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# Planning Commission: Forest Drive/Eastport Sector Study Meeting 5

**Nov. 2, 2017**
**7:00 PM**
**City Council Chambers**

## Agenda

1. Review of Sep. 20 Planning Commission work session
   a. Minutes
   b. Draft of *Forest Drive Traffic Studies: Summary & Analysis of Studies*

2. Summary of Open House Sep. 27
   a. Issues list, originally derived from stakeholder interviews, expanded with additional items and details

3. Summary of Survey #1 results and conclusion of Step One: Identify the Issues.

4. Meetings: Monthly meetings on third Wednesday starting again in January

5. Timeline:
   - Dec. 12, 2017: Public meeting/Open House #2. Conclusion of Step Two: Identify Policies and Actions Based on Input
   - Winter 2017– Spring 2018: Step Three: Confirm Policies and Possible Solutions
   - Spring 2018: Public meeting/Open House #3
   - Late Spring 2018: Step Four: Draft Document and Public meeting/Open House #4
   - Spring–Fall 2018: Step Five: Plan adoption process begins. Plan goes to Planning Commission and City Council for public hearings

**Summary of Planning Commission Work session**

September 20th 2017

PC Attendees: Robert H. Waldman, Vice Chair and William Herald

City Attendees: Pete Gutwald, Sally Nash & Eric Boucher

Consultant Team: Pat Faux, Chris Goettge, Mike Perrotta and Rebecca Myrick

Work Session Topic: Transportation Elements of the Plan

The PC members and attendees discussed the planned format for the upcoming Issues Identification Public Meeting scheduled for on September 27th and the planned closure of the issues identification stage in October. They also discussed the preliminary list of issues generated from the stakeholder interview sessions and the responses received to date through the online issues survey.

The PC members and attendees discussed the team's draft white paper regarding four other traffic studies done recently on portions of the Sector Plan area. PC member asked for clarification on several points and suggested additions to provide added context on certain points to help readers understand the findings and issues better. The team agreed to update the paper before posting it.

The team discussed the scope and methodology of the team's on-going traffic analysis tasks. The team reviewed the number of intersections to be studied and plans to finish collecting needed 2017 traffic counts once the school year started. They discussed progress on establishing a current 2017 existing condition base line and their plans for future projections. Attendees discussed traffic flow issues related to arterial corridors, the expanded more detailed road network to be added to the refined BMC round 8B regional model so as to better understand flows within the sector plan area, the Peninsula traffic-shed area and how they impact flows on the County's Forest Drive corridor and its various intersections with city streets.

# Forest Drive Traffic Studies: Summary & Analysis of Four Recent Studies

## Introduction:

During the issue identification stage of the Forest Drive Sector Plan project the planning team was asked about the relevancy and findings of four recent traffic studies. We were asked whether these studies might help the community understand both existing and future traffic issues in the Forest Drive Corridor, the larger Sector Plan Area and the Annapolis Neck Peninsula traffic-shed as a whole. The studies are:

1) **Forest Drive Corridor Study,** 2015, published by the City of Annapolis (Referred to here as the FDCS study it is sometime referred to as the Traffic Concepts, Inc. study)
2) **Major Intersections and Important Facilities Study** (MIIF), 2016, published by Anne Arundel County.
3) **The Eastport Transportation Study**, 2016, published by the City of Annapolis
4) **PALS Land Use/Transportation Evaluation for the Forest Drive Corridor**, 2016, published by a student with the University of Maryland/ Partnership for Action Learning in Sustainability

A brief review of each of these reports is provided and while each of these older studies provided useful insights, they served different, more focused purposes than the Sector Plan. They looked only at portions of the Sector Plan area. They utilized older traffic counts, studied fewer intersections and looked at shorter time periods than the Sector Plan. They used standard traffic analysis methodologies (HCM, intersection delay, etc.) to measure and report levels of congestion and road adequacy based on overall intersection function and overall road capacity.

For comparison, the Sector Plan will include the following elements:

Study Area: A 3.5 mile section of Forest Drive along with the Eastport area and a larger regional traffic-shed will be studied. The study will take into account traffic flows and projections for the entire peninsula and City and the region based the Baltimore Metropolitan Council's (BMC) Regional traffic model data.

***Study Traffic Shed Map***

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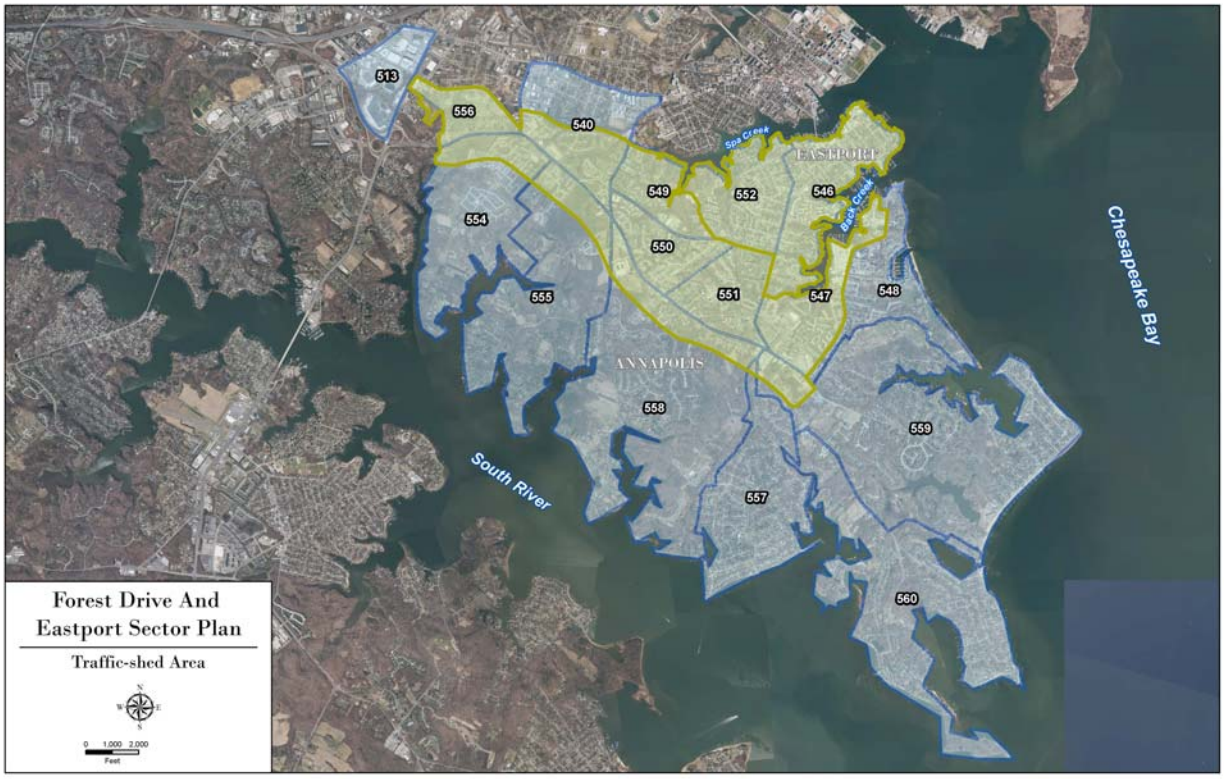


Intersections to be analyzed: The Team will study and report on 19 intersections and a more detailed road network than analyzed in previous studies.

***Roadway Network and Intersection Map***

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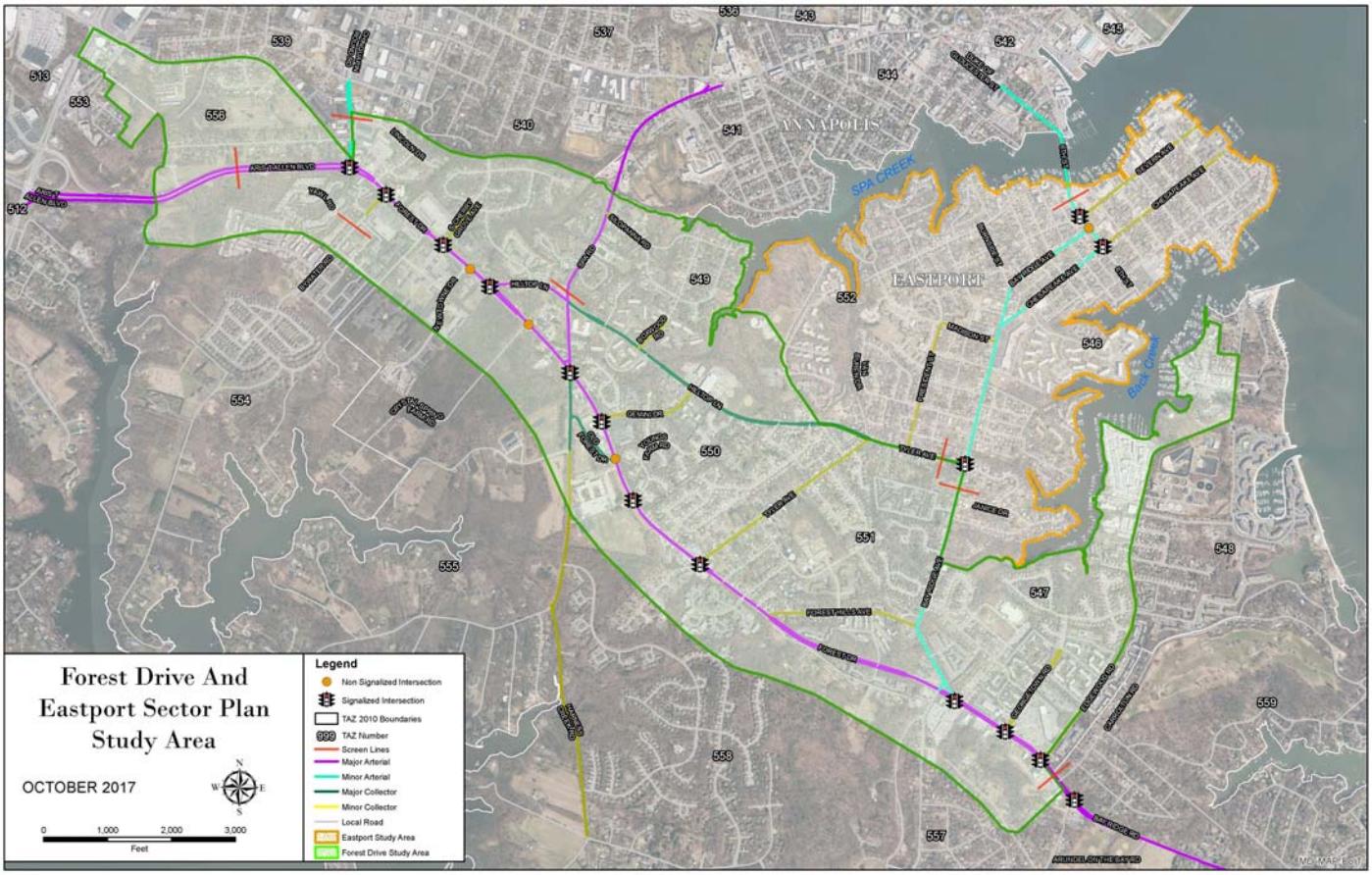


