

Clearwater Marina District Boardwalk Design Guidelines and Specifications

General Information:

The Clearwater Marina District Boardwalk Design Guidelines and Specifications, adopted by Ordinance No. 8438-13, should be considered a supplemental document to the City of Clearwater's special area plan *Beach by Design: A Preliminary Design for Clearwater Beach and Design Guidelines*. It shall guide construction of the public boardwalk along Clearwater Harbor from Baymont Street south to the southern boundary of the District terminating at a public plaza adjacent to the public parking lot north of Memorial Causeway.

This document provides specific requirements regarding the design and construction of the public boardwalk on private property, as well as the public entrances to be constructed by the City of Clearwater at Papaya and Baymont Streets and the public plaza to be constructed by the City of Clearwater adjacent to the public parking lot north of Memorial Causeway.

Where feasible the boardwalk shall be constructed completely over the water rather than on uplands. Exceptions may be granted on properties adjacent to the public entrances at Papaya and Baymont Streets or when a hardship prevents construction over the water.

Public entrances and sidewalks shall incorporate all required streetscaping standards identified within the Beach by Design document. The sidewalk along East Shore Drive and the sidewalk from the public plaza to the east/west sidewalk at Memorial Causeway shall be provided as indicated herein.

The boardwalk and sidewalk shall be compliant with all governing codes and regulations including compliance with the Florida American with Disabilities Act Accessibility Guidelines (ADAAG) requirements.



Figure 1 - Scope of Boardwalk & Sidewalk Guidelines

Property owners required to construct the new public boardwalk as a result of the development approval process are responsible for constructing a continuous portion of public boardwalk along the length of their property as indicated herein. Property owners adjacent to public entrances to the public boardwalk must also address, integrate and transition to the public entrances. Public boardwalk and transitions requiring environmental engineering for permitting will be the responsibility of the property owner. Environmental engineering required for the public plazas will be the City's responsibility.

Private property transitions including any and all stairs, ramps, railings, or continuation of decking from or transitioning to the public boardwalk or public entrances shall be accessible. All work shall be consistent with these guidelines and must be consistent in fit and finish, complementary to the new public boardwalk and its entrances. All phases of design documents shall be submitted to the City of Clearwater for review, comment and approval by the City's Parks and Recreation Department.

The City of Clearwater - Parks and Recreation Department shall be responsible for maintaining the constructed public boardwalk up to the private property owners' adjacent property upon acceptance the boardwalk is constructed to the satisfaction of the Parks and Recreation Department and after the one year warranty construction period is completed and walk through acceptance by the City of Clearwater - Parks and Recreation Department.

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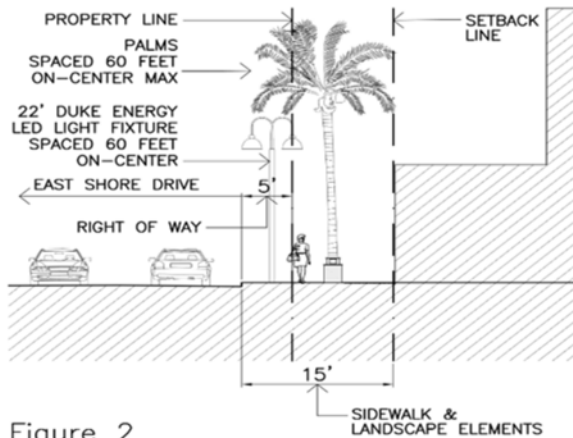


Figure 2
**EAST SHORE DRIVE SIDEWALK
SECTION DIAGRAM**
SCALE: 1/16"=1'-0"

Sidewalk Requirements: (East Shore Drive)

As shown in Figure 2 and as stated within the Beach by Design guidelines, a 15 foot wide clear setback, starting from the street curb, with a minimum 6 foot wide pedestrian sidewalk shall be provided along East Shore Drive. An easement shall be required as necessary to provide this distance. The 15-foot wide setback from street curb to property line shall contain the following sidewalk improvements, including street lighting, trash receptacles, benches, landscaping, and hardscaping material. All improvements shall not interrupt pedestrian movement along the sidewalk.

