

**TWELVE AND A HALF MILES
THE ERIE CANAL IN CAYUGA COUNTY
THE WEB EDITION
SECTION ONE**



**BY
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Table of Contents for Section One

Chapter	Page
Introduction	3
One– Maps of the Trail and Canal	5
Two- Clinton’s Ditch	9
Three- The Canal Enlargement	13
Four- Locks	16
Five-Culverts and Ditches	26
Six- The Water Supply System	28
Seven- Cold Spring Pump and Fountainville	34
Other Sections include:	
Eight-Weedsport	
Nine-The Centerport Aqueduct	
Ten- Centerport	
Eleven-Port Byron	
Twelve- Montezuma	
Thirteen- The Cayuga and Seneca Canals	
Fourteen- The Seneca River Aqueduct	
Fifteen- The Cayuga Marshes and Seneca River	
Sixteen- Bridges	
Seventeen- The Barge Canal	
Bibliography	

This web edition was written as an updated version of the book “Twelve and a Half Miles” which was self published in 2002. It is intended by the author to be a free as a pdf file.

February 1, 2012

INTRODUCTION

The 19th century Erie Canal crossed Cayuga County in an east to west route, passing through the villages of Weedsport, Port Byron, and Montezuma, and the settlements of Cold Spring Pump and Centerport. The route covered twelve and a half miles, of which a little more than half is still available for exploration and study. The towing path, the bank from where animals pulled the boats, has been made into a recreational path under the banner of the Canalway Trail. The Canalway Trail is an effort to make a trail that crosses the state from Albany to Buffalo. In Cayuga County, the off-road sections are from the Onondaga County line to Port Byron. The on-road sections follow Route 31. As you travel along it, you have an opportunity to study what was once the major transportation route for New York and the young Nation.

To the casual observer, the twelve and a half miles of the canal may not seem to be of great interest. But with closer inspection and study, you will discover these miles contain most of the aspects of canal engineering and construction methods. On the western border of the County, near Montezuma, the Seneca River Aqueduct was the second longest aqueduct on the enlarged Canal. On the eastern border, Lock 51 awaits your close inspection. In between lay the three canal villages that grew and prospered during the canal era of New York State.

What I have tried to do with this book is to bring together much of what has been written about the canal in Cayuga County and enhance it with my own discoveries. My goals are: 1) to present a view of how the canal impacted Cayuga County and the villages it passed through; 2) to explain the workings of the canal structures; 3) to explain the how and why of the canal.

The reader should note that this work is not meant to be a definitive history of the canal or the villages and towns built along its banks. This work does not pretend to be a complete history of Weedsport, Port Byron or Montezuma. It is basically a recap of what I have learned as I have studied the canal and its relationship to the county. In places, I have chosen to go into great detail on canal subjects that I find interesting, such as the route change in Port Byron. Also, I like maps, so I have included a lot of maps.

There were four eras of the Erie Canal, and canal historians have given each era a name. These names will be used throughout this guide.

- Clinton's Ditch. This is the first Erie Canal, four feet deep and forty feet wide. It was named for Governor DeWitt Clinton, who was instrumental in getting the canal built.
- The First Enlargement, or the Enlarged Canal. This canal was the improved version of the Erie. It was seven feet deep and seventy feet wide. This is the canal you see and walk along today.
- The Second Enlargement. The Second Enlargement was a poor attempt by the State to deepen the canal to nine feet. It was of very minor significance in the history of the canal, except for the effects it had on the next era.
- The Barge Canal. This canal is the present day version of the Erie. It is a motorized canal and uses natural resources such as rivers and lakes. The impact of the Barge Canal on Cayuga County is that the canal was moved away from the villages, effectively ending the canal era in the county.

It is my hope that the reader will use this guide to get out on the Cayuga County Canalway Trail, explore, and gain a better understanding of our historic past. Not only is it a great part of New York State history, it is a very large part of our local history. The study of history should be fun and there is nothing more fun then getting out and meeting it face to face. It is also important to note that most of the remaining sites will deteriorate every year. Without daily, weekly or even yearly maintenance, the rockwork will fall apart, trees and brush will grow over and in-between the stone-work and wood will decay. Structures that were in good condition just a few years ago are now gone forever.

A NOTE ABOUT USING THIS BOOK.

This guide will take the reader in an east to west tour along the canal starting at Lock 51, which is located on the Cayuga / Onondaga County line on Route 31. Chapter One, Maps of the Trail and Canall, will give you a quick overview of the trail and existing canal sites. Chapters Two and Three; Clinton's Ditch and The Canal Enlargement, explain the two canals you will be exploring. The detailed tour starts with Chapter Four, Locks. From here the narrative works its way west. Once you leave the site of Lock 51, you will work your way west exploring Culverts, The Water Supply, Cold Spring Pump and Fountainville, and so on until you reach Montezuma and Chapter Seventeen; The Barge Canal. There is only one chapter that is really out of place, Chapter Sixteen; Bridges. There are no canal bridges left to see, but they certainly deserve an explanation. Also, once something has been discussed, it will not be repeated. The workings of Lock 52 in Port Byron is covered with Lock 51 in Jordan, and so on. At times, I will repeat details, quotes and maps in different chapters. This is done for those who might be using this book as a field guide, pulling out certain chapters and not reading it from cover to cover.



Over the years, I have written very in-depth walking tour guides for Port Byron and Montezuma. These are for sale at the local historical societies for a small price (which benefits the Society, not me).

This “web edition” also allows me the opportunity to present many of the maps and photos in full color. However, this document was re-created in Publisher, which does not allow for the easy placement of foot or end notes. The Bibliography contains all the sources I have used, or you can contact me for more information.

ONE— MAPS OF THE TRAIL AND CANAL

There are twelve and a half miles of the historic Erie Canal in Cayuga County. Within these miles, we are lucky to have eight to twelve sites to visit and explore. I say eight to twelve because this depends on what you wish to see. If you want solid, entire structures, your choices are fewer. As a canal historian, I will scamper through the woods and brush to see a cut rock, or a hole in the ground that might have belonged to the canal. No matter what your interests, most of these sites are within easy walking distance from the road.

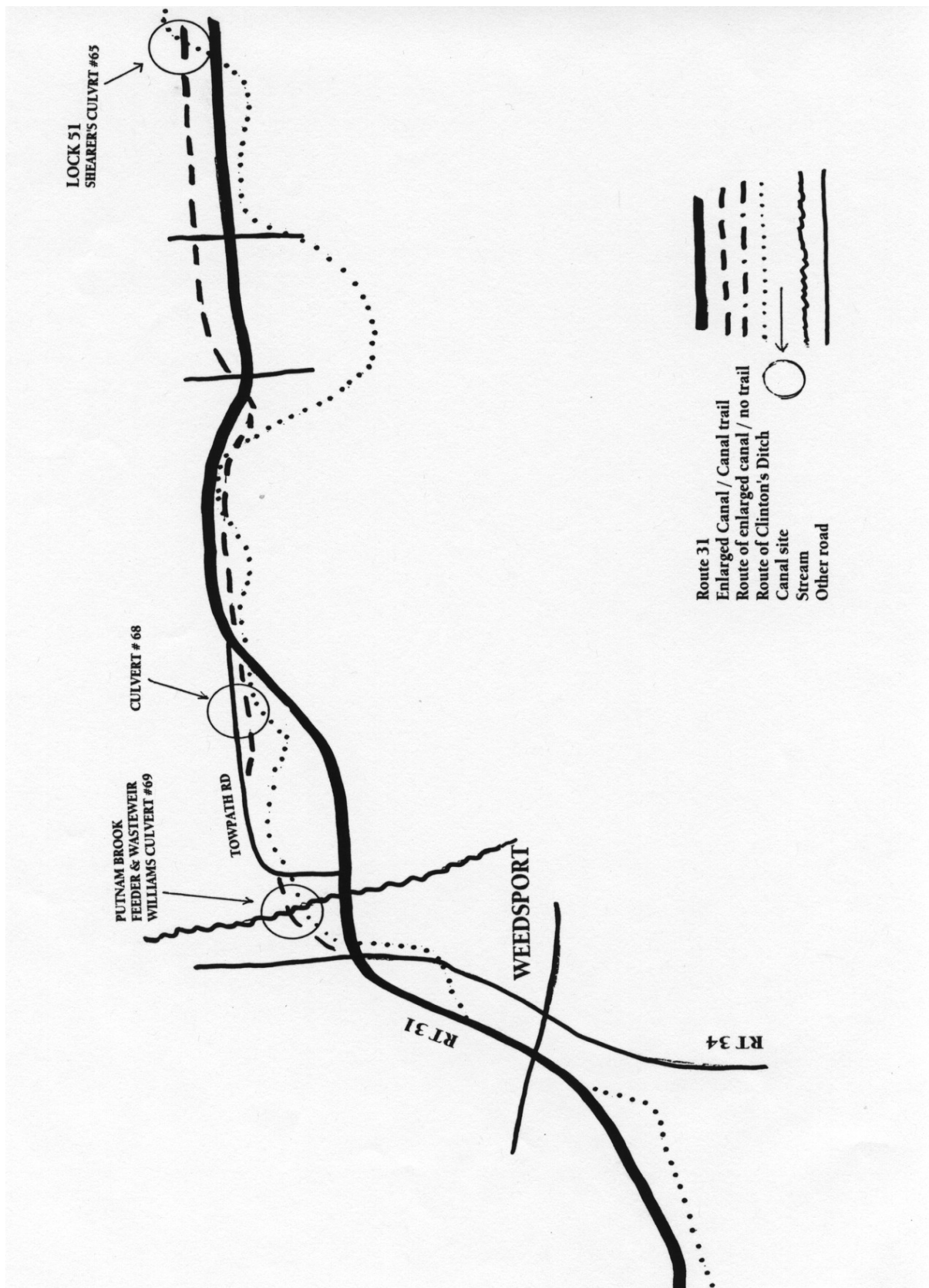
The three maps show the Weedsport (eastern), Port Byron (middle) and Montezuma (western) sections of the canal within the county. The routes of both the first and enlarged canals are shown to give you some idea of how the two canals took different paths. Much of the first canal has been covered up or built over, although you can still see parts of it along Clinton Road east of Weedsport, between Centerport and Port Byron and in the Montezuma area. The enlarged canal remains more intact. From Port Byron east to Camillus, the Erie Canal Trail has been completed, making it possible to walk along the canal for 16 miles. West of Port Byron, the enlarged canal sits on the north side of the NYS Thruway and lies along a dead-end road. About a mile of it can be seen, but then it disappears under the Thruway.

Driving along Rt 31, west of Port Byron, you will be able to see remains of the first canal, as it followed a course that went south of the present day Thruway. Once you cross the Thruway at Cranebrook, the two canals followed the same path toward Montezuma. Once in Montezuma, both canals can be found in the woods west to the Seneca River.

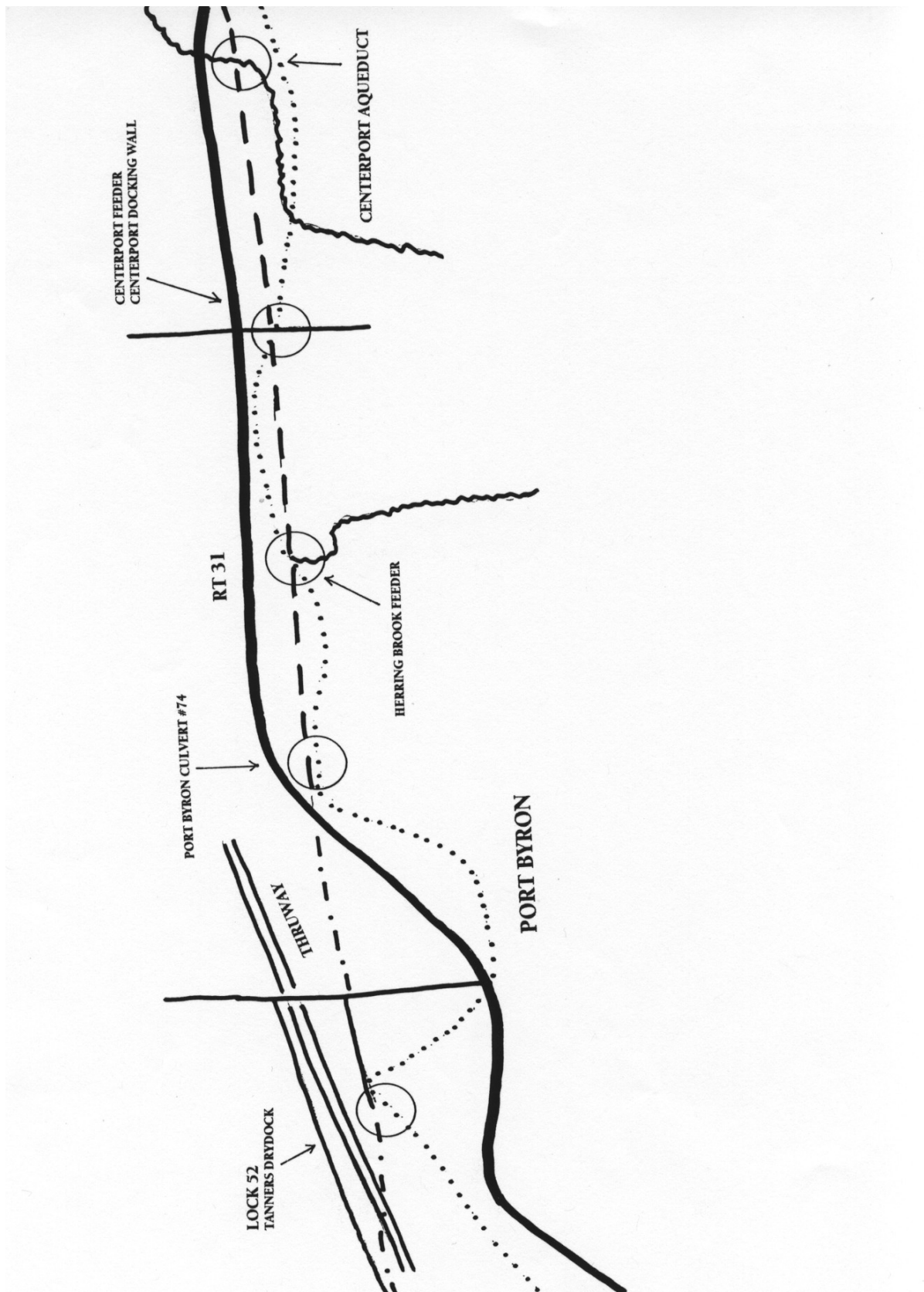
We also have the Seneca River and the Barge Canal running through the County. Although there are no structures to stop and view, the river / canal is an active transportation route, as well as a great recreational resource with the backwaters around Haiti and Howland's Islands.

And I did not show on the maps the Cayuga Seneca Canal route along Route 90 from Montezuma to Cayuga Lake. The old and current canals follow almost the same route and there is a working lock at the head of Cayuga Lake, CS Lock 1. The building of this lock and dam changed the Montezuma marshes forever.

