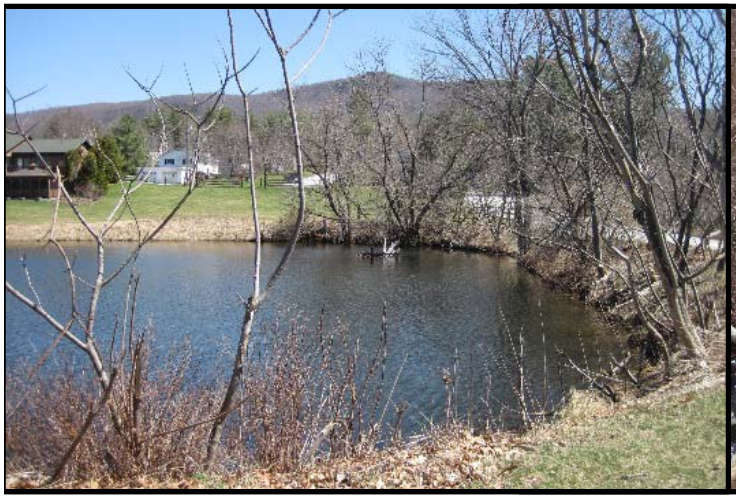
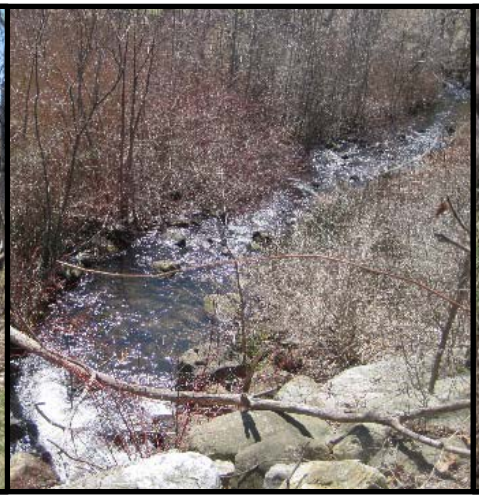
MILONE & MACBROOM

Public Meeting #2

Moon Brook Pond Modification Project

City of Rutland I February 23, 2017

Agenda

7:00 – 7:10	Piedmont Pond – Welcome and introductions
7:10 – 7:20	Piedmont Pond – Review values and objectives
7:20 – 8:00	Piedmont Pond – Vote on alternatives
8:00 – 8:10	Combination Pond – Welcome and introductions
8:10 – 8:20	Combination Pond – Review values and objectives
8:20 – 9:00	Combination Pond – Vote on alternatives

Public Meetings

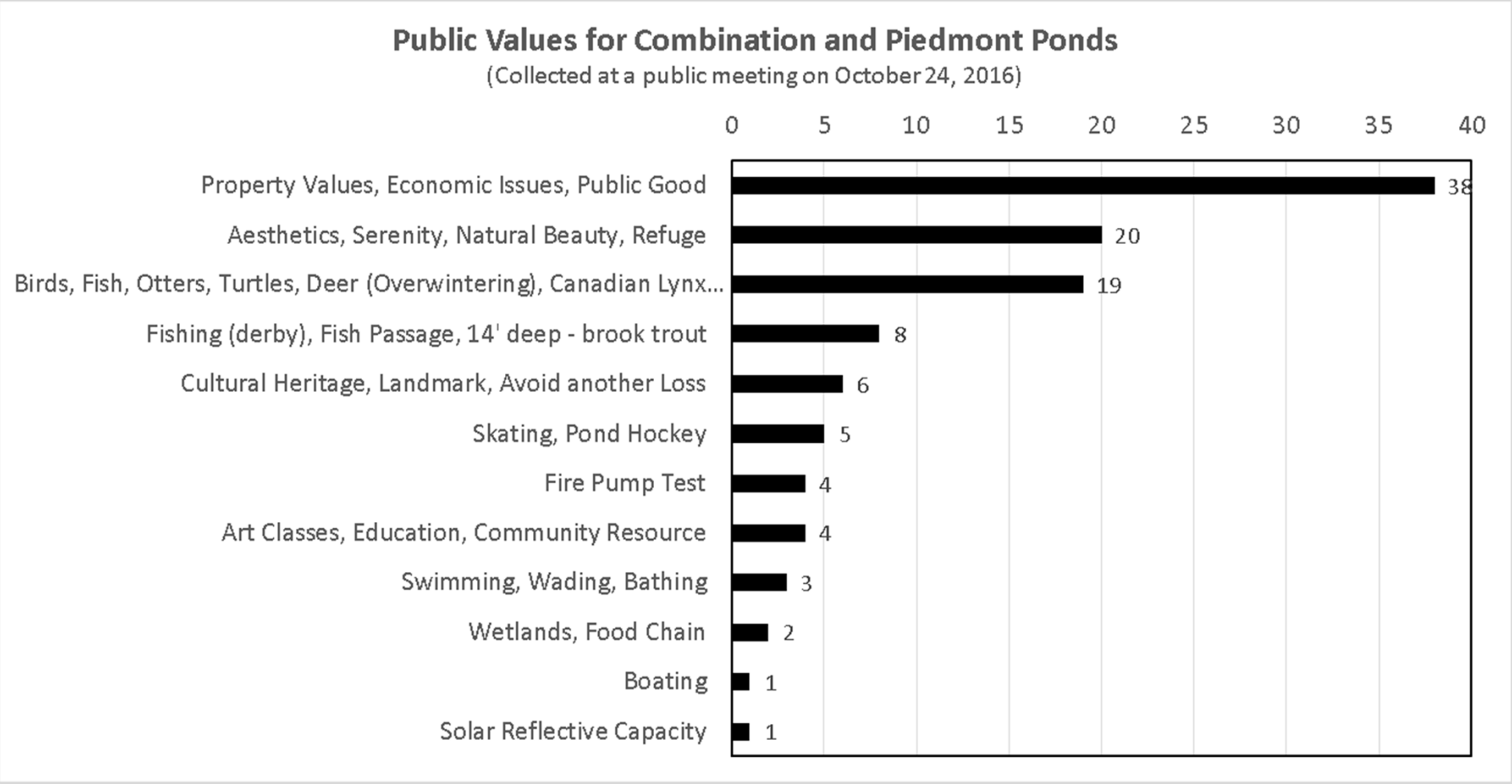
- Meeting #1. Introductions, values, and initial information exchange.
- Meeting #2. Review values and objectives. Discuss alternatives and preferences. Select options for ANR to model.
- Meeting #3. Alternatives analysis feedback. Select a preferred alternative to develop visualizations and concept design.
- Meeting #4. Present photo-simulations and concept design. Seek consensus on a preferred alternative to advance design.
- Meeting #5. Design review.

