

RIVER RAISIN DAM REMEDIATION PROJECT JUNE 2012



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PE

River Raisin Dam Remediation Project

- Raisin AOC presents a unique opportunity for potential delisting
- EPA dredging combined with this project, along with Sterling State Park and Sterling Island restoration work could lift habitat impairments
- Dam project will potentially be accomplished in two phases by 2012/2013 and create fish and small boat access from Lake Erie to Dundee (~23 miles)
- MDEQ working on strategies for other impairment delistings, recognizing that Monroe will remain an important shipping port for the foreseeable future

– Raisin AOC delisted 2012?

Monroe Dams

- City's six low head dams (2.5-ft to 3-ft high) constructed by the Works Progress Administration – early to mid-1930's
- Used to carry sanitary sewer over the river's unique limestone bedrock and “beautify” downtown
- Currently, only 4 dams carry active sanitary sewer
- Waterloo Dam (owned by City) and Grape Dam (privately owned) are 5-ft to 6-ft high

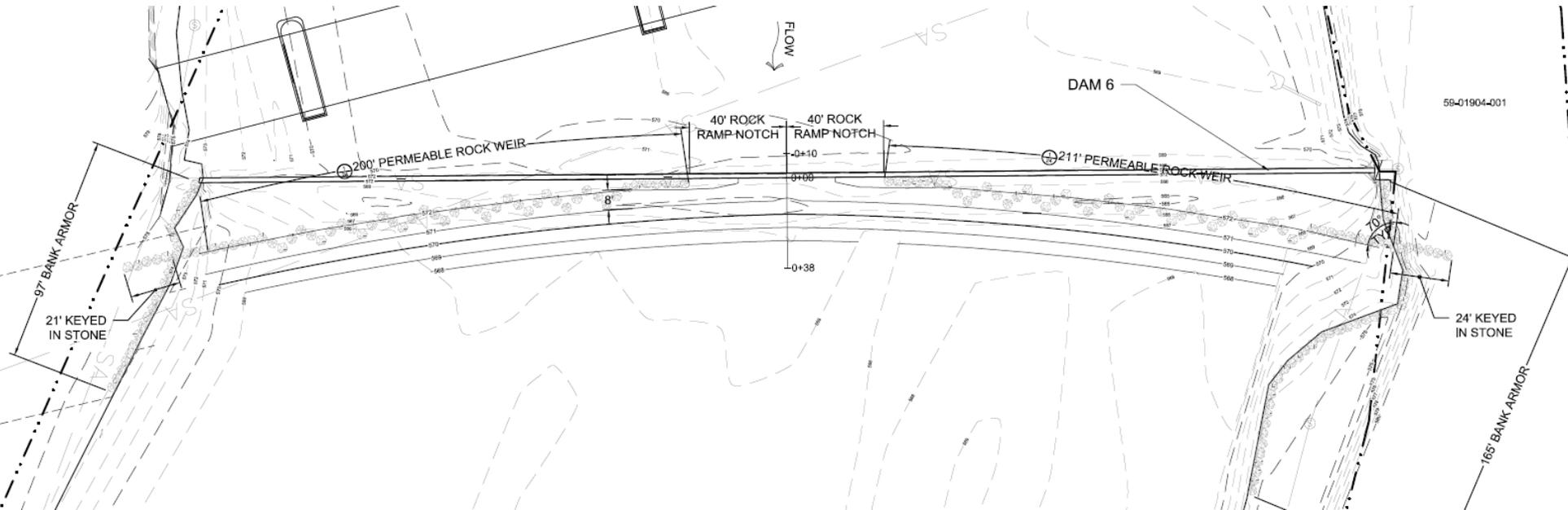
Phase 1 & 2 Project Area



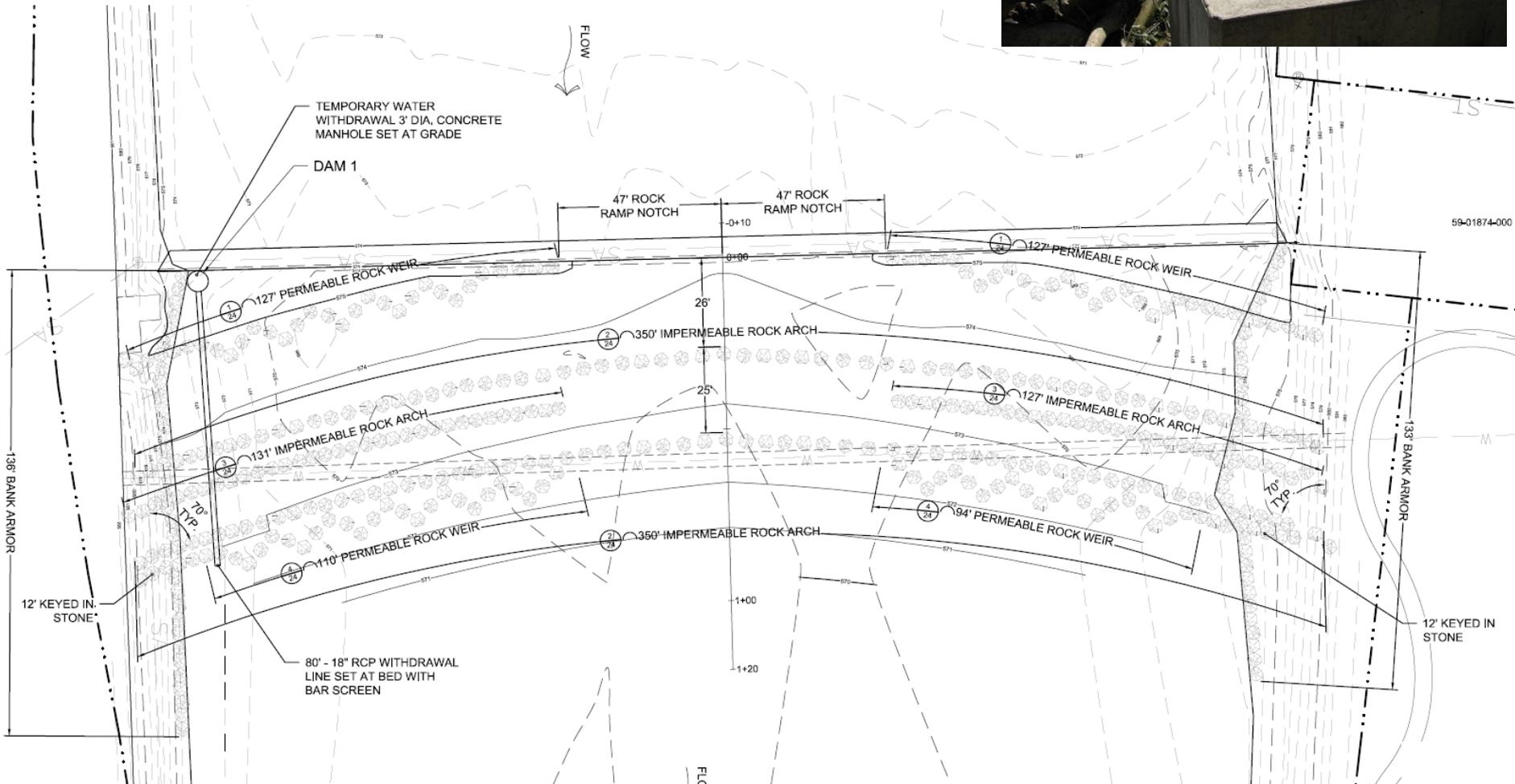
City Dams



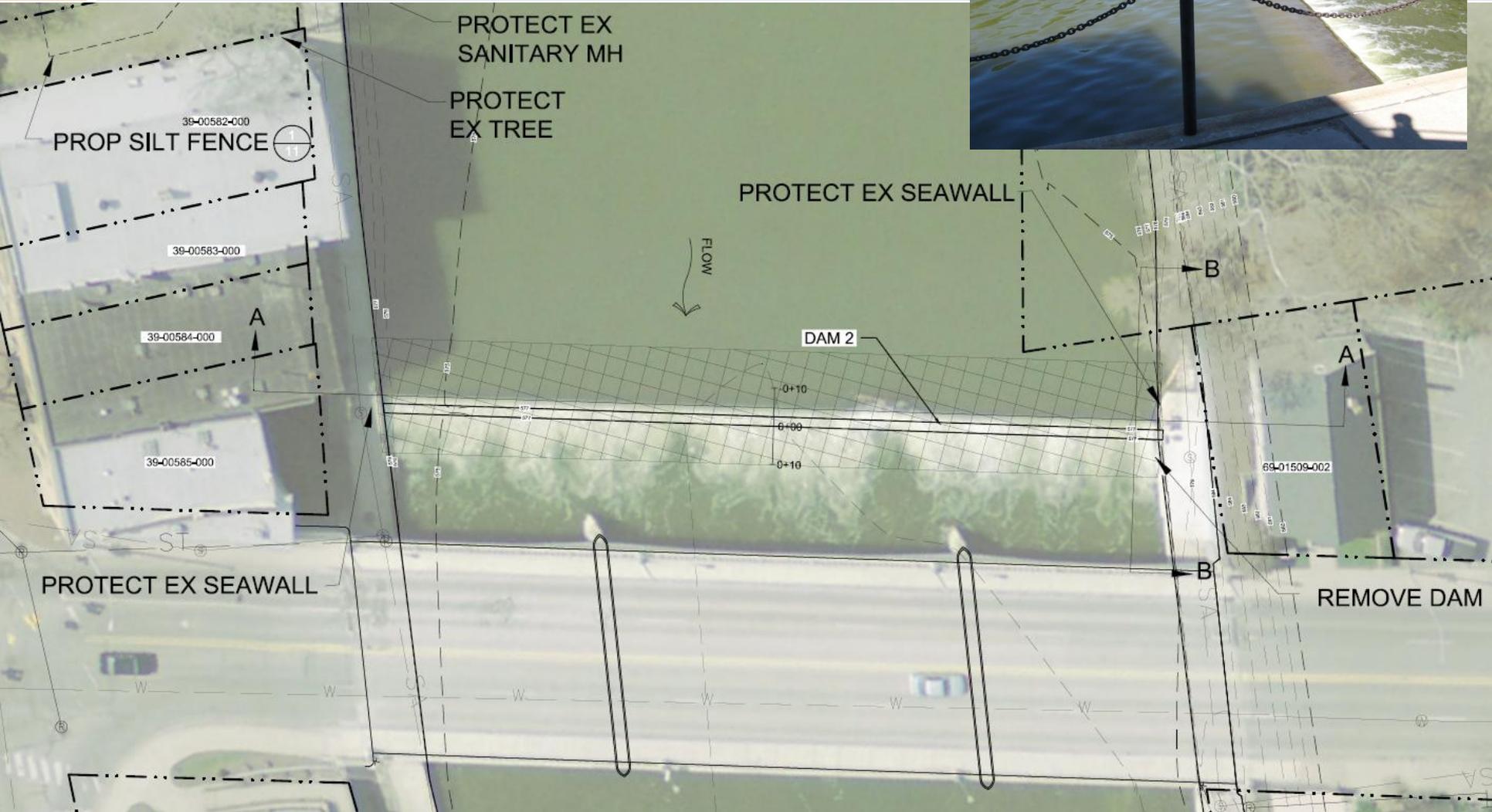