Date of Traffic Counts: The study will use base traffic signal and intersection design parameters and traffic volumes collected in 2017 during the school year.

Study Time Frame: Eighteen Years – the study will look out 8 and 18 years into the future using to the BMC regional planning years of 2025 and 2035.

Projected Development & Growth Assumptions: The study will utilize the most recent BMC Round 8b growth data for 2017 refined to include recent construction progress on approved development projects in the study area. Looking forward it will consider further build-out of approved development, newer projects that have received sketch plan approval as well as other likely development that might occur within the next 18 years (year 2035). A series of scenarios will be generated for analysis that consider different land uses, road improvements and travel mode assumptions.

Methodology: The study will report on existing traffic flows and congestion in 2017. It will use the BMC model to project future traffic flows and use post-modeling analysis tools to analyze and report on suggested intersection congestion changes (based on factors such as intersection queue lengths, intersection delay, and v/c ratios) which may include signal phasing adjustments, lane use changes, turning-lane length modifications, and system signal coordination. The team will use micro-simulation visualization tools to simulate real world operations and show study participants how individual vehicles in the traffic system can be traveled through the model and driver behavior characteristics can be assigned to vehicles.

**Forest Drive Corridor Study (FDCS)**

Purpose:
The City hired Traffic Concepts Inc. to develop a comprehensive analysis tool for the corridor as an aid in City planning and review of individual traffic impact studies for proposed developments. The study was designed to help identify needed APF improvements and was coordinated with the County. Consistent with its purpose the study followed the same methods currently required by the City's traffic impact guidelines and sought to be define a worst case in assessing traffic increases. It focuses on vehicular traffic impacts and utilized standard ITE trip generation rates to estimate the amount of traffic new development would generate. It did not address possible future changes in travel mode choices or other travel behavior in the City and County areas, nor did it recommend ways to improve congestion by means other than road improvements.

Study Area:
A 2.5 mile corridor section of Forest Drive from Chinquapin Round Road to Arundel on the Bay Road

Intersections Analyzed:
14 intersections (12 existing signalized intersections and 2 future intersections).

Date of Traffic Counts:
The base traffic signal and intersection design parameters and traffic volumes were collected in 2011 by the County. To establish 2015 numbers, the 2011 numbers were adjusted by increasing them by 1% per year.

Study Time Frame:
Five Years - the study had a base year of 2015 and projected forward to 2020.

Methodology:
The study used a similar methodology as a traffic impact study for individual development applications, but looked at a wider geographic area. It used Synchro and SimTraffic analysis tools. Synchro is a macroscopic analysis that uses Highway Capacity Manual (HCM) analysis methodology for capacity calculations. It analyzes factors including signal cycle lengths and phasing, split timing, signal coordination and lane use. Per a County request the 2000 Highway Capacity Manual was used. Synchro uses equations to determine delay and queue length. SimTraffic is a microscopic model. It was used to provide travel times along the corridor and queuing and blocking information at intersections. With these tools each vehicle in the traffic system is individually traveled through the model and driver behavior characteristics are assigned to each vehicle and the variation of each vehicle's behavior is simulated in a manner reflecting real world operation. The FDC Study analyzed future corridor operating conditions by looking at three scenarios:

- Scenario A - Future Conditions with No Road Improvements;
- Scenario B - Future Conditions with Adequate Public Facilities (APF) Improvements; and
- Scenario C - Future Conditions with Possible Road Improvements.

The list of road improvements described in the study was evaluated by Anne Arundel County to determine their effectiveness or acceptability.

Projected Development & Growth Assumptions:
The study projected additional traffic in the corridor based on another 5 years of 1% annual growth plus the traffic generated from full build out of the eight development projects that were either approved or under review in the City at that time. This projected development included 871 residential dwelling units and over 230,000 sf of various types of non-residential uses They are as follows:

1. Stop and Shop (8 vehicle fueling position gasoline station)
2. Quiet Waters Preserve 158 units - (72 townhomes and 86 single-family homes)

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3. Village Greens 89 townhome units
4. Rocky Gorge 48 units - (31 townhomes and 17 single-family homes)
5. Bay Village (pharmacy, restaurant, and office space) 25,000 sf
6. 1503 Forest Drive (general office and specialty retail space) 22,680 sf
7. Crystal Springs – (170 townhomes, 361 senior residential units, a 52 bed assisted living facility. 184,649 sf of retail, 31,362 sf cultural arts center and a 120 room hotel/spa)
8. Rodgers Property - 45 townhome units

Analyzed Improvements:
The study identifies 10 recommended road improvements selected to mitigate the impacts of the added traffic from the projected growth. Five (5) improvement projects were recommended in Scenario B as Adequate Public Facilities (APF) Improvements for specific development projects and five (5) as other possible road improvements were recommended in Scenario C without identifying which project might be required to build them.

Study Findings & Conclusions:
The FDC study reported that the corridor's overall level of service would remain acceptable but that corridor travel time would increase in all its future Scenarios. It reported and projected travel times in the corridor from Chinquapin Round Road to Arundel on the Bay Road as follows:

| | EXISTING CONDITIONS | | FUTURE CONDITION NO IMPRS | | FUTURE CONDITION APF IMPRS | | FUTURE CONDITION ALL IMPRS | |
|---|---|---|---|---|---|---|---|---|
| | AM | PM | AM | PM | AM | PM | AM | PM |
| Travel Time for Corridor (Average of 5 Runs) | 204.0 | 206.9 | 249.1 | 320.8 | 253.9 | 293.5 | 227.8 | 277.9 |

Since the FDC study was completed, the County has installed an adaptive control system on Forest Drive. As of 2015, all 12 County and State traffic signals on Forest Dr. and Bay Ridge Rd. corridor are now coordinated and adjust in real time to traffic conditions. This is estimated to have resulted in a 10% to 15% reduction in travel time for the corridor. This timing operation cannot be fully simulated by the Syncro program. (The County reported in 2017 that with this change traffic in the corridor travels at the speed limit.)

The FDC study reported that the overall level of service for the studied intersections was acceptable in 2015 and would remain acceptable after the analyzed full development build-out even in the No Road Improvements Scenario. The FDC study also analyzed the congestion levels at each of the individual intersection movements of each of its studied intersections. It reported that certain turning lanes on most of the intersections had unacceptable levels of congestion during the AM and PM peak hours both in its 2015 baseline year and all three of its future scenarios. It demonstrated that the recommended improvements mitigated only some of this congestion on these movements.

Comments:
The City APF standards define unacceptable levels of congestion to be as those at level D. The 1998 Highway Capacity Manual describes Level D as: "Operations with control delay of greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay

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values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences." It is important to note that an overall intersection service analysis reflects the average delay for all cars passing through all movements of an intersection. Intersections considered acceptable by this measure may have one more movements that experience unacceptable delays but because the number of cars using that movement is comparatively low the overall intersection function remains acceptable. City residents who enter and exit the Forest Drive corridor from various side roads and have experienced these longer delays have expressed some frustration with the overall intersection measurement reporting method.

The FDC study highlights two common conundrums of traffic planning along arterial corridors. First, improvements to the arterial corridor's level of service and travel time are typically given priority over side-street approaches. Correcting side delays often come at the expense of impacting the main line progression. Choices often must be made to find the best solutions to balance competing travel demands. Second, the Highway Capacity Manual method of grading congestion is less helpful on arterials. Once the overall signal cycle length at an arterial corridor intersection reaches a total of 140 seconds, the delays experienced on individual movements especially the of the side road approaches often exceed the 25 second delay benchmark for level D. This can occur without triggering the other failure features referred to in the definition of level D congestion. For instance, all the cars will regularly clear the signal cycle. A different measure of congestion may be more useful for these arterial corridor intersections.

The assumptions used in the FDC study were selected to show a worst-case scenario for the future that is unlikely to occur. For example, the assumption that traffic would grow at 1% each year means that the 2015 existing conditions baseline numbers used were higher than actual conditions. Actual SHA traffic counts for the nine years between 2007 and 2016 show a decline in corridor traffic volumes. In that time period the average daily traffic volume for the section of Forest Dr. between the intersection of Chinquapin Round Rd and the intersection at Bywater Rd. peaked in 2010 and was still more than 10% below that peak in 2016. This period of decline may reflect a temporary reduction in traffic during the recession years combined with a slower actual growth in the City at a rate less than was projected by the current City Comprehensive Plan. It may also reflect ongoing changes in travel behavior and destination choices for commuting and shopping.