Staying Involved

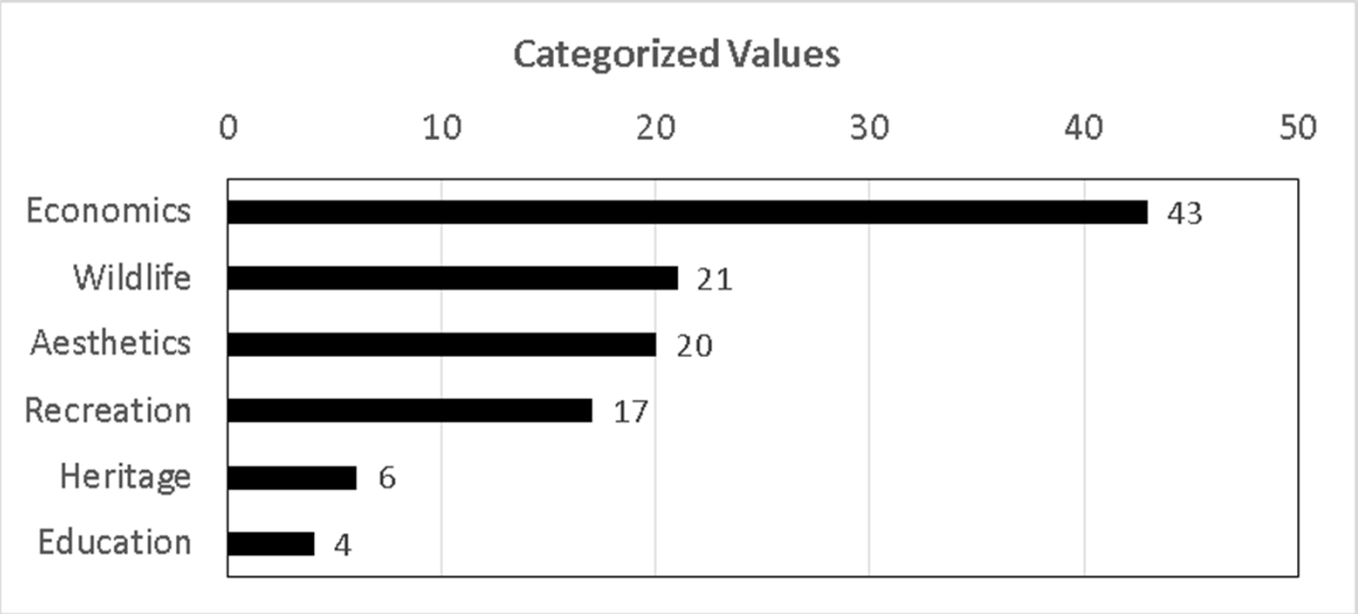
1. Attend public meetings.
2. Share information.
3. Request individual meetings.
4. Help reach consensus.
5. Follow information on website.