Phase 1 – Dam 6



Phase 1 – Dam 1



Phase 1 – Dam 2



Phase 1 – Dam 3



NG

29-00435-001

GRAVEL ACCESS RAMP

4/11

DAM 3

PROTECT CURBED ISLAND W/
TEMPORARY CHAINLINK FENCE
TEMPORARY CHAINLINK FENCE

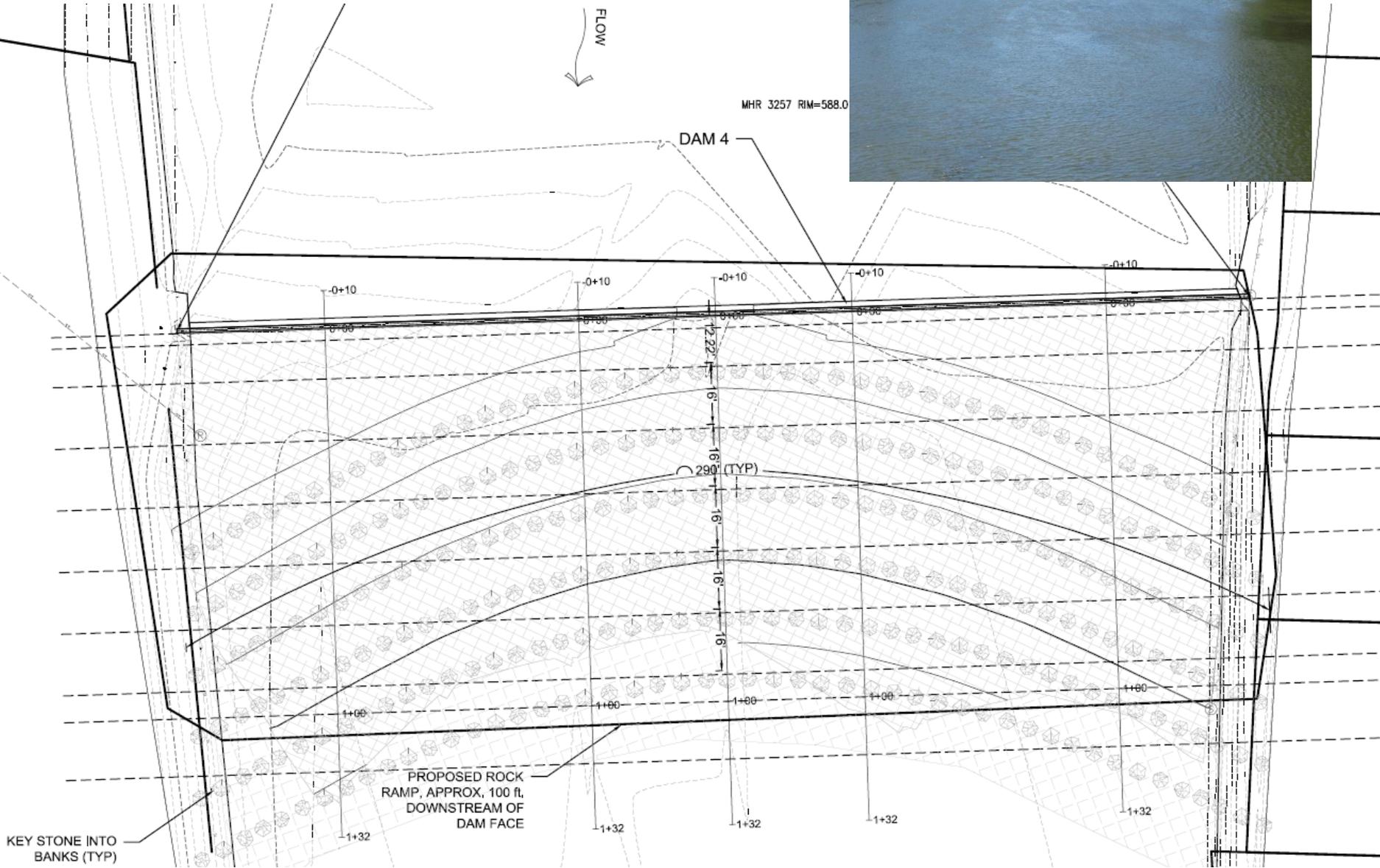
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BULKHEAD ABANDONED
SANITARY SEWER AT SEA WALL
* RECONSTRUCT SANITARY
SEWER CHAMBER WALL

