

Chickamauga Lock Project Update Inland Waterways Users Board

Mr. Don Getty
Project Manager
Nashville District
Great Lakes and Ohio River Division
28 February 2019



"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

BUILDING STRONG[®]
and Taking Care of People!



US Army Corps
of Engineers[®]



U.S. ARMY

Chickamauga Lock Replacement

- **Bottom Line Up Front**
 - ▶ **Lock Excavation Construction**
 - Substantially complete as of 1 Feb 2019.

 - ▶ **Lock Chamber Construction**
 - Mobilizing to the cofferdam work area
 - Preparing to exercise options 4, 6, 7, & 8, which will increase awarded contract amount to approx. \$154M.
 - Developing plan to utilize remaining \$12M from FY19 Work Plan.

 - ▶ **Post Authorization Change Report (PACR)**
 - OMB review on-going.

BUILDING STRONG[®]
and Taking Care of People!



US Army Corps
of Engineers



CHICKAMAUGA LOCK PROJECT OVERVIEW

Lock & Associated Facilities	\$752M
Road and Bridges	6M
Total	\$758M (Oct '17 P.L.)

\$246.5M Expended thru Dec 2018 = 33% completed

Road & Bridges - \$6M
Completed Feb 2007

Site Restoration
Award scheduled: Sep '23

Approach Walls & Decommissioning
Award scheduled: Sep '21

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

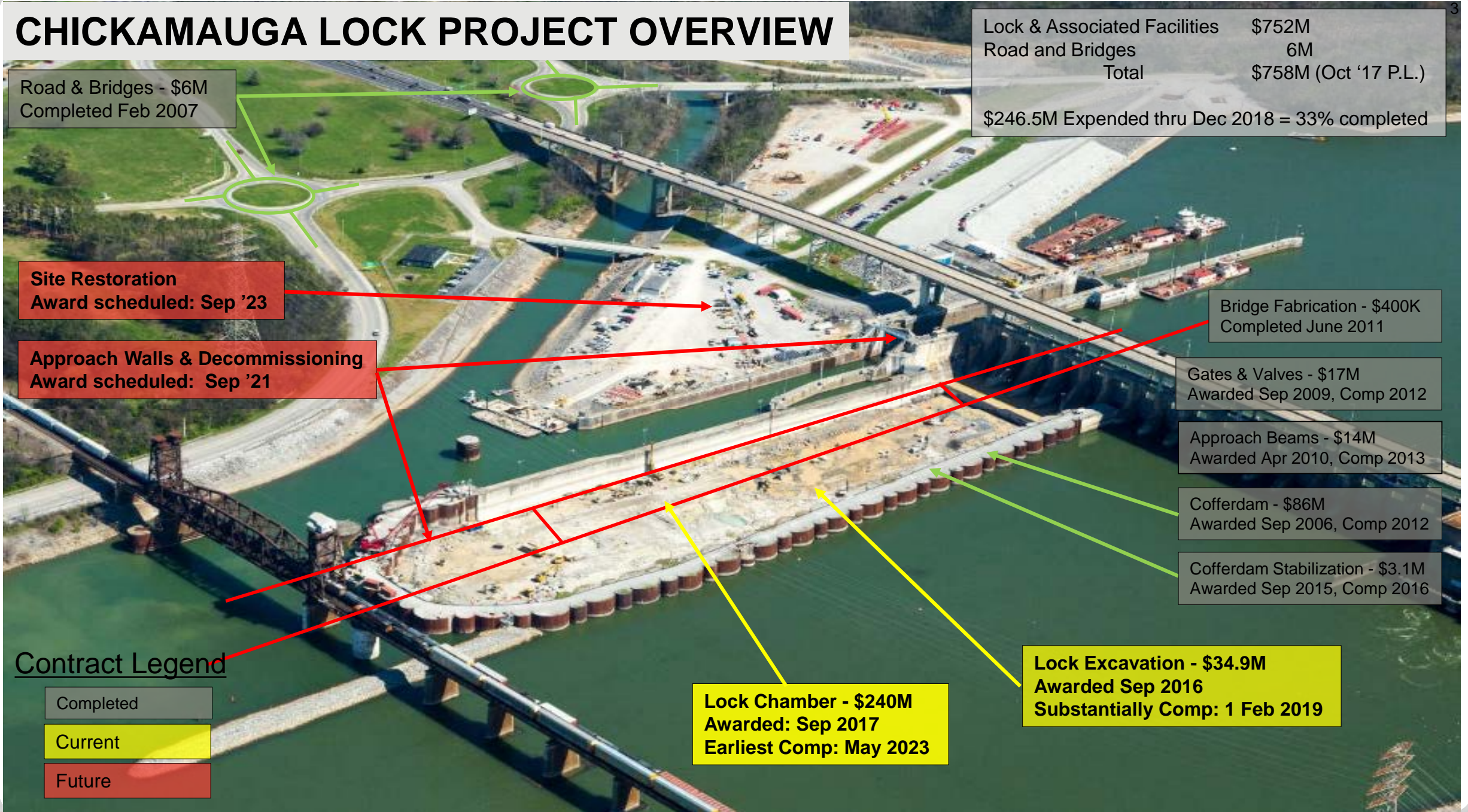
Cofferdam Stabilization - \$3.1M
Awarded Sep 2015, Comp 2016

