Eastport Traffic Study

Short-term and Long-term Recommendations

May 12, 2016
Outline

• Study goals
• Traffic impact analysis
  – Short term impacts from pipeline developments
  – Long-term impacts (how many vehicles can fit)
• Parking recommendations
  – Loading
• Walking recommendations
  – Traffic Calming
• Cycling recommendations
• Bus service recommendations
Study Goals

• Audit existing conditions
  – Safety
  – Traffic
  – Pedestrian & Bike
  – Bus

• Engage residents and business owners for input.

• Develop short- and long-term recommendation to address current and pending issues across all travel modes
  – Refine recommendations based on feedback
Traffic

• Analyzed short-term impacts (Year 2020) and long-term impacts
  – Made recommendations for each, as needed
• Reviewed current one-way street layout
  – Suggested alternatives
Short-term Traffic Forecasts

- Short Term Forecasts (year 2020)
  - 4 developments in planning pipeline (submitted applications or in the development review process).
    - Mix of apts; office; marina; townhouse; restaurant; and recreation:
      - Sarles/Petrini
      - Sail Loft
      - Griscom Square
      - Annapolis Yacht Club
  - Conservative traffic estimates
  - 1% annual growth in main line traffic from 2016-2020

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Traffic – Short term Findings

- Evaluated 11 study area intersections
- None of the 11 study area intersections fails in the short term
  - No intersection has a Level of Service worse than a “C” in any study peak hour
    - AM, PM, Saturday evaluated
Traffic – Short term Recommendations

• Findings
  – Sufficient capacity exists along main lines and at intersections to accommodate short term developments

• Recommendations
  – Evaluate signal timing at Madison/Bay Ridge and Tyler/Bay Ridge as developments proceed.
  – Per Yacht Club TIS recommendation, lengthen existing striping for the shared left-through lane on the southbound approach of 6th at Severn

• Recent Traffic Improvements
  – 6th & Severn and 6th & Chesapeake signals re-timed in 2014
Traffic – Long term

• **Goal:** To evaluate ultimate carrying capacity of Eastport’s main travelway: (Bayridge ➔ Chesapeake ➔ 6th Street)

• **Question:** What additional development can Eastport ultimately handle?

• The maximum vehicle throughput of a road is limited to the number of lanes, traffic control, and desired vehicle speed
Traffic – Long term Forecasts

• Based on a two-lane road, with several signalized intersections and a current speed of 25 mph, additional vehicle trips were modeled and simulated in roadway network.

• Bay Ridge/6th/Chesapeake begins to break down at around 1850 vehicles per hour
  – Beyond this number, long queues persist; very difficult to access Bay Ridge and Chesapeake from side streets.

• Signal Optimization has limitations, due to minimum pedestrian crossing times.
Traffic – Long Term Implications

• Maximum 1850 Peak hour Compares to current vehicle trips on Bay Ridge projected by Year 2020
  – AM Peak hour: 1300 (+550)
  – PM Peak hour: 1550 (+300)
  – Sat Peak hour: 1250 (+600)

• For perspective, **300 additional PM trips** is equivalent to about 850 new apartments (assuming traditional trip generation methods)
Traffic – Long term Recommendations

• The amount of vehicle traffic along the main line travel is constrained, assuming a maximum neighborhoods speed of 25 mph
  – Adding lanes along Chesapeake and 6th is unrealistic.
• In order to effectively deal with projected growth in traffic volumes, vehicle trip reduction strategies are recommended:
  • Travel Demand Management (TDM) strategies;
  • New Bus stops & Shelter;
  • Bikeshare & bike parking;
  • Bike/walk interconnectivity with adjacent land uses;
  • Limit newly-created parking spaces.
  • Transit subsidies
  – “Carrot and Stick” approach to cap number of vehicle trips
One-way Streets - Concerns

- One-way traffic is intermittent
- Narrow streets with parking on both sides
  - Many streets east of 6th Street are 22’ wide
    - Very low volumes allow for two-way passing
  - One-way blocks are often same width as two-way blocks
  - Lack of consistency was noted in public comments; however inability to traverse or safety of one-way streets was not a major theme.

