MARBLEHEAD TRAFFIC SAFETY ADVISORY COMMITTEE
6th QUARTERLY REPORT TO THE SELECT BOARD
Feb to April 2025

Under the Town's adopted Article 49 of the 2023 Town Meeting, the TSAC was formed to provide advisory assistance to the Select Board on matters pertaining to the safety aspects of the town's transportation infrastructure and promoting the Town's Complete Streets policy. As an advisory body, we are submitting this quarterly report to inform the Select Board of our recommendations. We recognize it is the Select Board's prerogative to determine which of TSAC recommendations it considers are priorities and wishes to advance. We further recognize that unless the TSAC's recommended actions include already programmed labor costs and materials either in stock or planned, they may not be pursued. In such cases, the TSAC is available to assist the Select Board with unfunded actions it still considers as priorities by pursuing additional grant/funding opportunities.

During this period, the Traffic Safety Advisory Committee (TSAC) held three hybrid public meetings, on February 24, 2025, March 17, 2025, and April 14, 2025.

At each meeting, the TSAC presented and debated safety issues consistent with our mission statement. Residents offered comments about traffic safety issues in town and generally wished to reduce excessive speeding to make Marblehead's roads safer for its vulnerable road users including pedestrians and bicyclists, while preserving or enhancing the town's unique character.

TSAC accomplishments during this period:

A. **Reviewed a draft presentation of Marblehead's Bike Facilities Masterplan.** The *draft* Toole Design Group plan can be viewed on the Town's website.
    1. Highest priority streets for separated facilities include: W Shore Dr, Lafayette St, Village St, Pleasant St, Atlantic Ave, Smith St, Rockaway Ave, Glendale Rd, Ocean Ave, Washington St and Cornell Rd.
    2. Of those, W. Shore Dr, Lafayette St, Atlantic Av, Ocean St, and parts of Pleasant St could be done at a lower cost.
    3. The Committee discussed the benefits of enhancing bike infrastructure, focusing on W Shore Drive.

B. **Reviewed MassDOT Vision Zero map highlighting Lafayette St to Pleasant St and Pleasant St to Ocean Ave** as the Town's focus corridor for safety enhancements from a regional perspective.

C. **Summarized and reviewed MassDOT Town wide crash data between 2022-2024.** TSAC found that injury crashes were relatively flat and total crashes declined based on MassDOT reported crashes. Pleasant St had the most crashes including one pedestrian fatality.

D. **Following several meetings of TSAC review, Marblehead's Unsignalized Crosswalk Installation Guidelines (4/14/25)** were unanimously approved for the Select Board's consideration (attached).

E. **DPW and MPD have kept the Committee apprised monthly of safety initiatives being undertaken.**

We welcome the Select Board's feedback and direction, as necessary.

Respectfully submitted,
Marblehead Traffic Safety Advisory Committee

TSAC:gh

Town of Marblehead

Guidelines on the Installation of New Crosswalks At Mid-block or Unsignalized Intersections

April 14, 2025

Prepared for: The Town of Marblehead

A Report of the Marblehead Traffic Safety Advisory Committee

1.1 Purpose of Marblehead Crosswalk Installation Guidelines

The purpose of this Marblehead community guideline is to describe warrants and criteria for the installation of proposed new marked crosswalks. This policy guideline, by reference, incorporates guidance and standards contained in the latest edition of the USDOT's Manual of Uniform Traffic Control Devices (MUTCD), Massachusetts Amendments to the Manual on Uniform Traffic Control Devices and Standard Municipal Traffic Code as well as national laws pertaining to accessibility.

Compliance with these guidelines will ensure that placement, design, and installation of any new crosswalk at a location that is not fully traffic signal controlled will be consistent with Americans with Disabilities Act (ADA) and Massachusetts Architectural Access Board (MAAB) requirements.

1.2 Process

The existing Marblehead Traffic Change Request form available via the Town's website guidelines provides crosswalk proponents with a means to request the placement of a pedestrian crosswalk on roadways controlled by the Town of Marblehead. Attachment 1 is a summary flow chart of the entire process for requesting installation of a new mid-block crosswalk. We strongly recommend that a person or group start the process by reviewing the request for a new crosswalk with immediate abutters and those who will be directly affected by construction of the accessible ramps needed for the new crosswalk.

