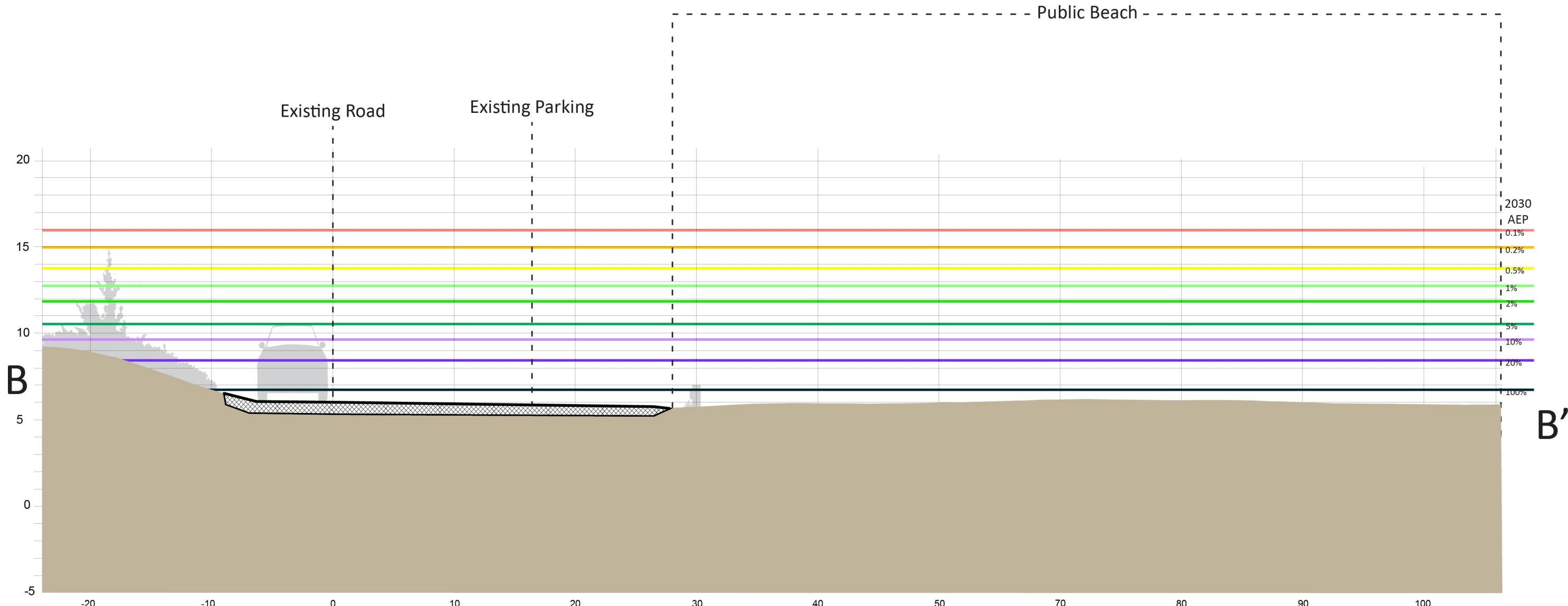
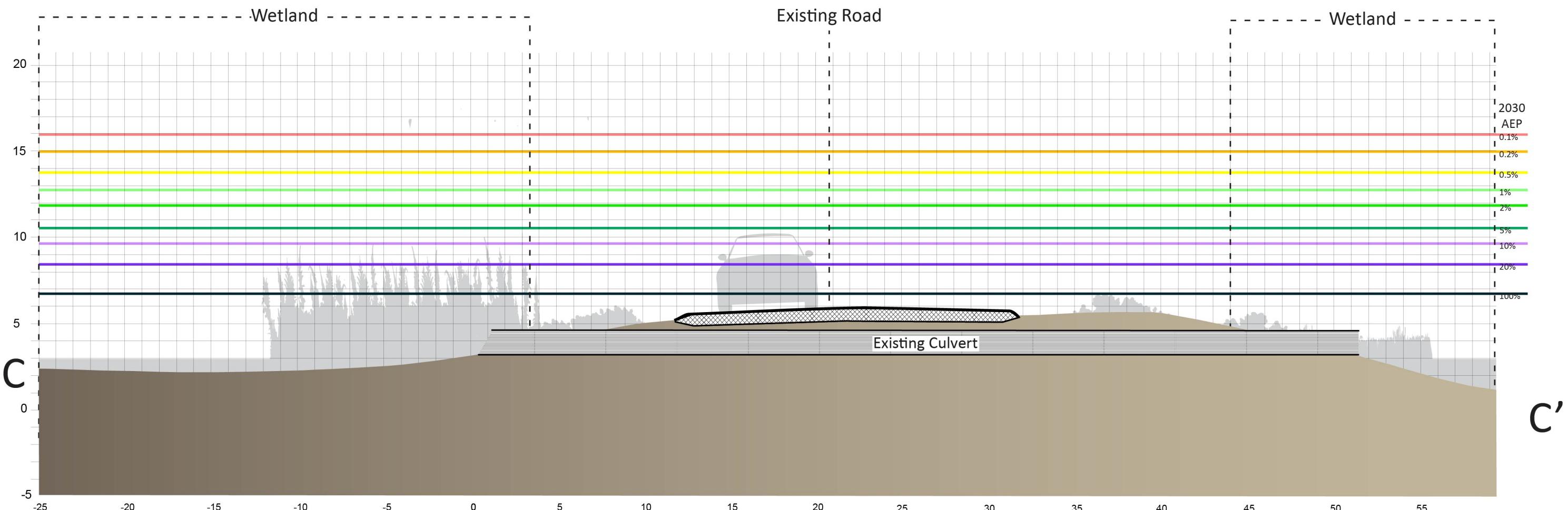