Another example of the worst-case scenario outlook is the assumption made that all of the listed projected new developments would both start construction and be fully built-out within 5 years. That is unlikely. As of September 2017 only a small amount of the listed projected development have been approved or started construction. Some of these projects were listed as pipeline projects in the 2009 City Comprehensive Plan but have still not started construction. The Forest Drive Sector Plan Study will utilize updated data as the list of City and County development projects that have been approved and are under review has changed.

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**2) Major Intersections and Important Facilities Study (MIIF)**

Purpose: The MIIF Study is a component of the County's Transportation Functional Master Plan, The master plan itself is not completed to date. The study evaluates mobility and accessibility needs of residents, commuters, and businesses along specific facilities of the regional travel network in Anne Arundel County. The study looks at seven key corridors, County-wide, in order to prioritize County improvement projects and identify ways to improve services without major road improvements where possible.

Study Area:
A 5.0 mile corridor—the study includes two sections: Forest Drive from Chinquapin Round Road to Bay Ridge Avenue (2.3 miles) and MD 665 (Aris T. Allen Boulevard) from US 50 to Chinquapin Round Road (2.7 miles).

Intersections Analyzed:
Five existing signalized intersections and the road links between.

Date of Traffic Counts:
2012 adjusted forward to 2015

Study Time Frame:
23 years—the study looked at existing conditions in 2012 and projected forward to the year 2035.

Methodology:
The travel demand model that was used for the MIIF Study was developed from the Baltimore Metropolitan Council's (BMC) regional travel demand model. Among other factors this model takes into consideration growth projections provided by the county and origins and destination travel patterns for the peninsula as reported in the 2010 US Census data. The MIIF Study did not do any in-depth SimTraffic simulation analysis and did not evaluate travel time as a measure of effectiveness.

Projected Development & Growth Assumptions:
In addition to the background BMC growth projections for both City and the Outer Neck by 2035, the MIIF study also assumed that 820 new households and 400,000 sf of non-residential uses would be added in the in the

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12 traffic assessment zones (TAZ's) that feed into the corridor from 8 development projects. Based on the combination of these two sources the MIIF Study projected the average traffic growth along the Forest Drive corridor segments to be less than 1% annually over the next 23 years.

Analyzed Improvements:
No roadway capacity or major transit improvements were assumed to occur within the next 25 years.

Study Findings & Recommendations:
The MIIF study finds that the Forest Drive Corridor is the least congested of all of the seven major county corridors studied. It therefore places it at a lower priority for added County improvement.

Like the FDC study, the MIIF Study also reports on the current overall level of service at corridor intersections and on corridor links to be acceptable as the chart below shows. It reports the future overall level of service at corridor intersections as acceptable without any roadway capacity or major transit improvements.

| Study Intersections | Summary of Results | | | | | |
|---|---|---|---|---|---|---|
| | Existing | | Existing Delay (seconds per vehicle) | | Existing v/c | |
| | AM | PM | AM | PM | | |
| Forest Drive at Chinquapin Round Road | B | C | 19.9 | 23.7 | 0.79 | 0.84 |
| Forest Drive at Bywater Road | B | B | 14.1 | 13.2 | 0.79 | 0.76 |
| Forest Drive at Hilltop Lane | C | C | 20.4 | 26.1 | 0.68 | 0.71 |
| Forest Drive at Spa Road | D | D | 39.6 | 46.3 | 0.94 | 0.96 |
| Forest Drive at Bay Ridge Avenue | D | D | 53.7 | 42.9 | 0.92 | 0.79 |

In addition to overall level of service, the MIIF Study reports on delay and v/c. The v/c ratio represents the sufficiency of an road segment to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur. The two diagrams below show these findings. Forest Drive at Spa Road and Forest Drive at Bay Ridge Avenue are shown above with acceptable levels of service, but v/c ratios that are approaching 1.

**Figure 13: Forest Drive 2035 AADT and LOS**

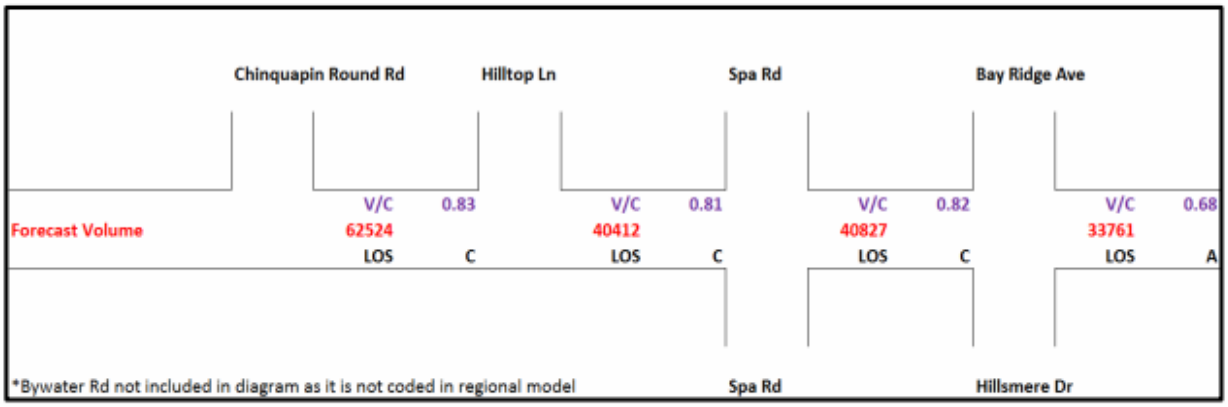
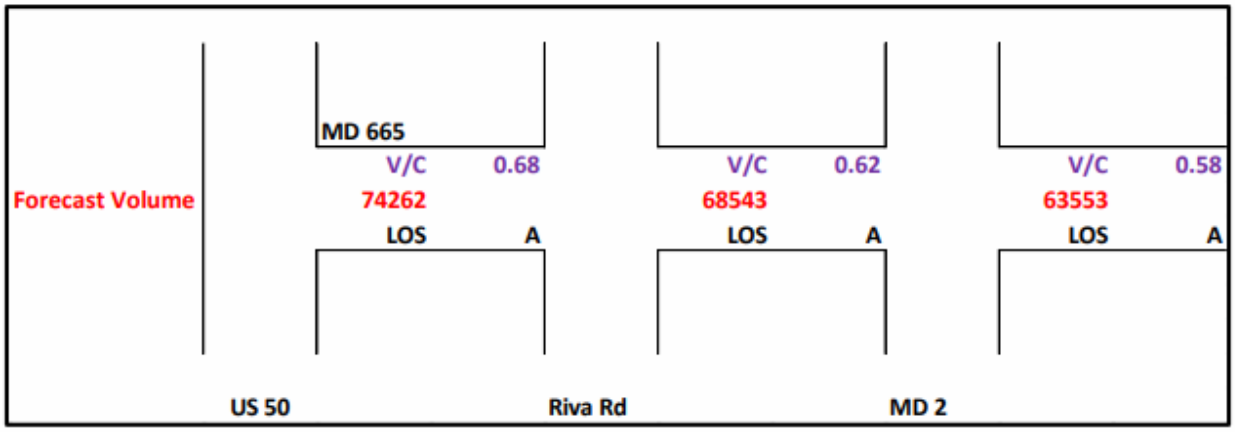


**Figure 19: MD 665 2035 AADT and LOS**




The MIIF study did not recommend any roadway capacity or major transit improvements for the Forest Drive corridor. It did recommend ways to improve congestion by means other than road improvements. Its recommendations include:

- Extension of MTA commuter bus service from Riva Rd. to Bay Ridge Ave.
- Explore Bus Rapid Transit or Light Rail Transit service from Annapolis Town Center
- Improve transit amenities including bus shelters and real time bus information
- Add bike lanes on Forest Dr. including segment from MD 2 to Chinquapin Round Rd.
- Construct missing sidewalk connections
- Allow for increased density and transit-oriented development in Town Center area
- Future development should occur in New Urbanism fashion with complete streets network
- Signal System coordination and optimization*
- Real Time Travel Time Information on Changeable Message Signs
- Special Event/Evacuation signal timing plan
- Access Management Plan

(*) Like the FDC study the MIIF study's assessment of existing congestion predates the County's 2015 improvements to 12 traffic signals on Forest Dr. and Bay Ridge Rd. corridor that now provide coordinated and adjust in real time to traffic conditions.

Comments:
Since the MIIF study was completed the County has made the development of an Inter-model Transit Center their highest priority in their annual requests to the State for transportation assistance. That project could impact travel behavior in the corridor and options for transit service.

This study, like the FDC, study utilizes older traffic counts from 2011 that have been adjusted forward. It uses older demographic data as a basis for existing conditions and uses lower growth projections than the FDC study does. . The Forest Drive study will utilize traffic counts taken in 2017 and review the model's projections for the future. While the Forest Drive/Eastport Sector Study will also use the BMC model; however, it will be refined to include more recent data, more detail in the road network and a more refined demographic analysis. Give the comparative congestion in the other 6 corridors analyzed in the MIIF Study; it is possible, but not likely that these higher projections might change the county's priorities for road improvements in this corridor.

The Forest Drove/Eastport Sector Study will analyze the MIIF recommendations in more detail as applicable to the City. It will also provide a more in-depth analysis of the corridor since it will rely on micro-simulation to assess additional measures of effectiveness.

