Level 2 Unified Permit Application
Mack Devens Development, LLC.
18 Independence Drive
Devens, Massachusetts

July 3, 2025

Submitted to:
Devens Enterprise Commission
33 Andrews Parkway
Devens, Massachusetts 01434

Applicant:
SMC Limited
18 Independence Drive
Devens, Massachusetts 01434

Prepared By:
McCarty Engineering, Inc.
42 Tucker Drive
Leominster, MA 01453

List of Appendixes

A. Narrative
B. Devens Regional Enterprise Zone Permit Application- Level 2
C. Permit Fee Check in the Amount of $149,086.42
D. Level 2 Unified Permit Checklist for Determination of Completeness
E. Industrial Performance Standards Checklist for Newly Proposed Projects
F. LEED Checklist for Sustainable Sites
G. Background Sound Survey Results
H. Stormwater Management Report

Plans (Under Separate Cover)

"SMC Ltd. Expansion & Addition"- Mack Devens Development LLC, 18 Independence Drive Devens, Massachusetts prepared by McCarty Engineering, Inc., Civil Engineers, 42 Tucker Drive, Leominster, MA 01453. Plans are dated and stamped 7/2/2025

Plan List:

1. Existing Conditions Plan (1 of 2)
2. Existing Conditions Plan (2 of 2)
3. Erosion Control Notes
4. Demolition & Erosion Control Pla
5. Layout and Materials Plan
6. Grading, Drainage & Utility Plan
7. Landscape Plan
8. Landscape Maintenance Plan
9. Lighting Plan
10. Truck Turning Plan
11. Fire Truck Turning Plan
12. Construction Details (1/4)
13. Construction Details (2/4)
14. Construction Details (3/4)
15. Construction Details (4/4)
16. Stormtech Detail Sheet

A-201. Overall Main Floor Plan
A-203. Enlarged Area "B" Floor Plan
A-301. Exterior Elevations

Appendix A:
Narrative

McCarty Engineering, Inc.
Civil Engineers

July 3, 2025

Devens Enterprise Commission
Mr. Neil J. Angus, AICP CEP, LEED AP BD+C & ND
Environmental Planner
33 Andrews Parkway
Devens, MA 01434

RE: Level 2 Unified Permit Application
Mack Devens Development, LLC
Proposed Building Addition
18 Independence Drive
Devens, MA

Dear Mr. Angus,

On behalf of Mack Devens Development LLC (Owner) and SMC Limited (Applicant), McCarty Engineering Inc. (MEI) has prepared the Level 2 Unified Permit Documents for the proposed addition located at 18 Independence Drive in Devens, Massachusetts. The attached plans and supporting documents have been prepared in accordance with the applicable sections of the Devens Enterprise Commission's Zoning Ordinance and in accordance with the Commission's Rules and Regulations for Level 2 Permits & Site Plan Review. The property is located in the Rail, Industrial & Trade Related Zoning District.

The subject parcel contains approximately 21.6 Acres and is bounded by Saratoga Boulevard to the West, Independence Drive to the North, and industrial properties to the South and the East. The applicant is proposing to construct an approximate 60,200 square foot addition with associated site improvements. These improvements include the construction of a new parking lot, installation of a new drainage system, utilities, and landscaping and lighting. In addition, the project will also include the renovation of a portion of the existing building that was previously occupied by Werfen. The proposed addition and renovation are being completed to facilitate the growth of SMC Ltd. In recent years SMC Ltd., a medical manufacturer that specializes in single-use and single patient medical and drug delivery and diagnostic devices, has seen a large growth in the company and requires additional space to meet their customer needs.

The proposed project will result in a decrease in truck traffic, from 13 active loading docks when Werfen was operating out of the facility, to the 6 proposed loading docks to be used by SMC. Shipping hours area being reduced to 8:00am-5:00pm. Employee count is be reduced from when Werfern had 100 employees during their largest shift. SMC business will operate with two shifts,

with 75 employees on the first shift and 50 employees on the second shift, as well as 50 employees on the weekend.

As current members of the bio-pharmaceutical manufacturing community at Devens, the applicants are aware of the strong impact a diverse workforce has on their business as well as the regional area. The renovation and addition to the existing facility will allow for substantial opportunity to hire and employ a diverse workforce. Potential positions will range from production workers to supervisors and other management positions, giving opportunities to a wide range of individuals to expand SMC's workforce.

The proposed facility was designed using sustainability and Low Impact Design (LID) principles to act in accordance with the goals of the Devens Reuse Plan. The design of the parking field was designed with LID techniques in mind including porous pavement to assist in the stormwater mitigation, and small bioretention areas within the landscaped islands. Along with the LID techniques, the applicant will minimize land alteration by protecting existing street trees along Saratoga Boulevard and Independence Drive. In addition, landscape berms are proposed between the proposed addition and the adjacent roads and will incorporate native plantings such as maples, dogwoods and pines. These plants will provide natural screening while allowing the proposed facility to be integrated into the surrounding environment.

The Applicant has designed the proposed building to embrace the abutting layouts and adhere to the design standards set forth by 974 CMR 4.00 established by the Devens Enterprise Commission (DEC). The proposed addition will have a de minimis impact on the local area. To ensure the proposed building will not unduly impact the Devens community, Industrial performance standards were met in regards to 974 CMR 4.04 and 4.05, Illumination and Sound. Devises to muffle equipment noise, such as landscape earth berms, screen plantings will be installed as necessary to ensure that construction related activities will not create a disturbance to the community. Per 974 CMR 4.08, the proposed addition will utilize multiple LID stormwater techniques to mitigate any potential adverse effects to the site or adjacent properties. The site will incorporate small bio retention areas with the landscaped islands in the parking field, and permeable paving will be used within the parking stalls of the new parking field to promote infiltration, evapotranspiration, and runoff. The stormwater management system has been designed in compliance with the MassDEP Stormwater Management Standards and DEC regulations (974 CMR 4.08), which can be reviewed in the accompanying Drainage Analysis.

The scope of the project is to construct the following:

- 60,200-SF Warehouse facility
- 101 Parking Spaces (38 news spaces 61 reconfigured as part of project)
- 5,448 +/- SF Office/Break Room
- 92,187 +/- SF of Warehouse Storage
- 160,413-SF of Manufacturing
- 6 Loading Docks
- 14' x 14' Drive in Door

The intent of this filing is to receive the Level 2 Unified Permit for the proposed development. We trust that the information provided is sufficient for the Commission to act favorably on this Permit request and we look forward to presenting the proposed project in detail to the Commission at our public hearing.

Should you require additional information or additional copies of the information submitted please feel free to contact me.

Sincerely,

Patrick McCarty, PE
President

Justin LeClair, EIT
Project Engineer

McCarty Engineering, Inc.

Civil Engineers

July 3, 2025

Devens Enterprise Commission
Mr. Neil J. Angus, AICP CEP, LEED AP BD+C & ND
Environmental Planner
33 Andrews Parkway
Devens, MA 01434

974 CMR 3.04
Mack Devens Development, LLC.
18 Independence Drive

Dear Mr. Angus,

On behalf of Mack Devens Development LLC, McCarty Engineering Inc. (MEI) is requesting a waiver from provisions of 974 CMR 3.04 (3)(a)1.a Parking for the Level II Unified Permit for 18 Independence Drive. We are requesting a wavier for parking within the front of the building as the building fronts on both Saratoga Boulevard and Independence Drive. Due to the location of the parcel and abutting streets there is no side or rear yard to relocate the proposed parking field. In addition the existing parking field for 18 Independence Drive is located in front of the building.

For further details please see the Proposed Plan Set provided by MEI.

We look forward to working with the Commission in the review of the proposed Project. Should you require additional information or additional copies of the information submitted please feel free to contact me.

Sincerely,

Patrick McCarty, PE
President

Justin LeClair, EIT
Project Engineer

42 Tucker Drive Leominster, MA Ph: 978-534-1318 Fax: 978-840-6907 www.mccartydb.com

Appendix B:

Devens Regional Enterprise Zone Permit Application- Level 2

DEVENS ENTERPRISE COMMISSION

DEVENS REGIONAL ENTERPRISE ZONE
PERMIT APPLICATION **LEVEL 2**

DEC NO. _____
DATE: _____
FEE: _____

==========

ESTIMATED COST OF CONSTRUCTION / IMPROVEMENTS $13,371,493.00

OWNER Mack Devens Development, LLC
ADDRESS 330 SMC Drive
CITY/STATE/ZIP Somerset, WI 54025
PHONE (715) 247-3500
FAX _____

SIGNATURE

MICHAEL SCHICK V.P.
Type or print name and title

APPLICANT SMC Limited
ADDRESS 18 Independence Drive
CITY/STATE/ZIP Devens, MA 01434
PHONE (978) 422-6800
FAX _____

SIGNATURE

Alan S. Fiver Facilities Manager
Type or print name and title

If appropriate, attach a separate sheet with the name(s), address(es), and telephone/fax numbers for the project engineer, attorney, or other "development team" personnel.

SITE / LOCATION / STREET 18 Independence Drive

LOT SIZE / TOTAL PARCEL / ZONING DISTRICT: 21.6 AC/Rail, Industrial & Trade Related

==========

STATEMENT OF PROPOSED WORK OR ACTIVITY: Construction of a 60,200 sf +/- addition and site work.

==========

SCOPE OF WORK (pick the actions that best fit your project or application)

- [X] Site Plan
- [ ] Reconsideration
- [ ] Wetlands NOI
- [ ] Zoning Variance
- [ ] Minor amendment or modification of an approved plan
- [ ] Historic District renovations/addition/alternations
- [ ] Other (Specify) _____

Explain work to be performed: Work will include the construction of a 60,200 sf addition to the existing buidling, associated parking area, installation of new drainage improvements, installation of new utility connections, site grading and landscaping/lighting.

Comments from Notifying Agencies: _____

Appendix C:
Permit Fee Check

SMC LTD
330 SMC DRIVE
SOMERSET, WI 54025
PHONE: (715) 247-3500 FAX: (715) 247-3611

WELLS FARGO Wells Fargo Bank, N.A.

171075
11-24/1210

171075

DATE	AMOUNT
7/2/2025	149,068.42

PAY One Hundred Forty-Nine Thousand Sixty-Eight and 42/100

TO THE ORDER OF
Devens Enterprise Commission
33 Andrews Parkway
Devens,MA 01434

⑈171075⑈ ⑆121000248⑆ 4121498075⑈

171075

Date: 7/2/2025 **Check Number:** 171075 **Vendor:** Devens Enterprise Commission **Vendor Number:**

Invoice Number	Invoice Date	Invoice Amt	Balance	Discount	Net Amount
					149,068.42
					149,068.42

Appendix D:
Level 2 Unified Permit Checklist for Determination of Completeness

LEVEL TWO UNIFIED PERMIT –
CHECKLIST FOR DETERMINATION OF COMPLETENESS
[Devens Enterprise Commission Rules and Regulations 2024]

Name of applicant and project: Mack Devens Development, LLC SMC Ltd. Expansion & Addition

Date of Issuance of this DOC: _____

List Regulatory Components of this Unified Permit: _____

Signature of LUA or Authorized Agent: _____

---

1. Submission Requirements

☑ (a) A completed Permit application form.