EXISTING CONDITIONS
Circuit Avenue, Bourne





EXISTING CONDITIONS
Circuit Avenue, Bourne

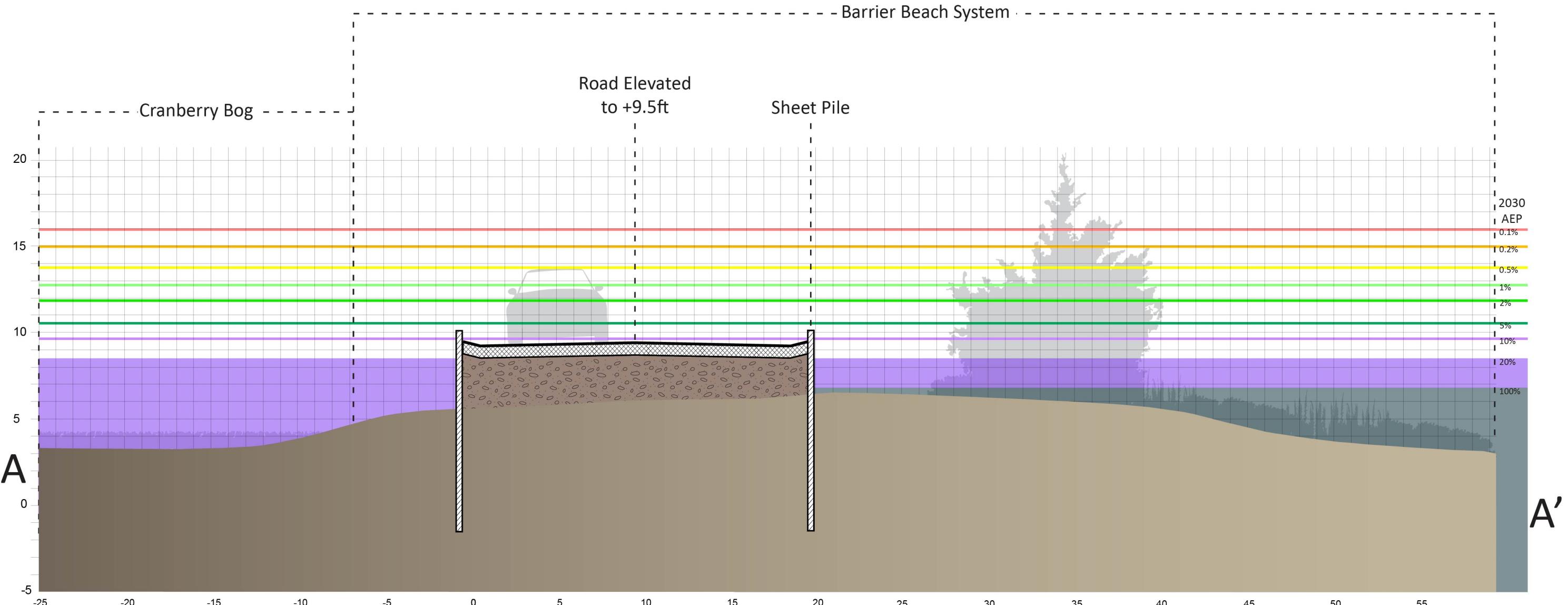


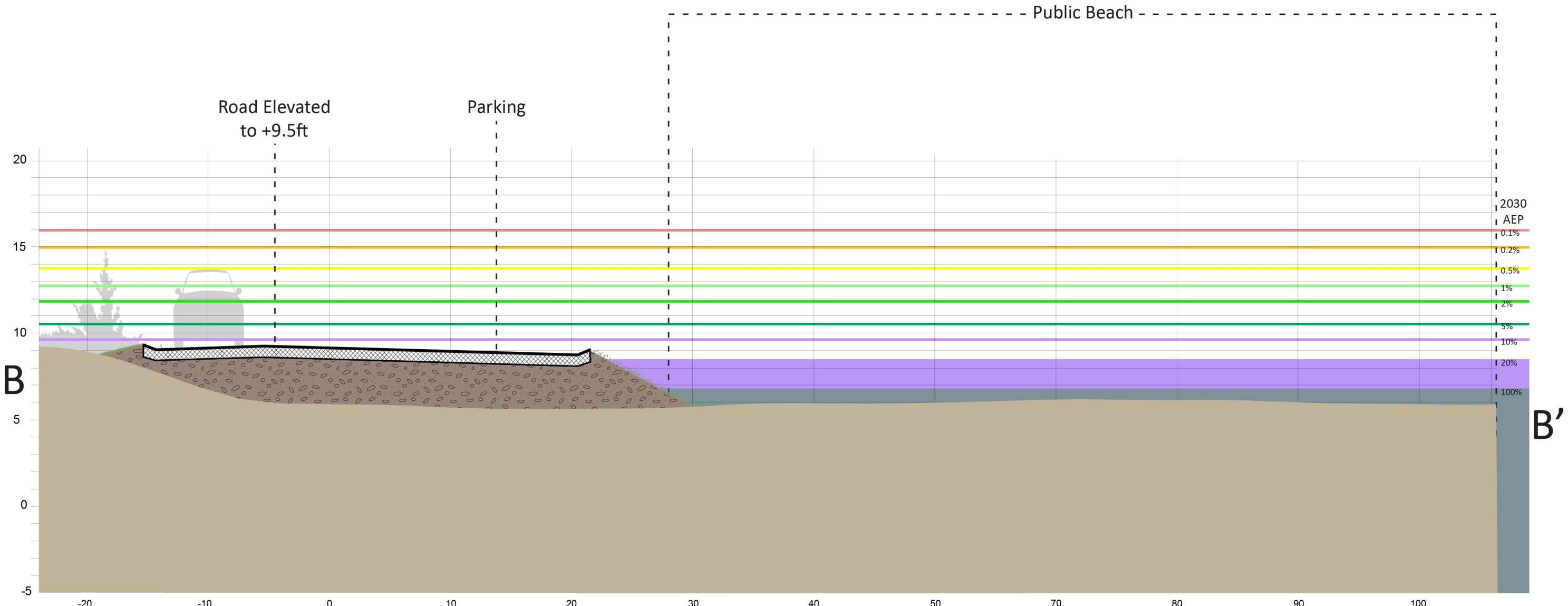
Note: Project overlap with wetland areas, rights of way and property lines is approximate and needs confirmation with a site survey



