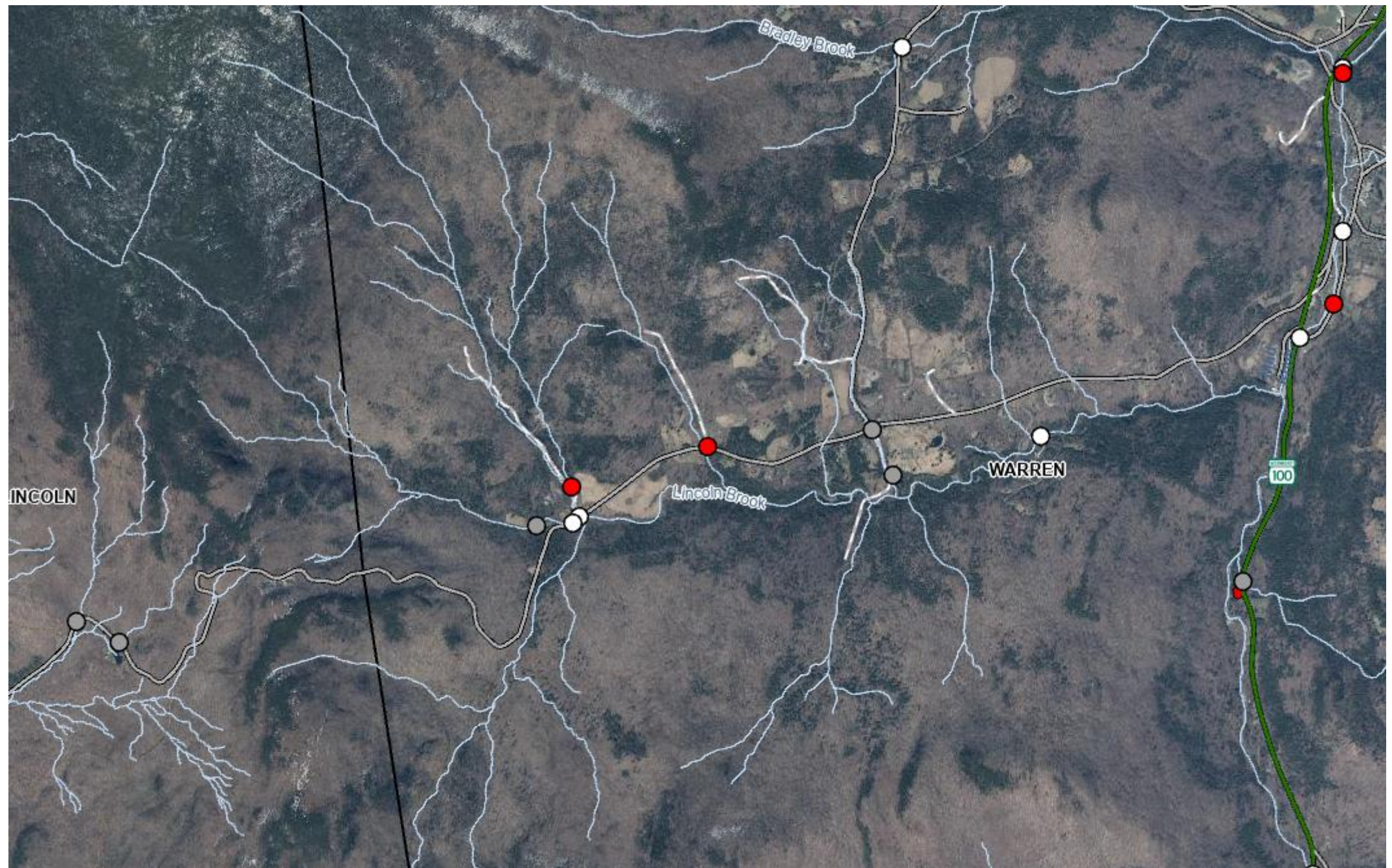
