

**Florida Department of Transportation
Wildlife Crossing Guidelines
2018**

A wildlife crossing is a road-related structure that provides wildlife an option to cross under roadways. These crossings have the potential to reduce motor vehicle collisions with wildlife, consequently reducing the likelihood of injuries and mortalities to humans and wildlife as well as reducing the potential for damage to motor vehicles. These guidelines have been developed for use by the Florida Department of Transportation (FDOT) to evaluate the **appropriateness** of including wildlife crossings (upland or wetland) and associated features (herein referred to collectively as “wildlife crossing features”) for proposed projects on the State Highway System (SHS) or as possible stand-alone retrofit projects on the SHS when warranted. These guidelines have been developed in coordination with the United States Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC), which agencies have regulatory authority and are the recognized experts for wildlife species nationwide and within the State of Florida, respectively.

For these guidelines, the term “wildlife crossing feature(s)” may include, but is not limited to new or modified structures, such as bridges, bridges with shelves¹, specially designed culverts, enlarged culverts or drainage culverts and/or exclusionary devices such as fencing, walls or other barriers, or some combination of these features. Further, as used in these guidelines, the term “wildlife” refers to listed, protected or otherwise regulated species that the USFWS and/or FWC have jurisdiction over.

In cases where a FDOT District has an off-SHS project, the District will coordinate with the Office of Environmental Management regarding possible inclusion of any wildlife crossing features. Wildlife crossing feature locations should be identified as early as possible in the project planning and development processes, and prior to project design. These guidelines also establish **criteria** that must be considered during design of wildlife crossing features.

In developing projects, the FDOT District Offices, in coordination with USFWS and/or FWC, will determine if a wildlife crossing feature is appropriate. As part of the planning and project development processes, the FDOT also considers input from other stakeholders, including local governments, non-governmental organizations and the public. Although opportunities for input exist throughout the process, the FDOT has two prescribed phases where early coordination and input are solicited during project planning and development. These two phases are:

- 1) Efficient Transportation Decision Making (ETDM) is the process where projects are screened and wildlife agency and other stakeholder input is solicited to provide early scoping information regarding potential effects and resources of concern in the project area. During the screening event(s), wildlife agencies and stakeholders have the opportunity to

¹ This structure modification includes a shelf at the toe of the riprap slope protection area under a bridge. This modification can be used to provide a raised alternative for wildlife accommodations when flooding limits wildlife passage at the ground level. An example of these plans can be found in [Section 6](#) of the *FDOT Structures Detailing Manual* (revised January 2018).

propose wildlife crossing features as well as opportunities for wildlife impact minimization and, if necessary, potential mitigation strategies.

- 2) Project Development and Environment (PD&E) is the process by which the FDOT develops the project alternative(s) and analyzes project impacts. It is important for wildlife agencies and stakeholders to be involved during this phase since this is when preliminary design, constructability issues and financial and wildlife agency/stakeholder considerations are balanced to develop the preferred alternative and conceptual design. It is also the phase where commitments are initially considered.

In evaluating a project for a potential wildlife crossing feature, the following guidelines should be observed:

For a proposed FDOT project on the SHS: Wildlife crossing features typically will only be considered when the project is a new alignment, capacity improvement, roadway reconstruction or bridge replacement. However, if a FDOT District finds that a wildlife crossing feature may be beneficial on a different type of project than listed above, or if the project is not on the SHS, the FDOT District can review the project/site specific circumstances with the Office of Environmental Management to consider inclusion of such feature in the project.

For a requested retrofit project on the SHS, FDOT Districts should require entities requesting a wildlife crossing feature to provide scientifically based documentation or studies to substantiate their requests. Funding for acceptable, substantiated requests could result from financial partnerships with requesting entities. In support of these efforts, requesting entities can work with other stakeholders to facilitate funding, to meet coordination requirements with property owners /other stakeholders, and identify right of way and maintenance requirements. Retrofit projects may require the requesting entity to agree to maintain and/or fund the maintenance of the wildlife crossing feature. It is important to advise the requesting entity that appropriate agreements (i.e., Local Funds Agreements/Maintenance Agreements) would need to be executed consistent with FDOT requirements and related Work Program approvals would be needed in order to design and construct a retrofit project.

The following list should be used as a guide in evaluating whether a wildlife crossing feature is appropriate. The list below is not exhaustive and should not be considered a checklist, but simply a guide for coordination, consultation and decision making:

- Has a FDOT District received a documented, science-based need for a wildlife crossing feature that is supported by USFWS and/or FWC and regulatory agencies, as applicable?
- Are there wildlife species documented within the project area and is the project area used by these species?
- Are there documented road kills of wildlife species with high conservation value (as determined by the USFWS/FWC) or within a known area where traversing the roadway creates a potential hazard to motorists and/or wildlife species?
- Is the project within the documented range of the Florida panther and/or Florida black bear?

