ROAD SAFETY AUDIT

Washington Street (Route 138) at Purchase Street and Turnpike Street at Purchase Street

Municipality of Easton

April 2018

Prepared For:

The Town of Easton

Prepared By:

Old Colony Planning Council
70 School Street, Brockton, MA 02301
Under MassDOT Contract 88826
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Background

This Road Safety Audit (RSA) for two intersections in Easton, Washington Street (Route 138) at Purchase Street and Turnpike Street at Purchase Street was conducted by the Old Colony Planning Council, (OCPC) for the Town of Easton. OCPC received a request from the Town of Easton Department of Public Works for a Road Safety Audit for the intersection of Turnpike Street at Purchase Street. According to the Easton DPW, this intersection has drawn the attention of the town’s Traffic Safety Committee due to numerous crashes at this location. The Turnpike Street/Purchase Street intersection is included in MassDOT’s 2013-2015 HSIP Crash Clusters. In addition, this intersection is included in the Old Colony Region’s Top 100 High Crash Intersection List. The intersection of Washington Street (Route 138) at Purchase Street was added to the Road Safety Audit at the suggestion of OCPC, because the intersections are in close proximity.

Both of the intersections were included in the Easton State Number Route Corridor Study, which was prepared by OCPC in 2007. The corridor study was a comprehensive study of the state numbered routes in the Town of Easton for the purpose of identifying specific problems in traffic efficiency, circulation, and safety.

The Easton State Number Route Corridor Study concluded that the traffic flow on the major roads, Washington Street (Route 138) and Turnpike Street, is so heavy during the peak hours that side street traffic on minor streets, which are stop-controlled approaches, has very few sufficient gaps in the major street traffic to make safe, efficient through, left, or right turning movements. The levels-of-service (LOS) on the side street approaches are characterized as forced flow conditions (LOS “F”) during the afternoon peak hour.

Project Data

The Road Safety Audit (RSA) took place on Tuesday October 3, 2017 at the Easton Town Hall, located at 136 Elm Street, North Easton MA. The meeting was facilitated by OCPC staff. OCPC provided collision diagrams and the latest crash experience (2013 through 2017), based on crash reports provided by the Easton Police Department. In addition, OCPC compiled background traffic data and analysis including morning and afternoon turning movement counts, intersection peak hour levels-of-service, and signal warrant analysis. This data and analysis is included in the appendix to this report.

The RSA meeting consisted of three components. The first portion of the meeting focused on a discussion of the issues and concerns. The participants left the meeting room and proceeded to the intersection to visit the site for the second portion of the meeting. The discussion of issues was continued during the site visit as OCPC staff took notes. The third portion of the meeting focused on potential short term and long term potential improvements for the intersections. The agenda and the background materials are included in the appendix to this report. Table 1 lists the names and affiliations of the audit participants.
Table 1: Participating Audit Team Members

<table>
<thead>
<tr>
<th>Audit Team Member</th>
<th>Agency/Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas Rebello</td>
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<td>Easton DPW</td>
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<td>MassDOT Projects</td>
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<td>Kevin Partridge</td>
<td>Easton Fire Department</td>
</tr>
<tr>
<td>Bill McNulty</td>
<td>Old Colony Planning Council</td>
</tr>
<tr>
<td>Raymond Guarino</td>
<td>Old Colony Planning Council</td>
</tr>
</tbody>
</table>

Project Location and Description

Washington Street (Route 138)

Washington Street (Route 138) runs north-south through the eastern portion of Easton from Stoughton to Raynham. The posted speed limit varies from 40 miles per hour to 45 miles per hour. The speed limit is posted at 45 MPH on Washington Street (Route 138) northbound side north of the Purchase Street intersection. Washington Street (Route 138) provides two lanes of travel, one for each direction of travel through the study area. There is a six to seven foot shoulder on both sides of Washington Street (Route 138) within the study area. There are no sidewalks along Washington Street (Route 138) in the vicinity of the study area.

