



New York State Archives

**New York State Engineer and Surveyor Detailed Estimates
and Location Maps for Proposed Construction of Gun Boat
Locks on the Western Division of the Erie Canal B0675**

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Overview of the Records

Repository:	New York State Archives
Summary:	This is a series of location maps and illustrated estimates of raw materials and quantities of excavated material for proposed construction of gun boat locks on the western division of the Erie Canal. The maps show the location of proposed locks; the new and existing canal channels; towpath; existing canal structures; properties, bodies of water, or buildings near the canal; state-owned land; property boundaries; names of land owners; and acreage.
Creator:	New York (State). State Engineer and Surveyor
Title:	Detailed estimates and location maps for proposed construction of gun boat locks on the Western Division of the Erie Canal
Quantity:	0.2 cubic feet
Quantity:	2 volumes; 17 maps
Inclusive Date:	1863
Series:	B0675

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Arrangement

Arranged by volume and therein by lock number.

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Administrative History

Map titles state they were made in accordance with joint resolutions of the Senate and Assembly passed on April 20th and 24th of 1863. The resolutions authorized the State Engineer and Surveyor, under the advice and direction of the Canal Board, to make a survey and estimate of the cost of constructing enlarged tiers of locks along the Erie Canal, since "the General Government may deem it desirable and important to secure, without delay, the right

of perpetual passage through said canals with locks thus enlarged...for the vessels, gunboats, troops and munitions...of the United States...".

The locks were to be located along side of or near existing locks, and built to specific dimensions and depths out of wood, stone, or a combination of materials, with the cost of each kind of lock estimated separately. The resolutions also call for an estimate of the quantity of excavation and other work connected with enlarging canal locks, and for designation of the location and cost of any new feeders or improvements to existing feeders made necessary by the lock enlargement.

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Scope and Content Note

The series contains location maps and illustrated estimates of raw materials and quantities of material to be excavated during proposed construction of gun boat locks on the Western Division of the Erie Canal.

The volumes occasionally contain scattered plans of related structures such as abutments, culverts, approaches, and finishing banks, and also a few general plans of locks and bulkheads. The estimates are accompanied by individual detail drawings that profile the work being estimated.

The maps in the series show the location of the proposed locks. A map usually appears first in the sequence of estimates. Each includes a full title that identifies the site and names the work, often in relation to existing locks (e.g., "Proposed new lock on the berme side of Miller's Lock at Brighton, Monroe Co."). There is one map showing the location of the Rochester Aqueduct for a proposed extension. Maps show the canal channel and the lands immediately adjacent to it. Typical features include all or some of the following: exact siting, usually in red ink, of proposed lock and related construction (e.g., vertical walls); solid and dashed colored lines depicting new canal channels, new appropriations, center line of towpath, state owned land, offset lines, and figures measuring the distance along or across the canal; existing canal structures and properties (e.g., waste weirs, lock house lots); property boundary lines and names of land owners; significant roads, railroad lines, and/or bodies of water near or crossing the canal line; outlines, sometimes identified, of significant structures (e.g., "cemetery", "Miller's Grocery", "barn"); lock number and the lift height (in feet); statement of authorizing legislation; directional symbol and/or reference pointers (e.g., hand drawn finger pointing out the direction of the "Road to Pinnacle"); and notes on permanent land appropriation, including name of property owners and acreage.

Estimates follow the location map and often extend over several pages, with amounts totaled at the bottom of a page and carried forward to the next. Each has a title that specifies the proposed work being estimated and its location (e.g., "Estimate of quantities for a new line

for location of one tier of locks at...). Sometimes station and district numbers are given. Each specific estimate involved in the general construction is given a separate table.

Examples of work estimated included: excavation of old lock walls; calculation of new masonry; rebuilding of abutments; bridge conversions; towpath construction; and road culverts and plans for abutments to road bridges and approaches.

Estimates on excavation are set up in a facing page format with one side showing numerous small hand drawn diagrams that profile the work being estimated, and the opposite side laying out figures in specified columns giving both area and cubic yardage. The initial estimates following the map are for excavation work and may include figures for some or all of the following: earth excavation, specifically area of prism and muck areas; embankment (bank area); rock excavation; puddling area; slope wall area; lining area; and rubble wall area.

These figures are followed by specific estimates involved in the construction, as well as a general summary of all items. General plans may also be occasionally included. An estimate for a composite culvert, for example, includes a plan of the wings; a diagram of the section through the culvert; a bill of timber and iron, including the number of pieces, where applied, dimensions, and board measure; and the cubic yards of masonry for the parapet and wings. Separate tables are present for estimates of related work or materials (e.g., "Estimates of quantities for North Side Approach for Change Bridge" or "Bill of Timber for Vert. Wall east of Lock"). Sometimes different types of new locks (stone, timber or composite) are estimated for the same site. All items involved in building are listed separately with columns for quantities, prices used, and amounts in dollars and cents. Estimates are quite detailed and separately delineate kinds of timber (e.g., white oak, white pine) or iron (e.g., wrought iron, cast iron), and prices for spikes and nails and for painting the structures.

Maps, plans, and profiles are hand drawn on paper in various colored inks. Estimates are also in ink (sometimes covering pencilled figures) on lined tablet paper. Scale appears only on plans and is generally ten or twenty feet to one inch. A few maps have the name or initials of their preparer inked in a corner. All maps and plans are drawn within neat lines, with a single sheet size of 33 x 25.5 cm. Some maps cover two sheets and measure 36 x 54 cm, folded within the overall volume size of 38 x 31.5 cm. The small profile drawings succeed each other vertically, several to a page. They range in size from 2 x 6 cm to 3 x 15 cm. Pages were originally glued and sewn between cardboard bindings, and the volumes share the same binder's title. An index of lock numbers, locations, and the relevant page numbers appears at the end of each volume.

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Other Finding Aids

Available at Repository

An index to lock numbers appears at the end of each volume.

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Use of Records

Access Restrictions

There are no restrictions regarding access to or use of this material.

Access Terms

- United States--History--Civil War, 1861-1865
- New York (State)--History--Civil War, 1861-1865
- Locks (Hydraulic engineering)
- Erie Canal (N.Y.)
- Plans (orthographic projections)
- Profiles
- Maps (documents)
- New York (State)
- Canals--Design and construction--Costs
- Maintaining infrastructure
- Constructing canals
- Location maps
- Hoisting machinery
- Western New York (State)
- Canals--New York (State)
- Estimating canal construction
- Manuscript maps
- Canals--Design and construction
- New York (State). Department of Transportation