☑ (b) The required Administrative, Processing, and Peer Review Fee.

☑ (c) One (1) original and three (3) copies* of the application, supporting plans (no larger than 24"x36") and materials and one (1) digital (PDF) copy of the full submission. ***Copies shall not contain any plastic binders or covers.***

☑ (d) A List of Abutters, certified if abutters are not located in Devens and a sketch plan showing the proximity of the abutters to the site.

☑ (e) Drainage calculations prepared by an Engineer complying with 974 CMR 3.04(4).

☒ N/A (f) Request for Determination of Applicability (RFD) or a Notice of Intent (NOI) shall be submitted in accordance with Article XII of the By-Laws and 974 CMR 4.06.

☑ (g) Copies of all existing easements, covenants, restrictions and Institutional Controls applying to the lot.

☑ (h) Soil suitability tests and analysis.

☑ (i) A list of Waivers requested by the applicant, identified as Waivers of Submission and Plan Form and Contents requirements or Design Standards, with the applicable section of the Regulations clearly identified or a statement that no waivers are being requested.

☑ (j) Copy of any variance applying to the land, granted or filed concurrently with the Site Plan.

☑ (k) A narrative demonstrating compliance with the Reuse Plan and By-Laws meeting the specifications of 974 CMR 1.02.

☒ N/A (l) If proposed by the applicant, a plan for the phasing of the construction of the required improvements, including a description, schedule, and plan showing the location of each phase.

☒ N/A (m) A written statement of compliance with the Devens Open Space and Recreation Plan (DOSRP) and the Devens Main Post Trails report dated July 2001, to determine the effects, if any, of proposed development on resource areas, proposed trail rights-of-way, active and passive recreation areas, and other amenities included in the DOSRP.

☒ N/A (n) If an applicant proposes parking lot construction phasing, a written statement demonstrating that the portion to be constructed is sufficient for the needs of the users of the proposed structure, comparing the number of spaces required by the By-Laws to the number the applicant believes are adequate, written certification that no building or permanent accessory structure will be placed on the area reserved for additional parking spaces, and a draft covenant that the parking will be built when the DEC determines it is required.

☑ (o) An estimate of the number of vehicle trips daily and for the morning and evening peak periods (trip generation rates shall be based on the ITE "Trip Generation Manual" most recent edition, and if applicable, data about similar developments in Massachusetts) and a description of traffic mitigation measures proposed including traffic management plans, trip reduction methods, and car/vanpooling preferential parking, etc. Refer to the Devens Transportation Management Initiative Overview for full details and parking/trip reduction guidance.

☑ (p) An erosion and sedimentation plan.

☑ (q) A landscaping maintenance and water management plan.

☑ (r) A narrative demonstrating compliance with the Industrial Performance Standards.

☑ (s) A copy of the LEED Green Building Rating System Project Checklist with the Location and Transportation, Sustainable Sites, and Water Efficiency Categories completed: https://www.usgbc.org/resources/leed-v4-building-design-and-construction-checklist .

☑ (t) Building elevations or perspectives of those portions of the building visible from public ways and residential and open space zoning districts showing the general appearance, massing, building materials, proposed colors, and relationship to abutting premises and, prior to the public hearing, the design review letter from Mass Development.

☒ N/A (u) Building design review materials and if located within the Viewshed District, viewshed impact analysis.

☒ N/A (v) All Slope Resource Areas as identified in 974 CMR 3.06 Appendix B Figures (13) Figure M within the proposed plan area shall be shown on the site plan.

☑ (w) Climate change mitigation, adaptation and greenhouse gas emissions mitigation measures in accordance with the requirements of 974 CMR 4.11.

☑ (x) A completed copy of the Devens Project Checklist for Reducing Embodied Carbon (highlighted rows only) – see Appendix 2. A final copy of this competed checklist (all rows) will be required prior to issuance of a Certificate of Occupancy.

☑ (y) All project submittals subject to DEC review shall require the stamp and signature of a registered Professional Engineer in the Commonwealth of Massachusetts certifying that the project complies with the requirements of 974 CMR 3.04(4), Stormwater Management Design Standards, and 974 CMR 4.08, General: Stormwater Management

2. Surveying and Drafting Plan Requirements

☑ (a) Site plans shall be 24”x36” and at a scale of 1” = 40’ unless alternate size is approved by the Director. All Site Plans must also conform to the Registry of Deeds requirements for recording.

☑ (b) The names and addresses of the record owner of the land and the applicant and the name, seal, and address of the designer, Engineer, Surveyor, and Registered Landscape Architect who made the plan, all of which shall appear in the lower right-hand corner.

☑ (c) The name of the development, scale, date of plan, and legend.

☑ (d) A locus plan indicating the general location of the site in relation to all adjacent and nearby roads, railroads, and waterways.

☑ (e) Ties from the development site to the nearest town and county bounds if within 1000 feet of the site. Bearings and curve data/distances of all lot lines, names of all adjoining property owners as they appear in the most recent tax list, and the location of easements, rights-of-way, and public and private ways.

☑ (f) Devens Lot number of the site, if available.

☑ (g) Topography for the entire site in two-foot intervals with contours and principal elevations of significant existing and proposed features related to the National Geodetic Vertical Datum (NGVD) of 1929. Existing contours shall be shown as dashed lines and, along with all other existing features, shall be screened. Proposed contours are to be shown as solid lines.

☑ (h) A space for the DEC's endorsement of the Site Plan by a majority of the members of the DEC on the front sheet and space for the chairperson or designee to sign all other sheets.

☑ (i) Lines of existing abutting Streets and Roads showing drainage and driveway locations and curb cuts.

☑ (j) Surveyed property lines showing distances and monument locations, all existing and proposed Easements, Rights-of-Way, utilities and other encumbrances, the size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed.

3. Administrative Plan Requirements

☑ (a) Zoning district(s) and any boundary of zoning districts within the site, along any existing or proposed lot line, or within 50 feet.

☑ (b) The location, dimensions (including height), and general use of all existing and proposed buildings and structures to remain, including ground coverage, gross floor area, open area uses, and other facilities and improvements. Location of buildings existing on the site to be developed and on adjacent land under the same ownership within 500 feet of the lot line, indicating whether existing buildings are to be retained, modified or removed. See Appendix 1 for table template.

☑ (c) A statement noting the area of the site, the percentage of the site to be covered by impervious surfaces (such as buildings and parking areas), the area to be devoted to open space, the area to be paved for parking, driveways, loading spaces, and sidewalks, the number of proposed parking spaces and the number required by the By-Laws, the number of employees expected per shift, and the gross floor area of each proposed (commercial, industrial, office, or other) use. This data shall be tabulated to show the relationship of the required versus the proposed quantities. See Appendix 1 table template.

☑ (d) Existing and proposed front, side, and rear setback dimensions.

☑ (e) Parking lots and loading docks, showing driveway entrances and exits designed for safe ingress and egress, curb cuts, layout of parking spaces, aisles, off-street loading facilities, pedestrian walks, bicycle racks or storage facilities, handicap ramps, and representative cross-sections of service and parking areas and driveways.

☑ (f) Existing and proposed landscape features such as fences, walls, planting areas, wooded areas, and walks. Scattered trees to be preserved shall also be shown as well as all "specimen trees" (trees exceeding a minimum caliper of twelve inches) within 100 feet of existing or proposed lot lines have been identified and indicated on the plan. All existing landscape features, especially existing trees and woodland to remain are shown on ALL site plan sheets. Planting details setback, screens, and other landscaped areas including quantities, species, and spacing of plantings, shown at sufficient scale to illustrate clearly the landscaping design. Plans for walks, walls, and fences including dimensions, materials, and finishes. Landscaping Plans, Irrigation Design plans, Planting Plans, Planting Detail sheets, and Planting Specifications shall be prepared by a Landscape Architect registered in the Commonwealth of Massachusetts and shall bear the seal and signature of the Registered Landscape Architect who prepared them.

☑ (g) Planting Plans shall indicate the locations of proposed Street, Road and site lighting, even if site lighting is shown elsewhere on a separate plan and designed by separate consultant. Planting plans shall also include details and locations for walks, walls, and fences including dimensions, materials, and finishes.

☑ (h) Quantities, species, and spacing of plantings in lot setback areas, screens, parking and loading areas, and other landscaped areas shall be shown at a minimum scale of 1"=40'. Detail plans for areas such as landscape treatments adjacent to buildings, tree clusters or shrub beds, landscaped islands in parking areas, or other densely landscaped areas shall be shown at a scale of 1"=20'.

☒ N/A (i) If an irrigation system is proposed, the Submission shall include an irrigation plan complying with 974 CMR 8.09(11) showing the complete layout and of all components, complete schematic diagrams of all systems, a functional and sequential description of all systems, and irrigation details for installation of all components, including but not limited to piping, valves, valve boxes, sprinkler heads, backflow preventers, automatic control systems, pumps, meters, associated cabinets, and all appurtenances as needed.

☑ (j) Proposed means of fire equipment access**.**

☑ (k) Proposed traffic circulation systems, including the volume and proposed direction of traffic flows into, out of, and within the site for both vehicles and pedestrians for an average day and for peak hours.

☑ (l) Location and dimensions (including height) of all storage facilities for equipment, material, and other like items. Location of all underground and aboveground fuel, combustible, and flammable liquid storage tanks greater than 250 gallons.

☒ N/A (m) Location and dimensions (including height) of facilities for garbage, rubbish, recycling, and other waste collection and disposal. Location and dimensions (including height) of facilities for garbage, rubbish, recycling, composting and other waste collection and disposal. **Note: Applicants should be aware of MA waste ban materials and plan for storage/reuse accordingly.** Info. on waste ban items can be found at http://goo.gl/Qrea5

☑ (n) Garage and pedestrian entrances and exits.

☑ (o) Maximum size vehicle, including trailers, expected to use the site after construction, by length, width, height, and American Association of State Highway and Transportation Officials (AASHTO) designation.

☒ N/A (p) Location and dimensions (including height) of existing and/or proposed free-standing signs and the manner of illumination. All proposed signs shall conform with Article XIII of the By-Laws and 974 CMR 6.00: Sign Control as most recently amended.

☑ (q) Existing and proposed public and private utilities, above and below grade, along with their type, size, and class

☒ N/A (r) If the project is to be phased, a plan for the phasing of the construction of the required improvements, including a description, schedule, and plan of affected areas

☑ (s) Any additional details that may be pertinent or required by the Director during the scoping or Pre-Permitting sessions

4. Industrial Performance Standards Plan Requirements.

☑ (a) The site lighting information shall be provided on the Site Plan, including types of fixtures, heights, wattage, foot candle output directly under the light source, foot

candle output at the lot line, and a photometric layout/diagram showing direction and intensity of outdoor lighting.

☑ (b) Notes shall be provided on the Site Plan stating:

(1) Existing or proposed use will not generate electromagnetic interference to any sensitive receptor. Interference with the Harvard-Smithsonian radio telescope (1400-1720 MHz) is specifically prohibited.

