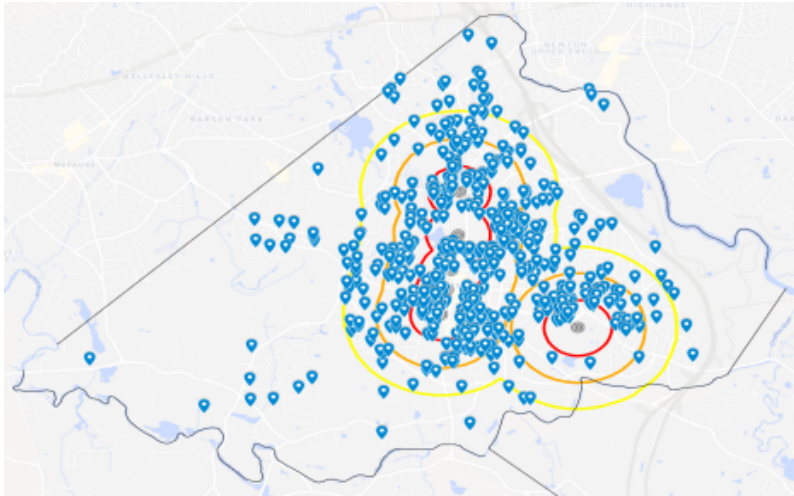


VOTE YES ON ARTICLE #28

QUIET ZONE PHASE 1: DESIGN & ENGINEERING

Safer Quieter Needham is resident-led effort to encourage Needham to establish a rail horn “Quiet Zone” at train grade crossings, which would eliminate the need for non-emergency train horns.

Needham residents have collected signatures from nearly one thousand of their neighbors and local business owners who support this *safety, quality of life, and economic development issue*.



This map indicates the addresses of all Needham residents and businesses that have signed the petition supporting this effort. There is broad support for addressing this issue throughout Needham.

Distance from RR Crossing:

RED: 1/4-Mile Radius

ORANGE: 1/2-Mile Radius

YELLOW: 3/4-Mile Radius

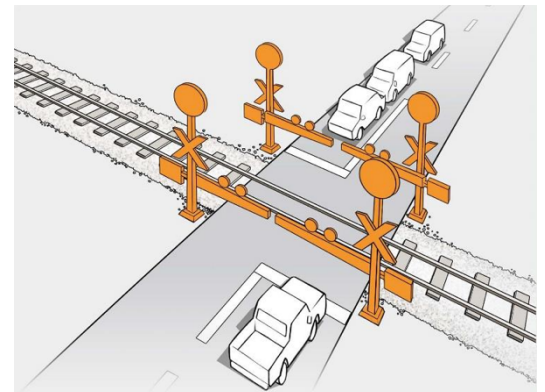
This issue is not only a concern only for those who chose to live near the train. Approximately 59% of individuals who signed the petition live more than 1/4-mile away from the nearest crossing, and about 25% live more than 1/2-mile away. **Residents across town support the investment to make Needham a Quiet Zone.**

Why should the Town need to allocate funds for Phase 1: Design & Engineering now?

- To implement a Quiet Zone, there is a predefined menu of Supplemental Safety Measures (SSMs) that can be employed to achieve the necessary safety improvements. An important result of the 2015-2016 Feasibility Study identified that the only SSM that is practicable for Needham is four-quadrant gates.
- No feasibility study, no short memo from a transit agency, and no reference to like-kind projects can provide Needham with cost certainty. Determining the total cost with certainty requires the Phase 1: Design & Engineering called for by Article #28. See below for additional information on why and costs.

Is a Needham Quiet Zone safer than Needham's current conditions using train horns?

- By implementing a Quiet Zone with four-quad gates, Needham's crossings would be 49% safer than the national average and 62% safer than current conditions using train horns.
- Implementing a Quiet Zone means that train horns are no longer routinely used at each approach to a crossing. **All other safety elements remain the same.** The only change is the elimination of the federally mandated 4 horn blasts at 95-110 decibels for 15-20 seconds at each rail crossing, from 4:45 AM until after midnight.
- The FRA's Quiet Zone Calculator tells us that for Needham, implementing a Quiet Zone using four-quad gates at each crossing will simultaneously make a dramatic improvement in the safety of our rail crossings and will have a dramatic impact on the quality of life and economic vitality of the town.



Four-quadrant gates

Does investing in the Quiet Zone offer a prudent return?