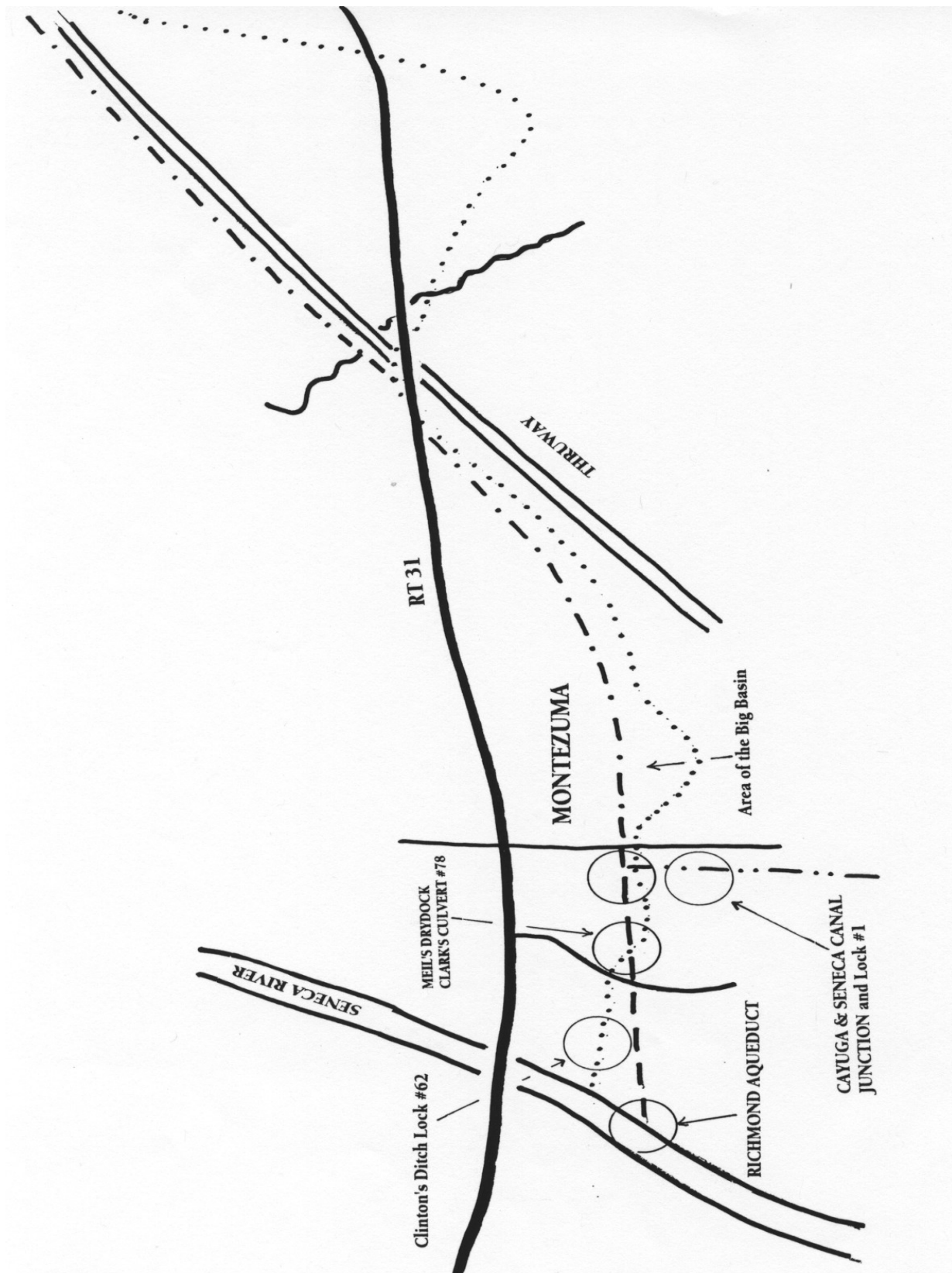
When this book was first written in 2002, there was no Google Earth. Now it is possible to view the landscape from above and connect the remains to gain an understanding of how the canals were built and why.



The Weedsport section.



The Port Byron section.



The Montezuma section.

TWO- CLINTON'S DITCH

Construction on the first Erie Canal (aka: Clinton's Ditch, Great Western Canal) began at Rome, NY on July 4th, 1817. From Rome, the builders began digging both east toward Utica and west toward Montezuma. So why start in the middle of the State? It would seem to make sense to start at Albany and work west, building and putting the finished canal into use as they went along. But it was all about geology. The Mohawk River flows west to east from Rome to Albany, but east of Schenectady the river drops over an escarpment down to the Hudson River. The valley is narrow, with the river occupying most of the valley floor, so any canal not built using the river would have to be built alongside the river. And the river was already being used by small boats and canoes to transport people and goods. At Rome, the Mohawk turns north and the valley ends. West of Rome, the land to Montezuma was mostly flat and soft. Construction of the canal in this area would be relatively quick and easy. This would allow everyone new to canal building the time to devise and improve construction techniques before they encountered the difficult terrain in the east and western parts of the State. So the thought was to begin building at Rome and build the canal to Montezuma. Even if they stopped building at this point, they would still have the river from Albany to Rome, a canal to Montezuma, and at Montezuma, they could enter into the Seneca River, the Finger Lakes and a little further west along the Clyde River.

In any discussion of canals, you always need to step back for a moment and look at the terrain it would be built on. Were there mountains, valleys, level plains? Was there water nearby? Was the soil soft, rocky, or swampy? In New York, the canal engineers had to face three distinctly different problems as they built across New York State. As mentioned, to the east of Rome, the canal was to be built in the Mohawk River Valley. The canal had to share space with the river and roads, but there were plenty of streams and the Mohawk River to supply water to the canal.

To the west of Rome, the land becomes flatter. There were no real cities, and most of the villages had been settled in the preceding 30 years. From Oneida Lake west, the Seneca, and Oneida Rivers run through a shallow valley, but the land is often low and swampy, and the river is shallow and slow moving.

From Lyons west, the canal builders had no river valleys to follow. Although the land was flat, finding water was difficult. West of Rochester, the Niagara Escarpment would need to be overcome before the canal could reach Lake Erie. It was the most difficult section of the canal to build.

We might look at a river and think that it would make a good canal. But rivers are creations of nature and geology. Rivers take in all the water from the surrounding streams and lakes, and will react to the weather, but flooding in wet times, or getting shallow in dry seasons. For a canal to be successful, it must be reliable. It must hold a certain depth of water and be calm without a swift current. It is better to build a ditch and fill it with water from local natural sources of water that can be turned off as needed.

So let's get to Cayuga County. Here, the Seneca River flows from the northern end of Seneca Lake a short distance to the east, where it joins the outlet of Cayuga Lake. From there it flows northward, where it joins the Canandaigua River and then begins to flow eastward toward Baldwinsville. Along the way, the Seneca River collects the outflows from the eastern Finger Lakes. The result is a shallow valley, swampy in places, and quite prone to flooding. Except for the areas around Seneca Falls and Baldwinsville, the river does not offer enough waterpower to power mills.

The land around the river is dotted with small hills called drumlins, which are leftover piles of gravel and silt from the last ice age. Early settlers found it safer to live in the higher land back away

from the Seneca River and swampy land. On the hillsides they were able to use the waterpower of the many small streams that dot the landscape.

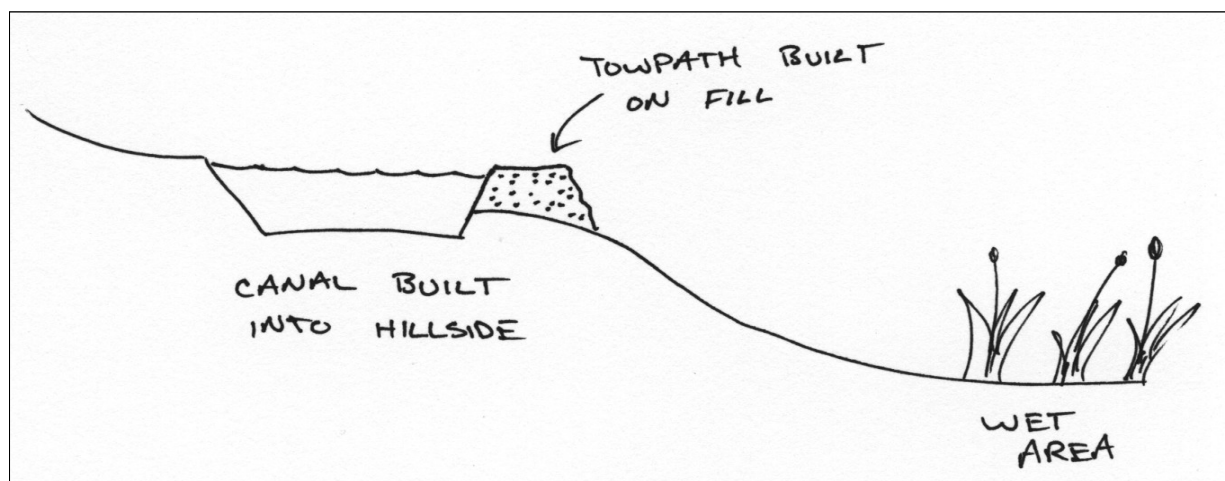
As the early canal engineers and surveyors explored and mapped the route of the canal, they found they had two choices. They could choose to build the canal through the lower land of swamps and soft soils; or they could build along the sides of the many drumlins in order to elevate the canal. The drumlin method was faster and cheaper than dealing with the swamps and mucky soils. So they dug into the hillsides, scooping out soil and using the drumlin as one canal bank. The scooped out soil would form the other bank. A canal built in this manner is referred to as a contour canal, as the canal follows the contour of a certain height.

However, this method had its problems. The drumlins do not lie in a straight line from east to west, and the canal became a winding, twisting snake as it tried to follow a route from hill to hill. On the next page are two maps sections that show the results of trying to avoid low land and use the drumlins. Clinton's Ditch is shown as the dashed line. The blue canal is the newer, enlarged canal. Map 1 is of the area now occupied by Millis Trucking along what is now Route 31, east of Weedsport. You can see the NYWS+B RR (New York West Shore and Buffalo Railway). Today you can find this spot by looking for the old concrete bridge abutment along side Rt 31. Map 2 is from an area just west of Port Byron. At some points the canal twisted in ninety degree bends, at times almost twisting back on itself. This design would become a constant problem, as a canal engineer wrote in 1853. *"The old canal, between Jordan and Port Byron is very crooked, and in many places the channel is quite narrow and when crowded with boats there is great difficulty in sending forward the requisite quantity of water to keep up the levels and supply the locks."* (Canal Commissioner report, 1853) The fully loaded boats acted like clogs in a pipe. The water could not get around them fast enough to re-supply the canal when water was used in lockage or lost from leakage. As the years went by and more boats used the canal, this design flaw caused many problems and delays.

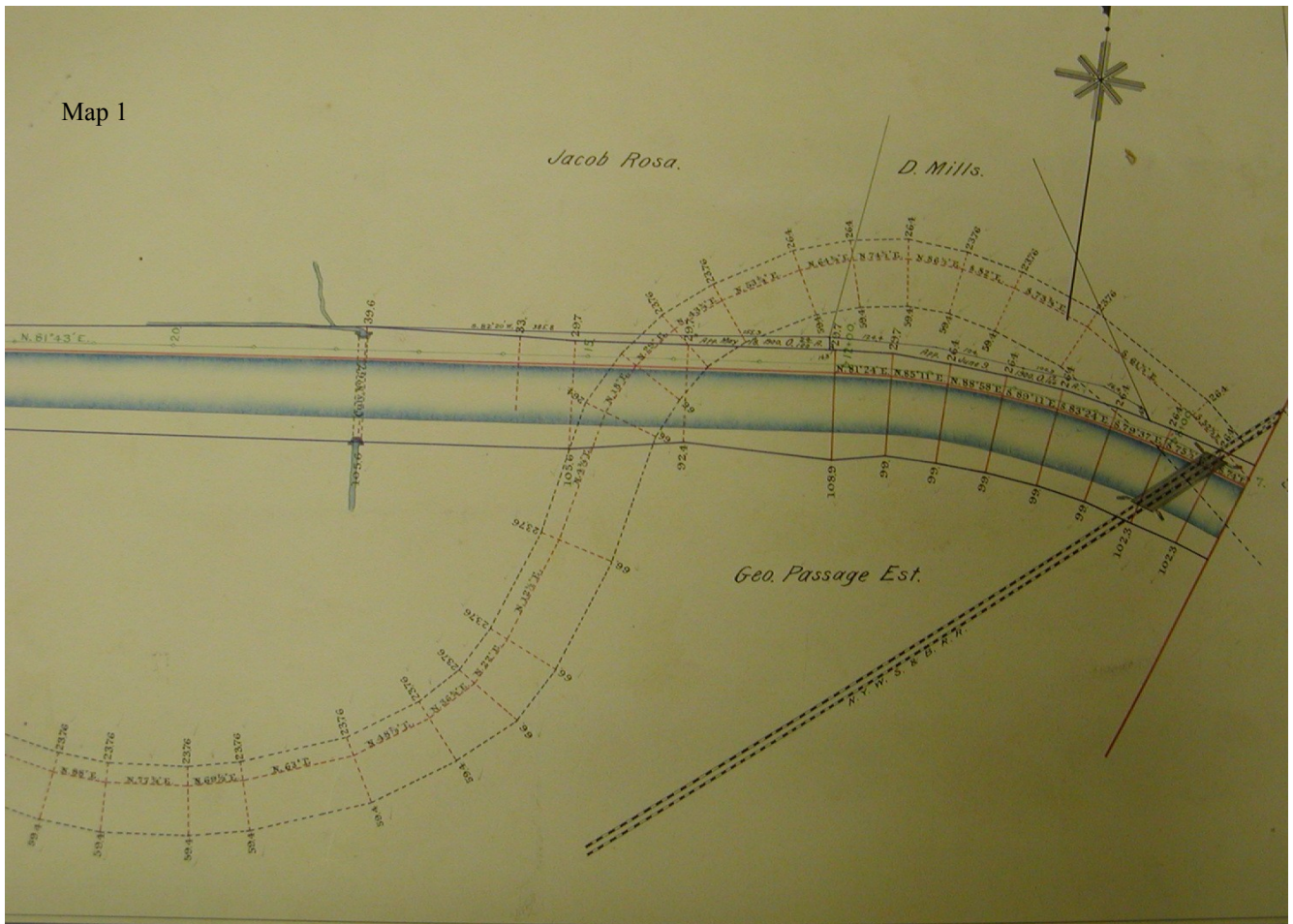
There were other problems to deal with. Although most of the land is flat, there was a change in elevation that had to be overcome with locks, along with many small swift moving streams that had to be crossed on aqueducts. Here is a list of the major structures on the canal in Cayuga County, and where you would find them today.