(2) Proposed or existing use will not cause pronounced, multiple patterns of noise or vibration nuisance to, or interfere with, any sensitive receptor.

(3) Either "A Massachusetts Department of Environmental Protection (DEP) air quality permit application has been made" or "A DEP air quality permit is not required."

☑ (c) Locations or uses deemed by the Director to be sensitive receptors in any given area of impact may be subject to field identification of the receptor and/or special documentation or field data that helps to clarify the existence or absence of subject impacts. This documentation and data includes existing secondary data and studies, limited field testing by the applicant, or in the worst case scenario, retention of additional professional consultants to conduct further testing. Specifications for any additional information will be identified by the Director during the pre-permitting conference and shall be incorporated in the Site Plan.

☑ (d) A Copy of the completed Industrial Performance Standards Checklist shall be included: http://www.devensec.com/forms/Industrial_Performance_Standards_Checklist.pdf .

5. Wetlands/Water Resources/Flood Plain Plan Requirements. Not Applicable

☒ (a) All Resource Areas as defined by 974 CMR 4.06, including existing natural features (ponds, brooks, wetlands, etc.), Federal Emergency Management Agency (FEMA) flood plain elevations on and/or adjacent to the lot, Flood Insurance Rate Map (FIRM) panel number, zone designation, and base flood elevation.

☒ (b) Erosion, siltation, and dust control measures before and during construction, in accordance with 974 CMR 3.02(3)(e).

☒ (c) Location of all private wells on or within 200 feet of the boundaries of the property, if any

☒ (d) Location of all public and community water supply wells on or within 1,000 feet of the boundaries of the property, if any.

☒ (e) Proposed conservation restrictions and easements.

☒ (f) For any site plan that stores fuel, combustible and flammable liquids, as defined by 42 U.S.C. section 6901-6922i, G.L. c. 148, and 527 CMR 9.00, compliance with 974 CMR 4.09 and an addendum to the DSPCC and the location of on-site materials and equipment for spill response in accordance with its specific DSPCC are required.

6. Schedule:

Transmitted to Nitsch and other consultants
Pre-Permitting conference
Date of Determination of Completeness
Mail to Towns (30-day comment period begins)
Advertisements
Notification of abutters
Public hearing
End of 30-day comment period
Tentative vote

7. Notes/Comments

Project Checklist for Reducing Embodied Carbon in Devens

A Worksheet for Project Teams

Embodied Carbon Reduction Strategy	Already included	Will pursue?	Checklist for Schematic Design	Achieved?	Checklist Based on As-Builts	Get Started on Learning More (More to be added in v2!)
0 Process and Tools						
0 Identify Embodied Carbon as a Priority Communicate early in the design process that reducing embodied carbon is a design and procurement priority for the whole team (e.g., structural engineer, architect, contractor, sustainability consultants, mechanical engineers, etc.)	No	Yes	*McCarty Associates can incorporate these practices into the buidling desing and construction.*	SELECT	*Add a brief explanation as to whether and how the project incorporated this strategy. If the team intended to pursue this strategy but was not able to, provide insight as to why.*	WGBC Bringing Embodied Carbon Upfront
0 Set a Project Embodied Carbon Reduction Target Align the design and construction team around an embodied carbon reduction target. Consider targets from organizations around the globe (e.g., C40, Architecture 2030, WGBC, LETI) to understand what reductions we need now to reach 2030 and 2050 goals. Use life cycle assessment tools (see Sections 0.3 and 0.4 below) to track progress towards reduction goals. See Section "4.1 Integrate Carbon Intensity Limits into Specifications" for information about setting targets for multiple building products.	No	Yes	McCarty Associates can incorporate these practices into the buidling desing and construction.	SELECT		C40 Cities Clean Construction Declaration LETI Embodied Carbon Primer: Best Practice Targets Architecture 2030 2030 Challenge for Embodied Carbon
0 Commit to Using Whole Building (Whole Project) Life Cycle Assessment Perform a whole building life cycle assessment (WBLCA) early in design development to identify the largest opportunities ("hot spots") for emissions reductions. Use the results from WBLCA(s) done throughout design to compare design choices and identify which reduction strategies will have the largest impact. WBLCA can be used to analyze the whole building, tenant improvement projects, or portions of a building.	No	Yes	McCarty Associates can incorporate these practices into the buidling desing and construction.	SELECT		Carbon Leadership Forum LCA Practice Guide AIA-CLF Embodied Carbon Toolkit for Architects (particularly Part 2: Measuring Embodied Carbon)
0 Use Environmental Product Declarations (EPDs) During Procurement Once a product type has been selected, ask manufacturers (via specifications and the bidding and procurement processes) to provide environmental product declarations (EPDs) of their products to help select the lowest-carbon option.	SELECT	SELECT		SELECT		Embodied Carbon in Construction Calculator (EC3) AIA-CLF Embodied Carbon Toolkit for Architects (particularly Part 2: Measuring Embodied Carbon)
0 Discuss Whether to Integrate Carbon into the Bid Process Carbon can be evaluated alongside cost, schedule, and other criteria when selecting bids for materials to be used in construction. Alternatively, performance incentives can be provided to contractors who deliver low-embodied-carbon projects or suppliers that deliver materials below a certain carbon threshold. These strategies all require discussion early in the process between the owner, design team, and contractor.	No	Yes	McCarty Associates can incorporate these practices into the buidling desing and construction.	SELECT		Steps to Develop a Low Carbon Procurement Policy (Incentives) OwnersCAN Embodied Carbon Action Plan Microsoft Case Study
1 Build Less, Reuse More	*Already included*	*Will pursue?*		*Achieved?*		**Learn More**
1 Reuse/Retrofit Existing Buildings Re-use or retrofit existing buildings instead of constructing a completely new building. Reductions in new square footage or new structure will translate directly to reductions in embodied carbon.	Yes	SELECT	*In conjunction with the proposed addition, the project includes the renovation of a portion of the existing buidling that was occupied by the previous tenant.This space will be outfitted to support the growth and expansion of SMC as needed in lieu of construction an entirely new space. Additionaly mezzanine area is proposed to further optimize space within the addition*	SELECT	*Add a brief explanation as to whether and how the project incorporated this strategy. If the team intended to pursue this strategy but was not able to, provide insight as to why.*	
1 Design for Disassembly and Reuse Maximize the reuse potential of building components by detailing connections that can be easily disassembled and reused in future buildings. Avoid lamination and adhesion in assemblies (such as composite decks or hybrid mass timber/concrete assemblies) that prevent deconstruction and reuse. Avoid materials that are difficult to recycle, and avoid coatings that could prevent recycling.	SELECT	SELECT		SELECT		Zero Net Carbon Collaboration Resources AIA's Retrofitting Existing Buildings Guid e
1 Select Salvaged or Refurbished Materials Reuse materials, such as those onsite or from other city properties, or purchase salvaged materials rather than new ones. Consider refurbishing items, such as furniture, instead of throwing them out and re-purchasing them.	SELECT	SELECT		SELECT		Where feasible, take advantage of past EC 'investments' by making use of previously-used building materials rather than newly-produced materials. (AIA, 2019; Carbon Leadership Forum Webinar Series, 2018)
2 Design Lighter and Smarter	*Already included*	*Will pursue?*		*Achieved?*		**Learn More**
2 Reduce [New] Floor Area Identify opportunities for design and programmatic flexibility to minimize the amount of new floor area. Similar to material and building reuse, reducing new floor area translates to material savings (as well as cost savings) and reduces embodied carbon.	Yes	SELECT	*The proposed layout has been designed to proposed the minimum about of new floor area required while considering the existing area that is being rennovated as part of the proposed project.*	SELECT	*Add a brief explanation as to whether and how the project incorporated this strategy. If the team intended to pursue this strategy but was not able to, provide insight as to why.*	

2	**Reduce Below-Grade Construction** Reduce or eliminate below-grade parking or interior spaces. Subgrade construction requires a large amount of concrete (a carbon-intensive material) and releases soil carbon during excavation.	Yes	SELECT	No subgrade construction such as below-grade parking or interior space is proposed. Only excavation below grade for the proposed addition is solely for the installation of the foundation and utilities.	SELECT		Canadian Architect, 2021
2	**Select Lighter Materials and Assemblies** When possible, selecting lighter materials and assemblies for the structure and envelope systems can reduce the load on structural components (and therefore their size and embodied carbon). Consider lightening slabs through use of void systems, or using lighter structural materials like timber. In some cases, lighter structural loads may be decreased enough to allow for the preservation of an existing structure, unlocking additional carbon savings from building reuse.	SELECT	SELECT		SELECT		
2	**Design Structure for Material Efficiency** Using less of a material to do the same work results in large carbon and cost savings. Structural design choices -- such as bay sizing, column and beam spacing, and member cross sections, as well as avoiding structural gymnastics (like cantilevers and transfer beams) -- can all reduce carbon.	SELECT	SELECT		SELECT		SE2050 Structural Engineering Commitment case studies Additional strategies may include using braced frames instead of moment-resisting frames, using lighter shapes like joists/trusses, lightening concrete slabs by using void systems, and "right-sizing" each steel member.
3	**Choose Finishes Carefully** The total impact of interior finishes adds up significantly over time. Consider the expected turnover of the space you are designing and whether that matches up with the selected products. Architects and interior designers can collaborate to use salvaged materials and minimize the need for additional finishes where not required for functional performance, particularly in spaces with high occupant turnover and frequent interior fit-outs. These considerations should be included alongside toxicity, cost, and performance requirements when choosing finishes.	SELECT	SELECT		SELECT		Metropolis Magazine's Climate Toolkit for Interior Design CLF LCA of MEP Systems and Tenant Improvement
3	**Minimize Construction and Demolition Waste (Waste Prevention)** Before construction, design in modules to minimize waste. During construction, adopt sorting and waste diversion practices on-site to minimize construction waste.	Yes	SELECT	The proposed project will limit waste maximizing the material used on site. Standard Waste diverision practices will be implemented during construction.	SELECT		AIA 10 Steps to Reducing Embodied Carbon

