

Chickamauga Lock Project Update Inland Waterways Users Board Meeting No. 94

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Chickamauga Lock Replacement

- **Bottom Line Up Front**

- ▶ **Lock Excavation Construction**

- Contractor submitted change to Final Modification language
 - Contract closeout pending

- ▶ **Lock Chamber Construction**

- Exercised all Remaining Options (9-13) on 15 Jun 2020, valued at \$78.8M.

- ▶ **Recertified Total Project Cost Estimate:**

- \$757M (Fully Funded at FY20 Price Level assuming a Nov 2025 completion)



CHICKAMAUGA LOCK PROJECT OVERVIEW

Road & Bridges - \$6M
Completed Feb 2007

Site Restoration
Award scheduled: Sep '24

Approach Walls & Decommissioning
Award scheduled: Sep '21

Contract Legend

Completed

Current

Future

Lock & Associated Facilities	\$751M
Road and Bridges	6M
Total	\$757M (Oct '19 P.L.)

\$300.8M Expended thru Mar 2020 = 40% completed

Bridge Fabrication - \$400K
Completed June 2011

Gates & Valves - \$17M
Awarded Sep 2009, Comp 2012

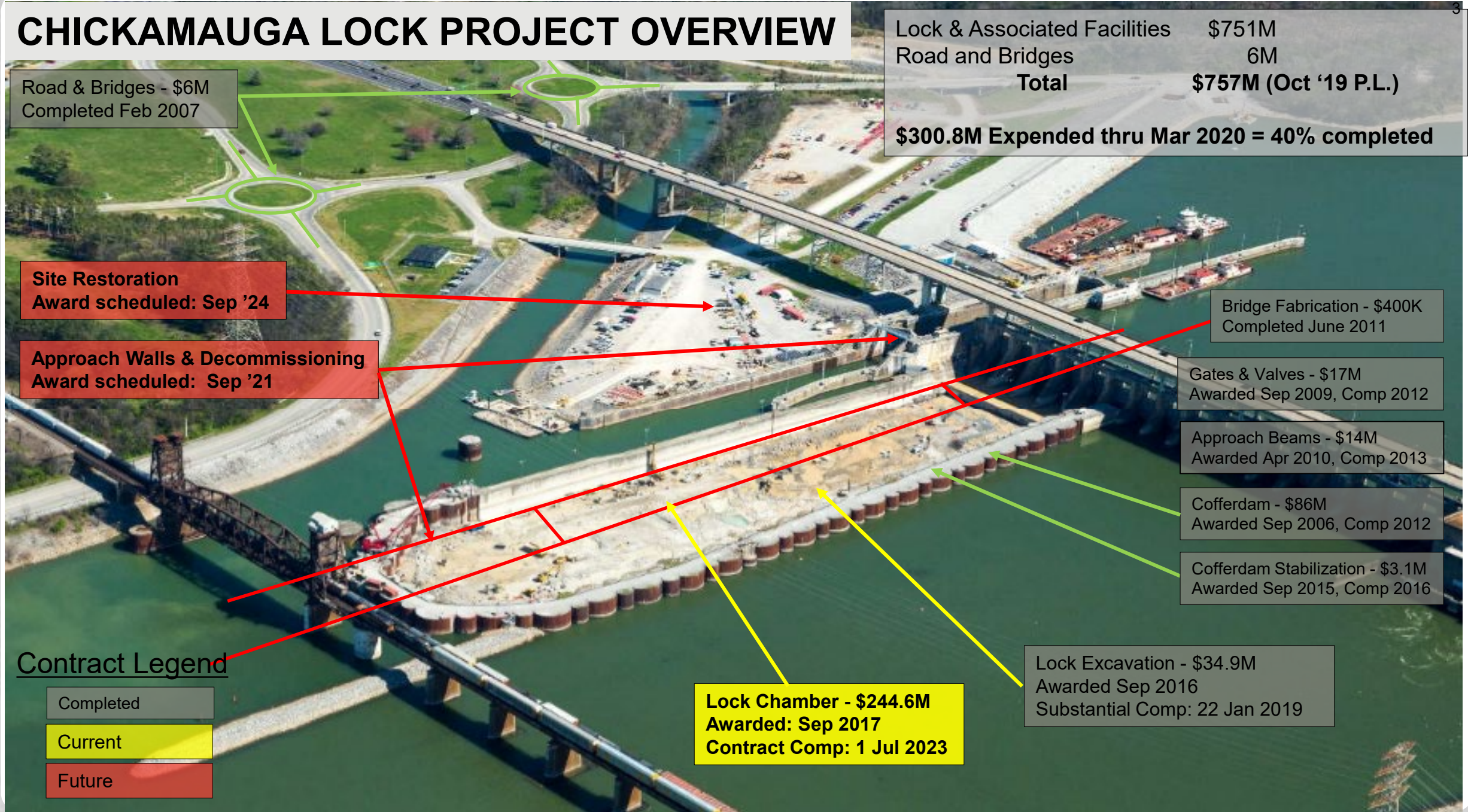
Approach Beams - \$14M
Awarded Apr 2010, Comp 2013

