archaeological record. The next step will be to examine the post-occupational history of the site and determine in as much detail as possible the non-cultural transformations which the archaeological record is likely to have undergone. The product of these three steps, i.e. the reconstruction of the cultural system from historical documents, the prediction of the physical manifestations or observational predictions concerning the deposition of the archaeological record, and the set of predictions concerning the post-depositional disturbance of the archaeological data, should be a body of predictions or postulates concerning the patterning of the archaeological record.

CHAPTER IV

A MODEL OF THE CULTURAL SYSTEM OF THE FORT ST. JOSEPH COMMUNITY

In order to establish the site formation processes which created Fort St. Joseph as an archaeological site, it is necessary to determine how the community of Fort St. Joseph was structured, to suggest how this would be manifested spatially, and then to predict what the physical remains of this might be.

As a community, Fort St. Joseph played two major roles, that of a military/diplomatic outpost of the British imperial government and that of an economic centre within a trade network. While the duality of its roles was generally reflected in its spatial configuration with the site divided into two major sections, the military fort and the civilian settlement, there was a certain amount of overlap in that the Indian Department operated partly out of the fort and partly out of the civilian settlement. Nor do the four groups of people present at the site fall neatly into the two roles or functions of the site. These groups are: military personnel and Indian Department personnel, who were primarily involved in military and diplomatic activities (although not exclusively), fur traders who were primarily (although again not exclusively) involved in economic

activities, and Indians who were involved in both military/diplomatic and economic activities.

None of the groups were homogeneous; status and role differentiations existed in each. Table Two illustrates a general breakdown of the status hierarchies of each group.

TABLE 2: Levels of Social Organization at Fort St. Joseph

Status	Military	Indian Department	Fur Traders	Indians
Upper	Commanding Officer	Storekeeper	Company Partners	Leaders
Upper Middle	Non-comm. Officers	Interpreter	Local Traders	
Lower Middle	Articifers	Blacksmith,	Blacksmith, Tradesmen	Hunters, Gatherers
Lower	Enlisted Men	Hired local Servants	Engages	Local wage employees

It should be noted that in a frontier post such as Fort St. Joseph there would probably be some blurring of social boundaries and people who fall within the highest status levels here might only fall within a middle status level in the larger metropolitan society from which they came. Also, the Euro-Canadian people here were from stratified state societies with hierarchical status levels, while the Indians were from comparatively egalitarian societies

which did not have rigidly defined hierarchical status levels. Therefore, status levels indicated for Indians are only relevant to the community itself, and not to Indian social organization per se.

A. Establishment of Variables

In Prehistoric Patterns of Human Behavior: A Case Study in the Missippippi Valley, Bruce Smith discusses the difference between determining the settlement pattern of a population and determining the settlement system of the same population:

> "Establishing the settlement pattern of a prehistoric human population involves determining the number, size, and spatial distribution of the full range of sites occupied by that population. Establishing the settlement system of a prehistoric human population involved the additional, and much more difficult, task of determining the functional role of each site in the overall adaptive strategy of the human population. It involves determining the seasonality of occupation of different sites, as well as the political, kinship, and economic ties existing between groups occupying different sites. It also involves specifying and quantifying the movement of people, energy, and information between sites throughout the annual cycle. Determining the pattern of settlement of a prehistoric human population is possible; determining the structure of the underlying settlement system - the complex web of interaction and inter dependence that ties the various sites together in a balanced, functioning, adaptive system - is much more difficult" (Smith 1978: 13).

In order to contribute to the development of the settlement system of the Powers Phase in the Missippippi Valley, Smith investigated an example of one of the lesser

known categories of sites within the phase, sites smaller than village size. His rationale for this was to develop a model of one small segment or subsystem of the total cultural system which could interlock with models of the other sub-systems to form the larger cultural system (Smith 1978: 15). He addressed the five following problem areas in this investigation:

1. The seasonality of occupation of the site;
2. The range of activities carried out at the site;
3. The size and composition of the occupying group;
4. The duration of occupation of the site; and
5. The relationship of the site to other Powers Phase sites (Smith 1978: 145).

Following Smith's approach, I propose to attempt to determine the community system of Fort St. Joseph. It is more complex than the site investigated by Smith, as it was occupied by four rather different groups of people more or less simultaneously. However, the structure of the community system can be viewed in the same way as the structure of the settlement system - as "the complex web of interaction and interdependence that ties the various sites (groups or sectors of the community) together in a balanced, functioning, adaptive system" (Smith 1978: 13).

From both historical data and the archaeological survey of Fort St. Joseph, it is obvious that different parts of the site were used in different ways by different

groups, although exactly how remains to be determined. In order to determine this, information concerning the differences and similarities of the various groups and their activities will be examined as potential cultural formation processes. The information will be organized according to the following variables:

1. The seasonality of each group's occupation of the site;
2. The size and composition of each group;
3. The duration of each group's occupation of the site;
4. The range of activities carried out by each group at the site;
5. The space and building requirements of each group based on information concerning the other four variables.

From the alternative expressions of these variables, markers can be established for each group so that the presence and activities of each group, or combination of groups, can be recognized in the archaeological record.

The first three variables can be examined in terms of demographic characteristics of the groups involved. Variables four and five relate more directly to site formation processes because both activities and space and building use interact to help produce the archaeological record. In order to simplify and organize the values of these two variables, I will group both activities and space and building requirements into general functional

categories. These same categories can then be used to group the elements of the archaeological record - the units of space and material remains or units of observation as Schiffer defines them. These general functional categories are adapted and modified from Sprague (1980-81: 251-261).

1. Domestic: this refers to the household. In the case of activities, this category includes eating, sleeping, cooking, heating, waste disposal, etc. For space and building requirements, it includes shelter/accommodation, household storage, etc.

2. Sustenance: this refers to activities and space and building requirements related to the procurement and processing of food and includes agriculture, gardening, animal husbandry, hunting, fishing, gathering, etc.

3. Transportation: this refers both to the movement of goods and people to the site and around the site and the activities and space and building requirements associated with transportation.

4. Trades and Light Industry: this refers to activities related to the technology involved in the construction and maintenance of the community and includes such activities as lime burning, blacksmithing and canoe building.

5. Commerce: this refers to activities and space and building requirements associated with trade and the buying and selling of goods.

6. Defence: this refers to military activities and the space and building requirements for the maintenance and defence of the community.

7. Group Ritual: this refers to the activities of the Indian Department and Indians in maintaining alliances.

B. Cultural Manifestation of Variables

The four groups present at the site were the military, Indian Department, fur traders and Indians. The major reason for a group's presence on site will have a direct bearing on seasonality, range of activities, size and composition of group, duration of group's occupation of the site, the relationships of groups to one another and the space and building requirements of the group. Seasonality and duration of occupation will have a direct impact on the range of activities carried out and vice versa. The first four variables will have a direct bearing on the space and building requirements of each group. Each group will be discussed separately. I have chosen to express the first three variables in terms of the demographic characteristics of seasonality, size and composition of the smallest unit, and the duration of occupation on the site of individuals with each group, respectively.

1. Military Personnel

The military personnel at Fort St. Joseph, like the

other non-Native groups, can be divided into four status levels, each with their respective roles (Table 2). These are:

1. high status - commanding officer;
2. upper middle status - junior and non-commissioned officers;
3. lower middle status - articifers; and
4. lower status - enlisted men.

In some cases, these status level differences are reflected in the variables , particularly in terms of seasonal mobility, range of activities, and space and building requirements.

The historical information on the military at Fort St. Joseph is quite extensive (see Vincent 1978a: 96-101 for a good summary). The first step in analysing the military in terms of the cultural variables was to compile a time table from the historical documents showing the dates for the occupation of the various regiments and commanding officers (Table 3). From this it can be seen that generally speaking, the regiments stayed at the fort all year round. The exceptions were the Royal Engineers and the articifers them who worked on construction of the fort and its buildings only during the summer and returned east each fall. The range of length of occupancy of the regiments was from one to five years, with an average of two to three years. The range of length of occupancy of the commanding

TABLE 3: Military Regiments at Fort St. Joseph
(extracted from Vincent 1978a: 98-100)

LENGTH OF OCCUPATION	COMMANDING OFFICER	NON-COMM. OFFICERS	REGIMENT	NO.
Spring - Aug. 1796	Lieut. A. Foster	1 Serg., 1 Corp.	24th Reg.	12 men
Aug. 1796 - later 1796	Ens. L. Brown	1 Serg.	Queen's Rangers	12 men
late 1796 - July 1801	Capt. P. Drummond	2 junior officers	Royal Can. Volunteers	42 men
July 1801 - 1802	Lieut. R. Cowell		Queen's Rangers	detach.
1802 - Sept. 1805	Capt. A. Clerk		49th Reg.	
Sept. 1805-1809	Capt. A. Trew		41st Reg.	detach.
	Capt. A. Muir			
	Maj. A. Campbell			
	Capt. W. Derenzy			
Summer 1809 - Fall 1811	Capt. T. Dawson		Wing of 100th Reg.	
	Capt. T.O. Sherrard			
Sept. 1811-July 1812	Capt. C. Roberts	4 corps. 2 sergs. 3 officer	10th Royal Veterans	36 men
		1 serg. 2 gunners	Royal Artillery	

officers was from one to five years as well, but the average stay was one to two years. At this point I do not know whether the junior and non-commissioned officers would have followed the regiment or the commanding officer as I do not have information on these men between July 1801 and September 1811, the time during which regiments sometimes stayed while the commanding officers moved. In most cases, the military men at Fort St. Joseph did not bring families with them, either, as in the case of the enlisted men, because they were not allowed to, or, in the case of the officers, because the posting was considered uncivilized and hopefully short. There were exceptions however, as Askin (Indian Department storekeeper from 1807 to 1812) mentions the presence of Captain Muir's wife in January 1808:

> "Our Society is verry small being composed of Capt. Derenzy, Capt. and Mrs. Muir, Mr. & Mrs. Crawford, Lt. Craddock, Doctr Davis & our Family" (Askin 1931: 590).

In the majority of cases, however, the military component at Fort St. Joseph consisted of single males. With the above information, the demographic characteristics can be examined (Table 4).

a. <u>The seasonality of the group's occupation of the site</u>: In terms of seasonality, the military personnel can be sub-divided into two groups: 1) the engineers and articifers who were only on site during the summers to work on fort and building construction, and 2) the rest of the military

personnel, including comanding officers, junior and non-commissioned officers and enlisted men who stayed at the fort year round.

TABLE 4: Demographic Characteristics of Military Personnel

Rank	Average Stay	Seasonal Mobility	Composition of Demographic Unit	Ave. No.
Command. Officer	1-2 years	year-round	Single males, some wives	1
Junior Officers	1-2 years	year-round	single males	3-4
Articifers	3-4 months	summer	single males	6-40
Enlisted men	1-4 years	year-round	single males	12-42

b. The size and composition of the group: Except for isolated instances of the presence of officers' wives, the military personnel consisted of single males. As can be seen from Table 3, the usual contingent consisted of one commanding officer, two to five non-commissioned or junior officers and twelve to 42 enlisted men. The articifers were primarily present on site during the summers of the years that construction was taking place, from 1797 to 1806. The articifers were both military men and civilians employed by the military who were carpenters, masons, bricklayers,

blacksmiths, glaziers and axemen (Vincent 1978b: 29, 32, 35, 39, 41, 43, 44, 45). The most numerous of these were probably carpenters, followed by masons. The numbers ranged from two to more than forty, the greatest number being present in the summer of 1799.

c. The duration of the group's occupation of the site: Military personnel were present at the site throughout its occupation from construction until destruction (ca. 1797 to 1814). However, their use of other parts of the site was more complicated because it was unofficial. An example of this was officers renting out civilian houses for accommodation. Since this was done by individual officers for limited periods of time, it is important to note that most of the officers were at the site for only one year. As this factor is directly related to participation in subsistence activities, it should also be noted that the regiments occupied the site on an average of two to three years.

Given the information stated above, combined with other historical data, variable four can be examined.

d. The range of activities carried out by the group at the site: The activities of the military personnel at Fort St. Joseph varied somewhat according to their status level or rank and the length of their posting. Table 5 illustrates

the involvement of different ranks in the various functional categories of activities.

As relatively well-to-do, year-round residents of the community, some of the commanding officers and commissioned officers established households in houses in the civilian settlement. Only one officer was known to have his wife with him, but some officers would have had a servant or two who would have performed such domestic activities as food preparation and cleaning (Vincent 1978b:19). They were involved in gardening (Masson 1889, Vol. 2: 172) and had livestock brought from Lower Canada on North West Company ships (Askin 1931: 659, 660). Some of the officers may have gone humting or fishing for recreation and to supplement their diet. They undoubtedly would have bought local produce from the Indians, as well as importing provisions for their personal use. They would have used the schooner wharf primarily for travelling or shipping goods to and from the post. Their involvement in military activities would have been primarily administrative. Indian councils and the gift-giving ceremony also required the presence of the commanding officer.

Some of the non-commissioned officers may also have established households outside the fort but were not likely to have had wives there and were less likely to have had servants. Some of these men may have lived in military accommodations. They may have done some of their own food

TABLE 5: Activities of Military Personnel at Fort St. Joseph

Rank	Commanding Officer	Junior Officers	Articifers	Enlisted Men
Domestic	est. households, food prep.& consumption	est. households, food prep.& consumption	food prep.& consumption	food prep. &consump., cutting wood
Sustenance	gardening, animal husbandry	gardening, animal husbandry		gardening, hunting & fishing
Transportation	travelling to & fro, shipping personal goods	travelling to & fro, shipping personal goods	travelling to & fro,	road const travelling to & fro
Defence			construct. of defens. works	guard duty
Trades & Light Industry			blacksmith, lumber prep carpentry	
Commerce	purchasing - traders & Indians	purchasing - traders & Indians		
Group Ritual	parade, Indian councils	parade,		parade
Administration	Paperwork, corresp., records	records		

preparation either in their houses or in the military kitchen. They would have been involved in gardening but, because of the cost, were less likely to have brought in domestic animals than the officers. They may have done some hunting and fishing for sport and to supplement their diet. Some provisions and personal items would have been purchased from the local Indians and fur traders. The junior officers would have had some administrative duties, as well as the maintenance of discipline in relation to their military duties.

Generally speaking, the articifers who were brought to St. Joseph's to build the fort were only there during the summer. Their accommodation would have been at the temporary camp in 1797 and 1798 and at the fort from 1799 to 1806. Most summer accommodations would have been temporary, so households would not have been established. Their meals would probably have been prepared in the military kitchen. There is, however, a mention of an articifer named Frerot who was preparing to build a house in the community in the fall of 1798 (Vincent 1978a: 93-95). In August of 1801 Dr. Richardson talked of renting a "comfortable lodging belonging to the Girl that lives with Mr Frero" (Askin 1931: 355). It is possible that Frerot was a local (ie. from Michilimackinac or Sault Ste. Marie) civilian articifer and did not leave the post for the winter as the military articifers did. It is unlikely that the military articifers

would have been on site long enough each summer to participate in any local subsistence activities such as gardening or animal husbandry. Their primary activities would have been their skills or trades such as carpentry, masonry, brick-laying, glazing, blacksmithing and wood cutting and trimming (axemen building palisades). The military artificers would not likely have been much involved in local commerce, group activities such as Indian councils or administrative activities.

The enlisted men were housed in the blockhouse and prepared and consumed their food in the military kitchen and barracks, so no households would have been established by them. They participated in gardening and probably some hunting and fishing. They may have acquired some local produce by trading their own garden produce for provisions or other goods. The commanding officer wrote at one point of his men receiving powder and shot, among other things, from the Indian Department Storekeeper in return for cutting wood for him (PAC, RG8, C Series, Vol. 254, p. 9, Cowell to Green, 10 Feb. 1802). The military duties of the enlisted men would have included guard duty, parade, labouring jobs for fort construction and maintenance (clearing land of trees, shrubbery and rock, digging privies, etc.), wood cutting for stoves and fireplaces, hauling water, etc.

From the values of variables one, two, three and four, the values of variable five, the space and building

requirements of the group can be determined. Table 6 summarizes the general space and building requirements of the men in each of the status levels at Fort St. Joseph.

TABLE 6: Space and Building Requirements of the Military at Fort St. Joseph

Rank	Commanding Officer	Junior Officers	Articifers	Enlisted Men
Domestic	Rented Accom., Off. kitchen, bakehouse, woodlots	Rented Accom.,Off. kitchen, bakehouse, woodlots	Rented Accom., ? kitchen, bakehouse, woodlots	blockhouse men's kitchen, bakehouse, woodlots
Sustenance	gardens, stables, animal pens, storage	gardens, stables, animal pens storage		gardens
Transportation	wharf canoe dock roads	wharf canoe dock roads	wharf canoe dock roads	wharf canoe dock roads
Defence	Fort, palisades, bastions, ravelins, powder magazine, guardhouse			
Trades & Light Industry			Stores bldg lime kiln, blacksmith shop, workshops, storage	
Group Ritual	parade ground, tents, flag poles, travelling magazine			
Administration	blockhouse			

e. The space and building requirements of the group: As can be seen from examining the activities of the military, most commanding officers and some junior commissioned officers rented houses with associated building lots and other features outside the fort. They still probably had their food prepared in the bakehouse and military kitchens, as did the articifers, enlisted men and non-commissioned officers who were accommodated in the blockhouse. All of the year round military residents had gardens, while in addition, the commanding and commissioned officers required animal pens and stables and possibly some kind of feed storage for their domestic animals. The primary military mode of transportation to and from the site would have been by military ship via the wharf, but local water transportation would have been by bateau which may have involved the use of the canoe docks as well as the wharf. The local roads to and from the fort were likely built by the military. Defence requirements included the fort with its palisades, bastions and ravelins, as well as the powder magazine and guardhouse. In terms of trades and light industries, a storehouse and workshop would have been required for the engineer and military articifers, as well as a lime kiln for the masons, a blacksmith shop for the smiths and a sawpit for the carpenters. For group rituals, space for a parade ground within the fort would have been required and it is likely that large tents

for the gift-giving ceremonies were provided from military stores (Carter-Edwards 1979: pers. comm.).

2. The Indian Department

Unlike military personnel with their rigidly maintained status levels, the Indian Department was somewhat more flexible. This is illustrated by Table 7 which gives the names and dates of Indian Department personnel at Fort St. Joseph between 1796 and 1812. For a good part of this period, the storekeeper acted as the interpreter as well. This represents an overlap between the high and upper middle status levels as shown in Table 2. However, the distinction between these levels and lower middle and lower levels seems to have been maintained, as the blacksmith and other workmen were never mentioned as part of the Askins' social circle.

As can be seen in Table 7, the range of length of occupancy of Indian Department personnel at Fort St. Joseph was from a minimum of one to two years to a maximum of five to six years. In some of these cases, the length of the person's occupancy of the site was probably longer than their term of office, as some of them were already living on site when appointed to the position, and some of them probably continued living on site after they gave up the position. The mode (the number of years of occupancy that is most frequent) was five years.

John Askin Jr., storekeeper, clerk and interpreter

TABLE 7: Indian Department Personnel at Fort St. Joseph, 1796-1812. Extracted from Vincent 1978a: 105-108.

YEAR	STOREKEEPER	CLERK	INTERPRETER	BLACKSMITH
1796	Thomas Duggan		Capt. Gme. LaMothe	
1797				
1798			(died 1799)	
1799			Langlade Jr	Louis Dufresne
1800				
1801	suspended Jan. 1802		J. Martin (asst. by Chaboillez)	
1802	J. Martin (Jan. to May)			
	Charles Chaboillez			
1803				
1804				
1805				(died Nov. 1805)
1806	pay stopped 1806			Feb. to July 1806, unnamed blacksmith loaned by Spinard, Fields&Varin, traders
1807	Askin Jr.	Chiniquy		John Johnson (appointed Dec. 1806)
1808				
1809				
1810			Cadotte (1mo. 1810)	
1811				
1812				

between 1807 and 1812, brought his family and servants with him to Fort St. Joseph and tried to maintain his household much as he would have in Upper Canada. Lamothe left a wife and two young children behind when he died in the fall of 1799 (Michigan Pioneer and Historical Collections, Vol. XXI, p. 592). Unfortunately, there is considerably less information concerning the other Indian Department personnel at the fort. Given the fact that several of them (Chaboillez, Langlade, Lamothe, and likely some of the others) lived in the general area of the Upper Great Lakes prior to the construction of Fort St. Joseph, it is quite probable that the majority of the Indian Department personnel at the fort had families with them.

Given the above information, variables one, two and three can be discussed (see Table 8).

TABLE 8: Demographic Characteristics of Indian Department Personnel

Status	Average Stay	Seasonal Mobility	Composition of Smallest Unit	Ave. No.
Store-keeper	5-6 years	year-round	nuclear family, and servants	1
Inter-preter	3-4 years	year-round	nuclear family	1
Blacksmith	6 years	year-round	nuclear family	1
hired local servants	?	year-round	individuals, male or female	?

a. The seasonality of the group's occupation of the site: Indian Department personnel were present on site all year round, during all seasons.

b. The size and composition of the group: As shown in Table 6, the number of Indian Department personnel at Fort St. Joseph ranged from two to three at a time, but was usually three (this number does not take into consideration the number of local people who might have been employed by the storekeeper, clerk, interpreter or blacksmith for short periods of time as laborers). It is most likely that these people were accompanied by families; and in the case of John Askin, even servants. Although the servants would be considered to be of lower social status, they were part of the household of their employer and therefore difficult to recognize as a separate entity archaeologically.

c. The duration of the group's occupation of the site: The Indian Department was present at the site throughout its occupation, from 1796 to 1812. Individually, the representatives of the Indian Department were at the site for several years at a stretch in most cases.

Given the information stated in one, two and three above, combined with other historical data, variable four can be examined.

d. The range of activities carried out by the group at the site (see Table 9): Indian Department personnel were involved in two kinds of activities at Fort St. Joseph, official, departmental duties, and unofficial, personal activities. Official duties would vary, depending on the particular role of the individual in question. The role of the storekeeper was to keep track of the Indian stores, inventorying them and giving them out to the Indians at appropriate times. He was responsible also for receiving and giving out or shipping off those gifts which the Indians brought for the British, usually in the form of corn, maple sugar and fish. The storekeeper, being the most senior Indian Department official on site, represented the British government along with the commanding officer in any treaties, alliances, giftgiving ceremonies and other official occasions involving the Indians at the fort and in the immediate vicinity. It was his duty to persuade the Indians to remain loyal to the British and to gather any information he could from them concerning the movements of the Americans and other Indians in the Great Lakes and Upper Mississippi regions.

The clerk's role was to assist the storekeeper with his paperwork, and as can be seen in Table 7, in most cases, this duty was performed by the storekeeper himself. The role of the interpreter was to act as translator during interactions between the Indian Department and military and

TABLE 9: Activities of Indian Department Personnel at Fort St. Joseph

Status	Storekeeper & Clerk	Interpreter	Blacksmith	Engages, Servants
Domestic	est. households, food prep. & consumption	est. households, food prep. & consumption	est. household, food prep. & consumption	cutting wood, chores related to susten.
Sustenance	gardening, animal husbandry, agriculture	gardening, animal husbandry	gardening, animal husbandry	gardening, fishing
Transportation	shipping & receiving of dept. & personal goods	shipping & receiving personal goods	receiving materials, tools&stock	
Defence				
Trades & Light Industry			manufacture & repair of metal items	
Commerce	purchasing - traders & Indians	purchasing - traders & Indians	purchasing - traders & Indians	
Group Ritual	gift-giving, Indian councils	translating at ceremonies,counc.		
Administration	inventory, distributing receiving, corresp.	records		

the various Indian groups which visited the fort. After 1802, this duty was also performed by the storekeeper.

The primary work of the blacksmith at Fort St. Joseph was to manufacture and repair metal goods such as axes, traps, kettles and muskets for the Indians. It is unclear whether this was intended to be a free service to the Indians, as part of their relationship to the Indian Department, or whether they were expected to pay the blacksmith for his services. The latter may have been the case, since there is documentary evidence of fur traders accusing the blacksmith of trading his services for furs (Vincent 1978a: 114). If these services were supposed to have been free to the Indians, they would not be likely to pay for them with furs.

The unofficial activities of the Indian Department personnel would have concentrated primarily on subsistence activities. The storekeeper, interpreter and blacksmith all established households where family members or servants carried out the usual household tasks involved in food preparation, and cleaning, maintenance and refuse disposal. Since they were on site all year round and usually for several years at a time, they would have been more heavily involved in subsistence activities than other groups such as the military, who were only there for a year or two at a time, or the fur traders who were often away from the site seasonally. People like John Askin Jr., however, were more

farmers than hunters, and their subsistence activities were concentrated more in the area of gardening, animal husbandry and the growing of small crops for animal feed. Judging from Askin's discussion of the acquisition of wild game from the local Indians (Askin 1931: 574, 591, 605), it would seem likely that he did not do any hunting or fishing himself, but bought local meat and fish for his family's consumption. The following is a good description of his subsistence activities:

> "... I have found out the Method of getting the Indians to kill Bears they have brot me Bear meat several times which was uncommon before my arrival. I cannot cmplain as yet for want of provisions, the Indians have furnished me wh abundance of Ducks, fish, Baver Meat, Hares and Pheasants. its true it has cost me a whole Barrl of Whisky and numbers of Loaves of Bread. However I'll be better provided for next year, having planted plenty of Potatoes, a Garden well furnished wh Cabbage plants for the winter and great prospects of the onions I planted. I have a field of Oats which looks well and promising; Eight busels were sowed and to tell you the truth my Horses and Cattle were nearly starved in order to save whatI did for seed. Exclusing of the field where the oats are another field for pasturage was fenced in by Johnny and [some] Indians it contains four Acres well inclosed wh Cedar poles wh posts and pins and clover and Timothy Sown in it for the Calves The Apple Tree plants have been planted out and have taken very well. We have abundance of good Radishes every day and Spanish spinage Greens (Melons, cucumbers, carrots Beats and Selery the grubs have entirely destroyed). I have been verry unseccessful wh the two yews I brought wh me they had two lambs each, and after feeding the old ones well wh Turnips and paying great attention and attendance they all died I am again with my old stock to commence raising De nouveaux" (Askin 1931: 605-606).

It is likely that Chaboillez and Duggan, the other two long-term storekeeper/clerks, also followed the same policy of buying local game rather than doing their own hunting and fishing, given the social standing of the storekeeper, and given that both men were advanced in years at the time of their service (Askin 1931: 553-554; Vincent 1978a: 115). It is difficult to say with certainty whether Chaboillez or Duggan were as involved in farming as Askin, but considering their length of stay at the fort, they would have had ample opportunity for it. Louis Dufresne and John Johnson, the two long term blacksmiths at Fort St. Joseph (nine year and six year residents respectively), also had ample opportunity to engage in farming and other local subsistence activities. However, like the other Indian Department employees and the military, they had full time jobs which would have kept them fairly busy during the day. While there is little information concerning the activities of Johnson, a complaint against DuFresne by one of the traders reveals that DuFresne was acquiring provisions from the Indians:

> "Louis De Frene also says he went out last March to some Indian Lodges in quest of Provisions, and that the Indians made him a present of the Sugar, and Martin Skins mentioned by Mr. Fields ..." (PAC, RG8, C Series, Vol. 254, p. 219, Court of Inquiry, 13 August 1804).

Given the above information, I would hypothesize that Indian Department employees were involved in agricultural pursuits to a considerable extent but that any local

fish or game that they consumed was purchased from local Indians. It may be, as in the case of John Askin who had three servants (Askin 1931:592, 649), that it was not the official himself who did the gardening or other such work; but since the servants lived in the same household, the archaeological effect in terms of remains would be the same.

> "Men servants can be procured here which are the best being engages and accustomed to the country. he will want a Female Servant they being scarce who understand how to Cook wash and milk Cows For my part an Engage, the Negresse and Gilbert does all the work about the House the Engage cuts and hawls all the Wood for Four fires, Feeds 4 Cows, 1 ox 2 Horses and 1/2 Dn Hogs and always more wood in the Yard than My Brother ever had at any one time" (Askin 1931: 649).

In terms of transportation, the storekeeper would be involved in the shipping of provisions such as corn and sugar which had been brought in by the Indians and in receiving the goods sent to the site by the Indian Department for distribution to the Indians. The blacksmith, under the direction of the storekeeper, probably received metal stock and other materials sent by the Indian Department for his work.

From the information generated by the values of variables one, two, three and four, variable five - the space and building requirements of the group - can be examined.

e. <u>The space and building requirements of the group</u>: The general space and building requirements of the Indian

Department and its personnel for their various activities are summarized in Table 10. The storage space required by the department for the safekeeping of the Indian gifts and supplies was provided by the military in the blockhouse. Since there was no Indian Council House ever built, the storekeeper or interpreter's house was used for this purpose (Vincent 1978a: 118). Transportation of Indian Department goods was provided on government ships. The transportation of personal goods for the Indian Department personnel was provided mainly by fur trade company ships (Askin 1931: 574, 577, 590, 606, 628, 631, 636, 640, 645, 650, 659, 660, 668, 679, 695; Vincent 1978a: 143). The blacksmith, of course, required a blacksmith shop in order to carry out his duties and "In 1810 Presque LeGris was paid £22 10s for building and completing a blacksmith shop at Fort St. Joseph, presumably to replace an old one" (Vincent 1978a: 115). This means that there were at least two different Indian Department blacksmith shops at the fort, one pre-1810 and one post-1810.

Building lots and houses were needed for accommodation and sheds, animal shelters and other outbuildings. Gardens and fields were also needed to accommodate the subsistence activities of the Indian Department personnel.

A minimum of six of the houses at Fort St. Joseph would have been residences of Indian Department personnel at one time or another. Three of these would have been built by

TABLE 10: Space and Building Requirements of Indian Department Personnel at Fort St. Joseph

Status	Storekeeper/ Clerk	Interpreter	Blacksmith	Servants, local labor
Domestic	house, yard, sheds,summer kitchen	house,yard, sheds, summer kitchen	house,yard, sheds, summer kitchen	employer's house or temporary shelter
Suste-nance	gardens, stables, animal pens, fields, storage	gardens, stables, animal pens fields, storage	gardens, stables, animal pens fields, storage	
Transpor-tation	wharf, canoe dock, roads, vehicles	wharf, canoe dock, roads, vehicles	wharf, canoe dock, roads, vehicles	
Defence				
Trades & Light Industry			workshop, farrier's sling, fuel & stock storage	
Commerce				
Group Ritual	Indian council house, tents			
Adminis-tration	Storehouse			

or for people who were government officials at the time (LaMothe, Duggan and Dufresne); the others would have been built by merchants who later became Indian Department employees or who rented or sold their houses to newly arriving Indian Department employees. All of these houses would have been situated on building lots as shown in the map of the site in 1800 (Fig. 3).

Most of the Indian Department personnel probably had gardens, and some of them like Askin had fields as well. Askin also kept a considerable collection of domestic animals to supplement his family's diet. Although he did not mention the use of any kind of building to shelter his animals, it is quite likely that he would have had one, considering the severity of the winter in that area. Although considerably less historical documentation is available concerning the other Indian Department employees, Askin's comments lead one to believe that he was certainly not the only person at the fort to keep animals:

> "From the Great Scarsity of Indian Corn and other grain the Inhabitants of this place have been under the Necessity of killing all their Poultry. All the Hogs are starved to Death and it will be with great difficulty to prevent the Horned Cattle from the same fate ... my Having made a purchase of a House at this place, a cow Bed Sted, pigs and potatoe fields ..." (Askin 1931: 591, 636).

This does not necessarily prove that the other Indian Department employees kept animals at the fort, but it does indicate that keeping animals there was a common practice.

Since Indian Department employees were probably the longest term year-round inhabitants of the site, they would be the most likely to bring in and keep animals which needed to be cared for and guarded constantly.In terms of building requirements, this would indicate the probable need for sheds or shelters and possibly fields for growing hay or other animal feed. Storage sheds would also be required for such things as animal fodder, barrels of provisions, fuel, etc.

