

ROAD SAFETY AUDIT

Route 28 at Pitcher's Way, Lincoln Rd, & Barnstable
Intermediate School

Town of Barnstable

FINAL

January 17, 2023

Prepared For:
MassDOT



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CAPE COD
COMMISSION

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Background

The Federal Highway Administration (FHWA) defines a Road Safety Audit (RSA) as the formal safety examination of an existing or future road or intersection by an independent, multidisciplinary team. The purpose of a Road Safety Audit is to identify potential safety issues and possible opportunities for safety improvements while considering all roadway users. As part of the Massachusetts Department of Transportation’s (MassDOT) guidelines, RSAs are required for Highway Safety Improvement Program (HSIP) eligible locations and should be conducted prior to the development of the 25 percent design submission or prior to the submission of a Draft Environmental Impact Report (DEIR) for a project of regional impact. The RSA evaluates the Route 28 corridor in Barnstable, MA at the following locations as shown in Figure 1:

- Route 28 at Pitcher’s Way
- Route 28 at Lincoln Road
- Route 28 at Barnstable Intermediate School Area

The Cape Cod Commission (CCC), serving as the regional planning agency for the fifteen towns on Cape Cod, has reviewed many transportation locations over the years during various processes, including the Regional Transportation Plan, the Transportation Improvement Program, and Developments of Regional Impact, considering the existing safety issues and potential improvements. CCC staff have updated the High Crash Locations report most recently in 2022. CCC staff reference the High Crash Locations report and dashboard to prioritize locations for future Road Safety Audits. The High Crash Locations report also serves as a resource for transportation safety professionals looking to make strategic investments to improve safety in the region.

Based on the 2022 Barnstable County High Crash Locations report, the intersection of Route 28 (Falmouth Road) at Pitcher’s Way was ranked #9 due to the total number of crashes (2018-2020). This intersection was identified by MassDOT as a Top 200 crash cluster for 2017-2019 and 2018-2020, a Highway Safety Improvement Program (HSIP) cluster for 2017-2019 and 2018-2020 and a HSIP Bicycle crash cluster for 2010-2019 and 2011-2020. An intersection is defined as HSIP eligible if it is within the top five percent of crash clusters in its respective Regional Planning Commission’s (RPC’s) boundaries based on Equivalent Property Damage Only (EPDO). EPDO weighs crashes according to severity. Historically, this intersection was previously identified as a Top 200 crash cluster and also a HSIP crash cluster for the period of 2016-2018. Additionally, it was listed as a HSIP Bicycle crash cluster for years 2009-2018.

The intersection of Route 28 at Lincoln Road is not considered a high crash location according to the Barnstable County High Crash Locations report and recent data. Previously, the intersection of Route 28 at Lincoln Road was a Top 5% HSIP crash cluster for the years 2016-2018. With its proximity to the intersection of Route 28 (Falmouth Road) at Pitcher’s Way, the intersection of Route 28 at Lincoln Road was also included in this RSA.

For similar reasons, Route 28 at the Barnstable Intermediate School (BIS) Area was included in this RSA in addition to a request made by the Town of Barnstable. The BIS school area includes the Barnstable Intermediate School driveway, the Barnstable High School access road, Old Strawberry Hill Rd, Whitehall Way, and several smaller driveways all along Route 28. The Route 28 at the BIS school area intersections are not considered high crash locations.

Project Data

The RSA was held on Tuesday, January 17, 2023, with representatives from state, regional and local agencies and organizations providing expertise in the engineering, planning, maintenance, transit, and emergency response fields. The RSA was held in-person with pre- and post-audit meetings held at the Barnstable Adult Community Center. A site visit was conducted at the three intersections where the audit team was able to observe traffic operations and existing roadway conditions. Attendees were encouraged to visit the site prior to the audit and to review the collision diagrams and crash summaries to become familiar with the existing safety issues.

A list of the attendees is provided in Table 1 with their contact information provided in Appendix B. A copy of the RSA Agenda can be found in Appendix A.

Table 1: Participating Audit Team Members

Audit Team Member	Agency/Affiliation
Paul Graves	Town of Barnstable
Griffin Beaudoin	Town of Barnstable
Matt Lounsbury	Barnstable Police
David Webb	Hyannis Fire
Michelle Deng	MassDOT Traffic Safety
Dakota DelSignore	MassDOT Traffic Safety
Ilia Karelo	MassDOT Traffic Safety
Daniel Rautzel	MassDOT District 5 Projects
Barbara Lachance	MassDOT District 5 Planner
Bianca Marshall	MassDOT District 5 Traffic
Katherine Jansen	Mass Bike
Frank Nogueira	Cape Cod Regional Transit Authority
Fred Valdivia	Cape Cod Regional Transit Authority
Colleen Medeiros	Cape Cod Commission
David Nolan	Cape Cod Commission
Evan Costa	Cape Cod Commission

As a group, the team identified safety issues at the intersections. An in-person field visit to the study area followed. The audit team finished the meeting by determining appropriate short, medium, and long-term countermeasures for the safety issues discussed.

Project Location and Description

Study Area Roadways

Route 28

Route 28 (Falmouth Rd) between Pitcher’s Way and the Barnstable Intermediate School (BIS) driveway is classified as an urban principal arterial running nominally in the north-south direction, but through the Town of Barnstable, Route 28 is an east-west roadway. Route 28 provides access to the south shore of Cape Cod and serves as a major alternative route to U.S. Route 6 to the north. Route 28 in Barnstable County is under MassDOT jurisdiction. Within the RSA limits, Route 28 has a posted speed limit of 45 miles per hour (mph) and consists of commercial, institutional, and residential land uses. Additionally, there is a 20 mph School Zone speed limit on Route 28 within the BIS school area. The RSA covers a 0.75-mile stretch of Route 28 from Pitcher’s Way to the Barnstable Intermediate School. The cross section along Route 28 varies, with the roadway generally consisting of one 11-foot travel lane in each direction from Arrowhead Drive west to the BIS driveway and one 12-foot travel lane in each direction from Arrowhead Drive east through the Pitcher’s Way intersection. Turn lanes also exist at the signalized intersection noted below. Along this section of Route 28, there are approximately one-foot striped shoulders with guardrails along certain sections of the roadway. In the BIS area, there is an additional unpaved shoulder area that vehicles occasionally traverse to bypass a turning vehicle. There is an eight-foot-wide shared use path located on the south side of Route 28, but no bicycle or pedestrian facilities on the north side of Route 28. No other bike facilities are provided. The Cape Cod Regional Transit Authority (CCRTA) provides bus service along this section of Route 28 via the Sealine Route. Although there are no fixed route bus stops for the Sealine Route through the corridor, the CCRTA operates as a flag stop service along this section of Route 28.

Pitcher’s Way

Pitcher’s Way is a two-lane roadway that begins to the north at Bearses Way, crosses Route 28 at a signalized intersection and terminates at Scudder Avenue to the south. Pitcher’s Way is classified as an urban minor arterial under Town of Barnstable jurisdiction and provides access to residential and commercial areas. Pitcher’s Way provides key access to Route 132 and to Route 6 (Mid-Cape Highway). Currently, there are no bicycle or pedestrian facilities along Pitcher’s Way at its intersection with Route 28. North of the Route 28 intersection (to Bearses Way) the posted speed limit on Pitcher’s Way is 35 miles per hour (mph) and south of the intersection (to Scudder Ave) the speed limit on Pitcher’s Way is 30 mph. In addition, there are “thickly settled” advisory speed signs for 30 miles per hour (mph) on Pitcher’s Way south of the intersection at Route 28.

Lincoln Road

Lincoln Road, to the south of Route 28, is a two-lane roadway that serves as a connection between West Main Street and Route 28. Lincoln Road is classified as an urban collector under Town of Barnstable jurisdiction and primarily provides access to residential areas. There is a five-foot asphalt sidewalk along the west side of Lincoln Road. The sidewalk begins 200 feet south of Route 28 and connects to West Main Street. There is a “thickly settled” advisory speed of 30 miles per hour (mph) in accordance with the statutory speed limit established per Massachusetts General Law (MGL) Chapter 90.17.

Lincoln Road Extension

Lincoln Road Extension is opposite Lincoln Road, to the north of Route 28. Lincoln Road Extension is a two-lane roadway that is classified as a local road under Town of Barnstable jurisdiction. This roadway primarily provides access to residential areas and is a dead-end roadway. There is no posted speed limit on this roadway.

BIS Area

The BIS Area consists of several driveways, the most notable of which are the Barnstable Intermediate School Driveway and the Barnstable High School Access Road. These roads are both classified as local roads and are under the jurisdiction of the Town of Barnstable. The Barnstable High School Access Road also serves as the driveway for the Barnstable Adult Community Center providing access to Route 28.

Old Strawberry Hill Road

Old Strawberry Hill Road is a two-lane roadway and is classified as a local road under Town of Barnstable jurisdiction, serving as a connection between Route 28 and Route 132 and provides access to residential areas. There is a 30-mph posted speed limit which is governed by MGL Chapter 90.17 as a 30 mph “thickly settled” zone. There are no bicycle or pedestrian facilities on Old Strawberry Hill Road.

Study Area Intersections

The following intersections were analyzed as part of this RSA.

Route 28 at Pitcher’s Way

Route 28 at Pitcher’s Way is a four-legged signalized intersection. At the intersection, the westbound approach of Route 28 consists of an eleven-foot shared through-right turn lane and an eleven-foot exclusive left turn lane separated from the eastbound lane by a double-yellow centerline. The Route 28 eastbound approach also consists of an eleven-foot shared through-right turn lane and an eleven-foot exclusive left turn lane separated from the westbound lane by a double-yellow centerline. The eastbound and westbound left-turn lanes have a storage length of approximately 100 feet. The northbound Pitcher’s Way approach consists of a ten-foot shared through-left turn lane and a nine-foot right turn only lane separated from the southbound lane by a double-yellow centerline. The southbound Pitcher’s Way approach is similar, consisting of a twelve-foot shared through-left turn lane and a nine-foot right turn only lane separated from the northbound lane by a double-yellow centerline. The signal operates as an actuated two-phase signal with all left turns operating under permissive control.

There is an eight-foot asphalt shared use path on the south side of Route 28 with a crosswalk on the Pitcher’s Way northbound approach. There are no other pedestrian facilities or on street bicycle facilities at the intersection or approaches. Additionally, there are no pedestrian push buttons or signal phasing present for pedestrians or bicyclists.

Route 28 at Lincoln Road/Lincoln Road Extension

Route 28 at Lincoln Road/Lincoln Road Extension is a four-legged intersection which is under two-way stop-controlled (TWSC) with the minor approaches on Lincoln Road and Lincoln Road Extension. At the intersection, the eastbound and westbound approaches of Route 28 each consist of a single eleven-foot lane separated by a double-yellow centerline. The northbound and the southbound Lincoln Road approaches each consists of a single eleven-foot lane separated by a double-yellow centerline.

There is an eight-foot asphalt shared use path on the south side of Route 28 with a crosswalk on the Pitcher’s Way northbound approach. There are no other pedestrian facilities or on street bicycle facilities at the intersection or approaches.

Route 28 at Old Strawberry Hill Road

Old Strawberry Hill Road intersects Route 28 as a T-unsignalized intersection. The road provides access to residential areas and smaller commercial areas. At the intersection, the eastbound and westbound approaches of Route 28 each consist of a single eleven-foot lane separated by a double yellow centerline. The southbound approach of Old Strawberry Hill Road consists of a single eleven-foot lane separated by a double-yellow centerline.

There is an eight-foot-wide asphalt shared use path on the south side of Route 28 at this intersection. There are no crosswalks at this intersection, however, there is a midblock crossing located approximately 175 feet west of the intersection providing a designated place to cross Route 28. There are no other pedestrian facilities or on street bicycle facilities at the intersection or approaches, however, a worn dirt path exists between Old Strawberry Hill Road and the mid-block crossing.

Route 28 at Barnstable Intermediate School

The Barnstable Intermediate School driveway intersects Route 28 as an unsignalized T-intersection. At the intersection, the eastbound and westbound approaches of Route 28 each consist of a single eleven-foot lane separated by a double yellow centerline. The northbound approach from BIS to Route 28 consists of 21-foot lane separated from the southbound lane by a planted median.

There is an eight-foot asphalt shared use path on the south side of Route 28. The stop line for the driveway is located approximately 25 feet back from Route 28 before the shared use path. There are no crosswalks at this intersection, however, there is a midblock crosswalk halfway between this intersection and Old Strawberry Hill Road. Students and other pedestrians cross here to access Barnstable Intermediate and Barnstable High School and the shared use path. There are no sidewalks internal to the Barnstable Intermediate School driveway or on the north side of Route 28.

Route 28 at Barnstable High School Access Road

The Barnstable High School Access Road intersects Route 28 as an unsignalized T-intersection. This intersection gives Barnstable High School direct access to Route 28. This access road also provides access to the Barnstable Adult Community Center driveway from Route 28. At the intersection, the eastbound and westbound approaches of Route 28 each consist of a single eleven-foot lane separated by a dashed single yellow centerline. The northbound approach from the access road toward Route 28 consists of a single eleven-foot lane with no centerline separating it from the southbound lane.

There is an eight-foot asphalt shared use path on the south side of Route 28. There are no crosswalks or sidewalks at this intersection. Farther down on the access road, there is a sidewalk which starts on the western side of the road at the Barnstable Intermediate School and then switches to the eastern side down

near the athletic fields. There are no other pedestrian facilities or on street bicycle facilities at the intersection or approaches.

Crash Data

Crash reports were supplied by the Barnstable Police Department and supplemented with crash reports provided by MassDOT. The crash reports were reviewed, and a collision diagram was developed for each of the three study area locations. The crash diagrams are provided in Appendix C.

Route 28 at Pitcher’s Way

The intersection of Route 28 at Pitcher’s Way experienced 43 crashes over the three-year study period (2017-2019). Based on the CCC Barnstable County High Crash Locations report, the intersection of Route 28 at Pitcher’s Way is ranked #9 on Cape Cod in total crashes, #5 in equivalent property damage only (EPDO), #13 based on crash rate, and #13 based on EPDO rate. This intersection was identified by MassDOT as a Top 200 crash cluster for 2017-2019 and 2018-2020, a HSIP cluster for 2017-2019 and 2018-2020, and a HSIP Bicycle crash cluster for 2010-2019 and 2011-2020. During the three-year study period (2017-2019), there were 18 (42%) angle crashes, 17 (40%) were rear-end crashes, four (9%) were single vehicle crashes, two (5%) were sideswipe (opposite direction) crashes and two (5%) head-on crashes. There was one fatal injury crash at this intersection in 2012, resulting from a crash with bicyclist on Route 28 in the westbound direction at approximately 2:02 AM. During the three-year study period (2017-2019), there were 14 crashes that resulted in an injury, while the remaining 29 crashes were property damage only crashes. Approximately 16% of crashes occurred in the month of April, 12% of crashes occurred in July and nine percent in the months of September, October, and December. These percentages indicate that there is a higher percentage of crashes in the months when there is less congestion on the roadway and speeds may be higher. The higher percentage in July correlates with July typically being the peak for summer congestion and traffic volumes in the region. The time of day for the highest percentage of crashes occurred between 2 and 6 PM with approximately 35% of crashes occurring between that interval. About 27% of the crashes occurred outside of daylight hours and 14% occurred during wet or icy conditions. During the study period (2017-2019), there was one crash that involved a pedestrian in 2019.

There were eight crashes involving bicyclists from 2010-2016 with four of these crashes resulting in an incapacitating injury and one resulting in a fatality. These crashes statistics are not during the three-year study period and as such are not included in the crash data summary graphs for Route 28 at Pitcher's Way in Appendix C. However, they are included in the crash diagram, which brings the total crashes presented on the diagram to 51.

Route 28 at Lincoln Road

The intersection of Route 28 at Lincoln Road experienced 18 crashes over the three-year study period (2017-2019). During the three-year study period (2017-2019), 9 (50%) crashes were angle crashes, 7 (39%) were rear-end crashes, one single vehicle crash and one head on crash. There were no fatal injuries at this intersection, however 4 (22%) crashes resulted in non-fatal injury. Approximately 12% of the crashes occurred in the months of June and July as well as September, October, November, and December. These percentages line up with other crash data observed in the area showing that there are higher percentages during summer months and in the fall when schools in the area are back in session. There was one crash that involved a bicyclist in 2019 and no crashes that involved pedestrians. Approximately 35% of the crashes occurred between 2 and 4 PM. About 30% of the crashes occurred outside of daylight hours and 24% during wet roads. The intersection was identified as a MassDOT 2016-2018 HSIP Crash Cluster however it is not currently noted as a regional or MassDOT high crash location. The intersection of Route 28 and Lincoln Road is located about 760 feet to the west of the intersection of Route 28 at Pitcher’s Way and may experience backups from the traffic signal.

Route 28 at BIS Area

The intersections of Route 28 at BIS Area experienced 23 crashes over the three-year study period (2017-2019). There were 13 (57%) rear-end crashes, 5 (22%) angle crashes, 3 (13%) single vehicle crashes, one sideswipe (same direction) crash, and one head on crash. There were no fatal injuries at this intersection, however 9 (39%) of the crashes resulted in injury. Approximately 18% of crashes occurred in the month of January and the month of December indicating that this area experiences higher incidences in winter months. This area also has high percentages during the summer months, which may also indicate that due to increased summer traffic there is a higher probability of more crashes. There was one crash that involved a bicyclist in 2017 and one crash that involved a pedestrian in 2018. Approximately 50% of crashes occurred between 2 and 6 PM. About 14% of crashes occurred outside of daylight hours and 19% during wet or snow roads.



Figure 1: Locus Map

Audit Observations and Potential Safety Enhancements

The Road Safety Audit Team met in-person to discuss existing conditions, safety issues and potential countermeasures. The data that was reviewed included a crash summary, collision diagram, the RSA prompt list and a series of bar graphs depicting safety trends found at each intersection, all of which are included in Appendix C.

The following safety issues and potential enhancements were identified through the discussions with the Road Safety Audit team. Several of the issues require further study and engineering to determine the feasibility of implementing enhancements.

Route 28 Corridor-Wide Issues

Safety Issue #1: Corridor Operations

Observations:

Route 28 is a busy and congested corridor as it provides access to commercial and residential areas as well as acting as a main connecting road for the southern portion of Cape Cod. This section of Route 28 in Hyannis often experiences regular congestion and queuing, which is exacerbated during summer peak periods and peak travel times. The signalized intersection of Route 28 at Pitcher’s Way has outdated signal equipment which contributes to poor signal operations and lack of recommended multimodal accommodations.



Image 1: Traffic congestion on Route 28 at Pitcher’s Way, due to a left turning movement.

Left turn lanes in the study area are provided only at Route 28 at Pitcher's Way, however, there is no left turn protected phasing present. Vehicles wishing to turn left from Route 28 to the other streets and driveways may lack adequate gaps. Corridor wide there were 15 crashes that result from vehicles attempting to turn left from Route 28 onto a minor street/driveway. Vehicles attempting to take left turns from Route 28 onto Pitcher's Way resulted in two angle crashes (#35, 42), two rear-end (#17, 43), a single vehicle crash (#8), and a sideswipe, in the opposite direction (#39). Vehicles attempting to take left turns from Route 28 onto Lincoln Road resulted in one angle crash (#2), one single vehicle crash (#15) and two rear-end crashes (#3, 5). Vehicles attempting to take left turns from Route 28 in the BIS Area resulted in two rear-end crashes (#4, 6), an angle crash (#11), a single vehicle crash (#12), and a sideswipe in the same direction (#23). Additionally, RSA participants observed drivers accepting inadequate gaps while turning onto



Image 2: A left turning vehicle creates congestion on Route 28 at Lincoln Road, backing up to Route 28 at Pitcher’s Way.

the Route 28 corridor from the minor roadways. The unpaved shoulders show signs of vehicle treads indicating vehicles are using these shoulders for passing turning vehicles.

With only one intersection on this corridor signalized, there are increased queues due to a lack of having a prioritized timing sequence. Along the Route 28 corridor, specifically in the BIS Area, there are many driveway entrances close in proximity to one another. These clusters of driveways and curb cuts can add to congestion in the area as drivers slow to a stop and attempt to take lefts across an opposite lane.

Enhancements:

- Update signal timing at Pitcher’s Way for summer months to encourage traffic to progress efficiently through the corridor and reduce driver frustration.
- Evaluate locations to install short, dedicated left turn lanes at driveways and side streets along the Route 28 corridor to reduce queue and rear-end collisions involving turning vehicles.

Safety Issue #2: Emergency Response

Observations:

This section of corridor is narrow with unpaved shoulders and metal guardrails which limits the ability for drivers to safely pull over for emergency responders. During the RSA, Barnstable Police noted that this area is difficult to enforce due to the lack of safe pull-off areas.

The lack of shoulders also creates congestion when CCRTA buses stop in the road to let passengers on and off. Vehicles will often attempt to pass left turn vehicles as is evident by the numerous tire tracks visible on the unpaved shoulders. Overall, the narrowness of this corridor is a contributor to the congestion events observed as well as decreases safety for drivers and emergency response teams.

Enhancements:

- Review the possibility of widening the corridor to allow for paved shoulders or bus pull-off locations to improve vehicular safety and emergency response.



Image 3: Ambulance traveling eastbound on Route 28, observed during RSA.

Safety Issue #3: Multi-Modal Accommodations

Observations:

RSA participants noted that multi-modal accommodations throughout the corridor are either inconsistent or missing entirely. This section of Route 28 has schools present but lacks basic pedestrian and bicycle accommodations to connect to nearby residential neighborhoods. Site visits have noted that pedestrian and bicycle activity is present in this area. With the presence of a shared use path, there is an opportunity to further enhance the multi-modal accommodations to connect to the off-road facilities and other roadways. The current shared use path has poor pavement conditions, with areas of puddling or sand present. The current shared use path does not meet the minimum recommended width of 10 ft for two-way travel. Signage and pavement markings are older or missing along the shared use path which may affect compliance for pedestrians/bicyclists to stop when approaching roadway crossings. Additionally, there is a lack of signage and pavement markings for vehicles to warn of bicyclist/pedestrian activity when approaching or turning across the shared use path.



Image 4: Pedestrian attempting to cross Route 28 without an available crosswalk or pedestrian signal equipment.

Currently, there are two portions of existing sidewalk approaching Route 28 that are not connected to the corridor. These sections are on Lincoln Road and the Barnstable High School Access Road. The lack of connectivity may result in pedestrians having to walk without the benefit of sidewalks to access Route 28. There is a lack of safe walking space on the northside of the corridor, particularly at night. There is also a noticeable absence of lighting across the entire corridor. There is a distinct lack of sidewalk and crosswalk connectivity across Route 28 which affects the multi-modal connectivity and safety in this area. Furthermore, there is a noticeable lack of ADA accommodations at the RSA intersections and the shared use path crossings, including detectable warning pads and concrete curb ramps.

The CCRTA currently has no transit stops along this section of Route 28. However, the CCRTA Sealine bus route does use this section of corridor and the CCRTA operates as a “flag down” service in this area in place of fixed route stops. Buses stopped in lanes or at intersections along this section of corridor contribute to the area’s congestion. The CCRTA is in support of potential transit service enhancements along this corridor.



Image 5: Lincoln Road shared use side path crosswalk, with faded pavement markings and lacking ADA compliant features

From 2010 to 2019, there were a total of 11 non-motorist crashes recorded at the intersection of Route 28 at Pitcher’s Way, of which 6 resulted in non-fatal injury and 1 was a fatality. Additionally, from 2017 to 2019, one non-motorist crash was recorded at Route 28 at Lincoln Road and two non-motorist crashes were recorded at Route 28 at BIS Area. Many non-motorist crashes appear to involve motorists turning into the pedestrian or bicyclist due to either a lack of visibility or availability of pedestrian and bicycle facilities. There appears to be a distinct lack of visibility around the shared use path as 10 out of the 11 non-motorist (90%) crashes occurred when vehicles were entering or exiting the shared use path crossing. These crashes are also common when left turning motorists are getting impatient with the lack of an acceptable

gap of clearance to make a safe turning movement. Pedestrians and bicyclists can then be left vulnerable as the motorist often pays attention to oncoming traffic and not the crossing facility. With the increase of traffic on Cape Cod in the summer months it is likely that some of these motorists and cyclists are unfamiliar with this corridor. As such, higher percentages of crashes are observed before and during the summer season at all the locations along this corridor. Overall, the presence of unmarked or non-visible crossings, inadequate signage, and poor driver visibility are some of the major contributing factors to the pedestrian and bicyclist crashes in this area.

Enhancements:

- Upgrade the existing south side shared use path to be accessible and up to current design standards.
- Construct a sidewalk on the north side of Route 28 to improve sidewalk connectivity.
- Consider adding bicycle infrastructure on adjacent local roadways to provide a safe bike network for the area (Pitcher’s Way, Lincoln Rd, Old Strawberry Hill Rd, etc.).
- Consider constructing bus pull off lanes or areas on Route 28 to improve service times for the CCRTA buses.
- Consider adding wider shoulders on Route 28 for on-road bicyclists.
- Coordinate educational resources and public outreach efforts with the town to seasonal visitors on bicycle safety, transit options and preferred bicycle routes.
- Re-paint/re-stripe existing pedestrian and bicycle facilities including crosswalks and stop bars.
- Review and install missing signage for the shared use path where appropriate.
- Consider installing R10-15 signs (“Turning Vehicles Yield to Pedestrians”) on Route 28 to alert motorists of the shared use path users at the Pitcher’s Way and Lincoln Road intersections.
- Evaluate motorist sightlines and visibility when encountering the current shared use path.
- Add streetlights at the intersections and pedestrian scale lighting along the shared use side path.
- Perform maintenance, such as street sweeping and vegetation trimming, on the shared use path to remove debris (i.e. sand, pine needles, tree limbs etc.).

Safety Issue #4: Distracted Driving

Observations:

As Route 28 is a congested corridor, there were 25 crashes along the study area corridor that involved drivers that were either distracted, careless or inattentive according to the police reports. Within the RSA limits there was also a high occurrence of rear-end collisions (40% of all crashes observed in the study period). A common distraction to motorists is the use of a cell phone while waiting at a red light or waiting in congestion.

Enhancements:

- Coordinate with Barnstable Police Department to enforce distracted driving laws including the recently passed hands-free law.

Safety Issue #5: Pavement Markings & Signage

Observations:

With the high traffic on Route 28, the pavement markings along the entire corridor are well worn and faded. During the RSA, participants noted various locations along the entire corridor where pavement markings were faded or missing. RSA participants noted during the site visit that several roadway signs and shared use path signs were either missing, damaged or in need of replacement.

Enhancements:

- Evaluate the existing pavement markings on the corridor and determine which markings need to be added or re-stripped.
- Conduct a sign inventory to determine what signs along the corridor need to be added or replaced.



Image 6: Faded and missing pavement markings observed at the Barnstable High School access road.

Safety Issue #6: Drainage

Observations:

Areas of the corridor were observed to have signs of drainage issues. There was pooling in front of the Barnstable Intermediate School and in several other locations along the RSA limits from a rain event from the previous day. The side path had areas where rainwater had washed dirt onto the path creating a muddy surface. During the RSA, icy sections of the shared use path were observed as water had pooled on low points in the side path and froze. RSA participants noticed that this section of Route 28 does not have a lot of visible drainage systems. Pavement cross slope on the roadway and side path could also contribute to the drainage problems and puddling seen in the area. There were several crashes that happened during wet roadway conditions along the corridor, most notably a single vehicle crash at Route 28 and Lincoln Road (#17) where the vehicle fishtailed and crashed into a guardrail.

Enhancements:

- Evaluate the need for drainage systems and runoff collection corridor wide, review existing systems on the side streets to see if they are properly installed and maintained.
- Evaluate the need for drainage systems along the shared use path.