	Use Low-Carbon Alternatives: Substitute Low-Carbon Materials/Systems for High-Carbon Ones	*Already included*	*Will pursue?*		*Achieved?*		**Learn More**
3	**Consider Total Carbon when Selecting Envelope Systems** Use WBLCA (alongside energy modeling) to help assess the trade-offs in embodied and operational carbon for different envelope options. Typically, lightweight envelope systems are likely to have the lowest embodied carbon (in addition to reducing the embodied carbon of the supporting structure).	SELECT	SELECT	*Add a brief explanation here about how the project may incorporate this strategy into the project and any special considerations necessary*	SELECT	*Add a brief explanation as to whether and how the project incorporated this strategy. If the team intended to pursue this strategy but was not able to, provide insight as to why.*	
3	**Select Carbon-Storing Structural, Envelope, and Finish Materials** Bio-based materials typically have lower upfront carbon than non-bio-based products, with the added potential to store carbon over the life of the building. The availability of bio-based alternatives to conventional materials -- such as mass timber, laminated bamboo, wood fiberboard, straw, clay-straw, hempcrete, cork, wool, linoleum, cork, and more -- is increasing. Bio-based materials are also often significantly lighter than their alternatives, reducing the load and size of supporting structural members (and therefore reducing carbon).	SELECT	SELECT		SELECT		Builders for Climate Action's Zero Carbon Resources Buildings as Global Carbon Sinks WoodWorks Carbon Smart Materials Palette
3	**Select Lower-Carbon Refrigerants** Refrigerant leakage is one of the biggest contributors to climate change within the building industry. Architects can collaborate with engineers to use passive design strategies, select systems that use low-carbon refrigerants, and encourage clients to adopt building management practices to mitigate refrigerant leakage and ensure 100% refrigerant recovery.	SELECT	SELECT		SELECT		Integral Group's Refrigerants & Environmental Impacts: A Best Practice Guide
3	**Eliminate HFC-Containing Insulation and Select Lower-Carbon Insulation** Selecting an insulation that balances operational and embodied carbon trade-offs is key to achieving a total carbon balance for building. Generally, plastic- and chemical-based insulation will have a much higher embodied carbon than bio-based materials. In particular, avoid specifying HFC-containing rigid polyurethane spray foam, sealants, and XPS products that are being banned or significantly restricted in Canada and a growing number of states in the US (including California).	SELECT	SELECT		SELECT		HFC bans by region and end-use product (including foams and refrigerants) US EPA Substitutes in Foam Blowing Agents Building Enclosure: "New Climate Regulations Spell Changes for Building Products" (2020)

	Procure Low(er)-Carbon Products: Specify and Source the Lowest Carbon Product Available	*Already included*	*Will pursue?*		*Achieved?*		**Learn More**
4	**Integrate Carbon Intensity Limits into Specifications** At a minimum, architects can use template language to incorporate requests for EPDs into their specifications as a part of bid proposal submittals. For products where EPDs are more widely available, architects can integrate carbon intensity limits into performance requirements, requiring an EPD to document compliance with a global warming potential limit (e.g. XX kg CO2e / unit of material).	SELECT	SELECT	*Add a brief explanation here about how the project may incorporate this strategy into the project and any special considerations necessary*	SELECT	*Add a brief explanation as to whether and how the project incorporated this strategy. If the team intended to pursue this strategy but was not able to, provide insight as to why.*	Carbon Leadership Forum Material Baselines ownersCAN Embodied Carbon Action Plan ownersCAN ECAP Specification Matrix and Language

4 Use Performance-Based Concrete Specifications Use performance-based (rather than prescriptive) requirements for concrete design that is appropriate for each component/mix. If CMU is used in construction, use a specified compressive stress method instead of a prescriptive method to proportion grout mix.	SELECT	SELECT	SELECT		
4 Optimize Concrete Mix Design Work with structural engineers to optimize concrete design with strategies such as reducing cement volume, allowing for longer cure times by specifying strength at 56 days instead of 28 days to allow more time for strength gain, looking at carbon implications of higher-quality aggregate, or reducing strength requirements where feasible/appropriate. Minimizing portland cement and/or replacing portland cement with other materials -- such as Type 1L Cement or supplemental cementitious materials (fly ash, slag, etc.) -- also reduces embodied carbon.	SELECT	SELECT	SELECT		RMI Concrete Solutions GuideNRMCA Guide to Specifying S
4 Source from Lower-Carbon Facilities and Products Manufacturers vary in the sustainability of their facilities and sourcing practices. Two materials with the same performance may differ in their embodied carbon as a result of energy source (fuel type/electricity grid mix), plant energy efficiency, product design and material efficiency, or lower-carbon ingredient sourcing (through using recycled, bio-based, or local ingredients). Due to how products are specificed and selected, EPDs are typically the best or only option for a project team to differentiate the carbon intensity of products from different facilities and manufacturers.	SELECT	SELECT	SELECT		Embodied Carbon in Construction Calculator (EC3) Energy Star Industrial Plant Efficiency Program Carbon Smart Materials Palette
5 Source Climate-Smart Wood The full life cycle embodied carbon impacts and benefits of wood are difficult to quantify (and therefore difficult to optimize) because of complex supply chains and differing methods for calculating carbon benefits. Current strategies for optimizing wood sourcing include using reclaimed/salvaged wood, asking for chain-of-custody certificates or other supply chain transparency information, asking for sustainable forest management certifications (such as FSC or SFI), and specifying wood that is locally-harvested or harvested from working (not primary) forests. *(Note: An agreed-upon definition for climate-smart wood that can be used in procurement is still in development and should be included once available).*	SELECT	SELECT	SELECT		Carbon Leadership Forum's Wood Carbon Seminars Climate-Smart Forestry.org
5 Integrate Carbon into the Bid Process Evaluate carbon -- in addition to cost, schedule, and other criteria -- as an awarding criteria when selecting bids for materials to be used in construction. If points are used to differentiate bids, award points for low-carbon procurement. When possible, provide performance incentives to contractors who deliver low-embodied-carbon projects.	SELECT	SELECT	SELECT		Steps to Develop a Low Carbon Procurement Policy (Incentives) OwnersCAN Embodied Carbon Action Plan Microsoft Case Study

Appendix E:
Industrial Performance Standards Checklist for Newly Proposed Projects

Industrial Performance Standards Checklist for Newly Proposed Projects

All projects within the Devens Regional Enterprise Zone (DREZ) must comply with the Devens Enterprise Commission (DEC) Industrial Performance Standards (IPS) under 974 CMR 4.00. This checklist is intended to assist Applicants in determining at the time of submittal, or ideally before submittal, if their project may or may not involve development and/or activities that may impact sound, vibration, air quality, or lighting within the DREZ.

Site layout, building(s) design/orientation, traffic patterns, location of outdoor equipment and numerous other project components can impact sound, vibration, air quality, and lighting within the DREZ. By identifying any potential IPS concerns early on in the review process, Applicants can design their projects to ensure compliance with the IPS at all times and avoid potential future violations of the IPS and costly mitigation after the fact.

Please note, if a project requires an air permit from the Massachusetts Department of Environmental Protection (DEP), the Applicant will need to initiate permitting through the DEP office as well. Even if a project requires a DEP air permit, the proponent still must demonstrate compliance with the DEC IPS.

Please circle the correct answer to each question in this checklist. Please note that by circling "NO", the Applicant is not relieved of demonstrating compliance with the IPS requirements. If "NO" is circled and a potential concern is identified during the review process, it could temporarily suspend the approval process timeline until the concern is adequately addressed. If "YES" is answered, please explain and provide any supporting studies or information to aid the DEC in their evaluation of the project.

Project Name SMC Ltd. Addition

Does the proposed project and associated activities involve any potential increases in sound, vibration, air quality, odor, dust, lighting and/or electromagnetic interference that are covered under the DEC Industrial Performance Standards?

YES	NO

If you answered yes, will the Applicant demonstrate compliance directly or will the project proponent employ an expert to demonstrate compliance? Please provide pertinent contact information of the responsible official:

The Applicant has contracted ACENTECH to condcut a Noise Evaluation for the proposed addition to demonstrate compliance with DEC Industrial Perforamnce Standards.

Industrial Performance Standards Checklist for Newly Proposed Projects cont…

Noise

Does the proposed project have the ability to increase sound?	**YES**	**NO**
1. Will the increase in sound plus background sound exceed 974 CMR 4.05 (3)a?	YES	NO
2. Will the total sound plus background sound exceed 974 CMR 4.05 (3)b?	YES	NO
3. Will the increase in sound create pure tones that will exceed 974 CMR 4.05 (3)c and/or 974 CMR 4.05 (3)d7?	YES	NO
4. Will the increase in sound create impulsive sounds that will exceed 974 CMR 4.05 (3)d1-6 and/or 974 CMR 4.05 (3)d8?	YES	NO
5. Are there procedures and controls proposed to reduce sound during earth removal per 974 CMR 4.07(10)?	YES	NO
Checklist Options to Demonstrate Sound Compliance		
6. Have all of your potential sound sources been identified?	YES	NO
7. Will spreadsheet calculations of the potential increase in sound be provided?	YES	NO
8. Will sound modeling of the proposed project be provided?	YES	NO
9. Will the facility submit a protocol describing the potential sound monitoring, metrics, and modeling as required?	YES	NO
10. Does the project propose to collect background sound data (typically 7-days worth of valid data is sufficient)?	YES	NO
11. If the facility intends to collect background sound data will it include other qualifying weather data such as wind speed, wind direction, sky conditions, etc.?	YES	NO
12. Is mitigation to reduce the overall sound profile proposed?	YES	NO
13. Is sound mitigation to be assumed when calculations or modeling is performed?	YES	NO
14. Is compliance monitoring proposed to demonstrate that the project meets the estimated increases in sound?	YES	NO
15. Have increases in sound with respect to traffic been considered?	YES	NO

Industrial Performance Standards Checklist for Newly Proposed Projects cont…

Vibration

Does the proposed project have the ability to increase vibration? YES NO

16. Will the increase in vibration exceed 974 CMR 4.05 (4)a?? YES NO

Checklist Options to Demonstrate Vibration Compliance

17. Have all of the potential vibration sources been identified? YES NO

18. Will spreadsheet calculations of the potential increase in vibration be provided? YES NO

19. Will the proponent provide vibration modeling of the proposed project? YES NO

20. Does the project propose to collect background vibration data? YES NO

21. Is mitigation proposed to reduce the overall vibration profile? YES NO

22. Is vibration mitigation to be assumed when the calculations or modeling performed? YES NO

23. Is compliance monitoring proposed to demonstrate that the project meets the estimated increases in vibration as proposed? YES NO

Industrial Performance Standards Checklist for Newly Proposed Projects cont…

Air Quality

Does the proposed project have the ability to create air, visible, and/or odor emissions?	**YES** **NO**
24. Will the proposed project meet the air quality standards in 974 CMR 4.02(3)	**YES** NO
25. Are there procedures and controls proposed to minimize impacts during earth removal per 974 CMR 4.07(7)?	**YES** **NO**
26. Will the proposed project require a MassDEP air quality permit per 974 CMR 4.02 (1)	**YES** **NO**
If the project will require an air permit, then the proponent should set up a meeting with the regional MassDEP office to determine air permitting requirements, and answer the following:	Not Applicable
27. Will the proposed project submit a Limited Plan Approval application?	**YES** **NO**
28. Will the proposed project submit a Non-Major Comprehensive Plan Approval application?	**YES** **NO**
29. Will the proposed project submit a Major Comprehensive Plan Approval application?	**YES** **NO**
30. Will the proposed project be a Title V source?	**YES** **NO**
31. Will the proposed project be a PSD source?	**YES** **NO**

Checklist Options to Demonstrate Air Quality Compliance

32. Have you identified all of your potential air, visible and/or odor sources?	**YES** NO
33. Will there be any visible emissions?	**YES** **NO**
34. Will there be any dust emissions?	**YES** **NO**
35. Will there be any odor emissions?	**YES** **NO**
36. Will there be any potential increases in air, odor or dust emissions within the DREZ that will impact any internal or external receptors?	**YES** **NO**
37. Will the project proponent provide spreadsheet calculations of the potential increase in air and/or odor emissions within the DREZ to demonstrate how the increase will not impact any internal or external receptors?	**YES** **NO**

Industrial Performance Standards Checklist for Newly Proposed Projects cont…

Checklist Options to Demonstrate Air Quality Compliance (cont.)