3. The Fur Traders

The fur traders at Fort St. Joseph were a varied group whose comings and goings are rather difficult to tie down. Table 2 shows the hypothesized status levels of the fur traders at Fort St. Joseph. The company partners spent little time at the site, in most cases, only passing through. The local traders fell into two categories, one group being the local representatives of larger companies, the other being independents or small local companies. There are some scattered references to the aforementioned groups, but almost nothing concerning the two lower levels - the craftsmen and the engages. As a result of this paucity of data it is rather difficult to construct a time chart showing when, who and how many traders were at the post. However, by pulling together the scattered references which do exist, a skeleton outline can be constructed (Table 11).

TABLE 11: Presence of Individual Fur Traders at Fort St. Joseph

	1796	1797	1798	1799	1800	1801	1802	1803	1804	1805	1806	1807	1808	1809	1810	1811	1812
Langlade		*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	---*
Chaboillez			*	----	----	----	----	----	----	----	----	-*					
Ogilvie			*	*													
Gillespie			*													*	
Mitchell			*	----	----	----	----	----	?---								
Pothier			*									*	*			*	* *
Bleakley				*													
Ademar				*													
Culbertson		*															
Spinard								?	*---	----	----	----	--*-	----	--*		
Fields								*----	-*---	----	----	----	--*				
Varin									*---	----	----	----	--*				
Pelladeau									*	----	----	----	--*-	----	----	----	----
Livingstone								*								*	*
Crawford												*---	----	----	----	----	-?

Appendix B contains detailed historic information concerning the various traders who frequented Fort St. Joseph. Using this information, the variables relating to the demographic characteristics of the traders can be discussed (Table 12).

TABLE 12: Demographic Characteristics of Fur Traders

Status	Average Stay	Seasonal Mobility	Composition of Demographic Unit	Ave. No.
Company Partners	days, weeks	seasonal	Single males	varied
Local Traders	several years	year-round, seasonal	single males/ families	varied
Blacksmiths Canoe Builders	?	seasonal, year-round	single males/ families	varied
Engages	weeks	seasonal	single males	varied

a. <u>The seasonality of the group's occupation of the site</u>: In terms of the seasonality of occupation or use of Fort St. Joseph, the fur traders can be divided into two groups. The partners or associates of larger companies such as Ogilvy, Gillespie or Pothier seem to have spent only brief periods to time at the fort whenever necessary for the sake of business. Despite the fact that they built houses at St

Joseph in 1798-99, once they realized that they could continue to use Michilimackinac, they resumed their operations there. Most of these men seem also to have had residences in Montreal or Quebec and often travelled back and forth between there and the Upper Great Lakes. Generally the season during which they frequented St. Joseph's, particularly after the imposition of the trade embargo in 1805, was late spring-early summer. This was the rendez-vous time when furs brought in from the Indian villages by the wintering partners were exchanged for a new supply of supplies and trade goods brought from Lower Canada and around the lakes. Some of the XY and NW Co. partners also passed through Fort St. Joseph on their way between Fort William and Montreal, either in the spring or fall.

The other group of fur traders consisted of independent individuals and small companies who actually lived and traded at Fort St. Joseph. This would include firms such as Spinard, Fields, Varin and Pelladeau, and merchants such as Robert Livingstone, Charles Langlade and Culbertson. Lewis Crawford appears to have been the only Michilimackinac Company agent who lived at St. Joe. These traders seem to have lived at the fort year round and left there occasionally in the winter to spend short periods of time in the nearby Indian villages collecting furs and maple sugar.

b. The size and composition of the group: Since the first group of fur traders spent only short periods of time (hours or days at a time) at Fort St. Joseph and had their principal residences elsewhere, they would most likely be represented by single males. The second group however, who seemed to live almost full time at the fort, had at least women with them, and possibly in some cases children. The two specific cases about which some information exists are Lewis Crawford whose wife was the mixed-blood daughter of Dr. David Mitchell of Michilimackinac (Askin 1931: 576; Mason 1981 3), and Charles Spinard whose wife was a Native woman (PAC, RG8, C Series, Vol. 256, p.65, 82). Crawford's children died shortly after birth. I have not found any information to suggest whether Spinard and his wife had children. In most cases these lower status traders would not have had servants and thus would not have had as large and elaborate a household as someone like Askin. David Mitchell Jr., however, may have been an exception, since his servant Daniel Martin is mentioned in a dispute between Fields and Dufresne. Given the lack of references to Mitchell Jr.'s residence at the fort, it may be that he lived at Michilimackinac most of the time and left his servant to run his establishment.

Determining how many fur traders were living at or visiting Fort St. Joe at any point in time is difficult to say the least, let alone attempting to assess what the

cumulative effects of their presence would be. Between 1798 and 1806, only a few - possibly five or six - local traders would have been present at the fort. During the embargo period (1806-1812), the numbers of traders could have increased periodically up to 1500 men. This group would have been seasonal - only in the late spring and early summer, and seems to have congregated only when the embargoes were in effect. The major impact of this group would have been on Rains Point where the South West Company built in 1807. However, there would undoubtedly have been some spill-over to Fort St. Joseph.

To sum up, the fur traders who were year-round residents of the post would have been of upper middle status, have had families and have been relatively few in numbers. The fur traders who visited Fort St. Joe seasonally would have included a small number of company partners of a high status level, and, infrequently, large numbers of lower status engages who were there to be outfitted to be sent out to the Indian villages for the winter.

c. The duration of the group's occupation of the site: There were fur traders at the fort from 1798 until 1812. However, the length of any individual trader's occupation of the site is difficult to establish because of the lack of historical documentation. Charles Spinard was there from at least 1804 until 1810, if not longer. Lewis Crawford

appears to have been there from at least October 1807 until 1812 (Askin 1931: 576). Charles Langlade Jr. appears to have lived at Fort St. Joseph from 1797 until 1812. Most of the Michilimackinac traders, however, do not appear to have spent any great length of time there. The major impact of the fur traders' presence would probably have been between 1807 and 1812.

d. The range of activities carried out by the group at the site (Table 13): The local fur traders would have been involved in two major kinds of activities: business related activities and subsistence activities. To a certain extent, these would have been interrelated.

Their business activities would have included importing or buying trade goods, and trading these for furs, maple sugar, corn, meat, fish or other useful items produced by the local Native population. Most of the small local traders at Fort St. Joseph probably acquired their trade goods and supplies from larger merchants or companies in Michilimackinac. The trade they carried on with the Native population probably occurred both at Fort St. Joseph and in the nearby Indian camps. Competition between traders was fierce and during the trapping and maple sugar making seasons (winter and early spring), the traders would have been spending most of their time at the Indian camps.

TABLE 13: Activities of Fur Traders at Fort St. Joseph

Status	Company Partners	Local Traders	Artisans	Engages
Domestic	house const. food consump	household est.&maint. food prep.& consumption	household est.&maint. food prep.& consumption	food consumption
Sustenance		gardening, animal husbandry	gardening, animal husbandry	gardening, fishing
Transportation	shipping & receiving	shipping, travelling to Mich&Ind villages	shipping	travelling to and fro
Defence				
Trades & Light Industry			blacksmith, canoe construct., coopering	
Commerce	storage	storage, limited local trade		
Group Ritual				
Administration				

e. Space and building requirements of the group: The space and building requirements of the fur traders varied according to their status level and demographic characteristics. Table 14 illustrates these requirements.

TABLE 14: Space and Building Requirements of the Fur Traders at Fort St. Joseph

Status	Company Partners	Local Traders	Artisans	Engages
Domestic	rented, temporary accom.	houses, bldg.lots, middens, privies, woodlots, woodpiles	houses, bldg. lots, middens, privies, woodlots, woodpiles	tempo-rary accom.
Suste-nance		gardens, animal pens stables, fields	gardens, animal pens stables	
Transpor-tation	wharf, canoe docks, roads	canoe docks roads	canoe docks	canoe docks
Defence				
Trades & Light Industry			blacksmith shop, canoe factory, storage	
Commerce	storehouses	storage sheds		
Group Ritual				
Adminis-tration				

Because the company partners spent so little time on site, they probably lived in rented accommodations or simply stayed with one of the site's more permanent residents. They shipped in goods in both company schooners and by canoe. Although the Northwest Company operated a canoe factory at Fort St. Joseph, the work was undoubtedly carried out by local artisans or Indians skilled in canoe making, not by company partners. The major company requirements for commerce in the community were storehouses during embargo periods.

The local traders and their families occupied the site year round so they would have had building lots, houses, yards, privies, garbage middens and so forth. They had gardens, animal pens, stables and fields. They would have used their own canoe docks and the local roads for most of their transportation but would also occasionally have received goods via the schooner docks from the larger suppliers. They would likely have carried out most of their trading in the nearby Indian villages, with only some limited trading at their houses of the storage sheds they would have had for trade goods and furs.

Little is known about the fur trade artisans, who they were and how specialized they were. However, they would probably have lived on the site year round and have had houses, building lots and gardens as a minimum. They would have transported their goods via canoe docks and local

roads and would have needed workshops such as the canoe factory or blacksmith shop to carry out their trades.

The engages are also poorly represented in the literature. Those who worked for the larger companies probably spent most of their time (except for short periods during the summer) away from the fort travelling to and from the Indian villages. They would have only needed temporary accommodation and, therefore, would not likely have had any houses, lots, gardens or animals. They would probably have been fed and housed by their employers. They would have used the canoe docks for transportation.

4. Indians

Native people played a very important role in the history of Fort St. Joseph and their presence and activities were essentially the main reasons for the fort's existence and for the presence of the other three groups. Yet there are only a few references to them visiting the fort and none at all to them living in the settlement. Those references to fort visits refer mainly to the visits of large groups of Indians for the gift-giving ceremonies of the spring and fall, to Indians bringing in fish, game and other produce for the settlement's inhabitants, to Indians visiting the Indian Department storekeeper or the traders to exchange furs for manufactured goods or provisions, and to messages being sent with groups of Indians travelling to other posts.

The status levels shown for Indians in Table 2 are only relevant to the Fort St. Joseph community and not to Indian social organization per se, since they were from egalitarian societies which did not have hierarchical status levels. For purposes of discussing the demographic characteristics of the Indians who frequented Fort St. Joseph, it is useful to divide them into local Indians and visiting Indians. The term, local Indians, refers to those who lived less than a day's travel from the fort and who visited there sporadically to trade produce, obtain supplies or do day labouring jobs for the community's inhabitants. Some Indian women lived at the fort with men of the community "a la facon du pays" (PAC, RG8, C Series, Vol. 256, p. 65, Askin to Selby, 4 Feb. 1810). The term, visiting Indians, refers to those who lived further away from the fort and visited it semi-annually to give and receive gifts and maintain their alliance with the British.

In order to put the Indian visits to Fort St. Joseph into perspective, it is useful to discuss the Native seasonal round of activities in the Upper Great Lakes area in the late 18th and early 19th centuries. The two major groups to frequent the fort were the Chippewa and the Ottawa, as evidenced by Indian Department records. The Ottawa occupied the shores of Lake Huron and Lake Michigan. Their subsistence activities which included agriculture, hunting, gathering and fishing were heavily supplemented by trading.

According to Wright they were noted among their neighbors as intertribal traders and barterers, dealing chiefly in corn-meal, sunflower oil, furs and skins, rugs or mats, tobacco and medicinal roots and herbs (Wright 1967: 183). There appears to have been a considerable amount of overlap of the territories of the Ottawa and the Chippewa in the area where Lakes Huron, Michigan and Superior come together.

The traditional cycle of the Sauteur (Chippewa) in the Sault Ste. Marie area was described by Bacqueville de la Potherie, French Royal Commissioner to Canada, as follows:

> Those who remain at the Saut, their native country, leave their villages twice a year. In the month of June they disperse in all directions along Lake Huron, . . . This lake has rocky shores, and is full of small islands abounding in blueberries. While there they gather sheets of bark from trees for making their canoes and building their cabins. . . . While the children are gathering a store of blueberries, the man are busy in spearing sturgeon. When the grain (that they have planted) [brackets mine] is nearly ripe, they return home. At the approach of winter they resort to the shores of the lake to kill beavers and moose, and do not return thence until the spring, in order to plant their Indian corn. (Blair 1911: 279-280).

One of the most detailed accounts of the yearly cycle of the Chippewa in the late 18th century is found in Alexander Henry's journal (Quimby 1966). Here Henry describes his travel with his adopted Chippewa family for the year from June 1763 to May 1764. Table 15 summarizes

the movements and activities of the group during one yearly cycle.

TABLE 15: Summary of the Seasonal Round of Activities of the Adopted Chippewa Family of Alexander Henry in 1763-64 (Quimby 1966: 160-176).

MONTH/SEASON	LOCATION	ACTIVITY	GROUP
early June	Fort Michilimackinac	trading, visiting	village
9 June	Mackinac Island	trading, visiting	village
mid June to early August	St. Martin Bay, St. Martin Is.	sturgeon fishing	extended family
20 August to mid December	Fort Michilimackinac, L'Arbre Croche (1 day), River aux Sables	Acquiring supplies, acquiring corn, hunting beaver, wild fowl, raccoon,deer	village, extended family
mid December to March	North central Michigan - 60 to 70 miles inland	hunting elk, beaver, bear and otter	extended family
March	sugaring place	making maple sugar	several families
early April	Lake Michigan shore, L'Arbre Croche	travelling	several families
end April	Fort Michilimackinac	settle debts with trader, trade sugar and furs	village
May	St. Martin Bay	fishing and hunting	extended family

Although the locations might differ somewhat, this same cycle, with the same activities could likely be applied to some of the Chippewa (if not also the Ottawa) who visited Fort St. Joseph, with Fort St. Joseph replacing Fort Michilimackinac in the cycle. The visits to the fort were in early June and late August to acquire supplies and in late April to settle fur trade debts. Those Indians whose trapping and hunting territories were closer to the fort would have been able to visit there more often during the winter. Also, depending on the season, the spring and fall visits may have varied by as much as a month. It seems that during periods when the primary activity was fishing, hunting, or trapping, the aggregate was the extended family of about seven or eight people. However, during sugar making and visits to the fort several families appear to have banded together.

Blair's account also contains a description of the impact of the trade on the Native people who inhabited Michilimackinac and vicinity in the mid 18th century.

> The savages who dwell there do not need to go hunting in order to obtain all the comforts of life. When they choose to work, they make canoes of birch-bark, which they sell two at three hundred livres each. They get a shirt for two sheets of bark for cabins. The sale of their French strawberries and other fruits produces means for procuring their ornament, which consist of vermilion and glass and porcelain beads. They make a profit on everything. They catch whitefish, herring and trout for or five feet long. All the tribes land at this place, in order to trade

> their peltries there. In summer the young men go hunting, a distance of thirty to forty leagues, and return laden with game; in autumn they depart for the winter hunt (which is the best [time of the year] for the skins and furs), and return in the spring, laden with beavers, pelts, various kinds of fat, and the flesh of bears and deer. They sell all of which they have more than enough. (Blair 1911: 282-283).

Documentation referring to the Indians in the vicinity of Fort St. Joseph has been assembled and examined in Appendix C. Information derived from this documentation is used to develop values for the variables as follows (Table 16):

TABLE 16: Demographic Characteristics of Indians

	Average Stay	Seasonal Mobility	Composition of Smallest Unit	Average Number
Visiting Indians	days, weeks	seasonal, spring, fall	extended families, bands	varied
Local Indians	days	year-round, seasonal	individuals/ families	varied

a. Seasonality of the group's occupation of the site: The visiting Indians came to the site seasonally, in the spring and fall of the year for the gift-giving ceremony. The local Indians came to the site more frequently. As is often stated in the historical references, they "frequented" the site - probably like a farmer going to town - to sell the fruits of their labour, to acquire supplies, to get broken

tools fixed, etc. If the winter was bad (i.e. lack of game or as a result of a poor corn harvest or fishery) they might visit frequently to get provisions, particularly as the winter wore on and food supplies dwindled.

b. The size and composition of the group: The local Indians varied from individuals to families, small groups of men travelling together, and large groups at gift-giving time in spring and fall. They would have been mainly Chippawa from St. Joseph and nearby Islands, Sault Ste. Marie and the north shore and some Ottawa from nearby islands and Michilimackinac. The visiting Indians usually consisted of large groups of people including chiefs, warriors, women and children, which existed in extended family units. They would also have included Chippawa from further afield, Ottawa, Menomini, Potawatomi, and Winnebago from the shores of Lake Michigan, and Sioux from south of Lake Superior (PAC, RG8, M Series, Vol. 9, p. 72).

c. The duration of the group's occupation of the site: The visiting Indians probably stayed at Fort St. Joseph for a period of a few days up to a week or two at each visit. The local Indians probably only stayed from a few hours to a few days at a time.

d. The range of activities carried out by the group at the site: Other than performing some labouring jobs for the

site's inhabitants, the major activity of both the visiting and the local Indians would have been some form of exchange either in the gift-giving ceremony, or in trade (Table 17).

TABLE 17: Activities of Indians at Fort St. Joseph

	Visiting Indians	Local Indians
Domestic	est. temp. camp, food prep.&consum.	est. temp. camp, food prep.&consum.
Sustenance	trading or supplying corn, sugar	hunting,fishing gathering,supply maple sugar
Transportation	travelling to and from site	travelling to and from site
Defence		
Trades & Light Industry		canoe building
Commerce		trade
Group Ritual	gift-giving ceremony	gift-giving ceremony

While they would have been heavily involved in subsistence activities (particularly hunting, fishing, maple sugar processing, growing corn and gathering wild foods), these

would have been carried on away from the site and only the produce would have been brought there. The other major activity of Indians would have been the consumption of quantities of food and drink during their stay at the gift-giving ceremony.

e. The space and building requirements of the group (Table 18):

TABLE 18: Space and Building Requirements of Indians at Fort St. Joseph

	Visiting Indians	Local Indians
Domestic	space for temporary birchbark shelters	space for temporary birchbark shelters
Sustenance		storage
Transportation	canoe docks	canoe docks
Defence		
Trades & Light Industry		canoe factory
Commerce		traders' houses
Group Ritual	military tents	military tents
Administration		

The major space and building requirements for Indians at Fort St. Joseph would have been space for temporary housing or accommodation and shelter and space to hold the councils and festivities associated with the gift-giving ceremonies. Historical descriptions of both the temporary and permanent buildings erected by the Chippewa and Ottawa are included in Appendix C. The community's canoe docks and roads would have been extensively used by both the visiting and local Indians when they visited the site.

C. Interrelationships of Groups

While all four groups at Fort St. Joseph interacted with each other in some way, there was considerable variation in the nature and level of the interactions. Figure 5 is a model showing the exchange of goods and services between the four groups at Fort St. Joseph. While the Indians can be seen as the "client" group in both diplomatic and economic activities, they also provided a large portion of the provisions which fed the occupants of the community. All other groups interacted with them in carrying out the major functions of the post.

Interrelationships between groups or sectors of the site will not be treated as another variable as in Smith's model. While these interrelationships have a definite and major impact on cultural site formation processes, their primary effect was in blurring recognizable boundaries

between groups. Between any two groups the exchanges could be formal (official) and/or informal (unofficial or personal).

1. Relationship Between the Military and the Indian Department

Official relations between the military and the Indian Department were of a bureaucratic nature - the military shipped and provided storage space for Indian Department goods and sometimes interfered in Indian Department business (in one case, on behalf of the Indians because of complaints made against the Indian storekeeper (Vincent 1978a: 119).

Unofficial interactions between the military and Indian Department personnel were on an informal, individual level and are much more difficult to document. One example of a possibly illegal interaction is mentioned by Commanding Officer Lieut. Robert Cowell on 10 February 1802:

> "Mr. Duggan (Indian Department storekeeper) has this Winter; paid my men, (who cut a large quantity of fire wood for him) with calico, flannel, Shoes, Tobacco, Powder, Shot, and high wines, all of which, I have no doubt, originally came out of the Indian Store, except the latter Article" (PAC, RG8, C Series, Vol. 254, pp. 3-9).

As mentioned occasionally in The Askin Papers, when the military officers and the Indian storekeeper were on good terms, they often socialized frequently.

> "Our society is verry small being composed of Capt. Derenzy, Capt. and Mrs. Muir Mr. and Mrs.

> Crawford, Lt. Craddock Doctr. Davis and our Family ... No Set of People are more Sociable and friendly than we are all. We generally Dine, Drink Tea and sup together Once a Week and Once in each Week all meet together and play at cards" (Askin 1931: 590, 593).

2. Relationship Between Military and Indians

Official relations between the military and the Indians were supposed to be indirect, mediated by the Indian Department, but some of the commanding officers took matters into their own hands (Vincent 1978a: 117-122). Through the Indian Department, the Indians supplied provisions, e.g. corn, maple sugar and fish, information on the military movements of Americans and other Indians, and assistance in capturing and detaining mutineers (Vincent 1978a: 122) as well as assistance in the recapture of Michilimackinac in the beginning of the War of 1812. In return for some of the specific cases of assistance, the military paid for the services of the Indians in the form of provisions. In some cases, the military attempted to protect the local Indians from the excesses of the Indian Department or the fur traders (Vincent 1978a: 114). During times of food shortages, the local Indians depended on the military/Indian Department to supply provisions to them, usually in the form of corn, salt meat and bread. The salt meat and bread would have been brought in from outside, but the corn would have been part of the corn either supplied earlier by local Indians or shipped up from Detroit where it would have been

purchased from Indians in that area. Thus, in some ways, the provision of food for both Indians and whites at the fort was based on a system of pooling or redistribution, the Indian Department acting as the collector and redistributor. Under normal circumstances the local Indians supplied a good portion of the fort's food, and when the local Indians suffered from food shortages, they were provided with food by the military/Indian Department.

3. Relationships Between the Military and the Fur Traders

The informal interactions between the military and the fur traders were probably primarily of a business nature, since the fur traders formed the economic core of the community in terms of importing and exporting and the construction of housing. The officers rented houses from the traders and shipped their personal goods on company ships. Although the interactions between the military and fur traders were mostly unofficial, they sometimes overlapped the official realm. For example, a friendship between a fur trader and a commanding officer could land the trader a lucrative Indian Department position when a vacancy occurred through the death, removal or suspension of the incumbent (Vincent 1978a: 106-108).

4. Relationship Between the Indian Department and the Fur Traders

Formal relations between the Indian Department and the fur traders were focussed primarily on the main reason for the Indian Department's presence in the area - the maintenance of the Indians as allies in the struggle for dominance of the area between the British and the Americans. The fur traders associated with the British extended economic ties with native groups far into American territory and also gathered valuable intelligence from these areas. Because of their strong concern for the maintenance of British-Native alliances, the Indian Department often attempted to mediate in disputes between traders and Indians and tried to curb some of the traders' more exploitive excesses (Vincent 1978a: 113-114). However, their authority in this area was weak, and their leverage was more in the area of persuasion than of any kind of sanctions. Formal relations between the two groups were considerably complicated by the extensive informal ties between the Indian Department officials and the fur trading community.

Most of the Indian Department officials were appointed from the fur trade community and maintained many of their business and family ties even in situations which would be considered blatant conflict of interest. An example of this is John Askin Jr. passing on the following information to his father, a merchant near Detroit,

> "An assortment of Dry goods consisting of Shawls Linens printed Cottons, Teas, Coffee, Spirits,

> flannels,Hats Stockings Shoes Leather threads, Tapes, calico^{s} Silk cot thread stript^{d} Cottons Janes, fustians, & second cloths to the Am^{t} of 5 of 600 Dollars would have sold verry well to the Soldiers, it appears that they have not spent their pay (so report says) I mention this to you (at the same time do not wish that it should be known that the Information came from me for Reasons) first that Im on a good footing w^{h} the S.W. C^{o} the 2^{d} that it does not look well for a person in a Department such as I'm connected w^{h} to have anything to say about commerce." (Askin 1931: 605).

Most of the shipping of personal effects and foodstuffs and other amenities was done on the fur trade companies' ships which provided most of the transportation in and out of the area. Houses built by traders or trading companies were often rented or sold to Indian Department officials. A generalized labour pool was formed by the temporarily unemployed engages and hangers-on of the fur trade and these people often obtained temporary employment doing odd jobs for higher status individuals in the community. These jobs included fence construction and maintenance, wood cutting and hauling, the clearing of garden plots or fields, the harvesting of crops, etc.

5. Relations between the Indian Department and the Indians

The formal relationship between the Indian Department and the local and visiting Indians focussed on the maintenance of alliances between the Native groups and the British Government. The primary mechanism for maintaining these alliances was the gift-giving ceremony

held in the spring and fall. Fairly large quantities of goods were exchanged during this ceremony. Furs and provisions in the form of fish, corn and maple sugar were given by the Indians and the status, utilitarian goods and provisions (such as those given for the purchase of St. Joseph Island) were given by the Indian Department. While the Indians were visiting the post they were fed by the Indian Department with bread, corn, pork and liquor. Corn, fish and maple sugar brought to Fort St. Joseph by the Indians was shipped down the lakes to the Detroit area. Over 13,000 lb. of sugar were shipped from Fort St. Joseph between November 1797 and March 1800 (Vincent 1978a:116).

Informal relations between Indian Department personnel and local Indians were mainly commercial. Game and wild birds brought in by local Indians included ducks, pheasants, hares, deer, bears and beavers. Cranberries, huckleberries, woven mats, buffalo robes, deerskins and feathers were also supplied (Askin 1931: 574, 578, 584). It appears that in good years the Indians fed the community and in bad years the Indian Department fed the Indians (Askin 1931: 577, 589, 592, 605, 695). The local Indians visited the post to get provisions particularly during the winter (PAC, RG8, C Series, Vol. 254, p. 9, Cowell to Green, 10 Feb. 1802). According to Indian Department records, between the end of September in 1803 to the end of March 1804, 547 Chippawas and 741 Ottawas visited Fort St. Joseph (PAC, RG8,

M Series, Vol. 9, p. 72). While none of the Indian Department employees were supposed to trade with the Indians, a complaint brought against the blacksmith by one of the local trading companies illustrates that sometimes the temptation to exploit the formal relationship was too great (PAC, RG8, C Series, Vol. 254, p. 217, 219, 223).

6. Relations Between the Indians and the Fur Traders

This relationship was basically a commercial one. The fur traders gave status and utilitarian goods in return for furs, provisions and labour. Because competition between traders and companies on the Upper Great Lakes was fairly intense in the late 18th and early 19th centuries, the traders went out to the Indian villages to procure the sugar and furs, rather that waiting for the Indians to come to the settlement to trade (PAC, RG8, C Series, Vol. 254, p. 168, 219). Individual Indians made occasional trips to the fort to bring in furs they owed on credit or to acquire specific supplies from the traders (PAC, RG8, C Series, Vol. 256, p. 82). The transactions which took place in the settlement would have been carried out at the trader's house and or storage sheds.

In general the interrelationships between groups at Fort St. Joseph could be characterized as generalized and/or balanced reciprocity. There appears to have been at least a tacit recognition of the necessity for interdependency in

that each group was there because of the presence of at least one other group, and all groups were involved with at least one other group in some way in the procurement of their food and livelihood. This factor of interdependency was bound to have a strong influence on the contribution that each group made to the archaeological record.

CHAPTER V

PHYSICAL MANIFESTATIONS OF THE CULTURAL SYSTEM

A. Examination of Specific Cultural Formation Processes at Fort St. Joseph

The cultural variables have been discussed in some detail in the previous chapter and their alternative values have been examined. The next step then is to establish the "units of observation" (Schiffer) or "observational predictions" (Smith) which represent evidence of the different values of the variables. Schiffer defines units of observation as units of space and material remains recognizable in the archaeological record from their formal, spatial, quantitative and relational attributes (1976: 55-56). The range of values of the variables is examined below and the general effects of these variations are discussed as follows:

1. Seasonality

The alternative values for seasonality include year round (all Indian Department, all military personnel except articifers), summer only (military articifers), spring and fall (visiting Indians, fur trade company partners and engages), spring, summer, fall and part of winter (local fur traders), and sporadically all year round with more

concentrated visits for spring and fall gift-giving and in winter for provisions (local Indians). The major effects of the different variations in seasonality were in the different activities participated in by the groups of people at the site, which are discussed under variable four and in the space and building requirements of the group which relate to the seasonality of their occupation. On some sites it is possible to determine the seasonality of occupation by examining faunal and floral food remains for evidence of types only available at particular times of the year. Some species of ducks, for example, would only be in the Fort St. Joseph area in spring and fall (as migrants), some would spend the winter there and some were summer birds (Cumbaa 1979: 21). It might be expected that seasonal visitors to the community would consume food available in the season of their presence. In fact, it is likely that both major groups of seasonal visitors (visiting Indians and engages) were fed by the community with food already in storage there. The Indian Department was expected to feed the visiting Indians, and the fur trade companies usually fed their engages as part of the conditions of service. A great deal of the food consumed at Fort St. Joseph was preserved for long term storage, e.g. fish, meat and corn were dried, and maple sugar also had a long shelf life. Most of the local vegetables were root crops which with proper storage would keep over the winter. Thus, few food remains whose

consumption can be assigned to a specific season are likley to be found at Fort St. Joseph. In addition, it seems that a great deal of the "processed" food consumed at Fort St. Joseph arrived there already processed, e.g. the salt pork of the military, the maple sugar, dried fish and corn of the Indians. Thus little evidence of seasonal food processing for long term storage can be expected. While fish and wild ducks appear to have been brought in mainly in spring and fall, it seems that most other game was brought in during all seasons.

One advantage Smith had in his study was that the sites he was dealing with were in most cases small, single activity sites. Therefore, only one answer was likley in response to questions regarding the seasonality of an individual site. Unfortunately in the case of Fort St. Joseph, with its complex of occupying groups and more than sixteen years of occupation, some of the answers overlap one another and a combination of the values is possible for the seasonal use of an area of the site. For example, a house in the civilian settlement may have been occupied by people who lived on site all year round, by people who may have left their homes for periods of time in the winter, by people who only rented lodgings for the summer and by people who only visited the site for a few days at a time in spring, summer or fall. Evidence of a limited seasonal occupation in a house or building lot which was later occupied for at least

a year, by a year round resident would probably be obliterated or overwhelmed by the evidence of the longer occupation. In terms of larger areas, it is probably safe to generalize that the fort was occupied year round continuously and most of the civilian houses on building lots were occupied year round at least discontinuously. The areas where short-term accommodation was most likely found were between the fort and the building lots and along the south and southwest side of the point. Perhaps the major recognizable difference between a year-round and seasonal occupation would be in house types. The most numerous seasonal or short term occupants were the visiting and local Indians and the fur trade engages. The visiting Indians and the engages both visited the site in numbers during the same season, from June to September - so would have had similar requirements for shelter from the weather. They were however different in their activities and in the composition of the group, as well as being culturally different.

2. Size and composition of group

This is broken down into the size and make-up of the demographic unit and the number of individuals or units making up the group. The variations for the make-up of the demographic unit are a) single males (all military except for a few idividuals, fur trade company partners and engages), b) nuclear families with or without servants (all

Indian Department personnel except lowest level, local fur traders and civilian articifers), c) a range of individuals, nuclear and extended families (local Indians), and d) small to large village or tribal sub-groups of extended families (visiting Indians).

The variations for the numbers of individuals or units of each group on site at one time range from roughly one to five for military officers, two to forty for military articifers, twelve to forty-five for enlisted men, three to four households for Indian Department personnel, one to seven or eight for fur trade partners, six to ten or twelve for local fur traders' households, fifteen to 1500 for engages, one to seven or eight for local Indians and sixty to 1500 for visiting Indians. The variations of composition and the numbers of the groups will have an impact upon their respective activities and space and building requirements. For example, the impact of single males versus nuclear family or extended family units would be mainly in the domestic and personal functional categories. The impact of the size of a group would be in the number or size of space and building requirements and in the volume of material deposited in the archaeological record.

