

**AIR, NOISE AND VIBRATION
MONTHLY MONITORING REPORT
Number 015**

Prepared By: Roux / Wang Technology

DDC Project No.:	BBJ-XSP	Period Start: 10/1/23 End 10/31/23	
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
22	21	1	There were three 15-minute readings over the dust action concentration on 10/26 that are detailed below. Dust monitoring not performed on 10/20 due to rain.
Community Air Monitoring Weekly 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
10/26 11:12	0.176	0.143	An elevated reading above the dust action level was caused by nearby excavation activities. Work was temporarily stopped, and water was used to mitigate dust in the work area. Mitigative measure not fully effective upon immediate implementation.
10/26 11:27	0.143	0.063	An elevated reading above the dust action level was caused by nearby excavation activities. Work was temporarily stopped, and water was used to mitigate dust in the work area.
10/26 11:57	0.182	0.080	An elevated reading above the dust action level caused by the movement of blast pads. Work was temporarily stopped, and water was used to mitigate dust in

			the work area.
<p>Narrative Summary of Air Monitoring, Excursions and Corrective Actions: <i>In October 2023, 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.</i></p>			
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
22	22	0	NA
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
NA	NA	NA	NA
<p>Narrative Summary of Noise Monitoring, Excursions and Corrective Actions: <i>In October 2023, construction-related levels of noise did not surpass the limits of Local Law 113 of 2005. The daily average was below the limits and did not cause noise concerns for the community.</i></p>			

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
22	31	22	Two out of six vibration monitors recorded a total of fifty-six exceedances. Eight exceedances were caused by the excavators in the area moving the rocks. Seven events are not construction related; contractor confirmed that there was no work being performed in the area during the event times. Forty-one 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
10/2/2023 05:45 & 16:40	0.5288	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/3/2023 01:50	0.5508	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/4/2023 12:05, 12:10, & 12:50	0.607	N/A	Exceedances observed at VM11 were not construction related, it is confirmed that no work was being performed in the area.
10/4/2023 14:55 & 16:10	0.6051	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/5/2023 00:35	0.6613	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/5/2023 11:35	0.5682	N/A	Exceedance observed at VM11 was not construction related, it is confirmed that no work was being performed in the area.
10/5/2023 16:55 & 17:15	0.5843	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/6/2023 13:00	0.5635	N/A	Exceedance observed at VM11 was not construction related, it is confirmed that no work was being performed in the area.
10/6/2023 15:15	0.5204	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/7/2023 00:35	0.525	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/9/2023 15:51	0.6343	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/10/2023 15:00	0.5731	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/11/2023 14:55	0.6082	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/12/2023 00:35, 05:15, 06:35, 18:40, & 19:40	0.719	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/17/2023 00:35	0.5244	N/A	Exceedance observed at VM11 was recorded during non-construction hours.

10/17/2023 08:12 & 13:02	0.5707	0.4267	Exceedances observed at VM11 were due to the preparation work for next blast, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post events.
10/18/2023 19:42	0.5021	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/19/2023 00:35	0.7506	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/20/2023 10:50, 11:50, & 11:55	0.6188	0.489	Exceedances observed at VM11 were due to the preparation work for next blast, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post events.
10/20/2023 18:12 & 18:17	0.6799	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/21/2023 08:37 & 10:17	0.571	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/23/2023 08:57	0.5486	0.454	Exceedance observed at VM11 was due to the preparation work for next blast, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
10/24/2023 05:40 & 17:12	0.584	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/25/2023 00:55, 04:25, & 05:10	0.6309	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/25/2023 07:32	0.571	0.4748	Exceedance observed at VM11 was due to the preparation work for next blast, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
10/25/2023 16:57 & 18:17	1.1568	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/26/2023 00:30 & 17:10	0.7342	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/27/2023 00:55 & 06:20	0.5676	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/27/2023 09:05	0.5461	0.4686	Exceedance observed at VM11 was due to the preparation work for next blast, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced post event.
10/27/2023 13:10	0.5725	N/A	Exceedance observed at VM11 was not construction related, it is confirmed that no work was being performed in the area.
10/27/2023 19:05	0.5247	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/28/2023 00:20, 00:25, & 16:00	0.6169	N/A	Exceedances observed at VM11 were recorded during non-construction hours.
10/30/2023 00:40	0.6845	N/A	Exceedance observed at VM11 was recorded during non-construction hours.
10/4/2023 11:59	0.5648	N/A	Exceedance observed at VM12 was not construction related, it is confirmed that no work was being performed in the area.

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

In October 2023, two vibration monitors had recorded exceedances.

There were exceedances recorded during non-construction hours at VM11. No corrective action was required at this time.

The exceedances recorded at VM11 on October 17th, October 20th, October 23rd, October 25th, and October 27th were due to preparation work for blasting, where excavators in the area were moving rocks. The size of rocks being loaded into the truck was reduced 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) Blasting Related 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
22	31	1	Two out of ten vibration monitors recorded a total of four exceedances. All four exceedances were caused by sensor relocation. Detailed information about exceedances is provided in the narrative summary section and plots.

Blasting Related Vibration Monitoring Excursions and Corrective Actions

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

Action Level = 4.0 in/sec for VM and BVM install at 142nd St

Action Level = 12.0 in/sec for VM and BVM 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
10/31/2023 09:38, 09:39:00, 09:39:10	8.2896	N/A	Exceedances observed at BVM-A were due to relocation of the sensor. No corrective action was required at this time.
10/31/2023 08:32	6.9118	N/A	Exceedance observed at BVM-C was due to relocation of the sensor. No corrective action was required at this time.

Narrative Summary of Vibration Monitoring, Excursions and Corrective Actions:

For this project, there are project limits for events caused by general onsite construction activities, see the listed project limits in section 3 of this report. However, any events caused by blasting activities are governed by specific project limits set by the blast plan. The limits for blasting activities are listed in section 4 of this report.

In October 2023, two monitors had recorded exceedances that's over the project limits for blasting activities.

The exceedances recorded at BVM-A and BVM-C on October 31st were due to relocation of the sensors. No corrective action was required at this time.

Four portable vibration monitors for blasting monitoring were deployed at the following locations:

BVM-A was installed at location no. 11, BVM-B at location no. 2, BVM-C at location no. 8, and BVM-D at location no. 5 on October 2nd, October 3rd, October 6th, October 13th, October 16th, October 17th, October 18th, October 19th, October 20th, and October 25th.

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 October 31st.

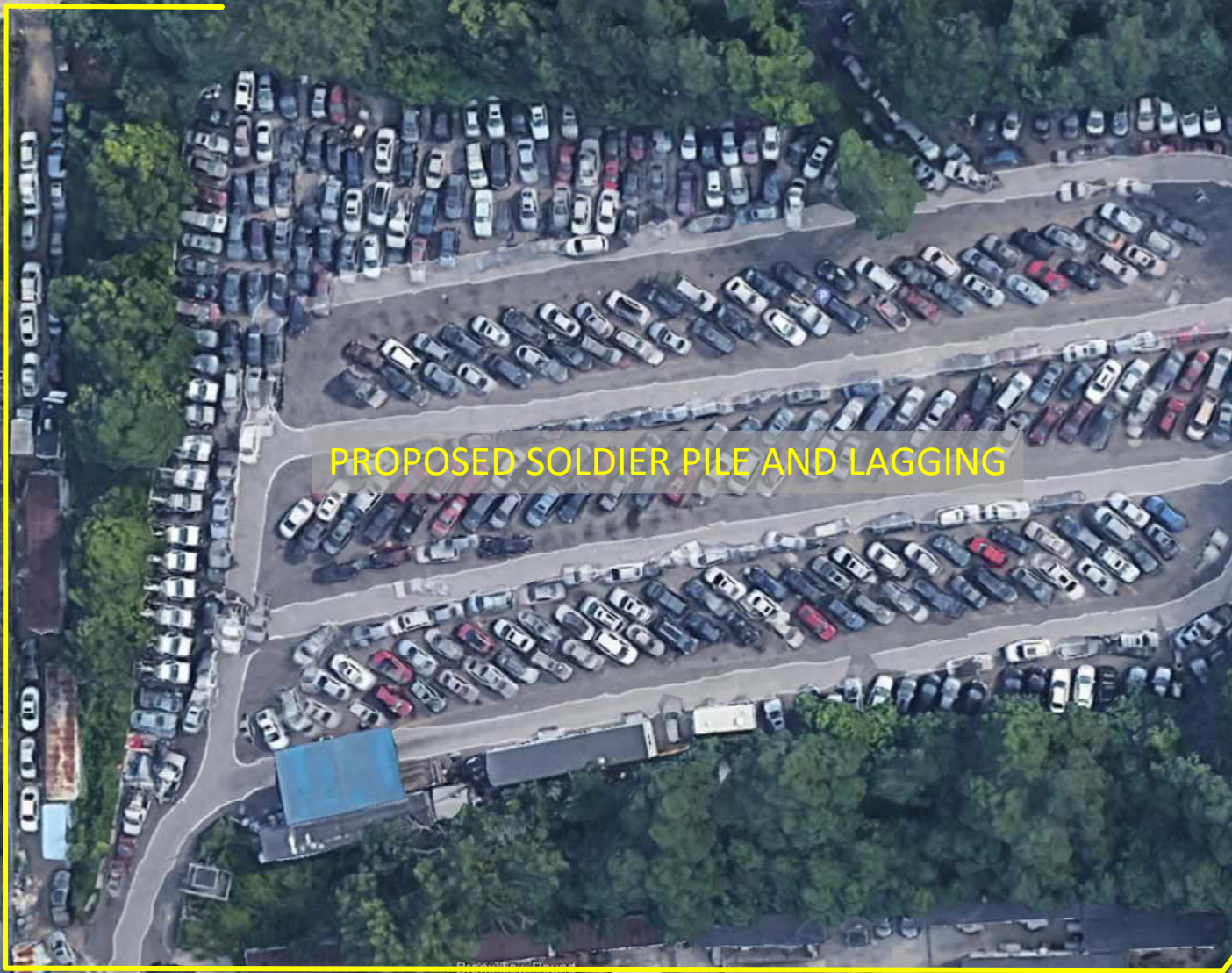
Note that blast monitors (BVM), situated on the sidewalk adjacent to the site and in the tunnel, fall outside the community plan's scope, which specifically addresses monitors in or on buildings. Additionally, the community plan (VM) measures PPV above background, while the blast plan (BVM) solely measures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

ATTACHMENTS:

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




Plan North

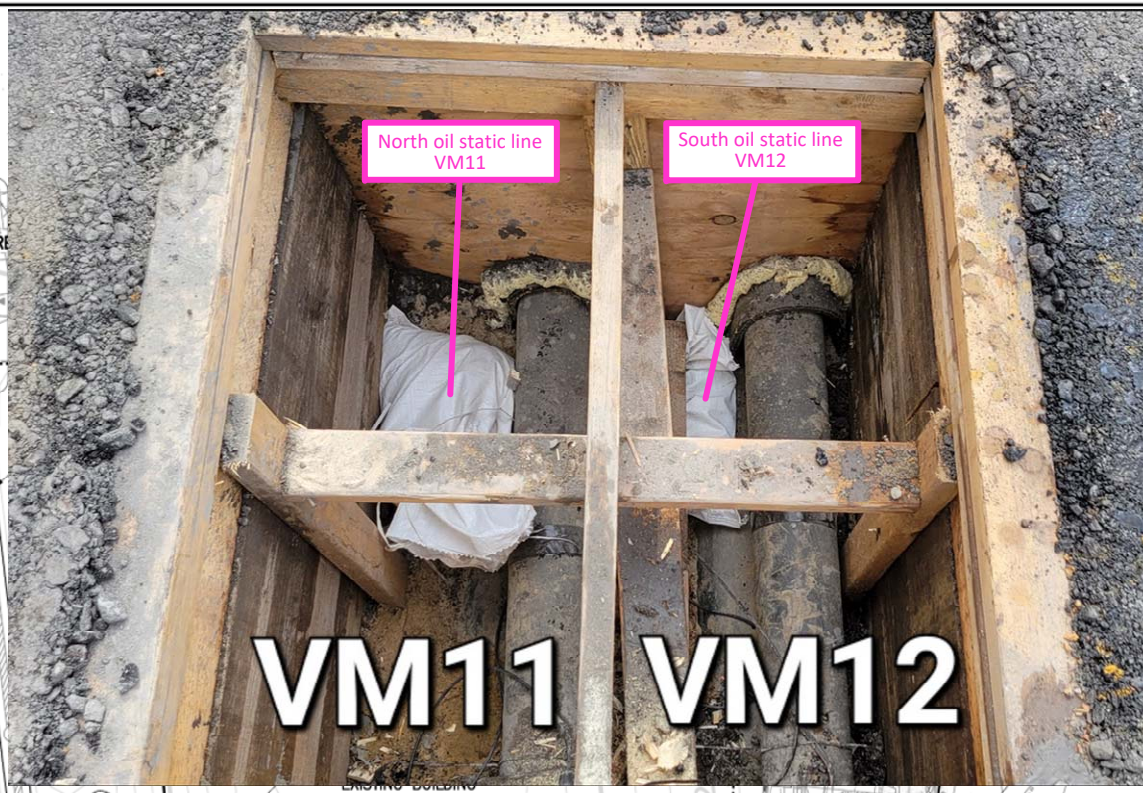
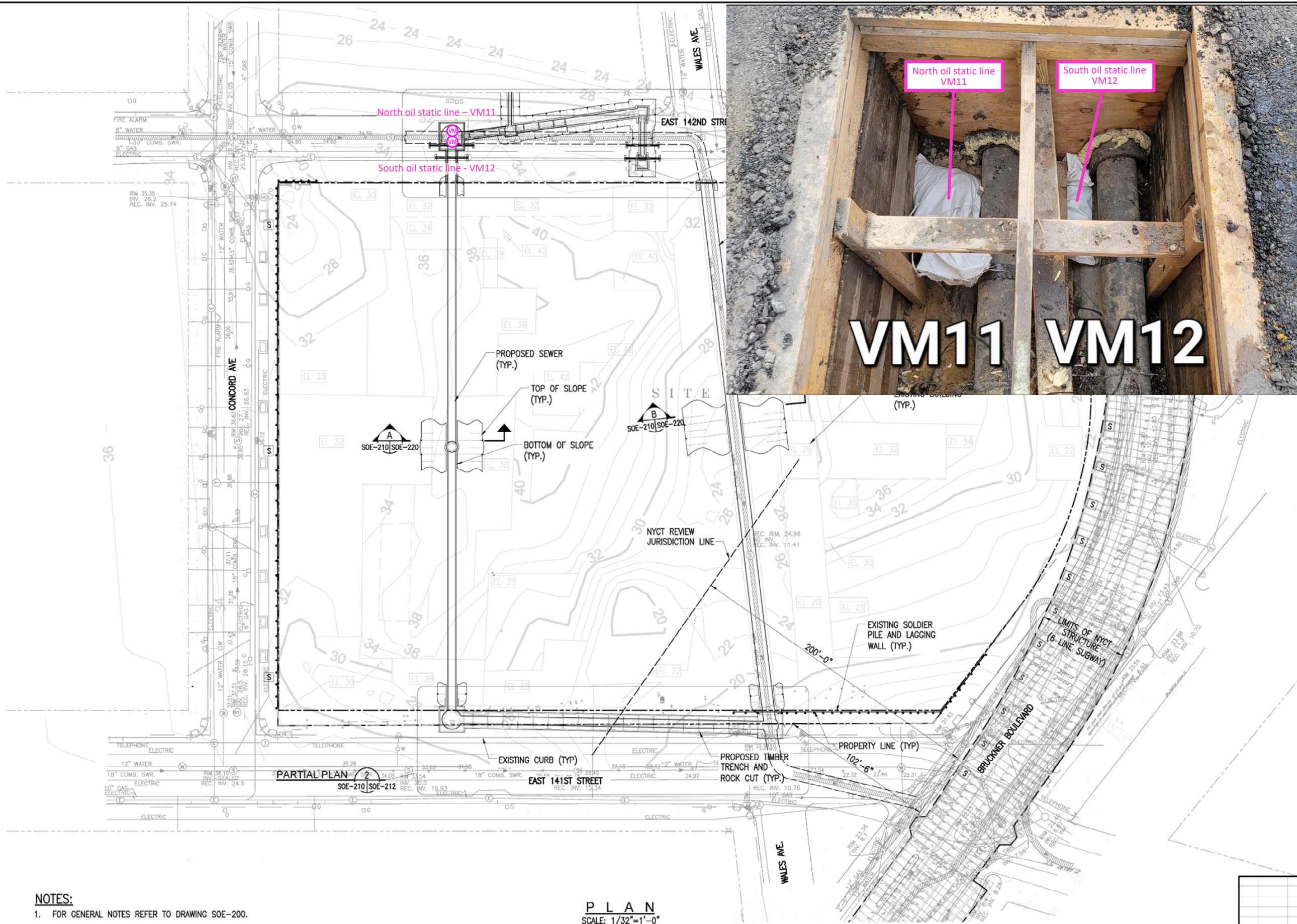


