

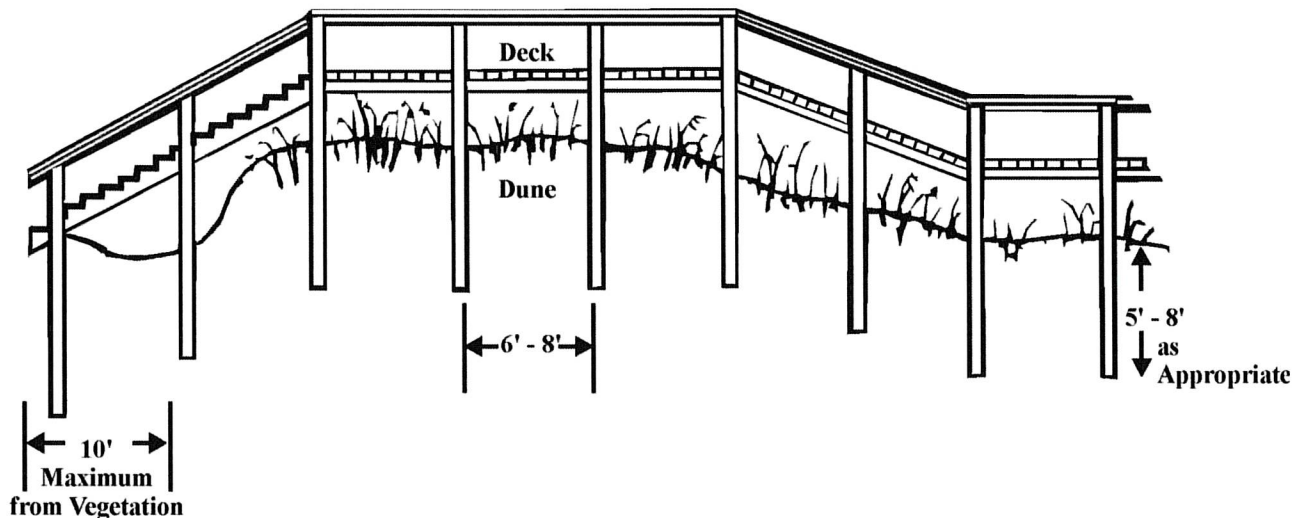


CCCL Dune Walkover Guidelines

On many of Florida's beaches, sand dunes and coastal vegetation provide significant protection to upland property, upland development, and the beach dune system. The Florida Department of Environmental Protection (DEP) encourages the design of beach access, including beach and dune walkovers, to protect the dune topography and dune vegetation from pedestrian traffic, allow for the natural recovery of damaged or eroded dunes and to not interfere with sea turtle nesting.

TYPICAL DUNE WALKOVER PROFILE

⇐ To the Beach



PERMIT REQUIREMENTS

A permit from DEP is required for construction of walkovers on most sandy beaches fronting on the open waters of the Atlantic Ocean or Gulf of Mexico. In areas where a Coastal Construction Control Line (CCCL) has been established pursuant to provisions of Section 161.053, Florida Statutes (F.S.), a permit is required for all excavation, construction, or other activities with the potential to cause beach erosion or damage coastal vegetation. On sandy shorelines where a CCCL line has not been established, a permit is required for construction activities within 50 feet of the mean high water line (see Section 161.052, F.S.).

Permits for walkovers contain standard conditions that require construction to be conducted in a manner that minimizes short-term disturbance to the dune system and existing vegetation. Replacing vegetation destroyed during construction with similar plants suitable for beach and dune stabilization is required. Only limited excavation for the placement of support posts is allowed, and walkovers cannot be constructed during the

marine turtle-nesting season, which extends May 1 through October 31 (except for Brevard through Dade counties, which extends March 1 through October 31).

GENERAL SITING GUIDELINES

The walkover must be located and designed to protect dune features, to minimize disturbance of native vegetation, to not obstruct lateral beach access and to minimize the amount of construction material that may become debris during a storm. Elevated walkovers are not required for all beach accesses, such as in sparsely vegetated, low profile dune areas where on-grade sand or shell paths are suitable for controlling foot traffic. Note that on-grade beach mats are considered to be structures that require CCCL permits. Walkovers are generally constructed over the frontal dune and perpendicular to the shoreline. Dune walkovers are designed to extend at least to the seaward toe of the frontal dune or the existing line of vegetation and are allowed no farther than 10 feet seaward of the vegetation. The optimum siting of the walkover structure can be determined by contacting a [CCCL field inspector](#).

