Black Rock Lock
Middle Miter Gate Removal

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Middle (Intermediate) Miter Gates

- Original to the lock
- Used for short tows and smaller vessels in order to cut down on filling/emptying time
- With the addition of additional filling/emptying valves to the operating gates the cycle time was cut down to make the time savings from use of the intermediate gates minimal
- When the upper and lower operating gates were converted to direct acting hydraulic cylinders the intermediate gates were not converted and instead abandoned in place
- Gates have been abandoned in place for over 40 years and have significantly deteriorated

Middle Gate Project Scope

- Removal of middle gates (Phase I)
- Backfilling of gate recesses with concrete to restore the lock chamber to a continuous surface (Phase II)

  ➢Includes the addition of recessed safety ladders
  ➢Includes the addition of utility crossing conduits

Potential Methods of Removal Considered

- Removal as a unit (approx 80 Tons per gate)
  - Limited availability of floating cranes with sufficient capacity
  - No land access
- Cut in the wet and remove in sections
  - Higher cost but more capability
- Cut in the dry as the lock chamber was drawn down
  - Requires close control of water level during dewatering
  - Would strand the crane barge used to make lifts in the lock chamber
- All 3 methods were allowed in the bid documents

Acquisition Methods Considered

- Use of Navy Salvage contract due to availability of their contractor having plant of sufficient capacity on Lake Erie
- Full and open advertisement
- Government Plant
  - Limited to cut in dry option
- Full and open was the selected method
  - Use of Navy contract not appropriate
  - Plant availability and reduction in time available to the phase II contractor for the dewatered chamber

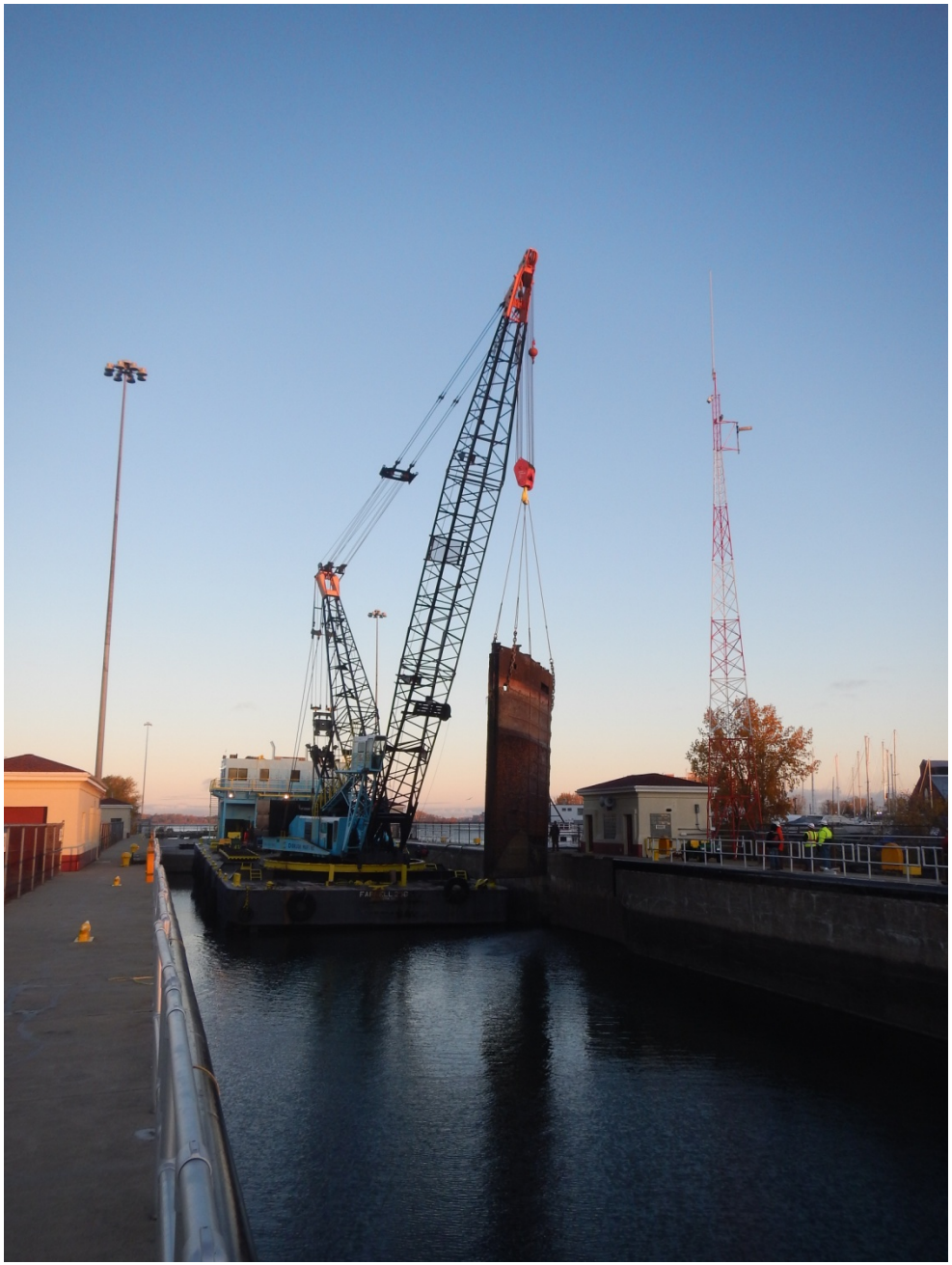
Contract Awarded

- Full and Open to Donjon Marine (Navy Salvage Contractor) for $247,271
- All other bidders were for the cut in the wet option, next lowest bidder was approximately $200K higher

Lifting Method

- Rather than depend on existing lift points, contractor elected to cut through the gate so as to use major structural locations as lift points
- Used chain to go through gate and make lifts

The Lift



Questions?