



**Town of Highland Beach
Total Improvement Costs
Engineer's Probable Cost
December 13, 2018**



Highland Beach Stormwater Improvements:	\$ 16,550,000.00
Highland Beach Ocean Walk:	\$ 11,250,000.00
Highland Beach Utility Undergrounding:	\$ 17,200,000.00
Grand Total:	\$ 45,000,000.00



Town of Highland Beach Stormwater Improvements Engineer's Probable Cost December 13, 2018



Item	Description	Quantity	Unit	Unit Cost	Item Cost
General Items					
1	Mobilization / Demobilization / Video	1	LS	\$ 900,000.00	\$ 900,000.00
2	Maintenance of Traffic	1	LS	\$ 450,000.00	\$ 450,000.00
3	NPDES Compliance (Includes Permitting, Monitoring, Silt Fence, and Turbidity Barrier)	1	LS	\$ 100,000.00	\$ 100,000.00
4	Construction Layout & As-Builts	1	LS	\$ 50,000.00	\$ 50,000.00
5	Clearing / Grubbing (Includes road right-of-way and outfalls)	10.00	AC	\$ 12,500.00	\$ 125,000.00
General Items Subtotal:					\$ 1,625,000.00
Drainage - Exfiltration					
6	No. 57 Stone (Includes Filter Fabric)	6,000	CY	\$ 116.00	\$ 696,000.00
7	Exfiltration Trench (Includes Stone w/ 15" perforated oval RCP, and Filter Fabric)	14,000	LF	\$ 165.00	\$ 2,310,000.00
8	15" Oval RCP	2,000	LF	\$ 95.00	\$ 190,000.00
9	24" RCP (Outfalls)	1,600	LF	\$ 85.00	\$ 136,000.00
10	Type 'E' Inlet	90	EA	\$ 4,500.00	\$ 405,000.00
11	Root Barrier	30,000	LF	\$ 20.00	\$ 600,000.00
Drainage - Exfiltration Subtotal:					\$ 4,337,000.00
Multi-Use Path (10' Wide)					
12	Pervious Concrete (6" Thick)	11,700	SY	\$ 100.00	\$ 1,170,000.00
13	Stabilized Subgrade	12,000	SY	\$ 12.00	\$ 144,000.00
14	#57 Stone Base (12" Thick)	6,000	CY	\$ 116.00	\$ 696,000.00
15	12" Wide Header Curb (18" Deep)	30,000	LF	\$ 40.00	\$ 1,200,000.00
16	Meandering Nonpervious Concrete (6" Thick)	15,000	LF	\$ 15.00	\$ 225,000.00
Multi-Use Path (10' Wide) Subtotal:					\$ 3,435,000.00
Drainage Outfalls					
17	Secure Easements	1	LS	\$ 300,000.00	\$ 300,000.00
18	Mangrove Mitigation / Trimming (2 areas)	1	LS	\$ 200,000.00	\$ 200,000.00
Drainage Outfalls Subtotal:					\$ 500,000.00
Drainage - Rubble Rip Rap Weir					
19	Rubble Rip Rap Control Structure (with 12" Bleeder)	3	EA	\$ 28,680.00	\$ 86,040.00
20	Rubble Rip Rap (Includes Bedding Stone / Filter Fabric)	81	TN	\$ 165.00	\$ 13,365.00
21	Install Tide Flex Valve Through Weir	3	EA	\$ 4,000.00	\$ 12,000.00
22	12" Corrugated Aluminum Pipe (CAP)	80	LF	\$ 65.00	\$ 5,200.00
23	Baffle Box - Gen 2	3	EA	\$ 50,000.00	\$ 150,000.00
Drainage - Rubble Rip Rap Weir Subtotal:					\$ 266,605.00



Town of Highland Beach Stormwater Improvements Engineer's Probable Cost December 13, 2018



