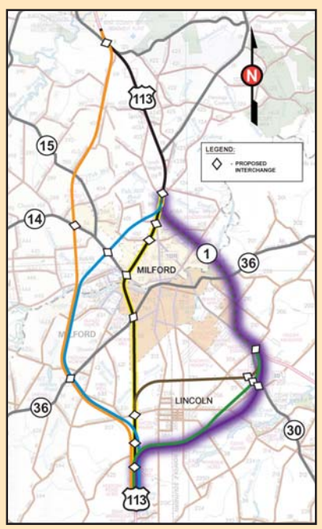
ALTERNATIVE RETAINED FOR DETAILED STUDY - PURPLE ALTERNATIVE (EAST BYPASS)

DESCRIPTION OF THE PURPLE ALTERNATIVE

The Purple Alternative begins at the existing split between SR 1 and US 113. It follows the existing SR 1 bypass of Milford as far south as Wilkins Road, including the addition of one lane in each direction to existing SR 1 in this area. (An interchange is proposed at NE Front Street as part of a separate project.) The alignment then curves to the south, with adjacent interchanges with SR 1 and SR 30. The alignment crosses Johnson Road just west of SR 30 and then curves to the southwest, roughly paralleling Cubbage Pond and Clendaniel Pond south of Lincoln. It crosses Greentop Road and curves to the west, bridging over Greentop Road, the railroad, and Old State Road, tying into US 113 just south of Haflinger Road at a full interchange.



NATURAL ENVIRONMENT

Advantages

- Low wetland impacts
- Wetland impacts to only small medium quality systems on unnamed tributary to Cedar Creek and unnamed tributary to Cubbage Pond
- Low State Natural Area and Resource Area impacts
- Lowest Waters of the US impacts
- Low potential Federally-listed RTE impacts
- Low forest impacts
- Moderate agricultural impacts
- No potential effect on wellhead protection areas
- No potential effect on excellent groundwater recharge areas
- Low potential effect on good groundwater recharge areas

Disadvantages

- Extends parallel, for some distance, to Cubbage and Clendaniel Ponds

CULTURAL RESOURCES

Advantages

- No direct impacts to National Register of Historic Places architectural properties
- Moderate potential indirect effects on National Register of Historic Places architectural properties (approximately 4 properties)
- Low impact to areas with potential high and moderate sensitivity for early historic-period archeological resources
- Low impact to areas with potential high and moderate sensitivity for prehistoric archeological resources
- Low impact to areas with potential high sensitivity for later historic-period archeological resources

Disadvantages

- Impacts a known archeological site

COMMUNITY / ENGINEERING / TRAFFIC

Advantages

- Low number of affected properties
- Moderate acres of affected properties
- Takes advantage of existing SR 1 - shorter length of construction on new alignment
- Good consistency with Livable Delaware
- Moderate cost alternative
- The alignment is at grade as it passes Hudson Mill and Hudson Pond Acres communities
- No school properties would be directly impacted
- All existing roads remain open, passing over or under the alternative
- Access to moderate number of residential properties (20), commercial properties (2) and farm properties (4) would be modified
- Moderate number of vacant (16) lots in approved subdivisions would be acquired
- Moderate number of existing residential properties (32) and farm properties (10) would be acquired
- Moderate number of existing communities (7) are within 900 feet of the Purple Alternative
  - Hudson Mill
  - Logans Run
  - Hudson Pond Acres
  - Woods Haven
  - Meadows at Shawnee
  - Knollac Acres II
  - Matlinds Eastates
- Low number of commercial properties (3) would be acquired

Disadvantages

- Opposed by Greater Lincoln Community
- Proximity to Lincoln community
- Impacts to Greentop community
- High number of existing residential properties (576) and high number of farm properties (77) are within 900 feet of the Purple Alternative. Note: 418 residential properties and 34 farm properties are located along SR 1
- Greater overall length than On-alignment and West Bypass Alternatives
- The Pentecostal Church of God is located within 900 feet of the Purple Alternative

RESOURCE & REGULATORY AGENCY COMMENTS

Because the East Bypass Alternatives directly impact less and lower quality natural resources, they are considered less environmentally damaging alternatives than the West Bypass Alternatives.