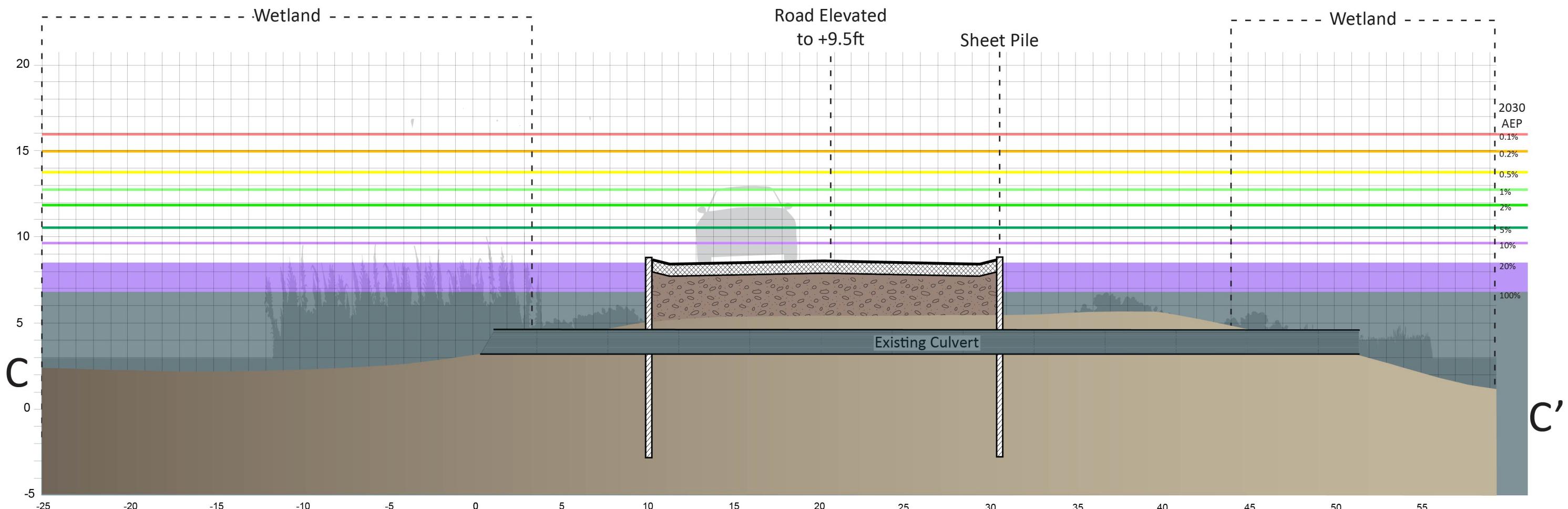
ALTERNATIVE 1: GRAY

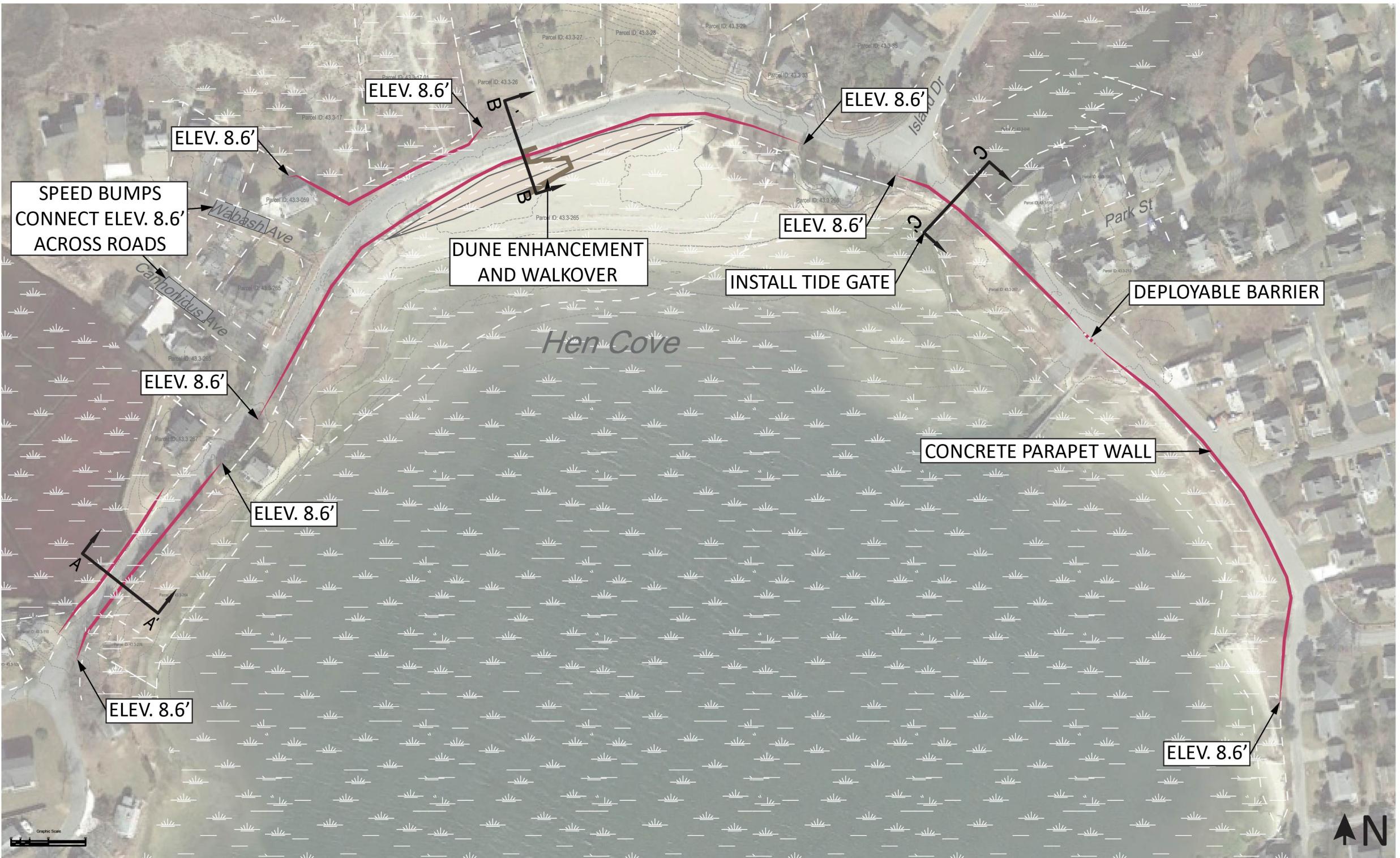
2452 linear feet of Town-owned road are elevated from a lowest point of 3.8 feet to a lowest point of 9.5 feet. Sheet pile is used to elevate the road at the cranberry bog and culvert crossing, and