Agenda

- Welcome
- Web Survey #2
- Phase II Strategies
- Review Phase II MOEs
- Results and Initial MOE Assessment
- Next Steps/Next Meetings
Web Survey #2

Which of these goals are the most important?

111 respondents rated potential measures from
1 (least important) to 5 (most important)

- Make the Most Out of the Existing System
- Provide Cost-Effective Solutions
- Protect the Environment
- Reduce Travel Time and Delay
- Increase Transit, Carpool, Vanpool
- Improve Safety
- Preserve Region’s Rural and Urban Character
- Provide Economic Benefit

111 responses
Review Phase II Highway Corridor Strategies

- 12 Strategies tested
  - 9 with regional focus connecting Central York County to I-95 and Route 1
  - 3 investigate more localized improvements
- Organized by 3 Corridors
  - Biddeford
  - Kennebunk/Wells
  - North Berwick/Ogunquit
Review Phase II Highway Corridor Strategies

- Refinements since last meeting
  - Focused on the more aggressive options for upgrading existing corridors
  - Added connections to Route 1
  - Added an additional Sanford-Biddeford Expressway strategy
Biddeford Corridor

**Strategy B1**

**Upgrade Rte 111**

- 4 Lanes east of Rte 224
- Minor capacity improvements to Rte 202 west of Rte 224
- Increase speed limit to 55 mph (except in town or at major crossroads)

*Regional strategy*
Biddeford Corridor

Strategy B2
Biddeford Connections

- New connections between Rte 111, Rte 1 and Waterboro Road

Local strategy
Biddeford Corridor

**Strategy B3**

Upgrade Rte 111 with I-95 Access and Biddeford Connections

- Combines elements of Strategies 1 and 2
- Create new, direct access to Maine Turnpike (I-95 exit 32)

*Regional strategy*
Biddeford Corridor

Strategy B4
Sanford Southern Bypass

- New highway linking Rte 202 (west of Sanford) to Rte 4 (east of Sanford)

Local strategy
Biddeford Corridor

**Strategy B5**

Expressway (South)

- Limited Access 4-lane Highway
- Interchanges:
  - Sanford/Alfred: Rte 202
  - Kennebunk/Lyman: Rte 35, I-95
  - Arundel/Biddeford: I-95
- New connecting roadways:
  - Arundel/Biddeford: Rte 1
  - Sanford: Rte 109, Rte 224

*Regional strategy*
Biddeford Corridor

**Strategy B6**

Expressway (North)

- Limited Access 4-lane Highway
- Interchanges:
  - Sanford: Rte 202, Rte 111
  - Alfred: Rte 202
  - Lyman: Rte 35
  - Biddeford: I-95/Rte 111
- New connecting roadways:
  - Arundel/Biddeford: Rte 1

*Regional strategy*
Kennebunk/Wells Corridor

Strategy K1

New Rte 99/Rte35/Exit 25 Connector

- More direct connection between Rte 99 and Rte 35 in Kennebunk
- Improves access between Rte 99 and I-95 (exit 25)

Local strategy
Kennebunk/Wells Corridor

**Strategy K2**

**Upgrade Rte 109**

- 4 Lanes between Rte 4 and Rte 99
- Increase speed limit to 55 mph
  - Would require new alignment in developed areas of South Sanford and High Pine
- Passing lanes (one each direction) south of High Pine

*Regional strategy*
Kennebunk/Wells Corridor

Strategy K3
Kennebunk Expressway

- Limited Access 4-lane Expressway
- Interchanges:
  - Sanford: Rte 202, Rte 99
  - Kennebunk/Wells: I-95/Rte 9A
- New connecting roadways:
  - Kennebunk/ Wells: Rte 1
  - Sanford: Rte 109, Rte 224

Regional strategy
North Berwick/Ogunquit Corridor

Strategy NB1
Upgrade Rte 4

- Increase speed limit to 55 mph (except approaching Rte 109)
- Passing lanes (two each direction)
- Rte 4 bypass around North Berwick town center

Regional strategy
North Berwick/Ogunquit Corridor

Strategy NB2
Rte 4 - Ogunquit Connector

- Upgrade Rte 4 (per Strategy NB1)
- New 2-lane at-grade highway to I-95 and Rte 1 in Ogunquit

Regional strategy
North Berwick/Ogunquit Corridor

Strategy NB3

Expressway
- Limited Access 4-lane Expressway
- Interchanges:
  - Sanford: Rte 202, Rte 4
  - Wells/N Berwick: Rte 9A
- New connecting roadways:
  - Ogunquit: Rte 1, Berwick Rd
  - Sanford: Rte 109 (South Sanford)

Regional strategy
# Measures of Effectiveness (MOEs)