1.2. A **Prior to submitting the request to the Marblehead Traffic Safety Advisory Committee, Town Police, in consultation with Town DPW or Engineering staff, shall conduct an initial review to determine whether a suggested new mid-block or unsignalized crosswalk is consistent with these guidelines.** It is recommended that, if possible, at least one of the Town's initial screeners be a registered professional engineer. If the initial Town staff review finds no basis for the crosswalk, the Town shall have the ability to conclude the review process without submitting the request to the Traffic Safety Advisory Committee (TSAC) for a follow-up review. If the initial Town review finds the request *may have merit*, it shall submit the request to the TSAC for a follow-up screening as a TSAC meeting Agenda item. The Planning Department shall be consulted to ensure that the suggested additional mid-block crosswalk is consistent with the Town's community planning goals and objectives for pedestrian connectivity. One or more members of the TSAC will perform a site visit to determine preliminary compliance with the "Criteria for Installation" defined in Section 1.6 of this document and invite the proponent(s) who prepared the Traffic Change Request Form to the site visit. Following preparation of a very brief site visit summary, the TSAC shall determine whether the site either does or does not comply with the criteria. If the initial determination is non-compliance, the processing is discontinued. Only a "**complies**" recommendation will result in continued processing via 1.2.B or 1.2.C below.

1.2. B **The TSAC issues a Finding of Initial Compliance** – The TSAC shall vote on a **"Finding of Initial Compliance**". The TSAC will determine whether the Town already has sufficient information to address the proposed crosswalk as an urgent need. If the TSAC deems it is an 'urgent need', it will request the Select Board consider funding an engineering study, as identified in Section 1.5 below, and/or funding for implementation by the Marblehead Department of Public Works.

1.2.C **Determination of the need for a Traffic Engineering Study** – If a new mid-block crosswalk is proposed as part of a new development, the developer shall fund and submit an engineering study to

TSAC and Planning Board. If the TSAC *and* Planning Board approve the crosswalk study findings, it will forward the request to the Select Board for implementation with the developer funding implementation.

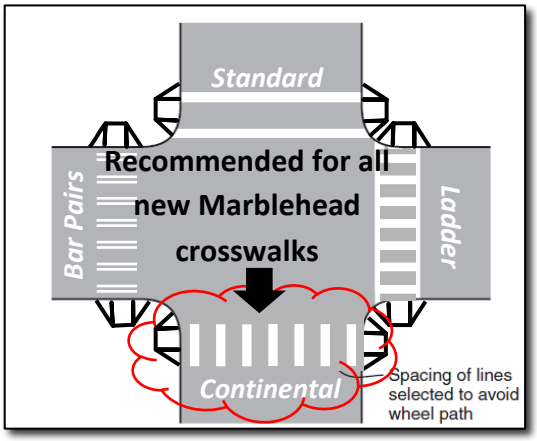
If the *proposed new mid-block crosswalk is not involved with a new development*, the TSAC in consultation with the Planning Board, will review whether traffic volume and safety information cited under Section 1.5 on the specific location is already available. The TSAC may find there is sufficient information available to move directly to implementation without a specific new traffic engineering study as defined in Section 1.5 below. In consultation with the Planning Board, it may request the Select Board vote to fund its immediate implementation. However, if the TSAC finds there is insufficient information, it may request the Select Board to fund a new Traffic Engineering Study under the auspices of the Marblehead Town Engineer and the Marblehead DPW with a tailored scope that incorporates known information to minimize costs. Depending upon the findings and recommendations within the study, the Select Board may elect to take no action, approve, or delay its recommendations until funding can be secured. If the Select Board approves its recommendations, the cost of the installation will be included for future funding through a budget approval action prior to implementation, unless such funding has already been allocated. Put simply, implementation will take place only if funding is secured and appropriated by the Select Board.

1.3 Definitions

"Marked Crosswalk" - Any crosswalk delineated by painted markings, discussed below, placed on the pavement for the purpose of directing pedestrians to use a particular location to cross the street. ***"Controlled Crosswalks"*** are those marked at intersections controlled by traffic signals or in front of stop/yield signs.

"Uncontrolled Crosswalks" are informal, unmarked, and located where traffic is not controlled by signals or stop/yield signs.

