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Flood Hazard Mitigation Alternatives: Phoenicia, NY



Photo provided by NYCDEP

Shandaken Town Board
September 8, 2025





Local Flood Analysis

Town of Shandaken Along Esopus Creek
Hamlets of Phoenicia and Mt. Tremper
Ulster County, New York
June 2016
(Revised October 24, 2016)



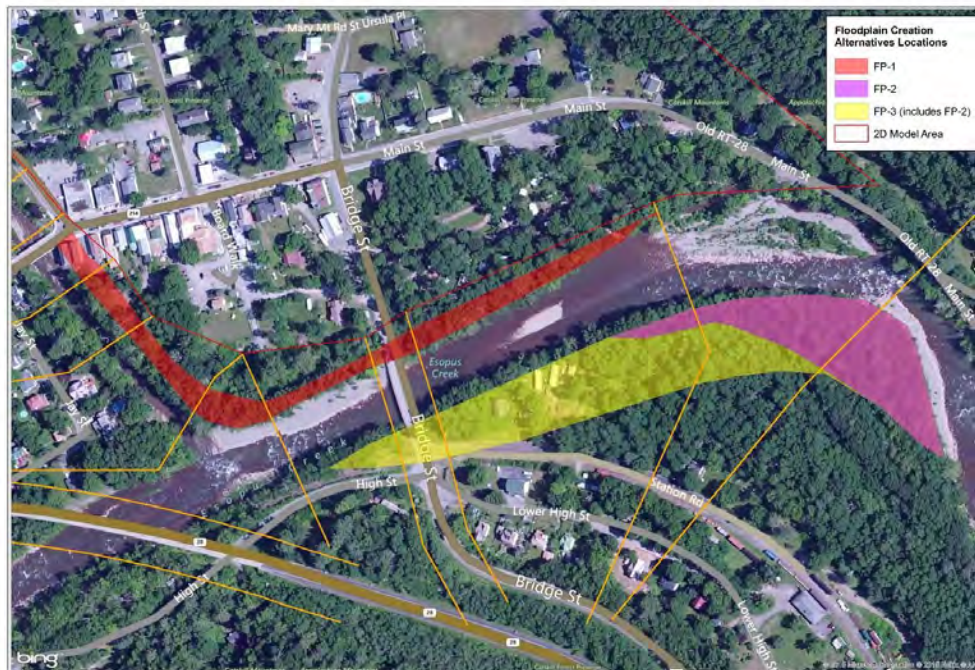
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MMI #4615-04-6

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Local Flood Analysis for Phoenicia and Mt Tremper, conducted by Milone & MacBroom (now SLR) in 2016



Rendering of conceptual
Esopus Creek floodplain
benches and replacement
Bridge Street bridge from
2016 Local Flood Analysis



ENHANCED FLOODPLAIN AND NEW BRIDGE STREET BRIDGE DURING NORMAL FLOW CONDITIONS



ENHANCED FLOODPLAIN AND NEW BRIDGE STREET BRIDGE DURING FLOOD CONDITIONS



Objective: re-evaluate LFA recommendations and develop additional potential flood hazard mitigation strategies for Phoenicia

Please Note:

- All presented flood hazard mitigation alternatives are conceptual/hypothetical
- Some alternatives are complex, long-term strategies
- Some alternatives require acquisition and removal of existing buildings
- Any disturbance to private property will require support from willing landowners
- All projects will require advanced design that includes input from affected landowners & stakeholders



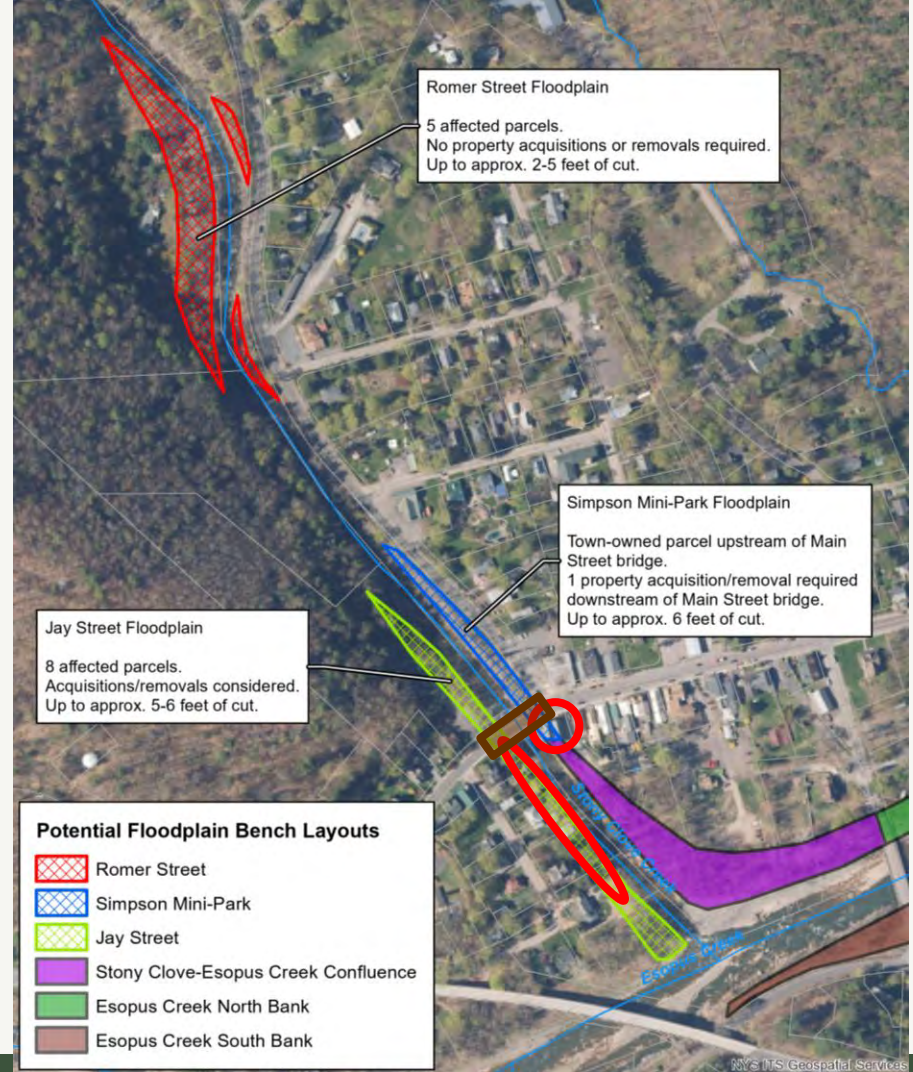
Possible Floodplain Enhancements: Esopus Creek

- Can improve hydraulic performance of Bridge Street bridge replacement
- Can alleviate much of the flooding in downtown Phoenicia caused by Esopus Creek
- Disturbance to private properties; acquisitions & removals

