

7

Erie Canal Museum

This museum gives a brief history of the Erie Canal. Completed in 1825, the Canal was the first major internal improvement in the United States and is, perhaps, the greatest single achievement of the people of New York State. The canal connected the Great Lakes with the Atlantic. This enabled products of both geographical areas to be traded easily which vastly increased commerce and growth within the State.

The choice of a waterway over a road was due in part to the fact that canals in other parts of the world had demonstrated their effectiveness in lowering transportation costs. In addition, New York State had the requisite terrain and water supply for a canal. A team of horses could pull far heavier loads on water than they could over the best of roads.

As shown on the enlarged maps at the entrance, waterways were used for trade from early times. More could be carried in a boat on a stream than by a horse along a narrow Indian trail. As the invaluable fur trade with the Indians moved further west, it was found that New York had an existing water system. The Oswego (Onondaga), Seneca and Mohawk Rivers were used with other streams to boat cargo to the navigable Hudson and on to New York City, where much of it was exported. (Carrying places are indicated between streams.)

Heavy usage led to improvements on the Mohawk and small canals were built at German Flats (Herkimer) and Little Falls by the State-authorized Western Inland Lock Navigation Co. Another canal was built at Rome, enabling boats to pass through to Wood Creek and then, via Oneida Lake, to Three Rivers Point, at which place the Seneca and Oswego Rivers met. Benjamin Wright's 1800 survey of the Mohawk, displayed here, was carried by De Witt Clinton in 1810 when he traced the State's waterways in search of a route for a great canal to Lake Erie. Map number 14 (left) of the Little Falls section of the Mohawk is one of 22 such connecting sections detailing the river on a larger scale.

The large blow-up of a contemporary wood cut represents boating on the Mohawk ca. 1810. Private efforts at canalizing the river went no further than this. The dam through which the men are poling the Schenectady boat is built on a shoal in the river. These dams raised the water level behind them and permitted the narrow boats to slip through. On deeper stretches of the river, when sails were ineffective, the crews would set their poles in the river bottom near the bow on either side of the boat. Pressing their weight against the upper end of the poles they walked the boat upstream until the stern was reached, whereupon they would withdraw the poles, return with them to the bow and start over again. Passenger boats, similarly propelled, were in scheduled use at this time.

The inadequacy of such waterways and contemporary roads to stimulate commerce in such a well-endowed state was pointed out to the United States Congress by New York Representative Peter B. Porter in 1810. Meanwhile, the St. Lawrence River carried freight from the Great Lakes away from New York State to Montreal.

As canals were not a new idea, and were growing in popularity in Europe, a few men in New York State began to see a canal as a possible solution to free trade within the State. Prominent among these were Gouverneur Morris, who early understood the necessity and logic of connecting the Great Lakes with the Hudson River; Jeffery Smith, a legislator from Long Island, who tried to get the State legislature to do something about it; and Jesse Hawley, merchant who worked out a basic plan to connect the State's various east-west rivers with the Hudson, using Lake Erie as the terminus and headway.

The State first became directly involved with the idea of a canal between the Hudson River and Lake Erie in 1808 when it appropriated \$600.00 for a survey of possible routes. By 1816 the route shown on the big state map had been agreed upon. Surveying instruments of the period were crude by today's

standards, requiring a good deal more diligence on the part of the surveyor-- however, if properly used, they could be quite accurate. An example: To prove that Rome and Syracuse were at the same altitude (which meant that a level canal could be constructed between them with no locks) engineers Benjamin Wright and James Geddes took two widely separate routes between the settlements recording the ups and downs of the different terrains. When Syracuse was reached the difference between their independent calculations was less than $1\frac{1}{2}$ inches! The instrument used by Wright was made in London, England.

The years from 1820-1825 saw a different routing problem solved on the eastern end of the canal and Albany was finally reached. An aqueduct, privately funded, over the Mohawk River at Little Falls, linked that village and its old Western Inland Canal on the north bank, with the Erie on the south. Two other longer aqueducts near the end took the Erie first to the north bank of the Mohawk, then back again where it proceeded south to Albany.

In the West two problems loomed-- one was of a mostly political nature involving the section of a western terminus at Lake Erie; the other was physical. Other than the lamentable miles of muck at Montezuma Swamp, the most difficult engineering problem was stepping the canal over a 90-foot high ridge known as the Niagara Escarpment. Extending to Niagara Falls in the West, the canal met this obstacle at present day Lockport. Five pairs of locks side by side conquered 60 feet while a seven mile long cut through solid rock, 30 feet in depth in one area sliced through the remainder. The towpath here was cut into the rock above the water line but well below the ground surface. The engineer for this project was Nathan Roberts.

The political maneuvering, dire threats and hard work exercised by the citizens of Buffalo and Black Rock over two years in attempting to secure the western terminus for their respective village places presented many inter-city contests in the form of debates. Every possible means was expended by both sides to persuade the Canal Commissioners of each party's superior location.

Although the canal was not complete, both parties knew that the stakes were high. Black Rock is a suburb of Buffalo today.