Item	Description	Quantity	Unit	Unit Cost	Item Cost
Drainage - Sheet Pile Weir					
24	Rubble Rip Rap (Includes Bedding Stone / Filter Fabric)	138	TN	\$ 165.00	\$ 22,770.00
25	Sheet Pile Control Structure (with Cap)	5	EA	\$ 28,000.00	\$ 140,000.00
26	Baffle Box - Gen 2	5	EA	\$ 50,000.00	\$ 250,000.00
Drainage - Sheet Pile Weir Subtotal:					\$ 412,770.00
Restoration					
27	Interim Sod	60,000	SY	\$ 4.00	\$ 240,000.00
28	Superpave Asphaltic Concrete, Traffic A (Roadway Restoration)	300	TN	\$ 126.00	\$ 37,800.00
29	Optional Base, Base Group 09 (Roadway Restoration)	1,600	SY	\$ 17.00	\$ 27,200.00
30	Compacted Subgrade (Roadway Restoration)	1,800	SY	\$ 12.00	\$ 21,600.00
Restoration Subtotal:					\$ 326,600.00
Rain Garden					
31	Landscaping	1	LS	\$ 72,000.00	\$ 72,000.00
32	Rock / Ground Covering	25	TN	\$ 165.00	\$ 4,125.00
33	Retaining Wall	190	LF	\$ 150.00	\$ 28,500.00
34	Excavation	1,600	CY	\$ 14.00	\$ 22,400.00
Rain Garden Subtotal:					\$ 127,025.00
Roadway					
35	Excavation	1,000	CY	\$ 14.00	\$ 14,000.00
36	Embankment	18,000	CY	\$ 22.00	\$ 396,000.00
Roadway Subtotal:					\$ 410,000.00
FPL / ATT / Comcast Crossings					
37	FPL/ATT/Comcast Conduit Crossings / Connections	19,000	LF	\$ 20.00	\$ 380,000.00
FPL / ATT / Comcast Crossings Subtotal:					\$ 380,000.00
Subtotal:					\$ 11,820,000.00
Admin / Design / Survey / Permitting / CEI (20%):					\$ 2,365,000.00
Contingencies (20%):					\$ 2,365,000.00
Grand Total:					\$ 16,550,000.00

Notes:

1. Costs obtained from the Florida Department of Transportation running Average dated from 6/01/2017 to 5/31/2018, and current bids with a three-year inflation rate of 1.10% applied.
2. It is assumed the stormwater improvements will be done prior to the FDOT 3R project. As-builts will be required ahead of the FDOT 3R project.
3. Costs are based on a 10' wide multi-use path.
4. Costs are for eight (8) outfalls. Each outfall to include a baffle box, control structure with tideflex valve.
5. Cost does not include additional pavement for raising the road. It is assumed FDOT will provide.
6. Permitting includes permitting through FDOT, SFWMD, FDEP environmental, and any other Federal or State agency impacted.



Highland Beach Ocean Walk Engineer's Probable Cost December 13, 2018



Item	Description	Quantity	Unit	Unit Cost	Item Cost
General Items					
1	Mobilization / Demobilization / Video	1	LS	\$ 700,000.00	\$ 700,000.00
2	Maintenance of Traffic	1	LS	\$ 474,000.00	\$ 474,000.00
3	NPDES Maintenance and Permitting	1	LS	\$ 52,000.00	\$ 52,000.00
4	Survey (Includes Potholing, Stake-out and As-Built)	1	LS	\$ 30,000.00	\$ 30,000.00
5	Clearing / Grubbing / Demolition	10.00	AC	\$ 12,500.00	\$ 125,000.00
6	Excavation	25,000	CY	\$ 14.00	\$ 350,000.00
7	Embankment	500	CY	\$ 22.00	\$ 11,000.00
General Items Subtotal:					\$ 1,742,000.00
Multi-use Path					
8	Luminescent "Starry Night"	1,500	SY	\$ 250.00	\$ 375,000.00
8	Luminescent Paint	50	GAL	\$ 100.00	\$ 5,000.00
9	Pathway Lighting	1	LS	\$ 2,000,000.00	\$ 2,000,000.00
Multi-use Path Subtotal:					\$ 2,380,000.00
Landscaping and Irrigation					
10	Landscaping (Transplanting)	1	LS	\$ 1,000,000.00	\$ 1,000,000.00
11	Landscaping (New)	1	LS	\$ 683,000.00	\$ 683,000.00
12	Irrigation	1	LS	\$ 110,000.00	\$ 110,000.00
13	Sod	14,800	SY	\$ 4.00	\$ 59,200.00
Landscaping and Irrigation Subtotal:					\$ 1,852,200.00
Pocket Parks					
14	Benches	9	EA	\$ 5,000.00	\$ 45,000.00
15	Trash Bins	8	EA	\$ 2,000.00	\$ 16,000.00
16	6" Thick Concrete Pad (For Benches)	160	SY	\$ 50.00	\$ 8,000.00
17	Concrete Base Pedestal	4	EA	\$ 4,000.00	\$ 16,000.00
18	Bike Repair Station	2	EA	\$ 2,000.00	\$ 4,000.00
19	Drinking Fountains (People and Pets) Incl water service connect, RPZ valve	2	EA	\$ 9,000.00	\$ 18,000.00
20	Lighting (2 at each Park - to be Sea Turtle Friendly) (Includes Electrical Power Source)	16	EA	\$ 16,000.00	\$ 256,000.00
Pocket Parks Subtotal:					\$ 363,000.00



