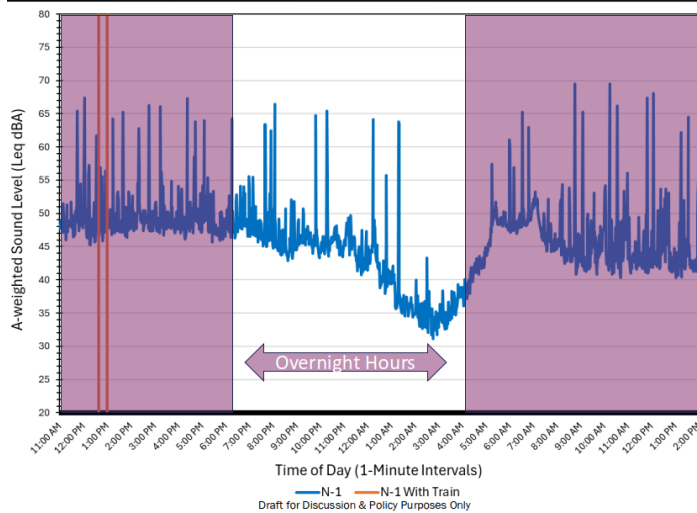


Questions/Notes from the Reading Turnback Committee Regarding the MBTA Turnback Track Sound Study

- Noise data was requested by the community at the public meeting held on February 25, 2025
- Performed from April 23 to 24 for a total of 27 hours
 - MBTA provided test train 12:37 to 12:58 on April 23 to record stationary train noise



Site N1 – Adjacent 20 Hunt Street



Proposed turnback service hours:

- 5:30AM-7:30PM
- Weekdays only



Key Findings

Site No.	Address	Test Condition	Leq dBA	Audibility (+5 dBA)	L90 dBA	Mass DEP (+10 dBA)	Ldn dBA	FTA/FRA (Cat.2)
			With and Without Train	Leq dBA Difference	Without Train	Leq - L90 dBA	With and Without Train	Ldn dBA Allowable
			12:40 to 13:00	12:40 to 13:00	05:00 to 19:00	05:00 to 19:00	24-Hour	24-Hour
N-1	20 Hunt Street	With Test Train	51	5	44	7	45	52
		Without Test Train	46				45	
N-2	88 Hancock Street	With Test Train	51	6	43	8	49	53
		Without Test Train	45				49	
N-3	13 Willow Street	With Test Train	51	1	45	6	47	52
		Without Test Train	50				47	

Screenshots are From - Transit Noise and Vibration Impact Assessment Manual

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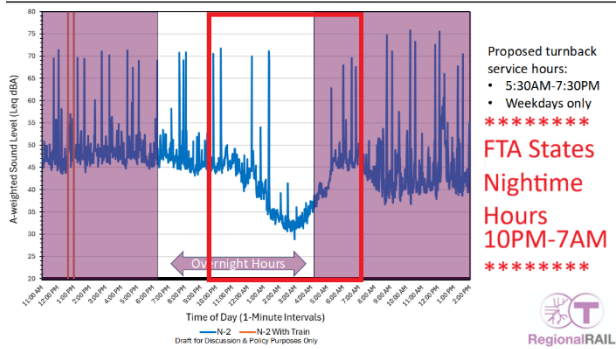
******Sound Study Scope & Calculation Questions******

1. MBTA sound study has the Nighttime hours wrong (6:30PM-4:30AM), the FTA states 10PM-7AM, reference chart screenshot below.