Sidewalk finish material: coquina shell topping surface Provide gray concrete sidewalk with broadcast coquina shell topping

Lighting: Duke Energy's 22' LED Light Fixture turtle friendly and spaced a maximum of 60 feet on center

Trash receptacles: Shall be provided by the City of Clearwater Parks and Recreation Department.

Trash receptacles along sidewalk will be spaced 75' on center and within the 10-foot wide easement.

Landscaping:

Provide palms spaced 60 feet on center max. with two smaller trees equally placed midway between each pair of palms. Provide 12' of "clear trunk" measured from base at finish grade. Acceptable palms include Bismarckia Nobeis (Bismarck Palm) and Phoenix Sylvestris (Silver Date Palm).

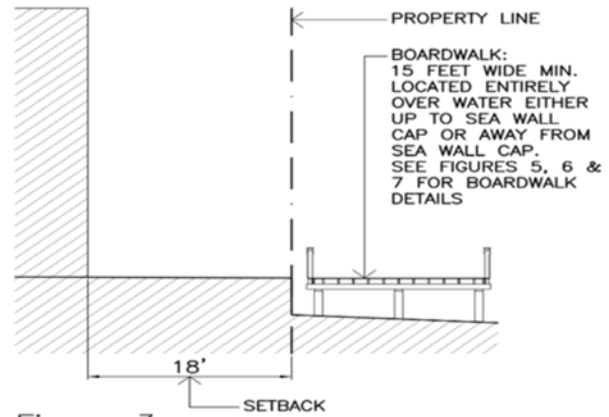


Figure 3
**BOARDWALK
SECTION DIAGRAM**
SCALE: 1/16"=1'-0"

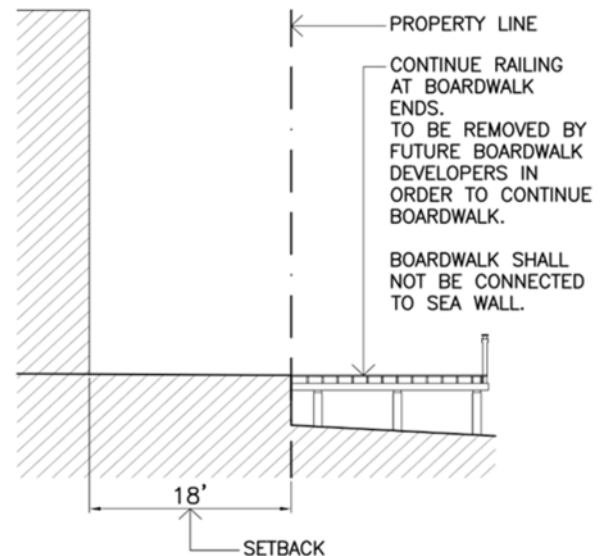


Figure 4
**BOARDWALK AT ENDS
SECTION DIAGRAM**
SCALE: 1/16"=1'-0"

Boat Dock Transitions: (to & from public boardwalk)

Any and all private or public boat docks, transitioning to or from the public boardwalk shall comply with all governing codes and regulations including the Florida American with Disabilities Act Accessibility Guidelines, the Pinellas County Water & Navigation Code, including Section 166-325 Boardwalk and Observation Platforms on Commercial & Multi-Use properties & Section 166-332 Minimum Construction Specification for all dock construction.

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Public Entrance Requirements:

There will be three public pedestrian oriented park plaza accesses to the boardwalk. Two located east of East Shore Drive at Papaya and Baymont Streets with their ends converted from streets to public entry pedestrian plazas to the boardwalk. At the southern end of the boardwalk a public pedestrian access plaza shall be created east of the public parking lot and connected to the sidewalk running east / west along the Memorial Causeway Boulevard. Other improvements shall include sidewalk pathways leading to the boardwalk entrances, lighting, seating areas, trash receptacles, bicycle racks, water fountains, collapsible bollards, and landscaping & hardscaping. All improvements shall not interrupt pedestrian pathways.