As sections of the canal were completed, they were opened for business. In 1820 the first tolls were levied on the newly completed middle section comprising 96 miles between Syracuse and Utica. At the close of the season, \$5,244.34 had been collected in tolls. The canal was completed in the fall of 1825. When Governor Clinton (aboard the "Seneca Chief" at Buffalo), felt the urging of the towline on October 26, the tolls received to that date were pushing \$1,000,000. The canal had cost over \$7,000,000; however the debt was projected to be paid by 1836, and it was. Meanwhile the cost to ship a ton of freight from Buffalo to Albany had dropped from \$100 to \$10.

The Seneca Chief and its attendant flotilla stopped at every village of consequence along the route of the canal to indulge in ceremonies prepared by the citizens. When, on November 4th, New York harbor was reached, the City spared no effort or expense to celebrate New York State's brilliant public work.

The canal opened what had been the old frontier; the West. Ohio, Indiana, Illinois and Michigan were all prosperously affected by it. In fact, the Erie had to be enlarged to accommodate the traffic. Packet boats carried a flood of immigrants West. These brightly colored boats were the pride of the Erie. Fast packets could carry 50-100 passengers in relative comfort (compared to a stagecoach) across the state from Schenectady to Buffalo in 50 to 70 hours. This was only possible with a frequent change of horses, more horses pulling with utter disregard for the speed limit (4 mph to protect the banks) and priority treatment at all locks. More typical were the line boats like the model "Morning Star" built to carry freight and passengers, which could take 6 days to cover the same distance.

But the bulk of Erie traffic (packets were gone by 1850) was freight vessels. Scows, lakers and bullheads came to predominate but anything that

floated was allowed on the canal. Everything was pulled by horses or mules. Most freighters boarded 4 animals in the bow cabin. Two would rest while two would tow. Passing other boats frequently led to the animals being pulled into the canal. Soon, safety releases were patented and sold to protect the animals. Passing called for one boat to stop its animals and swing wide. If the timing was right, the towrope would sink to the bottom of the canal, allowing the other boat to pass over it. Packet boats sometimes had sickles mounted at the bow stern to cut the other's line if the timing wasn't right.

There were 83 locks on the old Erie, 72 on the Enlarged Erie. The enlarged canal, begun in 1836, was dug 70 feet wide at the water line and 7 feet deep. The channel was straightened in many places where the first Erie Canal, or Clinton's Ditch, wandered around obstacles. The locks which may be seen today along the route of the Enlarged Erie do not look like the originals. Earlier locks looked like those along the lateral canals such as the Black River Canal in Rome. Though later in date than the Erie, these canals were often the same dimensions (40'x28'x4') as Clinton's Ditch. So were the locks--90'x15'. Enlarged Erie locks were doubled by building a new and longer lock alongside the original, then rebuilding the first lock. In this way traffic was not impeded during construction and yet was greatly facilitated after both locks were in operation. The enlargement wasn't completed until 1863. Locks were later lengthened again to accommodate "double headers" or two canal boats linked to each other.

Aqueducts took the canal over a river or stream. They were troughs with a towpath on one side, supported on piers or arches. Cargoes traveling east on the Erie were typically limber, pot and pearl ashes, grain, furs, beef and port, butter, cheese, and whiskey. Westward bound were manufactured items, merchandise, furniture and salt.

Boats were built all along the Erie. The nearest boat yard to the Canal Village in later years was at Durhamville, where the firm of Hosley & Doran

built canal boats for many years. An interesting feature of boat construction was the 10 foot long stay-belts which run through the wooden sides at close intervals, drawing all timbers fast.

For the trip down the Hudson to New York boats were gathered into tows at Albany. A tow usually consisted of between 50-100 boats lashed together and drawn as a great raft to New York harbor behind a steamer. The day and a half trip down river was a good time for cleaning boats. Boat captains often traveled with their wives or with cooks who could be obtained at agencies catering to the canal trade.

Commission agents arranged for cargoes to be gathered and sold up or down state. For this service the boatman who carried the cargoes paid a fee. The boat captian paid tolls for the use of the canal based on the wieght of his boat and on the weight of his cargo.. Hydraulic weighlocks at Albany, West Troy, Utica, Syracuse and Rochester determined at the beginning of each season the weight of the empty boat.

An Instector of Boats checked the cargoes and if everything was all right the Collector of Tolls issued a clearance enabling the boat to travel. Collectors were located at Buffalo, Black Rock, Lockport, Albion, Brockport, Rochester, Palmyra, Lyons, Montezuma, Syracuse, Rome, Utica, Little Falls, Fultonville, Schenectady, West Troy, Albany and New York. Proceeding in either direction, the boat would pay its toll to the first collector met, then show a receipt to all other collectors encountered thereafter.

In 1895 9 million dollárs was authorized to deepen and improve the Erie. Many Italian immigrants served as contractors and laborers for this work and the subsequent project, the Barge Canal. This project was stopped in 1900 and in 1903. The people of New York voted \$101,000,000 for the construction of a different canal along the same general route. This canal would be 120 feet across and 12 feet deep, utilizing existing waterways where possible. It would admit only motorized commercial transports such as motorized or

tugboat propelled barges. The increased size of the Barge Canal called for a greatly increased water supply, dredging and damming of rivers, new cuttings in some places and enlarging the Erie in others.

The Village of Delta, north of Rome, became a reservoir for the Barge system in 1912. Though navigation on the old Erie was ended in 1917 by the destruction of the Richmond aqueduct over the Seneca River, the Barge Canal was opened for thru-navigation the following year and horse-drawn boats became a thing of the past.