Pedestrians are advised that a crosswalk is there to let both motorists and pedestrians know where to expect crossings. It is up to the pedestrian to determine when it is safe to cross at any crosswalk that is not controlled by a traffic signal. This means a pedestrian must observe the speed and density of approaching traffic and raise his/her hand, if necessary, to get passing motorists attention allowing them time to come to a full and complete stop.



Overhead View of Alternatives & Marblehead TSAC Recommended Crosswalk Design Option

Research has shown that of the several available crosswalk types from the latest approved Manual on Uniform Traffic Control Devices (MUTCD, longitudinal bar or "Continental" crosswalks have the highest motorist visibility and perform best. Therefore, the TSAC recommends **all *new or replaced* marked crosswalks** within the Community be "Continental". All new crosswalks must comply with the latest approved MUTCD and the Massachusetts MUTCD Amendments. They shall also comply with the Americans with Disabilities Act and Massachusetts Architectural Access Board (ADA/MAAB) requirements for

handicapped accessible landings. All existing crosswalks within Marblehead shall be made ADA/MAAB-compliant as funding and Marblehead DPW coordinated construction and maintenance activities permit.

The street width where the crosswalk is proposed will dictate the length of a crosswalk while the width of a crosswalk preferably should be 8-10 feet with 24" wide bars consistently spaced 2' to 3' apart (no more than 5' apart, according to the latest MUTCD) the width of the at each midblock location. The new crosswalk designer should minimize the potential for vehicle/pedestrian conflicts of every new crosswalk. MUTCD-approved "Continental" crosswalks should be designed such that standard motor vehicles generally track between, not on, the bars.

1.4 General

Marked crosswalks are usually perceived by the public/residents as a "safety improvement". Commonwealth of Massachusetts laws give pedestrians the right-of-way when traveling within them. However, there is strong evidence that this 'safety' perception may prompt pedestrians to feel a false sense of security when entering and using a marked crosswalk.

Marked crosswalks simply show pedestrians where to cross, not when to cross, which is dictated by immediate traffic flow conditions at the crosswalk. Consequently, pedestrians may place themselves in a hazardous position by believing that all motorists can and will stop, even when it may be physically impossible to do so.

The 'pedestrian trap' is a particularly hazardous condition. This occurs when an approach to a crosswalk is wide enough such that an approaching motorist may stop while a following motorist may not see or know a pedestrian is crossing. In the 'pedestrian trap', motorists following a driver who is slowing to let a pedestrian cross may attempt to bypass to the left or right when bypassing room is available. It is not unusual for this type of behavior to contribute to a higher incidence of pedestrian crashes and a greater number of rear-end collisions at crosswalks than at unmarked pedestrian crossing locations.

This is why mid-block pedestrian crossings are often 'pinched' by curb extensions that create a neckdown to prevent following motorists from passing a vehicle stopping for a pedestrian.

In contrast, a pedestrian crossing an *unmarked* location feels less secure and less certain that the motorist will stop and thereby tends to exercise more caution, waiting for safe gaps in the traffic stream before crossing. The result is fewer accidents at unmarked crosswalks, but frustrated pedestrians who feel they are not being served adequately on the transportation system. The safety issue of marked crosswalks vs. unmarked crossings was thoroughly investigated in a September 2005 landmark USDOT Study *"Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations - Final Report and Recommended Guidelines"*. The subject report – referred to from here on as "the USDOT Study" provided guidelines being employed in this policy.

If conducted, a traffic engineering study must conclude that pedestrian safety is likely to be improved by a new crosswalk with whatever enhancements are deemed appropriate and must identify appropriate measures to ensure high pedestrian and motorist visibility and ADA/MAAB compliance will be possible. It shall estimate total crosswalk costs involving ADA/MAAB compliance, selected crosswalk paint materials, and any necessary visibility enhancements (e.g., RRFBs).