Sidewalk finish material: coquina shell topping surface

Provide gray concrete sidewalk with broadcast coquina shell topping

Lighting: Duke Energy's 22' LED Light Fixture turtle friendly

Provide lighting suitable for pedestrian pathways and seating areas.

Benches:

Provided by the City of Clearwater Parks and Recreation Department.

Trash receptacles:

Provided by the City of Clearwater Parks and Recreation Department.

Bicycle Racks: Bikeparking.com WCR02-SF Welle Circular surface mount. Color: Match existing bicycle racks.

Provide bicycle racks secured in accordance with manufacturer's specifications. All bicycle rack materials including fasteners shall be stainless steel 316 grade. Bike racks are not to be provided along East Shore Drive.

Water fountains: Manufacturer, Most Dependable Fountains, Mostdependablefountains.com, 10145 SMSS Chrome

Provide water fountains in accordance with manufacturer's requirements. Fountain materials, including fasteners shall be stainless steel 316 grade. Provide 3' diameter dry well 2' deep adjacent to fixture for water fountain drainage.

Landscaping Requirements:

Provide plant material at each public entry to the public boardwalk as well as part of the sidewalk requirement. All plant material shall meet Florida Grade #1 or better. Planting shall be performed in accordance with the Florida Nurserymen's and Grower's Landscape Association approved practices. Select and plant the species types of the acceptable landscape materials listed below as follows: (1) of the palm species. Minimum of (2) of the small canopy tree species (between the palms). Minimum (3) types of the shrub species. Minimum (2) types of the ground cover species.

Acceptable landscape material:

a. Tree / Palms

- | | | |
|---------------------------------------|------------------|---------------------|
| i. 12' Clear Trunk Bismarckia Nobolis | Bismark Palm | 12-foot clear trunk |
| ii. 12' Phoenix Sylvestris | Silver Date Palm | 12-foot clear trunk |

b. Small Canopy Tree Species Types

- | | | | |
|-----------------------|-----------------------------|---------------|----------------------|
| i. Acca Sellowiana | Feijoa Tree-Pineapple Guava | 8'-10' height | 2-inch trunk caliper |
| ii. Cassia Fistula | Golden Shower Cassia | 8'-10' height | 2-inch trunk caliper |
| iii. Cordia Sebestena | Orange Geiger Tree | 8'-10' height | 2-inch trunk caliper |
| iv. Jatropha Curcas | Jatropha Curcas Tree | 8'-10' height | 2-inch trunk caliper |
| v. Vitex Agnus-Castus | Vitex Tree | 8'-10' height | 2-inch trunk caliper |

c. Shrub Species Types

- | | | |
|--------------------------------------|------------------------|----------------------|
| i. Allamanda Cathartica 'Compacta' | Dwarf Allamanda | 18"x24" 3-gal. cont. |
| ii. Conocarpus Erectus var. Sericeus | Silver Buttonwood | 18"x24" 3-gal. cont. |
| iii. Fiesta Hibiscus | Dwarf Fiesta | 18"x24" 3-gal. cont. |
| iv. Ixora 'Maui Red' Dwarf | Dwarf Red Ixora 'Maui' | 18"x24" 3-gal. cont. |

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Landscaping: (Continued)

v. Ixora 'Maui Yellow' Dwarf	Dwarf Yellow Ixora 'Maui'	18"x24" 3-gal. cont.
vi. Pringles Podocarpus Dwarf	Dwarf Pringles Podocarpus	18"x24" 3-gal. cont.
vii. Nerium Oleander 'Petite Pink'	Dwarf Pink Oleander	18"x24" 3-gal. cont.
viii. Rhamphiolepis Indica 'Dwarf'	Dwarf Indian Hawthorn	18"x24" 3-gal. cont.
ix. Schefflera Arboricola 'Trinette'	Variegate Arboricola	18"x24" 3-gal. cont.
x. Strelitzia Reginae	Orange Bird of Paradise	18"x24" 3-gal. cont.