The environmental resource and regulatory agencies consider the East Bypass Alternatives preferable to the West Bypass Alternatives.

Because the Green and Purple Alternatives directly impact less and lower quality natural resources, they are considered less environmentally damaging alternatives than the Brown Alternative, which impacts and divides the higher quality wooded wetland and habitat complex around Herring Branch.

The environmental resource and regulatory agencies consider the Green and Purple Alternatives preferable to the Brown Alternative.

The Purple and Green Alternatives have less potential to affect historic buildings than the On-Alignment and West Bypass Alternatives

The Purple and Green Alternatives are generally less likely to affect areas with a higher probability to contain prehistoric archeological sites than the On-Alignment, West Bypass, and Brown Alternatives

PUBLIC COMMENTS TO DATE

- Working Group favors the East Bypass Alternatives and requested the Brown Alternative be evaluated
- Greater Lincoln Community favors the Brown Alternative and opposes the Green and Purple Alternatives

Comparison of Retained Alternatives

	No-Build	Yellow	Orange	Blue	Green	Purple	Brown
Wetlands and Waters of the US							
Wetlands (acres)	0	1.4	8.6	1.4	1.4	1.4	4.1
Waters of the US (linear feet)	0	688	1,128	1,262	570	508	1,020
Cultural Resources							
Number of Historic Properties within Study Area	0	16	6	4	4	4	4
Number of Properties Potentially Subject to Section 4(f)	0	0	0	0	0	0	0
Number of Properties Adversely Affected	0	0	0	0	0	0	0
Archeological Resources							
Number of Known Archeological Sites in the Limit of Disturbance *	0	1	1	1	1	1	1
Prehistoric Resources in the Limit of Disturbance:							
Number of Prehistoric Sites (percent)	0	7.7 (8%)	18 (18.2%)	14.5 (8%)	8.5 (7%)	8.5 (8%)	8.5 (10%)
Prehistoric Sensitivity Area (acres)	0	20.4 (1%)	1.5 (0.0%)	20.4 (1%)	20.4 (1%)	20.4 (1%)	20.4 (2%)
Prehistoric Sensitivity Area (percent)	0	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
Total Prehistoric Area (acres) *	0	289.0 (8%)	248 (8%)	289.0 (8%)	289.0 (8%)	289.0 (8%)	289.0 (8%)
Historic Period Resources in the Limit of Disturbance *							
Non-Sensitive Area (acres) *	0	2.8 (4%)	5.8 (8%)	25.8 (7%)	8.4 (12%)	8.4 (12%)	9.5 (7%)
Sensitive Sensitivity Area (acres) *	0	1.4 (2%)	0.8 (0%)	2.1 (2%)	2.1 (2%)	2.1 (2%)	1.8 (0%)
Total Historic Area (acres) *	0	4.2 (6%)	6.6 (8%)	27.9 (9%)	10.5 (14%)	10.5 (14%)	11.3 (7%)
Total Sensitivity Area (acres) *	0	22.1 (1%)	2.3 (0.0%)	22.5 (1%)	22.5 (1%)	22.5 (1%)	22.2 (2%)
Archeological Resources in the Limit of Disturbance *							
Non-Sensitive Locations	0	15	23	30	15	17	19
High Sensitivity Locations	0	10	27	20	10	10	12
Sensitive Sensitivity Locations	0	6	6	6	6	6	6
Total Sensitivity Locations	0	16	33	26	16	16	18
Section 4(f) Properties							
Number of Publicly-Owned Parks and Recreation Areas	0	0	0	0	0	0	0
Number of Publicly-Owned Wildlife and Waterfowl Refuges	0	0	0	0	0	0	0
Number of Historic Properties	0	0	0	0	0	0	0
Number of Properties Affected	0	0	0	0	0	0	0
Section 6(f) Properties							
Properties Acquired by Land & Water Conservation Fund (LWCF) (number)	0	0	0	0	0	0	0
Acres (acres)	0	0	0	0	0	0	0
Properties Acquired by Delaware Trust Fund (DTF) (number)	0	0	0	0	0	0	0
Acres (acres)	0	0	0	0	0	0	0
Natural Areas							
State Resource Areas	0	1	11	36	1	1	1
State Natural Areas	0	0	0	0	0	0	0
Rare, Threatened and Endangered Species							
Potential Rare, Threatened and Endangered Species Areas (acres) *	0	1	0	11	1	1	0
Hazardous Materials							
Potential Sites - The most number of properties	0	1	0	0	0	0	0
Sites within properties	0	0	19	0	0	0	0
Potential Hazardous Exposure (Percent of properties)	0	0	0	0	0	0	0
Potential Hazardous Exposure (Number of properties)	0	0	0	0	0	0	0
Wellhead Protection Areas (acres)	0	12	75	75	75	75	75
Well Head Areas	0	0	0	0	0	0	0
Residential Impacts							
Properties affected (number of)	0	355	491	238	156	156	147
Properties affected (total acres)	0	233	464	238	156	156	216
Community Impacts							
Residential (number of affected properties)	0	74	98	74	74	67	43
Residential (with existing Subdivision approved lots)	0	38 (51%)	38 (51%)	38 (51%)	38 (51%)	38 (51%)	38 (51%)
Agricultural	0	12	6	6	6	10	17
Commercial	0	3	3	3	3	3	3
Other	0	0	0	0	0	0	0
Mobility Access (number of affected properties)	0	26	4	4	26	26	26
Residential	0	20	0	0	20	20	20
Agricultural	0	4	4	4	4	4	4
Commercial	0	2	0	0	2	2	2
Other	0	0	0	0	0	0	0
Costs							
Preliminary engineered cost range ($ millions)	0	$216 - $312	$430 - $510	$324 - $390	$300 - $360	$237 - $315	$330 - $414
Environmental Impacts							
Consistency with State Strategies and local comprehensive plans *	N/A	YES/ YES/NR	YES	YES/NR	YES/NR	YES/YES	YES/YES
Engineering							
Length of alternative (miles)	12.2	16.2	17	17.2	16.9	16.9	17.1
Length of SR 1 (Milford-Hardy Bridge Dover) (miles)	8.5	9.8	10.8	7.8	9.5	9.5	9.5
Total length of alternative (miles)	12.2	12.1	12.5	12.9	12.9	12.9	12.1