Washington Street (Route 138) connects to I-495 in Norton to I-93 (Route 128) in Canton and is an important connection for local communities to and from the interstate network. It connects with I-495 in Raynham and runs parallel to Route 24 north through Stoughton to I-93 (Route 128). Washington Street (Route 138) is often used as an alternative to Route 24, especially when incidents and back-ups occur on Route I-495.

The land use along Washington Street (Route 138) varies with multiple driveways and side roads serving residential, commercial, and institutional uses. There are a number of retail plazas along Route 138 and an industrial park is located off of Plymouth Drive to the east of the road. Washington Street (Route 138) is eligible for federal funding under the Surface Transportation Program (STP) within the study area. Washington Street (Route 138) is classified as an “Urban Minor Arterial,” within the study area, based upon MassDOT’s road inventory. According to MassDOT’s road inventory, Washington Street (Route 138) in Easton is under state jurisdiction within the study area.
Turnpike Street

Turnpike Street is a two lane facility (north-south) and classified as an “Urban Minor Arterial” roadway under local town jurisdiction in the study area. The speed limit is posted at 30 MPH on Turnpike Street northbound and southbound approaching the Purchase Street intersection and 40 MPH on Turnpike Street on the northbound side north of the Purchase Street intersection. On the southbound side of Turnpike Street, the speed limit is posted at 30 MPH approaching the Purchase Street intersection. There are no shoulders along Turnpike Street and a sidewalk is located along the west side of Turnpike Street in the study area.

Purchase Street

Purchase Street is a two lane road classified as a “Major Urban Collector” under town jurisdiction. It extends from Depot Street (Route 123) in Easton to the West Bridgewater line, where it becomes West Street and connects to West Center Street (Route 106). The posted speed limit on Purchase Street is 25 MPH eastbound approaching Washington Street (Route 138) and 35 MPH westbound west of the Washington Street (Route 138) intersection.

The Turnpike Street/Purchase Street Intersection

Turnpike Street and Purchase Street form a four-way intersection in Easton located approximately 650 feet north of the Washington Street (Route 138)/Turnpike Street intersection and 340 feet east of the Washington Street (Route 138)/Purchase Street intersection. The intersection is stop sign controlled on the eastbound and westbound Purchase Street approaches. There is a flashing beacon facing the Purchase Street eastbound and westbound approaches (located on the east side of Turnpike Street), and one located on the southwest corner facing northbound and southbound traffic on Turnpike Street. All four approaches to the intersection provide a single lane shared for left, through, and right turning vehicles. There is limited sight distance on the Purchase Street westbound approach due to vegetation at the side of the road.

Washington Street (Route 138) and Turnpike Street form a “Y” type intersection south of Turnpike Street and Purchase Street. Consequently, vehicles headed northbound on Washington Street (Route 138) bearing right through this “Y” intersection have very little deflection and maintain a high rate of speed as they head northbound approaching the Turnpike Street/Purchase Street intersection.

The level-of-service for vehicles on the Purchase Street shared lane eastbound stop-signed approach is LOS “D” during the morning peak hour and LOS “E” during the afternoon peak hour. The level-of-service for vehicles on the Purchase Street shared lane westbound stop-signed approach is LOS “F” during the morning peak hour and LOS “E” during the afternoon peak hour.

The Washington Street (Route 138)/Purchase Street Intersection

The Washington Street (Route 138)/Purchase Street Intersection is a four-way intersection located approximately 340 feet west of the Turnpike Street/Purchase Street intersection. The intersection is stop-controlled on the eastbound and westbound Purchase Street approaches. All four approaches provide a
single shared left, through, and right turn lane. A restaurant parking lot is located adjacent to Purchase Street on the northern side of the street. The restaurant parking lot has two curb cut entrances and exits off of the east side of Washington Street (Route 138), and one exit off of Purchase Street.

The level-of-service for vehicles on the Purchase Street shared lane eastbound stop-signed approach is LOS “C” during the morning peak hour and LOS “C” during the afternoon peak hour. The level-of-service for vehicles on the Purchase Street shared lane westbound stop-signed approach is LOS “C” during the morning peak hour and LOS “D” during the afternoon peak hour.