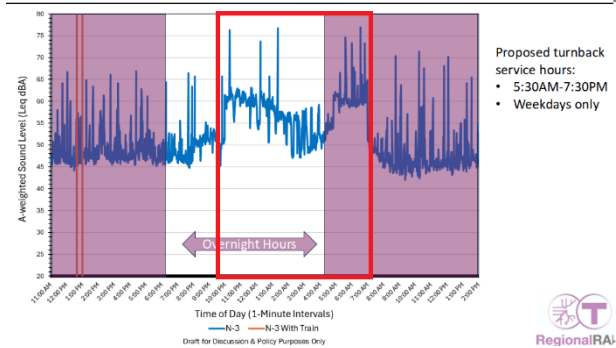
Day-Night Sound Level	L_{dn}	L_{dn} describes a receiver's cumulative noise exposure from all events over 24 hours. Events between 10 p.m. and 7 a.m. are increased by 10 dB to account for humans' greater nighttime sensitivity to noise. L_{dn} is used to assess transit noise for residential land uses.
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2. Was the Nighttime 10-db penalty applied to each nighttime noise event, reference chart screenshot below?
 - a. It appears it was applied during the correct nighttime 10PM-7AM for Site N3, but was not applied to Sites N1 and N2.
- **Category 2** – The noise metric L_{dn} is a used for all category 2 land uses where nighttime sensitivity is a factor. This noise metric includes a 10-dB penalty for nighttime noise. See Appendix B.I.4.5 for more information on this metric.

Site N2 – Adjacent 88 Hancock Street



Site N3 – Adjacent 13 Willow Street

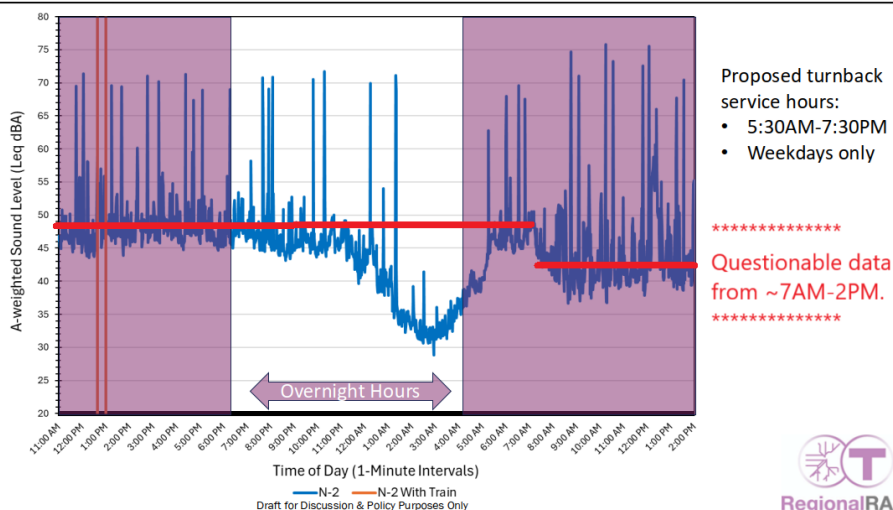


3. Were the additional 13 Turn Trains added to the calculations in the sound study calculation-chart?
4. What model locomotive was used as the “provided test train 12:37 to 12:58 on April 23 to record stationary train noise”?
 - a. All models or at least the loudest model locomotives should be used for this test.
5. Does the sound study only cover the current MTBA schedule?
 - a. Or was the proposed increase of Haverhill and Turnback Trains added to this sound study calculation?
6. Was the “provided test train 12:37 to 12:58 on April 23 to record stationary train noise” used to record the train noise as it leaves the station headed to the turnback track end and the reverse back to the station?
 - a. This data should be added into the sound study calculation.
7. Were there sound monitors sporadically placed on houses down Hunt St., Vine St., Hancock St. and the Reading Housing Authority units, to collect data for the sound study?

For residential land use (category 2), apply the noise criteria at the nearest façade of the occupied portion of the building, e.g., not at a garage or porch. The residential criteria should be applied at locations with nighttime sensitivity.

8. It appears there was a malfunction in all 3 Sound Devices around 7AM. If you draw and average line by eye from 11AM-7AM (excluding the nighttime dip) and the same from 7AM-2PM. The average dBA lines on all three charts drop approximately 5dBa.
 - a. This again calls into question the validity of the FTA/FRA Ldn dBa 24hr calculation.

Site N2 – Adjacent 88 Hancock Street



9. When were the Sound Devices last calibrated, please supply a Calibration Certificate?
10. Some of the above if left out will keep the Ldn dBA average calculation down.
11. Referencing the below screenshot, it mentions “Small Town Residential Area” should have an Ldn of ~50dBA at 50ft.
 - a. Is this correct?
 - b. Where do you obtain the Ldn specifications for our homes?