Image 7: Asphalt swale leading rainwater runoff from Route 28 onto the shared use side path.



Image 8: Rainwater puddling along Route 28 at BIS Area across from Old Strawberry Hill Road.

Route 28 at Pitcher’s Way

Safety Issue #1: Signal Equipment and Visibility

Observations:

There were several issues discussed regarding the existing traffic signal at the Route 28 and Pitcher’s Way intersection. During the site visit, RSA participants noted that equipment was outdated when compared to modern standards. There is no pedestrian equipment at this signalized intersection. The signal equipment that is currently in place are basic three section heads which do not have the capability of allowing for an exclusive left turn phase or left turns on a flashing yellow arrow. All signal heads were missing retroreflective backplates, which are important for visibility of the signal heads at night. At this intersection, three of the reported crashes were due to glare or lack of visibility. The addition of retroreflective backplates may help alleviate crashes that happened at night and during the day due to glare or lack of visibility.

The study area carries many heavy vehicles, including delivery vehicles, emergency response vehicles, and school and transit buses. Currently, the signal heads at Pitcher’s Way are mounted overhead on mast arms. Due to the rather extreme uphill gradient on both Pitcher’s Way approaches and the presence of trucks, visibility can be limited for motorists from the side streets. Limited signal visibility and red light running may be contributing factors to the rear end crashes at this intersection (40%). Additionally, poor lighting at this intersection is another contributing factor with 26% of crashes occurring outside of daylight hours at this intersection.

Enhancements:

- Install retroreflective backplates on all signal heads. (Note: a structural analysis may be required)
- Install additional street lighting at the intersection for better night visibility.
- Consider the re-grading the Pitcher’s Way approaches to improve visibility.
- Consider upgrading signal equipment to meet current standards, including installing ADA compliant pedestrian signal equipment.
- Consider installing auxiliary heads for improved signal visibility.



Image 9: Pitcher’s Way signal heads, faded visors and no backplates.



Image 10: Vehicle congestion.

Safety Issue #2: Signal Operations and Emergency Pre-Emption

Observations:

Currently at Route 28 at Pitcher’s Way, left turns operate under permissive signal control and are accommodated in an exclusive left turn lane on both approaches of Route 28 and in a shared left turn/through lane on Pitcher’s Way. There were several angle collisions that involved vehicles between the minor approach of Pitcher’s Way and the major approach of Route 28 (11 of the 51 crashes). These eleven crashes (#18, 22, 23, 28, 30, 33, 38, 40, 46, 48, 52) noted that a vehicle ran a red light. The yellow and all red clearance intervals may be inadequate and may contribute red light running crashes. Field observations indicated that the Route 28 eastbound and westbound permissive left turns often resulted in vehicles being stuck in the middle of the intersection due to congestion and lack of gaps, which may contribute to the high occurrence of angle collisions.

Additionally, there were three crashes that involved a left turning vehicle from Pitcher’s Way that collided with the opposing through movement from Pitcher’s Way. Several factors may contribute to the collisions on Pitcher’s Way between left and through movements including, the lack of exclusive left turn lanes, lack of left turn phasing and the uphill gradient on Pitcher’s Way.

The Town of Barnstable Police and Fire Departments are currently equipped with emergency pre-emption transponders within their vehicles; however, an emergency vehicle pre-emption system is not currently provided at this intersection. Due to the congested nature of this section of Route 28, emergency pre-emption would aid by reducing emergency response times.

Enhancements:

- Evaluate protected/permissive phasing for left turns on all approaches and the use of flashing yellow arrows, if not warranted, consider installing permissive flashing yellow arrow to improve left turn safety.
- Evaluate the yellow and all red clearance times and update signal clearance times based on the latest standards.
- Install emergency pre-emption for emergency response vehicles at current signalized intersections as well as any future signals along the corridor (Note: a structural analysis may be required to add to existing equipment).
- Consider the addition of traffic dividers on Route 28 to calm traffic for left turns.



Image 11: Vehicle on Route 28 attempting to make a left turn during red clearance.



Image 12: Car attempting to take a right turn on red from Pitcher’s Way onto Route 28, inching into crosswalk.

- Consider installation of an adaptive traffic signal to accommodate seasonal traffic patterns and progressively move vehicles through the corridor.
- Widen both Pitcher’s Way right turn lanes to current standards.

Safety Issue #3: Multi-Modal Accommodations

Observations:

Pedestrian activity was observed during the RSA site visit at the intersection where a pedestrian was forced to walk within the roadway as there are gaps within the sidewalk network. There is currently only a shared use path on the southern side of Route 28 which extends the length of the RSA corridor. There are no connecting crosswalks or sidewalks from the northern side of Route 28 or Pitcher’s Way. There were 11 non-motorist crashes at this intersection, with 10 crashes occurring within the existing crosswalk. There is no pedestrian phase or signal equipment and there is little opportunity for a non-motorist to cross the intersection since the signal operates with only two phases. Additionally, there has been a high number of crashes (7 crashes) involving a motorist attempting to take a right turn on red and a non-motorist crossing in the crosswalk. RSA participants observed that there are currently no detectable warning pads or ramps at this crosswalk, to meet current standards for Americans with Disabilities Act (ADA).

The northbound approach of Pitcher’s Way at Route 28 has a crossing for a shared use side path. The side path is offset from Route 28 by approximately 14 feet, this allows path users separation from the road. At the intersection, the stop bar on this approach is before the crossing, which causes to motorists to obstruct the crossing while attempting to take a right-on-red. Westbound traveling bicyclists who do not stop at the intersection are impacted by drivers obstructing the path and attempting right turns. This geometry has resulted in 7 crashes (#1, 3, 4, 5, 6, 7, 29).

Enhancements:

- Reconstruct existing curb ramps to comply with ADA regulations.
- Install new sidewalks along Pitcher’s Way to connect to the existing shared use path.
- Install sidewalks along the northern side of Route 28
- Install No Right Turn on Red restriction at the intersection on the northbound and eastbound approaches to reduce conflicts with vulnerable road users.



Image 13: Pedestrian observed walking on Pitcher’s Way southbound where there are no present pedestrian facilities.



Image 14: CCRTA transit vehicle seen at the intersection of Route 28 at Pitcher’s Way.

- Install stop bars and consider painting the word STOP on the shared use path approaching the Pitcher’s Way crossing.
- Install pedestrian signal equipment to the latest standards, including countdown timers.
- Consider installing bike boxes and or bike induction loops to aid bicyclists in the roadway.

Safety Issue #4: Signage and Pavement Markings

Observations:

A street sign on one of the mast arms for Pitcher’s Way was broken and only displays the word “Way”. Observers on the RSA noticed that on the shared use path heading in the westbound direction there was no stop sign for bicyclists as well as no advanced warning signs on either approach. It appears that there are no Signal Ahead signs located approaching the intersection on Route 28 or on Pitcher’s Way southbound.

There are no pavement markings for the shared-left turn lane on both approaches of Pitcher’s Way. The pavements markings that do exist at this intersection are cracked and faded in some areas, but the stop bars, crosswalk, and lane lines appear to have been re-striped. Participants noted that vehicles sometimes do not yield properly when entering onto Route 28 and drive aggressively, potentially contributing to the rear-end crashes. Instead of waiting at current stop bar locations, motorists pull up much further to get great visibility of the intersection because of the steep gradient when turning onto Route 28 from the side roads.

Enhancements:

- Add a stop sign and no motor vehicles sign to the westbound shared use path approach.
- Add approaching intersection warning signs to both side path approaches.
- Install Signal Ahead signage on both approaches of Route 28 and Pitcher’s Way southbound.
- Re-stripe cracked and faded pavement markings and supplement with additional lane markings as needed.
- Review and relocate the existing stop bar locations on Pitcher’s Way.



Image 15: A broken street sign on the mast arm and dirty stop sign on shared use path.



Image 16: The westbound shared use side path approach, missing the stop sign at the crosswalk and the no motor vehicles sign.

Route 28 at Lincoln Road

Safety Issue #1: Intersection Operations and Visibility

Observations:

The intersection of Route 28 at Lincoln Road has many of the same visibility problems as the intersection at Pitcher’s Way. These intersections are roughly 700 feet away from each other and as such have similar gradient problems on the minor streets. However, the gradient problems at Route 28 at Lincoln Road are to some extent worse than at Pitcher’s Way. At the intersection there are metal guard railings along Route 28 adjacent to the steep gradient to protect the south side shared use path. The steep gradient, the guard rails, and the offset of the shared use path from the road force drivers to pull up exceedingly far into the intersection to be able to gain the visibility they need to make a safe turning movement. RSA participants observed motorists consistently block the path of the shared use path when attempting to turn. The visibility of motorists on Route 28 when performing a left turning movement onto Lincoln Road is also impaired by the gradient. Motorists often take high speed lefts onto Lincoln Road to beat the opposing through traffic on Route 28. The non-motorist crash at this intersection (#15) is a direct result of that type of issue movement. The vehicle made a high speed left to beat opposing traffic then a collided with a non-motorist that wasn’t in view due to the gradient of the minor street and side path.

Since the intersection is close to the Pitcher’s Way signalized intersection, vehicle congestion and queuing often extends to the Lincoln Road intersection which can compound safety issues. Of the crashes observed at this intersection, many collisions (47%) were angle crashes. These angle crashes are likely because of motorists misunderstanding the courtesy of drivers in the opposite direction. Drivers failing to yield the right of way contrary to the rules of the road, resulted in 6 of the 18 crashes observed at this intersection during the study period (# 1,2, 4, 8, 13, and 18).

There is a visible lack of lighting at this intersection. About 36% of the crashes at this intersection took place after dusk and during non-daylight hours. Currently, there is only one streetlight attached to a telephone pole on the southbound approach of Lincoln Road Extension.

Enhancements:

- Consider improving the gradation of the southern side of Route 28.
- Evaluate if existing guardrail meets current standards and replace damaged sections.
- Evaluate if reflective delineators are present throughout existing guardrail and install if necessary.



Image 17: Grade difference between shared use path and roadway separated by guardrail.



Image 18: Congestion backing into the Lincoln Road intersection from the Pitcher’s Way signal, vehicle is attempting to take a right turn onto Route 28.

- Install additional lighting for the intersection and shared use path crossing.
- Evaluate the need for left turn lanes on the Route 28 approaches.
- Evaluate other intersection control options (flashing beacons, signalization) to reduce angle crashes.

Safety Issue #2: Multi-Modal Accommodations and Signage

Observations:

During the RSA, the lack of pedestrian and bicycle accommodations were noted along this entire section of Route 28. Nevertheless, at this intersection, there were several issues different from other areas along the corridor. There are faded bike route signs facing the roadways as well as faded stop signs on the shared use path. Four leg intersection warning signs on Route 28 are in poor condition as well and may need to be placed in better positions. There is no crosswalk to aid pedestrians in crossing Route 28 at this intersection. There are currently no detectable warning pads or ramps at this crosswalk, this does not meet current standards for ADA compliance.

Unlike a lot of the minor streets on this section of corridor, Lincoln Road has a sidewalk. This sidewalk is situated on the western side of Lincoln Road; however, this sidewalk ends about 180 feet before the intersection. The existing sidewalk is a five-foot wide asphalt sidewalk with varying different types of curbing. The existing sidewalk lacks detectable warning pads and ADA compliant ramps. It should also be noted that the sidewalk on Lincoln Road only exists south of Route 28, running south toward West Main Street. Lincoln Road Extension does not have a sidewalk. RSA participants noted that connecting the sidewalk on Lincoln Road to the existing shared use side path would increase the level of pedestrian connectivity in this area and take pedestrians out of the roadway at the intersection.

Enhancements:

- Connect the existing sidewalk on Lincoln Road to the shared use path.
- Evaluate the need to install a crosswalk across Route 28 at the intersection. Crosswalk treatments such as RRFBs and signage would need to be considered should a crossing be installed.
- Replace older and faded signage on the shared use path and at the intersection.
- Install Intersection Ahead advanced warning signs on Route 28 and the shared use side path.
- Reconstruct existing curb ramps to comply with ADA regulations.



Image 19: Lack of visibility of the shared use path crossing and guardrail obstructed view.



Image 20: Missing sidewalks on Lincoln Road.

Safety Issue #3: Pavement Markings

Observations:

The pavement markings at the intersection of Route 28 and Lincoln Road are in poor condition. On the roadway, the stop bar on Lincoln Road has slowly faded away and the crosswalk markings on Lincoln Road are completely missing. The lack of any high visibility paint makes this already visibility obstructed crossing even less observable. A pedestrian was observed crossing at this location during the RSA and it appeared as if there was no crosswalk due to how faded the markings were. The fog lines in this area also show signs of extreme weathering, as they are faded and have many cracks. On the north side of Route 28, Lincoln Road Extension does not have any pavement markings besides a well faded stop bar.



Image 21: Faded crosswalk markings and stop bar on Lincoln Road, fog lines and centerlines are also cracked at this intersection.

Enhancements:

- Re-stripe a high visibility crosswalk on Lincoln Road to connect the shared use path.
- Re-stripe the stop bars at the intersection, fog lines and centerlines as well, with high visibility paint for all approaches.



Image 22: Missing or faded fog line on Route 28, faded stop bar on Lincoln Road Extension and no visible lane markings.

Route 28 at BIS Area

Safety Issue #1: Multi-Modal Accommodations

Observations:

RSA participants from the Town of Barnstable remarked that many students often cross Route 28 in various places to get to school in this area from the various side streets. There is only one unsignalized mid-block crossing along this section of Route 28 near Old Strawberry Hill Road. A worn dirt path was observed in the northwest quadrant of the Route 28 at Old Strawberry Hill Road intersection showing a desire line for pedestrians from Old Strawberry Hill Road to the mid-block crosswalk. This crosswalk is halfway between the entrance to Barnstable Intermediate and the intersection of Route 28 at Old Strawberry Hill Road. The crosswalk has no corresponding sidewalk connections leading to the school and there are no ADA curb ramps either. A school crossing sign with a corresponding arrow is currently located on both sides of the marked crosswalk. Participants also noted there is a school crossing guard at this location but sometimes students cross the roadway too quickly before the crossing guard can stop traffic.

The shared use path system in the BIS Area has several multi-modal accommodation issues. There is a lack of proper bicyclist signage on paths and stop control at intersections. The shared use side paths in the BIS Area have a lot of cracked pavement surfaces and at some of the at-grade road crossings there are potholes. The crosswalks along this section are not painted or marked. The side path is also missing detectable warning pads at the Barnstable Intermediate driveway and the Barnstable High Access Road.

With the addition of a new apartment complex in the BIS area, there will be a likely increase of pedestrians in the area. Additionally, CCRTA participants noted this area is a popular transit flag stop for their route. The pavement surface of the shared use side path in this section was observed by RSA participants to have a larger aggregate size and to be older in condition. There is a small section of sidewalk that does exist in this area on the Barnstable High School Access Road. This sidewalk starts on the western side of the road at Barnstable Intermediate School and then switches to the eastern side at the athletic fields. However, there is no connection from this sidewalk to the Route 28 shared use path. There was an absence of lighting observed in this area especially. Lighting along the path and this section of corridor would also allow for motorists to see both the road and pedestrians better at night and in unpleasant weather conditions.

Enhancements:

- Evaluate locations for optimal pedestrian crossings on Route 28
- Connect the shared use path with the existing sidewalks facilities on Barnstable High School Access Road.



Image 23: Route 28 mid-block crosswalk between Barnstable Intermediate and Old Strawberry Hill Road.



Image 24: Worn dirt path from Old Strawberry Hill Road to Route 28 connecting to mid-block crosswalk.

- Consider repaving the shared use path and fixing the potholes in the BIS Area.
- Consider the installation of corresponding sidewalks and curb ramps at the existing mid-block crosswalk and connecting to Old Strawberry Hill Road and the new apartment complex on the north side of the road.
- Install advance warning signs on Route 28 for the mid-block crosswalk.
- Install missing stop signs and stop bars on the shared use path.
- Consider the installation of Rectangular Rapid Flashing Beacon (RRFB) or a Pedestrian Hybrid Beacon at the existing mid-block crosswalk on Route 28 near Barnstable Intermediate School.
- Install street lighting for roadway and pedestrian scale lighting for shared use path users.
- Coordinate with the Massachusetts Safe Routes to School program to coordinate educational awareness for students walking and bicycling to school.
- Consider construction of a CCRTA bus pull-off.

Safety Issue #2: Access Management and School Zone Operations

Observations:

The two schools in the area, Barnstable Intermediate and Barnstable High School, dictate a large portion of the traffic in this section of the corridor. School drop-off and pick-up times cause unique challenges at the intersection for all roadway users. Despite that there is a lot of traffic through this area at all times of day. There are a variety of roadway users in this area due to the various other destinations in the area such as the Barnstable Adult Community Center and the numerous residencies along this stretch of thoroughfare. Motorist age and aptitude are also variables to be considered in this location due to the variety of destinations. As discussed previously, the BIS Area is also a popular flag stop location for the CCRTA.

With the area having all these different destinations for motorists there are many clusters of curb cuts. Curb cut clusters create too many redundant access points to destinations and reduce efficiency of the main roadway. Reducing these clusters would in turn help to reduce congestion from turning vehicles and the high percentage of rear-ends in this area. Thirteen of the crashes observed in this area were rear-ends. There is an opportunity to widen the road in this section to allow for vehicles to have left turn lanes with decent storage lengths. A few of the intersections in this area



Image 25: New apartment complex entrance is offset from the Barnstable High Access Road.



Image 26: Worn dirt shoulders in BIS Area used by motorists.

also are aligned with Route 28 at an angle. Aligning these driveways with other access points would improve driver visibility.

The speed limit along Route 28 in this area is 45 miles per hour (mph) and there is a 20 mile per hour (mph) school zone designation in the area in front of BIS during school hours. It was noted that the existing school pavement markings are faded, and the locations of the school zone assemblies may not reflect new guidance in the Massachusetts Amendments to the MUTCD (2022) which incorporates high schools. The stop line for the BIS driveway is located approximately 25 feet back from Route 28 before the shared use path. This leads to cars inching up toward Route 28 and stopping in the way of the path due to a lack of visibility.



Image 27: Vehicle attempting to turn onto Route 28 after the stop bar at the BIS driveway.

The gradient in this area is much flatter than at the other intersections along the corridor and the side path is further offset from the road in most of this section as well. However, Old Strawberry Hill Road does intersect Route 28 at a down gradient and sight lines were observed to be obstructed by overgrown vegetation. Additionally, it was noted several private signs along this section of the corridor may also be obstructing sight lines for driveways.

Enhancements:

- Align existing driveways to allow for better movement or consider consolidating curb cuts along this section of Route 28.
- Consider the possibility of adding left turn lanes on Route 28 for the school driveways and Old Strawberry Hill Road.
- Consider widening the road to incorporate shoulders to allow for motorists to safely pass turning vehicles.
- Evaluate the location of private signs to determine if they are within the State Highway Layout and relocate as necessary.
- Modify travel speeds in the area and encourage drivers to slow down in the school zone with traffic calming measures such as visual cues, textured crosswalks, etc.
- Install a radar speed feedback sign on the existing school zone assembly to alert drivers that they should be reducing speed on this section of Route 28 in the school zone.
- Re-paint and/or adjust existing school zone pavement markings on Route 28 to encourage slower speeds and incorporate High School property limits.
- Re-evaluate location of existing School Zone assemblies to incorporate High School property limits.
- Coordinate with local driver’s education programs on traffic safety and encourage students to refrain from becoming distracted when driving.

- Perform vegetation clearing to ensure adequate sightlines are provided at school driveways and at Old Strawberry Hill Road.

Summary of Road Safety Audit

The final part of the RSA included the discussion of potential safety enhancements to address the identified safety deficiencies. There were a range of safety enhancements including both short-term, low-cost improvements as well as long-term and higher cost recommendations. Table 2 presents a summary of the estimated time frames and preliminary costs associated with these potential safety enhancements.

Table 3 presents a summary of the Road Safety Audit observations and enhancements to assist in the design and/or implementation of potential improvements elicited during the process. It is also recommended that any design process for more involved geometric changes include further analysis and public input. Safety payoff estimates are subjective judgement of the potential effectiveness of the potential enhancement.

Table 2: Estimated Time Frame and Costs Breakdown

Time Frame		Costs	
Short-Term	<1 Year	Low	<\$10,000
Mid-Term	1-3 Years	Medium	\$10,001-\$50,000
Long-Term	>3 Years	High	>\$50,000

Table 3: Potential Safety Enhancement Summary

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Route 28 Corridor Wide					
Corridor Operations	Update signal timing at Pitcher’s Way for summer months to encourage traffic to progress efficiently through the corridor and reduce driver frustration	High	Short-Term	Low	MassDOT
Corridor Operations	Evaluate locations to install short, dedicated left turn lanes at driveways and side streets along the Route 28 corridor to reduce queue and rear-end collisions involving turning vehicles	Medium	Long-Term	High	MassDOT
Emergency Response	Consider widening the corridor to allow for paved shoulders or bus pull-off locations to improve vehicular safety and emergency response	Medium	Long-Term	High	MassDOT
Multi-modal Accommodations	Upgrade the existing south side shared use path to be accessible and up to current design standards	High	Long-Term	High	MassDOT
Multi-modal Accommodations	Construct a sidewalk on the north side of Route 28 to improve sidewalk connectivity	High	Long-Term	High	MassDOT
Multi-modal Accommodations	Consider adding bicycle infrastructure on adjacent local roadways to provide a safe bike network for the area	Medium	Mid-Term	Medium	MassDOT/Town
Multi-modal Accommodations	Consider constructing bus pull off lanes or areas on Route 28 to improve service times for the CCRTA buses	Medium	Long-Term	High	MassDOT

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Multi-modal Accommodations	Consider adding wider shoulders on Route 28 for on-road bicyclists	High	Mid-Term	Medium	MassDOT
Multi-modal Accommodations	Coordinate educational resources and public outreach efforts to seasonal visitors on bicycle safety	Medium	Short-Term	Low	Town/CCRTA
Multi-modal Accommodations	Re-paint/re-stripe existing pedestrian and bicycle facilities including crosswalks and stop bars	Medium	Short-Term	Low	MassDOT
Multi-modal Accommodations	Review and install missing signage to the shared use path where appropriate	Medium	Short-Term	Low	MassDOT/Town
Multi-modal Accommodations	Consider installing R10-15 signage for turning vehicles on Route 28 to alert motorists of the shared use path users at the Pitcher’s Way and Lincoln Road intersections	Medium	Short-Term	Low	MassDOT
Multi-modal Accommodations	Evaluate motorist sightlines and visibility when encountering the current shared use path	Medium	Short-Term	Low	MassDOT/Town
Multi-modal Accommodations	Add streetlights at the intersections and pedestrian scale lighting along the shared use side path	High	Long-Term	High	MassDOT/Town
Multi-modal Accommodations	Perform maintenance, such as street sweeping and vegetation trimming on the shared use path to remove debris	Low	Short-Term	Low	MassDOT/Town
Distracted Driving	Coordinate with Barnstable Police Department to enforce distracted driving laws	Medium	Short-Term	Low	Town
Pavement Markings & Signage	Evaluate the existing pavement markings on the corridor and determine which markings need to be added or re-striped	Medium	Short-Term	Low	MassDOT/Town

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Pavement Markings & Signage	Conduct a sign inventory to determine what signs along the corridor need to be added or replaced	Medium	Short-Term	Medium	MassDOT
Drainage	Evaluate the need for new drainage systems and runoff collection systems	Medium	Long-Term	High	MassDOT/Town
Drainage	Evaluate the need for drainage systems along the shared use path	Low	Mid-Term	Medium	MassDOT
Route 28 @ Pitcher’s Way					
Signal Equipment/Visibility	Install retroreflective backplates on all signal heads	Medium	Short-Term	Low	MassDOT
Signal Equipment/Visibility	Install additional street lighting at the intersection	High	Mid-Term	Medium	MassDOT/Town
Signal Equipment/Visibility	Consider re-grading Pitcher’s Way to improve visibility	Medium	Long-Term	High	MassDOT/Town
Signal Equipment/Visibility	Consider upgrading signal equipment to meet current standards and install ADA compliant pedestrian signal equipment	Medium	Mid-Term	Medium	MassDOT
Signal Equipment/Visibility	Consider installing auxiliary heads for improved signal visibility	Medium	Mid-Term	Medium	MassDOT
Signal Operations	Evaluate providing protected permissive left turn at this intersection and the use of flashing yellow arrows, if not warranted, consider installing permissive flashing yellow arrow to improve left turn safety	High	Mid-Term	Medium	MassDOT
Signal Operations	Evaluate protected/permissive for left turns on all approaches	High	Mid-Term	Low	MassDOT

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Signal Operations	Evaluate the yellow and all red clearance times and update signal clearance times based on the latest standards	High	Short-Term	Low	MassDOT
Signal Operations	Install emergency pre-emption for emergency response vehicles at signalized intersections	Medium	Mid-Term	Medium	MassDOT
Signal Operations	Consider the addition of traffic dividers on Route 28 to calm traffic for left turns	Low	Short-Term	Low	MassDOT
Signal Operations	Consider the installation of an adaptive traffic signal to accommodate seasonal traffic patterns and progressively move vehicles through the corridor	Medium	Long-Term	High	MassDOT
Signal Operations	Widen the Pitcher’s Way right turn travel lane up to current standards	Medium	Long-Term	High	MassDOT/Town
Multi-modal Accommodations	Reconstruct existing curb ramps to comply with ADA regulations	Medium	Mid-Term	Medium	MassDOT
Multi-modal Accommodations	Install new sidewalks on Pitcher’s Way to connect to the existing shared use path	High	Long-Term	High	MassDOT/Town
Multi-modal Accommodations	Consider installing sidewalks along the northern side of Route 28 at this intersection	High	Long-Term	High	MassDOT
Multi-modal Accommodations	Install No Right Turn on Red restriction at the intersection on the northbound and eastbound approaches to reduce conflicts with vulnerable road users	Medium	Short-Term	Low	MassDOT
Multi-modal Accommodations	Install stop bars and other pavement markings on the shared	Low	Short-Term	Low	MassDOT

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
	use path approaching Pitcher’s Way				
Multi-modal Accommodations	Install pedestrian signal equipment, including countdown timers	High	Long-Term	Medium	MassDOT
Multi-modal Accommodations	Consider installation of bike boxes and bike induction signal loops	Medium	Mid-Term	Medium	MassDOT
Signage/Pavement Markings	Add a stop sign and no motor vehicles sign to the westbound shared use path approach	Medium	Short-Term	Low	Town/MassDOT
Signage/Pavement Markings	Add approaching intersection warning signs to both side path approaches	Low	Short-Term	Low	Town/MassDOT
Signage/Pavement Markings	Install Signal Ahead signage on both approaches of Route 28 and Pitcher’s Way southbound	Low	Short-Term	Low	MassDOT
Signage/Pavement Markings	Re-stripe pavement markings and supplement additional lane markings as needed	Medium	Short-term	Low	MassDOT
Signage/Pavement Markings	Review and relocate existing stop bar locations on Pitcher’s Way	Low	Short-Term	Low	MassDOT
Route 28 @ Lincoln Road					
Intersection Operations/Visibility	Consider improving the gradation of the southern side of Route 28 at this intersection	High	Long-Term	High	MassDOT
Intersection Operations/Visibility	Evaluate the existing guardrail to determine if it meets current standards and replace damaged sections	Medium	Mid-Term	Medium	MassDOT
Intersection Operations/Visibility	Evaluate if reflective delineators are present throughout on the guardrail and install if necessary	Low	Short-Term	Low	MassDOT

