Boston CSRM - Mitigation cost estimate via ILF for permanent loss of marine habitat

Estimated area to be mitigated

	sq ft		**Notes**
East Boston	9483		For all neighborhoods - any fill being placed in existing piles fields was included
Charlestown	71967		in the tally, but not the piles themselves as that seems to be more of a 1:1 replacement
Downtown	662988		
South Boston	159700		
Dorchester	66427		Included the in-water levee at columbia point
TOTAL	**970565**		
2026 MA ILF fee per credit tidal:		$822,670	Assuming this is per acre as prior fee in 2016 was $782,876/acre ($17.44/sq ft)
2026 price per sq ft:		$18.89	
Mitigation $	**$18,333,973**	**~$18.3M**	
2016 fee	$16,926,654		

EAST BOSTON

Alignment	Floodwall	Levee		Existing Open Water		Existing Piles		
		Land	Water	Fill	Piles	Fill	Piles	
Waterfront West to Atlantic Works	124,815	-	-	-	-	-	-	
Atantic Works to Lopresti (Perimeter)	49,052	-	-	-	-	-	-	
Border St Cutoff	20,406	-	-	-	-	-	-	
Lopresti to Piers Park	60,644	-	-	-	-	9,483	6,720	Includes wall features, plus additional fill under existing pile-supported roadway
Marginal St Road Raising	-	4,521	-	-	-	-	-	
Porzio Park/Tomahawk Drive	21,609	25,982	-	-	-	-	-	
East Boston Greenway/Wood Island Park	-	48,912	-	-	-	-	-	
Constitution Beach	81,129	22,081	-	-	-	-	-	
Orient Heights Railyard	112,862	-	-	-	-	-	-	Intent is for this to be all upland wall and limit/eliminate disturbance to marsh
Chelsea Creek (Perimeter)	91,611	-	-	-	-	-	-	
Chelsea Creek (Route 1A)	49,060	-	-	-	-	-	-	

Totals	**Sq. Ft.**	**Acres**
Total On Land	712,684	16.36
Total In Water	16,203	0.37

Typical Fill Width Behind Outboard Sheetpile	4	
Typical Pile Footprint Beyond Outboard Sheetpile	12	*Assumes 30' water depth*
Typical Floodwall Footprint	30	*Used where surface data was spotty/inconsistent*

Perimeter Classfication (Existing)

Stations	**Length (ft)**	**Type**
55+00 to 66+70	1170	Upland
71+20 to 78+00	680	Upland
78+00 to 83+60	560	Piles

CHARLESTOWN

Alignment	Floodwall	Levee	Existing Open Water		Existing Piles	
			Fill	Piles	Fill	Piles
Ryan Playground	2,777	7,383	-	-	-	-
Schrafft's	63,076	-	-	-	-	-
Navy Yard	62,267	-	10,022	24,900	17,797	20,100
Chelsea St	21,396	-	-	-	-	-
Little Mystic	19,727	-	4,812	14,436	-	-

Totals	**Sq. Ft.**	**Acres**
Total On Land	176,626	4.05
Total In Water	92,067	2.11

Typical Fill Width Behind Outboard Sheetpile	4	
Typical Pile Footprint Beyond Outboard Sheetpile	12	*Assumes 30' water depth*

DOWNTOWN

Alignment	Floodwall	Levee	Existing Open Water		Existing Piles		
			Fill	Piles	Fill	Piles	
Perimeter	9,000	13,276	118,888	155,040	356,791	-	Assumes all new wall is outboard, not in place of exisitng harborwalks. Levee = elevating parking lot
Interior	123,119	-	-	-	-	-	
Lovejoy Wharf	1,280	-	-	5,220	27,049	-	
Commercial St	10,349	3,643	-	-	-	-	"Levee" is technically a road raising
Paul Revere Park	-	5,896	-	-	-	-	"Levee" is technically a road raising

Totals	**Sq. Ft.**	**Acres**
Total On Land	166,563	3.82
Total In Water	662,988	15.22

Typical Fill Width Behind Outboard Sheetpile	4	
Typical Pile Footprint Beyond Outboard Sheetpile	12	*Assumes 30' water depth*

Larger Fill Areas	**Piles**	**Open Water**	**Total**
Battery Wharf	122,742	-	122,742
Lewis Wharf	12,713	6,366	19,079
Commercial Wharf	68,980	-	68,980
Long Wharf	-	16,217	16,217
Aquarium	52,967	11,159	64,126
Harbor Towers/Rowes Wharf	99,389	33,466	132,855

Outboard Perimeter Length	12,920

SOUTH BOSTON

Alignment	Floodwall	Levee		Existing Open Water		Existing Piles		
		Land	Water	Fill	Piles	Fill	Piles	
Fan Pier to Seaport Blvd	-	-	-	11,900	35,700	7,100	21,300	
Seaport Blvd to D Street	11,903	-	-	-	-	-	-	
D Street	20,464	29,362	-	-	-	-	-	
Marine Park Perimeter & Black Falcon	334,500	-	-	-	-	-	-	
Pappas Way	81,608	-	-	-	-	-	-	
Summer St & Haul Road	33,927	24,545	-	-	-	-	-	
Fort Point Channel Surge Barrier	-	-	-	105,000	-	-	-	Approximated, does not account for existing impacts from current Northern Ave Bridge remains
Parapet Wall								*Adding on to an existing wall, what do we need to include?*

Totals	**Sq. Ft.**	**Acres**
Total On Land	536,309	12.31
Total In Water	181,000	4.16

Typical Fill Width Behind Outboard Sheetpile	4	
Typical Pile Footprint Beyond Outboard Sheetpile	12	*Assumes 30' water depth*
Typical Floodwall Footprint	30	*Used where surface data was spotty/inconsistent*

Perimeter Classfication (Existing)

Stations	**Length (ft)**	**Type**
0 to 14+75	1475	Open Water
14+75 to 27+50	1275	Piles
27+50 to 42+50	1500	Open Water
42+50 to End	500	Piles

DORCHESTER

Alignment	Floodwall	Levee		Existing Open Water		Existing Piles	
		Land	Water	Fill	Piles	Fill	Piles
Harbor Point	19,408	190,929	60,187	-	-	-	-
Pattens Cove	15,701	90,082	-	-	-	-	-
Morrissey Blvd	33,531	-	-	-	-	-	-
Victory Road	-	1,333	-	-	-	-	-
Tenean Beach	6,986	56,069	-	-	-	-	-
Neponset Creek	9,903	33,340	-	1,560	4,680	-	-

Totals	**Sq. Ft.**	**Acres**
Total On Land	457,282	10.50
Total In Water	66,427	1.52

Typical Fill Width Behind Outboard Sheetpile	4	
Typical Pile Footprint Beyond Outboard Sheetpile	12	*Assumes 30' water depth*