GENERAL DESIGN GUIDELINES

Walkovers are designed to be minor, expendable structures that pose only minimal interference with coastal processes and generate minimal amounts of debris. Walkovers constructed across native beach and dune vegetation need to be post-supported and elevated a sufficient distance above the existing or proposed vegetation to allow for sand build-up and clearance above the vegetation. Stairways and ramps leading from the dune bluff or crest down to the beach need to completely span the seaward slope of the dune without installing posts into unstable slopes steeper than approximately 30 degrees. The structure must be designed to minimize the quantity of material used in construction, such as avoiding the use of vertical wood pickets, and reducing the length and width of construction on the beach.

Single family walkovers are not to exceed 4 feet in overall width and the support posts are not to be greater than 4-inch wide posts. Multi-family walkovers are not to exceed 6 feet in overall width and the support posts are not to be greater than 6-inch wide posts. Round posts are preferred to square posts. Support posts cannot be encased in concrete nor installed into dune slopes that are steeper than approximately 30 degrees. Support posts are to have a minimum 5 feet of soil penetration or embedment. Cross bracing is not required for most structures when following the designs in the document "*Beach/Dune Walkover Structures*," referenced at the end of this document. Local governments and property owners are advised to consult with a [CCCL Permit Manager](#) prior to requesting a permit for a walkover that contains switchbacks, long ramps or other features required to comply with the Americans with Disabilities Act Accessibility Guidelines.

WALKOVER ELEVATION GUIDELINES

Walkover heights vary as the structure crosses the beach/dune system. The ground cover changes from the uplands, commonly covered with woody scrub or coastal strand vegetation (saw palmetto/sea grape/scrub oaks), over a dune bluff or one or several dune crest(s), covered with either coastal strand or coastal grassland (sea oats/bitter panicum/marsh hay), down the slope to the dry sand beach, either uncovered bare escarpment or partially covered with beach/dune vegetation (railroad vine/sea rocket/sea oats). Design of the structure and height of the deck from the dune bluff or crest down to the beach also must be considered in setting the walkover elevation with the goal of minimizing the amount of material on the beach.

Walkover Elevations in Uplands. The upland environment of coastal scrub/coastal strand habitat is characterized by more stable soil conditions with less blowing sands and infrequent storm overwash events. The stable conditions allow for the development of a mature woody vegetation and saw palmetto dominated plant community. In addition to thick above ground stem and leaf vegetation between 5 and 15 feet in height,

this plant community has an extensive below ground woody root mat. Walkovers in these upland habitats need be elevated only a sufficient distance above the ground to avoid disturbance of the soil and root systems or cutting of low tree and palmetto trunks. An elevation of the stringers from 6" to 2'-0" above existing grade is expected to be sufficient in many cases. Walkover elevations crossing coastal wetlands within upland areas may require increased elevations. Elevation of the walkover above the leaf canopy is in most cases impractical in coastal scrub or coastal strand habitats where careful pruning needs to be limited to removal of only those aerial branches to create an open passage. Deck elevations need to be no higher than five feet above grade to provide clearance for vegetation, and the movement of sand, water and sea turtles underneath the structure.

Walkover Elevations over Bluffs. The low stringer elevation recommended for uplands can be carried to an eroded bluff line. This will reduce the length of a ramp or walkover down to the beach. Again the objective the walkover elevation is to reduce damage to coastal scrub soils and root systems.

Walkover Elevations over Dune Crests. Dune environments are characterized by mobile sands subject to storm effects (which lower grade elevations) and wind effects (which can raise elevation as sand is trapped). Dunes are dominated by coastal grassland plants adapted to the dynamic environment. These include sea oats, bitter panicum, and little bluestem. Walkovers sited within active dune systems are required to be elevated sufficiently to allow for sand movement and growth of vegetation. Walkover designs published in "Beach/Dune Walkover Structures" referenced below specify a 3'-10" minimum clearance from existing grade to the bottom of the stringers of an up to 6-foot wide (overall dimension) multi-family or public beach access structures, and a 3'-0" minimum clearance to the top of the deck for an up to 4-foot wide single family structures.