In recommending an Access Management Plan for the corridor, the MIIF team noted the existence of a significant number of mid-block curb cuts and private driveways in various parts of the corridor. They noted the left hand turn movements associated with these as a contributing factor in determining the corridor congestion and the v/c ratios that the study reported. The section between Chinquapin Round Rd. and Hilltop Lane is one example of such a segment. A good example of the type of modification the MIIF study is recommending is the recently approved change in access for the former State Auto Insurance building. This will redirect traffic flows to a traffic signal via a side street at South Cherry Grove.

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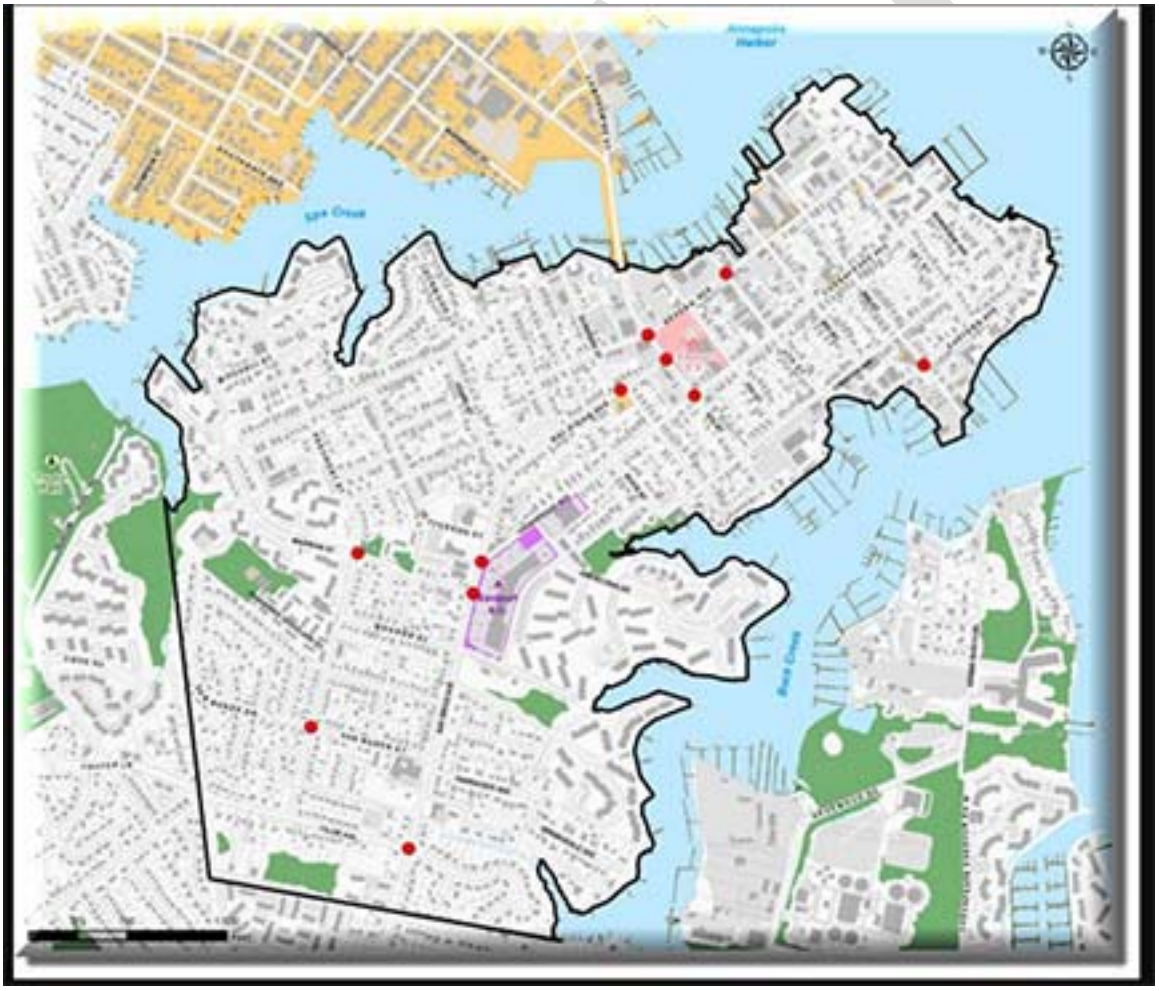
**3) The Eastport Transportation Study, Existing Conditions Report**, 2016, published by the City of Annapolis and **The Eastport Transportation Study, Short-term and Long-term Recommendations Report**, 2016, published by the City of Annapolis

Purpose:
The City of Annapolis conducted a multi-model transportation study for its Eastport neighborhood, in the form of two separate documents.

The objective of the **Existing Conditions Report** was to document and quantitatively assess baseline traffic and safety conditions, as well as the impact of future land use changes in order to develop a plan for improved traffic management and multi-model circulation and safety throughout the Eastport neighborhood. The **Short-term and Long-term Recommendations Report** provides short- and long-term recommendations and assesses future transportation conditions.

Study Area:
The Study area is about 1 square mile and generally extends from Spa Creek in the North to Back Creek in the South; and from Truxton Park in the West to the Severn River. The study area has limited roadway access to and from downtown Annapolis and points North (US 50, West Street), and points South and West (Outer Neck, Forest Drive and Harness Creek); as well as limited opportunities for additional roadway capacity.



Intersection Analyzed:

There were eleven intersections analyzed and they are shown in the study area graphic.

Date of Traffic Counts:
The majority of vehicle traffic enters and exits Eastport via 6th Street. Based on counts taken in 2015, 6th Street has an annual average daily traffic volume of 21,000 vehicles per day, compared to 12,500 vehicles at Tyler Avenue. Bay Ridge Avenue, the East-West spine of the network, carries 16,500 vehicles per day between Tyler Avenue and Madison Street. Counts were validated using current traffic count data and field observations.

Study Time Frame:
Baseline conditions are set at 2015 with projections out to 2020 (5 years) for the short-term analysis. The long-term time frame is not specified.

Methodology:
Short-term intersection capacity analysis was performed for the estimated traffic in the year 2020. Volumes were developed by adding the existing traffic volumes, growth in existing regional and net site generated traffic for the four background developments. A Synchro[tm] model implementing Highway Capacity Manual 2000 methods was used to perform the analyses. Additionally, queuing at intersection approached was assessed with SimTraffic.

Due to Eastport's compactness, long-term speculative developments would have a large impact on certain intersections depending on their ultimate location, size, and development program. Rather than guessing on individual programs and locations, the study focused on the ultimate carrying capacity of Eastport's main travel way—Bay Ridge/ Chesapeake and 6th Street—with the goal of determining how many more vehicle trips (local and/or through) that these arterials can accommodate before congestion results in gridlocked streets, (arterial Level of Service F). Long-term forecasts assume Eastport's main arterials remain the same: two-lane road network with 25 mph speed limits. A couple of additional signalized intersections along Bay Ridge / Chesapeake were included in the traffic model. In order to estimate the maximum amount of traffic the network can maintain the existing traffic model was first validated using current traffic count data and field observations. Vehicle trips were added onto the validated network until LOS F conditions were reached.

Projected Development & Growth Assumptions:
In the short-term using a 2020 design year, 4 pipeline developments are assumed built and operational and an additional growth in through traffic of 1% per year is assumed. The following developments were used to estimate the net trip generation for each background development using the 9th Editions of ITE Trip Generation Handbook and collected data:

1. Sarles / Petrini Property (South Annapolis Yacht Club), (84 marina berths, 30,000 S.F. warehouse, 3,000 S.F. general office)
2. Eastport Sail Loft (11 dwelling unit apartment building)
3. Griscom Square (12 dwelling unit townhouses)
4. Annapolis Yacht Club
    a. East side of 6th Street (11 employee general office, 108 marina berth, 130 member sailing club)
    b. West side of 6th street (59 seat restaurant, 35 marina berth, 10,000 S.F, Rec Center)

No long-term growth projections have been used in the methodology.

Analyzed Improvements:
The following improvements were a part of the short-term projections:

1. Additional lane capacity by restriping 6th Street
2. Adjust signal timing and cycle length at 2 intersection

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The following improvements were a part of the long-term projections:

1. Signal improvements along Bay Ridge
2. Signal improvements along Chesapeake
3. Assumed signal optimization in the study area

Study Findings and Conclusions:

The SimTraffic simulations under the short-term scenario show traffic conditions similar to those in existing conditions. Results show that none of the studied intersections nor any of the studied intersection movements degrade to a failing LOS from existing conditions. Furthermore, studied area intersections remain at an overall level of service of C for AM, PM, and Saturday peak hour scenarios. 95% queue length increases modestly.

In the long-term, at 1,850 vehicles per hour along Bay Ridge and Chesapeake Avenue, the roadway network begins to operate in unstable traffic flow conditions; this is the peak capacity. Beyond this traffic volume, long queues persist and accessing Bay Ridge and Chesapeake Avenue from the side streets becomes difficult. This traffic volume includes the use of signal optimization, which assists the timing of signals to efficiently move traffic through the network.

The maximum peak hour volume of 1,850 vehicles was then compared to the projected year 2020 peak hour volumes. The PM peak hour was projected to be closest to this limit at 1,550 vehicles per hour, or 300 trips / hour below ultimate capacity. This is an estimate of the additional capacity remaining in the most restrictive peak hour. Under the assumptions used in the model, 300 additional trips per hour (after year 2020) can go through the network during the PM peak before the ability of the roadway network to process vehicle traffic breaks down. These additional trips can take the form of additional through traffic, or trips that are locally generated from new developments, or some combination of both.

Comments:

The sector study will include 2017 traffic data for this area. It will review and take into consideration the findings of this study.

