Millsboro-South Area

Working Group

Meeting No. 7

March 30, 2005

Working Group Members

Ronald Atherton
Business Owner

Jim Bennett
Bennett Orchard

Joan Boyce
Millsboro / Dagsboro Chamber of Commerce

Joe Brake
First State Community Action Agency

Eric Buehl
Center for the Inland Bays

Lynn Bullock
Millsboro Volunteer Fire Company

Donald Collins
Sussex County Farm Bureau

S. Bradley Connor
Mayor, Dagsboro

Robert Daisey
President, Frankford Council

Mark Davis
Delaware Department of Agriculture

Preston Dyer
Developer

Peter Frederick
Mayor, Fenwick Island

Richard Kautz
Sussex County Planning & Zoning Commission

Faye Lingo
Town Manager, Millsboro

Roger Marino
Mountaire Farms, Inc.

Pam McComas
Bethany/Fenwick Chamber of Commerce

John Mitchell
Indian River School District

Margaret Mitchell
Millsboro Historical Society

Tran Norwood
Nanticoke Indian Association

Clifton Parker
Farmer

Bill Pfaff
Delaware Small Business Development Center

Mike Simmons
Delaware Department of Transportation

Robert Stuart
Sussex County Emergency Medical Services

Gary Taylor
Town Manager, Selbyville

John Thoroughgood
Millsboro Town Council Planning Commission

Ann Marie Townshend
Office of State Planning Coordination

Marissa VonVille
La Esperanza, Inc.

Michael Warrington
Delaware State Police, Troop 4

George White
Townsends, Inc.

Agenda

- 5:30 Call Meeting to Order — Bob Kramer
- 5:35 Opening Remarks — Monroe Hite, III
- 6:00 Traffic Analysis — Jeff Riegner
- 7:10 Matrix Review — Joe Wutka
- 7:30 Recap of Plan Changes — Jeff Riegner
  - Eastern Bypass Alternatives — Joe Wutka
  - Western Bypass Alternatives
  - On-Alignment Alternatives
- 8:00 Next Steps / Closing Remarks — Monroe Hite, III
- 8:30 Adjourn — Bob Kramer

Project Meetings & Workshops

- **Nov. 8, 2004:** Milford Area Public Workshop No. 3
- **Nov. 9, 2004:** Georgetown Area Public Workshop No. 3
- **Nov. 15, 2004:** Millsboro-South Area Public Workshop No. 3 (Millsboro)
- **Nov. 16, 2004:** Selbyville Area Public Workshop No. 1 (Selbyville)
- **Nov. 18, 2004:** Ellendale Area Public Workshop No. 1
- **Jan. 13, 2005:** JPR Meeting (Environmental Resource Agency Meeting)
- **Feb. 22, 2005:** Ellendale Area Working Group Meeting No. 4
- **Mar. 2, 2005:** Millsboro-South Area Working Group Meeting No. 6
- **Mar. 21, 2005:** Milford Area Working Group Meeting No. 6
- **Mar. 29, 2005:** Plantation Lakes Coordination Meeting
- **Mar. 29, 2005:** Millsboro-South Area Traffic/Modeling Meeting

Upcoming Meetings

- **Mar. 31, 2005:** Georgetown Area Working Group Meeting No. 6
  - 5:30 – 8:30 PM at CHEER Community Center
    20520 Sand Hill Road, Georgetown
- **Apr. 21, 2005:** Georgetown Area Working Group Meeting No. 7
  - 5:30 – 8:30 PM at CHEER Community Center
    20520 Sand Hill Road, Georgetown
- **Apr. 25, 2005:** Milford Area Working Group Meeting No. 7
  - 5:30 – 8:30 PM at Carlisle Fire Company
    615 Northwest Front Street, Milford
- **Apr. 26, 2005:** Ellendale Area Working Group Meeting No. 5
  - 7:00 – 9:15 PM at Ellendale Volunteer Fire Company
    302 Main Street, Ellendale
- **Apr. 27, 2005:** Millsboro-South Area Working Group Meeting No. 8
  - 5:30 – 8:30 PM at Millsboro Fire Company
    109 East State Street, Millsboro

Where We Are

The "MATE" Environmental Streamlining Process

COMPLETE

1. Transportation Planning
2. Scoping
3. Purpose and Need

IN PROGRESS

4. Alternatives Development

THIS SUMMER AND FALL

5. Detailed Alternatives Analysis and Draft Environmental Document

FUTURE

6. Identification of Preferred Alternative and Conceptual Mitigation Plan
7. Final Environmental Document
8. Record of Decision
9. Project Design and Final Minimization and Mitigation Coordination
10. Final Permit Decision
11. Project Implementation and Monitoring

Where We Are

- So far, we have developed a full range of alternatives.
- Analyzing all of these alternatives in detail would not be an effective use of time and money.
- Our goal this spring is to narrow down the full range of alternatives to a shortlist called “Alternatives Retained for Detailed Study.”
- The retained alternatives will be studied in detail starting this summer and compared to each other to determine a “Preferred Alternative.”

How Do We Narrow Down the Alternatives?

- **By using the Comparison Matrix, which currently includes…**
  - Natural resource impacts (wetlands, floodplain, etc.)
  - Cultural resource impacts (historic structures, archaeological sites, etc.)
  - Property impacts
  - Agricultural impacts
- **…and will include…**
  - Traffic benefit
  - Cost
  - Socioeconomic impact
- **…in conjunction with input from the public.**

How Do We Narrow Down the Alternatives?

