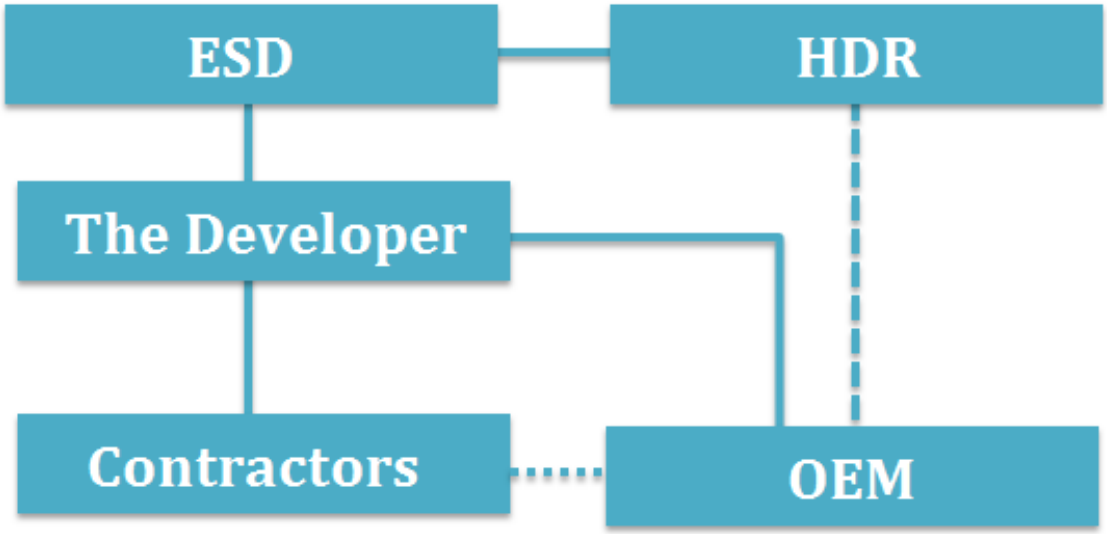
ATLANTIC YARDS REDEVELOPMENT PROJECT

ENVIRONMENTAL MITIGATION MONITORING PROGRAM

May 17, 2016

MEC Organizational Chart & HDR Staffing



(On-Site Environmental Monitor; *Remedial Engineering, P.C.)*

HDR Staffing:

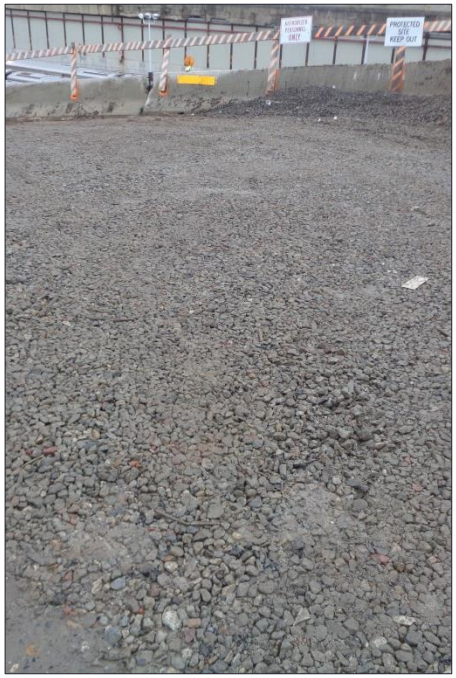
- Project Principal;
- Project Manager;
- Assistant Project Manager;
- Quality Control Reviewer;
- Traffic Engineer;
- Field Inspectors (2): and
- Access to specialists and technical experts as needed.

HDR Monitoring Oversight

- HDR scope of work included in Section O of the Second Amended MEC
- **Weekly Site Visits**
  - 1 full-day and 3 half-day site visits/week
  - 1 walk-through/site visit with the OEM each day on-site
  - Weekend and nighttime site visits
- **Weekly Calls**
  - OEM (including contractors for all project sites)
  - Developer
  - ESD/HDR
- **Review Project Documentation**
  - Noise monitoring reports
  - Equipment emission compliance
  - Noise receptor control tracking system
  - Site-specific plans and protocols
- **Weekly Site Reports**
- **Quarterly Reports**