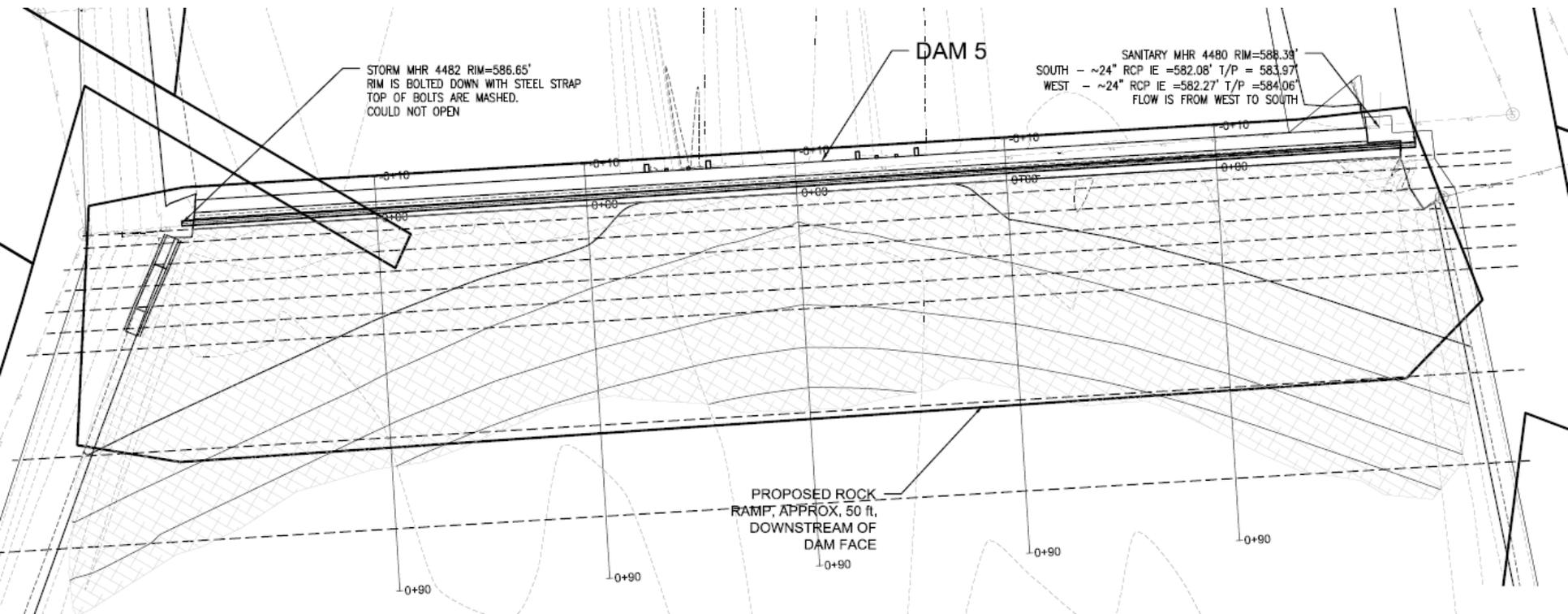
REMOVE DAM

2/13

Phase 2 – Dam 4

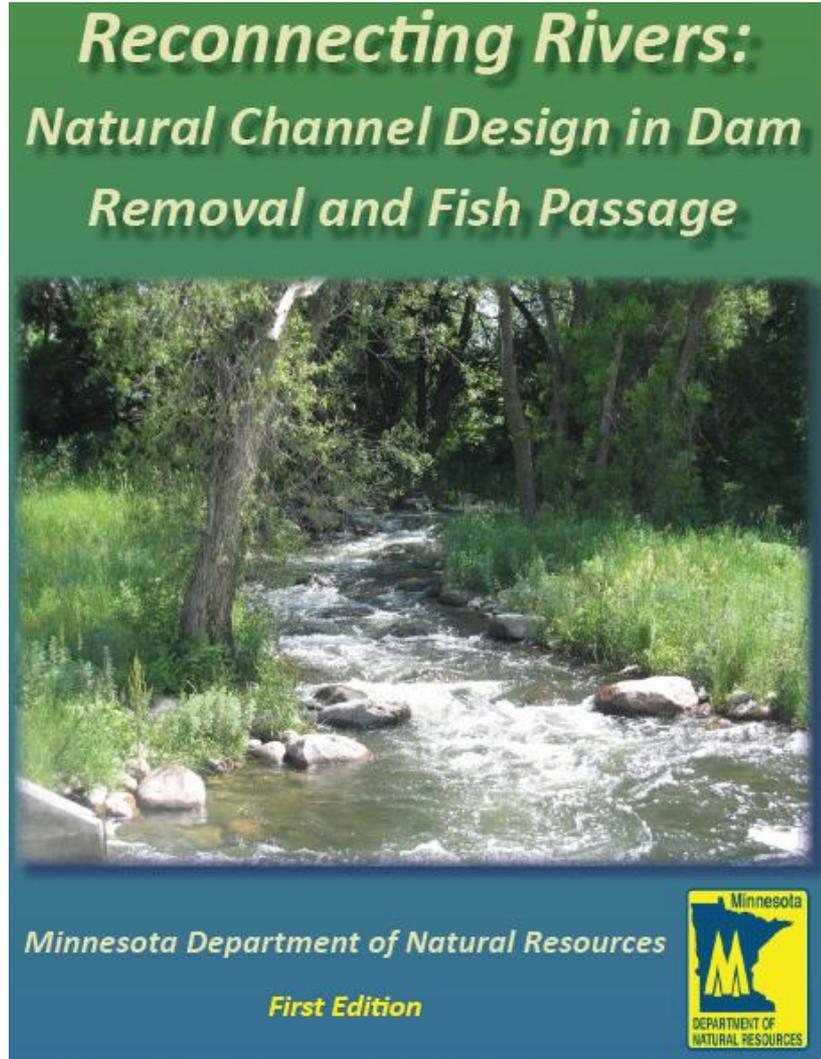


Phase 2 – Dam 5

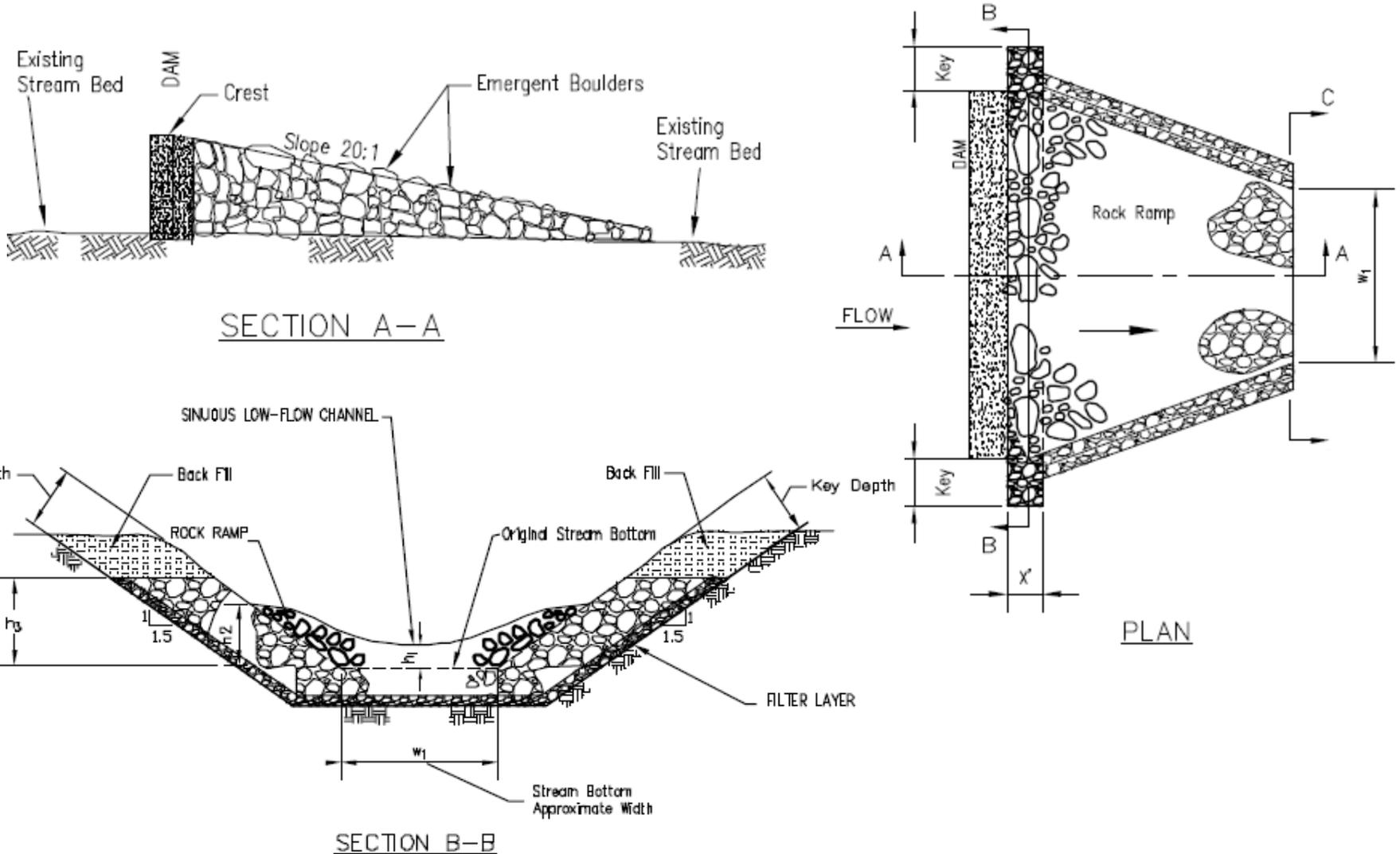