Historic properties per Lexington Gold or Determined-Eligible for the National Register of Historic Places eligibility status is based on consultant recommendations.
Section 4(f) applies to historic properties and parks, recreation areas, and wildlife and waterfowl refuges of national, state, or local significance that are adversely affected by a project. Section 4(f) applies to historic properties actually impacted by an alternative, properties excluded by direct impacts include any property within the limit of disturbance for the alternative and also includes where mitigation of all or some of the contributing components to the resource is proposed.
Section 6(f) applies to properties acquired or developed with Land and Water Conservation Fund (LWCF) or Delaware Trust Fund (DTF) funds.
Archaeological sites in SR with DHPO. Intact sites but yet been evaluated for National Register eligibility; note that for Limit of Disturbance (here and in subsequent rows) does not include future stormwater management and other needs such as wetland mitigation sites.
Potential Rare, Threatened and Endangered Species Areas (acres) - Based on Delaware Department of Natural Resources and Environmental Control (DNREC) Delaware Natural Heritage and Endangered Species Program (DNHESP) GIS coverage.
GIS coverage's accuracy/precision guarantees and current theory regarding yearly flooding and tidal influence, have been accounted for in the Limit of Disturbance. Note that potential contaminated sites are based on "potential" occurrences as of May 2005.
Consistency with State Strategies and local comprehensive plans - Based on information provided by the Office of State Planning Coordination, Kent and Sussex Counties, and the City of Milford, meeting held March 7, 2006. Because the Brown alternative was added after that date, additional consultation is required.
Current as of May 2006.
* Indicates new information.
Endangered species in sec. threatened and endangered species based on consultation to date with DNREC. Detailed evaluation and consultation with DNREC and US Fish and Wildlife Service is continuing. The state representative is the potential rare, threatened and endangered (RTE) species areas rare are not alternative specific.
Based on consultation with the Office of State Planning Coordination, Kent and Sussex Counties, and the City of Milford, meeting held March 7, 2006. Because the Brown alternative was added after that date, additional consultation is required.