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ELEMENTS OF A MILITARY HERITAGE: A STRUCTURAL HISTORY OF THE MERRICKVILLE AND NEWBORO BLOCKHOUSES, THE JONES FALLS AND WHITEFISH GUARDHOUSES, AND THE JONES FALLS DEFENSIBLE LOCKMASTER'S HOUSE

by William Wylie

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Abstract

This is a structural history of five buildings on the Rideau which were designed primarily for defensive purposes and built between 1832 and 1841. After the transfer of the waterway to the civil authorities in 1856, these structures served a variety of non-military functions. Eventually two of the buildings were dismantled while interest grew in the preservation and restoration of the other three. This analysis is intended to facilitate interpretation of the military significance of all five buildings.

Introduction

This report is a study of five buildings on the Rideau Canal: two blockhouses, two guardhouses, and a defensible lockmaster's house. While they served a variety of purposes during their history, they were all constructed primarily for military reasons.

These structures represent several stages of military planning during the first decade of the canal's history. The original intention had been to construct defensible residences for the lockmasters at each station. The Merrickville and Newboro Blockhouses were erected on the order of Lt. Col. By in 1832 and 1833 as part of a general scheme for defense of the canal. After 1833, work was halted by the reluctance of the British Ordnance Department to make further expenditures. The department was pushed into action again by the rebellions of 1837-38 which raised the possibility of sabotage on the Rideau. The guardhouses at Jones Falls and the Whitefish Dam were an immediate response to this danger. Constructed in 1838-39, they permitted the stationing of soldiers at these installations during the remainder of the crisis. Built in 1841, the defensible lockmaster's house at Jones Falls was part of a longer-term response which resulted in the construction of substantial masonry buildings at 16 stations over the 13 years between 1838 and 1851.

Three of these buildings are still in existence. While the two guardhouses are no longer standing, it is the intention of Parks Canada to interpret the significance of all five of these elements of the military heritage of the

canal. These structural histories were prepared primarily to support the task of interpretation.[1]

The Merrickville Blockhouse

The evolution of the Merrickville Blockhouse may be divided into four periods corresponding to various functional and structural phases in the building's history. After its construction in 1832, the blockhouse served mainly as a storage facility and staff residence during most of the nineteenth century. Nonetheless, prior to Confederation, it was also considered as a potential military fortification in the event of a crisis. Defensive considerations became less important after the transfer of the canal from the British Ordnance Department to the Provincial Department of Public Works in 1856 and disappeared altogether after the American Civil War.

The period between 1867 and 1909 was marked by a dramatic decline in the building's physical stability. This was caused in part by the nature of the structure itself: the weight of masonry infill on the second floor placed a great strain on the blockhouse's foundations. But even more important was the effect of constant water leakage on the main columns in the basement. These conditions led the lockmaster to vacate the building late in the nineteenth century and eventually resulted in the partial collapse and removal of the second floor in 1909.

After 1909, the blockhouse experienced few structural or functional changes. With the removal of the second storey, pressure on the vertical columns was relieved. The main floor continued to be used primarily as a storehouse and work area, though it also provided office space and

temporary staff quarters. After 1960, the blockhouse was declared obsolete for maintenance purposes and was restored as a museum. Since 1967, it has been operated in that capacity by the Merrickville and District Historical Society.

The Military Period, 1832-67

The purpose of the Rideau Canal was to provide a defensible transportation route between the Great Lakes and Montreal. The system was protected from American attack by its distance from the border. On the other hand, the works were vulnerable by their very nature: the canal itself would provide the enemy with navigation. To provide further protection, the Kempt Commission of 1828 proposed small defensible lock-master's houses at each station.[1] Their erection was delayed because of the costs involved and because Lt. Col. John By, who was in charge of the canal's construction, was determined to install larger fortifications.

By proposed blockhouses at each station.[2] Like the houses, they could be built cheaply and quickly utilizing local materials. They would provide self-sufficient positions capable of being defended which could also serve as quarters for the lockmasters. However, blockhouses had the advantage over more modest buildings of containing two storeys instead of one. This not only meant that they were more spacious, but that their defensive capabilities were increased. Fire could be directed further into the distance from the second floor. The flanks of the main floor walls could also be covered from openings (machicolations) cut in an overhanging second storey.[3]

While the idea of blockhouses was acceptable to Col. E. W. Durnford, the officer commanding the Royal Engineers in Canada, he criticized the size of By's proposed structures. These would not only be too expensive, but also too large to serve as residences for the lockmasters as By intended.

While further deliberations were underway, Durnford planned to provide temporary housing where possible by making use of the residences built by the contractors for their own use during construction of the stations.[4] Subsequently building costs were shared with the contractors at three stations: Black Rapids, Long Island, and Kingston Mills.

When no further action took place by 1832, By reached an agreement with the builders at five sites to construct blockhouses at Merrickville, Burritts Rapids, Newboro, the Narrows, and Kingston Mills. This initiative was justified on the grounds that defensive installations were needed and that a saving in expense could be effected by employing the construction crews already on the spot. On the basis of his estimates for Merrickville, By believed that blockhouses could be built along the line of the canal at a cost of eight hundred pounds each, five hundred pounds more than the estimate for lockmasters' houses, but almost half of the figure of fifteen hundred pounds projected earlier by him.[5] Four of the five blockhouses were constructed: that at Burritts Rapids was not completed. Construction at other sites did not take place because of the Ordnance Department's abhorrence of the extra expense, especially in view of the criticism of the cost of canal construction which led to a British parliamentary inquiry in 1832.[6]

The Merrickville Blockhouse was larger than the others and was also regarded as more important because of its strategic position.[7] The high road from Brockville offered a direct route from the American border to the canal at this point. Merrickville was also the regional commercial centre for the surrounding area which was well populated. The blockhouse was situated at the most strategic point in the locality: directly adjacent both to the locks and to the bridge which carried the road across the river (Fig. 2).

Little is known about the process of construction.

Agreements were reached with the contractors responsible for the locks. H. C. Stevens was to provide the masonry, which probably came from a distance of several miles, perhaps from the quarry at the next station, Clowes. The contractor who had worked on the gates and other woodwork was employed in similar tasks in the blockhouse: his name is unknown. Each man agreed to complete his work for three hundred pounds, and an additional two hundred pounds was set aside for tinning the roof and other contingencies.[8] The agreements were reached in or before January 1832 and by October the building had been completed except for the painting of windows and doors.[9]

The general configuration of the blockhouse was very similar to that in By's proposal of 1830 though the size had been much reduced. While barrack space had originally been envisaged for 250 men, the Merrickville Blockhouse could accommodate only 50.[10] The design was intended to provide a permanent fortification rather than one thrown up to meet immediate exigencies. The lower section of the building was constructed of thick masonry to withstand heavy fire. It was further protected by lining the ceiling with masonry. The overhanging timber storey was covered with tin to make it fire resistant. The pyramidal roof was also covered in this way. The structure was surrounded by a ditch which would have impeded the movement of attackers around the building. The blockhouse measured 51 feet square in the lower storey and stood 57 feet 6 inches from top to bottom:[11] it would have presented an imposing appearance in the frontier area of the Rideau.

Exterior

Masonry Storey

The walls were designed to withstand considerable force. They were composed of rough-coursed limestone with squared

quoins at the corners and around each opening. According to the 1852 plans, they measured four feet in thickness at the base tapering to three feet at the top which was 22 feet 6 inches above the base of the ditch (Fig. 5).[12]

Consistent with By's plans of 1830, embrasures were centrally located on each side. By had proposed to construct port holes which could serve as windows and doors except in war time. Then they could be "reduced to proper size, by lining them with raw hides well salted and rolled tight, and jammed in while moist, which is an excellent mode of protecting the ports from being damaged by the discharge of their own guns."[13] Acting on his instructions, the contractors installed windows on three sides and a doorway, all spanned by segmental arches. The kind of window sash is unknown though casement-style was used at other points on the canal and was present in the blockhouse later in the century (Fig. 6). The doorway was later altered, but few details are available. In 1852, Robert Christie, the canal contractor, installed 1.25 in. deals, tongue and grooved on both sides, presumably in the jambs.[14] All these openings had been described as "port holes for guns" in a Royal Engineer's report of 1846, but weapons apparently were never mounted.[15]

Upper Storey

The second floor measured 11 ft. 1.0 in. to the eaves and was 55 ft. square, overhanging the lower walls by approximately 2 ft. on each side (Fig. 5).[16]

According to By's plans, the second storey was to be constructed of heavy timbers overlaid by tin to provide a strong barrier against enemy attack.[17] A structural survey done during restoration in 1964 revealed the original fabric apparently unchanged.[18] It was composed of three layers. The inner wall consisted of 1.0 ft. square hand hewn elm timbers dove-tailed at the corners. Instead of

sealing the gaps between these with mortar, the timbers were covered with vertical sheathing 1.0 in. by 12 in. in size composed of tongue and groove pine boards. Neither timber nor boards showed signs of weathering which suggests they had never been exposed to the elements. They had been covered with metal cladding. The survey done in 1964 suggests that much of the outer surface was original and describes it as being composed of tin shingles which had been overlapped and "blind nailed" with hand hewn nails.

The openings present in this storey would have permitted gun fire to be directed into the distance and downwards. Thus, a loophole measuring 9 ft. by 4 in. was centred near the top of each wall. On either side were gun ports 4 ft. by 3 in. by 2 ft. 6 in. and they in turn were flanked by loops 7 ft. long.[19] Marksmen could fire through the loops and also through the machicolations cut in the underside of the building's overhang when attackers reached the sides of the building.[20] Until hostilities threatened, window frames were to be installed in the gun ports. Once again the original sash type is not clear though photographs taken later in the century indicate a casement configuration (Fig. 7).

Roof

Unlike the lower section, the second storey and roof do not seem to have been bombproofed. The pyramidal tin-covered roof extended 23 ft. 11 in. above the eaves.[21] A chimney is visible in the earliest sketches (Fig. 3). Located on the south side, it probably led to a fireplace on the second floor which is indicated in the plans of 1852. The blockhouse also had fire ladders. In 1854, the ladder installed on the side of the building was blown down during a storm and had to be replaced.[22] It was approximately 34 ft. long, almost precisely the height from ditch to roof. It was likely part of a two-ladder system mentioned later in the century -- the

second ladder being mounted on the roof.[23]

Ditch

The depression directly around the blockhouse walls represented a slight modification in By's plans. In 1830 he had suggested a raised earthenwork which could be composed of material excavated for the foundation of the building. Conscious of the danger of erosion, however, he had stipulated that the crest should be completed only when there was threat of war.[24] The finished perimeter featured a ditch instead of a raised area, though the outer edge of this depression seems to have been raised somewhat above surrounding ground level. The ditch, which may have been between eight and nine feet in depth and ten to fifteen feet across, would have served the original purpose of presenting an obstacle to approaching attackers.[25]

In spite of the local mythology of a water-filled moat and drawbridge, all the evidence indicates that the ditch was intended to be dry. Such features were a common feature in British defence planning at the time. Plans and reports made in 1835, 1846, and 1852 all note a ditch at Merrickville, but make no reference to the possibility of it being water-filled.[26] The legend probably derives from the fact that the depression usually contained some water due to canal leakage. Seepage was first reported in 1837 and was still a problem after restoration in 1965.[27]

There is little information concerning the bridge leading to the front entrance. A sketch made in 1839 suggests that an approach with a railing was already in place (Fig. 4). This was probably similar to the wooden ramp constructed in 1867 which is discussed in the next section of the report.

Interior

Cellar

This area was dominated by the powder magazine located in the southwest corner. It was approximately 20 ft. square and constructed of rubble stone. According to a report of 1874, the top had originally been covered with three inch plank upon which stones had been placed bedded in lime to a thickness of approximately 2.5 ft.[28]

Little is known about the other features of the basement. The floor was never properly completed. Sometime in the thirty-year period prior to 1874, worn-out bridge sheathing was installed as a temporary surface.[29] Although not shown in the plans of 1852, the two air vents which were found in each wall during later inspections were probably original features.[30] Access to the main floor was likely by a trap door and a linear flight of stairs.

Supporting Structure

In addition to the masonry walls, the stability of the building was dependent on sets of vertical posts located on each of the three levels -- the cellar and the first and second storeys. These columns helped to support the horizontal members of each floor and the base of the roof.

In the cellar, these posts rested on oak blocks and perhaps also on horizontal sleepers which are shown running across the building in the plans of 1852 (Fig. 5).[31] The original number of vertical columns is not clear, though repairs done in the 1870s suggest that there were probably eight.[32] These helped to support the cross-beams of the first floor which measured 12 in. by 15 in. In the drawings of 1852, these ran in an east-westerly direction and were imbedded in the masonry walls. Three inch joists were mounted on top of the beams and a three inch plank floor was laid

over the joists.[33]

Vertical posts, probably eight in number (Fig. 5), continued to the second storey where they had to bear a heavy weight. The horizontal beams of the second floor were overlaid with two feet of rubble stone and lime cement intended to act as a protective layer against projectiles which penetrated the roof.[34] This weight bore on the masonry walls over which the second storey projected as well as on the vertical posts of the interior. While the rubble stone placed a great strain on the structure, later engineering analysis indicated that it also acted as a counter-balance against the outward movement of the timber walls of the second storey.[35] These walls were further secured by knee braces attached to the interior floor surface.[36]

In the upper storey, four vertical posts provided some support to both walls and roof. Horizontal timbers extended from these columns to the top of the outside walls increasing stability. The posts continued to the roof in a queen-post design (Fig. 5). The present king-post truss apparently was erected during the repairs of 1873 when it was noted that the main posts were no longer making contact with the roof and a temporary column had been introduced leading to the apex.[37]

Partitions and Use

While the blockhouse was built for military reasons, it was used primarily as a residence and canal storehouse. The first floor and part of the second were utilized for storage purposes.[38] The lockmaster's quarters were also located on the second storey. Since partitions were only erected in stages over time, he and his family probably put up with uncomfortable conditions in the early years. The first room was built in 1835.[39] In that year, two stoves and pipes also arrived at the station for the use of the staff.[40] While one

of these appliances may have been intended for the lock-labourer's residence situated near the station, one stove likely was installed in the blockhouse where it would have been useful for heating purposes. A fireplace on the south side of the blockhouse would have been maintained primarily for cooking. The one shown in the 1852 plans may have been an original feature since sketches of the 1830s show a chimney already in place (Fig. 3). By 1852, six rooms were finished on the south and east sides of the second storey (Fig. 5). Since these quarters received minimal maintenance during the rest of the period, they probably became quite rundown. In 1864, two rooms were patched and plastered with hair mortar, but three others, which required lathing and plastering, were not touched.[41] The rest of the storey seems always to have been unfinished with exposed wall timbers and roof structure.

Movement between the first and second storeys was made possible by a staircase with five landings in the form of a rectangular spiral. The steps and landings were "renewed" in 1850. The steps were comprised of 1.5 in. pine approximately 2 ft. by 1.0 ft. which was "wrought on one side." The landings were composed of the same material cut to a size of 2 ft. 5 in. by 2 ft. 4 in., "wrought on one side and dyed."[42]

In spite of its other functions, the blockhouse was still regarded primarily as a defensive position by the Ordnance Department. Between 1841 and 1852, three reports estimated barrack accommodation variously at between thirty-six and fifty non-commissioned officers and privates.[43] The building seems to have housed troops on only one occasion. In 1838, great concern was expressed about the safety of the Rideau after the rebellions of Upper and Lower Canada. Fear was expressed that the canal might be disrupted by small groups of rebels or American sympathizers. At Merrickville,

Lockmaster John Johnston, formerly a sergeant with the Royal Sappers and Miners, was involved in training the local militia.[44] Later he claimed that he had been ordered to leave the blockhouse during this time by a "Senior Officer in command of British Troops" and required to hire quarters in town.[45] This probably refers to the brief visit of Major Deedes with five companies of the Thirty-Fourth Regiment of Foot on 1 June 1838 who may have camped at the station while travelling through the canal on their way to Amherstburg.[46]

During the Oregon Crisis of 1846, the building figured prominently in defensive contingency plans. In a report prepared by Lt. Col. William Holloway, commanding the Royal Engineers in Canada, the St. Lawrence was made the first line of defence for the area with two fall-back positions in the interior.[47] The second of these was on the Rideau itself and Merrickville was to be the headquarters for canal operations. The blockhouse was to be the key to the defence of this position though it could be supported by occupying Merrick's mills on the opposite side of the river. As tensions cooled, however, it did not become necessary to implement these plans. No further threat of war occurred prior to the transfer of the canal from the Ordnance Department to the Provincial Department of Public Works in 1856.

The military potential of the canal did not loom large in the thinking of provincial bureaucrats. The last possibility for military usage of the blockhouse occurred during the American Civil War when Anglo-American relations again reached a boiling point. During the Trent Crisis of 1862, Lockmaster Johnston prepared to move from the blockhouse as he expected it would be required by the military. The superintending engineer of the canal, however, was opposed even to the storing of ammunition in the building for fear it would endanger the lockmaster's family and the safety of canal operations.[48] Finally in 1867, a separate drill shed

was constructed for the use of the militia.[49] Located to the west of the blockhouse on canal land, it effectively removed the possibility that the blockhouse would be used for defensive purposes again.

Surroundings

The area around the building was a hive of activity during this period. The blockhouse was situated directly adjacent to the upper lock and to the bridge leading across the canal to the mills several hundred yards away on the island and the north shore (Fig. 2). To the south, the village of Merrickville stretched out behind. For at least part of the period, the yard around the blockhouse as well as the building itself were used for storage of canal equipment. In 1860, Lockmaster Johnston reported the theft of a tamping hammer, iron crow bar, and a wrought iron heel post strap from this yard.[50] Immediately west of the blockhouse, two storehouses had been constructed by private individuals on canal land by 1850 to facilitate the forwarding of flour and wood products along the waterway. In a map drawn in 1867, there were still two storehouses in this position, each with a wharf leading to the canal cut. West of these buildings was the newly constructed militia drill shed.[51]

The lockmaster's domestic needs were sandwiched among these maintenance, commercial, and industrial activities. Fences were built around the blockhouse as early as 1834 to separate it from the surrounding area.[52] As a matter of policy, lockmasters on the Rideau were permitted to use Ordnance lands for the cultivation of crops and the pasturing of animals. Several maps drawn between 1848 and 1860 indicate two gardens near the blockhouse, one directly to the west and another across the lock to the north.[53] Around the former were several sheds which may have been used for the storage

of roots or tools. A privy was located near the garden on the north side. The layout of the station gives the impression of clutter: not a very comfortable living space for the lockmaster and his family.

1867-1909: Declining Stability

During this period, the condition of the building steadily deteriorated due to structural instability and the neglect of the canal office at Ottawa. Successive superintendents of the Rideau were reluctant to spend money on renovations when operations on the canal generally were running at a deficit. Major repairs were undertaken in 1874 when damage to the foundations, the lockmaster's quarters, and the interior structure of the roof, was becoming intolerable. Though this improved the situation temporarily, the lockmaster became increasingly dissatisfied with the living conditions and ultimately moved his family to other quarters near the end of the century. Finally, the second floor was allowed to disintegrate and was dismantled in 1908-9.

A new approach and entrance were constructed in 1867.[54] Two longitudinal members then extended over the ditch, each of which was 30 ft. long and composed of cedar 10 in. in diameter. To permit a more level ramp, some masonry was removed from the door sill at one end while gravel was drawn to the base of the approach at the other. The platform was supported over the ditch by two pairs of vertical cedar posts, each of which was joined by a cross-beam 12 ft. long. The size of the horizontal beams implies that they protruded on both sides of the platform, a fact which is confirmed by a photograph of 1900 (Fig. 7). The surface of the approach was also covered in 1867 with two inch planking; scantling was made into handrails and posts; and the structure was then painted by the carpenters. The documents indicate only

minor maintenance until the end of the century when photographs show a similar structure with cross-beams protruding beyond the edge of the ramp. The approach seems to have been the same width as the door arch (Fig. 7).

A new doorway was also installed in 1867. The materials for door and frame included three hinges, 1.25 doz. screws, 3.25 lbs. wrought nails, 29 ft. of dry pine boards, and a new lock valued at $1.70.[55] There is no evidence of further alterations until the end of the century when a photograph shows a transom with four panes of glass and the frame painted a dark colour to match the approach (Fig. 7).

After replacing his father as lockmaster in 1869, Mathew Johnston wrote a series of reports complaining that there had been no extensive maintenance for 35 years and that the blockhouse was intolerably cold and drafty.[56] By the early 1870s, the roof was leaking and the building was settling dangerously. When the canal office failed to take action, Johnston authorized repairs himself in 1872. The work was done by village contractors and included extensive renovations to the floors, stairs, woodwork, and plaster of the interior.[57] Some tin was also repaired on the exterior around the windows of the second floor.[58] The bill came to $64 in total and was eventually paid by the department.[59] It was perhaps also at this time that the exterior of the masonry walls was first covered with water lime.[60]

Meanwhile, the shifting internal structure was continuing to emit hourly cracking noises and was leading to a dangerous situation in the roof. In 1873, Johnston reported that a gap of ten inches had been opened between the roof and the top of the four main posts. In that year a king-post was erected for the first time.[61] The structure may have taken the modern form which would have involved new horizontal braces between the four main columns and a central beam running between these supports into which the vertical post would be

fastened (Fig. 15). Though these repairs were described as temporary, there is no record of the installation of a permanent king-post system afterwards. Thus the structure presently in place may date from 1873.

In 1874, the canal authorities finally initiated an analysis of the building's structural condition.[62] Its instability was traced to the deterioration of main columns and oak bases in the basement. Rot was particularly severe in the southwest corner where the beams and posts were in contact with the magazine roof. Deterioration was caused in part by dampness which was so extensive that the basement was not usable. However, Mr. Goodfellow, the overseer of repairs, believed that the structure could never be completely stabilized until some of the weight bearing on the posts was removed. The lockmaster was criticized for storing wood for heating purposes in the middle apartment of the first floor. The major problem however was the tremendous weight of the masonry infill between the first and second storeys.

Repairs were undertaken in July and August of 1874. The plan was to raise the frame in the basement and substitute new blocks at the base. Accordingly, eight blocks of timber and six screw jacks were brought to the site.[63] Since the heavy stone roof of the magazine was bearing directly on the surrounding beams, it had to be demolished before jacking could begin. During the ensuing work, the temporary cellar floor, composed of used bridge sheathing, was destroyed and extra expense was caused by the necessity of working in water. There is no detailed list of the materials used, but a cedar 't' post was mentioned, and elm seems to have been used for most of the repairs.[64]

Repairs were also necessary to the exterior of the roof where the action of frost and wind had led to the lifting of some of the tin shingling. The resulting leakage of precipitation into the lockmaster's apartment led to further

damage to the plaster and woodwork which already had been injured by the shifting foundations.[65] Once again, Lockmaster Mathew Johnston made repeated requests for repairs before action was taken.

Finally in 1875, the canal office decided to replace the tin with cedar shingles. This represented an attempt at cost cutting at the expense of safety. Lockmaster Johnston argued that a shingle roof would endanger the building because of the chance of fire from passing steamers. Since the roof was approximately level with the steamer pipes, the danger would be great particularly during a north wind. He argued that storehouses had frequently caught fire in this way.[66]

The final decision to place shingles over the existing tin was also criticized. According to Johnston, local mechanics did not think that the tin underneath would save the building if the roof ignited.[67] In spite of his remonstrances, the department proceeded to take bids and the lowest of four from local contractors was accepted.[68] Joseph Boyd was to do the work for $123.50; he finished the job in July 1875. The contract specified best quality shingles three inches wide, nailed well with two nails per shingle. Zinc sheets were to be placed on the hips of the roof to prevent the penetration of moisture.[69]

A further argument concerned paint with Johnston claiming that the mixture proposed by the department was not sufficiently fire-proof.[70] The canal office insisted on applying two coats of a substance which would have been slightly thicker than whitewash. It included three bushels of roach lime, two pecks of coarse salt, and one bushel of the finest sand -- all mixed together. The railings of the approach to the entrance were also coated with the same substance.[71]

New fire ladders were also supplied in 1875 to replace the existing two which were deemed unsafe. Boyd was to

furnish one of 30 ft. for the roof and one 35 ft. leading thereto, both for a price of $12.[72] These were to have pine sides and oak rungs, and were to be fastened with the old iron key rings. They were to be covered with two coats of fire-proof paint of a slate colour. By the end of the century, these ladders had disappeared from photographs and were not renewed. They may have become unnecessary after the creation of a well-organized village fire brigade in 1902.[73]

In spite of improvements, the building remained an uncomfortable residence. In 1876, Lockmaster Johnston complained of the heating bill which stood at $50 a year for firewood. Because of the building's size, it required three times the fuel of most lockhouses. With the exception of the upstairs rooms, the interior structure had never been lathed and plastered. Given its failing condition, Johnston argued that it would not now justify further repairs.[74] The implication was that a new house should be built for the lockmaster. The canal took no action, though in 1888 Superintending Engineer Wise acknowledged the need to demolish the blockhouse and replace it with a new building better suited as a residence.[75] By 1896, Johnston was living in his own house in the village.[76] He retained some furniture on the second floor of the blockhouse, but it is not clear whether this was used solely for office purposes or also as a summer residence.[77] The first floor was still fully occupied as a storehouse and workshop and apparently had been partitioned for some time.[78]

In the 1890s, photographs were taken of the blockhouse which reveal the nature of the window sash for the first time and make clear that the building's general appearance was deteriorating (Fig.'s 6 & 7). Casement sash was visible in each of the arched window openings of the first floor. Each window was divided in two with the sections opening outwards. Each side contained 10 panes of glass arranged in two

vertical rows of five. Eighteen panes of glass were evident in the window frames of the upper floor. The sash on both levels was painted a dark colour. By this time, discolouration was evident in the tin cladding of the upper storey and the top of the chimney was crumbling.

In 1902, renovations were undertaken at a cost of $90 by Henry Rose, a local contractor.[79] He was given the task of raking out the loose mortar and repointing the exterior masonry, the government supplying the cement and Rose the sand. He was also to add two coats of whitewash to these walls and cover the tin cladding of the second storey with two coats of a "drab colour" supplying his own paint and brushes. The window sash of both levels was to be painted white. On the roof, he was to remove the old shingles and ridge-boards and lay new shingles -- the government supplying nails and "xxx cedar." The shingles were to come from Merrickville if possible; otherwise British Columbia shingles were to be bought from R. Ryan in Smiths Falls. This roofing was to be laid five inches to the weather. Rose was also to furnish ten inch strips of galvanized iron or zinc at each corner of the roof. Rose also seems to have repaired the chimney and installed a mast at the apex of the roof, which improved the appearance of the building and may also have served as a lightning rod (Fig. 8). Following these exterior renovations, the Merrickville Star declared the building to be "one of the ornaments of the town."[80]

The interior displayed quite another character. In 1899, two of the posts in the basement were again jacked up and new sills were inserted. An inspection indicated that the entire interior of the building should be rebuilt, but this subsequently was estimated to involve an expense of $1000 and the department was loath to act.[81] In 1904, the lockmaster began receiving a housing allowance of $80 a year, which was tacit recognition that the building was not

fit to inhabit.[82] By the winter of 1908-9, the masonry infill of the second floor had fallen in dangerously and the structure was removed except for some of the cross-beams. Fifty years later, signs of rot were still visible where the beams of the second floor had been in contact with the masonry.[83] After 1909, the building was regarded solely as a maintenance building by the canal office.

Surroundings

Situated between the town on the south and the mills to the north, the area around the blockhouse continued to serve a variety of purposes, the nature of which are partially obscured due to a dearth of information prior to 1900. To the east, the landscape was altered by the reconstruction of the approaches to the bridge leading over the canal. Between 1892 and 1894, new retaining walls were built on either side of this roadway and a boardwalk with a pipe railing was provided on the side nearest the blockhouse. By 1900, the ditch on this side had also been filled in and grassed over, perhaps as a safety measure to protect pedestrians and perhaps also to improve the appearance of the site.[84]

The grounds to the west and north of the building continued to present an unkempt and cluttered appearance. Fences surrounded the blockhouse throughout the period to divide it from this area (Fig. 7).[85] One storehouse was still in place along the canal cut by the turn of the century. This was the present day depot. It is not clear whether this structure was one of the storehouses erected prior to 1867 or represented a more recent addition.[86] Several wooden sheds of unknown function were situated near it (Fig. 9). The militia drill shed constructed in 1867 had been removed by 1888.[87] The area along the south side of

the canal cut and across the lock to the north seems frequently to have been used for canal maintenance work and storage of timber, stone, and other materials (Fig. 6).[88] The lockmaster and staff still used the remaining part of the reserve west of the blockhouse to pasture their cattle.[89] Towards the end of the period, the town council attempted to have the ground around the blockhouse turned into a public park, but this was rejected by the canal office on the basis that it was still needed for the operation of the station.[90]

1909-60: Maintenace Building

With the removal of the weight of the second floor, the building became much more stable. After 1909, there were periodic renovations, but no further alterations on the scale of those in the earlier years. The main floor continued to be used primarily as a storehouse and work area, although it also provided office space and temporary staff quarters. During these years also, the blockhouse was first recognized as an historic site.

Several improvements occurred prior to 1930. In 1915 or shortly before, a telephone was installed for the use of the lockmaster. This allowed him to be in direct contact with the canal office at Ottawa and also with the staff of the power house who controlled water levels after the building of the new dam in 1916.[91] In 1922, the exterior was refinished: the masonry walls were whitewashed, the tin siding painted, and the roof repaired.[92] During this period, the blockhouse seems to have served as a regional depot for the canal. For instance, in 1926, cement was being stored here for use at Burritts Rapids.[93]

Considerable inconvenience was caused by the fact that the lockmaster no longer resided in the building. In 1920, the superintending engineer of the canal wrote to the

Deputy Minister of Railways and Canals complaining that, because Lockmaster Paul lived in the village, he had trouble hearing the signals from vessels seeking passage through the locks. This was one of a number of attempts to gain subsidized quarters for the lockmaster closer to the canal. The canal office proposed purchasing a house built by a former canalman, but this was rejected by the department on the grounds of cost.[94] It was argued that the lockmaster at Merrickville was being discriminated against, since he was not provided with a house or even a rental allowance: this had been withdrawn in 1911.[95] All other lockmasters along the canal were provided with residences except at Ottawa where the officer was given $12 a month for rent.[96] During these years, the lockmaster may sometimes have resided in the blockhouse in the summer months. This expedient was recommended to Lockmaster Owen in 1933 to save rent and to place him closer to the locks.[97] Finally, in 1935, a house was secured. A canalman's house at the Narrows was removed from its foundations, floated down the canal by barge, and installed near the lower locks.[98]

Further renovations were made to the blockhouse in the 1930s. By 1930 the roof leaked and the edifice generally was in need of repairs which were delayed due to a lack of funds.[99] Money was finally made available by the Public Works Construction Act of 1935. The masonry was repointed and whitewashed and the window and door lintels and sills were set back in place where the keystones had become loose. The sash frames were painted white on both floors.[100] The bridge over the ditch may also have been altered at this time. A photograph taken in 1936 indicates one set of vertical supports instead of two and minor changes in the railings since the turn of the century (compare fig.'s 7 & 10).

The interior was also refurbished. Instead of having

two rooms, the main floor after 1935 contained at least three. Temporary quarters were thus provided for the carpentry staff on the canal. The building already had electricity and a cook stove was provided for the men. However, there was no water, sanitation, or heat.[101] The building continued to serve as seasonal living quarters and a storehouse until the 1950s.[102]

During the 1930s, interest began to grow in the military aspects of the building's history.[103] Communication took place between the Leeds and Grenville Historical Society and Brig. Gen. E. A. Cruikshank, a member of the Historic Sites and Monuments Board of Canada (HSMB), who was a pioneer in encouraging the recognition of historic landmarks.[104] As a result, an initiative for formal commemoration was launched by the National Parks Service. Their first suggestion was to take over and preserve the blockhouse. When this was rejected by the Department of Transport which argued that the building continued to fill a valuable storage function, the two sides agreed that the site could be designated as of national historic significance.[105] Consequently, a 'secondary bronze tablet' was erected by the HSMB with the inscription, "Merrickville Blockhouse. A fine example of the best type of the blockhouses erected for the defence of the Rideau Canal about 1832" (the wording indicates the Board's perfunctory knowledge about the building at the time). The plaque was unveiled 12 June 1940. By the end of the year, the lockmaster was reporting that it was already drawing tourists to the area.[106]

Twice in subsequent years, the Department of Transport rejected overtures from the village to turn the blockhouse into a museum. In 1945, Harry Falconer McLean, wealthy industrialist and philanthropist, proposed to place four hundred dollars worth of imported antique guns on display in the building.[107] Presumably the blockhouse was

considered a suitable repository because of its military past, though it is not clear whether the articles in question had any direct connection with the history of the Rideau. In 1951, a second proposal emphasized the economic benefits a museum would provide in encouraging tourism in a depressed area. On this occasion, the plan received the influential backing of Senator A. N. McLean, Member of Parliament A. C. Casselman, and Senator C. G. 'Chubby' Power, who was a formidable figure in the Liberal Party. In spite of their pressure, however, the Department of Transport held firm arguing that the building still filled an important function as a storehouse and temporary staff quarters. The cost of replacing its facilities was placed at $8000 in 1951, possibly an exorbitant estimate, but one which clearly indicated the department's determination to hold on to the building.[108] In general terms, the structure seems to have been much more successful as a one storey warehouse in the 20th century than as a two storey residence and storehouse in the 19th.

Condition of the Building in 1960-61

At the end of the building's warehouse period, a thorough inspection of the structure was undertaken by engineers from the Historic Sites Branch of the Department of Northern Affairs and National Resources. Their reports constitute a useful record of the condition of the blockhouse immediately prior to the beginning of restoration.[109]

With the exception of work around the posts supporting the main structure, there had been little attention paid to the basement since 1900. By 1960, four of the vertical posts were resting on concrete bases which were superior to wood in resisting humidity.[110] The rest of the cellar had been used as a catch-all by canal employees for surplus

material and garbage. The floor had never been finished and the tops of the magazine walls, damaged during the repairs of 1874, had not been rebuilt. The only entrance remained a trap door leading from the first floor.[111] Seepage of water had continued in spite of improvements made to the lock, basin, and canal embankment between 1900 and 1935.[112] It now seems likely that this leakage was due to ground water as well as run-off from the canal.[113]

The first floor had been maintained in good condition as a storehouse.[114] It was supported by 12 in. square beams overlaid with both joists and rough planking which had been recently replaced.[115] This storey was divided into a central area with four rooms around it. Casement windows were still in place similar to those visible since the late nineteenth century. These were mounted close to the inside surface of the masonry walls.[116]

Abandoned since 1909, the second level was in disarray. There were no stairs leading between the first and second storeys. With the masonry infill gone, only a few cross-beams remained between the walls -- all lying in a west-easterly direction (Fig. 11). Many other beams and joists were missing altogether or protruding only partway into the interior (Fig. 12). The area was apparently used by the canal staff to store garbage. An old tire and other assorted refuse is visible along the base of the second storey walls in a photograph taken at the time.[117] Nonetheless, this level retained some vestiges of its earlier history. Remnants of wallpaper and ochre paint were found on the walls in the vicinity of the old apartment. The remains of a fireplace still stood adjacent to the south wall. The loopholes were covered with shutters and casement windows were in place near the inside of the timber walls.[118]

While the removal of the second floor apparently had eased pressure on the main posts, it had also placed new

stresses on the stability of the walls and roof. There was evidence of slight bulging of the north and south masonry walls which were no longer spanned by the second floor cross-beams. While knee braces were still attached to the inside of the second storey walls, they now rested on temporary blocks which filled the space previously occupied by the masonry lining of the floor (Fig. 13).[119] There were signs of settling in the timber walls and deflection of some of the remaining joists at the base of these walls. Iron strapping had been required to prevent dislocation at the joints of vertical and horizontal members of the structure (Fig. 14). Where this had not been done in the southwest corner, some separation had occurred.[120] The roof structure had also been braced. In addition to the four main posts and king-post suspended between them, sixteen columns were evident closer to the perimeter of the walls. These were mounted on the stumps of the second floor beams and on diagonal beams protruding into the blockhouse from the corners. They extended in some cases to the horizontal members joining the tops of the timber walls to the main posts and in others to the rafters of the roof.[121] They may have been added in 1922 when the department's annual report noted that the roof had been "shored up."[122]

On the exterior, the ditch was approximately four-five feet deep by this time and was surmounted by a "modern timber bridge." Vertical cracking was visible in the masonry and the centre stones of the arches of all four embrasures once again showed downward movement. Some rust areas were evident on the grey metal sheathing of the second floor and the square timbers were found to be rotted behind these spots. The roof was covered with wooden shingles which were generally intact but badly in need of paint.[123]

Surroundings, 1909-60

A major change in the surrounding terrain was caused by the construction of a new concrete dam in 1914-15.[124] Replacing the previous structure which had been situated at the western end of the station, the new dam was located north of the blockhouse and immediately west of the road running across the locks. During its construction, milling activities on the island had been disrupted. Consequently, a temporary saw and grist mill had been erected west of the blockhouse adjacent to the depot.[125] After construction of the dam, much of the land north of the canal cut was permanently flooded. Nonetheless, a privy was still visible in a photograph of 1925 and the remaining ground in the vicinity was still used for storage and maintenance purposes.[126]

To the west of the blockhouse, the depot remained standing, but a park-like atmosphere was encouraged in the surrounding area. Prior to the first world war, the canal authorities had discouraged further pasturage of animals by erecting fences in the vicinity. The Ladies Association of Merrickville had also been allowed to make improvements. They placed seats and benches near the blockhouse and arranged for the building of a bathing house at the western end of the canal reserve where a beach was cleared for swimming.[127] During the rest of the period, an attempt was made to maintain the appearance of the reserve by the trimming of grass and planting of trees.[128]

The land behind the blockhouse was also utilized for community purposes. The area had been leased to the town for the construction of a firehall in 1907, though it is not clear whether a building was actually erected at this time.[129] In 1919, the town received permission to construct a memorial to local soldiers who had fallen in the first world war.[130] The firehall lease was renewed in 1928 and it was probably shortly afterwards that the present concrete-block structure

was erected.[131] Older residents still recall that the roof of this structure was sometimes used as the platform for local band concerts.[132]

The Heritage Period: 1960-79

While appreciation of the blockhouse's historic significance had been growing since the 1930s, it was not until the Department of Transport decided to part with the building in 1960 that this potential could be fully realized. Due largely to the initiative of J. R. Baldwin, Assistant Deputy Minister of Transport, the building was restored as a museum between 1962 and 1965. His first suggestion was for the National Historic Sites Branch to take over the blockhouse. When this was rejected, the work was done by Transport in co-operation with the local historical society. Based largely on the 1852 plans and local traditions, restoration was authentic to the military period except for some details. Since 1967, the blockhouse has been operated by the Merrickville and District Historical Society on a lease from Transport until 1972 and afterwards from Parks Canada.

