

GLMRIS BRANDON ROAD STUDY

Date: 19 Dec 2018



US Army Corps
of Engineers®



BRANDON ROAD STUDY



Final GLMRIS Brandon Road Report & EIS review 23 Nov – 7 Jan

Draft Chief's Report State & Agency Review 23 Nov – 24 Dec

Recommended Plan includes:

- Nonstructural Measures
- Electric Barrier
- Acoustic Fish Deterrent
- Air Bubble Curtain
- Flushing Lock



BRANDON ROAD STUDY



What changed since TSP:

- Cost Increase
- Water Jets to Bubble Curtain
- Mooring Cells Removed
- Phased Implementation Strategy
- Complex Noise to Acoustic Fish Deterrent
- Appendices added:
 - Appendix H.2 - Engineering Recommended Plan
 - Appendix N - Mitigation Plan
 - Appendix O - Draft Record of Decision
 - Appendix P - Public Comment Summary Report



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Next Steps:

- Complete Report On schedule for January*
- Chief's Report submitted On schedule for February*
- Design Agreement Discussions initiated, New admin*
- Design Phase Agreement signed, funding received**

Critical Path Activities for PED:

- Real Estate
- Physical Model
- Acoustic Research

* Assuming no review extensions or significant changes to the recommended plan are required.

** Design can begin when Chief's Report is submitted and funding is allocated.



BRANDON ROAD PRECONSTRUCTION ENGINEERING & DESIGN

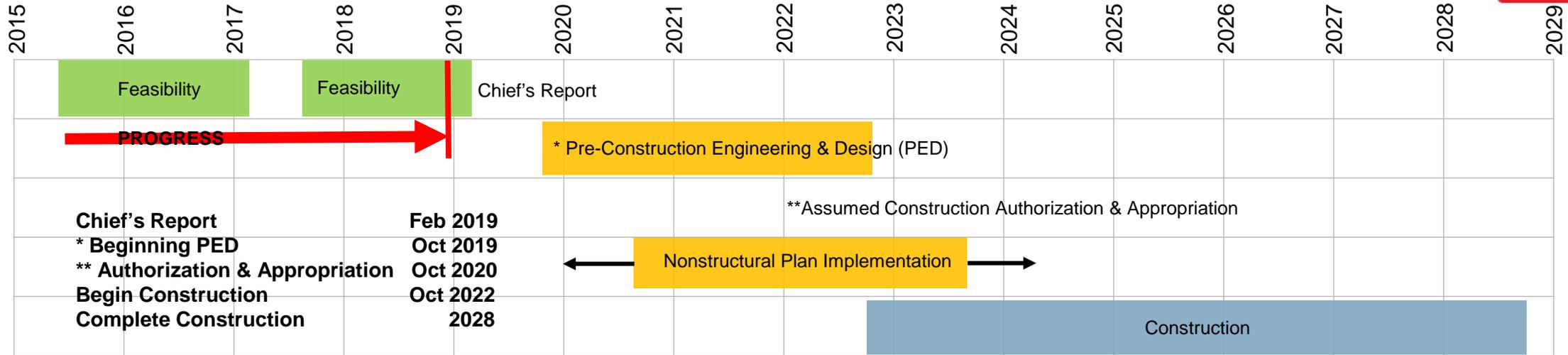
POTENTIAL RISK INCREMENT I ACTIVITIES



Data Gathering & Research	Engineering & Design
Phase II HTRW Investigation	Engineered Channel Design
Geotechnical Exploration	Air Bubble Curtain Design
Topographical, Boundary, Utility Surveys	Acoustic Deterrent Design
Waterway Numeric Model for Flood Flows & Navigation Conditions	Control Building Design
Initiate Physical Modeling of the Flushing Lock	Upstream Boat Ramp Design
Physical Modeling of the Channel	Initiate Flushing Lock Design
Acoustic Deterrent Research	Initiate Electric Barrier Design
Bubble Curtain Research	Engineering Charrette
ANS Control Research/Testing & ANS Control Interaction Studies	Value Engineering
Concept Studies, Engineered Channel Wall, Channel Floor	Permit Coordination
Shallow Electric Barrier Research, (Stray Current Numeric Model for Insulation Termination & Channel Length Shortening)	Engineering Specifications & Drawings Risk Reduction Increment I
	30% PED & Drawings for Risk Reduction Increments II & III



PROJECT SCHEDULE



Chief's Report
 * Beginning PED
 ** Authorization & Appropriation
 Begin Construction
 Complete Construction

Feb 2019
 Oct 2019
 Oct 2020
 Oct 2022
 2028

* PED is able to begin after submittal of Chief's Report to ASA(CW) and Design Agreement is signed pending funding