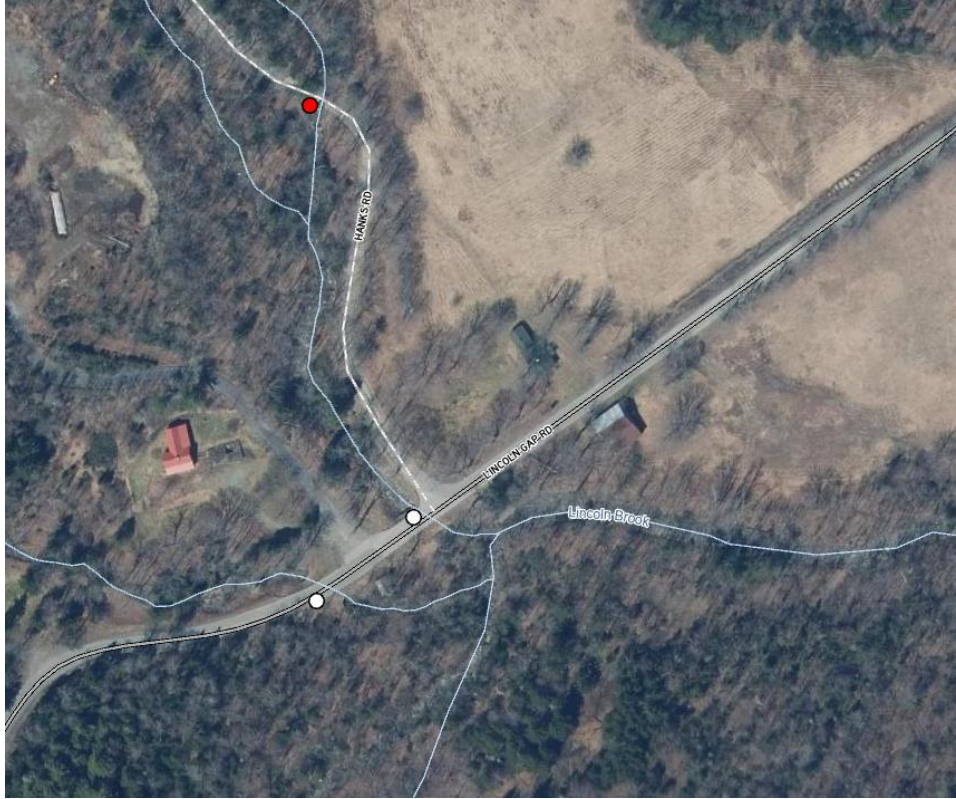