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Intersection Operations/Visibility	Install additional street lighting for the intersection and shared use path crossing	Medium	Long-Term	Medium	MassDOT/Town
Intersection Operations/Visibility	Evaluate the need for left turn lanes on the Route 28 approaches	High	Long-Term	High	MassDOT
Intersection Operations/Visibility	Evaluate other intersection control options (flashing beacons, signalization) to reduce angle crashes	Medium	Mid-Term	Medium	MassDOT
Multi-modal Accommodations/Signage	Connect the existing sidewalk on Lincoln Road to the shared use path	High	Mid-Term	Medium	MassDOT/Town
Multi-modal Accommodations/Signage	Evaluate the need to add a crosswalk across Route 28 at the intersection	Medium	Mid-Term	Medium	MassDOT
Multi-modal Accommodations/Signage	Replace older and faded signage on the shared use path and at the intersection	Low	Short-Term	Low	MassDOT/Town
Multi-modal Accommodations/Signage	Install Intersection Ahead advanced warning signs on Route 28 and the shared use side path	Low	Short-Term	Low	MassDOT
Multi-modal Accommodations/Signage	Reconstruct existing curb ramps to comply with ADA regulations	High	Mid-Term	Medium	MassDOT
Pavement Markings	Re-stripe a high visibility crosswalk on Lincoln Road to connect the shared use path	Medium	Short-Term	Low	MassDOT/Town
Pavement Markings	Re-stripe the stop bars, fog lines and centerlines with high visibility paint	Medium	Short-Term	Low	MassDOT/Town
Route 28 @ BIS Area					
Multi-modal Accommodations	Evaluate locations for optimal pedestrian crossings on Route 28	Medium	Mid-Term	Low	MassDOT

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Multi-modal Accommodations	Connect the shared use path with the existing sidewalks facilities on Barnstable High School Access Road	Medium	Mid-term	Medium	MassDOT/Town
Multi-modal Accommodations	Consider repaving the shared use path and fixing the potholes in the BIS Area	Medium	Long-Term	Medium	MassDOT
Multi-modal Accommodations	Consider the installation of corresponding sidewalks and curb ramps at the existing mid-block crosswalk and connecting to Old Strawberry Hill Road and the new apartment complex on the north side of the road	High	Mid-Term	Medium	MassDOT
Multi-modal Accommodations	Install advance warning signs on Route 28 for the mid-block crosswalk	Low	Short-Term	Low	MassDOT
Multi-modal Accommodations	Install missing stop signs and stop bars on the shared use path crossing in the BIS Area	Medium	Short-Term	Low	MassDOT
Multi-modal Accommodations	Consider the installation of Rectangular Rapid Flashing Beacon (RRFB) or a Pedestrian Hybrid Beacon at the existing mid-block crosswalk on Route 28 near Barnstable Intermediate School	High	Long-Term	Medium	MassDOT
Multi-modal Accommodations	Install street lighting for roadway and pedestrian scale lighting for shared use path users	Medium	Mid-Term	Medium	MassDOT/Town
Multi-modal Accommodations	Coordinate with the Massachusetts Safe Routes to School program to coordinate educational awareness for students walking and bicycling to school	Low	Short-Term	Low	Town

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Multi-modal Accommodations	Consider construction of a CCRTA bus pull-off	Low	Long-Term	High	MassDOT
Access Management/School Zone	Align existing driveways or consolidate the number curb cuts along this section of Route 28	High	Long-Term	High	MassDOT/Town
Access Management/School Zone	Consider adding left turn lanes on Route 28 for the school driveways and Old Strawberry Hill Road	Medium	Long-Term	High	MassDOT
Access Management /School Zone	Consider widening the road to incorporate shoulders to allow for motorists to safely pass turning motorists	Medium	Long-Term	High	MassDOT
Access Management/School Zone	Evaluate the location of private signs to determine if they are within the State Highway Layout and relocate as necessary	Low	Short-Term	Low	MassDOT/Town
Access Management/School Zone	Modify travel speeds in the area and encourage drivers to slow down in the school zone with traffic calming measures	Medium	Mid-Term	Medium	MassDOT/Town
Access Management/School Zone	Install a radar speed feedback sign on the existing school zone assembly to alert drivers that they should be reducing speed on this section of Route 28 in the school zone	Medium	Short-Term	Low	MassDOT/Town
Access Management/School Zone	Re-paint and/or adjust existing zone school pavement markings on Route 28 to encourage slower speeds and incorporate High School property limits	Low	Short-Term	Low	MassDOT
Access Management/School Zone	Re-evaluate location of existing School Zone assemblies to	Low	Short-Term	Low	MassDOT/Town

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
	incorporate High School property limits				
Access Management/School Zone	Coordinate with local driver’s education programs on traffic safety and encourage students to refrain from becoming distracted when driving	Medium	Short-Term	Low	Town
Access Management/School Zone	Perform vegetation clearing to ensure adequate sightlines are provided at school driveways and at Old Strawberry Hill Road	Medium	Short-Term	Low	Town

Appendix A. RSA Meeting Agenda

Agenda

Road Safety Audit

Route 28 at Pitcher's Way, Lincoln Rd & BIS Area

Meeting Location: Barnstable Adult Community Center
825 Falmouth Rd, Hyannis, MA

01/17/2023

9:00 AM – 1:00 PM

Type of meeting: High Crash Location – Road Safety Audit
Attendees: Invited Participants to Comprise a Multidisciplinary Team
Please bring: Thoughts and Enthusiasm!!

9:00 AM Welcome and Introductions

9:15 AM Review of Site Specific Material

- Crash, Speed & Volume Summaries– provided in advance
- Existing Geometries and Conditions

10:00 AM Visit the Site

- Walk/drive to Pitcher's Way, Lincoln Road & BIS intersections
- As a group, identify areas for improvement

11:30 AM Post Visit Discussion / Completion of RSA

- Discuss observations and finalize findings
- Discuss potential improvements and finalize recommendations

1:00 PM Adjourn for the Day – but the RSA has not ended

Instructions for Participants:

- Before attending the RSA on 1/17/23 participants are encouraged to drive through the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.
- 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 overall RSA process.
- After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.

Appendix B. RSA Audit Team Contact List

Participating Audit Team Members

Date: January 17, 2023

Location: Barnstable, MA

Audit Team Members	Agency/Affiliation	Email Address
Paul Graves	Town of Barnstable	paul.graves@town.barnstable.ma.us
Griffin Beaudoin	Town of Barnstable	griffin.beaudoin@town.barnstable.ma.us
Matt Lounsbury	Barnstable Police	lounsburym@barnstablepolice.com
David Webb	Hyannis Fire	dwebb@hyannisfire.org
Michelle Deng	MassDOT Traffic & Safety	michelle.deng@state.ma.us
Dakota DelSignore	MassDOT Traffic & Safety	dakota.d.delsignore@state.ma.us
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Barbara Lachance	MassDOT District 5 Planner	barbara.lachance@dot.state.ma.us
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David Nolan	Cape Cod Commission	david.nolan@capecodcommission.org
Evan Costa	Cape Cod Commission	evan.costa@capecodcommission.org

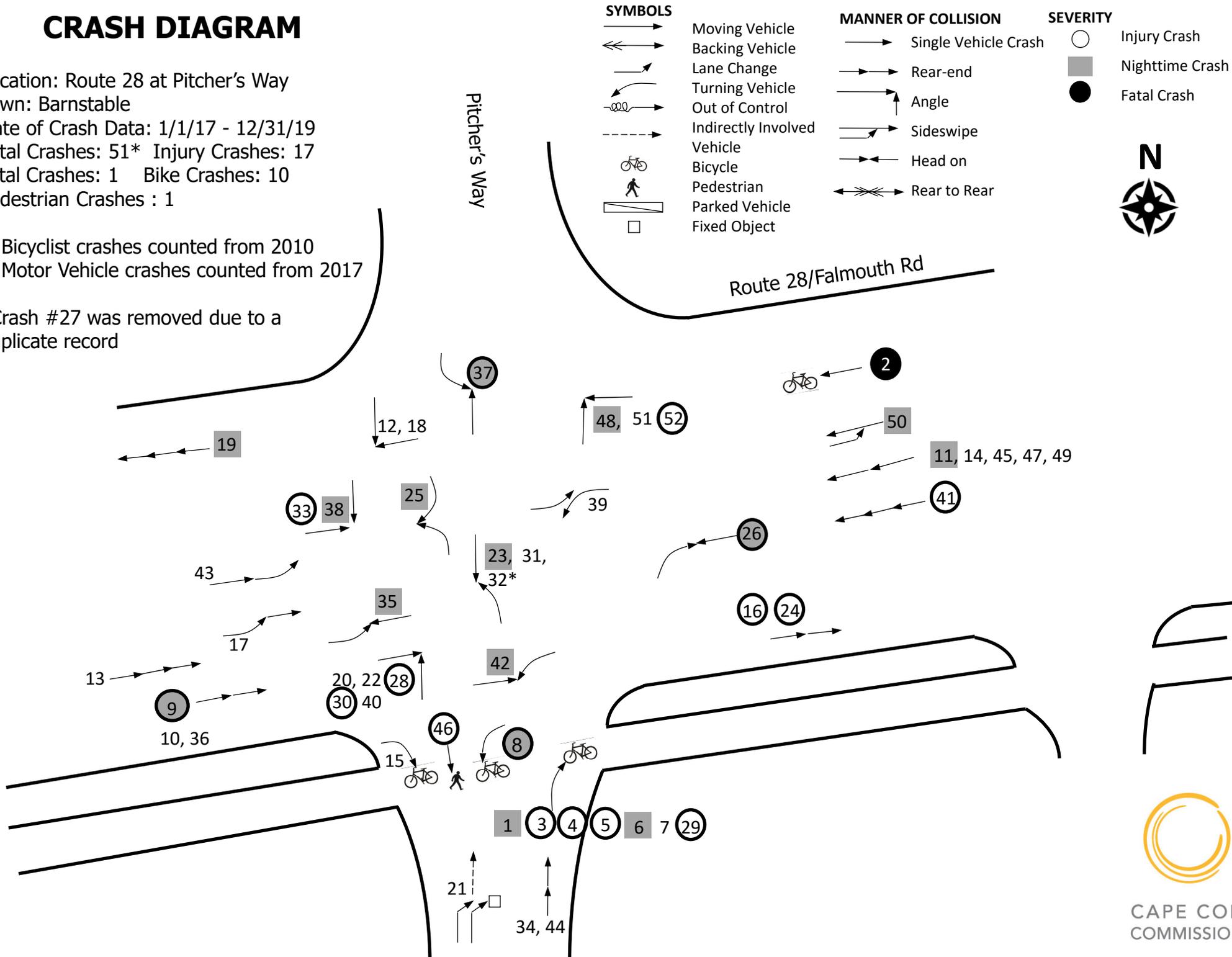
Appendix C. Detailed Crash Data and Count Data

CRASH DIAGRAM

Location: Route 28 at Pitcher's Way
 Town: Barnstable
 Date of Crash Data: 1/1/17 - 12/31/19
 Total Crashes: 51* Injury Crashes: 17
 Fatal Crashes: 1 Bike Crashes: 10
 Pedestrian Crashes : 1

- Bicyclist crashes counted from 2010
- Motor Vehicle crashes counted from 2017

*Crash #27 was removed due to a duplicate record



Crash Data Summary Table

Route 28 at Pitcher's Way, Barnstable, MA
2011-2019

Crash Diagram Ref #	Crash Date mm/dd/yy	Crash Day Day	Time of Day hh:mm	Manner of Collision Type	Light Condition Type	Weather Condition Type	Road Surface Type	Driver Contributing Code Type	Driver Distracted By Type	Injury Severity Type	D1 Age #	D2 Age #	D3 Age #	D4 Age #	Comments
1	8/21/11	Sunday	7:35 PM	Single vehicle crash	Dusk	Clear	Dry	No improper driving		No Injury	73				MV 1 was stopped at a red light on Pitcher's Way at Route 28 (NB). The driver pulled forward, attempting to turn right on red. A westbound-moving bicyclist on sidepath rode through through the intersection in front of MV1, leading to a low-speed crash. Bicyclist did not stop at stop sign.
2	6/14/12	Friday	2:02 AM	Single vehicle crash	Dark - roadway not lighted	Rain	Dry	Unknown		Fatal Injury	22				Two cyclists were traveling west on Route 28, approaching the intersection at Pitcher's Way. One of the cyclists was in the center of the roadway and was rear-ended by the driveway, causing her to collide with the windshield. (Hit and run crash)
3	7/5/12	Thursday	8:17 PM	Single vehicle crash	Daylight	Clear	Dry	No improper driving		Non-fatal injury	21				MV 1 was stopped at a red light on Pitcher's Way at Route 28 (NB). The driver pulled forward, attempting to turn right on red. A westbound-moving bicyclist rode through through the intersection, and collided with MV1.
4	7/24/14	Thursday	4:51 PM	Single vehicle crash	Daylight	Clear	Dry	Unknown		Non-fatal injury	23				MV 1 was stopped at a red light on Pitcher's Way at Route 28 (NB). He slowly pulled forward, attempting to turn right on green. A westbound-moving bicyclist rode through through the intersection, leading to a crash. MV 1 and bicyclist both stated that their travel direction had a green.
5	9/3/14	Wednesday	9:51 AM	Single vehicle crash	Daylight	Clear	Dry	No improper driving		Non-fatal injury	57				MV 1 was stopped at a red light on Pitcher's Way at Route 28 (NB). He slowly pulled forward, attempting to turn right on red. A westbound-moving bicyclist rode through a stop sign and the vehicle and bicyclist collided.
6	7/13/15	Monday	7:57 PM	Single vehicle crash	Dusk	Cloudy	Dry	No improper driving		No Injury	51				MV 1 was attempting to take a right turn onto Route 28 from Pitcher's Way (NB facing). MV 1 claimed to look both ways and make the right turn, striking a westbound-traveling bicyclist on the sidepath.
7	12/3/15	Thursday	8:00 AM	Single vehicle crash	Daylight	Clear	Dry	No improper driving		No Injury	48				Bicyclist was traveling west on the Route 28 sidepath while a driver stopped on Pitcher's Way at at Route 28, and then began a right turn onto Route 28. Bicyclist stopped at Pitcher's Way and then continued onward through the crosswalk, hitting the car.
8	10/31/16	Monday	7:01 AM	Single vehicle crash	Dark - lighted roadway	Rain	Wet	No improper driving	Not distracted	Non-fatal injury	66				Bicyclist traveling westward on Route 28 sidepath failed to stop at a STOP sign, thinking he was safe because traffic on Pitcher's Way had a red light. A driver on Route 28 attempted a left turn onto Pitcher's Way with a green light and hit the bicyclist.
9	1/18/17	Wednesday	10:26 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	Other activity (searching, eating, personal hygiene, etc.)	Non-fatal injury	64	46			MV1 and MV2 were heading north (east) on Route 28, just before the intersection with Pitcher's Way. MV1, who was in front of MV2, was at a red light and was rear-ended by MV2.
10	02/03/17	Friday	2:40 PM	Rear-end	Daylight	Clear	Dry	Inattention	Not distracted	No Injury	58	25			MV2 and MV1 were traveling eastward on Route 28 just west of Pitcher's Way. MV2 had been stopped in traffic and he was rear-ended by MV1, who claimed that she had not been texting, but had been unable to see the brake lights because of the sun.
11	02/15/17	Wednesday	6:31 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Unknown		No Injury	49	Unknown			MV1 and MV2 were traveling south (west) on Route 28, just ahead of Pitcher's Way. MV1 slowed for the traffic light and she was hit from behind by MV2, who then committed a "hit and run."
12	04/14/17	Friday	7:50 AM	Angle	Daylight	Clear	Dry	Glare		No Injury	69	69			MV1 was travelling west on Route 28 at Pitcher's Way. MV1 accidentally travelled through a red light because of glare. MV1 T-boned MV2, who had been traveling south on Pitcher's Way.
13	04/17/17	Monday	6:39 AM	Rear-end	Daylight	Clear	Dry	Distracted	Manually operating an electronic device (texting, typing, dialing)	No Injury	22	22	35		3 car crash in which 2 drivers going eastward at Pitcher's Way were stopped at a light only to be rear-ended by a third drivers, who had reached down to adjust the radio (chain reaction).
14	06/07/17	Wednesday	5:45 PM	Rear-end	Daylight	Clear	Dry	Inattention		No Injury	56	18			MV2 and MV1 were moving west in slow moving traffic ~100 yards west of Pitcher's Way intersection, with MV2 behind MV1. MV1, who was in front, began to break; MV2 was unable to stop in time and rear-ended MV1.
15	08/03/17	Thursday	3:34 PM	Single vehicle crash	Daylight	Clear	Dry	No improper driving		No Injury	41				MV1 was traveling eastward on Route 28 at Pitcher's Way and was going to turn right onto Pitcher's Way. Two bicyclists were crossing on the shared use path, and were hit as MV1 attempted the right turn.

Crash Data Summary Table

Route 28 at Pitcher's Way, Barnstable, MA
2011-2019

Crash Diagram Ref #	Crash Date mm/dd/yy	Crash Day	Time of Day hh:mm	Manner of Collision Type	Light Condition Type	Weather Condition Type	Road Surface Type	Driver Contributing Code Type	Driver Distracted By Type	Injury Severity Type	D1 Age #	D2 Age #	D3 Age #	D4 Age #	Comments
16	08/18/17	Friday	1:44 PM	Rear-end	Daylight	Rain	Wet	Other improper action	Passenger	Non-fatal injury	53	53			MV1 and MV2 were traveling eastward on Route 28 and had just passed Pitcher's Way when MV1, in front, stopped abruptly for heavy traffic. MV2 failed to stop in time and rear-ended MV1, possibly as a result of a water bottle near the brake that impeded him from applying the brake.
17	12/27/17	Wednesday	2:19 PM	Rear-end	Daylight	Clear	Dry	Unknown		No Injury	50	29			Two drivers were moving east on Route 28 in advance of Pitcher's Way. MV1, who was in front, was going straight through the intersection. MV2 was preparing a left turn; she attempted to slow down but accidentally hit the gas, leading to a rear-end near the back-rear section of MV1.
18	1/3/18	Wednesday	2:03 PM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings		No Injury	47	31			MV1 was traveling west on Route 28, while MV2 was traveling south on Pitcher's Way. MV2 had a green light and MV1 thought he had a green light (but did not, leading to a T-bone crash).
19	01/18/18	Thursday	5:00 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Followed too closely	Not distracted	No Injury	18	37	55		3 car crash that occurred on Route 28 just west of Pitcher's Way. All vehicles were moving westbound. MV3 was in front followed by MV2 and MV1. MV1 saw traffic in front slowed, but her "foot slipped" and she hit MV2, which then hit MV3. MV1 was likely traveling too closely to cars in front. A truck had pulled out in front of the vehicles prior to the crash occurring.
20	03/03/18	Saturday	2:26 PM	Angle	Daylight	Severe crosswinds	Wet	Failed to yield right of way	Not distracted	No Injury	77	23			MV1 was traveling east on Falmouth Road and MV2 was traveling north on Pitcher's Way. The traffic light was malfunctioning, due to a storm. MV2 entered the intersection, leading to a T-bone crash.
21	04/03/18	Tuesday	6:36 AM	Single vehicle crash	Daylight	Clear	Dry	Other improper action	Not distracted	No Injury	25	54			MV1 was traveling north on Pitcher's Way in the left lane at the intersection with Route 28. A vehicle in front of MV1 put their flasher on, leading to MV1 to attempt to go around them. In so doing, MV1 nearly collided with MV2, who was also going north on Pitcher's Way in the right lane at the intersection. MV2 was run off the road and hit the curb, but the vehicles didn't touch.
22	04/18/18	Wednesday	11:22 AM	Angle	Daylight	Clear	Dry	Unknown		No Injury	32	35			MV1 was traveling north on Pitcher's Way at the intersection with Route 28. MV2 was traveling east on Route 28. Both drivers claimed that they had a green light. The crash type was a T-bone (angle) crash.
23	04/30/18	Monday	7:31 PM	Angle	Dusk	Cloudy	Dry	Inattention		No Injury	86	21			MV1 was moving north on Pitcher's Way, attempting to make a left onto Route 28, while MV2 was on Pitcher's Way crossing the intersection and heading south. When the light turned yellow, both vehicles attempted to move through the intersection, leading to an angle crash.
24	05/04/18	Friday	2:39 PM	Rear-end	Daylight	Clear	Dry	Unknown		Non-fatal injury	18	66			MV 1 and MV2 were traveling east on Route 28 east of Pitcher's Way (approaching Bearses Way). Traffic had backed up there. MV2, who was in front, slowed to a stop. MV 1 accelerated and drifted to the right, rear-ending the vehicle in front.
25	05/16/18	Wednesday	10:10 PM	Angle	Dark - lighted roadway	Cloudy	Dry	Other improper action		No Injury	28	20			MV 1 (northbound) was attempting a left turn on Pitcher's Way. MV 1 had a green light and began to turn left. MV2 was traveling in a southerly direction and also had a green light and attempted a right turn. The two vehicles collided.
26	05/28/18	Monday	8:54 PM	Head on	Dark - lighted roadway	Clear	Dry	Inattention		Non-fatal injury	29	68			MV2 was attempting a right turn onto Route 28 to head eastbound. MV2 struck the front of MV1 which was waiting at a red light on Route 28 heading westbound. MV1 was preparing to take a left turn onto Pitcher's Way. MV2 took a wide turn causing the collision with MV1. Operator of MV1 was taken to CCH for injuries.
28	06/01/18	Friday	5:21 AM	Angle	Daylight	Clear	Dry	Unknown		Non-fatal injury	57	22			MV 1 was moving northbound (eastbound) on Route 28. MV 2 was going northbound on Pitcher's Way. MV 1 ran a red light and collided with MV 2 (angle crash).
29	07/11/18	Wednesday	7:41 AM	Single vehicle crash	Daylight	Clear	Dry	Unknown		Non-fatal injury	60				MV 1 was on Pitcher's Way (NB) attempting a right turn on a red light onto Route 28. A bicyclist was traveling west when they collided.
30	09/06/18	Thursday	1:33 PM	Angle	Daylight	Clear	Dry	Unknown	Not distracted	Non-fatal injury	50	34			MV 2 was attempting a left turn from Pitcher's Way onto Route 28 (facing northbound). MV 1 was likely attempting a left turn onto Pitcher's Way from Route 28 (facing east). MV 1 likely ran a red light and collided with MV 2.
31	09/14/18	Friday	6:13 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	Unknown	No Injury	55	27			MV 1 was on Pitcher's Way attempting to make a left onto Route 28 (facing northbound). MV2 was moving southbound on Pitcher's Way, attempting to cross Route 28. Both cars had a green light and they collided in an angle crash after MV 1 did not yield.
32	09/24/18	Monday	4:51 PM	Angle	Daylight	Clear	Dry	Unknown	Not distracted	Non-fatal injury	62	84	39		3 car collision. MV 1 was traveling south on Pitcher's Way, crossing Route 28. MV 2 was traveling north on Pitcher's Way, attempting to turn left onto Route 28. MV 2 collided with the rear of MV 1, causing MV 1 to spin around and hit a north-facing car (MV 3) that was waiting at the intersection.
33	10/29/18	Monday	10:21 AM	Angle	Daylight	Rain	Wet	Disregarded traffic signs, signals, road markings		Non-fatal injury	49	70			MV1 (moving east on Route 28 at Pitcher's Way) collided with southbound-moving MV 2 on Pitcher's Way at Route 28. MV 1 went through a red light.
34	12/07/18	Friday	6:40 AM	Rear-end	Daylight	Cloudy	Ice	No improper driving	Not distracted	No Injury	19	66			Road was icy. MV 2 and MV 1 were traveling northbound at 766 Pitcher's Way (just south of Route 28). They were stopping because of a red light ahead. MV 1 lost control, couldn't stop, and slid into MV 2 in front.
35	12/23/18	Sunday	6:28 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	Manually operating an electronic device (texting, typing, dialing)	No Injury	19	46			MV 1 was traveling east on Route 28 and MV 2 was traveling west on Route 28. MV 1 attempted to turn left onto Pitcher's Way and struck MV 2's front left side. MV1 was using GPS on his cell phone for the first time.
36	01/22/19	Tuesday	11:51 AM	Rear-end	Daylight	Clear	Dry	Inattention	Other activity (searching, eating, personal hygiene, etc.)	No Injury	50	41			MV 2 and MV 1 were both traveling eastward on Route 28, with MV 2 in front. (Unsure of the exact location; whether crash was east or west of intersection. MV 1 dropped something in her vehicle, attempted to pick it up, and didn't see MV 2 stopping ahead, leading to a rear-end collision.