3. Duration of occupation of the group

Except for the military artisans who apparently stopped coming to the site after 1806 and the fur trade

engages who probably only came to the site in great numbers after 1807, all of the groups were represented on site from 1798 until 1812. While the staff turnover of the Indian Department and the military during that time caused the faces of some of the site's occupants to change, the overall impact on the archaeological record was probably negligible. For example, one commanding officer or one Indian Department storekeeper was probably not different enough from another to have a noticeable effect on the site. However, in the case of short term versus long term residents, a great deal more "de facto" refuse would be expected in areas occupied by short term residents. Long term residents would have more of a vested interest in keeping their living and working areas clean.

4. Activities of the group

Here, and in variable five, is where the greatest impact on the archaeological record would occur as a result of the differences between the groups. Artifacts which represent the domestic functional category and are found in the civilian settlement will be considered as being associated with those groups of individuals who established households in this area. Those structures and artifacts which represent animal husbandry will be associated with groups known to have kept domestic animals on site. However, there are few activity categories which have less that two groups

participating in them so no one activity category can be used to identify the group which used an area. Instead, a combination of activities must be examined. For example, if evidence of blacksmithing is found in a particular area, one of three different groups may be represented: a) military blacksmiths, b)the Indian Department blacksmith or c) fur trade blacksmiths. In order to try to determine which of these three groups is represented, evidence of other activities which were not common to all three groups must be sought. If evidence of an established household, gardening and/or animal husbandry is found in association with the smithing activities, the military blacksmith can probably be ruled out because he was unlikely to have participated in these activities.

5. Space and building requirements of the group

As with activities, the space and building requirements have been divided into functional categories so that individual units of archaeological features and space can be assigned to a functional category. As with activities, most of the functional space and building requirements have more than one group which fits the category so no single requirement or trait can be used to distinguish between the groups which used an area. Instead, a combination of requirements must be examined.

B. Establishment of Units of Observation

In order to establish a consistent set of material remains which could be discussed as units of observation, the set of functional categories used for activities and space and building requirements will be sub-divided into more specific sub-categories. These are modified from Sprague's functional categories (1980-81: 251-261).

1. Functional Categories

In order to separate all artifacts recovered into meaningful functional categories, one additional category is needed which was not used for activities or space and building requirements. A category for Personal artifacts helps to distinguish individuals from different groups. It includes clothing, footwear, adornment, indulgences (such as smoking and drinking) and small personal tools. The presence of individuals such as women, children, military men or Indians may thus be detected in addition to the most common type of person - the Euro-Canadian male civilian.

The functional categories and sub-categories used as units of observation are as follows:

DOMESTIC

- Structures
  - Hardware
  - Materials
  - Features
- Furnishings
  - Furniture
  - Accessories

- Housewares and Appliances
  - Culinary
  - Gustatory
  - Heating
  - Lighting
- Cleaning and Maintenance
  - Cleaning
  - Maintenance
  - Laundry
  - Sewing
- Refuse Disposal
  - Human waste
  - Kitchen waste
  - General discard

SUSTENANCE

- Agriculture and gardening
  - Structures
    - Hardware
    - Materials
    - Features
  - Tools
  - Produce
  - By-products
- Animal Husbandry
  - Structures
    - Hardware
    - Materials
    - Features
  - Tools for grooming,feeding and control
  - Produce
  - By-products
- Hunting
  - Weapons and accessories
  - Ammunition
  - Faunal remains of wild game
- Fishing
  - Tools
  - Faunal remains
- Gathering
  - Storage containers
  - Produce

SUSTENANCE cont. . . .

- Processing of local produce
  - Tools
  - By-products

TRADES AND LIGHT INDUSTRY

- Blacksmithing
  - Structures
    - Hardware
    - Materials
    - Features
  - Tools
  - Fuel
  - Storage
  - Materials
  - Products
  - By-products
- Masonry
  - Tools
  - Materials
  - Products
  - By-products
- Carpentry
  - Structures
    - Hardware
    - Features
  - Tools
  - Materials
  - Products
  - By-products
- Canoe Building
  - Structures
    - Hardware
    - Features
  - Tools
  - Materials
  - Products
  - By-products
- Glazing
  - Tools
  - Materials
  - By-products

TRANSPORTATION

- Water
  - Vehicles
  - Structures
  - Hardware
- Land
  - Vehicles
  - Structures
  - Horses' harness and accessories

DEFENSE

- Fortifications
  - Structures
  - Materials
  - Hardware
  - Big guns
- Military weapons
  - Weapon hardware
  - Powder and ammunition
- Discipline
  - Uniforms
  - Tools

ADMINISTRATION

- Accounting
  - Tools for record keeping
  - Materials
  - Storage containers

COMMERCE

- Trade Goods
- Storage
  - Structures
  - Containers
- Shipping and Receiving
  - Packing seals
  - Shipping containers

GROUP RITUAL

Structures
Status Gifts

PERSONAL

Clothing
Footwear
Adornment
Bodily ritual and grooming
Medical and health
Indulgences
Pastimes and recreation
Pocket tools and Accessories

2. Discussion

In order to elaborate on the kinds of structures and features which may be found within some of the various general functional categories, the following definitions are offered.

1. Domestic structures are associated with the household and include the following kinds of structures and features.

   a) A building with a fireplace is considered a year-round residence.

   b) A building outline without a fireplace may be a temporary shelter.

   c) A small building with a fireplace, closely associated with a residence may be a summer kitchen. Artifacts associated with a summer kitchen should be primarily in the food preparation or culinary functional category.

   d) Domestic storage sheds are building outlines without fireplaces which are associated with or attached to a residence and are in closer proximity to the residence than to other outbuildings.

e) A yard is a space which either encompasses and/or is associated with a residence. The space should either be within the boundaries of the building lot or may be partially delineated by fences, pathways or roads.

f) A midden is a space containing an accumulation of secondary refuse and is normally out of the way of traffic and everyday activities.

g) Pit privies are outhouses which should be found in association with most residences.

h) Woodpiles should also be found in association with residences, particularly those with fireplaces.

2. Those structures associated with sustenance are the spaces and buildings required within the community for the procurement, processing and bulk storage of food. These include:

a) Gardens are fenced plots in relatively close proximity to residences on building lots or on the neck of land used for gardening.

b) Animal barns or stables are buildings used to shelter animals (cattle, sheep, horses, pigs, domestic fowl) located with a building lot, and without a fireplace or stove. Associated with these may be crude building hardware and evidence of the presence of animals including manure, rich organic soil, animal feed, feed containers such as buckets, tubs and troughs, harness, and tools such as pitch forks and curry combs. There should not be a great accumulation of domestic refuse in these areas, except as secondary refuse.

c) Animal pens are fenced areas associated with animal shelters. They are likely to have rich organic layers due to the presence of decomposed manure.

d) Fields are large fenced areas away from the building lots on the northeast edge of the neck of land.

e) Food storage structures outside residences may consist of small sheds or lean-tos. These would probably be wooden structures without major foundations. They may have evidence of bulk food storage or animal food storage such as hay, oats or corn associated with them.

C. Area Breakdown of the Site into Meaningful Sectors

The nature of archaeological research is such that the use of space by people is its focus. When archaeological testing is done on a site, space is the "population" that is sampled or tested. Information concerning the different groups of people and their varying activities and requirements for structures and space has been organized and examined. In order to complete the picture of a living, breathing site, it is necessary to apply this information to the physical, spatial site. Different people used different parts of the site for different activities. Some general information concerning the use of space is available in the historical documentation.

1. Apparent Physical Layout of the Community

The map of Fort St. Joseph dating to 1800 shows the general layout of the community and its use of space (Fig. 3). The more or less square fort with a diamond shaped bastion at each corner occupies the centre of the peninsula. A ravelin guards or covers each of the two gates. The water gate faces down towards the schooner wharf

on the southwest end of the point and the land gate faces down towards the neck of land that joins the point to the rest of the island. There are shallow bays on either side of the neck and a row of civilian building lots faces onto these bays from each side of the point. Seven of the ten building lots on the northeast side of the point contain buildings; only one of the eight building lots on the northwest side of the point contains a building. In both rows of building lots, one lot is not outlined, as if it were left open for a transportation corridor from the water to the fort. Several buildings are shown on the west tip of the point and between the fort and the water along the southwest end of the point. These buildings are not shown with building lots marked out around them. A trail leads from the building lots on the northwest side of the point and connects with a trail from the buildings on the west tip of the point and the combined trail leads to the area adjacent to the northwest flank of the palisade. Another trail leads from the northeast flank of the north bastion and runs northeast along the neck. It is intersected by a trail leading between the northeast ends of the two rows of building lots at the narrowest part of the neck. All areas not covered by the fort, building lots, buildings or trails appear to be filled with shrubbery and trees except the area between the southwest side of the fort and the shoreline.

The map of the post dated 1823 (Fig. 6) is virtually the same except for the replacement of the gun platform in the north bastion with a powder magazine (built in 1804), the elimination of a gun platform in the east bastion, the elimination of the old bakehouse (which burned in 1802), the addition of a stores building inside the fort (built in 1804-5) and the addition of the new bakehouse (built 1804-5) outside the fort near the schooner dock. No changes at all appear in the civilian buildings, the building lot layout or the configuration of the trails and vegetation. It appears that this map is a copy of the 1800 map with minor adjustments for military buildings. It is likely to be relatively accurate for the military features but probably incomplete for the civilian features.

Archaeological excavation and survey has revealed that there is evidence of more buildings and other activities that are not shown on the historical maps (Fig. 4). In most cases the military buildings were found where they were shown to be, although one of the ravelins and the two gun platforms shown on the map do not appear to have been erected and two kitchens which were built in 1804-5 are not shown (Emerson, Devereux and Ashworth 1978; Lee 1978). Evidence of building outlines has been found in the general area of the building lots on both sides of the point (Lee 1982b: 11, 12). Evidence of one or possibly two buildings was found in the area where buildings are shown on the west

tip of the point. The two major areas where archaeological evidence of buildings not shown on the historical maps was found were: 1) in the area to the southwest of the south bastion where a complex of at least fifteen semi-subterranean buildings and a limekiln were located and, 2) the area between the east bastion and the buildings on the east side of the point where a complex of at least six semi-subterranean buildings and a blacksmith shop were located (Lee 1982: 12).

It appears that in terms of activities and use of space, the site can be broken down into a few general areas where certain kinds of activities seem to have clustered. These areas are as follows (see Fig. 7):

a) The Fort: Most of the military activities were likely conducted inside the fort and most of the space and building requirements of military personnel were met by the various military buildings and spaces in the fort. As has already been discussed, there were some exceptions.

b) The Civilian Building Lots: The use of these two areas seems to have been somewhat complex. The people who built houses in this area included Indian Department personnel of three different status levels, fur trade companies, local fur traders and local tradesmen. In addition, the military officers rented lodgings in this area. As well as domestic,

household activities, trade, light industries such as blacksmithing and group rituals such as Indian councils were carried out in the buildings and associated yards on the building lots. Regarding the acquisition, use and transferrance of the building lots, it would appear that: 1) anyone (Indian Department, fur trader or tradesman) who applied for a lot could get one, 2) those who received lots cleared them and built on them, 3) when individuals left the site for some reason, they sold their "improvements" to someone else who had just arrived or who was staying on, 4) long term residents may have bought up several lots, 5) gardens belonging to civilians may have been either on their building lot near their house or in a separate plot on the neck of land with all the other garden plots.

c) The Area in Front of the Fort: This refers to the area on the west tip of the island and along the southwest side of the fort where scattered buildings not on building lots were located. This is a strip running across the southwest end of the point from the west tip to the south tip between the front of the fort and the shoreline where the schooner wharf was located. This area appears to contain both military and civilian buildings and the activities focussed here probably related to the proximity of the schooner wharf and the gate of the fort. Workshops and storage sheds

using or storing materials brought in by schooner (rather than by canoe) may have been situated in this area.

d) The Fertile Neck of Land Joining the Point to the Island: This seems to have been used almost exclusively for gardens. References to gardening suggest that originally the garden plots were laid out by the military, but were also used by civilians. There is no definite information suggesting whether these plots were fenced one from the other. No plan exists which shows the precise boundaries of the gardening area. However, the area with the most fertile, organic soil probably starts near a line joining the ends of the two building lots across the narrowest part of the neck and extends to the northeast.

e) The Unoccupied Area: This is the area shown on the 1800 and 1823 maps as being unoccupied and filled with natural vegetation. This can be subdivided into three areas: a) the area between the southeast side of the fort and the east building lots, b) the area between the northwest side of the fort and the northwest building lots, and c) the area between the northeast side of the fort and the neck or gardening area.

These five general areas will be discussed separately in terms of predicting what the archaeological manifestations of their respective activities and uses were.

Within each area the archaeological manifestations will be discussed in terms of the functional categories of spaces, buildings and artifacts discussed earlier.

D. Predicted Physical Manifestations of the Cultural System by Area

1. The Fort

The activities which took place in this area included guard duty, military parade, construction of military buildings and fortifications, military administration, food preparation and consumption, and the storage of materials required for defense.

a) Domestic: The domestic artifacts most likely to be deposited within the fort should be associated mainly with the blockhouse where some of the officers and all of the enlisted men lived and ate, with the exception of the bakehouse and military kitchens where their food was prepared. Some artifacts related to food consumption (culinary) may also be found in association with the guardhouse where the men on guard would have eaten. Another household requirement would have been for sanitation, i.e. some kind of military privies should have been located inside the fort. Chamber pots may also have been used in winter. There are no historical references to the locations of privies and areas where other domestic refuse was deposited. Other domestic artifacts

might include barracks furniture, stove parts, and lighting fixtures. Within the sub-category of housewares and appliances are cooking and eating utensils. There should be some difference here between those used by the officers and those used by enlisted men. The officers likely would have had their own private sets of dishes which would have reflected their higher status, whereas the enlisted men likely had cheap, crude, basic dishes issued to them.

b) Personal: The personal artifacts most likely to be deposited within the fort should be mainly those associated with items of apparel worn by the military such as military buttons, buckles and other accoutrements, as well as some indulgences such as tobacco pipes. The military kitchen seems to have been a place where the enlisted men gathered to socialize when off duty (Vincent 1978a: 166) so this would be a location where evidence of pastimes and recreational activities such as gaming pieces, smoking pipe fragments or liquor bottle fragments, etc. might have been deposited. Other personal items such as pocket knives, grooming artifacts such as combs, and so forth may also have been deposited in the area of the barracks, the bakehouse or military kitchen.

c) Sustenance: Most of the activities related to obtaining sustenance (food) from local sources were carried on outside

the walls of the fort. In addition, the propensity of the military for keeping the fort clean and tidy probably means that during the military occupation of the fort, little in the way of tools or remains associated with sustenance procurement would left lying around to enter the archaeological record. However during the temporary military re-occupation of Fort St. Joseph in 1815, the period of Fort St. Joseph's abandonment between 1812 and 1815 when only a skeleton force manned the fort, and during the period from 1815 to 1829 when a corporal's guard occupied the few standing buildings and guarded the powder magazine and some cattle, sustenance related artifacts may have been deposited inside the fort area and not subsequently cleaned up. However, tools related to gardening and animal husbandry carried on by military personnel may have been stored in the blockhouse, the stores building, the bakehouse or kitchens. Bulk supplies of food which had been processed for storage were probably stored in the bakehouse, kitchens and in the room set aside for Indian Department storage in the blockhouse. It is likely that most of this would have been consumed or destroyed by fire by the time the major military contingent left Fort St. Joseph in 1815. Artifacts associated with sustenance most likely to be found inside the fort would be food storage containers such as barrels, kegs, casks, birchbark mococks, chests and leather or woven sacks.

d) Trades and Light Industry: The activities associated with this category which were carried out in the fort area were concerned primarily with the construction and maintenance of the military buildings and fortifications. These included masonry (stone foundation, fireplace and building construction), carpentry (construction of wooden buildings, furniture, etc.), glazing (installing windows in the buildings), and blacksmithing (manufacture and repair of hardware for military buildings and fortifications). Of these four, the blacksmith and carpenters needed special workshops where their tools and materials would have been stored and where they could work. During the winter while the articifers were not on site, the articifers' tools were kept in the blockhouse (Vincent 1978a: 84-89). A sawpit was required for the preparation of lumber and finished wood for the carpenters, although the sawpit may not have been inside the fort (Vincent 1978b: 9). Axemen were included as well in the list of articifers in association with the construction of the palisades, bastions and ravelins. This activity may have also required a sawpit. The construction and maintenance of the fort would have included a considerable amount of earthmoving in the digging of palisade trenches and builders' trenches for building foundations, raising the ground in some of the bastions, removing boulders scattered around the fort, etc. The digging of pits for the lime kiln

and slaking pits was also associated with fort construction but this took place outside the fort in Area Two.

The blacksmith's activities - the manufacture and repair of hardware and tools - would have been confined primarily to his shop. The archaeological evidence of his presence and activities would consist of remnants of a blacksmith shop with fuel and stock storage area, a forge, anvil and workbenches, with the associated by-products of slag, waste, broken or unfinished products, and broken tools (Light 1984). The products of his work - primarily building and gate hardware - would of course be scattered about the fort wherever they were attached to structures. Since the fort was burned rather than dismantled, a lot of this material should have been deposited near where it was attached to a structure.

The masons' activities would not have been localized to a workshop since they were primarily involved in constructing buildings and building foundations. All of their materials were brought in from outside the fort. Limestone was brought from nearby Lime Island by bateau, lime was burned in a kiln in Area Two and sand was probably brought from either side of the neck where the lake bottom is sandy. When not in use, the masons' tools would probably have been stored in a general workshop, possibly the structure which was called the stores building. The products of the masons' activities inside the fort were

primarily the structures they built and the by-products would have been concentrations of lime, sand and mortar and flakes of stone dropped near the buildings during construction. It is likely that most of the by-products would have been cleaned up shortly after construction. It is also likely that most of the masons' tools would have been taken away from the site after construction was finished in 1806.

The carpenters' activities would have been carried out both in a workshop/work area and in the buildings they were constructing. Their workshop was probably temporary and if it was inside the fort was probably cleaned up and either removed or used for some other purpose after construction was finished. The sawpit may have been either inside or outside the fort and may have been either a pit or a trestle arrangement. If it was located inside the fort, it would probably have been cleaned up after construction was finished. The carpenters' tools would probably have been taken away from the site after construction was finished after 1806.

Other, more specialized activities carried out by articifers in the construction of the buildings in the fort included plastering the rooms in some of the buildings and installing and painting tin roofs on some of the buildings. Plastering required the preparation of quick lime which was then mixed with sand and hair. The roofing tin was likely

shipped to the site in sheets which were installed and then painted (Lee 1976: 40,41). The installation of glass in the windows of the military buildings may have resulted in the deposition of some broken glass around the buildings. Again, the tools for these activities would probably have been removed from the site and the by-products or debris created by installation would have been cleaned up.

The by-products, refuse and debris from the various trades involved in fort construction and maintenance were probably disposed of in middens somewhere outside the fort, and may be found in area two.

e) Defense: In the area of the fort, there is an overlap between the remains associated with the products of the trades and light industries and the space and building requirements of defense. This is because the structures required for fortifications and for the storage of ordnance (weapons and ammunition) were built by the articifers. The fortifications included the palisades, gates, bastions, ravelins and possibly gun platforms. Earthworks were intended to augment the fortifications but it does not appear from either historical or archaeological data that these were ever constructed (Lee 1976: 76). The powder magazine constructed in 1804 was used for the storage of gun powder, ammunition and weapons. The fortifications were all destroyed by fire in 1814. Although the powder magazine was also burned, its masonry shell remained standing and one of the

rooms was cleared out and reused for powder storage from 1815-1829 (Vincent 1978a: 246-262). Archaeological evidence of the fortifications exists in the form of charred and buried remains of the palisade, bastions, gateways and a ravelin (Emerson, Devereux and Ashworth 1977: 68-103; Lee 1976: 76). The remains of the 1804-1829 powder magazine still stand in the north bastion but evidence of an earlier temporary magazine (1802-1804) somewhere near the old bakehouse (Vincent 1978b: 20-21) has not yet been found.

Although four six-pounder guns were sent to Fort St. Joseph in 1799 (Vincent 1978a 97-98), it appears that the gun platforms were never erected in the bastions (Lee 1976: 73). Two of the guns were declared unserviceable in 1807 and had to be replaced. No mention is made of whether the unusable guns were scrapped or disposed of on site, cannibalized by a local blacksmith or returned to lower Canada. Undoubtedly most of the useable military guns, powder and ammunition would have been removed from Fort St. Joseph by 1829. Since there was never any real threat of attack on Fort St. Joseph during its military occupation (1796-1812), most of the use of small arms was for more day to day events such as mounting guard and hunting. The most likely way for gun parts to enter the archaeological record would have been through breakage and discard. Some small parts might be lost while a gun was dismantled or being

cleaned. Given the relative isolation of the post, it is likely that any broken gun parts which were reusable would have been cannibalized. It is unlikely, therefore that gun parts would form a very large portion of the archaeological record. They are most likely to be found in areas where they were used or serviced, rather than where they were stored. Like all artifacts in general, they are not likely to be found in areas subject to constant grooming or cleaning, such as the parade ground, unless they were deposited there after the departure of the main military contingent in 1812.

Another sub-category of artifacts which has been subsumed under the defense category is that of the various accoutrements of the military uniform and other symbolic trappings. These include military buttons, buckles, shako plates, chin straps and various other accessories marked with regimental insignia. These elements could enter the archaeological record in several different ways. They could be lost during wear, broken and discarded, stashed and then forgotten, or curated from worn uniforms and then later lost or abandoned. These events could occur within buildings occupied by the military and in some cases in outdoor areas used for parade and other military exercises. Again, those areas heavily used would probably be cleaned regularly, so the area where the artifacts are found may not be the area where they were originally used, dropped or discarded. In

addition, some of these elements may have been prized for their decorative or symbolic value by the Native visitors to the site and may have been acquired and worn by them in between the time the military wore them and they entered the archaeological record. This, of course, further confuses the issue of the relationship between the "find" location of the artifacts and their use location and association. If these artifacts are found in areas which would have had heavy use and have been regularly cleaned during use by the military, they they are either likely to have been deposited there after the military left in 1812, or they must be small enough or have been well enough hidden not to have been found during clean-up. If they are found in the burned military buildings (except for the new bakehouse and powder magazine which had continued use after 1815) in a sealed pre-burn or burned context, then they had probably either been stored, lost or abandoned there in 1812, or before the 1814 fire. Since the dates of the presence of various regiments at Fort St. Joseph are known, regimental buttons can be dated and associated in some cases with the rank of the wearer. As with all other artifacts, particularly those which are so highly portable, it is crucial to analyse the archaeological context in which these items are found before any interpretation as to the events leading to their deposition can be made.

f) Transportation: The two modes of transportation used in relation to Fort St. Joseph were water transportation and land transportation. Obviously, given the fort's distance from the water, the archaeological manifestations of water transportation which would show up inside the fort would have to be indirect. Large ships carried people and supplies to and from the site, and bateaux were used locally to transport local supplies to the site. For example, limestone was brought from nearby Lime Island by bateau (Vincent 1978b: 9, 51). The bateaux would not, of course, be used inside the fort but they would have had to be stored somewhere for the winter; some of them were constructed on site and they would have undoubtedly been repaired on site. While some or all of these events may have occurred inside the fort, it is more likely that the bateaux would have been built, repaired and stored down near the wharf in Area Two. Materials deposited as a result of such boat building would include wood shavings and scraps, broken metal boat fittings and broken tools.

On land, roads were built by military personnel from the wharf and canoe docks to the gates of the fort (PAC, RG8, C Series, Vol. 321, p. 247, 6 Oct. 1800). Horses and sledges or carts were used by military personnel to bring materials such as firewood into the fort (Michigan Pioneer and Historical Collections, Vol. XXI, p. 38, 271). Horses acquired by the military for local transport may or may not

have been sheltered inside the fort. There is no mention in the historical record of any kind of stable or animal shelter in the fort. It is possible that the local civilian who sold the horse and sledge/cart to the sergeant responsible for hauling wood also provided a place for these to be kept in the civilian community.

The kinds of artifacts which might be deposited as a result of transportation activities inside the fort would include harness parts and wagon or sled hardware. If these are found in open areas where heavy use or traffic would be expected, then they were probably not deposited there until after the fort was left empty in 1812. These artifacts would not be expected in any great quantity, as any usable items would probably have been removed from the site. Any items which had been stored in military buildings at the time of the 1814 fire may be found in situ.

g) Commerce: It is unlikely that any significant amount of commerce (trade or buying and selling) was carried out inside the fort. If the military men wished to make any purchases from the traders, they would have gone to the traders houses in the civilian community. While some individual purchases may have been conducted between soldiers and local Indians, many of these would likely have taken place outside the fort, as a soldier wealthy enough to make many purchases was usually an officer who rented lodgings in the civilian community.

h) Administration: In terms of use area, artifacts associated with the administration of the post would primarily be concentrated in the blockhouse where the commanding officer had his rooms and in the stores building where it seems the assistant commissary/barrack master was lodged in 1810. These artifacts would include writing and accounting instruments. Like many other artifact categories, all usable administrative artifacts were probably removed to Michilimackinac in 1812. Those which were broken or worn out and discarded would most likely be in a midden associated with the fort. Those which had been left in the blockhouse or stores building when the site was abandoned in 1812 would likely have burned in situ in 1814.

i) Group Ritual: It is unlikely that either the gift-giving ceremonies or the Indian Councils were held inside the fort during its occupation. Large groups of Indians were probably not allowed inside the fort, given that this was only 35 years after the massacre at Michilimackinac. Even in 1815 after the fort had been burned, these ceremonies were held at the storekeeper's house outside of the fort (Askin 1931: 761,762).

2. The Civilian Building Lots

The people who occupied these lots included Indian Department personnel of three different status levels, fur trade companies, local fur traders and possibly local

tradesmen. In addition, the military officers rented lodgings in this area. As well as domestic, household activities, trade (commerce), light industries such as blacksmithing and some group rituals such as Indian Councils and gift-giving were carried out in the yards associated with the buildings on the building lots. However, it is probable that not all lots held the same activities and that each ended up with a different archaeological record. In order to determine all of the possible alternative results in terms of archaeological findings, it is necessary to examine in detail each activity in terms of the functional categories of artifacts it would be likely to produce.

a) Domestic/Household Activities: The four major groups of people who established and maintained households on the building lots were a) Indian Department personnel (storekeeper and interpreter), b) various artisans or tradesmen (civilian articifers, fur trade and Indian Department blacksmiths), c) military officers, and d) local fur traders. Two factors which might have contributed to variations in these households were the composition of the households and the seasonality of their occupations. Except for military personnel, most of these men had families with them and probably several of them had at least one servant. Obviously the household size varied depending on the number of servants and children present. Whether the women were Euro-Canadian, Native or of mixed blood would also have had some

effect on the material culture. The military men were most likely to have had Euro-Canadian wives, the Indian Department personnel most likely to have had Euro-Canadian or mixed blood wives, and the local traders and tradesman most likely to have had Native wives. All four groups maintained their households all year round. Even though the local traders often left their homes to go out to the Indian camps during the mid and late winter, their families and business associates most likely maintained their households for them. Thus the impact of their temporary absence on the archaeological record would have been negligible. Within the domestic category therefore, it is likely that there would have been little difference between these four groups other than status. The military officers and the Indian Department storekeeper had greater access to more expensive, imported goods, and the tradesmen and local traders had greater access to items produced locally. The officers and the Indian storekeeper probably imported a good deal of their furniture. If they had some furniture made for them by local tradesmen, it probably showed more upper class pretensions than the furniture of the local traders which was probably more basic, crude and functional and less decorative. Furniture would include such items as bedsteads, tables, chairs, chests of drawers, cupboards, etc.

The housewares and appliances subcategory includes such artifacts as culinary items (used in food preparation

and cooking), gustatory items (used in the serving and consumption of food, such as tablewares), heating items (stoves, bed warmers, etc.), and portable lighting fixtures such as lamps, candlesticks, etc. All households needed these items in some fashion in order to be able to function as households. It is likely that the quantity and quality of these kinds of artifacts varied in relation to the status of the household and presence of women of varying cultural backgrounds. Wood piles would have been located somewhere near the house to supply fuel for the heating and cooking fires. Archaeological evidence of these would have consisted of an organic soil layer generated by the decay of wood chips, bark and sawdust. Artifacts used in the activities of cleaning and maintenance include tools such as brooms and brushes used for cleaning, stove blacking, laundry and sewing related items and materials. All households would have had these to some degree, those with women probably to a greater degree. Clotheslines would have been associated with the backyards of most of the households. Remains of these would have simply consisted of end posts and possibly fragments of clothes pegs or rope. Households where the woman was native would have been more likely to have locally produced tools and materials in this sub-category.

All households had the need for refuse and waste disposal. This includes disposal of human waste, as well as broken, torn or otherwise unusable household items from all

of the other sub-categories and by-products of household activities such as food preparation and consumption. The disposal location of any particular kind of waste is usually determined by how much the waste interferes with the comfort, health and activities of the residents of the area. Privies for the disposal of human waste were probably located far enough behind the house that the smell and flies would not have bothered the residents unduly. Organic waste from food preparation and consumption would have been fed to pigs as slops by those households which had pigs. Those who did not have their own pigs may have either dumped their organic garbage in a midden, composted it for fertilizing their garden or given it to another household which had pigs. Ashes from cooking and heating fires may have been used for soapmaking or may have been dumped on pathways and roadways to improve traction and drainage.

Large pieces of broken glass and ceramic objects would have been discarded in a midden so that no one would trip or cut themselves on them. If these objects were broken on a wooden floor the smaller pieces would also have been swept up and thrown into a midden. However, if broken on a dirt floor or outside on the ground, the smaller pieces would likely have remained where they fell, as they would not have been in anyone's way. Broken metal objects may have been taken to a blacksmith if they were repairable; otherwise they would likely have been discarded much like

glass and ceramic objects, i.e. in a midden if large, or where they fell if small.

The inside of a house with wooden floors would probably have been kept fairly uncluttered and clear of garbage during its occupation. Non-organic refuse consisting of small, unobtrusive items would most likely have been discarded in non-traffic areas along the sides and backs of buildings. The disposal of organic and possibly also other garbage may have been carried out somewhat differently during winter than in summer, as the snow and freezing temperatures could have hidden a multitude of sins.

b) Personal: The personal artifacts likely to have been deposited on the civilian building lots would have been those associated with clothing and other apparel, personal care and grooming, indulgences, footwear, medical and health, pastimes and recreation and pocket tools and accessories of the men, women and children who occupied these lots. Disposal patterns should have been similar to those of artifacts in the domestic category, with some exceptions. There would have been little in the way of organic refuse in this category. Some artifacts in the indulgences sub-category such as broken clay pipes or liquor bottle glass may have been deposited very near to their use area, if out of doors. Those households with women present should have produced more refuse associated with female clothing, footwear, adornment and body ritual and grooming. Those with children

should have produced artifacts associated with children's clothing footwear and pastimes and recreation.

c) Sustenance: Two sustenance activities were probably carried out on some of the building lots in this area - gardening and animal husbandry. Since many of the residents also had garden plots on the neck of land, there may have been some differences between what they grew near their houses and what they grew on their plot. The garden patches near their houses would probably have been considered kitchen gardens and may have had flowers and herbs as well as some root vegetables. These areas may be somewhat difficult to recognize archaeologically. The soil in areas which have been cropped consistently over several years is often somewhat depleted so the resultant vegetation is often sparse. Sometimes relict plants can be found in old garden areas years after they have been abandoned. The garden patches were probably fenced to keep animals and other trespassers out of them. Some household refuse such as eggshells may have been mulched into the garden soil. A garden space would probably only recognizable archaeologically in the context of the layout of a whole building lot.

