

**ATTACHMENT B**

**Harbor & Beaches Master Plan**

**HARBOR & BEACHES MASTER PLAN PROJECTS**

Ref #	Project	Category	YR Built	Last Refurb.	Cost	Remodel	Sq Ft	Units Measurement	Total Units	Today's Unit Cost	Current Age:	Estimated Useful Life	Years to Start	Project Estimate	FY Design Start Year	FY Const Start Year	FV Cost Est @2.5% Growth	External Contributions	Net Proposed Cost
<b>UTILITIES</b>																			
32	Tide Gate Valve Program (Peninsula, 62 total): Ongoing	Gate Valves	0	0				EA	62	\$65,000	**	25	2	\$4,030,000	2027	2028	\$4,234,019		\$4,234,019
<b>SUBTOTAL</b>														<b>\$4,030,000</b>		<b>\$4,234,019</b>	<b>\$0</b>	<b>\$4,234,019</b>	
<b>BULKHEAD/STRUCTURES</b>																			
39	Bulkhead (Lower Castaways): Replace	Bulkhead	0	0				LF	265	\$10,000	**	80	3	\$2,650,000	2027	2029	\$2,853,760		\$2,853,760
45	Balboa Island (Grand Canal & West End): Replace Bulkhead	Bulkhead	1930					LF	4,685	\$12,000	96	81	3	\$56,220,000	2026	2028	\$60,542,791		\$60,542,791
84	Bulkhead (West Newport Street Ends): Repair / Replace Program (Phase II)	Bulkhead	0	0				LF	1,560	\$10,000	**	80		\$15,600,000	2028	2030	\$15,600,000		\$15,600,000
85	Bulkhead (Peninsula Street Ends): Repair / Replace Program (Phase II)	Bulkhead	0	0				LF	1,982	\$10,000	**	80		\$19,820,000	2028	2030	\$19,820,000		\$19,820,000
81	Balboa Island (Grand Canal & West End): Boardwalk & Drainage	Other	1930	0				SF	32,950	\$25	**	80	3	\$823,750	2026	2028	\$887,089		\$887,089
46	Balboa Island (East & South Little Island): Replace Bulkhead	Bulkhead	1930					LF	2,730	\$12,000	96	80	9	\$32,760,000	2026	2034	\$40,912,751		\$40,912,751
82	Balboa Island (East & South Little Island): Boardwalk & Drainage	Other	1930	0				SF	20,005	\$25	96	80	8	\$500,125	2026	2034	\$624,588		\$624,588
47	Balboa Island (South & North): Replace Bulkhead	Bulkhead	1930					LF	5,861	\$12,000	96	82	14	\$70,332,000	2026	2039	\$99,377,275		\$99,377,275
83	Balboa Island (South & North): Boardwalk & Drainage	Other	1930	0				SF	46,888	\$25	95	80	14	\$1,172,200	2026	2039	\$1,656,288		\$1,656,288
61	Bulkhead (American Legion): Replace	Bulkhead	1957	0				LF	336	\$10,000	69	95	31	\$3,360,000	2053	2056	\$7,224,023		\$7,224,023
65	Bulkhead (West Newport Street Ends): Repair / Replace Program	Bulkhead	0	0				LF	162	\$10,000	**	80	2	\$1,620,000	2025	2027	\$1,702,013		\$1,702,013
66	Bulkhead (Corona Del Mar): Replace	Bulkhead	0	0				LF	175	\$10,000	**	80	20	\$1,750,000	2042	2045	\$2,867,579		\$2,867,579
67	Bulkhead (Promontory Bay): Replace	Bulkhead	1972	0				LF	1,158	\$10,000	54	80	20	\$11,580,000	2042	2045	\$18,975,178		\$18,975,178
69	Bulkhead (Rhine Wharf): Replace	Bulkhead	1960	0				LF	343	\$10,000	66	80	15	\$3,430,000	2036	2040	\$4,967,663		\$4,967,663
71	Bulkhead (Peninsula Street Ends): Repair / Replace Program	Bulkhead	0	0				LF	235	\$10,000	**	80	2	\$2,350,000	2025	2028	\$2,468,969		\$2,468,969
27	Bulkhead (Balboa Yacht Basin): Replace	Bulkhead	1985	0				LF	1,370	\$10,000	41	80	40	\$13,700,000	2062	2065	\$36,785,375		\$36,785,375
37	Bulkhead (Marina Park): Replace	Bulkhead	2015	0				LF	857	\$10,000	11	90	80	\$8,570,000	2101	2105	\$61,785,996		\$61,785,996
<b>SUBTOTAL</b>														<b>\$246,238,075</b>		<b>\$379,051,336</b>	<b>\$0</b>	<b>\$379,051,336</b>	
<b>PUBLIC PIERS - REPAIR / REPLACE</b>																			
11	Public Pier (15th St): Float only	Piers	1967	2025				EA	1	\$150,000	0	20	1	\$150,000	2043	2045	\$153,750		\$153,750
12	Public Pier (19th St): Float only	Piers	1957	2025				EA	1	\$150,000	0	20	1	\$150,000	2043	2045	\$153,750		\$153,750
13	Public Pier (Coral Ave): Float only	Piers	1940's	2025				EA	1	\$80,000	0	20	1	\$80,000	2043	2045	\$82,000		\$82,000
14	Public Pier (Fernando St): Float only	Piers	0	2025				EA	1	\$90,000	0	20	1	\$90,000	2043	2045	\$92,250		\$92,250
15	Public Pier (M St): Float only	Piers	1940	2025				EA	1	\$100,000	0	20	1	\$100,000	2043	2045	\$102,500		\$102,500
16	Public Pier (Opal Ave): Float only	Piers	1940's	2025				EA	1	\$80,000	0	20	1	\$80,000	2043	2045	\$82,000		\$82,000
17	Public Pier (Park Ave): Float only	Piers	1940's	2025				EA	1	\$80,000	0	20	1	\$80,000	2043	2045	\$82,000		\$82,000
18	Public Pier (Washington St): Float only	Piers	1940's	2025				EA	1	\$80,000	0	20	1	\$80,000	2043	2045	\$82,000		\$82,000