**Figure 1: Locus Map**
Crash Details

Crash data for both intersections, Washington Street (Route 138) at Purchase Street and Turnpike Street at Purchase Street, were obtained from the Easton Police Department for the years 2013 through 2017. The data was analyzed by OCPC in accordance with the standard practices published by the Institute of Transportation Engineers (ITE) in the Manual of Traffic Engineering Studies.

There were a total of 49 crashes at the Turnpike Street/Purchase Street intersection within the study time period. Ninety percent of the crashes were angle type crashes, four percent were rear-end crashes, four percent were head-on crashes, and two percent were vehicle ran off the road type crashes.

Forty-eight percent of the crashes resulted in personal injury, while 52 percent resulted in property damage only. The majority of the crashes were spread out evenly during the day between 6 a.m. and 6 p.m. and occurred under daylight and dry conditions; however there were 14 percent or six crashes that occurred after dark and before 6 a.m. The intersection has a crash rate of 2.75 crashes per million entering vehicles. The MassDOT District 5 average for unsignalized intersections is 0.58 crashes per million entering vehicles. More detailed crash data is included in the Appendix.

Audit Observations and Potential Safety Enhancements

During the RSA meeting prior to the field visit, a brief introduction of the RSA process and a summary of traffic volumes and crash information were presented to the audit participants. Following this brief presentation, the members of the audit team were asked to discuss the existing issues that may affect safety at the two intersections, Washington Street (Route 138) at Purchase Street and Turnpike Street at Purchase Street in Easton. The audit team then visited the site as a group, at which time observations, safety concerns, and deficiencies were identified and documented.

The following provides a list of the safety concerns and the potential enhancements that were identified during the RSA.

**Turnpike Street at Purchase Street Intersection:**

**Safety Issue: Lack of Advanced Warning Signs**

On Turnpike Street northbound approaching Purchase Street, there is a lack of warning signs indicating the presence of an intersection ahead. On the southbound approach, there is a “reduce speed ahead” sign before the posted 30 MPH speed limit sign, but no warning of the potential to cross moving traffic. There are “Stop Ahead” warning signs on the Purchase Street westbound and eastbound approaches to the intersection.

**Enhancements:** Improve visibility at the intersection by installing
overhead beacons and adding advanced warning on the northbound and southbound Turnpike Street approaches.

**Safety Issue: Lack of Sight Distance on the Purchase Street Approach Due to Vegetation and Parking on Turnpike Street**

Sight distance for vehicles approaching the intersection on the stop-sign controlled Purchase Street westbound approach is obscured by the presence of vegetation along the east side of Turnpike Street.

**Enhancements:** Improve visibility at the intersection by trimming back vegetation on the southwest corner of the intersection, adjust stop bars, and adjust the height of signs. In addition, restrict or prohibit parking on Turnpike Street.

**Safety Issue: The Flashing Beacon Visibility is Blocked**

The flashing beacon visibility, located on the southeast corner of the intersection, is blocked by a utility pole and weight limit signs.

**Enhancements:** Improve visibility at the intersection by installing overhead beacons.

**Safety Issue: Too Few Gaps in Turnpike Street Traffic**

The traffic flow on Turnpike Street, which has the right of way at the intersection, is such that there are very few gaps in the traffic sufficient for vehicles turning from the Purchase Street side streets to enter Turnpike Street safely.

**Enhancements:** Install Traffic signals. Warrant analyses were performed for the intersection and the intersection satisfies the Manual On Uniform Traffic Control Devices (MUTCD) Warrants for Warrant 1, Eight-Hour Vehicular Volume, Warrant 2, Four-Hour Vehicular Warrant, and Warrant 3, Peak Hour Warrant.