The Restoration Process

Late in 1960, Transport announced its intention of replacing the blockhouse with a new storehouse as part of its policy of ridding itself of outdated canal structures whenever possible. Baldwin, however, was interested in the historic potential of the Rideau area and convinced that the blockhouse could be utilized as a museum. With the hope of preserving the building, he approached R. G. Robertson, Deputy Minister of Northern Affairs and National Resources, and subsequently also Jean Casselman, MP for Grenville-Dundas, and Allan Hay, Chairman of the National Capital Commission.[133]

The Historic Sites Branch of Northern Affairs showed an early interest. Following Baldwin's overture, E. A. Cote, Assistant Deputy Minister, authorized an analysis of the building's engineering and historic potential. This led to a report by R. W. Mathie which underlined the building's structural instability as a result of the removal of the beams between the first and second floors. O. T. Fuller, branch historian, expressed interest not only in the blockhouse but in the Rideau generally. He recommended that steps be taken to insure that Transport did not destroy historically significant buildings when they were no longer necessary for canal operations. As a result, Robertson wrote to Baldwin in January 1961 expressing interest in preserving the entire line of the Rideau and in July gave an informal commitment to take over the blockhouse.[134]

Within a few months, Historic Sites had changed its position. It was pointed out that the blockhouse was only of limited historic significance: its attraction lay in appearance and location rather than association with important military events. In October 1961 a further engineering analysis indicated that the building could be stabilized on a temporary basis at a relatively low price. With about four thousand dollars in repairs, R. D'Amours concluded, the blockhouse could continue to serve its present function for twenty to thirty years. Because of these considerations, Robertson wrote to Baldwin advising him that Historic Sites was not interested in taking over the structure in the near future and recommending that Transport preserve its exterior and continue to use the interior as before. This would serve as an example of how government buildings could be protected in the future. Since only a few edifices could be or should be turned into museums, preservation could best be assured in most cases by putting the structures to good use.[135]

Transport, however, was determined to go ahead. By the

time of Robertson's new proposal in November 1961, the foundations of a new storehouse, 24 ft. by 30 ft., had already been laid.[136] Baldwin proceeded with his goal of turning the blockhouse into a museum by contacting Jean Casselman, the local MP and, by March 1962, a committee had been organized from the Grenville Historical Society and other persons from the Merrickville area, including several members of the village council, to develop the museum concept. In accordance with the local committee's wishes, Transport agreed to restore the building to its original appearance by 1967.[137]

The features of the original appearance were ascertained by reference to the Royal Engineer's plans of 1852 for the interior and local tradition for the exterior. Several suggestions made for the exterior were not historically accurate. These included a water-filled moat, exposed square timbers on the second floor, and a cedar shingle roof.[138]

A programme for restoration was first laid out in the fall of 1962. L. W. Clark, Superintending Engineer of the Rideau, estimated that the project could be completed between 1963 and 1967 at a cost of twenty-five thousand dollars.[139] The first step in the practical work was taken with the laying of new cedar shingles between August and November of 1962. An estimate of four hundred dollars was made for this job and local contractors were encouraged to bid, but it is not clear who did the work.[140] The intention was to use the regular canal maintenance staff to do the rest of the reconstruction during the winter months when they would not be involved in canal operations.

The original scheme proved unfeasible. In February 1964 Clark reported that little work had been completed because the maintenance staff had been needed elsewhere. He now proposed to complete the work within two years by hiring casual labour to assist canal carpenters working the year round.[141]

By September 1964 substantial effort had been expended. The first floor partitions had been removed to provide space for the labourers. New cross-beams had been laid between the first and second floors to supplement those already present and a sub-floor was in place over the beams and joists. A square-spiral stairway had been erected between the floors according to the 1852 plans. Expenditures thus far amounted to $3420 for materials, $4043 for casual wages, and $3549 for regular wages for a total of $11,012. It was estimated that the remaining work would cost $10,000.[142]

Between October 1964 and spring 1965, the interior restoration was completed. Following the 1852 plans, a series of rooms were installed in the second storey. A wearing floor was also constructed and painted, gun walks were placed under the loopholes on the north and west walls, and the fireplace was restored. In the first storey, the floor surface was patched and the exterior walls and ceiling structure was whitewashed. According to the instructions of the local historical society, the finish was to be left rough: most of the interior including the second floor partitions were only to be whitewashed. Electrical outlets were placed on both floors and flood lights were erected upstairs to illuminate the roof members. A room was built in the northeast corner of the first storey for use of the museum staff; this contained an outlet for an electric heater and was secured by a lock.[143]

Exterior renovations were completed by the fall of 1965. The request of the local group for a water-filled moat was rejected not on the grounds of historical authenticity, but because the continuing problem of leakage in the blockhouse cellar would have been exacerbated by the water.[144] Attempts to remove whitewash from the exterior of the masonry walls were initially unsuccessful and the stone work eventually was sandblasted before being repointed.[145] Analysis by U. J.

Lortie, Assistant Superintending Engineer of the Rideau, indicated that the metal cladding was probably original and should not be removed because this would result in rapid deterioration of the wood structure underneath.[146] In August the ditch was partially filled, graded, and grassed.[147] All work was completed by October 1965 and a lease of the building and surrounding property was made out for a nominal rent of $1.00 per year. The blockhouse was opened to the public in 1966 under the auspices of the Merrickville and District Historical Society.[148]

The Accuracy of Present Structural Features

Exterior

Ditch and Approach

The present landscape reveals only a trace of the original ditch which may have been eight to nine ft. deep. The turf slopes gently down towards the blockhouse on three sides while on the eastern extremity adjacent to St. Lawrence Street, no trace remains of the depression. The elevated approach to the entrance is similar in general concept to the original platform, but probably not identical in detail.

Exterior Walls

These seem virtually identical in appearance to the late nineteenth century. The stonework of the masonry is exposed without whitewash as was the original. The doorway and casement windows are identical to those in the first available visual evidence near the turn of the century and

very likely the same as at the time of construction. An HSMB plaque, mounted in 1940, is still situated at the northeast corner of the masonry floor.

The second storey is still tin-covered, perhaps with much of the original metal. It has been painted a grey colour consistently at least since the turn of the century. The gunport-windows are similar to those in the first photographs of the building.

Roof

The roof is cedar shingled rather than the original tin. The chimney on the south side seems an original feature though it has been restored several times in the intervening years. The mast set on the apex of the roof seems to have been placed there for the first time during the renovations of 1902. There is no trace of the fire ladders which extended from the ground to the top of the roof in the middle of the 19th century.

Interior

Cellar

While there are some differences, several of the features of the basement are similar to the original. The magazine walls are still in place. The floor is still unfinished. There is still a problem with water leakage and deterioration of the wooden columns due to the infestation of vermin encouraged by the humidity. There are now seven columns whereas originally there may have been eight; the missing post would have been adjacent to the magazine wall.[149] These posts are now seated on concrete instead of oak bases and there is no

sign of the timber sills which apparently ran in a north-south direction between the walls (Fig. 5).

First Floor

This is probably similar to the original configuration in consisting of one large unfinished area with exposed masonry walls and overhead timber structure. This area is now used for museum artifacts and contains a small office-washroom in the northeast corner. The staircase to the second floor is based on the 1852 plans though the tread measurements vary slightly -- the depth and thickness presently are 9.25 in. and 2.75 in. compared to 12 in. and 1.25 in. in 1850. There are four columns bracing the second-floor structure. These are supported by diagonal wooden braces and by metal strapping at their meeting point with the horizontal beams -- features which probably were not present in the original construction.[150]

Second Floor

This area has been restored, but with several modifications giving superior stability to that in the nineteenth century. The beams and timber floor surface have been reconstructed without the heavy masonry infill. The roof structure has maintained the king-post truss design which seems to have been adopted during the 1870s (Fig. 15). There are presently five rooms in the same configuration as those shown in 1852, but with one partition removed which would have created a sixth room (Fig. 5). Gunwalks run around the west and north walls; it is not clear from the documents whether these were original features. Although the loops are presently situated 6 ft. 10 in. above floor level, before 1909 there was an additional two feet of masonry resting on

the beams of the second floor, which may have made platforms unnecessary.

The Newboro Blockhouse

Like its counterpart at Merrickville, the Newboro Blockhouse was built on the orders of Col. By in 1832-3. Between 1833 and 1856, it served as a lockmaster's residence, but was regarded primarily as a defensible structure by the British Ordnance Department. After the transfer of the canal to the provincial government, the building experienced a somewhat different fate than the structure at Merrickville. Because of its smaller size, the Newboro Blockhouse was not suitable as a major maintenance or storage facility, but functioned more efficiently as a residence.

In 1888, an extensive reconstruction took place to make a more confortable dwelling. This involved remodelling the blockhouse and construction of an extension which gave the composite structure the appearance of a large frame farmhouse. Afterwards, it served as quarters for families of successive lockmasters until being declared surplus to the needs of the canal in 1962. During the 1960s, the house was largely dismantled and many of the original features were restored to evoke the historic ambience of the blockhouse.

The Blockhouse, 1832-87

A defensible installation became desirable at Newboro when locks were constructed there and at the Narrows to raise the water level of the summit of the Rideau system (Fig. 1).[1] The lock at Newboro was situated at the south end of an artificial channel one mile long which was cut between the

Rideau and Cataraqui Rivers. The blockhouse was located 500 feet northeast of the lock on a height of land from which gun fire could be directed over much of the length of the canal cut (Fig. 17).

Although the channel was constructed under the supervision of the Royal Engineers, Col. By was able to adhere to his plan of using local contractors and materials for the building of the blockhouse.[2] An agreement was signed with William Tett, a carpenter and operator of a saw mill built by his brother Benjamin, who was deeply involved in the development of the new community of Newboro.[3] For the masonry base of the blockhouse, William Tett made use of sandstone similar to that in the lock walls. The upper storey was constructed of eastern white pine which existed in abundance in the area.[4]

Construction took longer than first anticipated. Tett signed a contract for erection of the Newboro and Narrows Blockhouses on 26 December 1831. The terms stipulated a price of £104 stg. for each building and completion by 31 March 1832.[5] By November, much remained to be done on both buildings. At Newboro, the masonry and timber storeys had been erected, but the floors had not been laid; the windows, door, and ladder leading to the entrance were not made; and the roof was not boarded.[6] Tett had received £86.13.4 stg. for both blockhouses and in May 1833 was paid an additional sum of £48.9.5½.[7] By August of that year, the building at Newboro was virtually complete except for the installation of knees to reinforce the interior of the second floor walls.[8] Authority for shingling, clapboarding, and the erection of knees was given in November and the work was probably finished before the onslaught of winter.[9]

While generally similar in conception, the buildings at Newboro and the Narrows were constructed on a much smaller scale than the blockhouse at Merrickville. Their

lower storeys were 24 feet square which was approximately half the size.[10] They also lacked masonry infill between the first and second storeys and the tin cladding on the exterior of the upper walls and roof.[11] Clearly they were not as well protected as the building at Merrickville, probably because the summit area of the canal was regarded as less vulnerable to attack from the border because of the absence of good roads.

Exterior

Masonry Storey

The first floor walls were constructed of solid masonry which tapered from a thickness of three feet near their base to approximately 2.5 feet at the top (Fig. 19). The masonry consisted of granite blocks at the corners measuring 15 in. by 34 in. by 15 in. with rubble sandstone between.[12] Since this storey was intended only for storage, the only openings were protected air holes which were centred on each wall.

Upper Storey

The second storey was 28 feet square and extended over the edge of the first by two feet on each side (Fig. 19). Each wall consisted of seven squared timbers averaging 15 inches in thickness and 14 to 19 inches in height which were dove-tailed at the corners. The walls were approximately nine feet high.[13] The upper storey was covered with clapboard of unknown dimensions in the fall of 1833 or spring 1834 and this subsequently was whitewashed.[14]

The openings in this storey are visible in a Burrows sketch of 1841 (Fig. 18) and seem identical to those later

uncovered during the restoration process in 1967. Loopholes were centred on each wall; each was 48 inches long and 4 inches high. These loops were situated between gun ports which were approximately 2 ft. 9 in. wide by 2 ft. 2 in. high.[15] The opening at the south end of the west wall was slightly larger than the rest. Instead of a gun port, a door was constructed on the west end of the south wall to provide access to the blockhouse. A stairway with railings leading to the ground is visible in the Burrows sketch (Fig. 18). The type of window sash is unknown.

Roof

The second storey of the structure was topped with a pyramidal roof which was shingled in 1833, probably with cedar shakes.[16] The Burrows sketch shows a chimney on the west side and this is confirmed in the plans of 1852 (Fig.'s 18 & 19). There is no evidence of fire ladders.

Ditch

It is not clear whether a ditch ever existed for defensive purposes around the blockhouse. One is shown in the Royal Engineer's plans of 1852 and in maps of 1849 and 1860, but these sources are not reliable on this point (Fig. 19).[17] A contractor's journal of 1849 indicates that fill was then being placed around the blockhouse and that the area was being smoothed and sodded.[18] If a ditch had existed, it had been removed before the maps and plans were drawn.

Interior Structure

The blockhouse was stabilized by a supporting structure extending from the base to the apex of the roof. Because of

the smaller size of the building, this was less extensive than that in the Merrickville Blockhouse.

Although the upper storey of the Newboro Blockhouse was carried principally on the masonry walls, the plans of 1852 also show four internal posts bracing the second floor cross-beams (Fig. 19). The plans are inconsistent about the base of these posts. While buttresses are shown extending from the corners of the wall in one drawing, these are not clearly indicated in the elevations accompanying the plans. The elevations, however, do seem to indicate a crawl space under the first floor which together with air holes, which were located close to the base of the walls, would have permitted air circulation to prevent rotting of the floor joists.[19]

The cross-beams of the second storey were found virtually intact in the 1960s. Composed of eastern white pine and shaped with a broad axe, these pieces averaged 10 in. by 12 in.[20] The main beams ran east-west and were secured by mortise and tenon to shorter pieces projecting over the northern and southern walls and extending diagonally towards each corner (Fig. 20). The square-timber walls of the upper storey stood on the ends of these beams and were braced on the interior with one-piece wooden knees which were joined to both the walls and floor. These L-shaped braces averaged five inches in width and three feet along each of the two sides. Two were fastened to each wall with 0.75 in. iron bolts.[21] The walls were further stabilized at their tops by cross-beams which met in the centre of the interior space. Knees were also bolted in place at the intersection of these horizontal beams with the walls.[22]

A king-post structure led from the point of juncture of these cross-beams to the apex of the roof, a distance of approximately eight feet. The vertical post was ten inches square. It supported four diagonal members which extended

from its base to the underside of the roof where they met timbers leading from the top of each wall to the top of the king-post.[23] All these pieces were fastened with mortise and tenon joints and made tight with tapered wedges and one inch diameter wooden pins shaped with a broad axe.[24] The 1852 plans show further vertical bracing between cross-beams and roof, but this may be apocryphal (Fig. 19).

Evolution, 1833-87

During the first decade after construction, the blockhouse received only minor repairs. The masonry was pointed and the clapboarding whitewashed, but more substantial renovations were delayed.[25] The Ordnance Department seems to have been reluctant generally to make expenditures on the Rideau since the canal was already operating at a chronic deficit in spite of the revenue from tolls.

Between 1849 and 1852, major improvements were finally made to the blockhouse in order to make a more comfortable residence for the lockmaster. The work was carried out by Peter Christie and Alexander McIntosh, two contractors frequently employed by the canal. The interior of the masonry storey, which was probably used only for storage, was insulated in 1849. The contractor's journal refers to furring which would have consisted of a rough coating of scantling and plaster applied to the masonry to reduce dampness.[26]

A permanent apartment seems to have been constructed on the second floor for the first time. Walls were lathed and plastered; door trim and skirting were installed and painted. Ceiling joists were erected to support a new ceiling which was lathed.[27] A new floor was also laid.[28] More than a century later, patches of old flooring were found during an inspection of the building shell. The surface had been cut

in several places to accommodate the alterations of 1888, but the remaining flooring may have been that installed in 1851. It consisted of 2.5 in. pine boards 14 to 16 in. wide with 0.5 in. by 0.25 in. splines wedged between the joints of the boards.[29] After this work, the plans of 1852 show the second storey divided into five rooms (Fig. 19). Access to the lower storey was by an interior trap door and stairs. On the west side of the second floor a chimney was located which was probably connected to a stove. The stove would have been used mainly for heating purposes since a cookhouse existed near the blockhouse for use at least during the summer.[30]

Substantial renovations were also made to the exterior during this period. The ground surrounding the blockhouse was levelled and sodded in 1849 obliterating any ditch which might previously have existed. A surface drain was also installed from the building at this time and cribs were built into the ground around each air hole at the base of the structure to permit free circulation of air.[31]

Changes were made in the entrance to the blockhouse on the second floor. A new porch and door frame were constructed and painted by Peter Christie in 1851.[32] In the 1852 plans, the doorway, located at the southwest corner of the building, was 6 ft. 3 in. in height. It was surrounded by a small porch and railing which projected slightly beyond the entrance on the west side. The stairs had 12 risers leading to ground level (Fig. 19).

Other improvements were made to the exterior. Fillets or cleats were installed to brace the projecting underside of the upper storey. New window frames were constructed for this storey. Their configuration is unknown, but casement sash is likely since this predominated on the canal at the time. Some clapboarding was replaced and the walls were again whitewashed. There was some evidence of deterioration in the roof, probably caused by leakage.

Damaged rafters, framing studs and shingles were replaced.[33]

Although the blockhouse served principally as a residence for the lockmaster, its defensive capabilities were also kept in view by the British Ordnance Department. The station at Newboro was regarded as part of a military transportation route. In 1843, the lockmaster recorded that a labourer was cleaning arms which indicates that weapons were being kept near the lock.[34] In barrack estimates of 1841 and 1852, the blockhouse was judged able to accommodate 20 non-commissioned officers and privates.[35] Armed troops were present at the station on only one occasion after the construction of the blockhouse. During the rebellion crisis of 1837-38, members of the second regiment of Leeds Militia were on duty at each station from Newboro to Jones Falls between July and September 1838.[36] At Newboro, they may have been billeted at the old barracks as well as the blockhouse. The barracks had been constructed to house members of the Royal Sappers and Miners during the excavation of the Isthmus channel; it stood north of the blockhouse on the west side of the embankment.[37] It is not clear whether the militia stayed on at Newboro after they were replaced at Jones Falls by British regulars in September 1838. There is no further reference concerning the presence of troops after that date.

After the transfer of the canal to the Provincial Department of Public Works in 1856, the blockhouse served more exclusively as a lockmaster's quarters. Few repairs were made to it during the next 30 years. New stairs and a porch with handrail were installed in 1866 at a cost of $20.[38] In 1879, Charles McGonigal, a contractor from Newboro, made further repairs to the stairs and to the clapboarding on the second storey. He also completely reshingled the roof at a cost of $140.[39]

Surroundings

For purposes of analysis, three areas may be distinguished around the blockhouse during this period. Closest to the structure was a series of buildings and gardens designed to satisfy the domestic needs of the lockmaster. Immediately adjacent to the lock were several structures intended for the use of the canal. Directly across the lock, there were several buildings constructed during the excavation of the Isthmus together with accommodations for the lock labourers.

A number of buildings are visible near the blockhouse in the Burrows sketch of 1841 (Fig. 18). In the map of 1849 these are identified as a roothouse, stable, shed, and cookhouse (Fig. 17). The latter was located southwest of the blockhouse and was renewed in 1851 with boards drawn from the ruins of old buildings close to the station.[40] A road was built to the blockhouse from the direction of the village to the east in 1851[41] and a garden also existed during this period to the northwest. As at other stations, the staff at Newboro were allowed certain privileges to compensate for their low wages. The lockmaster and several labourers were given free housing and the right, without prior approval, to use government lands not needed by the canal for the erection of personal outbuildings and the raising of crops.[42] When the gardens of the lockmaster and labourers were inadvertently sold in 1870 to Michael and John Shea, the department reiterated its commitment to the staff and took measures to insure that no further sales took place.[43]

The canal buildings near the lock were a carpenter's shop and a watch office. Both were renovated in 1850 and were still standing ten years later (Fig. 17).[44]

There were also several buildings across the lock. A one storey building with loopholes, which probably dated from the construction period, was shown in the Burrows

sketch of 1841. By 1848, this and other original structures along the mile long channel at the Isthmus were in poor repair and were removed soon after.[45] In the meantime, in 1840 two locklabourers had been employed building houses for themselves on the west side of the lock.[46] These were constructed at least partly of stone since the lockmaster recorded them being pointed in 1843.[47] Subsequently, the labourers' houses, with outbuildings and a garden, were indicated on the maps of 1849 and 1860 (Fig. 17).[48]

An "Old Wooden Farm House": 1888-1962

The history of the blockhouse during this period is one of neglect by the canal authority broken only by one major attempt at renovation. In 1888, the old blockhouse, which always had represented an uncomfortable marriage of domestic and military considerations, was almost completely rebuilt in the style of a typical farmhouse of eastern Ontario. Except for minor innovations, no further changes were made until the 1920s when a small addition was added and the interior renovated to forestall total reconstruction. By 1962, the building was in very poor condition and had been abandoned by the lockmaster who now lived in the village of Newboro. This marked the end of the building's career as a residence.

The decision to transform the blockhouse in 1888 represented belated recognition of the passing of the military era on the canal. The work was done by Charles McGonigal of Newboro, who was a former locklabourer now involved in contract work on the canal. Completed between August and October 1888, the new residence cost the Department of Railways and Canals $775, exclusive of painting which the department decided to do itself.[49]

The old structure served as the basis for the new. Doors and windows were cut into the masonry walls which were

covered with plaster cement later described as stucco (Fig. 21).[50] On the second storey which still overhung the first, several of the gunports were enlarged to provide more light while another of the ports and the firing slits were covered with clapboard.[51] The roof was altered from a pyramidal to a gabled configuration with the gables at the north and south ends. Most of the west wall of the blockhouse was removed to make way for a two storey frame addition 24 ft. by 21 ft.[52] The extension fit flush with the original building on the first floor, but approximately two feet of the second storey of the blockhouse projected beyond the surface of the addition on the north and south walls (Fig. 22).

The original blockhouse and extension were finished in a complementary style. With the exception of the masonry section of the blockhouse which was stuccoed, the walls were clapboarded. Vertical wooden trim was placed at each corner. Wide fascia boards ran under the eaves and were complemented by skirting boards at the bottom of the projecting storey. The window frames were of double-hung sash with four panes of glass each. The trim and the clapboard siding seem always to have been painted in contrasting colours. In a photograph taken in 1904, the walls appear to have been the standard government grey while the trim was painted a darker colour (Fig. 21).

The house was capped with two intersecting gable roofs set at right angles. The roof of the extension featured a returned gable configuration on the west end and merged with the sloping section of the blockhouse roof on the east. These surfaces seem to have been shingled with cedar shakes. In the photograph of 1904, ridgeboards are evident running along the apex. Brick chimneys protruded at the western end of the extension and the northern end of the main section (Fig.'s 22 & 24).

Several photographs taken after the turn of the century indicate the position of the door and window openings (Fig.'s 21-3). On the south side which measured 45 ft. in length, there were two doors, one in the extension and one in the original blockhouse section, each flanked by a window on the right. A porch roof projected over the first storey extending the length of the extension and protruding slightly over the original section. In photographs of 1930 and 1934, vines ran along the underside of this roof and continued along the bottom edge of the projecting storey of the blockhouse relieving the severity of the building's rectangular lines. There were three windows on the second floor, one in the extension and two in the blockhouse proper in the positions formerly occupied by the doorway and a gun port.[53]

On the west side, there were two windows on the first floor, but none on the second. On the east, a small doorway had been cut into the masonry near the south corner and a window was positioned to the right of the door at the top of the first storey.[54] On the upper storey, the gun port on the south had been converted into a window while the opening on the right had been covered with clapboard. There are no views of the north side available for this period. A photograph taken in the 1960s indicates two windows on the upper level of the blockhouse section similar to those on the south side. One window is also visible on each floor of the extension (Fig. 24).

Between 1888 and 1920, the building seems to have received only minor maintenance. In 1899, the ceilings were replastered and small repairs of an unspecified nature were completed in 1906 and 1913.[55] The building was also repainted in 1894, 1904, and 1914.[56]

By the 1920s, the house was described as in a deplorable state and major renovations were again undertaken.[57] A new frame kitchen was built at the back of the blockhouse section

in 1923 at a cost of $500.[58] Measuring 14 ft. by 14 ft., it featured a roof sloping down from the bottom of the second storey windows (Fig. 24). The lean-to was clapboarded and finished with vertical corner trim similar to that on the rest of the building. In a photograph taken in 1964, a door and window are visible on the east side of the kitchen. There were also a door and window on the north side. Appended to the west end of the lean-to was a small addition, perhaps five to six feet long, with a doorway: this may have been a privy which had been added later (Fig. 24).

In September 1923, a contractor by the name of McCreary and four carpenters began repairs estimated at $1500 on the main building.[59] The roof was completely reshingled at a cost of $140.[60] There were few other changes visible on the exterior, though the house was described as partially rebuilt (Fig. 22). This suggests that much of the work was expended on the interior where plastering is known to have taken place.[61] The building was already somewhat more comfortable by this time as a result of the installation of electricity in 1921 and a telephone in 1923.[62]

After 1924, few improvements seem to have been made. The lockhouse was painted a slate grey colour with white trim in 1926 and this colour scheme is visible in a photograph of 1930 (Fig. 22).[63] In that year, a concrete cistern was installed in the cellar to replace an old wooden one which was in poor condition.[64] Repairs were made to the new kitchen and its roof in 1935 for a total cost of $50.[65] After 1935, a curtain is drawn across our view by the absence of extant files dating from the period of superintendency of the Department of Transport.

By the 1960s, the building was painted white and had a red roof. The porch along the south side had been extended eastward to cover the doorway in the blockhouse section, a distance of perhaps 10 ft. Ventilation ports are visible in

the north and south gables. The shingles were asphalt. They covered sawn roof boards which may have dated from the reconstruction of 1888. These pieces were 1 in. thick and up to 17.5 in. wide and were fastened to the rafters with square nails and to each other with tongue and groove joints.[66]

After the death of Lockmaster King in 1962, the house was declared surplus. The new lockmaster preferred to live in town and the department had concluded that the old structure was not worth maintaining.[67]

The Interior

There is little information regarding the interior during this period. A departmental report of 1930 indicates that the house then contained seven rooms.[68] For other data, the researcher must rely heavily on the as-found drawings of 1967 which unfortunately were compiled after the removal of the extensions on the west and north sides and the internal partitions of the blockhouse itself.[69]

There is scanty evidence concerning the base of the building after 1888. A crawl space was discovered under the blockhouse portion during an inspection in the 1960s.[70] The major extension had apparently contained the cellar in which the cistern had been replaced in 1930.[71]

The first storey of the blockhouse may have had a kitchen prior to the construction of the northern extension in 1923. In the as-found drawings, a doorway and an opening for a stove pipe are evident in the north wall which would have led to the later kitchen addition.[72] The extension, resting on a concrete foundation, was likely used the year round. In the 1960s, it was noted that the ground floor of the blockhouse had been used only as a root cellar for many years.[73] In fact, much of it may not have been in use at all. The drawings show plaster in the southeast corner suggesting

partitions in that area. They would have run roughly from the mid-points of the south and east walls meeting to form a room reached by the door on the east side of the house.[74] This door was unusually small, 5 ft. 5 in. high, suggesting an entrance to a storage area.

An opening approximately 15 ft. wide in the masonry of the west wall facilitated integration of the older section with the 1888 addition. There was a similar area cut away in the timber wall of the upper floor and a large hole in the adjacent floor area which indicated that the main stairway between the two levels of the house was probably placed at the conjunction of the old and new sections.[75]

In the upper storey, the ceiling had been constructed above the bottom of the major cross-beams leaving them partially exposed.[76] Above these beams were the remnants of the original roof structure. Only the king-post and one of the four original diagonal braces were still in place.[77]

There may have been a bathroom on the east side of the second storey. A small exhaust pipe is visible in the east side of the roof in a photograph of 1964 (Fig. 24). Sewage pipes were discovered on the underside of the second floor and openings in the flooring on the east side could have accommodated their attachment to fixtures.[78]

Peter John Stokes, consulting architect, noted a small cupboard built in the remnants of a gun port on the west wall next to a doorway leading to the extension.[79] The configuration of rooms in this addition is unknown.

This large building was heated by stoves attached to two chimneys at the western and northern extremities of the structure built in 1888 (Fig.'s 21, 23, & 24).[80] These stoves were probably wood-burning. According to Mrs. Edgar Whalen, wife of a Newboro locklabourer in the inter-war period, this was then the norm in the surrounding area.[81] A central furnace was never installed and, by the 1960s, the

house was described as "an abomination to heat."[82]

Surroundings

After the reconstruction of 1888, efforts were made to improve the appearance of the yard directly around the lockhouse. During the tenure of Lockmaster Dargavel from 1888 to 1921[83], a decorative fence was erected immediately in front of the house. This had a wooden frame with wire facing and two entrances in line with the doorways in the building (Fig.'s 21-2). By 1930, this seems to have been painted white. In 1914, permission was given to the lockmaster to erect a flag pole and this is visible at the east end of the fence in photographs taken in the 1930s.[84] By this time too, a number of small coniferous trees had been planted around the house.

The outbuildings visible on the map of 1860[85] seems to have been replaced as they deteriorated over time. Lockmaster Dargavel was allowed to erect a stable which may be the structure visible directly behind and to the east of the lockhouse in 1904 (Fig. 21). In 1925, this was torn down and replaced with a new structure costing $1000, which utilized some of the old materials.[86] In 1934 this stable can be seen in the same position as the previous one. It was a one storey frame structure with a roof sloping down on the north side (Fig. 23).

Directly behind this building was the outline of another which may have been a separate entity or an extension of the stable. To the east was a one storey frame structure with a gable roof and the outline of a wide door. This also seems to have featured a small door in the gable and may have been an ice house.[87] Though these buildings may not have been painted in 1930[88], by 1934 they were a dark colour with light trim. Another building, perhaps unpainted, stood to the

west of the lockhouse. Probably a shed, this was also a one storey frame structure with a roof sloping down on the north. Nothing is known concerning the origin of any of these buildings.

During the 1930s, the lockmaster was still permitted to utilize the grounds to supplement his income. Lockmaster Lyons owned a horse and two jersey cows which were probably housed in the stable and pastured on the surrounding rolling fields. He also maintained a garden.[89]

By the 1960s, little of this establishment remained (Fig. 24). All the outbuildings seem to have been removed with the exception of a frame garage located on the west side of the house.[90] A dirt road approached from the east and proceeded to the lock passing to the south of the lockhouse. The country farm ambience was slowly fading away.

The Blockhouse Restored: 1962-79

The process leading to restoration of the Newboro Blockhouse in the 1960s was somewhat different than that for the Merrickville Blockhouse. Believing the Newboro building to be less historically significant, the Department of Transport was more reluctant to undertake the work. Restoration was begun only after plans were underway to convert the whole of the canal into a national historic resource and the Historic Sites Branch of the Department of Northern Affairs and National Resources played a more prominent role than at Merrickville in preparing the plans for reconstruction.

The Newboro Blockhouse was declared surplus in February 1962 after Mrs. King, widow of the last lockmaster, moved out.[91] According to the Department of Transport policy of phasing out staff housing, the building should have been leased, sold, or demolished.[92] By this time, however, an understanding existed with the Historic Sites Branch to

co-operate in the disposal of historically interesting structures.[93]

For approximately four years, the fate of the blockhouse hung in the balance while the Historic Sites Branch and the Department of Transport negotiated. The former were anxious to see the building preserved, but lacked the funds to insure this. J. S. Baldwin, Deputy Minister of Transport, was reluctant to commit his department to maintain the structure. The blockhouses at Newboro and Narrows, which had become surplus almost at the same time, were regarded as less interesting than that at Merrickville because their original configuration had been almost totally obscured by later accretions.[94] Unlike the Merrickville Blockhouse, they were not obvious historic landmarks. Baldwin also believed that commemoration of one blockhouse on the canal was sufficient for historical purposes.[95]

This attitude changed slowly as interest grew in the history of the canal. By 1965, discussions were underway between a number of federal and provincial agencies concerning the establishment of a heritage waterway along the Rideau.[96] In that year, the Department of Transport committed itself to restoration of blockhouses and other early defensible structures on the canal as they became vacant and as funds became available.[97]

In 1966, the department began work on the Newboro Blockhouse. Since historical interest focussed on the military period, the department proceeded by stripping the original building of the accretions acquired since 1888. By December 20, the western extension and the smaller kitchen addition on the north side had been removed.[98] The clapboard and window frames covering the openings in the second floor were gone and the interior partitions dismantled. As a result, when Historic Sites staff arrived to record the building on December 29, little evidence remained of the

structure erected in 1888.[99]

The Department of Transport proceeded with the advice of the Historic Sites Branch. In spring 1967 the latter agency prepared as-found drawings and plans which were made available in July.[100] It was assumed that the finished building would become a museum in the hands of a local historical society. For this reason, the Historic Sites Branch recommended that a doorway be built into the first floor, although this was not historically accurate, and that electric heating be provided to maintain the condition of artifacts.[101] In fall 1967, the restoration was begun by a contractor named Burns from Smiths Falls.[102] Plaster and stucco were removed by hand from the masonry storey. Gaps in the masonry resulting from the renovations of 1888 and afterwards were filled with cut stone and rubble. The masonry finally was sandblasted and pointed.[103]

The second storey was dismantled prior to reconstruction. According to Lloyd Lortie, former assistant superintending engineer, the old timbers were marked and B.C. fir brought in to replace those which had become decayed. The new pieces were allowed to dry for a year and then were trimmed and notched with broadaxe and adze by Lorne Pinch of Morton.[104] A photograph taken in July 1968 shows new timbers alternating with the old (Fig. 25).

By September of that year, much of the work had been completed. The timber walls were standing and a pyramidal roof had been constructed.[105] The exterior lacked stairs, shingles, and window sash. C & L Construction of Smiths Falls had been engaged to build a brick chimney on the west side.[106] These features were finished soon after.

Because an outside agency could not be found to take responsibility for the building, the interior was never reconstructed. It consisted of two empty spaces divided by

the floor of the second storey. A trap door and temporary ladder provided movement between the two. The structure was not heated.[107] Since 1968, it has been used only briefly as a centre for craft demonstrations and more lately as a storehouse for Parks Canada materials.[108]

The Accuracy of Present Structural Features

Exterior

Masonry Storey

The stone walls are original with the exception of new materials which were required to fill the gaps created by the renovations of 1888. As in the period 1832-1887, the stone has been left exposed, though it has been sandblasted and repointed.[109] A doorway has been installed on the east side to permit entry of visitors in the event that the interior should be used as a museum. There was none in the original walls which were intended to repel invaders.[110] Ventilation ports have been reopened in the east and west walls, but protected openings are shown on all four sides in the 1852 plans (Fig. 19).

Upper Storey

The entrance on the south side is similar though not identical to that in the 1852 plans. A wooden stairway with railings and 18 risers, as opposed to 12 in 1852, leads to a porch which extends to the east side of the door, instead of the west as in the early plans.[111] The door is 6 ft. high of double plank construction with steel nails instead

of hand wrought iron.[112]

The squared-timber walls approximate the originals though much of the eastern white pine has been replaced with B.C. fir.[113] In a major departure in appearance, these timbers and the protruding floor beams on which they rest have been left exposed and stained a dark colour. In the 1830s, these features were covered with clapboard which was then whitewashed.[114] Fillets were added to the underside of the projecting upper storey in 1851; these have not been duplicated.[115]

The openings in this storey consist of loops flanked by ports similar to those in the 1852 plans. The latter have been fitted with windows set back in the apertures. Each window consists of 9 panes of glass with the exception of that on the south end of the west wall which contains 12.[116] These windows are covered with wire mesh on the outside and set on horizontally sliding sash on the inside.[117] The casement-style appearance was common during the military period of the canal, though the actual configuration of the windows at Newboro is unknown.

Roof

In height, slope, and overhang, the roof seems to reflect the appearance of the original structure. It is pyramidal and covered with cedar shakes. A red brick chimney enters near the edge of the western slope.

Interior

Ground Floor

Although plans for restoration were drawn up in 1967, they were never carried out. There was almost certainly a crawl space located under the floor of the blockhouse ca. 1850.[118] The base of the building is presently filled with gravel dumped by the Department of Transport in 1967.[119] The plans of 1852 seem to indicate four interior posts bracing the second floor beams (Fig. 19). There were plans for two 10 in. by 10 in. posts mounted on concrete bases in 1967, but these were not installed.[120] Instead of stairs leading to a trap door in the second floor, a temporary ladder now provides access. The masonry walls have been left exposed though they were covered in 1849 with a rough layer of scantling and plaster to reduce dampness.[121] In other respects, the unfinished appearance is appropriate in evoking the ambience of an area used mainly for storage during the military period.

Upper Floor

The supporting structure seems almost identical to that thought to have existed in the mid-19th century. The pattern of floor beams revealed in the as-found drawings in 1967 was duplicated in restoration (Fig. 20). This required replacing some if not all of the original pieces.[122] New elm braces were cut from the local woods.[123] Two of these elbow pieces were placed on each side at the intersection of the wall and floor. One more was located at each juncture of the walls and the two cross-beams forming the base of the roof.[124] A king-post, perhaps the original one, was located at the intersection of these beams and

diagonal supports spread from the base of the post to the underside of the roof. One of these had been extant in 1967 and this may have been used in reconstruction.[125] A steel tie rod, not in the original design, was incorporated into the roof frame.[126]

The interior of this storey was prepared for finishing. A new floor of whip-sawn pine was laid with almost identical features to that found in the building in 1967. The planks were approximately 12 in. wide and 2.5 in. thick with wood splines. They were fastened to the floor timbers with wood pegs.[127] A red brick chimney was situated on the west wall and braced on the floor. Built by C & L Construction of Smiths Falls, it contained a thimble for a stove pipe and a metal cleanout door.[128] It was located in the same spot as the chimney indicated in the 1852 plans (Fig. 19). The gun loops were fitted with wooden covers hinged to swing down and the port holes contained horizontally sliding sash.[129]

In spite of these features the rest of the interior was never completed. The second storey lacked partitions, lathing, and plaster which had existed in the 1850s (Fig. 19).[130] The timber walls and inside roof structure were left exposed. Thus the building remains, protected from the weather but without a clearly defined use.

Surroundings

Little evidence remains of the history of the surrounding area. It is not clear whether a ditch ever existed around the building[131]; but the ground is presently level immediately adjacent to the masonry walls. A frame garage still stands to the southwest of the building. On the east, a pump is situated a few feet away from the structure. A concrete slab is still in place to the north which may have

been the foundation of one of the sheds.[132] These are the only reminders of the cluster of buildings which once served domestic and agricultural functions for the lockmaster and his family.

The Guardhouses at Jones Falls and the Whitefish Dam, 1838-1939

These guardhouses were erected in 1838-39 in response to the rebellion crisis in the Canadas which made evident the need for more effectual defence of the canal in the vicinity of Jones Falls. Between 1839 and 1842, the buildings served as accommodation for militia stationed at Jones Falls and the dam on Whitefish Creek about three miles away. Afterwards their furnishings were kept in storage by the lockmaster of Jones Falls during the tenure of the Ordnance Department on the canal. On the eve of the waterway's transfer to the provincial government, these supplies were sold to the public in 1855 signifying the end of the military function of the buildings.

After 1856, the buildings were put to little use. The guardhouse at Jones Falls was occupied as a lockman's residence while the structure at Whitefish was rented periodically to private individuals. By 1900, both buildings had been abandoned. In spite of interest expressed in their historic significance by passing tourists, they were allowed to deteriorate until the guardhouse at Whitefish collapsed completely in 1929. In the 1930s, some money was expended on the building at Jones Falls before it was finally dismantled in 1939.

Although called blockhouses at the time of their construction, these one-storey buildings will be described here as guardhouses to distinguish them from the two-storey structures at Merrickville and Newboro. These guardhouses,

however, are not to be confused with the temporary guard-room erected at Whitefish only a few months before the construction of the more permanent structures.

The Military Period: 1838-1856

During the months of tension following the rebellion of Upper Canada, fear was expressed for the safety of the canal especially at Kingston Mills near the American border and Jones Falls.[1] The latter was vulnerable not only because of the complexity of the works at the station, which included a keystone dam more than 60 feet in height, but also because of the Whitefish dam located several miles away. This edifice prevented the escape of water into the Gananoque River system and preserved a navigable level through the lower three stations on the Rideau.

Thus, in July 1838 militia forces were sent to Jones Falls and Whitefish as well as several other stations on the canal.[2] The soldiers in the vicinity of Jones Falls were members of the Second Leeds Regiment who had been assigned by their Commanding Officer, Colonel Charles Jones.[3] The detachments included a sergeant and a dozen rank and file at the locks and a sergeant with eight men at Whitefish.[4] They were under the immediate command of Captain James Schofield who arrived on 10 July with arms and ammunition for the men.[5]

A problem of accommodation arose at Whitefish where there was no shelter within one half mile of the dam. Permission was given in July for construction of a temporary guardroom.[6] Work began in August with the transportation of boards from Brewer's Mills and three locklabourers were involved in the construction.[7] As the total cost was only £5.6.5, the structure must have provided very rudimentary cover.[8]

Several personnel changes occurred in the detachments over the next months. The Leeds militia was replaced in September by regular soldiers of the 71st Regiment of Foot (Highland Light Infantry) who occupied four rooms of the lockmaster's house at Jones Falls and presumably the new guardroom at Whitefish.[9] They were withdrawn in October in accordance with the strategy of Sir John Colborne, Commander of Canadian forces, to concentrate regulars at major points while militia would defend most public installations.[10] The regulars were relieved by men of the Glengarry militia who by December had been replaced in turn by members of the 4th Battalion of Incorporated Militia, which had been formed specifically to deal with the threat of further upheaval.[11] During the winter, 13 privates and one sergeant were stationed at each site.[12]

In the meantime, more permanent provision had been made for housing the men. In August 1838, approval was given for the construction of guardhouses at the two sites to cost a total of £196.0.1½.[13] Work began in October at Jones Falls and November at Whitefish.[14] It was carried out by Lockmaster Sweeney and his labourers, with the assistance at Whitefish of John Purcell, the Lockmaster at Davis.[15] The foundations were first cleared and the buildings underpinned with stones. Materials were received by scow, possibly from canal stores at Bytown.[16] The edifice at Jones Falls was completed in January 1839 and the one at Whitefish in February.[17] Subsequently a gallery was built on the Whitefish guardhouse in March and the two buildings were inspected by the barracks master in April and turned over to the soldiers.[18]

Both guardhouses were situated on promontories overlooking the works being defended. At Jones Falls, the building sat on a hill adjacent to the basin separating the combined and detached locks (Fig. 27). The structure at

Whitefish was erected on a high cliff almost directly overlooking the dam with a sweeping view of the surrounding lakes and countryside (Fig. 28).