PROPOSED SOLDIER PILE AND LAGGING

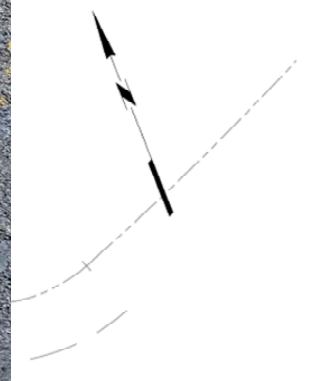
LEGEND

 VIBRATION MONITOR

355
353
351
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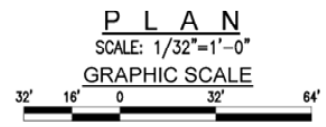


VM11 VM12



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.



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

DESIGN SUBMITTED BY:

DESIGN PREPARED BY:

CONTRACTOR:

OWNER:

SUPPORT OF EXCAVATION PLAN

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

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

CAPITAL PROJECT NO. 8502021CR000 1P-3 SHEET 5 OF 10 SOE-210



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

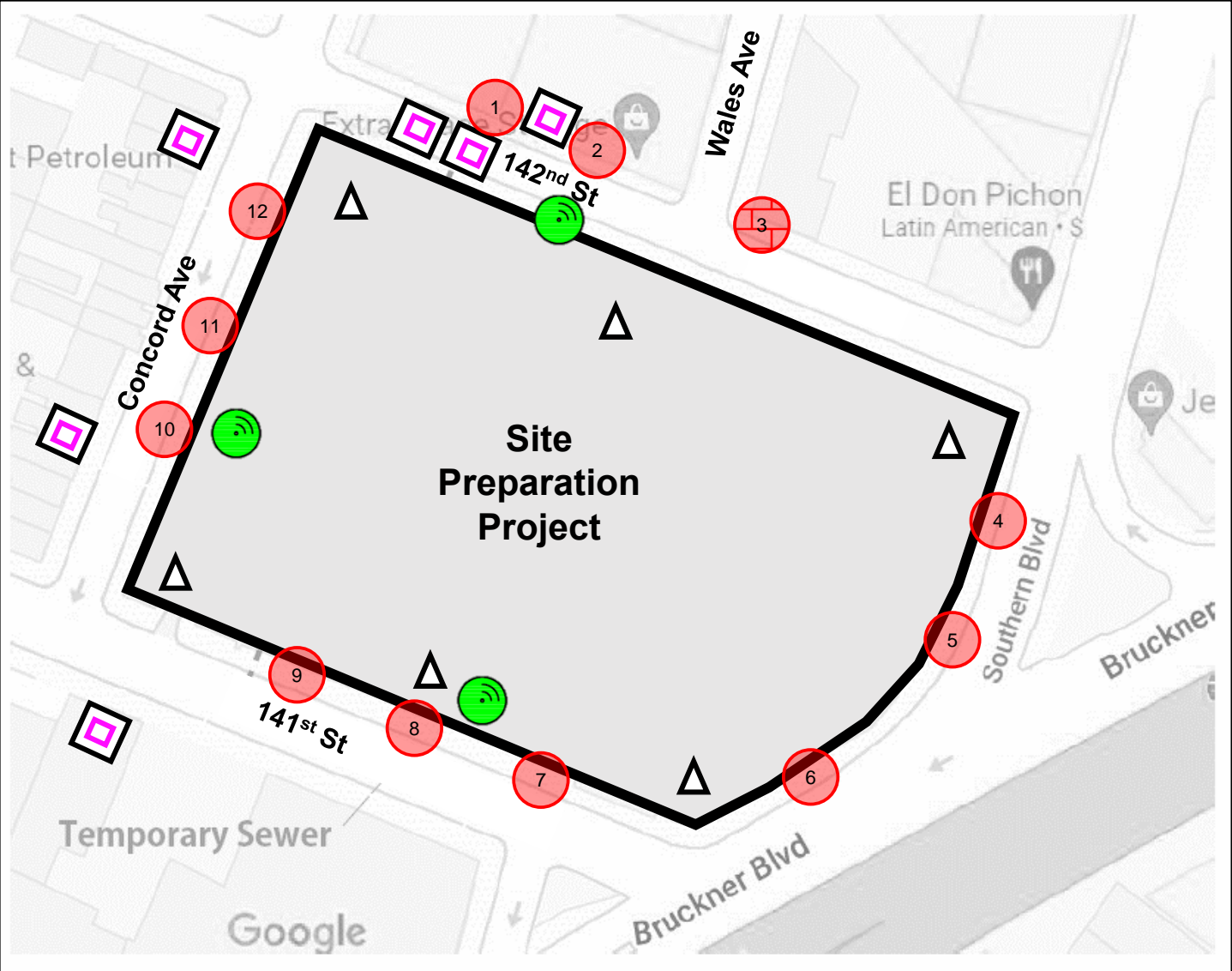
333







E 141st St

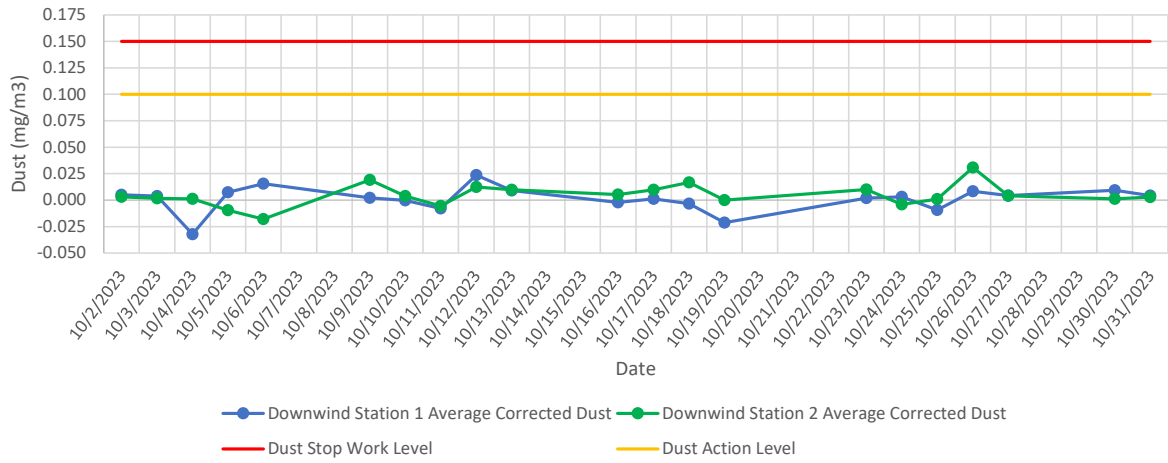
Attachments

Environmental Monitoring The Bronx

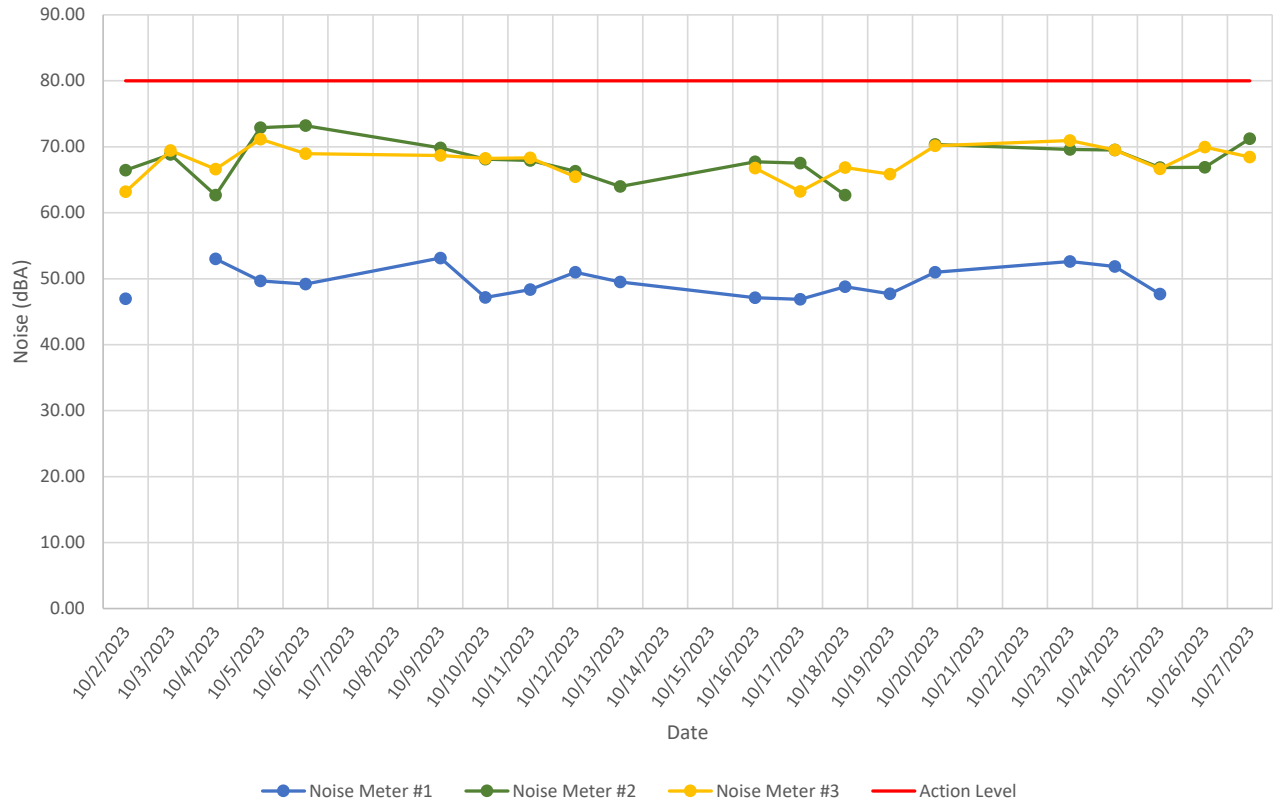


-  Vibration Monitor (VM)
-  Air Monitoring Station (DM)
-  Noise Monitoring Station (NM)
-  Blasting - Vibration Monitor (BVM)

