

AIR, NOISE AND VIBRATION MONTHLY MONITORING REPORT

Prepared By:
Hajeong Lim (HRCG)

DDC Project No.:	BBJ Q DSS	Period Start: 07/01/23 End 07/31/23	
DDC Pin No.:	8502020CR0046P		
Project Name:	NYC Borough Based Jails System - Queens Dismantle and Swing Space		
1) Community Air Monitoring Monthly Status Summary			
TWA – Time Weighted Average ug/m ³ - micrograms per cubic meter			
Number of Workdays in a Month	Number of Air Monitoring Days in a Month	Number of Days with Dust Concentrations above Action Concentrations by Month (100 ug/m ³ 15 minute TWA)	Comments
25	0	None	As discussed at the weekly progress meeting with Department of Design and Construction (DDC) and Project Managing Consultant (PMC), Phase III dismantlement was ended in mid-July before the date when a monthly follow up monitoring would have been scheduled. The initial 2 days of peak dust monitoring the Phase IV dismantlement will be scheduled when the number of dismantlement workers and equipment increases when the dismantlement level reaches the main floors.
Community Air Monitoring Monthly Excursions and Corrective Actions			
Action Concentration = 100 ug/m ³ 15 minute TWA above background concentration Stop Work Concentration = 150 ug/m ³ 15 minute TWA above background concentration			
Date: Time	Maximum Dust Reading Before Corrective Action 15 Minute TWA (ug/m ³)	Maximum Dust Reading After Corrective Action 15 Minute TWA (ug/m ³)	Corrective Action
N/A	N/A	N/A	N/A
Narrative Summary of Air Monitoring, Excursions and Corrective Actions:			
<p><i>In July 2023, construction-related levels of Particulate Matter (PM) PM10 did not surpass Daily Permissible Exposure Limits (PEL) as set by federal standards for the 24-hour Time Weighted Average (TWA), or daily value, and did not cause air quality concerns to the public or on-site workers.</i></p> <p><i>The contractor, Hunter Roberts Construction Group, in conjunction with the contractor's environmental specialist, has successfully implemented mitigation techniques at Action Level as well as Permissible Exposure Limits (15-Minute TWA) to suppress construction activity effects on air quality throughout the project work-zone.</i></p>			

2) Community Noise Monitoring Monthly Summary

Units to be a weighted decibels (dBA) level

Number of Workdays in a Month	Number of Noise Monitoring Days in a Month	Number of Days with Noise Levels above Action Levels by Month	Comments
25	4	None	

Community Noise Monitoring Monthly Excursions and Corrective Actions

Action Level = above baseline as shown in the Baseline Noise Report dated April 2022.

Date Time	Location	Maximum Noise Reading before Corrective Action (dBA)	Maximum Noise Reading after Corrective Action (dBA)	Baseline Noise Level Day/Night (dBA)	Corrective Action
N/A	N/A	N/A	N/A	N/A	N/A

Narrative Summary of Noise Monitoring, Excursions and Corrective Actions:

Throughout July 2023, noise levels remained below the set thresholds at all five locations. Construction-related activities in the month stayed within or below the warning limit at various locations. No corrective actions were required as noise levels didn't surpass the limits.

Nighttime Action Levels are established for three residential location, location #3, #4, and #5, in case dismantling activities are performed between 5 pm and 7 am.

3) Community Vibration Monitoring Monthly Summary

Units (in/sec)

Number of Workdays in a Month	Number of Vibration Monitoring Days in a Month	Number of Days with Vibration Levels above Action Levels by Month	Comments
25	25	2	Vibration Monitoring was continued throughout the month and two exceedance events were recorded as below.

