

**AIR, NOISE AND VIBRATION
MONTHLY MONITORING REPORT
Number 018**

Prepared By: Roux / Wang Technology

DDC Project No.:	BBJ-XSP	Period Start: 1/2/24 End 1/31/24	
Project Name:	NYCDDC D&B – The Bronx Site Preparation		
DDC Pin No.:	8502021CR0004P-06P		
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
21	21	5	Each exceedance was recorded during separate 15-minute readings on 1/03, 1/05, 1/08, 1/09, 1/24, respectively. See details below.
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
1/03 12:28	0.406	0.023	An elevated reading above the dust action level was caused by street sweeper operating close to CAMP station. Work was temporarily stopped, and water was used to mitigate dust in the work area.
1/05 8:45	0.159	0.034	An elevated reading above the dust action level was caused by street sweeper operating close to CAMP station. Work was temporarily stopped, and water was used to mitigate dust in the work area.
1/08 7:12	0.196	0.009	An elevated reading above the dust action level was caused by a car idling close to CAMP station. The operator was asked to move the vehicle as soon as possible.

1/09 6:34	0.124	0.002	An elevated reading above the dust action level was caused by a car idling close to CAMP station. The operator was asked to move the vehicle as soon as possible.
1/24 06:23	0.127	0.056	An elevated reading above the dust action level was caused by a car idling close to CAMP station. The operator was asked to move the vehicle as soon as possible.
1/24 7:23	0.118	0.080	An elevated reading above the dust action level was caused by a car idling close to CAMP station. The operator was asked to move the vehicle as soon as possible.

Narrative Summary of Air Monitoring, Excursions and Corrective Actions:
In January 2024, construction-related levels of Particulate Matter (PM) PM10 did not surpass the Daily Permissible Exposure Limits (PEL) as set by federal standards for the 8-hour Time Weighted Average (TWA) and did not cause air quality concerns to the community and/or onsite workers.

2) Community Noise Monitoring Monthly Summary

Units: A-weighted decibels (dBA)

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
21	21	1	There was one instance of noise levels above the 80 dBA limit. Occurring on 1/03 and is detailed below.

Community Noise Monitoring Monthly Excursions and Corrective Actions

Action Level = 80 dBA

Stop Work Level = 80 dBA

Date: Time	Maximum Noise Reading before Corrective Action (dBA)	Maximum Noise Reading after Corrective Action (dBA)	Corrective Action
1/03/24 11:40 am	81.07	77.65	Exceedance began at 11:20am and ended at 11:40 am due to a truck idling near the noise meter along E 142st St. Operator was asked to move as soon as possible.

Narrative Summary of Noise Monitoring, Excursions and Corrective Actions:

In January 2024, construction-related levels of noise did surpass the limits of Local Law 113 of 2005 during one occasion on 1/03/24. The daily average was below the limits and did not cause noise concerns for the community.

3) Community Vibration Monitoring Monthly Summary
Units: inches per second (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
16	31	23	Two out of six vibration monitors recorded a total of two hundred and twenty-eight exceedances. Ninety-five exceedances were caused by the sensor failing sensor check and malfunction. The sensor was replaced post events. Forty-one events are not construction related; contractor confirmed that there was no work being performed in the area during the event times. Ninety-two exceedances were recorded during non-construction hours. Detailed information about exceedances is provided in the narrative summary section and plots.

Community Vibration Monitoring Excursions and Corrective Actions
Action Level = 0.5 in/sec above background for VM
Stop Work Level = 1.0 in/sec above background for VM

Date: Time	Maximum Vibration Level before Corrective Action (in/sec)	Maximum Vibration Level after Corrective Action (in/sec)	Corrective Action
1/1/2024 00:30	0.6312	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/2/2024 08:15	0.503	N/A	Exceedance observed at VM11 was not construction related, it is confirmed that no work was being performed in the area.
1/3/2024 14:22 & 14:57	0.6485	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/4/2024 05:30	0.5601	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/4/2024 07:52, 09:17, & 09:27	0.5784	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/4/2024 19:57 & 23:27	0.5207	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/5/2024 03:55	0.5281	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/5/2024 06:20, 07:12, 10:17, & 12:47	0.6144	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/5/2024 18:27	0.5933	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/6/2024 00:40, 05:25, 11:57 & 13:07	0.5508	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/8/2024 04:15	0.5393	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/8/2024 06:40	0.5555	N/A	Exceedance observed at VM11 was not construction related, it is confirmed that no work was being performed in the area.
1/9/2024 00:35 & 04:25	0.5679	N/A	Exceedances observed at VM11 were recorded during non-construction hours.

1/9/2024 08:30, 09:55, & 10:30	0.6026	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/9/2024 16:20, 17:10, 17:35, 18:15, 19:00, 20:15, 20:25, 20:45, 20:50, 20:55, 21:15, 22:20, 23:05, 23:10, 23:20, & 23:25	1.3806	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/10/2024 00:45 & 04:20	1.6468	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/10/2024 07:41, 08:11, & 08:46	0.6073	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/10/2024 17:05	0.5347	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/11/2024 08:15 & 09:55	0.5142	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/11/2024 16:20 & 23:00	0.8102	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/12/2024 08:30	0.5142	N/A	Exceedance observed at VM11 was not construction related, it is confirmed that no work was being performed in the area.
1/12/2024 15:10 & 16:35	0.602	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/14/2024 23:05 & 23:25	0.5738	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/16/2024 03:30	0.5852	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/16/2024 07:25, 08:20, 09:45, & 10:40	0.6125	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/16/2024 13:25, 13:35, 14:25, 15:45, 15:55, 18:10, & 21:10	0.6665	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/17/2024 05:35, 13:30, 14:25, 16:15, 16:25, 16:35, 19:00, 20:30, & 20:55	0.7367	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/18/2024 00:25	0.5052	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/18/2024 10:40 & 11:20	0.526	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/18/2024 16:05, 16:25, 16:30, & 19:00	0.5983	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/19/2024 05:15	0.5865	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/19/2024 06:35, 06:55, 07:40, 08:20, & 09:20	0.9604	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/19/2024 14:45, 15:50, 15:55, 18:35, 19:05, & 22:05	0.7783	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/20/2024 02:55, 05:15, 06:50, 07:20, 07:35, 09:15, 10:10, 12:55, & 19:25	0.6641	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/22/2024 01:25 & 05:45	0.5815	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
1/22/2024 06:55, 07:00, & 08:30	0.6523	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/22/2024 10:30, 11:40, & 12:55	0.5657	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/22/2024	0.602	N/A	Exceedances observed at VM11 were

14:05, 14:25, 15:00, & 18:10			recorded during non-construction hours.
1/23/2024 00:35	0.6014	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
1/23/2024 06:10, 08:45, 09:35, & 11:10	0.5437	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
1/23/2024 12:30 to 1/26/2024 06:45	9.1739	0.4788	Exceedances observed at VM11 were due to the sensor fails sensor check and malfunction. The sensor was replaced post events.
1/10/2024 00:40	0.6212	N/A	Exceedance observed at VM12 was recorded during non-construction hours.
1/11/2024 22:56	0.5406	N/A	Exceedance observed at VM12 was recorded during non-construction hours.
1/19/2024 03:41	0.5074	N/A	Exceedance observed at VM12 was recorded during non-construction hours.
1/19/2024 06:50 & 07:38	0.5638	N/A	Exceedances observed at VM12 were not construction related, it is confirmed that no work was being performed in the area.
1/22/2024 16:12	0.5281	N/A	Exceedance observed at VM12 was recorded during non-construction hours.
1/24/2024 15:42	0.5027	N/A	Exceedance observed at VM12 was recorded during non-construction hours.
1/28/2024 00:21	0.5198	N/A	Exceedance observed at VM12 was recorded during non-construction hours.

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

In January 2024, two vibration monitors had recorded exceedances.

There were exceedances recorded during non-construction hours at VM11 and VM12. No corrective actions were required at this time.

Exceedances recorded at VM11 between January 23rd 12:30 pm and January 26th 6:45 am were due to the sensor failing sensor check and malfunction. The sensor was replaced on post events.

The rest of the exceedances recorded at VM11 and VM12 were non-construction related. The event times when the exceedances were recorded were reviewed by the contractor, it is confirmed that no work was being performed in the area during these event periods. No corrective action was required at these times.

Note that blast monitors (BVM), situated on the sidewalk adjacent to the site and in the tunnel, fall outside the community plan's scope, which specifically addresses monitors in or on buildings. Additionally, the community plan (VM) measures PPV above background, while the blast plan (BVM) solely measures PPV.

4) Community Vibration Blasting Monitoring Monthly Summary

Units: inches per second (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
22	31	1	Five vibration exceedances were observed in January, caused by sensor being out of level. Detailed information about the exceedance is provided in the narrative summary section and plots.

Community Vibration Monitoring Excursions and Corrective Actions

Action Level = 2.0 in/sec for VMs install at Concord Ave, 141st St, and Southern Blvd.

Action Level = 4.0 in/sec for VMs install at 142nd St

Action Level = 12.0 in/sec for VMs install on all underground utilities

Date: Time	Maximum Vibration Level before Corrective Action (in/sec)	Maximum Vibration Level after Corrective Action (in/sec)	Corrective Action
1/16/2024 10:46, 10:47:08, 10:47:18, 11:01, & 11:15	8.0978	0.0397	The exceedances recorded at BVM-C were due to the geophone sensor being out of level as the soil underneath the geophone sensor was washed out and became loose. The soil was compacted and the geophone sensor was reseated post events on January 17 th . The geophone sensor went out of level again on January 22 nd . The geophone sensor was reseated and performed monitoring for the 2 nd blast on January 22 nd . The seismograph and the geophone sensor were replaced after blasting was completed on January 22 nd .

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

There are two sets of project limits for vibration, one for general onsite construction activities and another specifically for blasting activities.

The exceedances recorded at BVM-C on January 16th were due to geophone sensor being out of level as the soil underneath the geophone sensor was washed out and became loose. The soil was compacted and the geophone sensor was reseated post events on January 17th. The geophone sensor went out of level again on January 22nd. The geophone sensor was reseated and performed monitoring for the 2nd blast on January 22nd. The seismograph and the geophone sensor were replaced after the blasting was completed on January 22nd.

Four portable vibration monitors for blasting monitoring were deployed at the following locations: BVM-A was installed at location no. 10, BVM-B at location no. 3, BVM-C at location no. 7, and BVM-D at location no. 5 on January 9th, January 11th, January 16th, January 18th, January 22nd, January 24th, and January 25th.

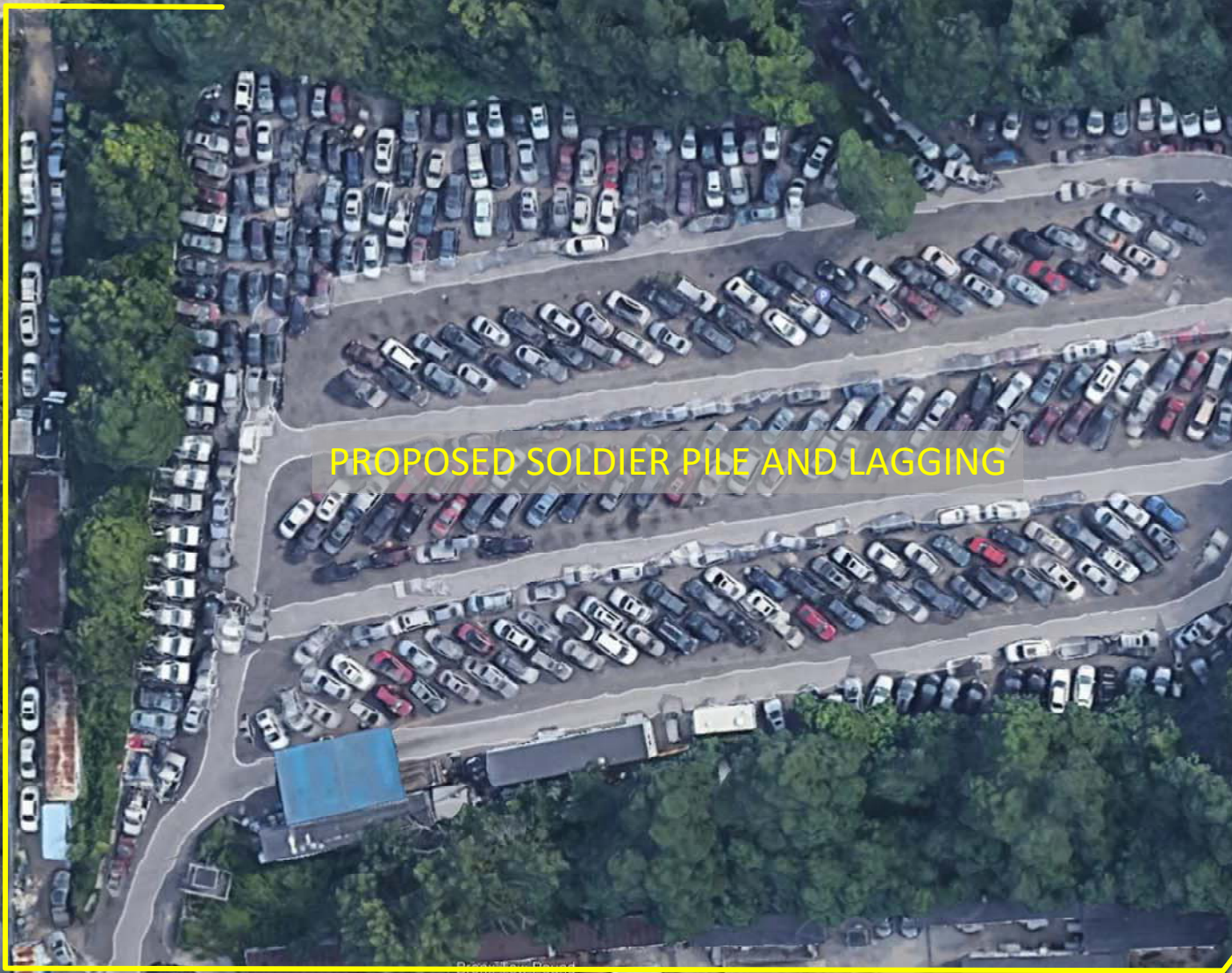
Note that blast monitors (BVM), situated on the sidewalk adjacent to the site and in the tunnel, fall outside the community plan's scope, which specifically addresses monitors in or on buildings. Additionally, the community plan (VM) measures PPV above background, while the blast plan (BVM) solely measures PPV.