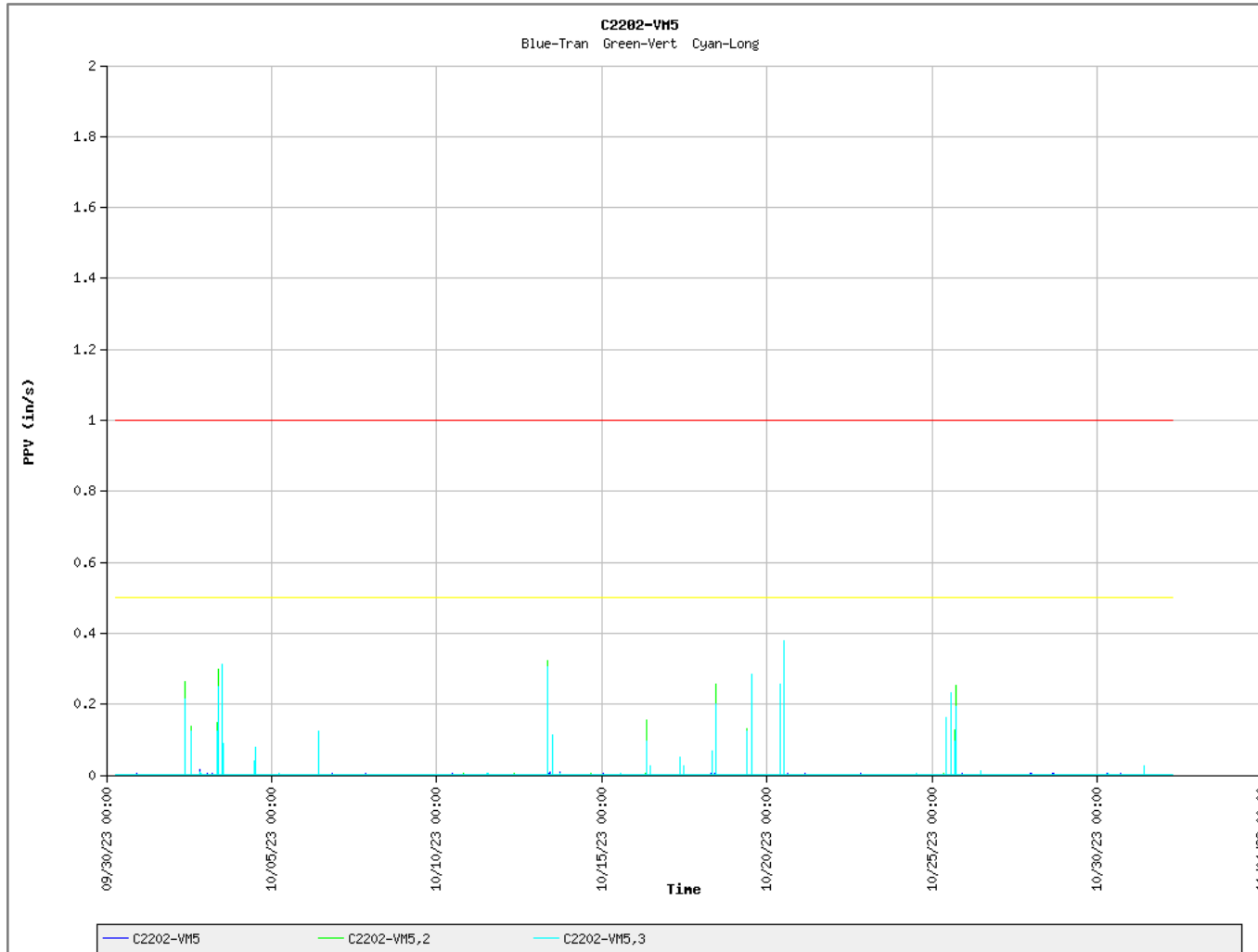
October 2023, 15-min Running Average Air Quality Data, PM 10 Plot



October 2023, Average Equivalent Sound Level Plot (Laeq)



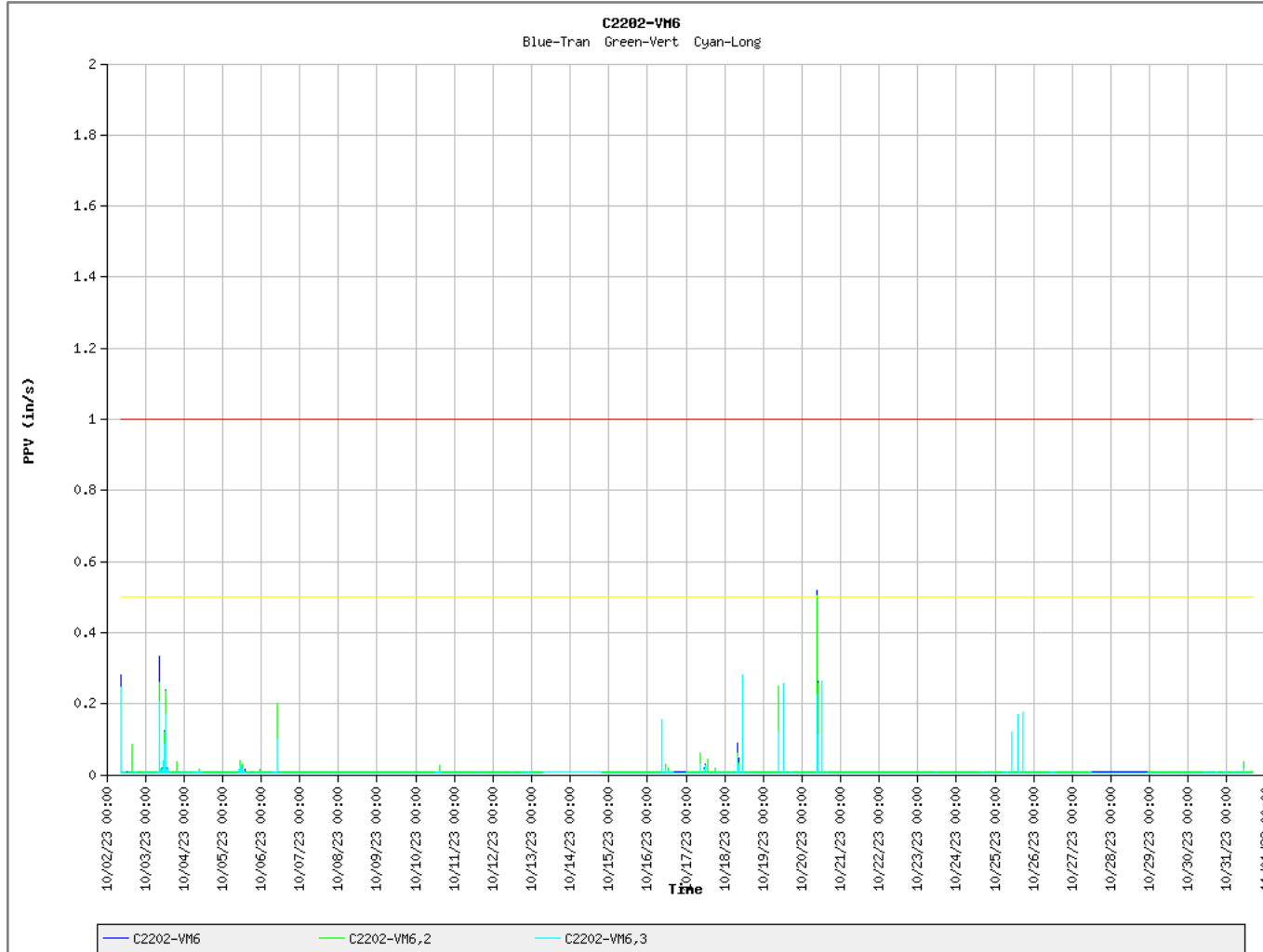
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



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

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

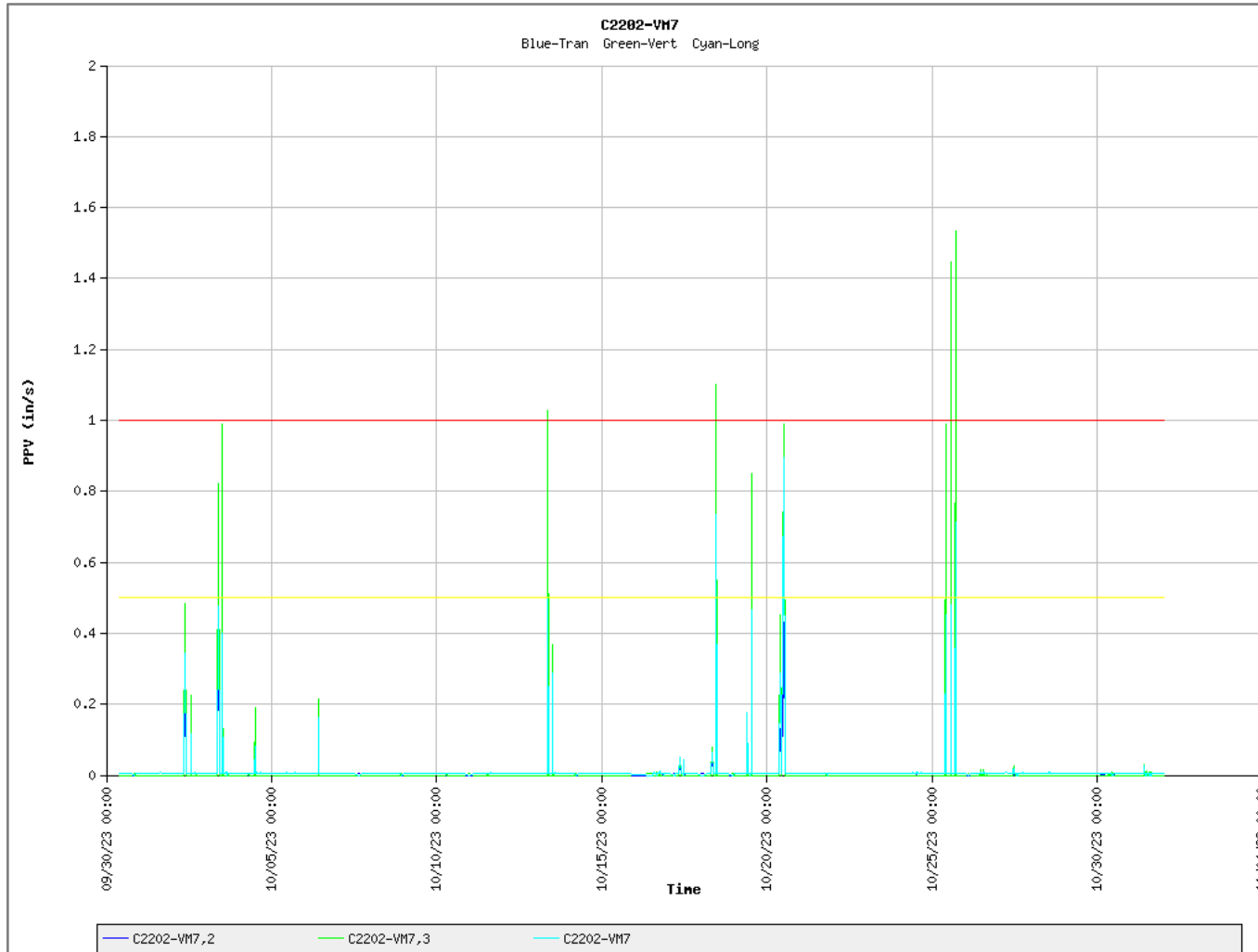
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



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

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

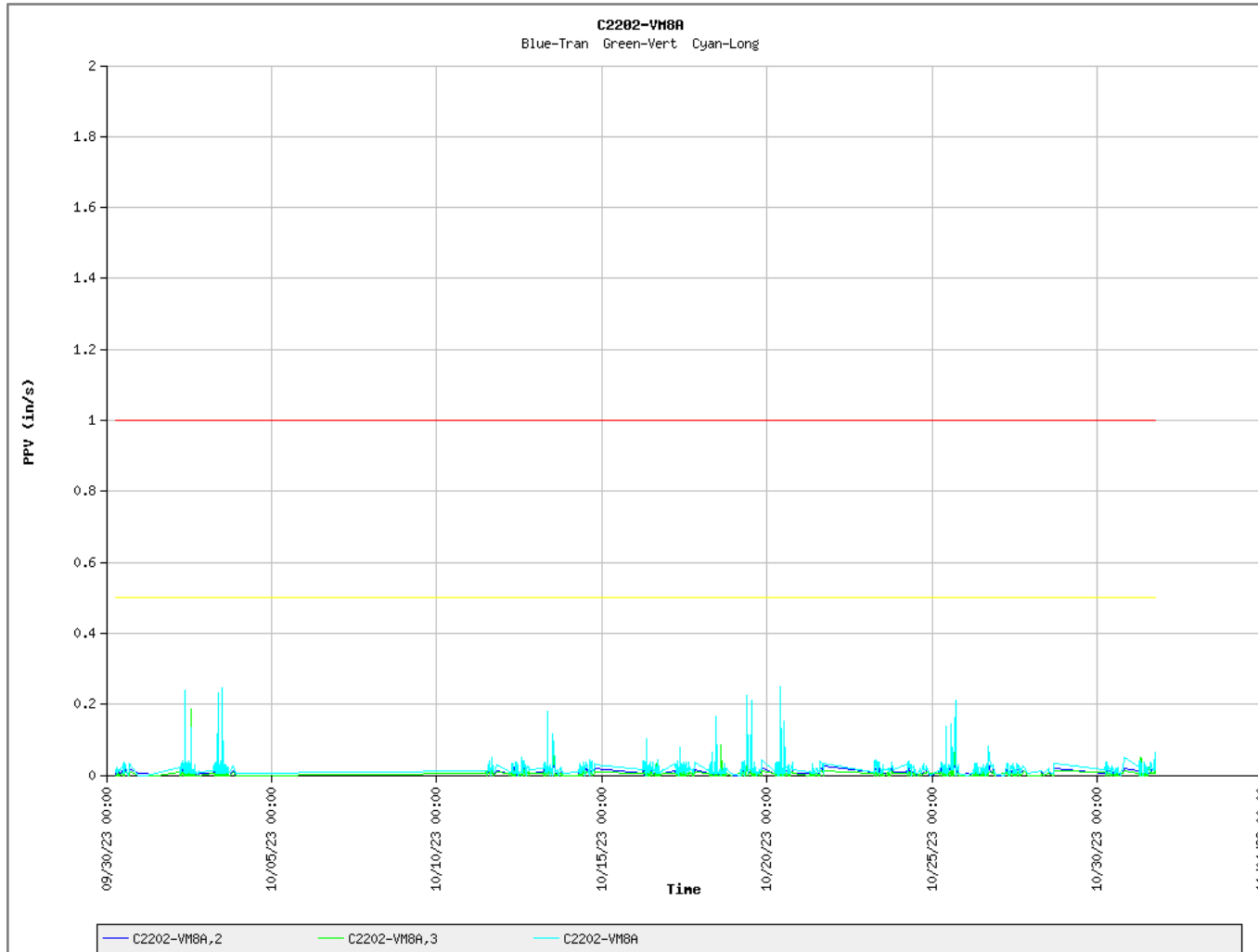
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