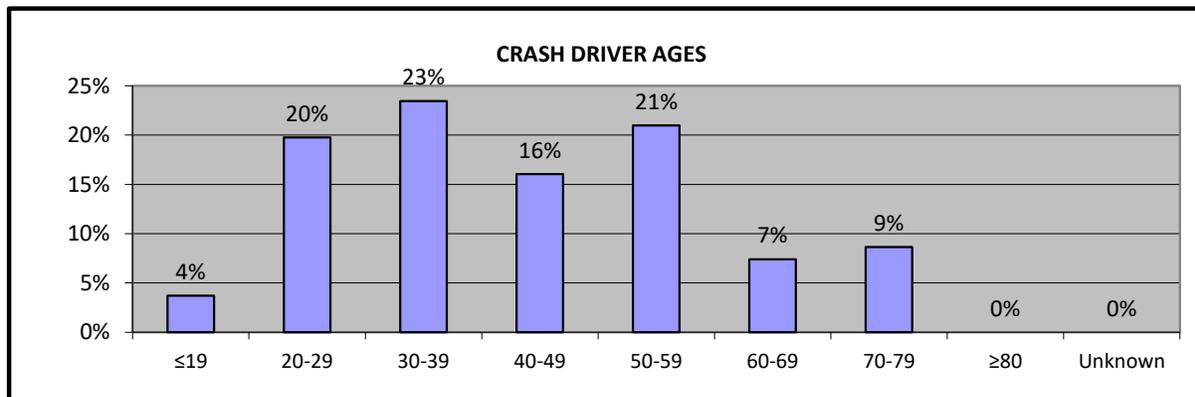
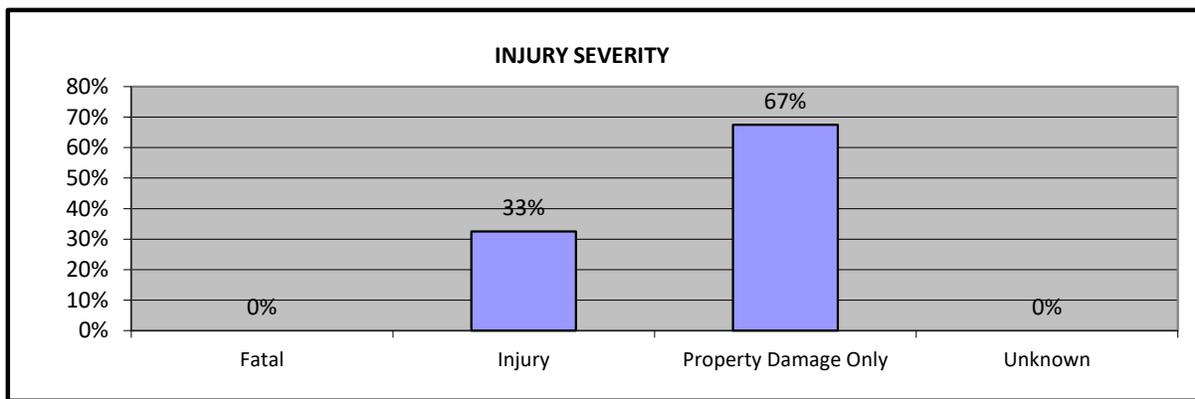
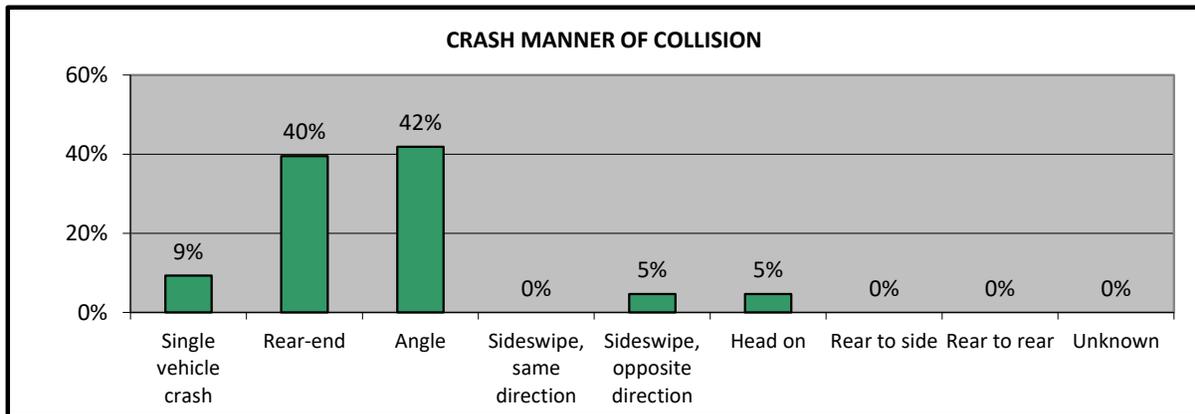
Crash Data Summary Table

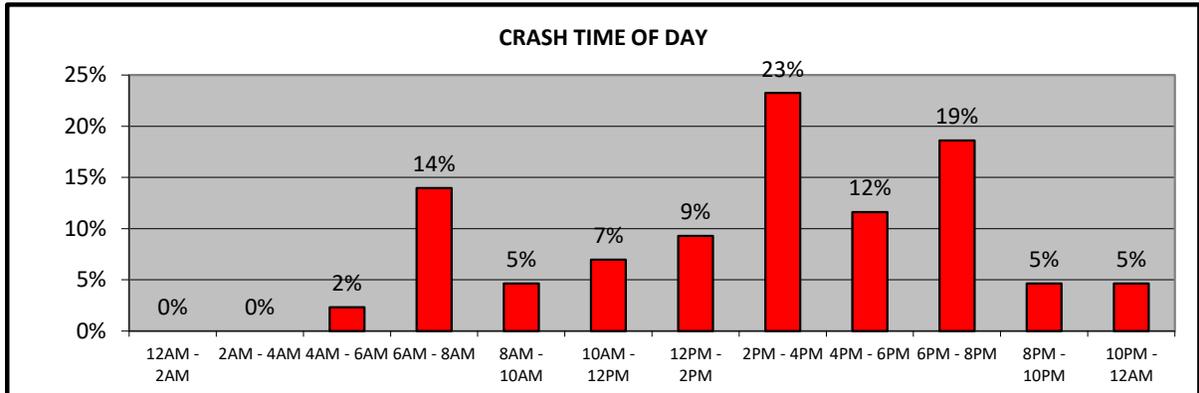
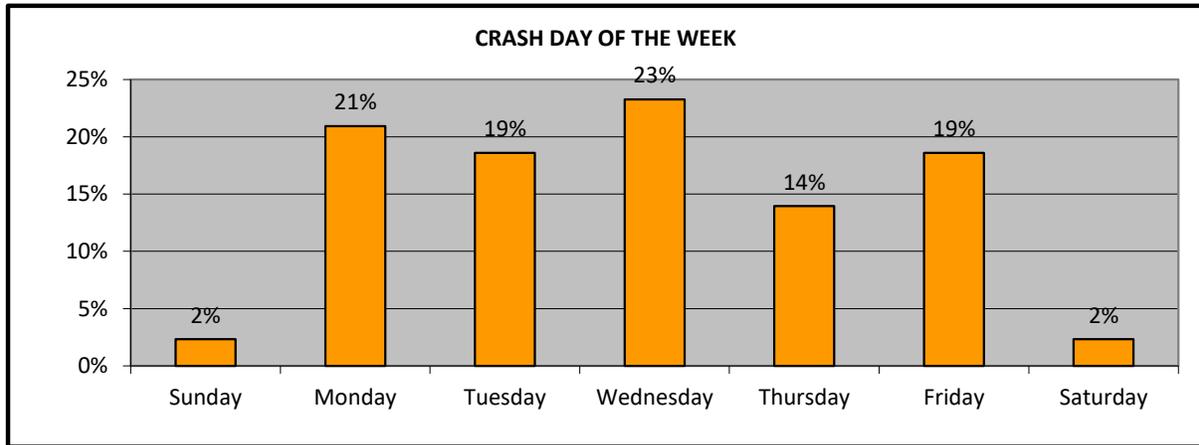
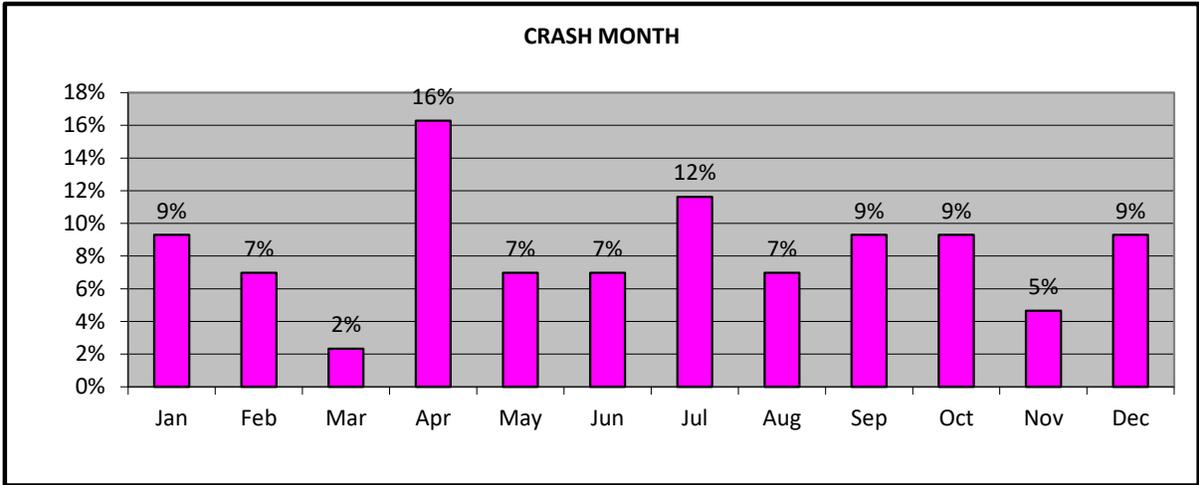
Route 28 at Pitcher's Way, Barnstable, MA
2011-2019

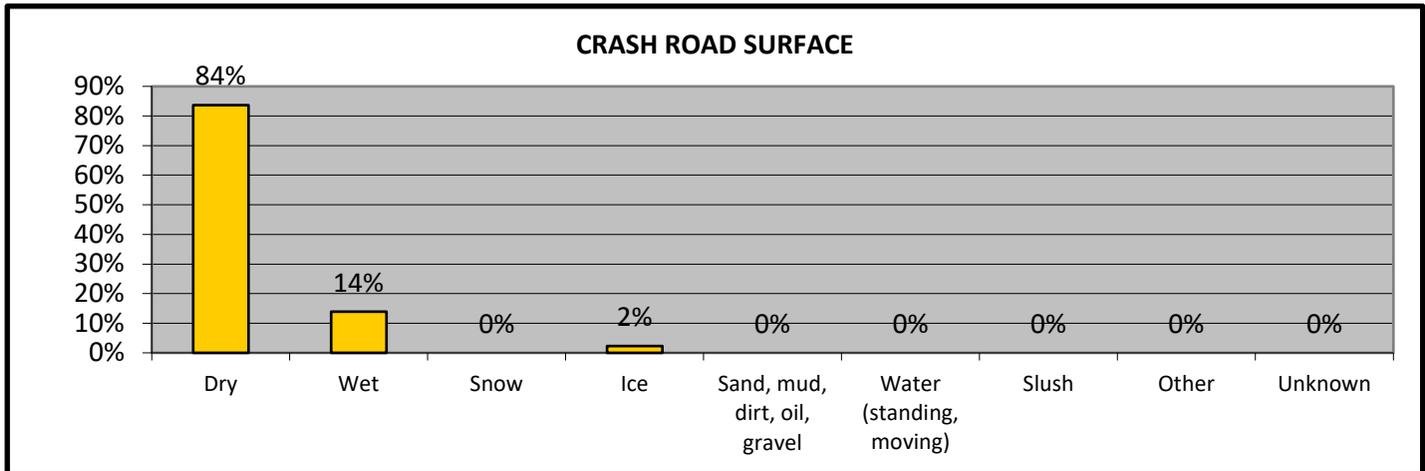
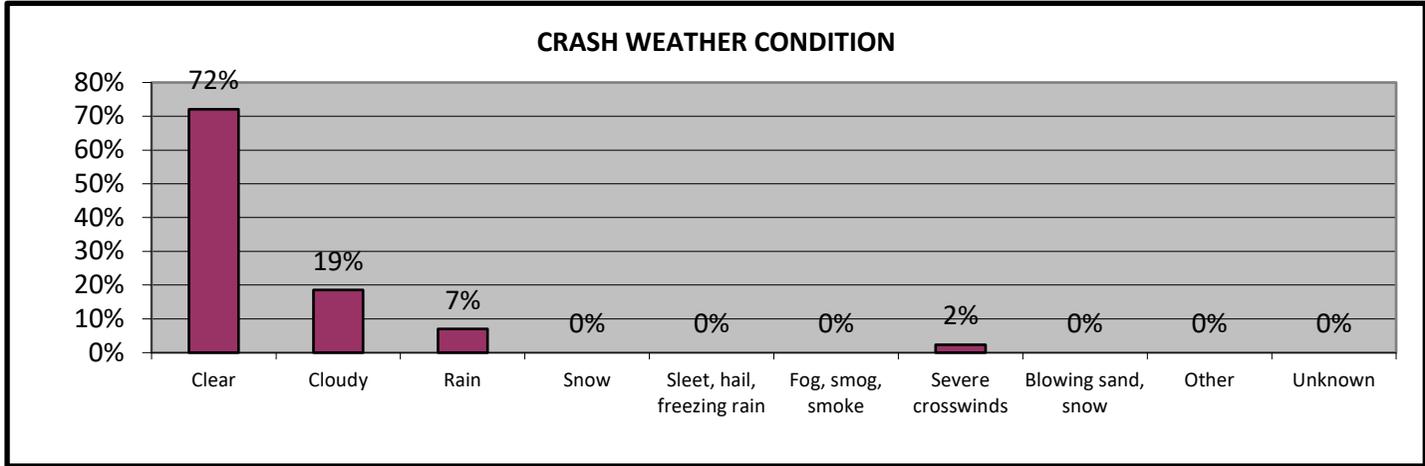
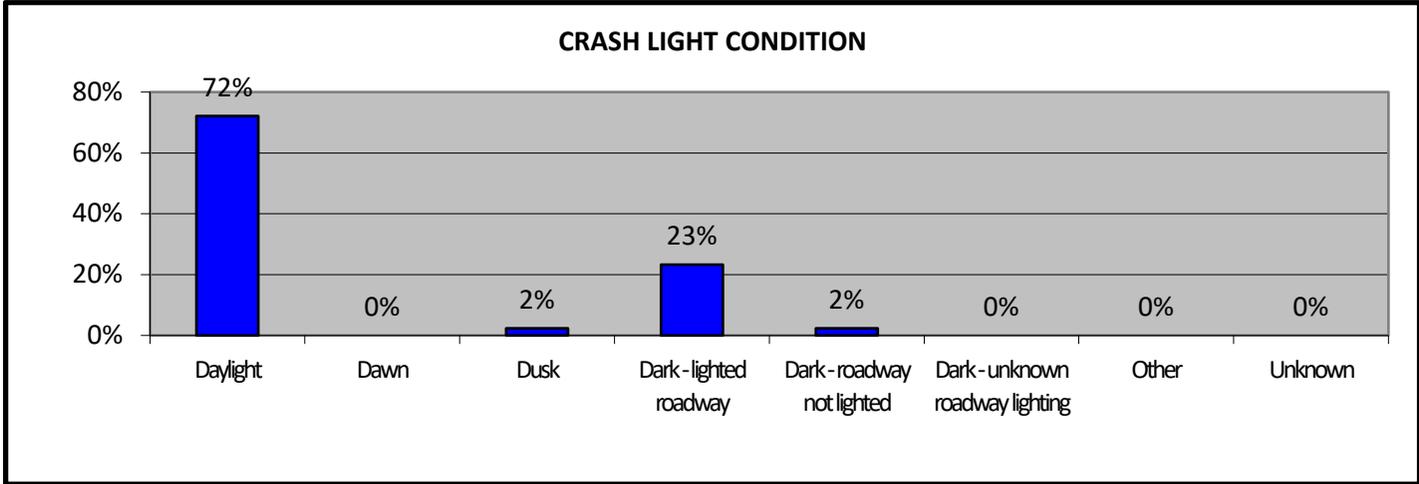
Crash Diagram Ref #	Crash Date mm/dd/yy	Crash Day Day	Time of Day hh:mm	Manner of Collision Type	Light Condition Type	Weather Condition Type	Road Surface Type	Driver Contributing Code Type	Driver Distracted By Type	Injury Severity Type	D1 Age #	D2 Age #	D3 Age #	D4 Age #	Comments
37	02/14/19	Thursday	7:05 PM	Head on	Dark - lighted roadway	Clear	Dry	Failed to yield right of way		Non-fatal injury	68	26			MV 1 was traveling north and MV 2 was traveling south on Pitcher's Way at the intersection with Route 28. MV 2 was attempting a left turn and did not yield to MV 1, who was trying to go straight.
38	04/08/19	Monday	7:51 PM	Angle	Dark - roadway not lighted	Cloudy	Wet	Disregarded traffic signs, signals, road markings	Not distracted	No Injury	49	35			MV 2 was traveling south on Pitcher's when he was struck by MV1, who was traveling east on Route 28. MV2 stated their light turned green, while MV 1 claimed that the light was still yellow when they were traveling through the intersection. Operator of MV1 was cited for failure to stop for red light.
39	04/26/19	Friday	3:24 PM	Sideswipe, opposite direction	Daylight	Cloudy	Wet	Inattention		Non-fatal injury	67	41			MV 1 was traveling west on Route 28 and was preparing to turn left onto Pitcher's Way. MV 2 was traveling east on Route 28 and was also preparing to turn left. But vehicles did not use care and hit one another.
40	06/24/19	Monday	6:56 AM	Angle	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings	Not distracted	No Injury	31	65			MV 1 was traveling east on Route 28, while the MV 2 was traveling north on Pitcher's Way. Due partially to glare, MV 1 was unable to see the red traffic light, and MV 1 hit the side/back area of MV 2.
41	07/03/19	Wednesday	3:51 PM	Rear-end	Daylight	Clear	Dry	Inattention		Non-fatal injury	19	19	50		MV 3, MV 2, and MV 1 were traveling west in advance of the intersection with Pitcher's Way, with MV 3 ahead of MV 2 and MV 1. As MV 3 and MV 2 slowed and stopped because of traffic ahead, MV 1 struck MV 2 from behind, with the collision causing MV 2 to in turn rear-end MV 3.
42	07/10/19	Wednesday	9:43 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	Not distracted	No Injury	19	19			MV 1 was traveling east on Route 28, while MV 2 was traveling west on Route 28. MV 2 attempted to turn left at Pitcher's Way and collided with MV 1.
43	07/18/19	Thursday	12:48 PM	Rear-end	Daylight	Cloudy	Dry	Inattention		No Injury	48	75			MV 2 and MV 1 were both traveling east on Route 28, in advance of Pitcher's Way. MV 2 was in front and was in the left hand lane, preparing a turn. MV 1, from behind, hit MV 2 in the rear.
44	07/30/19	Tuesday	4:42 PM	Rear-end	Daylight	Clear	Dry	No improper driving	Not distracted	No Injury	63	Unkown			MV 1 and MV 2 were traveling northward on Pitcher's Way at Route 28. MV 1 was waiting for the light to turn when she was rear-ended by MV 2. MV 2 subsequently turned right onto Route 28 (hit and run).
45	8/19/19	Monday	12:34 PM	Rear-end	Daylight	Clear	Dry	Unknown	Unknown	No Injury	64	28			MV1 and MV2 were traveling westbound on Route 28 approaching the Pitchers Way intersection when MV1 rear ended MV2 after MV2 slowed for other traffic.
46	09/10/19	Tuesday	2:17 PM	Single vehicle crash	Daylight	Clear	Dry	Glare	External distraction (outside the vehicle)	Non-fatal injury	82				MV 1 was traveling southward on Pitcher's Way, approaching Route 28. As the vehicle approached the intersection, the light turned from yellow to red, but MV 1 went through and collided with a pedestrian in the shared use path/crosswalk.
47	10/08/19	Tuesday	3:51 PM	Rear-end	Daylight	Clear	Dry	Inattention		No Injury	42	71			MV 2 was traveling west on Route 28 approaching the intersection with Pitcher's Way. MV 1, who was behind MV 2, did not realize that MV 2 was slowing down because of traffic ahead, which led to a rear-end collision.
48	10/08/19	Tuesday	6:58 PM	Angle	Dark - lighted roadway	Cloudy	Dry	Disregarded traffic signs, signals, road markings		No Injury	60	65			MV 1 was traveling north on Pitcher's Way and was stopped for a red light. When the light turned green, they entered the intersection. MV 2, traveling west on Route 28, followed another car through the intersection and appeared to run a red light, leading to a collision.
49	10/28/19	Monday	8:37 AM	Rear-end	Daylight	Clear	Dry	Unknown		No Injury	41	49			MV 2 was sitting on Route 28 going westward in advance of the intersection with Pitcher's Way. MV 1, traveling behind MV 2, did not see MV2 stopped/braking, leading to a rear-end collision.
50	11/05/19	Tuesday	7:01 PM	Sideswipe, opposite direction	Dark - lighted roadway	Rain	Wet	Visibility obstructed	Other activity (searching, eating, personal hygiene, etc.)	No Injury	20	35	45		MV 2 was stopped behind a stop line going west (there was a road closure ahead because of another crash). Another vehicle sped past him and sideswiped him. Other vehicle fled the scene.
51	11/05/19	Tuesday	5:15 PM	Angle	Daylight	Clear	Dry	No improper driving	Not distracted	No injury	37	35	45		MV 1 was traveling north on Pitcher's Way, approaching the intersection with Route 28 (MV 1 had the green light). MV 2 was traveling westbound, preparing to make a right onto Pitcher's Way from Route 28. MV2 turned right on red and struck MV 1 on the right side.
52	12/26/19	Thursday	9:55 AM	Angle	Daylight	Cloudy	Dry	Inattention	Not distracted	Non-fatal injury	40	18	45		MV 1 was traveling west on Route 28 in advance of the intersection with Pitcher's Way; the light turned red. MV 1 did not stop. MV2, going northbound, was hit in the front right side.

Crash Data Summary Charts

Route 28 at Pitcher's Way, Barnstable, MA







Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Pitchers Way
Town: Barnstable
Counted by: MW
Counters: 6

File Name : 2811AM_08202020
Site Code : 00002811
Start Date : 8/20/2020
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Pitchers Way From North				Rt 28 From East				Pitchers Way From South				Rt 28 From West				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00 AM	7	7	12	0	17	111	1	0	5	17	17	0	14	111	6	0	325
07:15 AM	5	10	12	0	13	125	2	0	8	14	21	0	12	109	12	0	343
07:30 AM	8	19	11	0	8	121	4	0	15	25	24	0	9	171	11	0	426
07:45 AM	2	11	13	0	10	133	1	0	15	21	23	0	17	194	4	0	444
Total	22	47	48	0	48	490	8	0	43	77	85	0	52	585	33	0	1538
08:00 AM	1	15	17	0	12	121	3	0	9	14	26	0	17	189	5	1	430
08:15 AM	5	12	12	0	10	133	3	0	5	17	10	0	12	133	3	0	355
08:30 AM	3	17	11	0	11	114	1	0	6	15	16	0	14	165	9	0	382
08:45 AM	2	21	12	0	4	112	3	0	8	27	19	0	15	183	11	0	417
Total	11	65	52	0	37	480	10	0	28	73	71	0	58	670	28	1	1584 ←1583
Grand Total	33	112	100	0	85	970	18	0	71	150	156	0	110	1255	61	1	3122
Apprch %	13.5	45.7	40.8	0	7.9	90.4	1.7	0	18.8	39.8	41.4	0	7.7	87.9	4.3	0.1	
Total %	1.1	3.6	3.2	0	2.7	31.1	0.6	0	2.3	4.8	5	0	3.5	40.2	2	0	
Cars	24	105	89	0	79	892	17	0	69	143	153	0	103	1202	61	0	2937
% Cars	72.7	93.8	89	0	92.9	92	94.4	0	97.2	95.3	98.1	0	93.6	95.8	100	0	94.1
Trucks	9	7	11	0	6	78	1	0	2	7	3	0	7	53	0	1	185
% Trucks	27.3	6.2	11	0	7.1	8	5.6	0	2.8	4.7	1.9	0	6.4	4.2	0	100	5.9

Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	8	19	11	0	38	8	121	4	0	133	15	25	24	0	64	9	171	11	0	191	426
07:45 AM	2	11	13	0	26	10	133	1	0	144	15	21	23	0	59	17	194	4	0	215	444
08:00 AM	1	15	17	0	33	12	121	3	0	136	9	14	26	0	49	17	189	5	1	212	430
08:15 AM	5	12	12	0	29	10	133	3	0	146	5	17	10	0	32	12	133	3	0	148	355
Total Volume	16	57	53	0	126	40	508	11	0	559	44	77	83	0	204	55	687	23	1	766	1655
% App. Total	12.7	45.2	42.1	0		7.2	90.9	2	0		21.6	37.7	40.7	0		7.2	89.7	3	0.1		
PHF	.500	.750	.779	.000	.829	.833	.955	.688	.000	.957	.733	.770	.798	.000	.797	.809	.885	.523	.250	.891	.932
Cars	10	53	45	0	108	35	465	10	0	510	43	73	81	0	197	49	656	23	0	728	1543
% Cars	62.5	93.0	84.9	0	85.7	87.5	91.5	90.9	0	91.2	97.7	94.8	97.6	0	96.6	89.1	95.5	100	0	95.0	93.2
Trucks	6	4	8	0	18	5	43	1	0	49	1	4	2	0	7	6	31	0	1	38	112
% Trucks	37.5	7.0	15.1	0	14.3	12.5	8.5	9.1	0	8.8	2.3	5.2	2.4	0	3.4	10.9	4.5	0	100	5.0	6.8

Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Pitchers Way
Town: Barnstable
Counted by: MW
Counters: 6

File Name : 2811AM_08202020
Site Code : 00002811
Start Date : 8/20/2020
Page No : 1

Groups Printed- Cars

Start Time	Pitchers Way From North				Rt 28 From East				Pitchers Way From South				Rt 28 From West				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00 AM	4	7	11	0	17	104	1	0	5	16	16	0	14	108	6	0	309
07:15 AM	5	10	11	0	13	116	2	0	7	13	21	0	12	102	12	0	324
07:30 AM	5	15	8	0	6	108	3	0	14	25	24	0	7	158	11	0	384
07:45 AM	1	11	11	0	10	123	1	0	15	20	23	0	16	188	4	0	423
Total	15	43	41	0	46	451	7	0	41	74	84	0	49	556	33	0	1440
08:00 AM	1	15	15	0	10	109	3	0	9	12	25	0	14	179	5	0	397
08:15 AM	3	12	11	0	9	125	3	0	5	16	9	0	12	131	3	0	339
08:30 AM	3	15	10	0	10	106	1	0	6	14	16	0	13	158	9	0	361
08:45 AM	2	20	12	0	4	101	3	0	8	27	19	0	15	178	11	0	400
Total	9	62	48	0	33	441	10	0	28	69	69	0	54	646	28	0	1497
Grand Total	24	105	89	0	79	892	17	0	69	143	153	0	103	1202	61	0	2937
Apprch %	11	48.2	40.8	0	8	90.3	1.7	0	18.9	39.2	41.9	0	7.5	88	4.5	0	
Total %	0.8	3.6	3	0	2.7	30.4	0.6	0	2.3	4.9	5.2	0	3.5	40.9	2.1	0	

Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	5	15	8	0	28	6	108	3	0	117	14	25	24	0	63	7	158	11	0	176	384
07:45 AM	1	11	11	0	23	10	123	1	0	134	15	20	23	0	58	16	188	4	0	208	423
08:00 AM	1	15	15	0	31	10	109	3	0	122	9	12	25	0	46	14	179	5	0	198	397
08:15 AM	3	12	11	0	26	9	125	3	0	137	5	16	9	0	30	12	131	3	0	146	339
Total Volume	10	53	45	0	108	35	465	10	0	510	43	73	81	0	197	49	656	23	0	728	1543
% App. Total	9.3	49.1	41.7	0		6.9	91.2	2	0		21.8	37.1	41.1	0		6.7	90.1	3.2	0		
PHF	.500	.883	.750	.000	.871	.875	.930	.833	.000	.931	.717	.730	.810	.000	.782	.766	.872	.523	.000	.875	.912

Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Pitchers Way
Town: Barnstable
Counted by: MW
Counters: 6

File Name : 2811AM_08202020
Site Code : 00002811
Start Date : 8/20/2020
Page No : 1

Groups Printed- Trucks

Start Time	Pitchers Way From North				Rt 28 From East				Pitchers Way From South				Rt 28 From West				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00 AM	3	0	1	0	0	7	0	0	0	1	1	0	0	3	0	0	16
07:15 AM	0	0	1	0	0	9	0	0	1	1	0	0	0	7	0	0	19
07:30 AM	3	4	3	0	2	13	1	0	1	0	0	0	2	13	0	0	42
07:45 AM	1	0	2	0	0	10	0	0	0	1	0	0	1	6	0	0	21
Total	7	4	7	0	2	39	1	0	2	3	1	0	3	29	0	0	98
08:00 AM	0	0	2	0	2	12	0	0	0	2	1	0	3	10	0	1	33
08:15 AM	2	0	1	0	1	8	0	0	0	1	1	0	0	2	0	0	16
08:30 AM	0	2	1	0	1	8	0	0	0	1	0	0	1	7	0	0	21
08:45 AM	0	1	0	0	0	11	0	0	0	0	0	0	0	5	0	0	17
Total	2	3	4	0	4	39	0	0	0	4	2	0	4	24	0	1	87
Grand Total	9	7	11	0	6	78	1	0	2	7	3	0	7	53	0	1	185
Apprch %	33.3	25.9	40.7	0	7.1	91.8	1.2	0	16.7	58.3	25	0	11.5	86.9	0	1.6	
Total %	4.9	3.8	5.9	0	3.2	42.2	0.5	0	1.1	3.8	1.6	0	3.8	28.6	0	0.5	

Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	0	1	0	1	0	9	0	0	9	1	1	0	0	2	0	7	0	0	7	19
07:30 AM	3	4	3	0	10	2	13	1	0	16	1	0	0	0	1	2	13	0	0	15	42
07:45 AM	1	0	2	0	3	0	10	0	0	10	0	1	0	0	1	1	6	0	0	7	21
08:00 AM	0	0	2	0	2	2	12	0	0	14	0	2	1	0	3	3	10	0	1	14	33
Total Volume	4	4	8	0	16	4	44	1	0	49	2	4	1	0	7	6	36	0	1	43	115
% App. Total	25	25	50	0		8.2	89.8	2	0		28.6	57.1	14.3	0		14	83.7	0	2.3		
PHF	.333	.250	.667	.000	.400	.500	.846	.250	.000	.766	.500	.500	.250	.000	.583	.500	.692	.000	.250	.717	.685

Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Pitchers Way
Town: Barnstable
Counted by: MW
Counters: 6

File Name : 2811AM_08202020
Site Code : 00002811
Start Date : 8/20/2020
Page No : 1

Groups Printed- Bikes

Start Time	Pitchers Way From North				Rt 28 From East				Pitchers Way From South				Rt 28 From West				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
*** BREAK ***																	
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
*** BREAK ***																	
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:45 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Total	0	1	0	0	0	2	0	0	0	0	0	0	0	4	0	0	7
Grand Total	0	1	0	0	0	2	0	0	0	1	0	0	0	4	0	0	8
Apprch %	0	100	0	0	0	100	0	0	0	100	0	0	0	100	0	0	
Total %	0	12.5	0	0	0	25	0	0	0	12.5	0	0	0	50	0	0	

Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	7
% App. Total	0	100	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.250	.000	.000	.250	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.583

Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Pitchers Way
Town: Barnstable
Counted by: MW
Counters: 6

File Name : 2811PM_08172020
Site Code : 00002811
Start Date : 8/17/2020
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Pitchers Way From North				Rt 28 From East				Pitchers Way From South				Rt 28 From West				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
04:00 PM	3	34	15	0	16	195	3	0	9	24	18	0	9	155	12	0	493
04:15 PM	0	38	14	0	25	195	6	0	7	26	19	1	18	165	7	0	521
04:30 PM	7	23	27	0	27	185	2	0	12	21	28	0	18	152	8	0	510
04:45 PM	1	26	22	0	28	186	1	0	14	24	26	0	10	152	11	0	501
Total	11	121	78	0	96	761	12	0	42	95	91	1	55	624	38	0	2025 #2024
05:00 PM	2	43	21	0	25	191	4	0	10	29	12	0	4	162	8	0	511
05:15 PM	3	41	16	0	21	204	9	0	11	22	16	0	12	154	19	0	528
05:30 PM	2	38	20	0	21	159	4	0	12	17	15	0	11	154	12	0	465
05:45 PM	4	28	12	0	20	151	4	0	10	25	19	0	10	163	12	0	458
Total	11	150	69	0	87	705	21	0	43	93	62	0	37	633	51	0	1962
Grand Total	22	271	147	0	183	1466	33	0	85	188	153	1	92	1257	89	0	3987
Apprch %	5	61.6	33.4	0	10.9	87.2	2	0	19.9	44	35.8	0.2	6.4	87.4	6.2	0	
Total %	0.6	6.8	3.7	0	4.6	36.8	0.8	0	2.1	4.7	3.8	0	2.3	31.5	2.2	0	
Cars	22	267	144	0	180	1442	31	0	82	183	151	1	91	1223	86	0	3903
% Cars	100	98.5	98	0	98.4	98.4	93.9	0	96.5	97.3	98.7	100	98.9	97.3	96.6	0	97.9
Trucks	0	4	3	0	3	24	2	0	3	5	2	0	1	34	3	0	84
% Trucks	0	1.5	2	0	1.6	1.6	6.1	0	3.5	2.7	1.3	0	1.1	2.7	3.4	0	2.1

Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App.Total	Left	Thru	Right	Peds	App.Total	Left	Thru	Right	Peds	App.Total	Left	Thru	Right	Peds	App.Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	7	23	27	0	57	27	185	2	0	214	12	21	28	0	61	18	152	8	0	178	510
04:45 PM	1	26	22	0	49	28	186	1	0	215	14	24	26	0	64	10	152	11	0	173	501
05:00 PM	2	43	21	0	66	25	191	4	0	220	10	29	12	0	51	4	162	8	0	174	511
05:15 PM	3	41	16	0	60	21	204	9	0	234	11	22	16	0	49	12	154	19	0	185	528
Total Volume	13	133	86	0	232	101	766	16	0	883	47	96	82	0	225	44	620	46	0	710	2050
% App. Total	5.6	57.3	37.1	0		11.4	86.7	1.8	0		20.9	42.7	36.4	0		6.2	87.3	6.5	0		
PHF	.464	.773	.796	.000	.879	.902	.939	.444	.000	.943	.839	.828	.732	.000	.879	.611	.957	.605	.000	.959	.971
Cars	13	130	85	0	228	98	759	15	0	872	46	94	80	0	220	43	607	44	0	694	2014
% Cars	100	97.7	98.8	0	98.3	97.0	99.1	93.8	0	98.8	97.9	97.9	97.6	0	97.8	97.7	97.9	95.7	0	97.7	98.2
Trucks	0	3	1	0	4	3	7	1	0	11	1	2	2	0	5	1	13	2	0	16	36
% Trucks	0	2.3	1.2	0	1.7	3.0	0.9	6.3	0	1.2	2.1	2.1	2.4	0	2.2	2.3	2.1	4.3	0	2.3	1.8

Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Pitchers Way
Town: Barnstable
Counted by: MW
Counters: 6

File Name : 2811PM_08172020
Site Code : 00002811
Start Date : 8/17/2020
Page No : 1

Groups Printed- Cars

Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
04:00 PM	3	34	15	0		16	187	3	0		9	23	18	0		9	150	12	0		479
04:15 PM	0	37	13	0		25	193	5	0		5	24	19	1		18	159	6	0		505
04:30 PM	7	23	27	0		26	183	2	0		12	21	27	0		18	151	8	0		505
04:45 PM	1	26	22	0		28	183	1	0		14	23	26	0		9	150	11	0		494
Total	11	120	77	0		95	746	11	0		40	91	90	1		54	610	37	0		1983
05:00 PM	2	41	21	0		24	190	4	0		9	29	12	0		4	157	8	0		501
05:15 PM	3	40	15	0		20	203	8	0		11	21	15	0		12	149	17	0		514
05:30 PM	2	38	20	0		21	154	4	0		12	17	15	0		11	147	12	0		453
05:45 PM	4	28	11	0		20	149	4	0		10	25	19	0		10	160	12	0		452
Total	11	147	67	0		85	696	20	0		42	92	61	0		37	613	49	0		1920
Grand Total	22	267	144	0		180	1442	31	0		82	183	151	1		91	1223	86	0		3903
Apprch %	5.1	61.7	33.3	0		10.9	87.2	1.9	0		19.7	43.9	36.2	0.2		6.5	87.4	6.1	0		
Total %	0.6	6.8	3.7	0		4.6	36.9	0.8	0		2.1	4.7	3.9	0		2.3	31.3	2.2	0		

Start Time	Pitchers Way From North						Rt 28 From East						Pitchers Way From South						Rt 28 From West						Int. Total
	Left	Thru	Right	Peds	App.Total		Left	Thru	Right	Peds	App.Total		Left	Thru	Right	Peds	App.Total		Left	Thru	Right	Peds	App.Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:30 PM																									
04:30 PM	7	23	27	0	57	26	183	2	0	211	12	21	27	0	60	18	151	8	0	177				505	
04:45 PM	1	26	22	0	49	28	183	1	0	212	14	23	26	0	63	9	150	11	0	170				494	
05:00 PM	2	41	21	0	64	24	190	4	0	218	9	29	12	0	50	4	157	8	0	169				501	
05:15 PM	3	40	15	0	58	20	203	8	0	231	11	21	15	0	47	12	149	17	0	178				514	
Total Volume	13	130	85	0	228	98	759	15	0	872	46	94	80	0	220	43	607	44	0	694				2014	
% App. Total	5.7	57	37.3	0		11.2	87	1.7	0		20.9	42.7	36.4	0		6.2	87.5	6.3	0						
PHF	.464	.793	.787	.000	.891	.875	.935	.469	.000	.944	.821	.810	.741	.000	.873	.597	.967	.647	.000	.975				.980	

Cape Cod Commission

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Counters: 6

File Name : 2811PM_08172020
Site Code : 00002811
Start Date : 8/17/2020
Page No : 1

Groups Printed- Trucks

Start Time	Pitchers Way From North				Rt 28 From East				Pitchers Way From South				Rt 28 From West				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
04:00 PM	0	0	0	0	0	8	0	0	0	1	0	0	0	5	0	0	14
04:15 PM	0	1	1	0	0	2	1	0	2	2	0	0	0	6	1	0	16
04:30 PM	0	0	0	0	1	2	0	0	0	0	1	0	0	1	0	0	5
04:45 PM	0	0	0	0	0	3	0	0	0	1	0	0	1	2	0	0	7
Total	0	1	1	0	1	15	1	0	2	4	1	0	1	14	1	0	42
05:00 PM	0	2	0	0	1	1	0	0	1	0	0	0	0	5	0	0	10
05:15 PM	0	1	1	0	1	1	1	0	0	1	1	0	0	5	2	0	14
05:30 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	7	0	0	12
05:45 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	6
Total	0	3	2	0	2	9	1	0	1	1	1	0	0	20	2	0	42
Grand Total	0	4	3	0	3	24	2	0	3	5	2	0	1	34	3	0	84
Apprch %	0	57.1	42.9	0	10.3	82.8	6.9	0	30	50	20	0	2.6	89.5	7.9	0	
Total %	0	4.8	3.6	0	3.6	28.6	2.4	0	3.6	6	2.4	0	1.2	40.5	3.6	0	

Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	1	2	0	0	3	7
05:00 PM	0	2	0	0	2	1	1	0	0	2	1	0	0	0	1	0	5	0	0	5	10
05:15 PM	0	1	1	0	2	1	1	1	0	3	0	1	1	0	2	0	5	2	0	7	14
05:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7	12
Total Volume	0	3	1	0	4	2	10	1	0	13	1	2	1	0	4	1	19	2	0	22	43
% App. Total	0	75	25	0		15.4	76.9	7.7	0		25	50	25	0		4.5	86.4	9.1	0		
PHF	.000	.375	.250	.000	.500	.500	.500	.250	.000	.650	.250	.500	.250	.000	.500	.250	.679	.250	.000	.786	.768

Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Pitchers Way
Town: Barnstable
Counted by: MW
Counters: 6

File Name : 2811PM_08172020
Site Code : 00002811
Start Date : 8/17/2020
Page No : 1

Groups Printed- Bikes

Start Time	Pitchers Way From North				Rt 28 From East				Pitchers Way From South				Rt 28 From West				Int. Total	
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
04:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
*** BREAK ***																		
04:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***																		
Total	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
05:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																		
Total	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	4
Grand Total	0	1	0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	8
Apprch %	0	100	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	
Total %	0	12.5	0	0	0	37.5	0	0	0	0	0	0	0	50	0	0	0	

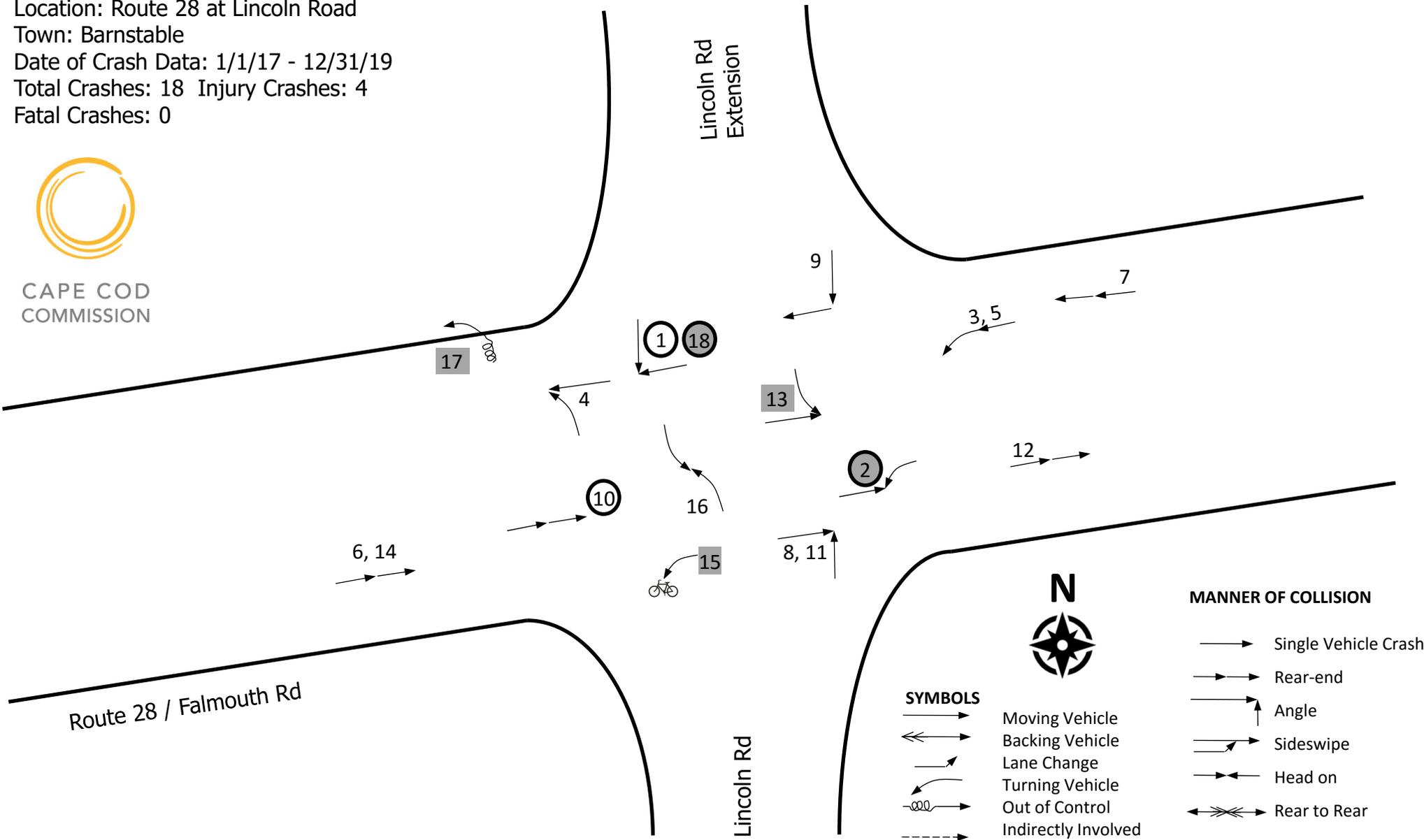
Start Time	Pitchers Way From North					Rt 28 From East					Pitchers Way From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
% App. Total	0	0	0	0	0	0	100	0	0	37.5	0	0	0	0	0	0	100	0	0	50	
PHF	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.500

CRASH DIAGRAM

Location: Route 28 at Lincoln Road
 Town: Barnstable
 Date of Crash Data: 1/1/17 - 12/31/19
 Total Crashes: 18 Injury Crashes: 4
 Fatal Crashes: 0



CAPE COD
COMMISSION



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Lane Change
- Turning Vehicle
- Out of Control
- Indirectly Involved Vehicle
- Bicycle
- Pedestrian
- Parked Vehicle
- Fixed Object

MANNER OF COLLISION

- Single Vehicle Crash
- Rear-end
- Angle
- Sideswipe
- Head on
- Rear to Rear

SEVERITY

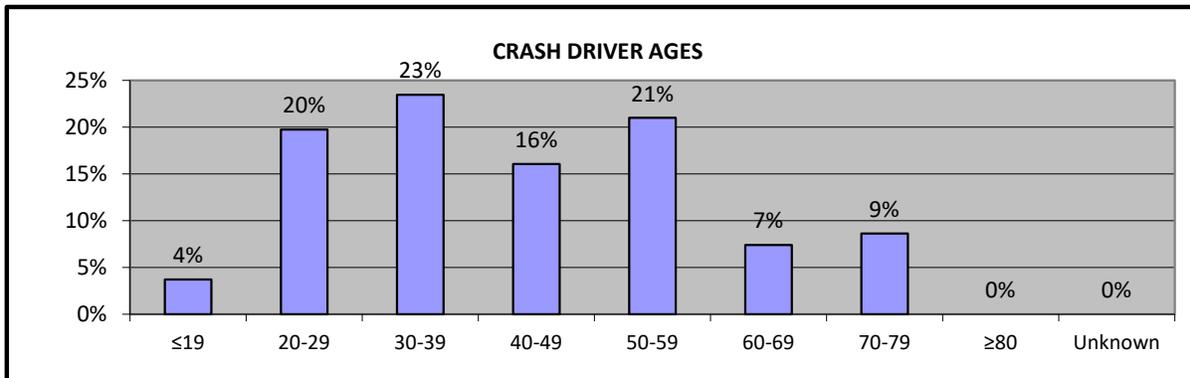
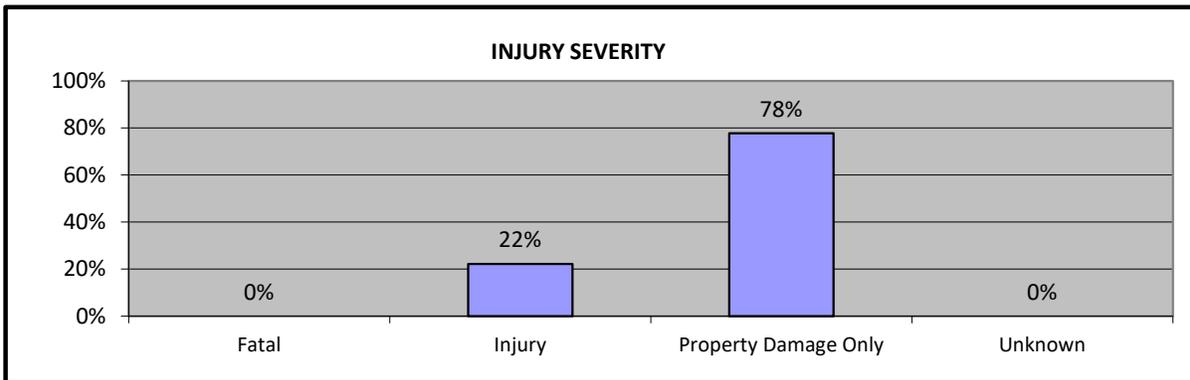
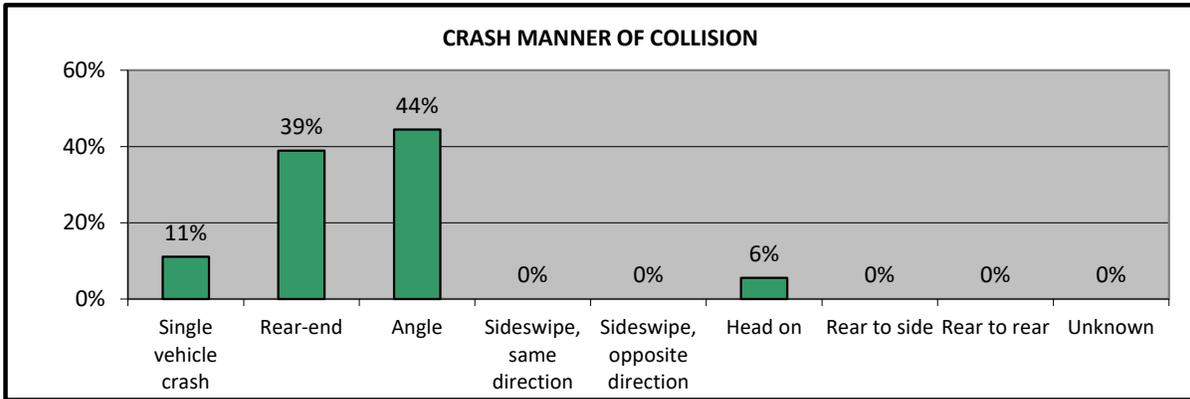
- Injury Crash
- Nighttime Crash
- Fatal Crash

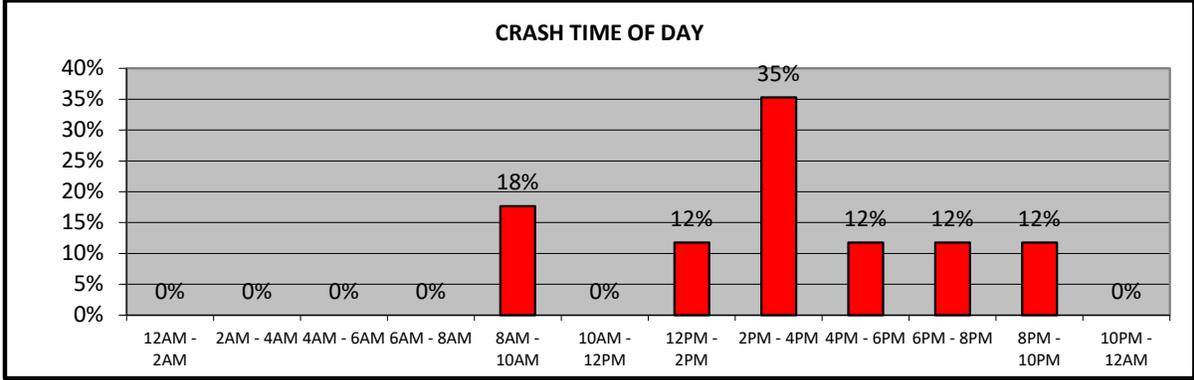
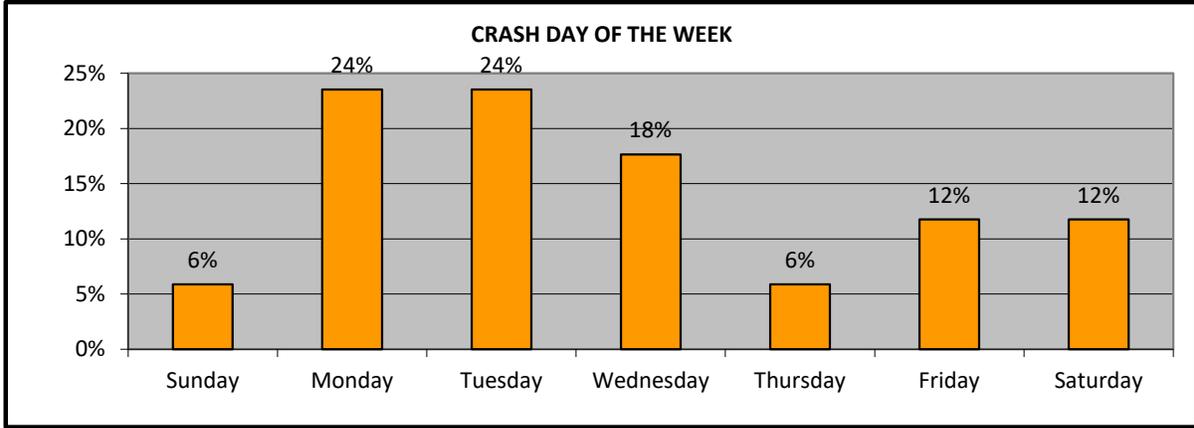
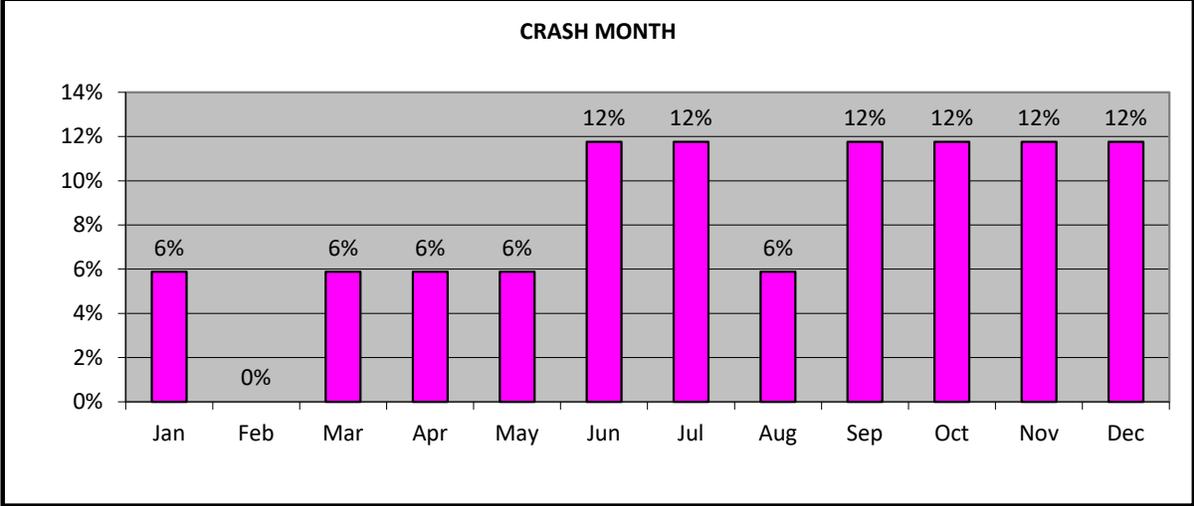
Crash Data Summary Table

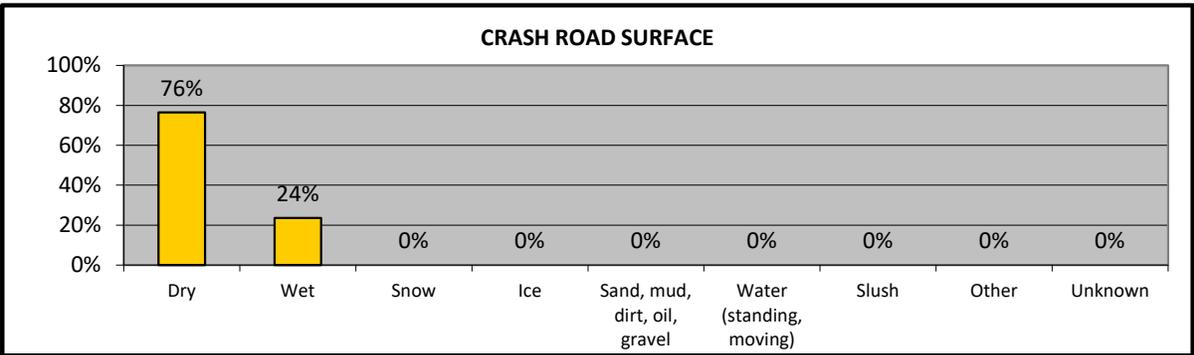
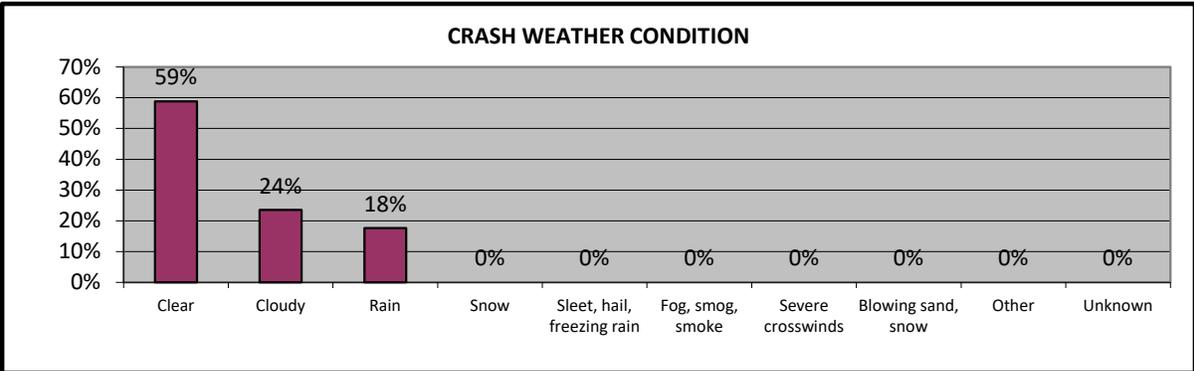
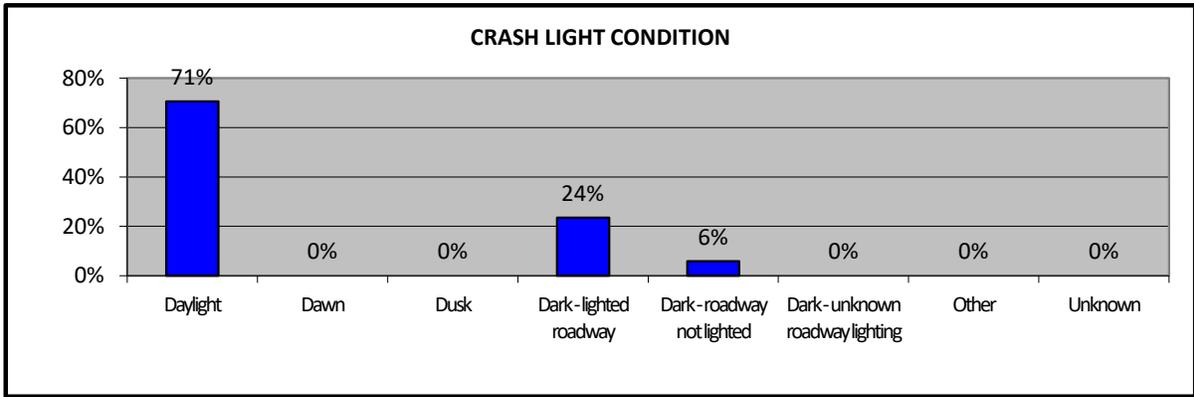
Route 28 at Lincoln Road, Barnstable, MA
2017-2019