According to later evidence, the buildings were almost identical in configuration (Fig. 29). They were one-storey edifices composed of squared-timbers dove-tailed at the corners. 20.5 ft. by 22.5 ft. in size, they were loopholed on all sides and capped with cedar shingled hipped roofs (Fig. 36). Each possessed an enclosed defensible porch at the entrance. At Whitefish, this porch was surrounded by an open gallery (i.e. verandah) which gave a sweeping view of the terrain to the south (Fig. 30).

During their construction in the winter of 1838, makeshift accommodation had to be provided for the militia. By January 1839, the guardhouse at Jones Falls apparently was in use as the lockmaster made a note of having taken wood there for the use of the militia.[19] The structure at Whitefish, however, was not ready until later. In the meantime, efforts were made in December 1838 - January 1839 to make the temporary guardroom inhabitable. A contractor, Charles McGonigal was hired to install a floor, paint the walls, and install shutters on the windows.[20] In spite of these efforts, the detachment was billeted at least in part at a building owned by Ira Haskin who later claimed compensation for damages done to his property.[21]

Both guardhouses were occupied almost continually by detachments of the 4th Battalion of Incorporated Militia between April 1839 and April 1843. Captain Schofield's Company was on duty until April 1840 when the battalion's original term of service expired and it was due to be disbanded.[22] A party was held at the Jones Falls guardhouse in March 1840 prior to the removal of the detachments at the station to Kingston.[23] However, when the 4th Battalion was reconstituted for a further two year term in May,

members of Captain Jessup's Company returned to Jones Falls.[24] The detachments at the station and the Whitefish Dam were renewed at six month intervals until November 1841 when they were withdrawn for the winter.[25] Lockmaster Peter Sweeney took charge of the guardhouse furniture until the troops returned in the following spring.[26] The 4th Battalion was finally disbanded permanently in April 1843 and Sweeney took possession of the stores for an indefinite period.[27]

In 1844, substantial renovations were made to both houses which had received hard usage from the militia. H. Blasdell, a contractor frequently employed by the canal, was required to repair the walls and ceilings of the interiors. The walls of the porch at Whitefish were painted and the rest of the interior whitewashed.[28] Six window panes were replaced at Jones Falls and four at Whitefish. Each pane was 8.5 in. by 7.5 in. which was a standard size during this time on the Rideau.[29] Shingles were relaid at Jones Falls and the exterior repointed at Whitefish where the mortar had become loose.[30] In the following year, the floor of the gallery at Whitefish was also repaired.[31] These improvements indicated the determination of the Ordnance Department to maintain the buildings in case of future threats to the canal.

Between 1843 and 1856, the guardhouse continued to figure in defensive planning. A man was stationed at the Whitefish guardhouse in order to watch over the dam.[32] During the Oregon Crisis of 1846, Col. William Holloway emphasized the importance of the Whitefish Dam and, in a communication to the Inspector General of Fortifications, recommended defence of the surrounding roads.[33] In 1852, the guardhouses were included in an inventory of defensive structures on the canal. Each was described as capable of accommodating 14 men.

During this period, the use of the building at Jones

Falls is not clear. It may have been a residence for labourers or merely a gathering place for the lockstaff to socialize. In February 1850, Lockmaster Sweeney noted that he had been drunk and stayed overnight with the labourers at the blockhouse.[35] Later in the year he reported that the lockmen had become intoxicated and broken a window there.[36]

Finally in 1855, preparations began for the removal of the military from the canal. In May barrack stores from the guardhouses were ordered sold at public auction by the lockmaster (Appendix). The transfer of the Rideau from the Ordnance Department to the province in 1856 marked the end of the military function of these structures.

Exterior

Foundations

The bases of the guardhouses were composed of stones collected from the surrounding area and assembled in uneven courses.[37] These pieces may have been arranged without mortar. Sketches at the time and photographs later show these foundations were used to provide a level base for the structures which were situated on hilly terrain (Fig.'s 30-1 & 36). At Whitefish where the ground dropped steeply towards the edge of the cliff, the foundation on that side was approximately five to six feet in height. Portions of the Jones Falls guardhouse, on the other hand, appear to have rested on only one layer of stone.

Walls

According to the plans of 1852, the walls were 20.5 ft. by 22.5 ft by 10.5 ft. high (Fig. 29). They were composed of

squared cedar timbers dove-tailed at the corners and averaging 8 in. by 10 in. in thickness.[38] There were 10 or 11 timbers in each wall (Fig.'s 31 & 36). These were cemented together with mortar which required periodic pointing. This was done at Jones Falls in 1842 and 1845 and at Whitefish in 1844 and 1848. The contractor at Whitefish in 1844, H. Blasdell, was directed to use the best rock lime and clean sharp sand in the preparation of his mortar. The contractor in 1848, Alexander McIntosh was instructed to provide four bushels of lime.[39]

Enclosed porches of a similar squared-timber design were built at each front door. These measured approximately 8.5 ft. by 7 ft. and seem to have stood 9 logs high (Fig.'s 29, 31, & 36). A roof sloped upwards from the outer wall of the porches to meet the main roof close to its edge. A door was located on the right side and loopholes were situated on the other two sides.

An open gallery was constructed at the front door of the Whitefish guardhouse in March 1839 (Fig. 30).[40] The gallery may have been 12 ft. long in one direction by at least 9 ft. in another. This is suggested by specifications for repairs in 1845 which directed the contractor, H. Blasdell, to supply 9 planks of 2 in. pine, each of which measured 12 ft. by 1 ft.[41]

Each guardhouse was loopholed on all sides. The plans of 1852 and later photos show three openings in each wall except the front where one was situated on each side of the porch. These varied in size and some would have been appropriate as gun ports instead of loopholes (Fig. 36). The openings were framed and covered with glass.[42]

Roof

The 1852 plans and later photographs indicate the buildings

had hipped roofs which were 7.5 ft. in height from the eaves (Fig.'s 29 & 36). A chimney was located on the left side of each roof. Damaged shingles, probably cedar, were replaced at Jones Falls in 1844, but this seems to have been the only maintenance during the period.[43]

Interior

Entering from the porch, each guardhouse consisted of two rooms, one situated behind the other and each approximately 10 ft. square (Fig. 29).[44] The interior was 7.5 ft. in height. The walls and ceilings of both rooms and the porch were lathed and plastered.[45]

According to the inventory of stores listed in 1855, both buildings had been provided with extensive supplies of domestic appurtenances (Appendix). There was a common stove and piping in each. In 1849, Alexander McIntosh, a contractor, had been instructed to supply cast iron stove stands for these units as well as for the lockhouse.[46] These stoves would have been used both for heating and cooking in the winters. A supply of five shovels, pots, pans, pot hooks, and ladles was noted in 1855. Dishes and forks were also listed along with cleaning implements such as mops, brooms and scrub brushes. Nine bed bottoms were recorded at Jones Falls and seven at Whitefish.

Surroundings

Although a path already existed between Jones Falls and the Whitefish Dam, a more substantial road was built after the construction of the Whitefish guardhouse. The locklabourers were involved in clearing a route through the brush in December 1838 and this was repaired periodically afterwards for several years.[47]

Living arrangements were improved dramatically in 1839 with the construction of cookhouses and privies at both locations.[48] The cookhouses seem to have been frame structures with several windows. The building at Jones Falls was situated northeast of the guardhouse with the privy placed farther east on the opposite side of a road passing through the station.[49] This cookhouse was painted in 1842 and received a new floor the following year.[50] Repairs were made to the sashes and windows of the cookhouses at both sites in 1844.[51] These probably continued standing until after 1856.[52]

Anachronisms: The Guardhouses under Civil Authority, 1856-1939

With the withdrawal of the military in 1856, the guardhouses were of marginal utility. They were occupied periodically before being abandoned late in the century. By 1900 they were recognized as curiosities, historic sites of some interest to tourists on the canal. Since the canal was viewed primarily as commercial in function, the departments in charge were not willing to make expenditures on buildings of purely historic interest. The guardhouses were allowed to deteriorate until the one at Whitefish collapsed completely and was removed in 1929. The structure at Jones Falls received minimal maintenance in the 1930s until it too was dismantled in 1939.

The building at Whitefish seems to have been rented from time to time until the 1880s. In 1859, Lockmaster Sweeney recorded that James Dolons had come to live there.[53] In 1875, the tenant in possession had gone off without paying the full amount due and had left a bill for improvements. To avoid this in future, the canal superintendent ordered monthly payments in advance.[54] In 1880,

$4.00 was received for four months rental from July to October.[55] By this time, the house may have only been occupied on a seasonal basis. There is no record of any maintenance on the building during these decades except that expended by the tenant in 1875.

The structure at Jones Falls, which earlier may have housed lock staff on a periodic basis, was altered in 1869 to accommodate them more permanently.[56] In 1871, the lockmaster designate, Henry Layng, was ordered to live in the guardhouse for ten months until the outgoing master, Peter Sweeney, could find a home in which to retire.[57] In 1877, the guardhouse was reshingled and four coping blocks installed to support the roof.[58] Mr. J. Carvell of Merrickville and Charles McGonigal Jr. of Newboro fitted new windows the following year.[59] In 1888, Mr. Mathew Ryan of Smiths Falls was given a contract to shingle the structure again and provide ridgeboards for $60.[60] The building was still being used when Arthur Phillips became Canal Superintendent in 1894, but was abandoned soon after when seasonal accommodation for the lockmen became available in a recently constructed storehouse.[61]

The value of the guardhouse as a tourist attraction was recognized soon after. Because it was an 'eyesore', Phillips had been in favour of demolishing the Jones Falls building when it became vacant. It was saved when tourists urged that it be preserved as a picnic shelter.[62] In 1900, proposals were made to renovate the building at Whitefish. This would have entailed an expenditure of $200 for weatherproofing and to have the floor repaired. Phillips was now in favour of preservation, but gave first priority to Jones Falls since it was on the line of the canal and could be seen by persons on the steamboats. The Whitefish Dam was never visited except by the canal tug and fishery patrol boat.[63] His statements, however, became more

positive with the passage of time. In 1909 he refused to rent the land around the Whitefish guardhouse on the grounds that the building there was a favourite spot for tourists and should be kept on account of its historical importance.[64]

In spite of this interest, there was apparently little maintenance undertaken. By 1923, photographs taken of the Whitefish guardhouse show that it had become a ruin (Fig.'s 33-4). The roof had collapsed completely and the upper levels of square timber had disintegrated. In the interior, the plaster and much of the lathing had been damaged by summer visitors. Even the building's stone underpinnings had fallen away leaving it perching precariously on the edge of the cliff overlooking the dam. In 1929, the building was dismantled by the canal to prevent portions of it from falling into the water below and perhaps injuring the dam.[65]

By this time, the guardhouse at Jones Falls had also deteriorated though not to the same degree. In 1932, the floors and roof were described as basically intact though the latter required patching. Some of the logs in the walls were partially rotted away. The structure had suffered from vandalism. Windows were broken and the plaster was almost completely gone from the interior partitions. Names had been carved in the timbers.[66] Photographs taken in this period show no front door, the top of the brick chimney missing, and the foundation stones crumbling (Fig. 36).

Since the building was regarded as of historic importance, the canal took steps to prevent further disintegration. An estimate of $350 was made for complete restoration[67], but only $150 was finally spent to protect the structure.[68] Lockmaster Alfred Sly and several of his labourers replaced the bottom several courses of logs. The new cedar timbers were cut in the area and taken to Morton

by team where they were squared at the saw mill, before being returned and inserted by carpenters. The building and surrounding grounds were thoroughly tidied. New windows were fitted and iron bars placed across the doorway to permit viewing of the building but not entry.[69] Subsequently repairs were made to the roof.[70]

During the 1930s, interest grew in preserving the building. Representations were made by the Brockville Historical Society and the Leeds South Women's Institute as well as private individuals.[71] It was suggested that because of its unique character, this building might be of greater historical value than the Merrickville Blockhouse which was then under consideration as a national historic site by the Historic Sites and Monuments Board. Having no further use for the guardhouse, the Department of Transport recommended its takeover by the Parks Service of the Department of Mines and Resources, whose responsibility it was to protect historic buildings.[72]

However, in 1939 the Historic Sites and Monuments Board declared that the guardhouse did not meet the criteria for a national historic resource.[73] Subsequently, the canal dismantled the building during the fall of that year.[74] Lockmaster Sly recalled that the logs were still holding together well, but after one was dislodged, the others soon rolled off easily. The timbers were then drawn across the basin where they were removed by boat.[75]

It seems clear that with the passage of time the guardhouses had become anachronisms. Though their historic character was recognized, no agency with funds existed in the 1930s to preserve buildings solely because of their historic interest.

The Jones Falls Defensible Lockmaster's House

Erected in 1841, this is one of a series of defensible houses constructed at lockstations along the Rideau. Like the others, the structure at Jones Falls was intended to serve two partly incompatible purposes, as a fortification and a residence. Since the first function was relatively short-lived, the canal was faced with the problem of making a defensive position comfortable as a residence through most of the building's history. Their efforts included several extensions constructed between 1886 and 1945 to augment the cramped space of the original quarters. Finally, because of deteriorating conditions, the house was abandoned in the early 1960s. Later in the decade, the first steps were taken towards its restoration as a historic site, a process which is only reaching completion in 1979.

1841-86: A Stone House

During construction of the canal, the intention had been to erect defensible residences for the lockmasters at each station. Disagreement over the size of these structures had led to delay. The Kempt Commission favoured small houses while Col. By advocated two storey blockhouses.[1] Subsequently, blockhouses were begun at five stations, but not at the others because of the expense.[2] In the meantime, the lockmaster at Jones Falls, Peter Sweeney, lived in one of the dwelling houses built north of the station during construction.[3] He may still have been there in 1838 when

four of his rooms were taken over by the 71st Regiment.[4] These British regulars were a small part of the military response to the threat of sabotage raised by the rebellion crisis. This led also to construction of guardhouses at Jones Falls and Whitefish and to a series of sixteen stone lockmaster's houses over the next decade.[5]

The house at Jones Falls was to be located on a height of land northeast of the upper lock from which much of the station could be observed (Fig. 27). Preparations began in the fall of 1840 with the arrival of supplies from the Ordnance storehouse at Bytown.[6] While these were not specified, they likely would have included tools and perhaps quantities of sand, lime, iron accessories, and glass. In February 1841, a contractor began the quarrying of stone locally, probably at Elgin where the stone for the original works supposedly had been found.[7]

Construction began in May with the appearance of government masons on the site.[8] By August the building had been completed and inspected by Thomas Burrowes, Overseer of Works on the canal.[9] The structure was scrubbed and its windows cleaned prior to the installation of Lockmaster Sweeney in September.[10]

The house at Jones Falls represented a variation on a theme. Like other defensible houses on the Rideau, it was a single storey building built of masonry and approximately 27 ft. sq. (Fig. 38). It contained a cellar and was capped by a hipped roof which was tinned to withstand fire.[11] The design was closer to the proposals of the Kempt Commission than to Col. By's recommendations. Since there was only one storey, there was less space for storage or barracks. On the other hand, the houses were better suited to residential use than the blockhouses because they lacked the unfinished ground floors of the latter which tended to make them uncomfortable.

The details of the defensible houses varied. The building at Jones Falls was loopholed on all sides and had porches at the south and the east sides which permitted cross-fire.[12] These defensive arrangements were compromised, however, by several domestic features. Entry was gained through doors at the front of the porches which made them vulnerable since they could not be protected by cross-fire.[13] Two large windows were also situated on each of the south and north walls of the building.[14]

Although the building was partly military in conception, it served solely as a residence for the lockmaster after construction. In the wake of the rebellion crisis, militia were still living in the guardhouses at Jones Falls and Whitefish until the fall of 1842 and possibly until April 1843.[15] Afterwards there were no further troop encampments at Jones Falls. The presence of the guardhouses made it unlikely that the lockmaster's house would be needed even in time of danger. Estimates of potential troop accommodation made by the Royal Engineers in 1841 and 1852 focussed exclusively on the log buildings.[16]

The lockmaster's house was well maintained during its first decade. It was painted several times between 1842 and 1847 and a thorough paint job was done on both interior and exterior in 1849.[17] Repairs were made to the shingles in 1843, the window glass and sashes in 1844, and to the handle and latch of one of the doors in 1845.[18] The steps at the two entrances were replaced in 1854.[19] In its evaluation of buildings in 1852, the Ordnance Department declared the lockhouse to be in good condition.[20]

The building received less attention after the takeover of the civil authorities in 1856. Struggling to restrict the canal deficit, they made only minimal expenditures on the lockmaster's residence during the next 30 years. The most substantial repairs were made in 1875 when $150 was

requisitioned for the house.[21] This action seems to have been precipitated by the arrival of a new lockmaster, Robert Bolton, and was probably intended to make the house more comfortable for his stay.[22] The details of these improvements are not known, but this likely was the time when two windows were cut in the west side of the house to match those on the north and south walls.[23] There were no other expenditures in subsequent years which were large enough to cover this substantial alteration.

Exterior

The walls of the building were built of rubble random-coursed masonry mounted on a stone foundation. Each side was 27.5 ft. long and approximately 9.5 ft. in height from the top of the foundation to the eaves.[24]

Access to the lockhouse was gained through two porches located at the centre of the south wall and near the north end of the east wall.[25] These structures were 6.5 ft. square and 6.5 ft. high.[26] Painting specifications of 1849 indicate they were to be covered with two coats of an oil-based, lead-coloured paint, which suggests they were not fronted with stone.[27] Some kind of wood finish is likely, perhaps clapboard. At least one of these porches was crowned with a pediment two feet high which may imply the existence of a small gable roof.[28] The porches may have contained loopholes to permit cross-fire along the sides of the building. This at least was the case with a similar house at Poonamalie which was shown in a painting of ca. 1850 (Fig. 38). If the porches were defensible, their walls may also have been fortified in some way, perhaps with masonry infill between the inner and outer surfaces.

The doors, on the other hand, were definitely not fortified, since they contained windows.[29] This was typical

of the uneasy balance of defensive and domestic considerations evident throughout the building. Each door was 6.5 ft. high by 3.2 ft. wide and contained 12 panes of glass. If these panes were the same size as those in the windows, they would have measured 8.5 in. by 7.5 in. each.[30] According to the instructions in 1849, two coats of white oil paint were to be applied to the splines and muntins between the panes. The remaining outer surface of each door, which measured 3.6 ft. by 3.2 ft. was to be covered with lead-coloured paint similar to that on the porch walls.[31] The angle-staff trim around the door frames was to be given two coats of black oil paint.[32] Access to the doors was by three steps of two inch pine, each four inches by one foot, which, together with their frames, were replaced in 1854.[33]

There were originally four windows located on the south and north sides of the building. Each measured 5.5 ft. by 3.75 ft. and contained 24 panes of glass.[34] These panes measured 8.5 in. by 7.5 in. and were set in casement frames.[35] The sash and muntins were painted with a white oil-based paint in 1849 and the angle-staff around the frames was coloured black.[36] After the addition of two windows on the west side, which probably took place in 1875, new window frames were installed in the house in 1878 at a cost of $30.[37] This may have been the occasion when the shift was made from casement to the double-hung sash evident in the building in the 20th century.

There were loopholes on all four sides of the building. The dimensions of 14 holes are indicated in the painting specifications of 1849.[38] Unfortunately, the numbers and dimensions indicated could not have been accommodated in the wall space available, even if several openings had been situated in the porches. The clerk at Bytown who drew up the instructions must have been misinformed about these

features. Consequently, the following analysis is based primarily on the remnants recently uncovered in the masonry of the building.[39] There were four openings on the south wall, each of which was approximately two feet long on the inside of the building.[40] These were placed symmetrically, two between the outer edges of the porch and the windows, and two near the outer edges of the wall. The east wall contained two loopholes between the south end and the porch located near the north corner. Each loop was approximately six feet in length. In the small area between the porch and the north corner of the building, there was another loop approximately two feet in length. The north wall contained one hole about 10 ft. in length situated between the windows. Along the west wall, the remnants of three loopholes still exist which were disturbed by the cutting of two later windows. Two slits, each approximately six feet long, were located near the south end of the wall and one approximately seven feet was situated near the north end.

These openings were covered with glass in peacetime.[41] They were set in wooden frames splayed inwards, with horizontal wooden members imbedded in the masonry running between the holes to brace the frames. Large wooden lintels were situated over each hole.[42] According to the painting specifications of 1849, the frames were to be painted a lead colour to match much of the rest of the building.[43] Sometime after the takeover of the civil authorities, perhaps when the new windows were cut, the loopholes were permanently covered. They seem originally to have been filled with wooden plugs. These were later replaced with masonry infill on most surfaces which were exposed to the weather.[44]

The walls were surmounted by a hipped roof which was braced with two king-posts, each approximately four inches

by eight inches. There were also four queen-posts about four inches by five inches in dimension. They were arranged in pairs, each of which was joined by a purlin, which provided extra bracing along the south and north slopes.[45] The roof was covered with tin shingles which were arranged in diagonal rows relative to the edge of the eaves.[46] A chimney is shown in a Burrows sketch ca. 1840s and the painting specifications of 1849 indicate the angle-staff trim of this projection was to be painted black (Fig. 37).[47] In 1851, a chimney pot one foot in length was ordered to provide extra protection from fire.[48] Roof ladders had been mounted for the same purpose in 1845. The contractor, H. Blasdell, was to supply two for the house, one 20 ft. long and one 18 along with two wrought iron hooks.[49] In 1862, these were replaced with ladders of 21 ft. and 18 ft. costing $4.20 and $3.60 respectively.[50]

Interior

Cellar

A basement with a drain leading from it was constructed in 1841.[51] The walls were composed of random-coursed rubble set on rock outcroppings, a shelf of which took up most of the east side. Jagged edges of this natural formation also protruded from the floor surface which was not originally finished.[52] An enclosed masonry structure approximately 5.5 by 7.5 ft. was erected north and east of centre on line with the chimney above. It seems to have been filled with rubble and probably constituted a base for the chimney and a fireplace.[53] The beams supporting the main floor were cut off where they intersected with this structure. These beams were composed of cedar timber still retaining its

bark. They were approximately 12 in. in diameter and had been flattened with an axe to fit under the flooring.[54] The main beam ran east - west where it met with the masonry structure. Ten timbers ran from each of the north and south walls to intersect with the central beam. Headroom varied but averaged 5.6 ft. under the beams. A trap door provided access to the main floor: the remains of several were located in the extant structure in the 1970s.[55]

Partitions and Finish

Much of what follows is supposition based on recent examination of the extant structure and on the painting specifications of 1849 which are not always reliable.

The living space consisted of one storey approximately 23 ft. square. It is known that plaster was applied directly to the stone walls.[56] This was also the practice in other houses of this type and in later years resulted in damp and unhealthy conditions.[57] The ceiling consisted of split lathing nailed directly to the roof joists and covered with plaster.[58] There seem to have been two original partitions, one running north-south and the other east-west, which indicates four rooms.[59] This design would have suited the needs of the first lockmaster, Peter Sweeney, who had a wife and daughter living with him through most of the 1840s and a son who occasionally visited.[60] The house may have been divided into a sitting room, master chamber, room for the daughter, and a cooking area. The latter was located in the northeast section of the house where the chimney probably led to a fireplace. In spite of the existence of the fireplace, most of the cooking would have been done on a cook stove which was kept in a separate cookhouse during the summer and in the lockhouse in the winter.[61] A "single" stove which on one occasion was moved from the lockhouse to

the cookhouse may have been used at other times to take the chill off the air of the residence.[62] In 1849, Alexander McIntosh, a contractor, was authorized to supply cast iron stove stands weighing 120 pounds each for the lockhouse and the two guardhouses.[63]

Prior to the painting contract of 1849, the building had received some such work in almost every year. In 1842, John Purcell, Lockmaster at Davis, whitewashed the Jones Falls house.[64] In 1844, John King, a contractor, painted the house again including the floors. In that year some papering was also done.[65] Further painting took place in 1845, 1846, and 1847.[66] Though they were inconsistent in some respects, the specifications drafted by the Royal Engineer's Office at Bytown in 1849 offer several clues about the nature of the interior. Alexander McIntosh was ordered to scrape the old wash from the walls and prepare the woodwork for painting. 163 ft. of skirting were to be covered with two coats of oil-based black paint.[67] This length of skirting seems consistent with the existence of four rooms.[68] Eighteen surfaces were to be covered with two coats of lime wash. Since walls and ceiling were probably included, this would have left two walls untouched. The reference to papering in 1844 suggests several walls may have been finished in this way.

The 1849 description specifies five interior doors which were to be painted a lead colour.[69] If two of these were the entrances to the porches, three doors may have provided access to the rooms. The architraves on both sides of these and on the interior side of the openings to the porches were to be painted lead-grey.[70]

The specifications suggest there were three or four cupboards. Four cupboards are listed to be painted the standard lead shade, but only three architraves around cupboard doorways were to be covered in the same way.

The windows were set near the exterior with jambs splayed inwards. Although only four existed, at one point in the instructions of 1849, five are noted.[71] In 1844, fireboards were to be fixed, presumably moveable coverings for the windows in case of attack.[72] This was consistent with a general order of 1845 which specified that all openings on defensible buildings should be fortified.[73] A similar arrangement seems indicated in a ca. 1850 sketch of the defensible house at Poonamalie (Fig. 38). In 1849 the window sashes and muntins were to be painted white and the window boards and casings lead-grey.[74]

Thus the predominant finish in 1849 was lime wash with lead-coloured oil paint on doors, architraves, cupboards, and around windows. The house skirting was coloured black and the sash squares of the windows white. The interior of the porches was to be coloured lead as were the loophole frames throughout the house.

There is little evidence of further alterations prior to 1887. In 1867, repairs were made to the floors at a cost of $12.[75] $150 of repairs were carried out after the arrival of Lockmaster Robert Bolton at the station in 1874.[76] While it has been speculated that this work was concentrated on the opening of windows on the west side, some of the funds may have been spent on other alterations for which there is no record.

Surroundings

The house was situated on a rocky promontory at the north end of the station. During the first two years, the lockmen were involved in levelling the ground in the vicinity, removing projecting rocks, and spreading gravel.[77] By 1850, a road ran past the house between the combined locks to the south and the massive arched dam to the north.[78]

By 1886, a crib work retaining wall was fixed along part of this road which was very steep in several places.[79] The cookhouse was situated near the northeast corner of the house in 1850 and 1860 and a privy was positioned farther from the house in the same direction.[80] There are no descriptions available of either building. Lockmaster Sweeney put up a barn in 1845, but this was almost certainly on his own farm which was situated northeast of Jones Falls.[81] After his arrival in 1874, Lockmaster Bolton built a stable and woodshed near the lockhouse using spare government lumber.[82] This was still standing in 1897 when he claimed compensation.[83]

1886-1962: The Period of Additions

During this period, the house was occupied by a succession of lockmasters and underwent a series of refurbishings and extensions.

In August 1886, a memorandum of agreement was signed by David Sly, a carpenter from the area of Jones Falls, to build a kitchen for the lockhouse.[84] In return for $75, Sly was to furnish stone, brick, lime, and plaster and do the carpentry and masonry work. The department would provide lumber, nails, and the assistance of the lockmen when they were not otherwise engaged. The job seems to have been completed during that fall.[85]

The new kitchen was located at the entrance to the eastern side of the house and replaced the previous porch. It was a wooden frame structure 9.4 ft. by 9.1 ft. set on a dry-stone foundation and capped with a brick chimney. The interior was lathed, plastered, and apparently covered with lime wash.[86] Photographs taken after 1930 show this addition clapboarded with a roof sloping down from the masonry wall. The walls of the extension were painted a dark colour,

probably grey, with white corner boards and fascia.[87] Eavestroughs and a window with double-hung sash are visible on the north side. There was also a door on the south side surmounted by a small projecting roof (Fig.'s 39 & 40).

The other alterations made to the east side of the house after the military period may also have been made in 1887, since $150 had been allocated for repairs and only half of that amount spent on the kitchen.[88] At some point, a doorway was opened near the southern end of the wall. Brick and stone infill around the frame and a wooden lintel indicate that this entrance was not original.[89] There may also have been a verandah or flimsy extension running along this portion of the wall. This is suggested by the fact that the loops along this side were never covered with masonry (wooden plugs were still extant in 1979) and because nails were found protruding from the masonry along the top of the wall in the 1970s.[90]

With the building of the kitchen extension, changes were made possible in the interior of the house. Because cooking facilities were no longer necessary in the building proper, the original chimney and fireplace were removed, new flooring was laid in the area, and an abbreviated new chimney was constructed with its base protruding slightly below the ceiling of the first floor.[91] This took place shortly after 1891-2 since a newspaper fragment of this period was later found imbedded in the plaster of the new chimney base.[92] The work required the patching of the roof boards and thus may have been carried out in 1895 when the original tin shingles were covered with a new surface of galvanized iron.[93] Removing the fireplace was preliminary to other alterations. When Lockmaster Alfred Forster arrived in 1897, he complained that the house was in very poor condition.[94] Subsequently, he received permission to remove partitions with the help of government carpenters

and submitted a bill for painting, papering, and some carpentry work.[95]

A small addition was built on the south side of the house in 1910. This structure, which extended 12.4 ft. from the house and was 9.8 ft. long, was slightly larger than the original porch which it replaced.[96] Sitting on a base of stones set in cement, this extension was constructed of two by four scantling and rough one inch lumber which was covered with clapboarding.[97] Its roof included a gable on the south end.[98] The government was to supply "4 M" shingles while the Lockmaster, Samuel Stuart, was to purchase the other materials from the area for a sum not exceeding $70.[99] The finished structure contained two windows and an exterior door. One of the windows was centrally located on the south side and had double-hung sash. The door was likely on the west side, since at some point, probably in the 1930s or early 40s, a partially enclosed porch with doorway was attached to that side (Fig. 40). The addition was painted white with dark trim in this period. It had been in use as an office for the lockmaster probably since its construction.[100]

Between 1913 and 1915, considerable improvements were made to the cellar and foundations of the house. The stonework of the house was pointed and a new cement floor was laid in the cellar in the winter of 1913-14.[101] It was perhaps at this time that basement windows were opened in the foundation and a cement facade with imitation raked joints was added to the exterior of the base.[102] The inscription "Arthur" later found on the inside sill of one of these windows probably refers to Arthur Last, the chief stone mason on the canal, who was responsible for these alterations.[103] In 1915, he built a concrete cistern in the northeast corner of the basement.[104] The exterior cellar entrance at the southeast corner may also have been

cut at this time to facilitate the movement of cement into the building. There were three steps cut into the rock outcropping leading down to the door and the entrance was enclosed by a small clapboard structure visible in later photographs (Fig. 41).[105]

Substantial changes were made during the tenure of James Mooney as Lockmaster between 1924 and 1933.[106] A telephone was installed, probably, in 1926, for purposes of water control at the station.[107] In 1926-7, the stone walls were furred, lathed, and plastered.[108] Since $385.25 was expended on the lockhouse at this time, it seems possible that alterations were also made in partitions.[109] In a later interview, Lockmaster Alfred Sly, who lived in the house from 1933 until it was declared surplus, indicated no further changes in room configuration during his residency.[110] Consequently, the remodelling in the 1920s may have established the partitions still visible in the early 1970s.[111] The inventory of 1930 indicated four rooms plus a kitchen extension which was lathed and plastered. There was no electricity, running water, or furnace.[112]

After Sly's appointment in 1933, several improvements were made. He papered the walls which had been painted grey prior to his arrival. New hardwood floors were laid and ducts were cut to permit the passage of hot air from a coal furnace which was now situated in the basement.[113] This furnace had probably been installed by Mooney or Sly at his own expense.

During the Second World War, the lock office on the south side was torn down and replaced with a two storey wooden structure which included a new kitchen.[114] This addition, which extended approximately 20 ft. from the house and was 15 ft. long, covered both the original doorway and west window of the main building on the south side.[115] It was topped by a gable roof which joined with the main roof

almost at its peak. A one storey open porch was located on the west side of this structure.[116] A photograph taken in 1967 indicates this extension still in place with a roofed porch on the west side (Fig. 42).

Electricity was finally installed in the house in 1948 by a contractor from Seeley's Bay. The wiring featured 31 outlets and cost $210.[117] The lockmaster absorbed the expense in stages through an increase in his rent.

By the 1960s, the building was deteriorating badly. Lockmaster Sly had been unable to look after it properly because of poor health.[118] In May 1962, the house was struck by lightning which damaged the wiring and left charred patches near the outlets. Trees and service poles outside also received injury.[119] Lockmaster Sly retired in August of the same year and the new lockmaster, Mr. Cheetham, preferred to continue living at his farm at Jones Falls. Without proper heating, sanitation, or running water, the building had become undesirable as a residence.[120]

Surroundings

Various steps were taken to domesticate the rocky surroundings of the house after 1886. A crib work retaining wall was built along the steeply sloping sides of the adjacent roadway prior to 1890.[121] This was repaired in 1890-1 and eventually replaced with a concrete wall in 1919.[122] This was capped with an iron railing costing $400.[123] The walls were extended along the roads at the station in stages during the next few years. Fences had been placed immediately around the lockhouse on the south and east sides by 1930 (Fig. 39). These consisted of wooden framing with decorative wire mesh. By the 1940s a cement walkway swept around the house on the south and east sides joining the

several entrances (Fig.'s 40-1). This walk ended in concrete steps leading to the road on the west and a shed on the east. Former Lockmaster Sly recalled the latter steps being built by Mr. Mac Alfred.[124]

Several amenities were provided near the house. In 1897, the first attempt was made to drill a well as the lake water was unfit for consumption by staff and tourists in summer. Some difficulty was experienced in drilling because of seams in the rock which made the bit drift sideways.[125] This led to several failures. In the fall of the year, the contractor, a Mr. Wilson, refused to continue his efforts to sink a 5 in. hole at $2.50 per linear foot without a guarantee of half payment in the event of failure.[126] Though the department refused to consider this, a well eventually was sunk on the west side of the road across from the house where it still stands.[127]

The house never possessed indoor toilets. The exact site of the privy is unknown after 1860 when it was located northeast of the residence.[128] In 1931 concern was expressed that the lockhouse toilet and that maintained for public use near the old storehouse elsewhere on the station were polluting the canal waters. In response to criticism from the Provincial Department of Health, the canal agreed to move the public privy farther from the water. The lockhouse toilet, however, was said to present no hazard. Its contents were emptied once a year, burned, and covered with earth.[129]

Several other buildings existed in close proximity to the lockhouse at different periods. The construction of the kitchen addition reduced the need for a separate cookhouse. It was probably removed soon after 1887. A stable and woodshed had been erected by Lockmaster Robert Bolton after his appointment in 1875.[130] The department paid him $35 for these buildings after he retired in 1897,

since a stable was needed by the lockmaster who had to make trips to the Whitefish Dam.[131] In 1922, this stable was partially rebuilt with a concrete foundation to replace the rotting timbers.[132] In 1930, a photograph showed a large shed on the east side which presumably was the same building (Fig. 39). This was a clapboard frame structure with a gable roof. It was painted a dark colour, probably grey, with white trim on the eaves and corner boards. It had a wide doorway and two windows on the west side. A shed was also visible in the same position in a photograph ca. 1940 (Fig. 41). By the 1970s, this building had disappeared. The outlines of the base of a concrete and rubble stone structure were evident southeast of the lock-house which may represent the shed in question or another smaller storehouse.[133]

1962-1979: The Genesis of Renewal

After 1962 the building was no longer considered suitable as a lockmaster's residence.[134] During the next six years, thought was given to the possibility of leasing the house as a summer cottage, but this would have entailed major expenditures for renovations.[135] In the meantime, interest in the historical significance of the building grew as talks continued between federal and provincial agencies concerning the potential of the Rideau Waterway as a historic resource. Although Lockmaster Cheetham, who was appointed in 1962, preferred to continue living on his farm, the stone house was apparently inhabited by other canal staff, possibly labourers, until February 1966.[136]

In 1967, the Historic Sites and Monuments Board declared the original lockmaster's houses on the canal to be of national historic significance.[137] As with other structures, the assumption was made that the military

period of the waterway was of chief interest. Thus in 1968, the Department of Transport took the first step towards preservation, ironically by destroying the additions which were an integral part of the building's evolution.[138] Thus the structure stood, its apertures blocked with makeshift covers and its grounds slowly returning to a state of nature. As-found studies were conducted by Parks Canada after its takeover in 1973-74 and restoration finally began in 1979.

Conclusion

There is an irony in the study of these elements of the military heritage of the Rideau. In the 1960s and 1970s, work has begun on restoring these buildings to their appearance during the military period of the canal's history. This period, however, was of relatively short duration. The Merrickville Blockhouse served for most of its history primarily as a storage and maintenance facility. The Newboro Blockhouse and Jones Falls Lockhouse were utilized mainly as living quarters for succeeding generations of lockmasters. Because the guardhouses were not well suited to purposes other than troop accommodation, they were allowed to deteriorate and finally were dismantled. The preservation of these elements has depended on their ability to serve purposes other than defence.

Appendix

List of Barrack Stores in charge of Lockmaster Sweeney
Ordered Sold at Public Auction
8 May 1855
27 June returns total - 4.10.6.

	JF	WF	TOTAL
Bed Bottoms	9	7	16
Trestles	22	14	36
Hair Brooms	1	1	2
Black Scrub Brush	1	1	2
Clamp	1	1	2
Dishes meat	1	1	2
Fire Shovels	1	1	2
Flesh (?) Forks	1	1	2
Brooms (?) Barrack	4	4	8
Handles Broom etc.	1	1	2
Ladles	1	1	2
Lids Iron		2	2
Mop Heads	1	1	2
Pails Water	1	1	2
Pans frying	1	1	2
Pots Iron with Bolts (?)	2	2	4
Pot Hooks	2	2	4
Tables Old Pattern	2	1	3
Tubs Urine	1	1	2
Hoes Felling	1	1	2

	JF	WF	TOTAL
Dozen Iron Pans	1	1	2
Stoves Common	1	1	2
Pipes Lengths	41	15	56
Boxes Grating (?)	1	-	1
Elbows (Stove Pipes)	4	-	4
Wood Horses	1	-	1
Candlesticks	1	1	2

PAC, RG43, B4(a), Vol. 117, Jones Falls Lockmaster's Journal, 1834-96

Endnotes

Introduction

1 The preparation of this report was facilitated by a large amount of information collected previously by historians from the Historic Parks and Sites Branch including S. Gillis, R. Passfield, J. Tulloch, and J. -C. Parent. Some of this material is available in S. Gillis et al., Merrickville Lock, Preliminary Site Study Series No. 7 (Ottawa: Parks Canada, 1976, and by the same authors, Newboro Lock, Preliminary Site Study Series No. 6 (Ottawa: Parks Canada, 1975), and Judith Tulloch, The Rideau Canal, 1832-1914, Manuscript Report Series No. 177 (Ottawa: Parks Canada, 1975), Appendix B.

The Merrickville Blockhouse

1 Canada. Public Archives, (hereafter cited PAC), MG13, W.O.44, Vol. 19, fol. 361-9, report of the committee appointed to assemble in Canada upon matters relative to the Rideau Canal, 28 June 1828; concerning the vulnerability of the canal, see also Ibid., Vol. 20, fol. 123, Nicolls to Byham, 30 July 1832.