Key Schedule Drivers

- Completion of Chief's Report
 - Internal & external reviews
- Non-federal sponsor/cost share agreements (DA/PPA)
- Availability of PED funds in FY 20
- Complex innovative designs increase PED duration
- Construction authorization & appropriation
- Real Estate Acquisition/HTRW
- Maintaining navigation during construction extends duration



BRANDON ROAD STUDY RECOMMENDED PLAN





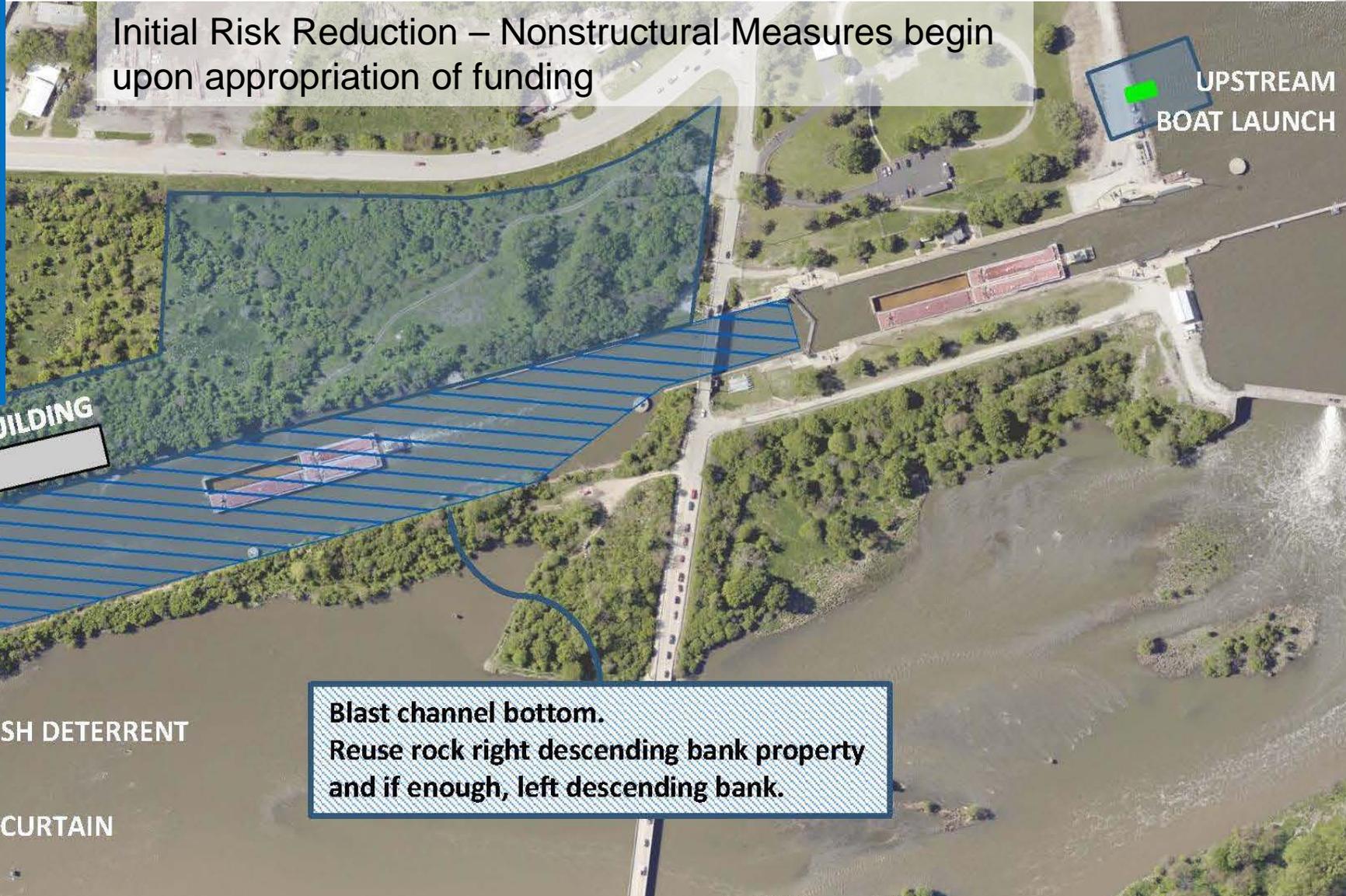
RISK REDUCTION INCREMENT I



Risk Reduction Increment I

- Prep NRG Site
- Channel Rock Excavation
- Air Bubble Curtain
- Narrow Acoustic Deterrent Array
- Control Building
- Upstream Boat Launch

Cost \$221,881,000
Design & Const. Duration 4-5 yr.
Timeline for structural implementation will be further developed in the PED phase.