traditional vegetated side slopes are used at other locations.





ALTERNATIVE 1: GRAY
Circuit Avenue, Bourne





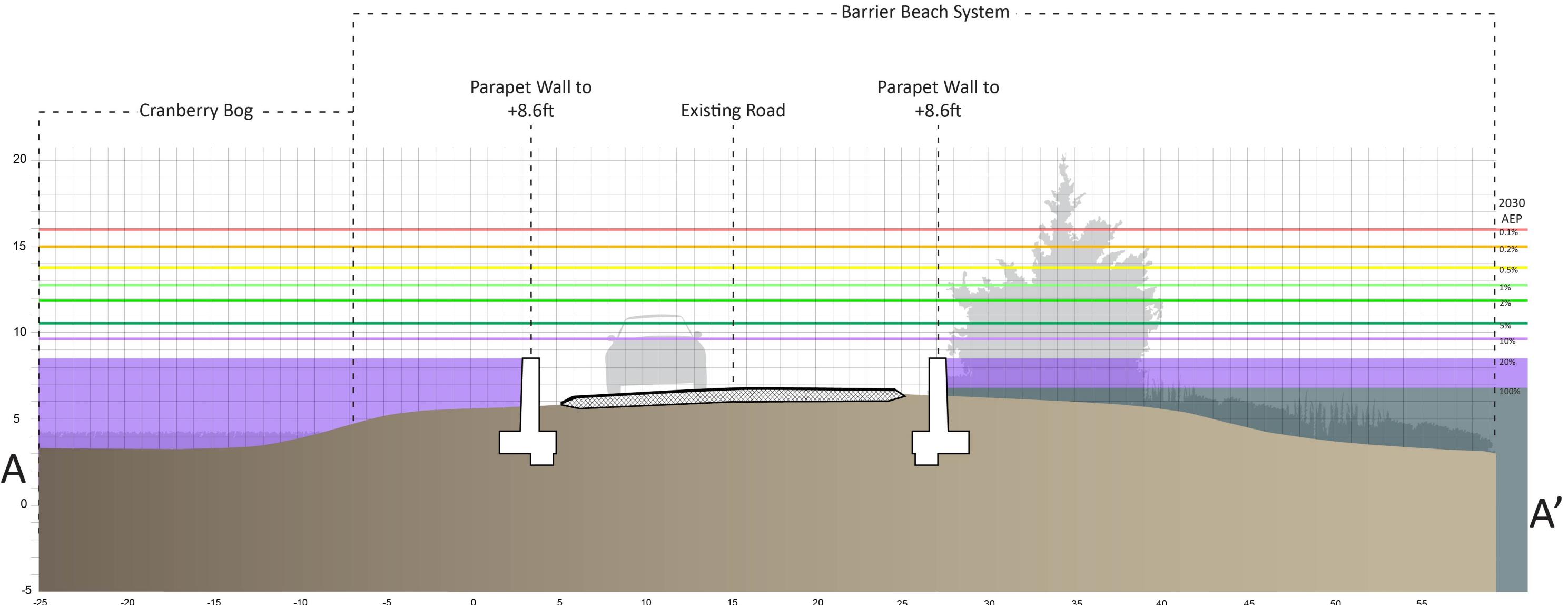
Note: Project overlap with wetland areas, rights of way and property lines is approximate and needs confirmation with a site survey