2 By to Mann, 15 March 1830, in Great Britain. Parliament. House of Commons, Canada Canal Communication. Return of an Address to His Majesty; dated 4 February 1831; -for, Copies of the Correspondence between the Treasury, the Secretary of State for the Colonies, and the Ordnance, on the Canal Communication in Canada. (London: House

of Commons, 1831), p. 123.

3 Richard J. Young, A Comparative Report and Catalogue of Blockhouses in Canada, Manuscript Report Series No. 155 (Ottawa: Parks Canada, 1973), pp. 13-4, 20-1, 34, 121.

4 Durnford to Mann, 24 April 1830, cited in Canada Canal Communication, p. 126.

5 PAC, MG13, W.O.44, Vol. 20, By to Durnford, 14 January 1832, fol. 428 for Merrickville; fol. 467 for the Narrows; fol. 472 for Newboro; fol. 507 for Kingston Mills.

6 Tulloch, Rideau Canal, 191, 201.

7 PAC, MG13, W.O.44, Vol. 20, fol. 428.

8 Ibid.; also PAC, MG24, 19, Vol. 7, 2052-3, Memo of a Journey from Kingston to Bytown, 1830, cited in Karen Price, Construction History of the Rideau Canal, Manuscript Report Series No. 193 (Ottawa: Parks Canada, 1976), p. 183.

9 PAC, MG13, W.O.44, Vol. 21, fol. 122, report of works on the Rideau, 19 October 1832.

10 By to Mann, 15 March 1830, in Canada Canal Communication, p. 123; PAC, National Map Collection, (At) 410-Rideau Canal - 1852, plan of Merrickville Blockhouse.

11 PAC, RG43, B4 (a), Vol. 34, Merrickville Lockmaster's Journal, report of Lockmaster Johnston, 10 July 1851.

12 Ibid..

13 By to Mann, 15 March 1830, in Canada Canal Communication, p. 123.

14 PAC, RG43, B4 (a), Vol. 34, 13 February 1852.

15 Ibid., MG13, W.O.55, Vol. 880, fol. 387, Holloway to Burgoyne, 25 March 1846.

16 Ibid., RG43, B4 (a), Vol. 34, 10 July 1851.

17 By to Mann, 15 March 1830, in Canada Canal Communication, p. 123.

18 Parks Canada (herafter cited as PC), File C8400/R85-2,

Vol. 1, Lortie to Clark, 2 November 1964.

19 Gillis, Merrickville Lock, p. 24.

20 Later descriptions always assume the existence of gun platforms to aid in firing through the loops, but there is no clear evidence of this. Though the slits are presently situated 6 ft. 10 in. above the floor, in the 19th century this surface was lined with two feet of masonry which would have brought the openings more conveniently within reach.

21 PAC, RG43, B4 (a), Vol. 34, 10 July 1851.

22 Ibid., Johnston to Commanding Officer, Royal Engineers, Bytown, 21 July 1854.

23 Ibid., Vol. 35, Johnston to Wise, 17 June 1875.

24 By to Mann, 15 March 1830, in Canada Canal Communication, p. 123.

25 PC, Rideau Canal Office, Smiths Falls (hereafter cited as RCSF), Sketch accompanying Captain Bolton's Report, 18 April 1835. The depth may be estimated by comparing reports made in 1851 and 1960. In 1851, Lockmaster Johnston gave the height of the masonry walls as 22 ft. 6 in. from the bottom of the ditch to the underside of the projecting second storey (PAC, RG43, B4 (a), Vol. 34, 10 July 1851). In 1960, the height of the exposed masonry walls was only 18 ft. The ditch was then four-five ft. in depth (PC, File HS-8-19-1-1, Vol. 1, enclosure in memo Coleman to Robertson, 16 December 1960). Extrapolating from this information, the ditch may have been eight-nine ft. deep, ca. 1850. Recent archaeological examination also tends to confirm this estimate (PC, Ontario Region, Cornwall, Merrickville Blockhouse Notes, Harley Stark, 1979).

26 RCSF, Sketch accompanying Captain Bolton's Report, 18 April 1835; PAC, MG13, W.O.55, Vol. 880, fol. 387, Holloway to Burgoyne, 25 March 1846; PAC, National Map

Collection (hereafter cited as NMC), (At) 410-Rideau Canal-1852, plan of the Merrickville Blockhouse.

27 PAC, RG43, B4 (a), Vol. 34: seepage was first noted in the lockmaster's journal in 1 April 1837; PC, File C8400/R85-2, Vol. 2, Lortie to Clark, 23 April 1968.

28 PAC, RG43, B4 (a), Vol. 35, Johnston to Wise, 31 July and 6 August 1874.

29 Ibid., Johnston to Wise, 30 November 1874; concerning the condition of the floor, see also PAC, RG8, C Series, Vol. 1635, p. 41, Inspectional Report, 1852.

30 Gillis, Merrickville Lock, p. 23.

31 PAC, RG43, B4 (a), Vol. 35, Johnston to Wise, 30 November 1874.

32 Eight blocks of timber for the basement were delivered by Lockmaster Newsome of Kilmarnock in January 1874. These were intended as supports for the base of the posts (ibid., 28 January 1874).

33 This was the format in 1874. Lockmaster Johnston then claimed that there had been no extensive repairs for 35 years (ibid., Johnston to Wise, 31 July and 6 August 1874).

34 Ibid., Johnston to Wise, 6 August 1874.

35 PC, HS-8-19-1-1, Vol. 1, Mathie to Scott, 12 December 1960.

36 These were discovered in 1960 and thought to be original (ibid.); similar braces had been placed in other blockhouses at the time of construction; for example, Newboro, PAC, MG13, W.O.55, Vol. 870, fol. 177, Byham to Inspector General of Fortifications, 15 November 1833.

37 Ibid., RG43, B4 (a), Vol. 35, Report of Lockmaster Johnston, 8 December 1873.

38 Ibid., Vol. 34, 10 July 1851.

39 Ibid., 17 and 27 June, 2-10 July, 1835.

40 Ibid., 4 and 12 November 1835.

41 Ibid., undated notations by the lockmaster, 1864; one partition was plastered in 1868 (ibid., 24 April 1868).

42 Ibid., 19 November and 15 December 1850.

43 Ibid., MG13, W.O.55, Vol. 876, fol. 212, report 1841, barrack accommodation 50 men; ibid., Vol. 880, fol. 387, Holloway to Burgoyne, 25 March 1846, accommodation for 36 men; ibid., RG8, C Series, Vol. 1635, p. 41, Inspectional Report, 1852, 50 men.

44 Public Archives of Ontario, Henry Moulton Scrapbook No. 62, "Ottawa, Smiths Falls, and Rideau Canal History", Read and Smythe to Bolton, 22 March 1838, cited in Tulloch, Rideau Canal, p. 256, n.4.

45 PAC, RG43, B4 (a), Vol. 35, Johnston to Slater, 1 January 1862.

46 Ibid., MG13, W.O.17, Vol. 1542, p. 93, Return of British Regiments, June 1838.

47 Ibid., W.O.55, Vol. 880, fol. 338, Holloway to Burgoyne, 25 Feburary 1846; fol. 387, Holloway to Burgoyne, 25 March 1846.

48 Ibid., RG43, B4 (a), Vol. 35, Johnston to Slater, 1 January 1862, 17 April 1863; Slater to Johnston, 4 May 1863.

49 Ibid., RG9, II, B2, Vol. 11-1, File 61.

50 Ibid., RG43, B4 (a), Vol. 34, Report of Lockmaster Johnston, 29 June 1860.

51 Richard Tatley, Industries and Industrialists of Merrickville, 1792-1979, unpublished manuscript on file, Parks Canada, Ontario Region, Cornwall, 1979, pp. 248-50; PAC, RG9, II B2, Vol. 11-1, file 61, map of Ordnance Land at Merrickville, 1867-68.

52 Ibid., RG43, B4 (a), Vol. 34, 30-31 May, 26 September 1834.

53 PC, Ontario Region, Realty Division, Ordnance Map of

the Lands surrounding the Merrickville Lockstation 1848 (1860); PAC, NMC, V1/410-Rideau Canal (Merrickville), 1860.

54 List of Expenses for this approach:

Renewing approach, 2 main stringers, ceder [sic]	
30 ft. long, 10 in. dia. 60 ft.	$ 3.00
4 ceder posts 12 ft. long 10 x 10 - 48 ft. dressed	4.80
2 cross beams 12 ft. long 10 x 10 - 24 ft. dressed	2.40
300 ft. scantling various sizes	3.00
200 ft. 2 in. plank 400 Bft.	4.00
50 lbs. cut spikes 5 in. hard	2.50
8 days carpenter $1.50 ditto labourer $1.00	20.00
3 days mason altering door sill	4.50
Total	$44.20

PAC, RG11, Vol. 184, File 84084, 17 January 1867; also Vol. 439, File 238, Annual Report, 10 July 1867; PAC, RG43, B4 (a), Vol. 35, reports by the lockmaster on the progress of the work, 17 January, May - June, September 1867.

55 Ibid., May - June, September 1867.

56 Ibid., Johnston to Slater, 30 November 1871; 4 May, 11 June, 25 November 1872; Johnston to Wise, 1 December 1873; Johnston to Wise, 27 July 1874; Johnston to Wise, 30 November 1874.

57 Ibid., Johnston to Slater, 4 May 1872.

List of Repairs done on the lockmaster's Responsibility

new plastering, lathing, and studding	$25.00
placing doors and windows in working order on account of settling	3.00
repairing roof	4.00
painting woodwork	10.00
repairing floors, stairs and other woodwork,	

also nails, putty, etc. 10.00
additional amount paid for door furnishings,
nails, glass, lumber, etc. 10.00
Total $62.00

See also Ibid., Johnston to Slater, 11 June and 21 December, 1872.

58 Ibid., repairing tin around the windows $2, December 1872.

59 Ibid., Abbott to Johnston, 24 December 1872.

60 Ibid., 5 July, August 1875.

61 Ibid., Johnston to Wise, 8 December 1873.

62 Ibid., 29 July, 31 July, 6 August 1874.

63 Ibid., 28 January, 22 July, 29 July 1874.

64 Ibid., 8 August 1874; it was noted that the cellar was too damp to be used; to floor the cellar would have required 100 ft. of 2 in. lumber planking (ibid., Johnston to Wise, 30 November 1874).

65 Ibid., Johnston to Slater, 2 December 1870.

66 Ibid., Johnston to Wise, 27 July 1874.

67 Ibid., Johnston to Wise, 10 May 1875.

68 The four bids were Jas. Brislin, $127; E. Brennan, $125; Thos. Driscoll, $125; Jos. Boyd, $123.50 (ibid., Wise to Johnston, 11 May 1875).

69 Ibid., Carrol to Johnston, 18 May 1875; the shingling was completed by 5 July.

70 Ibid., Johnston to Carrol, 16 August 1875.

71 Ibid., painting specifications, August 1875.

72 Ibid., Johnston to Wise, 17 June, 5 July, 30 September 1875.

73 Money was allotted for a fire department in 1902 (Richard Tatley, Industries and Industrialists of Merrickville, unpublished report, Parks Canada, Ontario Region, Cornwall, 1979, chapter 3).

74 PAC, RG43, B4 (a), Vol. 35, Johnston to Wise, 30 August

1876; ibid., Vol. 152, Wise to Johnston, 1 November 1876.

75 Ibid., Vol. 153, Wise to Bradley, 16 January 1888.

76 Ibid., Vol. 156, Phillips to Schreiber, 13 January 1896; ibid., B1 (a), Vol. 244, File 157723, Allan to Haggart, 6 January 1896.

77 Ibid., B4 (a), Vol. 159, Phillips to Butler, 27 October 1896.

78 In 1874, the lockmaster had been using the middle apartment of the first floor as a woodshed (ibid., Vol. 35, Johnston to Wise, 6 August 1874).

79 Ibid., Vol. 159, Phillips to Johnston, 1 August 1902.

80 Merrickville Star, 18 September 1902; I am indebted to Mr. Richard Tatley for this reference.

81 PAC, RG43, B4 (a), Vol. 176, Inspection Tour, 21 September 1899; Vol. 160, p. 66, Phillips to Jones, 2 October 1908.

82 Ibid., Vol. 159, Phillips to Johnston, 24 March 1904; Phillips to Schreiber, 13 April 1904; Phillips to Cranston, 17 April 1907.

83 Ibid., Vol. 160, Annual Report, 1 April 1909; Phillips to Jones, 31 May 1909; PC, File HS-8-19-1-1, Vol. 1, Mathie to Scott, 12 December 1960.

84 Gillis, Merrickville Lock, Appendix B, p. xvii.

85 PAC, RG43, B4 (a), Vol. 152, Wise to Braun, 14 June 1878; ibid., RG11, Vol. 590, File 78800, Wise to Braun, 14 January 1879.

86 Richard Tatley, Industries and Industrialists of Merrickville, pp. 255-56.

87 The shed was in deteriorating condition in 1884 (PAC, RG9, II, A1, Vol. 194, File A174, 16 January 1884); Gillis, Merrickville Lock, p. 44.

88 Photograph of Merrickville, ca. 1905, in the collection of L. Hassall, Merrickville, Ontario.

89 PAC, RG43, B4 (a), Vol. 35, Report on the use of government lands, 23 August 1875.

90 Ibid., Vol. 159, Phillips to Schreiber, 5 July 1902.

91 Ibid., Vol. 162, Phillips to the Bell Telephone Company, Merrickville, 23 August 1915, $5.35 due for rent of phone; ibid., Vol. 163, Phillips to Phillips, lock-labourer, concerning the difficulty of reaching him by phone, 18 June 1918; ibid., Vol. 169, Phillips to Dubuc, 16 February 1932.

92 Ibid., Vol. 164, Annual Report, 1 April 1922.

93 Ibid., Vol. 166, Phillips to Lang, 4 January 1926.

94 The superintending engineer recommended purchase of a house adjacent to the locks owned by the widow of lock-labourer Richard Phillips. This structure was described as 22 ft. by 30 ft., having a brick veneer, furnace, stable, outhouses, well and pump. It could be bought for $3500 (ibid., Vol. 164, Phillips to Bowden, 2 October 1920 and 11 November 1920; Phillips to Watchorn, 28 January 1921; Phillips to Bowden, 9 May 1921; Phillips to Paul, 11 May and 15 June 1921).

95 Ibid., Vol. 160, Phillips to Cranston, 25 August 1911.

96 Ibid., Vol. 165, Phillips to Bowden, 16 October 1923.

97 Ibid., Vol. 170, Phillips to Dubuc, 19 October 1933; Phillips to Owen, 2 March 1934; Phillips to Dubuc, 17 March 1934; ibid., Vol. 171, Murphy to Dubuc, 18 July and 27 September 1934.

98 This was a frame house 18 ft. by 24 ft. with kitchen addition 12 ft. by 15 ft. The two sections were separated from each other and their foundations, loaded on a flat scow owned by the department, and floated to Merrickville, where they were mounted on a new foundation. The work was done by John F. Graham of Newboro in June 1935. Subsequently, plastering and other repairs were carried out. The total cost was

$970 (ibid., Murphy to Graham, 2 November 1934; Murphy to Dubuc, 2 and 8 November 1934; Estimates, 13 April 1935; Whittier to Owen, 14 May 1935; Murphy to Dubuc, 17 June 1935; Murphy to Graham, 29 July 1935; Murphy to Dubuc, 17 September 1935; Whittier to Owen, 28 September 1935; ibid., Vol. 172, Annual Report, 1 April 1936.)

99 Canada. Department of Indian and Northern Affairs, Engineering and Architecture (hereafter DINA, E&A), Canals Engineering, Department of Railways and Canals Inventory of Rideau Buildings, Merrickville Blockhouse, 1930.

100 Ibid., File C8400/R85-2, Vol. 1, Jost to Deputy Minister, 14 September 1938.

101 PAC, RG43, B4 (a), Vol. 171, Estimates, 13 April 1935; Murphy to Dubuc, 17 September, 2 and 17 October 1935; ibid., Vol. 172, Annual Report, 1 April 1936; also PC, File C8400/R85, Vol. 1, Jost to Deputy Minister, 14 September 1938.

102 PC, File C8400/R85, Vol. 1, Inspection Report, 1961.

103 PAC, RG43, B4 (a), Vol. 170, Phillips to Van Camp, 30 March 1933; ibid., Vol. 171, Murphy to Green, 28 September 1935.

104 PC, File HS-8-19-1-1, Vol. 1, Cruikshank to Williamson, 29 August 1938; Morgan to Cruikshank, 10 December 1938.

105 Ibid., Williamson to Yates, 31 August 1938; Williamson to Yates, 17 September 1938.

106 Ibid., Minutes of the Historic Sites and Monuments Board, 30 May 1939; Williamson to Winnipeg Brass Ltd., 8 November 1939; invoice of Winnipeg Brass Ltd., 29 December 1930; Armstrong to Cromarty, 26 June and 5 July 1940; PC, File C8400/R85-2, Vol. 1, Whittier to Jost, 28 October 1940; ibid., File HS-8-19-1-1, Vol. 1, Report of Lockmaster Owen, 1941-42.

107 PC, File C8400/R85-2, Vol. 1, Chevrier to Abbott, 4 July 1945.

108 Ibid., McLean to Lessard, 2 February 1951; Casselman to Lessard, 5 February 1951; Power to Lessard, 5 February 1951; Lessard to McLean, Casselman, and Power, 8 February 1951.

109 Ibid., File HS-8-19-1-1, Vol. 1, Mathie to Scott, 12 December 1960; D'Amours to Scott, 27 October 1961.

110 Ibid., Mathie to Scott, 12 December 1960.

111 PAC, RG43, B4 (a), Vol. 170, Phillips to Van Camp, 30 March 1933; PC, File HS-8-19-1-1, Vol. 1, Morgan to Cruikshank, 10 December 1938; ibid., Mathie to Scott, 12 December 1960; Coleman to Robertson, 16 December 1960.

112 Gillis, Merrickville Lock, p. 47.

113 Writing of leakage around the building in 1968, the Assistant Superintendent noted that: "There was always water in the moat which fluctuated as the locks were being used. The area was backfilled with about four ft. of pit-run gravel, but the water is still there." (PC, C8400/R85-2, Vol. 2, Lortie to Clark, 23 April 1968). The opinion that ground water is also involved is held by staff of the Rideau Canal Office and the Region following a new analysis of the problem in 1979; discussions involving A. Randev, R. Day, K. Dewar, V. Zubatiuk, H. Stark, and W. Wylie, May - June 1979.

114 PC, C8400/R85, Vol. 1, Inspection Report, 1961.

115 Ibid., HS-8-19-1-1, Vol. 1, D'Amours to Scott, 27 October 1961.

116 Ibid., photograph enclosed in Mathie to Scott, 12 December 1960.

117 Ibid., another photograph enclosed in Mathie to Scott, 12 December 1960.

118 Ibid.

119 Ibid., D'Amours to Scott, 27 October 1961.

120 Ibid., Mathie to Scott, 12 December 1960; D'Amours to Scott, 27 October 1961.

121 Ibid., photograph enclosed in Mathie to Scott, 12 December 1960.

122 PAC, RG43, B4 (a), Vol. 164, Annual Report, 1 April 1922.

123 PC, File HS-8-19-1-1, Vol. 1, Mathie to Scott, 12 December 1960.

124 Gillis, Merrickville Lock, pp. 50-51.

125 Richard Tatley, Industries and Industrialists, p. 325; PAC, RG43, B4 (a), Vol. 162, Phillips to _____, 1914.

126 PC, Historic Parks and Sites Branch, Rideau Collection, R4-009-B-0008, Ordnance Land Photograph of Merrickville, 1925.

127 Gillis, Merrickville Lock, p. 47.

128 PC, File HS-8-19-1-1, Vol. 1, Mathie to Scott, 12 December 1960.

129 PAC, RG43, B4 (a), Vol. 168, Phillips to Grant, 6 November 1928.

130 Ibid., Vol. 163, Phillips to Bell, 31 May 1919.

131 Ibid., Vol. 168, Phillips to Grant, 6 November 1928; the firehall is visible in a photograph taken by E. A. Cruikshank in 1938, enclosed in PC, File HS-8-19-1-1, Vol. 1.

132 Personal Communication with Newman Wylie, Ottawa, December 1979.

133 PC, C8400/R85-2, Vol. 1, Robertson to Baldwin, 6 January 1961; Baldwin to Robertson, 27 January 1961; Baldwin to Hay, 27 January 1961; Casselman to Baldwin, 6 February 1961.

134 Ibid., HS-8-19-1-1, Vol. 1, Cote to Coleman, 8 November 1960; Mathie to Scott, 12 December 1960; Fuller to

Herbert, 16 December 1960; Coleman to Robertson, 16 December 1960; Ibid., C8400/R85-2, Vol. 1, Robertson to Baldwin, 6 January 1961; Robertson to Baldwin, 5 July 1961.

135 Ibid., HS-8-19-1-1, Vol. 1, D'Amours to Scott, 27 October 1961; Coleman to Robertson, 10 November 1961; Robertson to Baldwin, draft, 15 November 1961; ibid., C8400/R85-2, Vol. 1, Robertson to Baldwin, 29 Nobember 1961.

136 Ibid., C8400/R85-2, Vol. 1, Betournay to Clark, 19 January 1962.

137 Ibid., Baldwin to Casselman, 9 February 1962; McMullen to Baldwin, 28 March 1962; Clark to Ballinger, 20 November 1962.

138 Ibid., Betournay to Clark, 17 July 1962; Douglas to Baldwin, 9 August 1962; Clark to Ballinger, 20 November 1962; Ballinger to Baldwin, 17 September 1964.

139 Ibid., Clark to Ballinger, 20 November 1962.

140 Ibid., C8400/R85, Vol. 1, Inspection Report, 1961; Ibid., C8400/R85-2, Vol. 1, Douglas to Baldwin, 9 August 1962; memo by Betournay, 27 September 1962; Clark to Ballinger, 14 November 1962.

141 Ibid., Clark to Ballinger, 20 February 1964.

142 Ibid., Baldwin to Douglas, 21 May 1964; Ballinger to Baldwin, 17 September 1964; Clark to Ballinger, 30 September 1964.

143 Ibid., Clark to Ballinger, 27 November 1964 and 15 December 1964; Douglas to Baldwin, 10 May 1965.

144 Ibid., Ballinger to Baldwin, 17 September 1964.

145 Ibid., Douglas to Baldwin, 10 May 1965.

146 Ibid., Lortie to Clark, 2 November 1964.

147 Ibid., Clark to Farmer, 28 July 1965.

148 Ibid., Cavey to Clark, 19 August 1965; Clark to Farmer, 15 October 1965; draft of order in council, 3 February

1966.

149 Gillis, Merrickville Lock, pp. 23-4.

150 Ibid., DINA, E&A, Technical Data Services, As-Found Drawings, Merrickville Blockhouse, J.-P. Jérôme, 1975 ; PAC, RG43, B4 (a), Vol. 34, 19 November, 15 December 1850.

The Newboro Blockhouse

1 The decision to raise the water level is described briefly in Gillis, Newboro Lock, p. 11; some of the documents concerning construction have been printed in Karen Price, Construction History of the Rideau Canal, Manuscript Report Series No. 193 (Ottawa: Parks Canada, 1976), pp. 243-256.

2 The decision to have the military take over construction from contractors was made in 1829 (PAC, MG13, W.O.55, Vol. 869, fol. 236-237, By to Respective Officers at Quebec, 4 December 1830).

3 Ibid., RG8, C, Vol. 54, p. 57, report on contracts not yet completed, 12 November 1832; D. M. Schurman, "Benjamin Tett of Newboro, 1820-1843," Historic Kingston, No. 10 (January, 1962), pp. 3, 6; Ruth McKenzie, Leeds and Grenville: Their First Two Hundred Years (Toronto: McClelland & Stewart, 1967), p. 52; Newboro. Centennial Committee, The Isthmus: A Historical Sketch of Newboro (Newboro: n.p., 1967), p. 2; Thad. Leavitt, History of Leeds and Grenville Ontario, from 1749 to 1879, with illustrations and biographical sketches of some of its prominent men and pioneers, fascimile edition (Belleville: Mika, 1972), p. 106.

4 Gillis, Newboro Lock, p. 36; Centennial Committee, The Isthmus, p. 1; McKenzie, Leeds and Grenville, p. 171.

5 PAC, RG8, C, Vol. 54, p. 57, report on contracts not yet completed, 12 November 1832.

6 Ibid.

7 Ibid., MG13, W.O.55, Vol. 870, fol. 59, Byham to the Inspector General of Fortifications, 29 May 1833.

8 Ibid., Vol. 871, fol. 184, Bolton to Nicolls, 24 July 1834.

9 Ibid., Vol. 870, fol. 159, Byham to the Inspector General of Fortifications, 1 November 1833; ibid., fol. 177, Byham to the Inspector General of Fortifications, 15 November 1833; ibid., Vol. 871, fol. 26, Byham to the Inspector General of Fortifications, 18 April 1834.

10 Ibid., NMC, (At) 410-Rideau Canal-1852, Newboro Blockhouse.

11 Young, Blockhouses, pp. 22-23, 24, 29, 86.

12 The original walls were uncovered during restoration in 1966 (PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966).

13 DINA, E&A, Newboro Blockhouse As-Founds, Drawing 6, 6 March 1967.

14 PAC, MG13, W.O.55, Vol. 870, fol.159, Byham to the Inspector General of Fortifications, 1 November 1833; ibid., RG43, B4 (a), Vol. 102, 4-5 June 1840; ibid., 11-13 September, 2-4 October 1843.

15 DINA, E&A, Newboro Blockhouse As-Founds, Drawing 9, 8 June 1967; Gillis, Newboro Lock, p. 25.

16 PAC, RG8, C, Vol. 54, Bolton to Nicolls, 12 November 1832; ibid., MG13, W.O.55, Vol. 870, fol. 159, Byham to the Inspector General of Fortifications, 1 November 1833.

17 PC, Ontario Region, Realty Division, Ordnance Map of Newboro Lockstation, 1849 (1851); PAC, NMC, VI/410-Rideau Canal, Plan of the Isthmus Station 1860.

18 Ibid., RG43, B4 (a), Vol. 102, 1-2, 30 July, 20 August - 7 September, 11 September - 6 October 1849.
19 Ibid., Contractor's Journal, July - August 1849.
20 PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966; DINA, E&A, Newboro Blockhouse As-Founds, Drawings 4 and 7, March - June 1967.
21 PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966; DINA, E&A, Newboro Blockhouse As-Founds, Drawing 7, June 1967.
22 PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966; ibid., Preliminary Report on Three Buildings on the Historic Rideau Waterway, P. J. Stokes, January 1965.
23 DINA, E&A, Newboro Blockhouse As-Founds, Drawing 3, 8 June 1967.
24 PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966.
25 PAC, RG43, B4 (a), Vol. 102, 4-5 June 1840; ibid., 11-13 September, 2-4 October 1843.
26 Ibid., 27 April - 25 May 1849.
27 Ibid.,
28 Ibid., 29 January 1851.
29 PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966.
30 PAC, RG43, B4 (a), Vol. 102, 6 February, 16 June 1851.
31 Ibid., 1-2, 30 July, 20 August - 7 September, 11 September - 6 October 1849.
32 Ibid., 31 January, 1-17 February 1851.
33 Ibid., 10-15 May 1852.
34 Ibid., 12 and 14 December 1843.
35 Ibid., MG13, W.O.55, Vol. 876, fol. 212, Report of 1841; ibid., RG8, C, Vol. 1635, p. 41, Inspection Report, 17 July 1852.
36 Ibid., MG13, W.O.13, Vol. 3695, fol. 468, 470-75;

Queen's University, Tett Papers, Vol. 1, Benjamin Tett to Majors Young and Bolton, 8 July 1838, cited in Tulloch, The Rideau Canal, p. 7.

37 The barracks are still indicated in a map of 1849 (PC, Ontario Region, Realty Division, Ordnance Map of Newboro Lockstation, 1849 [1851].

38 PAC, RG11, Vol. 184, File 78992, Slater to Trudeau, 15 February 1866; ibid., RG43, B4 (a), Vol. 151, Annual Report, 1 February 1867, $40 was also expended on miscellaneous repairs in 1872 (ibid., RG11, Vol. 187, File 27382, Slater to Braun, 11 November 1872).

39 Ibid., RG43, B4 (a), Vol. 102, Contractor's Journal, 7 October 1879; ibid., RG11, Vol. 590, File 78800, Wise to Brown, 14 January 1879; small repairs were also made in 1883, (ibid., RG43, B1 (a), Vol. 322, File 100785, Annual Report, 15 September 1883).

40 Ibid., B4 (a), Vol. 102, 6 February, 16 June 1851.

41 Ibid., 1-4 July 1851.

42 Tulloch, The Rideau Canal, p. 147.

43 PAC, RG11, Vol. 389, File 10395, Kilborn to Commissioner of Public Works, 7 April 1870; ibid., RG43, B4 (a), Vol. 151, Slater to Brown, 16 April 1870; ibid., RG11, Vol. 389, File 10736, Slater to Braun, 2 May 1870; ibid., File 10824, Parent to Braun, 7 May 1870; ibid., RG43, B4 (a), Vol. 151, Slater to Braun, 27 May 1870.

44 Ibid., RG43, B4 (a), Vol. 102, August, October 1850; ibid., NMC, V1/410-Rideau Canal, Plan of the Isthmus Station [1860]).

45 Ibid., RG15, Vol. 1666, Sands to Respective Officers, Bytown, 1848.

46 Ibid., RG43, B4 (a), Vol. 102, 5, 6-11 May, 28 September 1840.

47 Ibid., 26 October 1843; repairs were made to one of

these houses in 1849; ibid., 9 November.

48 Ibid., NMC, V1/410-Rideau Canal, Plan of the Isthmus Station [1860].

49 Ibid., RG43, B4 (a), Vol. 153, estimate of repairs $800, 20 December 1887; ibid., Wise to Dargavel, 24 April 1888; ibid., Wise to English, 30 October 1888; ibid., Vol. 154, Annual Report, 19 September 1889.

50 PC, File HS-8-19-1, Vol. 1, Preliminary Report on Three Buildings of the Historic Rideau Waterway, P. J. Stokes, January 1965.

51 DINA, E&A, Newboro Blockhouse As-Founds, Drawing 6, 6 March 1967.

52 This has been calculated from the dimensions given in DINA, E&A, Canals Engineering, Department of Railways and Canals Inventory of Rideau Buildings, Newboro Lockmaster's House, 1930; PC, Historic Parks and Sites Branch, Research notes on Rideau Canal Buildings, J.-C. Parent.

53 DINA, E&A, Newboro Blockhouse As-Founds, Drawings 4 and 9, March - June 1967.

54 Ibid., Drawings 2 and 10, March - June 1967.

55 PAC, RG43, B4 (a), Vol. 176, Inspection Book, 17 May 1899; ibid., Vol. 159, Annual Report, 1 July 1906; ibid., Vol. 161, Annual Report, 1 April 1913.

56 Ibid., Vol. 156, Annual Report, 11 July 1895; ibid., Vol. 159, Annual Report, 2 July 1904; ibid., Vol. 161. Annual Report, 1 April 1914.

57 Ibid., Vol. 165, Annual Report, 2 April 1923.

58 Ibid., Vol. 164, estimates 1922-23, 17 January 1922; ibid., Vol. 165, Annual Report, 2 April 1923.

59 Ibid., estimates 1923-4, 27 November 1922; ibid., Phillips to Lyons, 10 September 1923.

60 Ibid., Annual Report, 1 April 1924.

61 Ibid.

62 Ibid., Vol. 164, Phillips to Bowden, 11 June 1921; ibid., Vol. 165, invoice of telephone rental for lockhouses at Newboro and the Narrows, $5.00, 1923.

63 Broken glass in the windows was replaced and minor repairs were also made (ibid., Vol. 166, Annual Report, 1 April 1926; ibid., Phillips to Lyons, 4 May 1926; ibid., Vol. 167, Phillips to Lyons, 27 November 1926; ibid., Annual Report, 1 April 1927.)

64 Ibid., Vol. 168, Annual Report, 1 April 1930; new stove pipes were installed in 1932 (ibid., Vol. 169, Phillips to Lyons, 10 November and 12 December 1932).

65 Ibid., Vol. 171, 13 April 1935.

66 PC, File C-2507/R85, Vol. 1, photograph enclosed in Coleman to Manning, 26 November 1965; ibid., File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966.

67 Ibid., File C-2507/R85, Vol. 1, Clark to Betournay, 16 February 1962; ibid., Clark to Ballinger, 4 September 1963.

68 DINA, E&A, Canals Engineering, Department of Railways and Canals Inventory of Rideau Buildings, Newboro Lockmaster's House, 1930.

69 Ibid., Newboro Blockhouse As-Found Drawings, 1967.

70 PC, File HS-8-19-1, Vol. 1, Preliminary Report on Three Buildings of the Historic Rideau Waterway, P. J. Stokes, January 1965.

71 PAC, RG43, B4 (a), Vol. 168, Annual Report, 1 April 1930.

72 DINA, E&A, Newboro Blockhouse As-Founds, Drawing 2, 8 June 1967.

73 PC, File HS-8-19-1, Vol. 1, Baldwin to Coté, 27 February 1964.

74 DINA, E&A, Newboro Blockhouse As-Founds, Drawing 10, March 1967.

75 Ibid., Drawings 2, 5, and 7, March - June 1967.

76 PC, File HS-8-19-1, Vol. 1, Preliminary Report on Three

Buildings of the Historic Rideau Waterway, P. J. Stokes, January 1965.

77 DINA, E&A, Newboro Blockhouse As-Founds, Drawing 8, March 1967.

78 PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966; DINA, E&A, Newboro Blockhouse As-Founds, Drawing 7, March 1967.

79 PC, File HS-8-19-1, Vol. 1, Preliminary Report on Three Buildings of the Historic Rideau Waterway, P. J. Stokes, January 1965.

80 New stove pipes were purchased for the lockhouse in 1932 (PAC, RG43, B4 (a), Vol. 165, Phillips to Lyons, 10 November and 12 December 1932).

81 PC, Historic Parks and Sites Branch, transcript of interview with Mrs. E. Whalen, 13 June 1975.

82 Ibid., File HS-8-19-1, Vol. 1, Baldwin to Coté, 24 February 1964; ibid., Preliminary Report on Three Buildings of the Historic Rideau Waterway, P. J. Stokes, January 1965.

83 PAC, RG 43, B4 (a), Vol. 153, Wise to Dargavel, 24 April 1888; ibid., Vol. 164, Phillips to Dargavel, 1 May 1921.

84 Ibid., Vol. 161, Phillips to Dargavel, 2 May 1917.

85 Ibid., NMC, V1/410-Rideau Canal, Plan of the Isthmus Station 1860 .

86 PAC, RG43, B4 (a), Vol. 165, estimates 1924-25; ibid., Vol. 166, Annual Report, 1 April 1925; ibid., Phillips to Dargavel, 22 June 1925; ibid., Phillips to Lyons, 22 and 25 June 1925.

87 Gillis, Newboro Lock, p. 22.

88 DINA, E&A, Canals Engineering, Department of Railways and Canals Inventory of Rideau Buildings, photograph of lock office with lockhouse in the background, 1930.

89 PC, Historic Parks and Sites Branch, Interview with

Mrs. E. Whalen, 13 June 1975.

90 PC, File C-2507/R85, Vol. 1, Clark to Ballinger, 4 September 1963.

91 Ibid., Clark to Betournay, 16 February 1962.

92 Ibid., File C-2520/R85, Vol. 2, Farmer to the Assistant Deputy Minister of Indian and Northern Affairs, 22 February 1974.

93 Ibid., File C-8400/R85-2, Vol. 1, Baldwin memorandum, 5 December 1961; ibid., File C-8400/R85, Vol. 1, Baldwin to Coté, 19 November 1963.

94 Ibid., File HS-8-19-1, Vol. 1, memorandum to file, Maxwell Sutherland, 6 March 1964.

95 Ibid., File C-8400/R85, Vol. 1, McIlraith to Francis, 8 July 1963; ibid., Baldwin to Coté, 19 November 1963.

96 Ibid., Coombs to Pierce, 12 February 1965.

97 Ibid., File C-2520/R85, Vol. 1, Stead memorandum, 12 August 1965; ibid., File C-8400/R85, Vol. 1, draft policy, 6 June 1966.

98 Ibid., File HS-8-19-1, Vol. 1, Coleman to Farmer, 20 December 1966.

99 Ibid., Laverty to Perry, 29 December 1966.

100 DINA, E&A, Newboro Blockhouse As-Found Drawings, June 1967; PC, File C-8400/R85, Vol. 1, Coleman to Farmer, 28 July 1967.

101 Ibid.

102 Gillis, Newboro Lock, p. 23.

103 Ibid., pp. 23-24; PC, File C-8400/R85, Vol. 1, clipping of an article in the Kingston Whig Standard, 11 May 1970.

104 Gillis, Newboro Lock, pp. 23-24.

105 PC, File C-8400/R85, Vol. 1, Photograph of Newboro Blockhouse, 1 September 1968.

106 Ibid., Clark to C & L Construction, Smiths Falls, 9 September 1968.

107 Gillis, Newboro Lock, pp. 24-26.

108 PC, File C-2507/R85-17, Vol. 1, Huntley to Robinson, 29 March 1972; ibid., C-2520/R85, Vol. 1, memorandum to file, L.W. Clark, 5 July 1973; personal inspection by the author, 2 October 1978.

109 Gillis, Newboro Lock, pp. 23-24.

110 PC, File C-8400/R85, Vol. 1, Coleman to Farmer, 28 July 1967.

111 DINA, E&A, Technical Data Services, Photographic Inventory of the Rideau, Newboro Blockhouse, front elevation, 1973.

112 Gillis, Newboro Lock, p. 26.

113 Ibid., pp. 23-24.

114 PAC, MG13, W.O.55, Vol. 870, fol. 159, Byham to the Inspector General of Fortifications, 1 November 1833; ibid., RG43, B4 (a), Vol. 102, 4-5 June 1840.

115 Ibid., 1-17 February 1851.

116 DINA, E&A, Technical Data Services, Photographic Inventory of the Rideau, Newboro Blockhouse, west side, 1973.

117 Gillis, Newboro Lock, p. 26.

118 PAC, RG43, B4 (a), Vol. 102, Contractor's Journal, July - August 1849.

119 PC, File C-8400/R85, Vol. 1, Coleman to Farmer, 28 July 1967; personal inspection by the author, 2 October 1978.

120 DINA, E&A, Newboro Blockhouse Restoration Drawings No. 3, July 1967.

121 PAC, RG43, B4 (a), Vol. 102, Contractor's Journal, 27 April - 25 May 1849.

122 During restoration, some of the members appeared newer than others (PC, File C-2540/R85-2, Vol. 1, Photograph of Newboro Blockhouse, 10 July 1968).

123 Gillis, Newboro Lock, p. 23.

124 Personal inspection by the author, 2 October 1978.

125 DINA, E&A, Newboro Blockhouse Restoration Drawings No. 2, July 1967.

126 Gillis, Newboro Lock, p. 25.

127 PC, File HS-8-19-1, Vol. 1, Laverty to Perry, 29 December 1966; DINA, E&A, Newboro Blockhouse Restoration Drawings No. 2, July 1967.

128 The chimney cost $500 to install (PC, File C-8400/R85, Vol. 1, Clark to C & L Construction, 9 September 1968).

129 Gillis, Newboro Lock, p. 26.

130 PAC, RG43, B4 (a), Vol. 102, Contractor's Journal, 27 April - 25 May 1849.

131 If a ditch had existed, it had been filled in by 1849 (ibid., 1-2, 30 July, 20-23 August, 24 August - 7 September, 11 September - 6 October, 1849).

132 Personal inspection by the author, 2 October 1978.

The Guardhouses at Jones Falls and the Whitefish Dam

1 PAC, RG8, C Series, Vol. 59, pp. 192-4, Bolton to Wright, 2 July 1838; ibid., Bolton to Rowan, 6 July 1838; Charles R. Sanderson, editor, The Arthur Papers: Being the Papers Mainly Confidential, Private, and Demi-Official of Sir George Arthur, K.C.H., (Toronto: Toronto Public Libraries, 1947), Part I, p. 193, Jarvis to Bonnycastle, 6 June 1838.

