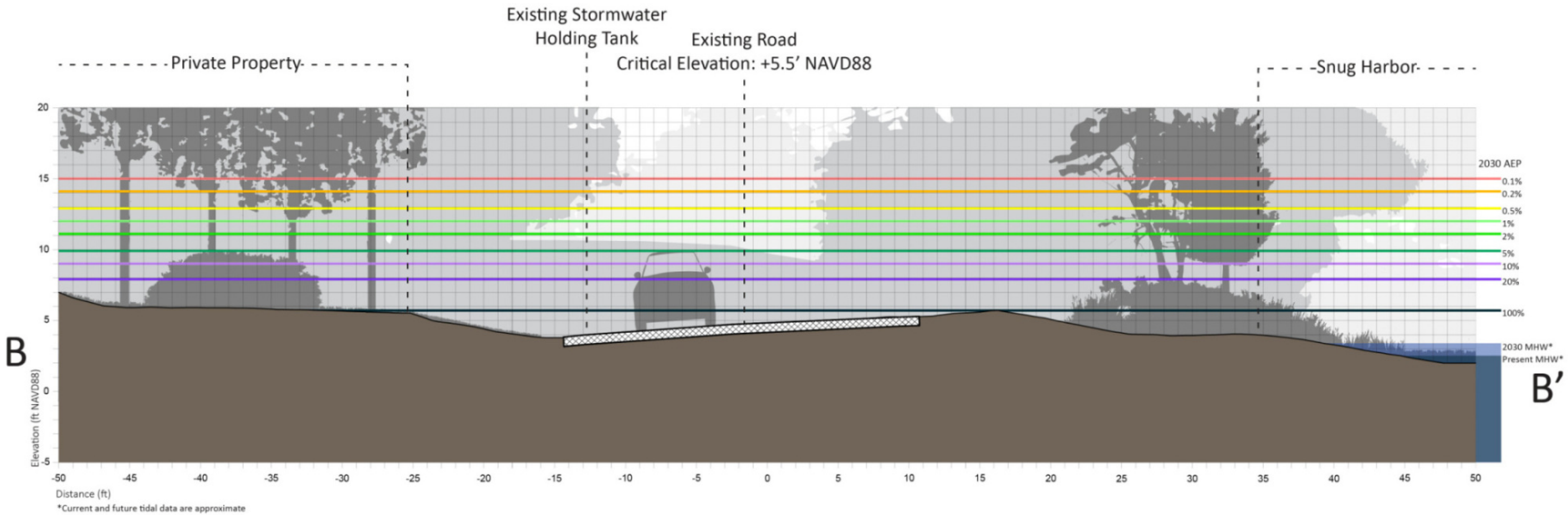


EXISTING CONDITIONS

Nashawena Street, Falmouth



EXISTING CONDITIONS

Nashawena Street, Falmouth

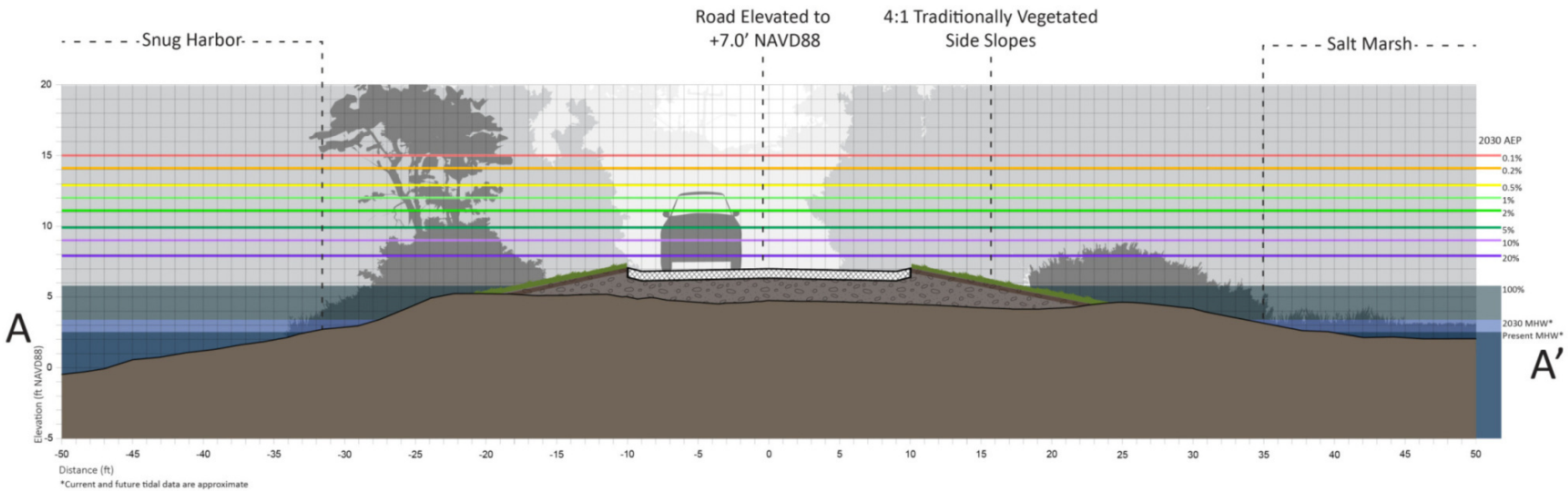


Note: Project overlap with wetland areas, rights of way and property lines is approximate and needs confirmation with a site survey



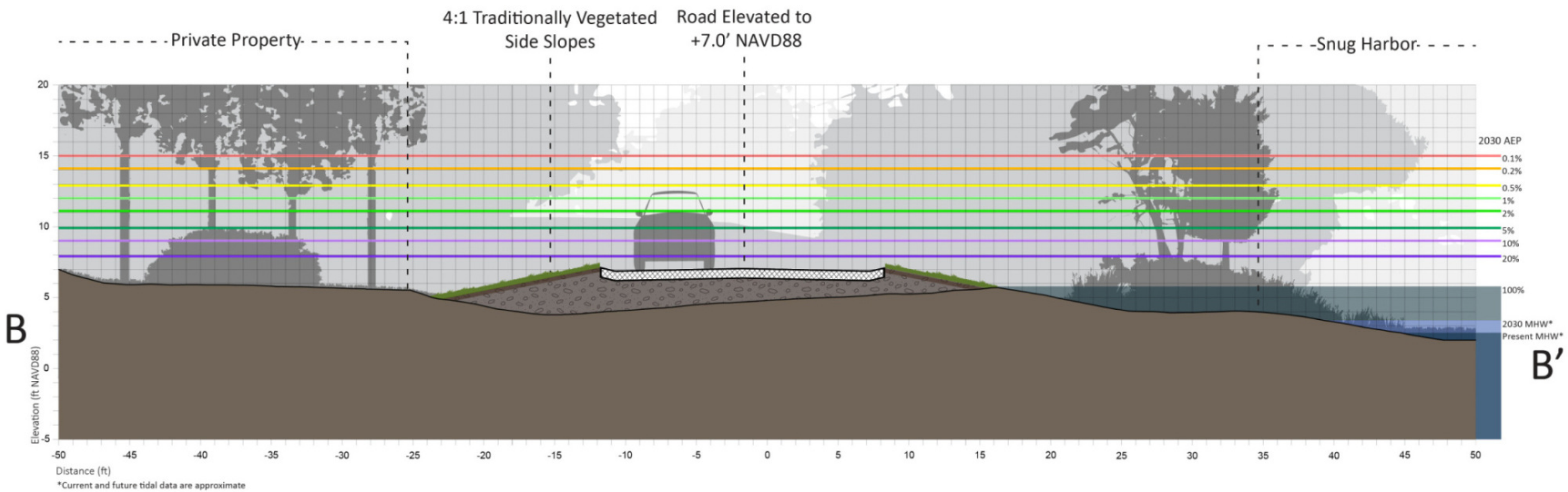
ALTERNATIVE 1: GRAY

1350 linear feet of town-owned road are elevated from a lowest point of +4.6' NAVD88 to a lowest point of +7.0' NAVD88 using 4:1 traditionally vegetated side slopes. The road layout is shifted eastward to take advantage of higher elevation areas already within the road layout. Short segments of sheet pile may be necessary to avoid impacts to wetlands. This elevation accommodates a variety of bank angles or a flat roadway.