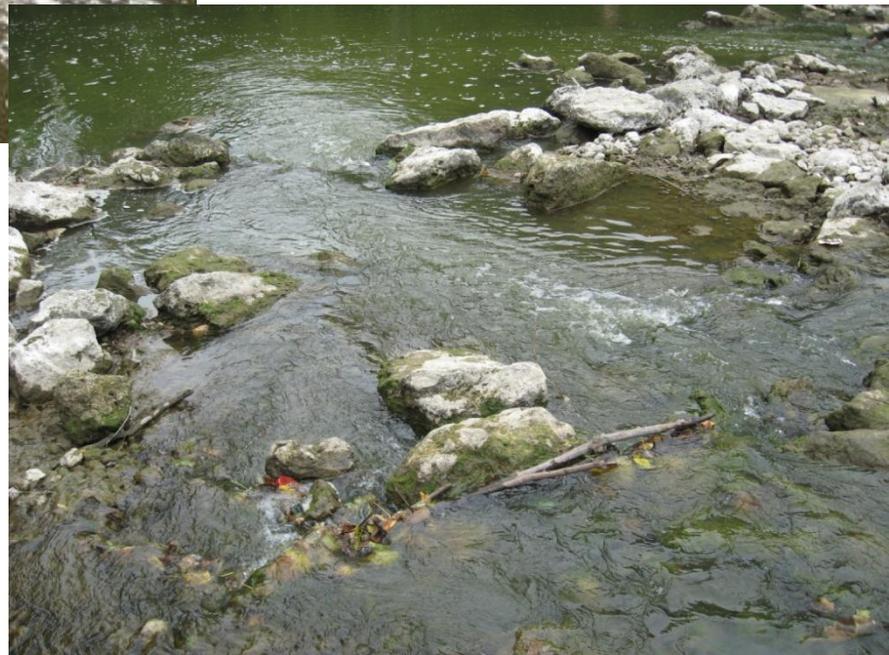
Natural Channel Design for Dams

- Reconnecting Rivers by Luther Aadland, Minn. DNR and consultant to this project
- http://www.dnr.state.mn.us/eco/