Highland Beach Ocean Walk Engineer's Probable Cost December 13, 2018



Item	Description	Quantity	Unit	Unit Cost	Item Cost
Milling & Overlay					
21	Milling (0.5" Average Depth)	4,800	SY	\$ 4.00	\$ 19,200.00
22	0.5" Superpave Asphaltic Concrete SP-9.5	480	TN	\$ 90.00	\$ 43,200.00
Milling & Overlay Subtotal:					\$ 62,400.00
Pavement Markings					
23	12" White Thermoplastic	1,600	LF	\$ 4.00	\$ 6,400.00
24	24" White Thermoplastic	1,200	LF	\$ 8.00	\$ 9,600.00
25	6" White Thermoplastic	6,400	LF	\$ 2.00	\$ 12,800.00
26	6" Yellow Thermoplastic	3,200	LF	\$ 2.00	\$ 6,400.00
27	Bicycle and Arrow Markings	32	EA	\$ 300.00	\$ 9,600.00
28	Green Bicycle Lane Markings	960	SY	\$ 75.00	\$ 72,000.00
29	Patterned Pavement	640	SY	\$ 75.00	\$ 48,000.00
Pavement Markings Subtotal:					\$ 164,800.00
Crosswalk Sidewalk (ADA tie-in) (FDOT 3R Contract)					
30	Detectable Warning	480	SF	\$ 50.00	\$ 24,000.00
31	4" Pervious Concrete Sidewalk	800	SY	\$ 38.00	\$ 30,400.00
32	12" Sand Base	920	SY	\$ 20.00	\$ 18,400.00
33	12" Stabilized Subgrade (LBR 40)	960	SY	\$ 5.00	\$ 4,800.00
Crosswalk Sidewalk (ADA tie-in) (FDOT 3R Contract) Subtotal:					\$ 77,600.00
Solar Crosswalk Lighting "Turtle Friendly"					
34	Lighting System Complete Incl. Pole, Fixture, and Solar	8	EA	\$ 20,000.00	\$ 160,000.00
Solar Crosswalk Lighting "Turtle Friendly" Subtotal:					\$ 160,000.00
Solar Advanced Crosswalk System "Turtle Friendly"					
35	Crosswalk System Complete / Light-up Stripes Incl. Signage, Lane Light LED, Push Button Activator	8	EA	\$ 78,500.00	\$ 628,000.00
Solar Advanced Crosswalk System "Turtle Friendly" Subtotal:					\$ 628,000.00
Ultimate Design Passive Detection Crosswalk (FDOT 3R Contract)					
36	Infrared Bollard Set Complete	8	EA	\$ 15,000.00	\$ 120,000.00
37	System Adjustment Post Roadway Construction	8	EA	\$ 10,000.00	\$ 80,000.00
Ultimate Design Passive Detection Crosswalk (FDOT 3R Contract) Subtotal:					\$ 200,000.00



Highland Beach Ocean Walk Engineer's Probable Cost December 13, 2018



Item	Description	Quantity	Unit	Unit Cost	Item Cost
Entry Monument					
38	Entry Monument (Includes Footing, Foundation, Landscaping, and Lighting)	2	EA	\$ 80,000.00	\$ 160,000.00
39	Delray Sands Monument (Includes Footing, Foundation, Landscaping, and Lighting)	1	EA	\$ 100,000.00	\$ 100,000.00
40	Town Hall Monument (Includes Footing, Foundation, Landscaping, and Lighting)	1	EA	\$ 160,000.00	\$ 160,000.00
Entry Monument Subtotal:					\$ 420,000.00
Subtotal:					\$ 8,050,000.00
Admin / Design / Survey / Permitting / CEI (20%):					\$ 1,600,000.00
Contingency (20%):					\$ 1,600,000.00
Grand Total:					\$ 11,250,000.00