- The recommendation on which alternatives will be retained for detailed study will be based on a balance among all of these factors.
- Certain factors may constitute a "fatal flaw" for one or more of the alternatives.
  - Section 4(f) impacts, dealing with public parkland and historic properties
  - Wetland impacts, which require a federal permit
  - Lack of broad-based public and/or legislative support

Traffic Analysis

- The process and general trends will be discussed in more detail tonight
- We'll review questions raised during the last working group meeting
- Updated preliminary model results for each alternative will be presented at the next working group meeting

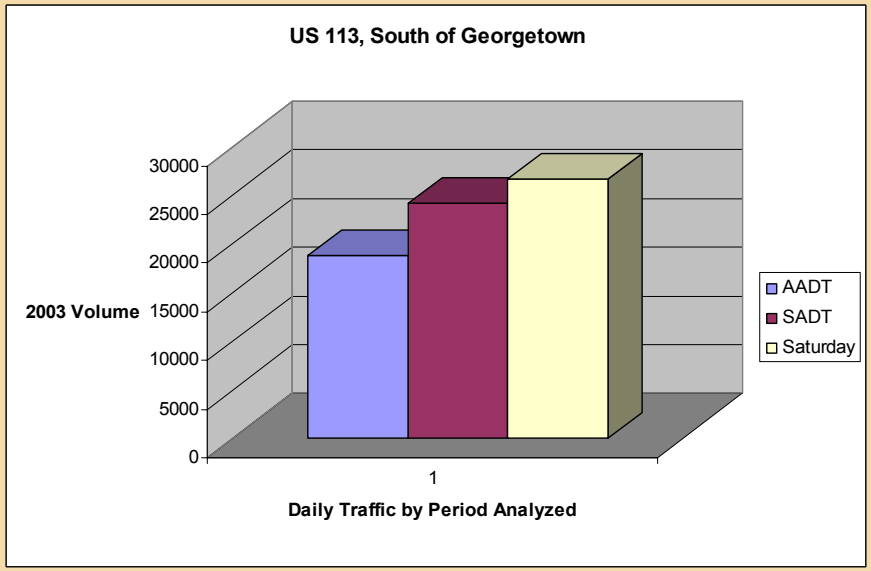
Traffic Analysis
Project Planning Process

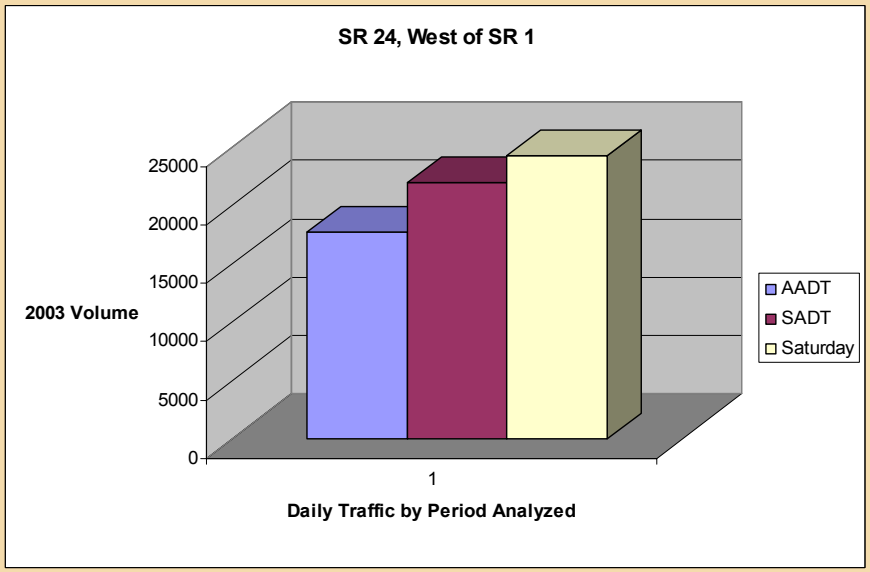
- **Stage 1: Establish Future Traffic** [WE ARE HERE]
- **Stage 2: Establish Facility Size**
- **Stage 3: Establish Types of Access**
- **Stage 4: Establish Concept Designs**

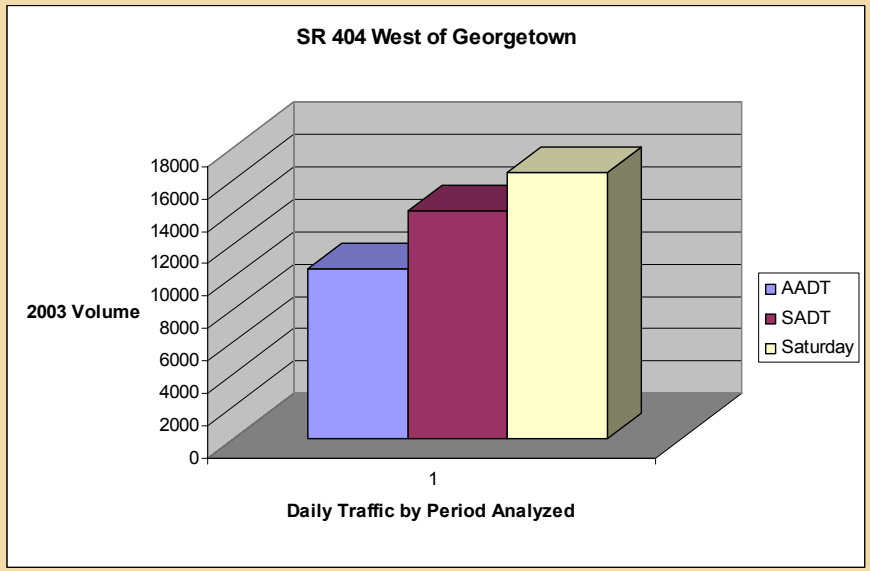
REMEMBER: PREDICTING THE FUTURE IS NOT AN EXACT SCIENCE!