Initial Risk Reduction – Nonstructural Measures begin upon appropriation of funding

UPSTREAM BOAT LAUNCH

FACILITY SUPPORT BUILDING

ACOUSTIC FISH DETERRENT

AIR BUBBLE CURTAIN

Blast channel bottom.
Reuse rock right descending bank property and if enough, left descending bank.



RISK REDUCTION INCREMENT II

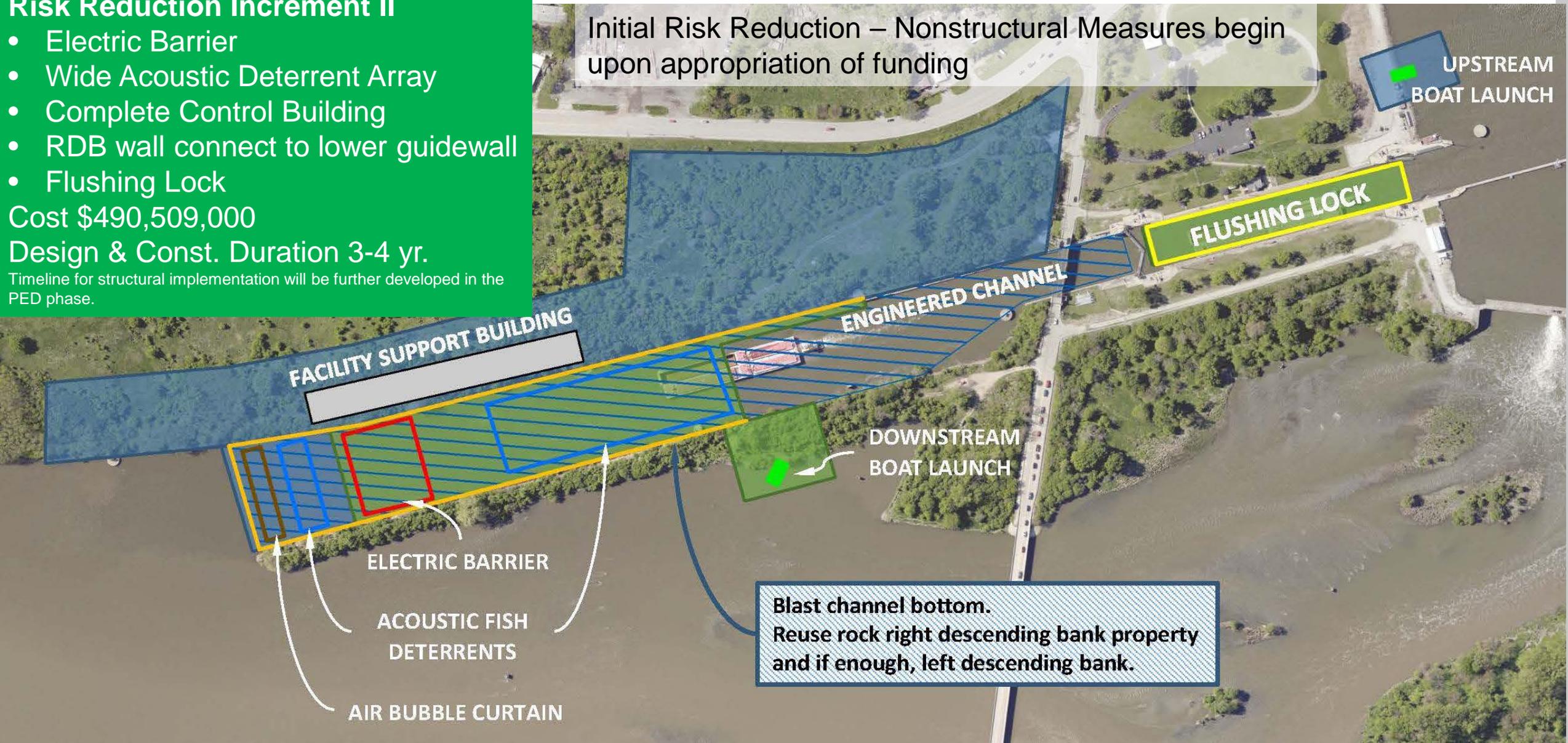


Risk Reduction Increment II

- Electric Barrier
- Wide Acoustic Deterrent Array
- Complete Control Building
- RDB wall connect to lower guidewall
- Flushing Lock

Cost \$490,509,000
Design & Const. Duration 3-4 yr.
Timeline for structural implementation will be further developed in the PED phase.