There were three locks:

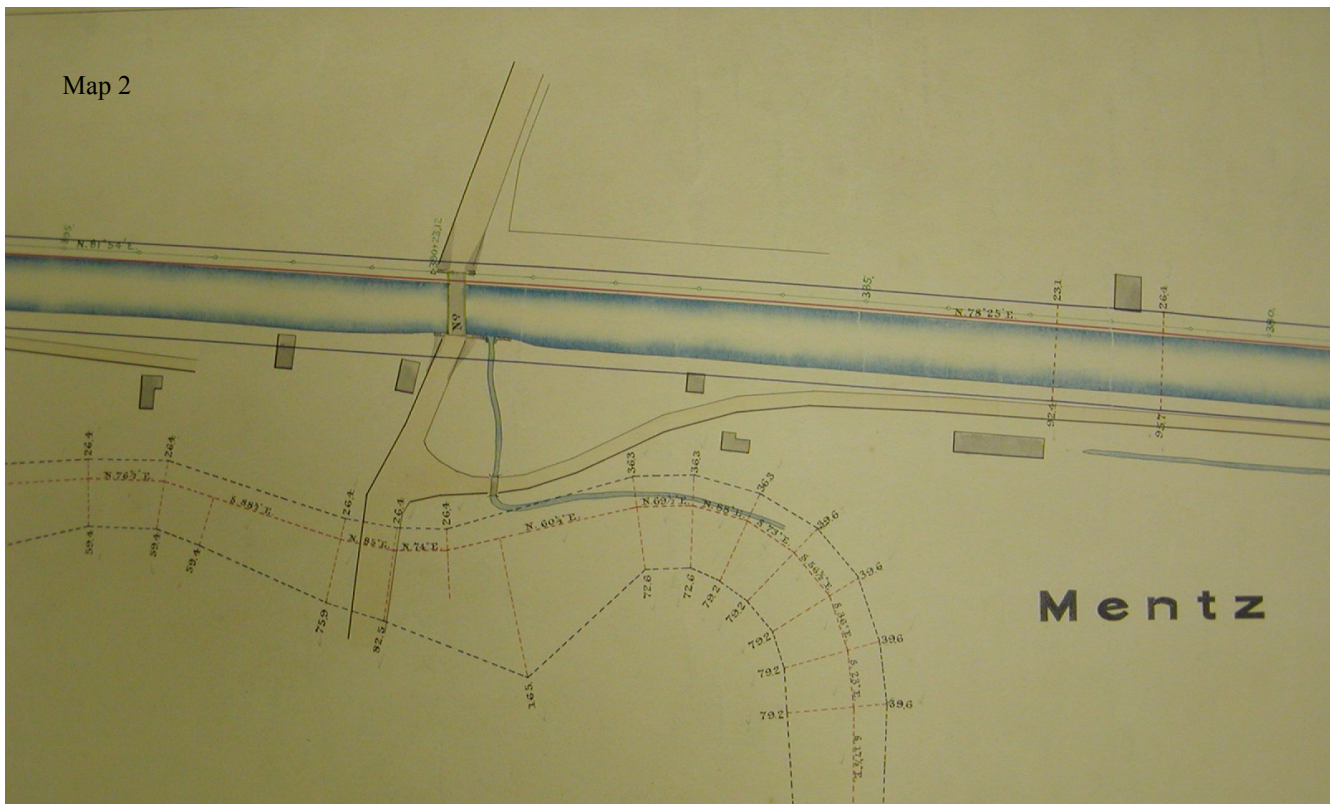
- 1) Lock 60 in Port Byron, just across from where the Erie House now stands.
- 2) Lock 61 just to the west of Crane Brook. This lock is referred to as "Sacketts Lock". The location of this lock is now under the Thruway, about halfway between Port Byron and Montezuma.



Map 1



Map 2



3) Lock 62, a guard lock along the Seneca River just west of Montezuma. (1)

In addition, there were three aqueducts:

1) Cold Spring Brook. This aqueduct was just to the north of Hamilton Road near the golf course.

2) Owasco Outlet. One arch of this aqueduct remains just behind St. John's Church in Port Byron.

3) Crane Brook. Just to the south of where Route 31 crosses Crane Brook.

In case you think that building the canal was an easy task, here is a small section of a contract for work in the Cayuga County area.

"The grubbing is to be at least sixty feet wide that is thirty feet on each side from the middle of the canal, in which space all the trees, logs, roots, stumps, saplings, bushes, brush and wood of all descriptions are to be dug, cleared, eradicated and wholly removed therefrom a space of thirty six feet in width on each side of the grubbing as to have all the trees cut down together with the saplings and bushes, and within fifteen feet of the grubbing, no tree sapling or stump shall be left standing more than one foot in height and all the logs, trees, stumps, roots, saplings, bushes, brush and wood of all descriptions shall be removed at least forty five feet from the center of the canal. The canal and banks shall be constructed in such manner that the water may in all places be at least forty feet wide at the surface, twenty eight feet at the bottom and four feet deep, each of the banks shall be two feet perpendicular measurement above the top water line, except where the natural surface of the earth on the side opposite the towing path is as high as the top water line or rises to that height and higher within a short distance of the canal, in which case no earth shall be thrown on the last mentioned side, and such a slope shall be preserved on the inner side of the banks both above and below the top water line as that every foot perpendicular rises shall give a horizontal base of at least eighteen inches. The surface of the towing path shall be not less than ten feet wide and not less than two nor more than four feet high in any place above the top water line, it shall be on the northerly side of the canal, smooth and even, and consist of the best earth excavated, opposite the towing path the bank wherever one is required shall not be less than five feet wide on its surface, smooth and even and neither of the banks shall have a less slope on the outer than on the inner side except where there is a redundance [sic] of stuff, and no part of the extra stuff nor any trees or rubbish of any kind shall be felled, laid or left on either of those parts of the canal line adjoining this (work)."

The canal contractors were able to push the work forward to Montezuma by December 10th, 1819. Ninety-eight miles of the canal were complete and ready for use. It was opened the next spring: *"It was in the year 1820 that the people of Montezuma built a flatboat, which they named Montezuma, and on this a considerable part of the population of the place was conveyed by way of the canal to Syracuse. This was the first boat of any kind ever to traverse any part of the waters of the Erie Canal. Arriving at Syracuse the visitors patronized the restaurants and stores and probably the saloons also. Prior to this the people of Syracuse had been almost a unit in opposing the construction of the canal, but the visit of the people of Montezuma that day destroyed much of this opposition, so difficult is it for people to entertain views antagonistic to their financial interests."*

By 1823, the canal opened from Rochester to Albany. The people of Cayuga County began to get the full benefit from easy transportation via the new waterway. This made the villages of Weedsport, Port Byron and, to a lesser extent, Montezuma, ports of destination. Those who lived

(1) At first, the lock numbering scheme began at Rome and worked both east and west, so the first lock west of Rome was #1W and the first lock east was #1E. This was changed at some point. I use the easier to understand numbering scheme which starts at Albany and works west. Thus Lock 62 was the sixty-second lock west of Albany.

north or south of the canal had to travel to one of these villages to board a boat or pick up their merchandise. This was a role the villages played for the next eighty plus years. By 1825 the entire canal opened connecting Cayuga County to the Hudson River and the Great Lakes.

Think of it this way: from Weedsport, Port Byron or Montezuma, one could board a boat and not set foot on land again until he or she reached Europe. The benefit to farmers and manufacturers was life changing. The papers are filled with newsworthy shipments.

“The canal boat Independence was at Rochester on Monday with 239 barrels of eggs, each containing 90 dozen – total 258,120 bound for the New York [city] market.”

“The iron Canalboat ‘Vulcan of Rochester’, J.J. Davis, master, passed through this village [Syracuse] Sunday morning past, loaded with 850 barrels of Flour, being this the largest load that has passed this season.”

In comparison, even the largest wagon pulled by six or eight oxen could ship only a few ton of goods. The rough roads, the hills and valleys, and the rolling resistance of the wagon placed a limit on what a team could move. It would have been cost prohibitive to ship 258,120 eggs by wagon. Even if the eggs did survive the trip, they would have spoiled before they reached New York City.

By the early 1830’s, the number of boats on the canals reached into the thousands. A person standing on a bridge over the canal would see a steady line of boats, twenty-four hours a day. When the canal was closed due to breaks, the boats would back up for miles, waiting for the canal to re-open. The canal villages became places to visit for new and interesting products from the eastern port cities. Items such as fresh seafood, the newest fashions and goods from European markets could now be transported quickly and cheaply into the inner regions of New York State to be sold to and enjoyed by people who had never been to the large cities. This would be a dramatic change of life for our Cayuga County forefathers as well as the rest of the citizens of upstate New York.

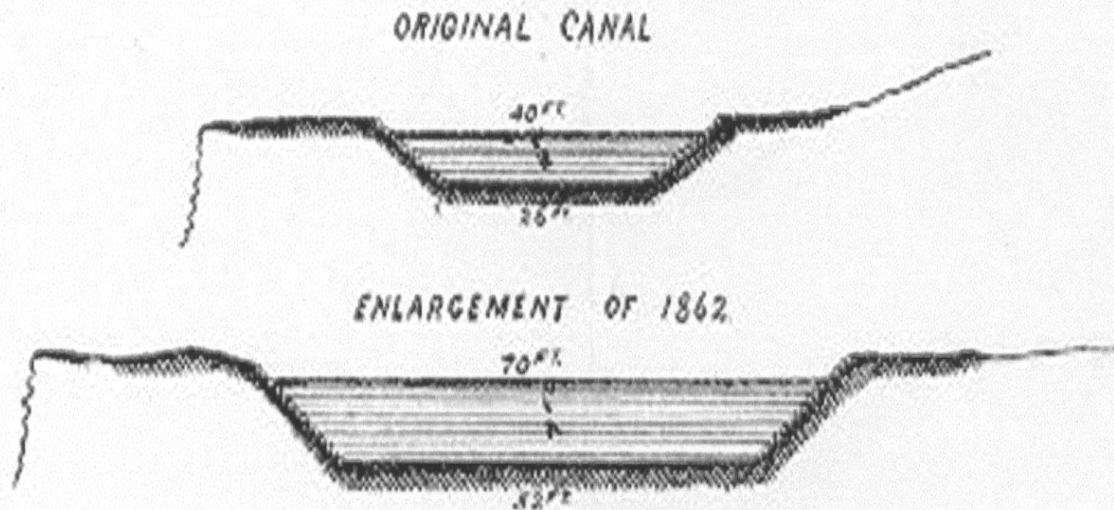
The magnitude of traffic on the canal led to congestion and delays. In 1836 and for a period of about thirty years, the Erie Canal was deepened and widened to handle larger boats. Canal historians refer to this work as the “First Enlargement”. In the eastern and western regions of the State, where land space was limited or digging difficult, the old canal was widened by thirty feet and deepened by three feet. In Cayuga County, where the canal was twisting and troublesome, the old canal was abandoned for a newer, straighter route. The old canal land was sold or otherwise taken over by people who used it for farming, building space, roads or just left to be reclaimed by nature. Thus there is very little left to see and explore in Cayuga County.

This is not to say that there is nothing left. In the chapters to follow, you will be told where to look for the remains of this early canal. Also, there are a couple sections of the old canal visible that you might drive by every day. Look for these along Route 31 and Clinton Road to the east of Weedsport. During the winter months when the leaves have fallen from the trees, the old canal is easily seen following Clinton Road. Look for places where water pools in the old canal bed or the small rise of the towpath. A slow drive or bike ride along Clinton Road will reward you with a view.

THREE- THE CANAL ENLARGEMENT

The canal was enlarged for a very simple reason: Clinton’s Ditch was just too small. Clinton’s Ditch was forty feet wide and four feet deep, and the boats that used it could carry about fifty to seventy-five tons.

TYPICAL CROSS SECTIONS OF ERIE CANAL PRISM



The canal as it was first constructed was never intended to carry thousands of boats. Some people speculated that no one would use it at all. But within a few years of the opening of the canal many thousands of boats were registered for use. And it took only a few years for people to begin to ask for canal improvements such as double locks, a wider and deeper canal, and safer river crossings at the Schoharie and Seneca Rivers.

In 1836 the State began the process of enlarging the canal to a seven-foot depth and a seventy-foot width. In addition to the wider and deeper canal, the State decided to build side by side or double locks, which would allow for two boats to pass through at once. The Engineers also decided to straighten out many of the twists and bends in some sections of the canal. They would do away with the contour canal when it was possible. Why was this so important? This straightening would shorten the canal by many miles. Each extra mile of canal meant more water was needed. More water meant more reservoirs, more feeders, more chances of breaks. With the double locks and a deeper canal, the Engineers could see that problems would develop in finding water to fill and maintain the level of the new canal. Fewer miles of canal meant less money was needed during the enlargement process.

Since most of the canal route in Cayuga County was twisting, most of it was relocated as it was rebuilt during this enlargement process. In 1837 the Commissioners report that the canal between Syracuse and Montezuma would not be difficult to enlarge. It was thought since the new canal would be completely new, construction could take place all year around and work would go quickly. In areas where the old canal had to be dug out such as in Weedsport, work could only happen in the winter months when the canal was shut down. In 1839, the Commissioners reported that the canal enlargement work should be complete by 1843. These predictions would not hold true.

In 1842 the proposed alignment of the enlarged canal had been surveyed across the County. The route would be completely new excepting the sections that passed through Weedsport and Port Byron. It would be considerably straighter and shorter than the line followed by Clinton's Ditch.

A financial crisis began in 1842 when the State ran out of money and was forced by law to stop all work. This work stoppage lasted nearly ten years. During this time, only work that was nearly complete was finished; emergencies were dealt with; and otherwise normal maintenance on the canal was continued.

Once the crisis was over many people began to question the need for the canals since railroad service was now available almost everywhere in the state. The railroads had the advantage that they could run on a year around schedule. So why did the State continue to rebuild the canal system? The railroads were privately owned and the State had little control over the fares charged. On the canal, anyone with the money could buy a boat and go into the freight hauling business. This created competition between the railroads and the canals, helping to keep the cost of moving freight lower, which benefited everyone who needed to ship or purchase goods.

The enlargement began in the eastern sections of the state from Albany to Syracuse to accommodate the larger volumes of traffic that naturally took place around the larger population areas. In Cayuga County the enlarged canal was not put into total use until 1858. Just to point out how slow this enlargement process was, in nearby Camillus and Jordan the new canal was in use by 1845.

The Enlarged Canal did allow larger boats to be used and the amount of tonnage per boat increased from seventy-five tons to over two hundred tons. But even this did not solve many of the problems that plagued the canal commissioners. The boat builders continued to make boats as big as would fit into the locks. And the boat owners continued to overload the boats until they were almost dragging on the bottom of the canal. The mules were overworked as they struggled to pull the boats and the round trip times actually slowed down. Why? We have all seen a boat go through the water. The front of the boat, the bow, cuts through the water and pushes it aside. The water moves around the boat and then refills the "hole" left by the boat. But canal boats had a squared or slightly rounded bow. This was not as efficient to cut through the water. Instead, it acted as a plow, pushing the water ahead of it, creating resistance. Think of a snowplow in a parking lot. And in the narrow confines of the canal, the water had a difficult time moving around and under the boat. If the State had mandated that boats could draft no deeper than six feet, and be no wider than fifteen feet, many problems would have been avoided. But for the owners bigger was better and the State allowed for the largest possible boat to be used.