**Safety Issue: False Right Turn Directional Signal on Turnpike Street Northbound Vehicles**

As vehicles headed northbound on Washington Street (Route 138) bear right at the Washington Street (Route 138)/Turnpike Street intersection, they quickly approach the Turnpike Street/Purchase Street intersection, which is approximately 650 feet just north of the Washington Street (Route 138)/Turnpike Street intersection. They make this movement at a high rate of speed because there is very little deflection for northbound right turns at the Washington Street (Route 138)/Turnpike Street intersection. In addition, the right-turn directional signals on many of these vehicles that make this movement are still on. As these vehicles approach Purchase Street, with their directional turn signal still on, it appears that their directional is for the Turnpike Street/Purchase Street intersection, which falsely indicates to vehicles waiting to turn from Purchase Street to Turnpike Street that these vehicles would be turning right at that
intersection. These vehicles turn onto Turnpike Street in anticipation of a gap in traffic, when in fact the vehicles are actually going through the intersection and not turning right.

**Enhancement:** Change the turning radius at the Washington Street (Route 138)/Turnpike Street intersection to create a sharper turn thereby adding deflection and slowing down vehicles turning right on Washington Street (Route 138) northbound to Turnpike Street.

**Safety Issue: Poor Pavement Conditions**

The pavement is in poor condition on the southeast corner of Purchase Street. This condition puts vehicle tires at risk and is detrimental to motorcycles and bicycles.

**Enhancement:** Repair and resurface the road surface at the intersection.

**Washington Street (Route 138) at Purchase Street Intersection:**

**Safety Issue: Visibility at the intersection is limited and On Street Parking Blocks Sight Lines**

On street parking is occurring on Washington (Route 138) on both sides of the road, especially in the vicinity of the restaurant, and vegetation on the southwest corner blocks sight lines.

**Enhancement:** Enforce no parking on state highways on Washington Street (Route 138) in the vicinity of the Washington Street (Route 138)/Purchase Street intersection. Clear vegetation on the southwest corner of the intersection and add overhead flashing beacons (red on the stop sign approach and yellow on the Washington Street (Route 138) approaches.

**Enhancement:** Install overhead flashing beacons, flashing red facing Purchase Street stop approaches and yellow facing northbound and southbound Washington Street (Route 138) approaches.

**Enhancement:** Signalize the intersection. Warrant analyses were performed for the intersection and the intersection satisfies the Manual On Uniform Traffic Control Devices (MUTCD) Warrants for Warrant 1, Eight-Hour Vehicular Volume, Warrant 2, Four-Hour Vehicular Warrant, and Warrant 3, Peak Hour Warrant.

**Safety Issue: Lack of Advanced Warning Signs**

The Washington Street (Route 138) northbound and southbound approaches to the intersection lack warning signs. The eastbound Purchase Street approach has a stop ahead warning sign; however, this sign is partially blocked by vegetation.

**Enhancement:** Add warning signs to the northbound and southbound Washington Street (Route 138) approaches to the intersection. Clear vegetation blocking signs.
Road Safety Audit—Washington Street (Route 138) at Purchase Street and Turnpike Street at Purchase Street, Easton, MA
Prepared by Old Colony Planning Council

**Safety Issue: Speeding on Washington Street (Route 138)**

Vehicles on the Washington Street (Route 138) northbound and southbound approaches to the intersection, which have the right of way through the intersection, pass through often at high speeds.

**Enhancements:** Enhance speed enforcement.

**Summary of Road Safety Audit**

Based on the review of data, on-site field observations and group discussion, the RSA team identified possible enhancements that could improve safety at the two intersections, Turnpike Street at Purchase Street and Washington Street (Route 138) at Purchase Street, in Easton. Further study and design work will need to be conducted to determine the feasibility of making some of the improvements.

Table 2 summarizes the estimated time frame and costs breakdown and Tables 3 and 4 summarize the safety issues, possible enhancements, estimated safety payoff, time frame, cost, and responsibility. Safety payoff estimates are based on engineering judgment and are categorized as low, medium, and high. The time frame is categorized as short-term (<1 year), midterm (1 to 3 years), or long-term (typically >3 years). Long-term improvements are typically considered to be substantial improvements with an expected time frame for implementation greater than 3 years. The costs are categorized as low (<$10,000), medium ($10,001 to $50,000), or high (> $50,000).