ATTACHMENTS:

- 1 – Include one map of monitoring station/locations
- 2 – Include Data Plots
- 3 – Include Baseline Reference




Plan North

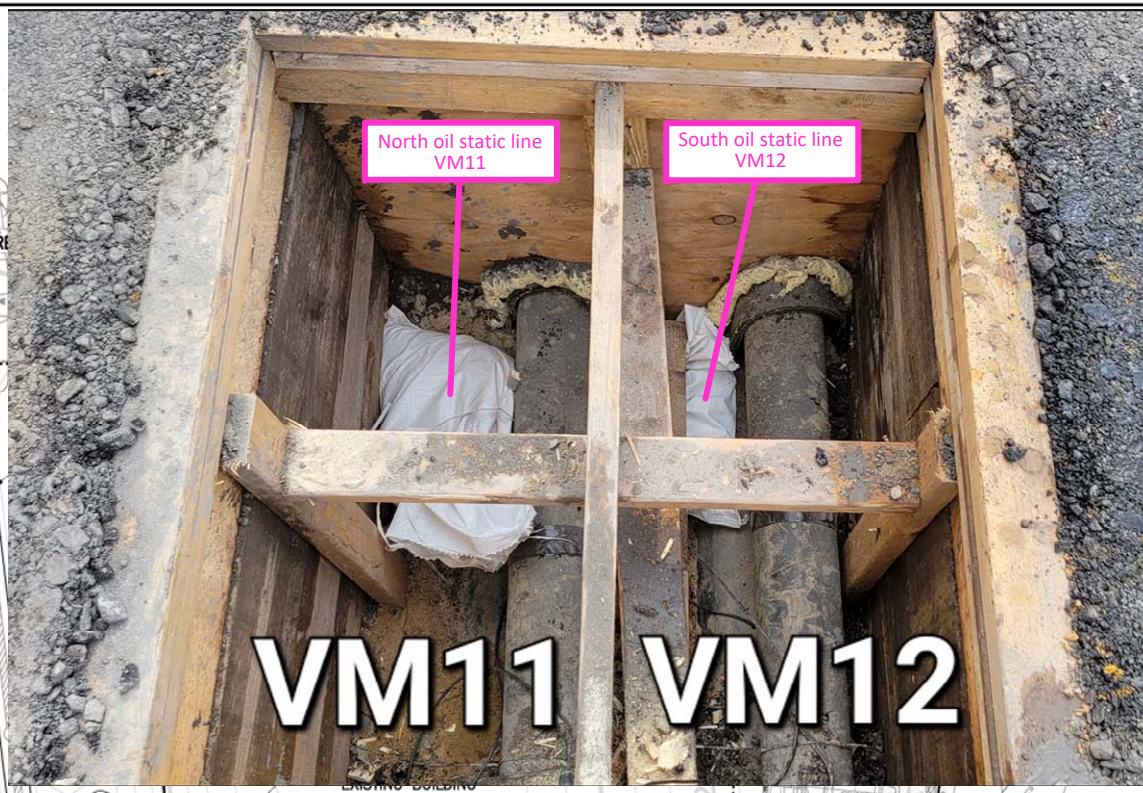
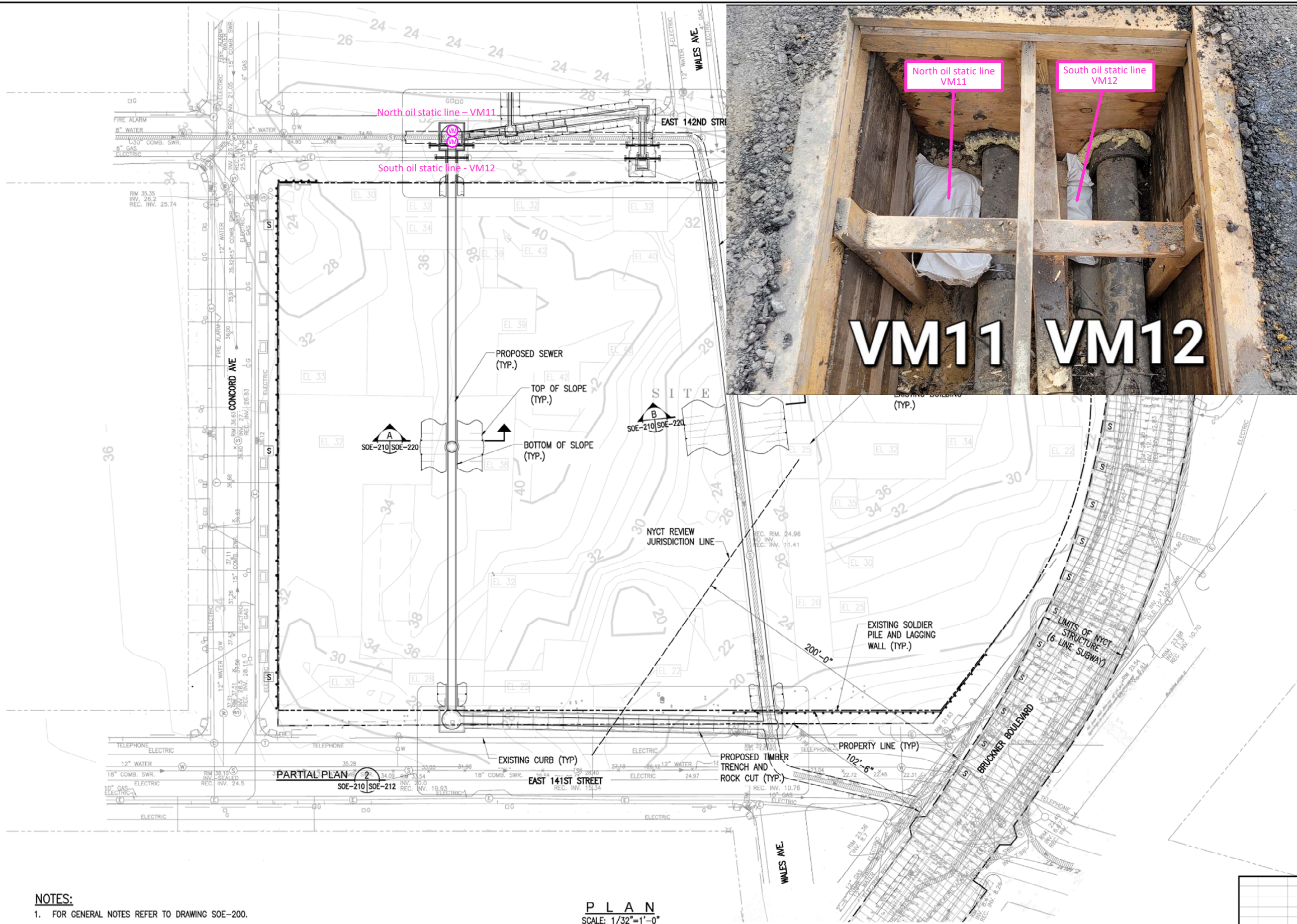


PROPOSED SOLDIER PILE AND LAGGING

LEGEND

 VIBRATION MONITOR

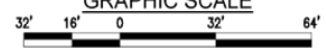
355
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321



NOTES:

1. FOR GENERAL NOTES REFER TO DRAWING SOE-200.
2. APPROXIMATE TOP OF CLASS 1D ROCK CONTOURS ARE SHOWN, REFER TO THE GEOTECHNICAL REPORT.

PLAN
SCALE: 1/32"=1'-0"
GRAPHIC SCALE



DESIGN SUBMITTED BY: **MIRCE** | **ROUX** | **BOHLER** | **MIRCE**

DESIGN PREPARED BY: **MIRCE**

CONTRACTOR: **Yonkers Contracting Company, Inc.**

OWNER: **NYC Department of Design and Construction**

SUPPORT OF EXCAVATION PLAN

F. WU
DRAWN BY: 8502021CR0001P3-SOE-210.00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
745 EAST 141 STREET, BRONX, NY				DOB#: X00731424-11

**NYC BOROUGH-BASED JAILS PROGRAM
THE BRONX SITE PREPARATION
BRONX BOROUGH**



1

2

3

E 142nd St

Southern Blvd

12

Blasting - Vibration Monitor Locations

11

4

10

5

Concord Ave

6

Bruckner Blvd

9

8

7

E 141st St

353

343

333

278

278

278

E 141st St

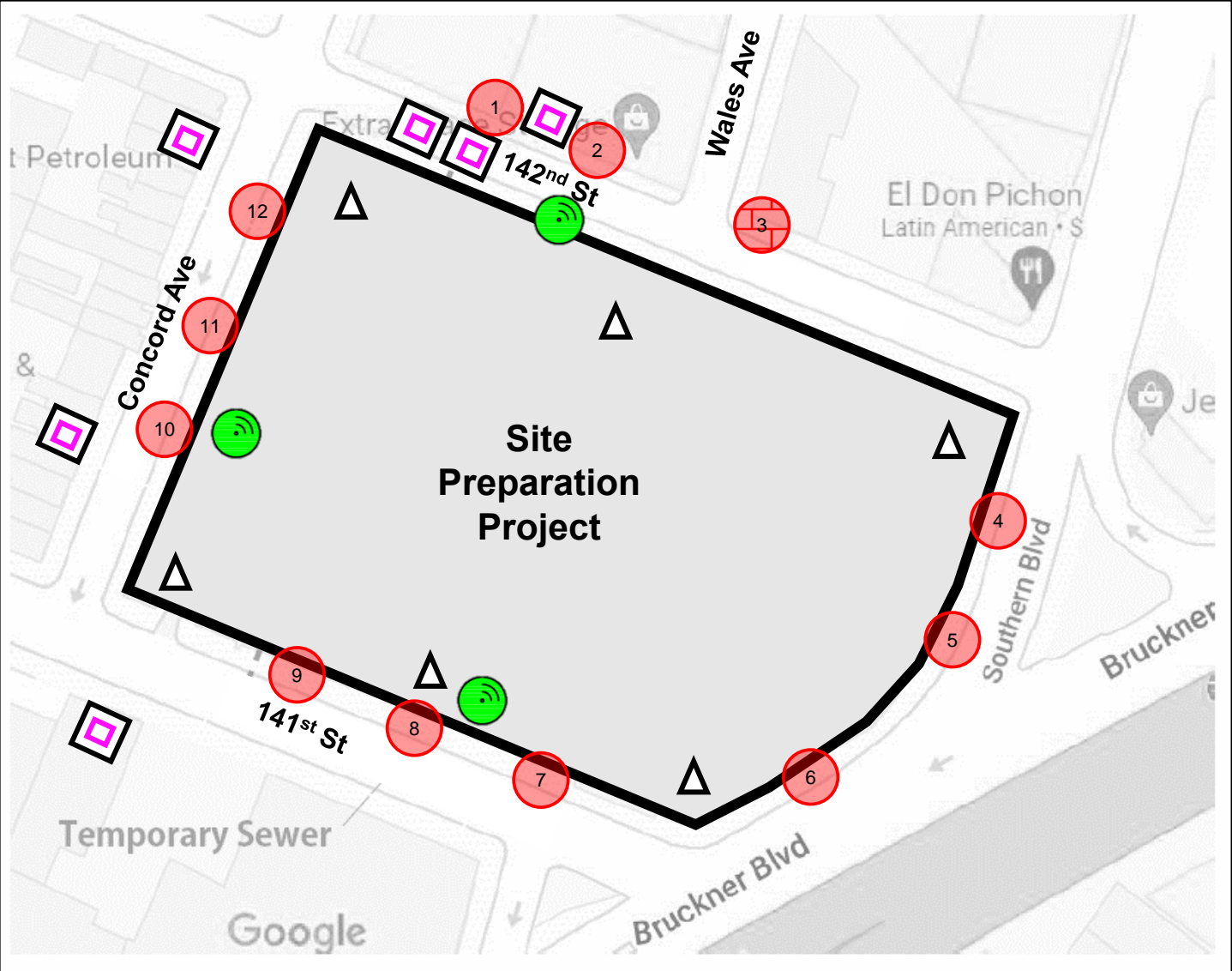
Bruckner Blvd





Bruckner Blvd

Bruckner Blvd

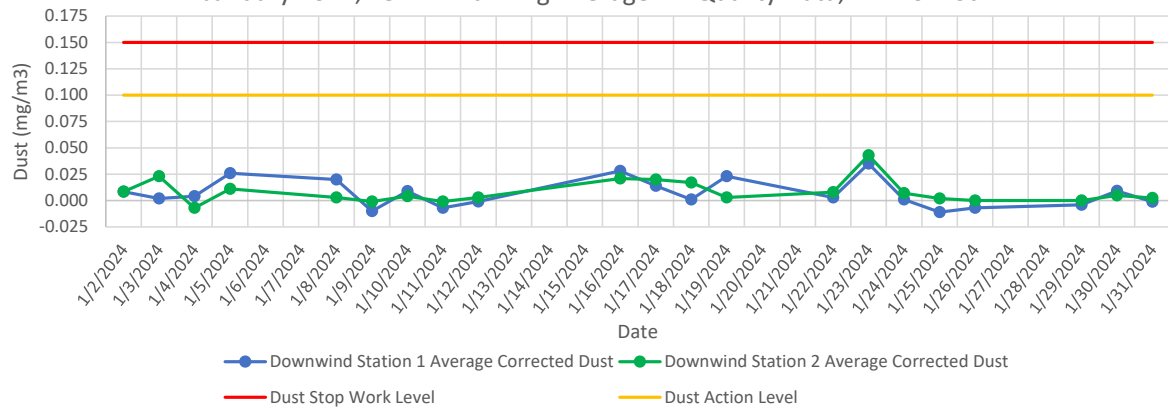
Attachments

Environmental Monitoring The Bronx

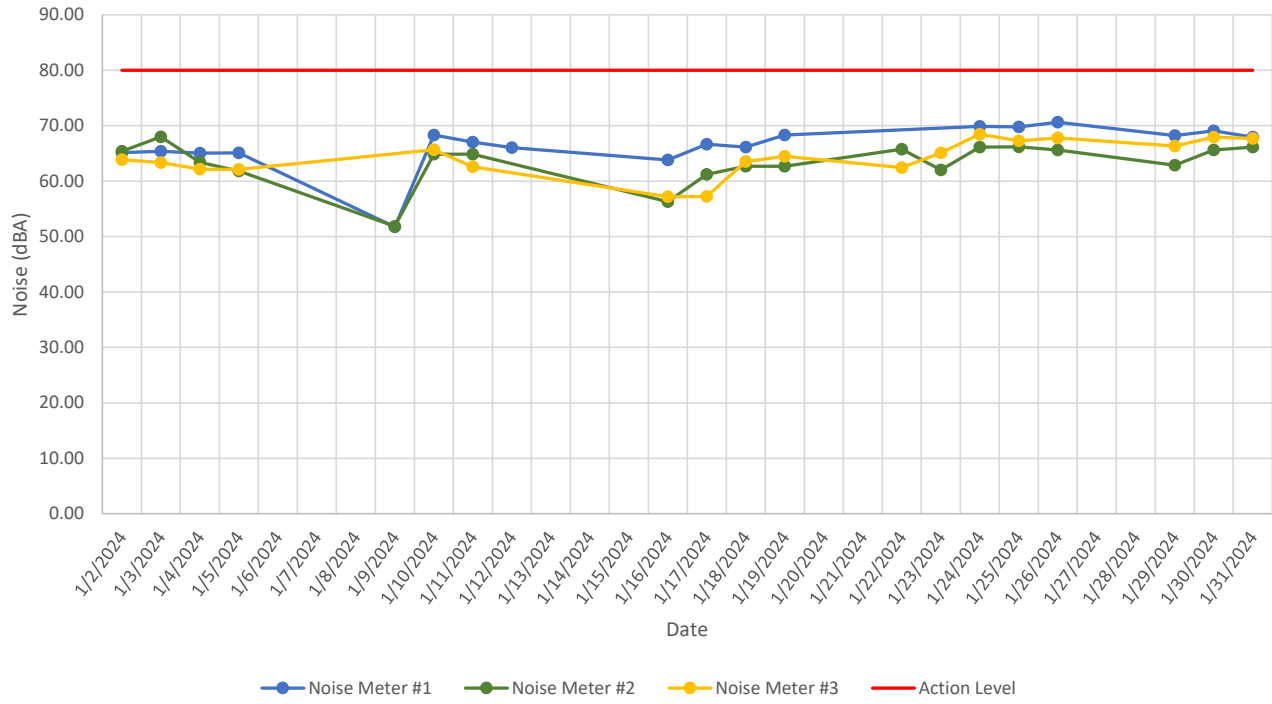


-  Vibration Monitor (VM)
-  Air Monitoring Station (DM)
-  Noise Monitoring Station (NM)
-  Blasting - Vibration Monitor (BVM)

