

3.3 FEASIBILITY EVALUATION



“There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth; remote, never wholly known. Nothing anywhere else is like them.”

– Marjory Stoneman Douglas

Introduction

Determination of feasibility is perhaps the most important step in this planning process. Through extensive research and analysis, compiled with broad public and stakeholder input, an evaluation of the ROGG’s conceptual design in an objective and unbiased approach can be accomplished.

‘The feasibility of designating a trail shall be determined on the basis of an evaluation of whether or not it is physically possible to develop a trail along a route being studied, and whether the development of a trail would be financially feasible.’ Section 5(b) of the National Trails System Act, administrated by the National Park Service.

Though a definition exists by which the NPS evaluates potential National Historic Trails for feasibility, a clear, nationally accepted set of criteria does not exist for determination of feasibility for trails/paths. Through the input of public participants, stakeholders, steering committee members, and extensive research, comprehensive criteria have been developed to evaluation proposed concepts for the ROGG. This section will define and apply the criteria to proposed concepts, in addition to evaluating potential routing alternatives. Based on results of the feasibility evaluation, a preferred route will be identified for further analysis.

The follow two sections are included in this evaluation:

- **Criteria and Application** – This section introduces comprehensive feasibility criteria and applies it to conceptual alternatives for path development.
- **Alternative Route Evaluation** – This section evaluates path routing alternatives for each mile of the ROGG Study Area and identifies a preferred route.

3.3.1 Criteria and Application

Determining feasibility should be an objective and transparent process based on reliable research and analysis for a comprehensive criteria. In the case of the ROGG, feasibility was determined based on extensive research of the Study Area’s existing conditions and refinement of publicly developed concepts. Determination of feasibility is based on a point scale system with the highest scoring cross-section having a high degree of feasibility. Six categories were identified and include:

- **User Experience** - This category includes considerations of a user’s experience such as authenticity of an Everglades experience, diversity of scenery and level of comfort while using the path;
- **Environmental Impacts** - This category includes potential impacts to environmental concerns as a direct or indirect result of the development or use of the path. This category includes potential impacts to wetlands, water quality and lack of compatibility with existing or proposed Everglades restoration efforts or with the mission or management plan of a public land unit;
- **Cultural Impacts** - This category includes two elements; heritage and archaeological resources which includes the broad tangible and intangible historical elements found within the Study Area;
- **Attributes** - This category includes four elements that capture wide-reaching topics important to the success of a trail or path; potential partnerships, aesthetics of design in the context of the path user and non-user, opportunities to provide educational experiences or information, and innovation of the proposed concept in the area of design, reduction of impacts and benefits;
- **Transportation** - This category goes beyond the required elements of safety which any concept would be required to fully met or exceed and instead focuses on perceived safety for users, connectivity to destinations such as significant resources, amenities and transit, and ease of public universal accessibility;
- **Cost** - This category includes two considerations of cost; range of construction costs based on a four levels, Level 1 (under \$500,000 per mile), Level 2 (\$500,000-\$1m per mile), Level 3 (\$1m - \$1.5m per mile) and Level 4 (over \$1.5m per mile); and estimates of annual and life-cycle operations and maintenance costs.

Within these six categories, 17 individual criterion elements were evaluated for each conceptual typical cross-section.

Path Section Alternatives

Point Scale:
 0 = None/ Extreme
 1= Low/ Negative
 3 = Medium/ Neutral
 5 = High/ Positive

The feasibility criteria matrix contains the evaluation of all proposed conceptual cross-sections. Cross-sections with fatal flaws in select locations are included in the matrix for further evaluation and comparison to other concepts but were not considered for use as alternative route options. Points are assigned on the following scale:

- 0 points for complete lack of element
- 1 point for low or negative assessments
- 3 points for medium or neutral assessments
- 5 points for high or maximum positive assessments

In addition to the evaluation of each conceptual typical cross-section by the established feasibility criteria, unique situations were considered where the a proposed concept is incompatible with the site or defined guideline/ plan for a specific reason. These situations are defined as fatal flaws and typical contain design characteristics that violate a defined goal, code, initiative or requirement. As such, the following fatal flaws have been identified:

- Significant impact to wetlands
- Lack of Everglades restoration compatibility,
- Potentially high level of maintenance required to maintain a safe, accessible path surface and route,
- Lack of compatibility with public land unit's mission or management plan,
- Lack of bicycle or pedestrian mode ability,
- High number of required highway or driveway crossings,

Following the evaluation of each typical cross-section, feasibility for route alternatives are determined by assessing all feasible alternatives and selecting the cross-section with the highest score as a preferred alternative. Routing alternatives are determined for the entire length of the ROGG Study Area.

| Criteria | Section | No Build Alternative | A | | | | B | | | | | | | | | | | | | | C | | | | | | |
|---|---------|----------------------|--------------|--------------|----------------|---------------|-------------------|--------------|------------|--------------|--------------------------|--------------------|-------------------------|------------------------|-----------------|---------------------|---------------------------|-----------------|-------------------|----------------|----------------|-----------------|-----------|----------------------|-----------------------|------------------|-----------|
| | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | Top of Levee | Toe of Levee | North of Canal | Floating Path | Barrier and Canal | Filled Canal | Sheet Pile | Cantilevered | Lanes Shift - North Side | On-Road Bike Lanes | Lanes Shift- South Side | Fill in Maintained ROW | Expand Shoulder | On Proposed Bridges | Board-walk Next to Bridge | Separate Bridge | Board-walk Bridge | Widened Bridge | Low Board-walk | High Board-walk | New Berm | New Berm w/ Culverts | New Berm Gabion Walls | Old Tamiami Road | Loop Road |
| User Experience | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Authenticity of Everglades Experience | | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 5 | 1 | 5 | 5 | 3 | 3 | 3 | 3 | 5 | |
| Diversity of Cultural and Natural Scenery | | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 3 | 3 | 3 | 5 | 5 | 3 | 3 | 3 | 3 | 5 | |
| Comfort | | 0 | 5 | 5 | 5 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 3 | 3 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | |
| Environmental Impacts | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wetlands | | 3 | 5 | 5 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | 3 | 1 | 1 | 1 | 5 | 5 | |
| Compatibility (Restoration/ Management) | | 5 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 5 | 5 | 1 | 3 | |
| Water Quality | | 3 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 3 | 3 | |
| Cultural Impacts | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heritage Resources | | 3 | 5 | 5 | 3 | 1 | 5 | 1 | 1 | 1 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | |
| Archaeological Resources | | 3 | 5 | 5 | 3 | 1 | 5 | 1 | 1 | 1 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | |
| Attributes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Potential Partnerships | | 1 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 5 | 3 | 3 | 3 | 5 | 3 | 3 | 3 | 5 | 3 | 3 | 1 | 3 | 1 | 5 | 3 |
| Aesthetics of Design | | 1 | 3 | 3 | 5 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 5 | 3 | 5 | 1 | 5 | 5 | 3 | 3 | 3 | 3 | 3 |
| Educational Opportunities | | 1 | 3 | 3 | 3 | 5 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 3 | 3 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 3 |
| Innovation | | 1 | 3 | 3 | 3 | 5 | 3 | 3 | 3 | 5 | 1 | 1 | 1 | 3 | 3 | 1 | 3 | 3 | 5 | 1 | 5 | 5 | 3 | 5 | 5 | 3 | 3 |
| Transportation | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perceived Safety | | 0 | 3 | 5 | 5 | 1 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 5 | 3 | 5 | 1 | 3 | 5 | 5 | 5 | 5 | 5 | 3 |
| Connectivity to Destinations (Resources, Amenities and Transit) | | 3 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | |
| Ease of Universal Public Accessibility | | 0 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 5 | 3 | 3 | 3 | 3 | 1 | 5 | 5 | 5 | 5 | 5 | 1 | |
| Cost | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Range of Construction Cost | | 5 | 5 | 5 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 5 | |
| Operations and Maintenance Costs | | 5 | 1 | 5 | 5 | 1 | 5 | 3 | 1 | 1 | 5 | 5 | 5 | 3 | 3 | 5 | 1 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | |
| Total Points (of possible 85): | | 36 | 53 | 59 | 57 | 34 | 57 | 31 | 27 | 31 | 33 | 41 | 33 | 39 | 43 | 37 | 47 | 43 | 61 | 31 | 57 | 59 | 49 | 57 | 55 | 59 | 55 |