38. Will the project proponent provide air and/or odor modeling of the proposed project within the DEC or into the neighborhood surrounding the DEC??	YES **NO**
39. Is mitigation proposed to reduce the overall air and/or odor profile?	YES **NO**
40. Is air pollution and/or odor control to be assumed when the calculations or modeling is performed?	YES **NO**
41. Is compliance monitoring proposed to demonstrate that the project meets the estimated increases in air and/or odor as proposed?	YES **NO**

Lighting/Illumination

Does the proposed project have the ability to create additional Illumination?	**YES** NO
42. Will lighting meet the illumination standards set forth in 974 CMR 4.04(3)?	**YES** NO
43. Have all of the potential light sources been identified?	**YES** NO
44. Will spreadsheet calculations of the potential increase in light and how it will not affect the Observatory outlined in 974 CMR 4.04(1) or any external or internal receptors be provided?	YES **NO**
45. Is mitigation proposed to reduce the overall light profile?	**YES** NO

Electromagnetic Interference

Does the proposed project have the ability to create electromagnetic interference?	YES **NO**
46. Have you identified all your potential electromagnetic sources?	YES **NO**
47. Are you proposing to provide spreadsheet calculations of the potential increase in electromagnetic interference and how it will not affect any internal or external receptors as per 974 CMR 4.03(3)?	YES **NO**
48. Are you proposing any mitigation to reduce your overall electromagnetic profile?	YES **NO**
49. Will your project comply with all the electromagnetic requirements under 974 CMR 4.03?	YES **NO**

Appendix F:
LEED Checklist for Sustainable Sites

LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: SMC Ltd Addition
Date: 7/3/2025

Y	?	N			
			Credit	Integrative Process	1

15	0	0	**Location and Transportation**		16
		x	Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
2			Credit	High Priority Site	2
5			Credit	Surrounding Density and Diverse Uses	5
5			Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
1			Credit	Reduced Parking Footprint	1
		x	Credit	Green Vehicles	1

10	0	0	**Sustainable Sites**		10
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
2			Credit	Site Development - Protect or Restore Habitat	2
1			Credit	Open Space	1
3			Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1

9	0	0	**Water Efficiency**		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
6			Credit	Indoor Water Use Reduction	6
		x	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

22	0	0	**Energy and Atmosphere**		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
		x	Credit	Enhanced Commissioning	6
18			Credit	Optimize Energy Performance	18
		x	Credit	Advanced Energy Metering	1
		x	Credit	Demand Response	2
3			Credit	Renewable Energy Production	3
1			Credit	Enhanced Refrigerant Management	1
		x	Credit	Green Power and Carbon Offsets	2

9	0	0	**Materials and Resources**		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
5			Credit	Building Life-Cycle Impact Reduction	5
		x	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
		x	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
2			Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

12	0	0	**Indoor Environmental Quality**		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
3			Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
2			Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
2			Credit	Interior Lighting	2
		x	Credit	Daylight	3
		x	Credit	Quality Views	1
1			Credit	Acoustic Performance	1

0	0	0	**Innovation**		6
		x	Credit	Innovation	5
		x	Credit	LEED Accredited Professional	1

0	0	0	**Regional Priority**		4
		x	Credit	Regional Priority: Specific Credit	1
		x	Credit	Regional Priority: Specific Credit	1
		x	Credit	Regional Priority: Specific Credit	1
		x	Credit	Regional Priority: Specific Credit	1

77	0	0	**TOTALS**	Possible Points:	110

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

Appendix G:
Background Sound Survey Results

ACENTECH
ACOUSTICS TECHNOLOGY VIBRATION

June 16, 2025

Patrick McCarty, P.E.
McCarty Companies
42 Tucker Drive
Leominster, MA 01453
Email: pmccarty@mccartydb.com

Subject: **Background Sound Survey Results**
SMC Expansion Noise Study
18 Independence Drive, Devens, MA
Project Number J639120.00

Dear Patrick:

This letter presents the results of the background sound monitoring surveys conducted by Acentech under contract to your firm and for the benefit of SMC, Ltd. The background survey was conducted in regard to a proposed expansion of the building at 18 Independence Drive in Devens, Massachusetts (the Project). The purpose of the noise surveys reported herein is to provide data to define the sound level limits of the Devens Enterprise Commission (DEC) defined herein.

Please contact me with any questions at mbahtiarian@acentech.com or 617-499-8058.

Sincerely,

Michael Bahtiarian, INCE Bd. Cert.
Principal

Cc: Jim Barnes, Marc Newmark; Acentech

Attachment: Background Noise Survey Results – SMC Devens Facility; Rev 0.2, dated June 16, 2025

Background Sound Survey Results – SMC Devens Facility

Revision 0.2, June 16, 2025

BACKGROUND

Acentech is under contract to the McCarty Companies (McCarty) to conduct a Project noise evaluation of a proposed industrial expansion that will consist of a new 60,860 square foot addition to the existing building and some reconfiguration within the existing space. The new mechanical equipment serving the existing building will include a total of sixty-seven (67) new pieces of mechanical equipment.

NOISE LIMIT

The applicable noise limits are defined in the DEC industrial performance standards 974 CMR 4.00, Section 4.05, *Noise and Vibration*. The numerical noise limits are given in Sections 4.05.3(a) and (b) and summarized in Table 1. We are not assessing any vibration limits as part of this study.

TABLE 1: Summary of DEC Noise Limits at Community Receptor Locations

Property Type	Level over Background* (relative limit)	Broadband Sound (absolute limit)
Residential – Day	5 dB	55 dBA
Residential – Night	5 dB	45 dBA
Commercial or Industrial	10 dB	60 dBA

*Quietest one-hour L_{90} sound level during equipment operation

As defined in section 4.05(d), background is defined as the quietest one-hour L_{90} sound level during the time periods when the equipment would be in operation. The project limit is the lesser of the relative and absolute limits.

SOUND SURVEY RESULTS

Acentech conducted three different surveys to assess the existing background sound levels at the site. These surveys were conducted according to our approved test plan[1]. The test plan defined five short-term (ST) monitoring locations and one long-term (LT) monitoring location that are summarized in Table 2 and shown in Figure 1. LT-1 and ST-1 are the same location.

TABLE 2: List of LT and ST Sound Monitoring Locations

ID	Location (also shown in Figure 1)
ST-1/LT-1	Antietam Street across from NE corner of Antietam Field SLM on tripod located on Mass Development property
ST-2	North side of building at lamp post at end of the parking lot
ST-3	East side of building centered on Trane chillers
ST-4	South Side of building center of façade
ST-5	Intersection of Buena Visita Street, Independence Drive, and Saratoga Boulevard

[1] Acentech Prepared Background Sound Monitoring Protocol – SMC Facility Expansion at Devens; Revision 2.0, dated 05/13/2025

SHORT-TERM DAYTIME SURVEY

The short-term daytime background sound survey was conducted on May 20, 2025, from 3:00 pm to 5:00 pm. Meteorological conditions during this survey were temperature at 58°F, wind at 7 mph from east-northeast and cloudy skies. The sound measurements consisted of three rounds of 5-minute samples. Table 3 provides the minimum values for L_{90}, L_{EQ} and L_{10} A-weighted sound pressure levels. Looking closer at the ninetieth percentile sound levels (L_{90}), the lowest level was recorded at ST-1 at 41 dBA. The sound levels measured at the ST-2 and ST-3 were controlled by SMC equipment.

TABLE 3: Summary of Short-Term Daytime Sound Survey

LOCATION	A-Weighted Sound Levels, dBA		
	L_{90}	L_{EQ}	L_{10}
ST-1	41	55	58
ST-2	52	53	54
ST-3	56	57	58
ST-4	45	47	49
ST-5	44	65	70

SHORT-TERM NIGHTTIME SURVEY

The short-term nighttime background sound survey was conducted on May 28, 2025, from 10:00 pm to 12:30 am. Meteorological conditions during this survey were temperatures at 55 to 60°F, wind at <10 mph and cloudy skies. The sound measurements consisted of three rounds of 5-minute samples. Table 3 provides the minimum values for L_{90}, L_{EQ} and L_{10} A-weighted sound pressure levels. Looking closer at the ninetieth percentile sound levels (L_{90}), the lowest level was recorded at ST-1 and ST-5 at 37 dBA. The sound levels measured at the ST-2 and ST-3 were controlled by SMC equipment.

TABLE 4: Summary of Short-Term Nighttime Sound Survey

LOCATION	A-Weighted Sound Levels, dBA		
	L_{90}	L_{EQ}	L_{10}
ST-1	37	38	39
ST-2	48	49	49
ST-3	59	60	61
ST-4	42	43	44
ST-5	37	38	38

Figure 2 is a comparison of the minimum L_{90} sound levels for all short-term monitoring locations (ST-1 through ST-5). Our survey shows that nighttime is about 5 dB quieter than daytime. However, at ST-3 we measured a 4 dB louder sound level during the night. This was simply because the daytime measurement was impeded by a large tractor trailer blocking sound from Trane chillers on the side of SMC. It is our opinion that the daytime sound level should be as measured during the night.

LONG-TERM SURVEY

The long-term background sound survey was conducted from May 20, 2025, to May 28, 2025. This equipment was installed during the short-term daytime survey and was removed during the short-term nighttime survey. The equipment was positioned as shown in Figure 3 at LT-1 / ST-1. Figure 4 shows the measured L_{90}, L_{EQ} and L_{10} hourly compiled sound levels. This data shows very weak diurnal pattern even in the L_{90} data set (blue circles). This is likely due to somewhat constant activity from the nearby industrial and trucking operations.

Table 4 summarizes the minimum hourly L_{90} sound levels for daytime (7:00 am to 6:00 pm) and nighttime (6:00 pm to 7:00 am). We have computed the average of the daily minimum sound levels. On Thursday May 22nd there was a significant nor'easter storm that resulted in higher sound levels as shown in Table 4. The L_{90} for that day and night (44 dBA and 39 dBA) have been removed from the average computation. The resulting sound levels of 37 dBA for daytime and 34 dBA for nighttime will be used to determine the overall Project sound level limits as discussed below.

TABLE 4: Minimum Daily One-Hour L_{90} A-Weighted Sound Levels at LT-1 / ST-1

Day	Date	Day	Night
Tuesday	5/20/2025	-	30
Wednesday	5/21/2025	38	35
Thursday	5/22/2025	44*	39*
Friday	5/23/2025	38	33
Saturday	5/24/2025	37	31
Sunday	5/25/2025	34	33
Monday	5/26/2025	35	34
Tuesday	5/27/2025	37	35
Wednesday	5/28/2025	37	-
Average of Daily Minimum		**37**	**33**

** Nor'easter storm, data removed from average*

PROJECT NOISE LEVEL LIMITS

Determination of the Project noise level limits requires 3-step process as follows: (1) determine the fixed sound level limits for each of the Project receivers with general limits defined in 974 CMR 4.00, sub-section 4.05.3(b) and listed in righthand column of Table 1. (2) Using the measured background sound data reported above, determine the relative sound level limits for each of the Project receivers with general limits defined in 974 CMR 4.00, sub- section 4.05.3(a) and listed in center column of Table 1. (3) the overall Project limit is the lesser of steps (1) and (2).