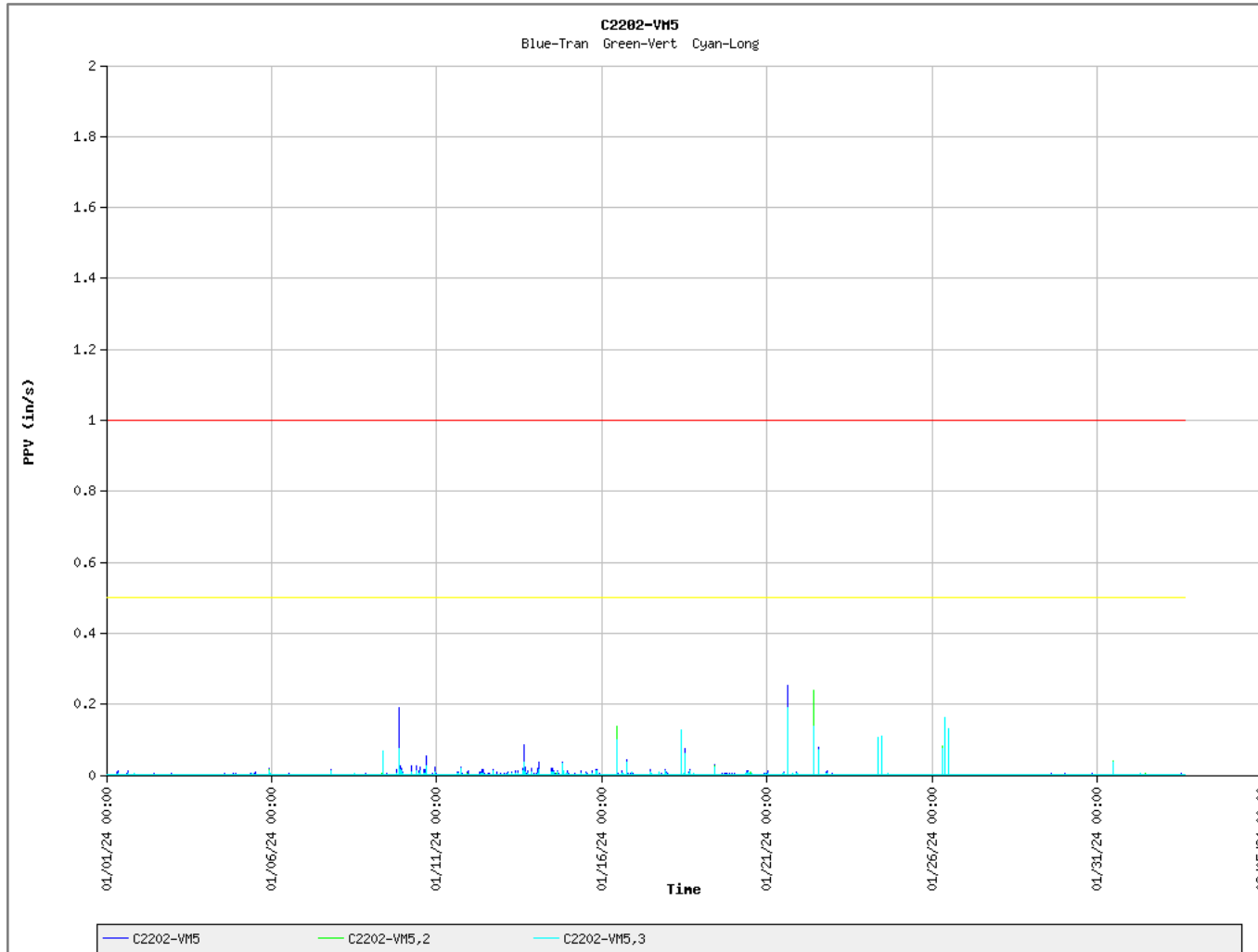
January 2024, 15-min Running Average Air Quality Data, PM 10 Plot



January 2024, Average Equivalent Sound Level Plot (Laeq)



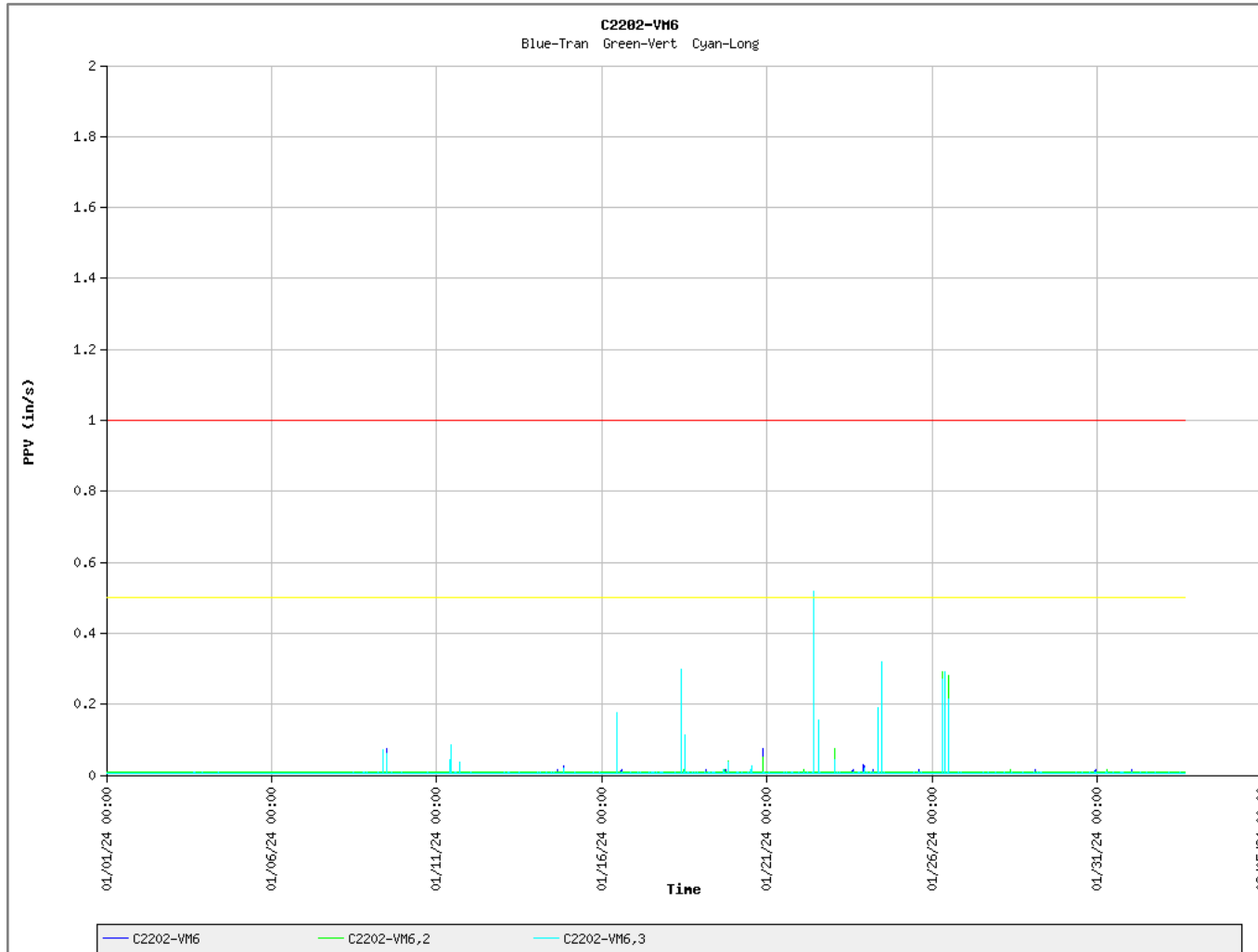
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM5 Transverse
C2202-VM5,2 Vertical
C2202-VM5,3 Longitudinal

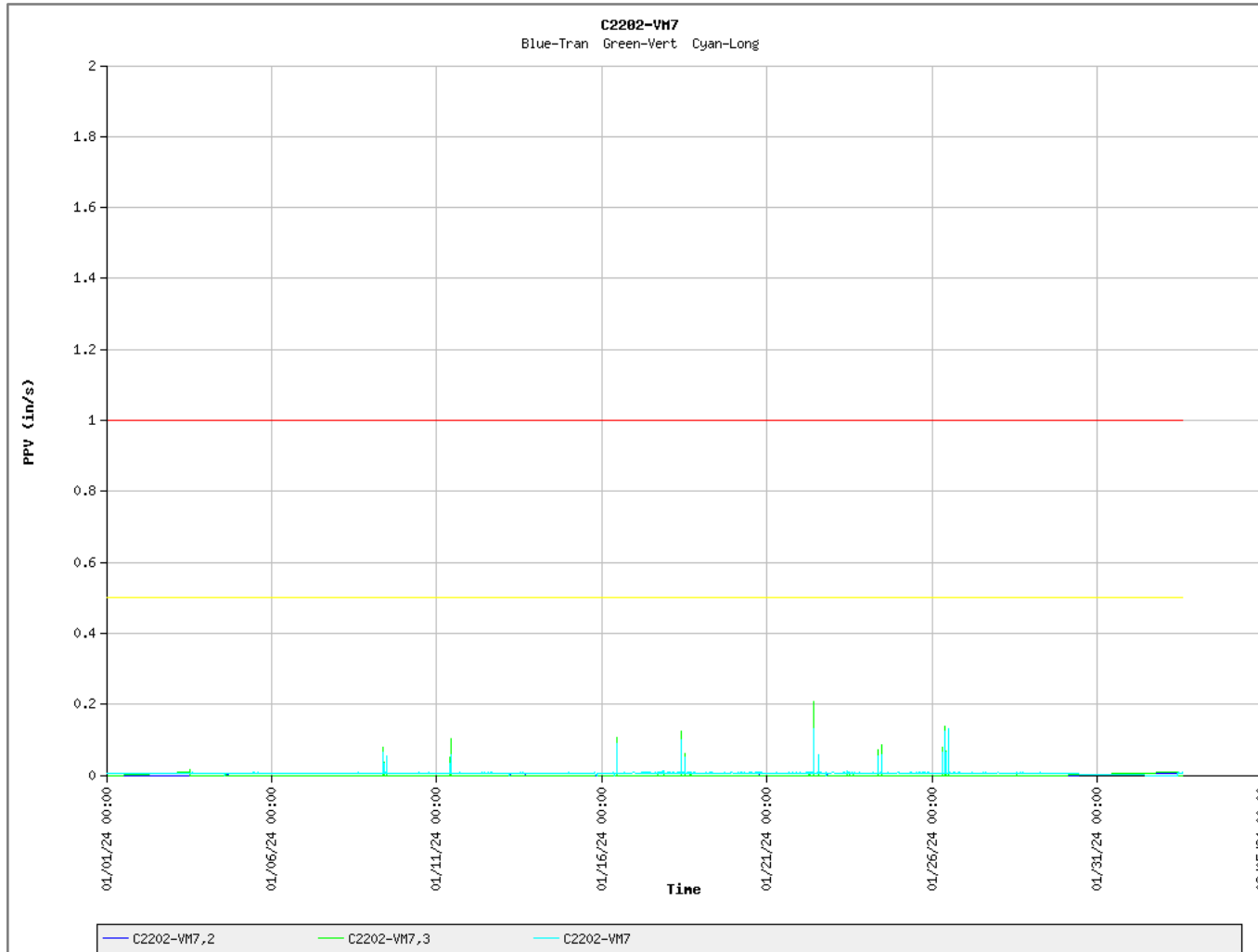
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM6 Transverse
C2202-VM6.2 Vertical
C2202-VM6.3 Longitudinal