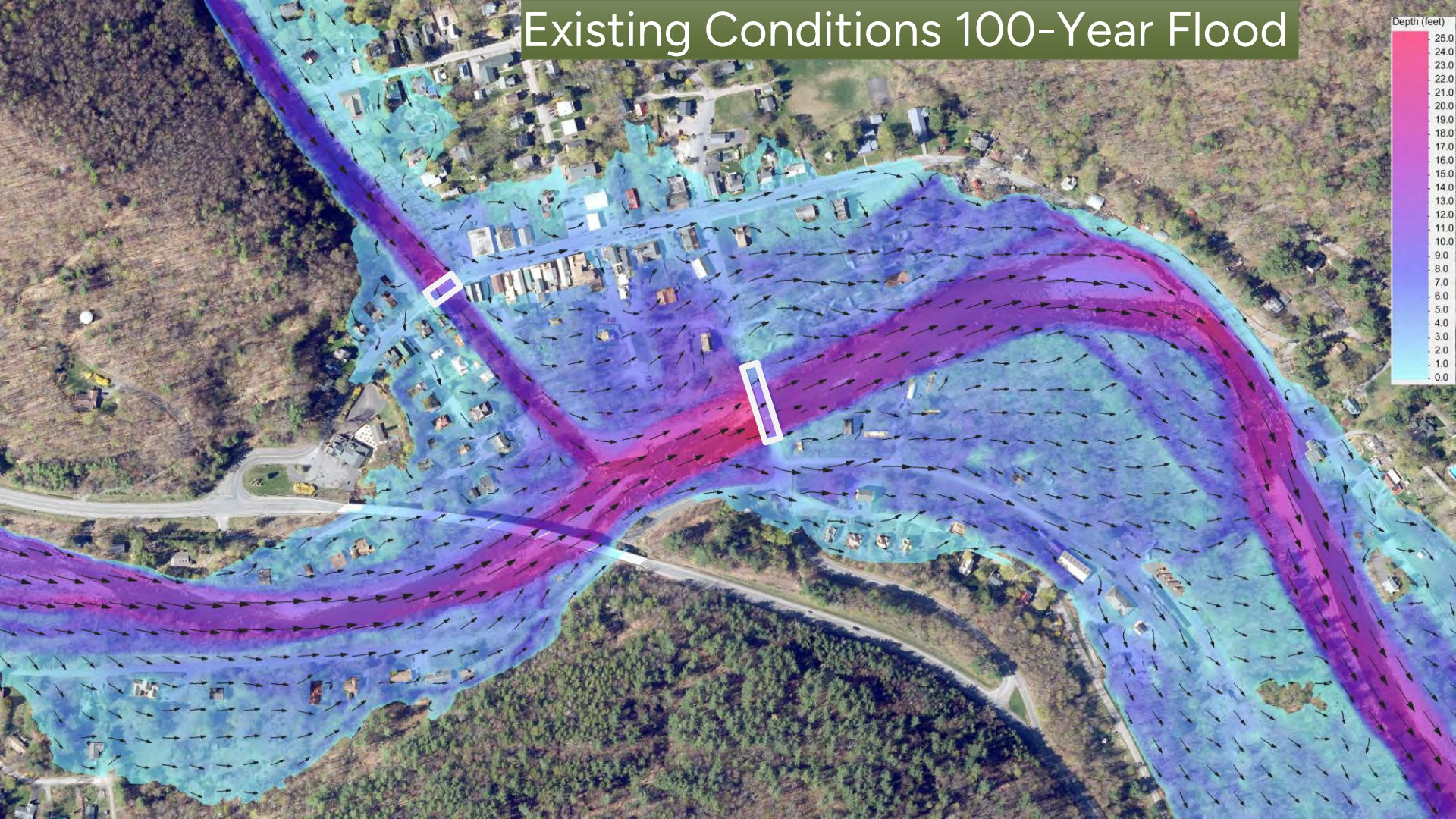


Possible Floodplain Enhancements: Stony Clove Creek

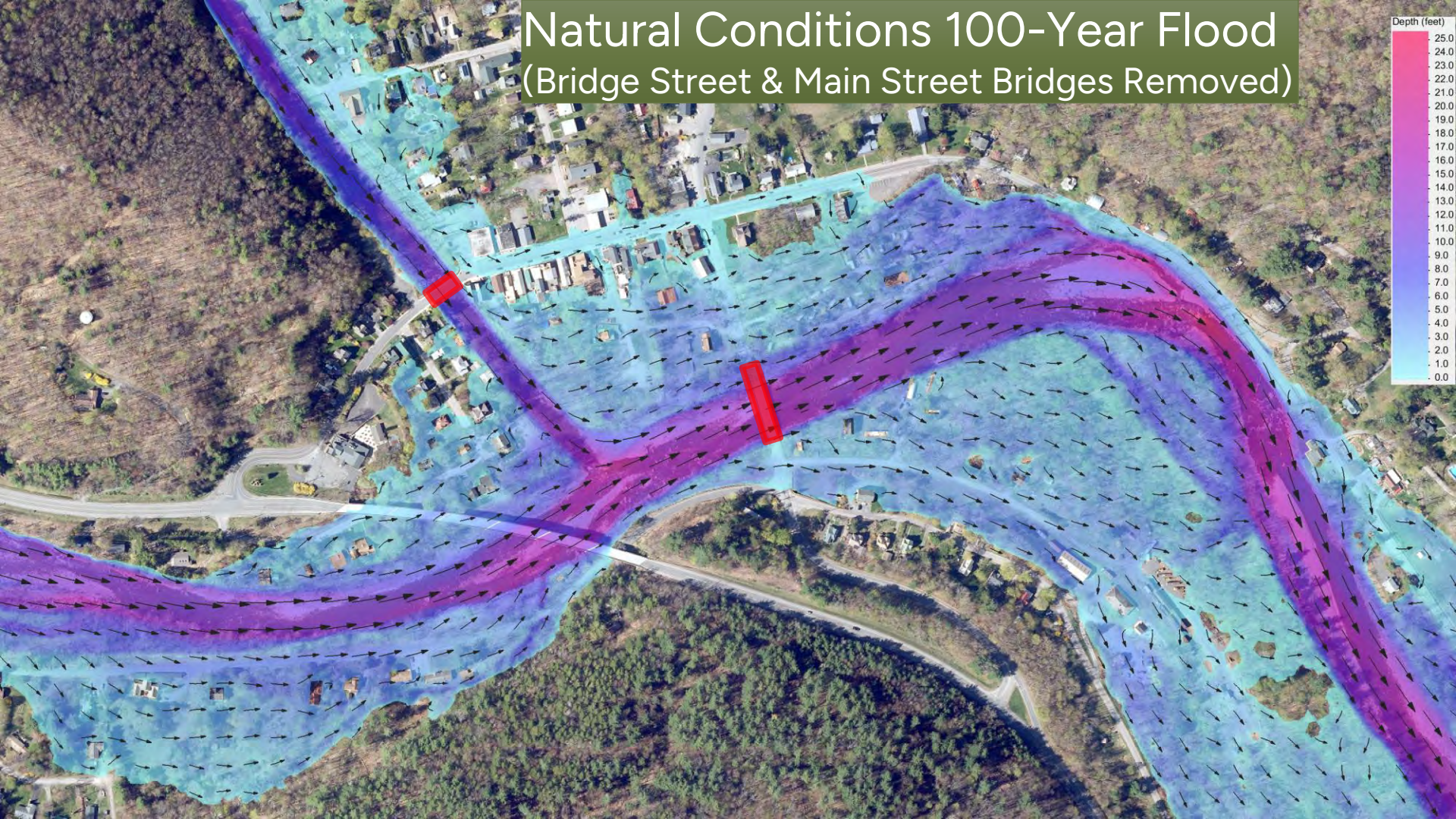
- Can facilitate hydraulically-adequate replacement of Main Street bridge (NY-214)
- Can alleviate much of the flooding in downtown Phoenicia caused by Stony Clove Creek
- Disturbance to private properties; building removals