d. Ground Cover Species

i. Arachis Glabrata 'Eco Turf'	Eco Turf Perennial Peanuts	6" - 8" 1-gal. cont.
ii. Liriope Muscari 'Emerald Goddess'	Emerald Goddess Lily Turf	6" - 8" 1-gal. cont.
iii. Trachelospermum Asiaticum		
Minima Jasmine 'Green'	Dwarf Minima Jasmine Green	6" - 8" 1-gal. cont.
iv. Trachelospermum Asiaticum		
Minima Jasmine 'Variegated'	Dwarf Minima Jasmine Variegated	6" - 8" 1-gal. cont.
v. Sesuvium Portulacastrum	Sea Purslane	6" - 8" 1-gal. cont.

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Boardwalk Requirements:

This section contains the requirements related to boardwalk materials, including pile bents (wood pilings & piles caps), wood piles, pile caps, wood stringers, composite decking, railings, lighting, and fasteners. Boardwalk must accommodate a 2000 lb vehicular live load. Furthermore requirements herein are meant to be consistent with Pinellas County Water & Navigation Code, including Section 166-325 Boardwalk and Observation Platforms on Commercial & Multi-Use properties & Section 166-332 Minimum Construction Specification for all dock construction. Where discrepancies occur the more restrictive requirements shall govern (see Figures 3, 4, 5, 6, and 7 for construction details).

Boardwalk Timber Piles:

Provide Southern Yellow Pine piles in accordance with ASTM D 25. Piles shall be round timber unused, clean peeled, and in one piece from butt to tip. Piles shall not be less than 10 inches in diameter and pressure treated according to AWWA C3 and AWWA C18 standards for marine service conditions. Structural member sizes shall be determined by the applicant and/or applicant's representative. Piles shall penetrate not less than 8' below mud line and terminate below finished decking material not to exceed 10 feet above mean high water levels.

Pile Wrapping:

All piles, 2.50 CCA, shall be wrapped with .060 mil/LF High Density Polyethylene pile wrapping material. Pile wrapping shall extend continuously from mud line to 2' above mean high water line.

Pile Bents: (Pile and Pile cap)

Pile bents spacing shall be determined by the applicant and/or applicant's representative, not exceed 12' on-center. All pile bents shall have at a minimum 8" x 8" pile caps, bearing stringers to support deck joists. All intersections shall be bolted.

Pile Caps:

Pile caps shall be at a minimum 8" x 8" pressure treated lumber. All intersections shall be bolted.

Stringers:

Outside stringer systems shall be doubled 4" x 12" pressure treated lumber or greater. Provide 5/8" diameter stainless steel bolts or greater to attach stringers to pilings. Intermediate stringers shall be single 4" x 12" pressure treated lumber or greater spaced not less than 16" O.C. to accommodate light vehicular traffic. Not to exceed a live load of 2000 lbs. All structural member sizing, spacing and fastening requirements must be determined by the applicant and/or applicant's representative.

All Timber/Lumber:

Shall be pressure treated and rated for ground contact. All wood members, including pressure treated wood members and all concealed wood members clad with Trex Transcend composite decking material, shall be finished at all surfaces with Sikkens Cetol Waterborne SRD Translucent Wood Finish in accordance with manufacturer's requirements. Pressure treated lumber must be fully cured (6 weeks) prior to receiving Sikkens treatment.

Fasteners:

All metal fasteners, including but not limited to, bolts, screws, and nails, etc. shall be stainless steel 316 grade. All bolts shall extend no further than 3 or 4 threads beyond nut fastener.