Initial Risk Reduction – Nonstructural Measures begin upon appropriation of funding





RISK REDUCTION INCREMENT III



Risk Reduction Increment III

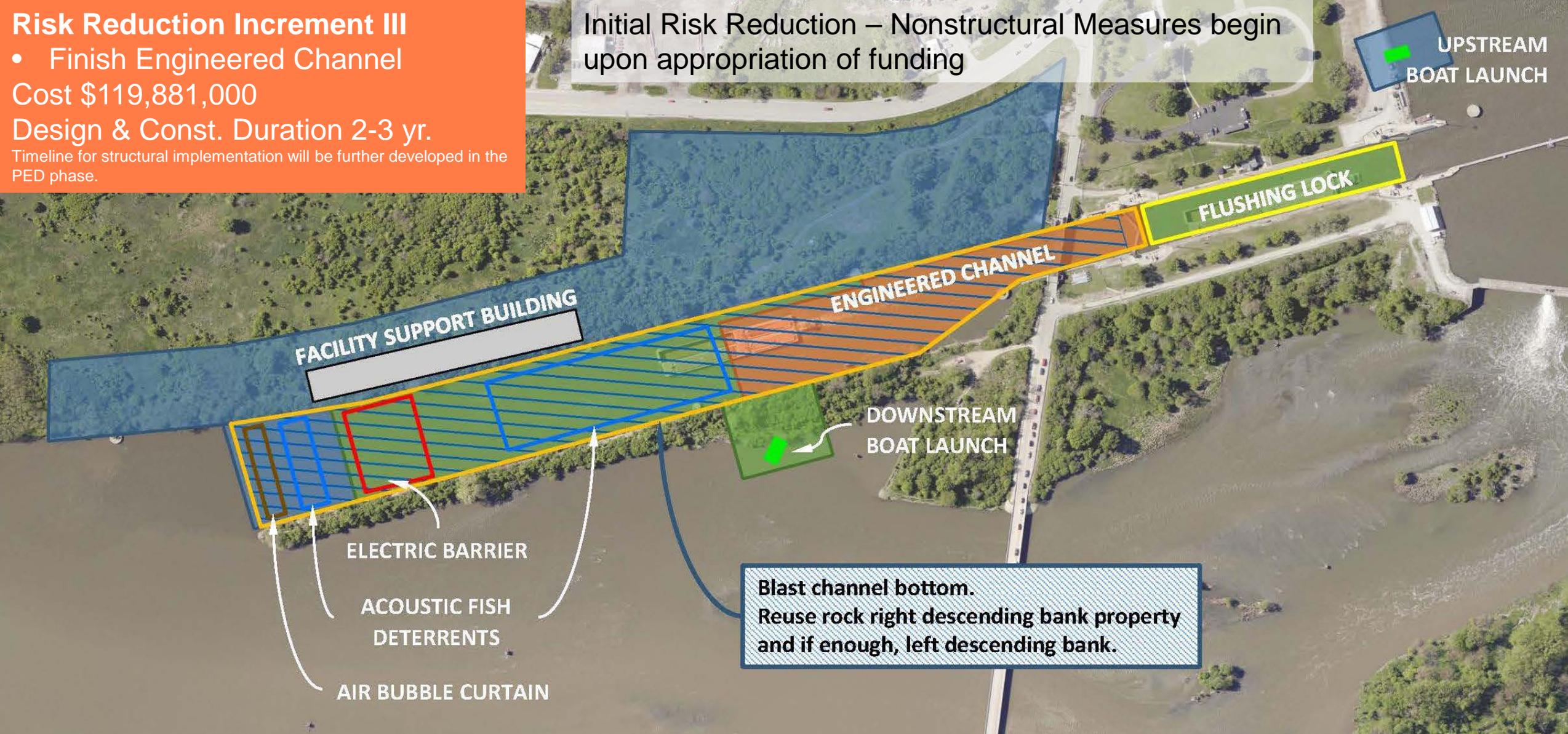
- Finish Engineered Channel

Cost \$119,881,000

Design & Const. Duration 2-3 yr.

Timeline for structural implementation will be further developed in the PED phase.

Initial Risk Reduction – Nonstructural Measures begin upon appropriation of funding



FACILITY SUPPORT BUILDING

ENGINEERED CHANNEL

FLUSHING LOCK

UPSTREAM BOAT LAUNCH

DOWNSTREAM BOAT LAUNCH

ELECTRIC BARRIER

ACOUSTIC FISH DETERRENTS

AIR BUBBLE CURTAIN

Blast channel bottom.
Reuse rock right descending bank property and if enough, left descending bank.