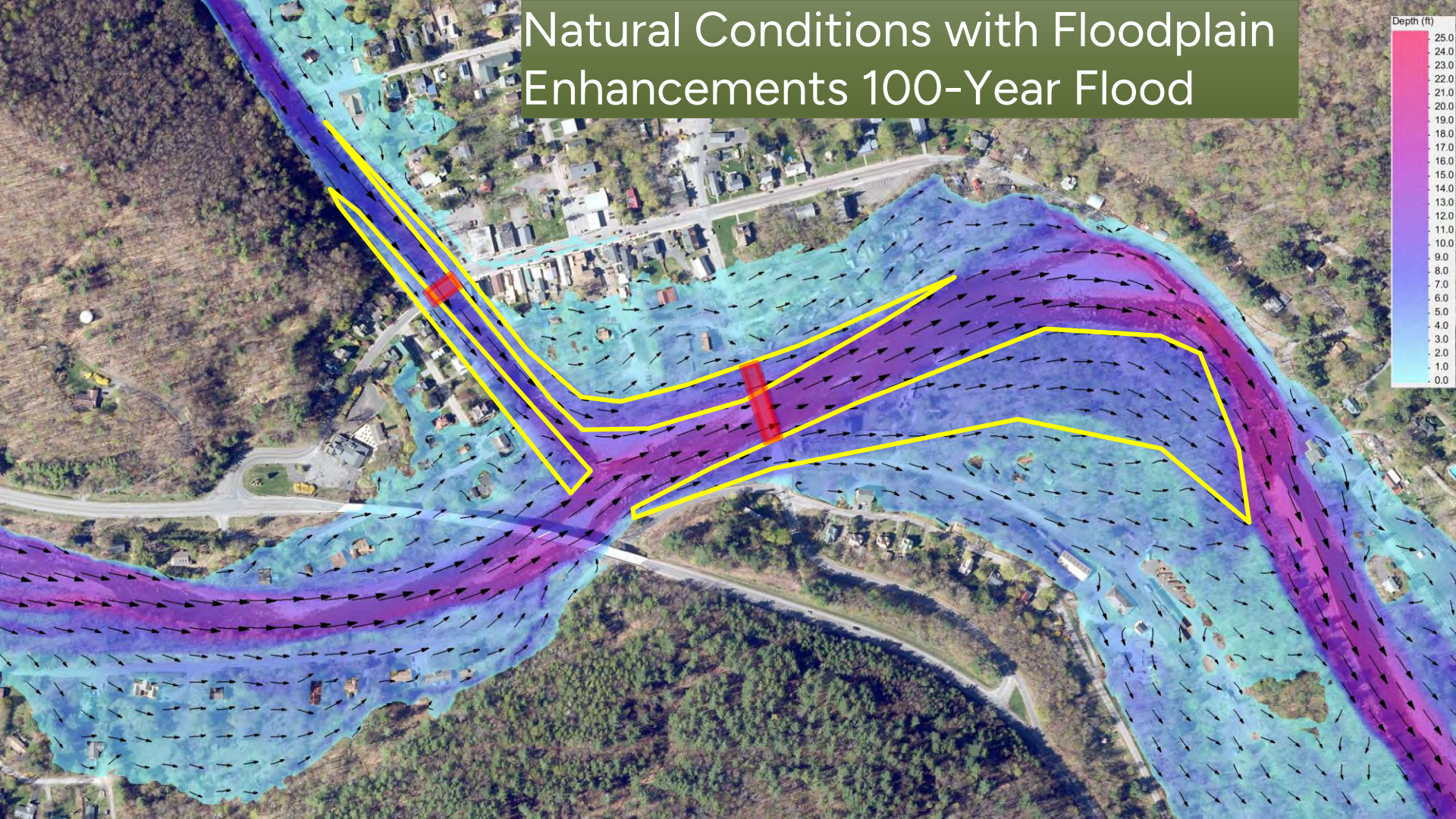
Existing Conditions 100-Year Flood



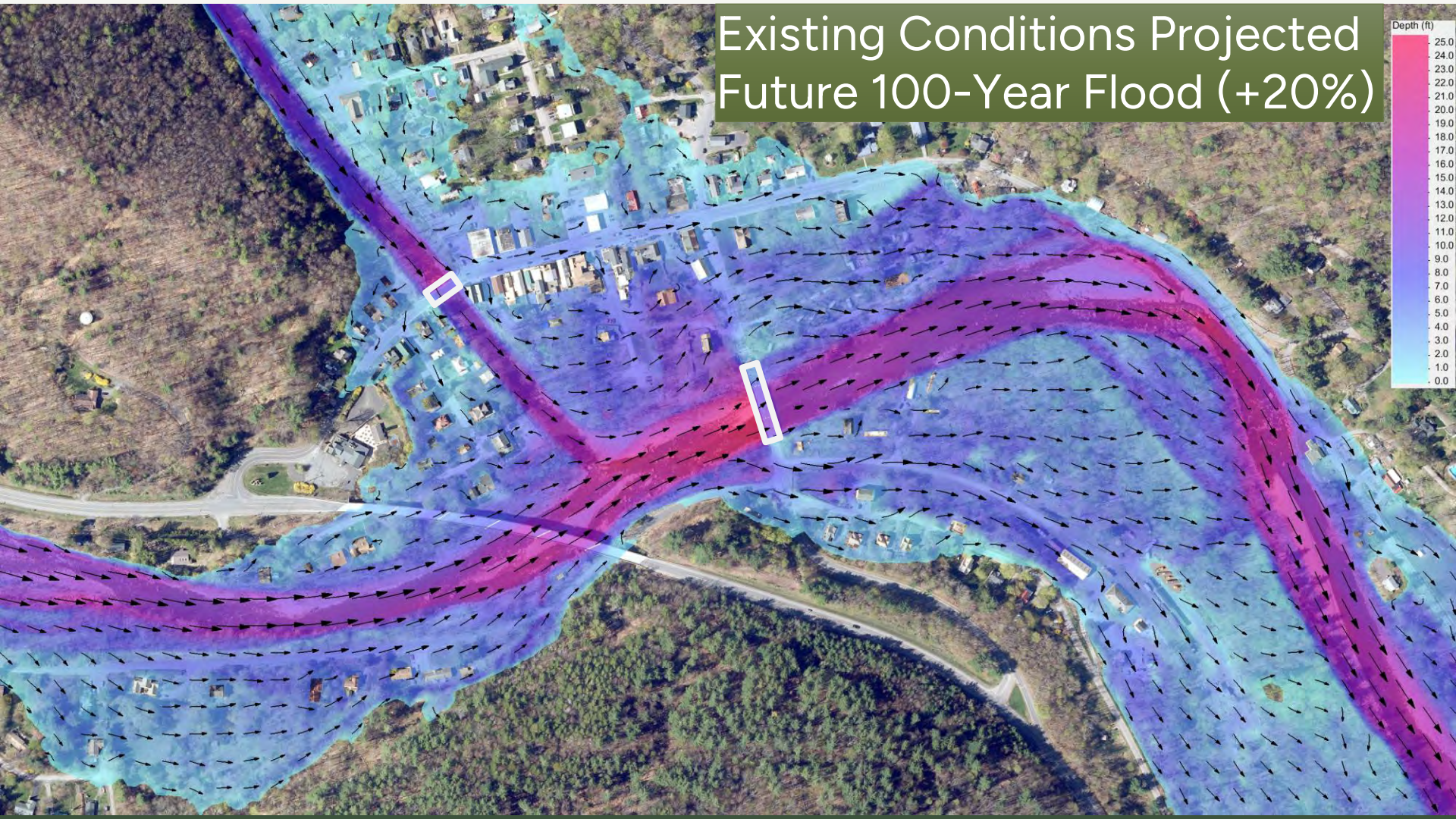
Natural Conditions 100-Year Flood (Bridge Street & Main Street Bridges Removed)