Hanks Road Culvert (Warren, municipal road)

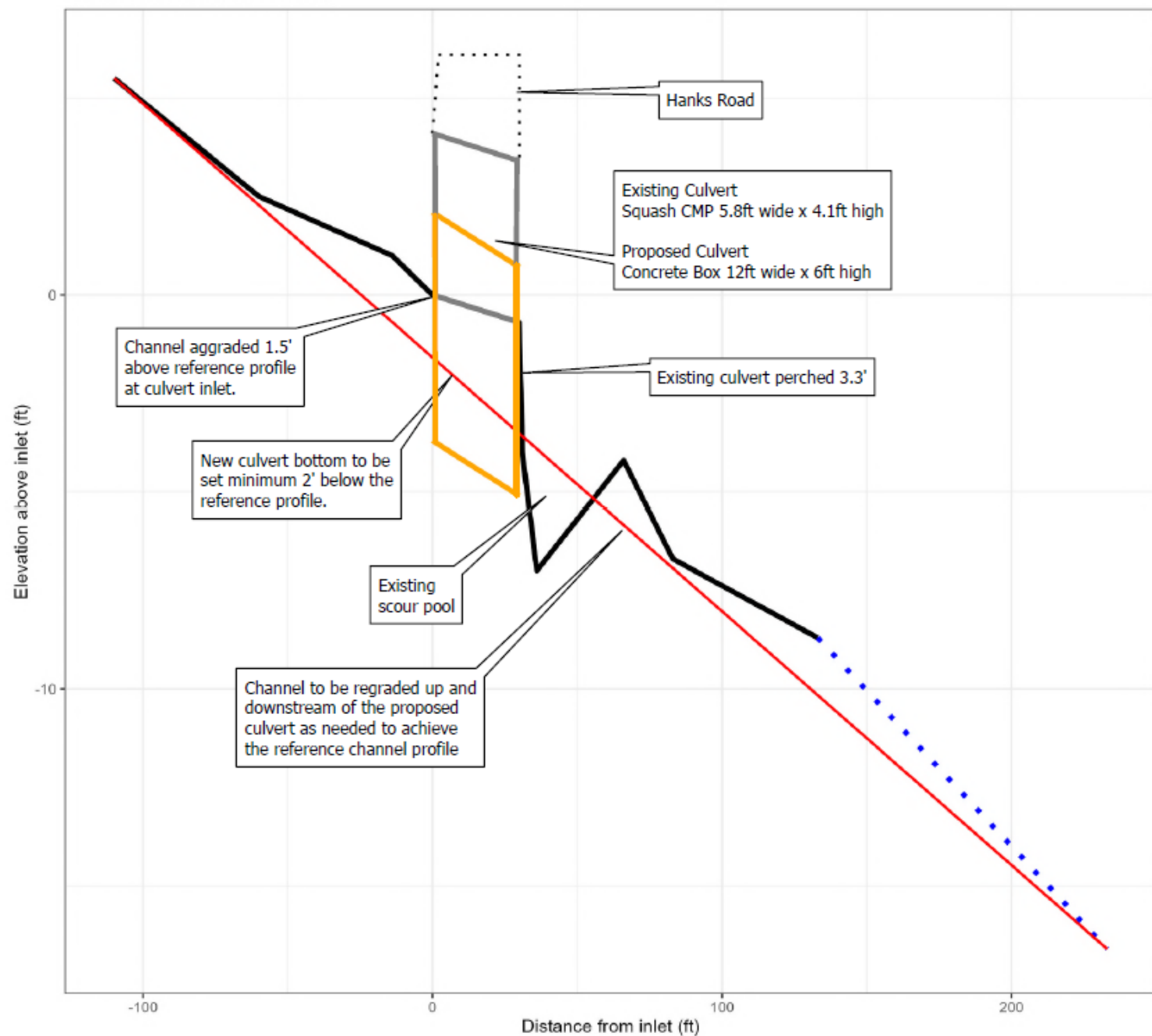
- Scoped in flood resiliency project in 2024 with preliminary design
- Undersized, perched
- Potential 5.5kg phosphorus/year
- AOP: 2-3 miles of headwater stream
- Culvert just downstream replaced in 2019
- Submitted as \$200k for LCBP Clean Water Oct 2025 – not funded
- Supported by Warren, local landowner





- Context
 - Proposal review was favorable, noted high end budget
 - RFP for large projects up to \$200k, total grant funding available \$680k for planning, small and large projects
- Original budget
 - \$170k final design, materials, fees/permits, construction, \$30k personnel/overhead
 - Aluminum box culvert to reduce costs – not aligned to preliminary design recommendation
 - Acknowledged in proposal potential for shortfall
- Updated budget proposal (rough draft)
 - \$300k: \$260 design/materials/construction, \$40k personnel/overhead
 - Potential for concrete box culvert
 - Additional funds for comparing final design assessments, staff managing multiple funding sources
- Strategy: Co-funded LCBP and CWSP
 - CWSP ask of \$150k, 5.5 kg/yr phosphorus = \$27k/kg
 - LCBP AOP RFP Feb 13, max grant award \$500k, total funding available \$2.5M
- Input / feedback
 - Viable?
 - Sequencing?
 - bundling design + implementation

Hanks Brook Culvert Profile



- Stream bottom (field measurements)
- Stream bottom (lidar)
- Reference channel profile
- Road
- Existing Culvert
- Proposed Culvert

Notes:
-Channel and culvert data
collected by FEA
on 9/10/2024

Mad River Resiliency Scoping
Project 45
Hanks Road Culvert Replacement
Warren, VT

JWC
EPP

Not to Scale

December 10, 2024

SHEET 2

Budget justification: Professional services

Professional services line is to be used if you are hiring a subcontractor to complete workplan tasks. For all tasks, if applicable, please describe in detail how the estimate of professional services cost was determined.

Task 3 - \$25,000 for Hanks Brook culvert final design

Task 3 - \$4,000 for legal and permitting fees

Task 5a - \$89,000 for construction mobilization and structure purchase

Task 5b - \$15,000 for project oversight from design consultant

Task 5b - \$40,000 for construction and installation of Hanks Brook Culvert

Estimates for design and construction were provided by Fitzgerald Environmental.