2 PAC, RG8, C Series, Vol. 1274, p. 34, Arthur to the Military Secretary, 12 July 1838; ibid., Vol. 1292, p. 130, Rowan to Commander Royal Engineers, 20 August 1838; for information on troop movements and equipment, I am indebted to the research done by William E. Henry in the preparation of The Kingston Mills Block House Media Plan, manuscript, Parks Canada, Rideau Canal Office, Smiths Falls, 1978, pp. 1-11.

3 PAC, MG13, W.O.13, Muster Rolls and Pay Lists of the Canadian Militia, Vol. 3695, pp. 468-475, 545.

4 Arthur Papers, Part II, p. 257, Colborne to Arthur, 16 August 1838.

5 PAC, RG43, B4 (a), Vol. 117, Lockmaster's Journal, Jones Falls, 10 July 1838, cited in Henry op.cit., 9.

6 Ibid., RG8, C. Series, Vol. 447, p. 349-50, Dundas to Bolton, 20 July 1838; ibid., p. 353-54, Bolton to Burrowes, 25 July 1838.

7 Ibid., RG43, B4 (a), Vol. 117, 3 and 24 August 1838.

8 Ibid., RG8, C Series, Vol. 447, p. 344-5, Bolton to Rowan, 30 March 1839.

9 Ibid., RG43, B4 (a), Vol. 117, 18 September, 2 October, 17 October, 1838.

10 Arthur Papers, Part II, pp. 256-8, Colborne to Arthur, 16 August 1838; ibid., p. 286-9, Colborne to Arthur, 28 September 1838; PAC, RG8, C. Series, Vol. 1274, p. 47-9; Henry, Kingston Mills Blockhouse, pp. 10-11.

11 PAC, RG8, C. Series, Vol. 148, pp. 168-9, Hill to Dundas, 3 April 1839, cited in Henry, p. 11; ibid., p. 12; J. Mackay Hitsman, Safeguarding Canada, 1763-1871, (Toronto: University of Toronto Press, 1968), pp. 136-7.

12 PAC, RG9, IB2, Vol. 22, Weekly Returns of the 4th Battalion, cited in Henry, p. 90, n. 30.

13 PAC, RG8, C. Series, Vol. 446, pp. 33-35, Royal Engineer's Office, Quebec, to Rowan, 10 November 1838.

14 Ibid., RG43, B4 (a), Vol. 117, 13 October, 9 November 1838.

15 Ibid., 26-28 November 1838.

16 Ibid., 15 October, 1, 3-6 December 1838.

17 Ibid., 12 January, 10 February 1839.

18 Ibid., 23, 25-26 March, 30 April 1839.

19 Ibid., 5 January 1839.

20 Ibid., 7, 26-31 December 1838, 1-2 January 1839.

21 Ibid., RG8, C. Series, Vol. 96, p. 274-5, Raynes to Dundas concerning Haskin's claim for 2.10.0, 8 May 1839.

22 Henry, p. 12.

23 PAC, RG43, B4 (a), Vol. 117, 17 March 1840.

24 Ibid., 23 April, 29 May 1840; ibid., RG8, C. Series, Vol. 709, pp. 308-13, militia general orders, 16 April 1840.

25 Ibid., RG9, IB2, Vol. 22, weekly returns, 3 June 1839 (at that time, there were 1 sergeant, 1 corporal, and 6 privates at Jones Falls and 1 corporal and 6 privates at Whitefish) and ibid., 18 November 1839 (1 sargeant and 7 privates at Jones Falls; 1 corporal and 6 privates at Whitefish) both cited in Henry, p. 90, n. 30; PAC, RG43, B4 (a), Vol. 117, 2 November 1841.

26 Ibid., RG43, B4 (a), Vol. 117, 7 May 1842.

27 Henry, p. 9; PAC, RG43, B4 (a), Vol. 117, 4 April 1843.

28 Ibid., 7 August 1844.

29 Ibid., 11 March 1844.

30 PAC, RG43, B4 (a), Vol. 117, specifications for contractor H. Blasdell, 11 March 1844.

31 Ibid., 15 July 1845.

32 Ibid., 9 August 1843; ibid., RG11, Vol. 439, File 237, Annual Report, 30 June 1867.

33 Ibid., MG13, W.O.55, Vol. 880, fol. 335, Holloway to Burgoyne, 25 February 1846.

34 Ibid., NMC, (At) 410-Rideau Canal-1852, plan of the Jones Falls and Whitefish Guardhouses.

35 Ibid., RG43, B4 (a), Vol. 117, 12 February 1850.

36 Ibid., 28 October 1850.

37 Ibid., 13 October, 9-11, 26-28 November, 10 December 1838.

38 PC, File C-8400/R85, Vol. 1, Phillips to Dubuc,

describing the timbers in order to make repairs at Jones Falls, 15 November 1932.

39 PAC, RG43, B4 (a), Vol. 117, 1 October 1842, 11 March 1844, 21 July 1845, February 1848.

40 Ibid., 23, 25-26 March 1839.

41 Ibid., 15 July 1845.

42 Ibid., 11 March 1844.

43 Ibid.

44 The guardhouse at Jones Falls still contained two rooms in the 1930s when Musen Perrin was a lockman at the station (PC, Historic Parks and Sites Branch, transcript of an interview with Mr. Musen Perrin, Jones Falls, 5 February 1975).

45 The guardhouse at Jones Falls required "8 superficial yards" of plaster, that at Whitefish "12 lineal [sic?] yards" (PAC, RG43, B4 (a), Vol. 117, 11 March 1844).

46 Ibid., 26 March 1849.

47 Ibid., 11-15 December 1838; ibid., 14-16 October 1839; ibid., 19 October 1842.

48 A cookhouse and privy were also built at Kingston Mills at this time; the new facilities at the three sites were to cost 191.18.3 st. (Ibid., RG8, C. Series, Vol. 1294, p. 119, Rowan to Bolton, 28 May 1839; ibid., p. 166, Rowan to Commissory General, 28 June 1839, both cited in Henry, p. 82 n. 70).

49 PC, Ontario Region, Realty Division, Ordnance Map of Jones Falls, 1849; PAC, NMC, V1/410-Rideau Canal, Jones Falls [1860]; the location of these buildings at Whitefish is not known.

50 PAC, RG43, B4 (a), Vol. 117, 27 June 1842, 27 April 1843.

51 Ibid., 11 March 1844.

52 By 1867, the cookhouses were probably gone; an inventory of that year indicates only one cookhouse at Jones Falls

which would have been located adjacent to the lock-master's house (ibid., RG11, Vol. 437, February 1867).

53 PAC, RG43, B4 (a), Vol. 118, 19 February 1859.

54 The tenant had paid only $6 and left a bill of $15 for improvements (ibid., Vol. 151, Wise to Bolton, 9 November 1875).

55 Ibid., Vol. 117, statement of rent paid by Mr. Marty, July - October 1880.

56 $50.00 was expended on this occasion (ibid., RG11, Vol. 440, File 7299, Annual Report, 7 July 1869).

57 Ibid., Vol. 788, File 11186, Braun to Slater, 13 July 1871.

58 The cost was $75 (ibid., RG43, B4 (a), Vol. 117, 18 June 1877).

59 Ibid., Vol. 118, 12-13 June 1878.

60 Ibid., Vol. 153, Wise to Ryan, 11 July 1888.

61 Ibid., Vol. 158, Phillips to Murphy, 30 April 1900.

62 Ibid., Phillips to Murphy, 30 April 1900.

63 Ibid., Vol. 159, Phillips to Schreiber, 3 September 1902.

64 Ibid., Vol. 160, Phillips to Schreiber, 17 July 1909.

65 PC, File C-8400/R85, Vol. 1, Phillips to Dubuc, 15 November 1932.

66 Ibid., McGillivray to Manion, 4 November 1932; ibid., Phillips to Dubuc, 15 November 1932.

67 This estimate included 8 new cedar logs, $25; cutting out decayed logs, framing and inserting new logs, $75; relathing and plastering, $200; repairing window frames and glass, $25; incidental, $25 (ibid., Phillips to Dubuc, 15 November 1932).

68 PAC, RG43, B4 (a), Vol. 170, Phillips to Dubuc, 22 November 1932; PC, File C-8400/R85, Vol. 1, Whittier to Yost, 31 October 1939.

69 Ibid., Dubuc to Phillips, 18 November 1932; PAC, RG43

B4 (a), Vol. 170, Annual Report, 1 April 1933; ibid., Phillips to Dubuc, 2 June 1933; ibid., Phillips to Mooney, 24 June 1933; PC, Historic Parks and Sites Branch, transcript of interview with Mr. Alfred Sly, 15 January 1975.

70 Ibid., File C-8400/R85, Vol. 1, Whittier to Jost, 31 October 1939; ibid., Historic Parks and Sites Branch, transcript of interview with Mr. Musen Perrin, 5 February 1975.

71 Ibid., C-8400/R85, Vol. 1, M.W. McGillivray, Toronto Manager of the Montreal Star, to R. J. Manion, Minister of Railways and Canals, 4 November 1932; ibid., Smart to Morgan, 19 November 1938; ibid., Yates to Hughson, 8 November 1939; ibid., Bickel to Jost, 10 August 1940.

72 Ibid., Jost to Deputy Minister, 14 September 1938.

73 Ibid., Yates to Hughson, 8 November 1939.

74 Canada. Department of Transport, Annual Report, 1940-41, (Ottawa: Department of Transport, 1942), p. 49.

75 PC, Historic Parks and Sites Branch, interview with Mr. Alfred Sly, 15 January 1975.

Jones Falls Defensible Lockmaster's House

1 PAC, MG13, W.O.44, Vol. 19, fol. 361-9, report of the committee in Canada on matters relative to the Rideau Canal, 28 June 1828; ibid., Vol. 20, fol. 428, 467, 472, 507, By to Durnford, 14 January 1832.

2 Work was begun at Burritts Rapids, Merrickville, Narrows, Newboro, and Kingston Mills.

3 Edward John Barker, Observations on the Rideau Canal (Kingston: British Whig, 1834), p. 26, cited in Tulloch, The Rideau Canal, p. 220.

4 PAC, RG43, B4 (a), Vol. 117, 18 September 1838. These

troops were replaced by militia on October 17.

5 Tulloch, The Rideau Canal, p. 191.

6 PAC, RG43, B4 (a), Vol. 117, 4 November 1840.

7 Ibid., 10 February 1841; The quarry at Elgin, which was widely used during the 19th century, was likely the site from which stone was hauled by oxen over "six miles of new made Road" during construction of the works. (Ibid., MG13, W.O.44, Vol. 18, fol. 320-3, report on progress in 1830 by Col. By, printed in Price, Construction History of the Rideau Canal, p. 277).

8 PAC, RG43, B4 (a), Vol. 117, 18 May 1841.

9 Ibid., 19 August 1841.

10 Ibid., 31 August, 4 September 1841.

11 Ibid., 21 May 1841; ibid., RG8, C, Vol. 1635, p. 115, Inspection Report, 1852.

12 Ibid., RG43, B4 (a), Vol. 117, Painting Specifications, 30 May 1849; DINA, E&A, J. P. Jerome, As-Found Drawings, Jones Falls Lockmaster's House, June 1974.

13 PAC, RG43, B4 (a), Vol. 117, Painting Specifications, 30 May 1849; this provision and the presence of windows in the walls of the house were contrary to the directions of a circular on defensible buildings prepared by the Inspector General of Fortifications in 1845 (ibid., MG13, W.O.55, Vol. 880, fol. 310).

14 DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, June 1974; on-site inspection by B. Terrence, Ontario Region, Restoration Architect, March 1979.

15 PAC, RG43, B4 (a), Vol. 117, May 1841, May 1842.

16 Ibid., MG13, W.O.55, Vol. 876, fol. 212, barrack accommodation 1841; ibid., NMC, (At) 410-Rideau Canal - 1852, plan of guardhouses at Jones Falls and Whitefish.

17 Ibid., RG43, B4 (a), Vol. 117, 9-11 May 1842; 1-4 June

1844; 14-22 May 1846; 20 May 1847; 30 May, 26 June 1849.

18 Ibid., 25 January 1843; 11 March 1844; month unknown 1845.

19 Ibid., 25 November 1854.

20 Ibid., RG8, C, Vol. 1635, p. 115, Inspection Report 1852.

21 Ibid., RG11, Vol. 341, File 46851, Wise to Braun, 14 December 1874 (also in RG43, B4 (a), Vol. 151).

22 Bolton, who was previously lockmaster at the Narrows, replaced Henry Layng who was dismissed 30 November 1874. Charges against the latter for misuse of government property were never proved, but ill-feeling between Layng and his neighbours was sufficient to impair his utility (ibid., RG43, B4 (a), Vol. 151, Wise to Langley, 26 August, 18 September, and 30 November 1874; Tulloch, The Rideau Canal, p. 166).

23 PAC, RG11, Vol. 585, File 51893, Annual Report, 15 July 1875 (also in RG43, B4 (a), Vol. 151).

24 DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, Drawings 5-8, June 1974; in the inspection report of 1852, the lockhouse was described as the same as that at First Rapids which was the same as Maitland's which was 27 ft. 6 in. square (PAC, RG8, C, Vol. 1635, pp. 52, 71, 95, 97, 115).

25 DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, Drawings 5 and 6, June 1974; PAC, NMC, V1/410-Rideau Canal, Jones Falls [1860].

26 Ibid., RG43, B4 (a), Vol. 117, painting specifications, Royal Engineer's Office, Bytown, 30 May 1849.

27 Ibid.

28 Ibid.

29 Ibid.

30 This size of pane was frequently used in canal structures;

in 1844, H. Blasdell, contractor, was to furnish panes of this size to repair broken glass in the lockhouse (ibid., 11 March 1844).

31 Ibid., painting specifications, 30 May 1849.

32 Ibid.

33 The frames for each set of steps were composed of two side boards each 5.0 ft. by 1.25 ft. (ibid., 25 November 1854).

34 DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, Drawings 5 and 7, June 1974.

35 PAC, RG43, B4 (a), Vol, 117, painting specifications, 30 May 1849; ibid., 11 March 1844.

36 Ibid., painting specifications, 30 May 1849.

37 Ibid., RG11, Vol. 588, File 71621, Wise to Braun, 2 January 1978; ibid., Vol. 589, File 76811, Annual Report, 12 October 1878.

38 Ibid., RG43, B4 (a), Vol. 117, painting specifications 30 May 1849.

39 On-site investigation by B. Terrence, restoration architect, March 1979.

40 All subsequent loop measurements also refer to interior dimensions.

41 PAC, RG43, B4 (a), Vol. 117, "cutting glass for the loopholes (in the guardhouse)", 29 October 1842.

42 On-site inspection by B. Terrence, restoration architect; Keith Dewar, interpretive officer; and the author, 18 September 1979.

43 PAC, RG43, B4 (a), Vol. 117, 30 May 1849.

44 The wooden plugs were still extant in 1979 on the south side where they would have been covered by the extension of 1910 and on the east side where a porch may have existed after 1887.

45 The king-posts seem original since they feature mortise and tenon construction; the queen-posts may have been

added at a later date (DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, Drawing, 30 June 1974).

46 PC, B. Terrence, restoration architect, on-site investigation, 1978-79; the lockmaster recorded shingles being brought to the house, presumably for repairs, in 1843 (PAC, RG43, B4 (a), Vol. 117, 25 January 1843); the diagonal pattern was also used in the Jones Falls Blacksmith's Shop (Jean-Claude Parent, Profil de certains édifices le long du canal Rideau: le "Royal Engineer's Office" et l'édifice du Commissariat à Ottawa, étude du paysage de la station d'éclusage d'Ottawa, le tunnel de chemin de fer à Ottawa, la forge à Jones Falls et le blockhaus à Kingston Mills, Manuscript Report Series No. 225 (Ottawa: Parks Canada, 1977), Figure 39.

47 PAC, RG43, B4 (a), Vol. 117, painting specifications, 30 May 1849.

48 Ibid., 28 February 1851.

49 Ibid., 7 January 1845.

50 Ibid., RG11, Vol. 183, File 51158, schedule of repairs, 5 January 1861; ibid., File 57063, schedule of repairs, 1 January 1862.

51 Ibid., RG43, B4 (a), Vol. 117, 21 May 1841.

52 DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 18, 1974.

53 Ibid., Drawing 12.

54 Ibid.

55 Ibid.

56 In 1927 the interior "was furred, lathed and plastered; it having been originally plastered on the stone walls" (PAC, RG43, B4 (a), Vol. 167, Annual Report, 1 April 1927); DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 32 and 36, 1974.

57 In discussing the unhealthy condition of the house at Hartwells in 1904-5, the canal superintendent noted that this was the result of the house not having been furred and lathed recently as had been most similar houses (PAC, RG43, B4 (a), Vol. 159, Phillips to Schreiber, 27 May 1904 and 14 March 1905).

58 DINA, E&A, J.-P. Jérôme, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 9, 1974.

59 This assertion is based on on-site investigation by B. Terrence, restoration architect, September - November 1979, which showed that the original plaster stopped at the points where the ends of these partitions intersected with the masonry.

60 The daughter, Catherine, lived at home until the end of 1848; the son, Tommy, left home in 1843, but returned periodically until 1848 when he emigrated to the United States (PAC, RG43, B4 (a), Vol. 117, Lockmaster's Journal, 1839-50; W. Wylie, A Lockmaster on the Rideau: The Life of Peter Sweeney, 1839-50, unpublished report, Parks Canada, Ontario Region, Cornwall, 1980).

61 The lockmaster recorded this stove being moved into the cookhouse between March and May in various years and back into the lockhouse usually in September (ibid., 29 September 1843, 10 March 1844, 23 May 1846, 30 September 1846, 19 April 1855).

62 Ibid., 30 September 1846.

63 Ibid., 26 March 1849.

64 Ibid., 9-11 May 1842.

65 Ibid., 14-19 May 1845, 20-22 May 1846, 20 May 1847.

67 Ibid., painting specifications, 30 May 1849.

68 There were also four rooms in the Davis Lockmaster's House at the next station, according to the Davis

Lockmaster's Journal, 1851, cited in M. Sutherland and D. B. Hornby, Historic Assets of the Rideau Waterway; a review prepared for the Canada - Ontario Rideau Canal Study Group. (Ottawa: Canadian Historic Sites Division, 1967), p. 42.

69 PAC, RG43, B4 (a), Vol. 117, 30 May 1849.

70 This is an interpretation of the specifications which lists 6 surfaces of architraves to be painted 17.6 ft. each and 2 of 16.6 ft.

71 "Window sashes - painting in oil 2 coats white - #5 - 24 squares".

72 Ibid., 1-4 June 1844.

73 PAC, MG13, W.O.55, Vol. 880, fol. 310, General Order by Inspector General of Fortifications, 29 September 1845.

74 Ibid., RG43, B4 (a), Vol. 117, painting specifications, 30 May 1849.

75 Ibid., RG11, Vol. 439, File 239, Slater to Braun, 10 July 1867.

76 Ibid., Vol. 341, File 46851, Wise to Braun, 14 December 1874.

77 Ibid., RG43, B4 (a), Vol. 117, 1, 7, 13, 28 September 1841, 10 November 1842.

78 PC, Ontario Region, Realty Division, Ordnance Map of Jones Falls, Part 1, 1849 (1850).

79 This crib work was repaired in 1890-91 (Canada. Department of Railways and Canals, Annual Report, 1891, (Ottawa: Dept. of R&C, 1892), Appendix 8, p. 135).

80 PC, Ontario Region, Realty Division, Ordnance Map of Jones Falls, Part 1, 1849 (1850); PAC, NMC, V1/410-Rideau Canal - Jones Falls, (1860).

81 PAC, RG43, B4 (a), Vol. 117, 12 April 1845.

82 Ibid., Vol. 151, Wise to Bolton, 27 March 1875.

83 Ibid., Vol. 157, Phillips to Bolton, 19 March 1897; Phillips to Schreiber, 29 May 1897; Phillips to Bolton,

9 June 1897.

84 Ibid., Vol. 118, memorandum of agreement, 7 August 1886; originally the department had set aside $150 for repairs; it is not clear whether the additional moneys were actually spent (ibid., Vol. 153, Wise to Bradley, 26 January 1886).

85 Ibid., Annual Report, 28 September 1887.

86 DINA, E&A, Canals Engineering, Department of Railways and Canals Inventory of Rideau Buildings, Jones Falls Lockmaster's House, 1930; PC, Ontario Region, Archaeology Section, research notes of Harley Stark, 1978; DINA, E&A, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 6, 1974.

87 In one photograph of the late 1930s or early 1940s, the colour scheme was reversed with white paint and dark trim.

88 PAC, RG43, B4 (a), Vol. 153, Wise to Bradley, 26 January 1886; ibid., Vol. 118, memorandum of agreement with David Sly, 7 August 1886.

89 DINA, E&A, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 6, 1974.

90 Ibid.

91 Ibid., Drawing 10, 13, and 14, 1974.

92 PC, Ontario Region, Historical Research Section, newspaper fragment, the Montreal D_____; this has tentatively been dated as March 1891 or 1892 on the strength of an article headed New York, March 17, which describes American Secretary of State Blaine's attempts to negotiate a reciprocal trade agreement with Spain concerning Cuba under the terms of the McKinley Tariff Act; the fragment of paper was found during investigations by B. Terrence, restoration architect, September 1979.

93 PAC, RG43, B4 (a), Vol. 156, Annual Report, 11 July 1895; repairs were made to the roof in 1897 by a tinsmith

(ibid., Vol. 157, Phillips to Dargavel, 25 March 1897).

94 Forster also indicated that the labourers at the station had been giving the previous lockmaster trouble (ibid., Vol. 157, Phillips to Forster, 6 March 1897).

95 This account included 2 inch and 2.5 inch wrought nails, wallpaper - $8.00, paint - $2.28, and glass $0.18 (ibid., Vol 119, 1 April 1897; ibid., Vol. 157, Annual Report, 12 July 1897).

96 Ibid., Vol. 160, Annual Report, 1 April 1911; PC, Ontario Region, Archaeology Section, research notes of Harley Stark, 1978.

97 Ibid., research notes of Harley Stark, 1978; this lumber was to be collected by the lockmaster for the rebuilding of a shed at the lockhouse. Since the only subsequent record of work performed is of the small addition, it is assumed that these materials were intended for this structure. They included:

40 Scantlings 2 in. by 4 in. by 12 ft. long
18 Scantlings 2 in. by 4 in. by 16 ft. long
300 F.B.M. 6 in. clapboards
200 F.B.M. pine for doors
1000 F.B.M. rough 1 in. lumber
30 lbs. 3 in. nails
20 lbs. shingle nails
9 joists 2 in. by 8 in. by 20 ft. long
2 common windows

(PAC, RG43, B4 (a), Vol. 160, Phillips to Stuart, 29 July 1910).

98 DINA, E&A, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 5, 1974.

99 PAC, RG43, B4 (a), Vol. 160, Phillips to Stuart, 29 July 1910; the building was reshingled in 1918, (ibid., Vol. 163, Annual Report, 1 April 1918).

100 Ibid.

101 Ibid., Vol. 161, Annual Report, 1 April 1914.

102 DINA, E&A, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 5, 1974.

103 Ibid., Drawing 18, 1974; PC, Historic Parks and Sites Branch, transcript of interview with Mr. Musen Perron, 5 February 1975; ibid., transcript of interview with Mr. and Mrs. Edgar Whalen, 13 June 1975; in 1932, Last was suspended for stealing government cement and other supplies (PAC, RG43, B4 (a), Vol. 169, Phillips to Dubuc, 14 January 1932).

104 DINA, E&A, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 18, inscription on cistern "A. Last fn. April 8, 1915"; PAC, RG43, B4 (a), Vol. 162, Annual Report, 1 April 1916.

105 DINA, E&A, Drawing 5, 1974; PC, Ontario Region, Archaeology Section, research notes of Harley Stark, 1978.

106 Small repairs of an unknown nature were made in 1925 (PAC, RG43, B4 (a), Vol. 166, Annual Report, 1 April 1925).

107 Ibid., Phillips to Dargavel, 17 September 1926; ibid., Vol. 169, Phillips to Dubuc, 16 February 1932; PC, Historic Parks and Sites Branch, transcript of interview with Mr. S. R. Hutchings, 11 July 1975.

108 PAC, RG43, B4 (a), Vol. 167, Annual Report, 1 April 1927.

109 DINA, E&A, Canals Engineering, Department of Railways and Canals Inventory of Rideau Buildings, Jones Falls Lockmaster's House, 1930.

110 PC, Historic Parks and Sites Branch, transcript of an interview with Mr. Alfred Sly, 10 August 1973.

111 DINA, E&A, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 13, 1974.

112 Ibid., Canals Engineering, Department of Railways and

Canals Inventory of Rideau Buildings, Jones Falls Lockmaster's House, 1930.

113 PC, Historic Parks and Sites Branch, transcript of an interview with Mr. Alfred Sly, 10 August 1973.

114 Ibid.

115 DINA, E&A, As-Found Drawings, Jones Falls Lockmaster's House, Drawing 5, 1974; PC, File C-2507/R85-14, Vol. 1, Speer to Clark, 21 September 1966.

116 PC, Ontario Region, Historical Research Section, aerial photograph of Jones Falls, 1964; W. Naftel, et. al., The Jones Falls Site and Lock Station, Preliminary Site Study (Ottawa: Parks Canada, 1973), p. 69, figure 33.

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120 Ibid., C-2507/R85-14, Vol. 1, Baldwin to the Director of Marine Works, 10 September 1965; ibid., Historic Parks and Sites Branch, transcript of an interview with Mr. Alfred Sly, 10 August 1973.

121 Canada. Department of Railways and Canals, Annual Report, 1891, (Ottawa: Dept. of R&C, 1892), Appendix 8, p. 135.

122 Ibid.; PAC, RG43, B4 (a), Vol. 163, Annual Report, 1 April 1920.

123 Ibid., Estimates 1920-21, 1 December 1919.

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127 DINA, E&A, Canals Engineering, Department of Railways and Canals Inventory, Jones Falls Lockhouse, 1930.

128 PAC, NMC, V1/410-Rideau Canal (Jones Falls) - 1860.

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131 Ibid., Vol. 157, Phillips to Bolton, 19 March 1897; Phillips to Schreiber, 29 May 1897; Wise to Bolton, 9 June 1897.

132 Ibid., Vol. 164, Annual Report, 1 April 1922.

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134 PC, C2507/R85, Vol. 1, Clark to Betournay, 16 February 1962.

135 Ibid., C2507/R85-14, Vol. 1, Baldwin to Director of Marine Works, 10 September 1965; Cowan to Pickersgill, 22 August 1966; Speer to Clark, 21 September 1966.

136 Ibid., C8400/R85, Vol. 1, list of blockhouses on the Rideau, enclosed in Clark to Ballinger, 4 February 1964; the building was occupied by staff until 27 February 1966 at $25 per month (ibid., C2507/R85-14, Vol. 1, Clark to Farmer, 28 September 1966).

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Tulloch, Judith
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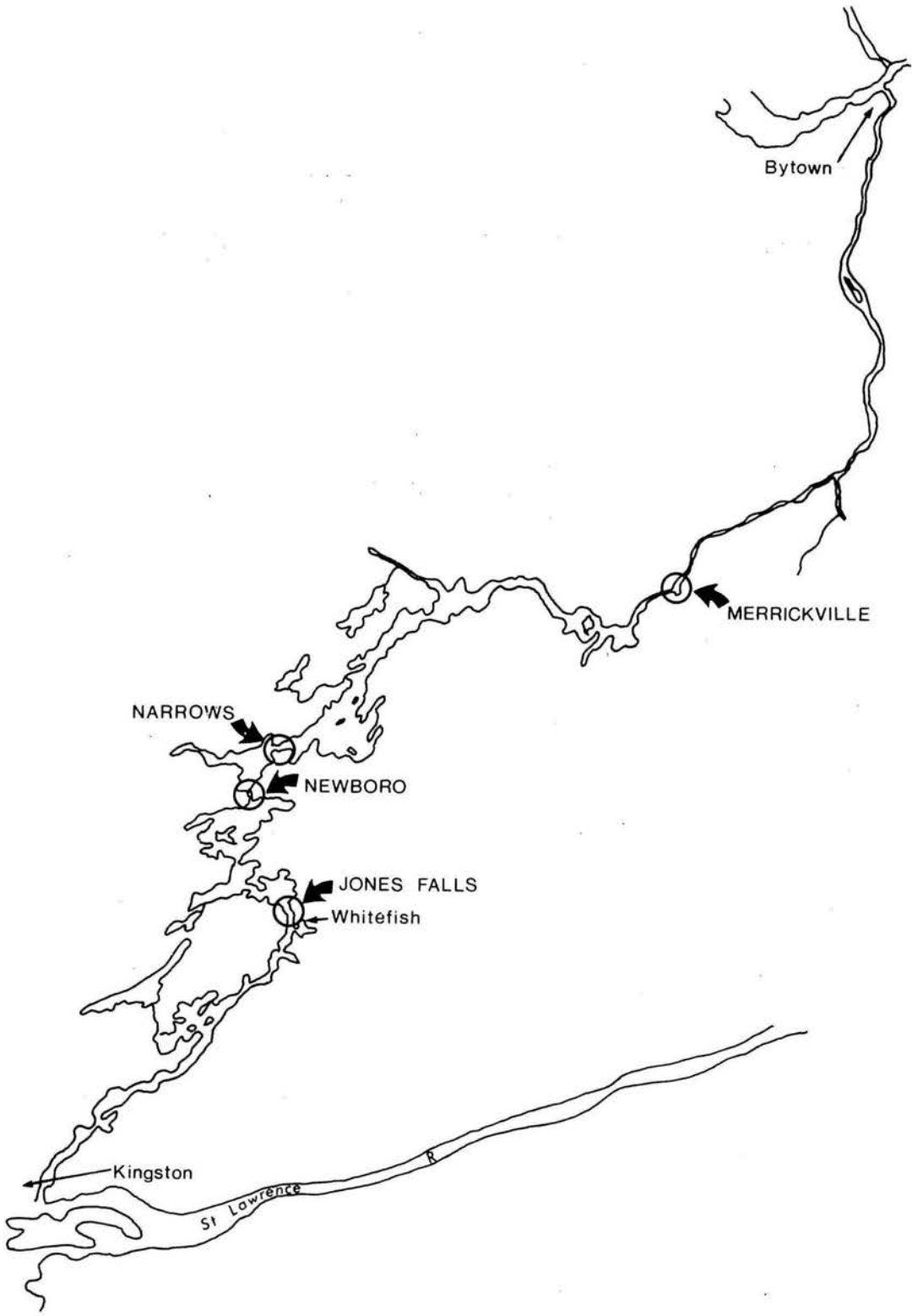
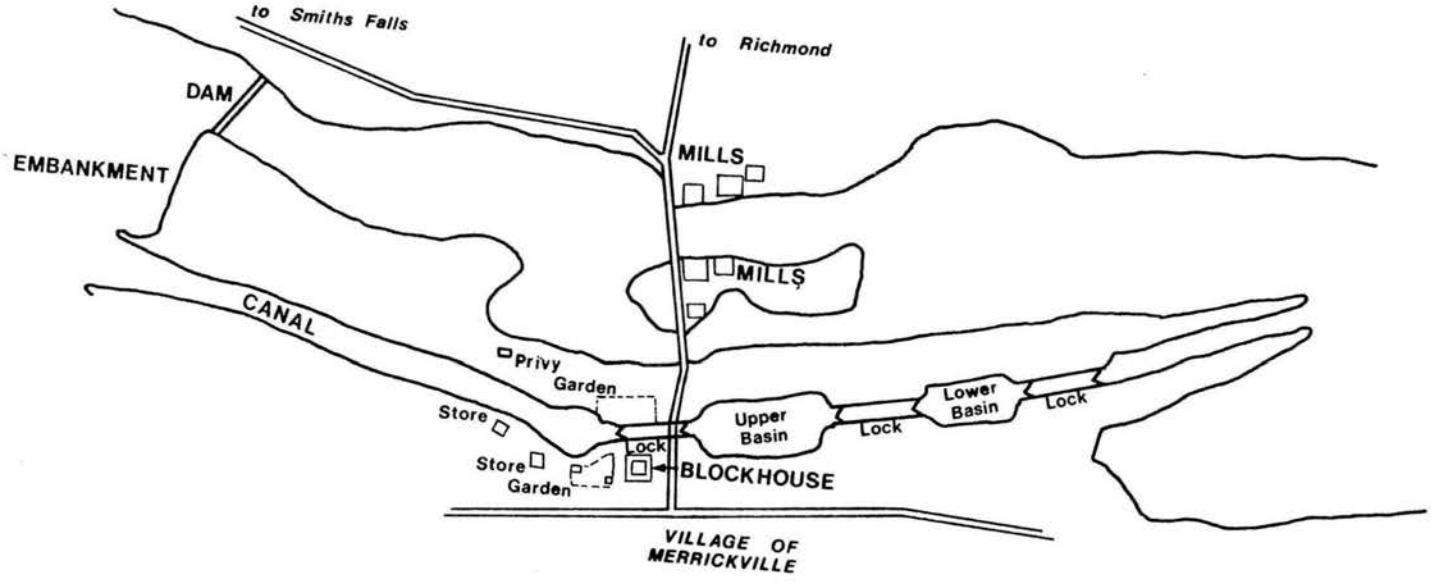
Wylie, William
A Lockmaster on the Rideau: The Life of Peter Sweeney, 1839-50. Unpublished report, Parks Canada, Ontario Region, Cornwall, 1980.

Young, Richard J.
A Comparative Report and Catalogue of Blockhouses in Canada.
Manuscript Report Series No. 155, Parks Canada, Ottawa,
1973.

1 Map of the Rideau Canal showing the Stations at Merrickville, Narrows, Newboro, and Jones Falls. (C. Tourangeau.)


Bytown
MERRICKVILLE
NARROWS
NEWBORO
JONES FALLS
Whitefish
Kingston
St Lawrence R

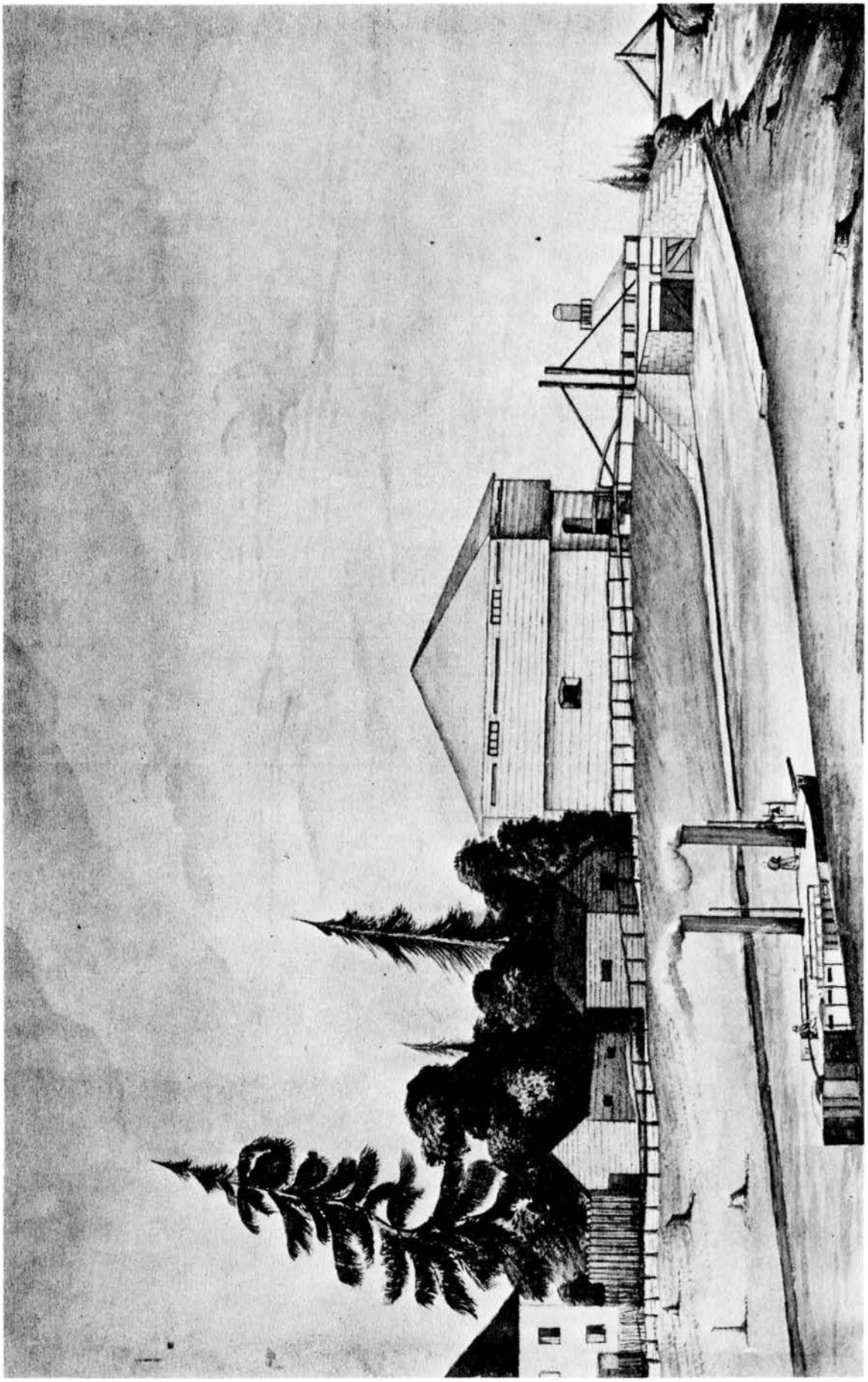
2 Map showing the position of the Merrickville Blockhouse in relation to the surrounding area, ca. 1850.
(C. Tourangeau.)


to Smiths Falls
to Richmond
DAM
EMBANKMENT
MILLS
MILLS
CANAL
Privy
Garden
Store
Store
Garden
Lock
Upper Basin
Lock
Lower Basin
Lock
BLOCKHOUSE
VILLAGE OF MERRICKVILLE

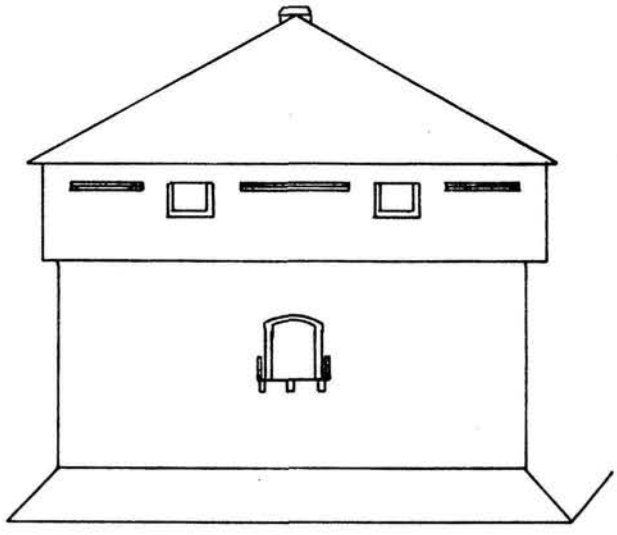
3 Wash Drawing of the Merrickville Station by William Clegg, ca. 1827-32. (Public Archives of Canada, C-1209.)

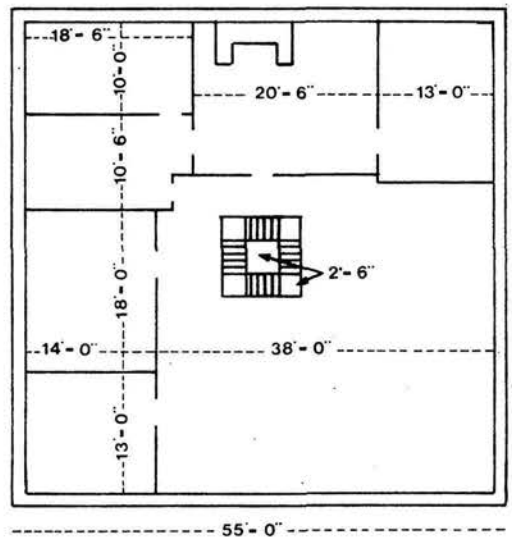
Station No 9 46½ Miles from Boston

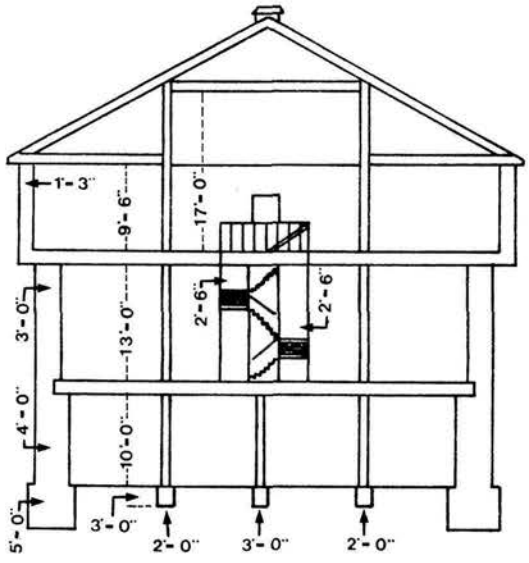
4 The Blockhouse at Merrickville, 1839, by Captain H. F. Ainslie; this sketch is not accurate in all its details.
(Public Archives of Canada, C-512.)