www.rutlandcity.org/ponds

Landowner Values



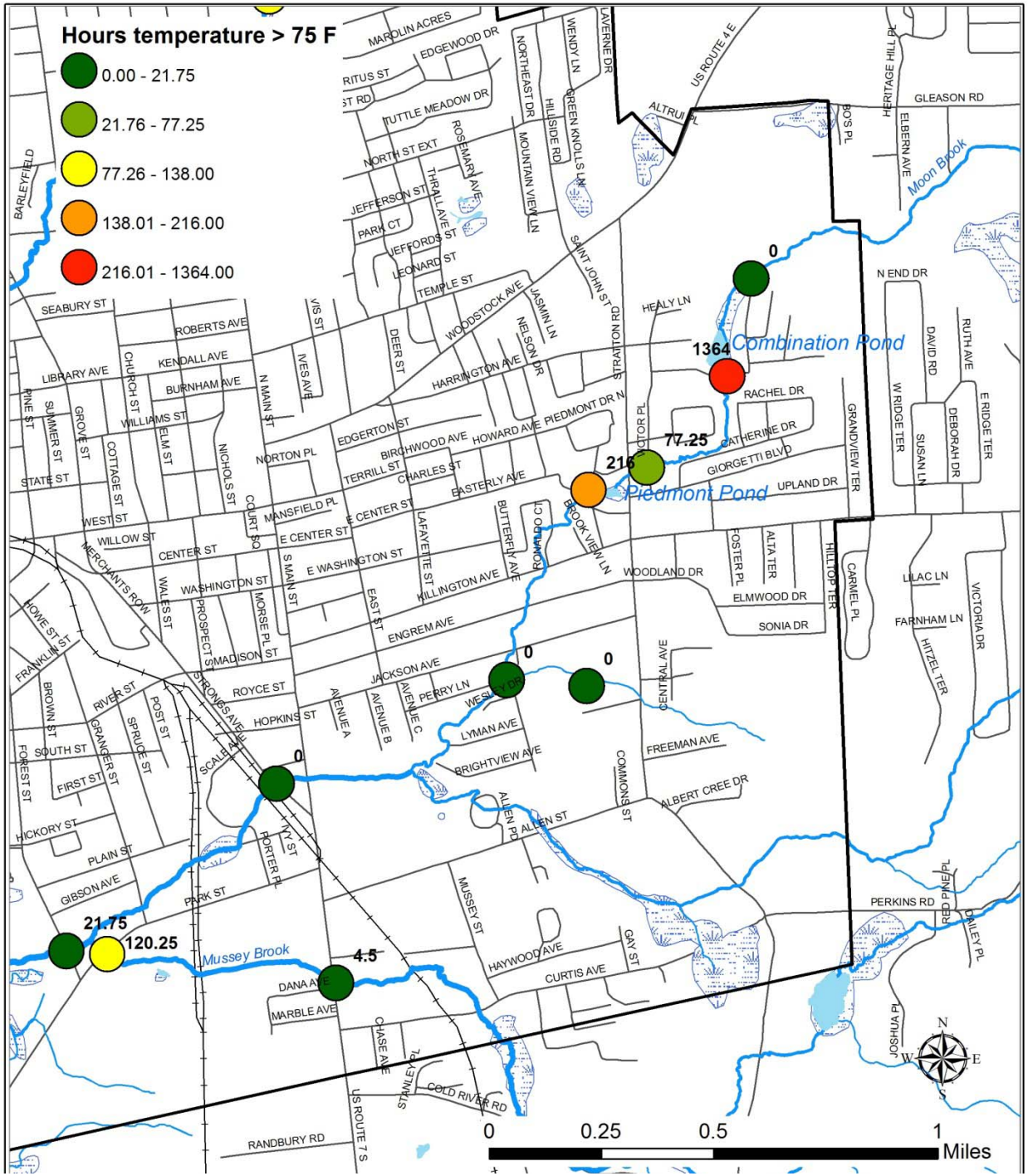
Landowner Values



Key Project Requirements

1. Improve Moon Brook water quality.
2. Improve dam safety.
3. Treat stormwater runoff
4. Start construction by October 1, 2018.
5. Create an insurable setting.
6. Reduce financial exposure of City and taxpayers.