- Yes! Two well-known studies (Bellinger, 2006 and Walker, 2016) indicate property value assessments can grow anywhere from 4% to 14% upon implementation of a Quiet Zone.
- With more than 4,700 properties within ½-mile of the rail crossings, each property would need to achieve, *on average*, an improvement in assessed value of roughly 1%, or \$11,100, to pay back the investment over 10 years. After that, the gains accrue to Needham.
- Although anticipating property assessment improvements is speculative, it is reasonable to believe a home or business located one block away from a rail crossing will be more attractive and more valuable without the constant noise of the train horns.

Will a Quiet Zone have any other benefits?

- Approximately 40% of Needham residents live within ½ mile of a train station. For these residents, it is unbearable to keep windows open during the warmer months due to the volume and frequency of the train horns. They instead rely on air conditioning keep their homes comfortable.
- Most of the electrical grid is powered by fossil fuels. Approximately two-thirds of the electricity produced in Massachusetts in 2020 was fueled by natural gas. Natural gas is a major source of emissions like carbon dioxide and methane.
- The more residents run their air conditioning, the more electricity is used, and the more greenhouse gases are released. Further, hydrofluorocarbons (HFCs), the industrial chemicals found in AC units, absorb 150 to 5,000 times more of the sun’s energy than carbon dioxide does.
- Giving thousands of Needham residents the option to comfortably open their windows will help Needham meet its climate goals and will do a small part to combat the ongoing climate crisis.

What about the recent lawsuit regarding Beverly? Should Needham wait to move forward until the resolution of the lawsuit?

- The recent Beverly lawsuit theorizes that the 2005 FRA Train Horn Rule, which allows for Quiet Zones, only governs public road crossings. As a result, only the 1941 Massachusetts Train Horn Rule (M.G.L. c.160 § 138) governs at-grade pedestrian station crossings. As stated in the lawsuit, “[t]he MBTA contends that at-grade pedestrian crossings located within passenger rail stations are excluded from the reach and application of [the Massachusetts Train Horn Rule].”
- We believe the most likely outcome of the lawsuit is that added pedestrian safety measures, like those discussed in the lawsuit, may be required at Needham Center and Hersey, *the only 2 stations that have at-grade pedestrian station crossings*.
- Even in the unlikely scenario where the plaintiff succeeds, the two pedestrian grade crossings could be eliminated. Some parkers at Hersey and Needham Center would need to cross over Great Plain Avenue to enter the boarding zone. **No matter the outcome of the lawsuit, the Town has options to preserve the safety, quality of life, and economic development benefits of investing in a Quiet Zone.**

Who pays for crossing infrastructure maintenance?

- The maintenance of the grade crossing equipment (gates, flashers, signal box) will always stay with the MBTA and their operator Keolis.
- Every five years Needham would need to recertify its Quiet Zone status with the FRA, which involves inspecting and affirming that the equipment at each crossing is operating as designed.

How much is the total Quiet Zone project going to cost Needham?

- **We cannot know for certain what the costs will be until Phase 1: Design & Engineering is complete.** Each crossing has unique conditions that must be accounted for, and there are many federal, state, and local stakeholders that influence the end result. Also, the design, engineering, and construction of a Quiet Zone must happen while maintaining safe rail and road transit operations.
- The closest comparison metric for cost is the City of Chelsea, which is also implementing four-quadrant gates across five public crossings. Their project had hard-bid costs of approximately \$4.2 million.
- Needham's FY2024 Capital Improvement Plan identified total costs of \$4.1 million for 5 crossings (which excluded the Great Plain Avenue crossing, which was assumed to be paid for by Ch. 90 funds).
- On April 19th, the Needham DPW issued a memo to the Finance Committee outlining a not-to-exceed budget of \$6.925 million for all six crossings in Needham (**NOT a lump sum** – costs could come in less than outlined). The cost would be reduced to \$5.465 million if the Great Plain Avenue crossing is paid for by Ch. 90 funds.
- **The April 19 memo also assumes very high, broadly estimated costs.** The memo assumes the cost to conduct Design & Engineering for the golf course, a private golf cart lane, at 85% of the cost to conduct Design & Engineering for Great Plain Avenue, a four-lane state-numbered road. Similarly, it assumes that the construction costs for the golf course will be just as much as the two-lane public road crossings at West St., Rosemary St., May St., and Oak St.
- While there are undoubtedly differences between the circumstances in Chelsea and in Needham, the April 19th memo outlines costs that are significantly beyond what Chelsea has experienced for, broadly speaking, the same scope of work.

We hope this information is helpful. Please visit our website to find other helpful resources, including an updated slide deck. We would be happy to discuss further at your convenience and appreciate your thoughtful consideration ahead of the 2023 Town Meeting.

SAFER QUIETER NEEDHAM

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Executive Cmte.
Town Meeting Member
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