Community Vibration Monitoring Monthly Excursions and Corrective Actions

Alert / Action Level = 0.3 in/s

Stop Work Level = 0.5 in/s

Date: Time	Maximum Vibration Level before Corrective Action (in/s)	Exceedance Duration	Maximum Vibration Level Followed Exceedance without Corrective Action (in/s)	Corrective Action
July 11 between 8 AM and 10 AM at Vibration Monitor Location #1	3.45 (ranging 0.75 to 3.45)	< 30 sec (each exceedance)	0.1 to 0.2	On July 11, workers were relocating construction fence adjacent to the vibration monitor, and each exceedance event was confirmed by Hunter Roberts Construction Group to be caused by direct contact with the transducer rather than vibrations in the structure. No corrective actions were taken.
July 12 around 9:30 AM at Vibration Monitor Location #1	> 0.5 (actual level not recorded)	< 30 sec	0.02	On July 12, AKRF staff picked up the vibration monitor for a manual equipment check. This exceedance was a result of direct contact with the transducer rather than vibrations in the structure. No corrective actions were taken.
July 12 around 9:30 AM at Vibration Monitor Location #2	> 0.5 (actual level not recorded)	< 30 sec	0.03	On July 12, AKRF staff relocated vibration monitor at DA Wing to an at-grade location from the roof to capture dismantlement activities better after QDA Wing is disengaged from the Detention Center as part of Phase III dismantlement. This exceedance was a result of direct contact with the transducer rather than vibrations in the structure. No corrective actions were taken.

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

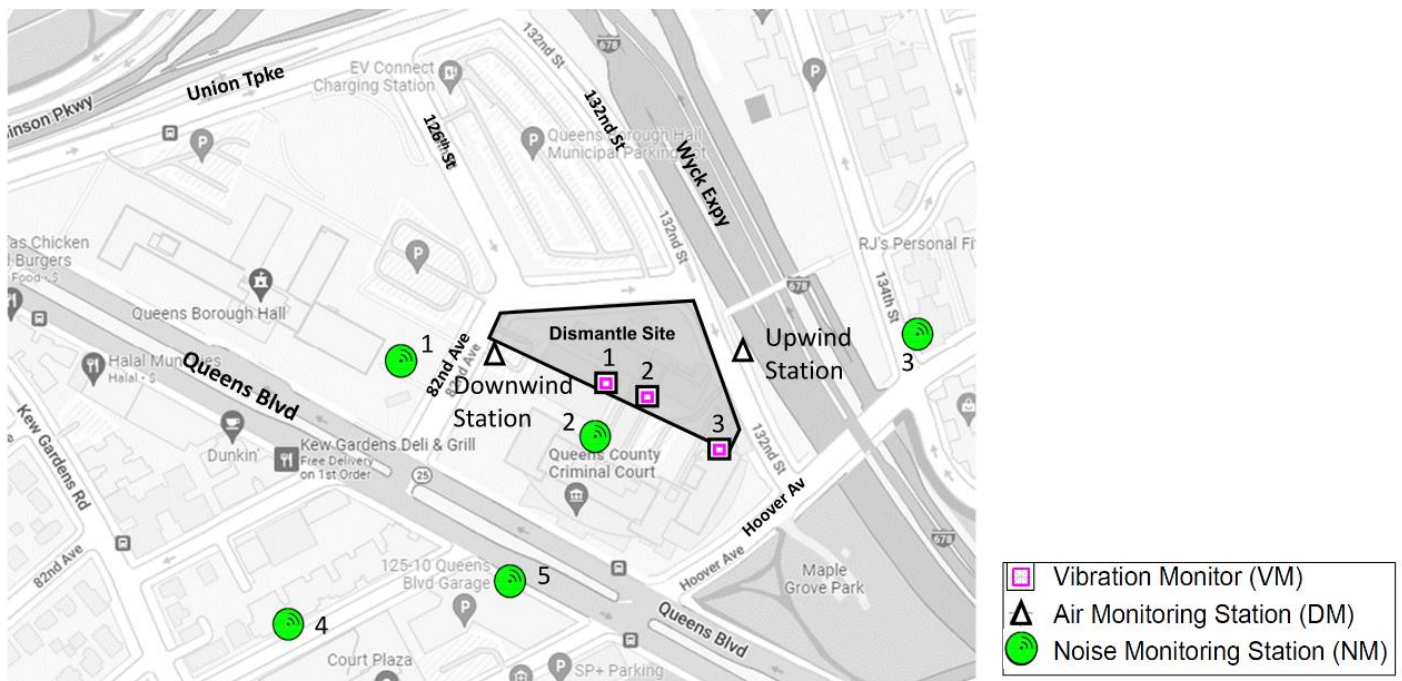
During the Month of July 2023, there were two vibration monitor exceedances at the Family Justice Center and QDA Wing vibration monitor locations. Other monitor at Annex Basement showed results of vibration being under the warning limit of 0.3(in/sec) / stop work limit of 0.5(in/sec).