1.5 Traffic Engineering Study Components

A traffic engineering study is required to determine if a marked crosswalk should be installed at an unmarked crossing. The components of the study will vary by location, but may include consideration of:

- Existing daily and AM/PM peak hour motor vehicle/bicycle volumes and speeds on the street(s) involved, plus a 5 -year projection of these only if a new development is involved
- Pedestrian crossing volumes and whether elderly or young pedestrians are or will be predominate users of the proposed crosswalk
- The prospective location's distance from nearest crosswalks in both directions at the prospective crosswalk location
- Observed pedestrian activity, crossing patterns, and nearby pedestrian activity generators
- Existing sidewalk network and feasibility of required warning sign installations and ADA/MAAB compliance of prospective crosswalk location
- Street characteristics including street grades by direction, distances to nearest marked crossings, horizontal and vertical curvature, pavement widths, number of vehicle and bicycle lanes at the prospective crosswalk
- Adequacy of sight distances for prevailing traffic speeds (absence of sight obstructions, and reaction times to come to a full and complete stop)
- Location of adjacent driveways and drainage structures affecting the required ADA/MAAB landings
- Ability to restrict on-street parking within 20 feet in advance of the proposed crosswalk in both directions.
- Street lighting at the proposed crosswalk
- Assess the potential for rear-end accidents, and impacts on bicycle traffic flow with a new midblock crosswalk
- If applicable, traffic progression between signals
- Opinion of probable costs for design/construction costs of all new crosswalk related features
- If the crosswalk is proposed as a part of a new development, predict whether future crosswalk pedestrian demands discussed under Section 1.6 will be met once the development or facility has been constructed and is fully occupied.

If some of the above data components list are already available, it will greatly reduce the cost of a new traffic engineering study. The Marblehead Police Department collects traffic volume and speed data and is enhancing its ability to obtain infrastructure information through its GIS system. Traffic flow data and pedestrian volume counts, if needed, should not be older than 2 years. If required, a traffic engineering study shall be conducted under the direction of a registered professional traffic engineer in the Commonwealth of Massachusetts.

1.6 Criteria for Installation at Unsignalized Intersections or Uncontrolled Approaches

A crosswalk *may be installed* at an intersection on a roadway approach that is regulated by a traffic signal, a stop sign, or a yield sign with ADA/MAAB compliant landings at each end of the crosswalk.

However, a new midblock crosswalk may be installed only *if all the following criteria* are met:

a. The speed limit and 85th percentile speed -- i.e., the speed at which 85% of passing traffic is at or below -- is 35 mph or less.

b. 20 or more pedestrians *are or would regularly use* the crossing during the AM and PM peak hours of vehicular traffic (lesser volumes may be considered if a large percentage of the pedestrian population consists of young, elderly, or disabled pedestrians such as near a school or activity center).

c. Measurements of average daily traffic for the roadway (both directions combined) is: 1) less than 12,000 vehicles per day for a 4-lane roadway, or less than 9,000 vehicles per day for a 2-lane roadway or a 1-way street. When motor vehicle volumes are higher than either of these thresholds, special treatments, such as enhanced visibility pavement markings, a short median, advance warning signage, rectangular rapid flashing beacons, etc. must be added to enhance safety and visibility. Implementation of the special treatments must be feasible, both physically and financially, in consultation with local officials and neighbors.

d. The feasibility of placing high visibility yellow/green warning signs at and in advance of the proposed crosswalk must be identified.

e. A sidewalk or adequate shoulder for use by pedestrians (as determined by traffic volumes, adjacent land uses and other site-specific considerations) exists on both sides of the roadway approach that may be physically altered if necessary to meet current MAAB/ADA requirements. Any new crosswalk shall have ADA and MAAB compliant landings associated with it.

f. Another crosswalk across the same roadway is not located within 200 feet of the proposed crossing.

g. Adequate stopping sight distance (equal to or exceeding that for the posted or 85^{th} percentile speed, whichever is greater) is available in both directions approaching the prospective crosswalk. Adequate sight distance must be provided so that an approaching driver can see a pedestrian at any point on the crosswalk. The adequacy of stopping sight distances shall be determined in accordance with the guidance contained in the most recently available AASHTO "Green Book" A Policy on the Geometric Design of Highways and Streets (the most current approved edition) and shall consider the roadway's horizontal and vertical curvature.

h. It is possible to 'daylight' each crosswalk by prohibiting parked cars a minimum of 20 feet in advance of the direction of travel for each prospective crosswalk and provide adequate warning signs in accordance with the latest MUTCD and Mass Amendments to the MUTCD. High visibility yellow green warning signs are preferred.

Town of Marblehead

Mid-block Crosswalk Installation Flow Chart