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-Term</td>
<td>Low &lt; $10,000</td>
</tr>
<tr>
<td>Mid-Term</td>
<td>Medium $10,001-$50,000</td>
</tr>
<tr>
<td>Long-Term</td>
<td>High &gt; $50,000</td>
</tr>
</tbody>
</table>
### Table 3: Potential Safety Enhancement Summary for Turnpike Street/Purchase Street

<table>
<thead>
<tr>
<th>Safety Issue</th>
<th>Potential Safety Enhancement</th>
<th>Safety Payoff</th>
<th>Time Frame</th>
<th>Cost</th>
<th>Responsible Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Advanced Warning Signs</td>
<td>Install overhead beacons and add advanced warning on the northbound and southbound Turnpike Street approaches.</td>
<td>Medium</td>
<td>&lt;1 Year</td>
<td>Medium</td>
<td>Town of Easton</td>
</tr>
<tr>
<td>Lack of Sight Distance on the Purchase Street Approach Due to Vegetation and parking</td>
<td>Trim back vegetation on the southwest corner of the intersection, adjust stop bars, and adjust the height of signs. In addition, restrict or prohibit parking on Turnpike Street.</td>
<td>Medium</td>
<td>&lt;1 Year</td>
<td>Low</td>
<td>Town of Easton</td>
</tr>
<tr>
<td>The Flashing Beacon Visibility is Blocked</td>
<td>Install overhead beacons.</td>
<td>Medium</td>
<td>1-3 Years</td>
<td>Medium</td>
<td>Town of Easton</td>
</tr>
<tr>
<td>Too Few Gaps in Turnpike Street Traffic</td>
<td>Install Traffic signals.</td>
<td>High</td>
<td>&gt;3 Years</td>
<td>High</td>
<td>Town of Easton</td>
</tr>
<tr>
<td>False Right Turn Directional Signal on Turnpike Street Northbound Vehicles</td>
<td>Change the turning radius at the Washington Street (Route 138)/Turnpike Street intersection to create a sharper turn thereby adding deflection and slowing down vehicles turning right on Washington Street (Route 138) northbound to Turnpike Street.</td>
<td>Medium</td>
<td>&gt;3 Years</td>
<td>High</td>
<td>Town of Easton</td>
</tr>
<tr>
<td>Poor Pavement Conditions</td>
<td>Repair and resurface the road surface at the intersection.</td>
<td>Low</td>
<td>&lt;1 Year</td>
<td>Medium</td>
<td>Town of Easton</td>
</tr>
</tbody>
</table>
### Table 4: Potential Safety Enhancement Summary for Washington Street (Route 138)/Purchase Street