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## 4) PALS Land Use/Transportation Evaluation for the Forest Drive Corridor

Introduction:
The Partnership for Action Learning in Sustainability (PALS) is a program administered by the National Center for Smart Growth at the University of Maryland, College Park (UMD). It is a campus-wide initiative that links UMD students and faculty to provide low-cost assistance to local governments.

This independent study was an exploratory use of ArcGIS and CommunityViz tools. The intent was to create a tool that can be applied to any corridor to analyze and generate landuse / transportation alternatives. With increased familiarity with the software and the study area, many alternative scenarios might be studied. In the future, if successful, this University effort might be adapted as a planning tool for other corridors.

The City of Annapolis engaged PALS to provide assistance in creating new data bases and planning tools to aid in planning.

Purpose:
To date there are three PALS projects. We reviewed these studies as another resource for the Forest Drive/Eastport Sector Study.

a. A existing land use inventory data base of the city
b. An experimental CommunityViz based model of the Forest Dr. Corridor
c. An inventory database of land likely to re-develop or develop in the Forest Dr. Corridor

The first PALS project is the development of a land use inventory (with clear land use classification) for about 14,000 properties, in two time periods, 2007 and 2016. The City adopted the County's land use categories and identified 14 primary land use categories and 40 secondary land use categories (subcategories of the 14 categories) that were used in the pilot area. The final outputs of this effort are two GIS layers of all properties of 2007 and 2016 in the City of Annapolis. Each property point is associated with many attributes, including 14 primary land use categories and 40 secondary land use categories for the pilot area. The inventory is based on the state's Maryland property view data available in 2016.This valuable inventory is still in the process of being checked and refined by city staff. Once completed, it will provide more accurate numbers regarding city land uses such as the number of city residences and the amount of commercial square feet. This final list is not anticipated to be ready in time to be used in the Forest Drive study but will inform other city planning efforts.

The second PALS project used a draft version of the land use database as a starting point and applied traffic data and traffic generation assumptions to the land uses along Forest Drive. It also applied the sketch software tool CommunityViz to the GIS databases to produce a tool to generate various land use/transportation alternatives and assess their impacts. The goals of the study were to:

- Assess the potential and need for expansion of Forest Drive as a result of assumed land use changes on adjacent parcels within City boundaries.
- Identify parcels most suitable for new development or redevelopment and generate an alternative development scenario using CommunityViz sketch software, and
- Develop a build-out analysis procedure that is applied to land parcels

The third is an inventory database of land likely to re-develop or develop in the Forest Dr. Corridor. Like the first project, this effort is still in the process of being refined.

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Study Area:
The PALS corridor study area covers the 3.5 miles of the Forest Drive/Bay Ridge within City limits including the section form Edgewood Road Rd to Route 2. It also looks at a simplified road network feeding into the corridor as shown in Figure 1 below.

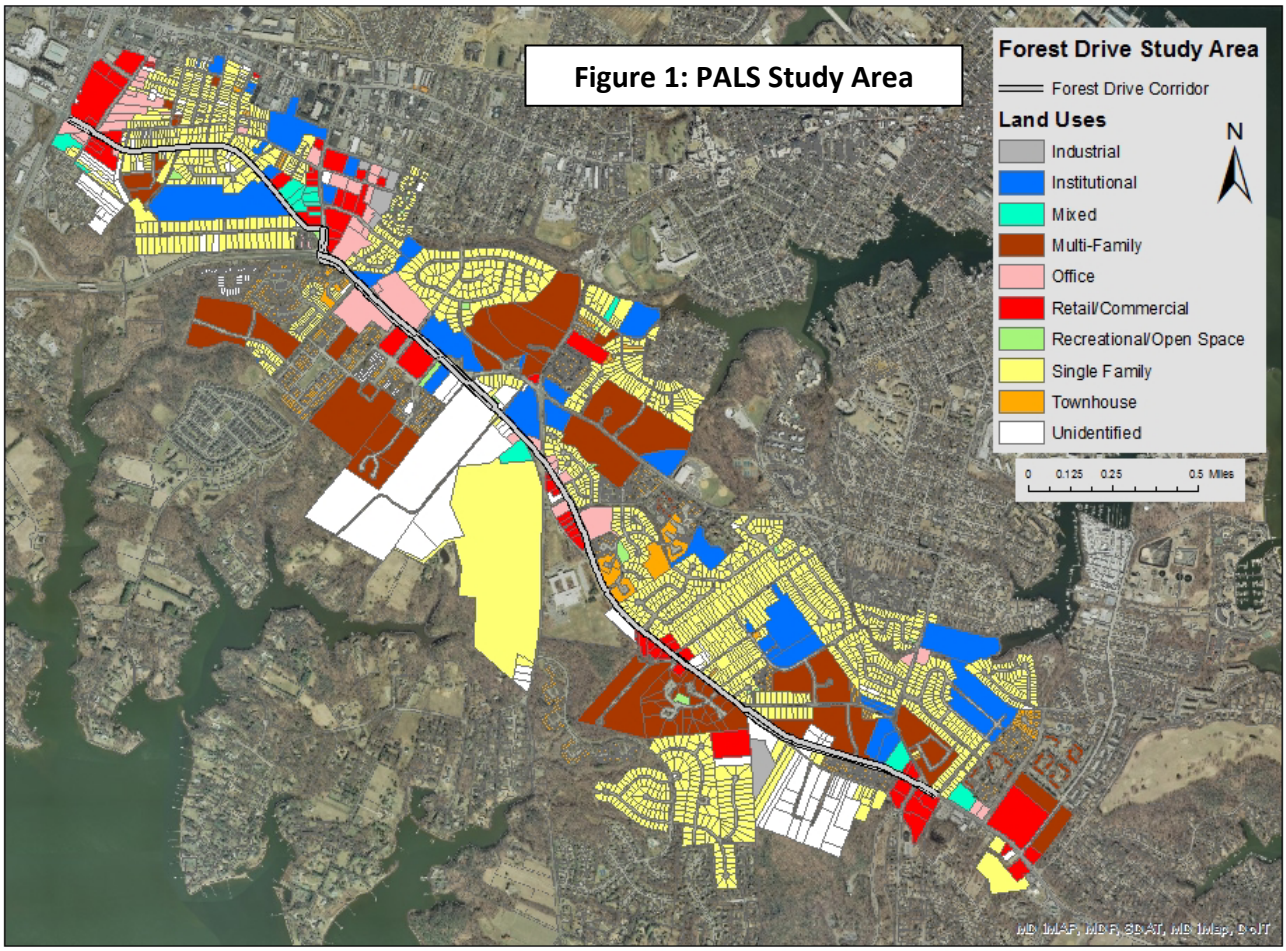

Figure 1: PALS Study Area

Intersections analyzed:
This study focusses on road links, not intersections. Its model included a limited number of corridor links and intersections.

Date of traffic counts:
This study did not utilize actual traffic counts to establish an existing conditions baseline. It generated a baseline based on a theoretical estimate of traffic based on ITE rates for the existing land uses identified in the database, which is still in the process of being refined and should cover uses in the study area though 2012. It is important to note that due to the time constraints of this student exercise, the author did not have the opportunity to calibrate the findings to reflect available actual 2012 traffic counts.

Two of the figures in the report, Figures 2 and 3, show the current level of service on the various road way link segments of the corridor in the morning and evening rush hour, derived from the Maryland Statewide Transportation Model (MSTM).

The MSTM uses household estimates based on Census 2000 data adjusted to the base year 2012, as well as employment data from the BMC, also derived from the 2000 Census (not 2010). This model shows severe

congestion (LOS F) in 2012 (baseline year for the model) on roadway links in much of the corridor and on adjacent roads.

Comments:
The MSTM model is a very macroscopic one that relies on outdated data or peak hour counts of traffic and a simplified road grid. It does not correlate with any of the more recent studies of the corridor.

Another limitation is that this PALS study assumes a new worst cases scenario for growth. It identifies approximately 324 parcels out of the 3,500 within the chosen study area as being suitable for redevelopment based on their existing land uses and assumes that full redevelopment would occur on all of them within 23 years. This resulted in a simplified maximum build-out of allowable uses that was assumed to add nearly 7,000 new morning peak trips and almost 8,000 afternoon peak trips to the corridor. This number differs significantly from the growth in daily traffic volumes projected by the 2016 MIIF. Again, due to the time constraints of this student exercise, the author did not have the opportunity to re-calibrate the assumptions and growth to reflect other factors such as environmental constraints, city development approval time frames or market absorption rates and trends.

Study Time Frame:
The study time frame is 2012 to 2035 or a 23-year time frame.

Methodology:
Using an uncalibrated baseline, the author of this PALS project applied data on trip generation from the 9th edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual to determine morning and afternoon peak trip generation rates for the various existing land uses found within the Forest Drive corridor. Once compiled, peak AM trips and peak PM trips were added as new fields to the GIS shapefile and the ITE rates were applied to the parcels using the ArcGIS Field Calculator. Each parcel was thus assigned a specific uncalibrated baseline number of peak trips for both morning and afternoon from which to make comparisons at later stages.

This study also used the CommunityViz Build-Out Wizard tool as a way to represent future development within the corridor area. In the modeling of the impacts, the study assumed build-out by 2035, the same horizon year of the travel demand model. There are drawbacks to this approach. The study was limited to one alternative scenario—Max Zoning Build-Out—with input criteria that closely resembled the bulk and density requirements and allowances in the Annapolis City Code. Each land use category was assumed to have only a single use (e.g. an “R3” zone is assumed to be 100% residential). These build-out scenarios are theoretical possibilities but in practice impossible. They do not take into account various constraints such as market demand, environmental features including Critical Areas, location of infrastructure, stormwater management requirements, etc.

