## ALTERNATIVE RETAINED FOR DETAILED EVALUATION - PURPLE -- SPUR ALTERNATIVE



# 13

## FOUR ALIGNMENT OPTIONS IN BOYDS CORNER ROAD AREA

## Option 1

Option 2

Provides new US 301 alignment just north of existing SR 896 (Boyds Corner Road – west of Jamison Corner Road)



- Avoids impacts to existing Jamison Corner Road residences, located just
- north of proposed Town Center (Bayberry)

- Mid-level waters of the US impacts

- - Results in difficult skew of new US 301 bridge over Boyds Corner Road
  - bridge over Boyds Corner Road

    Direct impact on proposed Bayberry

    South community (southside of existing
    Boyds Corner Road from east of Cedar
    Lane Road to Shallcross Lake Road)

    New US 301 is elevated and creates a

Highest waters of the US impacts

## Option 3

## Shifts New US 301 alignment to 1,500 feet north of New Covenant Presbyterian Church and adjacent to north boundary of proposed Town Center (Bayberry)



Option 4

396

- Avoids New Covenant Presbyterian Church
- Provides improved skew of new US 301 bridge over Boyds Corner Road Shifts new US 301 farther away from Cedar Lane Schools
  - Minimizes impacts to existing residence along Jamison Corner Road

Avoids New Covenant Presbyterian Church

Shifts new US 301 farther away from Cedar Lane Schools

Cedar Lane Schools

Minimizes impacts to existing residences along Jamison Corner Road

Avoids impacts to southwest corner of Grande View Farms

Avoids impacts to one of last three operating dairy farms (Emerson Farm) in New Castle County

Lowest forestland impacts

- Impacts southwest corner of Grande View Farms community
- Results in greater wetland impacts than
   Options 1 and 2

  - Increases length of new US 301 (increased costs)
- Requires long bridge structure over the intersection of Boyds Corner Road, the entrance to Grande View Farms, and Shallcross Lake Road (increased cost and potential safety considerations)

- Impacts on proposed "Livable Delaware" community (Bayberry)
   New US 301 creates a barrier between proposed Bayberry South and Bayberry North / Bayberry Town Center

Solates Church between Boyds Corner Road, new US 301 and realigned Jamison Corner Road

Impacts on proposed "Livable Delaware" community (Bayberry)
 New US 301 is elevated and creates a

## Advantages

- Mid-range number of properties directly impacted
   Mid-range impacts on existing communities (within 600 feet)
- Improves safety by separating local from through traffic, including truck traffic
   Significant reduction in traffic on existing US 301, Boyds Corner Road, Cedar Lane Road, Choptank Road and SR 299

ENGINEERING / TRAFFIC / SAFETY / COMMUNITY

Third highest volume using new US 301

- High noise impacts to residential properties along Boyds Corner Road
- Higher potential for traffic impacts during construction along existing Boyds Corner Road
   Proximity to new Appoquinimink High School (under construction) west of Middletown and to Cedar Lane Schools
- Not possible to lower new US 301 roadway profile along Boyds Corner Road, due to overpasses of Boyds Corner Road (2), realigned Shallcross Lake Road, US 13 and SR 1; therefore, difficult to mitigate indirect impacts (noise, visual, etc.) on
- Overall width of SR 896 and new US 301 creates significant barrier
- Requires acquisition of the New Covenant Presbyterian Church under Boyds Corner Road Area Option 1
- 2nd highest cost to construct

Note: Visual earth berms would be provided between new US 301 and the Southridge, Middletown Village, Springmill and Chesapeake