Decking: Trex Transcend 2" x 6" composite decking material. Deck Color 1: Lava Rock

Install in accordance with manufacturer's requirements. Decking should be cut to length and shall not extend to outside stringer not to exceed more than 2" beyond. See sections and drawing diagrams contained within this document.

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Boardwalk Requirements: (Continued)

Railing: Trex Transcend 2" x 6" composite decking material. Deck Color 1: Lava Rock

Provide railings configured in accordance with sections, elevations, and details contained within this document. Only provide railings where required by applicable codes. Top rails shall not be less than 42" above finished walkway surface. Provide 6" x 6" copper post caps (HS6C).

Benches: Provided by the City of Clearwater Parks and Recreation Department. Benches will be spaced every 40' along the length of the boardwalk.

Lighting: Post mounted LED accent light fixtures manufactured by AZEK integrally mounted to railing posts every 15'-0" on-center along both sides of boardwalk. See Figure 7. Provide infrastructure as required.

Trash Receptacles: Provided by the City of Clearwater Parks and Recreation Department.



Most Dependable Fountains 101459455

Mostdependablefountains.com, 10145
SMSS Chrome, at entry nodes



Trash Receptacle provided by the City of
Clearwater Parks and Recreation Department



AZEK Accent LED post-mounted light fixture
provided by the developer.



Bike Racks provided by the City of Clearwater Parks and
Recreation Department at every entry node only



Bench provided by the City of Clearwater
Parks and Recreation Department

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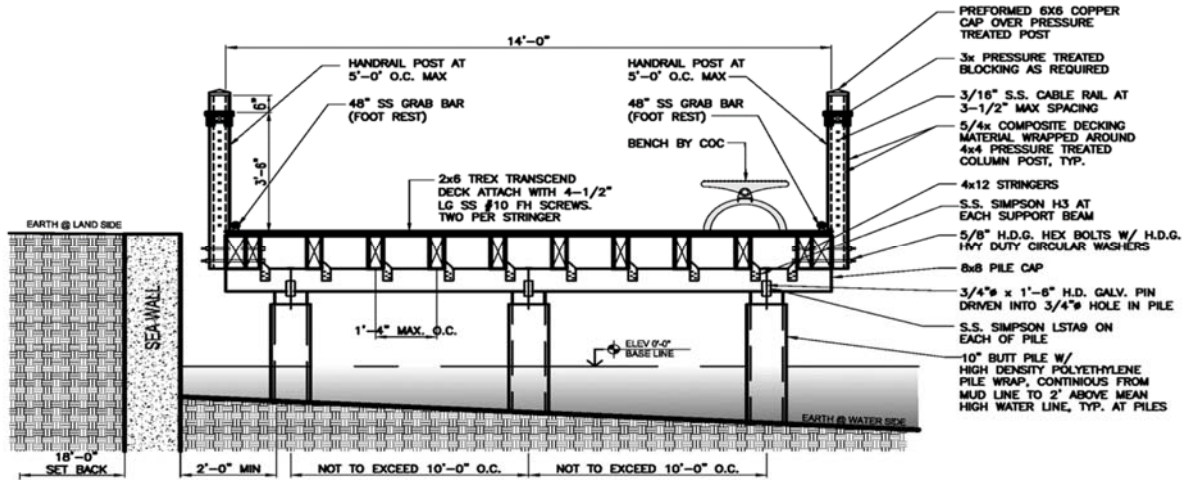


Figure 5
BOARDWALK SECTION
SCALE: 1/4"=1'-0"

NOTE:
ALL PILING AND LUMBER TO BE PRESSURE TREATED SOUTHERN YELLOW PINE, UNLESS OTHERWISE NOTED.