In the late 1800's the State attempted to address these concerns and make the canal two feet deeper. It wasn't that the State wished to allow the boats to carry more, it was that they wanted to create more depth under the boats for water to pass. They appropriated nine million dollars for this work, only about half of which was needed to complete the work. The money was quickly wasted by many of the contractors, and the work was never completed across the state. In Cayuga County, the canal was deepened in Weedsport and Port Byron.

Throughout all this the State continued to lower tolls on the canal, and by 1888 the tolls were removed all together. It was hoped that this would spur canal usage but it did not help. By this time the railroads had reached into all sections of the state providing year around service. Throughout this period, the State encouraged the development of steam powered boats or other towing systems. A boat equipped with a steam engine could propel itself and tow one or two other boats. All these measures were used to make the business of canalling more profitable, but traffic still fell off.

The State once again addressed the idea of another enlargement. For the many people who could stand on the banks of the canal and not see a boat for days, the idea was foolish. After many studies, it was decided to move the route of the canal into the rivers and lakes, and abandon most

of the manmade ditch. This work, the Barge Canal, was complete by 1918 and the Erie Canal era came to an end in Weedsport, Port Byron and Montezuma.

FOUR- LOCKS

Mechanically a canal is a very simple structure to build. A ditch is dug into the ground, and later filled with water. This simple canal works fine until the desired route comes to a place where the canal needs to climb a hillside or descend into a valley. Of course, the canal will not work if you try to dig the ditch up the side of a hill. The water would rush downward creating a current, and in effect what you would be creating is a manmade river. To overcome the hillside, you build one or more dams that back up the water and create a series of pools of still water. At the dam you build an enclosure that allows water in or out. This enclosure will lift your boat from a lower level to the next higher level, much like an elevator lifts people from floor to floor. Now the boat can safely travel up or down the hillside by going from one pool to another. The enclosure is called a lock. The lock is not something that the Engineers of the Erie Canal devised. Locks were in use for many hundreds of years before 1825 in England, Europe and China.

When Clinton's Ditch was built, eighty-three locks were used to overcome the elevation change between Albany and Buffalo. These locks were numbered in two different ways. The first was to begin with Lock One at the junction of the canal with the Hudson River in Albany. The highest numbered lock was at the western end of the canal at Buffalo. Three of these locks were built in Cayuga County. Lock 60 was in Port Byron, 61 was near Crane Brook, and 62 was in Montezuma, near the Seneca River. (A west bound boat from Albany would pass through 60 locks before it reached Port Byron.) The second method, used early on was to number east and west from Rome, the starting point of construction. In this manner, Lock 60 in Port Byron was Lock 7, or seven locks from Rome. You can see that this could get difficult. It is easier to count up from Albany.

You might notice that all locks in Cayuga County were west of Port Byron. Between Port Byron and Jordan the land was fairly flat, so there was no need for a lock. The locks built during the construction of Clinton's Ditch were singles, meaning they had one chamber. During periods of heavy traffic, boats could face a lengthy delay as they waited in line for their turn to pass through the lock.

Think it might be fun to be a lock tender? The duties of a lock tender were outlined in this appointment letter of March 1822:

Directions for the Lock Keeper of Mentz

- 1. Your duty will be to take charge of the Lock, to assist all boats in passing the lock at any hour they may arrive with the least possible delay.*
- 2. The culvert gates at your lock you are to keep in repair and also the spindles, cranks, etc, and for that purpose you will provide yourself with good and sufficient plank for making said gates, and when any one shall fail you will immediately repair the same; for which you will be allowed one dollar for putting in one half of a gate when that only is necessary, and one dollar sixty-three cents for putting in a whole gate, and when the cranks or spindles are to be repaired the blacksmiths bill will be allowed to you.*
- 3. You are to keep the culverts or passages for water into the locks clear from all sticks or other substances which shall in any manner prevent the said lock from filling with facility; you will also take out of the canal all float wood which shall come within twenty five rods of your lock.*

4. For the above mentioned services you will be allowed twelve dollars per month, and no charges for services rendered in repairs or otherwise in keeping the lock in good order will be allowed, other than those above mentioned.

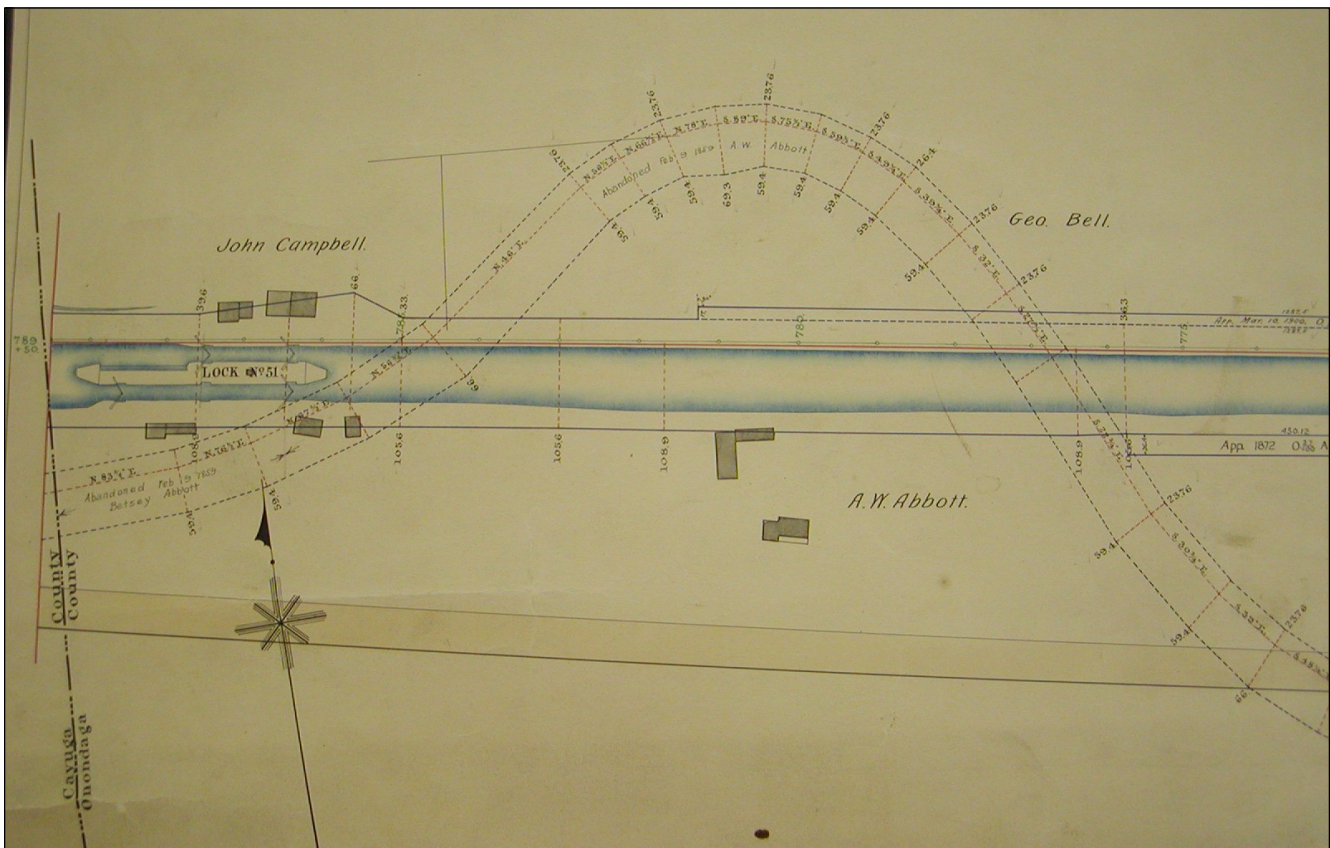
(signed) R. Matson Sup't

When the canal was enlarged, the lock design basically stayed the same, although there were two changes between the Clinton's Ditch locks and the Enlarged locks.

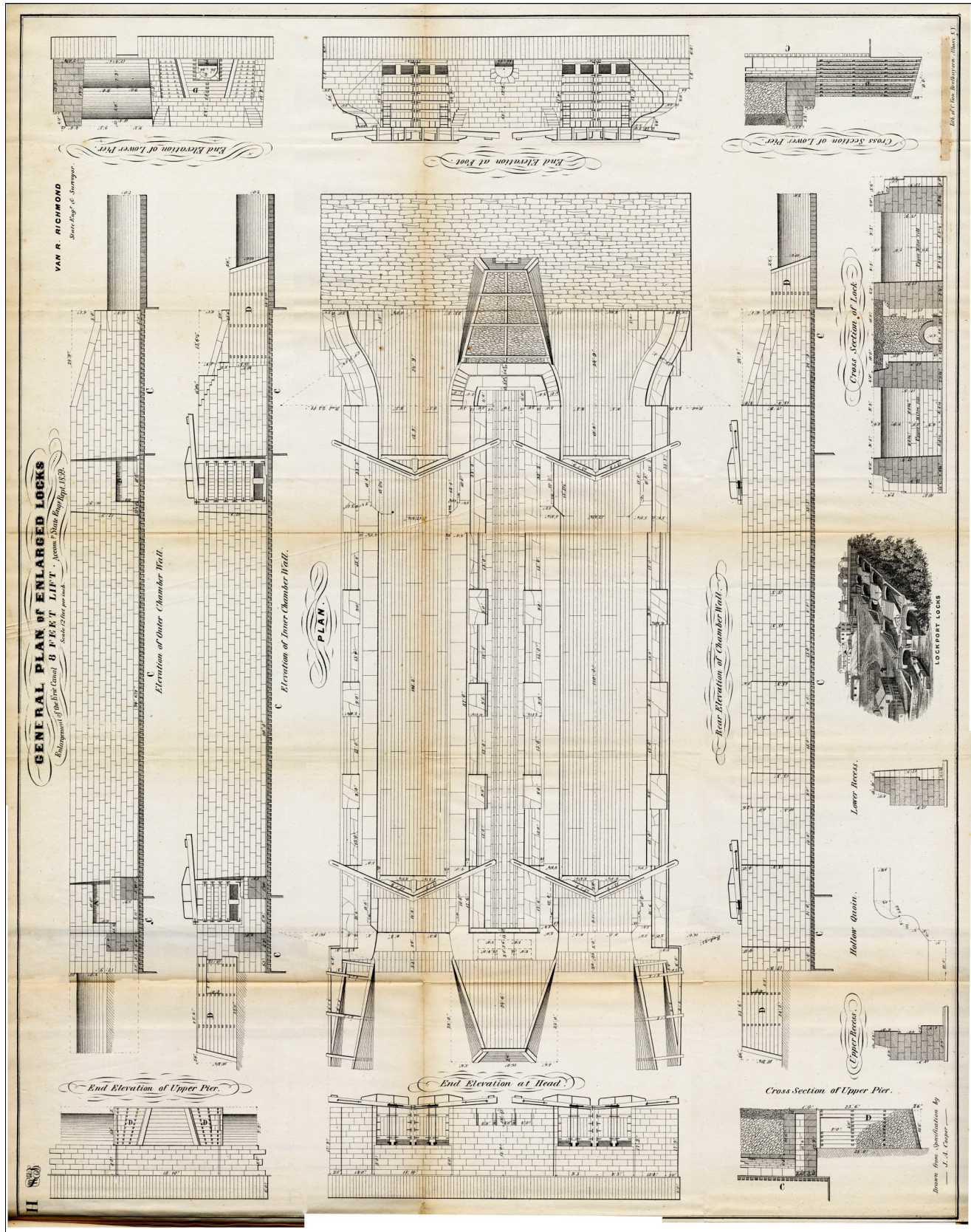
- 1) The overall size of the lock was increased from ninety feet by fifteen feet, to one hundred ten feet by eighteen feet. This allowed larger boats to be used. A larger boat meant that more freight could be handled.
- 2) The locks were doubled. Instead of having one chamber and making the boats wait in line, two chambers were built side by side. This created westbound locks on one side and east bound locks on the other, helping to reduce delays at the locks.

At first, the Canal Commissioners decided that only the locks from Albany to Syracuse should be doubled. They reasoned that most of the traffic was on the eastern part of the canal and most improvements should start there. But by 1835, the State decided to enlarge the entire canal and double all the locks.

During this enlargement process, the engineers made a major change in the route of the canal through Cayuga County. From Solvay to Montezuma, the new route would follow lower ground instead of hillside route as did Clinton's Ditch. This would eliminate the need for four locks. The lock in Jordan was moved a mile to the west, away from downtown Jordan to the Onondaga – Cayuga



Lock 51 in 1900. The old canal is shown with the dashed lines. The buildings are feed and grocery stores, an ice house and barn. The 1880's extension is shown by the longer chamber.



General Plan of Enlarged Locks, printed in the 1859 Canal Commissioners Reports.

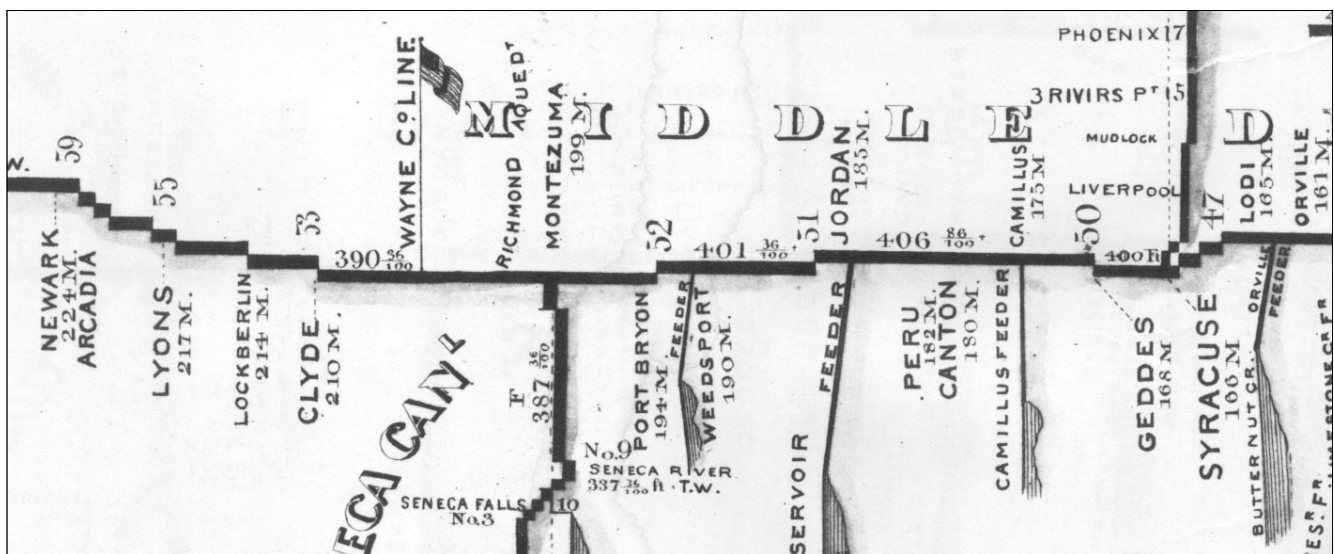
County border. In Port Byron, the lock was replaced by a newer structure with more lift. The two Clinton's Ditch locks near Montezuma were removed when the canal was rerouted to cross the Seneca River on an aqueduct. This type of improvement reduced the number of locks needed. As a result, Enlarged Lock 52 replaced Clinton's Ditch Lock 60 at Port Byron.