Lock Chamber - \$240M
Awarded: Sep 2017
Earliest Comp: May 2023

Lock Excavation - \$34.9M
Awarded Sep 2016
Substantially Comp: 1 Feb 2019

Contract Legend

- Completed
- Current
- Future

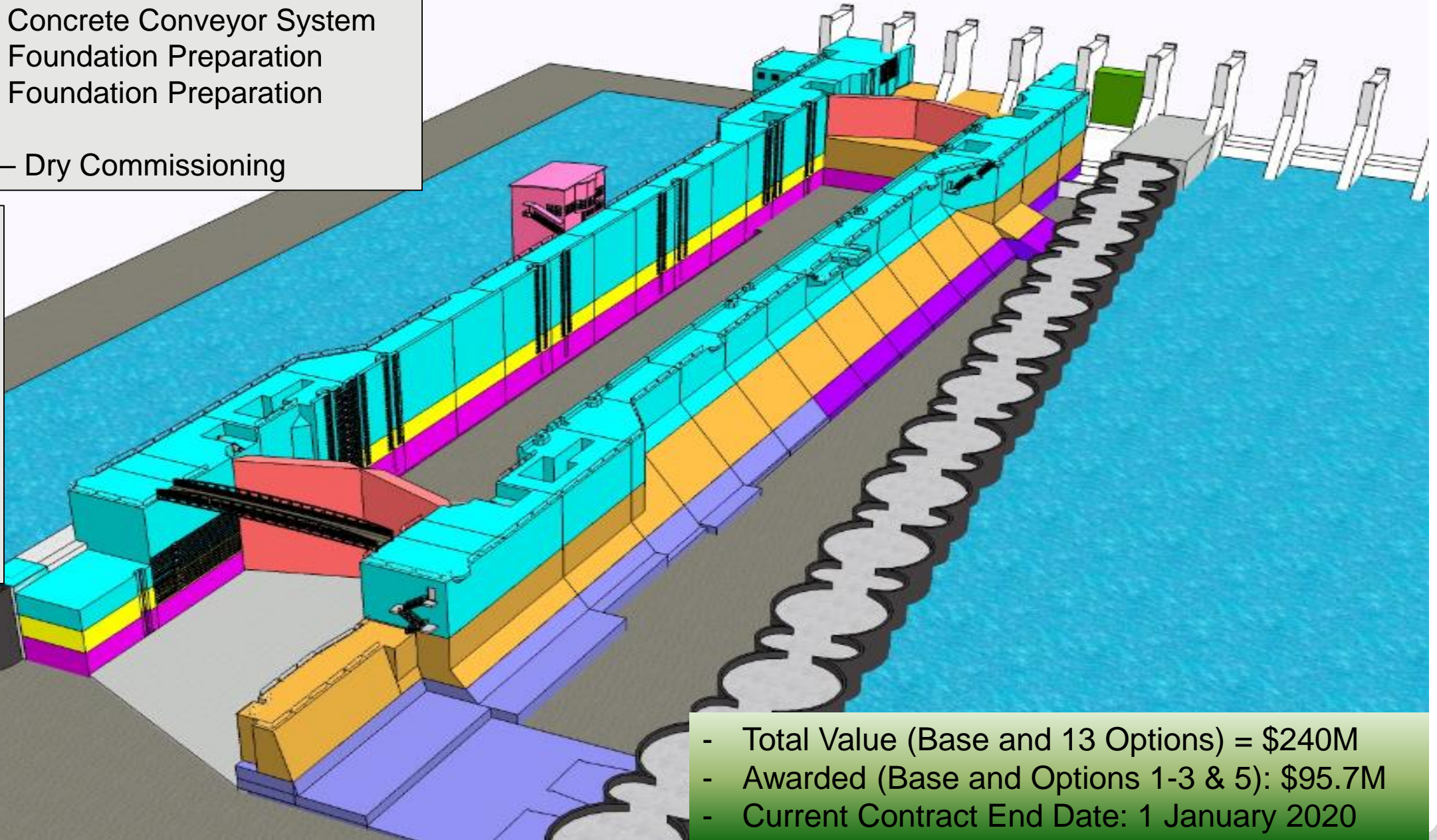


Lock Chamber Construction Contract

- ✔ 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 9
- Option 10
- Option 11
- Option 12



- Total Value (Base and 13 Options) = \$240M
- Awarded (Base and Options 1-3 & 5): \$95.7M
- Current Contract End Date: 1 January 2020

Current project photos



1. 7 Feb 2019: Cofferdam work area looking downstream;
2. 19 Dec 2018: Lock Chamber contract – concrete production facility with four fly ash silos from Olmsted.

Current project photos

26 Feb 2019 –
High water event with
inundated cofferdam
work area.



BUILDING STRONG[®]
and Taking Care of People!



US Army Corps
of Engineers



Chickamauga Lock & Dam, Tennessee River, TN

	ARRA	CG	IWTF	Total
Total Project Cost (TPC):				\$757,666,000 ¹
Allocations through FY2014:	\$49,307,619	\$68,391,511	\$68,389,500	\$186,088,630
FY15 Allocation:	\$0	\$1,500,000	\$1,500,000	\$3,000,000
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
Total Allocations to Date:	\$49,307,619	\$219,186,511	\$156,394,500	\$424,888,630
Remaining TPC Balance:				\$332,777,370
Remaining Balance Change From Last Meeting				-\$3,270,010

Note: ¹Cost & Schedule data reflect the FY2018 risked based total project cost update, Fully Funded, assuming Dec 2024 completion.

Changes

Corrected pre-FY2014 Allocation Amounts, updated remaining balance.

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: \$ 55,230,000 (thru FY18)
- Supervision & Admin Cost: \$ 9,153,000 (thru FY18)
- Mitigation Cost: TBD

Current Status of the Project

- Lock Chamber contract (Base & Options 1-3 & 5) valued at \$95.7M; 22% financially complete.
- Lock Excavation (LE) contract is substantially complete.
- OMB review of PACR underway.

Next Steps

- LE contract final cleanup in disposal area and closeout.
- Exercise Lock Chamber contract options 4, 6, 7, & 8 in FY19.

BUILDING STRONG[®]
and Taking Care of People!