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

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

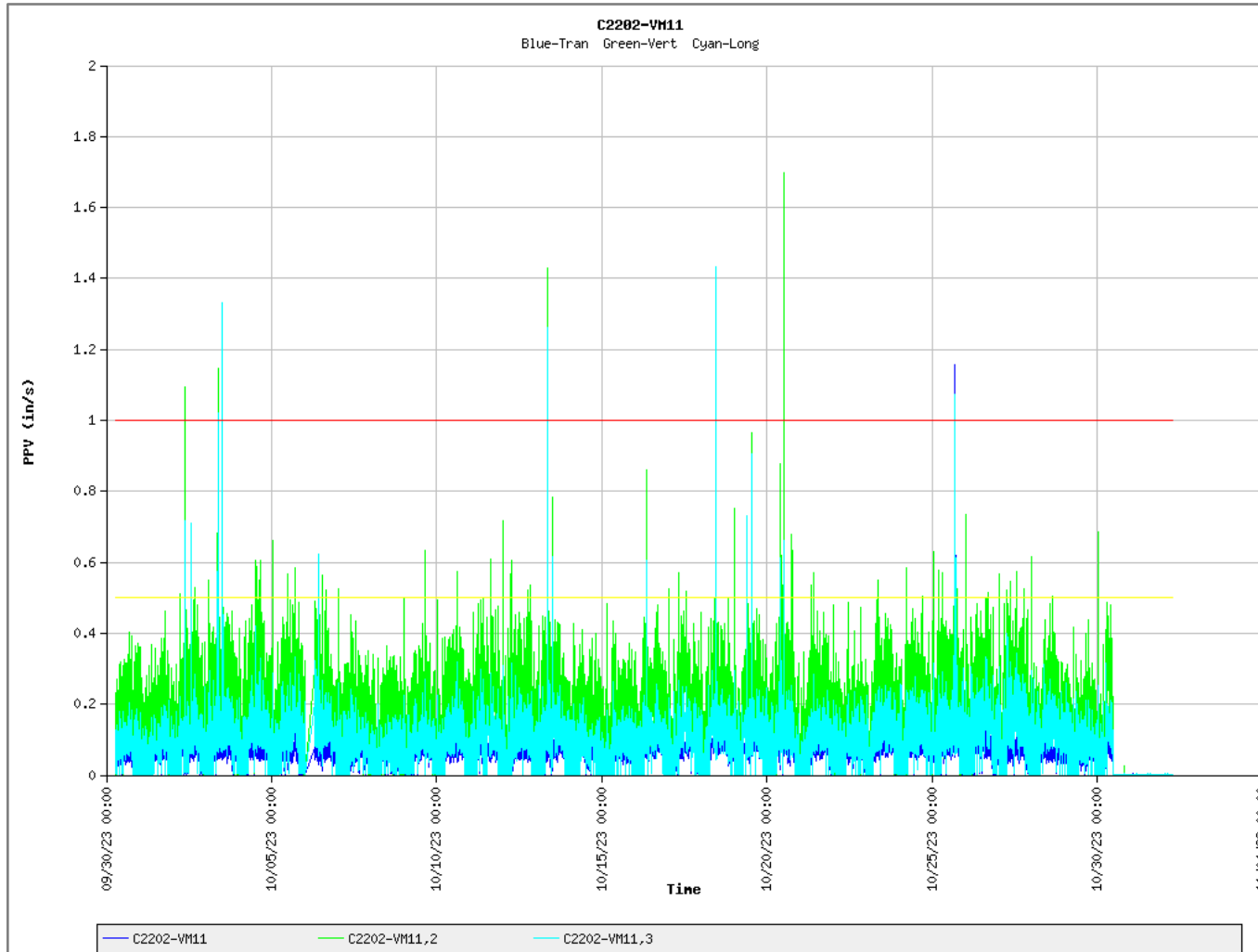
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



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

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

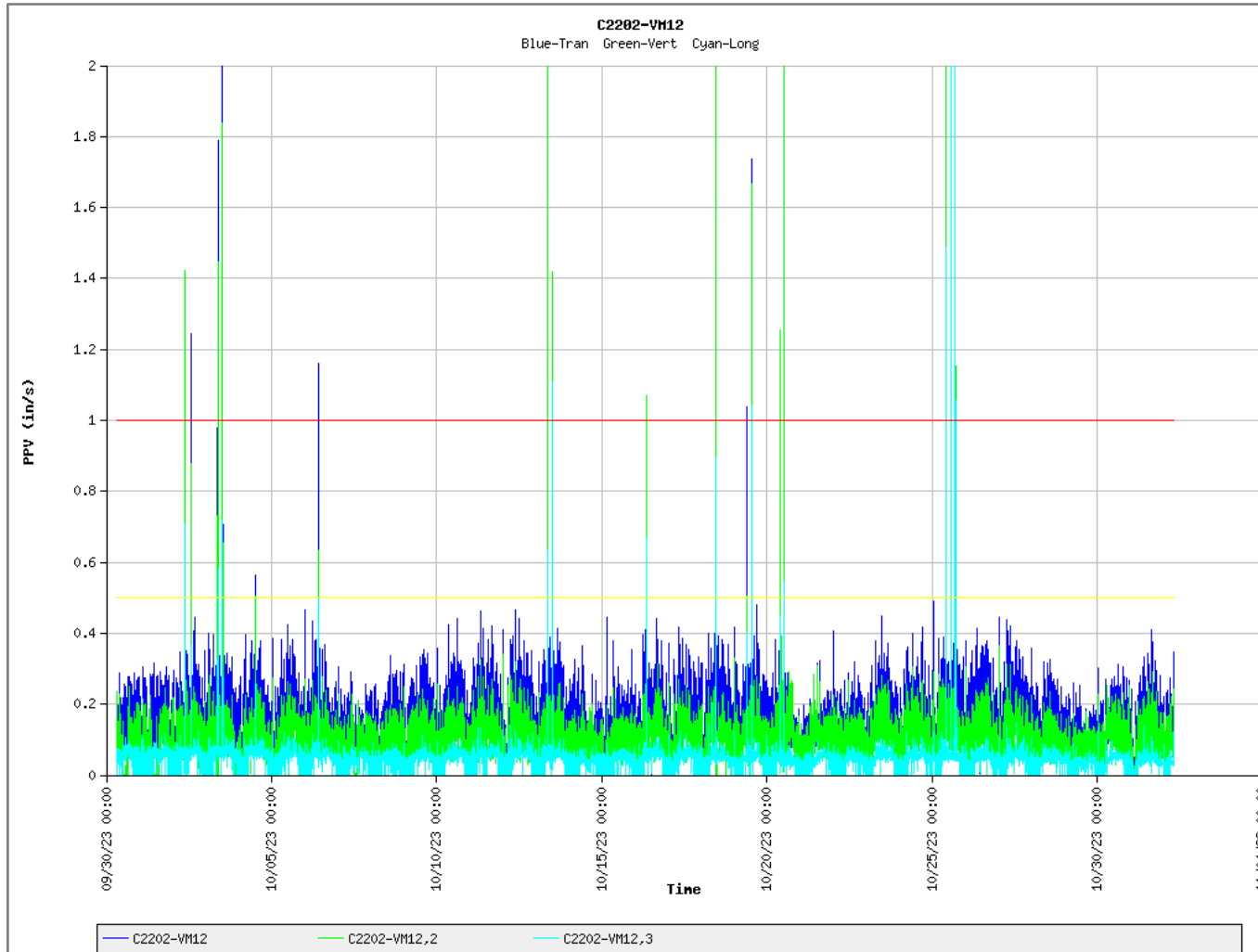
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



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

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

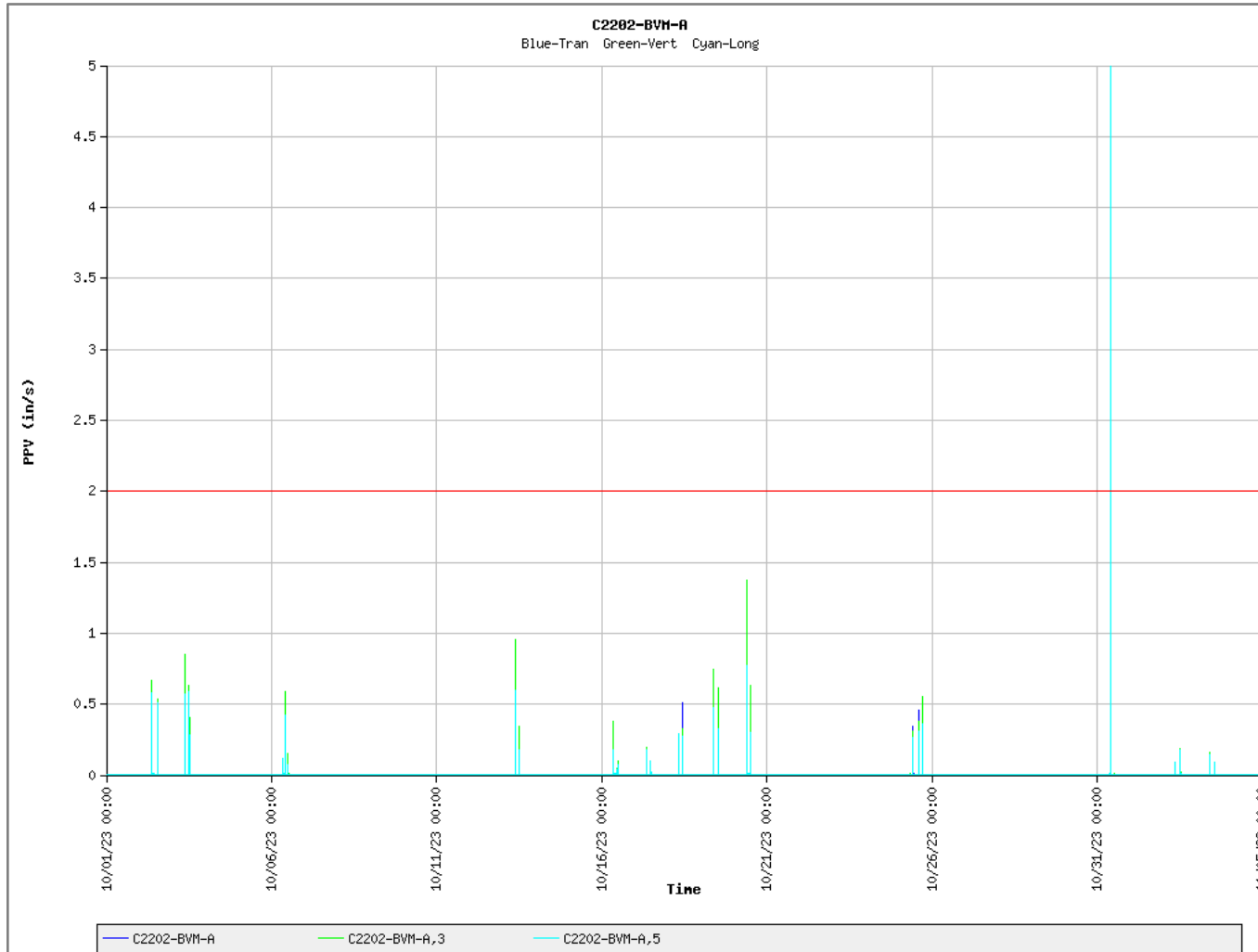
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