<table>
<thead>
<tr>
<th>MOE Name</th>
<th>Measure</th>
</tr>
</thead>
</table>
| Economic Benefit                      | • Potential job creation  
• Change in regional economic activity (dollars) |
| Cost                                  | • Approximate (planning-level) cost of strategy                         |
| Projected Traffic and Highway Capacity | • Changes in corridor traffic volumes  
• Changes in screenline traffic volumes  
• Segment Level of Service (LOS) |
| Travel Times and Delay                | • Projected travel times between key origins and destinations  
• Average network speed and total VHT |
| Traffic Safety                        | • Traffic volumes at current HCLs  
• Physical improvements to HCLs  
• VMT by facility type |
| Access to and Availability of Transit | • Ability to access transit stations/corridors                          |
| Impact to Rural and Urban Character   | • Rural acreage potentially affected  
• Proximity to town centers and identified historic sites/districts |
| Environmental Constraints             | • Miles of wetlands and environmental features in corridor              |
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| Environmental Constraints             | • Miles of wetlands and environmental features in corridor               |
General Points on the Projections

- They account for the projected increase in households and jobs (about +30%)
- Volumes shown are daily volumes in both directions
- Volumes shown are the INCREASES over 2035 baseline volumes except…
- …Volumes on new roads show the new TOTAL volumes
- Volumes are for summer weekdays
- Spaulding Turnpike Improvements included
- Racino not included
Some Overall Findings

- VMT for the study area increases by 29% in 2035
- The various strategies *increase* VMT by 1.4% County-wide but in some corridors by up to 25%
- VHT increases for the study area by 37% in 2035
- The various strategies *decrease* VHT by 1.9% County-wide at most but in some corridors by up to 50%
MOE: Travel Times
Central York County to/from the Region

Travel Times
Updated: June 10, 2011

1. Sanford – Maine Turnpike (east)
2. Sanford – Wells
3. Sanford – Maine Turnpike NH Line
4. Sanford – Dover

Insert travel time tables and map
Travel Times
Updated: June 10, 2011

Regional Through Trips

1. Rochester, NH – Maine Turnpike (east)

2. Maine Turnpike NH Line – Maine Turnpike (east)
Travel Times

Updated: June 10, 2011

Effect of Adding Access to Turnpike at Ogunquit

1. Ogunquit – Maine Turnpike (east)
2. Ogunquit – Maine Turnpike NH Line
3. Sanford – Ogunquit
1. Sanford - Maine Turnpike (East)

- **2010 Travel Time**: 30 minutes
- **2035 Base**: 33 minutes
- **B1: Rte 111 Upgrade**: 28 minutes
- **B3: Rte 111 Plus**: 27 minutes
- **B5: Limited Access (South)**: 24 minutes
- **B6: Limited Access (North)**: 26 minutes
- **K2: Rte 109 Upgrade**: 33 minutes
- **K3: Limited Access**: 27 minutes
- **NB1: Rte 4 Upgrade**: 33 minutes
- **NB2: New Ogunquit Hwy**: 33 minutes
- **NB3: Limited Access**: 32 minutes

**Modeled Travel Time (minutes)**
4. Sanford - Dover

- 2010 Travel Time: 36 minutes
- 2035 Base: 38 minutes
- B1: Rte 111 Upgrade: 38 minutes
- B3: Rte 111 Plus: 38 minutes
- B5: Limited Access (South): 38 minutes
- B6: Limited Access (North): 38 minutes
- K2: Rte 109 Upgrade: 38 minutes
- K3: Limited Access: 38 minutes
- NB1: Rte 4 Upgrade: 37 minutes
- NB2: New Ogunquit Hwy: 38 minutes
- NB3: Limited Access: 37 minutes
1. Rochester, NH - Maine Turnpike (East)

- 2010 Travel Time: 55 minutes
- 2035 Base: 60 minutes
- B1: Rte 111 Upgrade: 55 minutes
- B3: Rte 111 Plus: 55 minutes
- B5: Limited Access (South): 52 minutes
- B6: Limited Access (North): 47 minutes
- K2: Rte 109 Upgrade: 60 minutes
- K3: Limited Access: 54 minutes
- NB1: Rte 4 Upgrade: 60 minutes
- NB2: New Ogunquit Hwy: 60 minutes
- NB3: Limited Access: 60 minutes

Modeled Travel Time (minutes)
1. Ogunquit - Maine Turnpike (East)

- **2010 Travel Time**: 22 minutes
- **2035 Base**: 24 minutes
- **B1: Rte 111 Upgrade**: 24 minutes
- **B3: Rte 111 Plus**: 24 minutes
- **B5: Limited Access (South)**: 24 minutes
- **B6: Limited Access (North)**: 24 minutes
- **K2: Rte 109 Upgrade**: 24 minutes
- **K3: Limited Access**: 24 minutes
- **NB1: Rte 4 Upgrade**: 24 minutes
- **NB2: New Ogunquit Hwy**: 18 minutes
- **NB3: Limited Access**: 19 minutes

*Modeled Travel Time (minutes)*
3. Ogunquit - Sanford

- **2010 Travel Time**: 39 minutes
- **2035 Base**: 43 minutes
- **B1: Rte 111 Upgrade**: 43 minutes
- **B3: Rte 111 Plus**: 43 minutes
- **B5: Limited Access (South)**: 42 minutes
- **B6: Limited Access (North)**: 42 minutes
- **K2: Rte 109 Upgrade**: 41 minutes
- **K3: Limited Access**: 42 minutes
- **NB1: Rte 4 Upgrade**: 42 minutes
- **NB2: New Ogunquit Hwy**: 31 minutes
- **NB3: Limited Access**: 25 minutes