## **Comparison of the Retained Alternatives - Engineering**

ALTERNATIVES IMPACT MATRIX	YELLOW RANGE OF IMPACTS		BROWN NORTH RANGE OF IMPACTS	BROWN SOUTH RANGE OF IMPACTS	NORTH RANGE OF IMPACTS	SOUTH RANGE OF IMPACTS	
ieneral Considerations							
Preliminary Cost (\$ millions)	\$686-\$758	\$616 - \$680	\$550-\$808	\$499-\$551	\$534 - \$590	\$526 - \$582	
INGINEERING CONSIDERATIONS							
fotal length of alternative (miles)	19.4	16.9	17.5	15.9	17.5	17.3	
otal Area of Limit of Construction (acres)	870.5	901.9	895.9	894.3	897.4	876.3	
Sumber of Properties Impacted	377	154	100	100	132	190	
nterchange(s)							
Number	4	5	5	5	6	6	
1 Location(s)	Levels Road/SR15	Levels Road/SR15	Levels Road/SR15	Levels Road/SR15	Levels Road/SR15	Levels Road/SR15	
Type	Splt Diamond	Diamond	Diamond	Diamond	Diamond	Diamond	
2 Location(s)	North of Middletown	North of Middletown	SRB96 at the base of Summit Bridge	North of Middletown	North of Middletown	North of Middletown	
Type	Sio Ramos	Diamond	Partial Cloverleaf	Half Diamond	Diamond	Diamond	
3 Location(s)	SR1 at Boyds Corner Road	SR1 at Boyds Corner Road	SDRS6 north of Summit Assistion	SD895 north of Summit Autotion	SDISS noth of Summit Aulation Invitors Corner Board		
Type	Directional	Directional	Partial Cloverleaf	Partial Cloverleaf	Diamond	Diamond	
4 Location(s)	SR15/SR896/Choptank Road	SR 15/SR896/Choptank Road	Jamison Corner Road	Jamison Corner Road	SR1 North of Toll Plaza	SR1 North of Toll Plaza	
Type	Partial Cloverleaf	Directional	Diamond	Diamond	Disactional	Directional	
Location(s)		Bethel Church Road	SR1 North of Toll Plaza	SIR1 North of Toll Plaza	SR15/SR896/Chootank Road	SR15/SR896/Chootank Road	
Type		Partial Cloverleaf	Disertional	Directional	Directional	Directional	
6 Location(s)					Bethel Church Road	Bethel Church Road	
Type					Patial Cloverleaf	Partial Cipyerleaf	
7 Location(s)							
Type							
Pyerpasa(ea)							
Number	- 11	11			9		
1 Location(a)	Strawberry Lane	Strawberry Lane	Strayberry Lane	Strayberry Lane	Strauberry Lane	Strawberry Lane	
2 Location(s)	Middletown Business & Technology Park	Bunker Mil Board	Bunker Hill Road	Surker MI Doed	Bunker Hill Poort	Survey MI Start	
3 Location(s)	Bunker Hill Road	Bohemia Mili Armstrong Comer Road	Bohemia Mil Road	Bohemia Mill Road	Bohemia Mili/Amstrong Corner Road	Schemia Mill'Armstrono Corner Road	
4 Location(s)	Broad Street	US 301 Local	Old School House Road	Old School House Road	US 301 Local	US 301 Local	
5 Location(s)	Mari Pit Road	Norfolk-Southern Railroad	Churchtown Road	Churchtown Road	Norlok-Southern Railroad	Norfolk-Southern Railroad	
6 Location(s)	Existing US 301	SR 896	Norfolk-Southern Railroad	Norfolk-Southern Railroad	SR896	SR896	
7 Location(s)	Norfolk-Southern Railroad	Jamison Comer Road	Ratiedos Road	Ratiodos Road	Heetts Corner Road	Hyetts Corner Road	
8 Location(s)	5R896	SIR 896	Hyetr's Corner Road	Hyetr's Corner Road	Old Schoolhouse Road	Old Schoolhouse Road	
9 Location(s)	Jamison Corner Road	Shallcross Lake Road			Churchtown Road	Churchtown Road	
10 Location(s)	SR896	Old Schoolhouse Road					
11 Location(s)	Shallcross Lake Road	Churchtown Road					

## **CULTURAL & NATURAL ENVIRONMENT**

- Mid-range wetland impacts
- Lowest high quality wetlands impacts Mid-range Waters of the US impacts
- Mid-range impact to Species Habitat Areas (wildlife & plants)

- visual, etc.)
- High Agricultural District impacts

## Comparison of the Retained Alternatives - Cultural Resources



## Comparison of the Retained Alternatives - Natural Resources

	YELLOW		BROWN		GREEN with SPUR		i e
project classifusment	Roya's Corner Road Option 6 Spor Option 2		NORTH	SOUTH	NORTH Armstrong Corner Road Option 2A Spor Option 2B	SOUTH Armstrong Corner Road Option 2A Spor Outloon 2B	NOVEMBER 2006 ALTERNATIVES ENVIRONMENTAL IMPACT MATRIX
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- Shifts new US 301 farther away from Cedar Lane Schools

## Impacts southwest corner of Grande View Farms community

# Increases length of new US 301 (increased costs)

## Shifts New US 301 alignment 1800 feet north of New Covenant Presbyterian Church