Comments:
This study raised the issue of small-scale infill and redevelopment activities in areas outside the Opportunity sites focused on in the 2009 City Comprehensive Plan. The main strength of this study’s approach to traffic approach is that it closely aligned traffic and land use in an effort to better test the impacts of changes in land use mixes. However, the base model for the study is very dated and macroscopic and was not verified or tested in the field. A theoretical build-out was then added onto this number. The methodology should be refined with a model that reflects field-verified observations and the build-out analysis needs to account for real world impediments.

Proposed Development and Growth Assumptions:
The PALS study assumed a maximum zoning buildout would occur within the corridor within the next 23 years. This buildout included redevelopment of all undeveloped and underdeveloped parcels in the study area. In

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addition to this, it assumed all projected growth that was identified by the BMC model though 2035. This represents a double counting of development.

Analyzed Improvements:
The PALS study did not analyze planned or possible road improvements; this was not part of the scope of the study.

Comments:
One hoped for outcome is a tool to better test and quantify the traffic behavior changes and traffic impact reductions that can be achieved in an enhanced low scale mixed use community with many comfortable travel mode choices combined with and many desirable destinations close-by. This has yet to be realized.

Study Findings and Conclusions:
The Study is incomplete and uncalibrated. Therefore, no conclusions can be drawn.

**Figure 2: 2012 Levels of Service (LOS) on Forest Drive Area Road Segments**

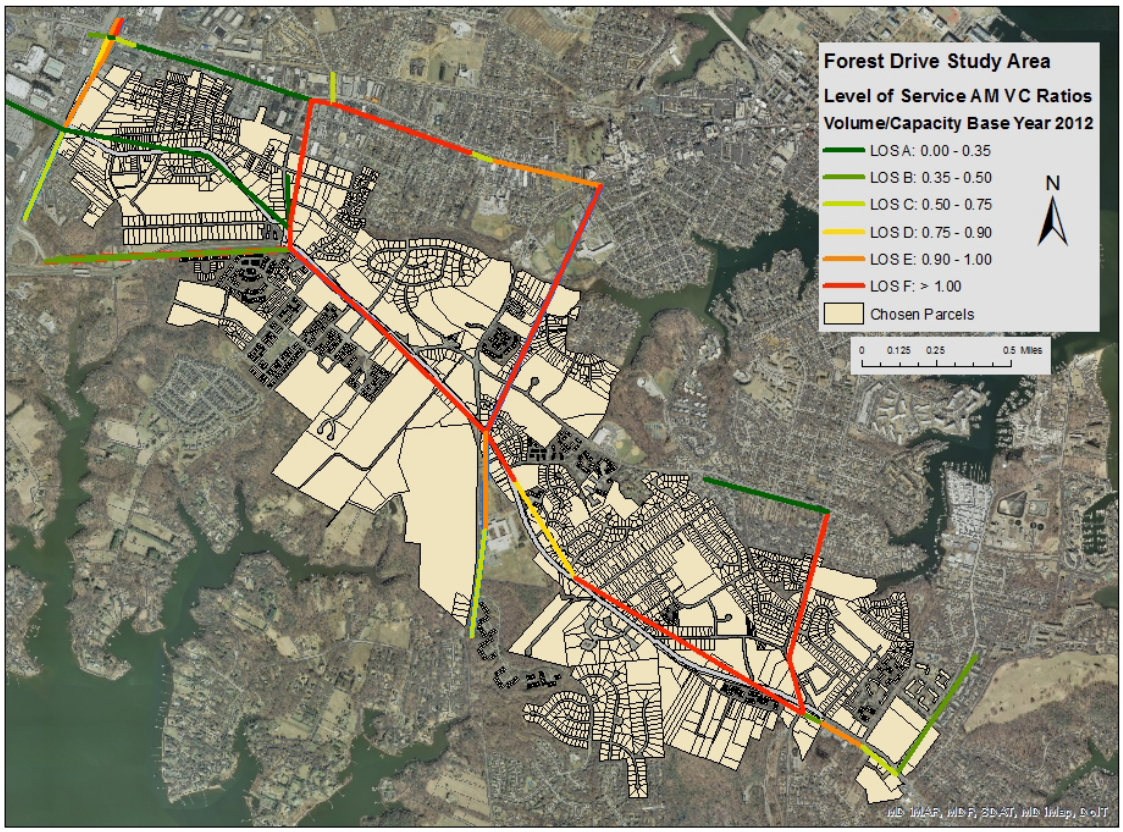
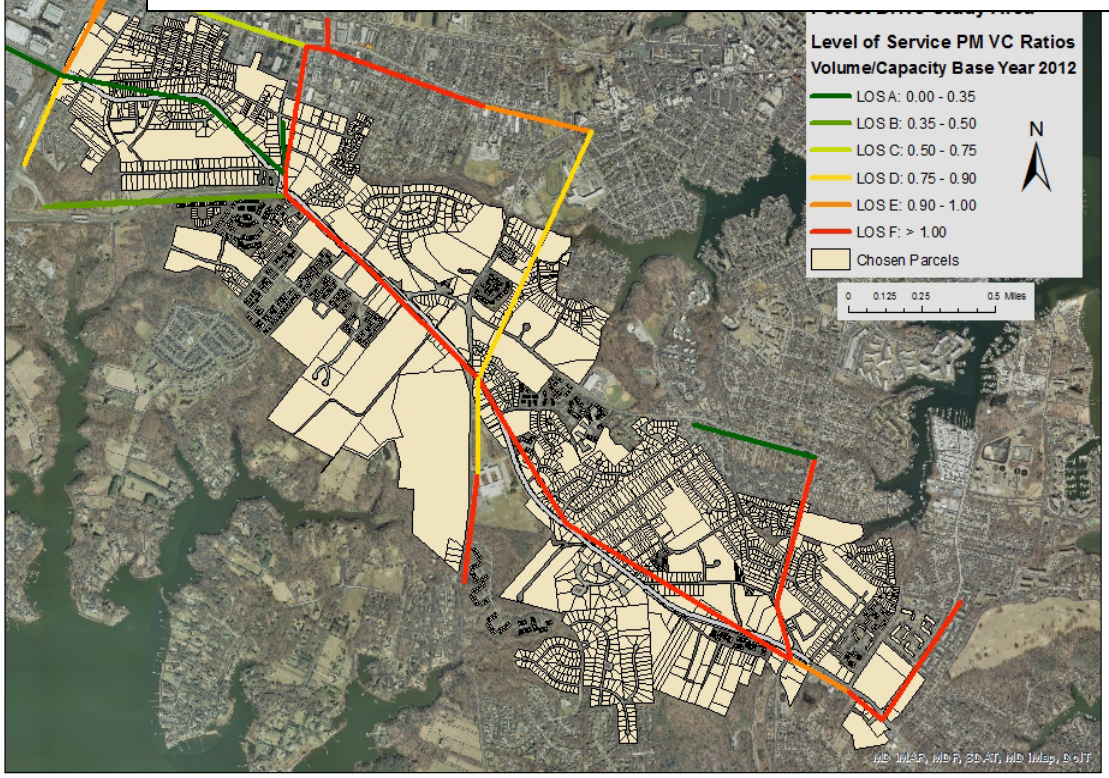


**Figure 3: 2012 Levels of Service (LOS) on Forest Drive Area Road Segments PM**

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# ISSUES REVIEWED & IDENTIFIED AT 1ST PUBLIC MEETING 9/27/17

(red text are issues raised at the meeting)

## CREATE, ADOPT & IMPLEMENT A CLEAR VISION FOR THE FUTURE

We need a vision for the SOFO corridor as a whole and as an important part of the City
We need a vision for the Eastport & Edgewood areas

## MOBILITY - VEHICULAR/TRANSIT

Ensure near and long term mobility for City and Peninsula
Work with County and property owners to plan for adequate corridor capacity & attractive character
Improve policies, coordination, communication & training to handle traffic during emergencies & incidents
Move away from car dominated travel, communities and streets
Add local street connections and grid network for more route options & connected neighborhoods
Reduce individual turn-ins i.e. driveways & curb cuts on Forest Drive - and drive throughs
Link to regional transit service & extend regional bus service do the corridor
Add eclectic transport to park and rides for access to regional transit
Embrace Uber, driverless cars and other technological changes that reduce private car usage over time
Improve local bus service, better stops, cheaper fare, more efficient, make it electric
Embrace new technologies to manage traffic - synchronize city traffic signals

## MOBILITY- PEDESTRIANS AND BIKES

Implement the City's 2010 Bike Master Plan - Build the planned bike lanes! We need them! Now!
Fix gaps in the sidewalk network and add crosswalks - yes make this a priority
Build wide mutli-use paths along Forest - build it like West street
Connect neighborhoods to shops, school and each other with connecter trail links
Approve low scale infill that helps create walkable mixed use neighborhoods and business areas
Work with the county to create Bike/pad spines and linkages to the greater Annapolis area and peninsula
Slow corridor speeds down to make it safer place to bike and walk, add a wide multi-use trail not a lane?
Need safe Bike trail from Eastport to Quite Waters Park

## VIBRANT ECONOMY

Increase city revenues to fund need city improvements listed in this plan and others - like bike trails!
Increase city tax base with more valuable commercial properties & added businesses
Add more jobs so city residents can work in the city -& not commute elsewhere
Anticipate huge changes from driverless cars, online shopping, & next generation values
Preserve & build on the City's maritime and tourism based economy
Improve ped/bike access to shopping and businesses to help local businesses compete
Annex Bay Ridge Rd/ Hillsmore to the city
Add a grocery store in Eastport - we need more places to eat in this area!
Attract more small shops & services we can walk or bike to instead of driving