Notes:

1. Ocean Walk Costs obtained from the Florida Department of Transportation running Average dated 6/25/18 and current bids with a three year inflation rate of 1.10% applied.
2. Multi-use path pervious pavement and base rock included in stormwater improvements. Costs above Multi-use path artistic elements.
3. Costs include 8 Pocket Parks.
4. It is assumed Ocean Walk will be constructed at same time as Stormwater improvements and minor adjustments will occur with the FDOT 3R project.
5. Crosswalk Costs obtained from TAPCO, SEPCO and the Florida Department of Transportation running Average dated 6/25/18.
6. It is assumed the Crosswalk work will be completed ahead of the FDOT 3R project and modifications will need to be done by FDOT at the time of the FDOT 3R project.
7. It is assumed FDOT 3R Project will place two (2) traffic calming features through corridor (raised speedtables). Cost per FDOT
8. Monument Costs obtained from the Florida Department of Transportation running Average dated from 6/01/2017 to 5/31/2018, and current bids with a three-year inflation rate of 1.10% applied.
9. Monument Cost include modest monument at north and south end of Town, similar monument at Delray Sands, and major monument of same style at Town Hall.
10. Monument construction may need to wait until the FDOT 3R project depending on the impact to the road clear zones.
11. Permitting includes permitting through FDOT and any other Federal or State agency impacted.



Highland Beach Underground Utilities Engineer's Probable Cost December 13, 2018



Item	Description	Quantity	Unit	Unit Cost	Item Cost
General Items					
1	Mobilization (Excluding FPL, Comcast, AT&T)	1	LS	\$ 380,000.00	\$ 380,000.00
2	Maintenance of Traffic	1	LS	\$ 200,000.00	\$ 200,000.00
General Items Subtotal:					\$ 580,000.00
Utilities Adjustments					
3	FPL Underground Conversion Estimate*	1	LS	\$ 10,700,000.00	\$ 10,700,000.00
4	10% Max Additional Cost Per FPL Letter	1	LS	\$ 1,100,000.00	\$ 1,100,000.00
5	Site Restoration Estimate* (Includes trench backfilling and pole removal restoration)	1	LS	\$ 250,000.00	\$ 250,000.00
6	Street Lighting (Turtle Friendly)	1	LS	\$ 2,620,000.00	\$ 2,620,000.00
7	Comcast / Cable Underground Adjustments	1	LS	\$ 1,600,000.00	\$ 1,600,000.00
8	AT&T Underground Adjustments	1	LS	\$ 800,000.00	\$ 800,000.00
9	Securing Utility Easements	1	LS	\$ 300,000.00	\$ 300,000.00
Utilities Adjustments Subtotal:					\$ 17,370,000.00
Subtotal:					\$ 17,950,000.00
FPL Credit for Undergrounding Entire Town (25% ±):					\$ (2,950,000.00)
Subtotal:					\$ 15,000,000.00
Admin / Design / Survey / Permitting / CEI (20%± - Excluding Items 1 & 2):					\$ 1,100,000.00
Contingency (20%± - Excluding Items 1 & 2):					\$ 1,100,000.00
Grand Total:					\$ 17,200,000.00

Notes:

1. FPL conversion estimate (increased by 10%) per FPL letter dated 1/5/18.
2. Site restoration estimate obtained from prior Town conversations with FPL and noted in the FPL letter dated 1/5/18
3. Additional 10% per FPL letter dated 1/5/18.
4. Street lighting must be in place prior to replacing the existing FPL lights. FDOT will not allow the corridor to be dark, thus lights must be installed ahead of the undergrounding of FPL. It is assumed Lighting is for street only.
5. It is assumed the Undergrounding of dry utilities will be done after the stormwater improvements but prior to the FDOT 3R project.
6. The Town is unique in that it is a newly hardened facility, thus credits are limited. The salvaged items may provide further discount above and beyond the 25% credit noted in the cost estimate.
7. Town gets FPL Credit only if the Town secures all easements required and all FPL utilities in Town are placed underground.