streamhab/reconnecting_rivers.html



Example Rock Ramp Design





Crookston Dam, Minnesota



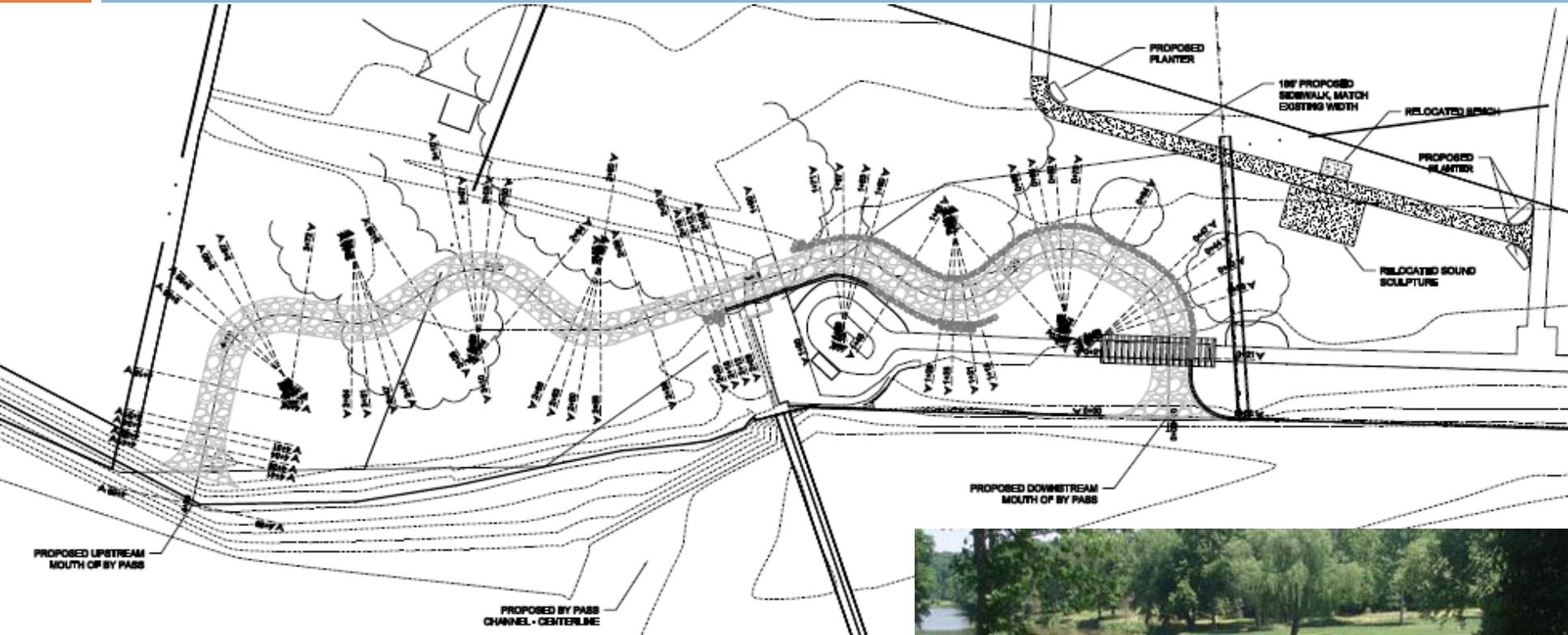
Visualization of Rock Arch Rapids in Monroe