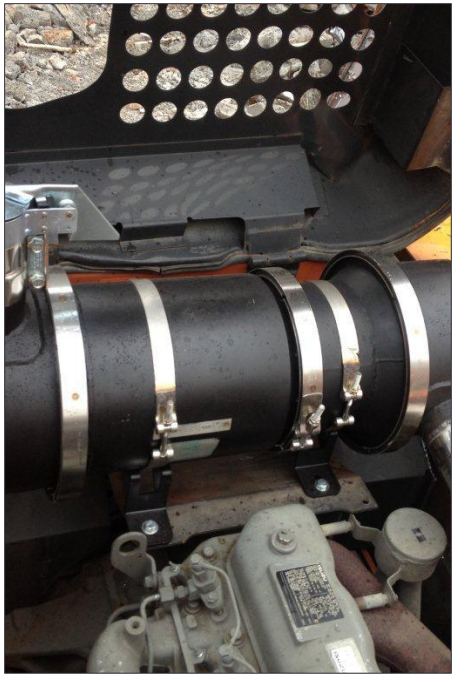
Typical Air Quality Measures

Air Quality Monitor
(CAMP)



Stabilized Entrance
(SWPPP & DMP)

Wetting Soil Disturbing Activities
(CAMP & DMP)



Diesel Particulate Filter

Notes:
1. CAMP: Community Air Monitoring Plan
2. SWPPP: Storm Water Pollution Prevention Plan
3. DMP: Dust Mitigation Plan

Typical Air Quality Measures (continued)

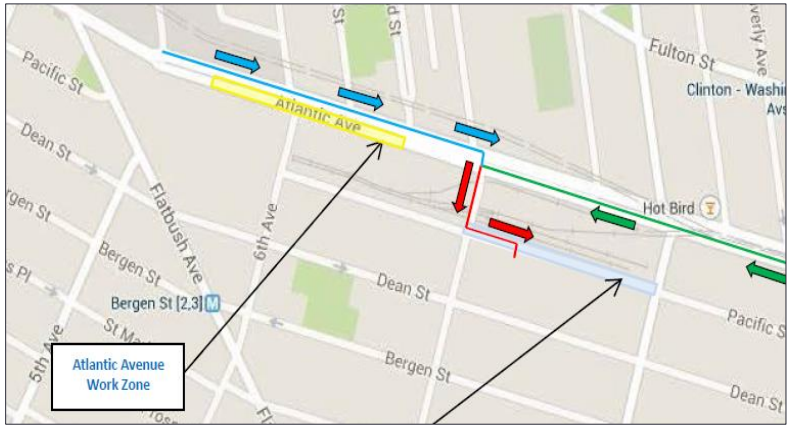
Wheel Washing
(DMP)

Covering and/or Watering Stockpiles
(SWPPP & DMP)

Notes:
1. DMP: Dust Mitigation Plan
2. SWPPP: Storm Water Pollution Prevention Plan

Typical Traffic Mitigation Measures

Pedestrian Walkway
(DOT-Approved MPT)



Truck Routing Map
(Truck Protocols)

Pacific Street Queue Area
(Truck Protocols)

Notes:
1. MPT: Maintenance and Protection of Traffic

Typical Noise Mitigation Measures

Path Noise Controls
(CNMP)

MEC Compliant Materials for Fencing/Gates
(CNMP)

Trucks Operating Behind Site Perimeter Fences
(CNMP)