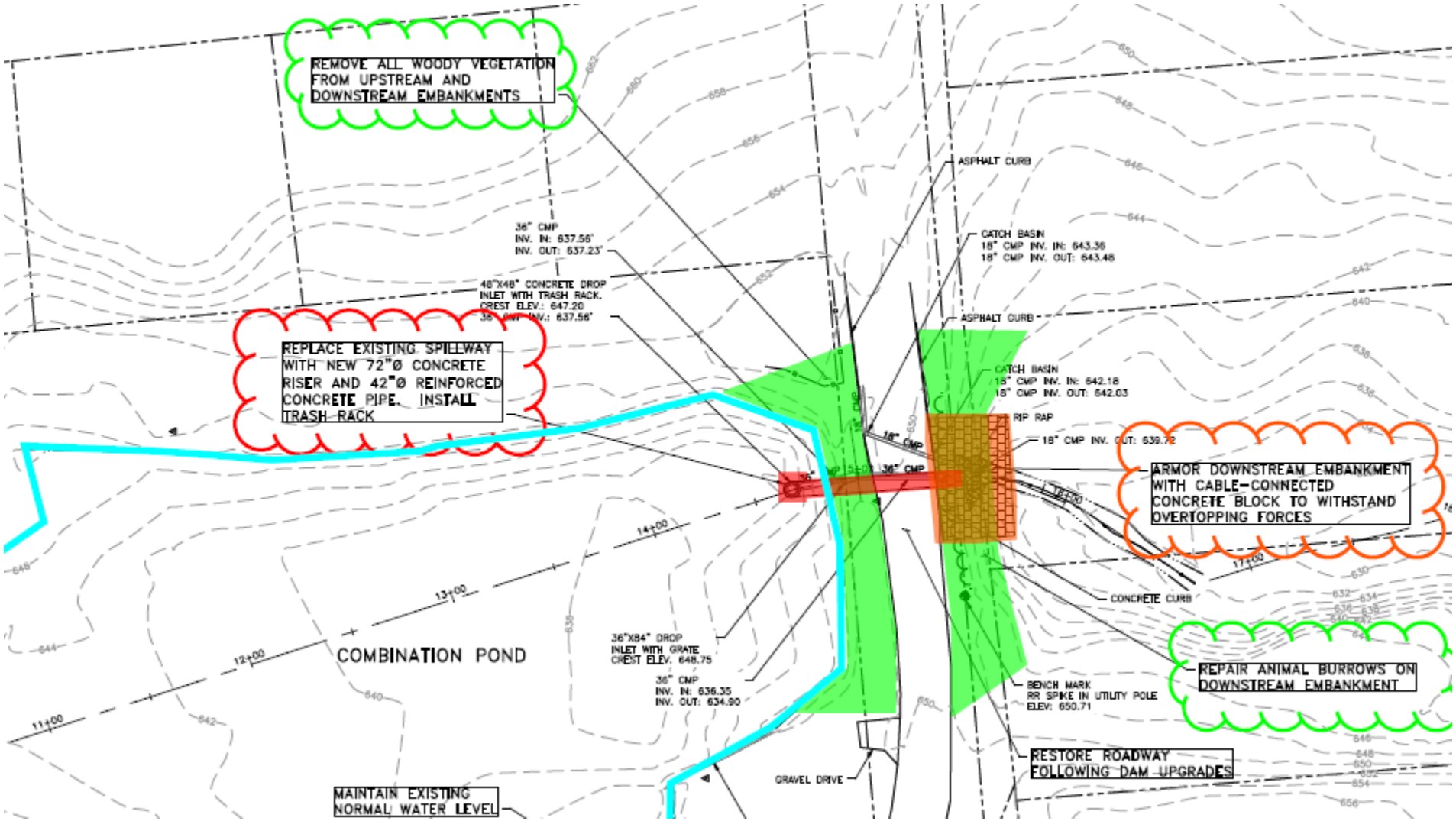
2016 Water Quality Data



List of Alternatives – Combination Pond

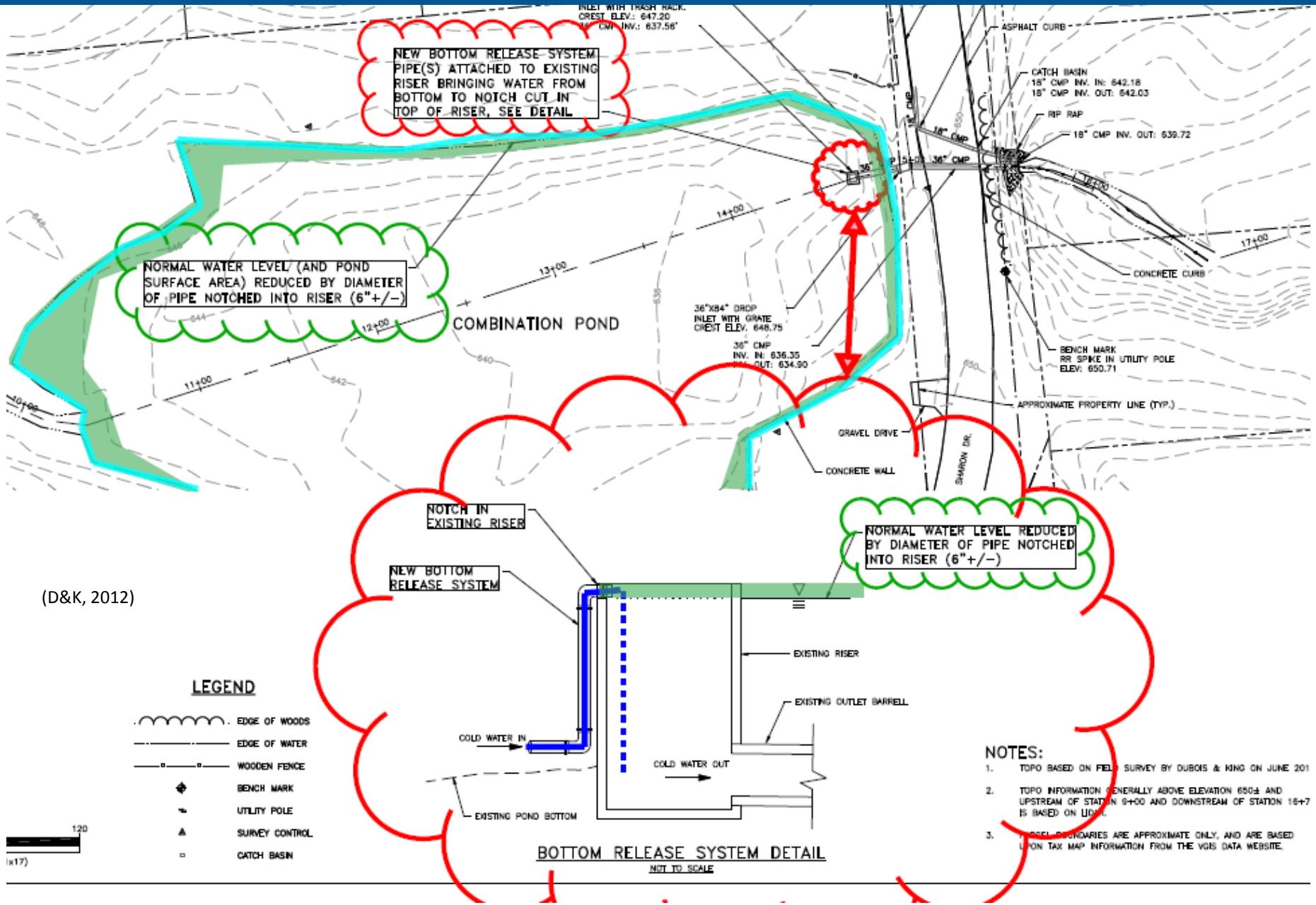
ID	Alternative	NOTES
A	No action - maintain existing conditions	Not possible given court order to meet water quality thresholds and the need to improve dam safety.
B	Dredge pond sediment	Suggested by some to remove accumulated bottom sediment. Reported 2 feet to remove.
C	Increase spillway flow capacity and armor downstream slope of embankment	Needed to improve dam safety.
D	Perform dam maintenance (Clear vegetation, patch embankment, replace trash rack)	This maintenance is needed to improve current dam safety.
E	Existing outlet retrofit to mix colder bottom water with surface water outflow	Depends on temperature profile over year. Could drop oxygen levels? Could increase Fe, Mn, or other metals? -ANR Temperature may not be low enough at bottom?
F	Create new bottom-release outlet structure	Depends on temperature profile over year. Could drop oxygen levels? Could increase Fe, Mn, or other metals? -ANR