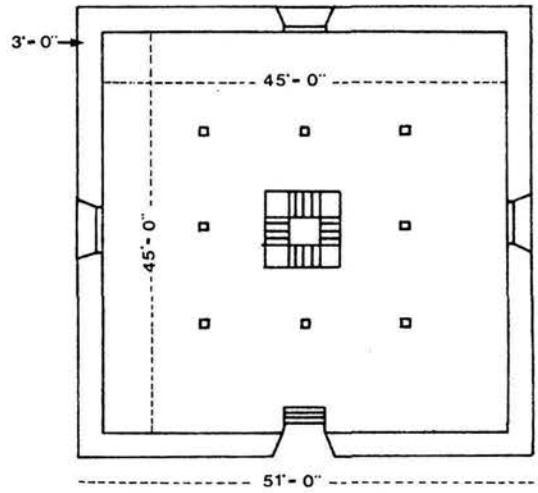


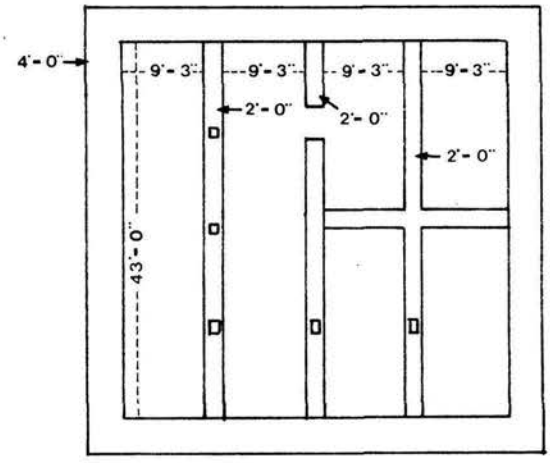
5 The Royal Engineers' Plans of the Blockhouse at Merrickville, 1852.
(drawing by C. Tourangeau based on the original in the Public Archives of Canada.)



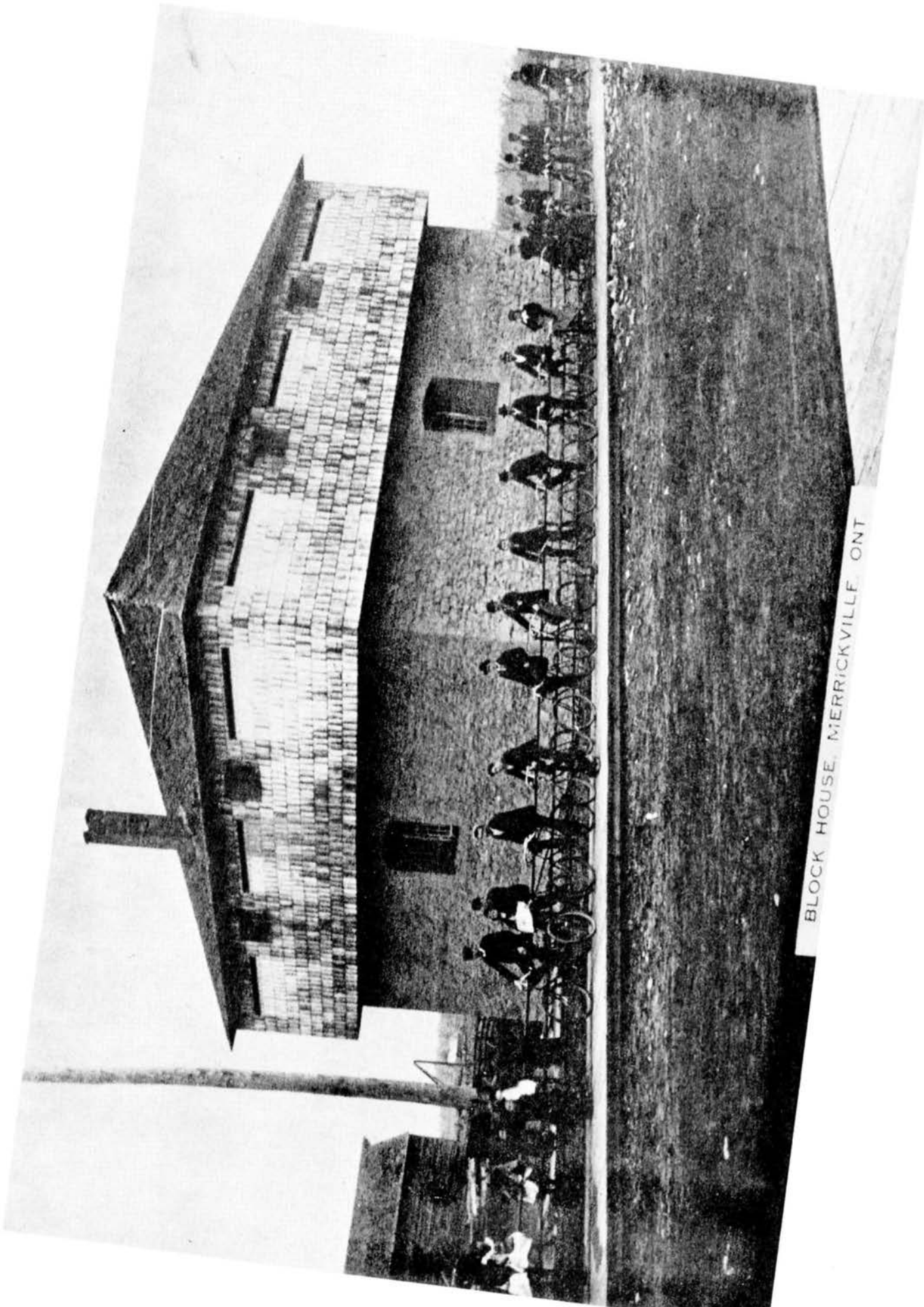

18'- 6"
10'- 0"
20'- 6"
13'- 0"
10'- 6"
2'- 6"
18'- 0"
14'- 0"
38'- 0"
13'- 0"
55'- 0"


1'- 3"
9'- 6"
17'- 0"
2'- 6"
2'- 6"
3'- 0"
13'- 0"
4'- 0"
10'- 0"
5'- 0"
3'- 0"
2'- 0"
3'- 0"
2'- 0"

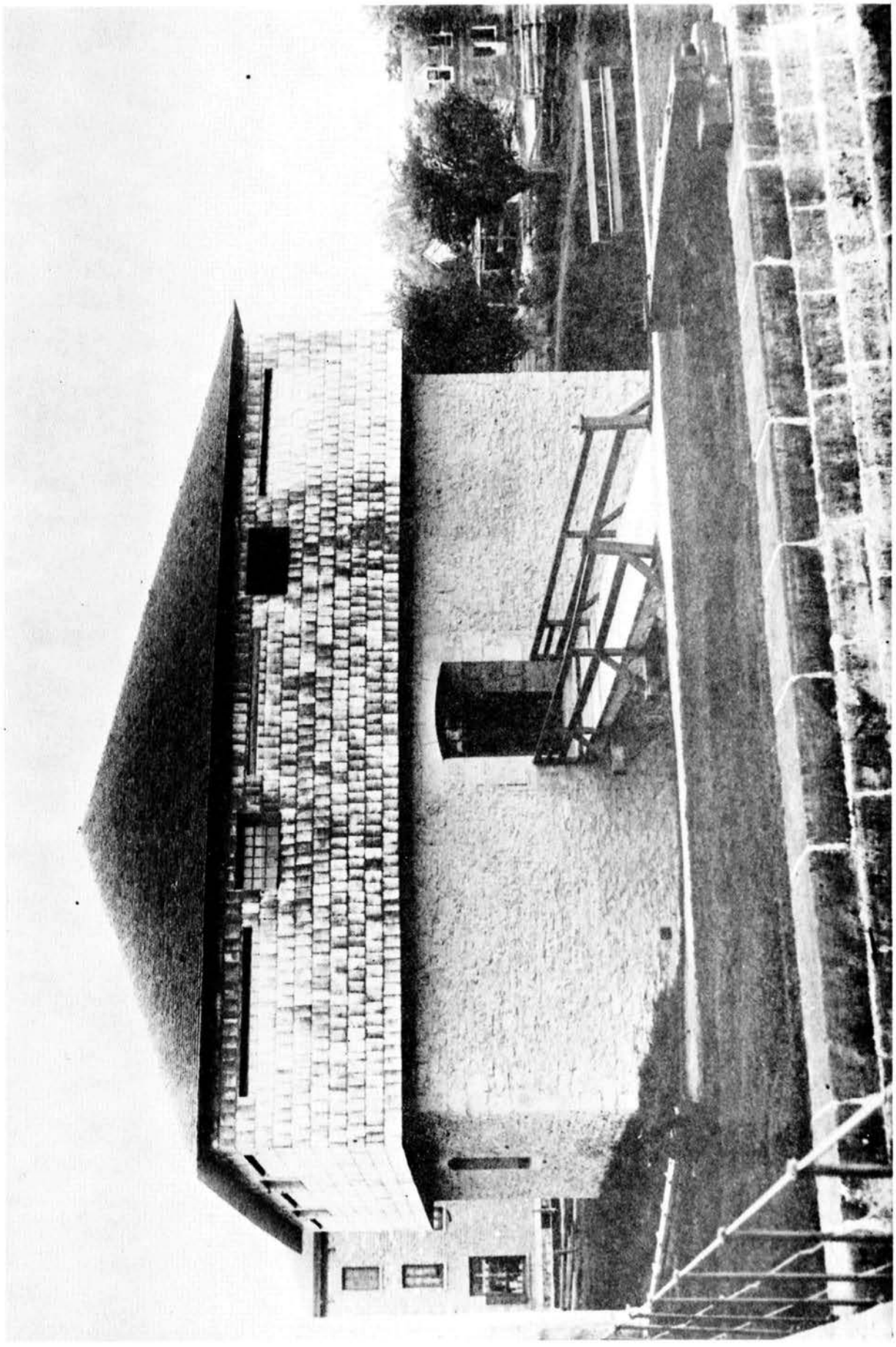

3'- 0"
45'- 0"
45'- 0"
51'- 0"


4'- 0"
9'- 3"
9'- 3"
9'- 3"
9'- 3"
2'- 0"
2'- 0"
2'- 0"
43'- 0"

6 View of the Merrickville Blockhouse with the Cycling Club in front of it, ca. 1895.
(Public Archives of Canada, C-53891.)


BLOCK HOUSE, MERRICKVILLE ONT

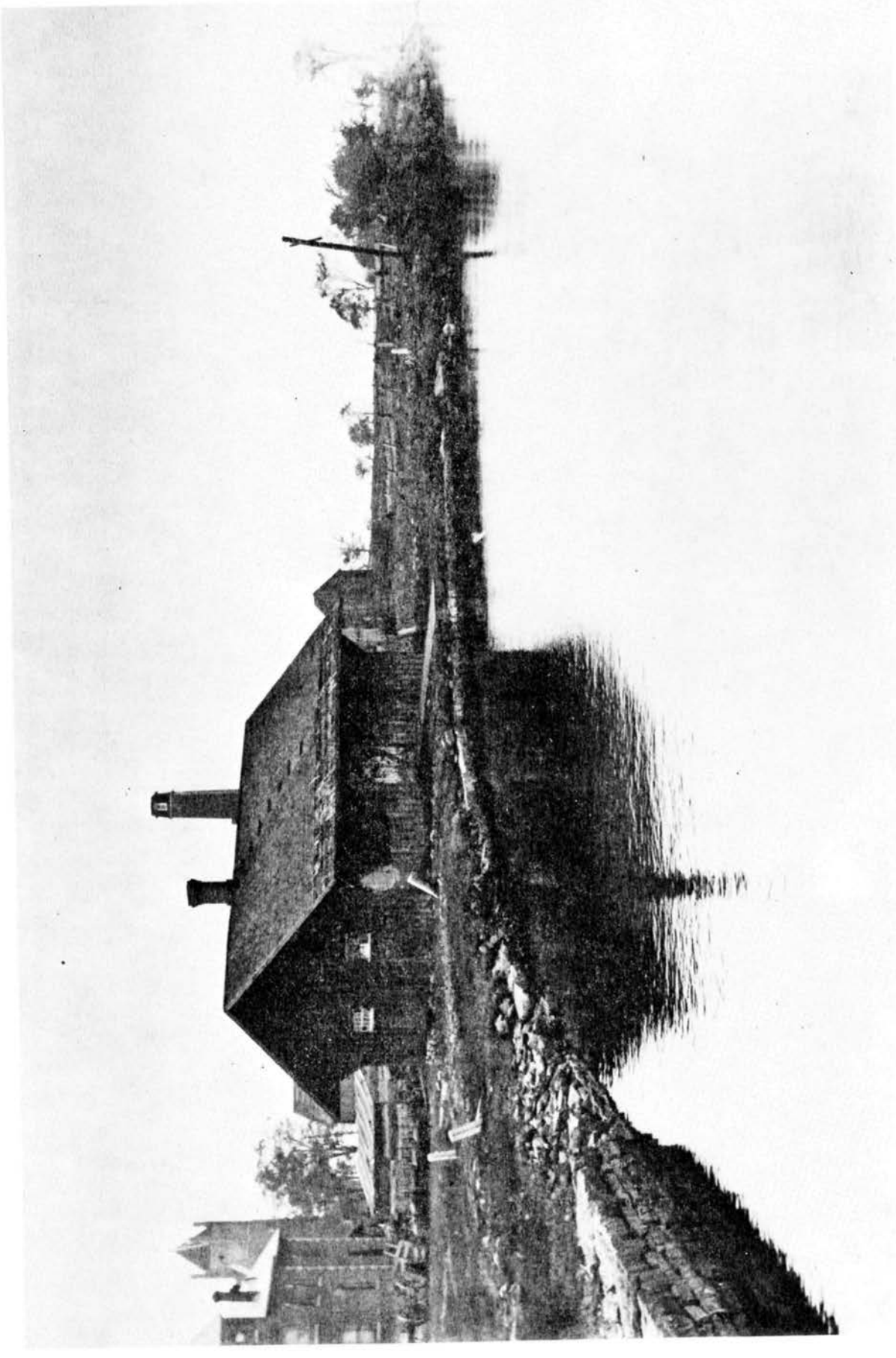
7 The Blockhouse at Merrickville, ca. 1900.
(Public Archives of Canada, PA-8821.)



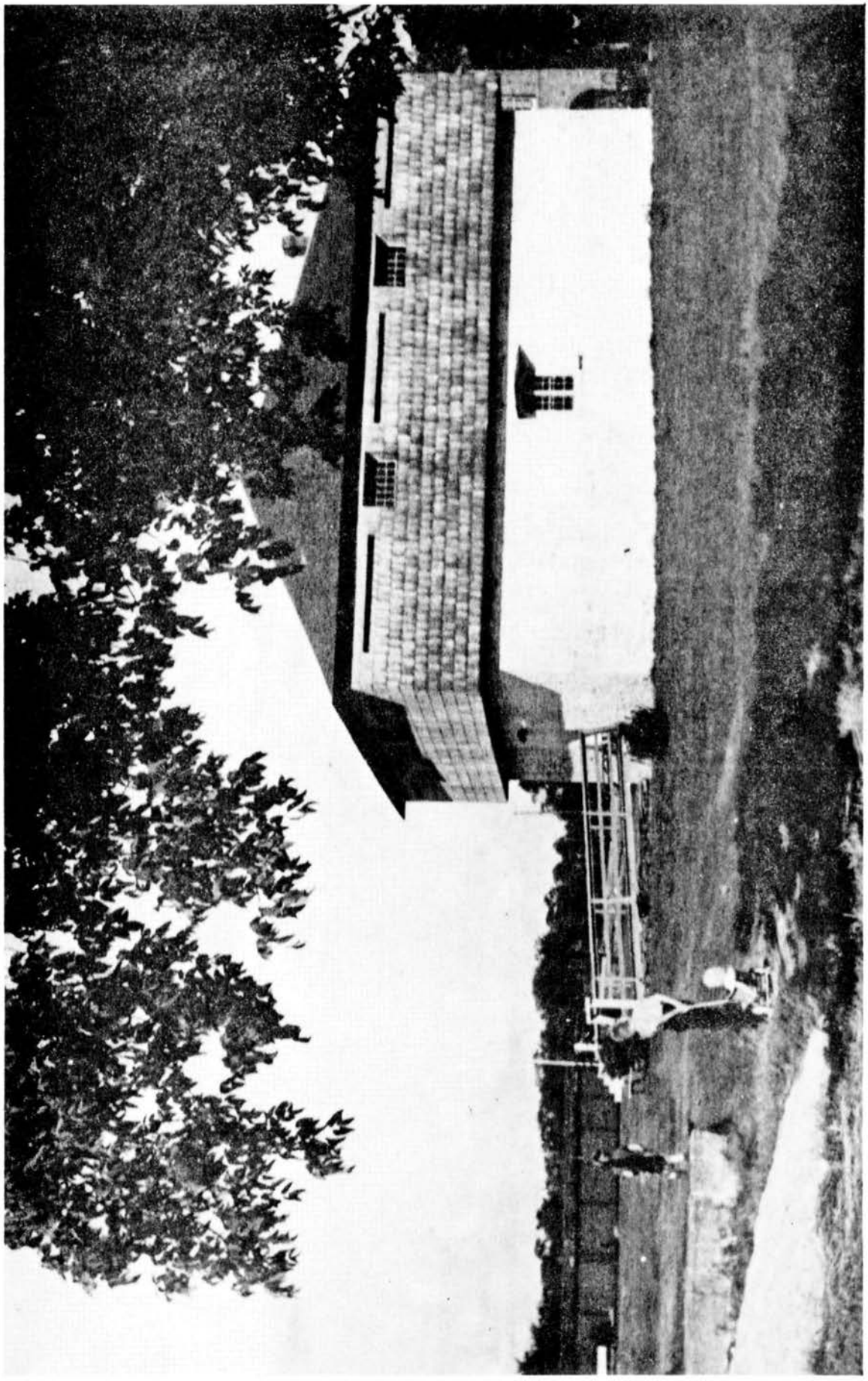
8 The Blockhouse at Merrickville, ca. 1902.
(Collection of L. Hassall, Merrickville.)

BLOCK HOUSE
MERRICKVILLE.
—ONT.—

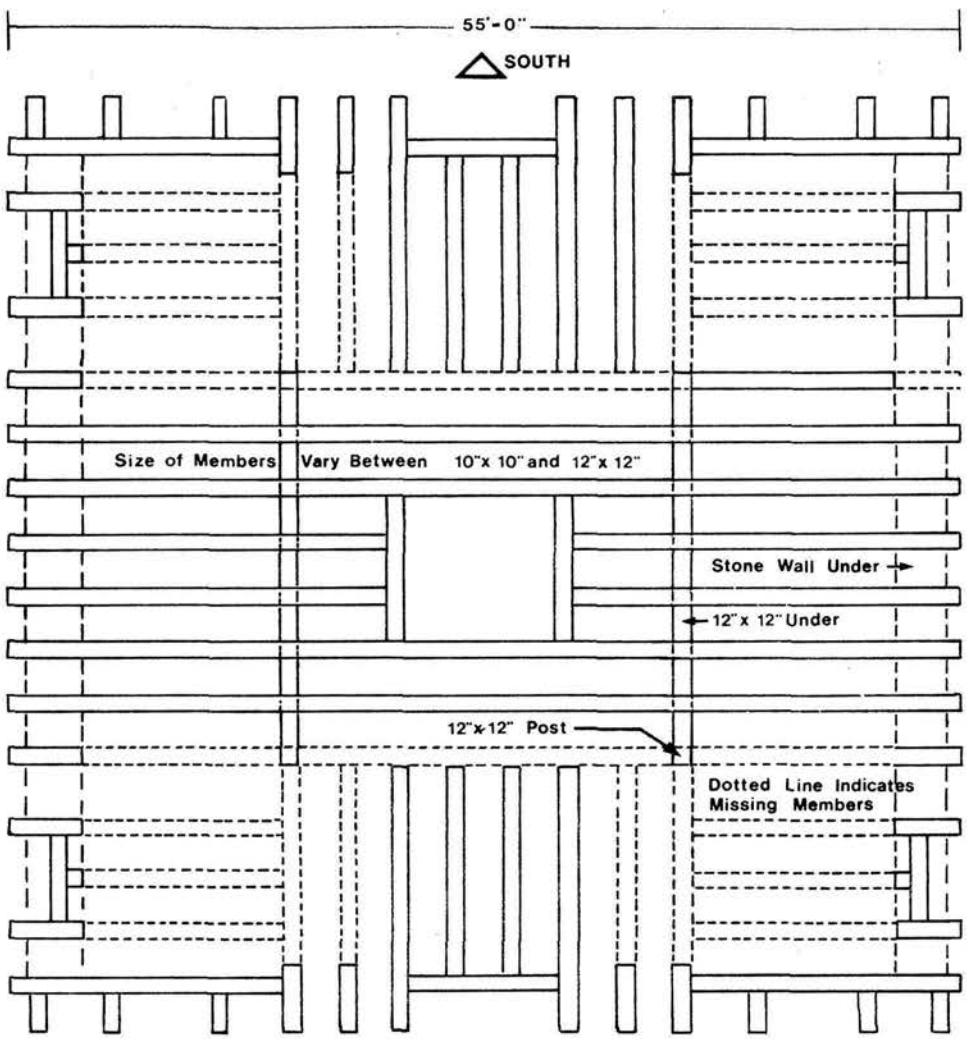
9 The Depot Building at Merrickville, 1905.
(Collection of Neil Patterson, Kingston.)



10 The Merrickville Blockhouse, 1936.
(Public Archives of Canada, C-6043.)



11 Plan of Second Floor Framing, Merrickville Blockhouse, 1961.
(drawing by C. Tourangeau based on the original in PC, File HS-8-19-1-1, Vol. 1.)

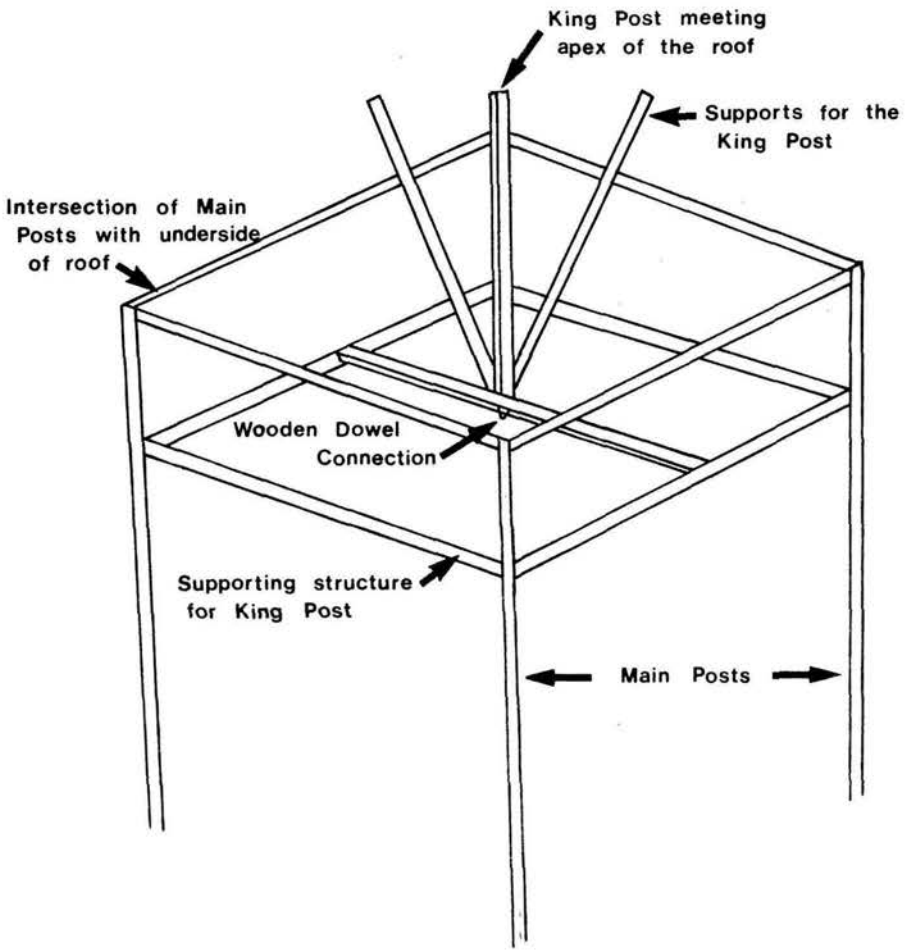

55'-0"
SOUTH
Size of Members Vary Between 10"x 10" and 12"x 12"
Stone Wall Under
12" x 12" Under
12"x12" Post
Dotted Line Indicates
Missing Members

12 The Interior of the Merrickville Blockhouse, 1961, showing the truncated beams between the first and second storeys.
(PC, File HS-8-19-1-1, Vol. 1.)

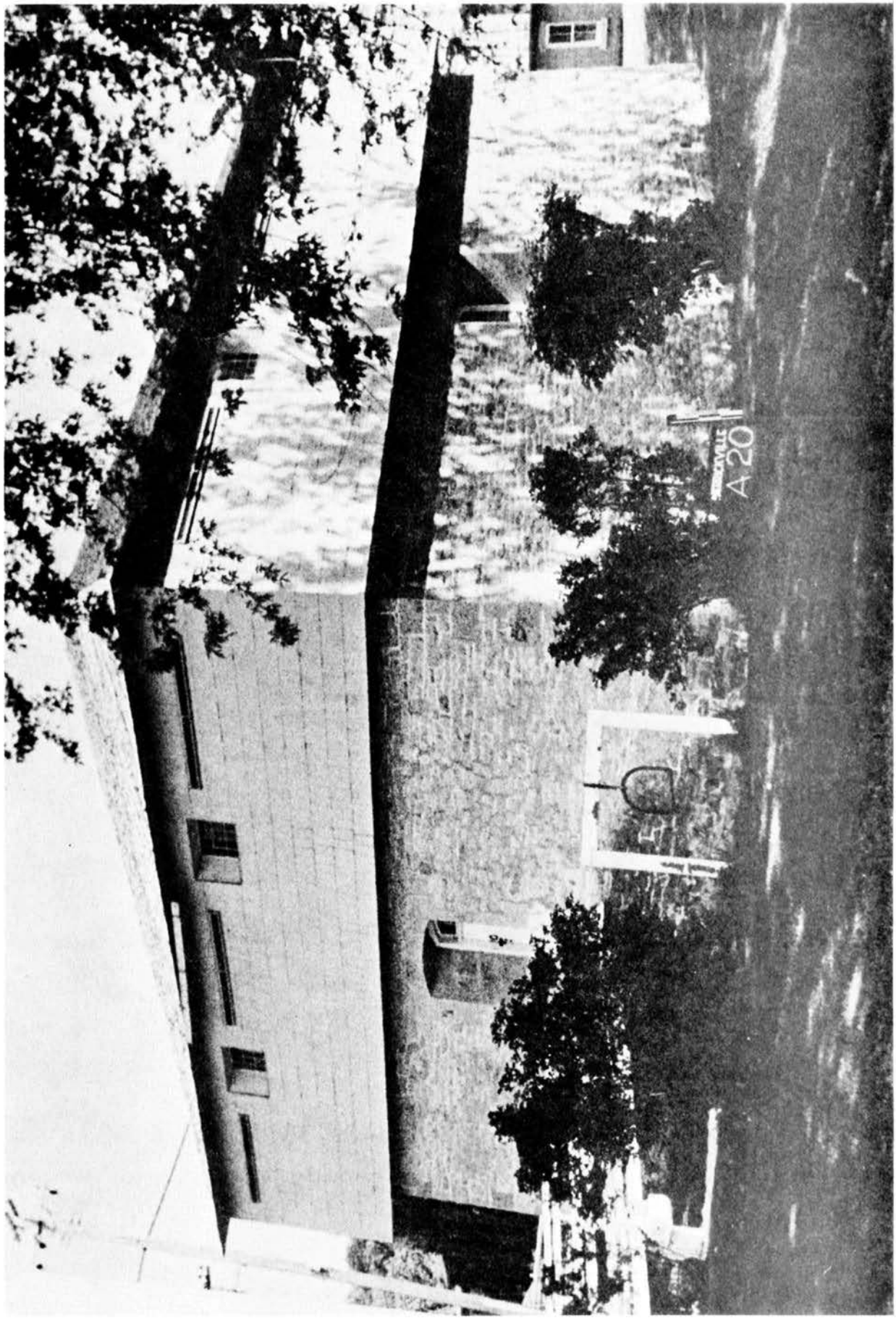
13 The Interior of the Merrickville Blockhouse, 1961, showing the temporary block under a knee brace and a new supporting post.
(PC, File HS-8-19-1-1, Vol. 1.)

14 The Merrickville Blockhouse, 1961; one of the four main interior posts; note the brace between the post and beam and the evidence of separation between the two.
(PC, File HS-8-19-1-1, Vol. 1.)

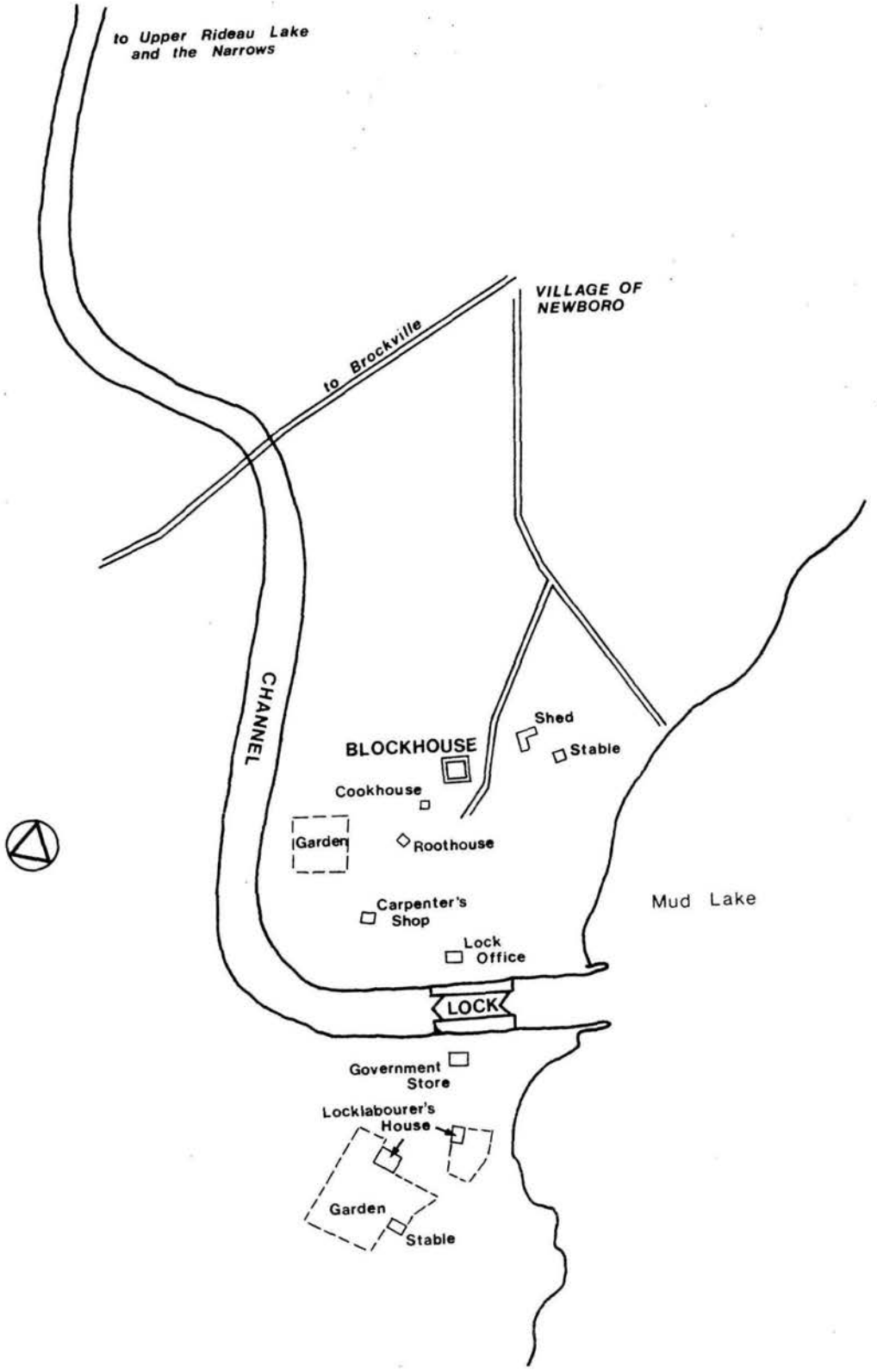
15 Drawing of the present internal structure of the roof of the Merrickville Blockhouse.
(C. Tourangeau.)


King Post meeting apex of the roof
Supports for the King Post
Intersection of Main Posts with underside of roof
Wooden Dowel Connection
Supporting structure for King Post
Main Posts

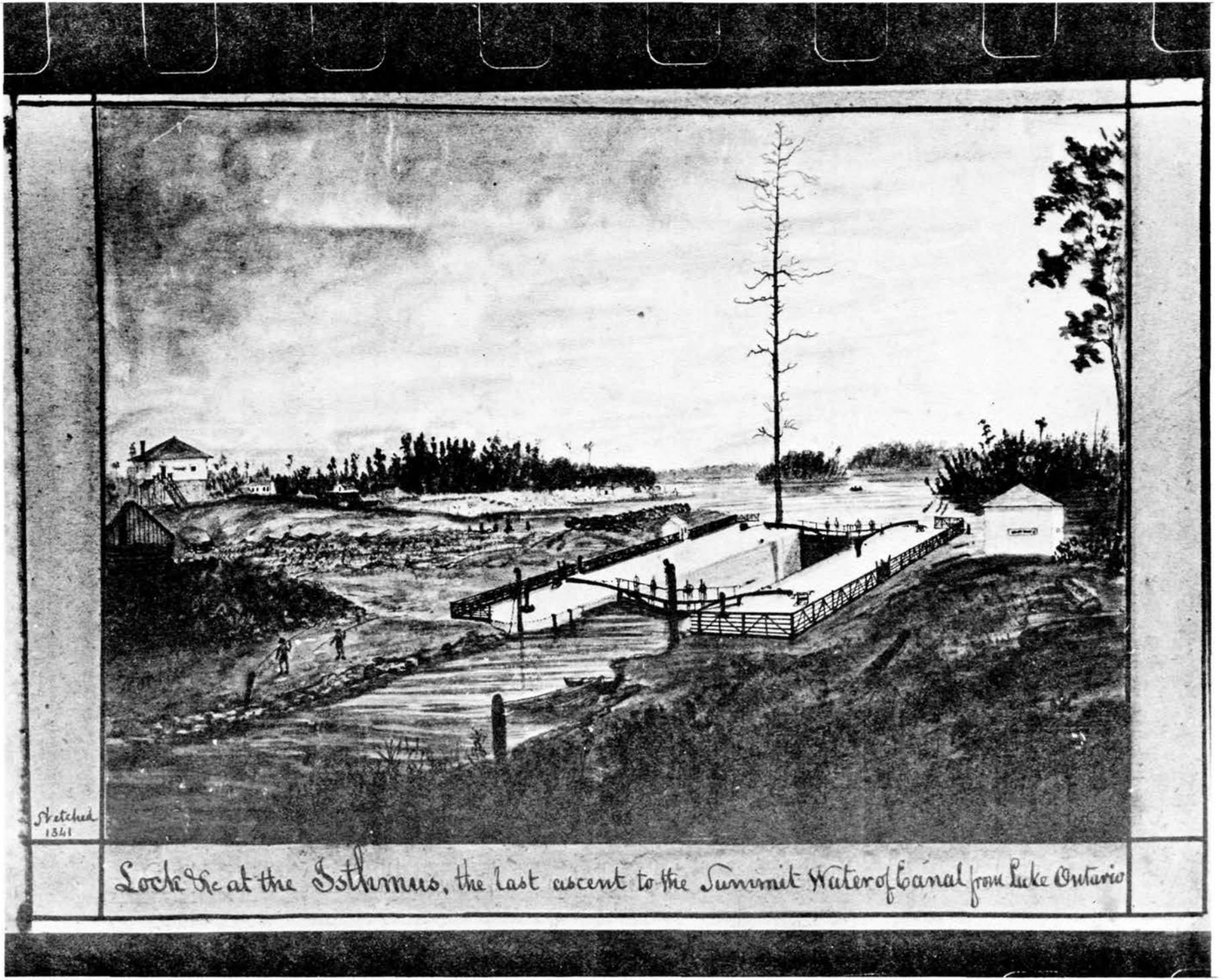
16 The Merrickville Blockhouse, 1973.
(DINA, Engineering and Architecture, Technical Data Services.)


A 20

17 Map of the Newboro Lockstation showing part of the canal cut and the buildings, ca. 1850. (C. Tourangeau.)

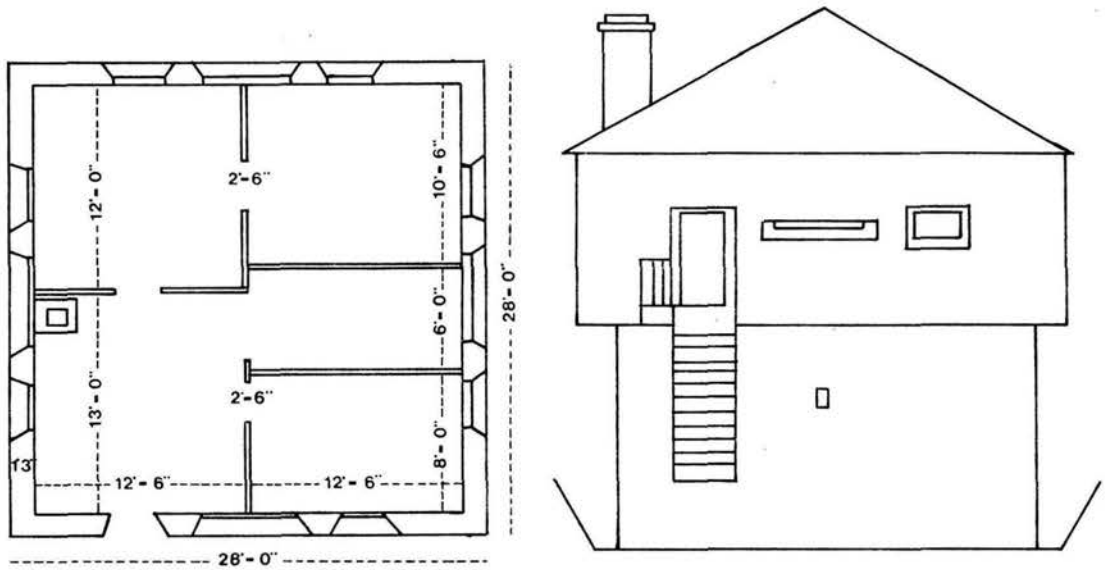

to Upper Rideau Lake
and the Narrows
VILLAGE OF
NEWBORO
to Brockville
CHANNEL
BLOCKHOUSE
Shed
Stable
Cookhouse
Garden
Roothouse
Carpenter's
Shop
Mud Lake
Lock
Office
LOCK
Government
Store
Locklabourer's
House
Garden
Stable

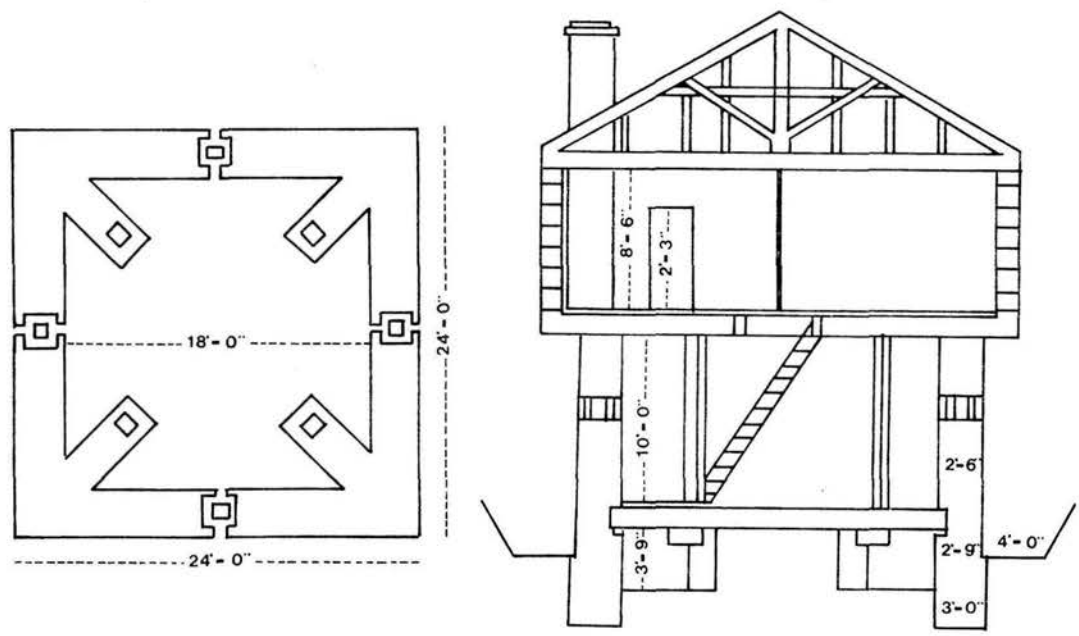
18 The Newboro Lock with the Blockhouse on the left, 1841; Burrows Sketch No. 36.
(Ontario Archives.)