FIXED SOUND LEVEL LIMITS

We have determined the fixed sound level limit for 7 receivers identified in Table 5. The receiver and the fixed limits were previously identified in the sound modeling protocol[2]. Receivers R-1 through R-2 are residential, while R-4 through R-7 are commercial. Receiver R-3 is a school, which we have categorized as noise-critical and applied the residential limit using the daytime limit for both daytime and nighttime.

[2] Acentech prepared Noise Modeling Protocol – SMC Devens Facility Revision 1.0, dated June 2, 2025

TABLE 5: Project Specific Fixed Sound Level Limits, dBA

Receptor	Location	Property Type	Noise Limit (dBA)	
			Day	Night
R-1	8 Bates Street	Residential	55	45
R-2	18 Bates Street	Residential	55	45
R-3	49 Antietam Street	Francis Parker School[3]	55	55
R-4	99 Buena Vista Street	Commercial	60	60
R-5	15 Independence Drive	Commercial	60	60
R-6	36 Independence Drive	Commercial	60	60
R-7	66 Saratoga Boulevard	Commercial	60	60

RELATIVE SOUND LEVEL LIMITS

To determine the relative sound level limit, we first must define the applicable minimum background sound level for each of the 7 receivers. This is given in Table 6. From this we have then determined the relative sound level limit as given in Table 7.

TABLE 6: Measured Minimum Background Sound Levels, dBA

Receptor	Location	Property Type	ST/LT Location	Sound Level (dBA)	
				Day	Night
R-1	8 Bates Street	Residential	LT-1	37	33
R-2	18 Bates Street	Residential	LT-1	37	33
R-3	49 Antietam Street	Francis Parker School[3]	LT-1	37	33
R-4	99 Buena Vista Street	Commercial	ST-5	44	37
R-5	15 Independence Drive	Commercial	ST-2	52	48
R-6	36 Independence Drive	Commercial	ST-3	56	59
R-7	66 Saratoga Boulevard	Commercial	ST-4	44	37

TABLE 7: Project Specific Relative Sound Level Limits, dBA

Receptor	Location	Property Type	Sound Limit (dBA)	
			Day	Night
R-1	8 Bates Street	Residential	42	38
R-2	18 Bates Street	Residential	42	38
R-3	49 Antietam Street	Francis Parker School[3]	42	42
R-4	99 Buena Vista Street	Commercial	54	47
R-5	15 Independence Drive	Commercial	62	58
R-6	36 Independence Drive	Commercial	66	69
R-7	66 Saratoga Boulevard	Commercial	54	47

PROJECT SOUND LEVEL LIMIT

The Project sound level limit is the lesser of the fixed limits given in Table 5 and the relative limits given in Table 7. These limits are shown in Table 8 and indicated on the aerial view in Figure 5. The Project sound level estimates (once determined) will be compared to these limits to determine compliance.

[3] We assume this location will need to meet the residential daytime limit, but during the day or night.

TABLE 8: Project Specific Sound Level Limits, dBA

Receptor	Location	Property Type	Sound Limit (dBA)	
			Day	Night
R-1	8 Bates Street	Residential	42	38
R-2	18 Bates Street	Residential	42	38
R-3	49 Antietam Street	Francis Parker School[3]	42	42
R-4	99 Buena Vista Street	Commercial	54	47
R-5	15 Independence Drive	Commercial	60	58
R-6	36 Independence Drive	Commercial	60	60
R-7	66 Saratoga Boulevard	Commercial	54	47

PURE TONE ANALYSIS

We have reviewed the ST and LT data for pure tones using the DEC pure tone requirements of Section 4.05(3)(d).7. Figure 6 shows the one-third octave band sound levels for all ST locations measured during the daytime survey. By the above definition, we have identified pure tones at locations ST-1 and ST-4 in the 4,000 Hz and 5,000 Hz one-third octave bands. Figure 7 shows the one-third octave band sound levels for all ST locations measured during the nighttime survey. Similarly, we have identified pure tones at locations ST-1, ST-4, and ST-5 in the 4,000 Hz and 5,000 Hz one-third octave bands. Based on the frequency, occurrence, and staff's field observations these tones above are believed to be environmental/insect sounds. Figure 8 shows the long-term overall (dBA), the average of the 4000 Hz and 5000 Hz one-third octave bands, and the average of the 3150 and 6300 Hz one-third octave bands. The 4000 Hz and 5000 Hz bands indicate the insect sound ("insect bands"). The 3150 and 6300 Hz are "reference bands". When the insect bands and reference bands are at the same level there, we conclude there is no insect sound. Conversely, insect sounds occur when the sound levels between the two bands are significantly different. This graph shows that the insect sound occurred only three nights as shown by red boxes in Figure 8. We conclude that the insect sound did not interfere with the minimal daily one-hour L_{90} sound level and limit determination given above.

Lastly, both Figures 6 and 7 show significant tone at the 125 Hz one-third octave band. Figure 9 shows that this is from the Air Conditioning Condensing Unit (ACCU-21) located next to the loading dock at the front of SMC. While these "tones" are significant they do not exceed the DEC tonal limit, which is 14 dB above the average of the 100 and 160 Hz octave bands. This equipment has already been removed as part of the expansion and will eventually be relocated to the roof. It will be evaluated as new equipment in our noise modeling evaluation.

FIGURE 1: Long-term (LT) and Short-Term (ST) Background Sound Measurement Locations

FIGURE 2: Comparison of Daytime and Nighttime L_{90} A-Weighted Sound Levels

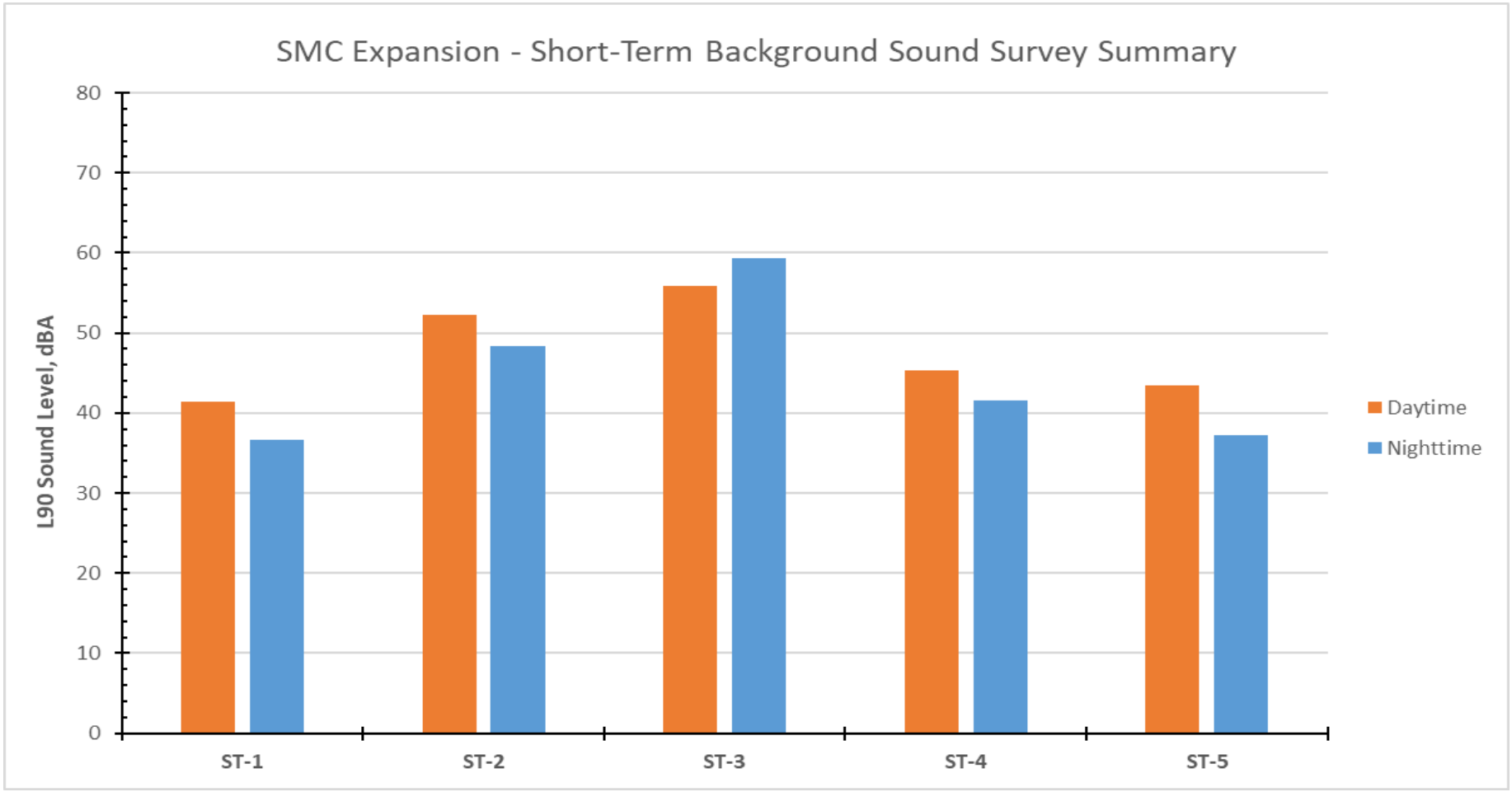


FIGURE 3: Long-Term Sound Monitoring Instrumentation as Installed at the Site.