The evidence of animal husbandry should be somewhat easier to recognize. The list of animals kept by John Askin illustrates the range of animals which may have been kept on a building lot: cows, horses, pigs, sheep, turkeys, and

chickens (Askin 1931: 605, 606, 649). Some pasture would have been required for the larger animals, as well as a stable or barn for shelter at least in the winter. Whether the poultry would have been housed in a shelter separate from the larger animals is unknown. I would suggest that of the four groups who occupied these building lots, the Indian storekeeper who had the longest known tenure, would have had the greatest investment in a variety of animals. The military officers usually only expected to be there for a year or two, so probably only brought a cow or two for a supply of fresh meat. In addition to shelter for the animals, some kind of structure would have been required for the storage of corn, hay, oats and other animal feed. This also may have been in the same building as the animal shelter, or in a separate structure. Tools used in the care and feeding of these animals would also probably have been stored in the same general area as the feed and/or animals. Items would have included pitchforks, ropes, halters, buckets, troughs, pans, grooming devices, and milking stools.

Structural remains associated with animal husbandry may include foundation remains of stables or other animal shelters and feed storage sheds. These structures probably had packed dirt floors and some internal partitions. Fences enclosing pens for the animals may be associated with the shelters. If animal pens were used for any length of time most of the vegetation would be worn away or consumed and

the ground would be pitted. Artifacts and other material culture remains may include building and fence hardware (hinges and nails, etc.), tools and accessories used for animal care, feeding and control, and organic remains of feed, straw or waste. Organic remains, particularly manure, would enrich the soil considerably and an abundance of lush vegetation may flourish in these areas. Manure piles are usually found beside or behind the associated barns. Deposits of feed may be found in storage areas, in feeding areas or where it has been spilt. Broken tools and other accessories may be found in and around animal shelters in low traffic areas (along walls, on either side of doors, behind buildings), in storage areas, or in domestic refuse middens. Barns, sheds and animal pens are much less likely to be kept clear of refuse than houses and their associated yards, so artifacts are more likely to be found in areas close to where they were used or stored. In most cases usable tools would be kept and mended and probably were removed from the site by their owners when the post was abandoned in 1812 or in 1815. Some of these tools could be homemade or fashioned by a blacksmith and thus may not have been considered quite as important to retain as imported items.

Food bought from local Indians had probably already been processed - the animals slaughtered, cleaned and cut up, the fish cleaned and dried, the maple syrup rendered into sugar, the corn dried and packed in containers, and the

berries cleaned. Therefore it is unlikely that any remains or by-products of these processes would be found in the area of the building lots. However, the food produced locally, i.e. vegetables and fruit from gardening, and meat from animals raised on site would have been processed on site, probably on the relevant building lot. Most of the local vegetables would likely have just been cleaned, had their tops or other inedible portions removed and have been stored in cool places, either in the house or in a root cellar. The only by-products from this processing would be the tops and other inedible portions which may have been fed to pigs, mulched into the garden or discarded in a refuse midden. By-products from the slaughtering and dressing of domestic animals would have been more substantial, with potentially greater input to the archaeological record. These include hides, bones, hooves, innards, etc. The hides would likely have been used or sold, and some of the bones may have been used for soup. The rest would likely have been discarded in a refuse midden. Any animals which died (as opposed to being slaughtered for meat) would likely have been burned or dragged off away from the site and abandoned. The knives and other tools used for dismembering carcasses and cutting up meat would have probably also had other domestic uses and cannot be directly or solely associated with butchering.

Most of the gathering of wild berries and other edible wide plants would likely have been done by local

Indians even though the produce would have been consumed by inhabitants of the building lots. The one group of inhabitants who may have participated in gathering would be the Native and mixed-blood wives of the local traders. These women would be most likely to have the knowledge of local plants necessary for collecting edible wild food. The potential archaeological remains of this activity would be primarily remains of the food itself and storage containers. While identifying households which had Native or mixed-blood women would be useful, this group of artifacts may not be helpful. This is because the other households purchased this type of food by container so all households may yield similar artifacts, whether their inhabitants participated in gathering or not.

It is unlikely that any other of the sustenance related activities would have had a substantial impact on the archaeological record of the building lots except in the faunal remains. Hunting and fishing would have been conducted away from the site, mostly by groups who did not occupy the building lots. The archaeological products of these activities would primarily be represented by faunal remains in the domestic refuse middens. Some smaller bones may also be found in non-traffic areas along the outside of building walls. Bones which have been thrown to dogs could be found anywhere in non-traffic areas and should show evidence of gnawing.

d) Trades and Light Industries: The two major trades carried on in the area of the building lots over a period of time were blacksmithing and canoe building. However some masonry and carpentry work were also involved in initial building construction.

The evidence of blacksmithing should be relatively easy to recognize both in the structures and in material culture remains. The blacksmithing carried out on the building lots would have involved either Indian Department personnel or fur traders. It is likely that a blacksmith shop would be on a building lot with a residence and other features and outbuildings. Other features which may have been associated with a blacksmith shop include a farrier's sling for shoeing oxen and horses, a fuel storage shed and a shed for the storage of metal stock. The shop itself would have had a forge with associated features , an anvil on a base, a workbench, a quenching bucket, a vice, bellows, and hammers, tongs and other blacksmith's tools (Light 1984). The blacksmith would have been both making and repairing metal objects so broken traps, guns, tools and other items would have been gathered in his shop, either for repair or to provide material. By-products of the process would include ashes with clinkers, metal slag, magnetized iron filings (Light 1984: 7), metal scraps, etc. In addition, since most of the blacksmith's work would be done on request for other people, his shop would be visited by a large number of

people, either Indians and other Indian Department personnel if he was the Indian Department blacksmith, or by fur traders, other civilians and some Indians if he was a fur trade blacksmith. These visits may result in a certain amount of general socialization and some personal artifacts associated with indulgences such as smoking pipes and liquor bottles or with pastimes and recreation such as gaming pieces may have been deposited in the vicinity of the shop, either inside during the winter or inside or outside during the summer. While a military blacksmith was probably on site during fort construction during the summers of 1797 to 1806, it is likely that after 1806 there was not a military blacksmith on site. The Indian Department blacksmith after 1806, therefore, probably had the military as clients as well as the Indian Department and Indians. It might thus be expected that partially repaired or broken military hardware might also be found associated with the Indian Department blacksmith shop.

As with domestic areas, areas of heavy traffic in and around a blacksmith shop should be relatively free of artifactual debris. However, unless the particular individual was obsessively tidy, it is likely that his workshop would not be kept as cleaned and uncluttered as a residence where people were living. Perhaps this is because if a particular kind of work was all that was going on in a workshop, it would cause no problem or inconvenience to leave

the job spread out around the shop from one day to the next. This assumes, of course, that no one was living in the blacksmith shop. The blacksmith shop which has already been excavated at Fort St. Joseph had a dirt floor. This would certainly be an advantage in terms of fire prevention but I do not know if this would have been a standard practice at the time. Certainly there is much greater potential for artifacts and by-products of activities to enter the archaeological record in the area of use inside a building with a dirt floor where the artifacts can disappear into or be obscured by the dirt. Probably most of the usable tools and larger pieces of stock would have been removed from the building when the site was abandoned by the Americans in 1814.

In such a small, relatively isolated community, the blacksmith probably also acted as a wheelwright and tinker. While the smith probably prepared his own charcoal for fuel this was probably done out in the woods away from the community.

The evidence of canoe building would not likely be as easily recognizable or as abundant as that of blacksmithing. According to historical references, the North West Company had built a house and a store "in the latter they construct canoes . . ." (Harmon 1903: 11). Apparently the canoes made at Fort St. Joseph were the smaller "canot du nord" (Ross 1973: 59). This type of canoe was about 25

feet long and could carry up to one and a half tons (Wheeler et al 1975: 4; Morse 1969: 22-24). Exactly who ran the canoe making operation and who constructed the canoes is unclear. The Ojibwa in the area were known for their canoe making abilities (Ross 1973: 58), so it is possible that under the direction of a North West Company agent, some local Indians and/or Canadians built the canoes which were used by the company. Given the competition between different companies, it is more likely that the canoes made by North West Company employees were only used by that company and not sold to other traders. If this were the case, the canoe factory would probably have been burned by the Americans in 1814.

The configuration of a building constructed to house canoe making is not discussed in the historical documents. According to reports from Fort William, canoe making was carried out during spring and summer and involved the work of several different people (Campbell 1980: 56-61). The materials required included birchbark, wood for the frame, wattap (spruce roots) for sewing, gum for sealing the seams, and paint for decorating the final product. These materials were undoubtedly brought in by Indians and traded to the company agent for other goods. The main tools used for canoe building included an axe and a crooked knife (also known as a canoe knife) for preparing the wooden frame, a canoe awl for punching the holes for the seams which were

sewn with wattap, a kettle for heating the gum or pitch and a stick for applying it. A fairly large volume of wood shavings would have been produced in the preparation of the pieces of the frame. A fire would have been required for heating the pitch. A building frame of wood and a sand building bed were required for the assembly of the canoe (Taylor: 1980: 63-67). Racks may also have been used to store the canoes once they were finished. The building would likely have been a shelter with a fairly high roof, a dirt floor and large doors. It would have needed large windows for light, but these may or may not have had glass in the windows. Remnants of any of the materials or tools used in canoe construction as well as features such as the remains of hearths, post moulds from frames, etc. may be found either in or around such a building, which may or may not have had a stone foundation. The building probably did not have a fireplace if it was used only for canoe building in the summer.

Coopering (making wooden barrels) is another activity which could have been carried out at Fort St. Joseph, as barrels were used for storing and shipping such commodities as fish. However, a great many imported products such as salt pork arrived at the post in barrels which could have been reused. This factor combined with the small population of Fort St. Joseph and the proximity of Michilimackinac (a much larger community), makes it unlikely that a cooper

would have been needed or could have been supported at Fort St. Joseph.

e) Defense: Little in the way of activities or space and building requirements was located in the area of the civilian building lots. Remnants of some personal weapons or other military accoutrements may be found in association with some of the buildings in this area, but these should be associated with the domestic accommodation of officers, not with defense per se.

f) Transportation: The building lots all front onto the water on a shallow bay so canoes would have been the only mode of water transportation directly accessible to the inhabitants. Canoe docks would have been built at many of the building lots, particularly by the fur traders who would have travelled frequently to and from the site by canoe. The military officers and Indian Department personnel whose major transportation was provided by larger vessels and who did not travel about the local area as frequently would not have had as great a need for their own canoe dock. While there may have been a public canoe dock on either side of the point in front of the opening between building lots, it is hard to say who would have built it. It is possible that a public canoe dock may have been considered a necessity for the use of Indians and other visitors who arrived at the post by canoe. While a party certainly could arrive at the

schooner wharf by canoe, the schooner wharf was much more exposed to wind and rough weather, and landing there could often have been difficult for a canoe. Because of the yearly freeze-up and movement of ice in the spring, the canoe docks would probably have been damaged often and would have required repair or rebuilding in the spring. The docks would probably have had stone filled log cribs under water to anchor them and keep them stable in heavy weather. The 1804 Walsh painting shows two canoe docks on the northeast side of the point. Canoes can of course be beached and unloaded without the use of a dock. However, if a trader was bringing back full canoe loads of goods from Michilimackinac or Indian villages on a regular basis, it would certainly be to his advantage to build a canoe dock in front of his house or store to facilitate loading and unloading.

The North West Company originally requested two building lots, one on either side of the neck to facilitate the loading and unloading of canoes in any kind of weather (Vincent 1978a: 134). They would likely have built a canoe dock on either side, although they may not have kept the docks up after 1806 when they gave up their interest in the area to the South West Company. Their houses were rented out to military officers who may or may not have kept up the docks. John Askin bought one of their houses in 1809 and may or may not have kept up the canoe dock associated with it. Evidence of the location of docks may be found along

the shoreline if the method of anchoring the shore end of the dock to the land can be determined. The remains of stone filled cribs may also be found in the water.

The method of land transportation for people who occupied the building lots varied depending on the season. Most of the transportation of people around the site was on foot. However, there was a great deal of movement of goods of all kinds from the water to the place of use of storage and between buildings on site. While smaller items were probably often carried by hand, the movement of any volume of material would have required some kind of vehicle or conveyance. There probably was some kind of road or pathway connecting the building lots along each side of the point - either along the front or water side of the lots or along the back or land side. Trail number four probably connected a public canoe dock (between lots five and six) with the fort and was probably used by residents of the southeast building lots to gain access to the fort. Vehicles would have been required to haul vegetables and animal feed in from the gardens and fields, to haul fence posts out to where the fields and garden plots were to be marked out, to haul a great deal of wood into the building lots for firewood. Volumes of stone, lime and sand would have been hauled to the building lots for the construction of masonry foundations and fireplaces. When new people arrived on site their household effects would have had to be hauled to their

residences. Summer transportation of this kind would probably have been provided by a wagon or cart pulled by either oxen or horses. Local winter transportation would likely have been provided by sledges or sleighs pulled by horses or oxen. For winter trips away from the community, for example to the Indian villages to obtain furs or maple sugar, the fur traders probably used snowshoes and small sleds or toboggans, as this was the common Native form of transport in this area (Quimby 1966: 164).

The archaeological features associated with transportation activities could include remnants of trails and roads, remains of canoe docks, etc. Artifacts might include wagon or cart parts, canoe parts, fragments of harnesses, sledges, etc. These may be found where a vehicle has been abandoned in an area out of the way of traffic, possibly associated with a stable or animal shelter. They would not be likely to be found on roads or pathways (unless deposited just before or after the site was abandoned) but may lie along side these features if broken during use. Vehicles abandoned on site after 1815 may have been reused or dismantled for parts be the military contingent left to guard the magazine and cattle from 1815 to 1829. Parts of these vehicles, especially hardware or wheels, may also be found in association with a blacksmith shop if the blacksmith was also acting as a wheelwright. The presence of these kinds of artifacts associated with the blacksmith

shop may indicate manufacture, mending or salvaging.

g) Commerce: Most of the commerce carried out at Fort St. Joseph would have occurred in Area Two, on the building lots occupied by the local fur traders. This activity refers primarily to trade carried on between fur traders and Indians. This is not to say that business transactions did not take place between other members of the community. Soldiers and Indian Department personnel also conducted business transaction with either fur traders or Indians on occasion, as well as with each other. Most of these transactions, however, were made with the aim of acquiring commodities for personal use or consumption, whereas the trade between fur traders and Indians was conducted for the purpose of making a profit and acquiring status as well as utilitarian goods.

Furs, provisions and trade goods were the primary media of exchange so it logically follows that remains of these would be the most direct evidence of the occurrence of trade and the presence of fur traders and Indians. However, in most cases these commodities were not intended for use at Fort St. Joseph. The furs were sent to Lower Canada and Europe, a good portion of the provisions were sent out with fur brigades on the Great Lakes and to the south and west, and the trade goods were taken back to Indian encampments elsewhere. The impact of this is that there would have been

little opportunity for direct evidence of this exchange to enter the archaeological record. Another factor which further confuses the issue is that many of the goods exchanged by the Indian Department and the Indians in the gift-giving ceremony were basically the same as the goods exchanged by the fur traders and Indians, with a few exceptions such as chiefs' medals and coats. The transactions which occurred when the Indians came to the Indian storekeeper's house for food and other goods would be almost identical to the transactions which would occur when Indians came to the traders' houses to trade. As mentioned earlier, however, most trade took place in the Indian villages and camps. As a result, the Indian Department transactions may have produced a much greater volume of archaeological remains than actual trading transactions. Another difficulty in separating out trade goods is that most of the items listed in the inventories as trade goods could also fit into one of the other functional categories and may have been acquired and used by any of the site inhabitants, as well as by the Indians. There are a few specific personal items which would have been manufactured specifically for the Indian trade such as trade silver, glass beads, tinkle cones, vermilion, etc.

The two other sub-categories under the functional category of commerce are storage and shipping and receiving. This is where the differences between the local fur traders, the larger companies and the Indian Department may

show up in the archaeological record. Trade goods were packed in kegs, crates, bales and bags for transportation and these were usually marked with packing seals of some sort. Structures used for the storage of trade goods, provisions and furs by a local trader should be found on or adjacent to the building occupied by him. These structures should have been unheated (no fireplace), well drained and secure. The only interior features which might be expected would be shelves. If the building was in a well drained area, a dirt floor may have been considered adequate, but in an area which was wet even only seasonally, a wooden floor would have been required. Trade goods would primarily be in storage from mid summer until they ran out in late winter or early spring. Provisions would have been in storage from early spring (sugar) through until late fall (corn, fish) and possibly over winter as well if used locally. Furs would have been in storage mainly from mid winter when they started coming in from the Indian camps until they were sent east in early to mid summer. The two seasons of the year when drainage was a problem in the area of the building lots were spring and fall. Chances are therefore that the traders' storage buildings in the area of the building lots would have had wooden floors and possibly some kind of ground water drainage system as well. Portions of packing seals, storage containers or their contents would only be likely to be deposited as a result of the containers being

opened up on site. It is highly unlikely that the evidence of furs would be found. These may have been packed up in bales at Fort St. Joseph with a fur press before shipping, or they may have been crudely bundled locally and carried to Michilimackinac for pressing and baling. A site with a relatively small annual fur intake may not have warranted the use of its own fur press, a device normally associated with much larger centres. Remnants of locally made storage containers of wood, birchbark or skin, or of the provisions stored in them may represent evidence of trade, but they may also represent evidence of the purchase of sustenance items by other of the site's inhabitants so they cannot be used alone to distinguish fur traders' building lots.

Remnants of shipping containers such as kegs and crates imported from Lower Canada may represent evidence of fur traders activities or of the Indian Department activities. Packing seals were often stamped with the mark of the company or agents responsible for buying, packing and shipping the goods to the fur traders. Since traders and fur trade companies tended to deal exclusively with particular packers, the examination of packing seals can yield information which may lead to the packing agent, whose business records may in turn lead to the particular trader or company which received the goods at Fort St. Joseph. Indian Department goods transported on government ships were often marked with a lead seal bearing the crest of the Transport Office.

In both cases, the packing seal would be broken and discarded when the package was broken open. If deposited at the time that the associated house was occupied, the seal would probably be discarded outside the house, possibly near the spot where the package was opened. Lead seals may have been curated and melted down to make musket balls, so their numbers will undoubtedly be fewer than the number of packs opened in a particular area.

h) Administration: The administration which took place in the area of the building lots would have been associated primarily with the duties of the leading Indian Department representative, the storekeeper. This activity involved keeping records of the visits of Indians, keeping the inventory of the Department's goods stored and distributed on site, keeping pay records for departmental personnel and preparing official correspondence regarding departmental activities. The materials and tools required for this activity would have been paper, parchment, quill pens, pencils, ink, ink bottles and wells, a blotter, a letterbook, and a container such a chest of box for keeping the records in and transporting them. Most of these materials would have been removed from the site when it was abandoned. Scrap paper or parchment and broken or discarded pencils, pens and ink wells or bottles may have been deposited on site in the domestic middens associated with the storekeeper's house.

i) Group Ritual: The major group rituals which took place at Fort St. Joseph were the semi-annual Indian Councils and gift-giving ceremonies. It is unlikely that these events would have taken place in Area Two because of the numbers of people involved and the space required. It is unlikely, therefore, that artifacts or structural remains would be deposited there as a result of group rituals.

3. The Area in Front of the Fort

The most important feature of this area is its location between the schooner wharf and the front gate of the fort. Other than the known presence of the military in the new bakehouse, there is little historical documentation referring to the use of this area. Six buildings are shown in front of the fort on the 1800 military map of Fort St. Joseph (Fig. 3). These are all labelled "Temporary buildings to be removed" and were probably military buildings. The two closest to the fort are not shown on the 1823 map and had probably been removed before 1812. These would not likely have been associated with defense, since they were outside the fort. They were not likely to have been military kitchens, since these were still required to be built in 1804. It is most likely that they were somehow associated with the construction of the fort and were used as workshops and/or storage sheds by the articifers.

Unfortunately the buildings on the west tip of the

point are not labelled and there is no way of knowing from historical information whether these buildings were associated with the military or civilians. The lack of associated building lots may mean they were built and used by the military. Even if this were so, their function remains a mystery. They were a long way from the schooner dock, so transporting bulky or heavy goods to them would be awkward. They were on the tip of the point most exposed to the prevailing winds so would not have been in a good location for the loading and unloading of canoes. The trail to them connects to a trail from the northwest building lots on its way to the northwest palisade of the fort, but this does not necessarily indicate that these buildings were in some way associated with the building lot occupants. The soil is very poor and rocky on the west tip of the point and not suitable for gardening.

The buildings appear to have been built prior to 1800. One group who may have built there were some of the first traders who arrived at Fort St. Joseph and requested permission to build before the building lots (in area two) were laid out. The letters from the commanding officers which refer to the laying out and disposition of building situations for civilians between 1797 and 1803 give the impression that there was considerable variation in the way the officers viewed land allotment and that some plots of land may have been given out before the two rows of building

lots were laid out. In November of 1797 the Commanding Officer wrote that lots needed to be laid out in order to prevent later confusion, and also that only two traders, Langlade and Culbertson, had already built (PAC, RG8, C Series, Vol. 250, p. 315). If these were traders' houses, then Langlade and Culbertson were most likely the occupants.

By September of 1798, the building lots appear to have been laid out so most, if not all, of the people who came to the post after that time would have applied for and built on them. The Commanding Officer wrote at the time:

> "The Indian Interpreter, Store Keeper, & Blacksmith, declined building on the Situation laid out for them on the plan, giving for reason, that they are always liable to be removed and thought it a hardship to build on Government property at their own expense, . . . in this case I was under the necessity of allowing them to build on the Situation laid out for the Traders, . . . (PAC, RG8, C Series, Vol. 251, p. 256).

It may be that the four buildings on the west tip of the point were on military land and were projected or intended for the Indian Department but were not used by them. Archaeological evidence indicates that there was at least one building with a cellar and fireplace in this area (Lee 1982: 57,58). This can probably be interpreted as a residence.

Immediately to the northeast and east of the new bakehouse, a cluster of thirteen semi-subterranean buildings were found as a result of archaeological research. No historical references to these buildings have been found and

therefore, we have no prior knowledge of their association with a cultural group or of their function. They appear to have been built after the new bakehouse was established in 1804 and before 1812.

Since little hard documentation concerning the use of Area Three exists, the possibility of all groups and all activities must be considered for this area.

a) Domestic: During the original occupation of the new bakehouse from 1804 until 1812, the building was used primarily to prepare bread for the garrison. Since men's and officers' kitchens were built inside the fort at the same time as the bakehouse, it is unlikely that anything other than bread was made in the bakehouse. Possible candidates for the archaeological record as a result of bread making would include flour, flour bags, a kneading trough or dough box, some kind of work table, fire shovels (wooden for the bread, metal for the coals), dough knife, a water pail, a grater, a scraper, bread basket, fire rake and a flour sifter. Any of these items which were still usable would likely have been removed from the building when the post was left empty in 1812. Unless any of these objects were broken and discarded or lost during use, they are unlikely to be found on site. The inside of the building would have been cleared out prior to its re-occupation by the corporal's guard in 1815.

The one group known to have lived in this area was

the military in the form of the corporal's guard which occupied the new bakehouse from 1815 until 1829. Domestic artifacts associated with their occupation may be some crude furniture, various items subsumed under housewares and appliances such as artifacts used in the preparation and consumption of food, the heating and lighting of the building, cleaning and maintenance, etc. The floor of the new bakehouse was constructed of unmortared slabs of stone. The resultant cracks between stones may have provided places where small artifacts may have been deposited during the actual use of the building. Otherwise, refuse disposal was probably outside the building, around the sides and to the back. The new bakehouse is within fifty feet of the water, so it is possible that some refuse would have been thrown into the water or left on the ice to be carried off during the spring thaw.

Another group which may have lived in this area were the fur trade engages who were on the site in large numbers for a few days at a time in the late spring and early summer between 1806 and 1812. They would have needed only temporary shelter and would have carried little in the way of domestic items with them. They would probably have been fed by their employers on dried food such as corn and fish. The only domestic remains which might be expected from this group would be a few cooking and eating utensils, cooking hearths and possibly some remains of temporary shelters.

The men probably slept on the ground, in sheds, or in other outbuildings belonging to their employers. It is possible that the semi-subterranean buildings were used for this purpose. However, since the South West Company set up a store and houses on Rains Point and were the company most likely to bring in large numbers of engages, it is possible that most of the engages would have been accommodated there rather than at the fort.

It is possible also that the Indians used this area for a temporary camping area. A sketch of the post on Drummond Island in 1820 shows a cluster of Indian tents along the shoreline in front of the post (Vincent 1978a: 242, 253). However, most of the area directly in front of the fort at Fort St. Joseph has a considerable slope to it, so would not be an ideal spot for setting up tents. The land flattens out towards both the western and southern tips of the point and either of these areas would be more suitable for temporary camps. One would not expect large groups of Indians to be allowed to camp in close proximity to the buildings belonging to the site's residents for security reasons. It is unlikely, for example that the Indians would set up camp in the area of the semi-subterranean buildings. A temporary birchbark tent would not be likely to leave much in the way of archaeological evidence. However, the remains of hearths or fire pits associated with such accommodations may be found. Domestic artifacts associated with such an

occupation may include remains of cooking vessels and other utensils used in food preparation such as knives, spoons, bowls, and baskets. These may be of either Native or European manufacture. It is doubtful that sleeping platforms and storage shelves or racks would be constructed in such temporary dwellings, so little in the way of furniture would likely be found. While cradle boards were probably used to hold babies, there would be little likelihood of parts of these entering the archaeological record unless they were broken at the site.

While there is no record of any other group of people living in Area Two, it is possible that in later years, the building lots in Area Two may have all been taken and later arriving fur traders may have built in area three. However, since there are no visible building outlines in this whole area except for the semi-subterranean buildings and the buildings already shown on the 1800 map, it is unlikely that any later fur traders residences were established there.

The semi-subterranean buildings in Area Three which were excavated in 1975 and 1977 present an interesting puzzle. Are they evidence of a domestic occupation - the remnants of historic households? The artifacts found in association with these buildings must be examined to determine whether they are associated with the occupation of the buildings or with later activities. It is possible that

these buildings were constructed as storage buildings by local fur traders after they discovered the drainage problems in Area Two.

b) Personal: Personal artifacts found in this area could be associated with anyone who lived at or visited the fort. This was a public area which probably experienced a considerable amount of traffic. In those areas where temporary military workshops and storage buildings were located, artifacts associated with pastimes and indulgences of both military and civilian may be found. These may include tobacco pipes, liquor bottles, gaming pieces, etc. If the military and civilian articifers worked here there was probably also a certain amount of socializing taking place in the same area. Because it was outside the fort, the area would not have been kept particularly clean and uncluttered by the military.

c) Sustenance: No local subsistence activities were likely to have taken place in most of this immediate area. It is too rocky and barren for any gardening or agriculture and no wild game or fish would have been procured here. However, it is possible that the keeping of domestic animals may have been associated with the buildings on the west tip of the point or the semi-subterranean buildings. The same kinds of features and artifacts described for animal husbandry in Area Two could be representative of this activity in Area

Three. Some of the military personnel who kept animals but did not rent out space in the buildings of Area Two may have constructed buildings of sheds for their animal shelters. If domestic animals were kept in this area, then they were also likely butchered there and the tools and by-products of this process may have been deposited in the archaeological record as is described in Area Two.

If any community fishing was done in the general area of Fort St. Joseph, then Area Three is most likely where the fish would have been cleaned and dried. The features associated with this activity might include post molds from fish racks and hearths from smoking fires. Other archaeological remains might include fish scales, fish bones, tools used in catching fish such as fish spears, fishhooks, net sinkers, etc., as well as fragments of storage containers such as barrels.

d) Trades and Light Industries: The trades and light industries carried out in this area would mostly have been associated with the construction of the fort by military personnel and civilian articifers and labourers. The temporary buildings shown on the 1800 map were probably workshops and-/or storage facilities used by the masons, carpenters, blacksmith, glaziers and labourers. The lime kiln, located directly to the southeast of the temporary buildings would have had slaking pits associated with it for the processing

of the quicklime produced in the kiln. Sand and water were the only other ingredients used in slaking lime, and concentrations of lime and sand would be expected in the area of the slaking pits. The by-products generated by these construction activities probably would have been deposited in the area where the activity was carried out, and may not have been carefully cleaned up because of being outside the walls of the fort. Since most of the fort's construction took place during the summers of 1797 to 1806, these would have been the times when these shops were in use. If this is the case, it would appear that these shops were left empty during the winter, as the articifers' tools were stored in the blockhouse over winter, probably mainly for security. Prior to the completion of the fort in 1806, raw materials such as logs, stone and bricks would have been stockpiled in this area.

Debris associated with a carpenters' shop would include wood chips and shavings, broken or unusable hardware such a nails and broken or unusable tools. Features may include a sawpit or trestle for cutting boards from logs, work benches, sawhorses, ladders, as well as a building which probably did not have a floor.

The structure of the blacksmith shop would be much as described in area two. However, there would be some difference in archaeological remains expected because of the difference in clients. The military blacksmith probably

worked strictly for the military and was on site primarily to manufacture and repair the hardware for the construction of the fort and the military buildings. This would include building hardware, gate hardware, nails, and tools for the other workmen including axes, hammers, chisels, planes, etc. If several blacksmiths worked together at one time, the shop would be larger than the civilian or Indian Department shop and would have had a different layout because of the repetition of some functions.

As well as the tools the masons used for construction (hammers, chisels, mortar boards, trowels, shovels, pails, etc.), they also required wheelbarrows for mixing and hauling mortar. Large loads of stone and brick were likely hauled to proposed building sites using oxen and a stone boat or flat bottomed sled. The masons did not likely have a workshop but must have had someplace where they could go to eat their meals and obtain shelter from bad weather.

The glaziers may have required a workshop where they could assemble windows before installing them in the buildings. The remnants of this activity would include broken glass and wooden window components and lost glazing points. Planes, saws, hammers, putty knives, etc. were the tools used for assembling windows and those items which wore out, broke or otherwise became unusable may have been discarded in the area of the workshop.

Disposal of debris and refuse resulting from these

activities was probably not as carefully regulated outside the fort as inside. While areas of heavy traffic, particularly near the front of the fort would have been kept clear of debris, a fair amount of refuse may have collected in the areas around the workshops themselves, particularly along the side and back walls.

While it appears that two of these temporary buildings were removed sometime during the occupation of the fort, the remaining four show up on the 1823 map. Obviously by 1823 all of the military buildings had been burned so that even buildings which had not been torn down by 1812 would have been destroyed. It is difficult to say whether these four buildings remained in use after 1806 and what function they served. The two buildings may have been removed when the palisade and ravelin were completed in 1802 (Vincent 1978b: 47, 48).

e) Transportation: Area Three is one of the areas of the site where a great deal of transportation of people and goods took place. It contains the corridor between the ship wharf and the fort and the rest of the community. Remains of the wharf in the form of stone filled log cribs were found more or less in the location of the wharf shown on the historic maps. A road from the wharf to the water gate of the fort was constructed by the soldiers in order to facilitate the movement of material. The road was probably

constructed simply by levelling and mounding up a roughly ten foot wide strip and digging shallow ditches along the sides for drainage. Most of the people who arrived by ship probably walked to the fort on this road. The materials used in the construction of the fort were unloaded at the dock and carried to where they were used. Since most of these materials were in large quantities, they were probably dragged up the hill on a stoneboat or cart pulled by oxen or horses. As mentioned in the previous section of trades and light industries, wheelbarrows were probably also used by workmen and articifers to transport smaller loads to and from their work areas. The vegetation and ground surface would have been worn down along the pathways which led between the road and the various buildings and work areas. While the movement of people and goods through this area was considerable, it is unlikely that very much direct evidence would remain of transportation. Any resulting debris such as broken harness or wagon parts or spilled loads would likely be cleaned up and moved off to the side out of the way. It is difficult to say whether the animals, harnesses and conveyances used in this transportation would have been housed in Area Three somewhere, or inside the fort. I would suggest that the fort was probably reserved more strictly for military activities and that this storage/shelter would more likely be located in area three. The fort's bateaux were probably stored near the wharf. They may have been put

up on racks for the winter, or simply hauled up on shore. The archaeological remains of of such racks would likely consist of post molds in a rectangular outline.