G	Lower pond level 2 feet, plant buffer	Pond elevation to 645. L: 430' to 410'. W: 260' to 225'. D: 9' to 7'.
H	Lower pond level 4 feet, plant buffer	Pond elevation to 643. L: 430' to 340'. W: 260' to 180'. D: 9' to 5'.
I	Lower pond level 6 feet, plant buffer	Pond elevation to 641. L: 430' to 280'. W: 260' to 150'. D: 9' to 3'.
J	Restore flowing stream and adjacent wetlands by dam removal	Best for dam safety and water quality. Large change at site and lose values associated with pond.
K	Create bypass channel	May lead to stagnant pond water and aesthetic impacts.
L	Install bypass pipe	May lead to stagnant pond water.
M	Groundwater mixing	Flow rates and temperature currently unknown.
N	Change pond level over year	Drop water level in summer low flow.
O	Create island with shade trees	Buffer plantings with view windows.

Alternative C, D – Update Dam



(D&K, 2012)

Alternative E, F – Release Bottom Water



(D&K, 2012)

Alternative G, H, I – Lower Water Level

Pond Level		L_{max}	W_{max}	D_{max}
647.2 (current)		430	260	9
645	(-2)	410	225	7
643	(-4)	340	180	5
641	(-6)	280	150	3