<table>
<thead>
<tr>
<th>Safety Issue</th>
<th>Potential Safety Enhancement</th>
<th>Safety Payoff</th>
<th>Time Frame</th>
<th>Cost</th>
<th>Responsible Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility at the intersection is limited and On Street Parking Blocks sight Lines</td>
<td>Enforce no parking on state highways on Washington Street (Route 138).</td>
<td>Low</td>
<td>&lt;1 Year</td>
<td>Low</td>
<td>MassDOT</td>
</tr>
<tr>
<td></td>
<td>Clear vegetation on the southwest corner of the intersection.</td>
<td>Low</td>
<td>&lt;1 Year</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add overhead flashing beacons.</td>
<td>Medium</td>
<td>1-3 Years</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signalize the intersection.</td>
<td>High</td>
<td>&gt;3 Years</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Lack of Advanced Warning Signs</td>
<td>Add warning signs to the northbound and southbound Washington Street (Route 138) approaches to the intersection.</td>
<td>Medium</td>
<td>&lt;1 Year</td>
<td>Low</td>
<td>MassDOT</td>
</tr>
<tr>
<td>Speeding on Washington Street (Route 138)</td>
<td>Enhance speed enforcement.</td>
<td>Medium</td>
<td>&lt;1 Year</td>
<td>Low</td>
<td>State Police and the Town of Easton</td>
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</table>
Appendix A. RSA Meeting Agenda
**Agenda**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 PM</td>
<td>Welcome and Introductions at Easton Town Offices</td>
</tr>
<tr>
<td>1:10 PM</td>
<td>Review and Discussion of Project and Site Specific Material</td>
</tr>
<tr>
<td></td>
<td>• Review of Traffic Data</td>
</tr>
<tr>
<td></td>
<td>• Existing Conditions and Known Challenges</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>Adjourn from Opening Session and head to site visits at each intersection</td>
</tr>
<tr>
<td></td>
<td>• Identify any deficiencies and/or potential improvements at the study area location</td>
</tr>
<tr>
<td></td>
<td>• OCPC staff will document all observations and comments</td>
</tr>
<tr>
<td>2:15 PM</td>
<td>Wrap-Up Site Visit / Conclude Audit Back at Easton Town Offices</td>
</tr>
<tr>
<td>2:45 PM – 3:00 PM</td>
<td>Adjourn For The Day</td>
</tr>
</tbody>
</table>

**Instructions For Participants:**

- Before attending the Road Safety Audit, participants are encouraged to familiarize themselves with the study area, and make note of existing conditions and any deficiencies they observe.
- All participants will be actively involved in the process throughout. Participants are encouraged to come with thoughts and ideas, but are reminded that the synergy that develops and respect for others’ opinions are key elements to the success of the Road Safety Audit process.
- After the meeting, participants will be asked to comment and respond to the document materials to ensure it is reflective of the Road Safety Audit completed by the multidisciplinary team.
- Please wear comfortable footwear, and bring safety vest if possible. A limited number of safety vests will be available at the audit.
## Appendix B. RSA Audit Team Contact List

### Participating Audit Team Members

<table>
<thead>
<tr>
<th>Audit Team Members</th>
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<td>Old Colony Planning Council</td>
<td><a href="mailto:rguarino@ocpcrpa.org">rguarino@ocpcrpa.org</a></td>
</tr>
</tbody>
</table>
Appendix C. Detailed Crash Data
Collision Diagram

Indicate North by Arrow

Purposes Name

Turnpike Name

SYMBOLS
- Moving Vehicle
- Striking Vehicle
- Non-involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
• Fatal Accident
• Injury Accident

TYPES OF COLLISIONS
- Rear End
- Head On
- Side Swipe
- Out of Control
- Left Turn
- Right Angle

SHOW FOR EACH ACCIDENT
1. Approximate Location of accident
2. Type of collision and vehicles involved.
3. Time, Day, Date
4. Any other pertinent factors mentioned on the report (i.e., presence of oil on road, lights, etc.)

INTERSECTION Turpentine Street and Purchase Street

PERIOD FROM: 1/1/2013 to 9/30/2013
<table>
<thead>
<tr>
<th>Crash Data Summary Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnpike Street at Purchase Street, Easton</td>
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<tr>
<td>1/1/2013 - 3/9/17</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Crash Diagram/Ref#</th>
<th>Crash Date</th>
<th>Time of Day</th>
<th>Manner of Collision</th>
<th>Light Condition</th>
<th>Weather Condition</th>
<th>Road Surface</th>
<th>Driver Contributing Code</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/20/13</td>
<td>10:20 AM</td>
<td>Angle</td>
<td>Daylight</td>
<td>Snow</td>
<td>Snow</td>
<td>Inattention</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>1/21/13</td>
<td>1:00 PM</td>
<td>Angle</td>
<td>Daylight</td>
<td>Clear</td>
<td>Dry</td>
<td>Failed to yield right of way</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>1/22/13</td>
<td>4:17 PM</td>
<td>Head on</td>
<td>Daylight</td>
<td>Clear</td>
<td>Dry</td>
<td>Failed to yield right of way</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>1/24/13</td>
<td>11:17 PM</td>
<td>Angle</td>
<td>Daylight</td>
<td>Cloudy</td>
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<td>22</td>
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<tr>
<td>23</td>
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<td>Dry</td>
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<td>25</td>
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<td>29</td>
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<td>Dry</td>
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<td>25</td>
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</table>