28	Ocean Piers Biennial Maintenance Program - (Balboa & Newport)	Piers	1940	2022				EA	1	\$550,000	83	0	1	\$550,000	2025	2026	\$563,750		\$563,750
30	Public Pier (Emerald Ave): Float only	Piers	1940's	2025				EA	1	\$100,000	0	20	1	\$100,000	2043	2045	\$102,500		\$102,500
31	Public Pier (Sapphire Ave): Float & Gangway only	Piers	1940's	2025				EA	1	\$80,000	0	20	1	\$80,000	2043	2045	\$82,000		\$82,000
42	Balboa Yacht Basin Slips: Replace	Slips Marina	1928	1985				EA	172	\$35,000	38	40	2	\$9,500,000	2025	2027	\$9,980,938		\$9,980,938
52	Public Pier (15th St): Pier only	Piers	1967	1986				EA	1	\$150,000	**	40	15	\$150,000	2037	2040	\$217,245		\$217,245
74	Public Pier (19th St): Pier Platform & Gangway	Piers	1957	1986				EA	1	\$70,000	**	40	15	\$70,000	2037	2040	\$101,381		\$101,381
53	Public Pier (Coral Ave): Pier only	Piers	1940's	1985				EA	1	\$125,000	38	40	15	\$125,000	2037	2040	\$181,037		\$181,037
54	Public Pier (Emerald Ave): Pier only	Piers	1940's	1986				EA	1	\$125,000	37	40	15	\$125,000	2037	2040	\$181,037		\$181,037
55	Public Pier (Fernando St): Pier only	Piers	0	1985				EA	1	\$125,000	**	40	15	\$125,000	2037	2040	\$181,037		\$181,037
56	Public Pier (M St): Pier only	Piers	1940	1985				EA	1	\$175,000	38	40	15	\$175,000	2037	2040	\$253,452		\$253,452
57	Public Pier (Opal Ave): Pier only	Piers	1940's	1985				EA	1	\$125,000	**	40	15	\$125,000	2037	2040	\$181,037		\$181,037
58	Public Pier (Park Ave): Pier only	Piers	1940's	1986				EA	1	\$125,000	**	40	15	\$125,000	2037	2040	\$181,037		\$181,037
59	Public Pier (Sapphire Ave): Pier only	Piers	1940's	1985				EA	1	\$125,000	**	40	15	\$125,000	2037	2040	\$181,037		\$181,037
60	Public Pier (Washington St): Pier only	Piers	1940's	1985				EA	1	\$150,000	**	40	15	\$150,000	2037	2040	\$217,245		\$217,245
62	Public Pier (Rhine Wharf): Float only	Piers	2007	0				EA	1	\$200,000	16	40	22	\$200,000	2045	2047	\$344,314		\$344,314
64	Public Pier (Grand Canal, Balboa Ave): Pier Platform	Piers	2017	2012				EA	1	\$25,000	6	20	13	\$25,000	2037	2038	\$34,463		\$34,463
68	Public Pier (Rhine Wharf): Pier Platform & Gangway (aluminum) only	Piers	2007	0				EA	1	\$140,000	16	50	32	\$140,000	2055	2057	\$308,526		\$308,526
70	Marina Park Slips: Replace	Slips Marina	2015	0				EA	23	\$35,000	8	40	30	\$805,000	2052	2055	\$1,688,542		\$1,688,542
72	Public Pier (Balboa Marina West): Float only	Piers	2025	0				EA	1	\$600,000	2	40	39	\$600,000	2062	2064	\$1,571,745		\$1,571,745
73	Public Pier (Balboa Marina West): Gangway (aluminum)	Piers	2025	0				EA	1	\$70,000	0	50	49	\$70,000	2072	2074	\$234,729		\$234,729
26	Public Pier (Central Ave): Pier Platform & Gangway (aluminum) only	Piers	2017	0				EA	1	\$140,000	6	50	42	\$140,000	2065	2067	\$394,939		\$394,939
75	Public Pier (Central Ave): Float only	Piers	2017	0				EA	1	\$200,000	6	40	32	\$200,000	2055	2057	\$440,751		\$440,751
10	Ocean Pier (Newport): Replace	Piers	1940	0				EA	1	\$20,000,000	83	85	2	\$20,000,000	2028	2030	\$21,012,500		\$21,012,500
23	Ocean Pier (Balboa): Replace	Piers	1940	0				EA	1	\$15,000,000	83	85	12	\$15,000,000	2034	2037	\$20,173,332		\$20,173,332
76	Public Swim Float (10th St): Replace	Piers	1950's	2020				EA	1	\$35,000	3	20	18	\$35,000	2040	2041	\$54,588		\$54,588
77	Public Swim Float (Ruby Ave): Replace	Piers	1933	2020				EA	1	\$35,000	3	20	18	\$35,000	2040	2041	\$54,588		\$54,588
<b>SUBTOTAL</b>														<b>\$49,585,000</b>		<b>\$59,748,002</b>	<b>\$0</b>	<b>\$59,748,002</b>	
<b>DREDGING</b>																			
2	Dredging & Beach Maintenance (Grand Canal)	Dredging	0	2019				CY	1	\$1,500,000	**	10	4	\$1,500,000	2027	2029	\$1,655,719		\$1,655,719
9	Dredging (Lower Federal Bay Channels): Ongoing Maintenance	Dredging	1935	2012				LS	1	\$15,000,000	**	30	1	\$15,000,000	2017	2026	\$15,375,000	\$12,000,000	\$3,375,000
25	Bathymetry Survey (Newport Island Channels)	Dredging	0	2021				EA	1	\$75,000	**	5	1	\$75,000	2026	2026	\$76,875		\$76,875
43	Dredging (Balboa Yacht Basin)	Dredging	1921	1985				CY	25,600	\$70	38	40	0	\$3,500,000	2025	2026	\$3,500,000		\$3,500,000
48	Dredging (Upper Bay Catch Basins)	Dredging	0	2009				CY	500,000	\$30	14	20	9	\$15,000,000	2035	2038	\$18,732,945	\$18,732,945	\$0
49	Dredging (Upper Bay Channels)	Dredging	0	2009				CY	250,000	\$30	14	21	9	\$7,500,000	2035	2038	\$9,366,472	\$9,366,472	\$0
<b>SUBTOTAL</b>														<b>\$42,575,000</b>		<b>\$48,707,011</b>	<b>\$28,099,417</b>	<b>\$8,607,594</b>	