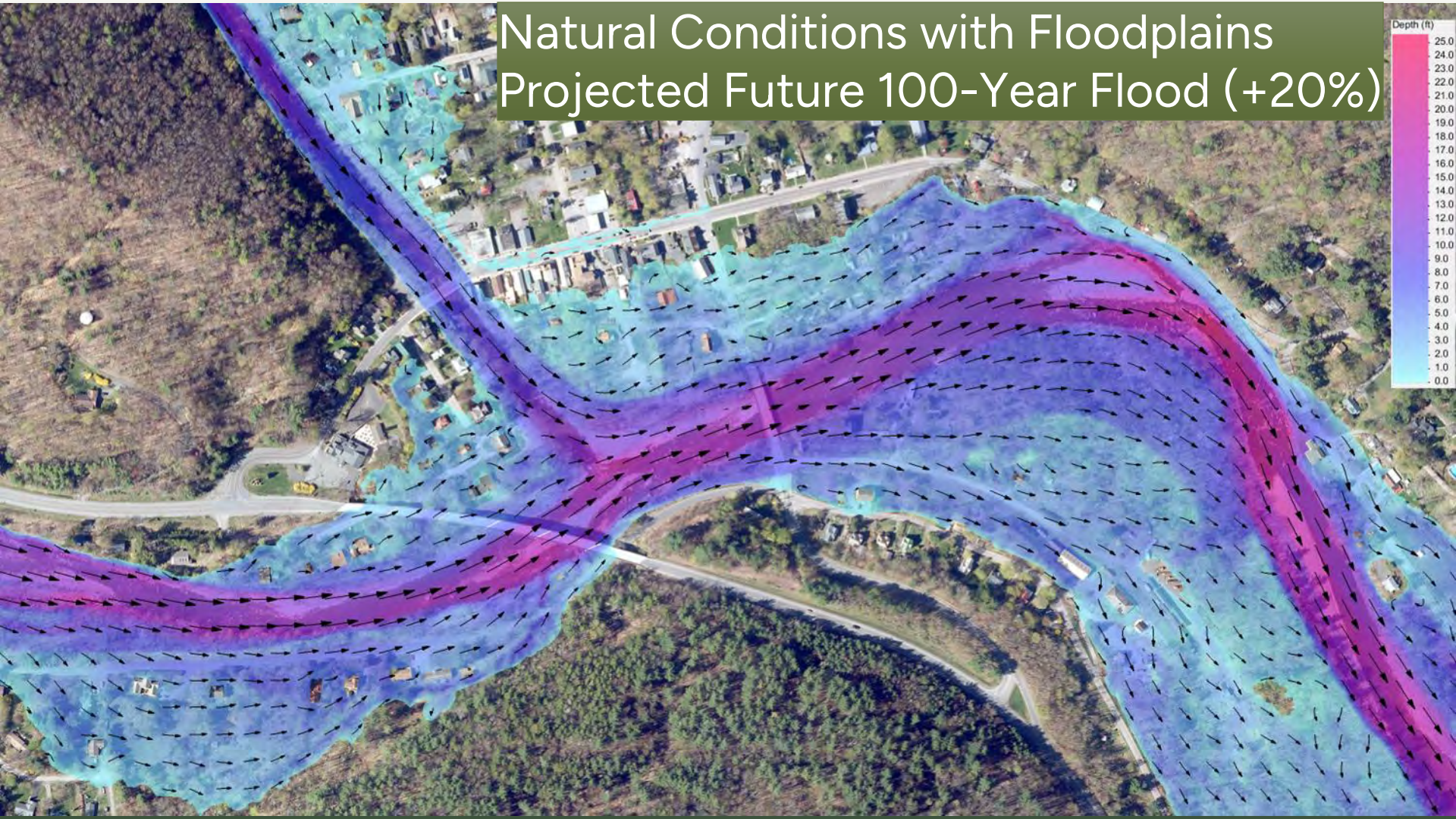
Natural Conditions with Floodplain Enhancements 100-Year Flood



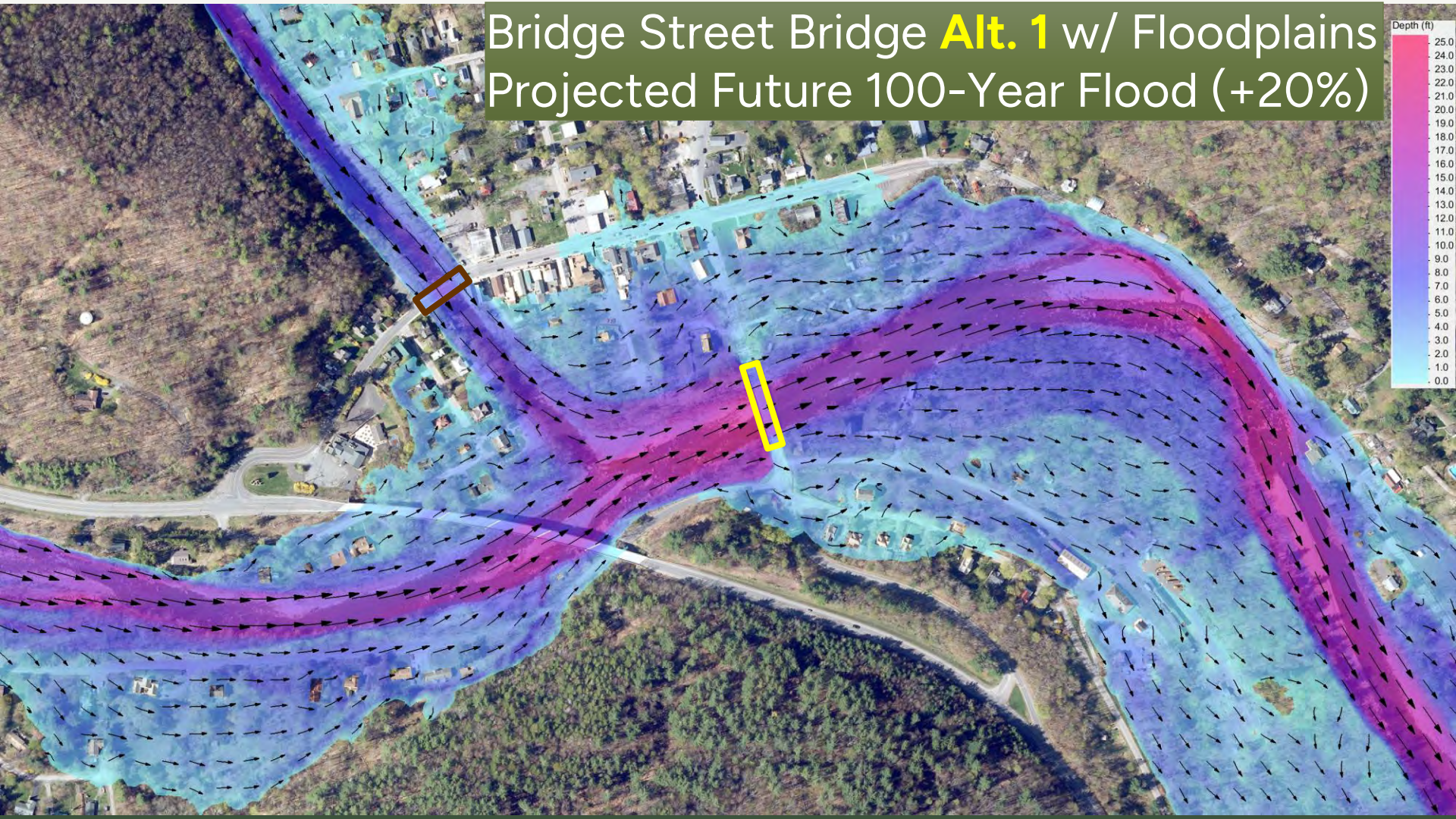
Existing Conditions Projected Future 100-Year Flood (+20%)