Notes: "Failed to yield right of way" includes drivers who failed to yield to the right of way, and "Sunlight" refers to sunlight shining into the eyes of the driver.
## Crash Data Summary Table

**Turnpike Street at Purchase Street, Easton**

<table>
<thead>
<tr>
<th>Crash Date</th>
<th>Crash Day</th>
<th>Time of Day</th>
<th>Manner of Collision</th>
<th>Light Condition</th>
<th>Weather Condition</th>
<th>Road Surface</th>
<th>Driver Contributing Code</th>
<th>Age</th>
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<tbody>
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<td>35</td>
<td>Monday</td>
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<td>Angle</td>
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<td>Cloudy</td>
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<tr>
<td>36</td>
<td>Tuesday</td>
<td>6:00 AM</td>
<td>Angle</td>
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<td>Clear</td>
<td>Dry</td>
<td>Road markings</td>
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<td>Angle</td>
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<tr>
<td>38</td>
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<td>6:17 PM</td>
<td>Angle</td>
<td>Duck</td>
<td>Rain</td>
<td>Wet</td>
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<td>Angle</td>
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<td>Dry</td>
<td>Distracted traffic signs, signals, road markings</td>
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<td>Distracted due to wind, slippery surface, vehicle, object, non-incident in roadway, etc</td>
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<td>Clear</td>
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*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another c
<table>
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<th>Crash Sequence</th>
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<th>Light Condition</th>
<th>Road Condition</th>
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<th>Contributing Factor</th>
<th>Other</th>
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<td>Speed limit</td>
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<td>Snow</td>
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<td>Speed limit</td>
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*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved non-trike driver who gives the right of way. Contrary to the rules of the road, to another driver.
Appendix D. Additional Information
## Warrants Summary Report

### 1: Turnpike at Purchase

#### Intersection Information

<table>
<thead>
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<td>Purchase Street</td>
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<td>EB/WB</td>
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#### Warrant Met? Notes

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<tr>
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<tr>
<td>Warrant 1, Eight-Hour Vehicular Volume</td>
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<tr>
<td>Condition A or B Met</td>
<td>Yes</td>
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<tr>
<td>Warrant 2, Four-Hour Vehicular Volume</td>
<td>Yes</td>
<td>7 Hours met (4 required)</td>
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<tr>
<td>Warrant 3, Peak Hour</td>
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</tr>
<tr>
<td>Condition A Met?</td>
<td>No</td>
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<tr>
<td>Condition B Met?</td>
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<tr>
<td>Warrant 4, Pedestrian Volume</td>
<td>No</td>
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<tr>
<td>Peds &gt; 100 Conditio</td>
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<tr>
<td>Peds &gt; 190 Conditio</td>
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<tr>
<td>Warrant 5, School Crossing</td>
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### Warrants Summary Report
**2: Washington at Purchase**

#### Intersection Information

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<td>Approach Speed</td>
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#### Warrant Met?  Notes

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<tr>
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<th>Met?</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Condition A or B Met</td>
<td>Yes</td>
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<td>Condition A and B Met</td>
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<tr>
<td>Warrant 2, Four-Hour Vehicular Volume</td>
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<td>0 Hours met (1 required)</td>
</tr>
<tr>
<td>Condition A Met?</td>
<td>No</td>
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<tr>
<td>Condition B Met?</td>
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<td>Warrant 3, Peak Hour</td>
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<tr>
<td>Condition A</td>
<td>No</td>
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<tr>
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</tr>
<tr>
<td>Warrant 5, School Crossing</td>
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Appendix E. Road Safety Audit References
Road Safety Audit References