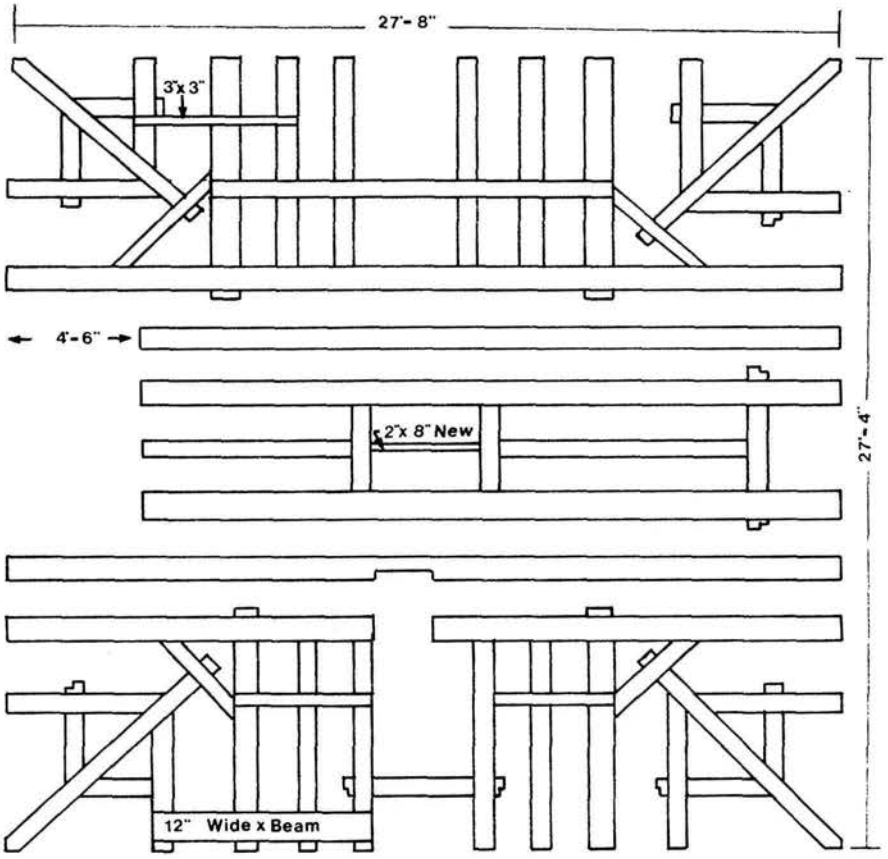
Lock No at the Isthmus, the last ascent to the Summit Water of Canal from Lake Ontario

19 The Royal Engineers' plans of the Newboro Blockhouse, 1852.
(drawing by C. Tourangeau based on the original in the Public Archives of Canada.)

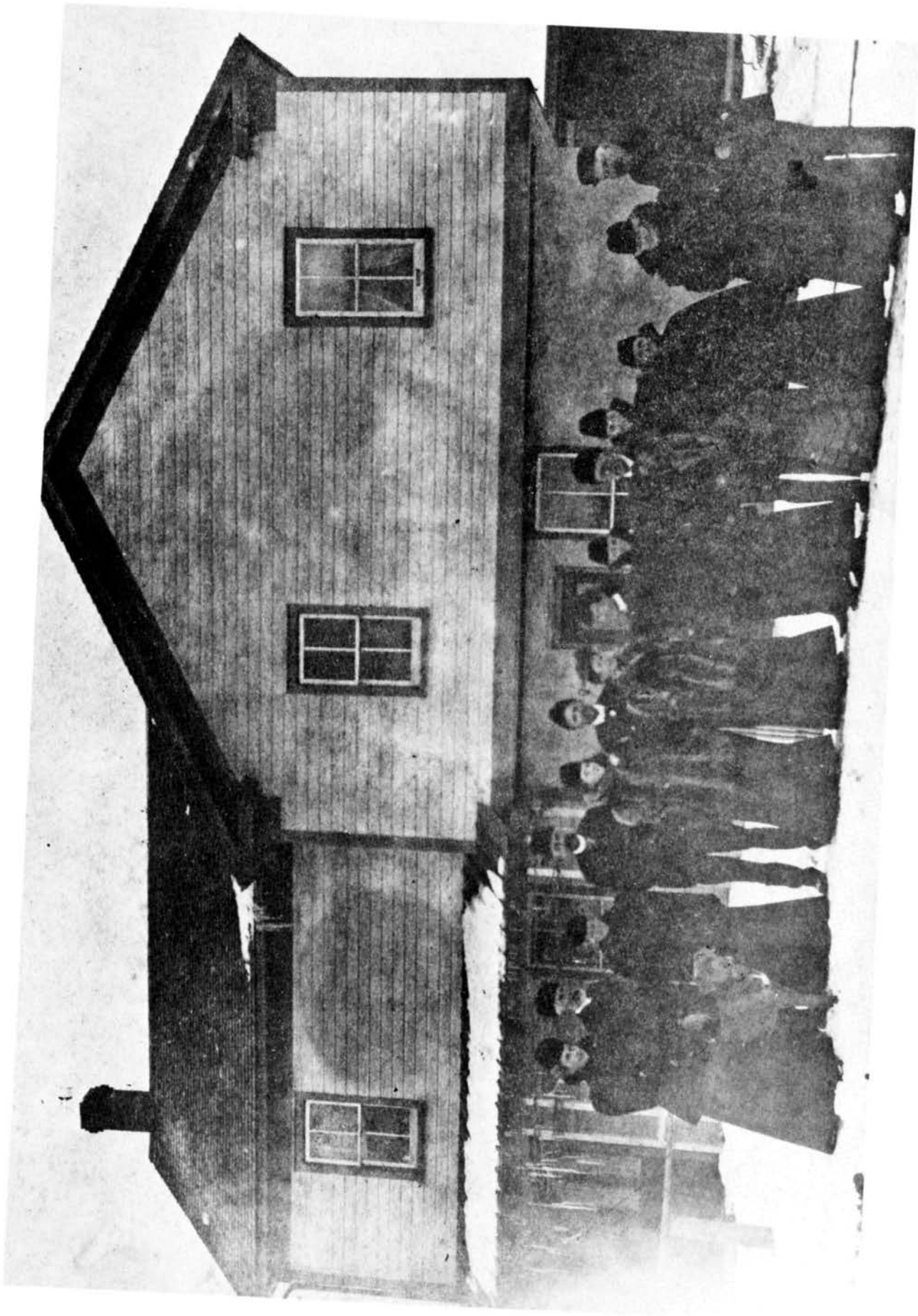

2'-6"
12'-0"
10'-6"
6'-0"
2'-6"
13'-0"
8'-0"
13'
12'-6"
12'-6"
28'-0"
28'-0"


18'-0"
24'-0"
24'-0"
8'-6"
2'-3"
10'-0"
2'-6"
3'-9"
2'-9"
4'-0"
3'-0"

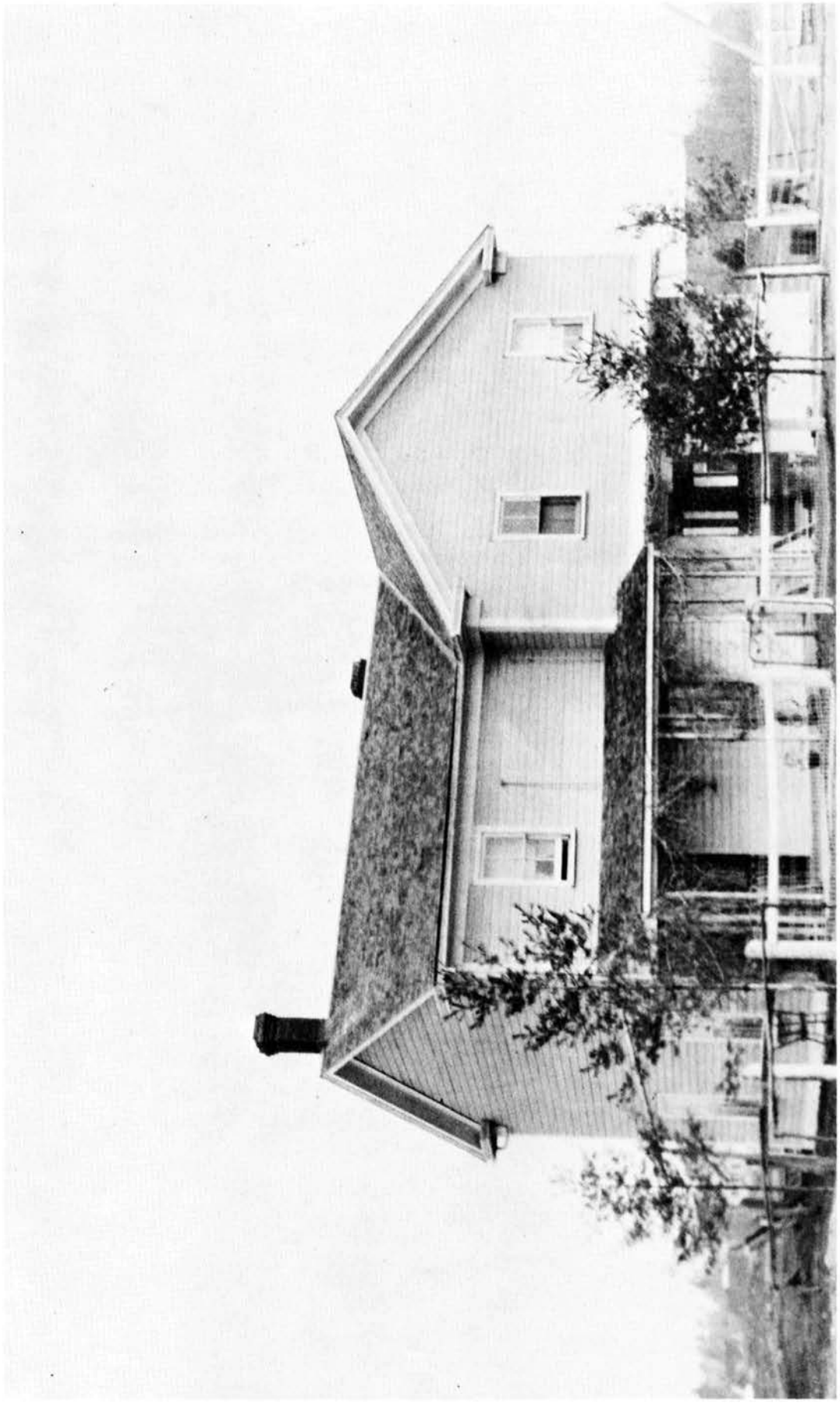
20 Plan of the second-floor beams as found in the Newboro Blockhouse, 1967.
(drawing by C. Tourangeau based on the original held by DINA, Engineering and Architecture, Technical Data Services.)


27'-8"
3"x 3"
4'-6"
2"x 8" New
27'-4"
12" Wide x Beam

21 The Newboro Lockmaster's House, 1904.
(Collection of Mrs. J. Laishley.)

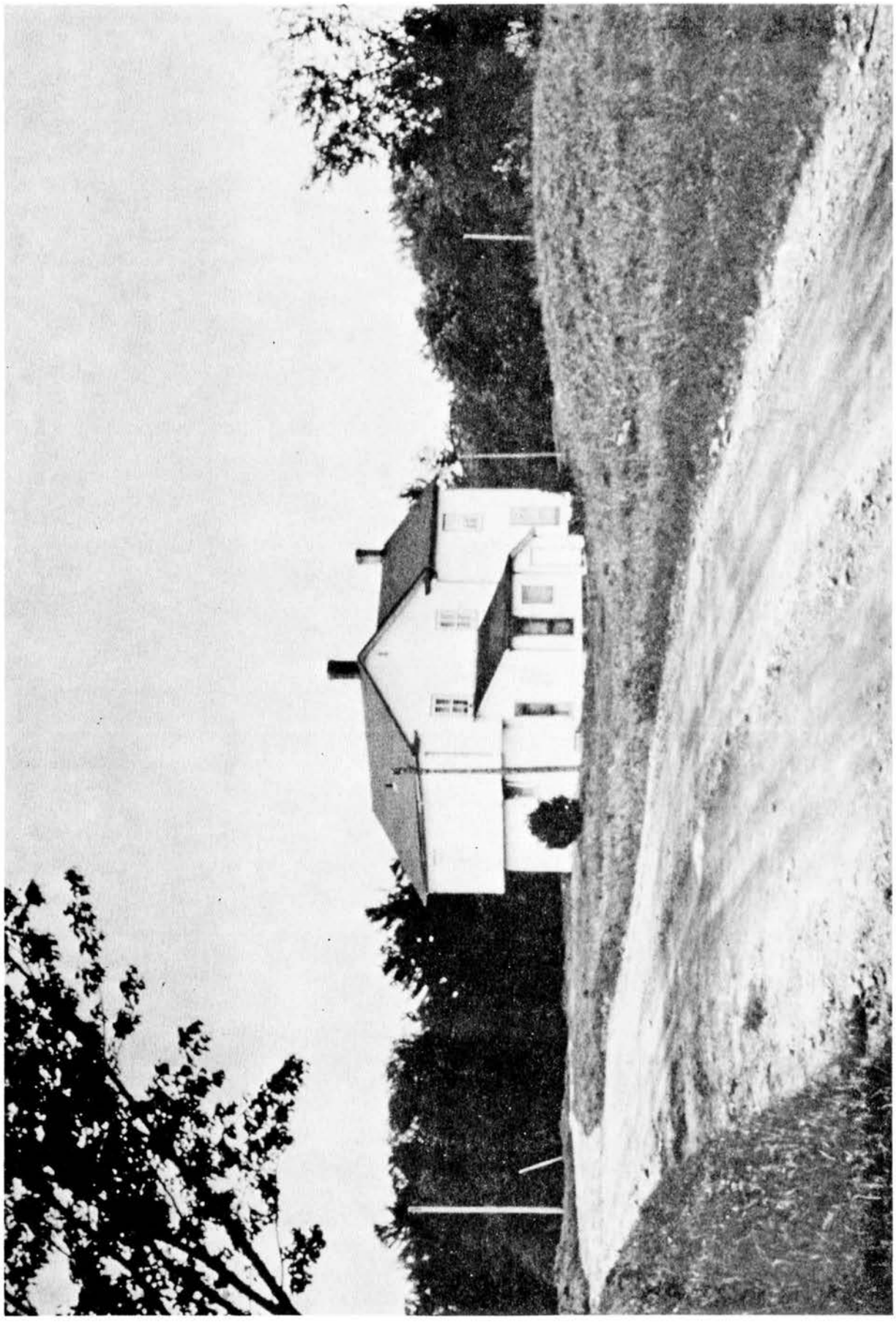


22 The Newboro Lockmaster's House, 1930.
(DINA, Engineering and Architecture, Canals Engineering.)

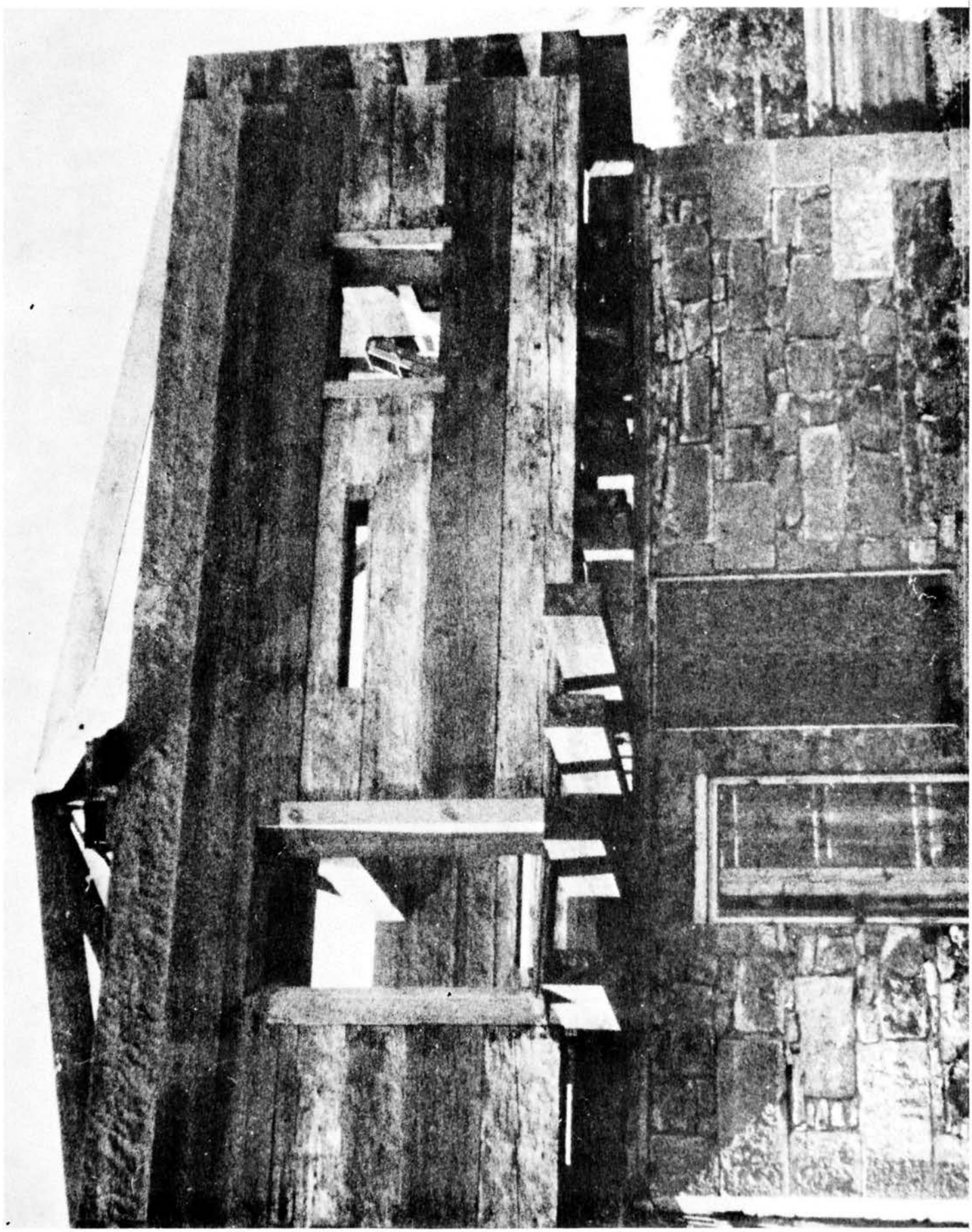


23 The Newboro Lockmaster's House, 1934.
(Collection of Mrs. E. Whalen, Newboro.)

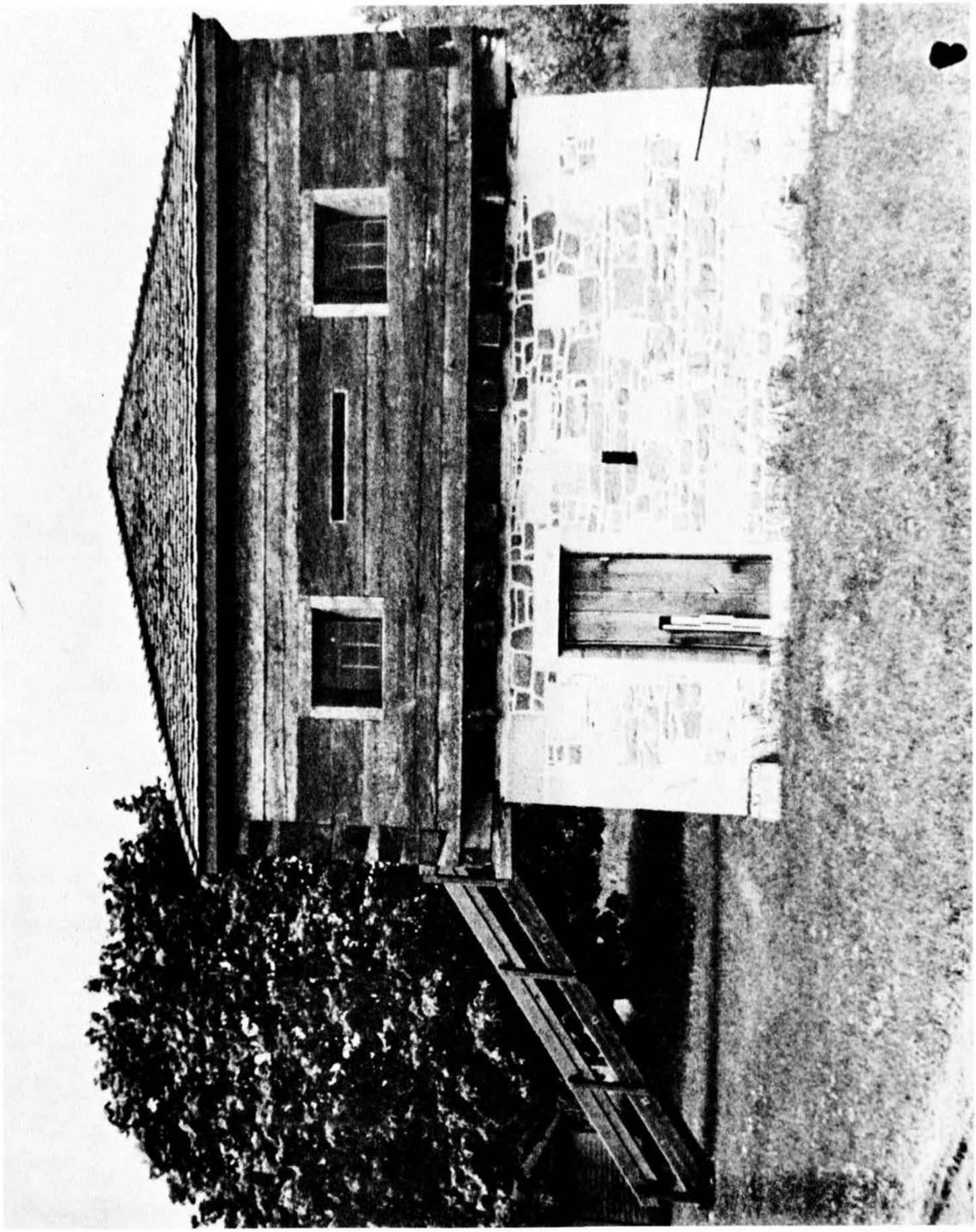
24 The Newboro Lockmaster's House, 1964.
(PC, Historic Parks and Sites Branch.)



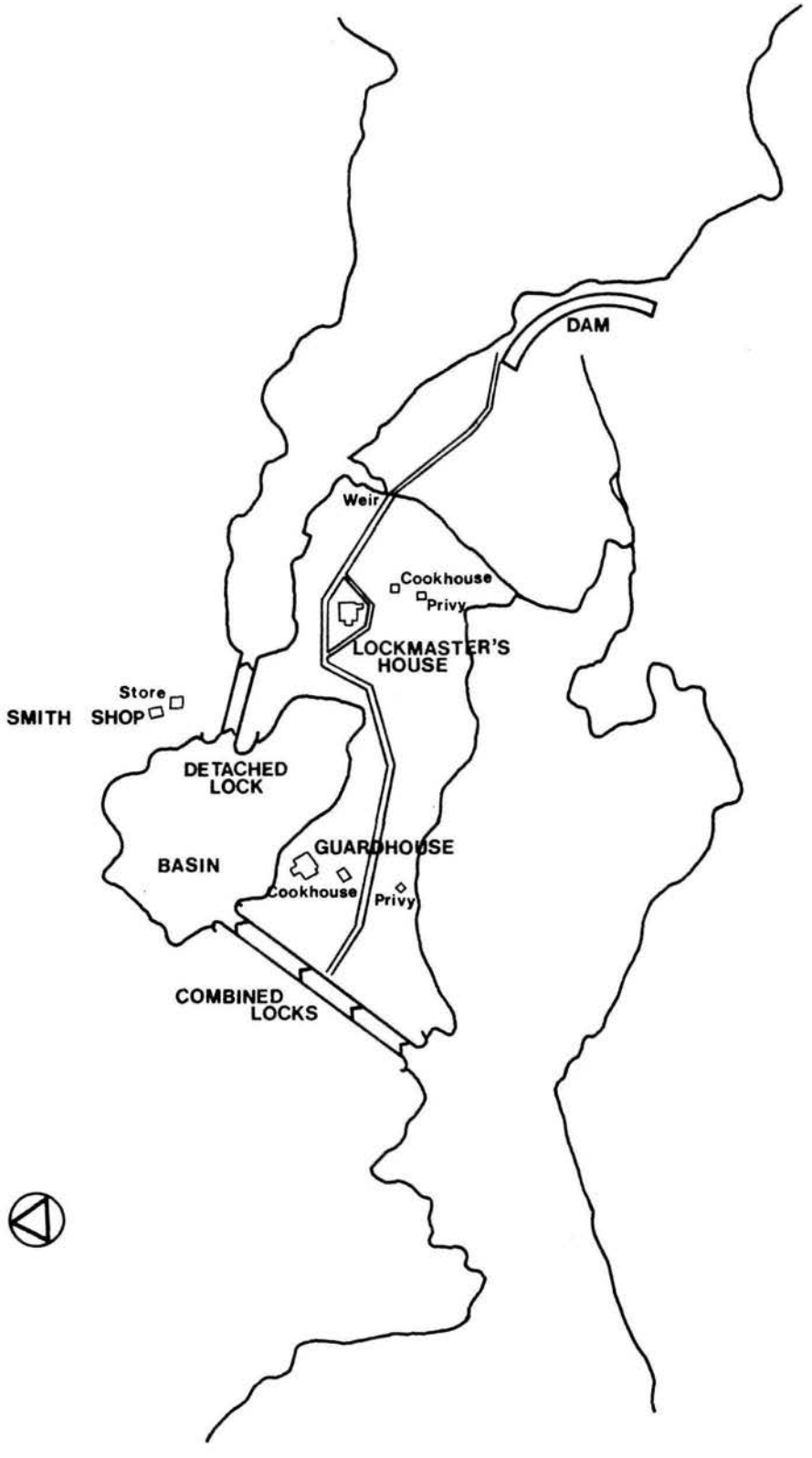
25 The Newboro Blockhouse in process of restoration, July 1968; note the original masonry and the pattern of new and old timbers.
(PC, File C-2540/R85-2, Vol. 1.)



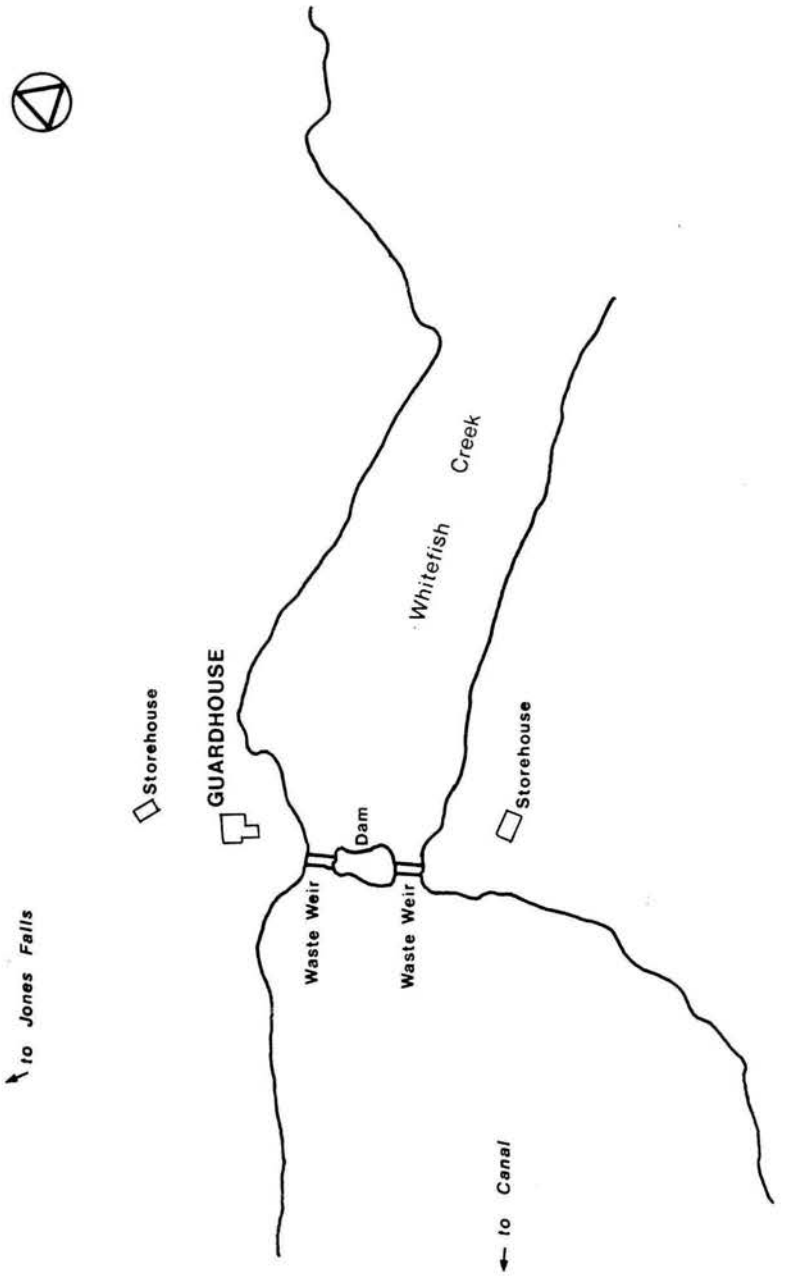
26 The Newboro Blockhouse, 1973.
(DINA, Engineering and Architecture, Technical Data Services.)



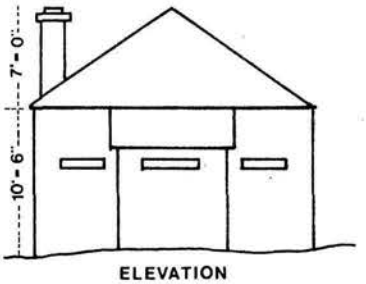
27 Map of Jones Falls showing the Lockmaster's House, the Guardhouse, and other buildings, ca. 1850. (C. Tourangeau.)


DAM
Weir
Cookhouse
Privy
LOCKMASTER'S HOUSE
Store
SMITH SHOP
DETACHED LOCK
BASIN
GUARDHOUSE
Cookhouse
Privy
COMBINED LOCKS

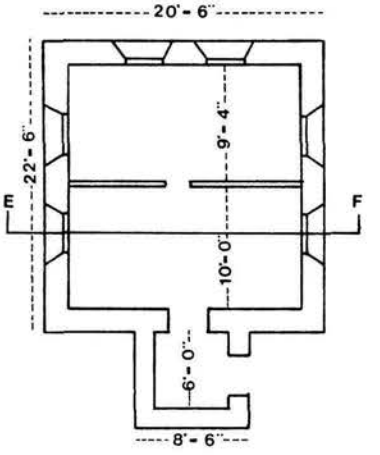
28 Map showing the Whitefish Dam and Guardhouse, ca. 1850.
(C. Tourangeau.)


to Jones Falls
Storehouse
GUARDHOUSE
Waste Weir
Dam
Waste Weir
Whitefish Creek
Storehouse
to Canal

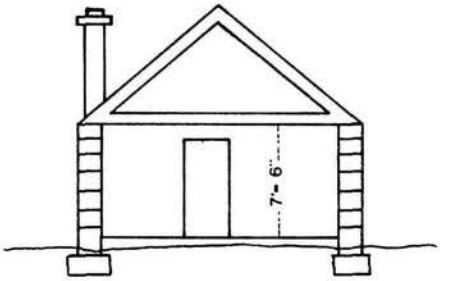
29 The Royal Engineers' Plans of the Jones Falls and Whitefish Guardhouses, 1852.
(drawing by C. Tourangeau based on the original in the Public Archives of Canada.)



ELEVATION

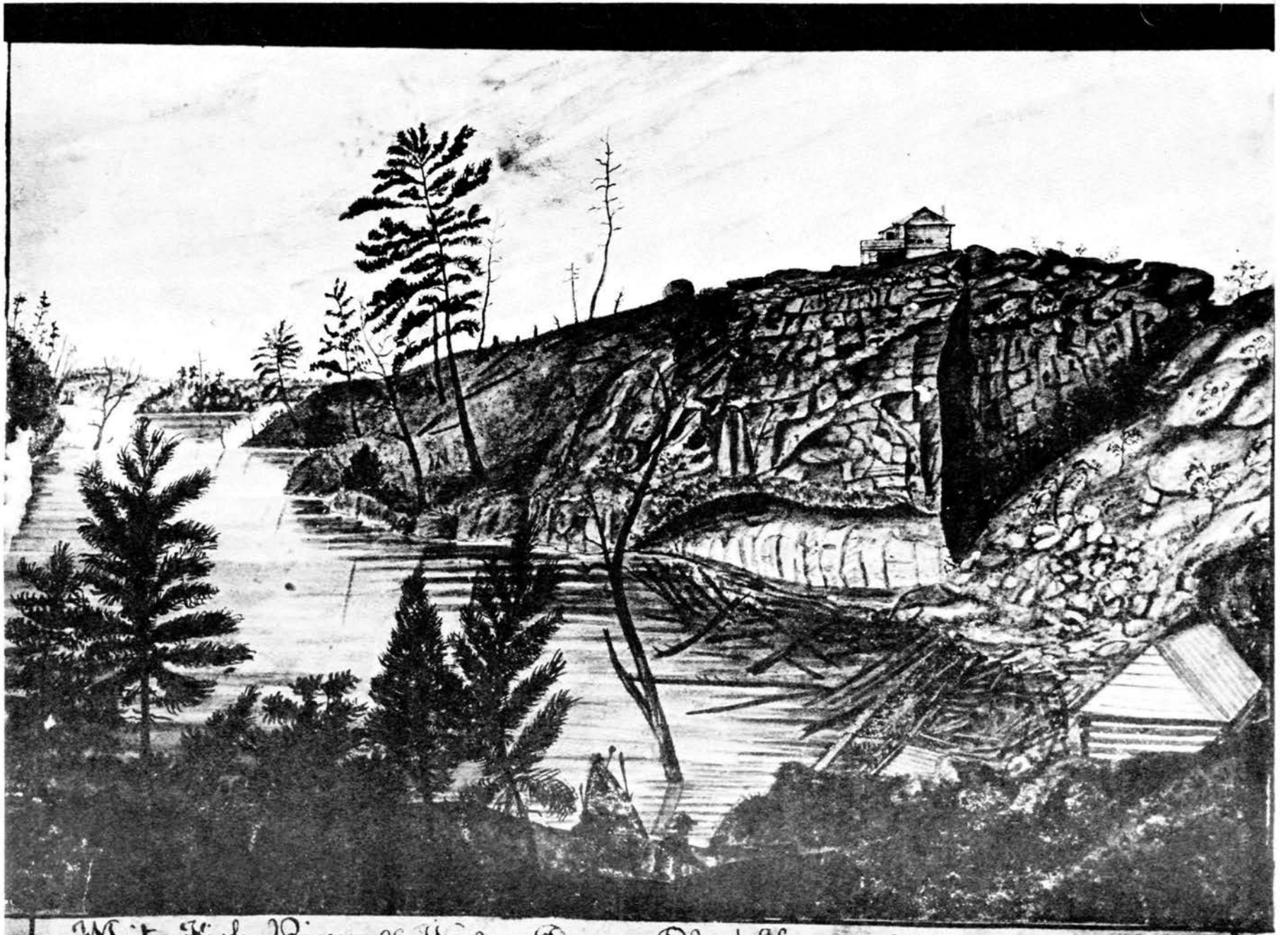


PLAN



SECTION ON E F

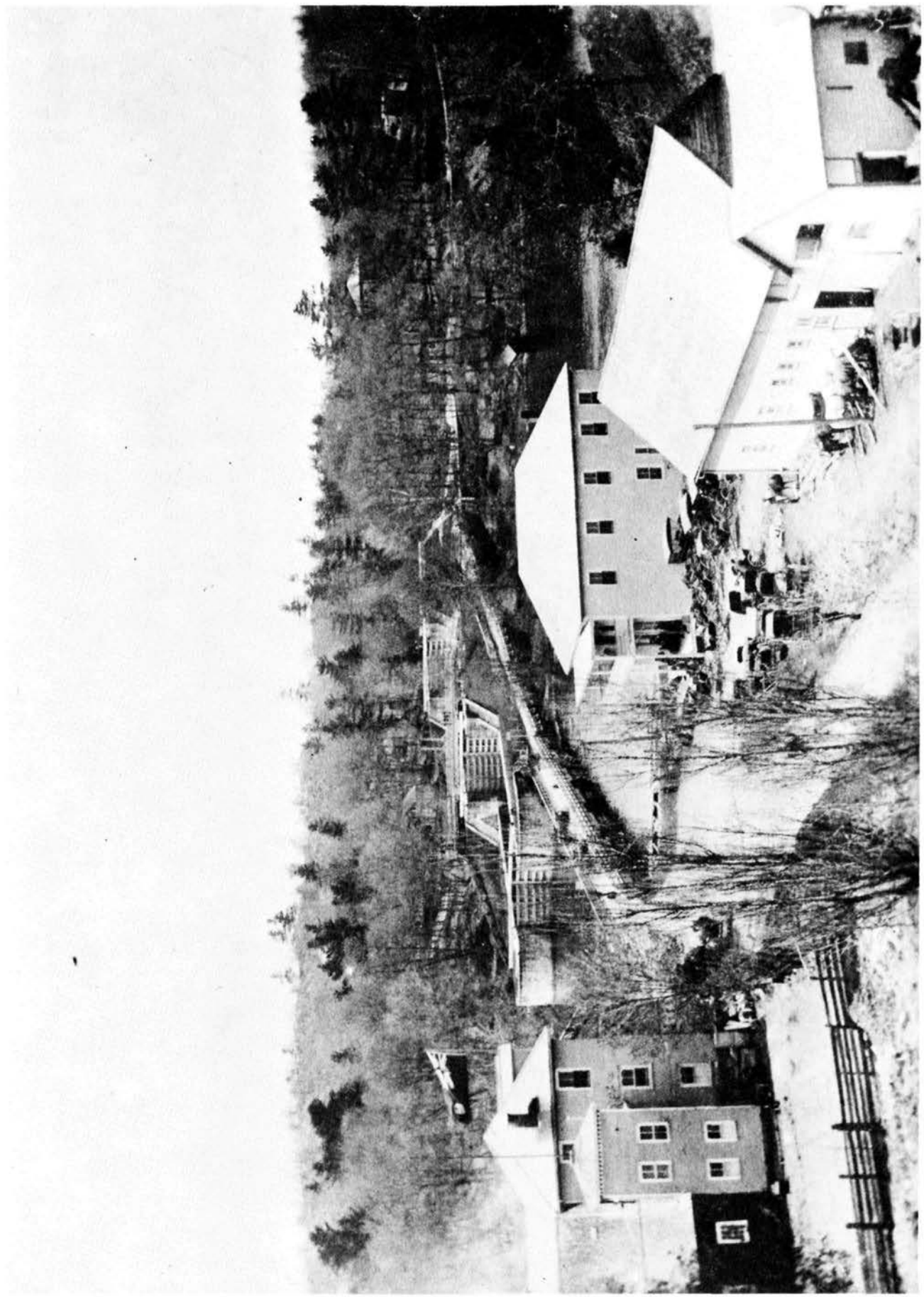
30 Whitefish River and the Wooden Dam with the "Blockhouse" built in 1838-9 to protect it; Burrows Sketch No. 60.
(Ontario Archives.)