Traffic Analysis
Establishing Future Traffic

- **How do we project future (2030) traffic volumes?**
  - **Determine existing daily traffic levels on the current road system.**
  - **Determine future daily traffic levels on the current road system.**
  - **Determine future daily traffic levels with the proposed project.**
- **For most projects, we typically select alternatives based on annual average daily traffic (AADT)**
- **We will select alternatives for US 113 based on summer average daily traffic (SADT)** [THESE ARE THE NUMBERS THAT MATTER NOW]
- **Detailed design will be based on peak period traffic (typically a summer Saturday)**


US 113, South of Georgetown
2003 Volume
30000
25000
20000
15000
10000
5000
0
1
Daily Traffic by Period Analyzed
AADT
SADT
Saturday

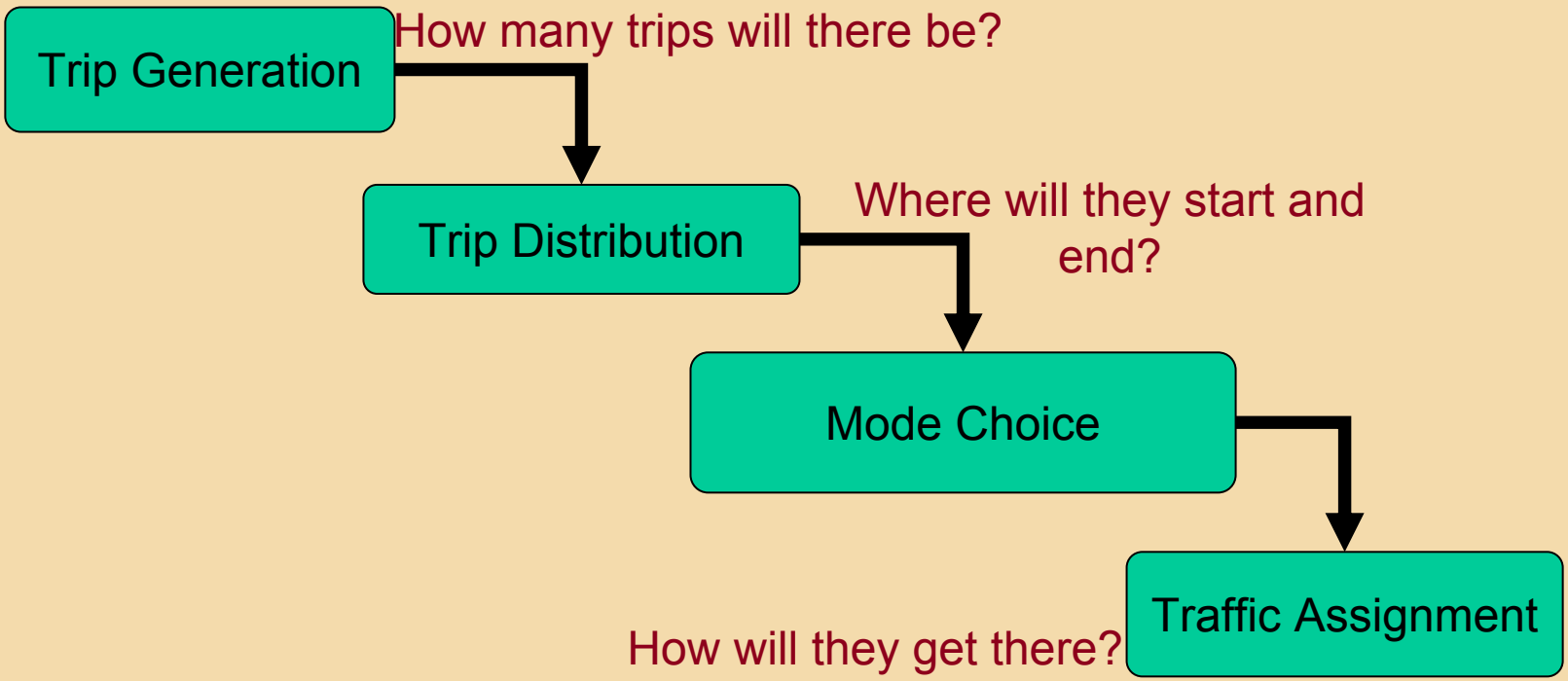

SR 24, West of SR 1
2003 Volume
25000
20000
15000
10000
5000
0
1
Daily Traffic by Period Analyzed
AADT
SADT
Saturday


SR 404 West of Georgetown
2003 Volume
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1
Daily Traffic by Period Analyzed
AADT
SADT
Saturday

Traffic Analysis

Establishing Future Traffic

- **Travel demand models are used to approximate current use and forecast future use of roadways in a study area.**