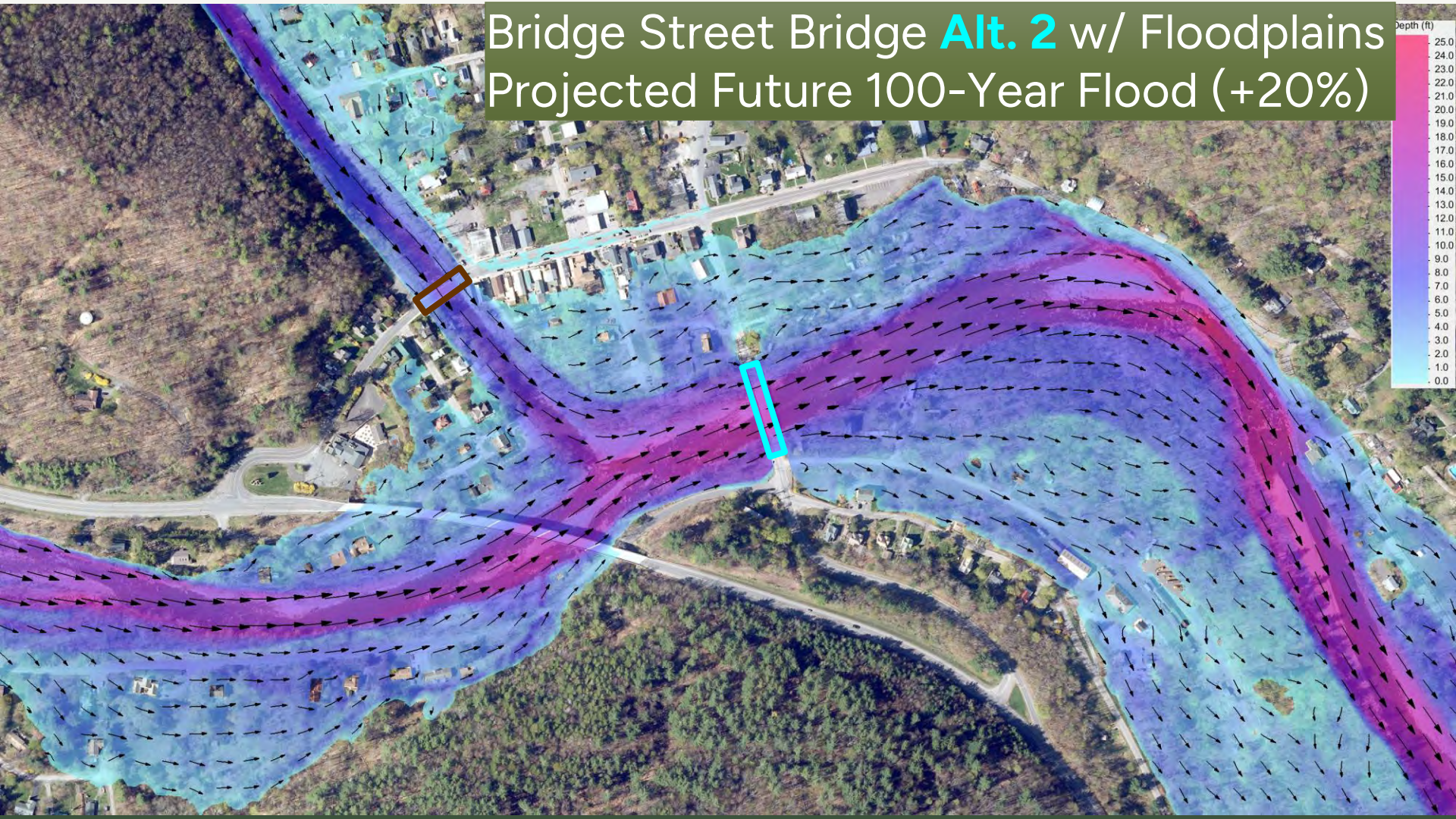
Natural Conditions with Floodplains Projected Future 100-Year Flood (+20%)



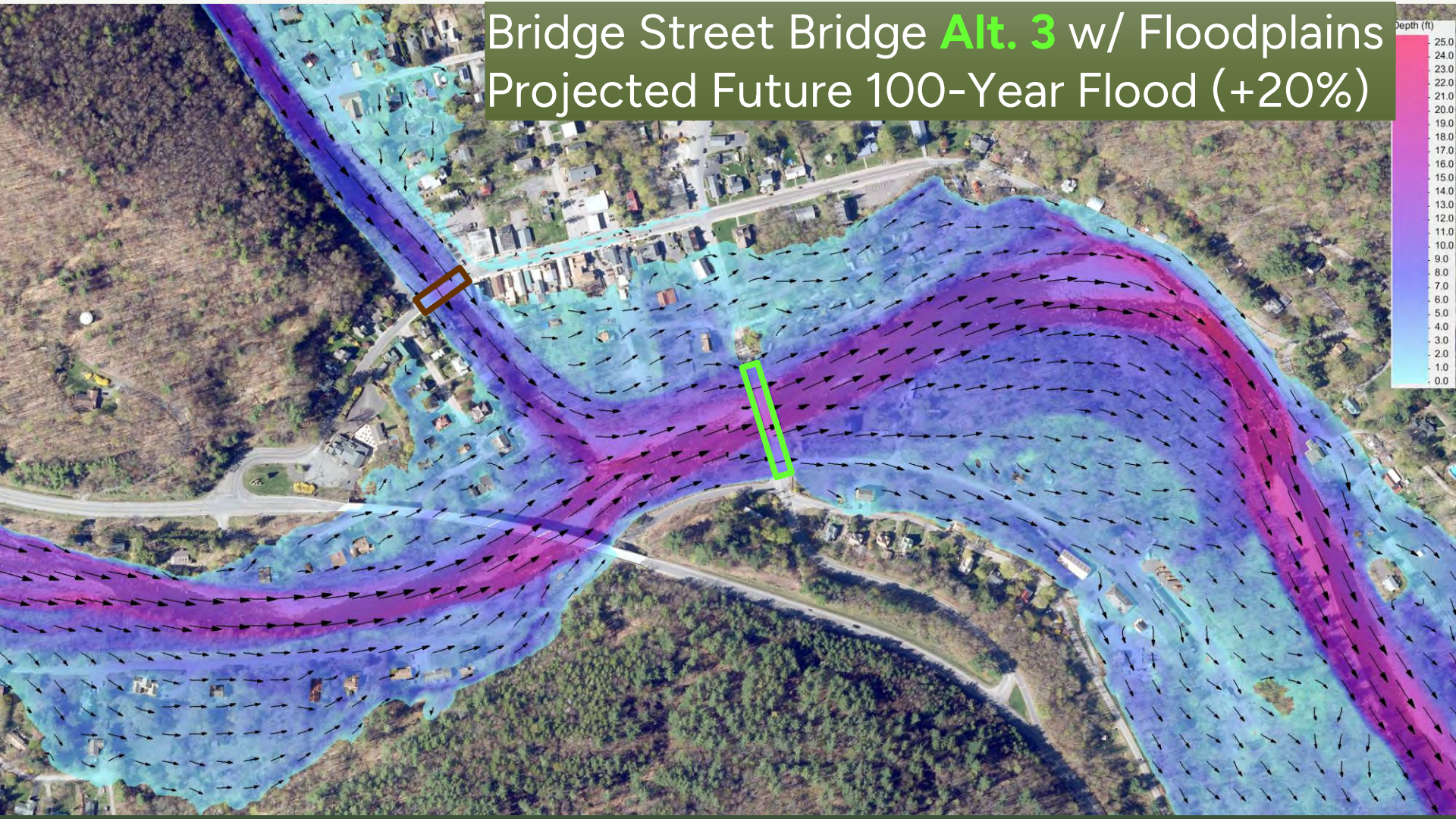
Bridge Street Bridge **Alt. 1** w/ Floodplains Projected Future 100-Year Flood (+20%)