US Army Corps
of Engineers



Chickamauga Lock & Dam, Tennessee River, TN

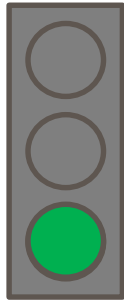
Schedule of Remaining Work	Design Initiated	Contract Award	Construction Complete *	Project Benefits**	Capitalized Cost Closeout
Task 1 – Approach Walls Fabrication	30-Mar-04	05-Apr-10	08-Mar-13		
Task 2 – Cofferdam Stabilization	31-Sep-05	25-Sep-15	18-Jul-16		
Task 3 – Lock Excavation	31-Sep-05	26-Sep-16	1 Feb 2019***		
Task 4 – Lock Chamber	11-Aug-05	28-Sep-17	May 2023		
Task 5 – Approach Walls and Decommission	11-Aug-05	30-Sep-21	Dec 2024	Sept 2023	
Task 6 – Site Restoration	11-Aug-05	30-Sep-23	Dec 2024		

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

**Based on June 2018 Certified cost estimate Cost and Schedule Risk Assessment, the project has an 80% confidence level of being completed by Jan 2027. Primary driver for the 25 months of schedule contingency is the funding stream uncertainty.

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

Chickamauga Lock Project Time and Cost Scorecard



Expenditures	31 Dec
Planned (BCWS)	\$255.1M
Earned (BCWP)	\$247.6M
Actual (ACWP)	\$246.5M

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

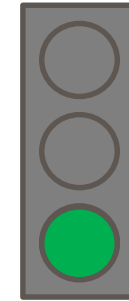
Target:
Actual as compared to Planned: (<1% = Green)
(>1% and <3% = Yellow) and (>3% = Red)

Schedule

	31 Dec (Baseline)/(Current)
Project Complete	May 2028 / Dec 2024
Lock Operational	Nov 2027 / Sept 2023

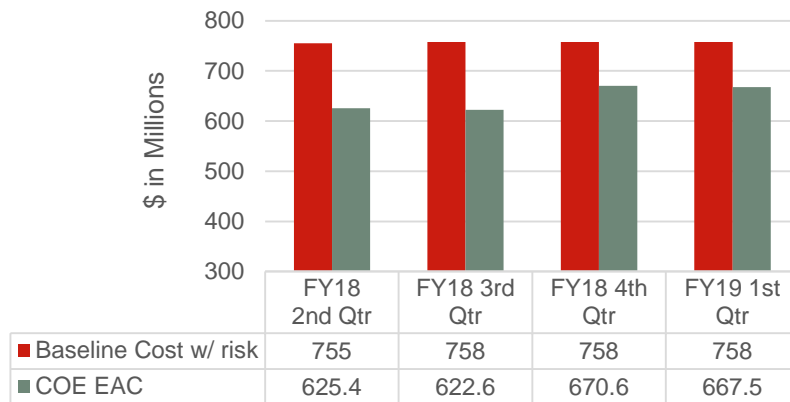
Measures: Planned project completion and Lock operational dates

Target: Lock Chamber contract completion May 2023



Budget

Chickamauga Project EAC Trend



Major Activity Schedule

Activity	Baseline	Current
Contractor Transition of Cofferdam Work Area	1 Feb 2019	1 Feb 2019 (A)
PACR – OMB Approval	16 Jan 2019	?? Mar 2019
Lock Chamber – Exercise Options 4, 6-8	31 Mar 2019	31 Mar 2019

BUILDING STRONG[®]
and Taking Care of People!



US Army Corps of Engineers



Chickamauga Lock Summary and Challenges

- **Lock Excavation** contract is substantially complete.
 - Final cleanup in Disposal Area
 - Contract Closeout
- **Lock Chamber** contract ramping up.
 - Anticipate exercising 4 additional Options in March 2019.
 - Mobilizing into Cofferdam work area.
- **Post Authorization Change Report**
 - OMB review on-going.