Although no such route is shown on either the 1800 of 1823 map, it is possible, even likely, that there was some kind of a road or pathway along the shoreline connecting the area of the wharf with the buildings on the west tip of the point. As the function of these buildings is unknown, however, it is difficult to suggest what may have been transported along such a route.

f) Defense: While area three was not directly part of the defensive works, it was in a sense a very important area for the defense of the community because it lay between the fort and the major shipping dock as well as the narrowest part of the navigation route that the fort guarded. In that regard, it lay between the fort and any enemy likely to attack the fort. As is obvious from the 1800 map, this was one of the first areas of the point to be cleared of vegetation, no doubt to provide a clear line of sight to the water and the navigation channel. The construction of the only ravelin in front of the watergate is further evidence that this side of the fort was considered the most important for defense. However, there were no other defensive features constructed in area three. The portable aspects of defense, the big guns, were kept inside the fort. The swivel guns which were

fired to salute the flags of visiting groups of Indians may have been used in area three. A small travelling magazine was apparently required to transport the powder for these guns (Vincent 1978b: 50). These guns and the travelling magazine may have been pulled out in front of the fort to salute a group of arriving Indians and then pulled back inside the fort.

g) Commerce: There are no historical references which would indicate whether any commercial transactions took place in this area. If either the buildings on the west tip of the point of the semi-subterranean buildings southeast of the new bakehouse belonged to fur traders, then some business dealings may have happened in these areas. If the traders used these buildings as storage sheds and conducted some trade there, some packing seals and other fragments of packing material and containers may have been deposited in the vicinity as a result of packs of goods being opened.

h) Administration: It is unlikely that any administrative type activities took place in this area except possibly in the case of the corporal's guard which resided in the new bakehouse from 1815 to 1829. The kind of paperwork involved in this type of duty would probably have been minimal at most. While a considerable amount of shipping and receiving occurred or passed through this area, most, if not all of the associated paperwork would have been done on board ship,

inside the fort or in the Indian storekeeper's quarters.

i) Group Ritual: The Indian Councils and gift-giving ceremonies may have been held in Area Three. The structures involved in these ceremonies would likely have been large military tents or marquees made of wooden poles, ropes, canvas or russia sheeting and metal grommets. Unless something broke or ripped during set-up or take-down, little in the way of structural evidence would likely remain, except possibly tent pegs or post holes. The artifacts involved in these rituals would have included status goods such as chief's guns, medals, coats, etc., and provisions brought in by the Indians such as corn and maple sugar. Because of the ceremonial importance place on these articles, and the public nature of their exchange, it is unlikely that many of these items would have entered the archaeological record at this point. If bales of gifts or containers or provisions were opened up on site, some elements of the packaging may have been deposited, particularly if they were broken, and provisions might have spilled on the ground. The discarded containers of tobacco and liquor consumed as part of these ceremonies may have contributed to the archaeological record but these would technically be categorized as personal artifacts under the heading of indulgences.

4. The Neck of Land Joining the Point to the Island

While gardening seems to have been the main activity referred to in this area, a few other activities probably also left some traces here.

a) Domestic: Although no houses are shown in this area on the historical maps, a surveyor's map of the site dating to 1925 notes the "remains of building, wharf, garden and picket fence" on the east side of the neck well to the northeast of the juncture of the neck with the point. This is the only indication of any domestic activity in Area Four. The same alternatives are possible for the association of this household as have been discussed for the building lots in Area Two.

It is possible that some domestic refuse from the inhabitants of Area Two and Area One may have been disposed of in Area Four. This would most likely be organic kitchen refuse composted into the soil in the gardening plots. Given the rate of decomposition of organic remains, it is unlikely that very much evidence of this kind of activity would be found today. It is unlikely that the remains of any other domestic activities will be found in this area.

b) Personal: It seems that some members of every major group in the community worked in the gardening area at one point or another, so there is some possibility of personal

artifacts, particularly those related to spring, summer and fall working apparel from all groups may have been deposited in the gardening area as a result of loss or breakage and discard during use. For example, buttons, etc., may have broken or popped off people's clothing while they were working in their respective gardens. One would expect, therefore, that such personal items deposited in the gardening area would have been associated with the work clothes of the people wearing them. Given the nature of gardening, these artifacts may have been moved about considerably from their original location of deposition.

c) Sustenance: The major sustenance activity which took place in this area was gardening. As discussed previously, both military and civilians participated in this activity, and the garden plots changed hands frequently as people arrived at and departed the community. The list of plants grown included potatoes, cabbages, onions, radishes, spinach, melons, cucumbers, carrots, beets, celery and turnips. Field crops included oats, clover and timothy (Askin 1931: 605,606). Some of these plants may have been grown in kitchen gardens on the building lots, but all of them were probably grown in area four, particularly the root crops, e.g. potatoes and turnips, of which a large volume was desired . The gardening area was cleared and laid out by the military, but there is no information to indicate whether

all plots were the same size and shape, and whether they were fenced. The likelihood is that they would have been fenced to keep out roaming animals (both domestic and wild), as well as other intruders. None of these crops would have been particularly susceptible to birds (except when just planted) so scarecrows would not have been necessary. Another question relating to the configuration of the gardening area concerns access to the gardens and space between adjoining plots. All plots would have to be accessible at least by foot paths, and some, such as large potato patches would need room for access by a cart or wagon so the produce could be carried away.

The features created as a result of gardening in this area would have included square and rectangular plots with pathways between them and fencelines surrounding them. The cycle of gardening included the following sub-activities: 1) clearing the native vegetation, 2) draining wet areas, 3) breaking the ground, 4) removal of rocks and roots, 5) cultivating the soil in preparation for planting, 6) planting seeds, seedlings or sets, 7) fencing the plot, 8) weeding the area and surveillance for pests, 9) harvesting the crops, and 10) removal of unusable parts of the plants and digging compost into the soil. The tools involved included shovels, hoes, rakes, large forks, knives, scythes, and possibly gardening trowels. If tools broke or were lost in the area of the gardens, they may have become

part of the archaeological record, but in most cases, they were probably removed from the site when the owners left, or passed on to another gardener. Some locally made tools may have been wooden, but most of them would have been made of a combination of metal and wood. It seems for the most part that little archaeological evidence of gardening will remain other than possibly some relict vegetation, some changes in soil chemistry, some remains of fences and the odd broken or lost tool. The remains of footpaths are unlikely to have survived the reforestation of the area.

Although it is not strictly a sustenance activity, the cutting of firewood for the community may have been associated with the clearing of trees from proposed garden and field sites. Given the relatively short life span of trees in this area, it is unlikely that the remains of tree stumps associated with this activity would be found today.

The other major subsistence activity associated with Area Four is the pasturing of domestic animals. If, as I suspect, the gardens were fenced, some of the domestic animals may have been allowed to wander and graze in this area. Some areas were apparently fenced, with hay or forage crops sown in them to provide pasture for cattle. The field Askin described was four acres in size, surrounded by a cedar rail fence and sown with clover and timothy (Askin 1931: 605,606). Again, other than rows of fence post remains, little would likely be found in the way of archaeological

evidence of this activity other than possibly some relict plants and negligible changes to soil chemistry.

d) Trades and Light Industry: Two activities related to trades and light industry may have occurred in Area Four, and both are related to the acquisition of fuel. These are the cutting of wood for domestic fires, lime burning, and canoe building, and the burning of wood to create charcoal for fuel for blacksmithing. For the first few years of the occupation of Old Fort St. Joe Point, there was probably enough wood from the clearing of the point itself to supply all the fuel needed in the community. However, by 1803 the commanding officer complained of the difficulty of procuring fuel (PAC, RG8, C Series, Vol. 513, p. 25, Clerk to Green, 8 Feb. 1803) and by 1805 he talked of the distance it was necessary to go to bring firewood (PAC, RG8, C Series, Vol. 255, p. 6, Clerk to Green, 24 Jan. 1805). This activity was apparently carried out during winter (ibid.; Campbell 1980: 71) because during that season, sleds could be used where no roads existed. As discussed earlier, the cutting and hauling of wood would probably leave little in the way of archaeological remains. Charcoal burning, however, may have left more substantial traces, since a considerable amount of ashes and charcoal may have been added to the soil in the area of the kiln. This activity may have been conducted in winter to avoid the danger of forest fire. There is no

specific reason why the kiln would be located in a particular spot in Area Four - the major consideration for its location would have been access to abundant fuel of the appropriate kinds of wood. Apparently several of the species available in the area were appropriate for making good fuel, particularly ash, birch and beech (Light 1984: 6). Some wood may have been cut in this area for use in building construction in the community. If done in winter, the trees would have been hauled out on sleds; if in summer, they would probably have been rafted to the point by water. There are no specific references to any other activities related to trades and light industries being carried out in Area Four.

e) Defense: No activities associated with the defense of the community were known to have been carried out in this area. Any artifacts associated with defense which are found in area four were most likely deposited there as a result of some other activity such as gardening.

f) Transportation: Except for the previously discussed house with wharf on the east side of the neck, there is no historical evidence of water transportation associated with Area Four. In terms of land transportation, there is a trail shown leading northeast along the middle of the neck and then veering off toward the east shoreline in both the 1800 and 1823 historical maps. This trail would have been

used by people passing that way to care for gardens, fields, or pastured animals, cut wood, burn charcoal, etc. Probably a great deal of the traffic would have been on foot, but carts and wagons pulled by oxen or horses would have been used to haul loads in the summer and sleds would have been used in winter. To be used by vehicles, the trail would have needed a relatively even, boulder free surface and good drainage. Ditches along either side and a slightly raised roadbed of gravel or cobbles would have been desired, as the water table is high in this area. Although all groups would have used this trail, there is a good chance that it was built by the military to facilitate their own activities. Most of the goods or items which would have been transported along this trail were organic and if lost, spilled or dropped would probably have left little trace. It is possible that if pieces of the vehicles or attached harnesses broke in use they may have been discarded along the trail. Since all groups probably used the trail, it will not likely be possible to associate transportation artifacts in this area with any one particular group.

g) Commerce: It is unlikely that any commerce was conducted in this area. Even though garden plots were bought and sold by various residents, the transactions probably took place in the community, rather than out in the gardening area.

h) Administration: It is unlikely that any administrative activities took place in Area Four, because these activities generally took place in an office or house. Any artifacts associated with this activity found in area four would probably have been redeposited there as a result of some disturbance to their original area of deposition.

i) Group Ritual: It is unlikely that the Indians Councils or gift-giving ceremonies would have been held in the gardening area. It is therefore also unlikely that any of the associated structures, features or artifacts would have been created or deposited here as a direct result of these rituals.

5. The Unoccupied Area on the Point Not Subsumed But Outlined By Areas One to Four

This area lies between the civilian community and the fort. It is the area about which there is the least amount of information concerning the activities which took place there. There is no historical information referring to the establishment of any structures or activities in area five. However, there is some archaeological evidence of buildings in the area between the northeast side of the fort and Area Four (sub-area 5c). These appear in two clusters, on either side of the historic road which leads from the land gate down to the bay on the northeast side of the

neck. To the southeast of the road is a cluster of six semi-subterranean buildings, five of which have interconnecting trails and are clustered quite close together near the road. On the other side of the road are several features consisting of an odd configuration of depressions and associated mounds, resemblingsemi-subterranean buildings. These are located near the north bastion which contained the powder magazine.

a) Domestic: Since generally speaking, the households of the military, Indian Department and company and local fur traders were taken care of by buildings in areas one and two, only two groups were likely to have looked for temporary accommodation in Area Five - the Indians and the fur trade engages. In the case of the Indians, both visiting and local people would have used the same kind of temporary dwellings consisting of conical or dome shaped wigwams or rectangular pole cabins covered in all cases with birch bark slabs (Quimby 1966: 162, 164). Remains of these might consist of a building outline of post moulds, with an associated hearth or hearths. Apparently even the birch bark cabins or longhouse type buildings could be erected in a day (Quimby 1966: 162,164). These would most likely be clustered somewhere where the ground surface was relatively level. There may have been one area where the local Indians camped each time they visited the fort. However, in the

case of the visiting Indians, sometimes there were several groups visiting at the same time, some of whom were at war with one another. It is likely therefore, that more than one area was used as a campground for visiting Indians. The number of lodges would depend of the number of extended families in the group.

An illustration of the post on Drummond Island in 1820 shows a cluster of conical tents down near the waterfront (Vincent 1978a: 242). This may suggest that the Indians preferred to camp near the water. However most of the level areas near the water at Fort St. Joseph would appear to have been taken up by civilian or military activities. This leaves level spots in Area Five as the most likely locations for temporary Native dwellings. I would suggest that the most likely spot in Area Five for the location of Indian encampments, and also possibly for the gift-giving ceremonies would have been the level area to the southeast of the fort's southeast side. This area is about 200 feet by 200 feet. Trail number four leads to this area from the bay by the southeast building lots.

The kinds of domestic artifacts which might be associated with these Native encampments would include articles of both Native and European manufacture used in food preparation and consumption. By this point in time in the area of the Great Lakes, European made items and materials were well integrated into the Native economy/household/lifestyle

along with Native made implements. Cooking pots, knives, spoons, bowls, cups, fire steels, would be among the artifacts used in the Native household. While these people probably brought some food with them to the fort, they generally expected to be fed by the Indian Department with corn and salt pork. The only food remains which might be expected would be bones from the salt pork and any wild game they may have brought with them. These would likely have been discarded outside, but in the vicinity of, the dwellings. The cooking and eating utensils would have been deposited only if broken and discarded or lost.

If on occasion large numbers of engages camped in Area Five during the summer, they may have erected makeshift shelters, slept in storage sheds belonging to site residents (who may have been their employers), or slept in the open. It is also possible that they camped (congregated) on Rains Point rather than Old Fort St. Joe Point and would not have left any domestic remains in Area Five. The domestic refuse from this kind of a short term occupation would depend to a certain extent on whether existing structures were used, temporary structures were erected or no shelters at all were used. If existing structures such as the semi-subterranean buildings belonging to site inhabitants were used, the refuse would have been discarded outside the structures or cleaned out of them after the guests had departed. If temporary structures were erected, refuse may have been left

inside the structures and no attempt may have been made to clean up when the structures were removed. If these men slept in the open, then their domestic refuse would probably have been scattered around their cooking fires. This refuse would have consisted primarily of utensils used in the preparation and consumption of food, as well as food remains such as bone. These men were probably fed by their employer with food purchased locally. The major difference between the domestic remains of the Indians' and engages' temporary camps would have been in the proportion of artifacts of Native manufacture. The engages probably used items primarily of European manufacture, whereas the Indians used both European and Native made utensils. The presence of these two groups would also be distinguishable on the basis of artifacts in the personal category.

Remains from the domestic refuse of groups who occupied Areas One and Two may also be located in Area Five. It is quite likely that there were military refuse middens and privies outside the fort in Area Five. The occupants of the building lots probably have privies and middens on their own lots, but their may also have been a place in Area Five which was used as a community dump, and may contain refuse from all groups who visited or lived at the site.

b) Personal: Personal artifacts associated with all of the groups who were at Fort St. Joseph may be found in Area

Five. Because this area was not occupied or set aside for any one particular groups, anyone may have used the area temporarily. Scattered personal artifacts will be difficult to attribute to any particular activity or group, but clusters of concentrations may point to areas where people camped, loitered, socialized or interacted in some way for some period of time or on a regular basis.

Personal artifacts associated with Native encampments or activity areas (dancing, socializing) may include adornments which were popular at the time such as tinkle cones, beads, silver earbobs, broaches, gorgets, chief's medals, rings, bracelets, buckles, buttons, vermilion, utilitarian items which have been modified for use as adornments, toys or artifacts associated with indulgences such as European or Native made tobacco pipes, liquor bottles, etc. Personal artifacts deposited in an area frequented by fur trade engages might include indulgences such as liquor bottles and clay tobacco pipes (of European manufacture), adornments such as buttons and other clothing fasteners, buckles, clasp knives and possibly musical instruments such as harmonicas or Jews' harps. If the semi-subterranean buildings were built and used by the local fur traders as storage facilities, then some personal artifacts associated with them may be found in the general area of these buildings. These would be similar to the personal items used by the engages, but probably of higher status or value. If the

engages slept in these buildings, as well, it would be difficult to distinguish personal items used by them and those of the local fur traders. Some personal artifacts associated with the military such as regimental buttons may be found in Area Five. Isolated finds may be considered the result of simple loss and possibly redeposition. However, if these are found in any concentration or clustering in association with features such as semi-subterranean buildings, middens or privies, or concentrations of artifacts from other functional categories, they may be considered to has been deposited as a result of some specific activity. This activity may be determined by examining the function of the other associated artifacts or features.

c) Sustenance: Some activities related to the procurement of sustenance may have taken place in Area Five. Although there were no building lots associated with the semi-subterranean buildings, these are located near the edge of the more fertile area where the garden plots were laid out. If the garden plots became overcrowded, it is possible that the strip along the northeast side of Area Five (adjacent to Area Four) may have been used for gardening. It is unlikely that the growing of crops for animal feed would have been carried out in this area, because of the poor soil and lack of space. However, some of the feed grown in other areas may have been stored in the semi-subterranean buildings in

Area Five if these buildings were used by people who owned domestic animals. Domestic animals may have been either penned up in this area or allowed to forage freely. It is also possible that waste from stables and animal pens in the building lots in Area Two may have been redeposited or disposed of in Area Five if the building lots became too crowded. These kinds of deposits may be recognizable in changes in soil chemistry or vegetation. It is possible that animals belonging to the military may have been quartered somewhere in this area. These could include both animals used to support the military presence such as the horses bought to haul firewood for the fort and animals acquired by individual soldiers to supplement their diet. These animals would be associated with military personnel who were domiciled inside the fort, not with those who rented lodgings in Area Two.

It is unlikely that hunting or fishing would have been carried on in this area, but game or fish caught by site inhabitants may have been processed here. The refuse generated by this processing would include fish scales and bones, unusable body parts such as feet, heads and tails, innards and some bone. The larger pieces of these would likely have been discarded in a midden away from or downwind from people's residences. By-products from fish cleaning, however, would more likely have been deposited near the area of processing because they are small and disappear

relatively quickly into the soil. If any fish or meat was smoked at Fort St. Joseph, Area Five would be one of the more likely areas for the location of this activity. This would involve a fire and some kind of rack made of poles. Dogs would undoubtedly gather around these processing and refuse areas and may have been responsible for altering the condition and location of the bone and other animal by-products in refuse piles or pits. Areas where meat or fish was dried or smoked would have to be guarded from dogs and possibly other thieves.

During the early years of the occupation of Fort St. Joseph, some gathering of wild berries and other plants may have occurred in Area Five. However, as time wore on, the woods around the fort were cut down for firewood and the underbrush would have been cut or trampled down. In the 1804 painting of the post the ground between the civilian buildings and the fort appears to have been cleared of trees and most shrubbery (Vincent 1978a: viii). It is unlikely that by this time there would have been much left to gather in Area Five. There are few sugar maples in the vicinity of the post, so it is unlikely that any processing of maple syrup would have been carried out at the fort.

d) Trades and Light Industry: There is no historical information to indicate whether any tradesmen set up shop in Area Five. The Commanding Officer in 1798 referred to

potential sites for tradesmen to build on in the following manner:

> "Should the Commander in Chief think it proper to direct that lots might be laid out between the present situation of the Traders across the Neck, leaving a broad road leading up to the Blockhouse in the Centre. It might be convenient for Tradesmen and others who would wish to settle at the post to build upon." (PAC, RG8, C Series, Vol. 251, p. 256).

However, there is no evidence to indicate that this was ever done. The kinds of civilian tradesmen that a small community like Fort St. Joseph could have supported would have been a carpenter/joiner during peak periods of building construction, and a blacksmith cum wheelwright/tinker/gunsmith most of the time. In the case of the blacksmith, where there might not always have been enough of these kinds of jobs to fully support him, he may have filled other functions to supplement his income. In fact, it is quite possible that a fur trader or employee of a fur trade company may have acted as a blacksmith whenever these services were required and carried out other fur trade related duties during the remainder of the time. If a fur trader occupying one of the building lots in Area Two also acted as a blacksmith, he could have had his workshop on his building lot or adjacent to his building lot in Area Five. It is unlikely that a blacksmith would set up shop in Area Five unless there were no building lots available or all of the space in his own building lot was taken up. However, if a group of traders

who had a cluster of storage buildings went together to bring in or hire a blacksmith, they may have found it practical to build a blacksmith shop adjacent to their storage buildings. The archaeological remains associated with a blacksmith shop would be the same as those described in Area Two, and should be easily recognizable.

The peak periods of civilian building construction at Fort St. Joseph were from 1797 to about 1804. Most traders probably constructed their buildings during this time. However, some civilian articifers, including carpenters, were hired by the military for fort construction. It is likely that some of these were local men and some were from Michilimackinac. Local carpenters probably had their own building lot with a workshop on it. However, a carpenter brought over from Michilimackinac for a specific project may not have bothered with acquiring his own building lot, but may have erected some kind of makeshift shelter for a workshop in Area Five. Of course it is also possible that an imported carpenter simply made a small workshop on the building lot of the person for whom he was working. The archaeological remains which might be expected from a carpenter's shop have been described in Area Three. A saw pit would have been required for the preparation of lumber for the civilian buildings. This could have involved an actual pit, or a raised trestle arrangement. In either case, this probably would have been separate from the military saw pit

and likely would have been in Area Five, not too far from either row of building lots. Since the logs would likely have been hauled in from along the neck and or from the shore near the canoe docks, one likely spot for a saw pit would be near the intersection of the trail leading north-east from the north bastion and the trail leading between the northeast end of the two rows of building lots. The archaeological remains which might be expected from a saw pit would include a fairly substantial pit with a consider amount of bark, sawdust, wood chips and shavings or possibly the base (consisting of large post molds) of a trestle with the same accumulation of debris.

The canoe factory operated by the North West Company was most likely located on one of their building lots. Since the North West Company probably would not sell canoes to their competitors, the other Fort St. Joseph traders would have had to acquire their canoes from other sources. The local traders would have made relatively short trips in their canoes so they would not have worn canoes out as quickly as the North West Company and would therefore have had less demand for them. It is possible that they bought or traded for the canoes they needed from the local Indians, but the local traders may also have made some of their own canoes on site. The archaeological remains which might be expected from canoe making have been discussed in Area Two.

Another trade which may have been carried out in

Area Five on an ad hoc or as required basis is coopering. In good weather this work can be done out of doors. The main by-products were wood shavings, chips and sawdust. The barrel hoops could have been wooden or metal. If they were metal, they would likely have been made by the blacksmith. This activity could also have been carried out on someone's building lot in Area Two. As discussed in Area Two, there would not have been a great demand for new barrels or casks at Fort St. Joseph, so it is probable that very few if any were made there. In most cases, if the person making the barrels was a site resident he would have done it in the vicinity of his own buildings. If he lived on a building lot he would be unlikely to make barrels in Area Five unless he had storage buildings there.

e) Transportation: It is obvious from the 1800 and 1823 maps that there were at least two sets of trails which criss-crossed Area Five (Fig. 8). The historic painting of the fort shows a third trail leading from the bay on the east side of the neck to the landgate. The location and existence of this trail was confirmed by archaeological testing in 1977 (Lee 1978:6). A fourth trail leading from the gap in the middle of the building lots on the east side of the point to the middle of the southeast curtain wall of the fort was recorded by a surveyor in 1925 as a "road edged with boulders" (Lee 1982b: 141). All site inhabitants and

visitors may have used all four of these roads. Interestingly, three of these roads lead to points on the fort's palisade where there is no indication of a gate. Trails one and two must have been existence by 1800, possibly before the palisade was completed. The use of these trails probably continued even after the palisade was complete, but an extra loop or segment may have been added to the end near the fort in order to provide access to the nearest gate. Trail three would have been established by 1804 and its use probably continued throughout the occupation of the fort. It is difficult to determine when trail four came into existence. It may have been a transportation route from the northeast building lots and canoe docks to the fort during its occupation. It is also possible, however, that this road was not established until after the fort had been burned, and that it simply led from a convenient docking area to the top of the hill for visitors to the site after 1815. However the fact that it turns and runs along the outside of the palisade outline may indicate that it was used while the palisade still stood, in other words, before 1814. The convergence of all of these trails on the fort point to its position as not only the physical but also the economic, cultural, and social centre or focus of the community.

These trails would have carried both vehicular and foot traffic. It is likely that supplies intended for

civilians which arrived at the schooner wharf would have passed through or around the fort and to the respective building lot via these trails. Likewise goods being sent by civilians to other communities by ship would have been routed via these trails and through or around the fort. Goods involved in transactions between military personnel and civilians would have been carried between buyer and seller along these trails. Goods intended for the military or Indian Department which arrived at the canoe docks would have travelled to the fort via these trails. Carts, wagons, and possibly even wheelbarrows would have been used to transport goods, depending on their size, volume and how they were packaged.

Obviously goods well packed or wrapped would have little opportunity of entering the archaeological record along a trail unless the package fell off a vehicle and broke open. Even then, unless the goods were either broken by the fall or were lost because they were small, little would likely have been deposited. The trails themselves were kept clear of clutter and broken items were probably discarded in the ditches or along the sides of the roads. Questions to be asked concerning items found along transportation corridors (in Area Five) concern the use and destination for which the items were likely intended. These considerations may help to determine which group the artifacts may have been associated with. If irreparable

breakage occurred on vehicles along the trails, some broken parts may have been discarded near where the accident occurred. However, these incidents would probably not be frequent enough to have much of an impact on the archaeological record. It is unlikely that many items associated with transportation would be found in Area Five, since it is not bounded anywhere by water.

f) Defense: There were no defensive structures and there are no references to any defensive activities carried out by the military in Area Five. Any features or artifacts found in this area which appear to be associated with the military should probably be attributed to activities other than defense.

g) Administration: Most, if not all administrative activities were carried out in the fort or in the storekeeper's house. It is unlikely that any artifacts associated with this activity would be found in Area Five. It is possible, however, that if some of the buildings in Area Five were used for storage by the fur traders, some artifacts associated with accounting may have been used in this area. Given the small size of the trading enterprises at Fort St. Joseph, it is likely that most of their accounting practices were rather informal, to say the least. In any case, they were more likely to keep their records in their houses on their building lots than in their storage sheds.

h) Commerce: While there are no specific historic references to the presence of fur traders in Area Five, the existence of the clusters of semi-subterranean buildings on either side of road number three would suggest some activities by them in this area. As discussed before in the discussion of commerce in Area Two, the amount of commerce or trade actually carried out at Fort St. Joseph was probably rather limited as most trade likely happened out in the Indian villages or camps. However, some Indians probably brought in furs or provisions in order to obtain needed supplies or tools or to pay off debt to the traders. Some trade probably also occurred between the merchants and the visiting Indians at the time of the gift-giving ceremonies. If the semi-subterranean buildings were used as storage sheds for trade goods, provisions or furs by the traders, then some archaeological evidence of commerce or trade may be found associated with these buildings. The variations of the procedure followed in the trading transactions which took place at Fort St. Joseph are not well known. One possibility is that the Indians approached the trader at his house on his building lot and indicated that they had brought some produce which they wished to trade for some specific trade goods e.g. an axe, kettle, gun, knife, cloth or beads, etc. The trader would have gone himself or sent his servant to the semi-subterranean storage shed in Area

Five to open the packs of trade goods, get the required items and bring them back to his house where the actual transaction would have taken place. In this case, the only point at which any artifacts were likely to have entered the archaeological record in Area Five was when the packs of goods were opened up in the storage area. Once they had been opened, it is quite possible that if they sat open over a period of time with items being frequently removed from them, some small items might have fallen out and become lost, or have broken and been left or discarded. If the storage buildings had well made wooden floors, only very small items would likely have been lost, and broken items would likely have been discarded outside. Given the drainage problems at Fort St. Joseph, it is likely that all commercial storage facilities would have had wooden floors. If these semi-subterranean buildings were used as storage buildings by the fur traders, the evidence of their association with commercial activities would most likely have consisted of a few packing seals, some small lost or broken trade goods or broken shipping and storage containers discarded around the outside of the buildings. Lost or broken trade goods found in this context would likely have been unused and would not show wear. If building hardware was found in association with these buildings, locking hardware may have been included, as storage were likely kept locked. Heating devices would not be expected in storage facilities.

Another possibility might be that the trader would have used a semi-subterranean building in Area Five as his store and brought the Indians there to trade over the counter. This alternative is less likely, as it seems that it was general practice for traders not to allow Indians into their warehouses to see the quantities of goods stored there. This policy stemmed from the differing attitudes of the two cultures towards the concept of ownership of private property and the values placed on generosity towards one's friends and allies in times of plenty.

i) Group Ritual: When large groups of Indians visited Fort St. Joseph in the spring and fall, the location of the gift-giving ceremonies and councils was most likely in area five. The large amounts of russia sheeting referred to in Indian Department inventories were probably used to erect a marquee or large field tent for these official ceremonies. The only archaeological remains from the tents themselves would be post molds from tent poles and pegs. While foot traffic in and around such a tent would break down the vegetation and wear pathways, the short term, infrequent use of such structures would probably not have enough of a long lasting effect to still be visible today. If the tent(s) were set up in a very rocky area, the space from where the rocks would have been cleared away in order to level an area for the tent may still be visible. It is difficult to say

whether the tents would have been set up in the same spot each time the ceremony was held. Artifacts which may have been deposited as a result of these ceremonies may fall into several functional categories. These may include status personal items for military officers, Indian Department personnel and Indians, such as accoutrements and accessories for uniforms (worn by both the military officers and the Indian Department) and chief's coats, as well as medals, wampum, pipes, etc. Sustenance items such as corn and sugar and furs were offered by the Indians. Because of the formal nature of these ceremonies and the value placed on the goods exchanged, it is unlikely that very much material would have had an opportunity to enter the archaeological record at this point. However following these ceremonies, the gifts would have probably been unwrapped and admired, and those intended for adornment would have been worn. In the informal festivities including dancing, smoking and drinking which followed in the area of the Native encampments, some artifacts such as buttons, beads, bottles, pipes, etc., may have been broken and discarded or lost.

CHAPTER V

NON-DEPOSITIONAL SITE FORMATION PROCESSES

Various natural processes and historical events occurred at Fort St. Joseph which acted to distort the configuration of the artifacts, features and their interrelationships created by the occupation of Fort St. Joseph from 1796 until 1829. These are the "A-A" and "A-S" processes discussed by Schiffer which account for the transformation of artifacts from one archaeological context to another and from the archaeological to the systemic context, respectively (Schiffer 1976: 29).

A. Events Affecting the Archaeological Record

Several events occurred during the occupation of Fort St. Joseph which in some way destroyed or removed part of what would have become or was already part of the archaeological record. These include:

1) the burning of the old bakehouse in 1802,

2) the burning of the wooden buildings in the fort and some of the civilian buildings in 1814;

3) the dismantling for parts and removal of unburned civilian buildings to the new post on Drummond Island in 1815;

4) the burning of the interior of the powder magazine and new bakehouse complex when the site was abandoned by the military in 1829.

Further site disturbance by human factors occurred in 1925-26 and in the late 1940s and early 1950s (Figure 9). In the 1920s the military reserve was transferred to the National Parks Branch and the site was plaqued. At this time considerable reconstruction work was done on the remains of the site's three standing masonry structures: the powder magazine, the new bakehouse and a standing chimney. Photographs taken of the reconstruction work in progress appear to indicate that at least in the case of the bakehouse and chimney, the stonework was almost completely dismantled and rebuilt stone by stone. With all three features there was some, if not considerable, disturbance of the ground in the immediate vicinity.

