



STATUS REPORT

1 / 16 / 2016

Mountain Valley Park Dam

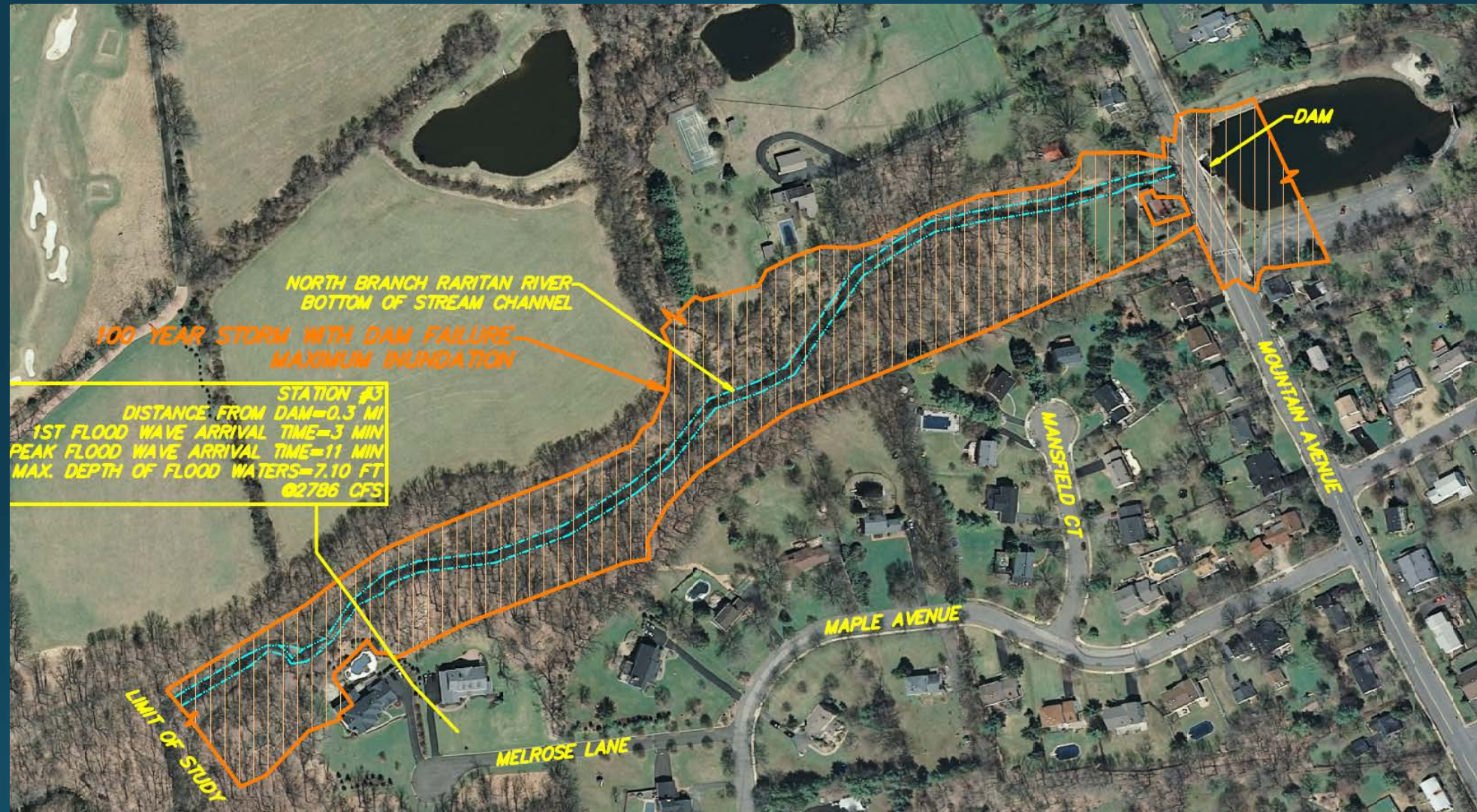
INTRODUCTION - Why are we here?

- Rehabilitation of the dam is mandated by NJDEP. Spillway can not safely pass the 100 year flood
- Construction of the Dam Rehabilitation must begin by June 23, 2017 as per NJDEP mandate
- Dredging of the lake is recommended

HISTORY – How did we get here?