ALTERNATIVE 1: GRAY

Nashawena Street, Falmouth



ALTERNATIVE 1: GRAY
 Nashawena Street, Falmouth

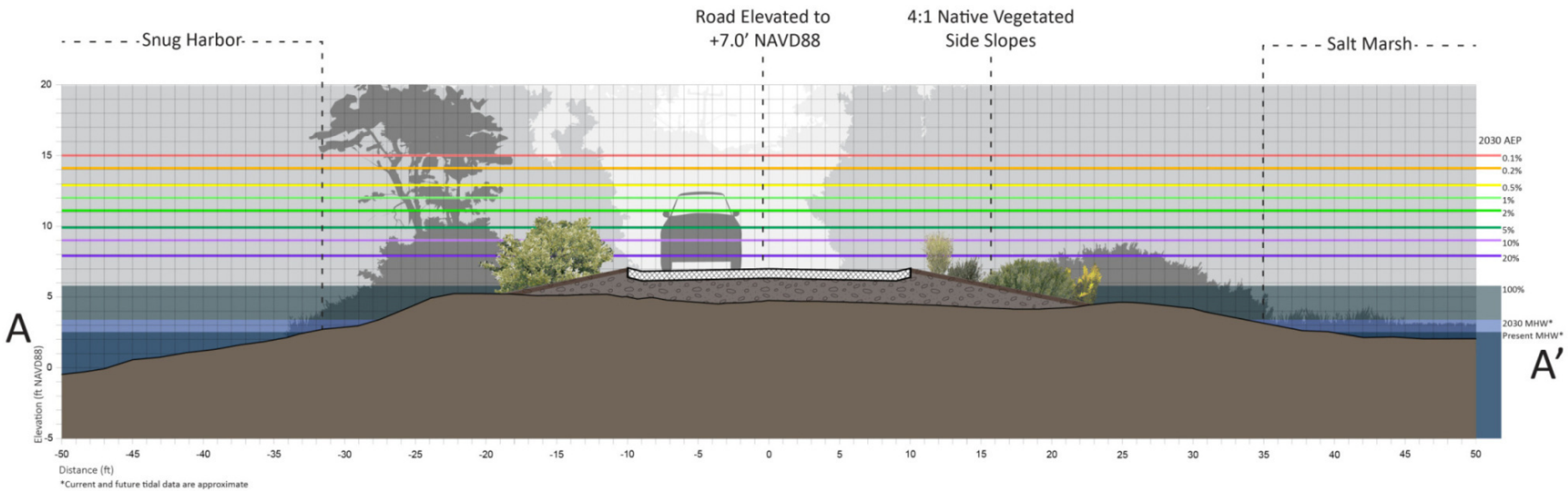


Note: Project overlap with wetland areas, rights of way and property lines is approximate and needs confirmation with a site survey