The major disturbance to the site took place during a program of road construction and landscaping carried out during the late 1940s and early 1950s. This involved the construction of an access road to the site, the bulldozing of a circular drive through the ruins and the scraping of several areas of the point with a bulldozer to level the ground surface, remove scattered boulders and facilitate the cutting of grass and the eradication of poison ivy. Examination of an air photo taken during the bulldozing and observation of areas of the site which appear to have been disturbed by scraping of the ground surface indicate that the areas disturbed by this activity may have been fairly extensive.

1. Area One

In the late 1940s, the bulldozer appears to have scraped around the visible features in the fort, e.g. the blockhouse foundation and standing chimney, and skimmed the tops of the foundations of the old bakehouse and the guardhouse. Most of the northeast and southeast walls of the stores building foundation were destroyed. Some of the material gathered up by this scraping was pushed into a pile east of the guardhouse near permanent survey monument number two. In levelling the ground surface inside much of the fort, the surface evidence for such features as the parade ground, the temporary semi-subterranean powder magazine (near the old bakehouse), and the internal pathways was obliterated.

2. Area Two

The construction of the circle drive in the late 1940s removed the upper (western) end of all of the building lots on the east side of the point. This may have obliterated evidence of pathways, fences, animal pens, stables and interconnections between building lots and with other parts of the site. It also appears that in the open area in the middle of this set of building lots, an area may have been scraped level to provide a spot for picnic tables, and the debris from this was pushed into the water. The disturbance of building lots five and six and the area between them may

have been considerable and may have extended to the water's edge. The bulldozing at this point in time does not appear to have affected the building lots on the northwestern side of the point.

3. Area Three

The disturbance by bulldozing of the area between the southwest (front) wall of the fort and the shoreline appears to have been considerable. The airphoto taken during this activity shows that a strip about 150 feet (45.7 meters) to 200 feet (61 meters) wide from the watergate down to the water was scraped. The southeast side of the strip extended almost to the northwest end of the new bakehouse. This disturbance probably obliterated most, if not all surface traces of the military buildings and of the road from the watergate to the wharf. In addition, the construction of the circle drive along the shoreline from the wharf area to the south tip of the point undoubtedly obliterated any features which might have existed between the new bakehouse, semi-subterranean buildings, lime kiln and the shoreline, such as trails and loading platforms.

4. Area Four

Considerable disturbance has occurred in the gardening area, primarily from the late 1940s to the late 1970s as roads and other modern facilities were constructed to serve the site. The road was cut into the site and a small

parking lot was levelled in the late 1940s. An office was constructed, two trailers were brought in and a septic system with a weeping tile bed for these building was installed in the late 1960s and early 1970s. In 1977 a large Visitor Reception Centre was constructed, major changes were made to the configuration of the access roads and parking lot, and a maintenance compound was constructed (Fig. 9). Two clusters of features shown on the 1925 survey map were in the path of these disturbances. The "Chimney with 'Flowers - Sweet William'" on the northwest side of the neck was probably in the location where the septic system now lies, and the access road, parking lots and/or the Visitor Reception Centre probably obliterated the "Remains of building, wharf, garden and picket fence" on the east side of the neck. In addition, most if not all of any evidence of gardening, pasturage of the growing of field crops was also probably wiped out by road, parking lot and compound construction.

5. Area Five

This area appears to have undergone little disturbance from major earthmoving activities except in four areas. On the south tip of the point, the circle has cut a circa 15 foot (4.6 meter) wide strip along the shoreline. The "Flagpole surrounded by stones" shown on the 1925 survey map may have been disturbed or destroyed by road construction. The circle road also cut along trail number four

marked "road edged with boulders" on the 1925 map. The structure of the trail itself has probably been destroyed but it appears that the bulldozed circle road follows the same route as the original road. It is likely, therefore, that most of the material disturbed in this activity would simply have been pushed off to the sides of the present road. While artifacts found along this section of the road may not be in their original location of deposition, they should not be far from it. The third location of disturbance in Area Five is the section of trail number three (which leads to the land gate) where it enters the present treeline. A beach ridge runs perpendicular to the trail and probably originally near the east cluster of semi-subterranean buildings. It appears that a bulldozer was used to push dirt, gravel and boulders along the inside of the beach ridge and extend it across the trail (Lee 1982a: n.p.). Although it is difficult to determine from looking at the ground surface, it is possible that the route the machine took to get to this area from road/trail number four was along the inside of the beach ridge. Trail number three appears to be intact on either side of this circa 30 foot (9 meter) wide disruption. A fourth disturbance in Area Five is the location of modern pit privies about 100 feet southeast of the southeast palisade wall. These were constructed in the late 1960s or early 1970s.

Other general human activities which may have altered the archaeological record include pothunting, surface collecting, picnicing, drinking parties, grass and vegetation cutting, foot traffic, vehicle traffic and site clean-up. As a result of these activities, there are recent, 20th century artifacts found on the surface along with artifacts from the early 19th century. The historic artifacts found on the surface have been picked over by visitors to the site since the 1920s so there is obviously an incomplete representation of the artifacts which should have been on the surface as a result of a combination of depositional activities described in the previous chapter. One could argue as Baker (1978) did, that those artifacts found on the surface are, and have been, highly susceptible to being moved around and are less likely to be anywhere near their location of original deposition than the buried artifacts. However, as Lewarch and O'Brien (1981) argue, the buried artifacts were at one time also lying on the surface and were subject to the same forces and so are also not likely to be in their location of original deposition. While Baker's argument that a greater proportion of larger sized objects should remain on the surface while the smaller objects are more likely to be buried may be true, this is probably counterbalanced by the fact that the larger objects which remain on the surface are more subject to being picked up by pothunters or collectors because of their visibility.

It is obvious from the foregoing discussion that the original deposition patterns of the artifacts at Fort St. Joseph will have been considerably distorted by human activities after the abandonment of the community. It then follows that a knowledge of these activities is very important to the interpretation of the artifact distribution patterns found after these activities have taken place. At the gross level of interpretation, one can say that probably most of the artifacts found on the surface today are not in their precise location of original deposition. One can also say that the artifacts that remain on the surface today will only be a portion of what was there originally and may not necessarily be representative in terms of functional categories, artifact classes or numbers of artifacts.

B. The Effect of Natural Processes on the Archaeological Record of Fort St. Joseph

The soil on Old Fort St. Joe Point is a thin, poorly developed sandy loam grading into gravelly till with frequent cobbles and boulders. In all but a few special cases the stratigraphic sequence consist of the sterile sub-soil (clay or gravelly till) overlain by a thin layer of cultural material mixed with a gravelly sandy loam, which is covered by a thin sod layer.

Of the nine processes of pedoturbation described by Wood and Johnson (1978), graviturbation, floralturbation,

aquaturbation and cryoturbation probably had the greatest impact on the archaeological record at Fort St. Joseph. While there may have been some minor effects from aeroturbation and faunalturbation, these would probably have been so limited as to be relatively insignificant. The effect of other processes of pedoturbation (argilliturbation, crystalturbation and seismiturbation) would have been negligible to non-existent. The effects of these processes of pedoturbation would have been, as Wood and Johnson discuss, in the movement of artifacts horizontally and/or vertically away from their location of original deposition. Floralturbation would have primarily involved the displacement of soil and artifacts as a result of the growth and decay of roots. Aquaturbation would have involved the movement of soil and artifacts as a result of erosion by water, as aeroturbation would have by wind erosion. The freeze-thaw cycle (cryoturbation) acted to move artifacts about as a result of the expansion and contraction of moisture in the soil. The effects of gravity would have been felt in all of these cases, particularly in areas with sloping ground surfaces. Most areas of the site are more or less equally subject to these natural processes, although areas where trees have been allowed to re-establish themselves would obviously have suffered more from floralturbation. Rodent activity (faunalturbation) seems to have been concentrated more in some areas (the semi-subterranean buildings) than in others.

In most cases, the major areas of human activity were separated by enough space that most artifacts are unlikely to have migrated from one activity area to another. Artifacts deposited in the fort are unlikely to have found their way to the civilian building lots in any quantity. Artifacts found associated with the semi-subterranean buildings are not likely to have moved there from inside the fort. However, there may have been a fair amount of movement of artifacts within an activity area. There is some possibility, for example, for movement of artifacts within a building lot or even between building lots in Area Two. Obviously the greatest potential for horizontal movement is within open areas and within areas of heavy traffic or use. Artifacts deposited in areas which are confined or in some way bounded physically by walls are more likely to remain within these confines than artifacts deposited on surfaces with no physical boundaries. The implications of this are that artifacts deposited within a building like the powder magazine which has standing stone walls are more likely to remain physically separated from artifacts deposited outside the walls of the building. However, in the area of a wooden building whose walls have been burned or removed, the artifacts from inside and outside the walls are less likely to remain separated.

Erosional factors will differ according to the contours of particular features. For example, the

depositional patterns of artifacts associated with ordinary above ground buildings situated in a relatively level area will be little affected by erosion in comparison to the depositional patterns of artifacts associated with semi-subterranean buildings which have more variable contours themselves, as well as being located on sloping ground. Thus there will likely be greater vertical movement of artifacts in the semi-subterranean buildings, but less horizontal movement, because of the confined space. However, in the ordinary above ground buildings (without cellar depressions), there will be greater potential for horizontal movement of artifacts, and less for vertical movement.

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In conclusion, it is likely that at Fort St. Joseph, the movement of artifacts by natural sources is likely to be negligible in terms of differing use of areas. However, the movement of artifacts within use areas may be considerable.

CHAPTER VI

THE STATE OF THE ARCHAEOLOGICAL RECORD OF FORT ST. JOSEPH

A. Postulates Developed in the Fort St. Joseph Model

In the process of examining the historical data available concerning the occupation of Fort St. Joseph, a number of postulates have been developed which have been useful in helping to reconstruct the cultural and physical patterns of the community and in predicting the nature of the archaeological record which may have been produced by this community. Postulates have also been developed which concern the changes which may have affected the archaeological record subsequent to its initial creation. Many of these postulates are equivalent to the Schiffer's cultural formation processes which he divides into four types; "S-A processes . . . whereby materials are transformed from systemic context to archaeological context", "A-S processes . . . (which) transform material back from archaeological context to systemic context", "A-A processes (which) transform materials from state to state within archaeological context", and "S-S processes by which materials are transformed through successive system states" (Schiffer 1976: 28-29).

These postulates fall into five major categories depending on their particular range of applicability and focus. The first category consists of a set of particularistic predictions based on specific historical information and pertaining to the space and building requirements and activities of the various groups which inhabited the community. The second set have a more generalized applicability and concern behavior associated with the deposition and patterning of archaeological remains. This set in particular would fall within Schiffer's category of "S-A" and "S-S" formation processes, since they relate to the transformation of objects within the systemic or cultural system and to the transformation of objects from the cultural system to the archaeological record. The third set are predictions concerning the identification of functional areas and buildings through their configuration and the presence and absence of various features. Those in the fourth set deal with the impact upon the archaeological record of recycling and curation of artifacts and materials. These would equate with Schiffer's "A-S" formation processes, or the transformation of objects from the archaeological to the systemic context. The last set examine the impact of post occupational human and non-human factors which have altered the archaeological record, and would be similar to Schiffer's "A-A" processes, which are transformations within the archaeological context.

1. Particularistic Postulates:

a) Space and Building Requirements:

i) The canoe factory was probably on a building lot belonging to the North West Company on the south-east (leeward) side of the point.

ii) The southwest semi-subterranean buildings were built after the new bakehouse was constructed in 1804.

iii) Prior to 1812, the new bakehouse was probably only used for baking bread, since other cooking would have been done in the kitchens.

iv) The temporary buildings shown on the 1800 map were probably military workshops or storage buildings associated with fort construction.

v) The 1823 map is incomplete for civilian buildings and some military buildings but what it does show probably did exist prior to the burning of the area in 1814.

vi) The public canoe dock on the southeast side probably lined up with trail number four.

vii) The Indian Department and fur trade blacksmith's shops were probably located on the building lots where the respective blacksmiths lived.

viii) The southwest boundary of the gardening area was probably a line between the northeast ends of the rows of building lots, near the trail which runs northwest-southeast in this area.

ix) Refuse disposal by the military would have produced middens both inside and outside the fort.

x) There should have been military privies located inside the fort.

xi) Any military refuse middens outside the fort would likely have been in areas three or five.

xii) Garden patches were probably fenced to keep animals out.

xiii) Of the building lot residents, the local traders would have had the greatest requirement for their own private canoe docks.

xiv) If public canoe docks existed for the two rows of building lots, they would have been at the gap between lots five and six on the southeast side and lots four and five on the northwest side.

xv) Barns or stables would have been required to house animals over winter.

xvi) Tools used in animal care would probably have been stored in the barn or stable.

xxiv) Civilian articifers (hired to work at the site by the military) were probably accommodated in the civilian community on the building lots.

b. Activities:

i) After 1806, the Indian Department blacksmith probably also did work for the military.

ii) The local traders most likely had Native or mixed blood wives from the nearby area.

iii) Residents with a longer tenure would have kept a greater variety of animals and would have kept breeding stock.

iv) Residents with a shorter tenure would have mainly brought in individual animals to slaughter for meat and would not likely have kept breeding stock.

v) People who had garden patches associated with their houses and in Area Four as well, probably grew more ornamental crops in their kitchen gardens and more utilitarian crops in their plot or allotment in Area Four.

vi) Most of the trade between local traders and Indians took place in the Indian villages, rather than at the site.

vii) When traders went out to the Indian camps to trade in the winter, their business associates, clerks or families stayed to maintain their households.

viii) The inhabitants most likely to have participated in gathering were the Native and mixed blood wives of the local traders.

ix) While at the fort, the Indians were supplied with salt pork and corn by the Indian Department.

x) While at the fort, the engages were probably fed corn, salt pork or peas by their employers.

xi) The military were the only group likely to have brought stoves to the site.

xii) Food purchased from either local or visiting Indians had probably already been processed before arriving on site.

xiii) Food produced locally (garden produce, domestic animals, fish) would have been processed on site.

xiv) Higher status and wealth meant greater access to imported food and goods.

xv) Lower status and wealth meant greater use of local resources.

2. Postulates concerning depositional behaviors and use of space:

i) Some refuse from the new bakehouse may have been thrown into the water.

ii) Ashes from heating and cooking fires would have been dumped on pathways and roads.

iii) The disposal location of household waste was determined by how much the waste interfered with the comfort, health and regular activities of the residents of the area.

iv) More defacto refuse is likely to be found in a workshop than in a residence because people did not live in workshops.

v) Some domestic refuse associated with food consumption may be found in workshops as a result of the tradesmen eating their noon meals at work.

vi) The inside of a house with a wooden floor would have been kept fairly uncluttered and clear of garbage during its occupation.

vii) Barns, sheds and animal pens are less likely to be kept clear of refuse than household structures so in these areas, artifacts are more likely to be found near their use or discard location.

viii) Artifacts found in areas of heavy use or traffic are more likely to have been deposited there (in that location) after the heavy use of the area stopped (during or after abandonment), as a result of some other activity. In other words, if a substantial quantity of artifacts are found on a road or path surface, they would likely have been deposited there after the road was no longer in use.

ix) Large pieces of broken glass and ceramic objects would have been discarded in a midden to prevent accidents.

x) If objects were broken on a wooden floor, the smaller pieces would be swept up and discarded either outside the door or in a midden with the larger pieces.

xi) If objects were broken or dropped on a dirt floor or outside on the ground, the smaller pieces would likely remain near where they fell.

xii) In a domestic area, disposal patterns of personal artifacts should be more or less similar to those of domestic artifacts, that is, the disposal location is determined by the material and size of the object.

xiii) In non-domestic areas, the find location of clusters of indulgence (personal) artifacts may be very close to the use location.

ixx) Non-organic refuse consisting or small, unobtrusive items would most likely be discarded in non-traffic areas along the sides and backs of buildings.

xx) The disposal of garbage, particularly organic garbage would have been carried out differently in winter than in summer.

xxi) Tools used for butchering probably also had other domestic uses and, unless they broke during use, are unlikely to have been deposited near the butchering area.

xxii) Most of the by-products from the slaughtering of animals would have been discarded in a refuse midden well away from the residence of the owner/consumer.

xxiii) Dogs were present on site and were undoubtedly responsible for scattering faunal remains away from the area of their original deposition.

xxiv) After the fort had been burned in 1814, the deposition patterns of the military occupation (in 1815 and from 1815 to 1829) would not have been structured by the physical outline of the fort. In other words, they would not have had the same concern with keeping the area inside the palisade walls clear of litter because the walls had been burned. Therefore refuse found inside the fort may be associated with the post-1814 period occupation.

xxv) Artifacts associated with transportation are not likely to be found on transportation routes unless they were deposited there after 1812. They may, however, have been deposited alongside trails or pathways during the main occupation.

xxvi) Packing or shipping seals were most likely to be discarded when the packs were broken open.

3. Postulates concerning the identification of functional areas and buildings:

i) Buildings not situated on building lots, without associated fences (or bounded space) and without fireplaces are most likely to be temporary shelters or storage sheds.

ii) Most workshops had dirt floors.

iii) Visiting and local Indians would have preferred to set up camp in relatively level areas.

iv) The washing of household laundry would have required a clothesline for drying clothes.

v) If buildings not situated on building lots had specific outdoor activities associated with their use, these areas may have been fenced, depending on the activity.

vi) Residences not situated on building lots may have had fenced yards associated with them.

vii) The canoe factory was likely a large, open building with a high roof, a dirt floor, large window openings and no structured fireplace. There would have been a hearth or fire pit on the ground for heating pitch and a frame for assembling the canoes. These features may have been inside or outside the structure. The building lot on which the canoe factory was located would have had its own canoe dock.

viii) Fenced enclosures associated with barns were likely animal pens.

ix) Barns and stables would have had dirt floors.

x) Evidence of burning may indicate the building was associated with the military, the Indian Department, or independent or North West Company fur traders.

xi) Lack of evidence of burning may indicate that the building was associated with the South West Fur Company.

xii) Buildings with wooden floors would have been used for dwellings or storage.

xiii) Buildings with dirt floors would have been used for workshops or animal shelters.

ixv) A building outline with a fireplace was likely a residence.

xv) A building without a fireplace was likely a storage building, workshop or animal shelter.

xvi) A building without a fireplace may have been used as a temporary shelter by fur trade engages.

xvii) Only buildings used by the military were likely to have had stoves in them.

xviii) Those households with children should produce personal artifacts associated with children's clothing, footwear, pastimes and recreation.

xix) Those households with women present should produce more personal refuse associated with female clothing, footwear, adornment and body ritual and grooming.

xx) A household with a Native woman present would have a somewhat different domestic material culture than one with a mixed blood or Euro-Canadian women.

xxi) The presence of women or servants in a household would result in a greater abundance of objects used for household cleaning and maintenance.

xxii) Buildings built as storage facilities would have been unheated, well drained and secure.

xxiii) Areas adjacent to barns or animal pens where manure was piled should have lush vegetation.

xxiv) The vegetation and soil inside animal pens and barns would have been consumed or worn away.

xxv) Relict or non-native garden plants may indicate the historic location of gardens. This, of course, depends on the nature of regeneration of the plant in question.

xxvi) Absence of building hardware in association with a building outline probably means all or parts of the building were reused on site or removed and taken to the post on Drummond Island between 1815 and 1829.

xxvii) Presence of building hardware and evidence of burning may mean the building had already fallen out of use and collapsed by 1815 and was not considered worth salvaging.

xxviii) The domestic midden of the Indian Department storekeeper should also contain refuse associated with his official duties such as administration.

xxix) Most households probably bought local produce such as wild berries from local Indians, and the archaeological remnants of the consumption of

this produce would not be recognizably different from households where the produce was gathered by inhabitants - the same produce and containers were probably used.

xxx) Since the whole site was occupied year-round, it will be difficult to determine if one specific area of the site was used by seasonal occupants, since year round residents may have easily used the area when the seasonal occupants were absent.

xxxi) Short term seasonal visitors present on site in large numbers in temporary accommodation would be more likely to discard refuse in the location of consumption or use.

xxxii) In general, it is more likely for a discard area to be associated with an activity area in seasonally occupied sectors than in year-round occupied sectors.

xxxiii) Because a blacksmith did work for other people, a fair amount of social activity probably occurred at his shop. This should have resulted in the deposit of artifacts associated with indulgence, such as clay pipes.

xxxiv) If the skeleton of an animal is found more or less complete in one location, it is probable that it died of natural causes and was not slaughtered for food.

xxxv) The wharf and canoe docks would have been subject to damage every spring by the spring ice break-up.

4. Postulates concerning the impact on the archaeological record of curation or re-use of artifacts by the site's inhabitants:

i) Burned buildings would have been subjected to less disturbance than non-burned buildings during the period immediately following the occupation of the site.

ii) Given the relative isolation of Fort St. Joseph, the incidence of curation and re-use of lost, abandoned and broken artifacts would have been high.

iii) Most usable tools and other material goods would have been removed from the site by their owners or later scavenged when the site was abandoned.

iv) Locally made tools may not have been as highly prized as imported tools, so may have been more readily discarded or abandoned. They may thus form a higher proportion of the artifact assemblage than they actually formed of the tool population.

v) Vehicles abandoned on site after 1815 may have been reused or cannibalized by the corporal's guard.

vi) Imported barrels may have been cleaned out and reused for local produce such as fish.

vii) Broken metal objects may have been taken to the blacksmith if they were repairable.

viii) Organic kitchen waste would have been fed to pigs or composted into gardens.

ix) Lead seals may have been melted down to make musket balls or fish net weights.

x) If lead seals were in relatively good condition after having been removed from a pack, they may have been reused as ornaments by Native people.

xi) Military discipline during the occupation of the fort would probably ensure that the grounds within the fort's walls would have been kept clean and uncluttered. Thus, unless too small to be noticeable, artifacts deposited in these areas would have been picked up and redeposited in a midden.

xii) During the temporary military occupation of the fort between 1812 and 1814 and for a short time in 1815, military discipline concerning keeping the grounds clean would probably not have been maintained, so artifacts deposited at that time may have been left in situ.

xiii) Refuse left in open areas by short term occupants may have been cleaned up by long term residents.

B. Postulates Extracted From the Literature

The foregoing postulates have been generated as a result of the construction of a model of a particular site. Those postulates relating to site formation processes which were extracted from Murray (1980: 479), Fehon and Schultz (1978: 273), Smith (1978: 162) and Binford (1978: 350-356) will now be examined in light of the Fort St. Joseph example:

1. Murray's Postulates:

a. "Use location will not equal discard location for elements used in activities within family living spaces that are (a) enclosed and either permanently or occupied for at least one season or (b) enclosed and occupied for less than one season" (Murray 1980: 479). This is partially applicable to the Fort St. Joseph situation, with some qualification. Use location will not equal discard location within living areas during their occupation. In other words, people are unlikely to discard refuse in the middle of their living areas. However, during a short term occupation or during abandonment, material may be discarded in living areas and not cleaned up. For example, fur trade engages who camped in an open area of the site for a short period of time may not have bothered to clean up after themselves.

b. "Use location will equal discard location for elements used in activities within family living spaces that are (a)

not enclosed and (b) occupied for less than one season" Murray 1980: 1980). This is applicable for some kinds of artifacts. There are several factors which influence the discard location of artifacts, including size, smell, danger to other activities, convenience, proximity to dumping areas and other potential uses of the artifacts. For example, such objects as clay pipe stem fragments may have been discarded within temporary, unenclosed living spaces and not cleaned up. Being small, blunt, and relatively odorless, these objects would blend into the ground surface and be inobtrusive to passers-by.

2. Fehon and Scholtz's Postulate:

a. If the probability of loss of artifacts is constant, then their occurrence in the archaeological record reflects variation in the environment, and b) if the environment is constant, then the occurrence of the artifacts in the archaeological record reflects the variation in the occurrence of the objects in the original systemic context (Fehon and Scholtz 1978: 273). While it is possible to examine the probability of loss of artifacts and the probability of recovery of artifacts from a particular environment in general terms, it is difficult to be categorical. This is because the human factor involved in the loss of and search for lost artifacts is impossible to hold constant. For example, a person with poor eyesight or a lower standard of tidiness is

not likely to recover as many lost buttons from his floor as a person with good vision, even if the same number of buttons were lost originally. Also, in using these transforms, it is important to be very careful in interpreting exactly what it means to say that the occurrence of artifacts in similar environments reflects the variation in the occurrence of the artifacts in the original systemic context. For one thing, how do we know that the objects were lost, and not discarded or abandoned? What does it mean to say that the environments are similar or are held constant? For example, is it enough for two rooms to both have wooden floors to make them similar environments? There are several possible explanations for variations in artifacts or assemblages found in similar environments, including length of occupation, size of occupying group, nature of occupation (sporadic or continuous). As Fehon and Scholtz have indicated, the context of the artifact assemblage is a very important factor in its interpretation. Objects found in refuse middens should be interpreted quite differently than similar objects found in living or working areas.

3. Smith's Postulate:

a. "The cause and effect relationship between many human activities that are termed technological and the cultural debris is so obvious and so universal that archaeologists

need not provide detailed accounts of why they think certain patterns of cultural debris resulted from a certain activity" (Smith 1978: 162). This may be true in some cases where certain by-products are known to result from specific activities - such as the by-products of stone tool manufacture. However, as can be seen in the discussion of technological activities carried out at Fort St. Joseph only some of the by-products associated with an activity are deposited where the activity occurred. Much of the cultural debris resulting from these activities was probably subjected to secondary and possibly tertiary deposition, recycling or use or consumption in other activities. In addition, many particular by-products may be produced by several different activities. For example, bark, wood shavings or chips may have been produced as a result of canoe building, coopering, building construction, furniture making, wagon repair, etc. Thus the identification of the by-products alone will not necessarily indicate the particular activity involved. Location, configuration, proximity to other features, association with other artifacts, etc. must be taken into consideration in determining the sequence of events which led to the deposition of the by-product in question in a particular area.

4. Binford's Postulates

a) "There are different areas associated with the performance of different activities" (Binford 1978: 350). This was certainly the case at Fort St. Joseph. There are many factors which affected the choice of a location for a specific activity. The location of an activity was determined in part by its requirements for shelter and space, its association with a residence of group of people, the availability of resources, raw materials, and an energy supply, its association with other activities, the need for transportation, the aesthetic implications of the activity, the status of the performers, and various environmental factors including the availability of space.

b. "At any one time on the site the different activities conducted simultaneously are independently organized in space" (Binford 1978: 352). This is true within the limited situation that Binford discribes at the Mask site, but its general applicability to Fort St. Joseph is limited. Although there may be not direct association between different activities, if they are occurring simultaneously and within the confines of the same archaeological site, they are not entirely independent. While each activity may be organized internally according to its own requirements, its location is affected by or in some way affects the location of other activities through the factors discussed in a. above.

c. "Over time, there is a statistical tendency for given activities to be repeatedly localized in the same places, although these loci would not be reserved exclusively for a single activity" (Binford 1978: 352). This is true because, as stated in a. above, there are basic functional reasons for the location of an activity. Different activities may occur in the same loci if some of their functional requirements are similar and if they occur intermittently and do not alter the loci beyond a state usuable by the other activity(s). For example, coopering and canoe building may be done in the same area because their requirements for space and raw materials are similar.

d. "The intensity of use was not evenly distributed among the recognized use areas (Binford 1978: 353). If by this Binford means that some areas are used more intensively than others, then, yes, this is obviously true. As would be obvious from examining the factors mentioned in Chapter IV, the characteristics of some areas would make them more desirable use areas than others. In addition, the intensity of use of an area would also depend on who the users were. To take the example of building lots in Area Two at Fort St. Joseph, the intensity of use of a building lot would depend on the activities of its occupants, their seasonality and their work habits. For example, a long term resident such as the Indian Department storekeeper would use his

building lot much more intensively than a military officer renting a house for a year.

e. "The various activities were not evenly distributed among the several areas" (Binford 1978: 353). As is described in a. above, the environmental factors which determine the location of an activity would indicate that some areas would be preferred over others as activity locations. These factors would include proximity to water, fuel supply and raw materials, ease of transportation, protection from the elements or insects, exposure, degree of rockiness and drainage.

f. "The degree that activities will be spatially separated at any one time can be expected to vary with the number of different activities simultaneously performed by different persons (Binford 1978: 354). This is true, with some reservations. On a site with limited space, if more people are participating in more activities, then there will be less space between individuals and activities. However, if certain specific activities always occur at the same location, the presence of other intermediate activities will not change the space between these more rigidly localized activities.

g. "Disposal patterns result in a distribution that is essentially inversely related to the patterns of use

intensity (Binford 1978: 356). This is because areas of heavy use are usually kept clear so that refuse does not interfere with the conducting of the activity. This is particularly true in living areas and in work areas during their occupation. However, after an area is no longer being used as a living or work area, material may be deposited there which is not representative of its earlier use.

As is obvious from the foregoing discussion, the human behavior which produces and shapes archaeological remains is very complex and is related to many diverse factors. These include such factors as how individuals and groups of people consciously and unconsciously use space and structure their activities, the value that people place on objects and materials, practical considerations relating to comfort and efficiency, status, cultural traditions, business connections, demographic characteristics, relationships between groups, lifestyles, level of individual control over personal circumstances, institutionalized standards of construction, access to materials and goods, and cleanliness. The landscape on which a community is located provides a certain physical structure within which the people of the community organize their lives.

The location and association of an artifact with features, stratigraphy and other artifacts is often the result of several events and factors, some of which may be totally unrelated to the original use or intended function

of the artifact. Once an artifact becomes refuse, its treatment relates more to its material and physical characteristics than to its original use or cultural association.

It is also important to note that usually the impression left on a landscape by a human occupation is at least partially a negative image. In other words, heavily used areas may yield few artifacts and areas unused for activities may contain many artifacts.

The basic model for the Fort St. Joseph cultural system was derived from one used for prehistoric site interpretation (Smith 1978: 145). However, historical documentation was used extensively to construct the model. Postulates relating to site formation processes which had been derived from prehistoric, historic and ethnographic studies were examined in light of this particular historic example and were found to be useful, with some limitations. One of the major lessons to be learned from this study is that it is important to approach the interpretation of archaeological remains with both caution and flexibility. This is always the case when trying to merge theoretical ideas with practical reality.

CHAPTER VII

CONCLUSIONS

The objective of this thesis was to develop a model for Fort St. Joseph which would provide the linkages between historical and cultural data and archaeological remains. In eliciting the site formation processes which operated to make Fort St. Joseph the archaeological site it is today, these six steps were followed:

1. the site inhabitants were divided into four major groups (military personnel, Indian Department personnel, fur traders, and Indians);

2. these groups were examined in terms of a consistent set of socio-cultural characteristics (demographic characteristics, activities and space and building requirements), in order to construct a model of the cultural system;

3. units of observation were established. These were essentially functional categories of activities, artifacts, features and structures which could be associated with the groups of people as a result of their characteristics;

4. the site was divided horizontally into five meaningful spatial units or sectors;

5. the site was discussed sector by sector and predictions were made concerning how the four groups of people are likely to be represented in each sector in terms of the functional groups of activities, artifacts, features and structures; and

6. both cultural and non-cultural factors which may have in some way altered the deposition or configuration of the archaeological record were discussed.

The arguments and predictions presented in steps 5 and 6 above illustrate clearly that there are many more characteristics of artifacts than function which may be important in explaining how the artifacts came to be in the locations in which they were found. These include size, smell, obtrusiveness, material, reusability, condition, seasonality, portability, group association and potential health hazard. To elaborate on this further, I would suggest that in examining an assemblage of artifacts from a particular context, the following factors should be taken into consideration.

