What is Integration?

- **Definition:** a planning process that provides a seamless connection between long range transportation planning and project development that ultimately leads to supporting the timely delivery of transportation projects.

- **Background:** The North Carolina Department of Transportation (NCDOT) is working with Federal Highway Administration (FHWA), MPOs, RPOs, and environmental resource agencies to integrate the long range planning process with the National Environmental Policy Act (NEPA)/State Environmental Policy Act (SEPA) project development process.

- **Components:** For the Integration project, linkages (or topic areas) have been identified between long range transportation planning and project development. Best practices and other guidance or tools are being developed for each of the linkages in order to ensure the products developed in long range planning can be used to better inform the NEPA/SEPA project development process. Integration aims to improve the quality of transportation planning and to ensure products from long range planning are developed and documented in a way that may be useful in project development.

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<th>Long range planning</th>
<th>Project development</th>
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<td>Problem Statement</td>
<td>Purpose and Need</td>
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<td>Alternatives analysis</td>
<td>Alternatives selected for detailed study</td>
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<td>Community impacts assessment</td>
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<td>Indirect and cumulative effects assessment</td>
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<td>Public involvement</td>
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- **Benefits:**
  - Improved long range transportation planning: better coordination, products, and documentation
  - Efficiency gains through use of information from long range planning in project development; more timely and predictable delivery of projects

What are Indirect and Cumulative Effects (ICE)?

- Indirect and cumulative effects are defined as shown below in relation to direct impacts:
Indirect effects (effects caused by the project, but occurring later in time or farther removed in
distance than direct impacts) include changes in land use attributable to the project (induced growth)
and impacts on environmental resources that occur as a result of the project’s influence on land use.

Cumulative impacts include the total sum of all impacts to a particular resource that have occurred,
are occurring, and will likely occur as a result of any action or influence, including the direct and
reasonably foreseeable indirect impacts of a project. Cumulative effects are any and all actions (past,
present, and anticipated future) that impact a resource. Cumulative impacts can result from multiple
seemingly small actions that collectively create a substantial impact over time.

The analysis of indirect and cumulative effects in project development is a requirement under NEPA
regulations and is a primary element of the 404 water quality certification permit application for
individual projects. Consideration of ICE in long range planning will generate useful information to not
only inform the ICE analysis that occurs in project development, but also to inform decision-making in
long range transportation and land development planning. Implementing assessment of ICE issues in
the planning process can provide and improve consistency of the ICE information and analysis
occurring later in the NEPA process, highlighting important issues early and potentially streamlining
project delivery later in the process.

Integration ICE Products for Long Range Planning

The proposed best practices for consideration of ICE in long range planning describe four (4) work
products that document existing conditions, assess future growth, screen proposed projects in the
long range transportation plan for indirect and cumulative effects, and recommend best management
practices for minimizing the effects.

<table>
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<tr>
<th>Product 1: Existing Conditions Assessment</th>
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| Provides a baseline of the existing human and natural environmental features contained within
  the long range planning Study Area. This product sets the scene for the subsequent ICE
  analysis that follows. |

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<tr>
<th>Product 2: Future Growth Potential Assessment</th>
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| Produces future growth potential map(s) that identify current and future utilities, current and
  future land use scenario(s), available land for development, and areas of short, medium, and
  long-term growth. |

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<tr>
<th>Product 3: CTP Indirect and Cumulative Effects Screening</th>
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| Performs a screening of indirect and cumulative effects for multi-modal long range planning
  project proposals. A Plan-Level Screening is conducted for the Study Area. A Project-Level
  Screening is conducted for indirect effects if specific project proposal(s) are anticipated to result
  in a higher potential for impacts. |

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<tr>
<th>Product 4: Best Management Practices Recommendations</th>
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| Recommends best management practices to minimize the potential for indirect and cumulative
  effects of the proposed transportation projects identified in the long range plan. |