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Injury Severity	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	Type	Type	Type	Type	Type	#	#	#	#	
1	06/02/17	Friday	6:18 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	Non-fatal injury	52	68			MV 1 was traveling southbound on Lincoln Rd Ext. approaching the stop sign. MV 2 was traveling west on Route 28. MV 2 slowed in traffic as vehicle in front turned onto Lincoln Rd. MV 1 pulled out and struck MV 2 on the passenger side, believing MV2 was slowing/letting them into the intersection.
2	07/17/17	Monday	8:51 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	Non-fatal injury	23	37			MV 1 was traveling west on Route 28, with MV 2 traveling east on Route 28. MV 1 attempted a left turn onto Lincoln Road; MV 1 did not see MV 2 or misjudged the distance, leading to a crash in the eastbound travel lane (just east of the intersection with Lincoln Road).
3	08/17/17	Thursday	2:58 PM	Rear-end	Daylight	Clear	Dry	Distracted	No Injury	20	60			MV 1 and MV 2 were traveling west on Route 28, with MV 2 in front. MV 2 slowed to make a left turn onto Lincoln Road. MV 1 was looking at her cell phone and drove into the back of MV 2.
4	9/11/17	Monday	2:44 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	No Injury	30	46			MV1 was traveling westbound when MV2 turned left onto Route 28 heading westbound. MV1 struck MV2 on the passenger side and MV2 struck the guardrail after the collision.
5	09/23/17	Saturday	9:30 AM	Rear-end	Daylight	Rain	Wet	Inattention	No Injury	58	47			MV 1 was traveling west on Route 28 and attempted to make a left turn onto Lincoln Road. MV 2, traveling behind, struck MV 1 (a result, she claimed, of her brakes not working).
6	11/29/17	Wednesday	12:40 PM	Rear-end	Daylight	Clear	Dry	Followed too closely	No Injury	16	55			MV 2 and MV 1 were traveling eastbound on Route 28 in advance of Lincoln Road (MV 2 was ahead). MV 2 slowed/stopped for traffic, but MV 1 was unable to stop in time and rear-ended MV 2.
7	1/31/18	Wednesday	3:21 PM	Rear-end	Daylight	Clear	Dry	Glare	No Injury	22	45			MV1 and MV2 were traveling westbound on Route 28 when MV2 slowed in traffic behind other braking vehicles. MV1 stated that there was sun glare and did not see MV2 stop before rear ending MV2.
8	03/09/18	Friday	8:55 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	No Injury	65	33			MV 1 was traveling east on Route 28, with MV 2 traveling north on Lincoln Road. MV 2 failed to stop at the stop sign and T-boned MV 1.
9	04/17/18	Tuesday	3:35 PM	Angle	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner	No Injury	48	37			MV 2 was traveling west on Route 28. MV 1 failed to stop at the stop sign while traveling south on Lincoln Road at a high rate of speed and hit the right-back side of MV 2, causing MV 2 to spin into the guardrail. Operator of MV1 was intoxicated.
10	06/26/18	Tuesday	6:05 PM	Rear-end	Daylight	Clear	Dry	Inattention	Non-fatal injury	18	38			MV 2 and MV 1 were traveling eastward on Route 28 at Lincoln Rd Ext. MV 1, who was behind MV 2, looked down to change the radio station and rear-ended MV 2, which was slowing down.
11	6/30/18	Saturday	3:11 PM	Angle	Daylight	Clear	Dry	No improper driving	No Injury	58	48			MV1 was traveling eastbound on Route 28 when MV2 attempted to cross Route 28 heading northbound on Lincoln Ave. MV2 struck MV1 in the rear.
12	10/12/18	Friday	1:14 PM	Rear-end	Daylight	Cloudy	Wet	Unknown	No Injury	24	41			MV 2 and MV 1 were moving eastbound on Route 28 just east of Lincoln Road, with MV 2 in the lead. MV 2 slowed/stopped for traffic ahead, and MV 1 rear-ended him. MV 1 claimed she was unable to stop because her brakes were not working.
13	12/10/18	Monday	6:40 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	No Injury	18	29			MV 1 was attempting a left turn from Lincoln Road Ext (facing southward). MV 1 began the turn but did not see an eastbound ambulance, which was blocked from view. MV 1 collided with the side of the ambulance.
14	05/06/19	Monday	2:54 PM	Rear-end	Daylight	Cloudy	Dry	Inattention	No Injury	19	61			MV 2 and MV 1 were both traveling east on Route 28 ahead of Lincoln Road. MV 2 slowed/stop for traffic in front of her; MV 1 did not have time to stop and rear-ended MV 2.
15	7/17/19	Wednesday	9:19 PM	Single vehicle crash	Dark - lighted roadway	Cloudy	Wet	No improper driving	No Injury	54				MV1 was traveling westbound on Route 28 and took a left turn onto Lincoln Road. The cyclist was also traveling westbound on the sidewalk on Route 28 and was struck by MV1 as MV1 turned onto Lincoln Road.
16	10/27/19	Sunday	8:55 AM	Head on	Daylight	Cloudy	Dry	Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc.	No Injury	41	54			MV2 was traveling westbound on Route 28 and swerved to avoid colliding with a vehicle stopped waiting to take a left turn onto Lincoln Road. After swerving MV2 struck MV1 who was stopped on Lincoln Road Ext. attempting to take a left turn onto Route 28.
17	11/05/19	Tuesday	4:43 PM	Single vehicle crash	Dark - lighted roadway	Rain	Wet	Over-correcting/over-steering	No Injury	37				MV 1 was taking a left turn onto Route 28 from Lincoln Road (NB). The driver fishtailed and crashed into the guardrail of the right side of the road, overturning the vehicle (likely related to speeding).
18	12/17/19	Tuesday	4:50 PM	Angle	Dark - roadway not lighted	Rain	Dry	Failed to yield right of way	Non-fatal injury	16	36			MV 1 was traveling west on Route 28 approaching the Lincoln Road intersection. MV 2 attempted to cross and failed to yield, leading to a T-bone crash.

Crash Data Summary Charts
Route 28 at Lincoln Road, Barnstable, MA







Cape Cod Commission

3225 Main Street, Barnstable, MA, 02630

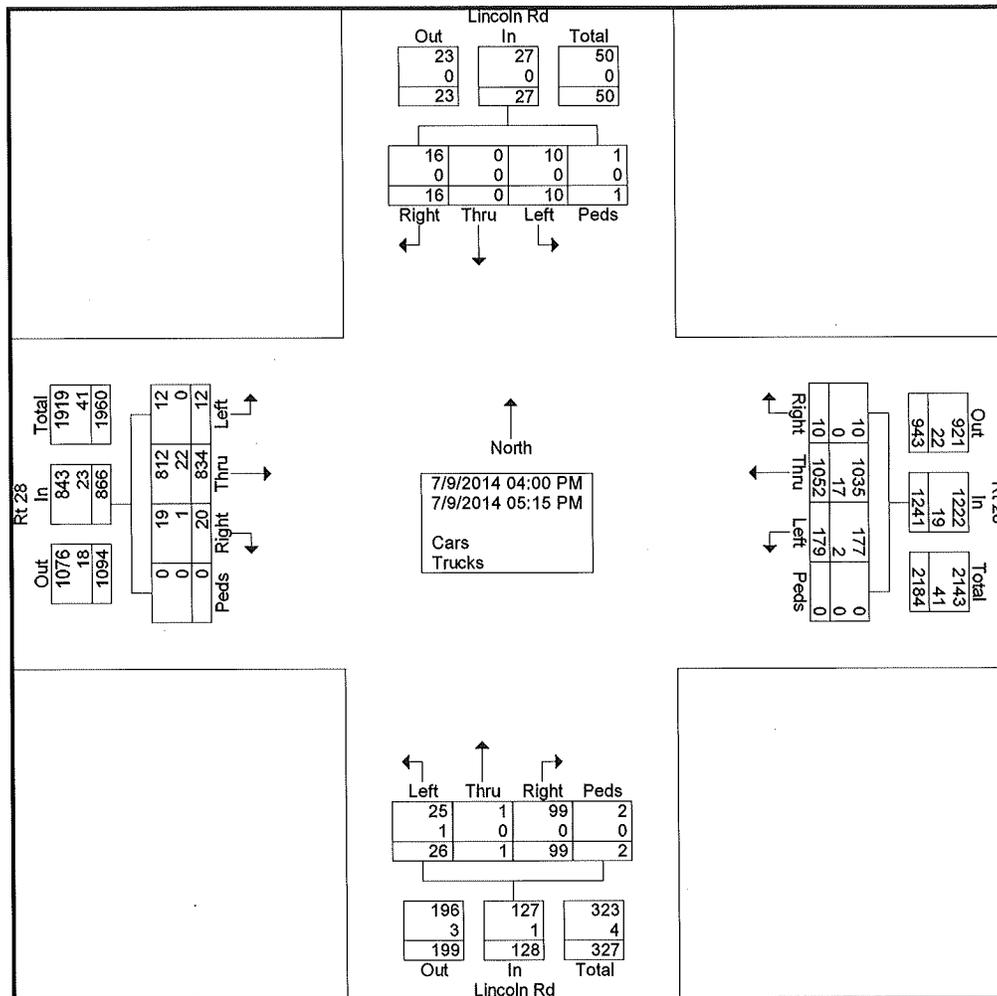
www.capecodcommission.org

Location: 3867
 Town: Barnstable
 Counted by: JW
 Counters: 3

File Name : 3867_07092014
 Site Code : 3867
 Start Date : 7/9/2014
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Lincoln Rd From North					Rt 28 From East					Lincoln Rd From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:00 PM	1	0	4	0	5	36	184	3	0	223	5	1	14	0	20	4	174	6	0	184	432
04:15 PM	4	0	2	0	6	28	195	1	0	224	6	0	22	1	29	0	137	4	0	141	400
04:30 PM	2	0	2	1	5	35	153	3	0	191	5	0	17	0	22	5	127	1	0	133	351
04:45 PM	2	0	0	0	2	20	160	1	0	181	3	0	19	1	23	1	138	5	0	144	350
Total	9	0	8	1	18	119	692	8	0	819	19	1	72	2	94	10	576	16	0	602	1533
05:00 PM	0	0	2	0	2	29	167	0	0	196	1	0	13	0	14	0	101	4	0	105	317
05:15 PM	1	0	6	0	7	31	193	2	0	226	6	0	14	0	20	2	157	0	0	159	412
Grand Total	10	0	16	1	27	179	1052	10	0	1241	26	1	99	2	128	12	834	20	0	866	2262
Apprch %	37	0	59.3	3.7		14.4	84.8	0.8	0		20.3	0.8	77.3	1.6		1.4	96.3	2.3	0		
Total %	0.4	0	0.7	0	1.2	7.9	46.5	0.4	0	54.9	1.1	0	4.4	0.1	5.7	0.5	36.9	0.9	0	38.3	
Cars	10	0	16	1	27	177	1035	10	0	1222	25	1	99	2	127	12	812	19	0	843	2219
% Cars	100	0	100	100	100	98.9	98.4	100	0	98.5	96.2	100	100	100	99.2	100	97.4	95	0	97.3	98.1
Trucks	0	0	0	0	0	2	17	0	0	19	1	0	0	0	1	0	22	1	0	23	43
% Trucks	0	0	0	0	0	1.1	1.6	0	0	1.5	3.8	0	0	0	0.8	0	2.6	5	0	2.7	1.9



Cape Cod Commission

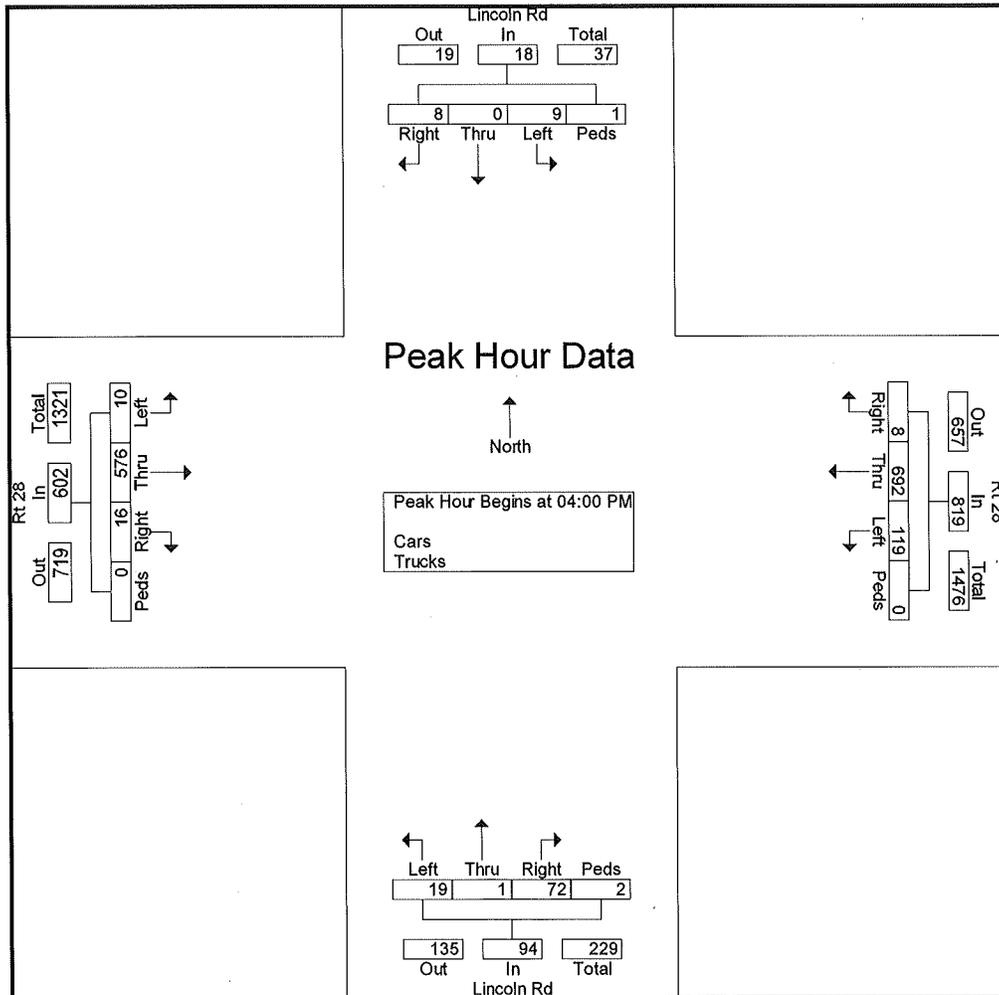
3225 Main Street, Barnstable, MA, 02630

www.capecodcommission.org

Location: 3867
 Town: Barnstable
 Counted by: JW
 Counters: 3

File Name : 3867_07092014
 Site Code : 3867
 Start Date : 7/9/2014
 Page No : 2

Start Time	Lincoln Rd From North					Rt 28 From East					Lincoln Rd From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	0	4	0	5	36	184	3	0	223	5	1	14	0	20	4	174	6	0	184	432
04:15 PM	4	0	2	0	6	28	195	1	0	224	6	0	22	1	29	0	137	4	0	141	400
04:30 PM	2	0	2	1	5	35	153	3	0	191	5	0	17	0	22	5	127	1	0	133	351
04:45 PM	2	0	0	0	2	20	160	1	0	181	3	0	19	1	23	1	138	5	0	144	350
Total Volume	9	0	8	1	18	119	692	8	0	819	19	1	72	2	94	10	576	16	0	602	1533
% App. Total	50	0	44.4	5.6		14.5	84.5	1	0		20.2	1.1	76.6	2.1		1.7	95.7	2.7	0		
PHF	.563	.000	.500	.250	.750	.826	.887	.667	.000	.914	.792	.250	.818	.500	.810	.500	.828	.667	.000	.818	.887



Cape Cod Commission

3225 Main Street, Barnstable, MA, 02630

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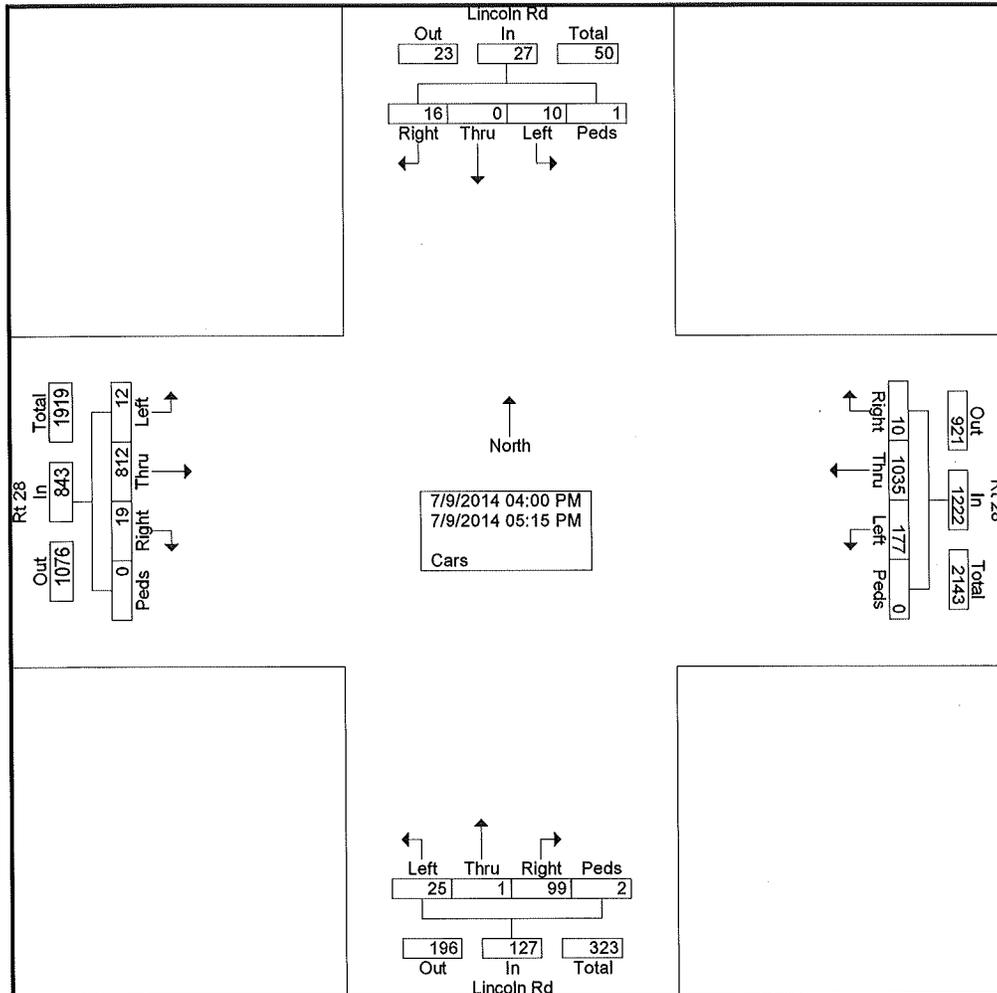
Location: 3867
 Town: Barnstable
 Counted by: JW
 Counters: 3

File Name : 3867_07092014
 Site Code : 3867
 Start Date : 7/9/2014
 Page No : 1

Groups Printed- Cars

Start Time	Lincoln Rd From North					Rt 28 From East					Lincoln Rd From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:00 PM	1	0	4	0	5	36	182	3	0	221	5	1	14	0	20	4	171	5	0	180	426
04:15 PM	4	0	2	0	6	28	193	1	0	222	6	0	22	1	29	0	132	4	0	136	393
04:30 PM	2	0	2	1	5	35	150	3	0	188	5	0	17	0	22	5	127	1	0	133	348
04:45 PM	2	0	0	0	2	19	158	1	0	178	3	0	19	1	23	1	131	5	0	137	340
Total	9	0	8	1	18	118	683	8	0	809	19	1	72	2	94	10	561	15	0	586	1507
05:00 PM	0	0	2	0	2	28	162	0	0	190	1	0	13	0	14	0	99	4	0	103	309
05:15 PM	1	0	6	0	7	31	190	2	0	223	5	0	14	0	19	2	152	0	0	154	403
Grand Total	10	0	16	1	27	177	1035	10	0	1222	25	1	99	2	127	12	812	19	0	843	2219
Apprch %	37	0	59.3	3.7		14.5	84.7	0.8	0		19.7	0.8	78	1.6		1.4	96.3	2.3	0		
Total %	0.5	0	0.7	0	1.2	8	46.6	0.5	0	55.1	1.1	0	4.5	0.1	5.7	0.5	36.6	0.9	0	38	

583



Cape Cod Commission

3225 Main Street, Barnstable, MA, 02630

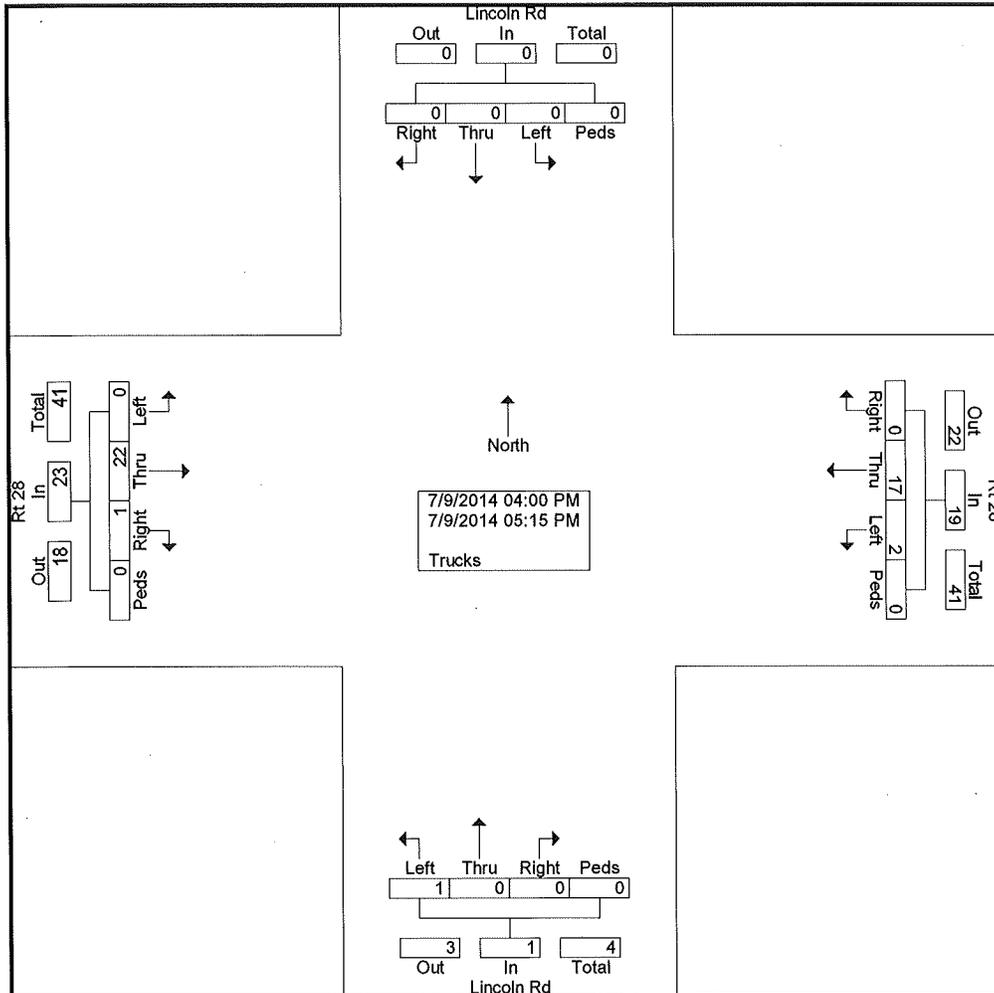
www.capecodcommission.org

Location: 3867
 Town: Barnstable
 Counted by: JW
 Counters: 3

File Name : 3867_07092014
 Site Code : 3867
 Start Date : 7/9/2014
 Page No : 1

Groups Printed- Trucks

Start Time	Lincoln Rd From North					Rt 28 From East					Lincoln Rd From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	1	0	4	6
04:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	7
04:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	7	0	0	7	10
Total	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	0	15	1	0	16	26
05:00 PM	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	2	0	0	2	8
05:15 PM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	5	0	0	5	9
Grand Total	0	0	0	0	0	2	17	0	0	19	1	0	0	0	1	0	22	1	0	23	43
Apprch %	0	0	0	0	0	10.5	89.5	0	0	0	100	0	0	0	0	0	95.7	4.3	0	0	
Total %	0	0	0	0	0	4.7	39.5	0	0	44.2	2.3	0	0	0	2.3	0	51.2	2.3	0	53.5	



