

MEMORANDUM

DATE: March 11, 2021

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TO: Peter Bemis, (508)480-0225 x11, pbemis@edcma.com

SUBJECT: Modeling of Chestnut Street and Jackson Drive Residences

> **Proposed Warehouse Sound Analysis** 555 Hopping Brook Road, Holliston, MA

This memorandum provides additional modeling results regarding the Cavanaugh Tocci letter report to Mr. Peter Bemis, Engineering Design Consultants, Inc. dated January 25, 2021 concerning the proposed warehouse at 555 Hopping Brook Road, Holliston, MA. In addition to the eight Medway residences previously modeled, this memorandum includes the residence at 56 Chestnut Street in Holliston and the recently constructed residences on Jackson Drive in Holliston

Figure 1 is a site plan sketch indicating the eight original receptor locations R1-R8 and the two new receptor locations R9 and R10, as well as the corresponding property line locations PL1-PL10.

Table 1 lists estimated stationary source sound levels at R1-R10 and at the corresponding property line locations PL-PL10. Also contained in Table 1 are the total sound levels at receptor study locations, and the zoning and MassDEP Noise Policy stationary source limits considered in this study.

Table 2 lists estimated sound levels produced by transient mobile sources at R1-R10 and at PL1-PL10. As transient sounds are at most only seconds in length and very rarely occur at the same time, the total has no physical meaning and is not reported in Table 2.

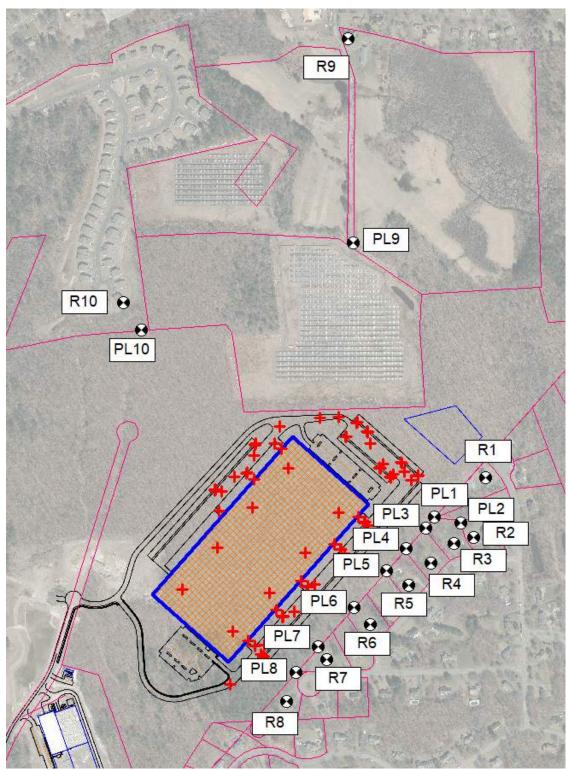


Figure 1. Pairing of property line locations PL1-PL10 with second floor (17' above grade) residential receptors R1-R10 Proposed Warehouse, 555 Hopping Brook Road, Holliston, MA



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|--------------------------------|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|-----|------|
| Stationary Sources | R1 | PL1 | R2 | PL2 | R3 | PL3 | R4 | PL4 | R5 | PL5 | R6 | PL6 | R7 | PL7 | R8 | PL8 | R9 | PL9 | R10 | PL10 |
| Warehouse interior equipment | 27 | 26 | 28 | 27 | 29 | 27 | 29 | 27 | 29 | 28 | 31 | 29 | 32 | 29 | 31 | 29 | 19 | 26 | 17 | 25 |
| Rooftop make-up air unit | 24 | 20 | 28 | 24 | 29 | 21 | 29 | 22 | 30 | 24 | 33 | 27 | 34 | 28 | 32 | 28 | 21 | 28 | 22 | 26 |
| Emergency generator | 9 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 12 | 12 | 13 | 13 | 13 | 12 | 12 | 23 | 32 | 25 | 23 |
| Total Continuous | 29 | 27 | 31 | 29 | 32 | 28 | 32 | 28 | 33 | 30 | 35 | 31 | 36 | 32 | 35 | 32 | 26 | 34 | 27 | 29 |
| Holliston 2015 Zoning Bylaw | | | | | | | | | | 5 | 0 | | | | | | | | | |
| Holliston 2019 Zoning Bylaw | 40 | | | | | | | | | | | | | | | | | | | |
| MassDEP Noise Policy | 40 | | | | | | | | | | | | | | | | | | | |
| Medway Zoning Bylaw | | | | | | | | | | 4 | 5 | | | | | | | | | |

Table 1. Summary of stationary equipment sound levels at 2nd floor receptors locations R1-R10 and property line locations PL1-PL10, and applicable limits Proposed Warehouse, 555 Hopping Brook Road, Hollistion, MA

| Transient Sources | R1 | PL1 | R2 | PL2 | R3 | PL3 | R4 | PL4 | R5 | PL5 | R6 | PL6 | R7 | PL7 | R8 | PL8 | R9 | PL9 | R10 | PL10 |
|---------------------|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|-----|------|
| Truck high idle | 36 | 37 | 36 | 36 | 37 | 36 | 38 | 35 | 38 | 37 | 38 | 37 | 39 | 37 | 38 | 39 | 30 | 37 | 28 | 34 |
| Backup alarm, tonal | 35 | 37 | 34 | 34 | 36 | 36 | 35 | 37 | 35 | 36 | 37 | 36 | 40 | 38 | 38 | 40 | 30 | 34 | 25 | 34 |
| Truck pass-by | 41 | 42 | 41 | 41 | 42 | 41 | 41 | 41 | 43 | 41 | 43 | 43 | 44 | 43 | 43 | 44 | 33 | 42 | 31 | 38 |
| Truck accelerating | 36 | 36 | 36 | 36 | 37 | 37 | 37 | 37 | 38 | 37 | 41 | 40 | 43 | 43 | 46 | 45 | 24 | 28 | 23 | 25 |
| Trailer disconnect | 47 | 47 | 47 | 46 | 48 | 47 | 48 | 46 | 48 | 47 | 49 | 47 | 49 | 48 | 49 | 49 | 41 | 47 | 38 | 44 |

Table 2. Summary of maximum transient sound levels at 2nd floor receptors locations R1-R10 and property line locations PL1-PL10 Proposed Warehouse, 555 Hopping Brook Road, Hollistion, MA

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