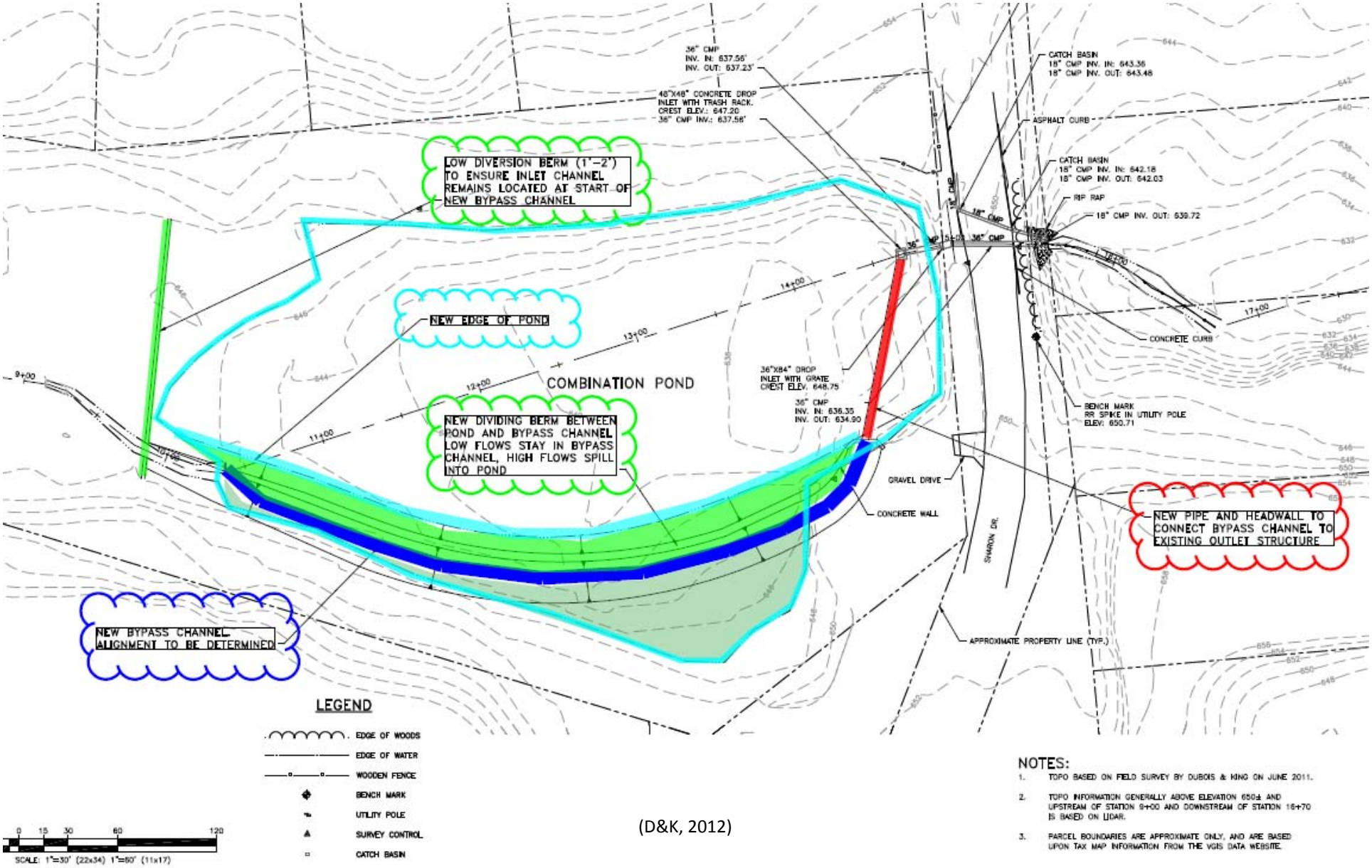
(feet)

Buffer Plantings

Limbed trees provide shade while maintaining lake views, privacy, & vegetation along both sides of the property

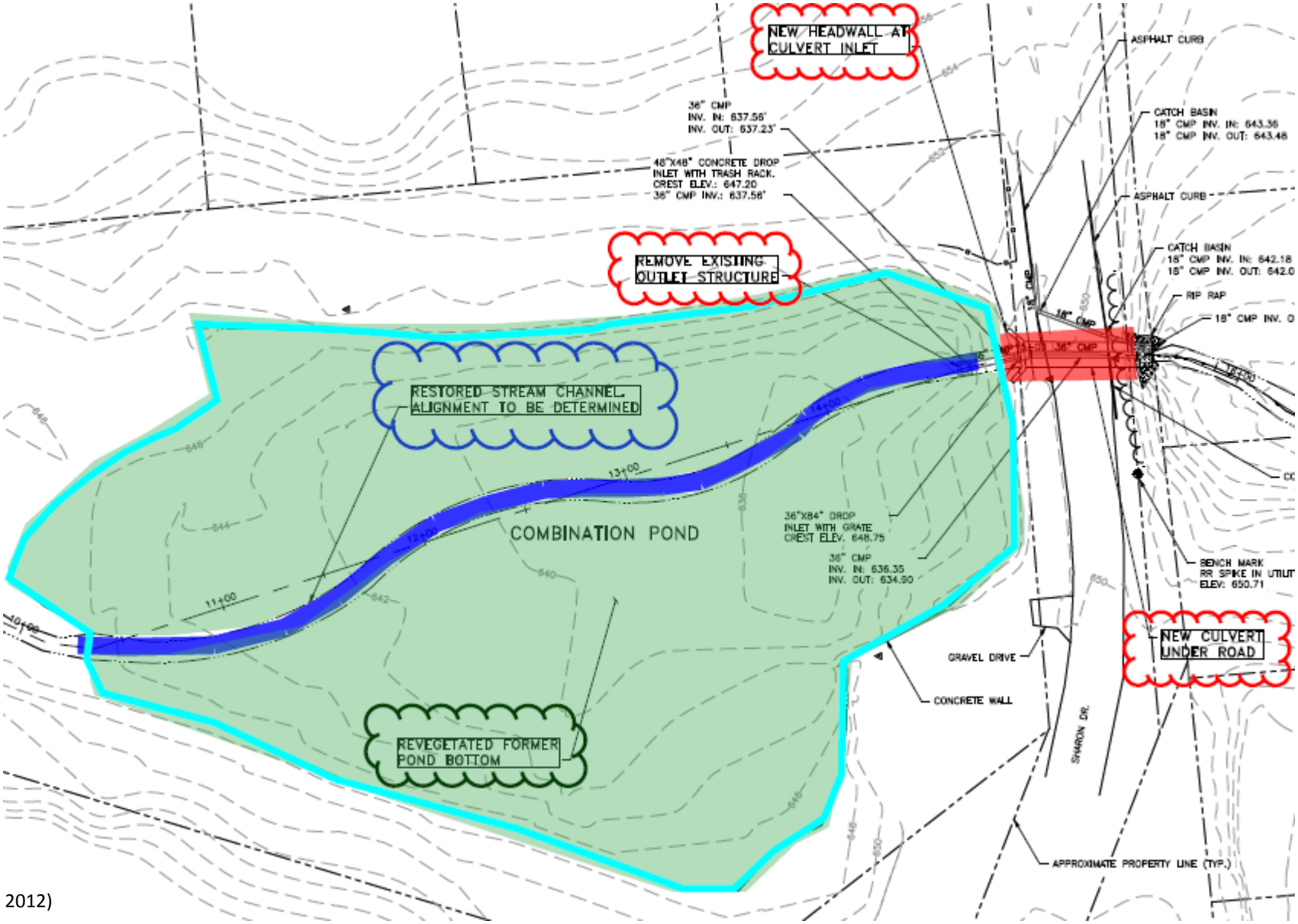
(MMI, 2014)