The enlarged Lock 51, which sits on the Cayuga - Onondaga County line is very accessible, and I will use it here to discuss locks. Lock 52 in Port Byron is on Thruway property and should not be visited unless the Thruway Authority is allowing guided tours.

Before you start looking at the lock, remember that all the locks are pretty much the same. The design had to be standardized so a boat could pass through all the locks on the canal. If one lock was even slightly smaller than the others, a boat could get wedged inside the chamber, closing the lock until the boat could be removed. The only difference among the locks is the amount of lift the lock would have. This was measured in feet and inches. Lock 51 had a lift of 5.732 feet. Lock 52 lifted 11.298 feet which was the highest lift on the entire system.

What did it take to build a lock? First, the lock pit was cleared out. A foundation was constructed which supported the entire structure. The type of construction method used in the foundation depended on the firmness of the underlying soil. If the ground was soft, or the bedrock was buried under many feet of soil, piles were driven in the ground in rows three feet apart. The length of the pile was based on the depth of the bedrock. (The piles at Lock 52 were twenty-five feet long.) Timbers twelve inches square were spiked to the piles and a heavy wooden floor made of two and a half inch thick hemlock and oak was laid on top of these timbers. Then it was time for the stone work. This consists of the chamber walls, the spillway and culvert, and the wing walls that extend out past lock structure. The stone was purchased from local quarries. At the quarry, the stone was shaped according to plans provided by the Canal Commissioners. At the lock site, the stone was cut for a tight fit. After, they would finish up by hanging the wooden doors, building the lock tender's office and perhaps his home. All this work was let out to contractors who would specialize in this type of construction. (It cost \$46,507.38 to build Lock 52 in the early 1850's.)

Locks 51 and 52 were a bit unusual compared to the other enlarged locks. Not in shape or size, but that they locked down to the west, instead of locking up. For the most part, the canal climbs from sea level at the Hudson River in Albany to 550 feet above sea level at Lake Erie at Buf-



This map shows the steps in the canal. Notice the dip at Syracuse and at Montezuma.

falo. But it is not a steady climb from east to west. There are valleys that need to be crossed. The Seneca River at Montezuma is in one of those valleys. So from Camillus to Montezuma, the canal goes downhill. After the canal crosses the Cayuga Marshes, the canal resumes its uphill climb at Lock 53 in Clyde, all the way to Lake Erie.

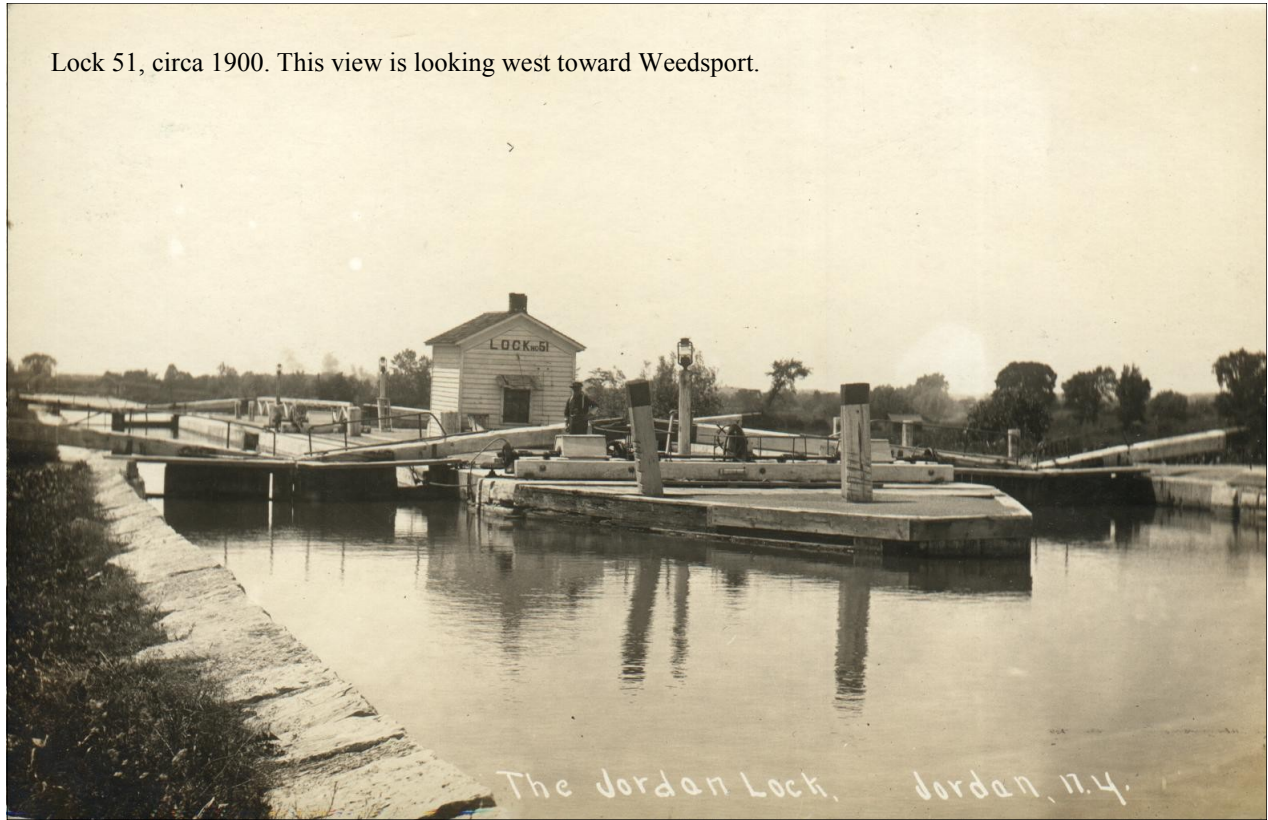
As you begin your tour of the lock, remember that the structure has not been used since 1918. Any wooden parts, such as the gates, have long since rotted away and iron parts were scrapped. Start your tour at the east end, which is the end toward Jordan. (photos next page)

As you look at the lock structure, you will see two long narrow stone lined pits (chambers). In between the chambers you will see a center island. The first thing you might notice in the lock structure is the three large openings in the center island. To understand why these openings were built into the lock, we must understand how the canal was designed to function. (photos following page)

The enlarged canal was built to hold seven feet of water. Water from natural resources (creeks, lakes) was taken into the canal at various points to keep the canal at the seven-foot depth. The canal had a very slight pitch which allowed the water to flow, albeit very slowly, downhill. When the water came to a lock, flow would stop, and the water would begin to back up. This created two problems. First, the canal was built to carry seven feet of water. Any more and the earthen banks could be washed away if the water happened to overflow the canal. Second, the water had to be continuously "flowing" in the canal to replace what was lost by evaporation, seepage or lock use. Without a constant seven-foot depth, the boats would run aground and traffic would stop. Water was passed through the lock as boats were raised and lowered. Each lockage could discharge many thousands of gallons into the next lower level. But if the lock was not being used, water still needed a way around the lock. In the Clinton's Ditch era, when the locks had only one chamber, a bypass was cut around the lock. During the enlargement, this bypass was built into the lock structure by building a tunnel under the lock between the two chambers. The three large holes at the head of the lock allow water into this tunnel bypass. Carefully poke your head into one of the openings and you will see a large pit and the tunnel running back under the island. Water would flow through these openings, into the pit, and out through the tunnel. Examine the stonework that form the openings and you will see a groove cut into the stones. In this groove, boards could be placed to make fine adjustments to the depth of water in the canal. When the canal was in use, a wooden platform extended out ahead of the three openings. This served as a bumper to protect the lock and the boats. The wood platform was filled with small stones. At Lock 51 you can see this pile of stones. At Lock 52, the stones have been removed.

Walk into the lock chambers. The lock chamber at Lock 51 has been filled with many feet of soil and fill, so the actual height has been reduced to about half. This is where the boat was "locked in". A boat traveling to the east was lifted up to the next level, and a boat to the west was lowered. Looking at the stone walls, you will see a recess where the wooden lock gates once fit flush into the walls, allowing an opening width of eighteen feet. There was one set of two gates at each end. The gates fit together in a "V" or what is called a miter. The gates closed against a miter sill, which was a stop structure built into the floor of the lock. This miter was one way to make the gates strong enough to hold back the force and weight of the water. The weight of the water pushing on one side of the "V" would force the gates together and make them watertight. But when the water level was equal on both sides of the gates, the heavy gate could be easily pushed open by the lock tender. To aid him, a long balance beam was built into the top of the gate, and a series of wood or stone cleats was fixed to the ground. By bracing himself against the beam and placing his feet on the cleats, the gates could be swung open or closed.

Lock 51, circa 1900. This view is looking west toward Weedsport.



Lock 51, 2010. Looking west.



Water bypass tunnel at Lock 51.

Top— the three large openings at the head of the lock. You can always tell the higher water side of the lock by finding the openings.

Middle— Once the water flowed into the openings, it passed into a large pit. At the bottom of the pit was a stone lined culvert.



Bottom— The tunnel from the lower end of the lock.

All photos taken winter of 2009 / 2010.

In each lock gate, there were one or two small doors with dimensions of approximately two feet by three feet. These doors would be opened and closed by a lever attached to the top of the lock gate. This allowed the lock tender to control the flow of water into or out of the lock chamber. The water flowed in or out by gravity, seeking to be level with the water on the other side of the gate.

But even with this simple design, there was a problem with Locks 51 and 52. A fully loaded boat coming from the west would be entering into the lock at the low end. It was found that it was more difficult to get a boat into the low end of the lock chamber for several reasons. One is that it is harder to handle a fully loaded boat rather than one that is empty. And as the mules pulled the boat into the lock, they were climbing up onto the top of the walls as the boat slid into the chamber. A boat entering the chamber on the far side had to deal with getting the rope around the lock tender's shack, the crossover bridges and lock gates. Sometimes you can find rope cuts made in the stone work by towropes straining to pull a 250 ton boat into the chamber.

The second problem was that as the boat was pulled into the lock chamber, the water in the lock did not have a way to make room for the boat. A boat does not float on the surface, it displaces the water, taking the space once occupied by the water. So as the boat is pulled into the lock, the water must have a way to escape from the lock chamber to make room for the boat. If the water cannot escape, it will pile up in front of the boat and begin to push back against the boat as it tries to find a way out of the lock.

The third problem resulted from the leaking of the gates that allowed more water into the chamber. Lock 52's gates leaked even more since they were taller than any other lock gates on the canal. This leakage created a current through the lock, pushing back on the boat as it tried to enter the chamber. With a boat measuring seventeen and a half feet wide and six and a half foot deep, you can understand that it would have a difficult time entering into a lock eighteen feet wide and seven feet deep. (1)

After the boat was lifted to the next level, it was difficult to pull the boat out of the lock as the boat leaving the lock left a space that had to be filled by water. This was the same problem encountered getting the boat into the lock, only in reverse. Now water had to find its way around the boat to fill the chamber. This problem could be fixed by lowering the upper miter sills allowing more water to flow into the chamber. At the other sixty-seven locks, the fully loaded boat would be entering the top of the lock chamber. Any leakage by the gates would create a flow that would help to suck the boat into the lock chamber.

In 1867, three proposals were made to overcome these problems:

- 1) Restrict the model and tonnage of the boats, as the problem was mostly with heavy, blunt-nosed, western grain types.
- 2) Use local steam power to help pull the boats in and out of the locks.
- 1) Build an additional lock.

However, very little was done about this problem until 1875. Then at the Syracuse Locks 47, 48, and 49, the walls were shaved back by two feet to make the chamber wider. This one action cut the locking time in half, and a recommendation was made to improve Locks 51 and 52 in the same manner. It does not appear that this widening ever took place at 51 and 52.

(1) The Canal Commissioner Report of 1847 indicates that Lock 60 (Port Byron) on Clinton's Ditch suffered from the same problems as Enlarged Lock 51 and 52. Most boats traveled fully loaded from west to east. Returning boats would be empty or loaded with finished products from the eastern factories.

In 1880, Resident Engineer Dension Richmond devised a way to help overcome this problem. Capstans, small drums that spin around, were mounted on the lock walls. Rope, running the length of the lock, was wrapped around these capstans. The capstan was powered by a small water wheel mounted in the overflow pit at the head of the lock. This wheel turned a system of gears that turned the capstans. As the boater began to enter the lock, he would unhook his animal team and attach the rope from the capstan to his boat. The capstan would then pull his boat in or out of the lock. In 1880, Lock 52 in Port Byron was the first to be fitted with this system. By 1883, the five “problem” locks were using this apparatus. It is estimated that two and a half-hours were saved by the introduction of this machinery.

At Lock 51, it is possible to see where these capstans were mounted. Look for a round cut-out in the stonework just next to the lock gate recesses. These cutouts are located on the center part of the lock. When looking at old photographs of the locks you can see the low wooden house built over this machinery at the head of the lock.

Improvements to the canal boats would require the State to make further improvements to the locks. In the 1870's, a steering system of ropes and pulleys allowed the boat owner to make one long articulated boat out of two regular boats. The benefit of this was that one crew could move two boats, much the same as you can see today where one tractor pulls two trailers. The steersman stood at the helm of the first boat. His steering wheel turned the rear boat that, in a sense, became the rudder. Also during this period of improvements, steam powered engines were beginning to replace mules and it was found that a boat with a steam engine could easily pull additional non-powered boats.

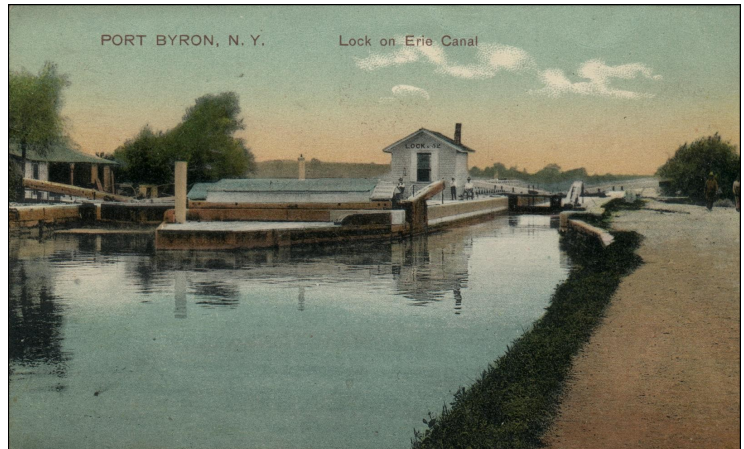
In 1884, the State began a lock-lengthening project. This would allow the longer tows through the locks without taking the time to unhook the two boats. Locks 51 and 52 were lengthened in 1888. This can be seen in the southern chambers of Locks 51 and 52. As you walk around, you can clearly see where the lock walls were extended out to the west. Look at the stone walls in the chambers and notice the color and texture change of the blocks. It is easy to see where the old 1850's construction meets the newer 1880's construction. To lower the cost of building this extension, a wooden deck was built out along the new stone wall. Look for this deck on the historic picture at the end of this chapter. Under this deck, the water from the overflow on the high side of the canal would flow out of a culvert. These days, you can see this culvert as you walk around the western end of the lock.