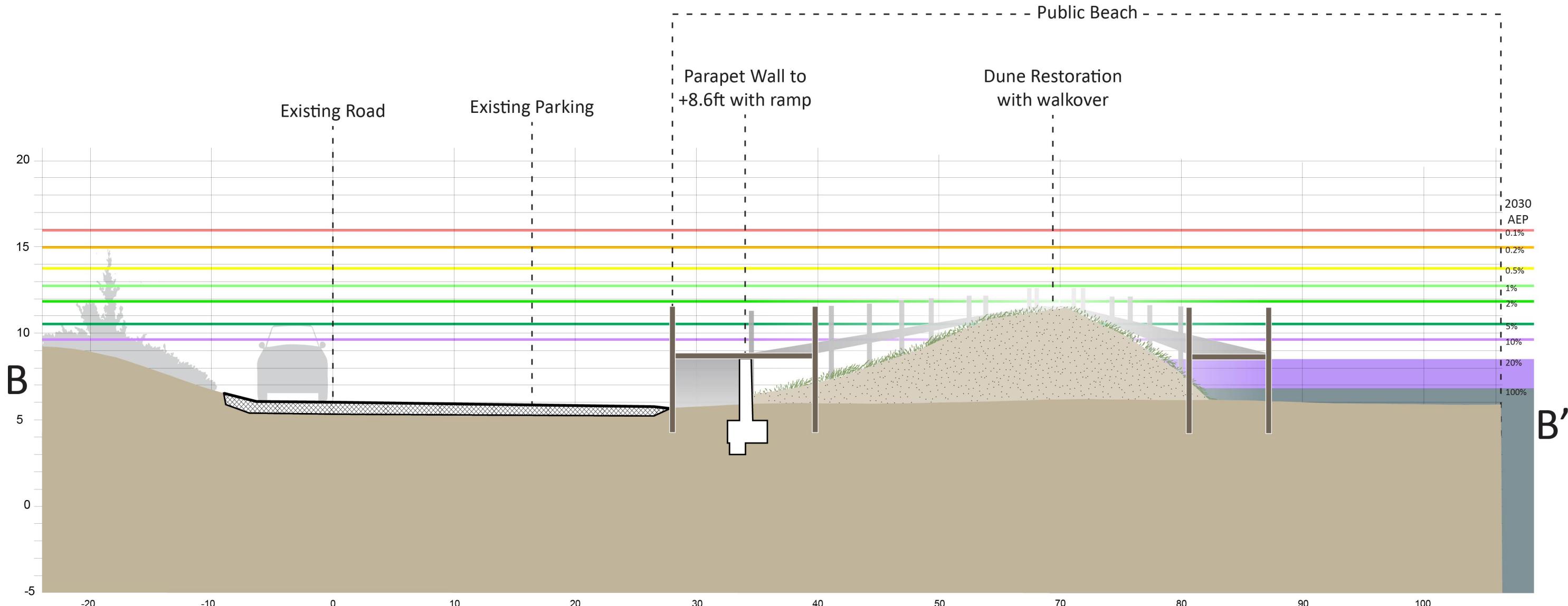


Circuit Avenue
BOURNE

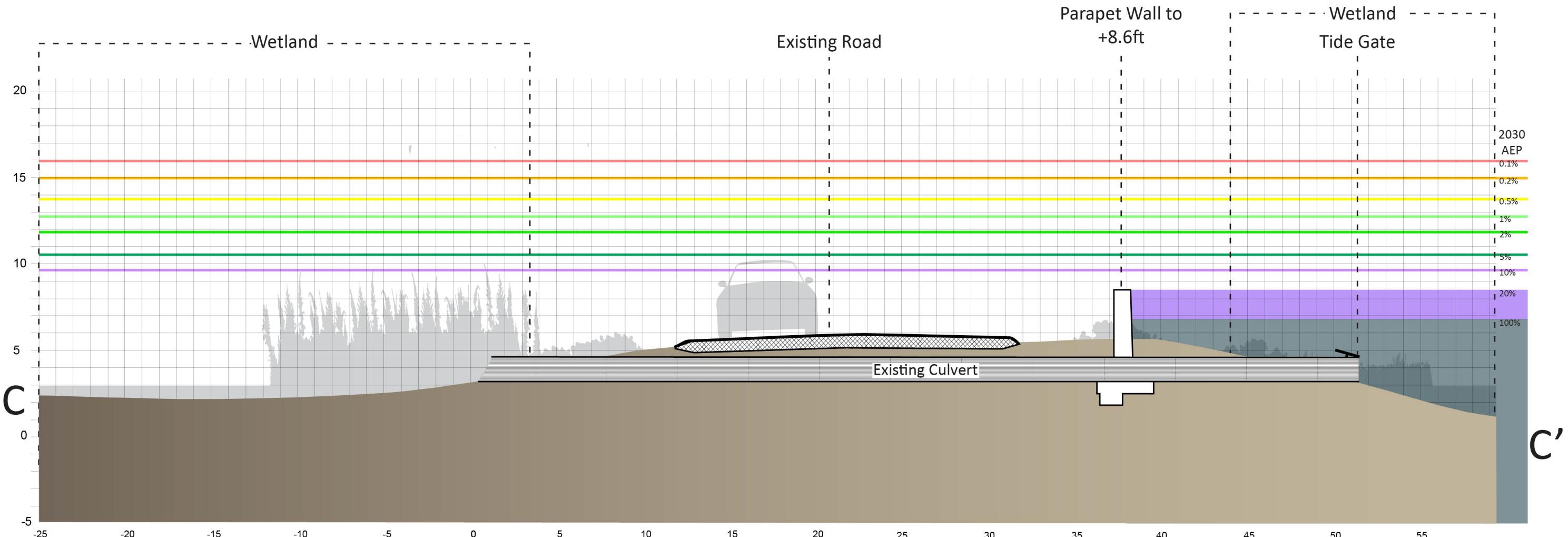
ALTERNATIVE 2: HYBRID

Parapet walls to 8.6 feet are installed to tie together high points along Circuit Ave. A tide gate is added to the culvert