Alternative K – Bypass Channel



(D&K, 2012)

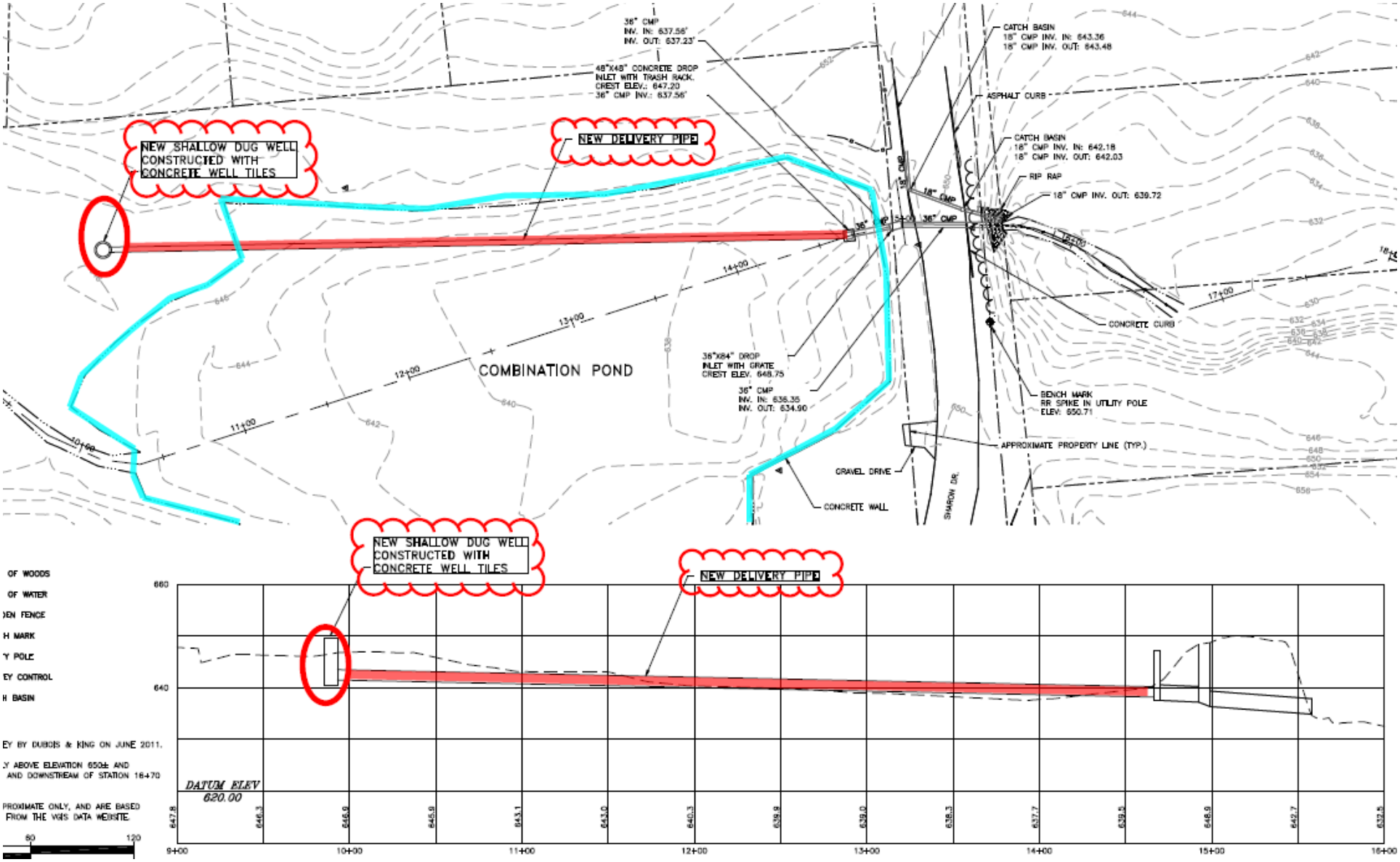
Alternative J – Remove Dam/Restore Stream