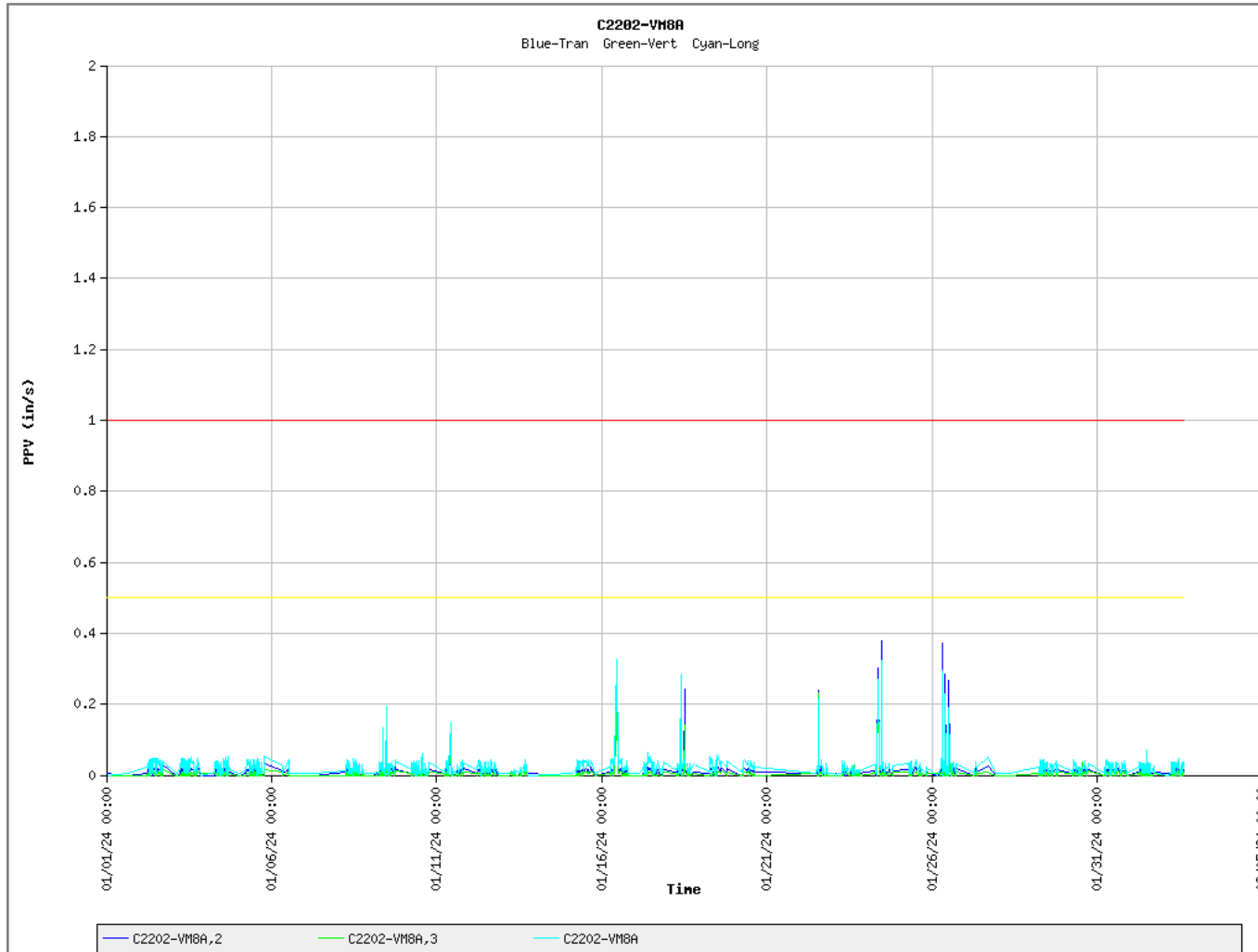
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM7 Longitudinal
C2202-VM7,2 Transverse
C2202-VM7,3 Vertical

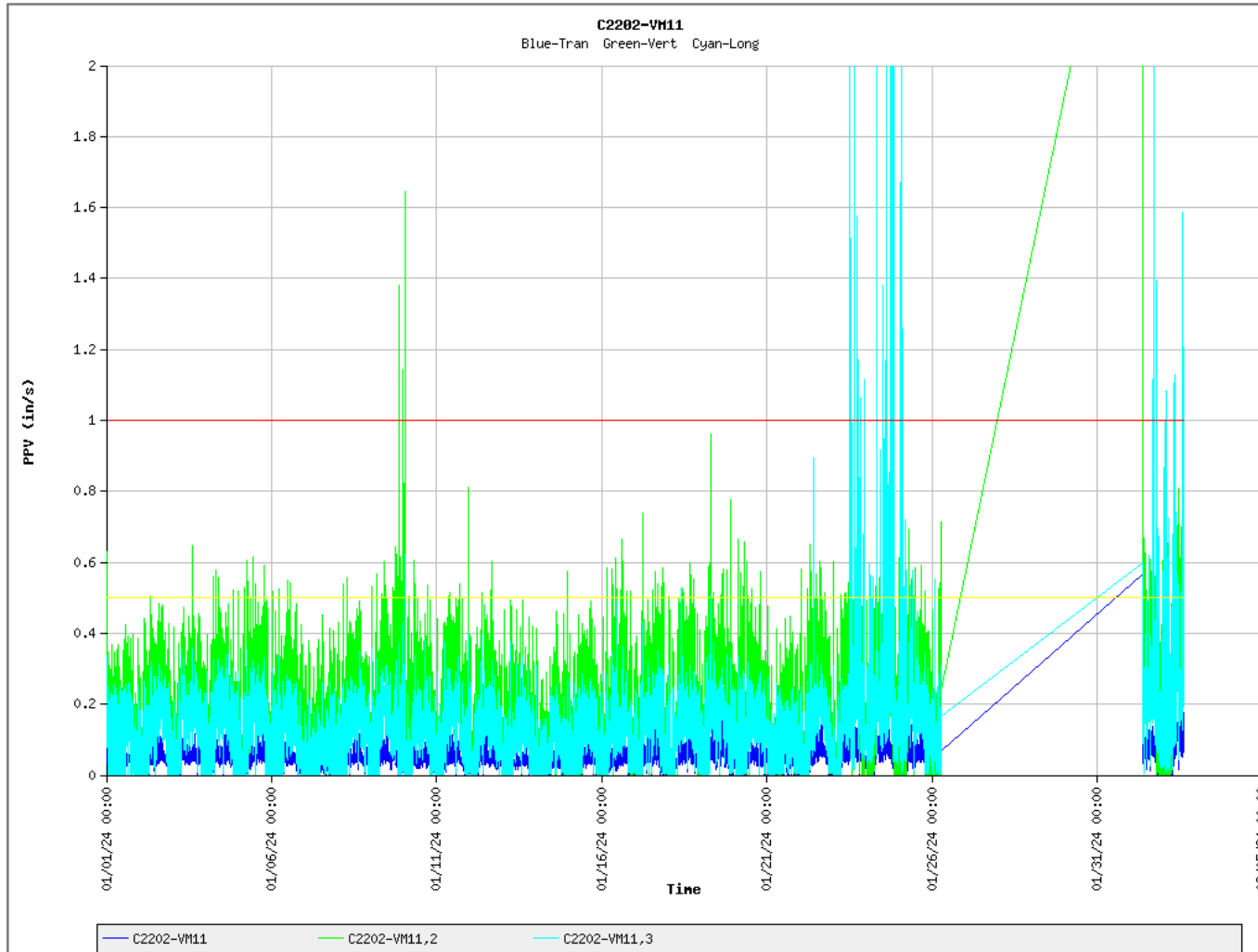
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM8A Longitudinal
C2202-VM8A,2 Transverse
C2202-VM8A,3 Vertical

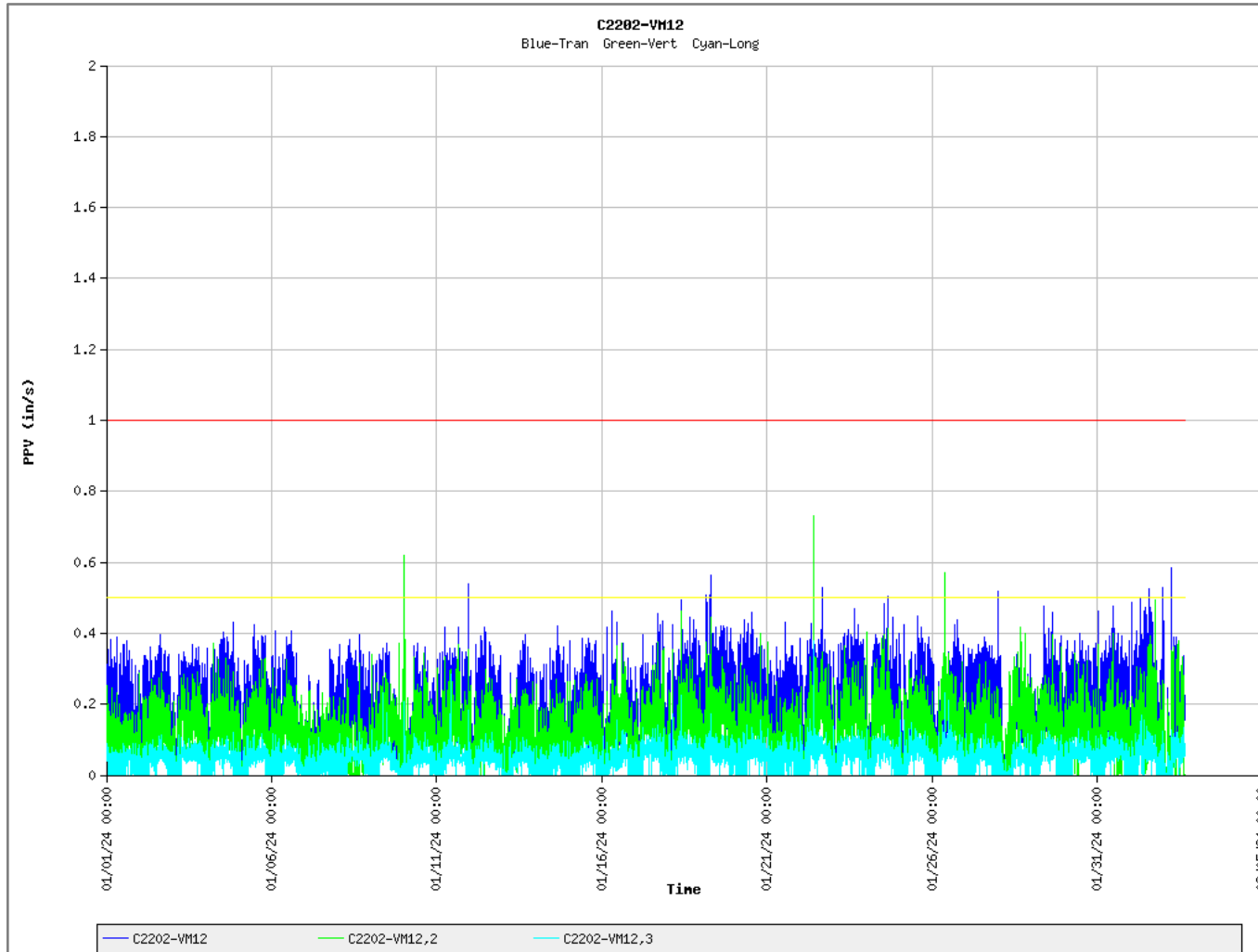
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM11 Transverse
C2202-VM11,2 Vertical
C2202-VM11,3 Longitudinal

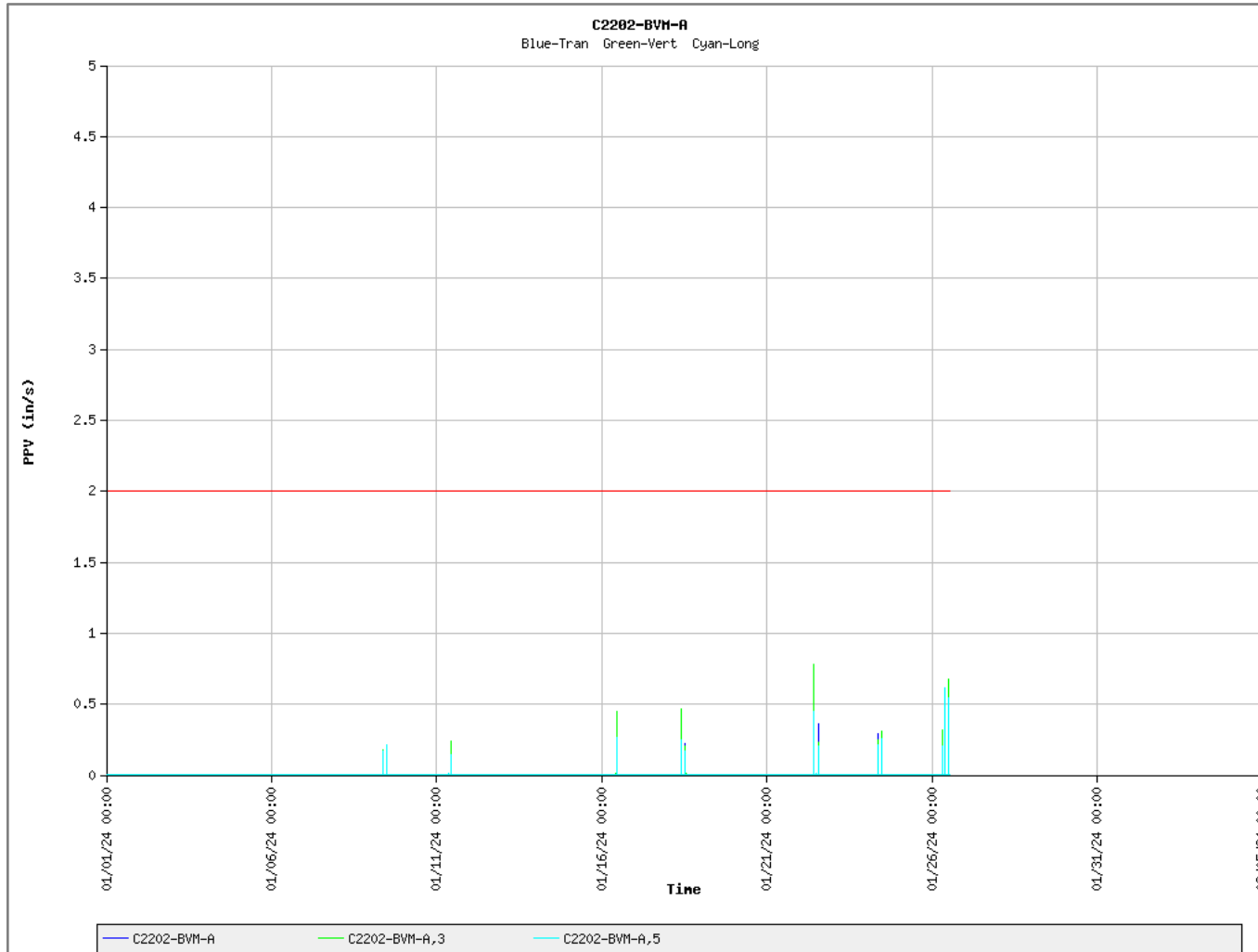
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM12 Transverse
C2202-VM12,2 Vertical
C2202-VM12,3 Longitudinal

