

Gulf Coast Parkway

Indirect and Cumulative Effects Action Plan

The Project Development and Environment (PD&E) Study for the Gulf Coast Parkway will be developed in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; and to comply with all federal and state laws and requirements. Given that the alternatives developed for the proposed project will be on new alignment or in combination with existing roadways, the level of documentation will be an Environmental Impact Statement (EIS). Coordination with state, federal and local agencies, including those with jurisdiction over the referenced requirements, will be conducted throughout the EIS process.

In order to further define the project study a scoping meeting will be conducted with the agencies to ensure that the scope of work adequately addresses all of the issues raised by the agencies. Agency coordination will continue throughout the study with regular conference calls to report on the project's progress and discuss agency concerns. The project team will meet with the Environmental Technical Assistance Team (ETAT) at key points in the study's development. In addition, the ETAT will have the opportunity to formally comment during the review period for the Draft EIS, Final EIS and Record of Decision (ROD).

Several members of the ETAT, through their review of the project in the Efficient Transportation Decision Making (ETDM) Programming Screen, had comments regarding Secondary (Indirect) and Cumulative Effects. Concern was expressed that the proposed alternatives would introduce greater potential for development in the least developed portions of the project area with the attendant risk of reduced water quality, loss of wetlands, hydrologic alterations and flooding within the watershed, the introduction and spread of exotic invasive plants, reduced aquatic habitat quality, fragmentation or loss of terrestrial habitat, and increased threats to listed species.

According to the Federal Highway Administration (FHWA) publication "Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process," potential effects or impacts of a proposed action that must be considered by Federal agencies as required by the NEPA process are defined by the Council on Environmental Quality (CEQ) regulations (40 CFR §§1500-1508) as:

Direct effects are caused by the action and occur at the same time and place. (40 CFR § 1508.8)

Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. (40 CFR § 1508.8)

Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions

September 27, 2007

regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR § 1508.7)

The terms "effect" and "impact" are used synonymously in the CEQ regulations (40 CFR §1508.8). "Secondary impact" does not appear, nor is it defined in either the CEQ regulations or related CEQ guidance. However, the term is used in the FHWA's *Position Paper: Secondary and Cumulative Impact Assessment In the Highway Project Development Process* (April, 1992) but is defined with the CEQ definition of indirect impact (40 CFR § 1508.8). Some authors on this subject have distinguished secondary impacts from indirect impacts, while others; including the FHWA have used the terms interchangeably. For purposes of this guidance, secondary and indirect impacts mean the same thing.

Through project scoping and direct consultation with the Florida Department of Transportation (FDOT), the Federal Highway Administration (FHWA) and other agencies, the level of detail and scope of the Secondary (Indirect) and Cumulative Effects analysis will be determined. Specific items to be discussed in the scoping meeting include the verification of issues to be analyzed, the determination of the study area and time period for the analysis, the methodology to identify future development and growth trends, the identification of secondary and cumulative impacts (encroachment-alteration/single-source additive or interactive effects and project-induced growth effects), the techniques to be utilized to determine the significance of the indirect and cumulative impacts (matrices, networks, cartographic techniques, etc.) and the identification of mitigation measures for the Secondary (Indirect) and Cumulative Effects within the affected watershed/ecosystem.

The procedure for analyzing the indirect and cumulative effects on specific resources will be conducted in the following manner and summarized in the draft EIS.

- **Identify resources to be evaluated for indirect (secondary) and cumulative effects.**
Participants in the scoping meeting will be asked to identify the resources to be evaluated; to provide the baseline condition (health and sustainability) of each affected resource; to identify the issues to be addressed in terms of characteristics, functions and importance of the affected resources; and to provide any available data or information for the evaluation.
- **Define the boundaries for each issue/resource.**
Scoping participants will be requested to suggest the appropriate spatial and temporal boundaries for the indirect and cumulative analysis for each resource.
- **Inventory notable features.**
The inventory of notable features confirms the baseline condition of the affected ecosystem and socioeconomic resources. It is also the stage of the analysis when past trends, goals, and the potential for change is determined. Sources for trend data include recent and historical demographic data from the US Census Bureau, state and regional agencies. Economic data may be obtained from other government sources such as the Bureau of Economic Affairs and from local

authorities. Land use and comprehensive plans reflect community goals and infrastructure plans and economic development agencies are sources for identification of economic development goals. Local and regional development regulations, zoning ordinances, special district regulations, and development incentives/disincentives help determine where change may occur.

- **Identify project impact-causing activities.**

This step identifies the indirect and cumulative impact-causing activities of the project and their causal relationships. Indirect impact-causing actions may be encroachment-alteration effects or access-alteration effects (project-induced growth effects). Induced-growth effects are attributable to induced growth itself, and not the project design features. Cumulative impact-causing activities include those resulting from the proposed activity and other reasonably foreseeable actions, such as planned developments.

- **Determine significance of the potential Secondary (Indirect) and Cumulative effects for analysis.**

The objective of this step is to compare the project impact-causing actions with the goals and notable features of the study area to establish which effects are potentially significant and merit subsequent detailed analysis.

- **Analyze the Secondary (Indirect) and Cumulative Effects.**

Assess the consequences of the indirect and cumulative effects. Because the proposed project is partially on new alignment, an integrated transportation-land use model, such as Transus or Transite, will be used. These models predict how changes in accessibility influence changes in locations. The allocation of population growth will be performed for both the No-Build and the Build alternatives. This allows the separation of project-induced growth effects from growth-induced effects.

- **Evaluate the analytical results.**

Due to the uncertainty of future events, it is necessary to make assumptions regarding the nature of the impact-causing activities, the nature of the cause and effect relationships, and how the environment will be affected by the impacts. If there is uncertainty regarding the underlying assumptions used to estimate the indirect and cumulative effects and changes in those assumptions would result in significant changes in the findings, then a sensitivity analysis will be conducted. This is a procedure whereby forecast assumptions are changed one at a time to test the sensitivity of effects to the particular assumptions.

- **Assess the consequences and develop strategies for avoidance, minimization, and mitigation.**

In this step, each identified indirect effect is evaluated in the context of the overall aim of the project and the study area goals and notable features. An effect that would adversely impact a study area goal or notable feature may require mitigation. Practical mitigation measures within the jurisdiction of the

FDOT/FHWA will be evaluated. Where practical mitigation measures are not within the jurisdiction of the FDOT/FHWA, strategies and techniques for growth management by others will be presented.