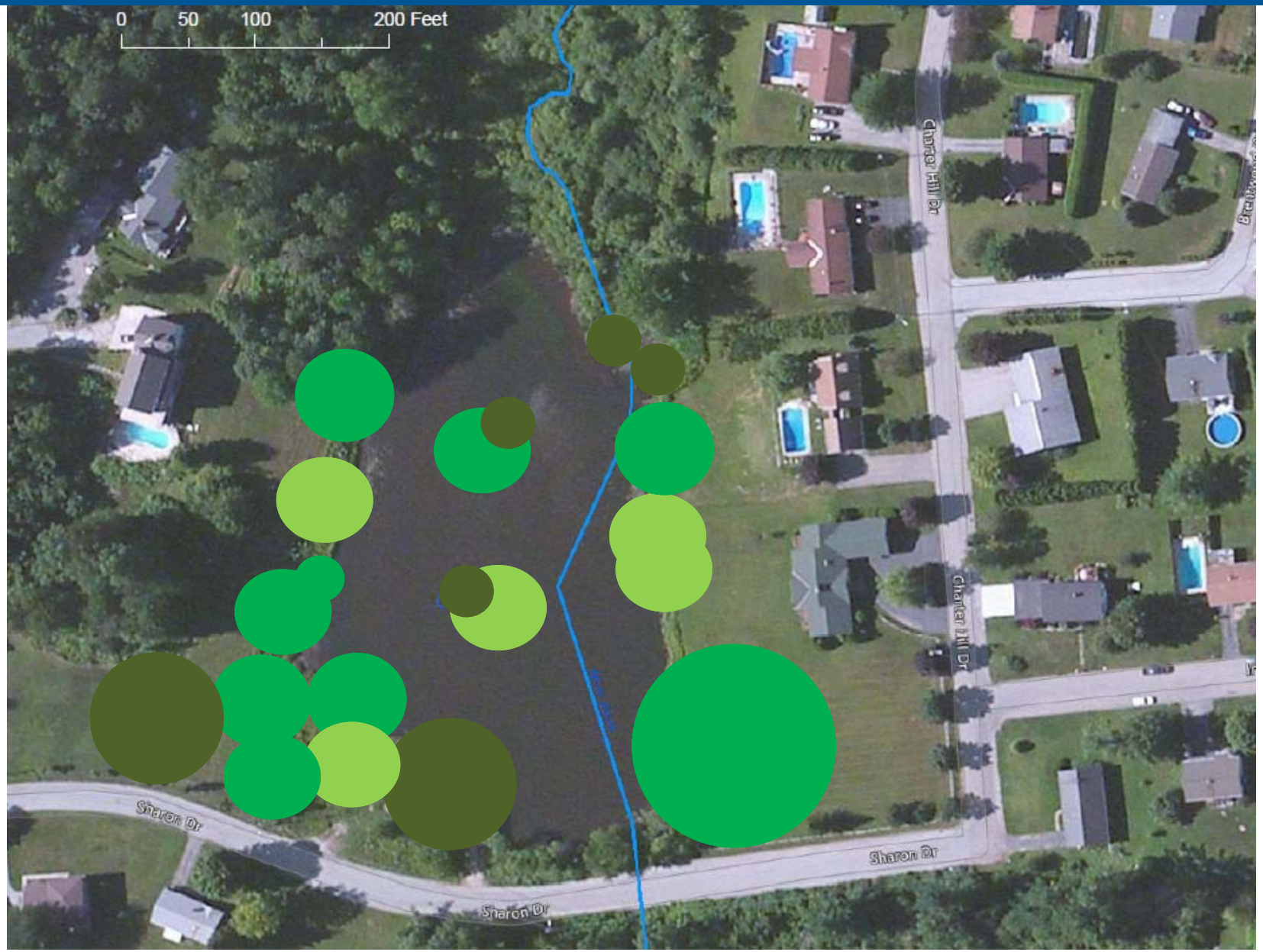
(D&K, 2012)

Alternative M – Groundwater Mixing

(D&K, 2012)



Alternative O – Islands / Buffer Plantings



What alternative do you prefer?

Email to Schedule Follow-up Discussions

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