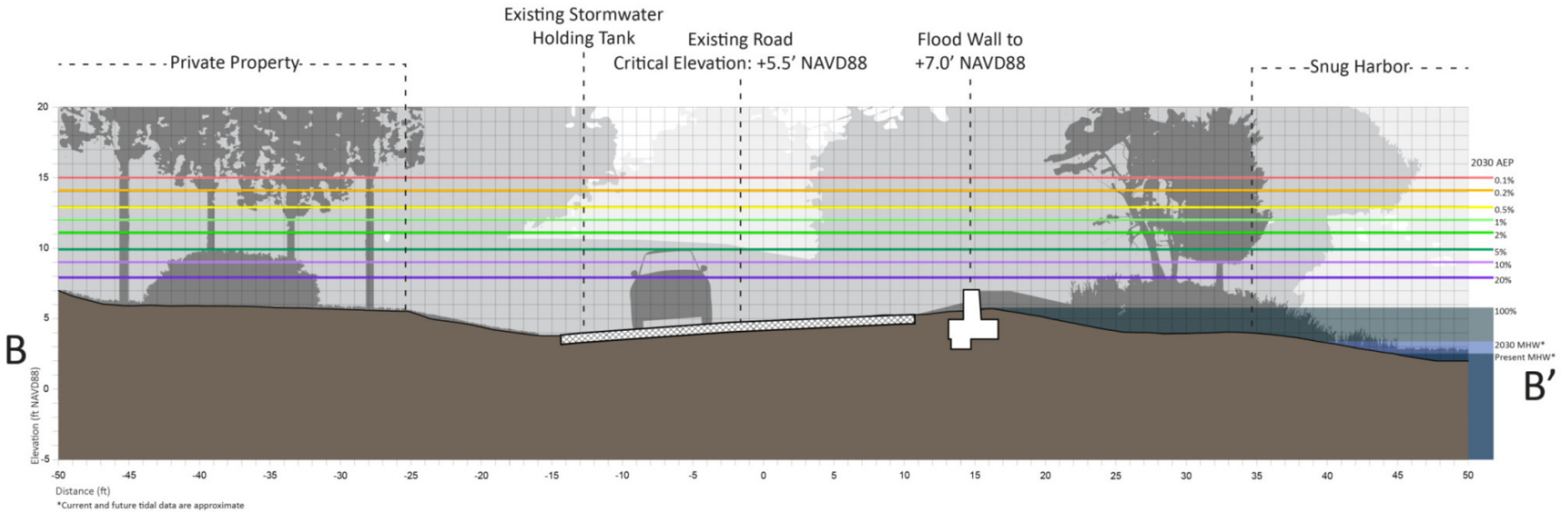
ALTERNATIVE 2: HYBRID

600 linear feet of town-owned road are elevated from a lowest point of +4.6' NAVD88 to a lowest point of +7.0' NAVD88 using 4:1 native vegetated side slopes. The road layout is shifted eastward to take advantage of higher elevation areas already within the road layout. In the southern segment of the road, a small flood wall and berm meet the critical elevation of +7.0' NAVD88.