Current One Way Streets:
- Bay Ridge, 30’, Parking on both sides
- Burnside, 30’, Parking on both sides
- State St, 30’, Parking on both sides
- 6th Street, 22’, Parking on both sides
- 5th Street, 26’, Parking on both sides
  - Bus Drop off/pick-up
- 3rd Street, 22’, Parking on both sides
- Chester Ave, 24’, Parking on both sides
One-way Streets

- **Short-term Recommendations**
  - Remove one-way operations on low-volume streets,
    - 3rd Street
    - Chester Ave
  - Leave one-way operations on:
    - 6th Street, south of Chesapeake
      - Road is too narrow to receive SB traffic while NB traffic waits at Chesapeake signal
        » Would require removing parking on one side
    - 5th Street, south of Severn
      - school bus drop-off
One-way Streets – Options

• Long-term Option #1
  – Inbound only on Chester
  – Outbound only traffic on Chesapeake, east of 6th
  – Alternate two-way traffic on numbered streets
  – Maintain two-way on Severn
  – **No extra-parking or bike lanes gained**
    • Modest improvement in vehicle progression

Existing Chesapeake Ave

One-way Chesapeake Ave
One-way Streets

- Long-term Option #2
  - Chesapeake becomes one-way from Bay Ridge to 6th Street
    • Forms one-way Couplet with eastbound Bay Ridge.
  - Adds two-way protected bike facilities between 6th Street and Eastport Shopping Center
  - Puts current westbound Chesapeake traffic onto Bay Ridge, which would no longer have a yield control at its intersection with Chesapeake

Other Institutional challenges remain

- For example, diverting of buses and delivery trucks onto Bay Ridge
Parking During the Week

- **Evening Weekday** parking is in high demand, concentrated between Severn to Chesapeake and 5th to 2nd Streets.
Parking during the Weekend

- **Saturday** *non-event* parking is in high demand, most heavy east of Burnside

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Percent occupied

- 0%
- 1% - 19%
- 20% - 39%
- 40% - 59%
- 60% - 79%
- 80% - 100%

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*Eastport E.S.*
Parking Economics

• Curbside parking is a highly-desirable commodity
  – Demand from residents, business owners, and visitors
  – Most curbside space is walkable to all Eastport businesses, as well as to Annapolis City Dock and Main Street

• It is not realistic to require neighborhood businesses to contain all patron parking on-site.

• Curbside parking is free and unmanaged
  – Competition for curbside space means that someone ends up paying for its use
    • Just like City Dock or along Main Street
Parking Recommendations

• Recommend metered parking along select blocks of Severn Ave and along numbered streets between Spa Creek and Severn Ave (160 spaces.)
  – Exclude single-family resid. block faces
  – Allows City to price spaces by time-of-day
  – Pay by phone or credit card

• Institute Residential Parking Permits (RPP) from Burnside to 1st Street
  – Insures the visitors to business do not take up parking along residential streets to avoid meters
Parking Recommendations

• Designate select curbside spots for 24-48 hour parking (e.g. overnight boat excursions)
  – Business owner permit buys access
• Institute Visitor Parking Permit program
  – Allows residents without owners driveways to have visitors at non-metered spaces
  – Charge for it to prevent abuse
• Fees go toward parking enforcement
• Wayfinding signs for existing off-street public/overflow Parking facilities
Loading

• Currently, there are several small loading zones along Severn and along 4th
• Loading needs change as each business changes or turns over.
• Recommend consolidation to small two full-time and time-limited loading zones situated near:
  – Intersection of 3rd & Severn
  – Intersection of 4th & Severn
  – Time limited (need coordination of deliveries from businesses)
• Long term: as business density increases
  – Require on-site loading
  – Loading Zone pricing – pay per use or annual permit
    • Time limits can be determined by community consensus
Event Management

• Events utilize majority of available curbside parking space in all of Eastport.

• Develop Event management plans with resident and business input.
  – Portable Wayfinding signage
  – Locate unused private parking
  – Provide online map with parking locations, spaces and pricing

• Utilize portable message signs to direct traffic flow.