Traffic Analysis
Establishing Future Traffic

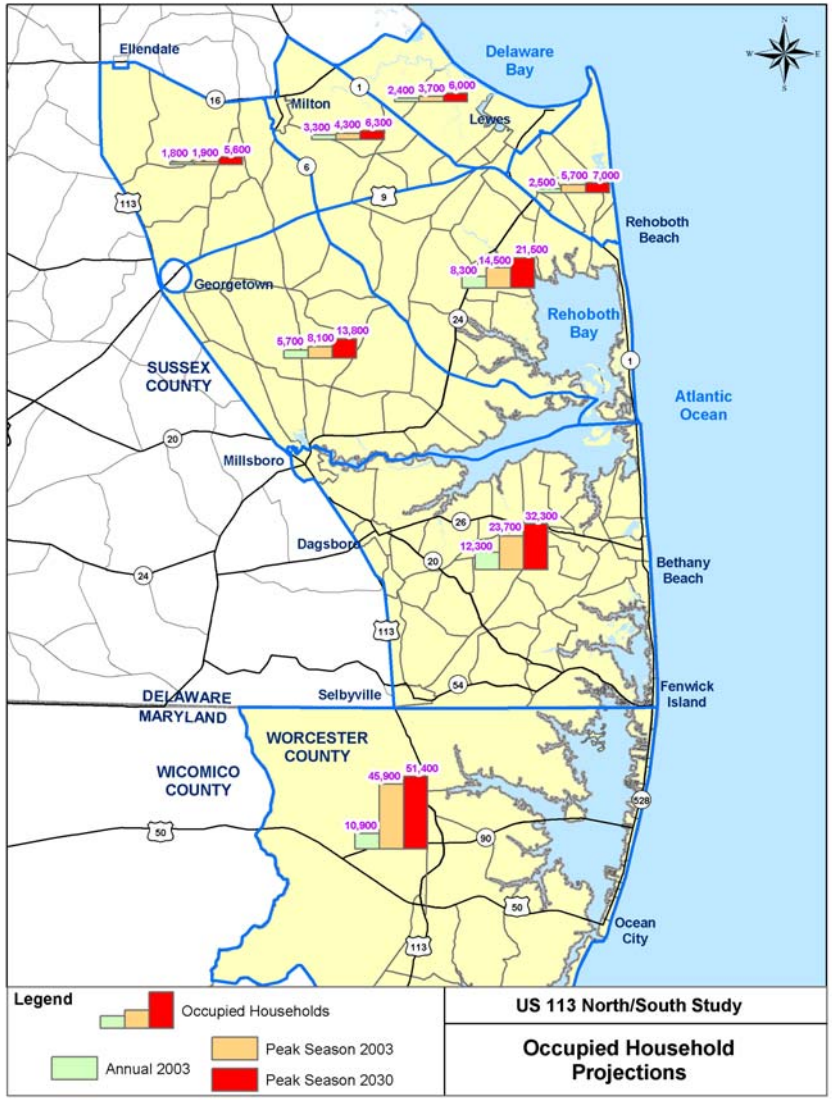
- **TRIP GENERATION – Determines the number of trips produced by and attracted to each zone.**
  - Traffic Analysis Zones (TAZs) are geographic units like blocks or groups of blocks.
  - Households generally produce trips.
  - Employers generally attract trips (whether work trips or consumer trips).
  - The number of trips per household is based on an ongoing Personal Transportation Survey conducted by the University of Delaware.

Traffic Analysis
Establishing Future Traffic

- One key to good traffic projections is estimating future jobs and households.
  - Based on Census standards, the Delaware Population Consortium develops state- and county-wide projections.
  - The University of Delaware (CADSR) breaks those projections down to census county divisions (CCDs), then eventually down to TAZs.
  - There is very little flexibility in the CCD projections.
  - However, there is flexibility at the TAZ level to account for recorded development activity.
  - All of these projections are developed in consultation with counties and municipalities throughout Delaware.


MILFORD
Kent County
Sussex County
Delaware Bay
Maryland
Sussex County
GEORGETOWN
Atlantic Ocean
Rehoboth Bay
Indian River Bay
MILLSBORO
Sussex County
SELBYVILLE
Legend
Roads
Municipal Boundary
Census County Division (CCD)
Transportation Analysis Zone (TAZ)
US 113 North/South Study
Census County Divisions and TAZ's
Sussex County
H:\30000\31514-01\GIS\Mapfiles\PlanningDistricts_TAZ\PlanningDistricts_TAZ.mxd

- **Estimates of future households take into account both full-time ("annual") and peak season occupancy.**



Traffic Analysis

Establishing Future Traffic

- **TRIP DISTRIBUTION – Determines where trips start and end.**
  - **Travel occurs between zones based on the number and type of households and employees and the distance separating them.**
  - **Travel from outside and through the study area is also included.**
- **MODE SPLIT – Determines the means of travel between zones.**
  - **In Sussex County, that's almost always cars.**

Traffic Analysis

Establishing Future Traffic

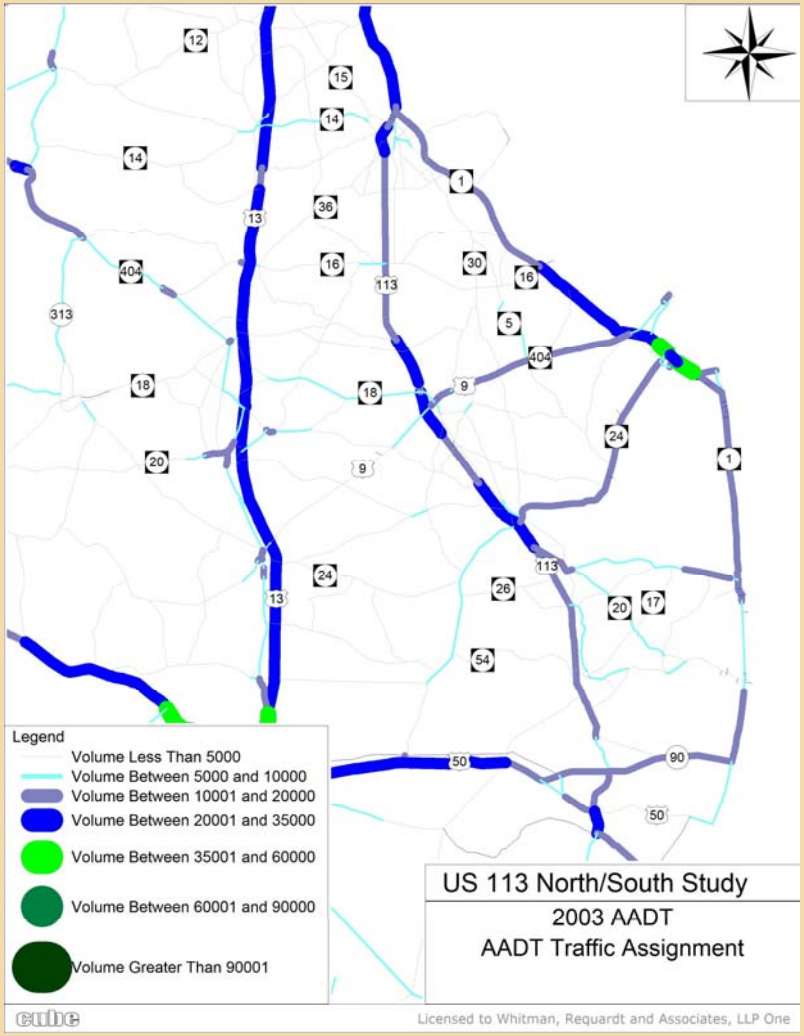
- **TRIP ASSIGNMENT – Determines which roads travelers take between zones.**
  - **Travelers make decisions based on a combination of time, distance, and cost.**
  - **As traffic volumes increase on roadways, the model predicts relative reductions in speed due to congestion.**