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

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

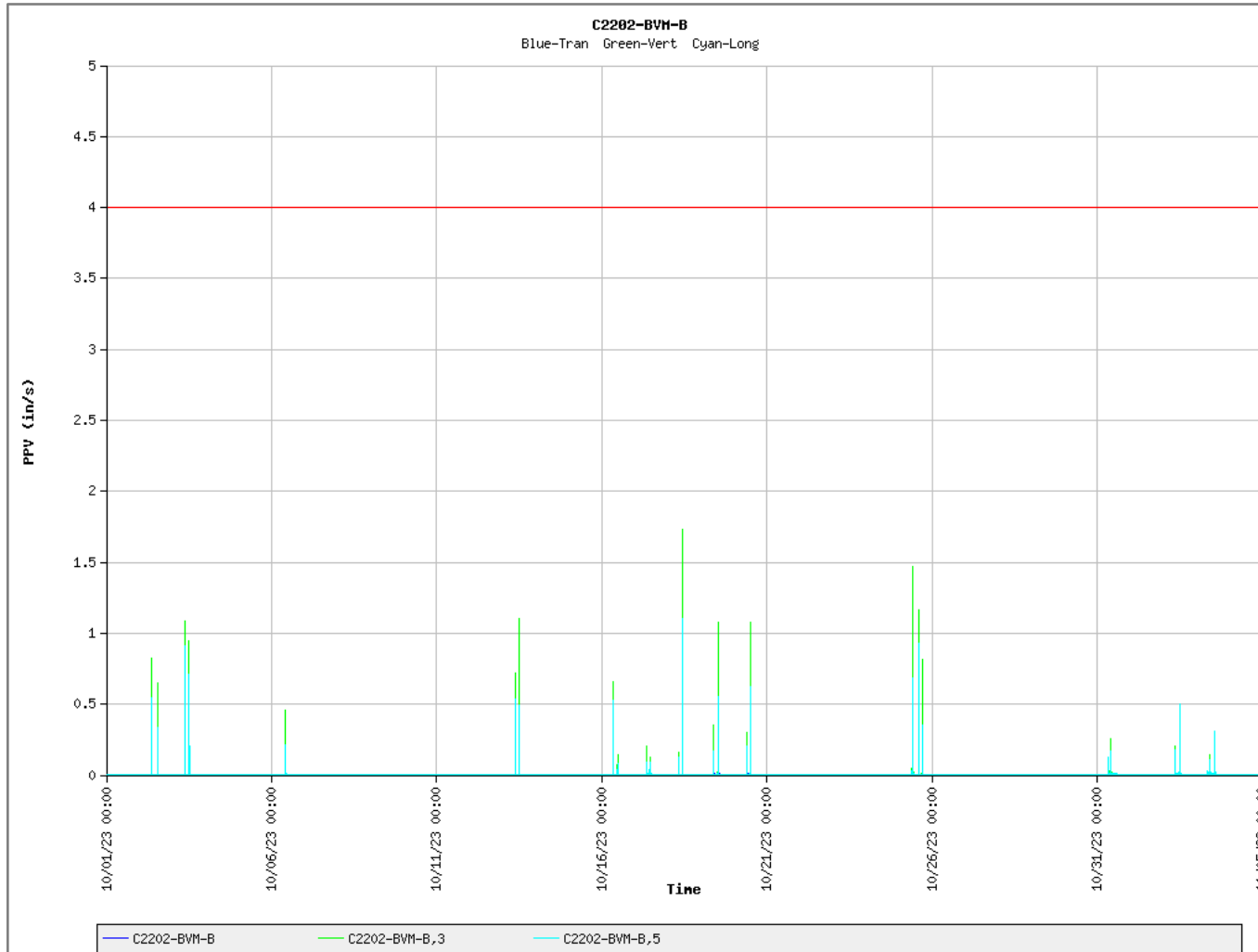
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
10/1/2023-10/30/2023 at location# 11
10/31/2023 at location# 10

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

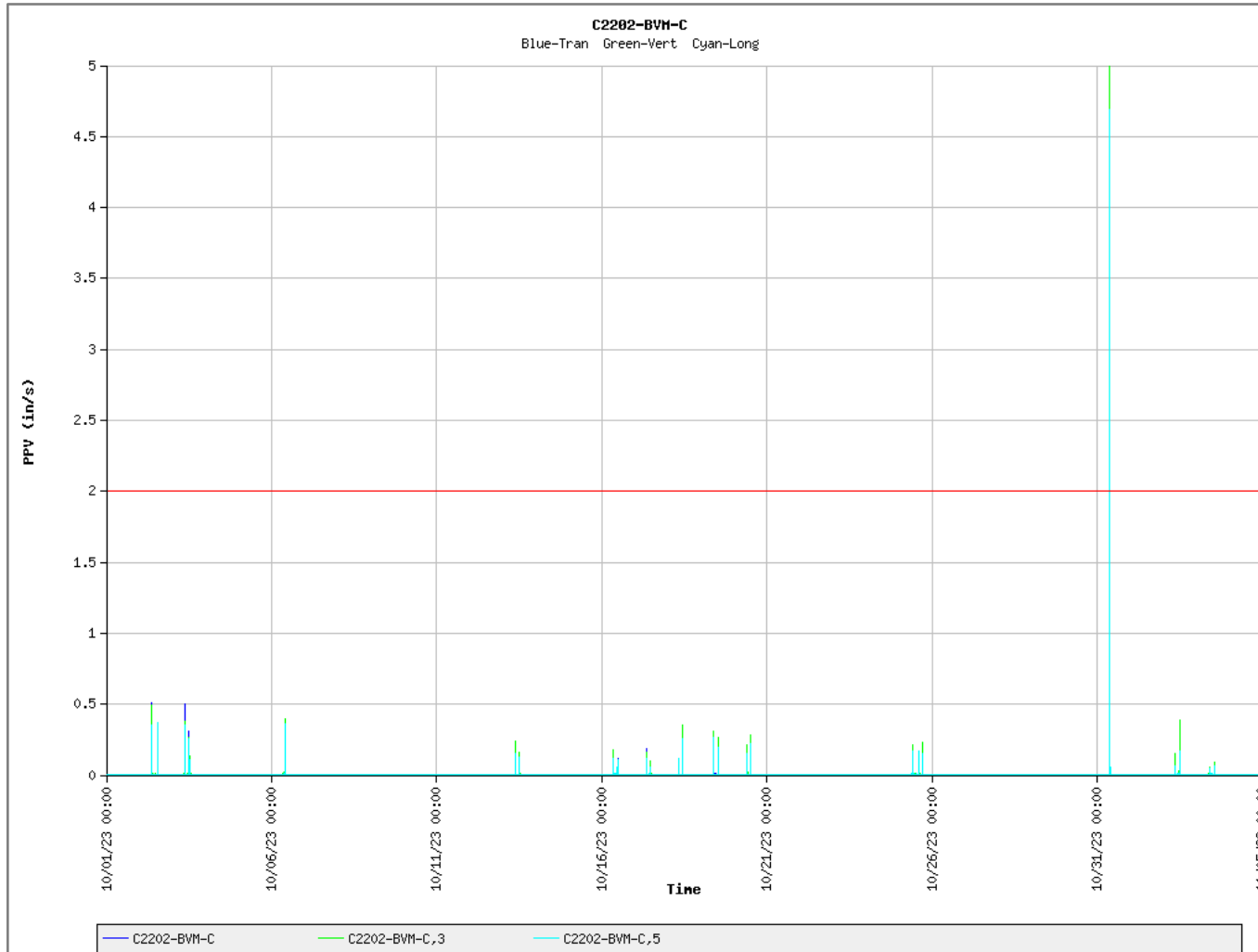
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



Exceedance level: 4 in/sec
10/1/2023-10/30/2023 at location# 2
10/31/2023 at location# 3

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

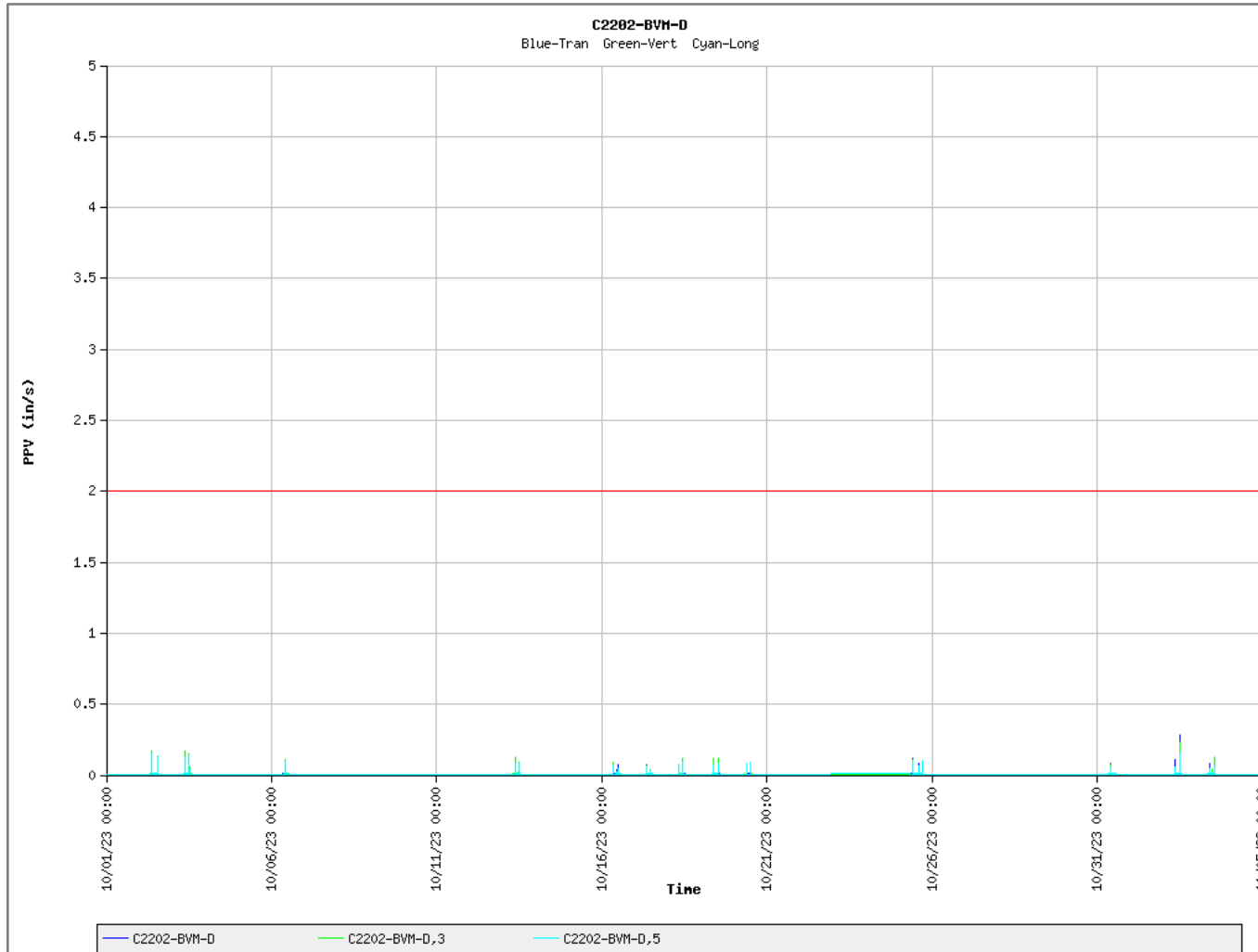
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
10/1/2023-10/30/2023 at location# 8
10/31/2023 at location# 7

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

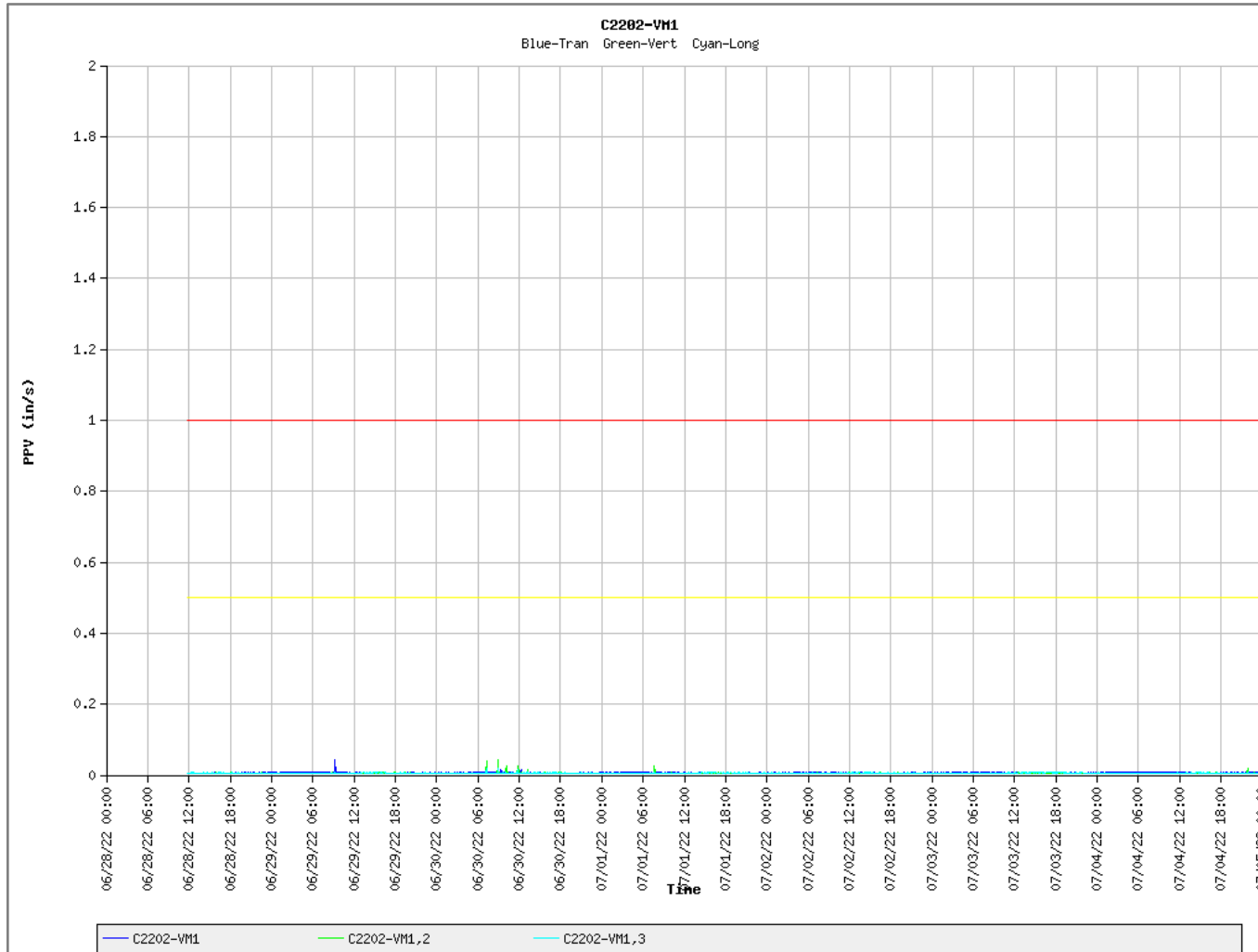
The Bronx Site Preparation October 2023 Vibration Monitoring Data Plots