- 1948 – Original Construction of Dam
- 1990 – NJDEP designates dam as “CLASS II – SIGNIFICANT HAZARD”
- 2000 – Spillway concrete was refurbished
- 2001 – Spillway Design Flood (SDF) was set at the 100 Year Flood
- 2003 – Lake was dredged
- 2012 – Dam Break Analysis & Emergency Action Plan were prepared
- 2012 – NJDEP Mandates Dam rehabilitation to safely pass the SDF
- 2016 – Permits obtained for Dam rehabilitation and lake dredging

INUNDATION MAP — 100 Year Flood with breach



100 year flood overtops earth embankment by 12 inches

2016 INSPECTION CONCLUSIONS

Dam is in POOR condition due to inadequate spillway capacity, tree growth on the dam, and deteriorating concrete.

Required and recommended improvements:

- Remove trees and brush on from earth embankment
- Backfill erosion at spillway abutment.
- Replace headwall on downstream channel.
- Repair spalling and cracking concrete on spillway.
- Install overtopping protection in accordance with permit.
- Lake dredging should be considered to remove sediment.



- Three large trees growing on earth embankment
- Embankment can erode from overtopping waters



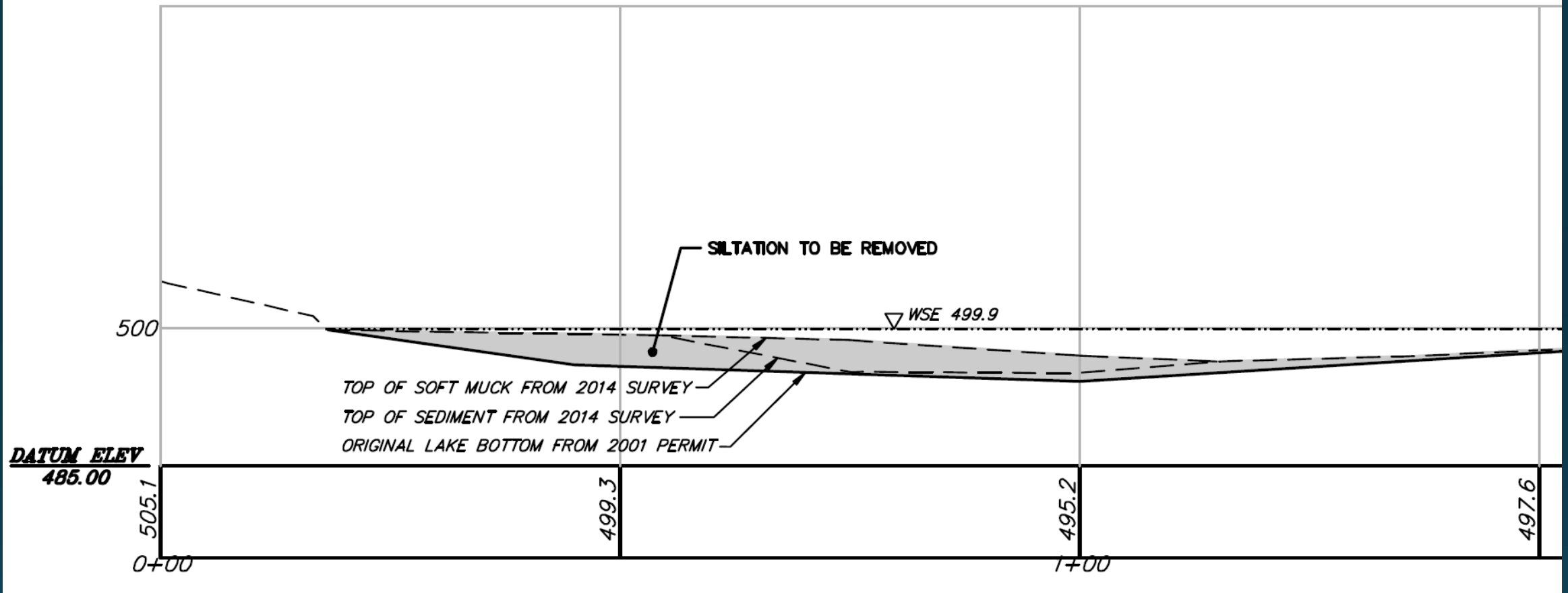
- Deteriorated concrete in spillway



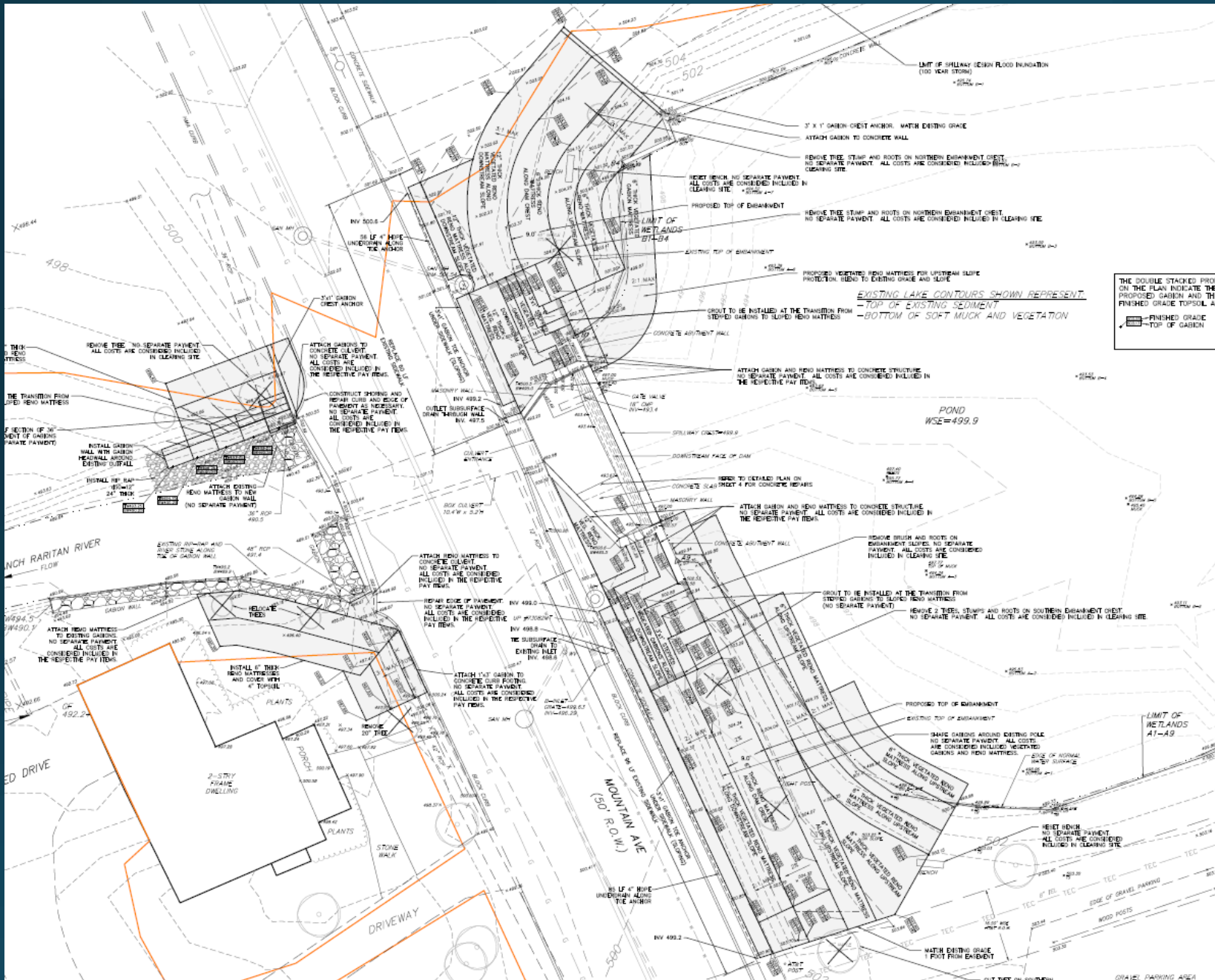
- Crumbling headwall on downstream channel



- Excessive sediment in Lake



- Typical cross section of accumulated lake sediments