and raised sections of pavement to side streets to prevent flanking. A dune is constructed at the public beach, and access is preserved with a wooden walkover.

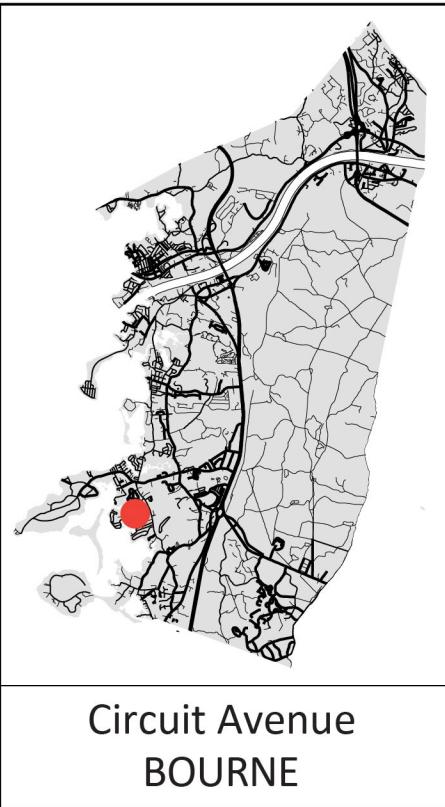
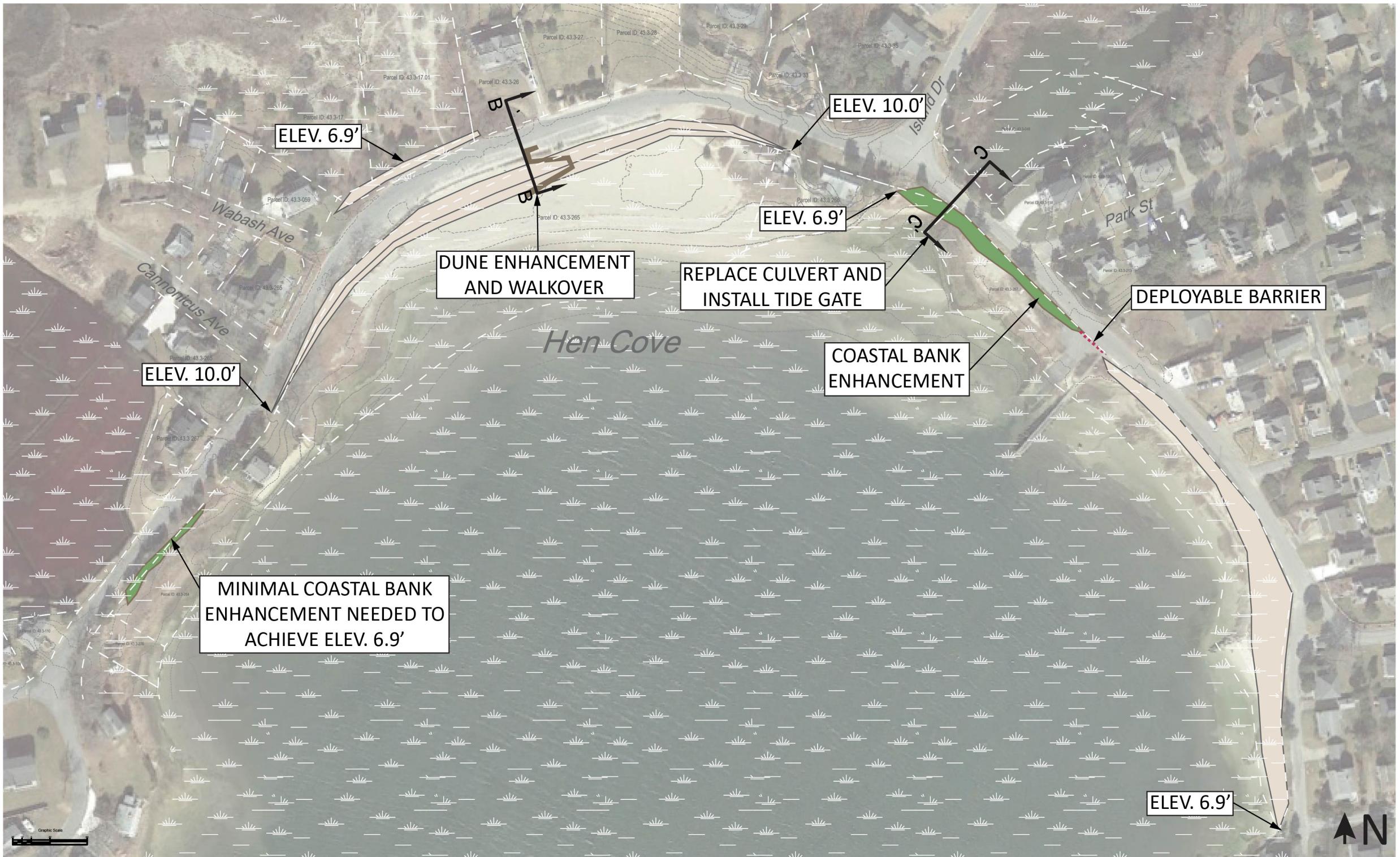