Exceedance level: 2 in/sec
10/1/2023-10/31/2023 at location# 5

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

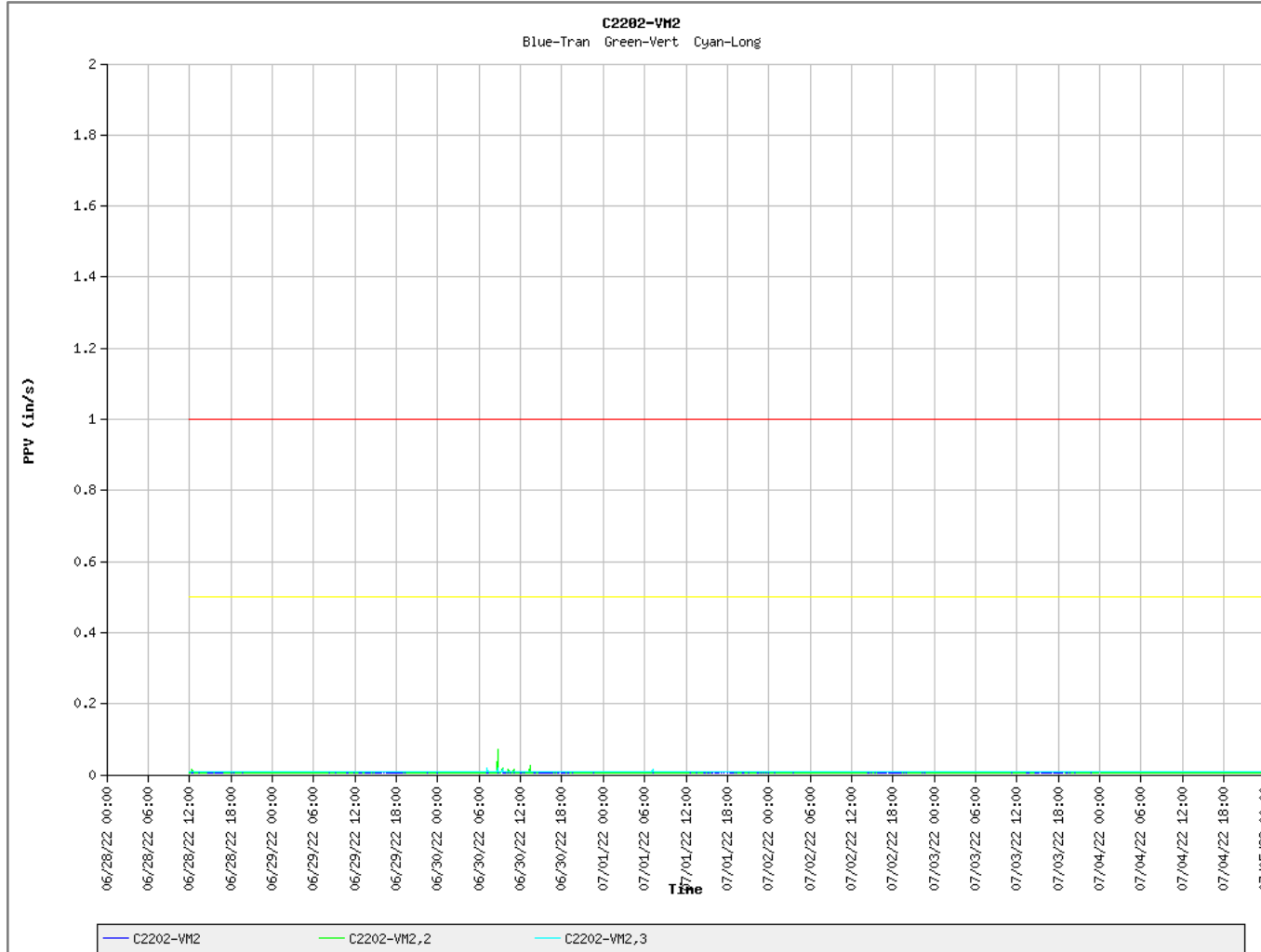
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

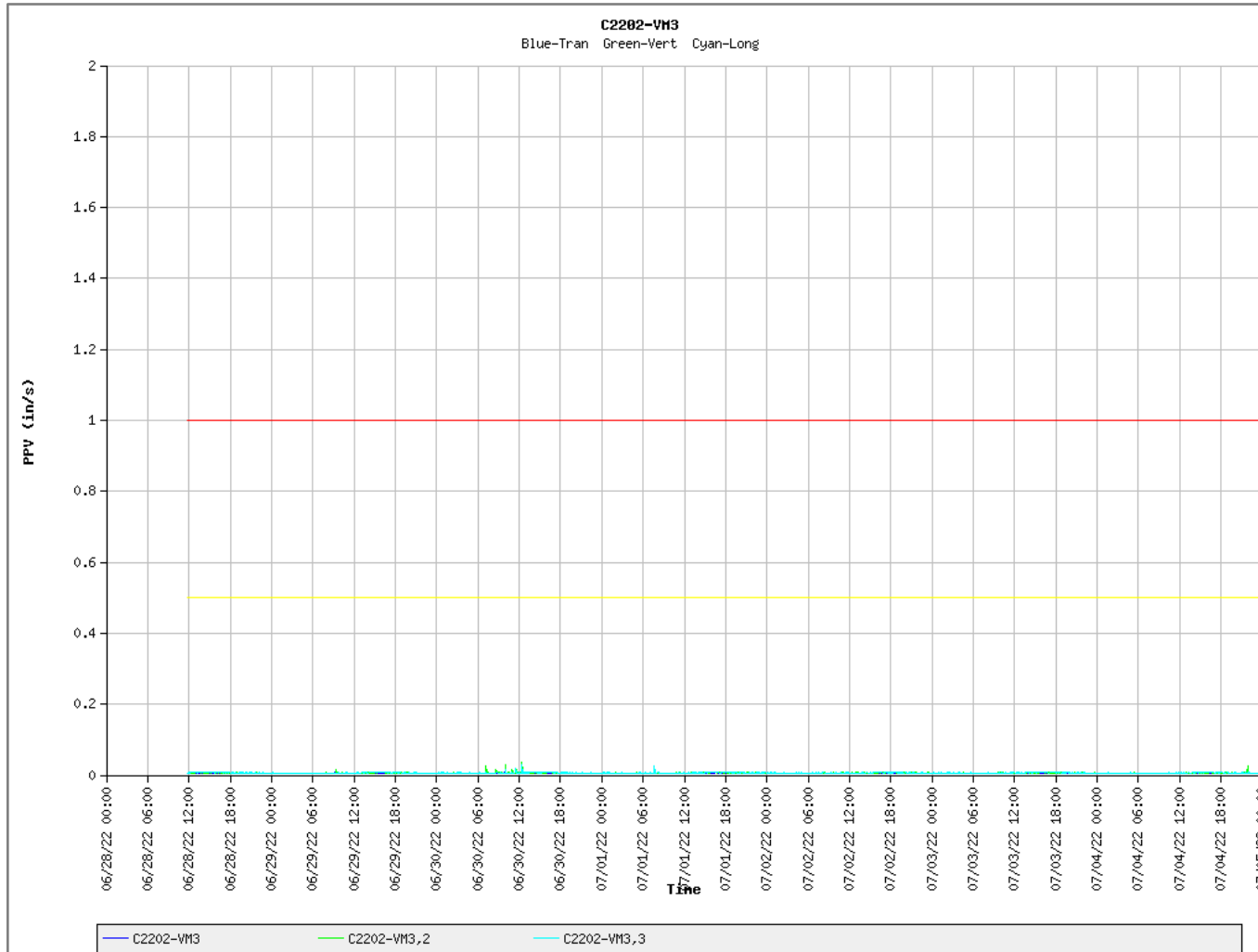
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

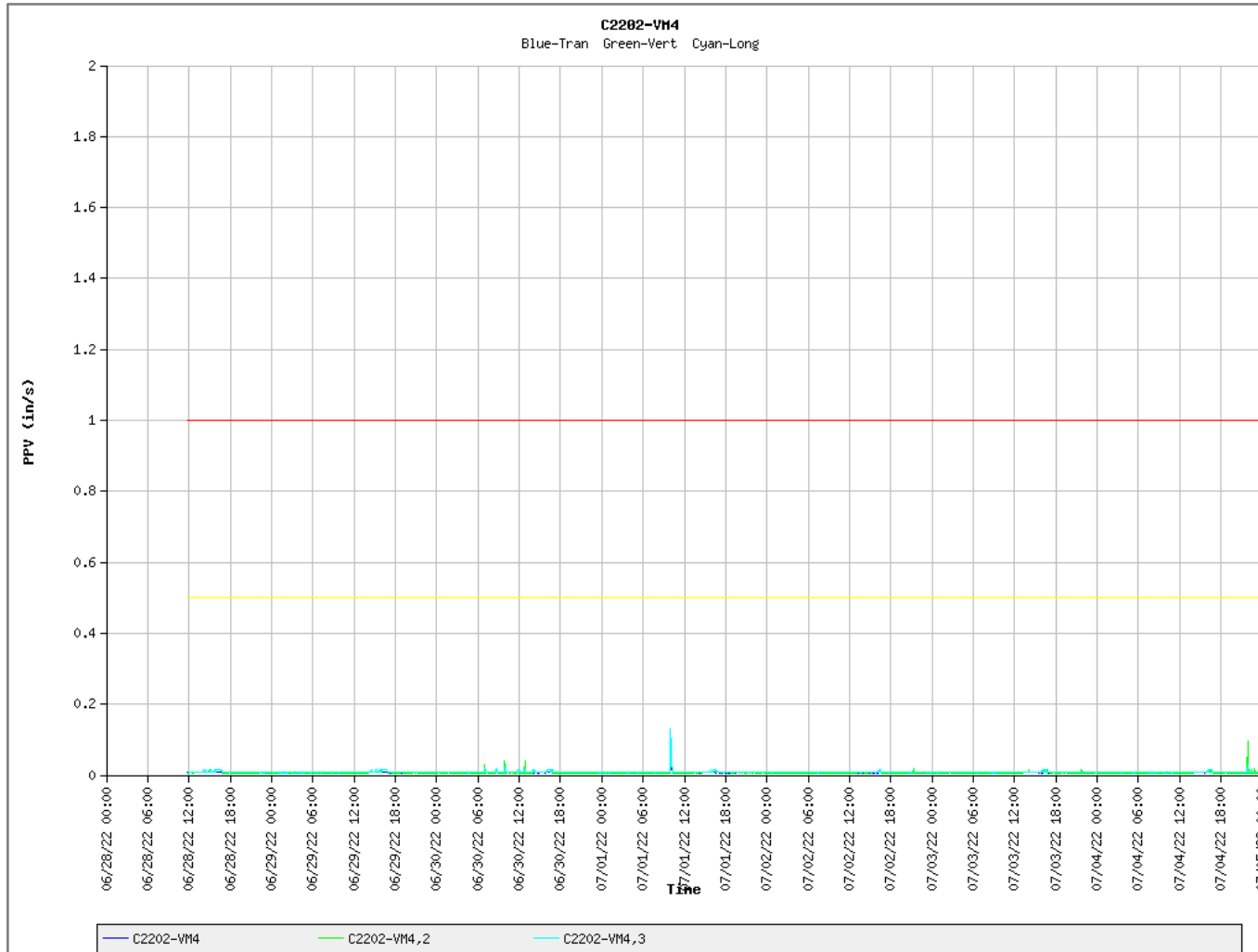
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

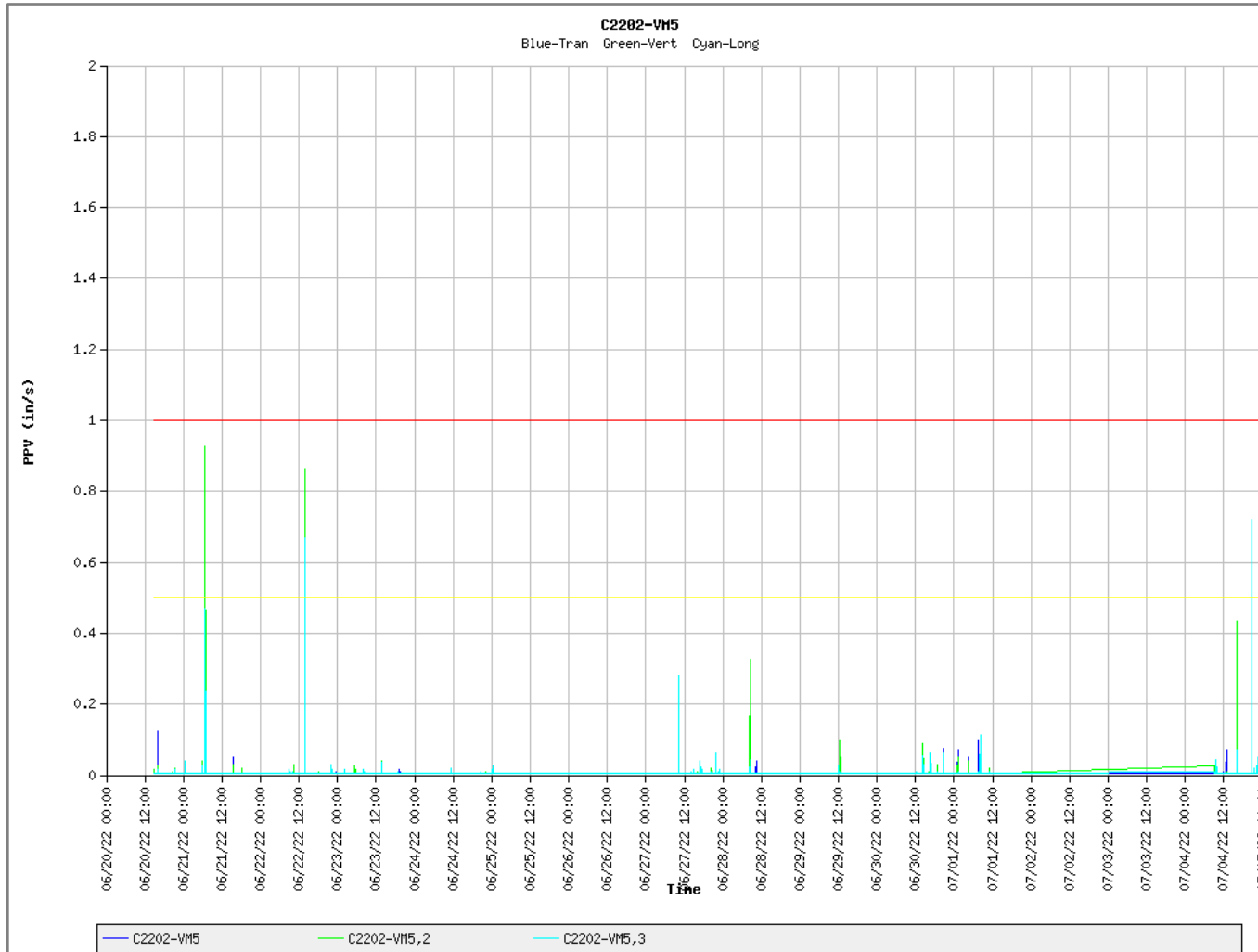
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