In 1895, the State once again attempted to make improvements to the canals by increasing the depth from seven to nine feet. This was done by making the canal banks higher, digging out the bottom of the canal bed or a little of both. This work would not accommodate wider or boats of increased draft. With an extra two feet of water, boats would be less likely to drag the bottom, and there would be less resistance on the pulling teams, as the water would have a little more space to flow around the boat. It would have been far too expensive to increase the depth of the locks by lowering the flooring, so this work is accomplished by building up the walls one extra course of stone. You can see this new stonework at Lock 52, but it does not appear that any work was done to Lock 51.

The locks had a locktender's shack built in the middle of the center island. This was his office where he would keep his records and catch some sleep. It also served as the outhouse. On the down stream end of the lock, small bridges were built across the chamber so the tender could walk from one side to the other to open gates.

Top- Post card of the Lock showing the office shack and the store on the far bank.

Middle- Lock 52 as seen from above. The NYS Thruway was built across the route of the canal. The line shows the canal route and watered remains can be seen in the upper right corner. The two chambers can be seen, along with the lengthened berme side chamber. The white L-shaped building is the Erie House.



Bottom- Lock 52 in the winter, showing the wooden wall built in front of the three openings.

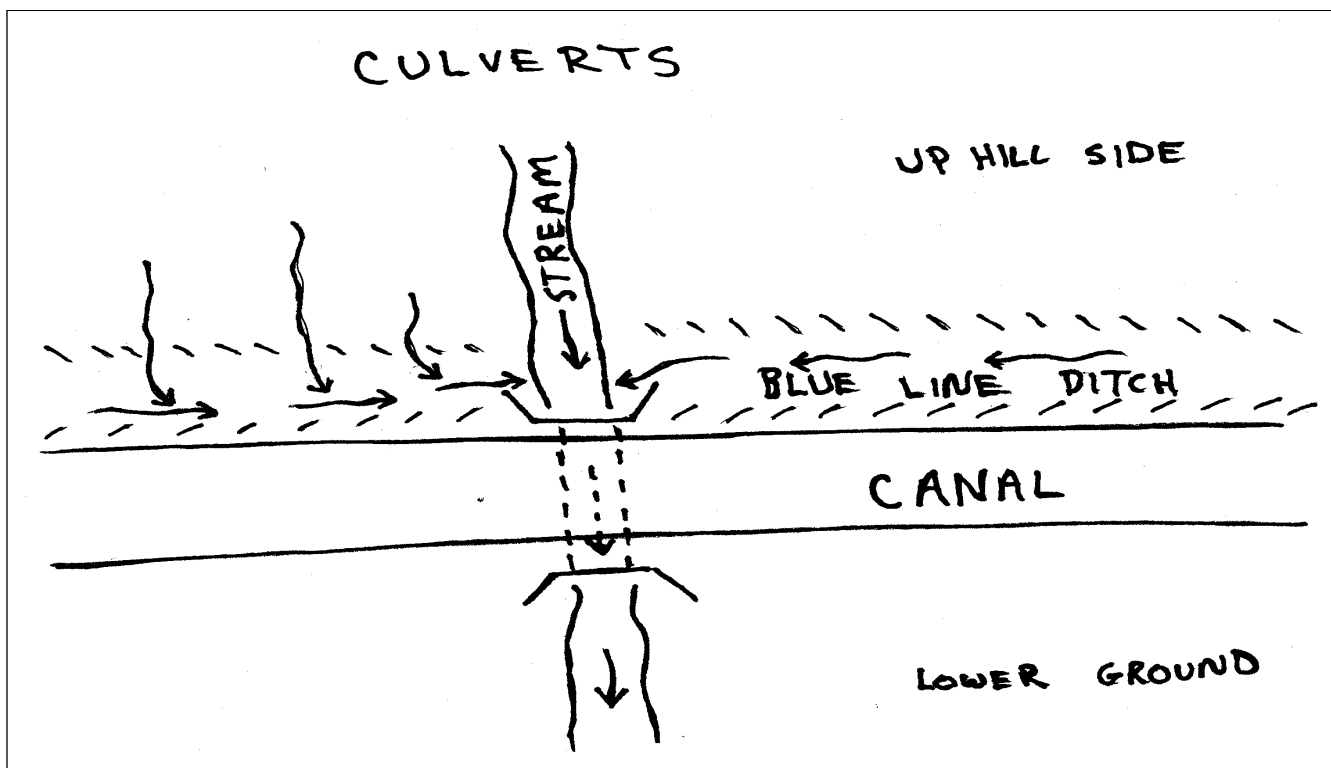
Missing from both Locks 51 and 52 are any remains of the stores that were built nearby to serve the boaters and the locals. Somewhat famous in Lock 52 legend is Kerns Store, which was located first on the north side of the lock from 1861 to 1873, and moved to the south side of the canal from 1873 to 1918. This store sold meats, groceries, boating supplies, animal feed, wood, lantern oil and ice. A very similar store was found at Lock 51, although little is known about it..

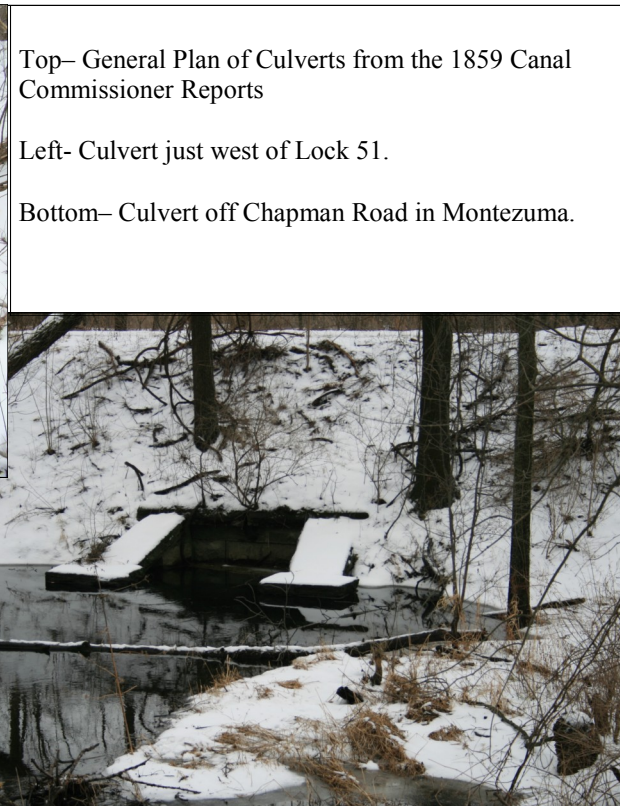
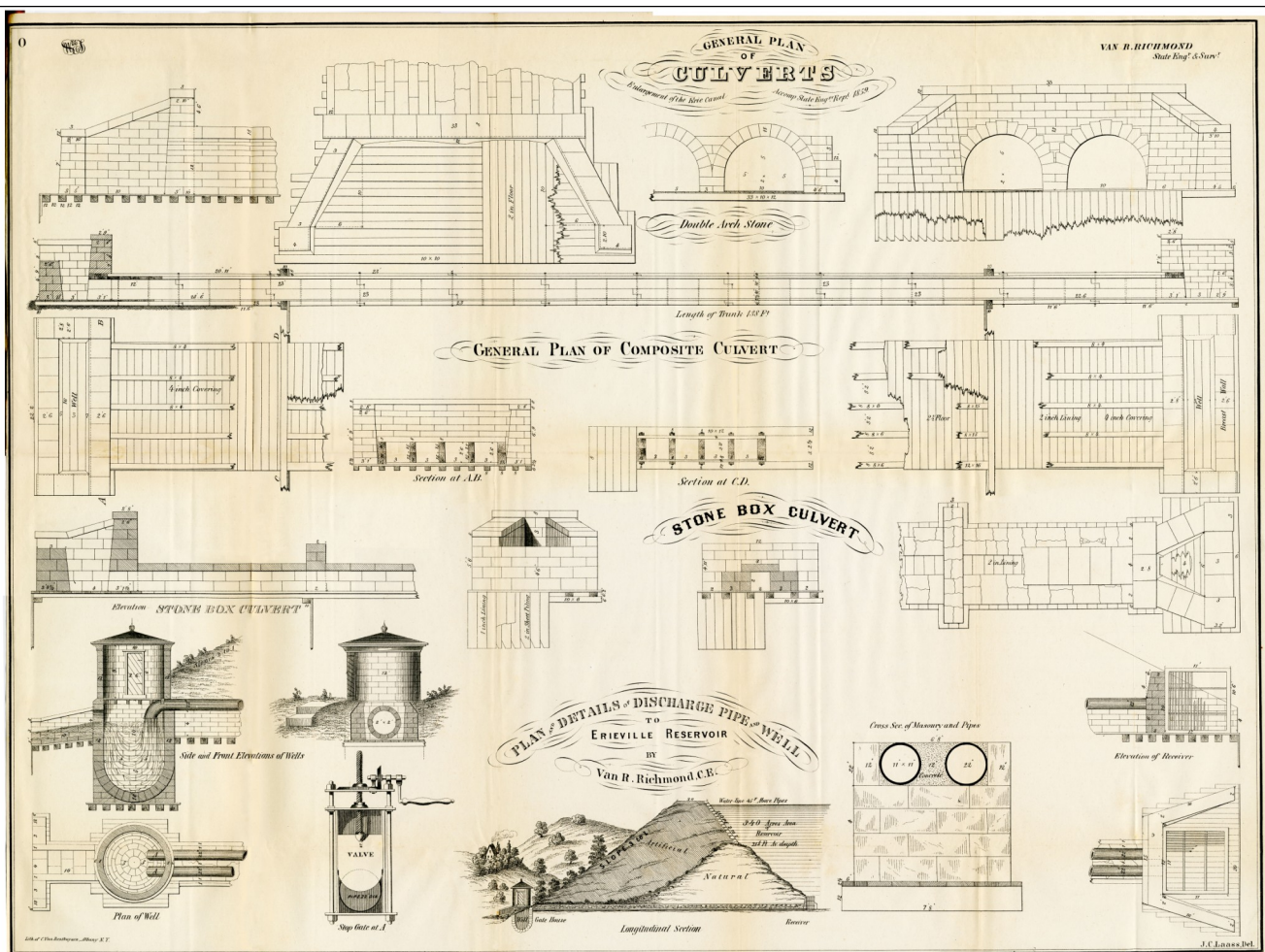
FIVE – CULVERTS AND DITCHES

The Random House Dictionary defines a culvert as: “a drain or channel crossing under a road, sidewalk, etc.” That is the key to understanding canal culverts. They go under the canal. Since they are under the canal, you can easily miss them as you travel along the canal or towpath. The culvert was the second most common structure on the canal, but you hear little about them. And few people will stop their car to explore a culvert.

A culvert on the canal served the same purpose as culverts under roads. It allows water to pass from the land on one side of the canal to land on the other side of the canal. Confused? Pretend the canal is a road, just like Route 31. When the road needs to pass over a stream so the water can safely flow under the road and not flood the road, a tunnel is built. If you didn't make a tunnel, the water in the ditch would soon back up and flood the road, perhaps washing it out. The same holds true for the canal. But wait, you say. What is the difference between a culvert and an aqueduct? Both allow water to pass under the canal. Good question. In most cases an aqueduct consists of a wooden or stone channel to carry the water of the canal whereas a culvert passes under the earthen banks of the canal. Aqueducts are employed when the canal crossed a large stream or river, the same way a road uses a bridge.

Water likes to flow downhill and a canal embankment cut into the hillside makes a great dam. During the early years of Clinton's Ditch, this runoff water, either from snow melt or rain fall, created many breaks as it washed away the banks of the canal. The result was that the canal main-





tainers had to build many more culverts than they had originally thought. Culverts were a major maintenance problem. Any blockage from trees, brush, silt or ice would stop the culvert from working, and canal wash outs would occur. The canal employees always had to keep an eye out for these blockages and clear away debris as needed.

Culverts came in different shapes and styles: box, arch, stone, wood, and combination (composite). The all-stone culverts have held up the best, as stone does not rot. Most culverts have some type of portal made of stone, and there are a few to look at in Cayuga County. Just to the west of Lock 51, a culvert can be seen from Route 31 if you look during the winter months. Behind Arby's, just to the east of the bridge over Putnam Brook you will find a culvert. You can find another just to the west of where Towpath road meets Route 31. If you do walk down the trail to see the culvert located on Towpath Road, you are walking on the berme side of the canal. When you get to the culvert, you will see the water going down a hole in the bottom of the canal. You will also notice a stone that looks a lot like a tombstone, stuck into the top of the berme. These stones were placed on the berme side only, so as not to interfere with the towlines. This is a culvert marker and it was used to show canal workers where the culverts were located so they would not break into the culvert when dredging. Walk down the bank and look at and through the culvert portal. This culvert is a composite type with a stone portal and a wooden tunnel. When the canal was abandoned, someone poked a hole in the bottom of the canal to allow water to flow out of the canal into the small creek. There is another very nice culvert in Montezuma just to the east of Chapman Road.

In addition to the culverts, they also dug small ditches along the outside of the banks to help collect the hillside run off. These ditches were dug to channel water toward the culverts. Many of these ditches were dug on or near the boundary between the state owned and private land. In 1834, Holmes Hutchinson, a Civil Engineer with New York State, used blue ink to indicate this property line and the term the "blue line" became known as the property line. Thus these ditches are called Blue Line ditches.

Ditches were not only dug to collect water from nearby hillsides, but also served to collect water that leaked out of the canal. As nearby residents and farmers complained about this seepage, ditches were dug to collect this water and return it to a nearby stream or culvert.

SIX- THE WATER SUPPLY SYSTEM

As you travel along the Cayuga County Erie Canal Trail, you might notice spots where water flows into the old canal bed. It might be from drainage pipes, a stream, or a nearby pond. The old canal has become part of a drainage network, helping to keep the countryside dry. But it wasn't always this way. When the canal was in operation, New York State had very tight control of the water that entered and exited the canal. Water is the lifeblood of a canal. Too little and the boats drag on the bottom getting stuck. Too much and the earthen banks might give out, flooding the surrounding area and disrupting all traffic for days or weeks. Even before canal construction began in 1817, Canal Engineers knew they would need large quantities of water. The lakes and rivers in Central New York held a lot of water, but how do you connect a natural body of water to an artificial river while retaining control of the water? The Engineers developed a feeder system to supply the canal with water in a (hopefully) controlled manner. In Cayuga County, there were four water supply points, each one a little different. (Here is a test: can you name any one or all four?) From east to west, there was: Putnam Brook stream receiver, Centerport feeder, Herring Brook stream receiver, and the Port Byron feeder.