Mid-July, Dismantle Phase III activities to disengage QDA Wing from the Detention Center reached the levels of the QDA Wing. As Phase III was completed, on July 11, construction fence at Family Justice Center was relocated and workers and materials had direct contacts with the vibration monitor by Family Justice Center. On July 12, AKRF staff relocated DA Wing monitor from the roof to at-grade location. While visiting the site, the staff checked the vibration monitoring device at Family Justice Center. That made the vibration monitor level exceeds the threshold.

ATTACHMENTS:

- 1 – Map of Monitoring Station/Locations
- 2 – Baseline Reference
- 3 – Data Plots

Environmental Monitoring Queens



Noise Threshold Limits in dBA – Baseline Survey April 2022

Construction Noise Threshold Limits in dBA

Location	Daytime Leq	Nighttime Leq
Adjacent to the easternmost façade of Queens Borough Hall	75	N/A
At the southwestern corner of the DA Wing	75	N/A
At the residences along 134th Street between 82nd Avenue and Hoover Avenue	69	68
At the residences on 82nd Road between Kew Gardens Road and Queens Boulevard, approximately 200 feet from Kew Gardens Road	65	55
At the residences on Queens Boulevard between 82nd Road and Lefferts Boulevard	68	67

Noise Monitoring



Project: DDC Queens Dismantle & Swing Space

Date: 7/1/2023 **Weather:** SUNNY

Work Activities: 4th Floor wall abatement, burning steel beams, 3rd floor shoring.
4th Floor Abatement, Burning Steel Beams, 3rd Floor Shoring

Prepared by: Alexa Bartoloma
Alexa Bartoloma

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall			75 dBA	
x 2	Southwest corner of DA wing	11:35	57.9	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.			69 dBA/ 68 dBA	
4	200 ft away from Kew Garden Road on 82 nd Road			65 dBA/ 55 dBA	
x 5	Between 82 nd road and 83 rd Ave on Queens Blvd	11:55	61.8	68 dBA/ 67 dBA NA	Daytime noise action threshold not exceeded.

Corrective Action:



Noise Monitoring

Project: DDC Queens Dismantle & Swing Space

Date: 7-19-2023 Wed **Weather:** 75°F cloudy

Work Activities: Install scaffold & Abatement at 8th fl & Demo 5th floor mezz & slab

Prepared by: Yaw

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	9:48	64.8	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	09:24	63.4	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.	10:15	68.5	69 dBA/ 68 dBA NA	TRUCK noise, car horn Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 nd Road	11:08	61.3	65 dBA/ 55 dBA NA	Daytime noise action threshold not exceeded.
5	Between 82 nd road and 83 rd Ave on Queens Blvd	10:43	67.5	68 dBA/ 67 dBA NA	Daytime noise action threshold not exceeded.
Corrective Action: N/A					



Noise Monitoring

Project: DDC Queens Dismantle & Swing Space

Date: 7/24/2023 Mon **Weather:** Sunny 80°F

Work Activities: Demo tank room roof & east roof at 8th floor.

Prepared by: AKRF (actual meter reading) / Yao (filling out log)

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1	Queens Borough Hall	10:15 AM	62.8	75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing		68.6	75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.		68.7	69 dBA/ 68 dBA NA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 nd Road		64.9	65 dBA/ 55 dBA NA	Daytime noise action threshold not exceeded.
5	Between 82 nd road and 83 rd Ave on Queens Blvd	1:30 pm	67.5	68 dBA/ 67 dBA NA	Daytime noise action threshold not exceeded.
Corrective Action: <u>N/A</u>					

Noise Monitoring



Project: DDC Queens Dismantle & Swing Space

Date: 7-31-2023 Mon **Weather:** 74°F Sunny

Work Activities: Debris remove & Abutment walls at 8th fl East.