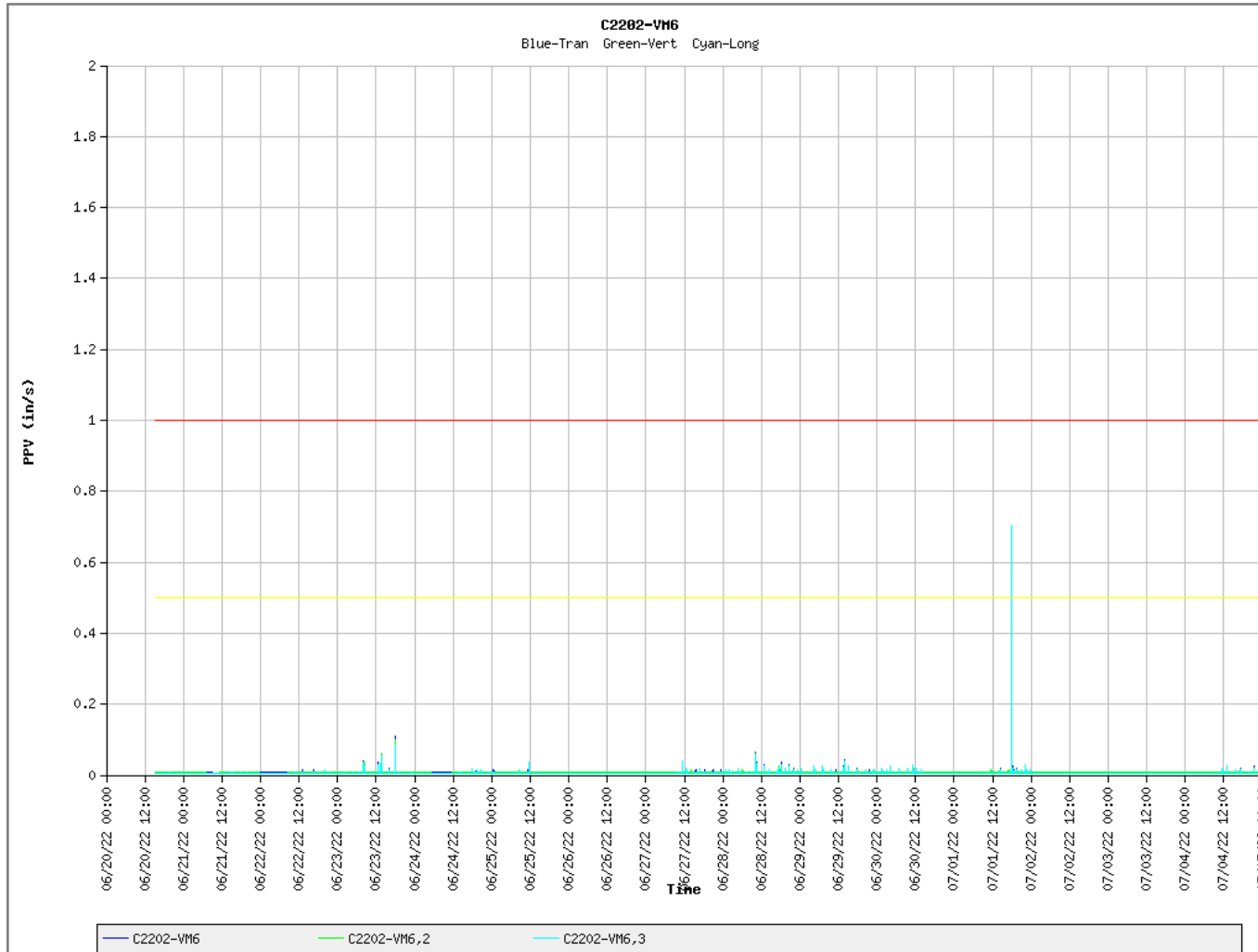
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

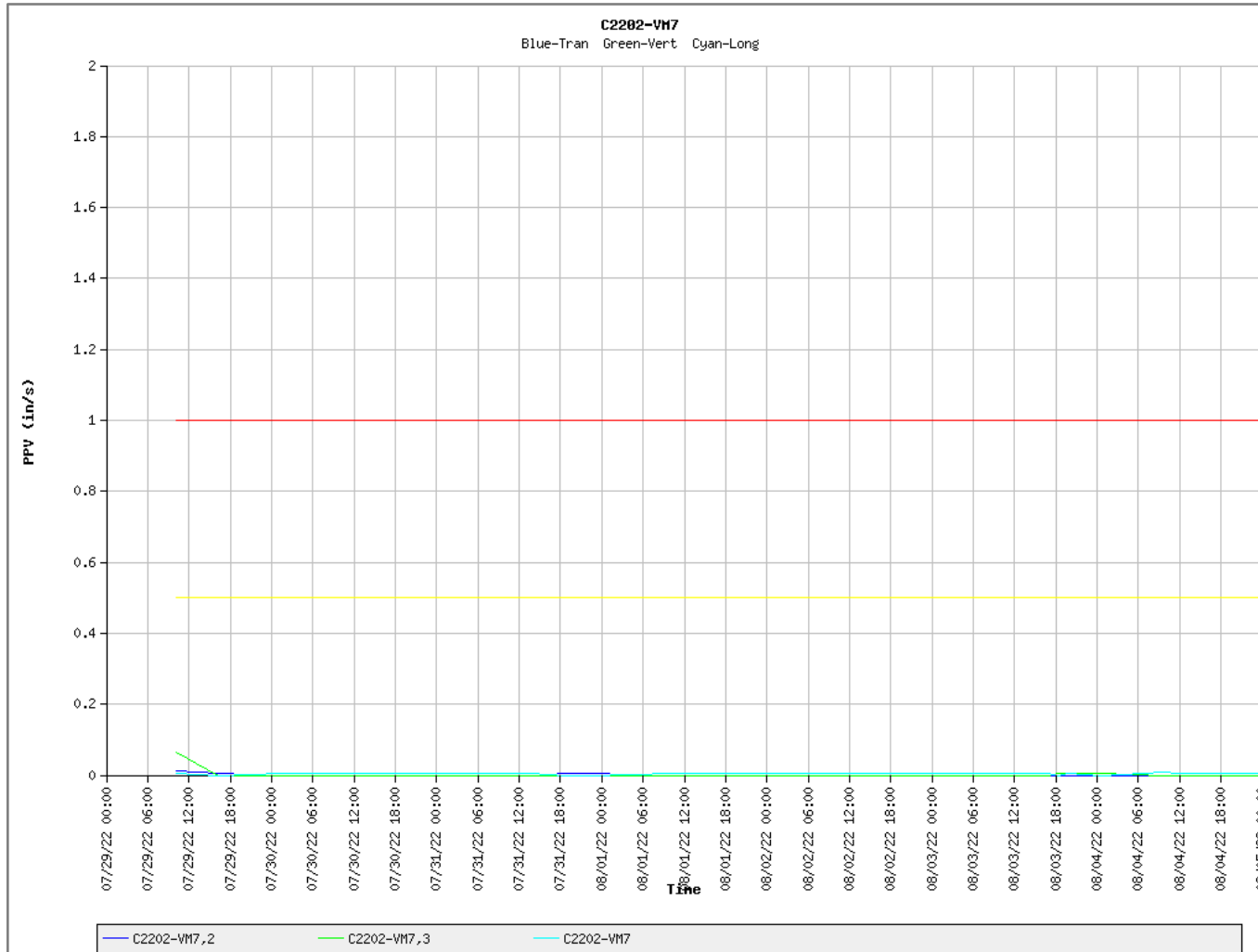
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

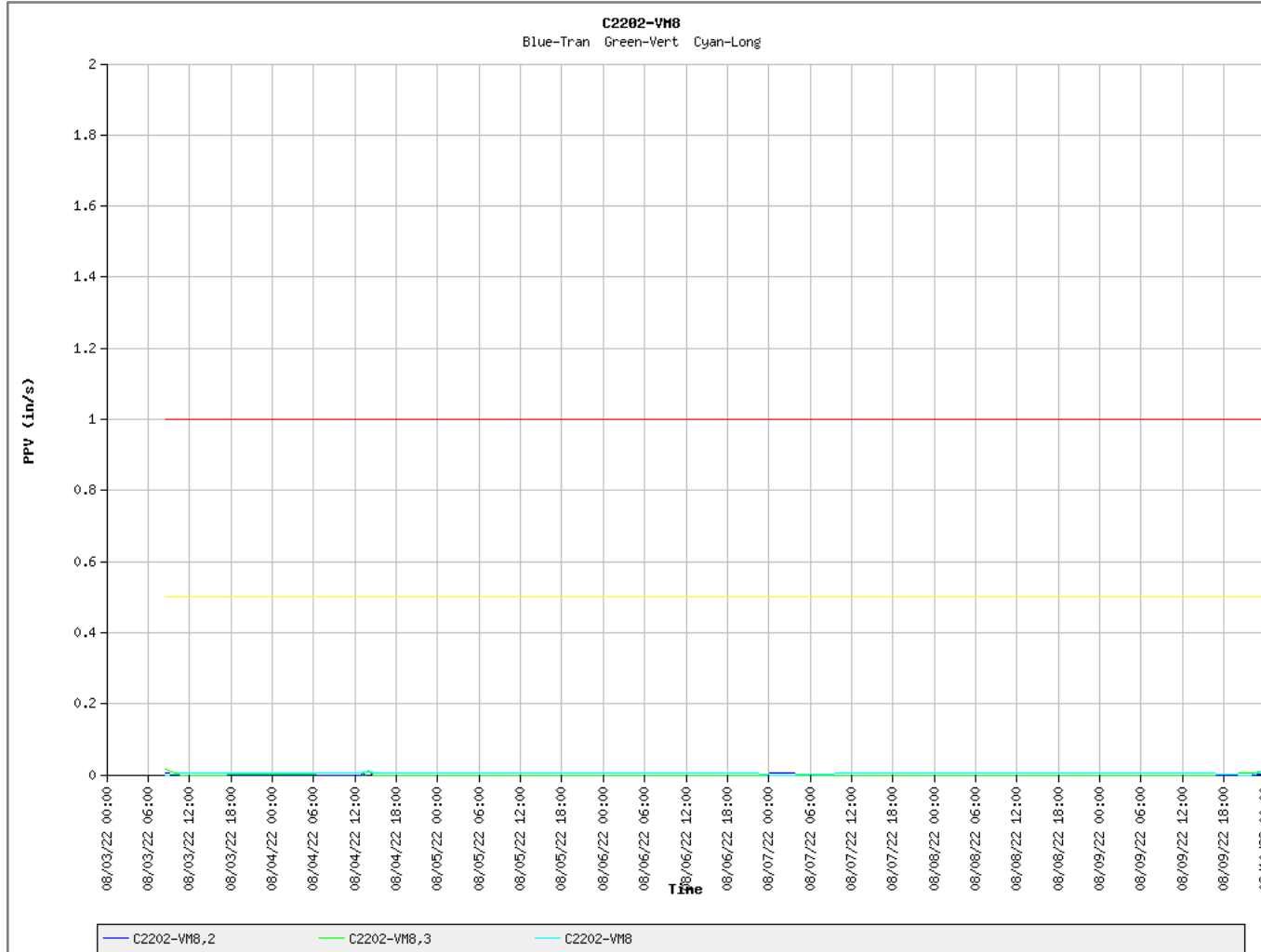
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