FIGURE 4: Summary of Long-term Background Sound Levels (1-hour samples)

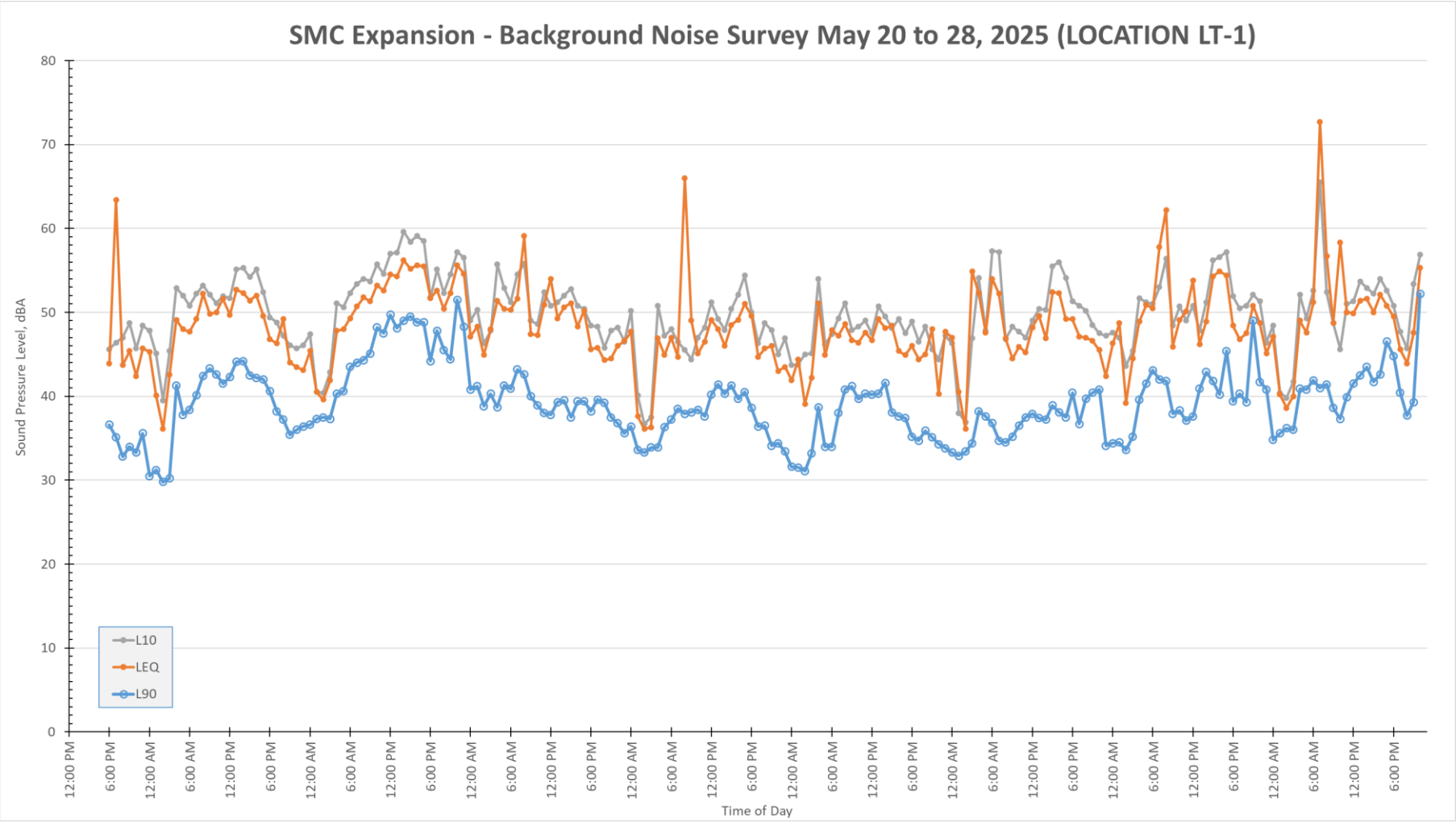


FIGURE 5: Noise Evaluation Compliance Locations with Day / Night Limits, dBA

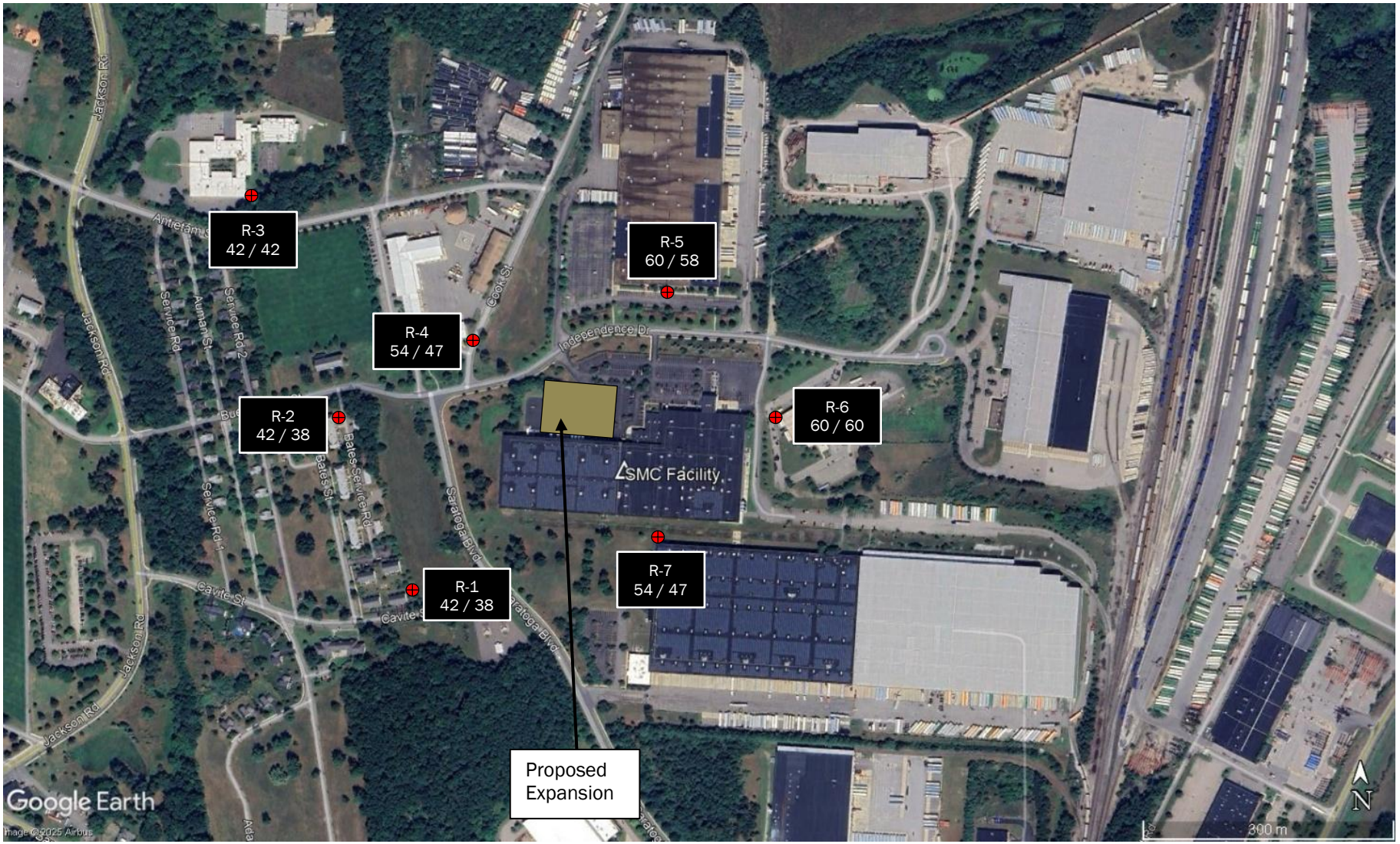


FIGURE 6: Pure Tone Analysis, Daytime ST Measurements, Pure Tones at Red Circles

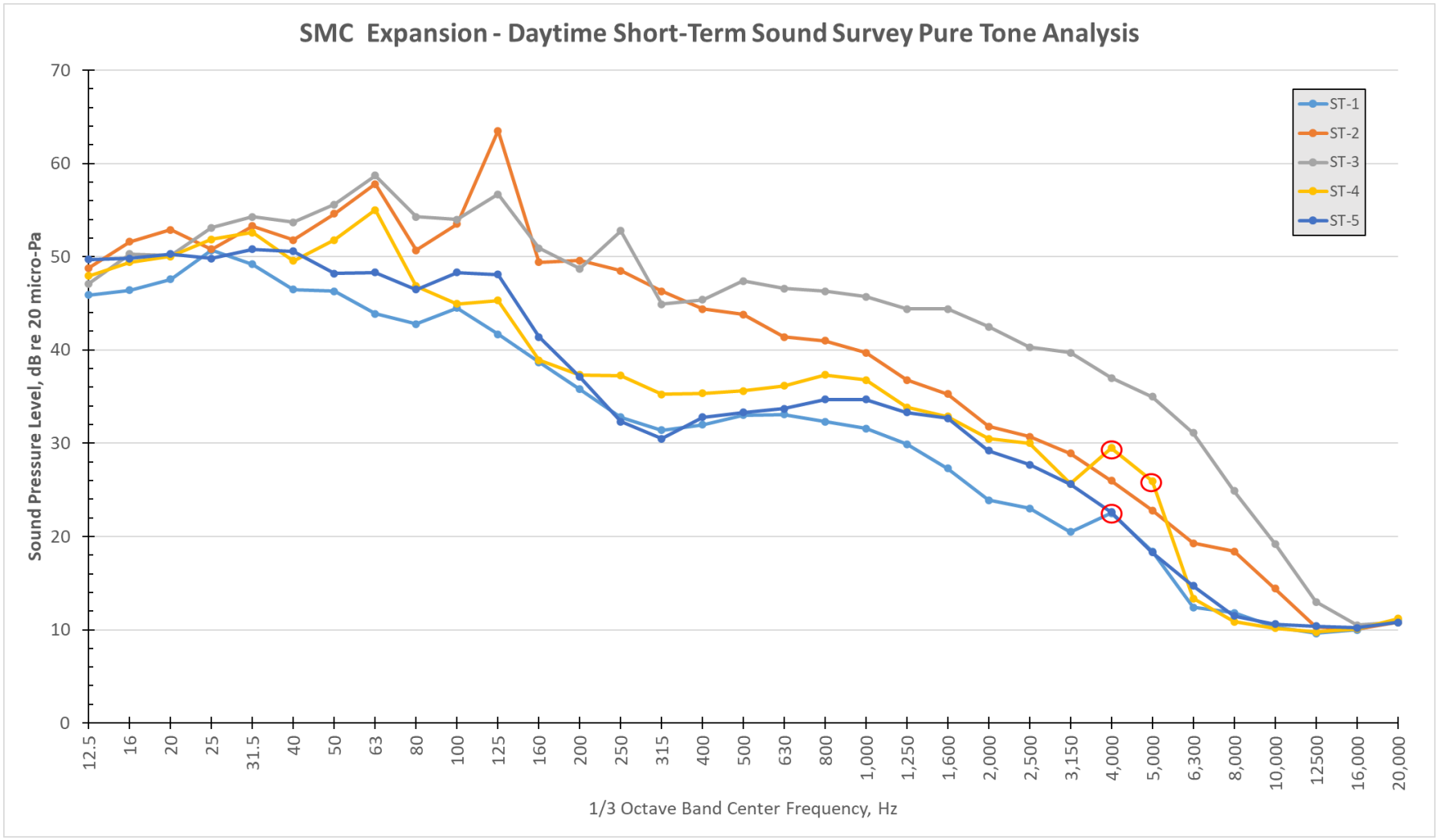


FIGURE 7: Pure Tone Analysis, Nighttime ST Measurements, Pure Tones at Red Circles