PLAN VIEW

- Gabion overtopping protection will provide additional spillway capacity (The entire dam becomes the spillway)
- Downstream of the roadway, the stream banks are stabilized to protect the roadway and the culvert from overtopping flows

NEXT STEPS – What needs to be done?

- Lake sediments must be sampled for contaminants
- Bid documents, specs and plans must be finalized
- Easements must be obtained from downstream owners
- Formal Construction Inspection Program must be approved by the DEP
- Lake lowering permit must be obtained from Fish and Wildlife
- Public bid
- Award contract

TIMING – When do we have to do this?

- Construction must begin by June 23, 2017
- Restricted periods due to Category 1 water and wood turtle habitat
 - Lake Lowering and Fish salvage must be done between 4/1 – 4/30
 - All work within banks of lake/stream must be done between 4/1 - 9/15
 - Qualified herpetologist must inspect the site for wood turtle and may allow work to extend beyond 9/15

TIMELINE

- January to March 2017 – Soil sampling (weather permitting). Easements.
- March 2017 – Public Bid
- April 2017 – Relocate fish and Lower lake (separate contract? Est. \$15k)
- May to June 2017 – Start construction
- Fall 2017 – End construction and allow lake to refill



STATUS REPORT

1 / 16 / 2016

Mountain Valley Park Dam