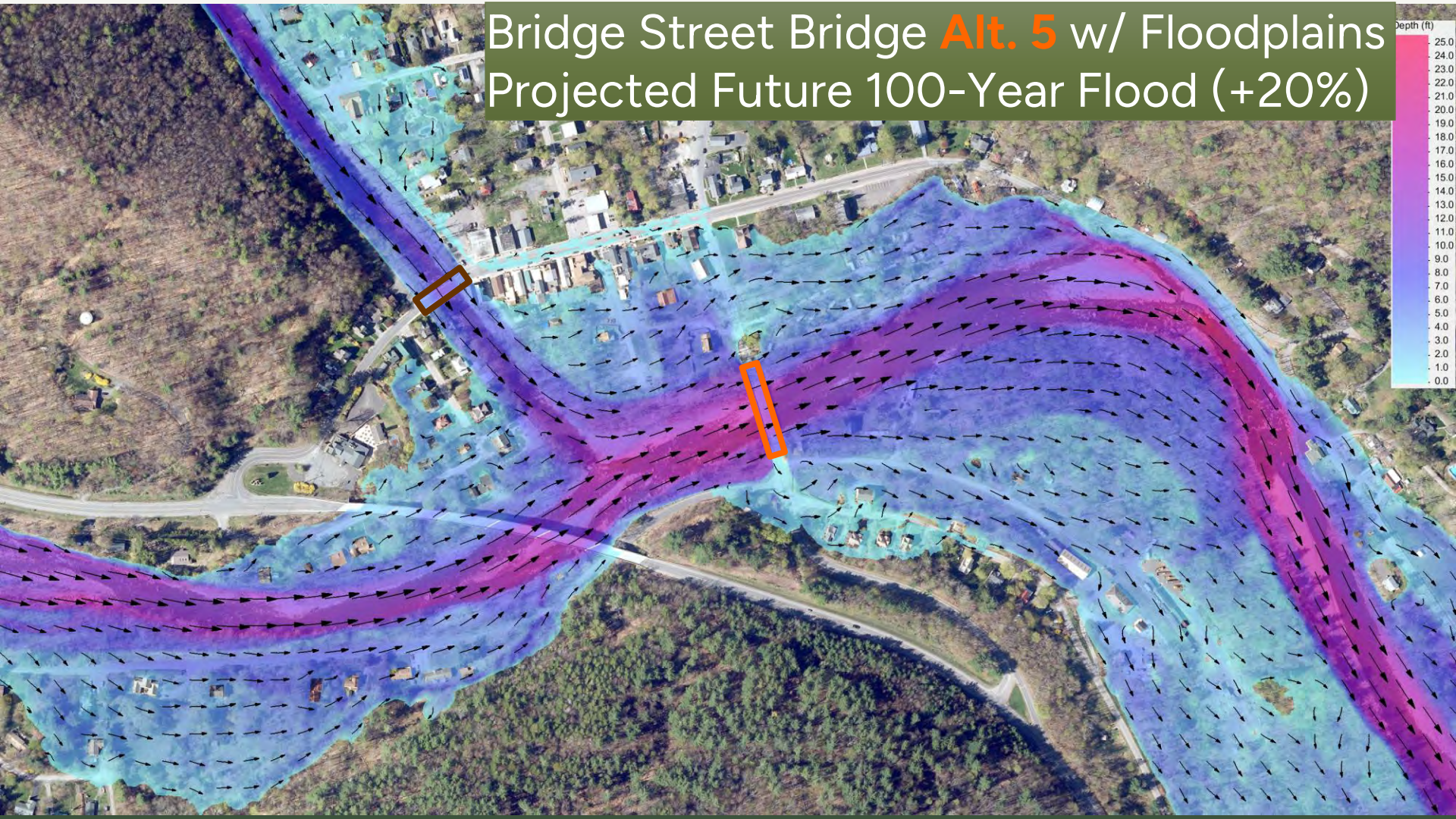
Bridge Street Bridge **Alt. 2** w/ Floodplains Projected Future 100-Year Flood (+20%)



Bridge Street Bridge **Alt. 3** w/ Floodplains Projected Future 100-Year Flood (+20%)