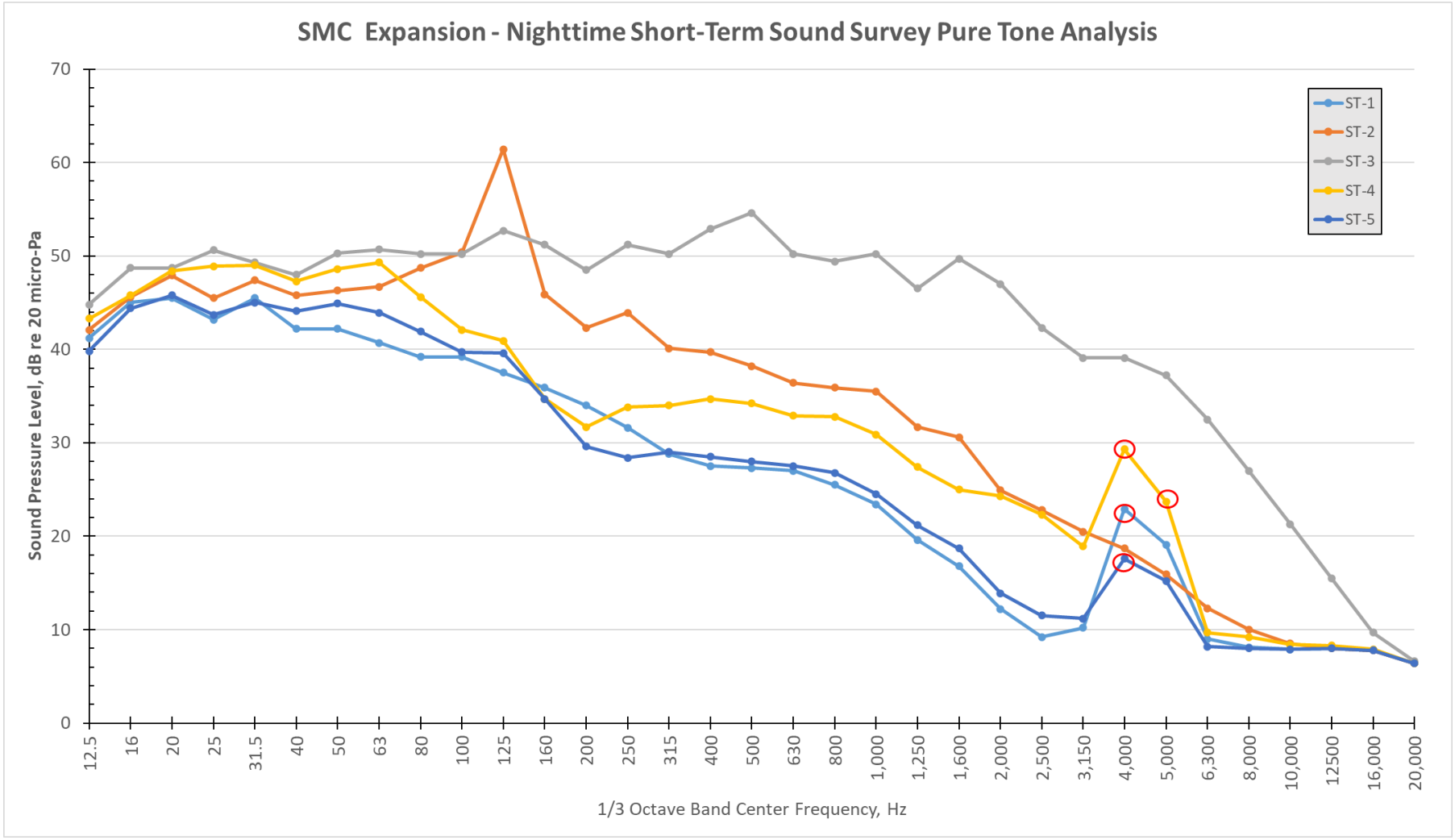


FIGURE 8: Pure Tone Analysis, LT Measurements, Insect Sound at Grey Boxes

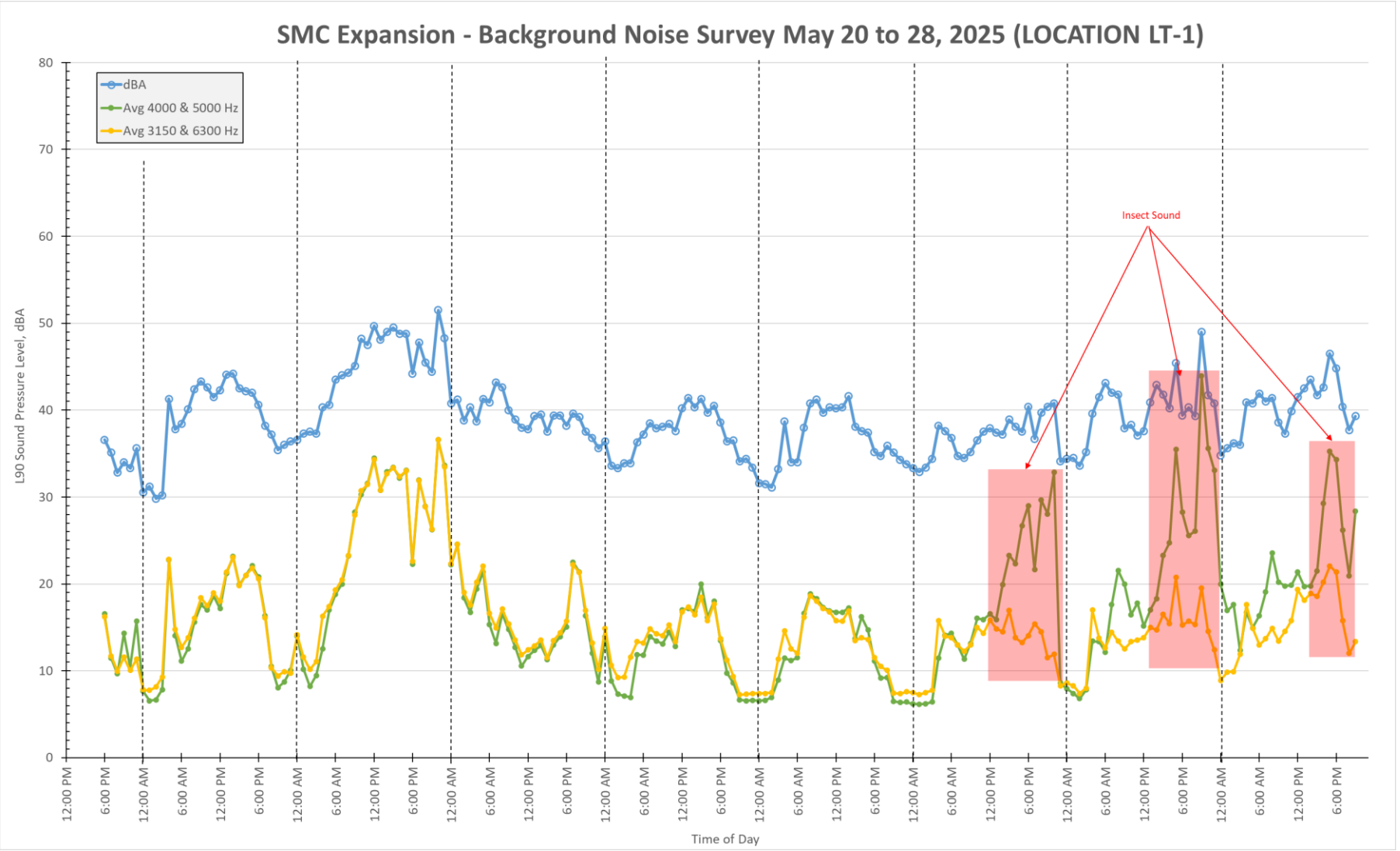
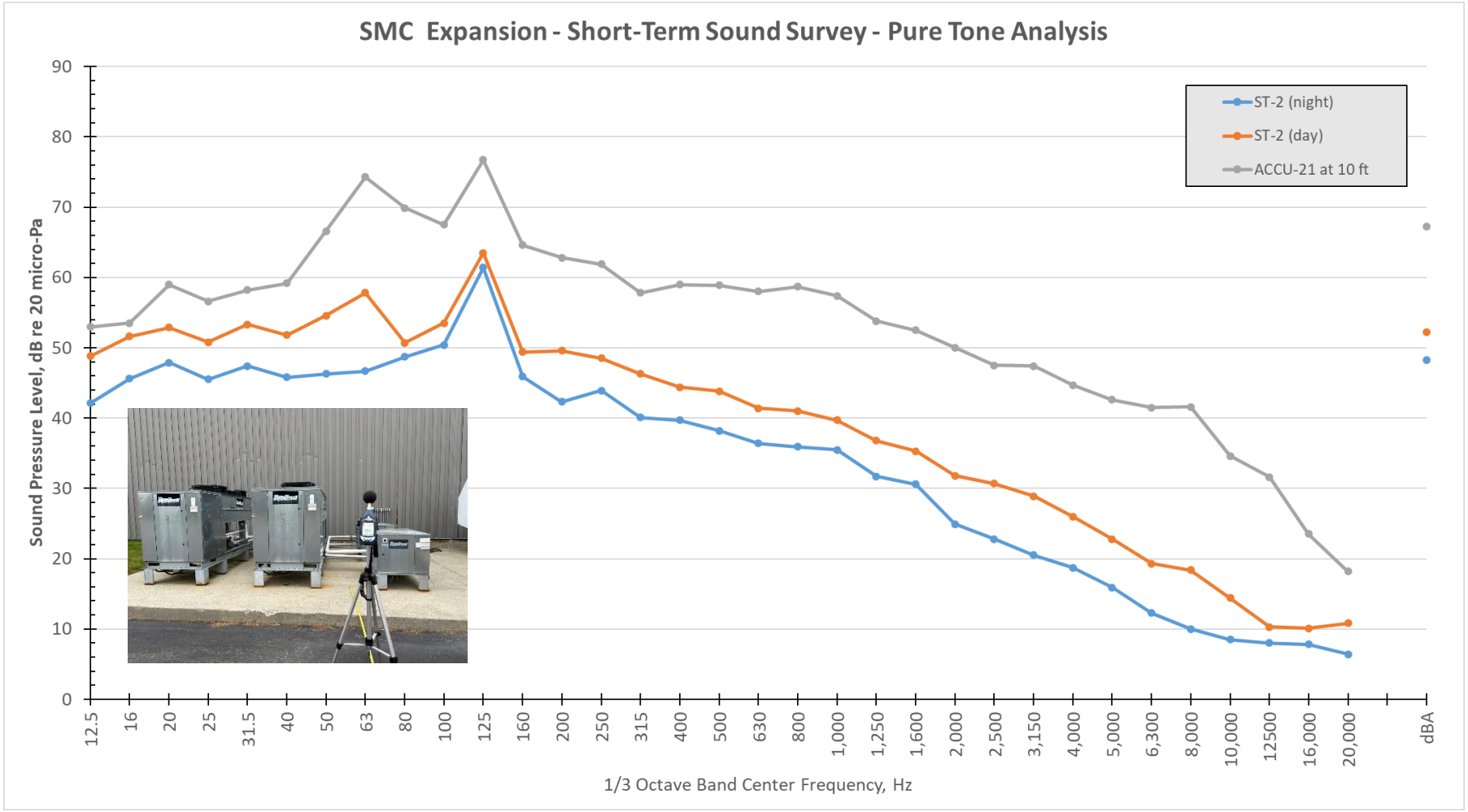


FIGURE 9: Pure Tone Analysis, ST-2 Tonal Sound Due to ACCU-21 (inset photo)



Appendix H:
Stormwater Management Report