Cofferdam - \$86M
Awarded Sep 2006, Comp 2012

Cofferdam Stabilization - \$3.1M
Awarded Sep 2015, Comp 2016

Lock Chamber - \$244.6M
Awarded: Sep 2017
Contract Comp: 1 Jul 2023

Lock Excavation - \$34.9M
Awarded Sep 2016
Substantial Comp: 22 Jan 2019

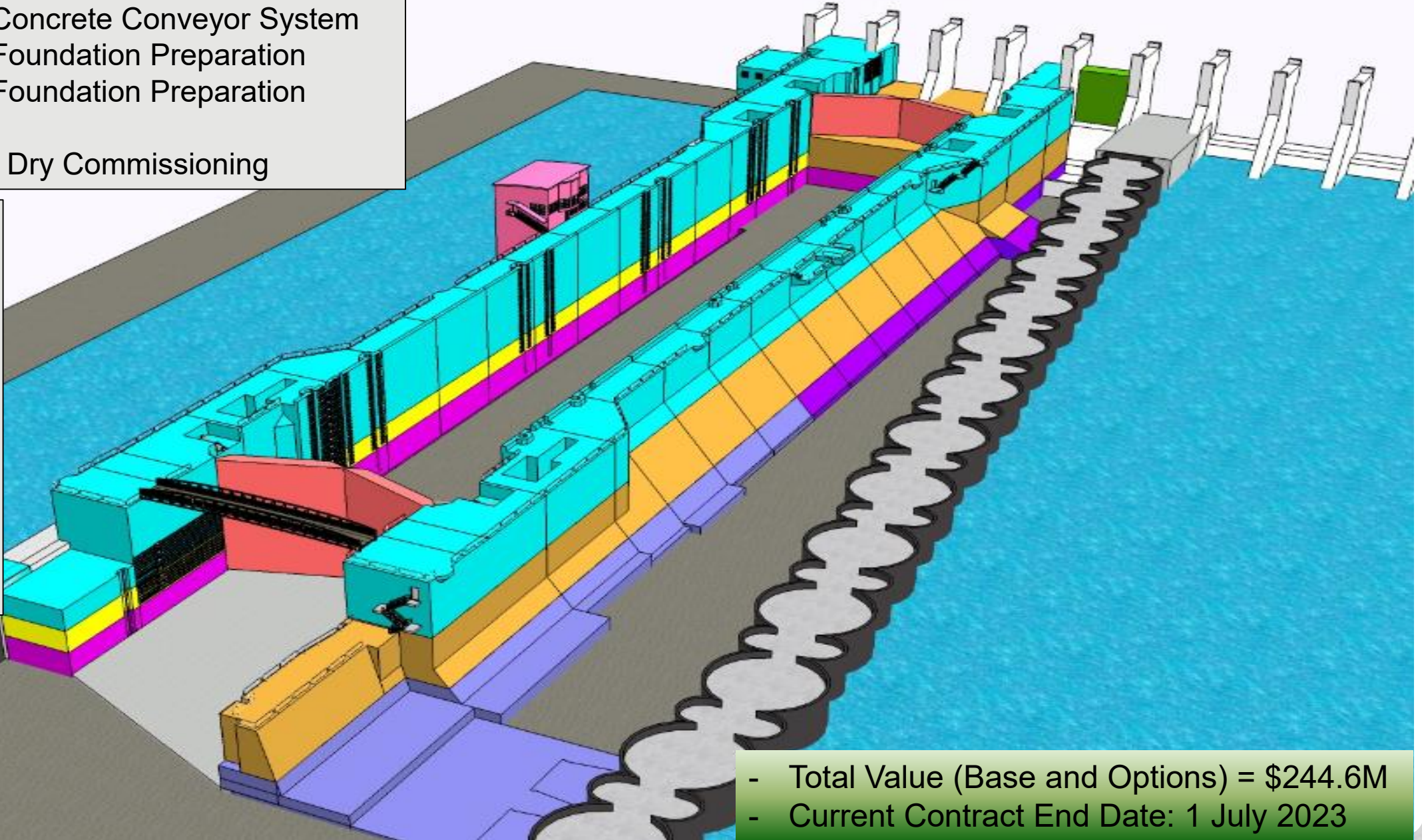


Lock Chamber Construction Contract

- ✓ Option 1 – Concrete Conveyor System
- ✓ Option 2 – Foundation Preparation
- ✓ Option 3 – Foundation Preparation
- ⋮
- ✓ Option 13 – Dry Commissioning

Legend

- ✓ Option 4
- ✓ Option 5
- ✓ Option 6
- ✓ Option 7
- ✓ Option 8
- ✓ Option 9a
- ✓ Option 9
- ✓ Option 10
- ✓ Option 11
- ✓ Option 12