Walkover Elevations on Seaward Dune or Bluff Slopes. The elevation of the walkover at the dune crest and the distance of the seaward terminus from the water's edge determine the height of the steps or ramps crossing the seaward slope. The design objective is to get the structure down to the beach in as short a shore-normal (perpendicular to the shoreline) distance as possible while reducing the shore-parallel coverage of the slope. Department guidelines require that the seaward terminus of the structure be no farther seaward than 10 feet from the line of permanent beach dune vegetation or the toe of the frontal dune. Reducing the seaward encroachment and shore-parallel width decreases the potential for storms interacting with the structure, occupation of sea turtle nesting habitat by the structure, and interference with lateral public beach access. Walkovers designed for the Americans with Disabilities Act often increase the length of walkover ramps on the beach. This requires the need for a site specific review for environmental impacts. The burial of the ramp or step terminus a minimum amount (0.5 to 1.0 feet)-foot below grade may allow for use of the walkover after some lowering of the beach elevation from minor storms. However, placement of this terminus below the depth of a post storm beach profile is discouraged as this portion of the walkover will most likely have been damaged by larger storms and to have interfered with coastal processes.

On Grade Access. Elevated walkovers are not necessary in all site conditions and use situations. Where dune development is minimal, beach dune vegetation is sparse and the use infrequent, on-grade footpaths may be preferred. The Department discourages solid concrete walks and footpath surfaces such as stepping stones that create debris or missiles. Other surfaces such as geotextile fabrics, cabled wood planks, or shell require a case by case review. No permanent path surfaces are allowed farther seaward than 10-feet from the dune or vegetation line or within sea turtle nesting habitat.

ALIGNMENT

Wood Walkovers. Elevated wood walkovers designed for reducing erosion of high dunes are recommended to be aligned perpendicular to the shore to reduce the shore-parallel extent of structure subject to wave attack and the amount of material used in construction.

On Grade Access. Sand paths, beach mats and low elevation walkovers crossing low dune systems subject to more frequent flooding are recommended to be layed out at an angle to the dune and shoreline. Diagonal access routes to the beach provide less of a direct path for storm waves to travel inland, may have a “self-healing” function that fills in during storm events, and are expected to provide a less direct route for ebb surge waters to scour channels as the storm’s floodwaters return toward the ocean.

WALKOVER LIGHTING GUIDELINES

Elevated Walkovers. Lights are generally prohibited on dune walkovers or elevated boardwalks and may only be considered under the following conditions: the lighting is required for purposes of building code compliance; light fixtures must be located landward of the frontal or primary dune, whichever is further landward; lighting must be long wavelength, downward directed, full cutoff and fully shielded and cannot be directly, indirectly, or cumulatively visible from the beach.

Beach Access Points. Lighting of beach access routes may be located and configured only for the minimal illumination of pedestrian paths landward of the beach and frontal dunes. All lighting of beach access points must be long wavelength, downward directed, full cutoff and fully shielded and cannot be directly, indirectly, or cumulatively visible from the beach.

OTHER CONSTRUCTION

Decks and Platforms. Decks and platforms are not allowed on the frontal dune and may be attached to the walkover in the dune system if landward of the frontal dune crest and cantilevered from an elevated, post supported walkover otherwise following these guidelines. Landward of the dune or bluff, cantilevered decks can have a maximum two-foot cantilever on each side of a single family walkover for a maximum 8-foot wide deck as measured in the shore-parallel dimension.

Roofs. Roofs and other permanent coverings are generally prohibited on walkovers or attached decks and platforms except where gazebos and other non-beach access related structures are allowable landward of the dune system.

Showers and Waterlines. Pipes and fixtures for showers, footbaths or fish cleaning stations may be run to the landward extent of the walkover, not out onto the beach or frontal dune. Water systems are recommended to include shut off valves in the uplands that can prevent uncontrolled discharges which can erode the beach or dune sand or flood sea turtle nests.

Railings. As minor, frangible or breakaway structures, dune walkovers are to be designed with the minimum amount of wood and other solid material needed to provide access through the dune system. Open railings instead of pickets and use of cables or other materials to prevent falls as required by building code for safety can minimize the amount of materials placed in the dune system that may become debris or missiles in storm events.

REFERENCES

Beach/Dune Walkover Structures, SUSF-SG-76 by Todd L. Walton, Jr., and Thomas C. Skinner. Published by the Marine Advisory Program of the Florida Cooperative Extension Service and the Florida Sea Grant, March, 1983.

Coastal Construction Manual, Volume III: Principles and Practices of Planning, Siting, Designing, Constructing, and Maintaining Buildings in Coastal Areas, Appendix I, Dune Walkover Guidance. FEMA.