Cape Cod Commission

3225 Main Street, Barnstable, MA, 02630

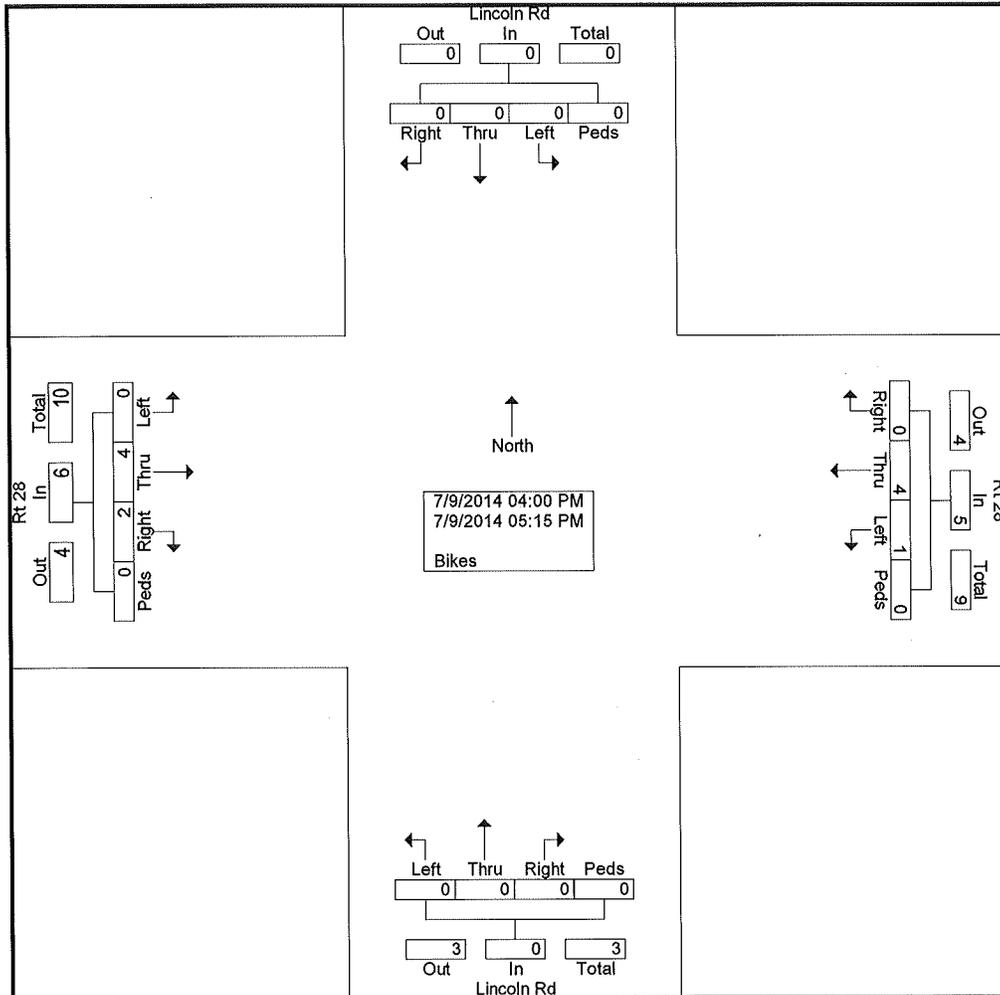
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 Start Date : 7/9/2014
 Page No : 1

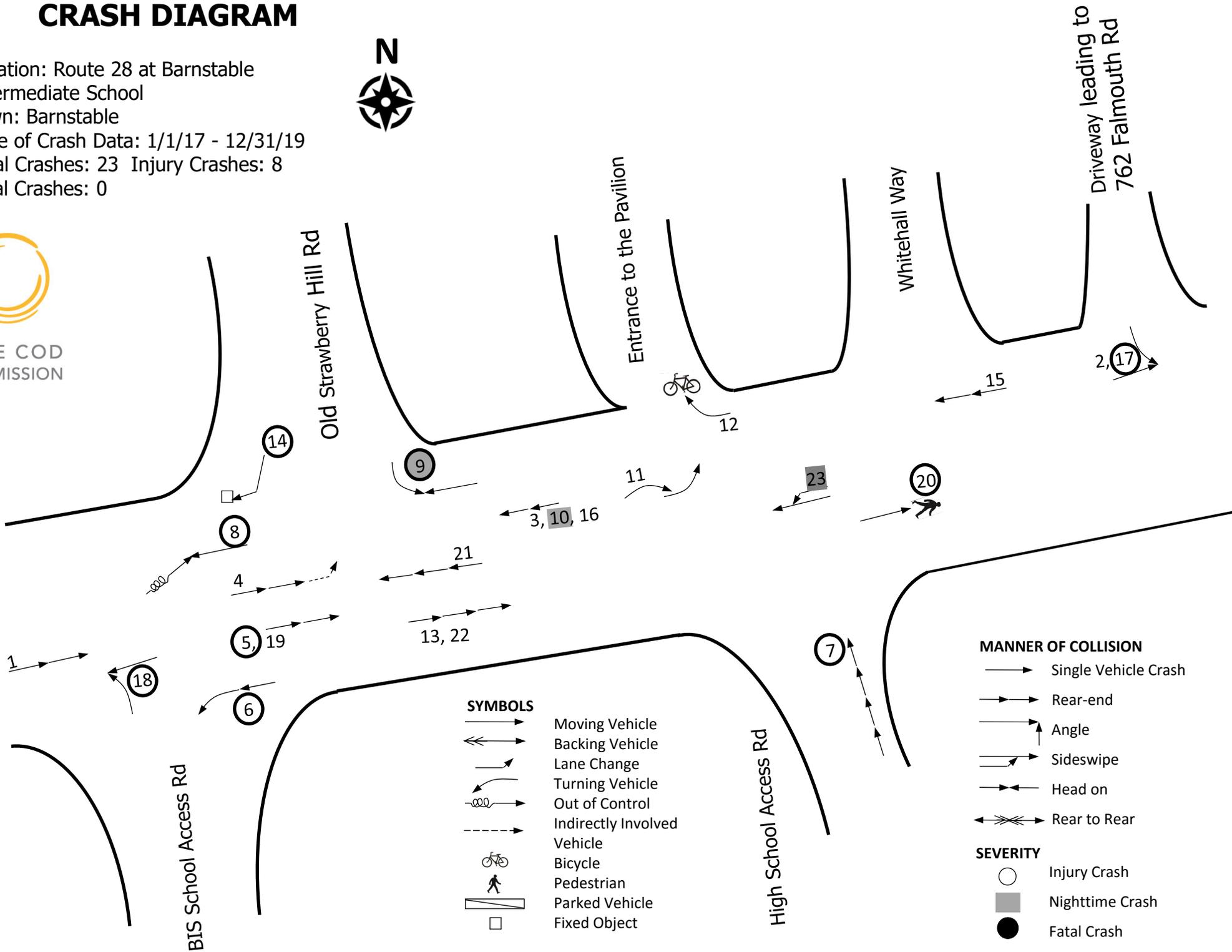
Groups Printed- Bikes

Start Time	Lincoln Rd From North					Rt 28 From East					Lincoln Rd From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1
04:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	2	0	0	3
*** BREAK ***																					
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	2	0	0	4
05:00 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Grand Total	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	4	2	0	0	6
Apprch %	0	0	0	0	0	20	80	0	0	0	0	0	0	0	0	0	66.7	33.3	0	0	0
Total %	0	0	0	0	0	9.1	36.4	0	0	45.5	0	0	0	0	0	0	36.4	18.2	0	0	54.5



CRASH DIAGRAM

Location: Route 28 at Barnstable Intermediate School
 Town: Barnstable
 Date of Crash Data: 1/1/17 - 12/31/19
 Total Crashes: 23 Injury Crashes: 8
 Fatal Crashes: 0



Crash Data Summary Table

Route 28 at Barnstable Intermediate School, Barnstable, MA
2017-2019

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Injury Severity	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	Type	Type	Type	Type	Type	#	#	#	#	
1	01/09/17	Monday	4:15 PM	Rear-end	Daylight	Clear	Dry	Inattention	No Injury	48	17			MV1 and MV2 were heading east on Route 28, just west of the intersection with Old Strawberry Hill Road. MV2 slowed in traffic and MV1 rear-ended MV2.
2	01/13/17	Friday	11:14 AM	Angle	Daylight	Clear	Dry	Unknown	No Injury	34	20			MV1 was driving east along Route 28. MV2 was exiting the lot of 762 Route 28 from the north (attempting a left turn) and collided into the driver's side of MV1 in the EB travel lane.
3	01/25/17	Wednesday	2:21 PM	Rear-end	Daylight	Clear	Dry	No improper driving	No Injury	21	40			MV1 was stopped while traveling west on Route 28 near the intersection with the Intermediate School when MV2, also traveling west, did not stop in time, rear-ending MV1.
4	01/25/17	Wednesday	4:11 PM	Rear-end	Daylight	Clear	Dry	Inattention	No Injury	17	52			MV1 and MV2 were both traveling east at Strawberry Hill Road, with MV2 in front. The car in front of MV2 stopped to make a left turn, leading MV2 to stop. MV1 rear-ended MV2.
5	05/24/17	Wednesday	2:51 PM	Rear-end	Daylight	Clear	Dry	Inattention	Non-fatal injury	27	53			MV1 and MV2 were traveling east on Route 28 at Old Strawberry Hill Road (#895 Falmouth Road). MV2 was traveling in front and they stopped with traffic. MV1 did not stop and rear-ended MV2, leading to minor/moderate damage in both cars. MV1 was issued a verbal warning.
6	06/08/17	Thursday	7:33 AM	Rear-end	Daylight	Clear	Dry	Inattention	Non-fatal injury	17	28			MV2 and MV1 were traveling west on Route 28 slightly east of the Barnstable Intermediate School. MV2 came to a stop, signaled to turn left, and was struck from behind by MV1. MV1 stated that he did not see the turn signals, nor the slowing/stopping.
7	09/11/17	Monday	2:12 PM	Rear-end	Daylight	Clear	Dry	Distracted	Non-fatal injury	17	17	18	46	4 car collision. All 4 cars were traveling north on the BIS connecting road just south of Route 28. MV4 was positioned closest to Route 28, and MV1 was closest to the school. MV1 became distracted by students being let out. She looked back at the road and hit the car in front of her (MV2), who then hit the other vehicles.
8	10/28/17	Saturday	4:50 PM	Head on	Daylight	Clear	Dry	Fatigued/asleep	Non-fatal injury	26	43			MV1 was traveling east on Route 28 slightly west of Strawberry Hill Road when he fell asleep, crossed the center line, and collided head-on with MV2, who was traveling west.
9	08/02/17	Wednesday	9:08 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	Non-fatal injury	57	40			MV2 was traveling west on Route 28 at Strawberry Hill Road. MV1 attempted a left turn from Strawberry Hill Road onto Route 28, leading to an angle collision.
10	12/20/17	Wednesday	5:46 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Followed too closely	No Injury	20	63			MV2 and MV1 were traveling west on Route 28 near 895 Falmouth Road (in front of the school), with MV2 in front of MV1. MV2 stopped in traffic; MV1 could not stop in time and rear-ended MV2.
11	12/21/17	Thursday	8:25 AM	Angle	Daylight	Clear	Dry	Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner; Failed to yield right of way	No Injury	71	37			MV1 made a left out of Old Strawberry Road in front of MV2, a truck. MV1 then stopped suddenly to make another left (into the Pavilion). MV2 swerved and rear-ended her.
12	12/28/17	Thursday	4:01 PM	Single vehicle crash	Daylight	Clear	Dry	No improper driving	No Injury	42				MV1 was traveling west on Route 28 and made a right turn into Pavilion Nursing Home. While executing the turn, a bicyclist (who was traveling straight) rode into the right rear side of MV1. There is no crosswalk at this location.
13	01/30/18	Tuesday	7:40 AM	Rear-end	Daylight	Snow	Snow	Unknown	No Injury	29	39	19		All three MVs were traveling east on Route 28, with MV3 followed by MV2, then MV1. MV2 and MV3 were both stopped in traffic. MV1 operator attempted to stop but the vehicle slid due to slippery road conditions, resulting in MV1 rear-ending MV2 and pushing MV2 into MV3.

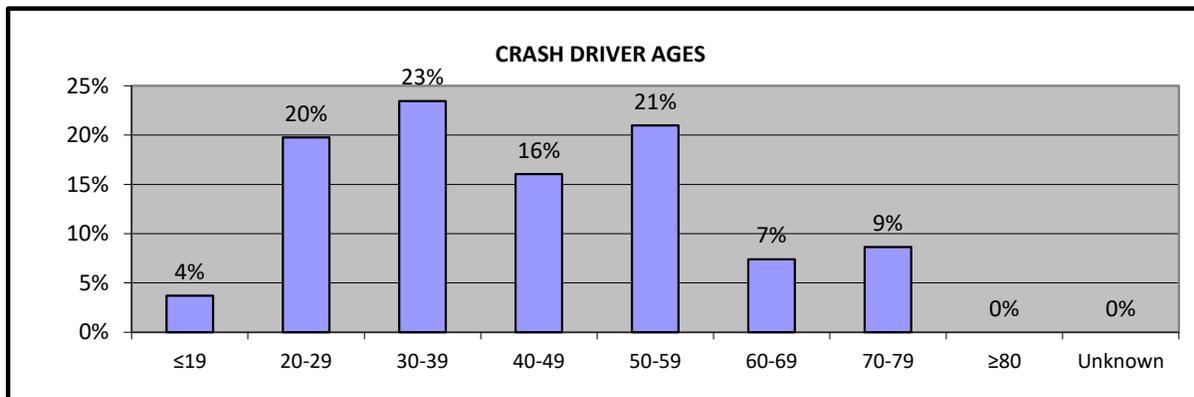
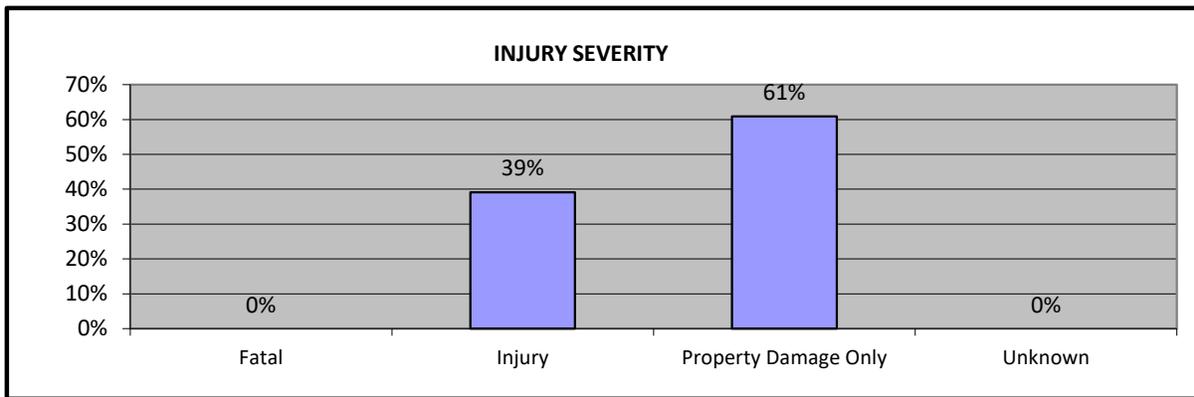
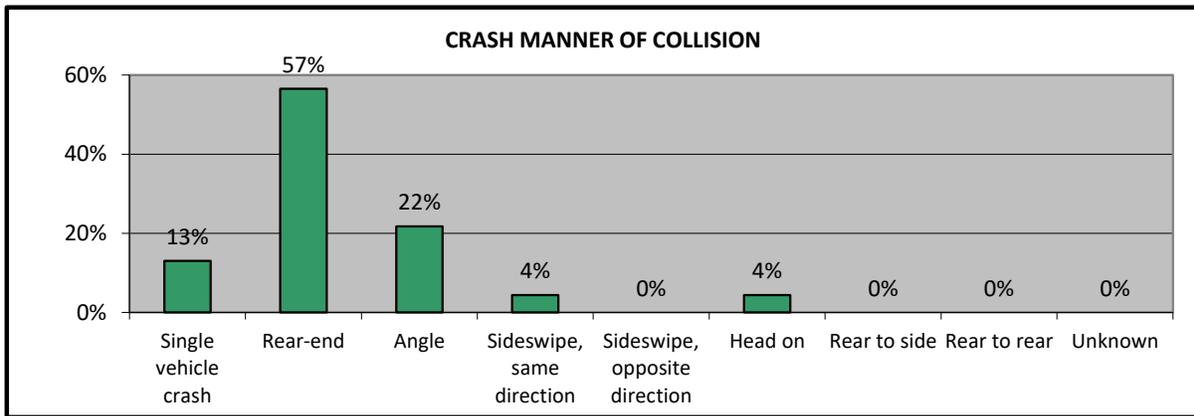
Crash Data Summary Table

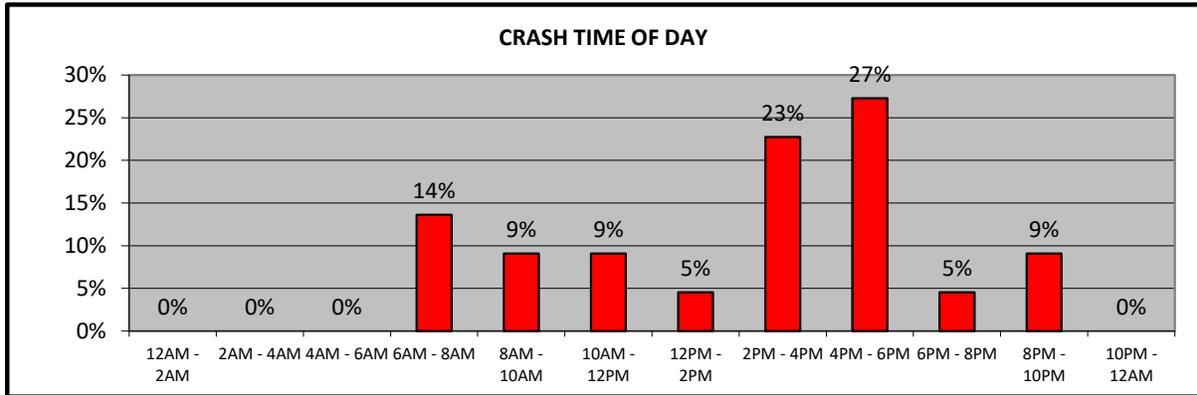
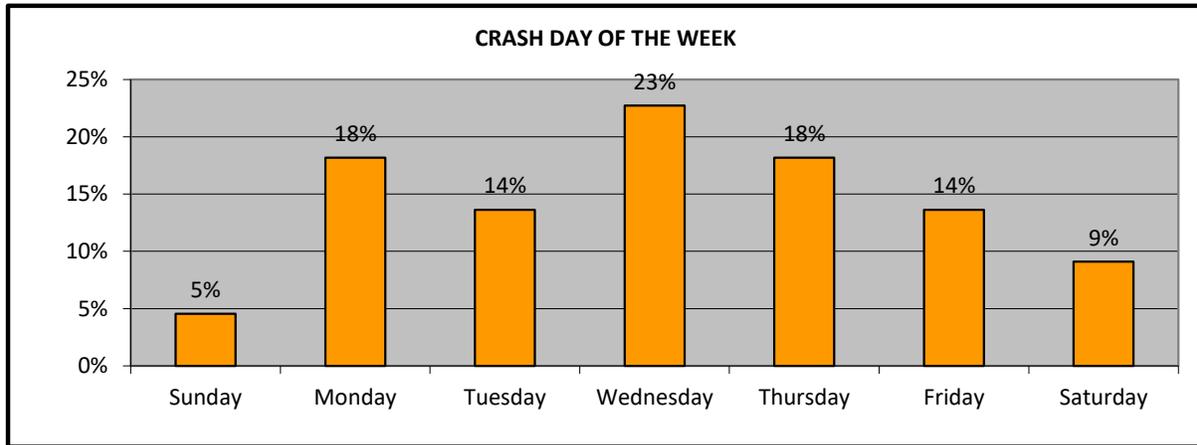
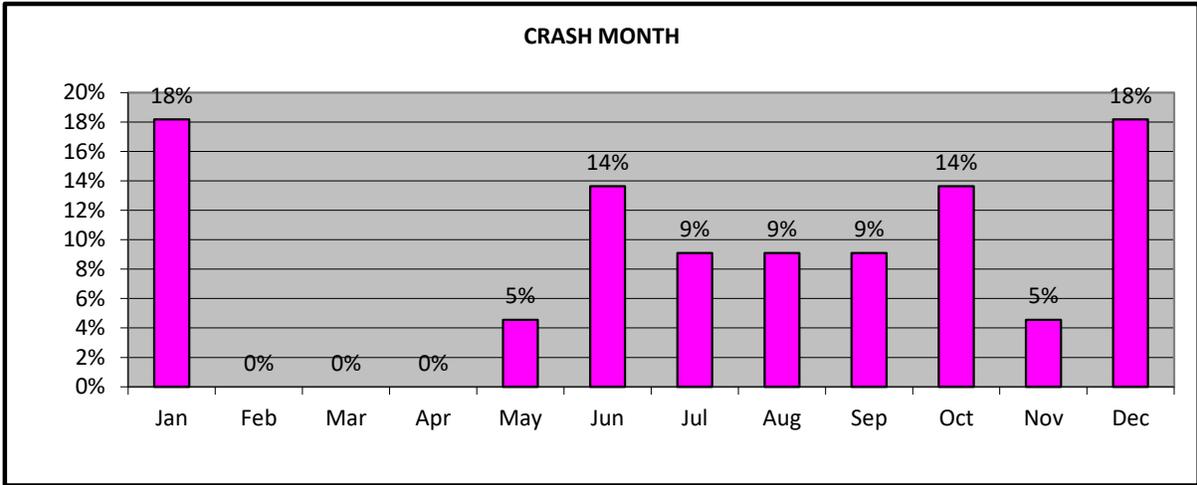
Route 28 at Barnstable Intermediate School, Barnstable, MA
2017-2019

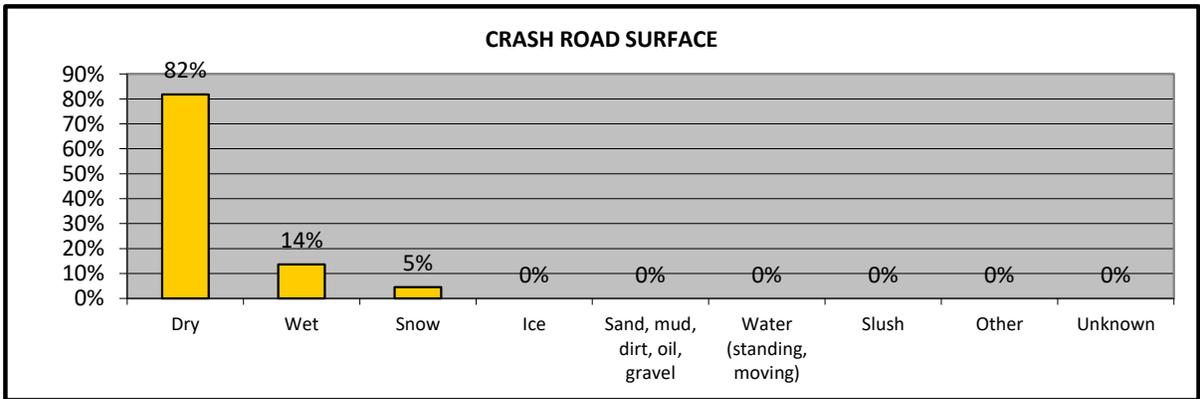
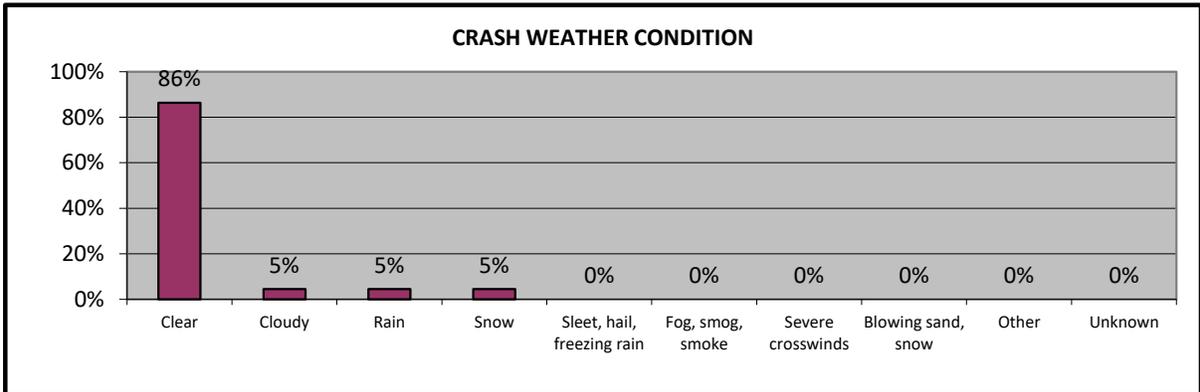
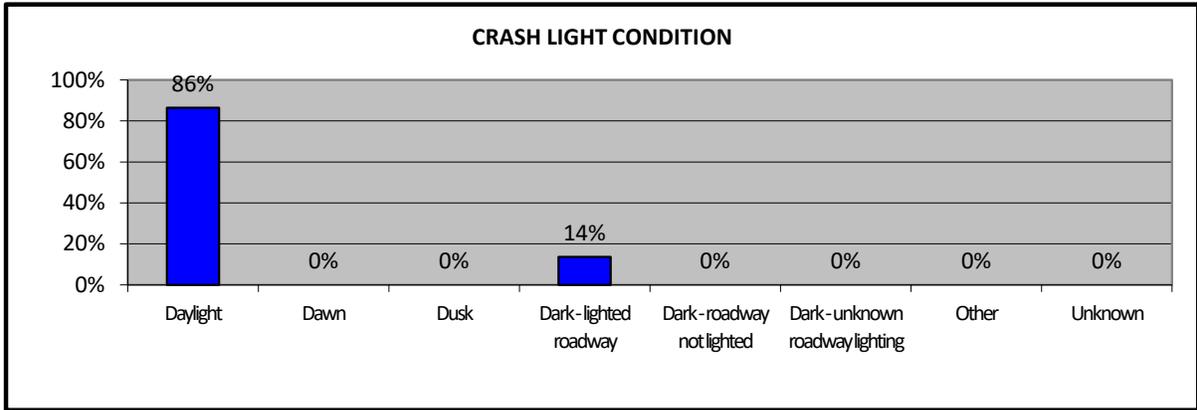
Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Injury Severity	D1 Age	D2 Age	D3 Age	D4 Age	Comments
#	mm/dd/yy	Day	hh:mm	Type	Type	Type	Type	Type	Type	#	#	#	#	
14	06/18/18	Monday	11:38 AM	Single vehicle crash	Daylight	Clear	Dry	Over-correcting/over-steering	Non-fatal injury	57	37			Single vehicle collision. MV1 was riding a motorcycle on Old Strawberry Hill Road. Individual claims to have struck a pile of gravel/sand at the corner when attempting a right turn onto Route 28/Falmouth Rd and fell off motorcycle. A witness claimed to have seen MV1 speeding.
15	07/29/18	Sunday	1:53 PM	Rear-end	Daylight	Clear	Dry	Followed too closely	No Injury	23	43			MV2 and MV1 were traveling west on Route 28/Falmouth Road, with MV1 behind MV2. Near Whitehall Way, MV2 stopped suddenly for traffic, leading to MV1 rear-ending MV2. Driver of MV1 claims that she saw MV2 stopped ahead of her, but that she pressed gas instead of brake.
16	07/24/18	Tuesday	7:05 PM	Rear-end	Daylight	Clear	Dry	Emotional	No Injury	51	21			MV1 and MV2 were traveling west on Route 28, with MV2 behind MV1. There was some emotional conflict between the drivers, with MV2 being accused of intentionally ramming/rear-ending MV1. MV2 stated V1 slammed on brakes abruptly to cause the accident intentionally.
17	8/7/18	Tuesday	3:26 PM	Angle	Daylight	Clear	Dry	Inattention	Non-fatal injury	59	53			MV1 was turning left onto Route 28 and did not see the motorcycle travelling eastbound on Route 28. The motorcycle operator was taken to CCH for minor injuries.
18	09/10/18	Monday	5:42 PM	Angle	Daylight	Clear	Wet	Made an improper turn	Non-fatal injury	17	60			MV2 was a CCRTA bus traveling west on Route 28 at School Access Road. MV1 was a motor vehicle attempting a left turn from School Access Road onto Route 28. MV1 did not see MV2 approaching, pulled out in front of MV2 and was struck on the passenger side.
19	10/20/18	Saturday	8:59 AM	Rear-end	Daylight	Cloudy	Wet	Distracted	No Injury	61	22			MV1 and MV2 were traveling east on Route 28 at 895 Falmouth Rd, with MV2 behind MV1. MV2 looked down momentarily and rear-ended MV1.
20	11/09/18	Friday	7:58 AM	Single vehicle crash	Daylight	Clear	Dry	No improper driving	Non-fatal injury	42				Traffic was stopped traveling west on Falmouth Road at Whitehall Way, when a pedestrian crossed between the vehicles north to south. The pedestrian was struck by a vehicle traveling east who did not see the pedestrian enter their lane until it was too late.
21	06/21/19	Friday	5:27 PM	Rear-end	Daylight	Rain	Wet	Followed too closely	No Injury	63	26	45		Vehicles 1, 2, and 3 were all traveling west on Route 28 in heavy traffic near 895 Falmouth Rd. Vehicle 3, in the rear, struck vehicle 2, which then struck vehicle 1. Vehicle 2 was towed.
22	10/21/19	Monday	2:54 PM	Rear-end	Daylight	Clear	Dry	Followed too closely	No Injury	21	74	23		3 vehicles were heading eastward near Falmouth Rd, with MV 3 in front, MV2 in middle, and MV1 at the end. MV1 failed to stop in time when traffic stopped. MV1 rear-ended MV2, which then rear-ended MV3.
23	12/26/19	Thursday	9:28 PM	Sideswipe, same direction	Dark - lighted roadway	Clear	Dry	Other improper action	No Injury	54	30			MV2 and MV1 were both traveling westbound on Route 28, at the Senior Center / Entrance/High School Access Road. MV1 was behind MV2 and felt that MV2 was going too slow so attempted a pass. MV2 was preparing a left turn off of Route 28 and had their blinker on. MV1 then attempted to pass MV2 on the left side, which led to a sideswipe crash.