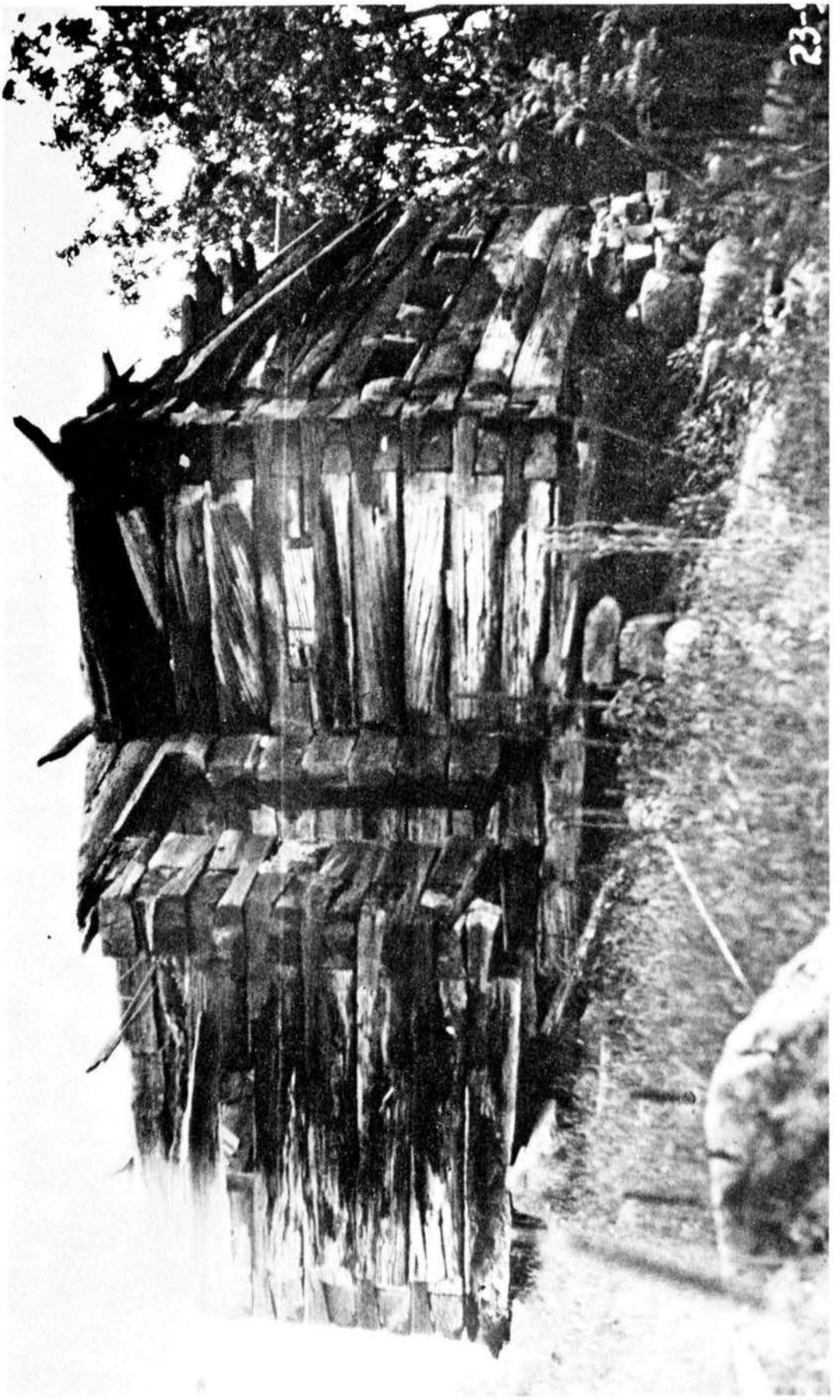
White-Fish River & Wooden Dam, with Block House built in 1838-9 to protect it.

31 The Whitefish Guardhouse, ca. 1895.
(Collection of Harold Nichol, Smiths Falls.)

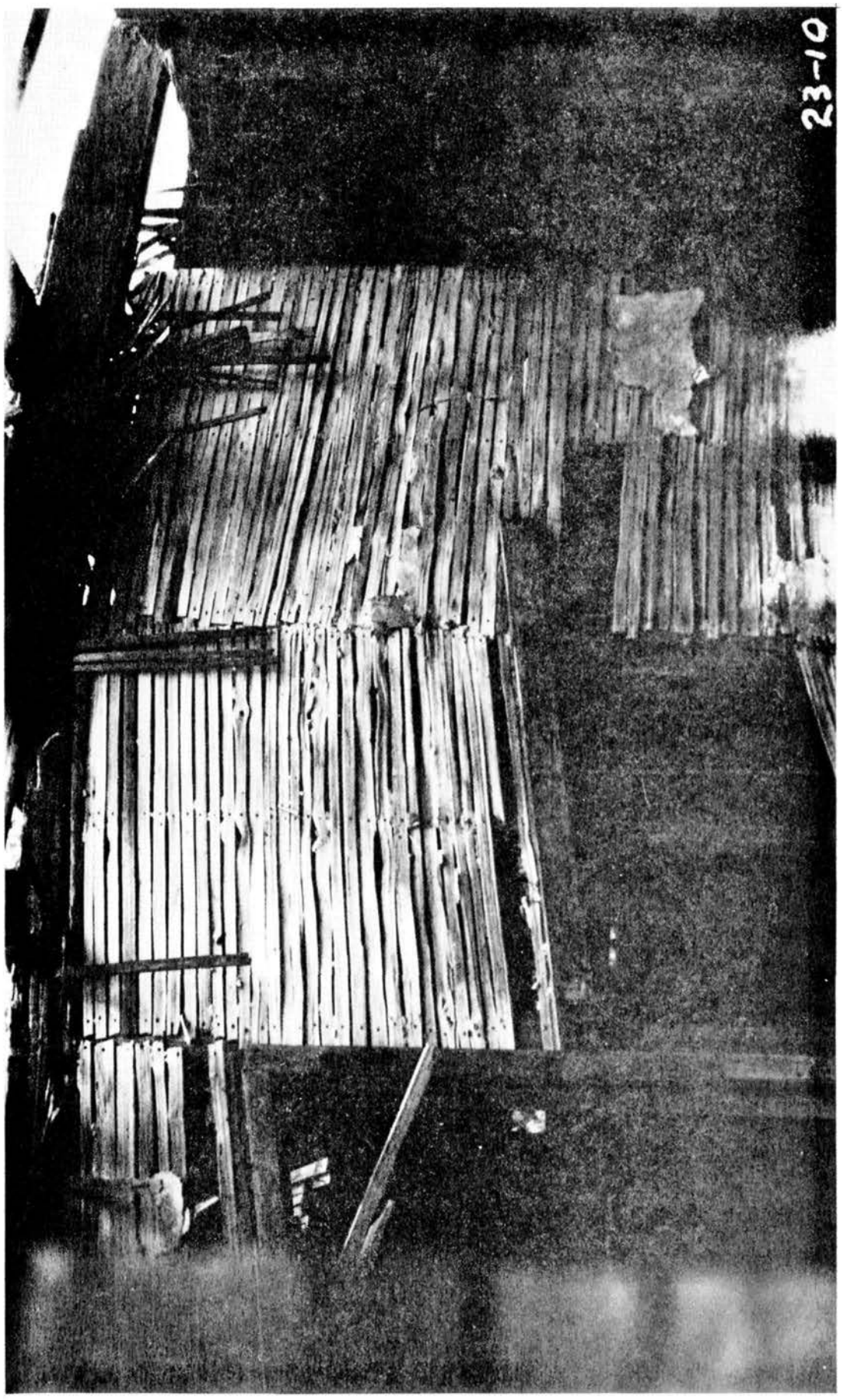
32 Birdseye View of Jones Falls with the Guardhouse situated on the promontory to the right, 1907. (Collection of B. A. Campbell, Elgin.)



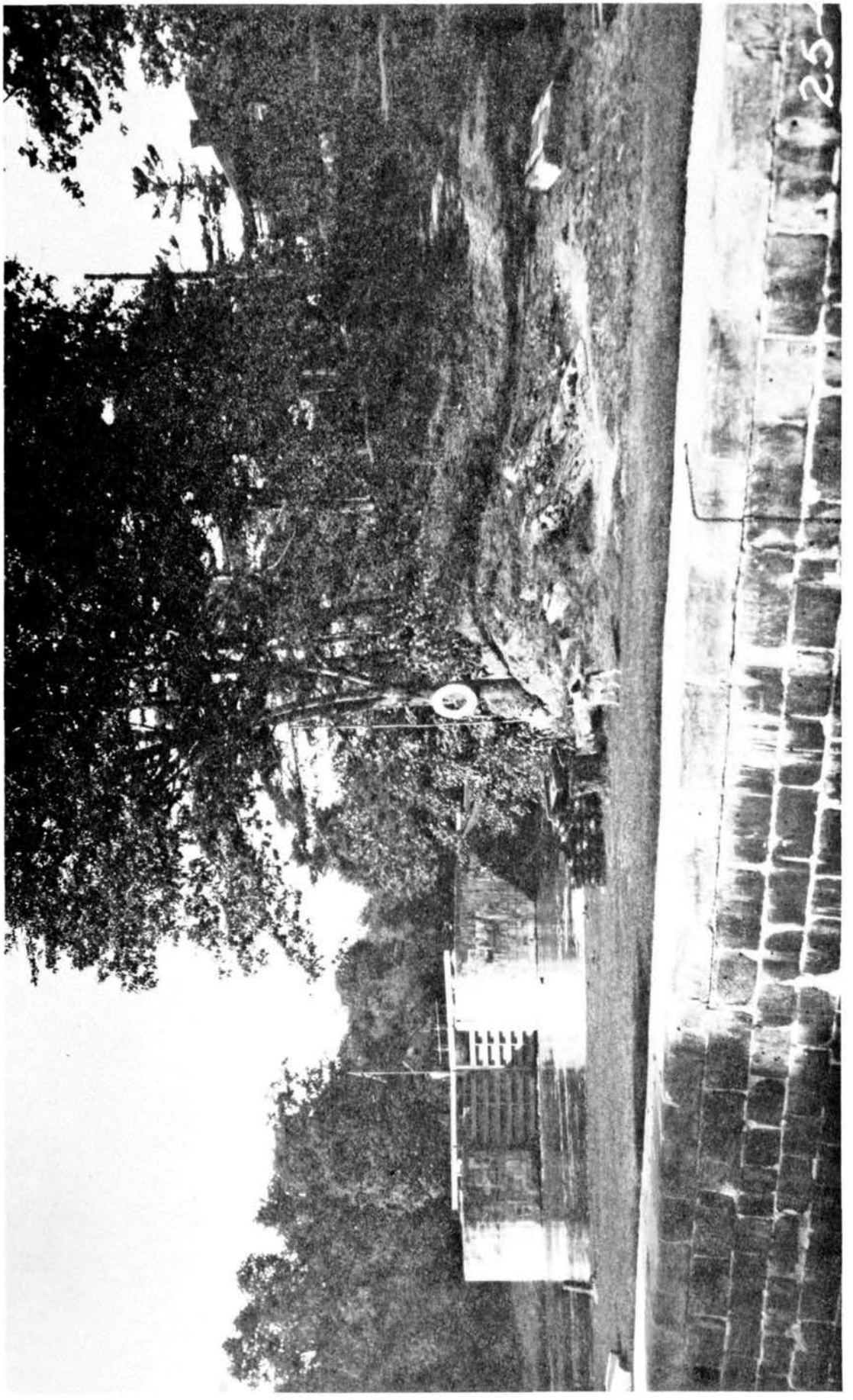
33 The Whitefish Guardhouse, 1923.
(PC, Ordnance Land Photo.)


23-

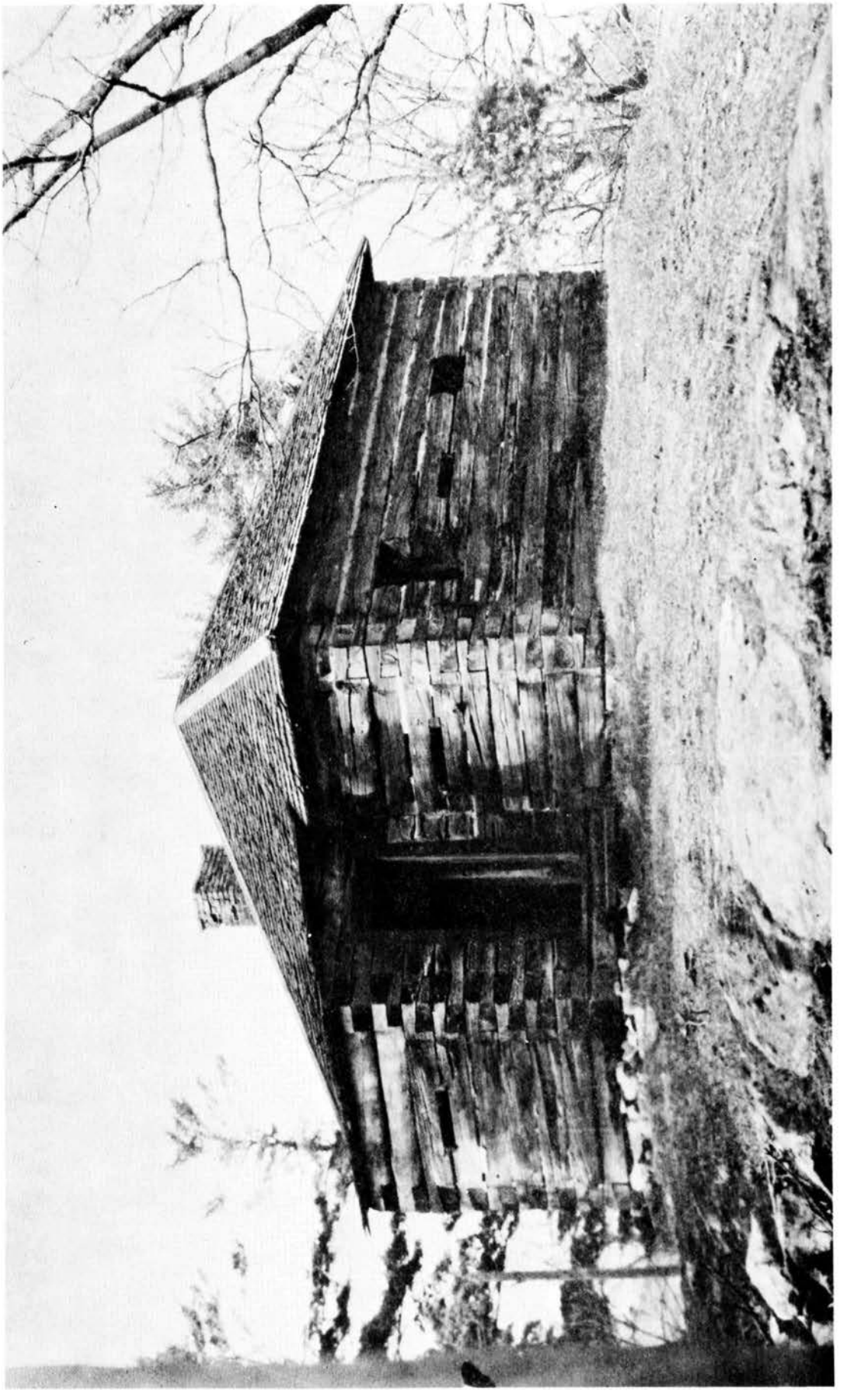
34 The Interior of the Whitefish Guardhouse, 1923. (PC, Ordnance Land Photo.)


23-10

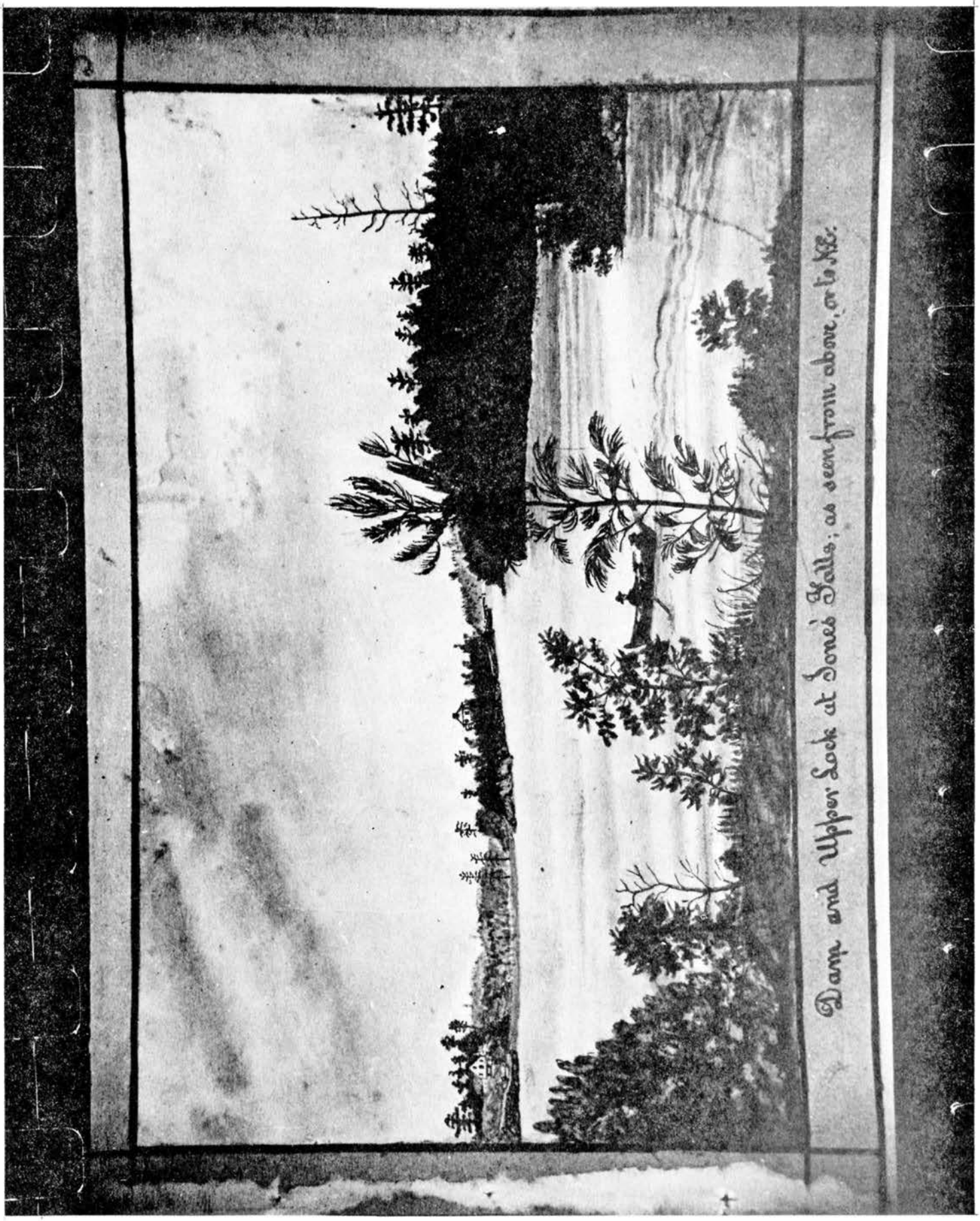
35 The Jones Falls Basin and Upper Lock with the Guardhouse on the right, 1925.
(PC, Ordnance Land Photo.)


25

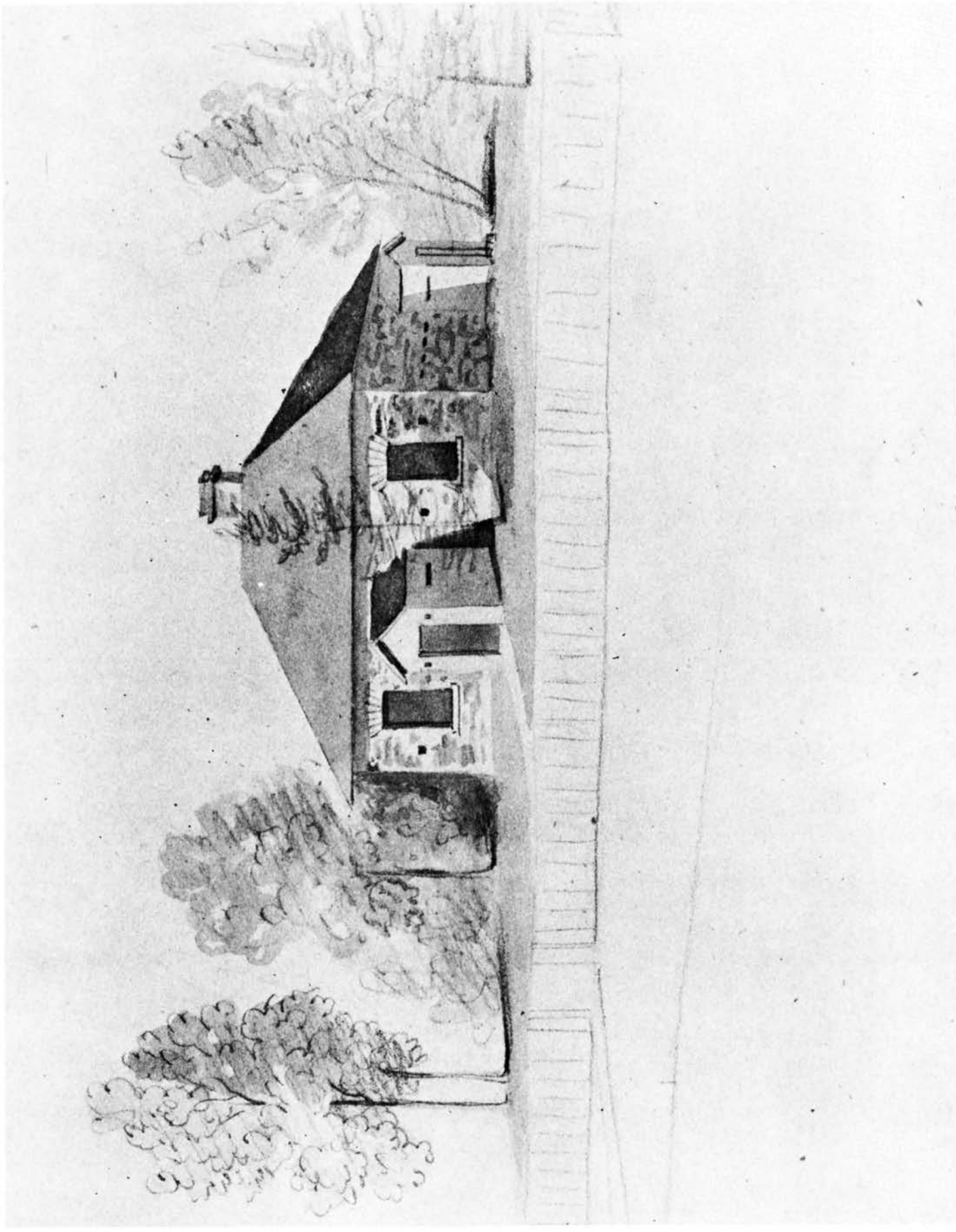
36 The Jones Falls Guardhouse, 1930.
(DINA, Engineering and Architecture, Canals Engineering.)



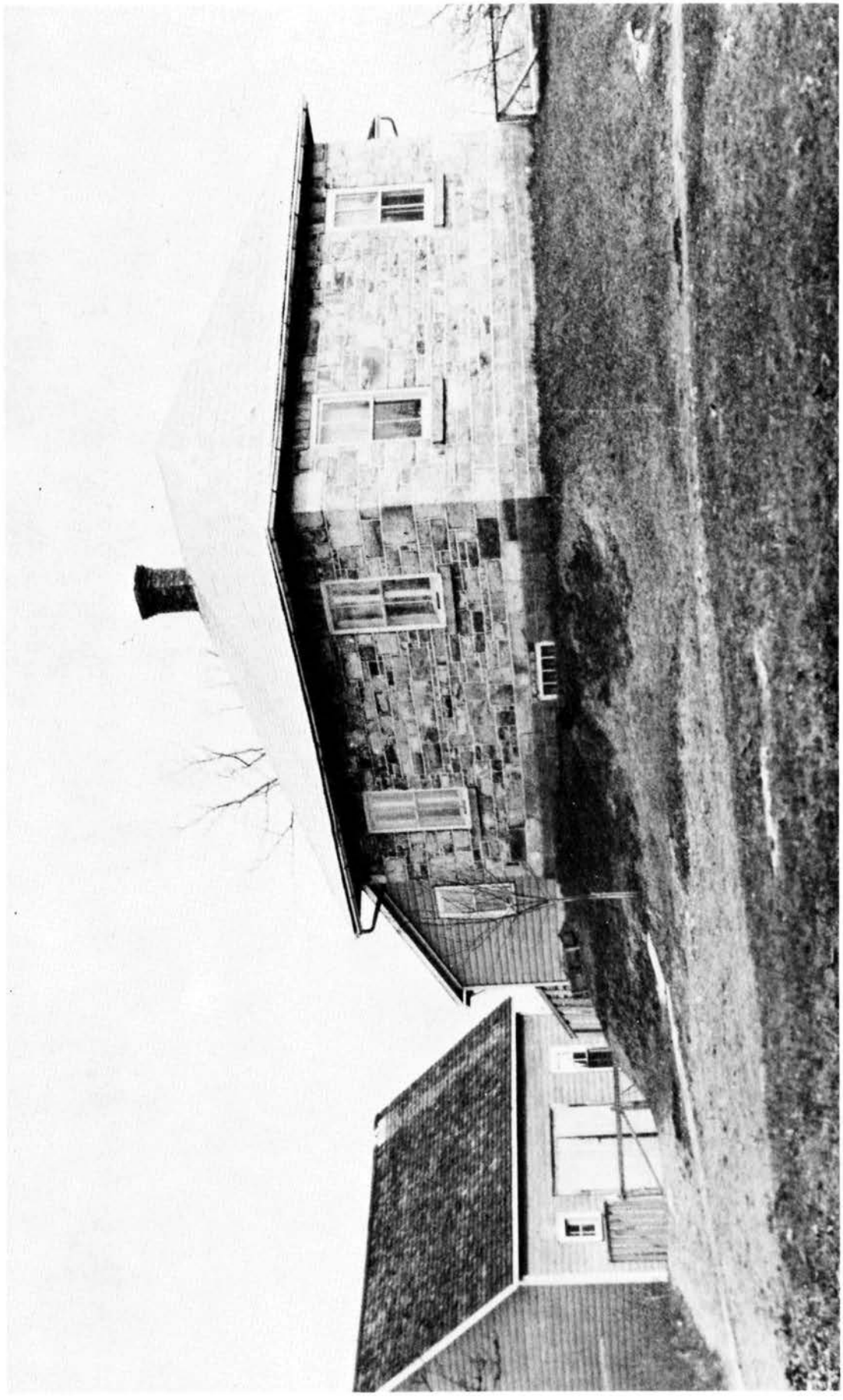
37 Jones Falls from the north with the Lockmaster's House in the distance, ca. 1841; Burrows Sketch No. 54.
(Ontario Archives.)


Dam and Upper Lock at Jones's Falls; as seen from above, or the N.E.

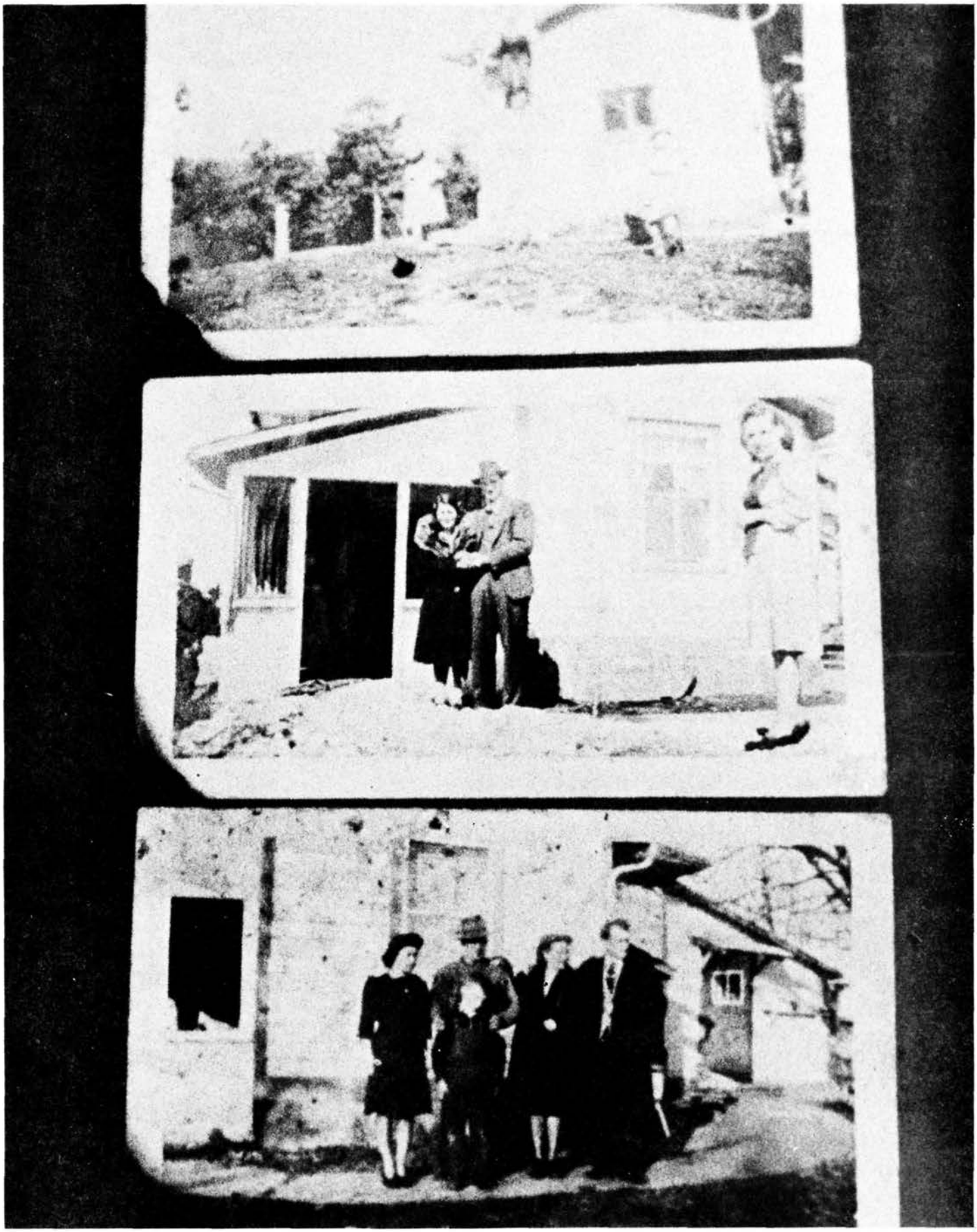
38 The Defensible Lockmaster's House at Poonamalie, ca. 1850, by Edwin Whitefield; This drawing is similar in many respects to the descriptions which exist of the house at Jones Falls. (Public Archives of Canada, C-13299.)



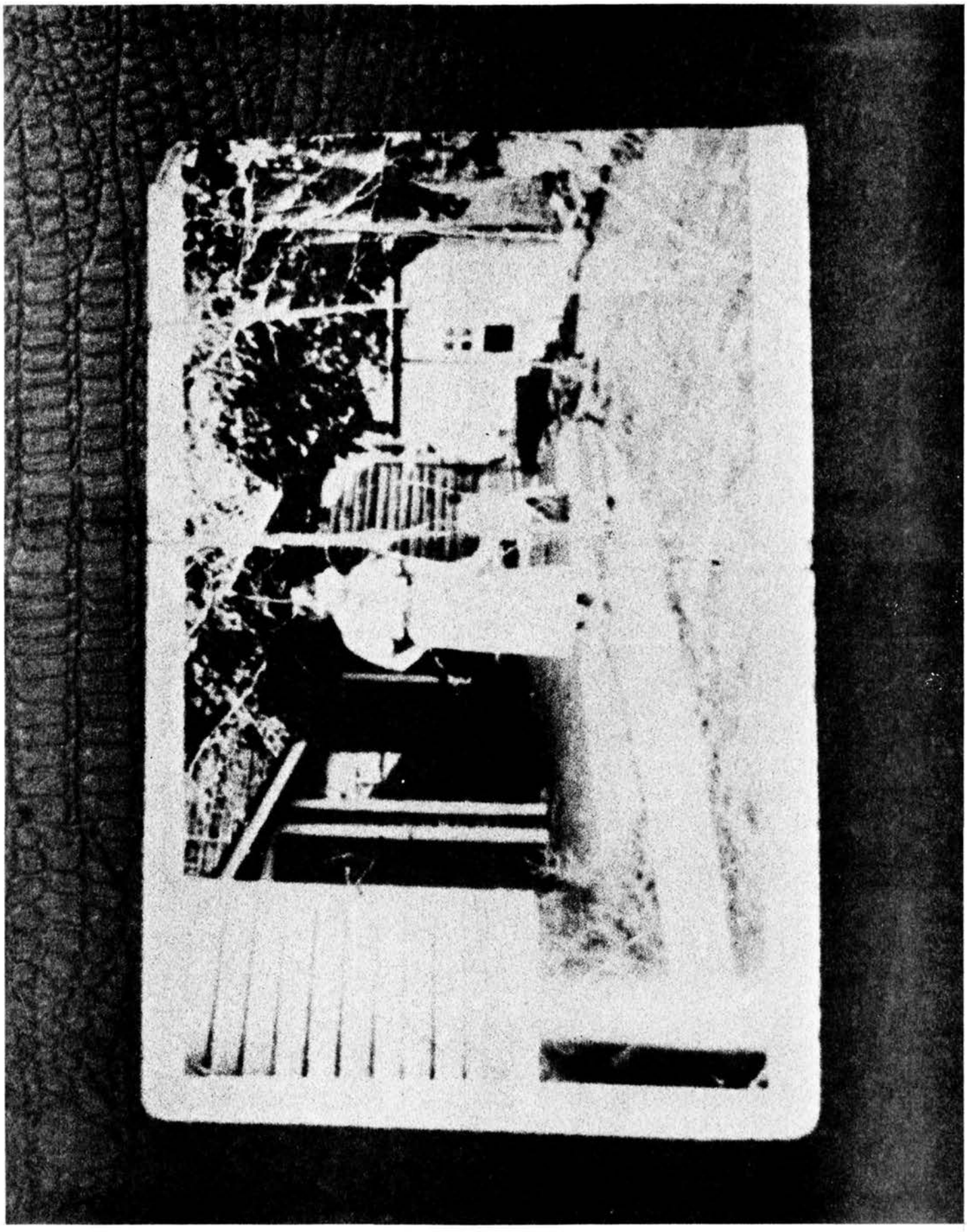
39 The Jones Falls Lockmaster's House, 1930. (DINA, Engineering and Architecture, Canals Engineering.)



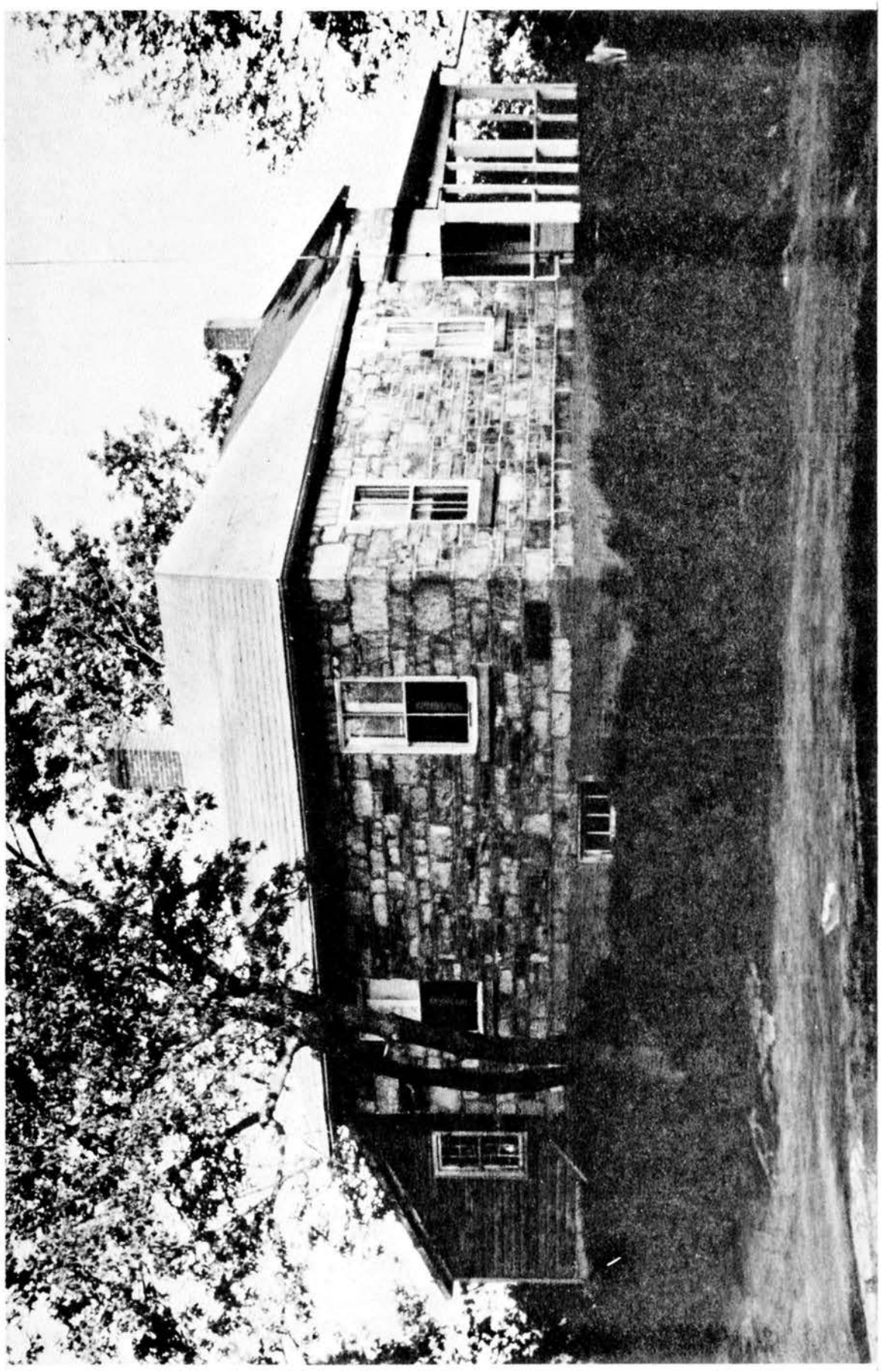
40 The south side of the Jones Falls Lockmaster's House, ca. 1930-45; note that a porch has been added on the west side in the two lower photos. (Collection of Alfred Sly, Jones Falls.)



41 The Jones Falls Lockmaster's House, east end of the south side, ca. 1930-45.
(Collection of Alfred Sly, Jones Falls.)



42 The Jones Falls Lockmaster's House from the northwest, 1967.
(PC, Historic Parks and Sites Branch.)



43 Concrete retaining walls on the approaches to the Jones Falls Lockmaster's House, 1973. (DINA, Engineering and Architecture, Technical Data Services.)