Prepared by: Law

NO.	Location	Time	Noise (dBA)	Noise Action Threshold (Day/Night)	Note
1 1A	Queens Borough Hall NW corner	9:53	60	< 75 dBA	Daytime noise action threshold not exceeded.
2	Southwest corner of DA wing	9:29	61.6	< 75 dBA	Daytime noise action threshold not exceeded.
3	Corner of 134 th ST and Hoover Ave.	11:07	65.2	69 dBA/ 68 dBA NA	Daytime noise action threshold not exceeded.
4	200 ft away from Kew Garden Road on 82 nd Road	10:20	63.5	65 dBA/ 55 dBA NA	Daytime noise action threshold not exceeded.
5	Between 82 nd road and 83 rd Ave on Queens Blvd	10:43	67.7	68 dBA/ 67 dBA NA	truck noise, car horn. Daytime noise action threshold not exceeded.
Corrective Action: <u>N/A.</u>					

Vibration Monitor – VM1 July 2023

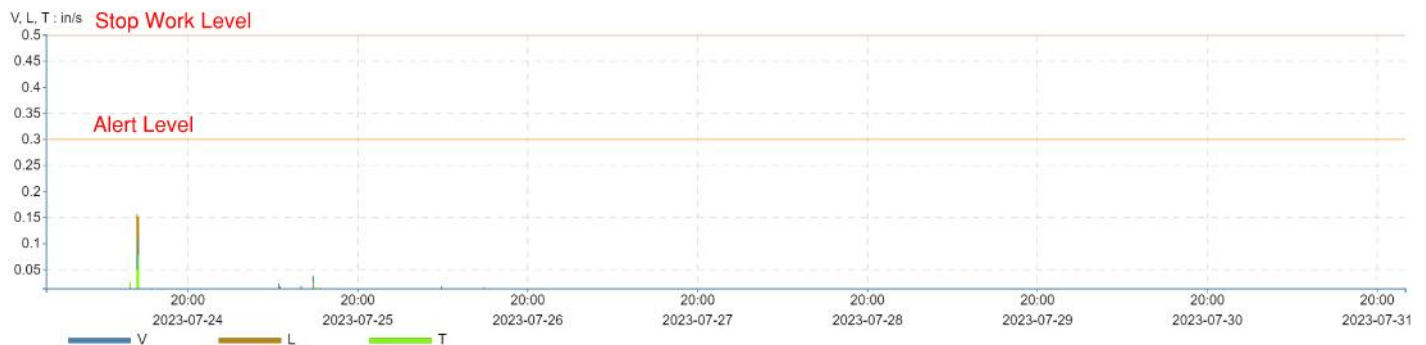
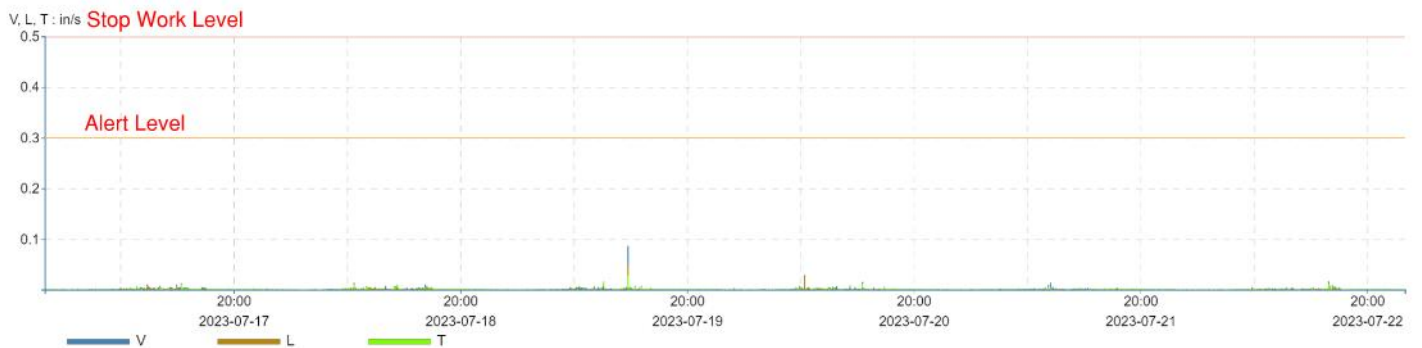
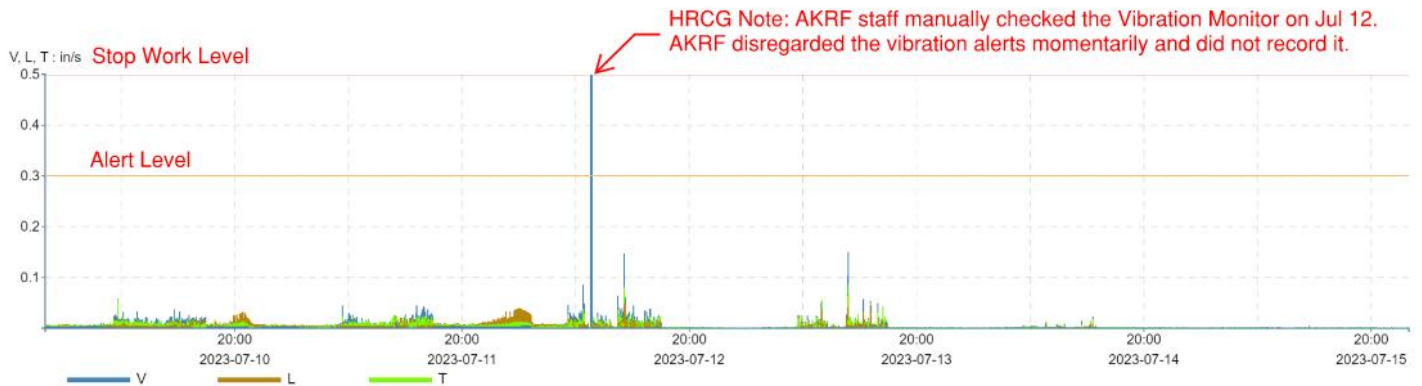
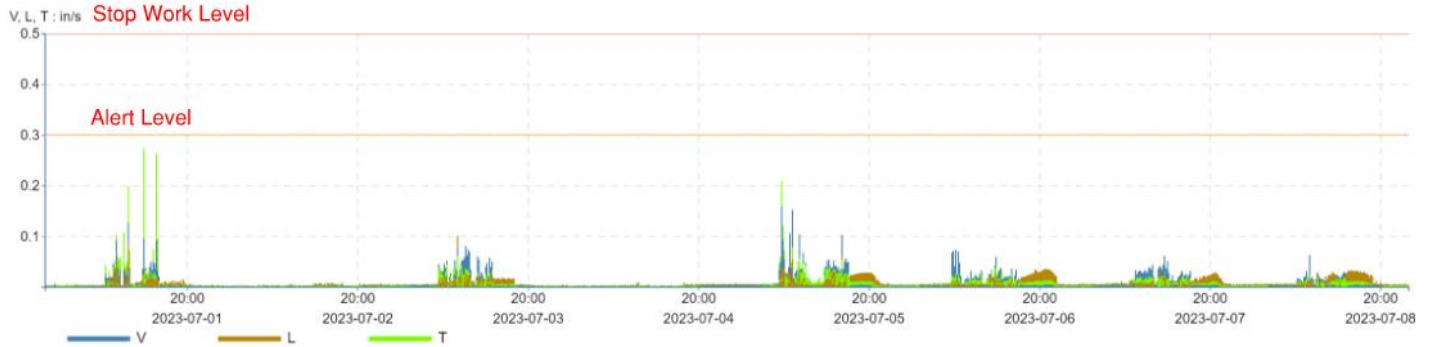
FAMILY JUSTICE CENTER – NORTHEAST CORNER



Vibration Monitor – VM2 July 2023

Relocated 7/12/23 from DA Wing Roof to At-Grade location.

DA WING – EASTERN FAÇADE EXTERIOR AND NORTHWEST CORNER



Vibration Monitor – VM3 July 2023

ANNEX – BASEMENT FIRE PUMP ROOM

