Create and execute continuing, cooperative and comprehensive regional long-range planning efforts that pro-
actively drive transportation decisions to improve safety, connectivity, economic development and quality of life in
the Wilmington region.

Board Work Session
Cape Fear Crossing
Wilmington Urban Area MPO
320 Chestnut Street, 6th Floor Conference Room
Wilmington, NC
April 26, 2017
1:30 pm

1. Call to Order
2. Review of Merger Process
3. History of the Cape Fear Crossing Project
4. Review Cape Fear Crossing 12 Detailed Study Alternatives
5. Review of Detailed Study Alternatives Impacts Table
6. Discussion of Alternatives the Board could support for Removal
7. Adjourn

Attachments:
• MPO Board Meeting Presentation- March 29, 2017
• Cape Fear Crossing Detailed Study Alternatives Map
• Cape Fear Crossing Detailed Study Alternatives Impact Table
Agenda

- Project History
- NEPA and Merger Process Overview
- Project Status
- Potential Impacts
- Next Steps
- Questions/Discussion
Project Study Area
NEPA & Merger Process Overview

1. Collect Data on Project Study Area
2. Identify Purpose of and Need of Project (CP 1)
3. Develop Range of Alternatives
4. Select Detailed Study Alternatives (CP 2)
5. Evaluate Impacts of Detailed Study Alternatives & Bridging Decisions (CP 2A)
6. Publish Draft Environmental Impact Statement
7. Public Hearings
8. Select LEDPA/Preferred Alternative (CP 3)
9. Update Designs and Analysis of LEDPA (CP 4A)
10. Avoidance and Minimization (CP 4A)
11. Publish Final Environmental Impact Statement
12. Issue Record of Decision
13. Purchase Right of Way
14. Construct Project
Alternatives B and C (new location)
Alternatives F and P (Upgrade Existing)
Alternatives G/Q and J/T (Hybrids)
Alternatives M Avoidance and N Avoidance
Alternative V (Freeway and Arterial Widening)
Project Alternatives, cont.

• Additional alternative proposed by members of the WMPO TAC in 2015
  – Alternative would use design of Alternative V and re-align it to either utilize the Port of Wilmington property (Myers Street) or Burnett Boulevard
  – Would not meet the purpose and need for the project
  – Higher in cost and impact than Alternative V
  – Would require additional studies and revisiting of Concurrence Points 1 (Purpose and Need) and 2 (Detailed Study Alternatives Carried Forward)
Project Status

• Completed Tasks
  – Purpose and Need
  – Alternatives Analysis
  – Various Technical Studies
Project Status

• Current Tasks
  – Agency Coordination
  – Traffic Noise Analysis and Air Quality Analysis
  – Sea-Level Rise Analysis
  – Updates to various technical studies
  – Cost estimates (Utility, ROW, Construction)
  – Determine Effects on Cultural Resources
  – Alternative Impact Analysis
Project Status

• Upcoming Tasks
  – Coordinate with NEPA/404 Merger Team on bridging decisions (CP 2A)
  – Prepare Draft Environmental Impact Assessment
  – Hold Public Hearing(s)
  – Select Preferred Alternative/Least Environmentally Damaging Practicable Alternative (LEDPA) (CP 3)
  – Prepare Preliminary Design on LEDPA
Project Status

• Upcoming Tasks (cont.)
  – Hold CP 4A Meeting—Avoidance and Minimization
  – Endangered Species Act Consultation
  – Update Technical Studies and Complete Archaeological Investigations
  – FEIS
  – ROD
Schedule

- DEIS – Fall 2017
- Public Hearing – Winter 2018
- Select Preferred Alternative/LEDPA – Summer 2018
- FEIS – Winter 2018/2019
- ROD – Summer 2019

*This schedule is dependent upon availability of funding and subject to change.*
Project Impacts

• Impacts calculated for 12 DSAs using functional designs
• Right of Way or slope stake boundaries plus 40 feet used