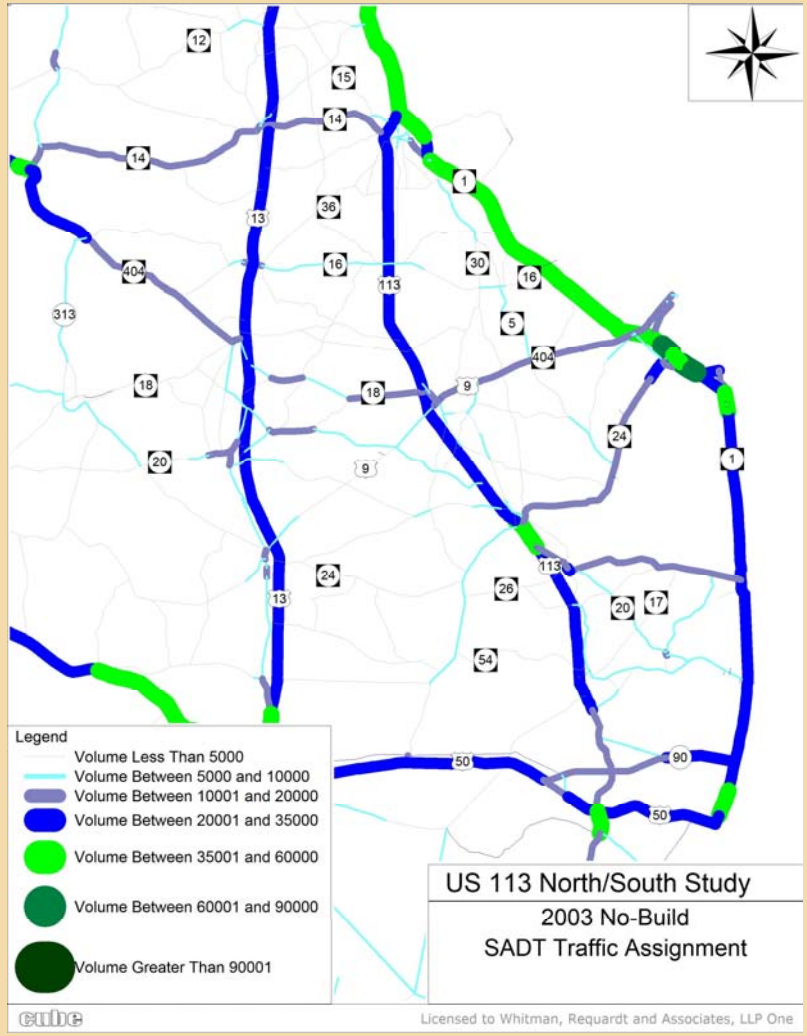
Traffic Analysis

Establishing Future Traffic

- The model is refined ("calibrated") until it predicts traffic volumes that acceptably match existing traffic counts.
- This model is well calibrated within the project area.

PRELIMINARY STAGE 1 FINDINGS:

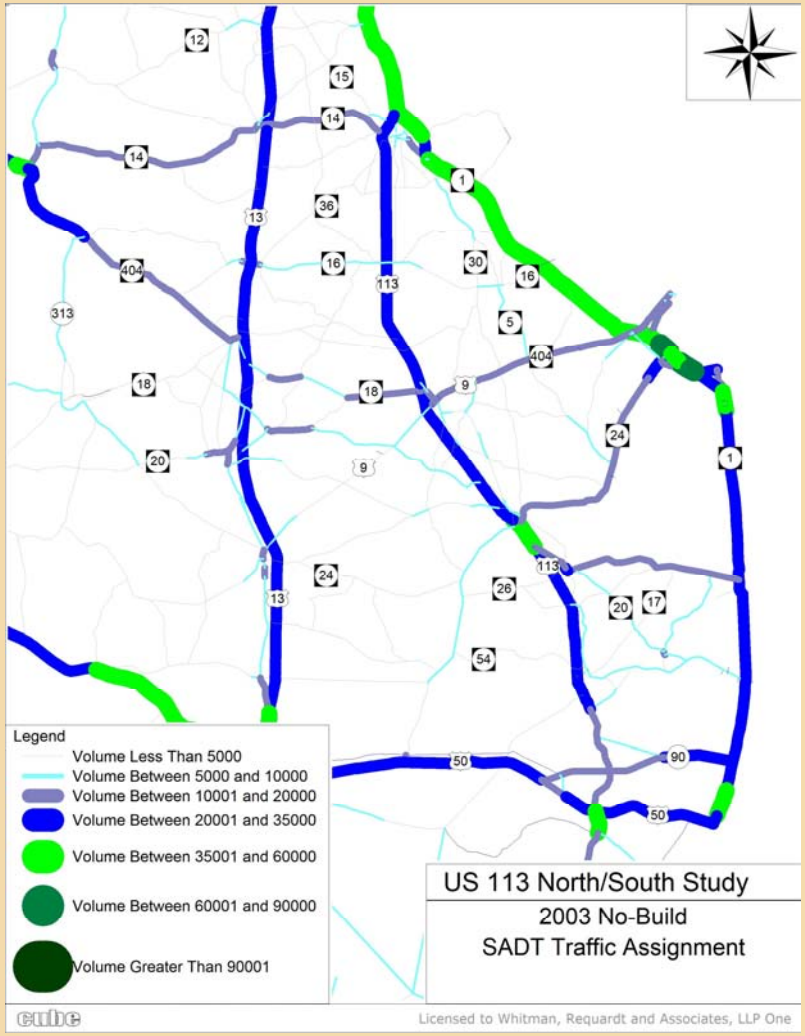


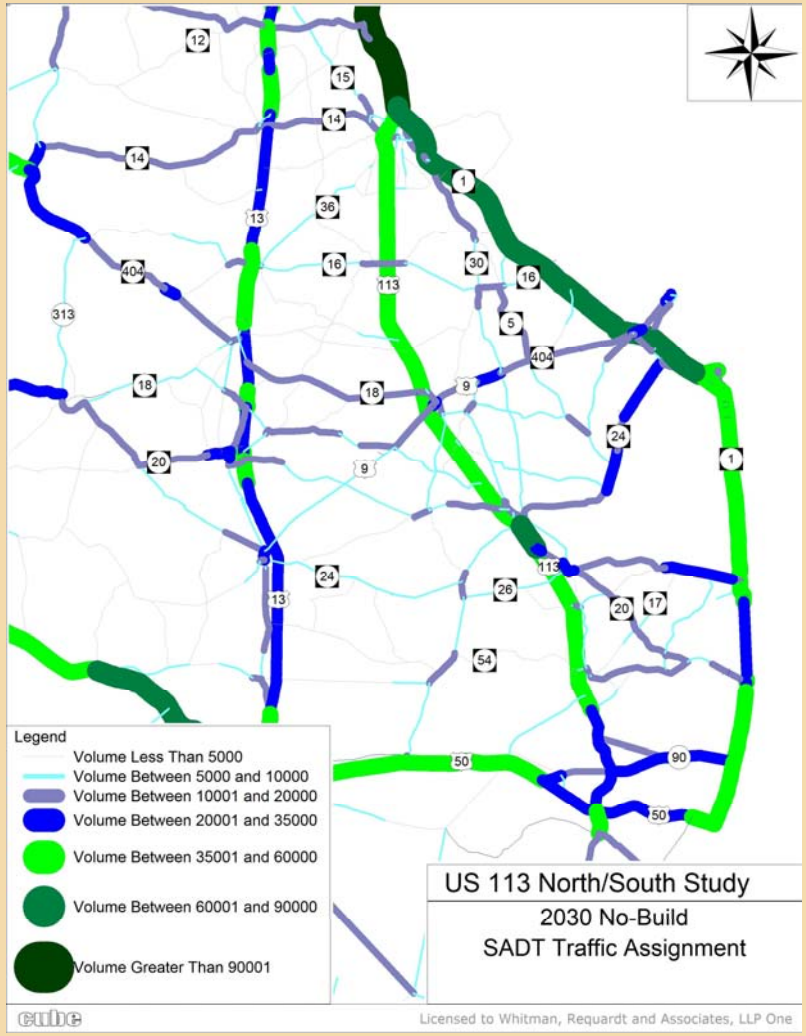


2003 average daily traffic over the entire year ("AADT")

How does the peak season affect traffic?

2003 average daily traffic during the summer ("SADT")