## LAND USE & COMMUNITY DESIGN

Replace aging strip development in the corridor
Prevent huge out-of-scale development that draws out of town traffic
Transform the Bay Ridge Area in to an attractive local business district for the peninsula
Zone all the commercial areas in the corridor (low scale) Mixed Use
Make the corridor more attractive, give it a sense of place and community life

## ZONING AND DEVELOPMENT REVIEW PROCESS

Zone all the commercial areas in the corridor Mixed Use - incentivize development
Promote conversion of existing auto-centric suburban commercial areas to walkable low-scale urban places
Revise zoning text to achieve vision, revise the use lists, etc.
Create Design guidelines to allow a mix of smaller shops & services we can walk and bike to
Protect the maritime zone and the working water front
Speed up the review process while making it clear, fair and open - allow by-right approvals for more things
Add a map to the city website reports on development applications - communicate more with residents

## QUALITY OF LIFE

Beautify the corridor & update/ enhance the existing older commercial buildings
Improve our sense of safety- violence & petty crime deters pedestrians and small businesses
Provide mobility for residents, & commuters and manage incident and event traffic better
Protect unique character of Annapolis and Eastport & create one for the SOFA corridor
Attract more small shops & services we can walk or bike to instead of driving
Achieve a greater sense of place, community life, bring in more art and neighborhood events
Implement the adopted 2009 Comprehensive plan - don't reinvent or change the wheel!
Down zone land if traffic can't be fixed
We need more smart growth in the city, not no-growth
Freeze all development! stop development at Crystal Springs, Rogers, prop. Watergate, etc.!
Build more low and moderate priced housing in the City

## GREENING ANNAPOLIS/ ENVIRONMENT

Plant more street trees and plants in Medians on Forest Drive, do better maintenance on F. Drive landscape
Improve the water quality of our creeks and the Bay
Promote redevelopment of older paved sites to add in SWM - Set impervious surface cap?
Create linked greenways, green spaces and tree canopies all preserved with easements
Save priority forests and canopy coverage - connecting where possible
Implement the City Water Resources Improvement Plan

## COMMUNICATION

Improve communication and joint planning between County and City on the corridor & peninsula
Increase the MPDU program - grant fewer variances to it

*City of Annapolis*
DEPARTMENT OF PLANNING AND ZONING

145 Gorman Street, 3rd Floor, Annapolis, Maryland 21401
*Chartered 1708* Annapolis 410-260-2200 · FAX 410-263-1129 · MD Relay (711)

**MEMORANDUM**

**TO:** **Planning Commision**
**FROM:** **Eric Borchers and Sally Nash, Department of Planning and Zoning**
**RE:** **Forest Drive/Eastport Sector Survey #1 Results Overview**
**DATE:** **October 25, 2017**

## Demographics

Over a roughly two-month period leading up to the public meeting on September 27, we received over 1,100 responses to the first survey produced for the Forest Drive/Eastport Sector Study. The survey asked respondents to identify where they live: along or near Forest Drive/Bay Ridge Road; in Eastport; outside the study area, but in the City of Annapolis; outside the study area, but in the County; or other. In terms of their responses, the majority of Forest Drive and Eastport residents both had migrated from somewhere else at least once in their lives. The most common reason respondents reportedly live in the study area is its proximity to Downtown Annapolis (55% for Forest Drive residents and 69% for Eastport residents).

The second reason Eastport residents cite for why they live in Eastport is the waterfront location, with sailing/boating/fishing as slightly less prevalent. Forest Drive residents also refer to waterfront location and activities as the two other top three reasons for living there, albeit a little less often compared to Eastport residents. Forest Drive residents more often choose nearness to work and a suburban feel as draws to the area compared with Eastport residents, who more often choose historic character and cultural activities.

The survey asked respondents to identify their age from one of the following categories: 25 and under; 26-40; 41-60; and 61 and above. The respondents predominantly reported to be from the last two categories. Roughly equal numbers of respondents are aged either between ages 41 to 60 or 61 and above -- that combines to make up just over 80% of respondents. Though 47% are Forest Drive residents (along or near the corridor) vs. 21% being residents of Eastport, a quarter of the corridor residents were aged 40 or below compared with just 15% of Eastport residents. The following breakdown shows age groups for the City, the Study Area, and for the survey.

| Age | Annapolis | % | Study Area | % | Survey | % |
|---|---|---|---|---|---|---|
| **24 and under** | 10,966 | 29% | 6609 | 29% | 7 | 0.06% |
| **25-40** | 10,647 | 28% | 6393 | 28% | 231 | 20% |
| **41-60** | 7387 | 19% | 4292.5 | 19% | 492 | 42% |
| **61 and above** | 8,567 | 22% | 4751.5 | 21% | 451 | 38% |

## Answers/Opinions

When asked, "What are the 3 most important topics to focus on in the Forest Drive / Eastport Sector Study?" the respondents generally agree on what they believe is the most important topic to focus on in the study. Selecting traffic, both on a day-to-day basis and during an accident as the two worst qualities of the sector area, transportation issues slightly outpace land use as most important. The environment; bicycle and pedestrian facilities; and types of businesses are the consensus 3rd, 4th and 5th most important topics to focus on, respectively.

### *Land Use and Development*

When asked for their top desires for the study area ("What do you wish were located along Forest Drive or in Eastport?"), respondents' top desires were widely variable, even after grouping like answers. Not one answer for top desire was shared by more than 10% of respondents. Although nearly 10% of respondents share a sentiment of not wanting anything in the sector area (2nd top desire), 85% express a desire for something that requires an investment. Those that want either less or no new development account for the other 5% of responses to the question. Most or two-thirds of those who are against development and/or improvements feel that overcrowding is one of the top 3 worst qualities of the study area. On the other hand, less than half of all respondents feel that way.

The most popular answer for top desire overall is for a better grocery store than what already exists. Another 5% of responses consists of wanting a grocery store in Eastport over anything else. Commercial development is most popular as a top desire collectively after also accounting for the many restaurant, entertainment and retail desires. While housing is not nearly as common of an urgent desire, those that do want housing over anything else prefer affordable housing.

### *Mobility*

Mirroring the sentiment in stakeholder meetings, three-quarters of respondents select traffic as the largest issue in the study area. To a lesser degree, respondents chose non-vehicular mobility as a major issue as well, as the 4th worst quality. However, as an urgent desire, 15% more respondents express wanting bike lanes over reduced traffic/congestion in the area. The combination of improving roads and improving signaling as citizens' number one desires amounts to less than half of the number that want bike lanes first. Particularly, those that think non-vehicular mobility is a top issue strongly prefer having better biking and walking mobility over better transit. Almost no respondents expressed a desire to have more parking, but again, the question was open-ended and intended to collect top desires.

### *Economy and Retail*

Less than 25% of respondents felt it is important for the study to focus on the types of businesses in the sector area. However, even after discounting desires for a grocery store, the number of respondents that rate commercial businesses like specialty stores, eating establishments, and other retail as a top desire exceeds the number of people who picked economic vitality as a top three priority. Similarly, only less than 15% of respondents select lack of restaurants, store and services or lack of jobs as of the worst qualities in the area. Not counting fast food or casual eateries, nearly 10% of respondents (3rd most) prefer more restaurants, if they could have anything in the area. Interestingly, around 85% or 1,000 of the respondents shop at either True Value Hardware, Bay Ridge Shopping Center or the Giant Shopping Center or some combination of the three. Less than half shop at the Safeway or Village Green Shopping Center. A prevalent theme we heard in stakeholder interviews was that locals like to shop outside of the corridor either instead of or in addition to nearest shopping centers.

***Quality of Life***
With the exception of safety, few respondents see narrowly-termed "quality of life" as a top three issue in the study area. Less than 10% view lack of activities and events as one of the worst qualities of the area. Likewise, about 15% of respondents feel recreation and leisure is most important to focus on for the Sector Study. Despite this, many residents and stakeholders have expressed a view that the traffic issue is a quality of life issue, and thus trumps other measures of quality of life. More popular traditional quality of life desires include safety improvements, recreation, and community services. Respondents aged 61 or older outnumber those aged 40 and under by a factor of about two to one in the survey, however, the younger constituents represent roughly a third of those who think recreation and leisure is of the most important topics to focus on compared with only a quarter of them being in the older group. Again, those aged 40 or under consist of about 40% of the 200+ respondents who think that a lack of restaurants, stores and services and/or a lack of activities and events is near the top of the list of worst qualities in the sector area. "Quality of life" is an overarching theme, but there is not a consensus definition of the term.

***Environment***
A slight majority of respondents select the "Environment" as among the top three topics to focus on in the Sector Study. Those with environmental concerns are marginally older than the survey average and a higher percentage of them live along or near Forest Drive. It might not come as a surprise that the most popular favorite place near the corridor among that group is Quiet Waters Park. However, it is also the top favorite place among all survey respondents. As an open-ended question, all other answers for favorite place near Forest Drive generate less than 8% of the total, while Quiet Waters Park is the collective favorite of about 10%. Respondents that provided more green space as their number one desire also wanted more greenery, though individually they are the 6th and 8th most popular desires for the sector area, respectively. Generally, those that are more invested in the environment as evidenced in the survey shared similar concerns as all other respondents. Two-thirds of them also rate land use and transportation issues in their top three topics to focus on.