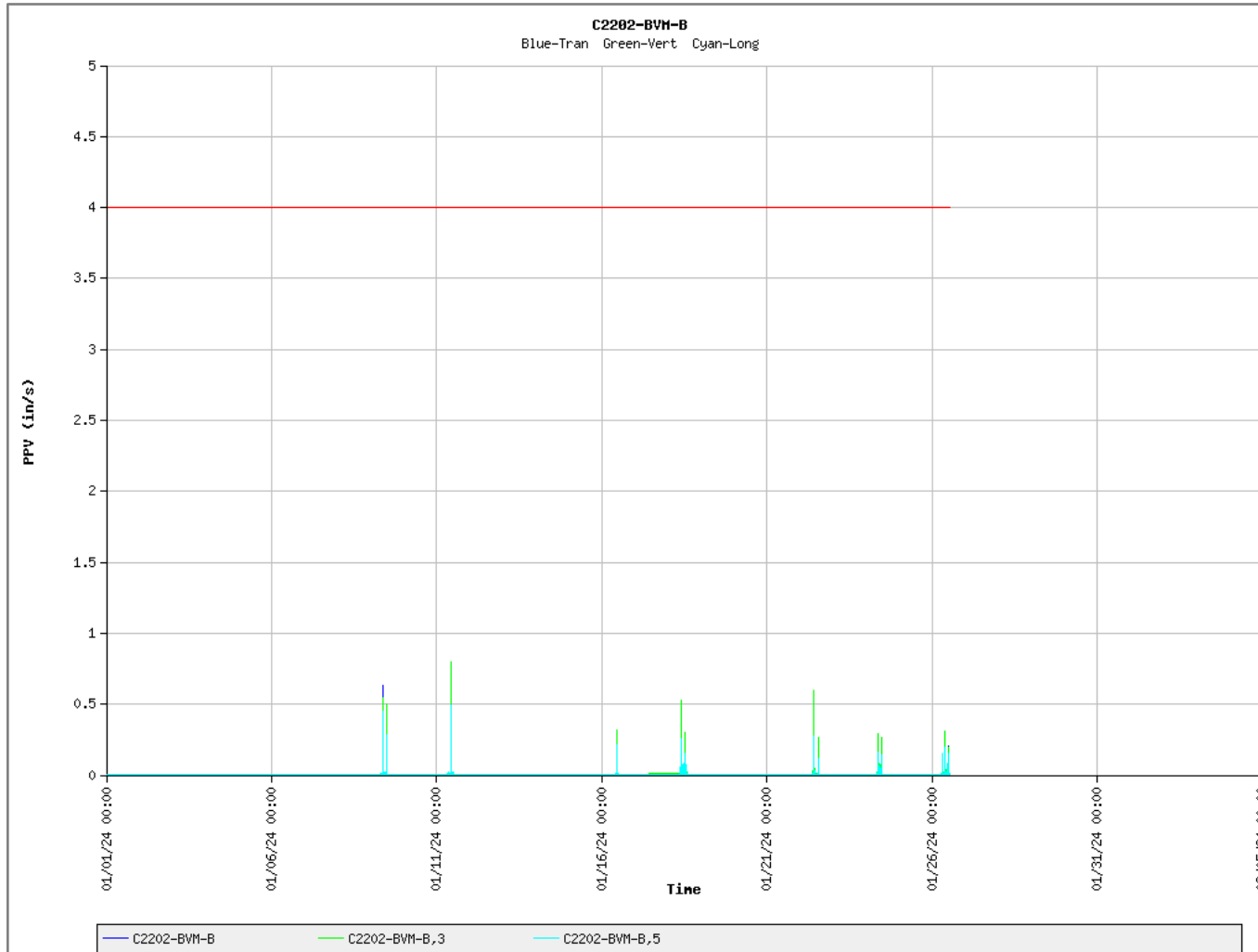
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
1/1/2024-1/31/2024 at location# 10

C2202-BVM-A Transverse
C2202-BVM-A,3 Vertical
C2202-BVM-A,5 Longitudinal

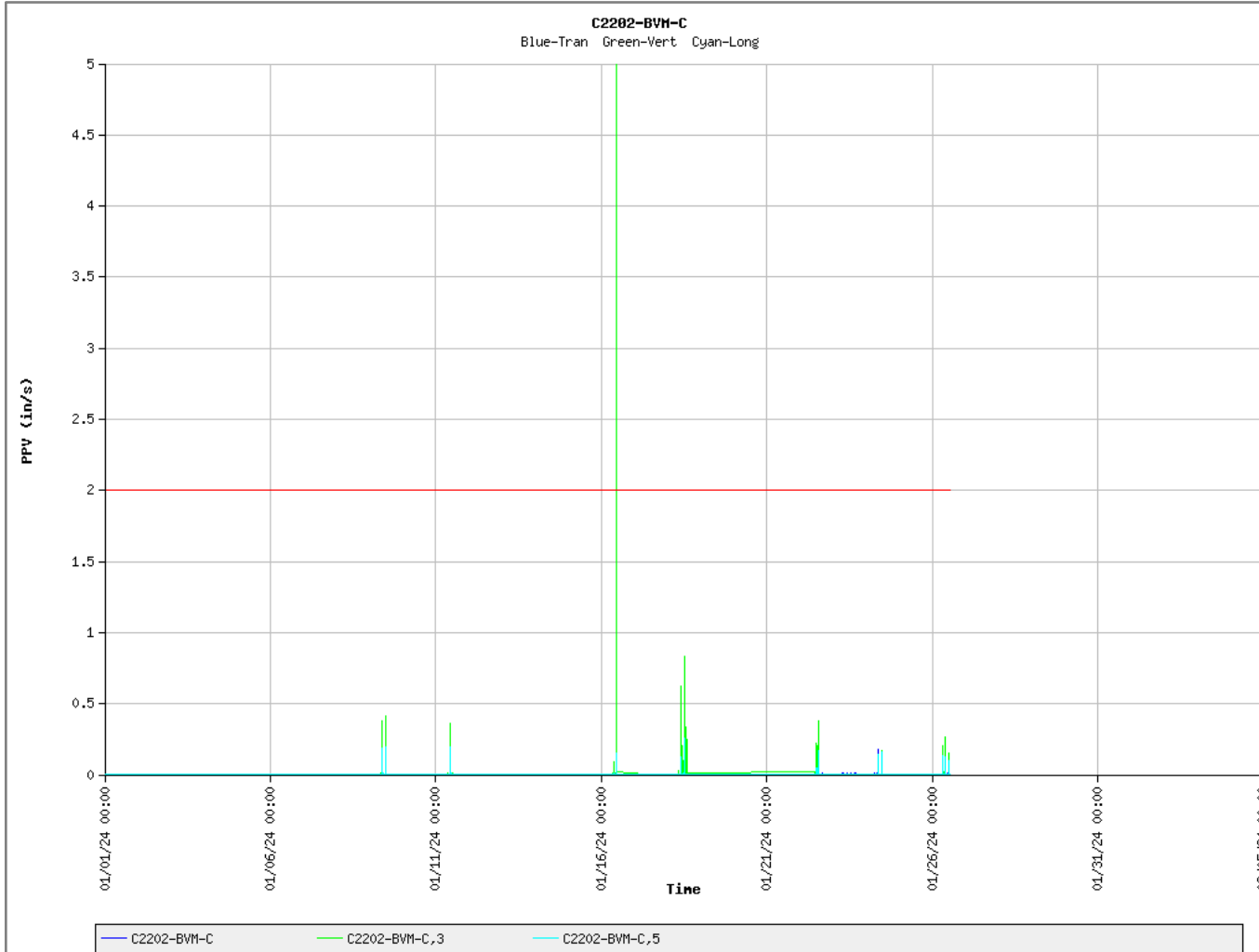
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 4 in/sec
1/1/2024-1/31/2024 at location# 3

C2202-BVM-B Transverse
C2202-BVM-B,3 Vertical
C2202-BVM-B,5 Longitudinal

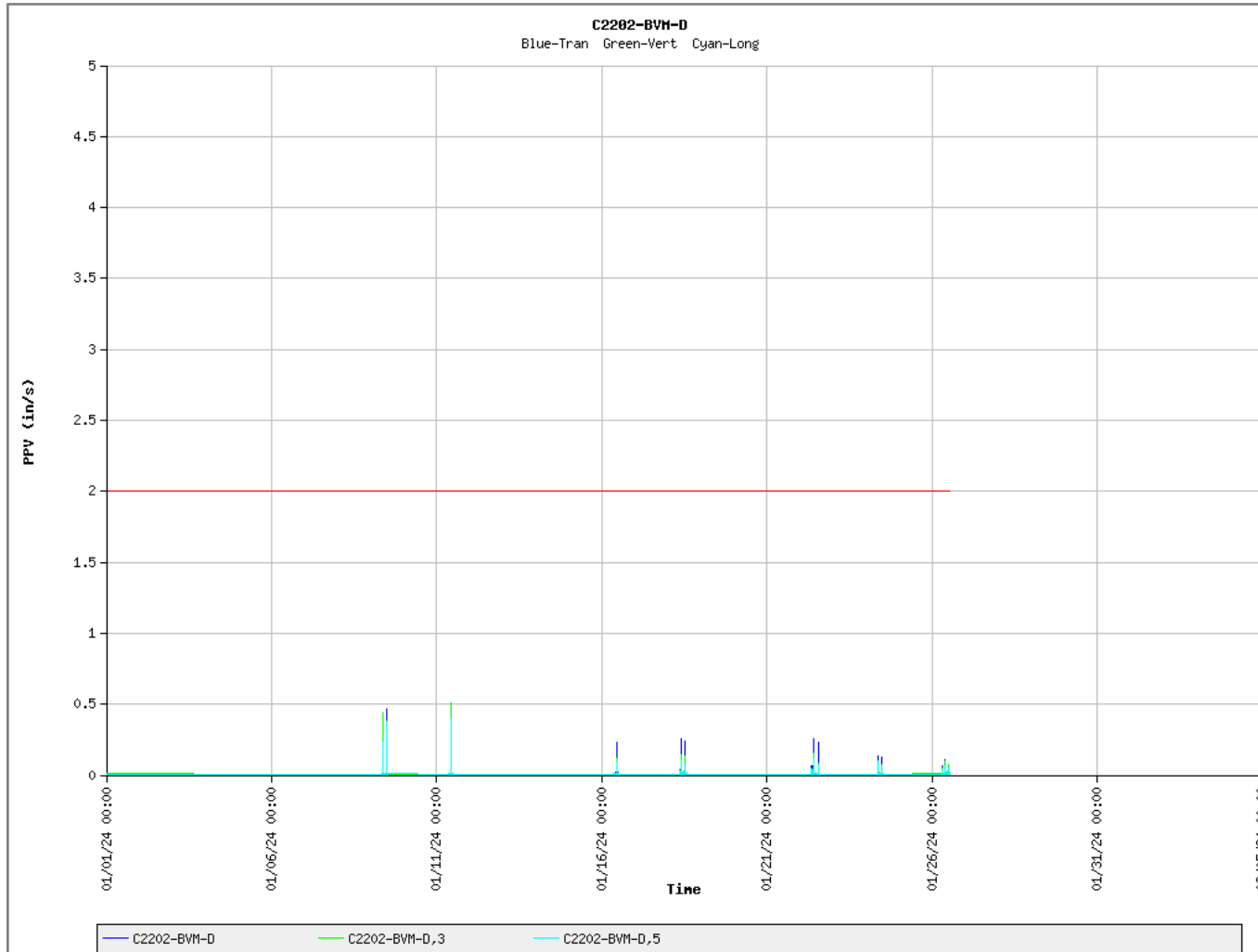
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
1/1/2024-1/31/2024 at location# 7

C2202-BVM-C Transverse
C2202-BVM-C,3 Vertical
C2202-BVM-C,5 Longitudinal

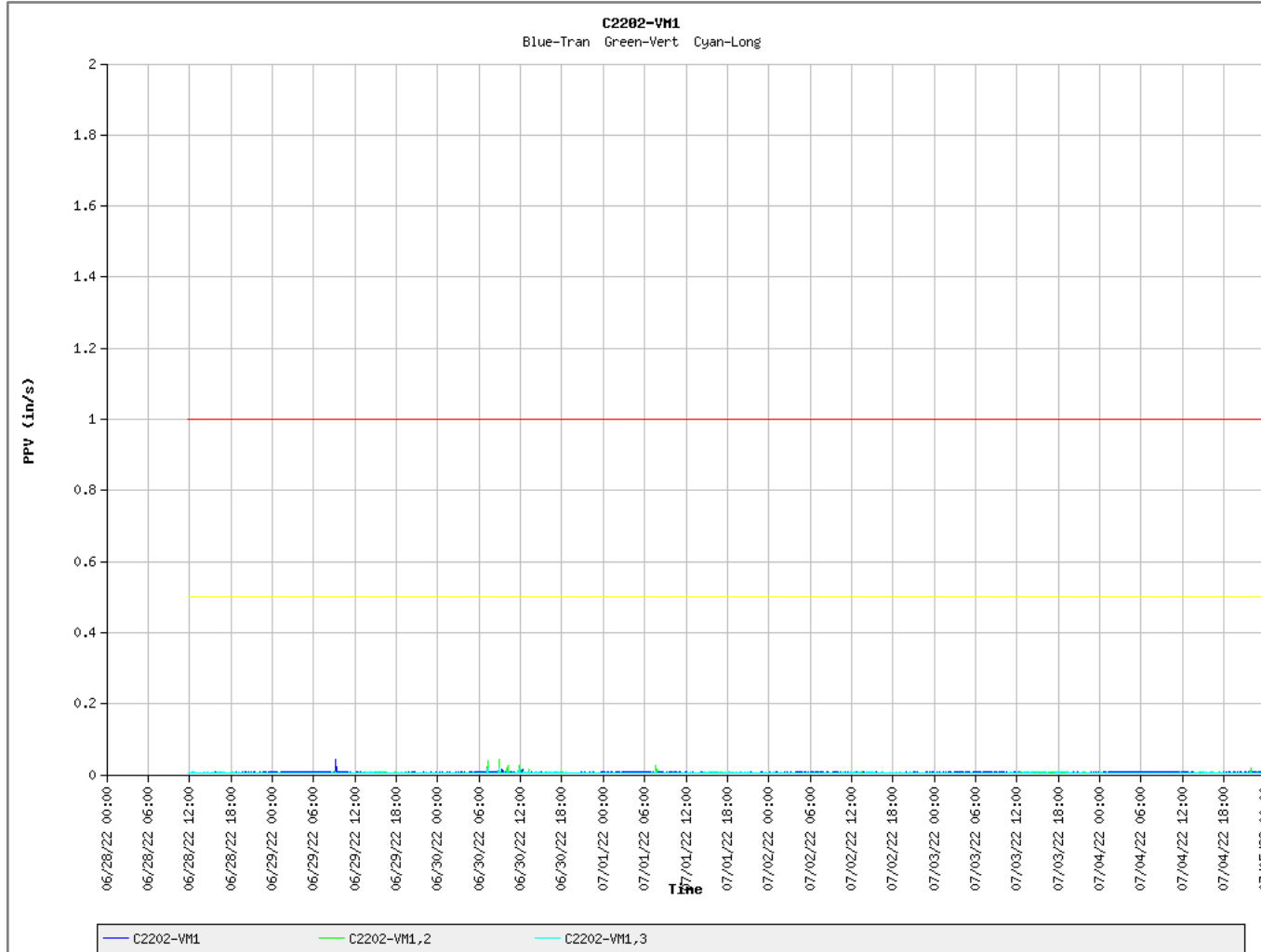
The Bronx Site Preparation January 2024 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
1/1/2024-1/31/2024 at location# 5