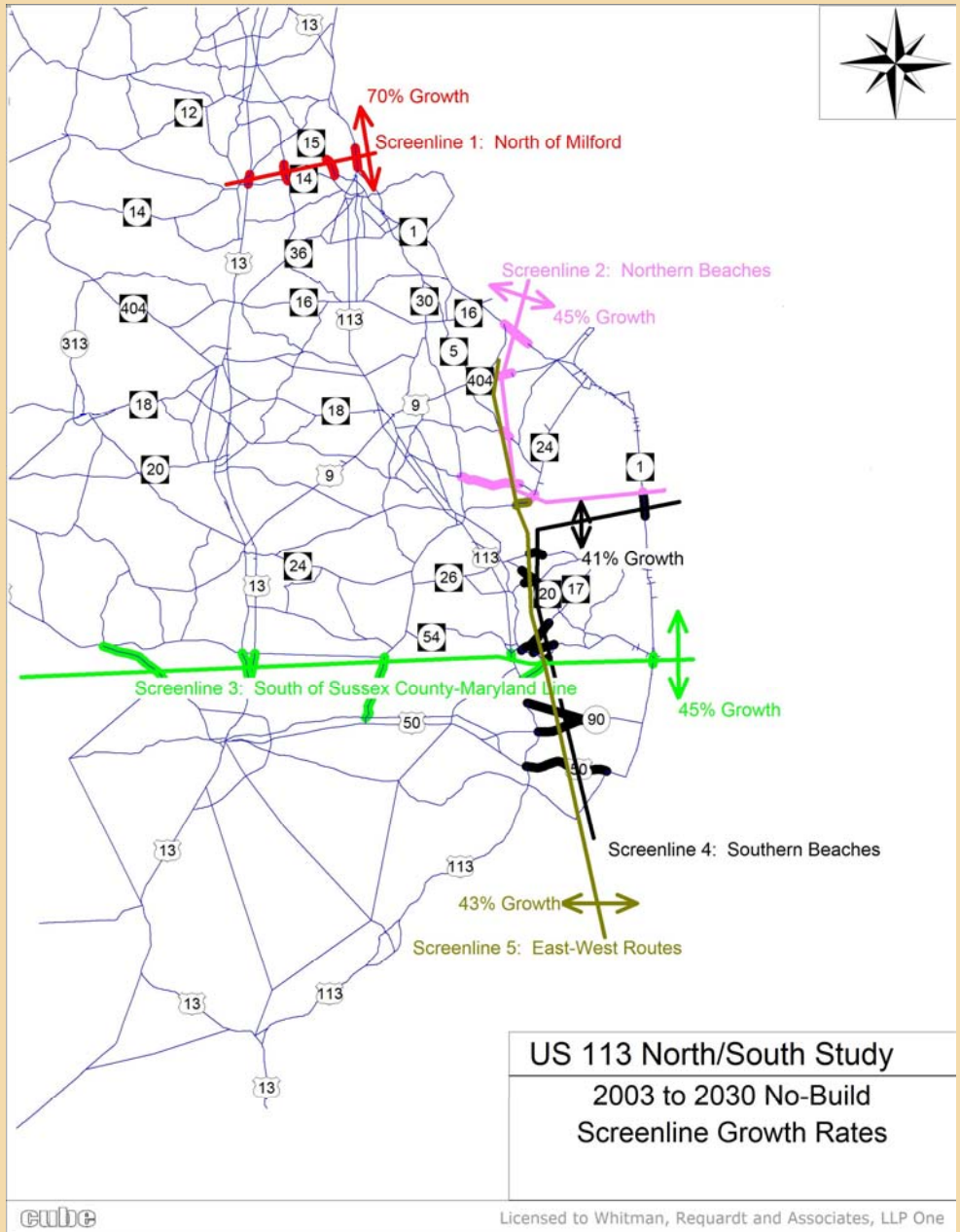




2003 average daily traffic during the summer

How will summer traffic grow over time?

2030 average daily traffic during the summer



How will summer traffic grow over time?

Traffic Analysis

Answers to the Working Group's Questions

- **1. Why are the "existing" numbers on SR 24 in Millsboro so low?**
  - **The map presented at the last meeting showed ANNUAL average daily traffic, not SUMMER average daily traffic.**
  - **Existing SUMMER average daily traffic from the model seems more consistent with the public's expectations.**
  - **Bear in mind that summer Saturdays are busier than average summer days.**
  - **Also, in downtown areas, there may be very short local trips that are not reflected in the model.**

Traffic Analysis

Answers to the Working Group's Questions

- **2. Why do the future numbers on SR 24 east of Millsboro grow so little?**
  - **Total traffic to and from the Lewes, Rehoboth Beach, and Long Neck area is expected to increase by 47% through 2030.**
  - **The bulk of that growth is NOT expected to be on SR 24 through Millsboro because the town is already congested.**
  - **As travelers seek alternate routes, much greater traffic growth is expected on SR 5 (88%), Mount Joy Road (80%), and other routes than SR 24 (16%).**

Traffic Analysis

Answers to the Working Group's Questions

- **3. Why is there so much traffic growth on US 113 so far south?**
  - **Improvements to SR 1 north of Milford and US 113 in Maryland will make US 113 more attractive as a north-south through route.**
  - **Worcester and Wicomico Counties are growing as destinations in their own right.**
  - **More Sussex County residents work in Maryland than in Kent County, and that trend is expected to continue.**

Traffic Analysis

Answers to the Working Group's Questions

- **4. Why don't some of the numbers on the traffic maps add up?**
  - **Existing traffic volumes are based on actual counts, which vary from season to season and even from day to day.**
  - **Projected traffic volumes from the model should add up, because the model never adds or loses trips.**
  - **In some cases, those trips take smaller side roads or are produced or attracted along the road.**

Traffic Analysis

Answers to the Working Group's Questions

- **5. Why would there be more traffic on [X] bypass than on [Y] bypass? That just doesn't make sense!**
  - **It depends on the circumstances.**
  - **The model assigns trips based on time, distance, and cost. Time lost waiting at signals is included.**
  - **Generally, most (if not all) through traffic will take a bypass unless it is congested or too far out of the way.**
  - **Local traffic will take the quickest, shortest route.**
  - **If you provide specific examples, we'll research them for the next working group meeting.**

Traffic Analysis
Conclusion

- Travel demand modeling is a complex, inexact process.
- To be valid, our travel forecasts must:
  - Be based on sound technical analysis, and
  - Make sense to you and to the public.
- If anything isn't clear, let us know.

Matrix Review

(Please refer to your handout)