ALTERNATIVE 2: HYBRID
Circuit Avenue, Bourne

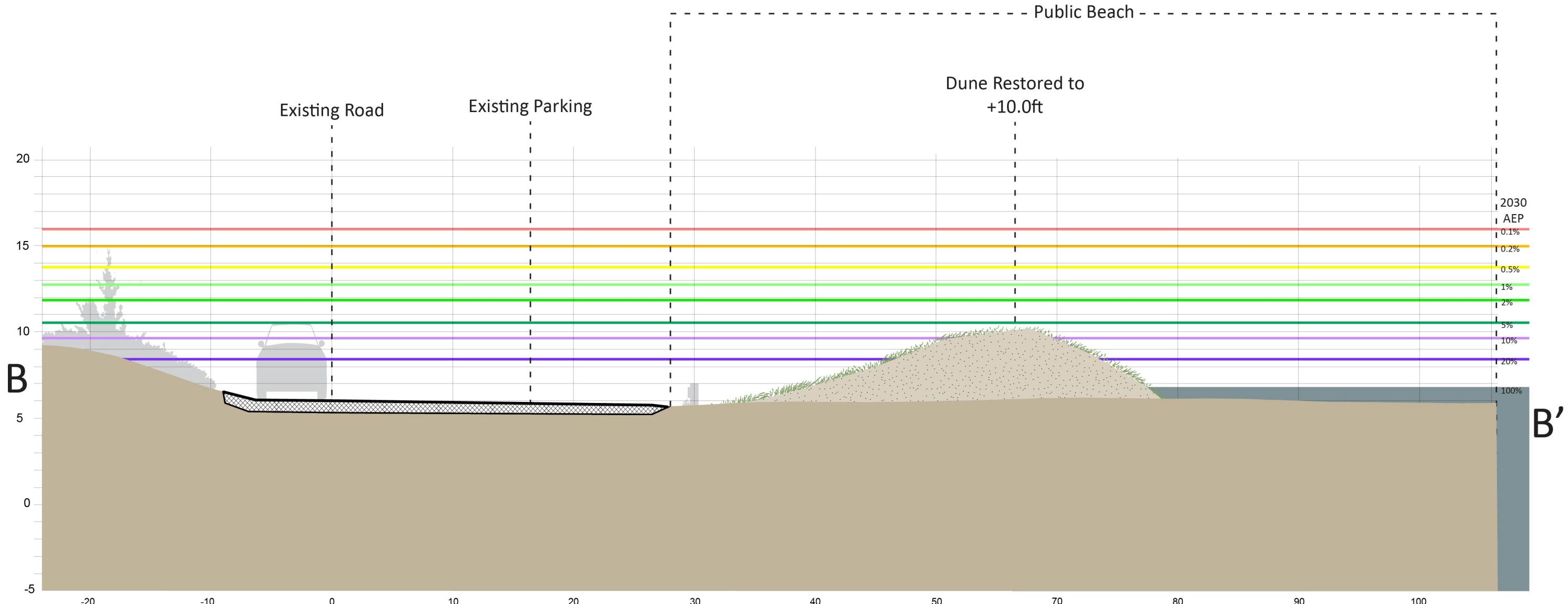


ALTERNATIVE 2: HYBRID
Circuit Avenue, Bourne

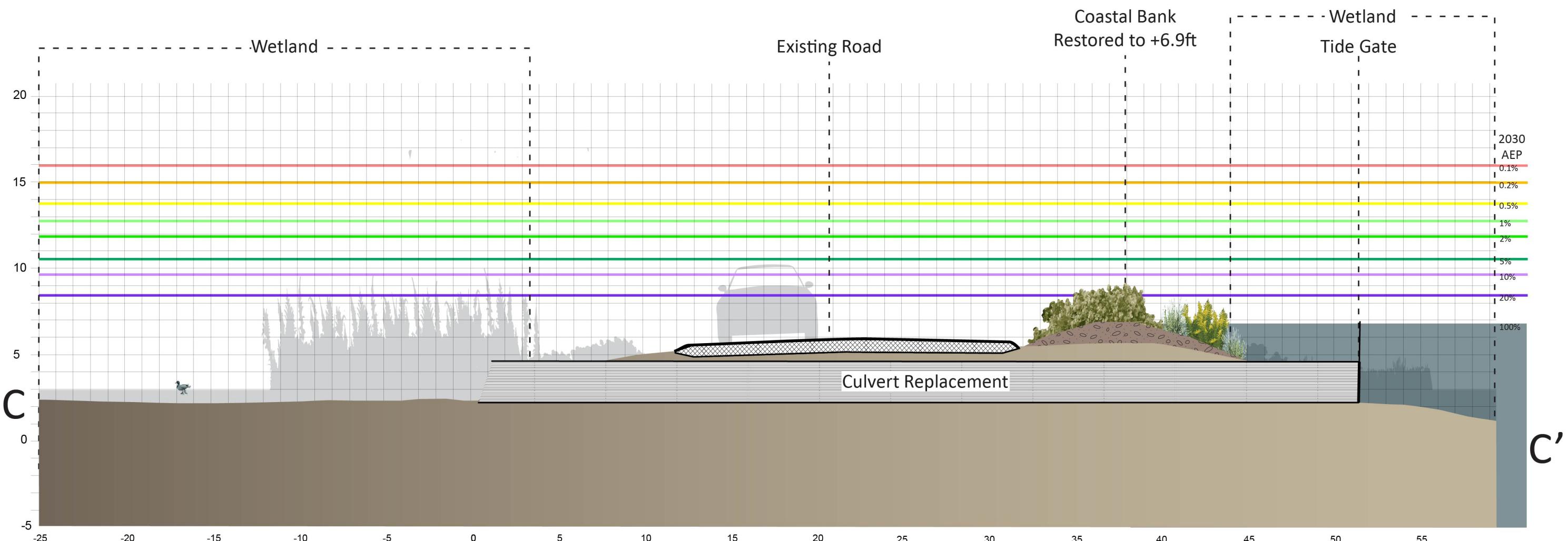


ALTERNATIVE 3: GREEN

A combination of coastal bank and dune enhancements protect the road to 6.9 feet. A dune enhancement to 10.0 feet protects the beach and parking lot from erosion. The culvert is replaced and an operable tide gate is installed.



ALTERNATIVE 3: GREEN
Circuit Avenue, Bourne



ALTERNATIVE 3: GREEN
Circuit Avenue, Bourne

CIRCUIT AVENUE, BOURNE

Summary of alternatives

	Description	Critical Elevation	Annual Exceedance Probability			Vulnerable to Tidal Flooding	Impacts to Wetlands	Impacts to Private Property	Estimated Cost*
			2030	2050	2070				
EXISTING	A segment of 20 foot wide road with a public beach and a culvert.	3.8 feet	100%	100%	100%	2050	N/A	N/A	N/A
ALTERNATIVE 1: GRAY	2452 linear feet of Town-owned road are elevated from a lowest point of 3.8 feet to a lowest point of 9.5 feet. Sheet pile is used to elevate the road at the cranberry bog and culvert crossing, and traditional vegetated side slopes are used at other locations.	9.5 feet	10%	20%	100%	N/A	N/A	Yes	\$1,133,000
ALTERNATIVE 2: HYBRID	A parapet wall to 8.6 feet is installed to tie together high points along Circuit Ave. A tide flap is added to the culvert to prevent flanking. A dune is constructed at the public beach, and access is preserved with a wooden walkover.	8.6 feet	10%	20%	100%	N/A	Possible Positive	No	\$1,386,000
ALTERNATIVE 3: GREEN	A combination of coastal bank and dune enhancements protect the road to 6.9 feet. Additional dune enhancements at the beach protect the parking lot and beach from erosion. The culvert is replaced and an operable tide gate is installed.	6.9 feet	20%	100%	100%	N/A	Positive	Yes	\$1,108,000

*Installed material cost +20% contingency. Excludes design, permitting, mobilization, stormwater and wastewater infrastructure, and site controls. Costs based on RSMeans 2021 cost book and adjusted for inflation and region.