C2202-BVM-D Transverse
C2202-BVM-D,3 Vertical
C2202-BVM-D,5 Longitudinal

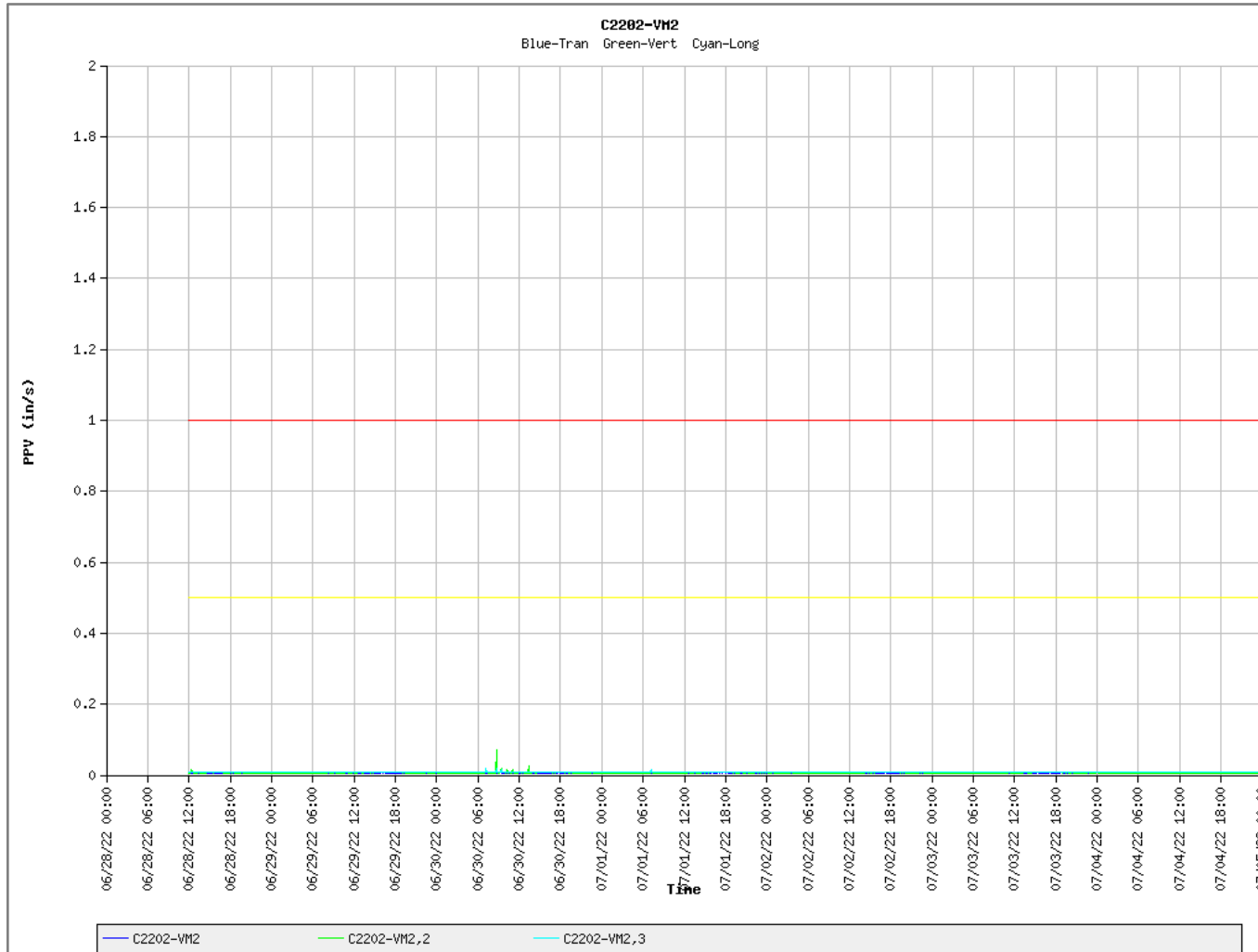
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM1 Transverse
C2202-VM1,2 Vertical
C2202-VM1,3 Longitudinal

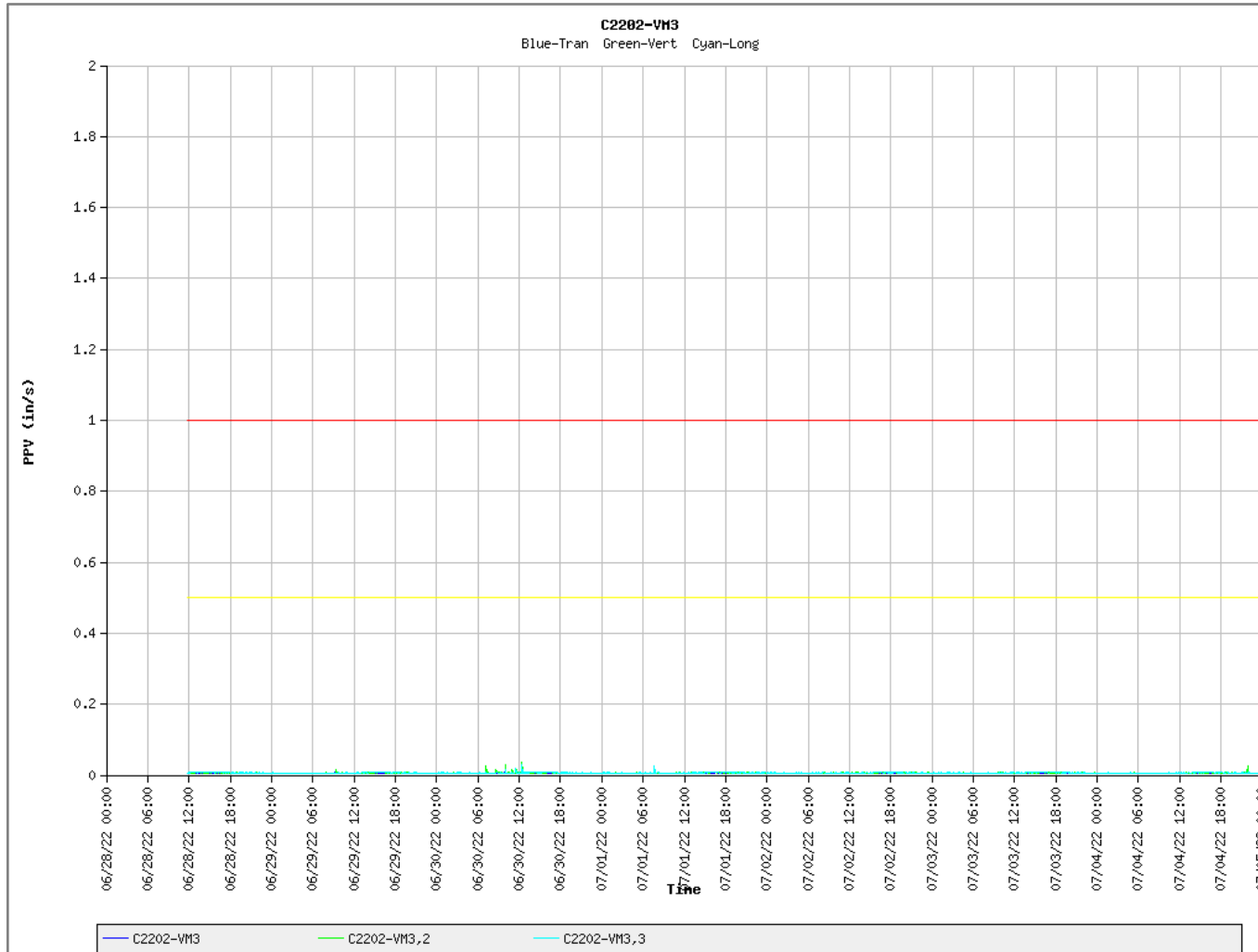
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM2 Transverse
C2202-VM2,2 Vertical
C2202-VM2,3 Longitudinal

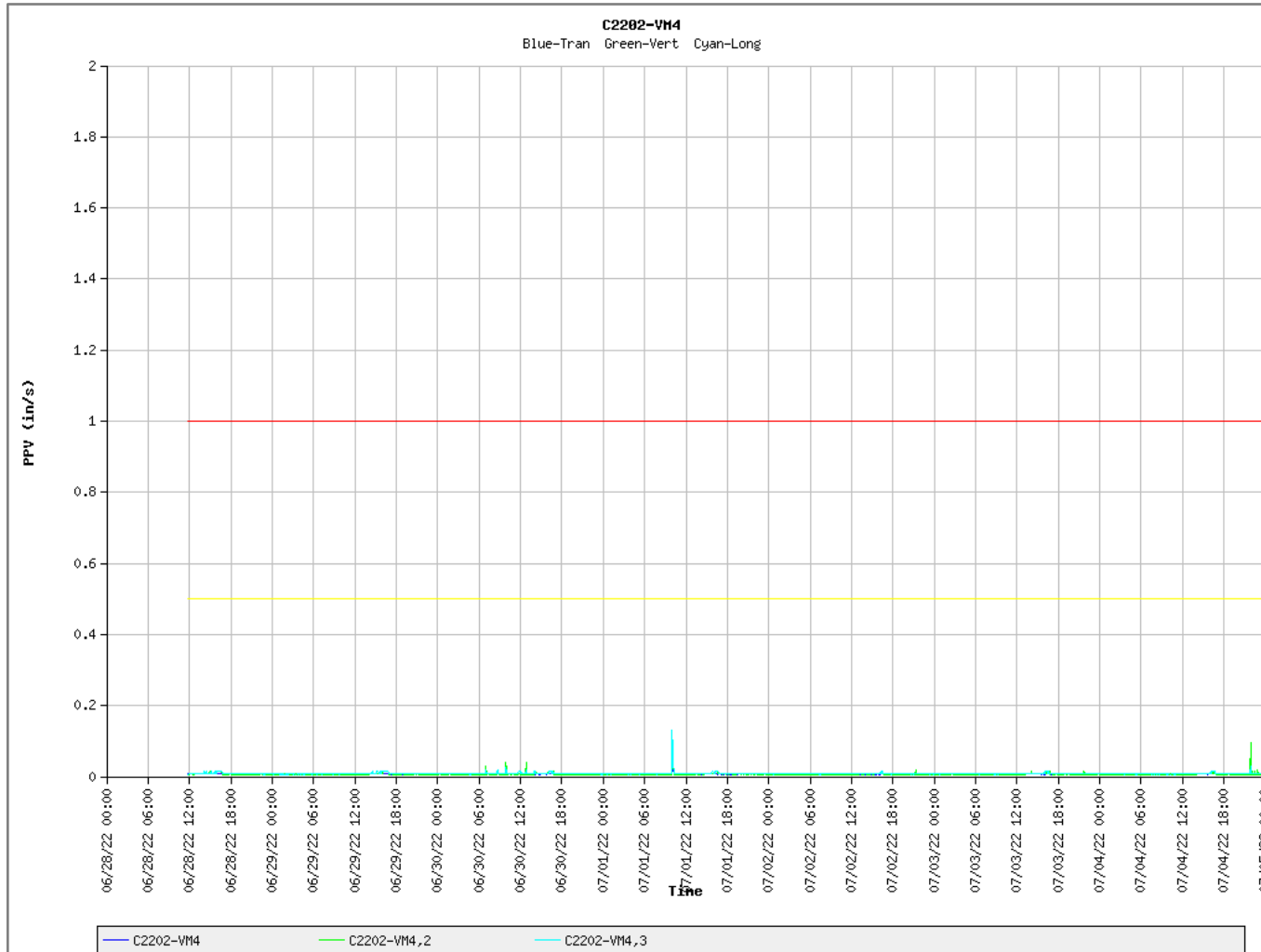
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM3 Transverse
C2202-VM3,2 Vertical
C2202-VM3,3 Longitudinal

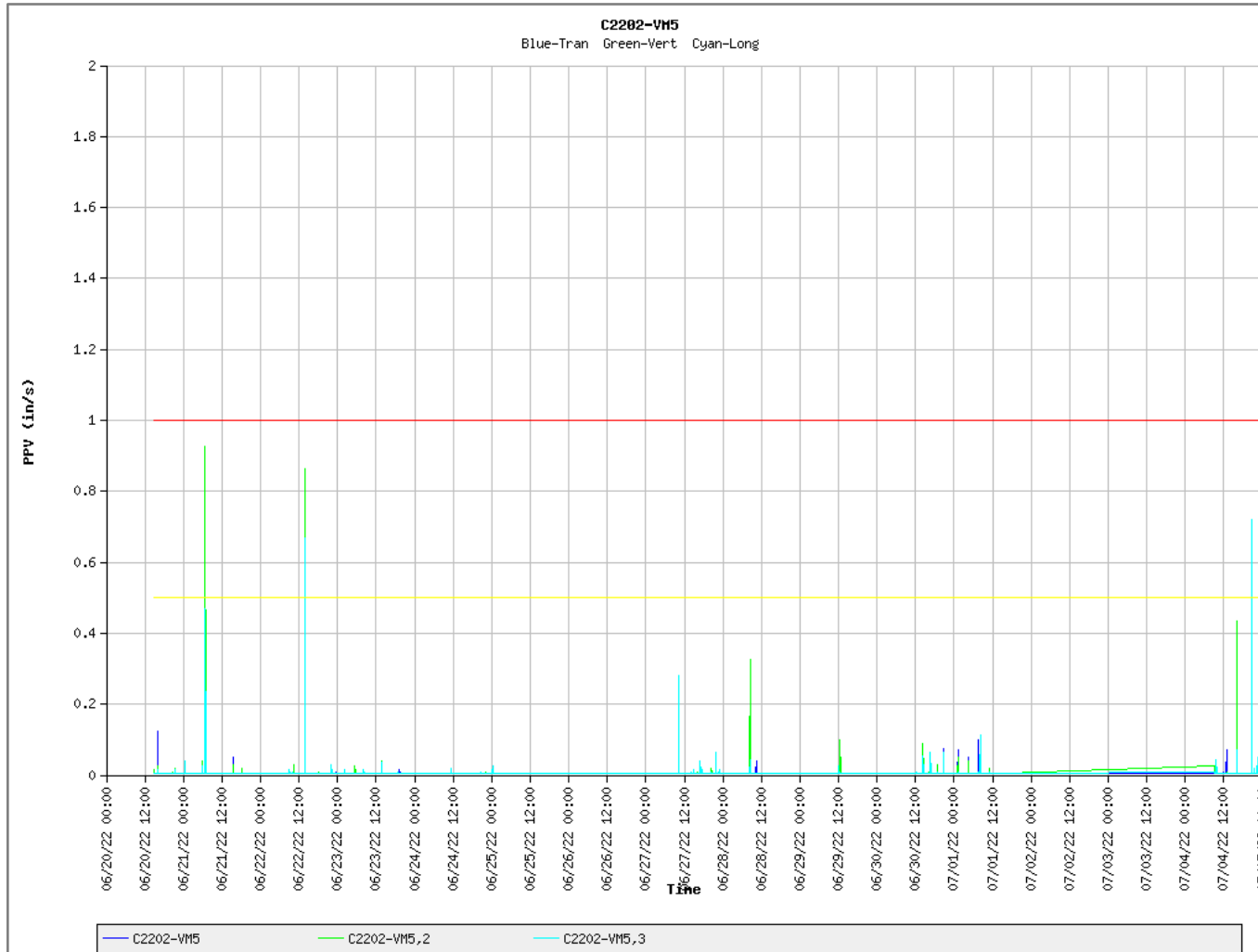
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM4 Transverse
C2202-VM4,2 Vertical
C2202-VM4,3 Longitudinal