1. The size of the objects.
2. The obtrusiveness of the objects.
3. The material type of the objects.
4. The potential usefulness of the objects to the site's inhabitants.
5. The condition of the objects at the time of deposition.
6. The homogeneity and heterogeneity of the deposit or assemblage.
7. The original function of the object and the range of activities with which it would most likely be associated.
8. The local or non-local nature of the object.
9. The nature of the area in which the assemblage was found. This relates to the use of space by the site's inhabitants.
10. The matrix or layer in which the objects were found.
11. The potential for interpreting seasonality of use or procurement of the objects.

12. The portability of the objects.

13. The social group with which the objects would likely be associated (ie. age, sex, status, ethnicity, etc.).

14. The relationship of the deposit to structures, features, stratigraphy and other deposits.

15. What factor the objects in the deposit all have in common which has caused them to be deposited together.

16. Post-depositional disturbance.

This will allow the researcher to interpret how the artifacts were deposited, what kinds of activities they represented and what role they played in the material culture and social history of the site's inhabitants.

This study represents an important contribution to our knowledge of the history of Fort St. Joseph, to our knowledge of the social history of frontier fur trade and military sites in early nineteenth century Canada, and to the study of historical archaeological, particularly in the area of method and theory. In the construction of the model of the community of Fort St. Joseph, the available documentary information is carefully examined and interpreted, and details concerning the demographic characteristics, activities and space and building requirements of the site's inhabitants are presented. Many of these details were not immediately obvious in the records, but were generated as a result of building the model and asking the right questions.

These details are contained in the particularistic postulates and were generated in part in the search for information relevant to archaeological site formation processes.

The contribution to historical archaeology is in the establishment of links between behavior and the creation of the archaeological record. This is done by framing research problems "within the systemic context of information, which includes specific behavioral and cultural variables of the past that are objects of archaeological descriptions and explanations" (Schiffer 1976: 55). The systemic context of information is the cultural system of the Fort St. Joseph community which is examined in Chapter IV and the specific behavioral and cultural variables are seasonality, size and composition of group, duration of occupation, activities and space and building requirements. "These variables, not directly observable in the archaeological record, are related through systemic transformations to specific units of analysis . . . (Schiffer 1976: 55). These units of analysis are the functional categories: domestic, personal, sustenance, trades and light industry, defense, transportation, commerce, administration and group ritual. These "in turn, are operationalized to units of observation in the archaeological context by identification transformations" (Schiffer 1976: 55). These units of observation are the subcategories listed in Chapter V, section B and are "the units

of space and material remains recognizable in the archaeological record from their formal, spatial, quantitative and relational attributes" (Schiffer 1976: 56). The postulates which are developed in Chapters V and VI and listed in Chapter VII are the systemic transformations and indentification transformations which respectively relate systemic context information to units of analysis and units of analysis to units of observation.

The contribution to anthropology is in the discussion of the intra- and inter- relationships of the different groups and status levels of people who lived at and visited Fort St. Joseph, and how these relationships affected their use of space and the physical environment. The interdependency of these people is obvious both at the formal and informal level and is very important to the understanding of the archaeological record they left.

The primary objectives of this thesis were accomplished. These were to provide a model of the cultural system of the Fort St. Joseph community which not only generates alternative explanations of archaeological remains but also provides a framework within which to evaluate these alternatives, and to provide the linkages between historical and cultural data and archaeological remains.

In addition to meeting the specific objectives set out at the beginning of this thesis, this work has also made the following contributions:

1. It provides a framework for further archaeological research, interpretation and analysis of the Fort St. Joseph community.

2. It provides details and predictions concerning life on an early nineteenth century frontier post which may be applicable to other sites and to the social history of the upper Great Lakes area in general.

3. It provides information concerning the conduct of the fur trade on the upper Great Lakes during the period of 1796 to 1812.

4. It examines the relationships between Natives and the three different groups of Euro-Canadians on the site.

5. It provides several general predictions concerning the nature of the deposition of the archaeological record which should have wider applicability.

6. It evaluates some of the literature and methods of looking at site formation process.

7. It examines in some detail the processes and factors involved in curation on a particular site.

8. It examines the factors involved in the use of space on a complex site, such as environmental factors, status levels, economic considerations, political events and so on.

9. It provides links between socio-cultural and demographic characteristics, activities and units of material culture.

APPENDIX A

Documentation Relating to Space and Building Requirements of Indian Department Personnel at Fort St. Joseph.

It appears that Duggan, LaMothe and Langlade had all built houses at the fort by late 1797 (Vincent 1978a: 93). LaMothe died in 1799 (Vincent 1978a: 154) but he apparently had a wife and two young children (Michigan Pioneer and Historical Collections, Vol. 21; 592), so his house would not have been left empty. Langlade had a family, an Ottawa wife and two sons (Wallace 1963: 387), who most likely lived with him in his house at Fort St. Joseph. On October 1801, Duggan says he allowed Langlade to live in his house rent free, and then Martin (Michigan Pioneer and Historical Collections, Vol. 21: 7). He died in December of 1803 almost two years after he was suspended from his duties as storekeeper and clerk (PAC, RG8, C Series, Vol. 254, p. 9-10, 10 February 1802) and it seems that his effects were left in his house for at least five months after his death before being sorted out (PAC, RG8, C Series, Vol. 254, p. 168, 28 May 1804). Chaboillez had turned down a request to act as interpreter after LaMothe's death in 1800 (Vincent 1978a: 106) and was present at Duggan's suspension hearing in January of 1802 (PAC, RG8, C Series, Vol. 254, p. 7,

25 January 1802) so it is likely that he was already living at the post prior to being asked to take over as storekeeper/clerk in May of 1802. In the meantime, Martin was appointed interpreter to replace LaMothe in 1801 and was present also at Duggan's hearing prior to replacing Duggan as storekeeper/clerk from January to May of 1802. It is likely, therefore, that he was also living at Fort St. Joseph very early. Louis DuFresne moved from Michilimackinac to Fort St. Joseph to become the Indian Department blacksmith sometime between 1797 and 1799 (PAC, RG8, C Series, Vol. 254, p. 217, 18 August 1804; Vincent 1978a: 105).

LaMothe, Langlade, Duggan, Chaboillez, Martin and Dufresne were all at the site early enough that they probably had to build houses for themselves. Three of these men, LaMothe, Duggan, and Dufresne, travelled to Fort St. Joseph in order to work for the Indian Department. All three died at Fort St. Joseph, LaMothe and Dufresne in service and Duggan almost two years after being suspended from his duties (PAC, RG8, C Series, Vol. 254, p. 3, 168, 10 February 1802, 28 May 1804). The other three men, Langlade, Chaboillez and Martin, were at the post prior to their involvement with the Indian Department and were in some cases listed as merchants.

The other four Indian Department employees at the fort were John Askin, Joseph Chiniquy, Jean Baptiste Cadotte

and John Johnson. Of these, Chiniquy and Cadotte had very short term appointments, and Chiniquy does not appear to have been at the site very long (Askin 1931: 607). Cadotte was sent to Fort St. Joseph in 1808 but does not appear on the pay lists until 1809; in 1810 he was appointed to take over Askin's position when Askin was suspended, but this appointment lasted less than a month. Apparently Cadotte was transferred to Fort George in 1810 (Vincent 1978a: 108). As both of these men arrived on site fairly late in the occupation of Fort St. Joseph and stayed for less than two years, it is highly unlikely that either of them would have brought their families or built their own houses.

John Askin was known to have lived in two different houses at Fort St. Joseph:

> "Messrs McGillvery and Thain passed here a few days ago for Montreal via York. They spent the evening with me and took an early breakfast. The former was exceeding friendly in offering the North West Co dwelling house which is occupied by the Commandant at present and that I should make my own Terms for it. When Captn Derenzy is relieved I then will move into it as the House I now occupy is to[o] small for my family exclusive of my being deprived of shewing many worthy persons that Hospatilaty due to strangers. (5 August 1809) ... Mr. Peltier situation is distressing and [I'm] truely sorry to say thta from my Having made a purchase of a House at this place, a cow Bed Sted, pigs and potatoe fields has left me so bare that I cannot afford him any assistance at present." (24 August 1809)(Askin 1931: 629, 636).

Askin made no mention of building a house when he arrived on site in June of 1807 (Askin 1931: 550, 551, 553-555). It is

quite likely that he rented or bought a house which was already standing, since by that time there should have been a fair number of houses on site, some of which may have been empty. (It is obvious in this case that many of the civilian houses at Fort St. Joseph would have had more than one occupant, sometimes three or four.) It is possible that Askin moved into the house that Chaboillez had lived in, since Chaboillez left the site shortly after Askin's arrival: "Old Chaboiller Seems to be very happy of my relieving him. he says that he will go to lower Canada in One Month" (Askin 1931: 553). However, there were undoubtedly other houses available as well.

There is little information available concerning the living arrangements of John Johnson, the Indian Department blacksmith at the fort from December 1806 until 1812. It is likely that he, like John Askin, rented or bought a house when he arrived on site. It is unclear whether he would have already been living on site prior to his appointment, as either a merchant or a blacksmith working for one of the merchants, or whether he was brought in from outside.

APPENDIX B

Documentation referring to the presence of fur traders at Fort St. Joseph.

Eleven different traders or companies are mentioned as building at Fort St. Joseph between 1797 and 1799. Langlade and Culbertson had built on the island by the fall of 1797, and a year later Chaboillez was building and the North West Company, Mr. Ogilvie, Mr. Gillespie, Mr. Mitchell and Mr. Pothier were preparing to build. In the summer of 1799 Mr. Blakeley (Bleakley), Mr. McKenzie and Mr. Ademar proposed to build (Vincent 1978a: 93-95). On May 28, 1800, Daniel Harmon wrote in passing, "As it is not long since a settlement was made here, they have only four dwelling houses and two stores, on other parts of the peninsula . . . The North West Company have a house and store here. In the latter they construct canoes . . ." (Harmon 1903:11).

As discussed earlier, Charles Langlade Jr. came to the island as a trader in 1797. On 6 August 1798 he acted as a civilian witness on a Board of Survey of the Indian Stores at St. Joseph and was listed as a merchant (PAC, RG8, C Series, Vol. 251, p. 170). He acted as the interim Indian Department interpreter from Lamothe's death in 1799 until John Martin was appointed in June 1801 (Vincent 1978a: 106).

There seems to be little indication of his whereabouts or his activities for the next few years. However, on 30 December 1809, he was present to witness a complaint against John Askin Jr. by another fur trader at Fort St. Joseph (PAC, RG8, C Series, Vol. 256, p. 84 Complaint of Charles Spinard against Mr. Askin 30th December 1809). Given the difficulty of travelling in this part of the country in the winter, it would be unusual for Langlade to be at Fort St. Joseph at this time unless he were living there. Given the custom of the fur traders to spend the winter among or near the Indians with whom they were trading, Langlade's presence would tend to indicate that he was probably trading with the Indians in the immediate vicinity of the fort. In July 1812, Langlade was listed as aiding in the capture of Michilimackinac by the British (Tasse 1878: Vol. 1, p. 149). He apparently moved to Green Bay after the War of 1812, while one of his sons (also Charles) went with the British army to Drummond Island in 1815 (Osborne 1901: 148, 149).

I have not been able to find any other reference to a Culbertson at Fort St. Joseph other than in 1797 (Vincent 1978a: 93), so it is difficult to determine whether he worked on his own and how long he lived there.

As mentioned earlier, Charles Chaboillez came to the island as a trader in 1798, worked for the Indian Department

in various capacities from 1801 until 1806 (Vincent 1978a: 106, 107), left the site during the summer of 1807 (Askin 1931: 553) and died in Montreal in 1808 (Wallace 1934: 432). He seems to have been an independent trader and is not to be confused with his son Charles who was a partner in the North West Company from 1799 to 1809 and who traded in the Red River, Assiniboine and Pic River districts between 1793 and 1809 and then retired to Quebec (Wallace 1934: 432).

John Ogilvie, 1769-1819, (Wallace 1934:490) was a partner in the Montreal firm of Parker, Gerrard and Ogilvie, a competitor of the North West Company. At that early date this company was also in competition with the "New " North West Company which was composed of Forsyth, Richardson and Co., Leith, Jameson and Co. of Montreal and six wintering partners (Lamb 1970: 488, 489). In 1800, Ogilvie joined the New North West Company to form the XY Company (Wallace 1934: 17). Whether he lived at Fort St. Joseph for any length of time is doubtful. Other than building at Fort St. Joseph in 1798, the only other references to him in that area are made by Alexander Mackenzie in the summer of 1799: "... It was past one before I got to St. Joseph's . . . Ogilvy had past late the evening before." (2 June 1799); "Ogilvy sends of two small canoes tomorrow to the Portage with Flour and Corn" (from Michilimackinac, 3 June 1799); "Mr. Ogelvy is likewise on his way with 4 Canoes heavy loaded" (from Grand

Portage, 16 June 1799) (Lamb 1970: 481, 482, 489). Ogilvy was one of the signing partners in the 1804 merger of the XY Companies (Wallace 1934: 490) and in the creation of the Michilimackinac Company in 1806 (Bryce 1904: 152, 153).

George Gillespie (1772-1842) was described by Wallace as being in charge of the North West Company house at St. Joseph's in 1798 (Wallace 1934: 447). He does not, however, reveal the source of this information and there is some doubt as to the association of Gillespie with the North West Company at this early date. His name does not appear in the North West Company agreements of 1787, 1788, 1790, 1799 or 1802 (Wallace 1934: 77-89, 94-103, 108-125). Apparently the trading house of Ogilvie, Gillespie and Company was in operation in Green Bay from 1794 until 1797 (Wisconsin Historical Collections, Vol. III, p. 252). His name appears in the 24 October 1803 agreement of the XY Company. In this agreement (Wallace 1934: 125-134), he is named as the partner who is to carry on the company's business at Michilimackinac and oblique mention is made of the fact that he has been carrying on trade there "for some time past". Curiously, his name does not appear in the 1804 agreement which documents the merger of the XY and North West Companies (Wallace 1934: 143-157). He does, however, seem to have been one of the partners of the Michilimackinac Company formed in 1806 (Tohill 1927: 25) (probably a wintering partner, as he is not listed as one of the

Montreal partners (Stevens 1918: 287, 288)). In December of 1807, however, an embargo was placed on the importation of British goods into the United States, and the Michilimackinac Company began building a post on the point of land immediately to the east of Fort St. Joseph (Askin 1931: 590, 604). In the spring of 1808 Gillespie was sent to Washington on behalf of the Michilimackinac Company to plead with the American government to lift the embargo. He was successful in this endeavor and as a result the company ceased construction activities on St. Joseph's (Vincent 1978a: 129, Askin 1931: 604). It is likely that they reverted to using Michilimackinac as an entrepot at this time, as it was the preferred location. Gillespie's name reappears in June of 1810 when he is sent as a representative of the Montreal partners to buy out the wintering partners of the Michilimackinac Company (Wisconsin Historical Collections Vol. XIX: 337). The company formed as a result of this move, the Montreal Michilimackinac Company, carried on the trade for another year, then merged with John Jacob Astor's American Fur Company to form the South West Fur Company in January 1811 (Vincent 1978a: 132). On the second of March, 1811, the American government enacted the Non-Importation Act (Wisconsin Historical Society Vol. XIX: 339). A letter from John Askin Jr. at Fort St. Joseph on 25 August 1811 illustrates the effect of this act on the fur trade on the Upper Lakes:

> "The constant arrival of Canoes for some days past from Michilimackinac and Boats from Montreal via the Lakes has kept the place alive The non-importation act will effect the S.W. Furr Company much for their Goods must remain here this winter unsold. Messrs Gillispie, Pothier, Berthelet and many others are expected in tomorrow they are to remain some time in hopes that the Act will be repealed." (Wisconsin Historical Collections Vol. XIX: 342).

It would appear from this that Gillespie was not normally resident at Fort St. Joseph at this point in time. His name does not appear in the list of fur traders who aided the British army in the capture of Michilimackinac in July of 1812 (Tasse 1878: Vol. I, p. 149), nor in the Corps of Canadian Voyageurs raised by the North West Company or in the Canadian Volunteers or the Michigan Fencibles who fought at Michilimackinac and Prairie du Chien during the War of 1812 (Irving 1908: 97, 98, 114). This may indicate that by this time he was either not in the area, or was at least spending most of his time in Montreal.

The Mr. Mitchell described as preparing to build at Fort St. Joseph in 1798 was probably David Mitchell Jr., the son of Dr. David Mitchell (Vincent 1978a: 94) who had come to Michilimackinac as a British army surgeon's mate, married a woman of French-Ojibway parentage (Mason 1981: 3) and had remained as the Indian Department Commissary and then as a trader (Armour 1978: 135; Lamb 1970: 482). Dr. Mitchell was selling canoes at Michilimackinac to Forsyth Richardson and Company in 1799 (Lamb 1970: 482). In August of 1804, a Daniel Martin stated at a court of inquiry that he was

servant to Mr. Mitchell, a trader at St. Joseph's, and had carried furs from someone else's house to his master's (PAC, RG8, C Series, Vol. 254, p. 170). This would indicate that Mitchell was maintaining a trading establishment at Fort St. Joseph from 1798 until at least 1804. On 31 December of 1806, Mitchell signed the agreement between the North West and Michilimackinac Companies as one of the partners of the latter (Wallace 1934: 224). Mitchell's name was included in a list of traders who arrived at Fort St. Joseph on their way from Michilimackinac to Montreal on 1 September 1807 (Askin 1931: 569). It would appear, however, that Mitchell was not living at Fort St. Joseph during the winter of 1807-1808, as John Askin describes the social set there as follows: "Our Society is verry small being composed of Capt Derenzy, Capt & Mrs Muir Mr & Mrs Crawford (brother-in-law and sister of David Mitchell Jr.), Lt. Craddock Doctr Davis & our Family." (Askin 1931: 590). If Mitchell had been living there, he would undoubtedly have been included in this group. In the same letter, Askin describes Crawford as <u>the</u> agent and partner of the Michilimackinac Company at St. Joseph. I can find no other reference to David Mitchell Jr. in association with Fort St. Joseph. Apparently he died in Montreal in April of 1809 (Wallace 1934: 487). Dr. David Mitchell Sr. seems to have remained in Michilimackinac until 1815, and then moved with the British military to Drummond Island. One possibility might be that David Mitchell Jr.

built and operated an establishment at Fort St. Joseph between 1798 and 1806, in some way associated with his father's operation at Michilimackinac. After he became a partner in the Michilimackinac Company, he may have moved to Michilimackinac (or Montreal) to take care of other company business (or gone south to winter amongst the Indians), leaving his brother-in-law Lewis Crawford as the Michilimackinac Company representative at St. Joseph.

Jean Baptiste Toussaint Pothier, 1771-1845, (Wallace 1978: 672) was witness to a marriage in Michilimackinac in February 1794 (Wisconsin Historical Collections Vol. XVIII, p. 497), and was preparing to build at Fort St. Joseph in 1798. However in June of 1799, he was selling canoes to traders in Michilimackinac under the advice of Alexander Mackenzie of the North West Company (Lamb 1970: 481). In November of the same year his name appears in North West Company account books as either owing or being owed money by the company (Wallace 1934: 104). However, his name does not appear in the North West Company agreements of 1787, 1788, 1790, 1799 or 1802 (Wallace 1934: 77-89, 94-103, 108-125) or in the XY Company agreement of 1803 (Wallace 1934: 125-134) of the XY - NW Co. merger agreement of 1804 (Wallace 1934: 143-157). In 1806 Pothier signed the agreement between the North West and Michilimackinac Companies as a representative of the latter. John Askin lists Pothier as arriving at St. Joseph's on 1 September 1807 on his way from Michilimackinac

to Montreal in the company of, among others, David Mitchell Jr. and Josiah Bleakley (Askin 1931: 569). In 1808 Pothier bought out the "land, houses, stores, and other buildings" of the small local trading firm of Spinard, Fields, Varin and Pelladeau at Fort St. Joseph (PAC, RG4A1, S Series, Vol. 84, p. 26160). He was also apparently the supplier for this firm during their existence from 1804 until 1808 (Vincent 1978a: 135). In June of 1810, along with George Gillespie, Pothier was sent to Michilimackinac to buy out the wintering partners of the Michilimackinac Company for McTavish, McGillivray and Co. and Forsyth, Richardson and Co. (Wisconsin Historical Collections Vol. XIX: 337). Askin mentions his arrival at Fort St. Joseph in August of 1811 to wait for the repeal of the Non-Importation Act (Wisconsin Historical Collections XIX: 342). As the agent of the Michilimackinac Company, he signed an engagement contract for the hiring of an engage in Montreal on 14 March 1812. The engage was to winter three years in the dependences of St. Joseph Island, Michilimackinac, Mississippi and Missouri (Wisconsin Historical Collections XIX: 343). In a letter from Joseph Rolette to Robert Dickson dated 6 July 1812, regarding Rolett's and Dickson' debt to the South West Company, a Mrs. Pothier was mentioned (Wisconsin Historical Collections Vol. XIX: 345). However, in Pothier's biography he is described as having married in 1820 to an Anne Bruyeres of Quebec (Wallace 1963: 601). This may mean that

he had taken a wife prior to 1812 in Michilimackinac or somewhere in his trading area "a la facon du pays". In the British attack on Michilimackinac in July, 1812, Pothier organized, armed and led the fur trade/Canadian contingent. He retired to Lower Canada after the War of 1812 and was active in politics for several years. It would appear that although Pothier was a relatively prominent fur trader on the Upper Great Lakes, his presence at Fort St. Joseph was limited. His time spent there would likely have been counted in days and weeks, as he passed through or waited for goods to arrive or embargoes to be lifted.

Josiah Bleakley and Patrick Ademar proposed to build at Fort St. Joseph in 1799. However, there is little other mention of their presence at the site.

The company of Spinard, Fields, Varin and Pelladeau operated at Fort St. Joseph from 1804 to 1808. James Fields was already a resident at the fort in 1803, as he registered a complaint against Louis Dufresne in that year (PAC, RG8, C Series, Vol. 254, p. 219, Complaint of James Fields, 11 Aug. 1804). Spinard was still living at the fort in 1810, with an Indian wife, as he played an important role in the dispute between John Askin and commanding officer Dawson in 1810 (PAC, RG8, C Series, Vol. 256, p. 82, Charges against John Askin Jr., 23 Feb., 1810; p. 65, John Askin Jr. to Pri-deaux Selby, 4 Feb. 1810). Askin mentioned that Spinard was still trading at this point in time. A Pelladeau was listed

as one of the voyageurs who relocated from Drummond Island to Penetanguishene with the British military in 1828-29, so it is quite possible that he also stayed on after the company sold out to Pothier in 1808 (Osborne 1901: 161).

A Robert Livingstone was also mentioned in the Askin-Dawson dispute as a trader (PAC, RG8, C Series, Vol. 256, p. 86, Ensign Irwin Dawson to John Askin Jr., 31 Jan. 1810), and a Mr. Livingston in the employ of the North West Company carried a letter for the commanding officer from Fort St. Joseph by way of Machidash in February 1803 (Michigan Pioneer and Historical Collections, Vol. 21, p. 272). There is a reference to Livingston living at Fort St. Joseph in 1811 (Michigan Pioneer and Historical Society Vol. 21; p. 287). After the War of 1812, Livingstone put in a claim for compensation for the loss of a house, store and wharf in the burning of Fort St. Joseph (D. Lee 1966: 109).

Lewis Crawford was the Michilimackinac Company's representative at Fort St. Joseph from at least a month or two before the first embargo took effect in 1807 until at least 1811 (Askin 1931: 576, 584, 590, 592, 628, 661, 691, 694). He had a young wife who was the daughter of Dr. David Mitchell of Michilimackinac.

That concludes the list of traders for which there are references associated with Fort St. Joseph. They include both short and long term residents. There may well have been others whose names do not appear in the records.

APPENDIX C

References to Indians in the vicinity of Fort St. Joseph.

According to Indian Department records, from 25 September 1803 to 24 March 1804, 547 Chippawas (147 warriors, 157 women and 243 children) and 741 Ottawas (207 warriors, 248 women and 286 children) visited Fort St. Joseph (PAC, RG8, M Series, Vol. 9, p. 72). Other references to numbers of Indians visiting Fort St. Joseph include "several canoes of the Minomines here at the same time with a number of Chippawas who was very jealous of one another" (Wisconsin HIstorical Collections, Vol. XII, p. 104); "upwards of 60 of them [Ottaws from L'Arbre Croche, brackets mine] at one time together" (Askin 1931: 568-569); "I have cloathed 300 persons within these three days past" (Askin 1931: 583-584); "You might have seen fifteen hundred Indians that my dear John has clothed since we arrived here and still they come, every day" (Askin 1931: 761); and "My dear John must have had two hundred Indians out hunting for him [a man who was lost in the woods near the fort, brackets mine]" (Askin 1931: 762).

Kinietz describes the "cabins" in the permanent Ottawa village at Mackinac at the end of the 17th century as being like Huron longhouses, with pole frames and coverings

made of rush mats. Apparently their form of shelter when travelling or hunting used the same materials but was circular in outline, rather than rectangular.

> The Ottawas have a very useful kind of tents which they carry with them, made of flags, plaited and stitched together in a very artful manner, so as to turn rain or wind well - each mat is made fifteen feet long and about five feet broad. In order to erect this kind of tent, they cut a number of long straight poles, which they drive in the ground, in the form of a circle, leaning inwards; then they spread the mats on these poles - beginning at the bottom and extending up, leaving only a hole at the top uncovered - and this hole answers the place of a chimney. They make a fire of dry split wood, in the middle, and spread down bark mats and skins for bedding, on which they sleep in a crooked posture, all round the fire, as the length of their beds will not admit of stretching themselves. In place of a door they lift up one end of a mat and creep in, and let the mat fall down behind them.
>
> These tents are warm and dry, and tolerably clear of smoke. Their lumber they keep under birch-bark canoes, which they carry out and turn up for a shelter, where they keep everything from the rain. Nothing is in the tents but themselves and their bedding (Kinietz 1965: 243-244).

The Chippewa dwellings were of similar construction but instead of using rush or reed mats for coverings, they used "strips of birch-bark . . . made of small pieces sewn together, so that they were twenty feet or more in length and about three feet wide. They rolled up into a very small space and were easily carried" (Kinietz 1965: 325). Further details concerning the configuration of the Chippewa tent and its contents is provided in the following description of the Sauteux Indians in about 1804 by Peter Grant:

> Their tents are constructed with long slender poles, erected in the form of a cone and covered with the rind of the birch tree. The general diameter of the base is about fifteen feet, the fire place exactly in the middle, and the remainder of the area, with the exception of a small place for the hearth, is carefully covered with the branches of the pine or cedar tree, over which some bear skins and old blankets are spread, for sitting and sleeping. A small aperture is left in which a bear skin is hung in lieu of a door, and a space is left opened at the top, which answers the purpose of window and chimney. In stormy weather, the smoke would be intolerable, but this inconvenience is easily removed by contracting or shifting the aperture at top according to the point from which the wind blows. It is impossible to walk, or even to stand upright, in their miserable habitations, except directly around the fireplace. The men sit generally with their legs stretched before them, but the women have theirs folded backwards, inclined a little to the left side, and can comfortably remain the whole day in those attitudes, when the weather is too bad for remaining out of doors. In fine weather, they are very fond of basking in the sun.
>
> When the family is very large, or when several families live together, the dimensions of their tents are, of course, in proportion and of different forms. Some of those spacious habitations resemble the roof of a barn, with small openings at each end for doors, and the whole length of the ridge is left uncovered at top for smoke and light. The master and mistress take possession of the bottom of the tent, right opposite the door, furniture and provisions are piled up without order near the mistress,s place. (Masson 1960: 329-330).

Grant also provides a brief description of the material culture of the Sauteux:

> Their culinary utensils consist of a few kettles, wooden bowls and spoons made of maple and birch, dishes made of birch rind and ornamented about the edge with painted quills. They have bags and pouches of various sorts, some made of worsted, in which their medicines and most valuable effects

> are kept, others made of the skins of otters, beavers, fishers, or other favorite animals; some of these are elegantly garnished, and consecrated to religious or conjuring matters, others of less importance, contain their tobacco and pipes, &c.
>
> Besides the casse-tete, knife and gun, they wear a kind of short broad dagger. In war, they use the pocomagan, a very destructive weapon; it consists of a piece of wood, a foot and a half long, curved at one end, with a big heavy knob, in which is fixed a piece of long sharp iron; they have lances, six or seven feet long, but seldom or never make use of them.
>
> Their fish taklings are: nets, lines, seines and iron spears fixed into a very straight and smooth pole of 12 or 15 feet long. The ice chisel or trench serves to pierce the ice in winter for setting lines or nets, or for working the beaver. The remainder of their moveables consists in axes, cradles, snow-shoes, sledges and bark canoes, which form the catalogue of the furniture and effects considered as quite sufficient for the most wealthy families among them. (Masson 1960: 332).

These people also had drums made of hollow tree trunks and parchment with wooden sticks, and rattles made of gourds or hollow wood with shot or pebbles, or wood with bones or deer hooves attached (Masson 1960: 332, 333).

It would appear from this catalogue of material possessions that the Chippewa used a mixture of European and Native goods and materials. By this point in time, 1804, the Indian people of this area had had some kind of contact with European culture for almost 150 years. Except for the gun, most of the European items in the list would appear to be replacing Native materials but to have the same function as the original Native item. This was particularly true in the case of cloth and metal objects.

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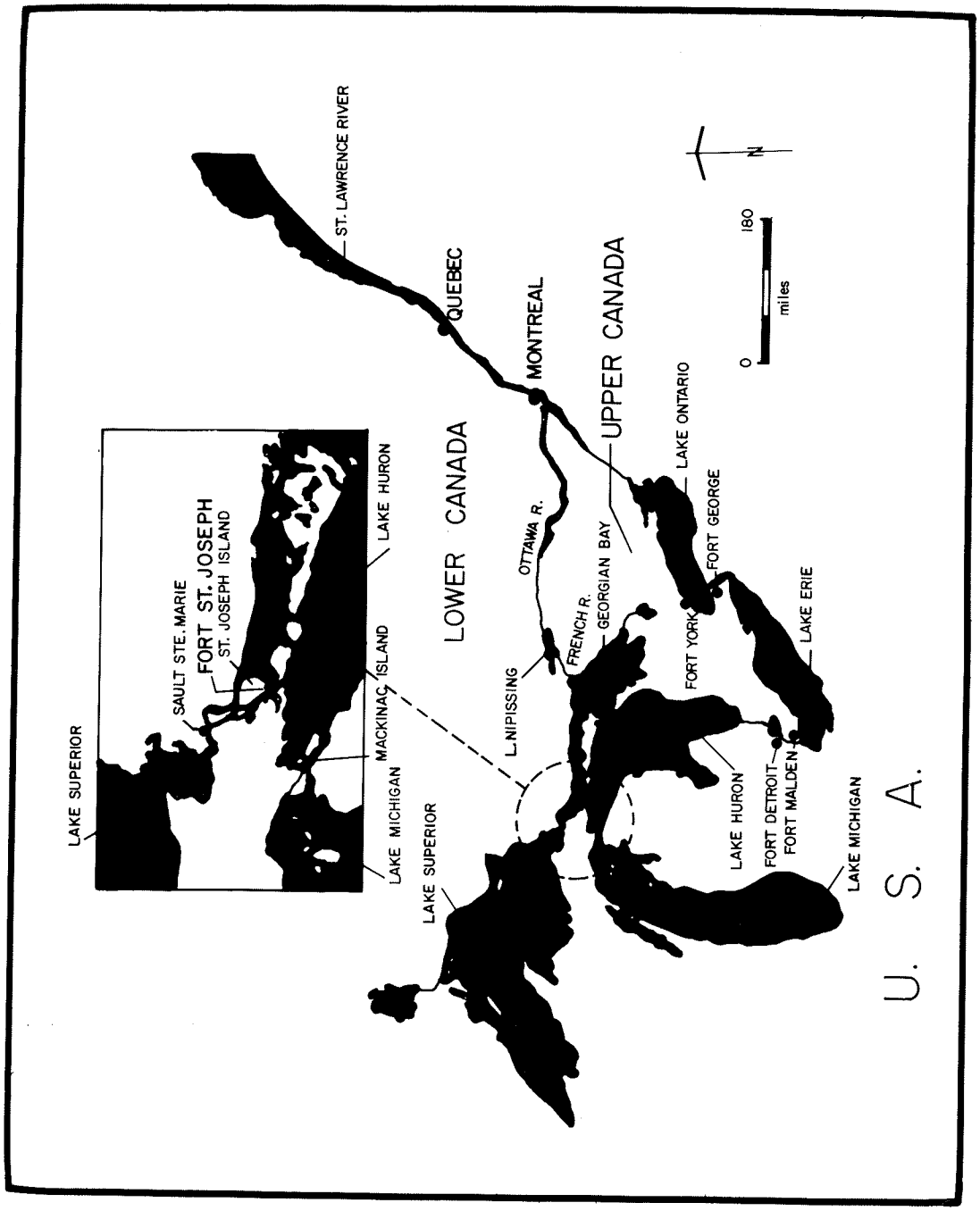

Figure 1. Map of the Great Lakes in 1800, showing the location of Fort St. Joseph. (Drawing by D. Elrick.)