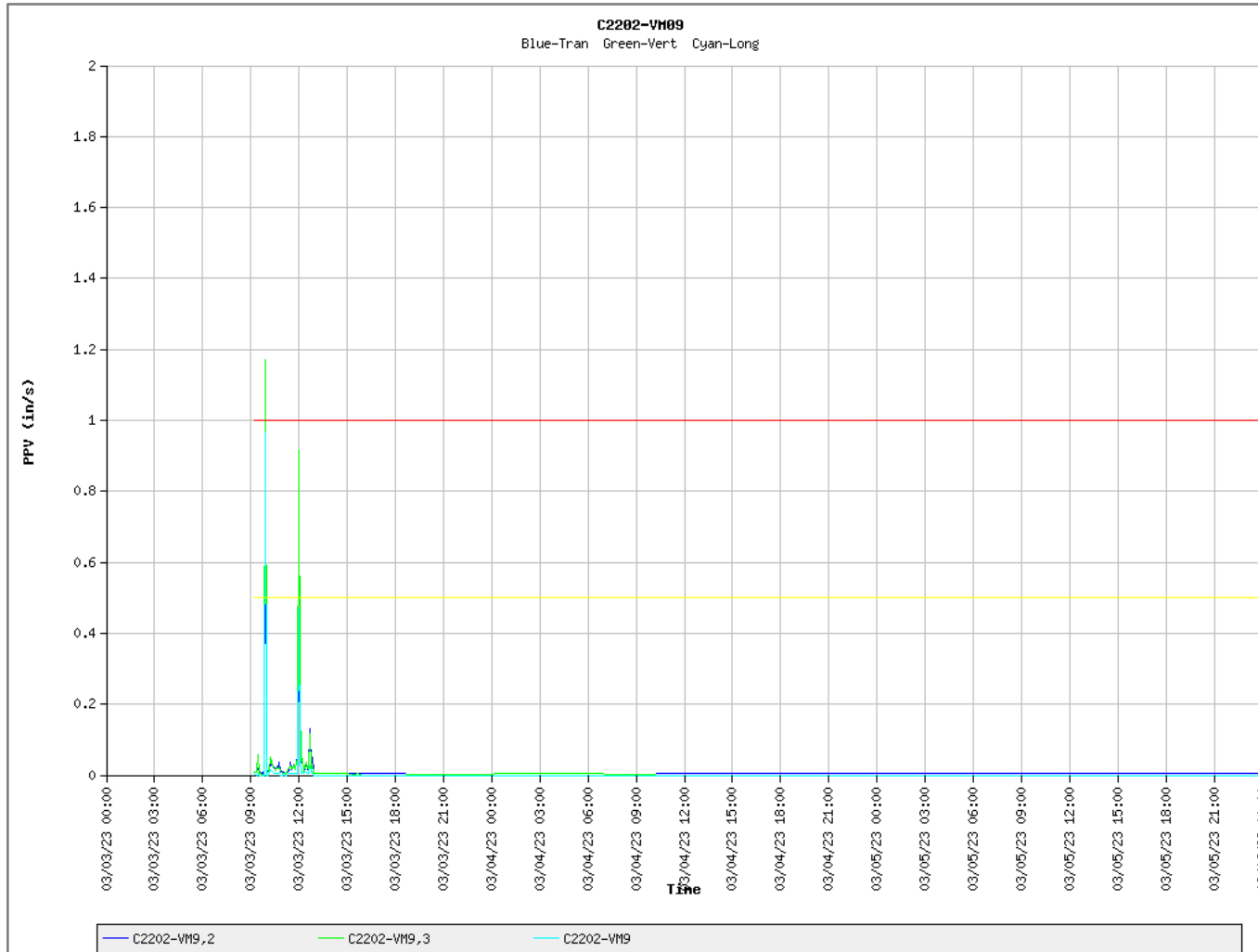
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

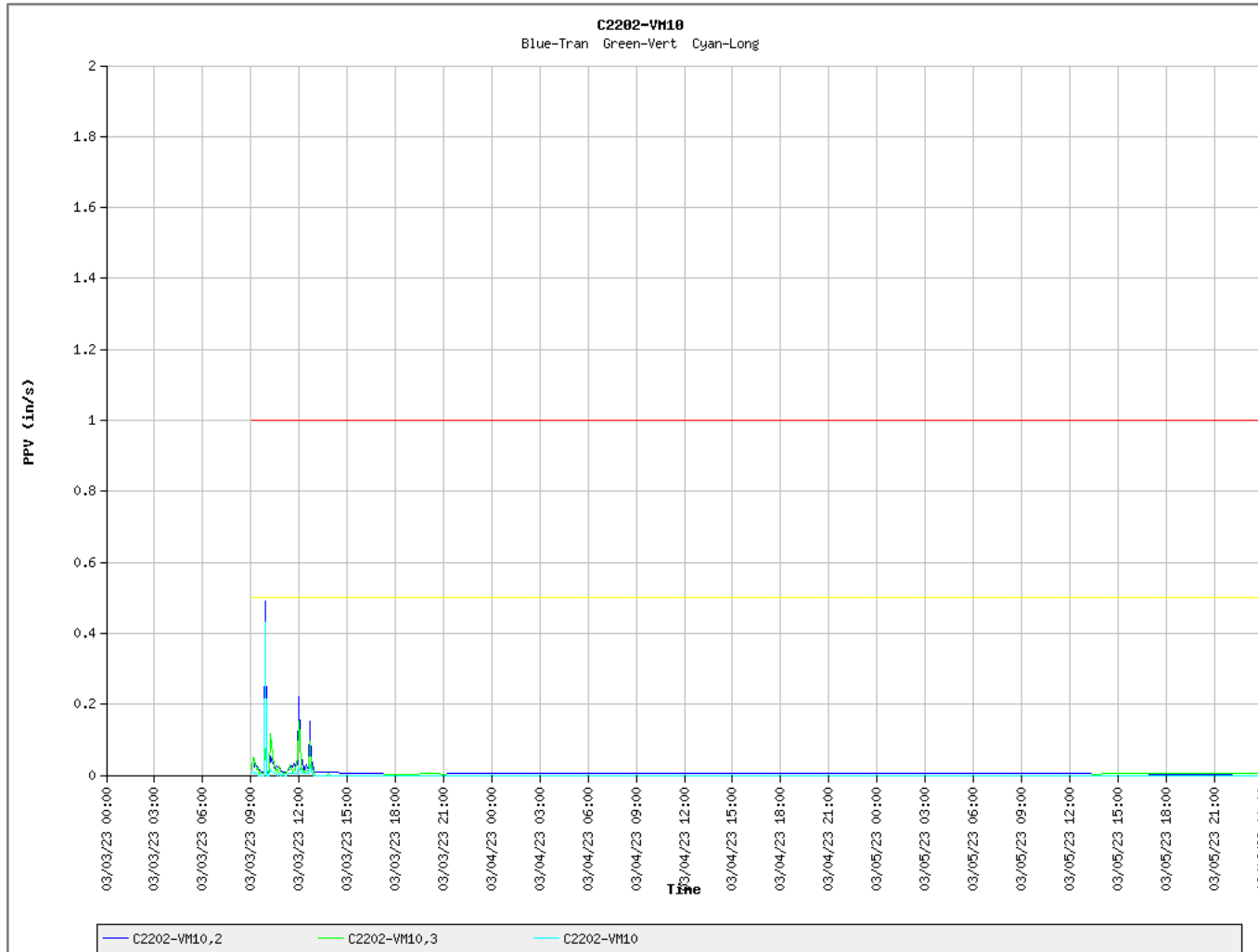
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

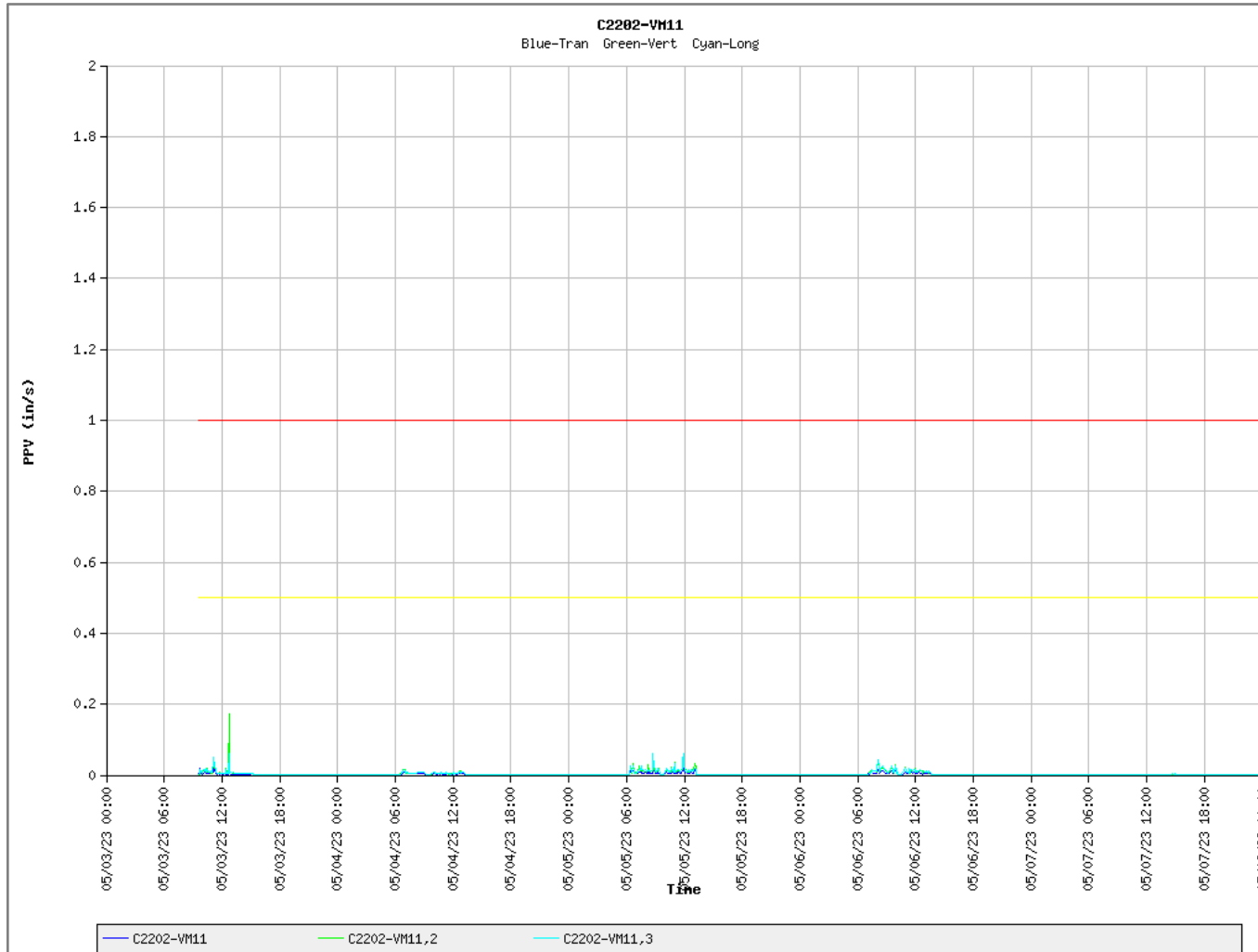
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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

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

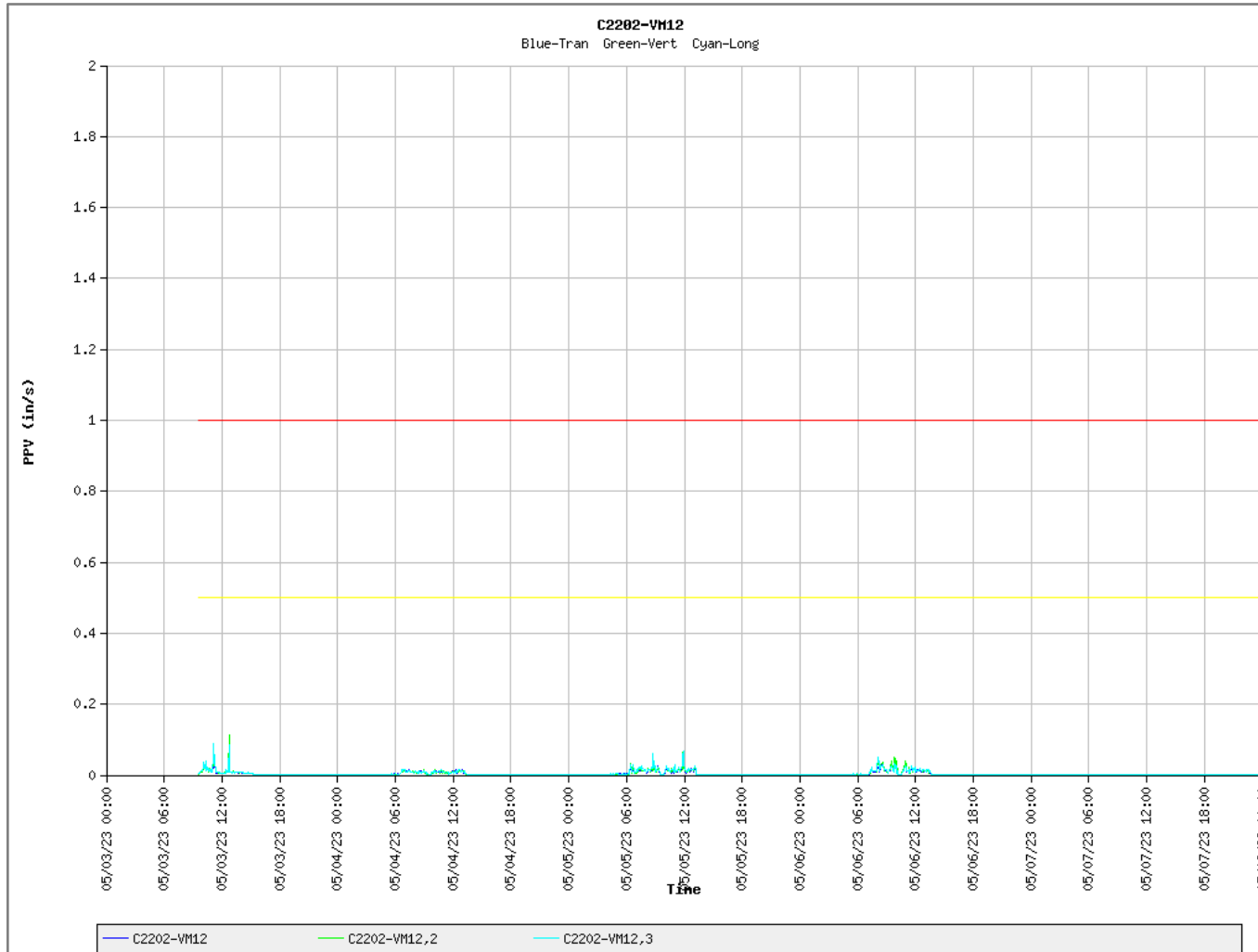
The Bronx Site Preparation Vibration Baseline Reference Data Plots



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