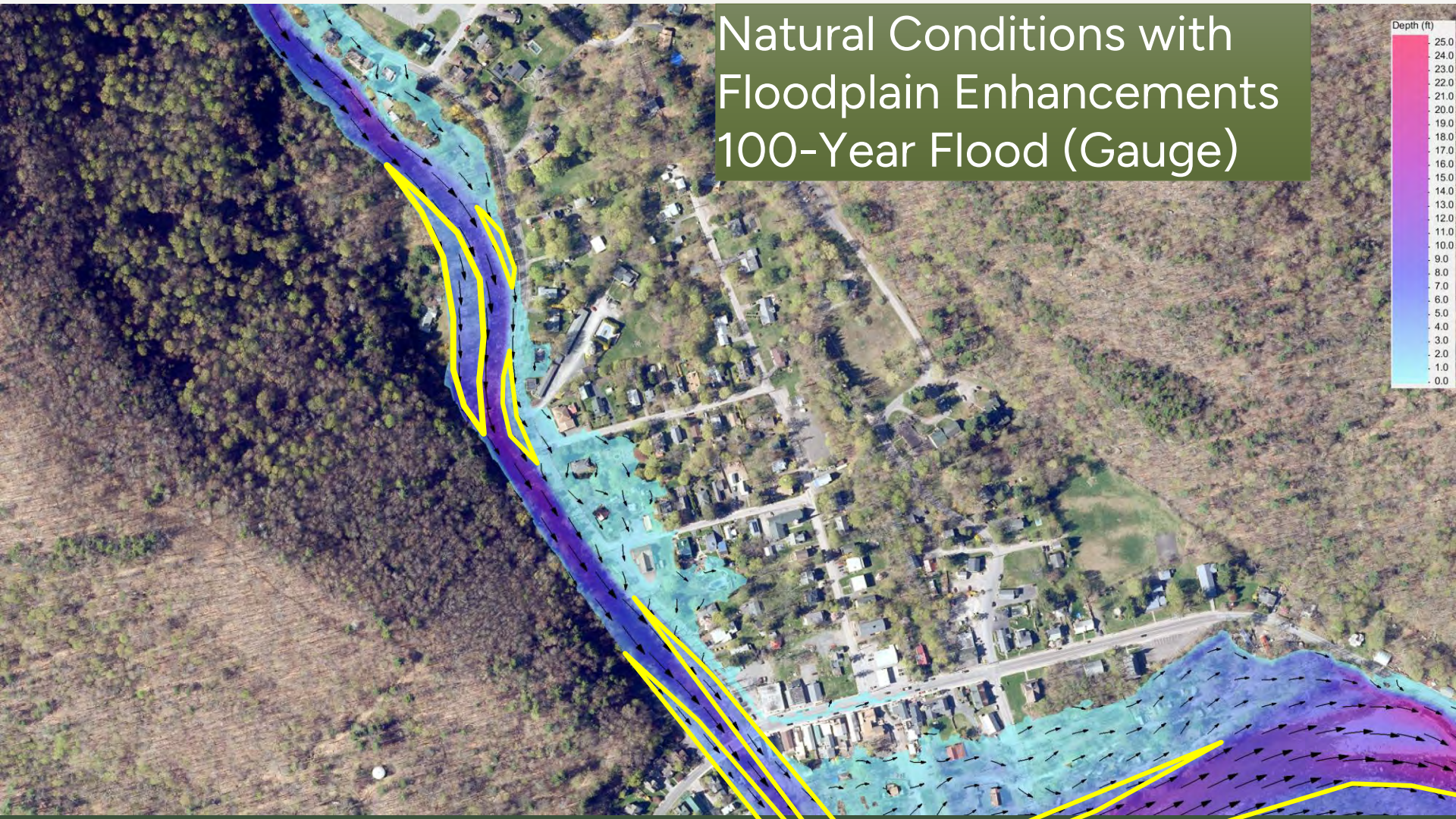
Bridge Street Bridge **Alt. 5** w/ Floodplains Projected Future 100-Year Flood (+20%)



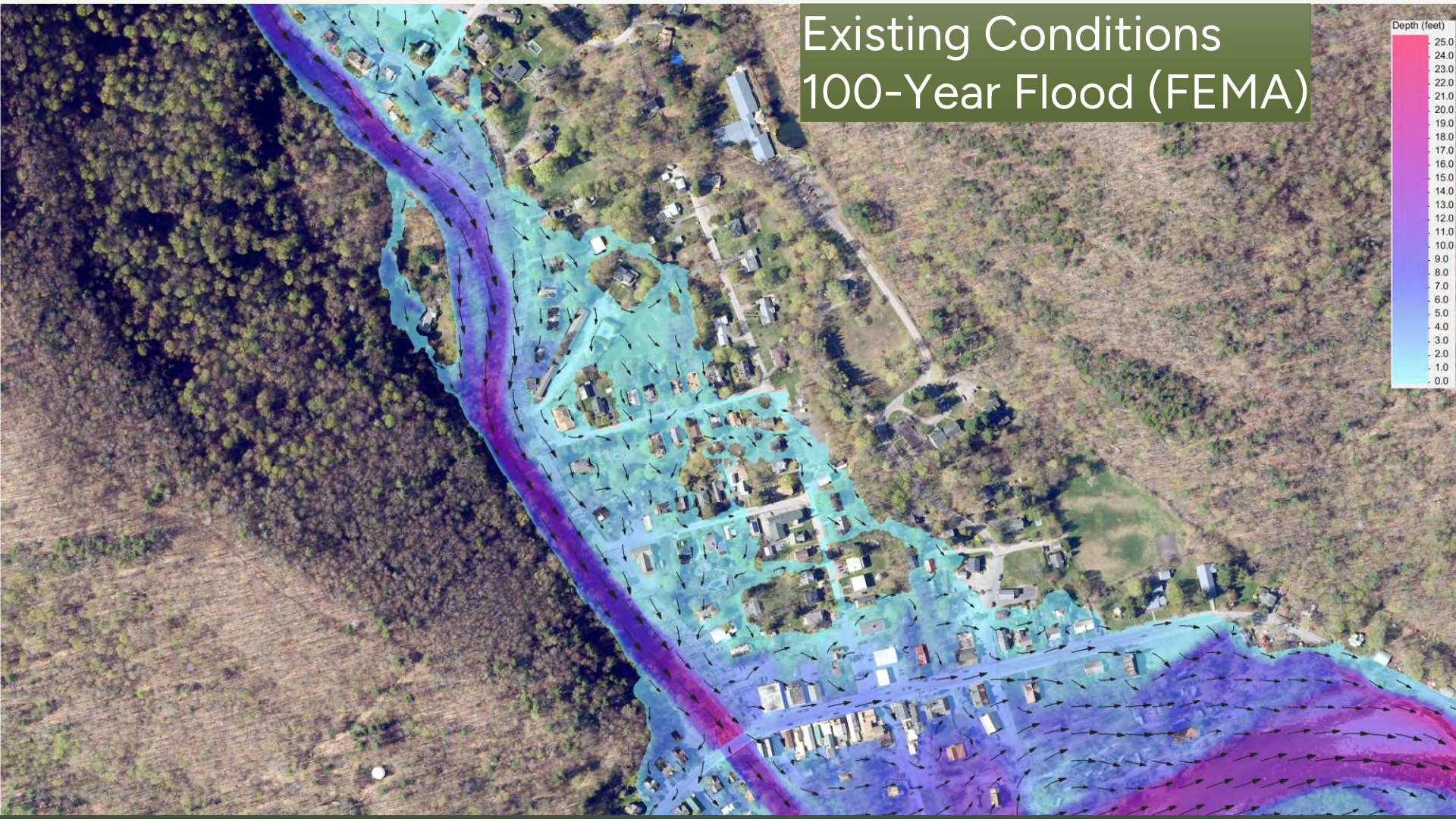
Existing Conditions 100-Year Flood (Gauge)