• Resources include:
  • Length
  • Construction Cost
  • Number of Interchanges
  • Number of railroad crossings
  • Number of Power Easements
  • Business and Residential Displacements
  • Community Resources (Schools, Churches, Cemeteries, Libraries, Fire Stations)
  • Floodplains
  • Noise Receptors
  • Terrestrial Communities
  • Hazardous Waste Sites
  • Public Trust Access
  • Natural Heritage Areas
  • Section 4(f) Properties
  • Wetlands, Streams, Ponds
  • Historic Properties
  • Archaeological Sites
  • Federally-Listed Species
<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Range of Impacts</th>
<th>Highest</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Cost</td>
<td>$380,000 - $779,000</td>
<td>Alternative G</td>
<td>Alternative P</td>
</tr>
<tr>
<td>Residential Relocations</td>
<td>31 - 145</td>
<td>Alternative Q</td>
<td>Alternative P</td>
</tr>
<tr>
<td>Business Relocations</td>
<td>30 - 74</td>
<td>Alternatives C, G, MA, Q</td>
<td>Alternatives B, C, G, J, MA, NA, Q, T</td>
</tr>
<tr>
<td>Historic Properties (Adverse Effect)</td>
<td>0 – 2</td>
<td>Alternatives B, C, G, J, MA, NA, Q, T</td>
<td>Alternatives F and P</td>
</tr>
<tr>
<td>Wetlands (acres)</td>
<td>42.5 – 161.3</td>
<td>Alternative T</td>
<td>Alternative T</td>
</tr>
<tr>
<td>Floodplains</td>
<td>0.4 – 3.9</td>
<td>Alternative VF</td>
<td>Alternative VF</td>
</tr>
<tr>
<td>Streams (#/linear feet)</td>
<td>8/1,560 – 23/13,050</td>
<td>Alternative MA</td>
<td>Alternative MA</td>
</tr>
<tr>
<td>Farmland (acres)</td>
<td>10.7 – 178.6</td>
<td>Alternative VA</td>
<td>Alternative VA</td>
</tr>
<tr>
<td>Farmland Soils (acres)</td>
<td>151.4-551.2</td>
<td>Alternative C</td>
<td>Alternative C</td>
</tr>
</tbody>
</table>
Questions?

www.ncdot.gov/projects/capefear
capefear@ncdot.gov
1-800-233-6315
### Table: U-4738 Cape Fear Crossing - Detailed Study Alternatives Impact Comparison