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<b>FERRY &amp; WHARF REPAIR / REPLACE</b>																			
35	Ferry Landing, Bulkhead & Restroom (Agate Ave)	Bulkhead	1930	0				EA	1	\$1,500,000	93	80	3	\$1,500,000	2026	2028	\$1,615,336		\$1,615,336
36	Ferry Landing & Bulkhead (Palm St)	Bulkhead	1930	0				EA	1	\$1,500,000	93	80	3	\$1,500,000	2026	2028	\$1,615,336		\$1,615,336
<b>SUBTOTAL</b>														<b>\$3,000,000</b>		<b>\$3,230,672</b>	<b>\$0</b>	<b>\$3,230,672</b>	
<b>WATER QUALITY</b>																			
20	Water Quality: TMDL Compliance (Ongoing)	Water Quality	0	0				EA	1	\$200,000	**	Ongoing	1	\$200,000	2026	2026	\$205,000		\$205,000
33	Vessel Sewage Pumpout Replacement (5 units)	Water Quality	1980's	2021				EA	5	\$25,000	5	7	2	\$125,000	2027	2028	\$131,328	\$95,000	\$36,328
86	Vessel Sewage Pumpour Replacement Marina Park	Water Quality	2015	0				EA	1	\$50,000	10	7	0	\$50,000	2026	2027	\$50,000		\$50,000
<b>SUBTOTAL</b>														<b>\$325,000</b>		<b>\$336,328</b>	<b>\$95,000</b>	<b>\$241,328</b>	
<b>BEACH NOURISHMENT - HARBOR &amp; OCEAN</b>																			
22	Ocean Beach: Sand Nourishment (Ongoing)	Sand	0	0				CY	1,000,000	\$15	**	20	3	\$15,000,000	2027	2030	\$16,153,359	\$12,115,020	\$4,038,340
44	Surfside/Sunset Ocean Beach: Sand Nourishment (Stage 14)	Sand	1964	2024				LS	1	\$300,000	0	7	3	\$300,000	2027	2029	\$323,067		\$323,067
51	Bay Beaches: Sand Nourishment (Ongoing)	Sand	0	2024				LS	1	\$125,000	**	Ongoing	1	\$125,000	2026	2026	\$128,125		\$128,125
<b>SUBTOTAL</b>														<b>\$15,425,000</b>		<b>\$16,604,552</b>	<b>\$12,115,020</b>	<b>\$4,489,532</b>	
<b>MISCELLANEOUS</b>																			
<b>SUBTOTAL</b>														<b>\$0</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>GRAND TOTAL</b>														<b>\$361,178,075</b>		<b>\$511,911,919</b>	<b>\$40,309,436</b>	<b>\$459,602,482</b>	