- Does the project cross or fragment designated critical habitat or a documented landscape level habitat linkage, ecological greenway, or Florida Forever project area where there is science-based evidence that the location is used by wildlife species? This may be especially important when a median barrier is proposed that could create entrapment of the species within the roadway.
- Are public conservation lands or lands under a perpetual conservation or agricultural easement needed to achieve successful use of a wildlife crossing feature? If so, are public conservation lands or lands under a perpetual conservation or agricultural easement present in sufficient amounts on both sides of the road (adjoining and contiguous), where a wildlife crossing feature may be located, including the ability to provide adequate fencing (where appropriate) to guide wildlife species for a sufficient distance to achieve successful use of the feature? Generally, these conditions would apply to large, new or retrofit wildlife crossing features that target wildlife with a large home range as compared to smaller wildlife crossing features where a shelf is being added to an existing structure. These conditions should be discussed and agreed upon with USFWS or FWC during the planning phase. If one of these conditions is required to achieve successful use and does not exist during the planning phase, but is reasonably certain to exist no later than the **beginning** of the 60% project design phase, the wildlife crossing feature can be considered up to that point in project development. Should the conditions agreed upon in the planning phase by the FDOT and agencies not exist at the beginning of the 60% design phase, the FDOT will not move forward with the inclusion of the wildlife crossing feature in the project. In cases where a project achieves 60% design but is not funded for right of way acquisition or construction and is put on “hold”, the FDOT may consider moving forward with the inclusion of the wildlife crossing feature if the conditions have been satisfied at the time the project design is resumed if the schedule and budget allow.
- Are the future land use and development patterns compatible with wildlife species needs or ecosystem viability?
- Does the project involve locations of critical conservation need as determined by USFWS or FWC?

Science-based data collected or provided to address the above items should serve as a guide to determine whether a wildlife crossing feature is appropriate.

In addition, this data should support the selection of an appropriate wildlife crossing feature design that would promote wildlife species movement or ecosystem viability. The District should consult with USFWS or FWC when alternative measures and technology are considered.

In cases where science-based data does not exist to adequately support a proposed crossing, it may be necessary to perform studies or additional research to obtain the data. Generally, the party requesting the wildlife crossing feature is expected to perform the study or conduct the research needed. The USFWS and/or FWC should have an active role in the review and development of relevant studies and in the evaluation of the results, including meeting with the appropriate FDOT District with regard to the final recommendations. This effort needs to be done in a timely manner so as not to slow the progress of the project development process.

The specific design (type, size, and location) of the wildlife crossing feature should be determined by the FDOT District through coordination with the USFWS and/or FWC and other regulatory agencies as appropriate. The FDOT Districts may also consider input from other interested stakeholders.

A wildlife crossing feature design must take the following points into consideration:

- The wildlife crossing feature cannot compromise any state or federal highway safety criteria.
- The wildlife crossing feature cannot compromise FDOT design requirements. Should roadway or bridge design variations or exceptions be needed for the proposed wildlife crossing feature, proper and timely review by the FDOT Districts and Central Office (as applicable) would be required. If not approved, the wildlife crossing feature would require redesign and further coordination with the agencies to determine whether it is feasible to provide the feature.
- The wildlife crossing feature cannot restrict legal access to adjacent property owners without written approval from said property owners.
- The wildlife crossing feature cannot negatively impact adjacent properties (e.g., provide access for people and/or wildlife species to private properties where none presently exist).
- The wildlife crossing feature cannot negatively impact existing drainage patterns or flood off-site properties.
- The placement of wildlife crossing features is usually associated with wildlife mortality hotspots; however, the ultimate placement may be based on the most cost efficient and biologically effective design that meets the needs identified by USFWS and/or FWC and regulatory agencies as appropriate.
- Upland and wetland habitat impacts should be avoided and minimized to the extent practicable by proper design.
- The lighting at wildlife crossing features should be minimized to the greatest extent practical.
- The wildlife crossing feature must be accessible for proper maintenance to ensure the feature remains viable.
- When various types of wildlife crossing features could be applied to a location, a cost-benefit analysis of the feature should be considered. The costs of each wildlife crossing feature should be compared to the anticipated benefit of reduced risks of collisions for both motorists and wildlife species. Costs for the wildlife crossing feature(s) should include design, permitting, right-of-way, construction and long term maintenance (i.e., fencing, gates and maintaining wildlife access to the wildlife crossing feature when applicable). Costs for collision reductions should be coordinated with the Traffic Operations Office and be based on the anticipated number of reduced collisions using the data supporting the need for the wildlife crossing feature.
- Should post-construction monitoring be requested by a regulatory agency, USFWS and/or FWC should have an active role in the review and development of the

monitoring plan. Any post-construction monitoring should be for data collection and information only and will only be conducted for a limited period of time.