Crash Data Summary Charts

Route 28 at Barnstable Intermediate School, Barnstable, MA







Cape Cod Commission

3225 Main Street
Barnstable, Mass. 02630

www.capecodcommission.org

Location: Rt 28 @ Barnstable Int School
Town: Barnstable
Counted by: SH
Counters: 5

File Name : 3882_05302019
Site Code : 00003882
Start Date : 5/30/2019
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Rt 28 From East					Barnstable Int School From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
01:30 PM	2	127	0	0	129	4	0	2	0	6	0	114	1	0	115	250
01:45 PM	2	119	0	0	121	3	0	1	0	4	0	131	8	1	140	265
Total	4	246	0	0	250	7	0	3	0	10	0	245	9	1	255	515
02:00 PM	18	143	0	0	161	1	0	5	0	6	0	122	8	0	130	297
02:15 PM	10	115	16	0	141	2	0	1	2	5	0	123	14	1	138	284
02:30 PM	20	117	0	0	137	20	0	41	0	61	0	104	12	0	116	314
02:45 PM	4	140	0	0	144	9	0	24	5	38	0	128	4	1	133	315
Total	52	515	16	0	583	32	0	71	7	110	0	477	38	2	517	1210
03:00 PM	1	125	0	0	126	10	0	9	2	21	0	138	4	2	144	291
03:15 PM	2	144	0	1	147	4	0	4	2	10	0	116	4	2	122	279
Grand Total	59	1030	16	1	1106	53	0	87	11	151	0	976	55	7	1038	2295
Apprch %	5.3	93.1	1.4	0.1		35.1	0	57.6	7.3		0	94	5.3	0.7		
Total %	2.6	44.9	0.7	0	48.2	2.3	0	3.8	0.5	6.6	0	42.5	2.4	0.3	45.2	
Cars	44	952	16	1	1013	51	0	84	11	146	0	886	46	7	939	2098
% Cars	74.6	92.4	100	100	91.6	96.2	0	96.6	100	96.7	0	90.8	83.6	100	90.5	91.4
Trucks	15	78	0	0	93	2	0	3	0	5	0	90	9	0	99	197
% Trucks	25.4	7.6	0	0	8.4	3.8	0	3.4	0	3.3	0	9.2	16.4	0	9.5	8.6

1201

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3225 Main Street
Barnstable, Mass. 02630

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File Name : 3882_05302019

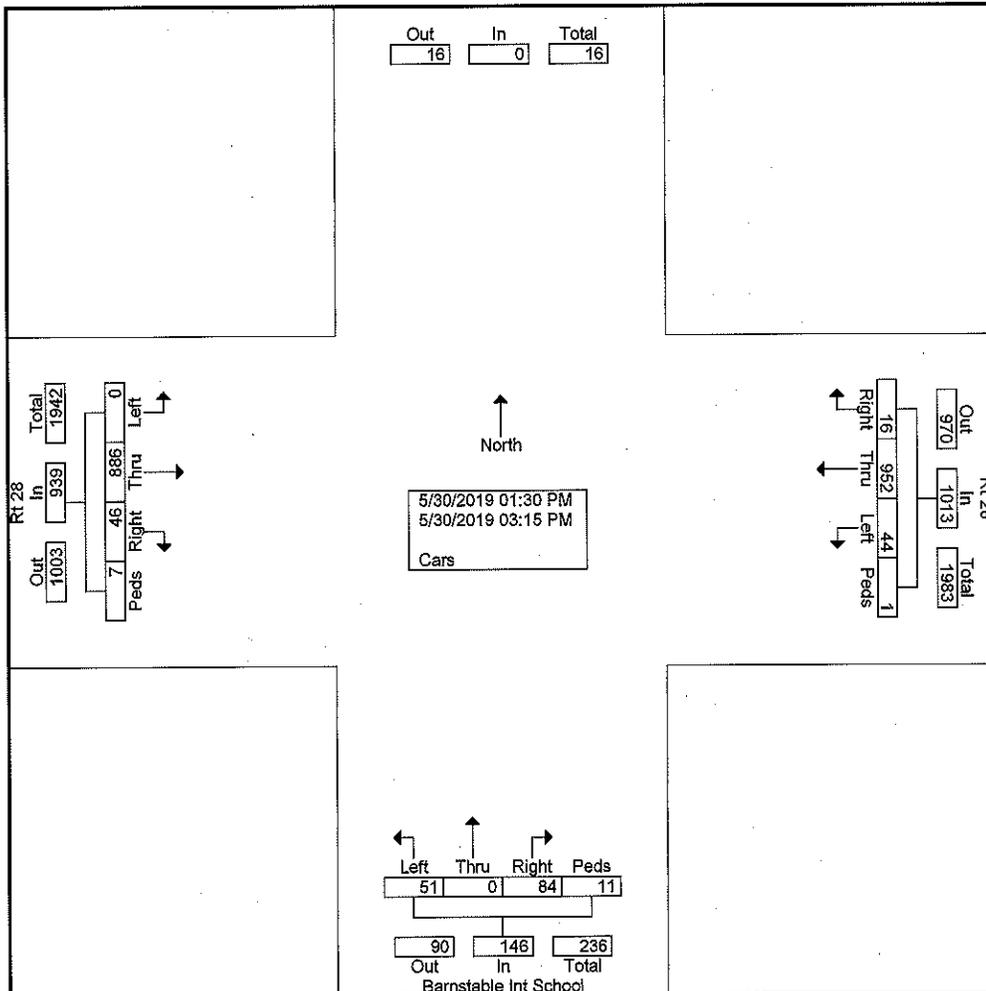
Site Code : 00003882

Start Date : 5/30/2019

Page No : 1

Groups Printed- Cars

Start Time	Rt 28 From East					Barnstable Int School From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
01:30 PM	2	114	0	0	116	4	0	2	0	6	0	101	1	0	102	224
01:45 PM	2	109	0	0	111	3	0	1	0	4	0	121	8	1	130	245
Total	4	223	0	0	227	7	0	3	0	10	0	222	9	1	232	469
02:00 PM	14	136	0	0	150	1	0	5	0	6	0	108	7	0	115	271
02:15 PM	8	110	16	0	134	2	0	1	2	5	0	109	10	1	120	259
02:30 PM	13	106	0	0	119	19	0	39	0	58	0	97	11	0	108	285
02:45 PM	2	123	0	0	125	8	0	23	5	36	0	117	2	1	120	281
Total	37	475	16	0	528	30	0	68	7	105	0	431	30	2	463	1096
03:00 PM	1	114	0	0	115	10	0	9	2	21	0	122	3	2	127	263
03:15 PM	2	140	0	1	143	4	0	4	2	10	0	111	4	2	117	270
Grand Total	44	952	16	1	1013	51	0	84	11	146	0	886	46	7	939	2098
Apprch %	4.3	94	1.6	0.1		34.9	0	57.5	7.5		0	94.4	4.9	0.7		
Total %	2.1	45.4	0.8	0	48.3	2.4	0	14	0.5	7	0	42.2	2.2	0.3	44.8	



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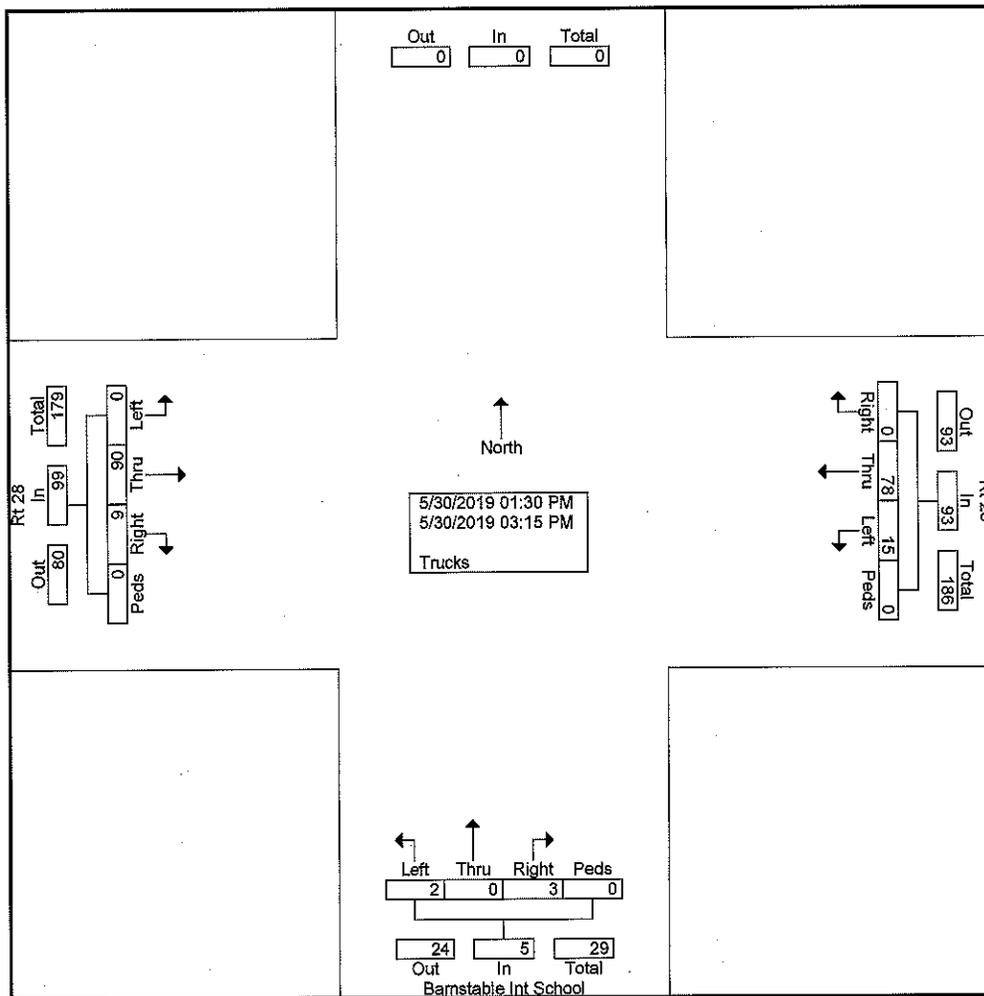
Site Code : 00003882

Start Date : 5/30/2019

Page No : 1

Groups Printed- Trucks

Start Time	Rt 28 From East					Barnstable Int School From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
01:30 PM	0	13	0	0	13	0	0	0	0	0	0	13	0	0	13	26
01:45 PM	0	10	0	0	10	0	0	0	0	0	0	10	0	0	10	20
Total	0	23	0	0	23	0	0	0	0	0	0	23	0	0	23	46
02:00 PM	4	7	0	0	11	0	0	0	0	0	0	14	1	0	15	26
02:15 PM	2	5	0	0	7	0	0	0	0	0	0	14	4	0	18	25
02:30 PM	7	11	0	0	18	1	0	2	0	3	0	7	1	0	8	29
02:45 PM	2	17	0	0	19	1	0	1	0	2	0	11	2	0	13	34
Total	15	40	0	0	55	2	0	3	0	5	0	46	8	0	54	114
03:00 PM	0	11	0	0	11	0	0	0	0	0	0	16	1	0	17	28
03:15 PM	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9
Grand Total	15	78	0	0	93	2	0	3	0	5	0	90	9	0	99	197
Apprch %	16.1	83.9	0	0		40	0	60	0		0	90.9	9.1	0		
Total %	7.6	39.6	0	0	47.2	1	0	1.5	0	2.5	0	45.7	4.6	0	50.3	



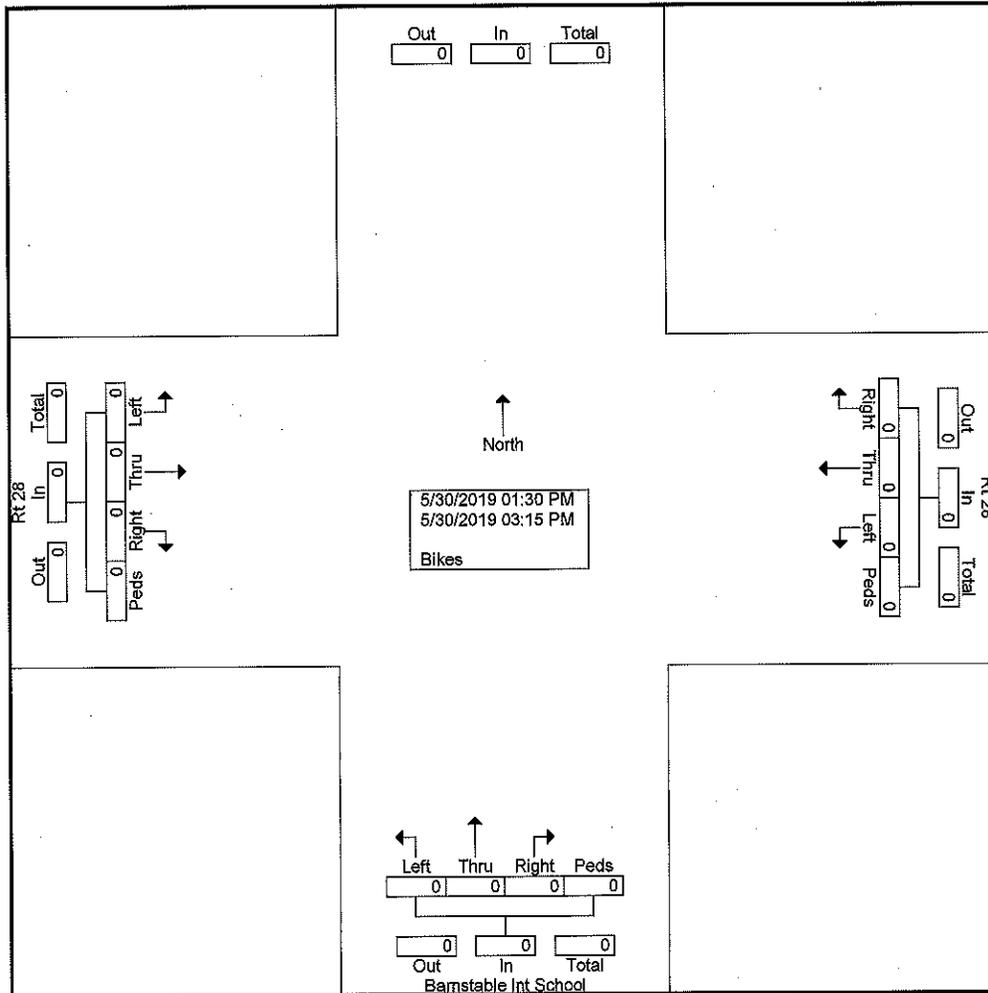
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File Name : 3882_05302019
 Site Code : 00003882
 Start Date : 5/30/2019
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Groups Printed- Bikes

Start Time	Rt 28 From East					Barnstable Int School From South					Rt 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
*** BREAK ***																
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		
Total %																



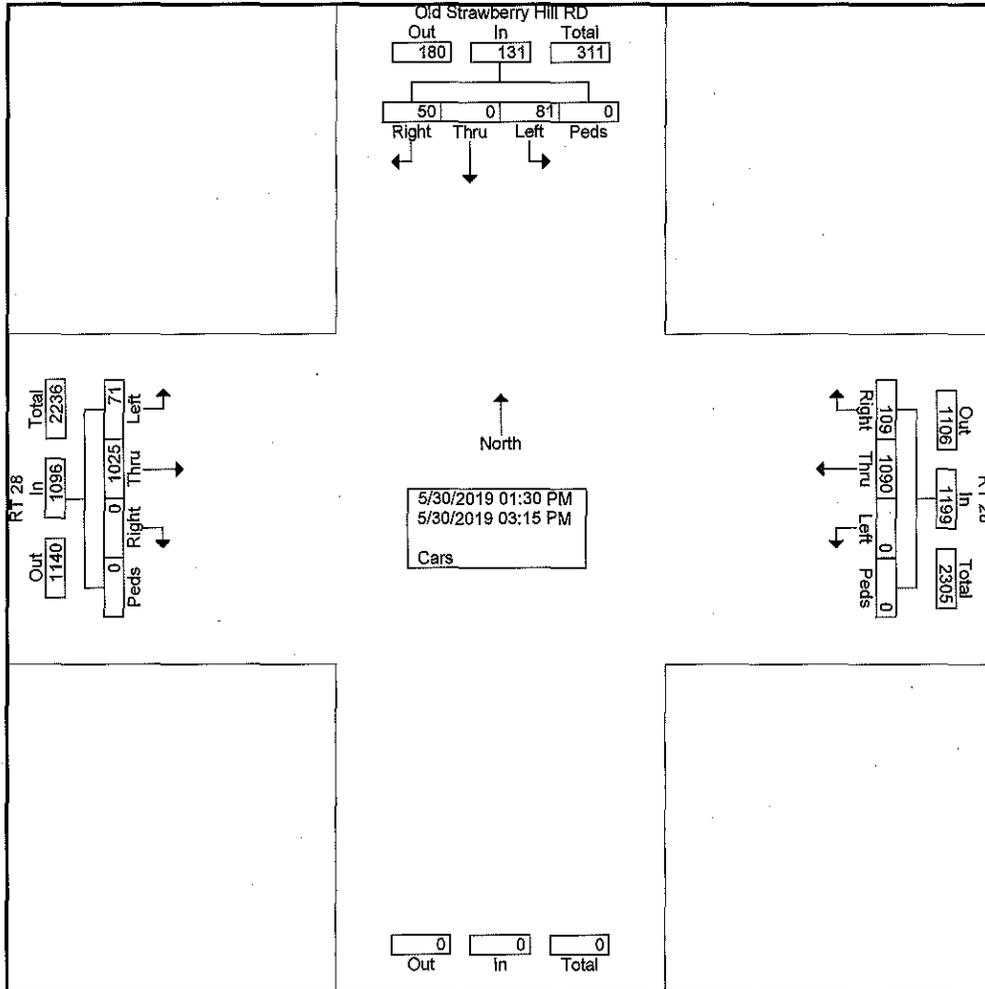
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File Name : 3131_05302019
Site Code : 00003131
Start Date : 5/30/2019
Page No : 1

Groups Printed- Cars

Start Time	Old Strawberry Hill RD From North					RT 28 From East					RT 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
01:30 PM	21	0	4	0	25	0	120	13	0	133	4	107	0	0	111	269
01:45 PM	7	0	3	0	10	0	114	9	0	123	4	136	0	0	140	273
Total	28	0	7	0	35	0	234	22	0	256	8	243	0	0	251	542
02:00 PM	14	0	9	0	23	0	155	17	0	172	3	114	0	0	117	312
02:15 PM	7	0	8	0	15	0	137	12	0	149	5	123	0	0	128	292
02:30 PM	8	0	10	0	18	0	134	10	0	144	14	139	0	0	153	315
02:45 PM	9	0	7	0	16	0	148	12	0	160	18	158	0	0	176	352
Total	38	0	34	0	72	0	574	51	0	625	40	534	0	0	574	1271
03:00 PM	7	0	5	0	12	0	131	16	0	147	19	134	0	0	153	312
03:15 PM	8	0	4	0	12	0	151	20	0	171	4	114	0	0	118	301
Grand Total	81	0	50	0	131	0	1090	109	0	1199	71	1025	0	0	1096	2426
Approch %	61.8	0	38.2	0		0	90.9	9.1	0		6.5	93.5	0	0		
Total %	3.3	0	2.1	0	5.4	0	44.9	4.5	0	49.4	2.9	42.3	0	0	45.2	



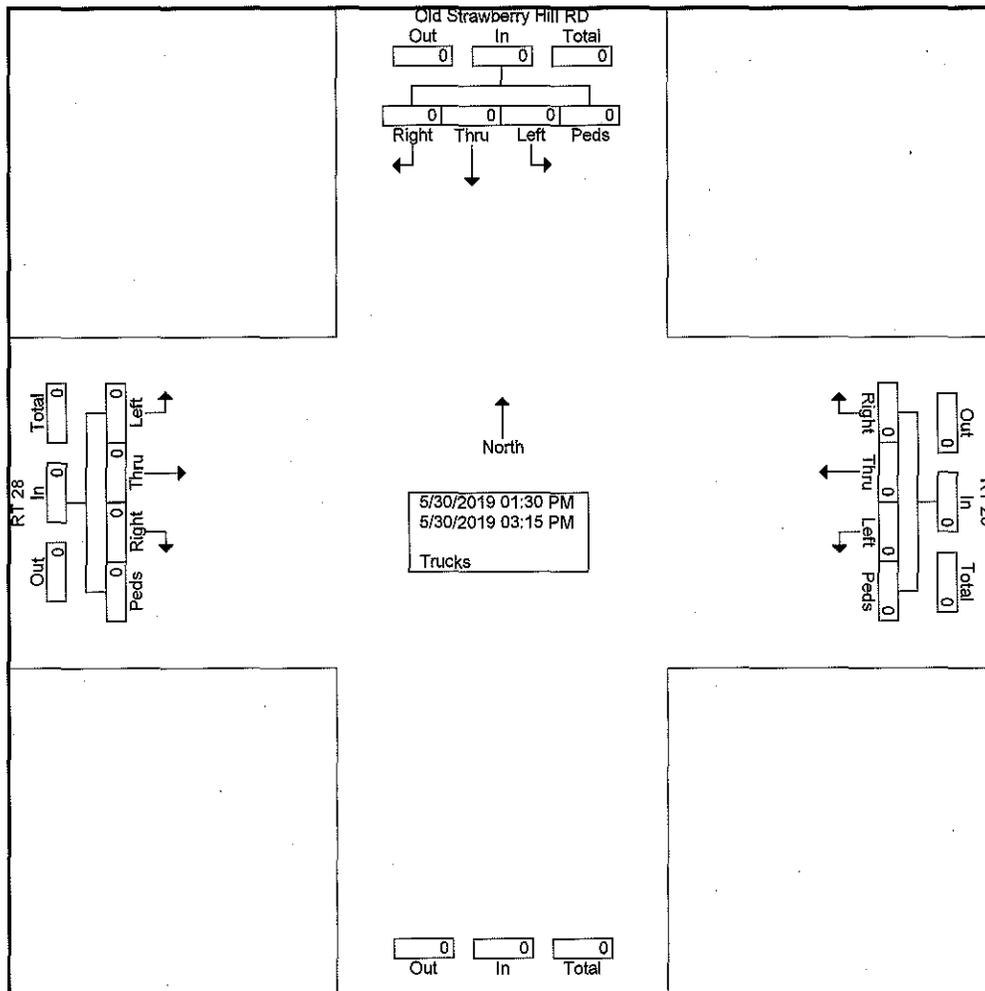
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File Name : 3131_05302019
Site Code : 00003131
Start Date : 5/30/2019
Page No : 1

Groups Printed- Trucks

Start Time	Old Strawberry Hill RD From North					RT 28 From East					RT 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
*** BREAK ***																
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0	0	0	0		0	0	0	0		0	0	0	0		
Total %																



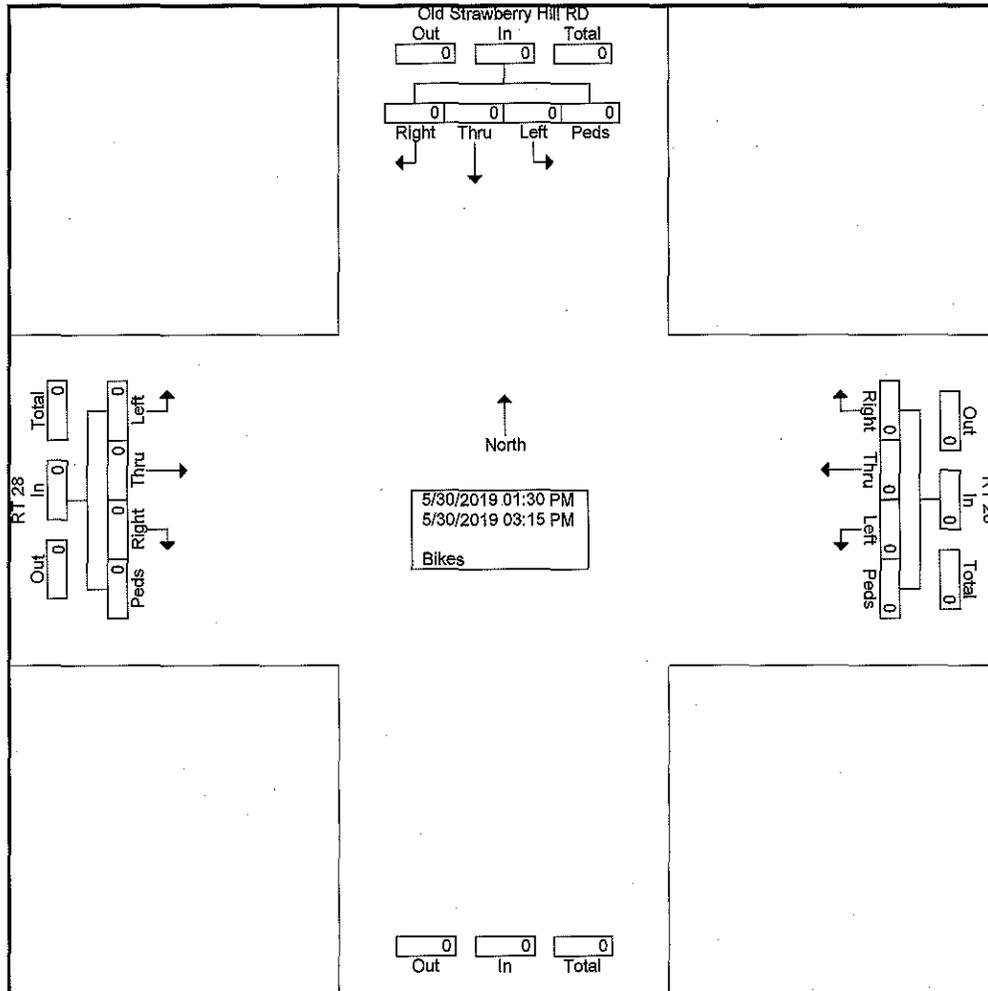
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File Name : 3131_05302019
Site Code : 00003131
Start Date : 5/30/2019
Page No : 1

Groups Printed- Bikes

Start Time	Old Strawberry Hill RD From North					RT 28 From East					RT 28 From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
*** BREAK ***																
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		
Total %																



Appendix D. Road Safety Audit References

Road Safety Audit References

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