The problem with the feeders in Cayuga County is that they were all quite small and would tend to dry up when they were needed the most. A good feeder must be able to supply many thousands of cubic feet of water every minute. As the canal was enlarged in the 1850's, the lack of water between Jordan and Montezuma became a serious issue for the Canal Commissioners. The locks at Port Byron have twice the amount of lift as the locks at Jordan. For each boat that passed through Cayuga County, twice as much water would be used at Port Byron than at Jordan. Even though the locks are made with a bypass, apparently this height difference between locks still created problems in the section between Locks 51 and 52. The Owasco Outlet at Port Byron, the only stream in Cayuga County that was capable of supplying the amount of water needed, wasn't used until the 1860's.

Putnam Brook and Herring Brook were stream receivers meaning that the stream emptied directly into the canal. Where the stream was to enter the canal, a dam was built. The top of this dam was the same height as the surface of the canal. The dam had a lot of functions. One, the dam would calm the flowing water before it entered into the canal reducing damage to the canal banks. Two, by slowing the current, the passing canal boats were not pushed into the bank of the canal. Three, slowing the water in the stream would settle out debris. Silt would pile up in the stream instead of in the canal. Fourth, the dam would prevent back flow into the creek in case of a drought. This would stop the water in the canal from trying to backfill the empty creek, rather than the creek filling the canal. With a stream receiver, there was no way to stop flow of the stream in case of flooding. Instead, a nearby spillway could dump water out of the canal back into the stream.

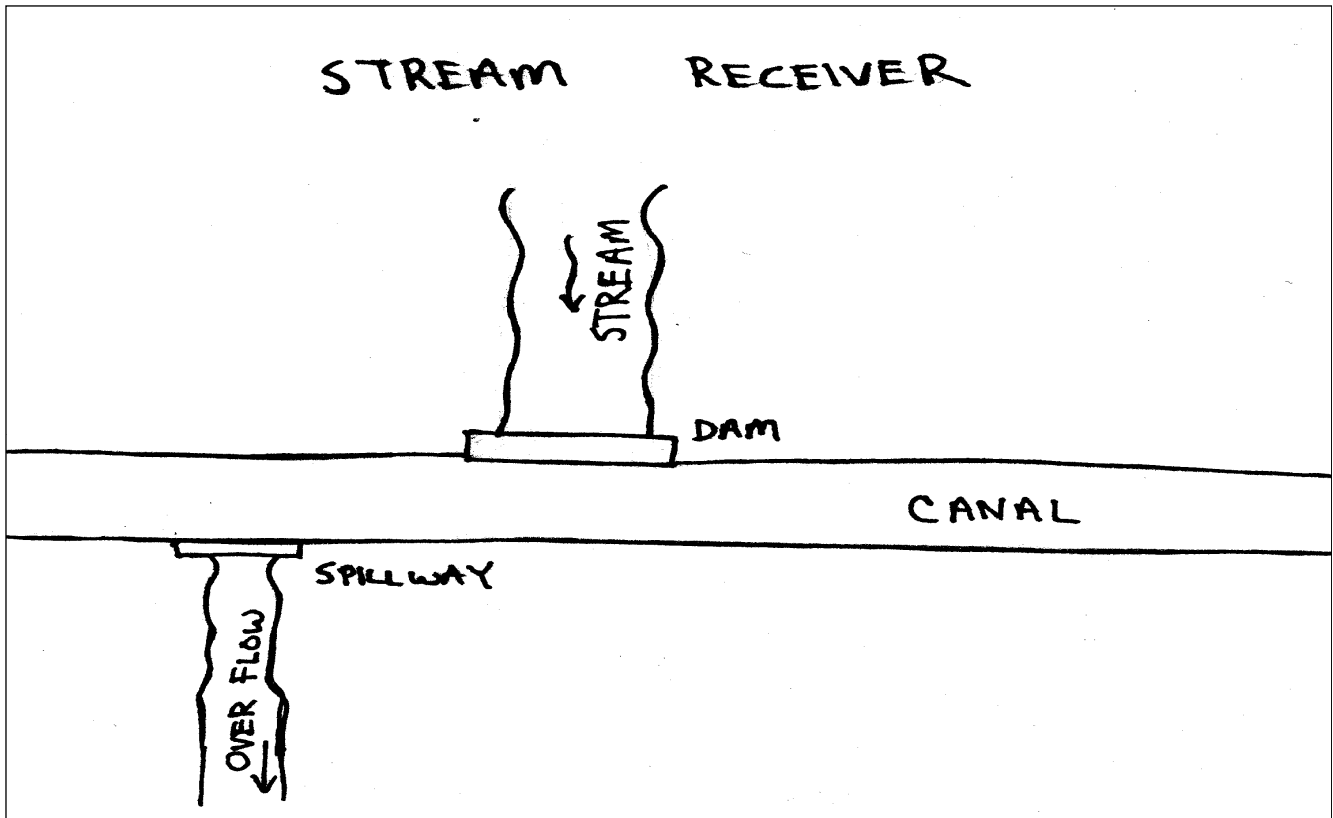
This type of water supply was used on small streams where it was known flooding would be at a minimum. Putnam Brook, the small stream behind Arby's, was intersected by the canal. During the summer, a spillway built into the towpath backed up the water of the creek into the canal. Once the canal was full, excess water would flow over this spillway, back into the stream. During the winter, the spillway would be opened and the stream resumed its natural course. Putnam Brook also had a small basin where boats could turn around or stop and get out of the traffic flow. In the winter, it is possible to see the outline of this basin.

Herring Brook (now Cold Spring Brook) is located between Port Byron and Centerport. Water continues to flow through the canal from this small stream. If you are on the path, you can see some of the stone blocks that were once part of the dam sticking out of the opposite bank. Unlike Putnam Brook, this stream does not continue past the canal. If it once did, all traces of the stream bed are long gone. Any excess water from this stream would need to flow west to Port Byron, and over into the Owasco Outlet. Another point of interest is the remains of the small bridge that once carried the trolley line over Herring Brook. This can be seen about 50 yards south of the canal.

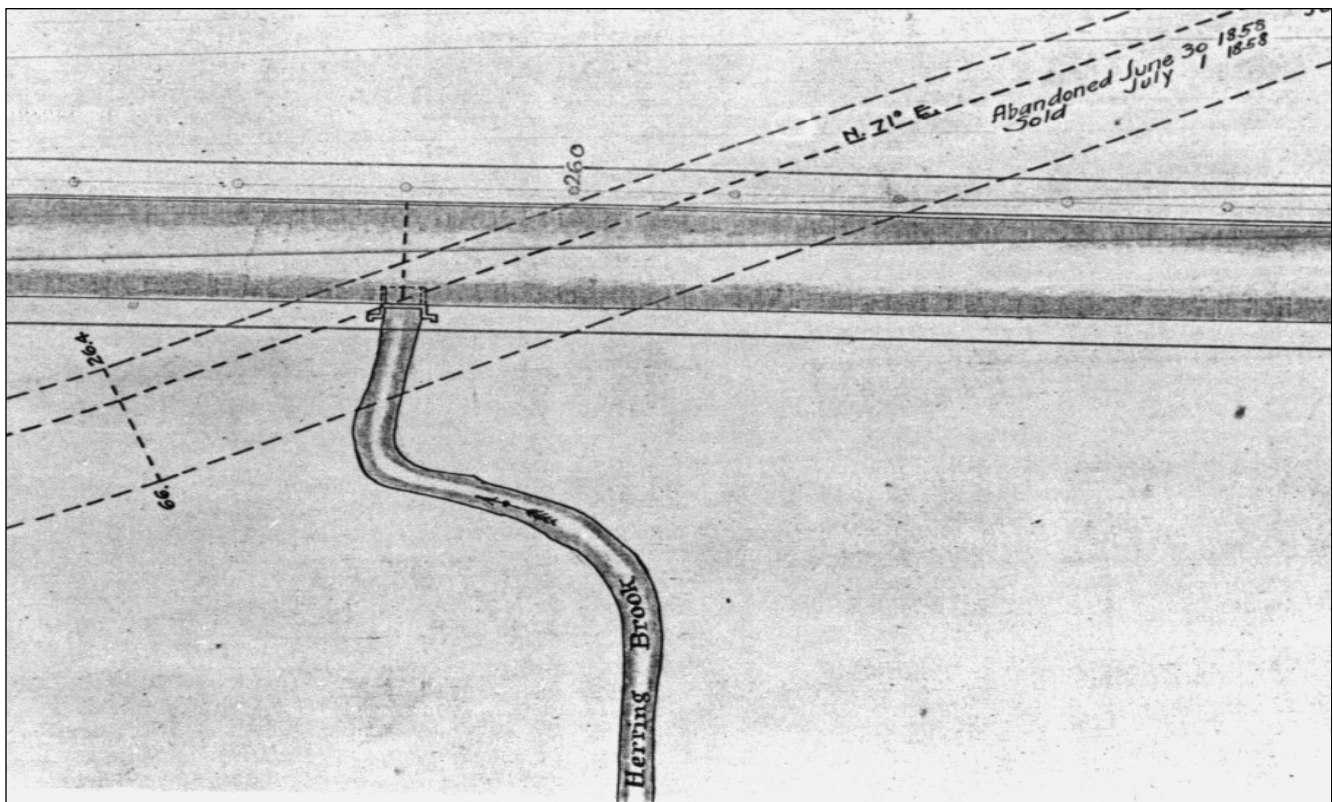
Centerport and Port Byron was the site of feeders, meaning a manmade ditch connected the canal to a nearby stream. A dam would be built in the stream to divert water into the canal. A gate or valve could be opened or closed to regulate the water flow into the canal. During the winter, emergencies, or during high water, the gate could be closed, and all the water would flow down the creek in its natural channel. When the gate was open, a portion of the water would flow into the man made channel to the canal.

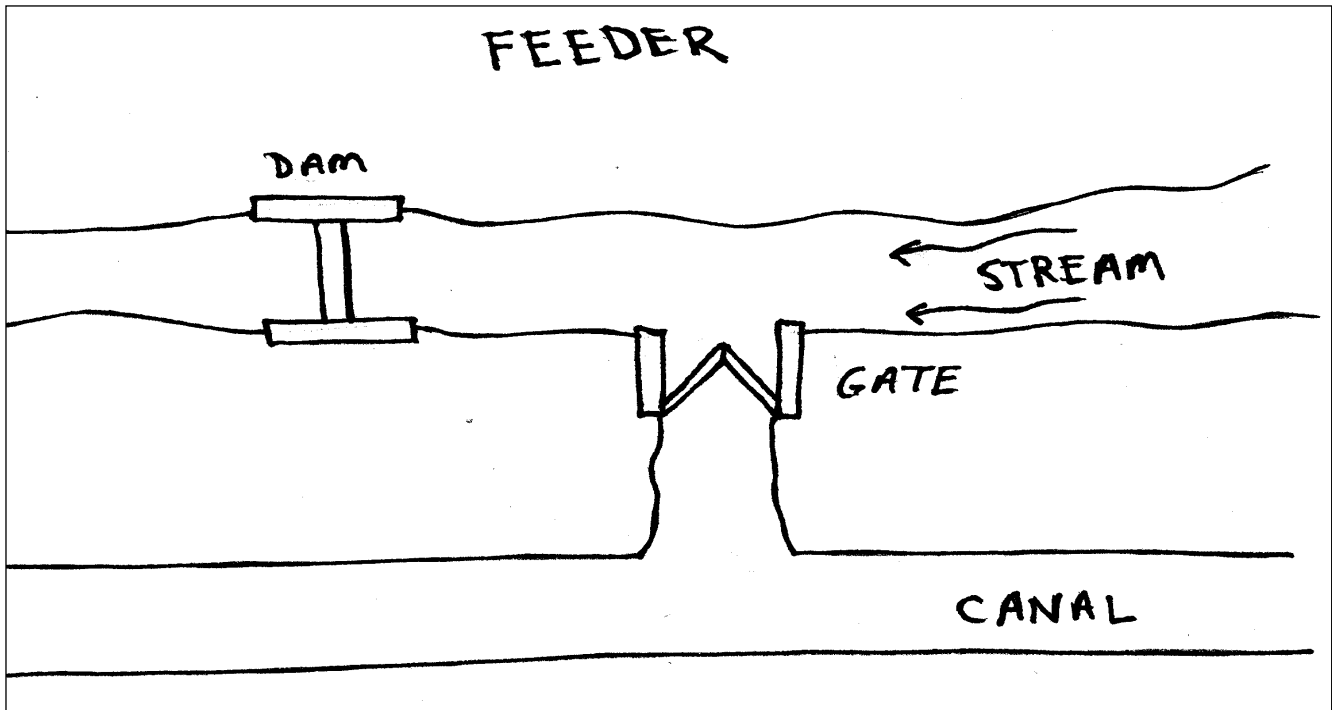
In Centerport the man-made ditch that connected the canal to Cold Spring Brook was located on the east side of Centerport Road. Parts of this can still be seen along the road. The feeder connected to the canal just to the east of where the road crosses the canal. If you look very hard, you can see parts of the feeder entrance stonework. This feeder was active in both canals.