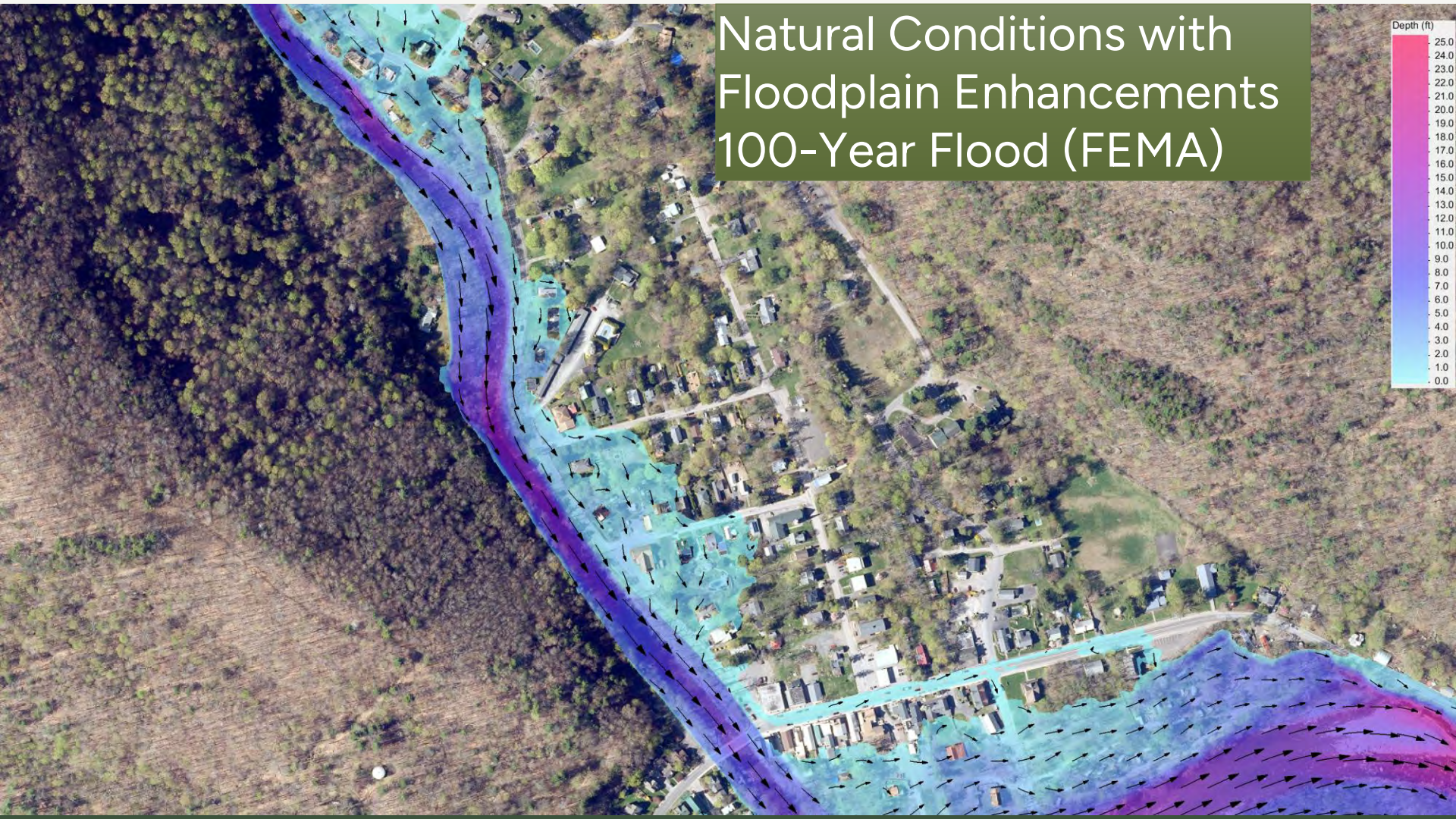
Natural Conditions with Floodplain Enhancements 100-Year Flood (Gauge)

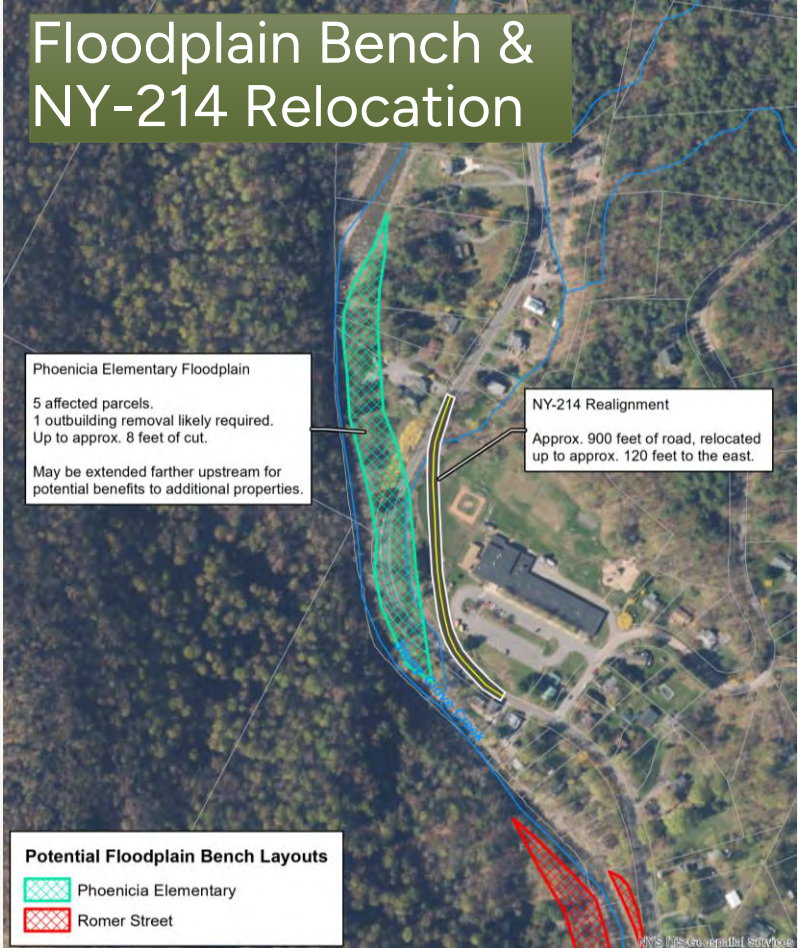


Existing Conditions 100-Year Flood (FEMA)

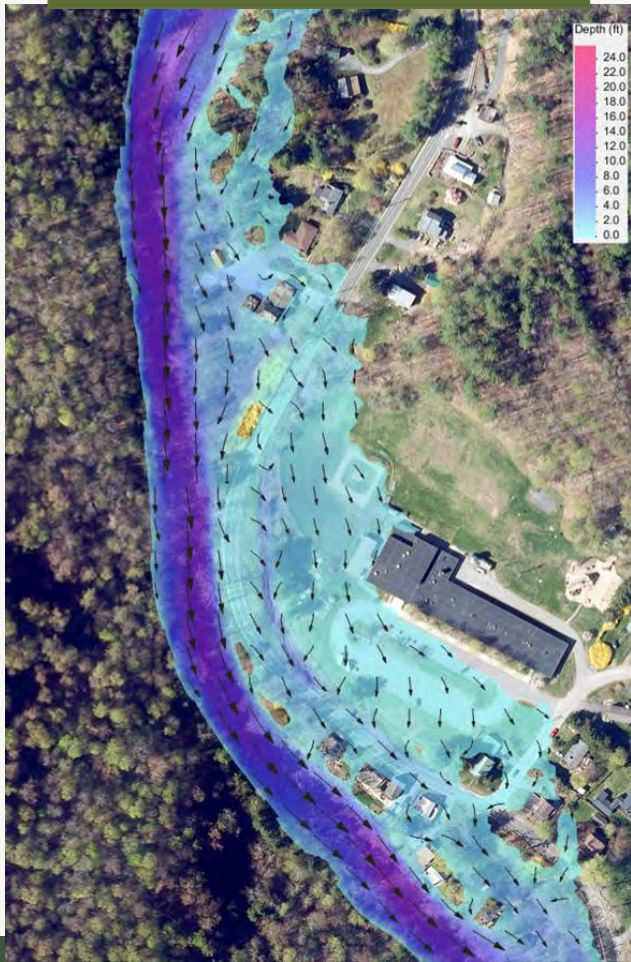


Natural Conditions with Floodplain Enhancements 100-Year Flood (FEMA)





Existing 100-Year
Flood (FEMA)



Swale Enhancement
& NY-214 Bridge



Floodplain Bench &
NY-214 Relocation





Do you
have any
questions?



Making
Sustainability
Happen

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