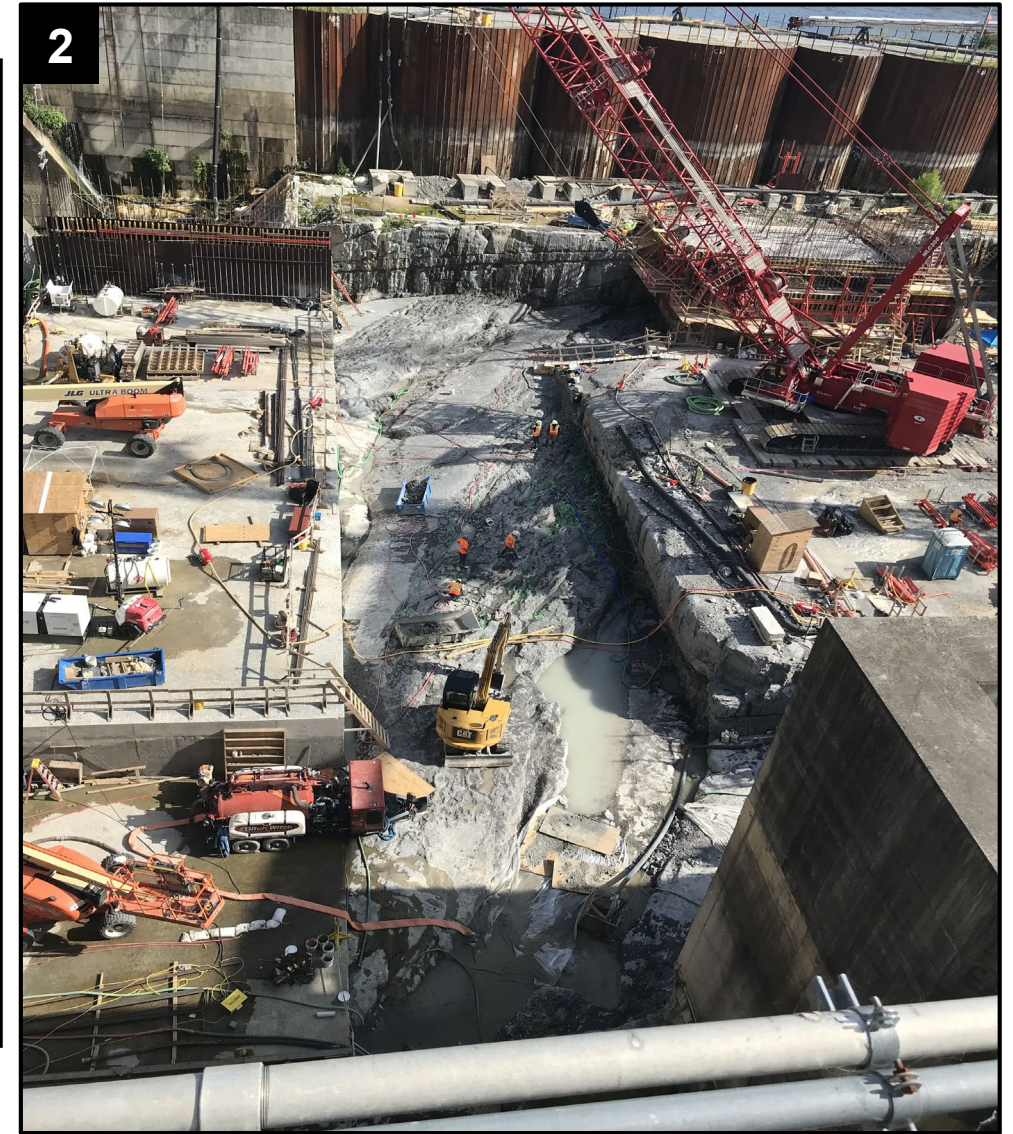


- Total Value (Base and Options) = \$244.6M
- Current Contract End Date: 1 July 2023

Current project photos



1. 25 JUN 2020 – Looking downstream showing completed mud slabs, drilled shafts, and monolith R4, R6, R8, R15, L4, L6, and L8 formwork and rebar installation.
2. 22 JUN 2020 – Looking at the upstream end of the cofferdam; U3 foundation preparation



Chickamauga Lock & Dam, Tennessee River, TN

	ARRA	CG	IWTF	Total
Total Project Cost (TPC):				\$756,880,000¹
Allocations through FY2015:	\$49,307,619	\$69,891,511	\$69,889,500	\$189,088,630
FY16 Allocation:	NA	\$14,800,000	\$14,800,000	\$29,600,000
FY17 Allocation:	NA	\$20,000,000	\$20,000,000	\$40,000,000
FY18 Allocation:	NA	\$38,250,000	\$38,250,000	\$76,500,000
FY19 Allocation:	NA	\$76,245,000	\$13,455,000	\$89,700,000
FY20 Allocation:	NA	\$66,105,000	\$35,595,000	\$101,700,000
Total Allocations to Date:	\$49,307,619	\$285,291,511	\$191,989,500	\$526,588,630
Remaining TPC Balance:				\$230,291,370
Remaining Balance Change From Last Meeting				-\$102,486,000

Note: ¹Project cost data is reflective of Jun 2020 certified cost at a Oct 2019 price level, Fully Funded, Nov 2025 completion

Changes

Includes FY20 Allocation and reduced Total Project Cost Estimate

Funding Overview

- Authorized Cost: \$757,666,000 (Oct 17 \$)
- 902 Limit: \$909,199,200 (Oct 17 \$)
- ARRA Funds: \$ 49,307,619 (total FY09-12)
- Engineering & Design Cost: \$ **58,486,000 (thru FY19)**
- Supervision & Admin Cost: \$ **11,613,000 (thru FY19)**
- Mitigation Cost: TBD

Current Status of the Project

- Lock Chamber contract (**fully awarded**) valued at **~\$244.6M**; 26% financially complete.
- Lock Excavation contract – **contract closeout pending.**

Next Steps

- Lock Excavation Contract – **preparing final VEQ Mod.**
- Lock Chamber Contract – **rebaseline Contractor work schedule to include options exercised on 15 June 2020.**
- Approach Wall and Decommissioning Contract – Developing Plans & Specifications package for anticipated FY21 award. **60% Agency Technical Review scheduled to begin 21 Aug 2020.**