ALTERNATIVE 2: HYBRID

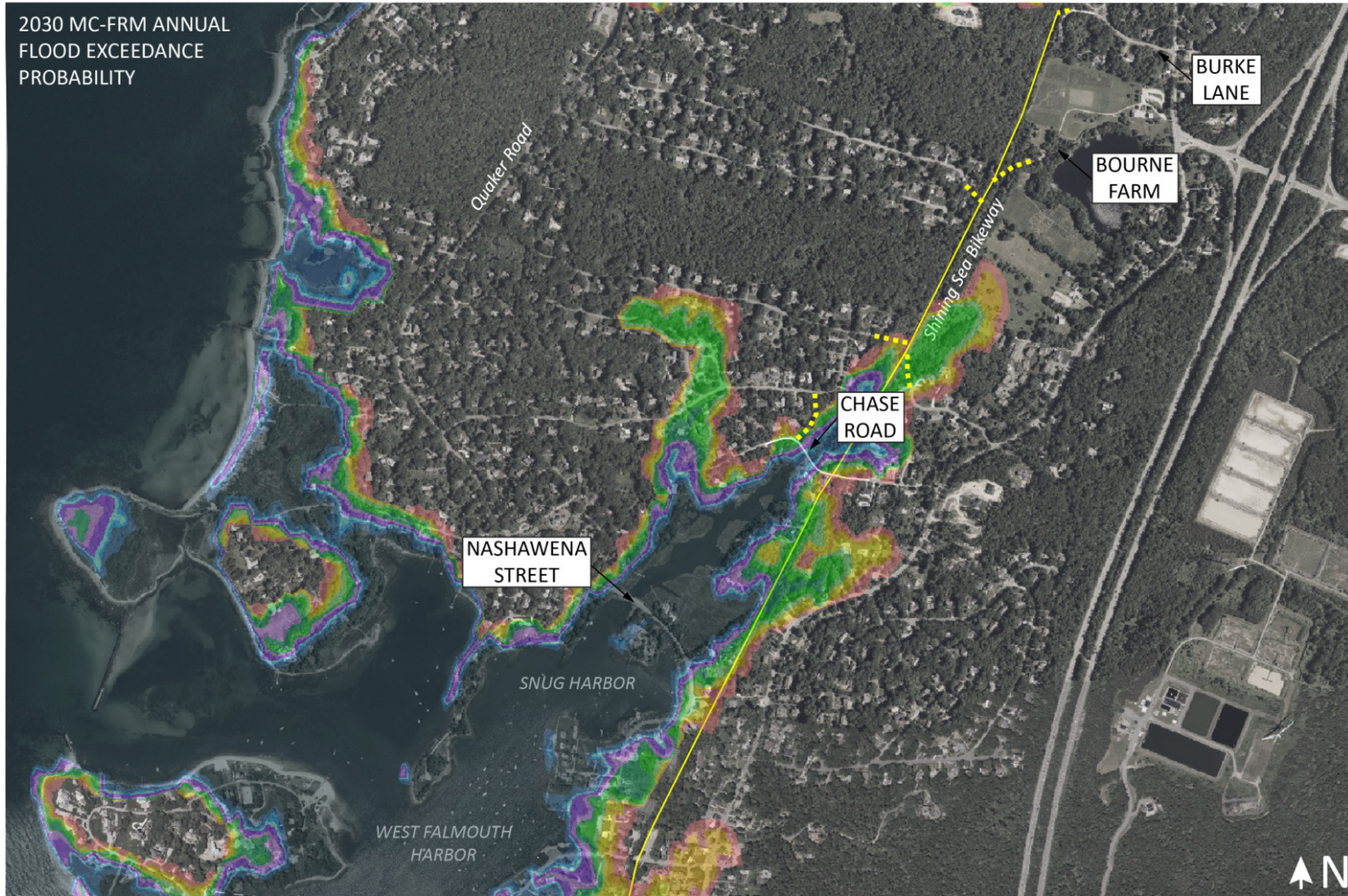
Nashawena Street, Falmouth



ALTERNATIVE 2: HYBRID

Nashawena Street, Falmouth

2030 MC-FRM ANNUAL
FLOOD EXCEEDANCE
PROBABILITY



ALTERNATIVE 3: REROUTING

Alternate emergency access routes to residential areas between Old Silver Beach and West Falmouth Harbor are established. Possible higher elevation access routes include Chase Road (with adaptations), and the Shining Sea Bikeway (if connections are established to roads to the east and west). If an alternate access road were successfully implemented, the neighborhood could be accessed during all storm conditions.

Note: Project overlap with wetland areas, rights of way and property lines is approximate and needs confirmation with a site survey

NASHAWENA STREET, FALMOUTH

Summary of alternatives

	Description	Critical Elevation (NAVD88)	Annual Exceedance Probability			Vulnerable to Tidal Flooding†	Permitability Concerns	Impacts to Private Property	Estimated Cost*
			2030	2050	2070				
EXISTING	A town-owned road next to a harbor and accessing a residential area.	4.6 feet	100%	100%	100%	2050	N/A	N/A	N/A
ALTERNATIVE 1: GRAY	1350 linear feet of town-owned road are elevated from a lowest point of +4.6' NAVD88 to a lowest point of +7.0' NAVD88 using 4:1 traditionally vegetated side slopes. The road is shifted eastward to take advantage of higher elevation.	7.0 feet	20%	100%	100%	No	Potential for wetland impacts	Minimal	\$508,000
ALTERNATIVE 2: HYBRID	600 linear feet of town-owned road are elevated from a lowest point of +4.6' NAVD88 to a lowest point of +7.0' NAVD88 using 4:1 native vegetated side slopes. In the southern segment of the road, a small flood wall and berm meet the critical elevation of +7.0' NAVD88.	7.0 feet	20%	100%	100%	No	Potential for wetland impacts	Minimal	\$540,000
ALTERNATIVE 3: REROUTING	One or more alternate access routes is constructed to allow for emergency access to residential areas when Nashawena Street is flooded. Cost is based on the construction of 200 feet of gravel road.	TBD	as low as 0%	as low as 0%	as low as 0%	No	Routing through private property and/or conservation land	Minimal-Moderate	\$64,000

*2023 installed material cost +40% escalation (through 2029) and 15% contingency. Excludes design, permitting, mobilization, stormwater and wastewater infrastructure, and site controls. Costs based on experienced contractor opinion and MassDOT costing data.

†Future tidal data are approximate.