Addendum:
Lock Gate Removal, Ottawa Locks,
October 27, 2009

An addendum to:

CANAL LOCK DESIGN AND CONSTRUCTION

THE RIDEAU CANAL EXPERIENCE, 1826-1982

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The following comprises a series of photos taken of a lock gate removal at the Ottawa Locks on October 27, 2009. These photos visually show the steps in the lock gate removal process, and the components of a Rideau Canal lock gate.

On the Rideau Canal an average of three sets of lock gates are replaced each year in a continuing cycle of renewal of the wooden lock gates. The new lock gates are constructed in the Rideau Canal Yard Office at Smiths Falls, Ontario, and floated out on the canal at the end of the navigation season to any locksite where a gate replacement is required.

In this case, a new lock gate was floated to the Ottawa Locks, just prior to the lowering of the water level for the winter season. A carpentry crew from the Smith’s Falls yard and a rental crane removed the lower gate of Lock 8, in the Entrance Valley flight of locks, and subsequently installed the new lock gate.
Figure A1
The new lock gate and gate footbridge, as floated to the Ottawa Locks. (Photo by Ed Bebee, 2009).
Figure A2

Entrance Valley Locks, awaiting arrival of the heavy Crane. (Photo by Ken W. Watson, 2009).

Addendum to:


**Figure A3**
Setting up the heavy Crane. (Photo by Ed Bebee, 2009)
Figure A4

Pulling floating lock gate, and footbridge, towards the locks for later pick up. (Photo by Ken W. Watson, 2009)
Figure A5

The lock gate to be removed. (Photo by Ken W. Watson, 2009)
Figure A6
Position of the Crane with respect to the lock gate to be removed. (Photo by Ken W. Watson, 2009)
**Figure A7**

Getting ready to lift off the footbridge of the old gate. (Photo by Ken W. Watson, 2009)
Figure A8
Bob Passfield surveying intently the lock gate removal process. (Photo by Ken W. Watson, 2009)
Figure A9
Removing the old lock gate footbridge. (Photo by Ken W. Watson, 2009)
Figure A10

Pulling a crane lifting strap through a slot under the top rail of the old lock gate. (Photo by Ken W. Watson, 2009)
Figure A11
Preparing to remove the collar keys to free anchor collar. (Photo by Ken W. Watson, 2009)
Figure A12
An anchor collar key with set screw lock in place. (Photo by Ken W. Watson, 2009)
Figure A13
The anchor plate, showing the two collar keys. (Photo by Ken W. Watson, 2009)
Figure A14
Getting ready to lift the old gate leaf. (Photo by Ken W. Watson, 2009)
Figure A15
Anchor collar keys removed, knocking out the collar strap arms. (Photo by Ken W. Watson, 2009)
**Figure A16**

Gate anchor collar freed, key slot visible in the collar arm. (Photo by Ken W. Watson, 2009)
Figure A17

Unhooking the chain of the floor chain gate operating system from the lock gate. (Photo by Ken W. Watson, 2009)
**Figure A18**
Lifting out the old lock gate. (Photo by Ken W. Watson, 2009)
Figure A19
Exposed floor chains system, old lock gate removed. (Photo by Ken W. Watson, 2009)
Figure A20
The anchor plate with the two collar keys, and gate removed. (Photo by Ed Bebee, 2009)
Figure A21

Ken Watson, recording the hollow quoin pier and foot box, gate removed. (Photo by Ed Bebee, 2009)
Figure A22

Dave Draper removing muddy water from the foot box at the base of the hollow quoin pier. (Photo by Ken W. Watson, 2009)
Figure A23

The hollow quoin pier, and foot box at its base where the gudgeon on the base of the heel post of the new gate will rest. (Photo by Ken W. Watson, 2009)
Figure A24
Manoeuvring the new gate, preparatory to lifting off the footbridge. (Photo by Ken W. Watson, 2009)
**Figure A25**

Lifting the new lock gate out of the water to begin the installation process – the reverse of the removal process. (Photo by Ken W. Watson, 2009)
Figure A26

Ed Bebee showing the top of the heel post of the new gate: the foot bridge connection tenon on top of the heel post, the rounded collar groove and brass bushing inserts; and the slot that enables the gate bridle to pass inside the anchor gate collar. (Photo by Ken W. Watson, 2009)
Figure A27
The base of the heel post of the new gate, showing the steel band, the cross tail, and the gudgeon, ready for commencing the gate installation process. (Photo by Ken W. Watson, 2009)
**Figure A28**

Removing the anchor gate collar and gate bridle from the old gate for re-use on the new gate; the final step before the installation of the new gate can commence.
Figure A29
Lifting the gate collar and gate bridle (only partially visible) from the old lock gate for re-use on the new lock gate; the final step before installing the new gate.