**Forest Drive / Eastport Sector Study Community Survey**
**Responses with More than One Occurrence**
(1,181 responses)

**1. Where do you live?** (1,181 responses)

| | |
|---|---|
| Along or near Forest Drive/Bay Ridge Road | 541 |
| In Eastport | 238 |
| Outside the study area (yellow area above), but in the City of Annapolis | 123 |
| Outside the study area (yellow area above), but in the County | 235 |
| Hillsmere | 5 |
| Fairfax Road | 2 |

**2. If you live along Forest Drive or Eastport, what attracted you to this area? (If you do not live in the study area, skip to question 3). Pick all that apply.** (892 responses)

| Value | Count |
|---|---|
| Proximity to downtown | 549 |
| Waterfront location | 425 |
| Sailing/boating/fishing | 351 |
| Historic character | 258 |
| Nearness to work | 213 |
| Suburban feel | 190 |
| Cultural activities | 160 |
| Family ties | 146 |
| Local businesses | 122 |
| Raised here | 109 |
| Cost of living | 93 |
| Job opportunities | 45 |
| Quiet Waters Park | 3 |
| Walkability | 2 |
| Hunt Meadow | 2 |

**3. Where do you shop in Eastport and Forest Drive? (Choose all that apply) (**1,173 responses)

| Value | Count |
|---|---|
| True Value Hardware | 1,003 |
| Bay Ridge Shopping Center (Annapolis Smokehouse, Bay Ridge Wine, Grumps, Dollar General) | 991 |
| Giant Shopping Center on Bay Ridge Road | 988 |
| Eastport Shopping Center | 842 |
| Annapolis Seafood | 647 |
| Clocktower Place | 611 |
| West Marine | 438 |
| Safeway | 413 |
| Village Green | 137 |
| Fawcetts | 6 |

| Value | Count |
|---|---|
| Main & Market | 4 |
| El Cabrito | 3 |
| CVS | 2 |
| Shoppers | 2 |
| Brusters | 2 |
| Riva Festival | 2 |
| Main and Market | 2 |
| Tuesday Morning | 2 |

**4. What is your favorite place on Forest Drive?** (1,035 responses)

Quiet Waters Park (56)
Annapolis Seafood (37)
True Value (30)
Smokehouse (26)
Giant (25)
True Value Hardware (18)
Annapolis Smokehouse (17)
Grapes (16)
Soul (13)
Main Ingredient (13)
Quiet Waters (13)
Grumps (11)
El Cabrito (10)
Bay Ridge Shopping Center (10)
Main & Market (10)
Clock Tower (10)
Main and Market (9)
Pit Boys (8)
West Marine (8)
Safeway (8)
None (8)
Annapolis Seafood Market (7)
Brusters (7)
Main Market (7)
Clocktower Place (6)
Grapes Wine Bar (6)
Quiet waters park (6)
Rita's (6)
Clocktower (6)
Smokehouse (5)
Bay Ridge Wine (5)
Ebb Tide (5)
CVS (5)
Bay ridge shopping center (5)
none (4)
Giant (4)
Bay Ridge Wine and Spirits (4)
Bay Ridge Wine & Spirits (4)
Grump's (3)
Brewsters (3)
Roccos (3)
Little Italy (3)

Soul Restaurant (3)
Jack's Fortune (3)
West marine (3)
True value (3)
Annapolis seafood (3)
Don't have one (3)
Seafood Market (3)
Bruster's (3)
Annapolis Seafood (3)
Clock tower (3)
Wine Cellars of Annapolis (3)
Main market (3)
Main ingredient (3)
clocktower place (2)
Wine cellars (2)
Sweet Hearts Patisserie (2)
clock tower place (2)
Rocco's Pizza (2)
quiet waters park (2)
No favorite (2)
Tru Valu (2)
Quiet Waters Park (2)
The Clock Tower Place (2)
Rita's (2)
fawcetts (2)
Tastings Gourmet Market (2)
Giant shopping center (2)
Giant Shopping Center (2)
Wine Cellars (2)
Main Ingredient (2)
Zu coffee (2)
Tuesday Morning (2)
Brewster's (2)
Wild Bird Center (2)
Ledos pizza (2)
Bruesters (2)
Bruster's Ice Cream (2)
Zu Coffee (2)
Soul restaurant (2)
Tastings Gourmet (2)
true value (2)
Bay Ridge shopping center (2)
Matsu Sushi (2)
pit boys (2)
True value hardware (2)
The Main Ingredient (2)
Grump's Cafe (2)
Annapolis smokehouse (2)
Seafood market (2)
Cvs (2)
True Value (2)
Fawcetts (2)
True value (2)
The short stretch of road between Annapolis Seafood and True Value (2)

**5. What is your favorite place in Eastport?** (1,038 responses)

Vin 909 (76)
Davis' Pub (33)
Boatyard (32)
Davis Pub (25)
Eastport Kitchen (24)
Adams Ribs (13)
Eastport Shopping Center (12)
Lewnes (11)
Adam's Ribs (10)
Adams (10)
Boatyard Bar and Grill (10)
EYC (10)
Eastport shopping center (9)
Boatyard Bar & Grill (8)
Eastport Liquors (8)
Davis' (8)
Annapolis Athletic Club (8)
Eastport Yacht Club (8)
Annapolis Maritime Museum (7)
Blackwall Hitch (7)
Ahh Coffee (7)
Vin909 (7)
Chart House (7)
Adam's Rib (7)
Davis's Pub (6)
Carroll's Creek (6)
Palate Pleasers (6)
Davis's (6)
Boatyard (6)
Adams Rib (6)
Sammy's (5)
Nail salon, village eatery (5)
post office (4)
O'Leary's (4)
Adam's (4)
Maritime Museum (4)
vin 909 (4)
Eastport Kitchen (4)
Diehl's Produce (3)
Carrol's Creek Cafe (3)
Leeward Market (3)
Annapolis Canoe and Kayak (3)
Annapolis athletic club (3)
Bakers & Co. (3)
PNC Bank (3)
Sammy's Restaurant (3)
Restaurants (3)
restaurants (3)
My house (3)
Post Office (3)
Palette Pleasers (3)
Rite Aid (3)
Quiet Waters Park (3)
Davis pub (3)
Charthouse (3)
Eastport kitchen (3)

Adams Grille (3)
Carrols Creek (3)
Lewnes (2)
Annapolis Yacht Club (2)
SSA (2)
Quiet Waters (2)
Eastport Shopping Ctr (2)
Boatyard Grill (2)
Carroll's Creek Cafe (2)
n/a (2)
Carols Creek (2)
The Boatyard (2)
Vin 909 (2)
China Wok (2)
Chesapeake Boating Club (2)
Eastport yacht club (2)
Sammys (2)
USPS (2)
Palate pleasers (2)
All of it (2)
Vin909, Eastport Kitchen (2)
Black Wall Hitch (2)
Vin 909 (2)
sammy's (2)
O'Learys (2)
Farmers Market (2)
Farmer's market (2)
Bakers and Company (2)
Eastport Deli (2)
Restaurants (2)
Lewnes Steakhouse (2)
Adams ribs (2)
my house (2)
Eastport Shopping center (2)
Boatyard restaurant (2)
Carroll's Creek Restaurant (2)
Eastport Shopping Center (2)
Annapolis City Marina (2)
Farmers market (2)
Eastport Barbershop (2)
The bridge (2)
Royal farms (2)
Eastport Bridge (2)
Adams Ribs (2)
Other (467)

**6. What do you wish were located along Forest Drive or in Eastport?** (925 responses)
Less traffic (11)
Nothing more (11)
Bike lanes (9)
Nothing (8)
Nothing else (8)
Wegmans (6)
Trader Joes (6)
Trees (6)
More good restaurants (6)

More restaurants (5)
Movie theater (5)
Wawa (5)
Grocery store in Eastport (4)
More restaurants (4)
Trader Joe's (4)
Whole Foods (4)
Starbucks (4)
Bike Lanes (3)
Grocery store (3)
Better grocery store (3)
movie theater (3)
Fewer cars (3)
nothing else (3)
A Wawa (2)
Grocery store in Eastport Shopping Center (2)
less traffic (2)
None (2)
Movie theatre (2)
Less Traffic (2)
A Trader Joe's grocery store (2)
n/a (2)
Wegman's (2)
Grocery in Eastport (2)
better roads (2)
Forest (2)
Dunkin Donuts (2)
Starbucks (2)
Harris Teeter (2)
Bakery (2)
Better bike lanes (2)
Bike path (2)
Bike lane (2)
better restaurants (2)
another grocery store (2)
Parks (2)
less congestion (2)
Nothing (2)
Less traffic (2)
Less (2)
Grocery Store in Eastport (2)
Less businesses and stop development (2)
Quality clothing shops (2)

**7. What 3 qualities do you like the least about the Forest Drive Area? (Pick 3)** (1,181 responses)

| Value | Count |
|---|---|
| Traffic on a day-to-day basis | 868 |
| Traffic when there is an accident | 868 |
| Overcrowding | 504 |
| Hard to get around without a car | 349 |
| Appearance | 343 |
| Crime | 294 |
| Poor safety | 236 |

| Value | Count |
|---|---|
| Lack of restaurants, stores, services | 153 |
| Lack of of activities and events | 91 |
| Lack of jobs | 16 |

**8. What are the 3 most important topics to focus on in the Forest Drive / Eastport Sector Study? (Pick 3)**(1,181 responses)

| Value | Count |
|---|---|
| Transportation issues | 818 |
| Land use | 786 |
| Environment | 659 |
| Bicycle and pedestrian facilities | 436 |
| Types of businesses | 269 |
| Recreation and leisure | 192 |
| Housing | 142 |
| Design of buildings | 112 |
| Traffic | 7 |
| Crime | 4 |
| Safety | 3 |
| TRAFFIC | 2 |
| Parking | 2 |
| Traffic | 2 |
| Overcrowding | 2 |

**9. What is your age group? (**1,181 responses)

| | |
|---|---|
| Under 25 | 7 |
| 26-40 | 231 |
| 41-60 | 492 |
| 61 or older | 451 |