ALTERNATIVE IMPACT COMPARISON MATRIX - MILLSBORO-SOUTH
March 30, 2005

	No Build Alternative	On-alignment options		East bypasses			Millsboro west bypasses						SR 24 connections (one will be included with each Millsboro west bypass)				Dagsboro west bypasses		Frankford west bypasses		Selbyville west bypasses (see note 6)	
		Alternative A, opt. 1	Alternative A, opt. 2	Alternative E1	Alternative E2	Alternative E3	Alternative C4	Alternative C5	Alternative C6	Alternative C9	Alternative D4	Alternative D6	Alternative C, north	Alternative C, south	Alternative D, north	Alternative D, south	Alternative E	Alternative F	Alternative G	Alternative H	Alternative I6	Alternative I7
Meets Project Purpose and Need (Y/N)	N	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Area of Potential Floodplain Impacts - FEMA (acres)																						
100-Year	0	13	14	25	41	29	11	11	7	4	11	7	0	0	0	0	0	0	0	0	10	11
Area of Potential Wetland/Waters of the US Impacts																						
Total Wetlands (acres)	0	11	12	57	15	22	24	23	19	24	19	13	1	2	2	3	3	4	0	0	3	3
Hydric Soils (acres)	TBD	146	146	65	122	126	15	15	14	170	11	9	1	1	3	4	67	57	71	42	57	64
Waters of the US (linear feet) (see note 1)	0	37,000	42,600	4,600	16,200	25,600	4,100	3,900	3,900	28,900	3,400	3,200	100	600	400	1,100	9,300	7,600	9,200	3,700	7,200	9,700
Potential Agricultural Impacts																						
Agricultural Districts (acres)	0	0	0	0	0	2	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Agricultural Development Rights (acres)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prime Farmlands (acres)	TBD	116	152	106	179	166	44	59	45	233	45	53	15	11	22	15	74	57	82	46	65	76
Potential Hazardous Waste Impacts																						
Number of EPA Sites	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of NPDES Locations	0	0	0	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potential Cultural Resources Impacts (see note 2)																						
Number of NRHP Buildings, Structures and Objects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of NRHP Archeological Sites	0	0	0	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of NRHP Districts	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of CRS Buildings, Structures and Objects	0	20	20	12	21	27	1	2	2	2	1	2	0	1	0	1	1	0	1	2	2	2
Number of CRS Archeological Sites	0	1	0	15	14	14	1	1	1	2	0	0	0	0	1	1	0	0	0	0	0	0
Number of CRS Areas/Districts	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Cemeteries	0	1	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
Predictive Model: Prehistoric Sensitivity - High & Moderate (acres) (see note 3)	0	22	24	41	54	57	192	185	150	172	147	134	25	25	51	45	0	0	0	0	9	9
Predictive Model: Early Historic Sensitivity - High & Moderate (acres) (see note 3)	0	11	14	6	14	14	34	27	30	17	25	25	4	7	9	11	0	0	0	0	0	0
Predictive Model: Sites of Historic Sensitivity - High & Moderate (number of) (see note 3)	0	56	56	45	54	54	5	5	7	2	5	7	0	2	0	2	0	1	1	0	5	5
Potential Natural Resource Impacts (acres, square feet)																						
Natural Areas (acres)	0	0	0	12	12	12	0	0	0	0	0	0	5	5	5	5	0	0	0	0	0	0
State Resource Areas (acres) (see note 4)	0	0	0	12	12	12	7	0	7	0	7	7	5	7	5	7	0	0	0	0	0	0
Forestland, 2002 Land Use (acres)	0	25	26	70	100	113	74	77	69	60	56	51	24	22	41	40	2	5	6	0	5	5
State Forest (acres)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rare, Threatened and Endangered Species	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Parks and Recreation Areas (acres) (see note 5)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note 1: Includes both streams and ditches. Only overall linear feet have been calculated until determination is made on ditch or stream.
Note 2: Historic properties may be assigned both a CRS and NR point, so CRS and NR totals should not be added together. Also, some parcels have been assigned more than one CRS point, therefore, the actual number of potential historic properties affected may assigned both a CRS and NR point.
Note 3: Predictive models do not cover entire area of alignment alternatives.
Note 4: State Resource Areas include State Parks and Forests and those properties under active consideration as additions to State Parks and Forests.
Note 5: Based on DNREC's Outdoor Recreation Inventory. Contains some state forest and state resource areas.
Note 6: Impacts DO NOT include the portions of alternatives I6 and I7 in Maryland.

General Alternatives

- **No-Build: Required by law**

Eastern Bypass Alternatives

- **Plan changes:**
  - Developed two alternative connections from US 113 to SR 24
  - Modified the southern end of Alternative B2
  - Developed two localized SR 54 bypasses of Selbyville
  - Modified local road realignments in conjunction with Alternative B3

Eastern Bypass Alternatives

- **Alternatives to be Retained for Detailed Study:**
  - Drop from further consideration?
  - Retain one or more alternatives?
  - If one, which alternative?
  - If more, which alternatives?

- **Alternatives: B1, B2, B3**

Western Bypass Alternatives

- **Plan changes:**
  - All western bypasses now include a connector to SR 24
- **Alternatives to be Retained for Detailed Study:**
  - Drop from further consideration?
  - Retain one or more alternatives?
  - If one, which alternative?
  - If more, which alternatives?
- **Alternatives:**
  - C4, C5, C8, C9, D4, D8 in Millsboro
  - E, F in Dagsboro
  - G, H in Frankford
  - I6, I7 in Selbyville

On-alignment Alternatives

- **Plan changes:**
  - Modified local road connection from realigned SR 54 interchange to US 113 frontage road
  - Eliminated backage road north of McCabe Road
  - Provided right-in/right-out access from northbound US 113 to Frankford Avenue
  - Eliminated backage road north of SR 26 in favor of a frontage road
  - Eliminated frontage road north of SR 20 in favor of a backage road

On-alignment Alternatives

- Resource agencies strongly support on-alignment alternative(s) for purposes of comparison with off-alignment alternatives

- Alternatives to be Retained for Detailed Study:
  - Retain one or both options?
  - If one, which option?

Third Lane Option

- Adds a third lane in each direction AT GRADE to increase traffic capacity; signals would remain
- At four intersections in the Millsboro-South area, this approach will result in an unacceptable level of service:
  - US 113 at SR 20, north of Millsboro
  - US 113 at SR 24
  - US 113 at SR 26
  - US 113 at SR 54
- At those locations, grade separations would be provided

Third Lane Option

- **Potential solution at those intersections:**
  - Construct four new "express" lanes in the median of existing US 113, elevated over the SR 24 and Delaware Avenue intersections.
  - The existing lanes of US 113 in this area would serve local traffic.
  - Access to "local" lanes would be only at each end of the "express" section.
  - Grade separations, with ramps, coordinated with possible east/west bypasses, would be provided at US 113 and relocated SR 54 and at US 113 and relocated SR 26.
  - A grade separation, with ramps, will be provided at US 113 and SR 20.

Next Steps

- **April:** Resource Agencies provide input on Alternatives to be Retained for Detailed Study
  (April 14 and 20, 2005)

- **April:** Working Group Meeting #8 – Continue to develop recommendations regarding Alternatives to be Retained for Detailed Study
  (April 27, 2005)

- **May:** Public Workshop #4 – Present recommendations on Alternatives to be Retained for Detailed Study and those options recommended to be dropped
  (May 23 in Millsboro, May 24 in Selbyville)

Next Working Group Meeting

- **Agenda:** Continue to develop recommendations regarding Alternatives Retained for Detailed Study
- **Date:** April 27, 2005
- **Time:** 5:30 – 8:30 PM
- **Location:** Millsboro Fire Company