<table>
<thead>
<tr>
<th>Resource</th>
<th>B</th>
<th>C</th>
<th>F</th>
<th>G</th>
<th>J</th>
<th>MA</th>
<th>NA</th>
<th>P</th>
<th>Q</th>
<th>T</th>
<th>VA</th>
<th>VF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Corridor (Miles)</td>
<td>11.1</td>
<td>11.3</td>
<td>12.0</td>
<td>11.3</td>
<td>11.2</td>
<td>12.3</td>
<td>12.2</td>
<td>12.0</td>
<td>11.5</td>
<td>11.4</td>
<td>11.8</td>
<td>11.8</td>
</tr>
<tr>
<td>Construction Cost (Millions $)</td>
<td>760</td>
<td>768</td>
<td>425</td>
<td>779</td>
<td>675</td>
<td>774</td>
<td>763</td>
<td>380</td>
<td>745</td>
<td>733</td>
<td>511</td>
<td>553</td>
</tr>
<tr>
<td>Number of Interchanges</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Number of Railroad Crossings</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Number of Major Power Easment Crossings</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Business Relocations</td>
<td>74</td>
<td>30</td>
<td>42</td>
<td>30</td>
<td>74</td>
<td>30</td>
<td>42</td>
<td>39</td>
<td>30</td>
<td>74</td>
<td>37</td>
<td>38</td>
</tr>
<tr>
<td>Residential Relocations</td>
<td>95</td>
<td>82</td>
<td>145</td>
<td>39</td>
<td>116</td>
<td>53</td>
<td>98</td>
<td>137</td>
<td>31</td>
<td>108</td>
<td>52</td>
<td>60</td>
</tr>
<tr>
<td>Total Relocations</td>
<td>169</td>
<td>112</td>
<td>187</td>
<td>69</td>
<td>190</td>
<td>83</td>
<td>172</td>
<td>176</td>
<td>61</td>
<td>182</td>
<td>89</td>
<td>98</td>
</tr>
<tr>
<td>Minority and/or Low-Income Populations Present</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Archaeological Sites (Number within Impact Area)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Historic Properties (Adverse Effect)</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Section 4(f) Lands (Acres within Proposed Right of Way)</td>
<td>1.2</td>
<td>0.0</td>
<td>73.9</td>
<td>0.0</td>
<td>1.2</td>
<td>0.0</td>
<td>1.2</td>
<td>73.9</td>
<td>0.0</td>
<td>1.2</td>
<td>16.7</td>
<td>16.7</td>
</tr>
<tr>
<td>Wetlands (Acres within Impact Area)</td>
<td>108.6</td>
<td>111.2</td>
<td>80.3</td>
<td>65.7</td>
<td>57.1</td>
<td>72.7</td>
<td>67.1</td>
<td>60.0</td>
<td>50.5</td>
<td>42.5</td>
<td>141.3</td>
<td>161.3</td>
</tr>
<tr>
<td>Surface Waters/Ponds (Acres within Impact Area)</td>
<td>0.05</td>
<td>0.05</td>
<td>0.07</td>
<td>0.05</td>
<td>0.05</td>
<td>0.00</td>
<td>0.00</td>
<td>0.05</td>
<td>0.04</td>
<td>0.04</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Floodplains (Acres within Impact Area)</td>
<td>16.6</td>
<td>15.8</td>
<td>135.0</td>
<td>50.4</td>
<td>46.2</td>
<td>44.2</td>
<td>42.5</td>
<td>119.1</td>
<td>34.0</td>
<td>29.8</td>
<td>218.2</td>
<td>234.3</td>
</tr>
<tr>
<td>Streams (Linear Feet within Impact Area)</td>
<td>2,650</td>
<td>7,950</td>
<td>3,630</td>
<td>8,250</td>
<td>2,280</td>
<td>13,050</td>
<td>7,440</td>
<td>2,330</td>
<td>7,510</td>
<td>1,560</td>
<td>2,340</td>
<td>3,720</td>
</tr>
<tr>
<td>Federally-Protected Species Habitat Present</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Potential Noise Receptors*</td>
<td>1167</td>
<td>781</td>
<td>2717</td>
<td>865</td>
<td>1449</td>
<td>552</td>
<td>1052</td>
<td>2468</td>
<td>779</td>
<td>1367</td>
<td>1508</td>
<td>1799</td>
</tr>
<tr>
<td>Lands Managed for Conservation and Open Space (Acres within Impact Area)</td>
<td>0.0</td>
<td>0.0</td>
<td>5.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>5.0</td>
<td>0.0</td>
<td>0.0</td>
<td>76.5</td>
<td>76.5</td>
</tr>
<tr>
<td>Community Facilities Impacted (Number within Proposed Right of Way)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cemeteries</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Churches</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Fire Stations</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Section 6f (Number within Proposed Right of Way)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forested Land (Acres within Impact Area)</td>
<td>110.3</td>
<td>123.2</td>
<td>44.7</td>
<td>141.9</td>
<td>121.2</td>
<td>178.6</td>
<td>161.7</td>
<td>10.7</td>
<td>106.3</td>
<td>84.7</td>
<td>10.7</td>
<td>44.7</td>
</tr>
<tr>
<td>Farmland soils (Acres within Proposed Right of Way)</td>
<td>477.5</td>
<td>551.2</td>
<td>280.6</td>
<td>512.9</td>
<td>466.7</td>
<td>550.1</td>
<td>490.1</td>
<td>151.6</td>
<td>413.3</td>
<td>367.0</td>
<td>151.4</td>
<td>280.8</td>
</tr>
</tbody>
</table>

**Note:** Screening factors where no impacts were found within any corridors and therefore are not included in impact table include: libraries, gamelands, VADs/EVADs, 303(d) streams (listed due to sedimentation), and SA/HQW/ORW waters

Impact area equals the slope stakes limits plus 40 feet

* Noise receptors include count within 700 feet of centerline along existing roadways and 600 feet of new location alternatives