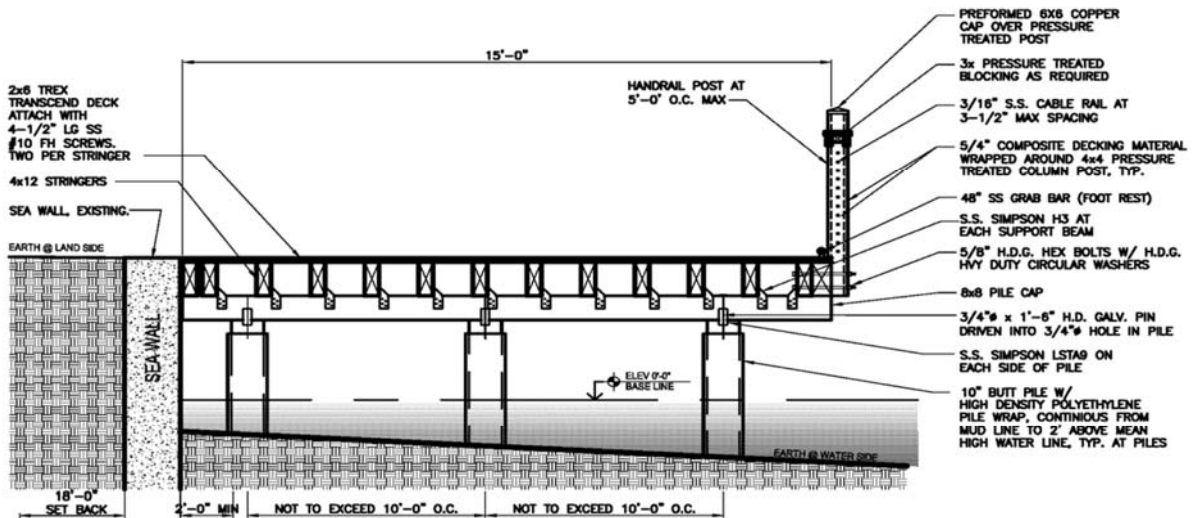


Figure 6
BOARDWALK SECTION AT SEA WALL
SCALE: 1/4"=1'-0"

NOTE:
BOARDWALK SHALL NOT BE CONNECTED TO SEAWALL.

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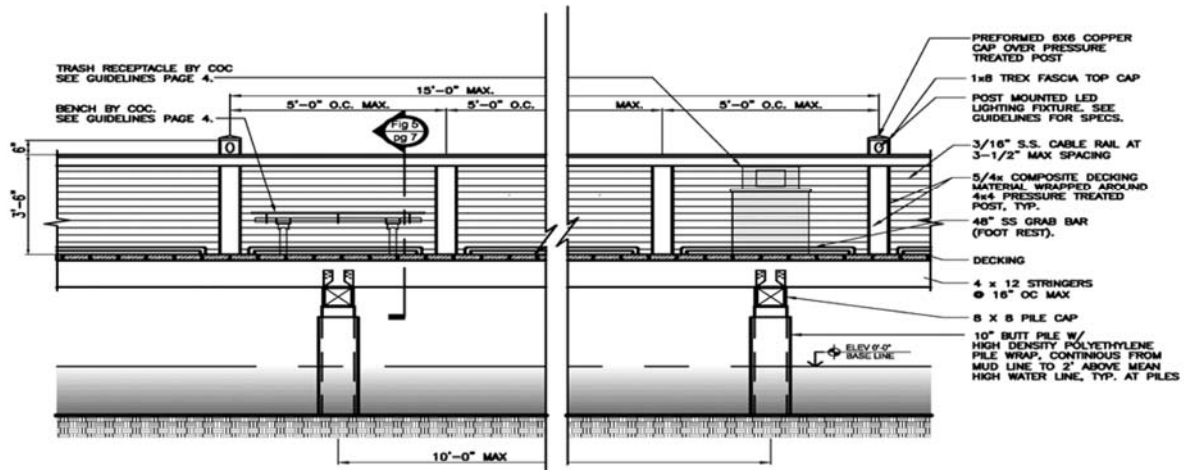


Figure 7
INTERIOR RAILING ELEVATION
SCALE: 1/4" = 1'-0"
NOTE:
FASTEN HORIZONTAL RAILING
USING STAINLESS STEEL
HARDWARE