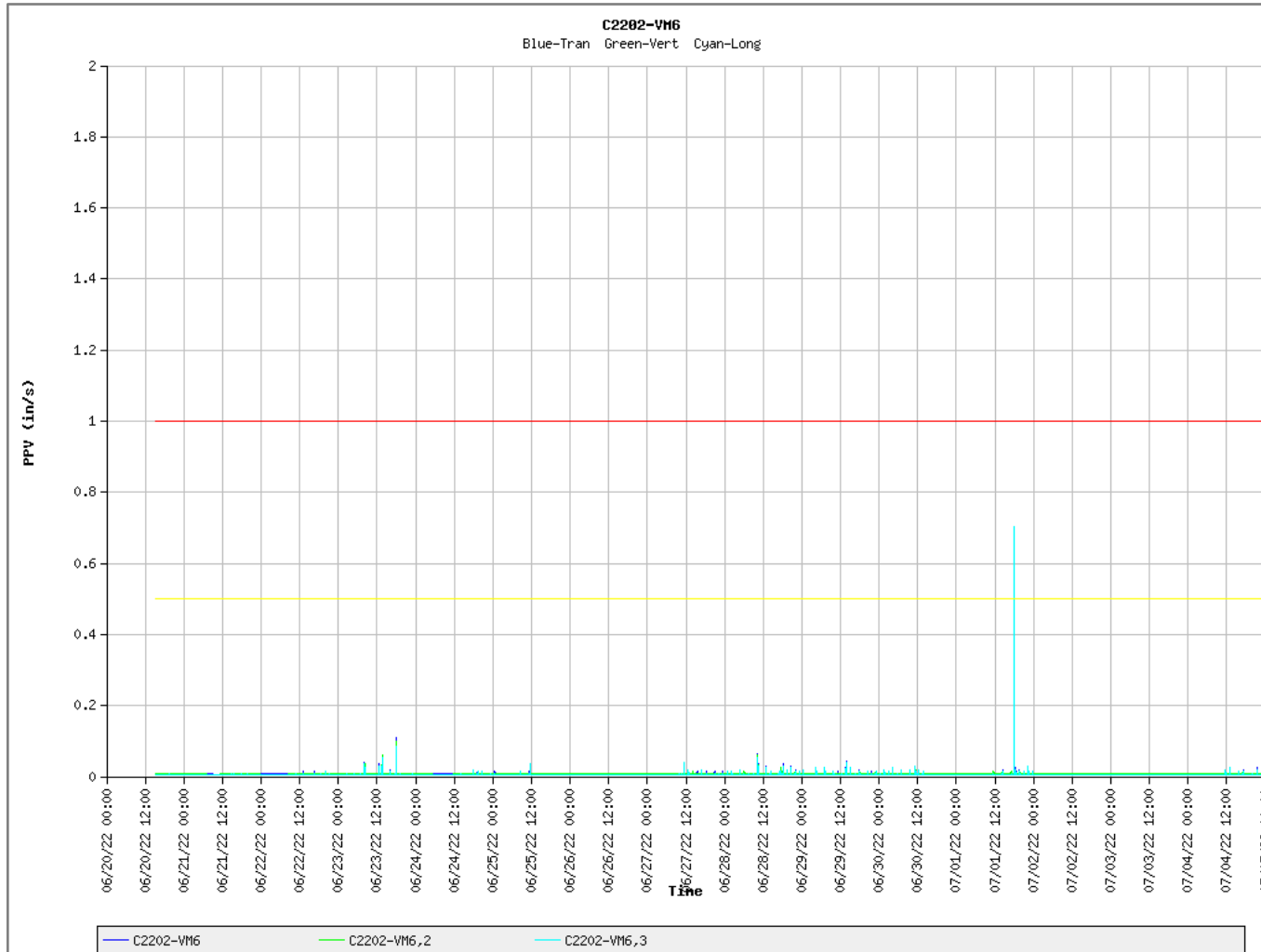
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM5 Transverse
C2202-VM5,2 Vertical
C2202-VM5,3 Longitudinal

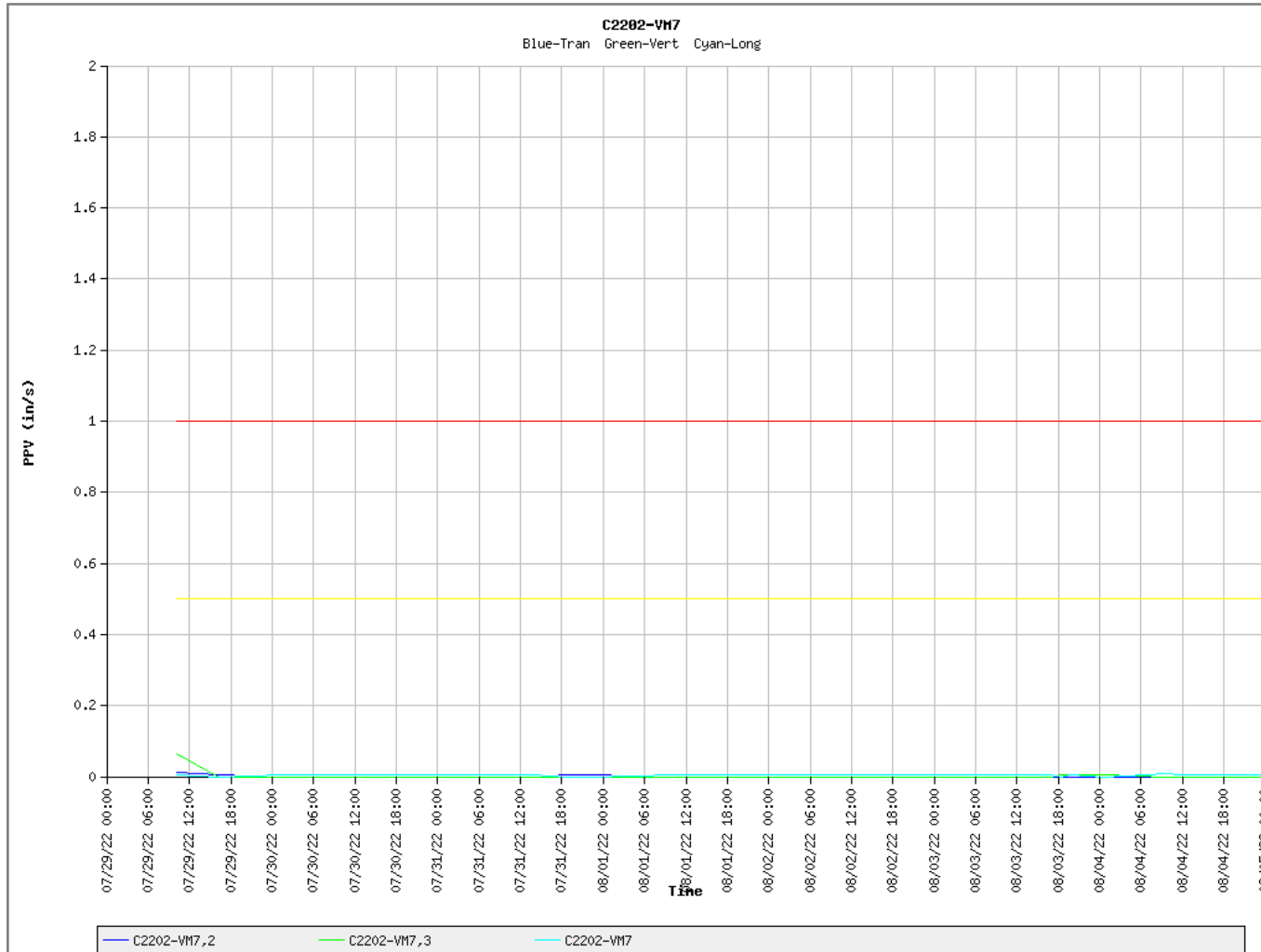
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM6 Transverse
C2202-VM6,2 Vertical
C2202-VM6,3 Longitudinal

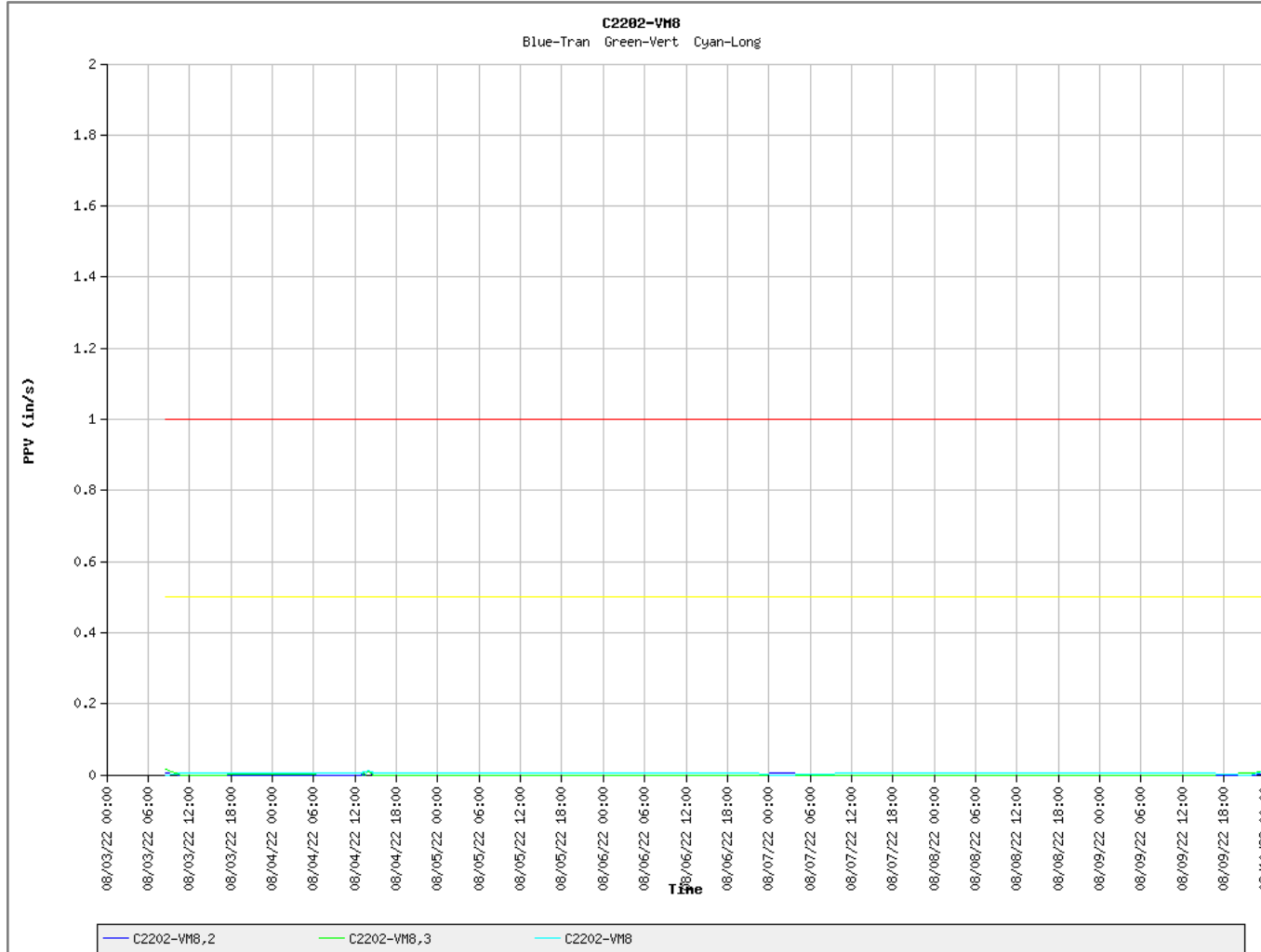
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM7 Longitudinal
C2202-VM7,2 Transverse
C2202-VM7,3 Vertical