In Port Byron it would be natural to think that the water from the Owasco Outlet should be used to supply the canal. But for some reason, it wasn't used. It is not known if the State was unable

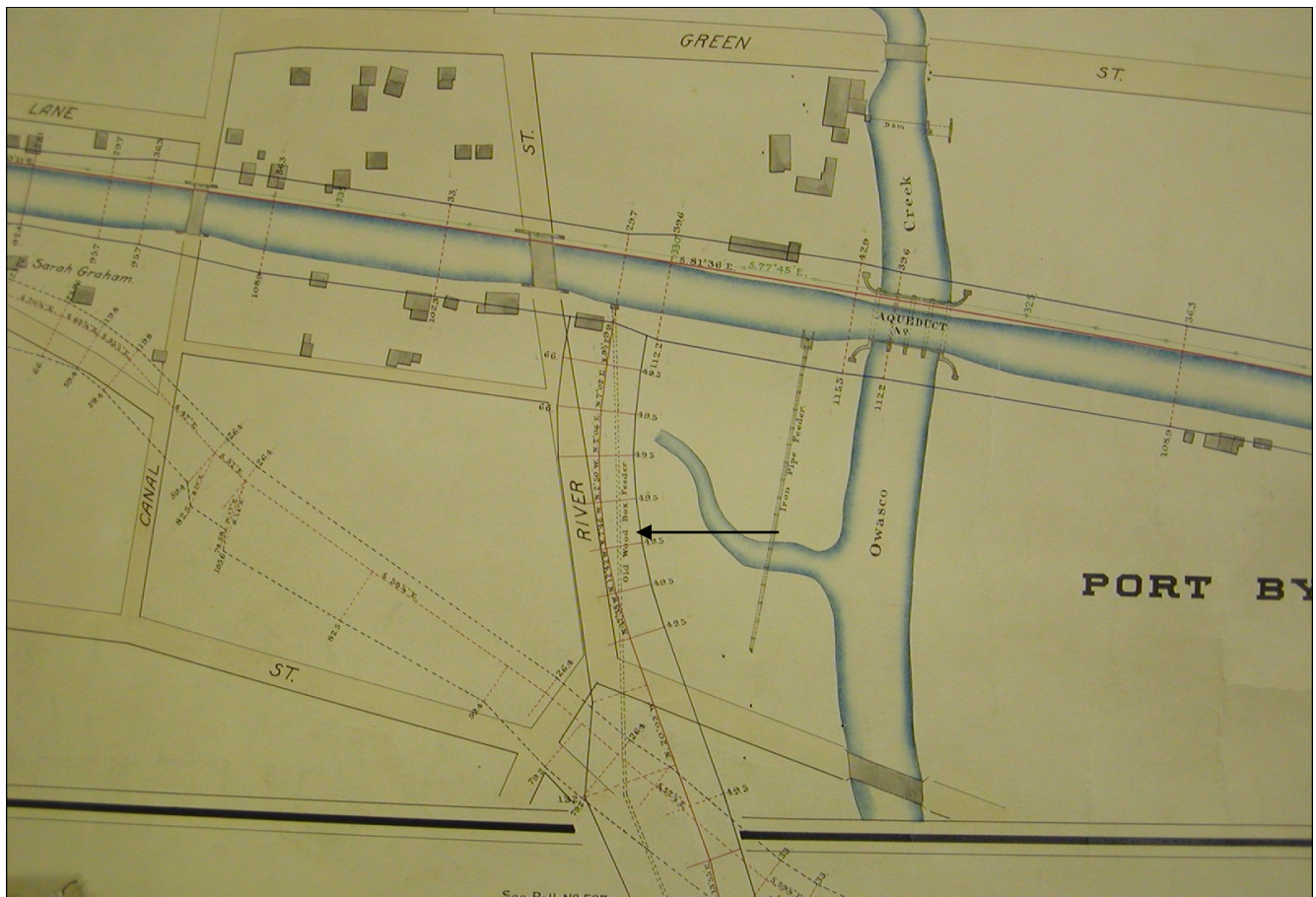


Above- A diagram of a typical stream receiver. The stream can only flow into the canal. A dam slows and controls the flow of the water as it enters the canal. Below, a canal map showing Herring Brook stream receiver. The dashed line is the route of Clinton's Ditch. Note that there is no outlet.





Above— A diagram of a typical feeder. The flow of water from the stream into the canal can be controlled or even stopped by closing the gate. The Port Byron feeder was an iron pipe that connected Beach's Mill Race to the Erie just to the east of River Road. If the canal needed water, the feeder gate was opened and water flowed into the canal. If the canal was over filled, the gate was closed and the water flowed through its natural course to the river.



or unwilling to use this source due to land holders asking for too much compensation or mill owners who feared that water taken from the Outlet would damage their ability to run the wheels.

In 1855, a very dry year, the State did take over the water rights to help fill the canal. But this was only a temporary measure. After Beach's Mill burned in 1859, the State considered buying the land and water rights to the millrace. But the owner of the land wanted too much money and the State did nothing. In 1863, another very dry year, the State was once again forced to look at the Outlet. This time it found that the landowners were willing to sell for one eighth of the former price. (It is an interesting sidebar that the same report notes that water from Lake Erie can now reach to the base of Lock 52.)

In 1866, the Canal Commissioners were still asking the State to purchase these rights as Skaneateles Lake was being taxed beyond its capabilities to supply water to this level of the canal. Beach's millrace, now called the "State Ditch" was finally brought into use in 1868.

To carry the water from the end of the old millrace to the canal, a wooden flume approximately one thousand feet long was built. This structure was built high on wooden legs that proved to be a constant headache for the maintainers. At the same time, the dam at the end of Owasco Lake was raised to impound more water for the canal, and the bed of the Outlet was dredged to allow more flow to the millrace. Although the exact date is uncertain, this flume was replaced sometime in the late 1870's by a forty-two inch iron pipe which carried the water 859 feet to the canal. A small section of this iron pipe can still be seen at the bottom of the hill just off Rochester Street. Men were employed to patrol these feeders, making adjustments to their flow, and necessary repairs. The section Superintendents appointed these men each year, and their appointment was printed in the local papers. Some examples I have found include; George Hayden of Port Byron named to patrol the Port Byron feeder in 1877; B.K. Lockwood appointed to the Port Byron feeder in 1896; and Joseph Traver to Weedsport.

The State developed this feeder system all along the canal route. There are reservoirs still in use for the Barge Canal that were built for the original Erie Canal. Many of these reservoirs are now used to supply water to local cities, and their use as a source of water for the canal has taken on a secondary role.

WASTE WEIRS / SPILLWAYS

A waste weir is a structure that allows excess water to flow out of the canal. It had a preset height and once the water reached that height any additional water in the canal would flow over the top of the spillway and into a nearby stream or river.

Having too much water in the canal was more dangerous than having too little. Excess water could destroy the canal banks by spilling over and washing them away. So the weir acted like a safety valve. An aqueduct could also act like a spillway just by allowing water to spill over the sides of the trough. This happened at the Centerport Aqueduct, where the water spilled over the top of the trunk.

In Weedsport, just behind Arby's, a spillway was located at Putnam Brook. This structure looked a lot like an aqueduct and many people who remember it recall it as "the Aqueduct". Sadly, it was removed many years ago.

Today if you want to see what a waste weir looks like you can find one nearby. Drive east to Peru just east of Jordan. On South McDonald road a sign denotes the location of the Carpenter's Brook Spillway and Culvert. The sign gives a good overview of what is located in that area. Walk down the trail one hundred feet to view the spillway and culvert. Over the years the Boy Scouts



have done a nice job of building stairs and clearing the site. In the cut stone, you can see where the boards were placed to hold the water in the canal. These boards could be removed to allow the canal to drain during the winter months.

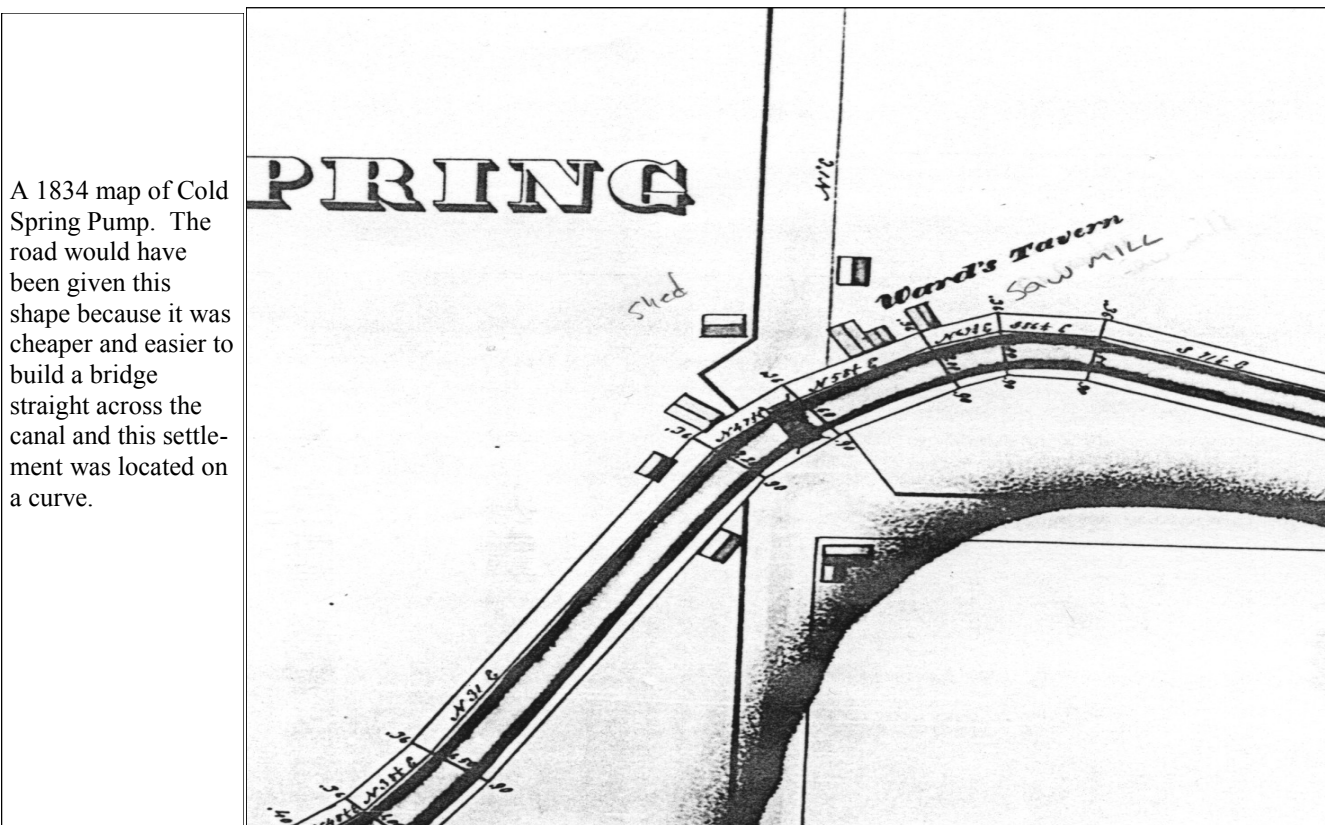
Many times you will find a feeder, spillway, and culvert located in the same area. If too much water began to flow into the canal, the excess would go over the spillway to save the canal from damage. During the winter when the feeder was closed all the water would flow through the culvert and away from the canal.

The Carpenter's Brook site is a great example and is a must see since it is so easy to get to. Maps show that this structure is very similar to the structure that once was located at Putnam Brook.

SEVEN- COLD SPRING PUMP AND FOUNTAINVILLE

The 1879 History of Cayuga County writes that, "Bateman Rude was the first person to live in the area of Cold Spring Pump. The Rude family moved from Saratoga County to Brutus in 1802. But little else has been written about the area or the "pump" for which it takes its name."

An 1834 map of Clinton's Ditch shows Ward's Tavern and a sawmill built around the pump or well. The map also shows that little was done in the way of docking or warehousing. There is no wide area to allow boats out of the main line of the canal. The buildings are built on a bend in the canal, which would make it almost impossible to stop a boat and allow others to get by. Folklore says that the spring was an important source of drinking water for the boaters, but there is little evidence to support this.

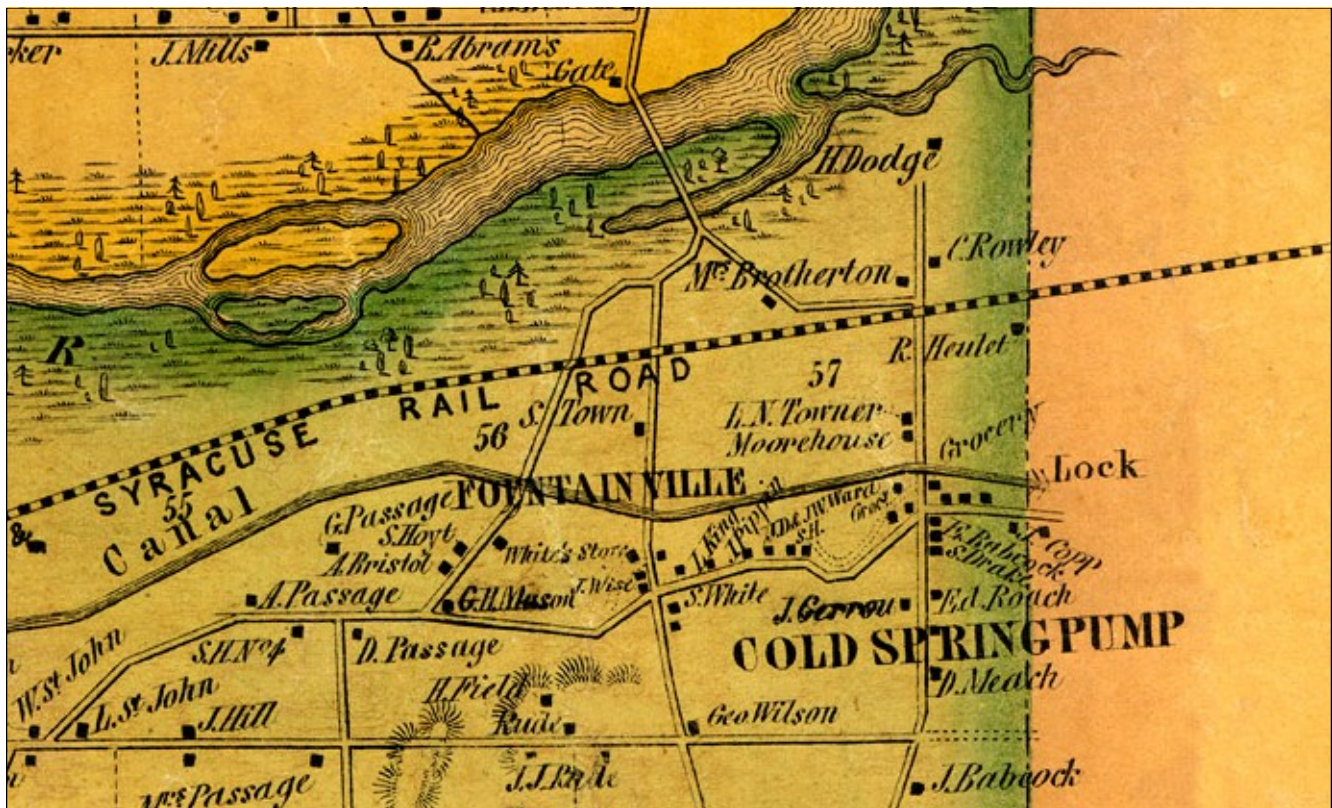


A 1834 map of Cold Spring Pump. The road would have been given this shape because it was cheaper and easier to build a bridge straight across the canal and this settlement was located on a curve.

On the 1853 map of Cayuga County, the name Fountainville appears just to the west of Cold Spring Pump. During this time the route of the canal was to be changed and someone might have had the idea to move the settlement to the banks of the new canal or begin anew. However this area is within a mile of the village of Jordan, a fact that would make it almost impossible to rationalize any new settlement.

Today, what was originally Cold Spring Pump is now a small cluster of homes, and an old school building. If you look behind the old school you can see the remains of Clinton's Ditch.

When you are exploring this area, you must keep in mind that the present day Route 31 was not built until the middle 1900's. The main road of the period was Clinton Road.



A section of The 1853 Wall Map of Cayuga County. This shows Cold Spring Pump and Fountainville, and the new route of the enlarged canal. If you look closely, you can see the dotted line of the first canal following the road just west of Cold Spring Pump.

END OF SECTION ONE