**Modeled Travel Time (minutes)**
MOE: Projected Traffic and Highway Capacity
Compare Modeled Changes in Daily Traffic

- Daily Traffic “Difference Plots”
  - Maps where and by how much traffic changes relative to the 2035 baseline
- Traffic “Screenlines”
  - Shows total traffic volume on all routes crossing an imaginary line
2035 Modeled Change in Daily Traffic
Updated: June 10, 2011

Strategy B1
Upgrade Rte 111 Sanford - Biddeford

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<tr>
<td>Decrease</td>
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State Boundary
Town Boundary
Study Area
Data Source: CYCCS Travel Model

Central York County Connections Study
2035 Modeled Change in Daily Traffic
Updated: June 10, 2011

Strategy B3
Upgrade Rte 111 with new Biddeford Connections Sanford - Biddeford

Increase
- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

Decrease
- 3,000

State Boundary
Town Boundary
Study Area
Data Source: CYCCS Travel Model

Central York County Connections Study
2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy B5
Limited Access Highway
Sanford - Biddeford

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<td>5,000</td>
<td>7,500</td>
<td>10,000</td>
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</tbody>
</table>

State Boundary
Town Boundary
Study Area

Data Source: CYCCS Travel Model

Central York County Connections Study

Map showing the modeled change in daily traffic for the years 2035, including a legend for the increase and decrease in traffic.
MOE: Projected Traffic and Highway Capacity

Compare Traffic at Screenlines

East-West Traffic (west of Biddeford)
2035 Modeled Change in Daily Traffic

Updated: June 10, 2011

Strategy K2
Upgrade Rte 109
Sanford - Wells

Increase
- 1,000
- 2,500
- 5,000
- 7,500
- 10,000
Decrease
- 3,000

State Boundary
Town Boundary
Study Area

Data Source: CYCCS Travel Model

Central York County Connections Study
2035 Modeled Change in Daily Traffic
Updated: June 10, 2011

Strategy NB2
New Highway (at-grade)
Alfred/Sanford - North Berwick/Ogunquit
Increase
- 1,000
- 2,500
- 5,000
- 7,500
- 10,000
Decrease
- 1,000
- 2,500
- 5,000
- 7,500
- 10,000

State Boundary
Town Boundary
Study Area
Data Source: CYCCS Travel Model
Central York County Connections Study
Daily Traffic Projections

North-South Traffic (south of Sanford)

Bar chart showing daily traffic projections for North-South Traffic (south of Sanford) with different models and scenarios for the years 2010 and 2035. The chart includes projections for Rte 4, Rte 109, New Expressway, and Other Roads.
MOE: Rural and Urban Character
Rural Acreage Potentially Affected

- Purpose: Assess potential to adversely affect rural and urban character

- Components:
  - Corridor width
  - Open fields, woodlands zoned for low density
  - Town centers, historic sites and historic districts
## MOE: Rural and Urban Character

### Rural Acreage Potentially Affected

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Corridor Area (acres)</th>
<th>Corridor Length (miles)</th>
<th>Rural Acres within Corridor</th>
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<td>NB1</td>
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</table>
MOE: Rural and Urban Character
Proximity to Town Centers and Historic Sites/Districts

Historical Resources
Data Source: SMRPC
Updated: November 18, 2010

- National Register Historic Site
- National Register Eligible Site
- National Register Historic District
- National Register Eligible District
- Study Area
- Town Boundary
- Limited Access
- US & State Highways
- Other Roads
- Railroad

Central York County Connections Study
**MOE: Rural and Urban Character**

**Proximity to Town Centers and Historic Sites/Districts**

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<tr>
<th>Strategy</th>
<th>Town Centers</th>
<th>Historic Districts, Sites</th>
<th>NR List</th>
<th>NR Elig</th>
<th>Hist Dist</th>
<th>Arch Site</th>
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<td>14</td>
<td>1</td>
<td>1</td>
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</table>
MOE: Environmental Constraints
Wetlands and Regulated Natural Features

• Purpose: Assess potential to affect environmental resources

• Components:
  • Wetlands
  • Other regulated natural resources
  • Linear feet of alignment
### MOE: Environmental Constraints
#### Wetlands and Regulated Natural Features

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Wetlands/ Hydric soils (mi)</th>
<th>Regulated Natural Resources (mi)</th>
<th>Total Constraints (mi)</th>
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Next Steps

- Finalize Phase II MOE Evaluation
  - Costs and Economic Evaluation
- Finalize other Phase II Documentation
- Begin to develop recommendations for Phase III study
- Identify additional data needs and MOEs for Phase III
- Next Meeting Dates
Central York County Connections Study

June 16, 2011
Advisory Committee
Steering Committee