Chickamauga Lock & Dam, Tennessee River, TN

Schedule of Remaining Work	Design Initiated	Contract Award	Construction Complete *	Project Benefits**	Capitalized Cost Closeout
Task 1 – Approach Walls Fabrication	30-Mar-04	05-Apr-10	08-Mar-13		
Task 2 – Cofferdam Stabilization	31-Sep-05	25-Sep-15	18-Jul-16		
Task 3 – Lock Excavation	31-Sep-05	26-Sep-16	1 Feb 2019***		
Task 4 – Lock Chamber	11-Aug-05	28-Sep-17	01 Jul 2023		
Task 5 – Approach Walls and Decommission	11-Aug-05	30-Sep-21	Dec 2024	Nov 2023	
Task 6 – Site Restoration	11-Aug-05	30-Sep-24	Nov 2025		

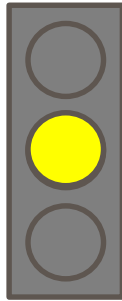
*Dates are achievable based on the most efficient funding profile.

Based on **June 2020 Certified cost estimate Cost and Schedule Risk Assessment, the project has an 80% confidence level of being completed by **Aug 2027**.

***Date Lock Excavation contractor demobilized from cofferdam work area and laydown yard.

Chickamauga Lock Project

Time and Cost Scorecard



Expenditures	1 Apr
Planned (BCWS)	\$302.9M
Earned (BCWP)	\$299.0M
Actual (ACWP)	\$300.8M

BCWP: Reports the value (based on % complete) of the work performed to date.

Target:

Actual as compared to Planned: (<1% = Green) (>1%and <3% = Yellow) and (>3% = Red)

Schedule 1 Apr

(Baseline)/(Current)

Project Complete	Jan 2027 / Nov 2025
Lock Operational	Jan 2027 / Nov 2023

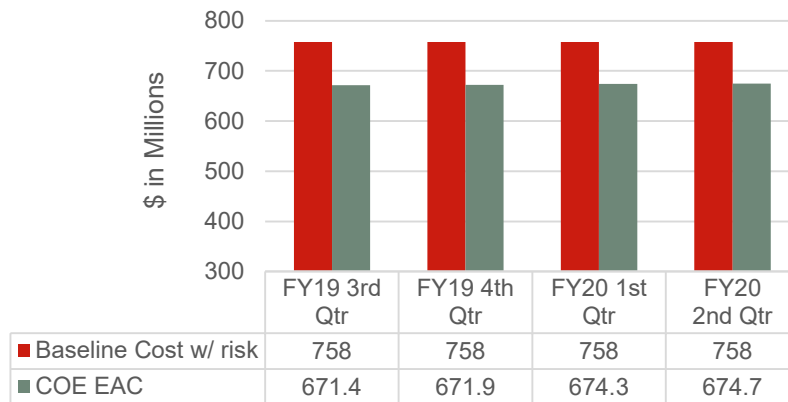
Measures: Planned project completion and Lock operational dates

Target: Lock Chamber contract completion July 2023



Budget

Chickamauga Project EAC Trend



Major Activity Schedule

Activity	Baseline	Current
Lock Excavation – Contract Closeout	18 Dec 2018	30 Aug 2020
Lock Chamber – Submit Rebaselined Contract Schedule	NA	July 2020
Approach Wall and Decommissioning Contract 60% P&S ATR	13 April 2020	21 Aug 2020

Total Project Cost Estimate – 2018 & 2020 Comparison

	Previous TPCE (FY18 Price Level)	Current TPCE (FY20 Price Level)
Project First Cost	\$731,320,000	\$ 732,323,000
Fully Funded Cost	\$ 757,666,000	\$ 756,880,000
Estimated On-line Date	Sept 2023	Nov 2023
Project Completion (Base)	Dec 2024	Nov 2025
Project Completion (80% confidence level)	Jan 2027	Aug 2027
Cost Contingency	19%	18.4%
Schedule Contingency	25 Months	21.5 Months

Chickamauga Lock Summary and Challenges

- **Lock Excavation** contract is substantially complete.
 - Contract closeout pending final modification negotiations with Contractor.
- **Lock Chamber** contract on-going.
 - All options exercised as of 15 June 2020.
- **Efficient Funding Profile:**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY2025	Total
Previous	\$94.5M	\$76.0M	\$74.8M	\$87.3M	\$34.7M	\$0	\$367.3M
July 2020	-	\$60.4M	\$88.5M	\$62.8M	\$10.6M	\$8M	\$230.3M