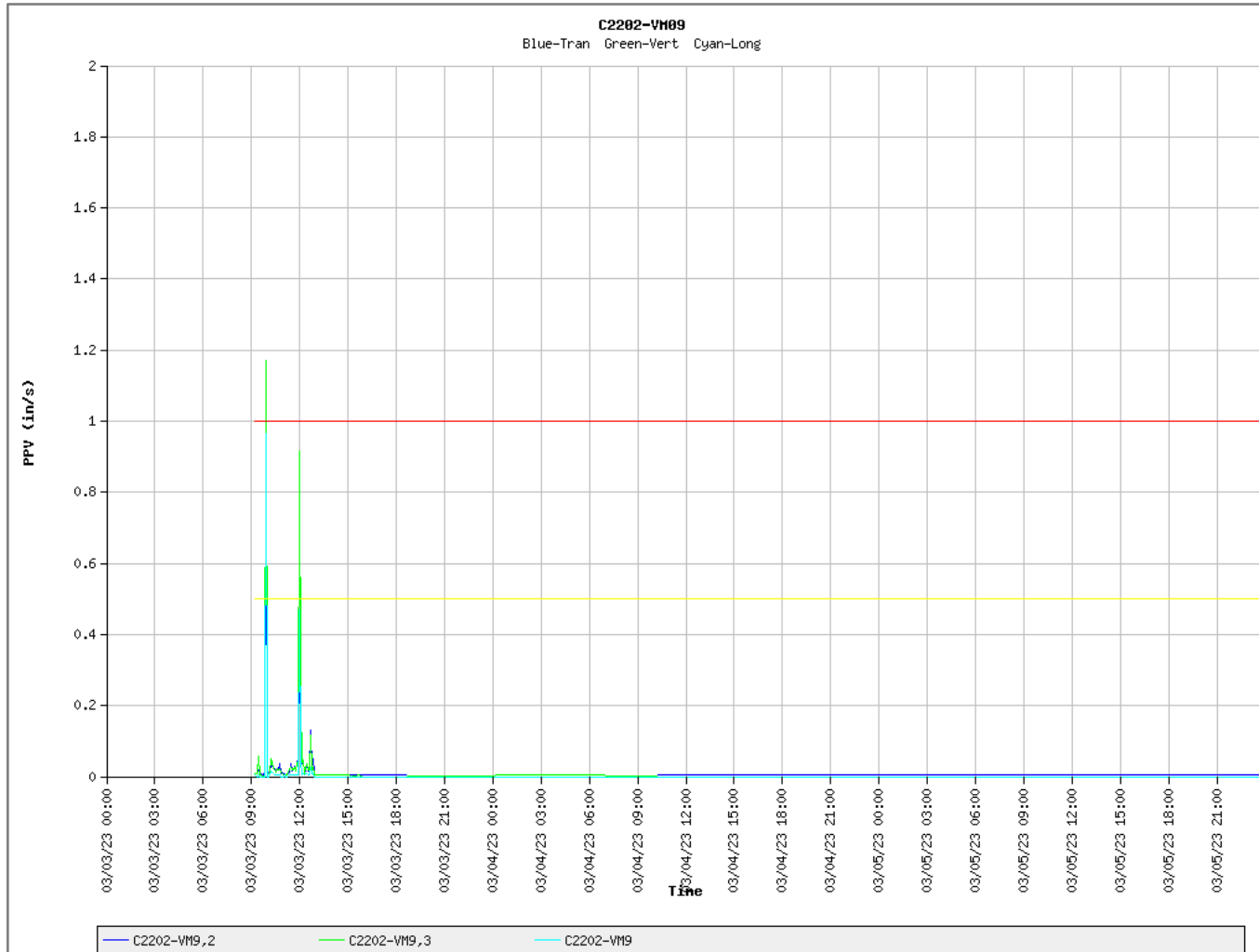
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM8 Longitudinal
C2202-VM8,2 Transverse
C2202-VM8,3 Vertical

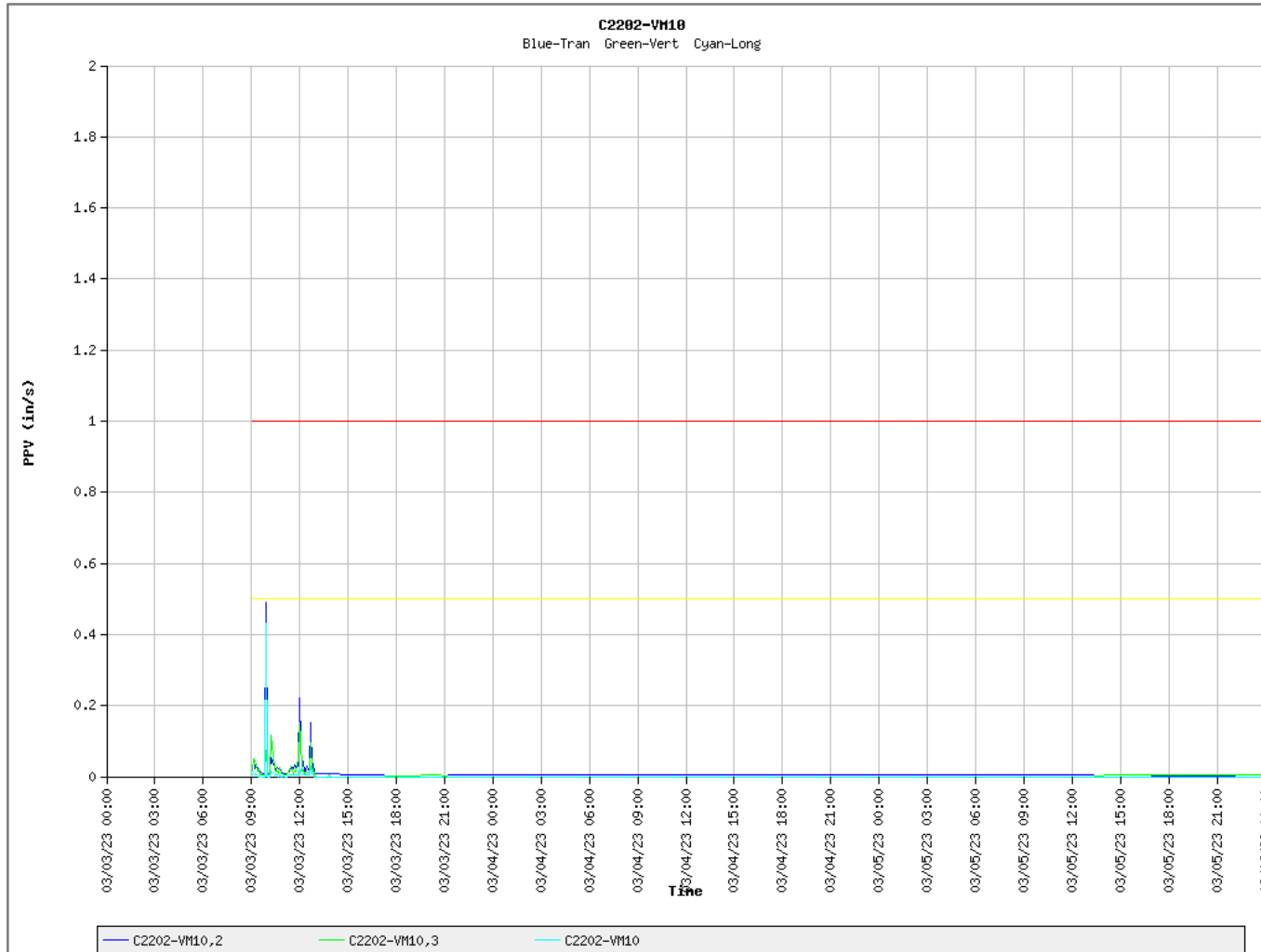
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM9 Longitudinal
C2202-VM9,2 Transverse
C2202-VM9,3 Vertical

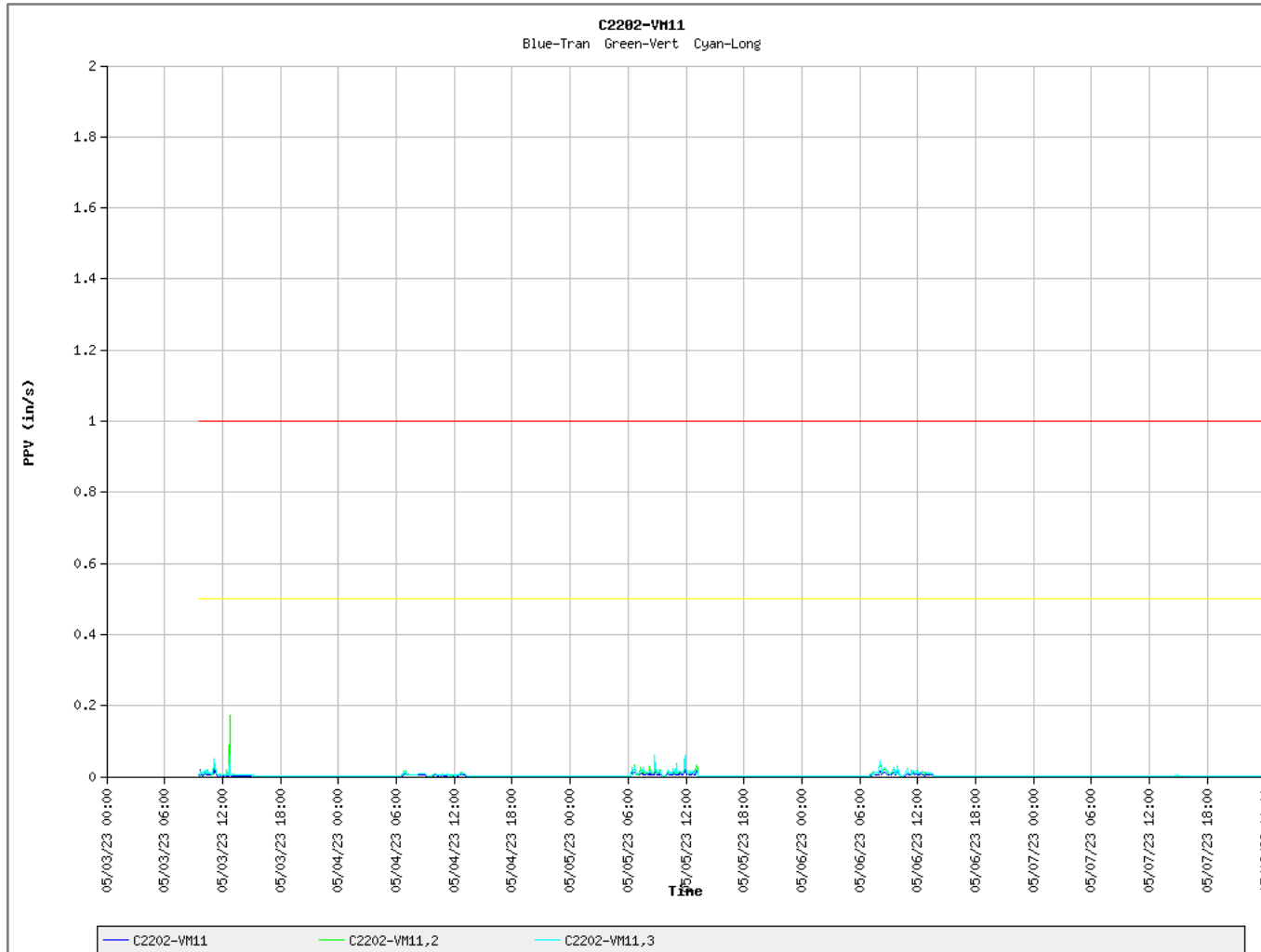
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM10 Longitudinal
C2202-VM10,2 Transverse
C2202-VM10,3 Vertical

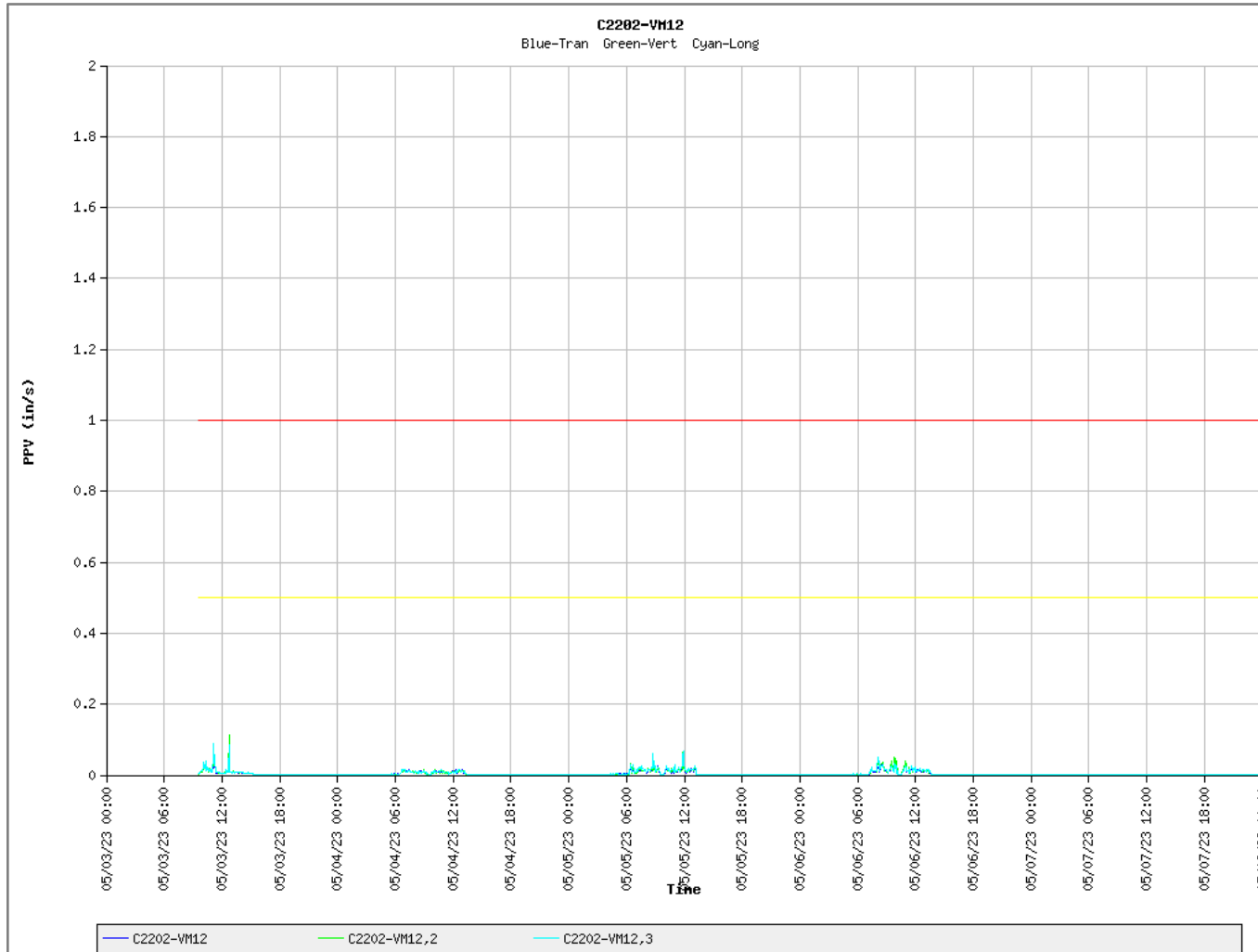
The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM11 Transverse
C2202-VM11,2 Vertical
C2202-VM11,3 Longitudinal

The Bronx Site Preparation Vibration Baseline Reference Data Plots



Exceedance level: 1 in/sec
Warning level: 0.5 in/sec

C2202-VM12 Transverse
C2202-VM12,2 Vertical
C2202-VM12,3 Longitudinal