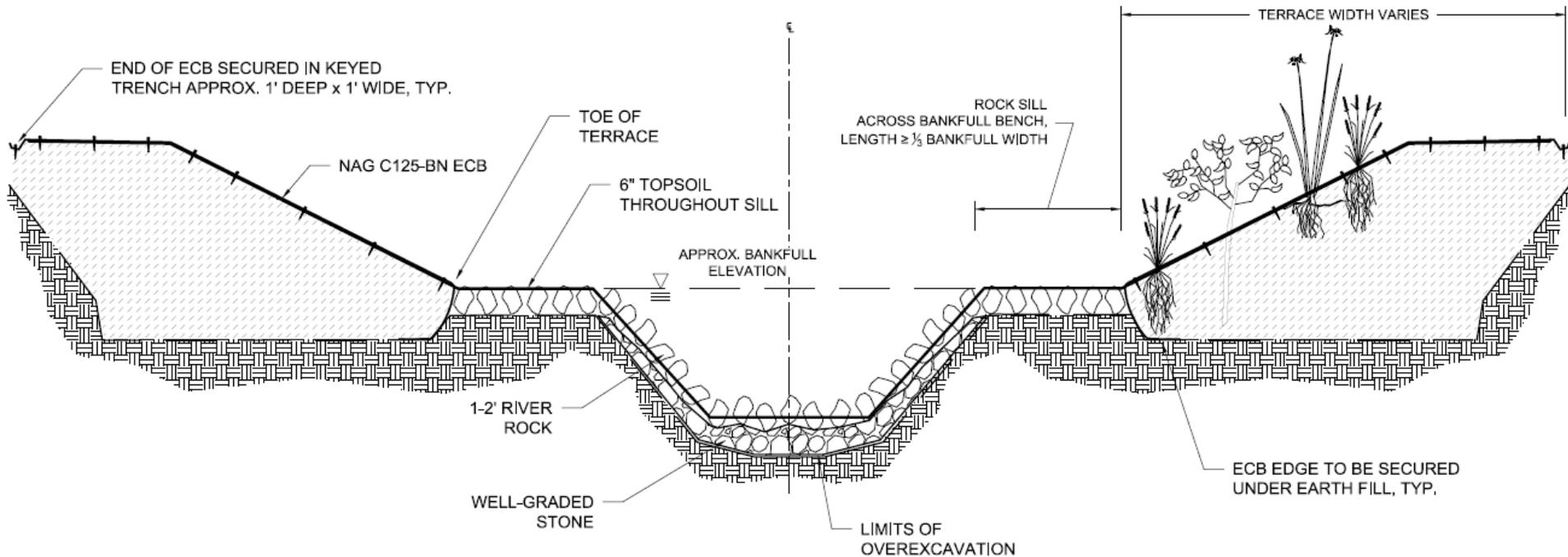
Waterloo Dam



Conceptual Channel around Waterloo Dam



Conceptual Channel around Waterloo Dam



WATERLOO FISH CHANNEL - TYPICAL RIFFLE DETAIL

NOT TO SCALE

Grape Dam Millrace



Grape Dam Woody Debris Jam



Grape Dam Millrace Structure Failure



Timeline

- Phase 1:
 - ▣ Design is being reviewed by MDEQ
 - ▣ Bid project early July
 - ▣ Begin construction late August/early September, 2012
 - ▣ Final restoration Spring, 2013
- Phase 2:
 - ▣ Submit permit application June/July, 2012
 - ▣ Bid concurrently/separately with Phase 1(?)
 - ▣ Begin construction 2012 or 2013
 - ▣ Final restoration Summer, 2013

Questions?



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