• Regional traffic management system and operations center (with state and county participation)

• Institute event signal timing program for signals along 6th and Bay Ridge
Pedestrian Concerns

• Lack of crosswalks and faded crosswalks
  – Long stretches on Bay Ridge and on Chesapeake without crosswalks
  – Crosswalk from Eastport Shopp. Ctr. to PNC Bank

• Need for traffic calming in general

• Intersection of 6th & Severn

• Sidewalks
  – Missing/damage
  – Narrow where utility poles are located
Pedestrian - Crosswalks

• Short-term Recommendations
  – Add Crosswalks. Prioritize:
    1. Near Schools
    2. High-pedestrian traffic areas
    3. Along Chesapeake and along Bay Ridge

10’ wide ladder-style crosswalks recommended
Pedestrian – Traffic Calming

• Both 6\textsuperscript{th} Street and Chesapeake have speeding problems (about 15% over 30mph for both)

• Prior Streetscape Recommendations: 2005 
  \textit{Eastport Streetscape Plan}

  – 4\textsuperscript{th} and 6\textsuperscript{th} Street

  – Called for:
    • Pedestrian lighting
    • Street trees
    • High-visibility intersections
Pedestrian – Traffic Calming

• Recommendations
  – Multiple Opportunities to calm traffic
    • 6th Street at Severn Ave and at Bay Ridge
      – Raised and textured intersections (as shown in prior study)
    • Chesapeake Ave is 40’ wide w/ Parking on both sides
      – Install crosswalks and bumpouts at all intersections between 6th and Bay Ridge
  • Both Elements will provide visual cue for drivers to slow down

Adams Morgan Neighborhood
Pedestrian Safety – 6th and Severn

• Short-term
  – Incorporate Leading Pedestrian Interval (LPI) phasing
  – High visibility crosswalk

• Long-term
  – Upgrade all ramps to ADA compliance
  – Traffic calming and Visual cue to look for pedestrians:
    • Textured intersection (stamped concrete) or raised intersections
Pedestrian – Sidewalks

• Short-term
  – Prioritize installation and utility relocation and new sidewalk along highest pedestrian traffic volume areas

• Long-term
  – Develop Utility relocation plan with BGE
Cycling - Issues

• More and safer bike lanes desired
  – 6th Street
  – Chesapeake Ave
  – Bay Ridge, south of Chesapeake Ave

• More bike infrastructure
  – Parking
Cycling on Chesapeake

- Recommendations
  - Low parking rates on Chesapeake
  - Consolidate parking to either north or south side of Chesapeake
  - Use space to provide protected WB bike facilities
Cycling on Bay Ridge

• Recommendations
  – South of Chesapeake, the road with varies based on presence of turn lanes
  – Sufficient room for 5’ bike lanes in each direction, assuming 10’ travel lanes. Replace sharrows with bike lanes.
    • Will keep vehicle speed down
    • Suggest 10” white line separating bike lanes and travel lanes
    • Suggest bike intersection crosswalks
  – Install SB Bike Lane between parking and travel lanes from Van Buren to Springdale
Cycling on 6th Street

• Recommendations
  – 40’ wide north of Severn; 32’ south of Severn to Chesapeake
    • Bikes lanes on each side are possible
  – Need the following analyzed from a traffic perspective:
    – Removal of Southbound Right from 6th to Chesapeake
    – Conversion of two southbound 6th Street lanes into 1
    – Removal of parking on 6th Street, just south of Bay Ridge
    – Conversion of the southbound shared through-left turn onto Severn Ave into a left-turn lane only
Cycling - General

- More Bike parking
  - On-street stalls
  - Private commercial property bike racks.
  - Private bike parking rooms at office buildings
Buses

• Issues
  – More Coverage
  – Select relocation of stop

• Recommendations
  – Consider relocation of select stops
  – Consider parking removal or bus bulb-out for better curbside access
Buses - general

- Consider stop consolidation (with shelter and curbside access) for low-ridership stops
- Provide schedule and route info at each stop
- Long-term provide real-time geo-location data so users know when the next bus is coming
Other Recommendations

• Institute a *Safe Routes to School* Strategies
• Private parking utilization study
• ADA transition plan for sidewalk and ramp conditions
  – Federal and State funding available