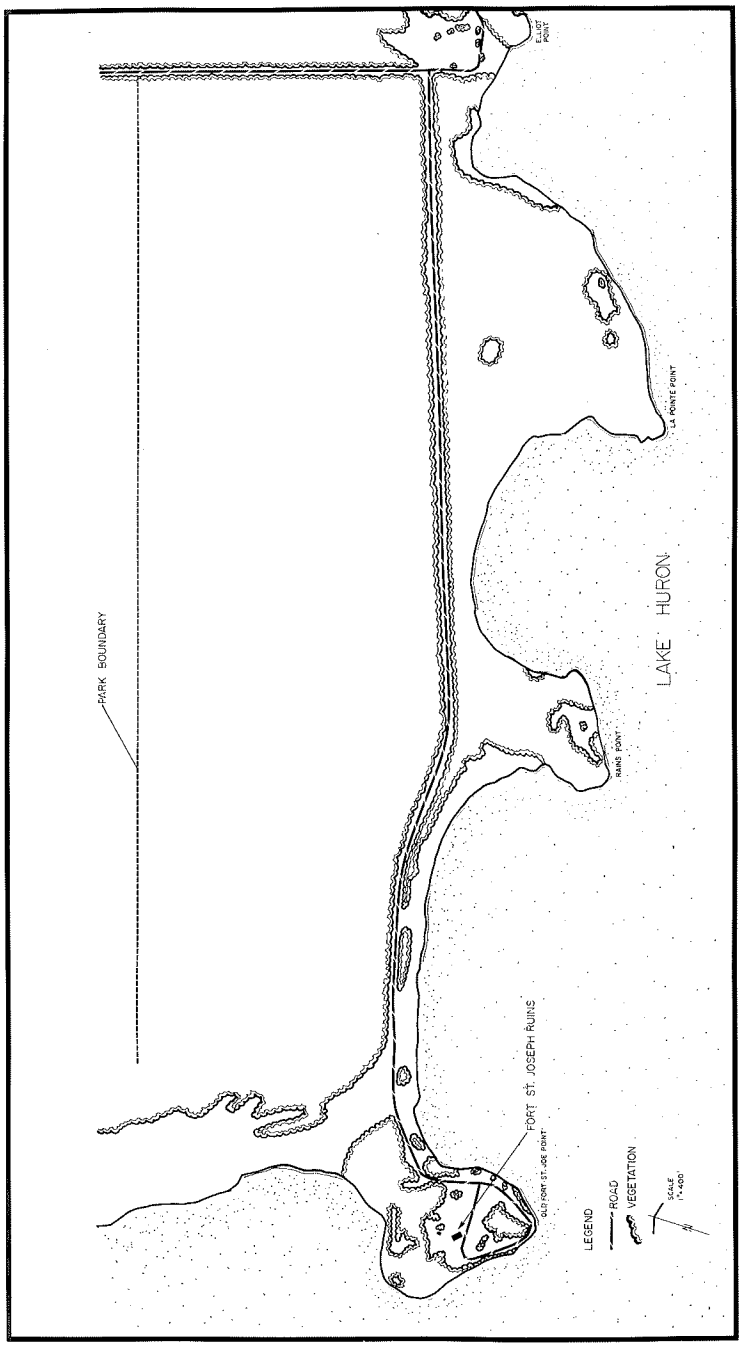

Figure 2. Map of Fort St. Joseph National Historic Park. (Drawing by D. Elrick.)

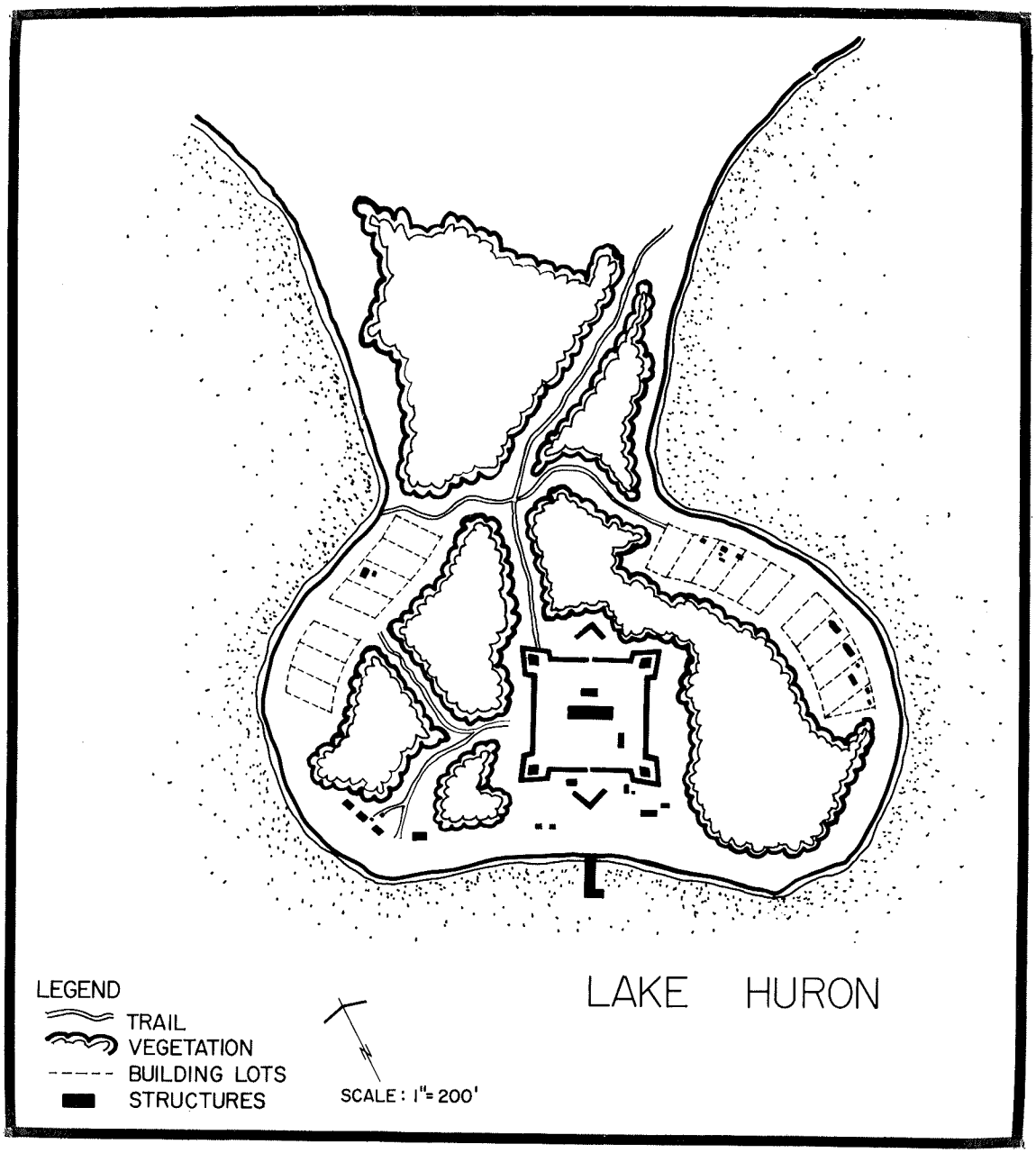

Figure 3. Plan of the Post on the Island of St. Joseph in Lake Huron, 1800. Adapted from historic map (Vincent 1978a: 87). (Drawing by D. Elrick.)

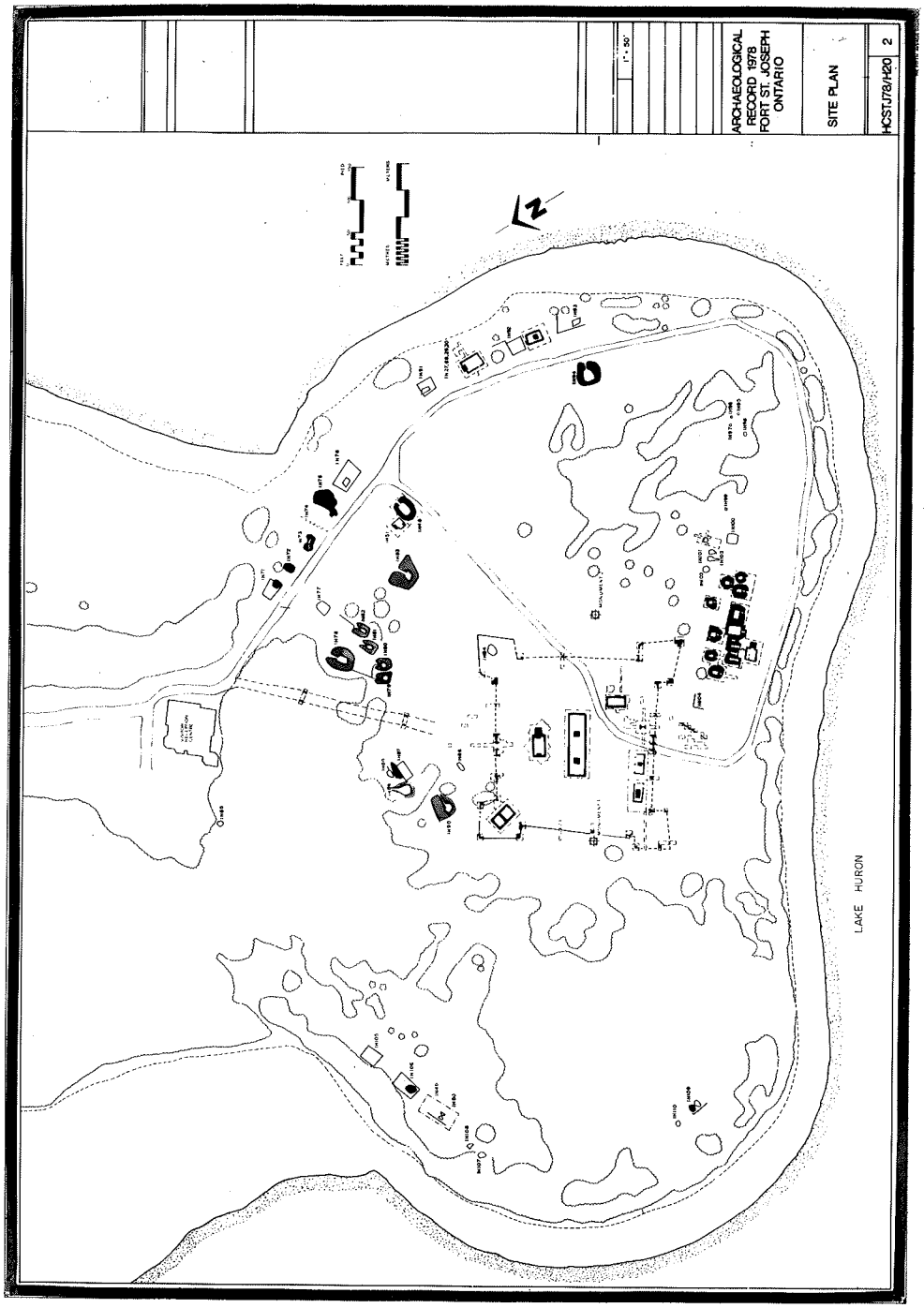

Figure 4. Site map of Old Fort St. Joe Point showing all archaeological features which have been excavated or mapped from 1963 to 1979. (Drawing by P. Gerrard.)

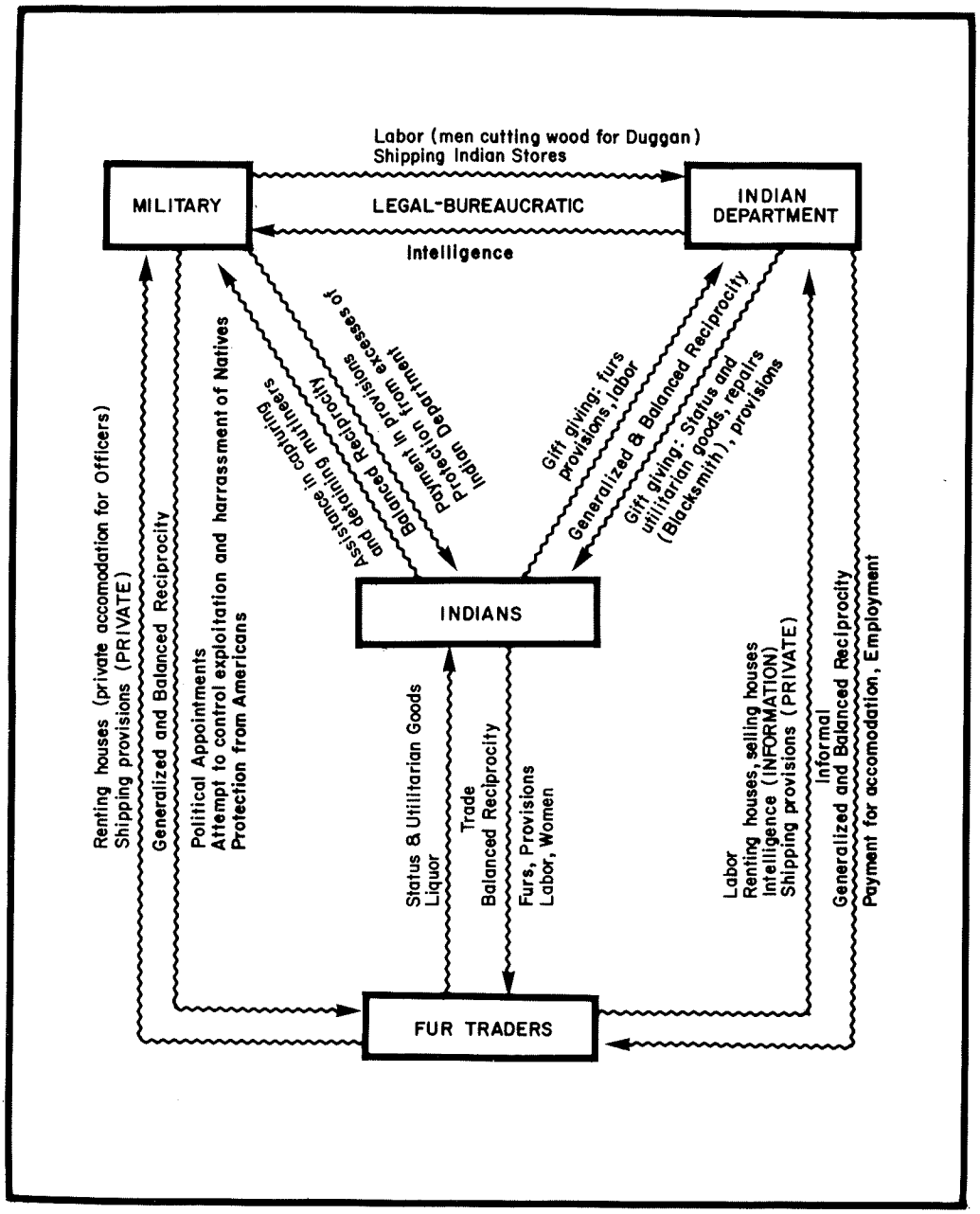

Figure 5. A model showing the exchange of goods and services between the four groups at Fort St. Joseph. (Drawing by D. Elrick.)

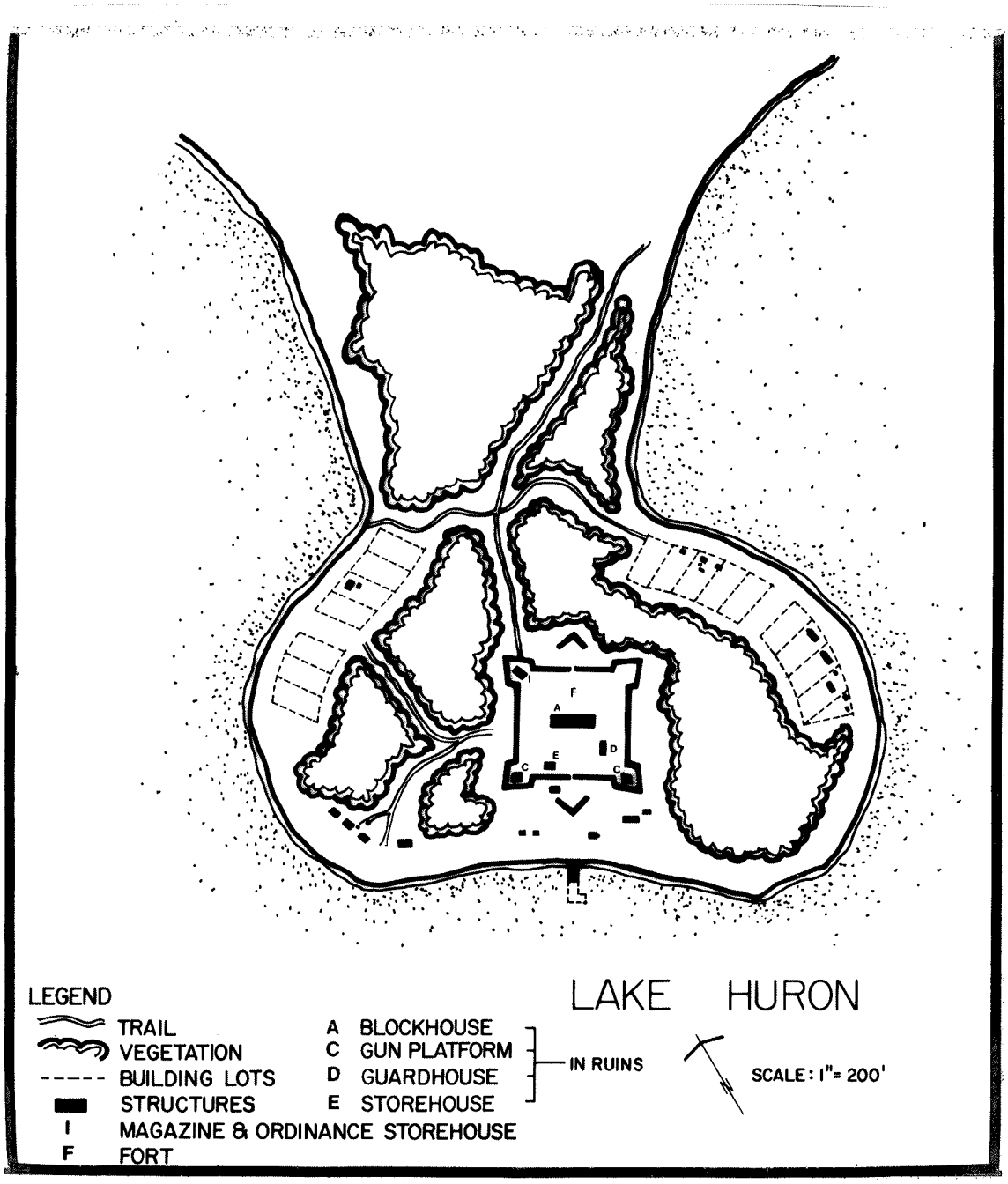

Figure 6. Plan of the post on the Island of St. Joseph in Lake Huron, 1823. Adapted from historic map (Vincent 1978a: 257). (Drawing by D. Elrick.)

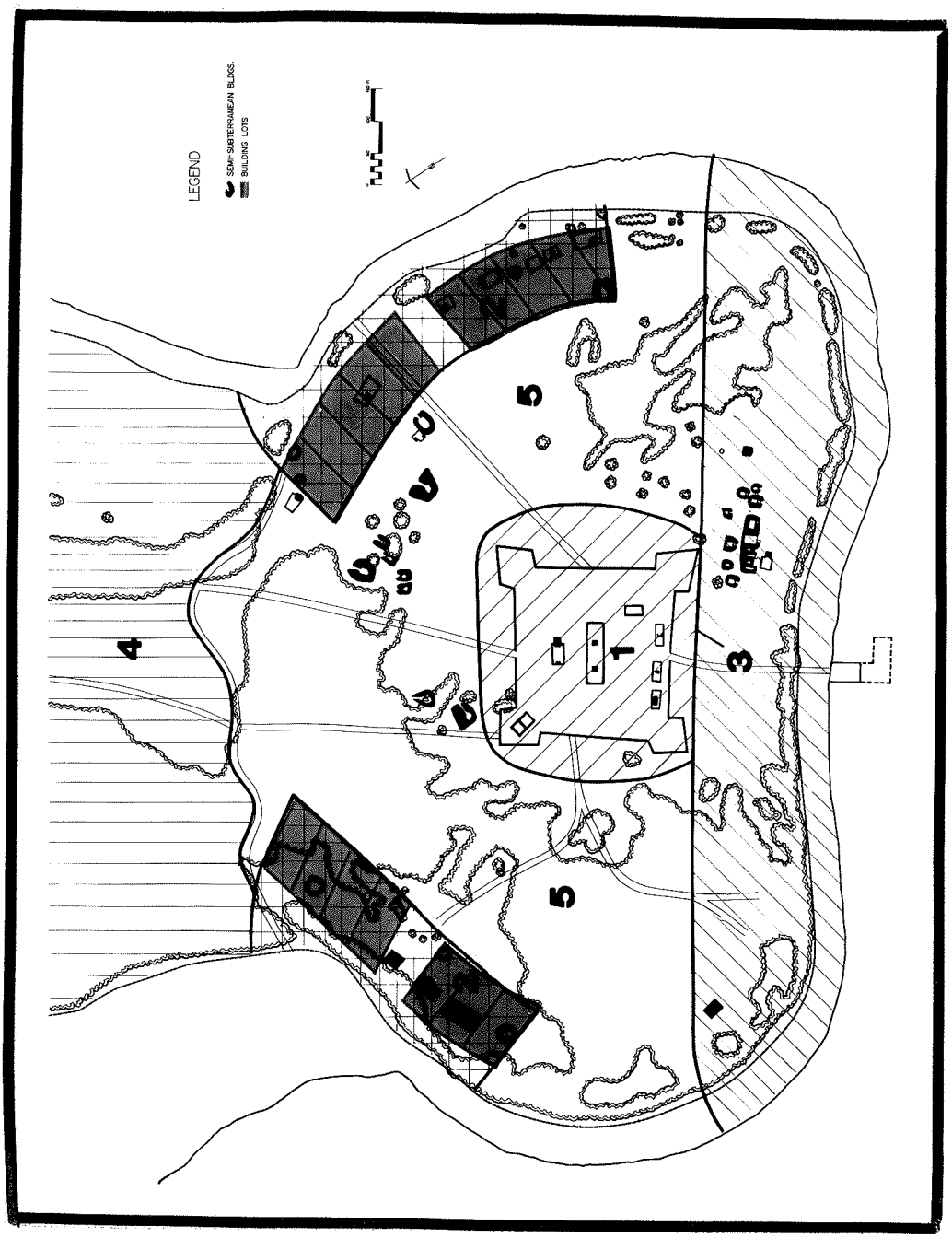

Figure 7. Plan of Old Fort St. Joe Point illustrating the division of the point into sectors. (Drawing by D. Elrick.)

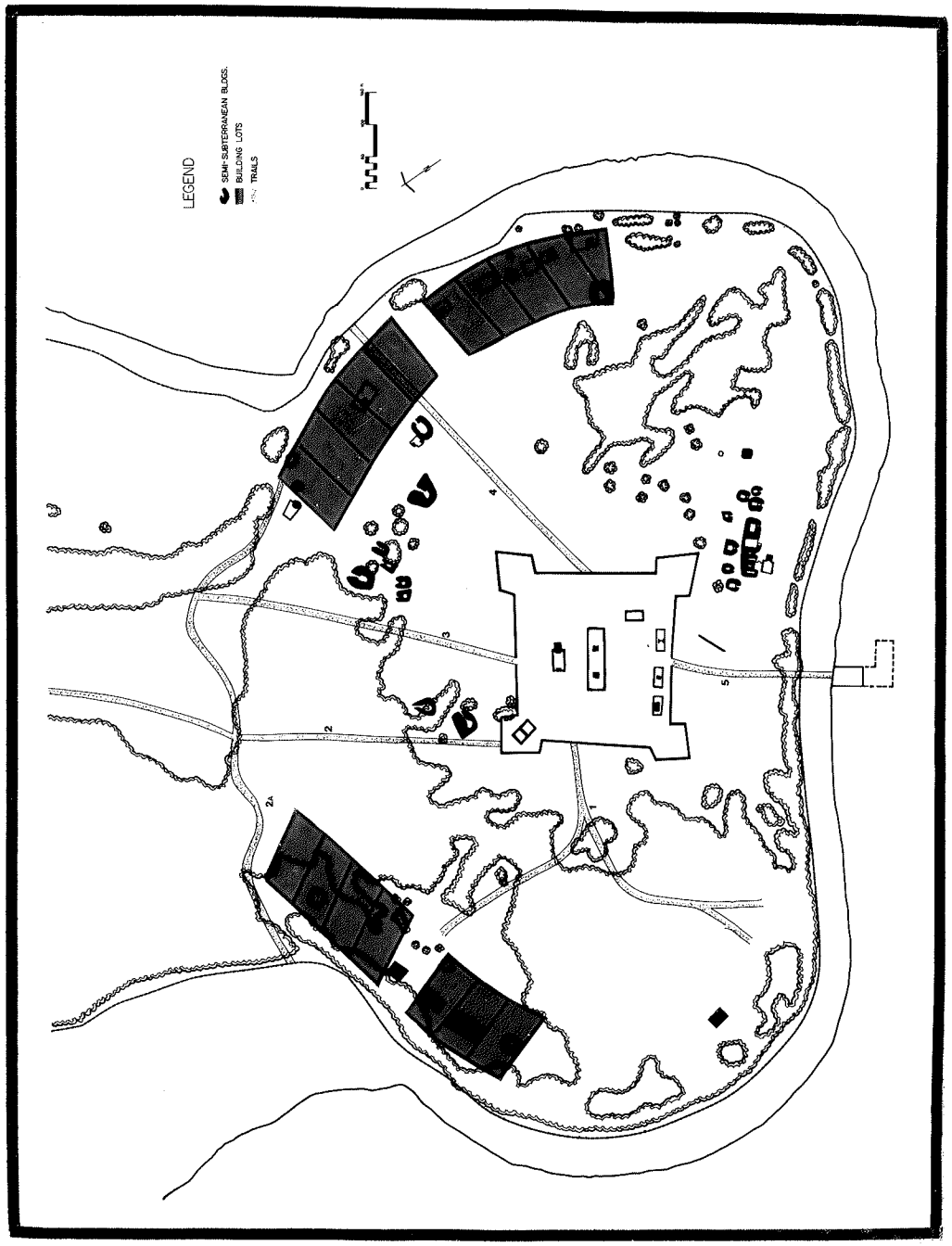

Figure 8. Plan of Old Fort St. Joe Point showing the trails. (Drawing by D. Elrick.)

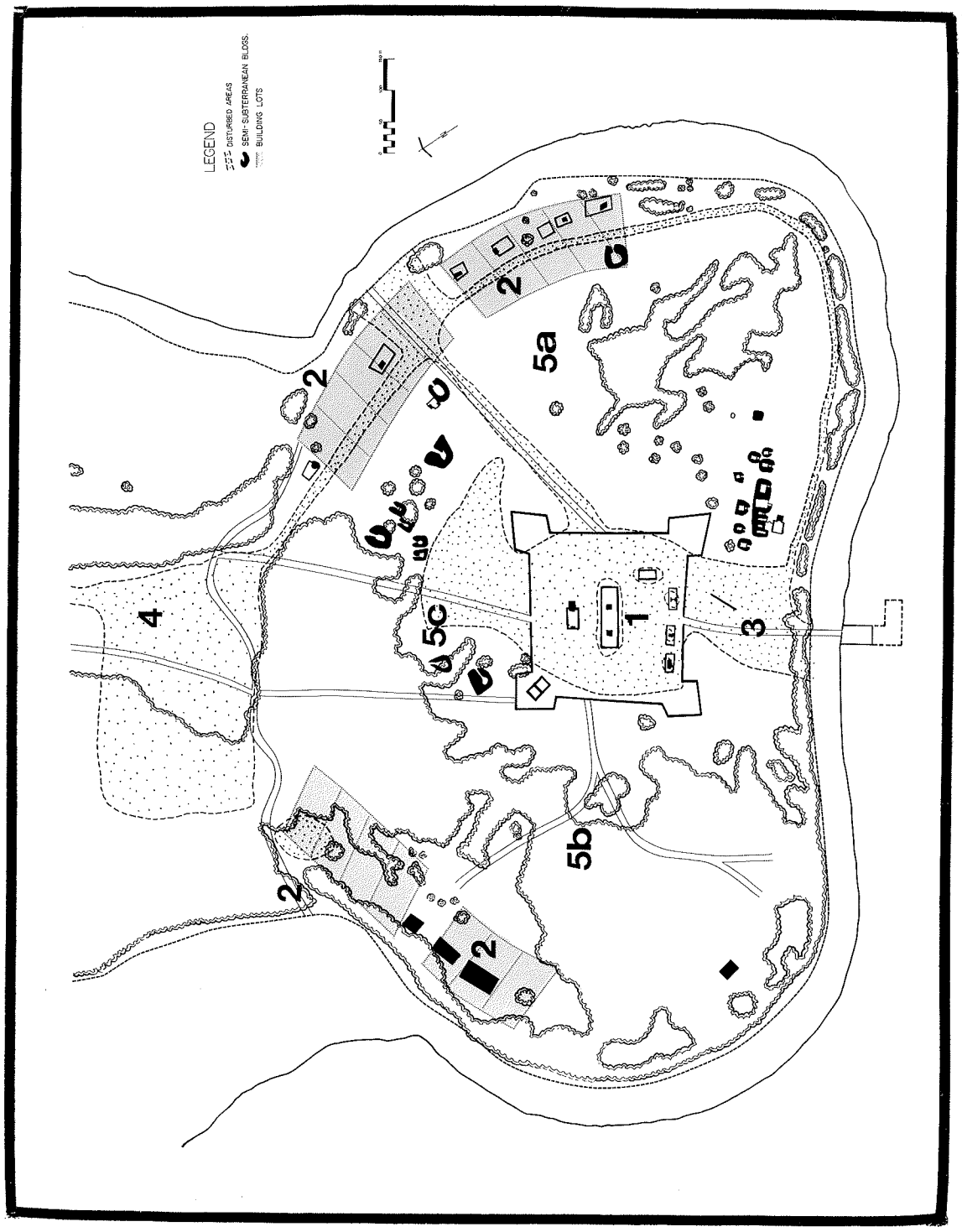

Figure 9. Plan of Old Fort St. Joe Point showing areas disturbed by road construction and landscaping. (Drawing by D. Elrick.)