Notes:
1. CNMP: Construction Noise Mitigation Plan

Mitigation Matrix

Item Number	MEC REQUIREMENT & DESCRIPTION	MEANS AND METHODS	NOTES [2]
67	**N.2 On-Site Environmental Monitor (OEM)** Retain services of a qualified engineering firm to serve as the on-site environmental monitor pursuant to a scope to be reviewed by ESD. Retain engineering firm to serve as the OEM on or before September 15, 2014.	N/A	Completed. Remedial Engineering was retained in October, 2014.
68	**N.3 On-Site Location for OEM** OEM engineer shall be assigned to work primarily from a construction trailer or other on-site location during periods of active construction.	See language in MEC requirement.	The Developer has allocated space for OEM team, including three mitigation engineers. Remedial Engineering has two mitigation engineers on-site on a daily basis performing walk-throughs and observing site activities.
69	**N.4 Developer Quarterly Report** Submit to ESD a quarterly report within 45 days of the end of the 3-month period to which it relates.	Developer shall submit OEM Quarterly Environmental Compliance Report to ESD and HDR. Report should comply with the requirements of the revised CAQM. REMEDIAL's MEANS AND METHODS: OEM will provide required documentation in support of preparation of quarterly report by The Developer: • Describe the construction activities that have taken place over the previous three months, including location of work and site logistics; • Describe anticipated construction activities expected to occur over the ensuing three months, including location of work and site logistics; • Summarize any significant incidents observed over the preceding three months, including the measures implemented to address the incidents; • Include the inspection forms and other environmental reports prepared by OEM personnel; • Describe the principal equipment used in the construction activities; • Describe any specific environmental measures implemented in the preceding three month period and any specific measures proposed for the ensuing three-month period; and • Such other information as may be reasonably requested by ESD. Frequency of Inspection: N/A	Developer submits quarterly report to HDR and ESD for its review and comment on a quarterly basis. Most recent quarterly report distributed to HDR was for the First Quarter of 2016.
70	**N.6(a) NYCDOT OCMC** Coordinate with NYCDOT OCMC to develop, implement, and fund the implementation of MPT plans developed by OCMC.	Developer shall provide ESD and HDR the opportunity to comment on draft versions of major MPT plans prior to its submittal to NYCDOT/OCMC. Developer shall provide final approved MPT plans to ESD and HDR for its records. REMEDIAL's MEANS AND METHODS: Although The Developer and its Contractors are responsible for requirements noted herein, ME will perform detailed inspections as MPTs are installed and modified to support The Developer's efforts to properly have MPT plans implemented. FREQUENCY OF INSPECTION: During installation and as needed	The OEM will field verify that MPTs have been installed in compliance with the approved plan.
71	**N.6(b) Roadway Improvements** Roadway modifications, traffic installations and operational improvements described in pages 19-78 and 19-79 of the FEIS and Table 5-9 of the FSEIS shall be put into place at or about the time that significant construction activity begins at the Project site in order to minimize construction-related traffic impacts, or as otherwise directed by NYCDOT.	Developer shall develop a timeline for implementation of these modifications, traffic installations, and operational improvements which can be tracked by the OEM.	The street modifications described in the FEIS as required for construction of the Arena have been implemented as of 2012. Measures identified in the FSEIS are not relevant until after substantial completion of Phase II, as deemed necessary by NYCDOT.

MEC Program Metrics

Table 1. OEM Compliance Tracking Summary for March 2016, Pacific Park Brooklyn

MEC REQUIREMENT		METHOD OF TRACKING EFFECTIVENESS OF OEM PROGRAM	METRICS
SECTION 7 - TRUCK PROTOCOL			
N. 7	**Truck Routes:** Trucks comply with project-specific truck protocol routes.	Method to Track Incidents of Non-Compliance Green Roof, Rail Yard, B2, B3, B11, B14 – OEM summarizes estimated number of non-compliant truck instances that are observed for each project by reviewing Non-Compliance Log. Method to Evaluate Effectiveness Compliance percentage for each individual project site and the overall project will be determined on a monthly basis utilizing the following formulas: **1. (number of compliant trucks in month/ number of trucks in month)*100 = % of Compliance** **2. number of compliant trucks in month = (number of trucks in month - number of non-compliant trucks in month)** This calculation will be based on information provided by the CMs for each project site. Specifically the CMs will provide number of soil trucks, concrete mixing trucks, module trailers and other major delivery trucks/ trailers that were utilized during the reporting period to the OEM on a monthly basis. The number of instances of noncompliance used in these calculations cannot be represented as the absolute and total number that actually occurred. The calculations for percentages of compliance (or noncompliance) are based on the data collected by the OEM, ESD, HDR, GLFC, FCRC and the Contractors. The data, which consists of instances of noncompliance, is collected during site visits and is compiled in the OEM's tracking log. Potential instances of noncompliance referred by outside parties (individuals, community, etc.) are compiled by ESD and recorded in ESD's log, and are sent to the OEM; these incidents are only added to the OEM log if they are confirmed to have actually occurred. Additional Perspective on Method Utilized to Evaluate Effectiveness Additional clarification and context may be required to further understand effectiveness of OEM program for non-compliance type being evaluated. For example, OEM will convey if there were major trucking events (i.e., major concrete pour occurred) associated with each project.	

Project	Total # of Trucks	Compliant Trucks	Instances of Non-Compliance	% Compliance
Rail Yard	198	196	2	98.99%
B2	164	164	0	100%
B3	473	471	2	99.58%
B11	175	171	4	97.71%
B12	0	0	NA (No Trucks)	NA (No Trucks)
B14	112	111	1	99.11%
B15 (Demo.)	0	0	NA (No Trucks)	NA (No Trucks)
B15 (Const.)	0	0	NA (No Trucks)	NA (No Trucks)
Total	**1,122**	**1,113**	**9**	**99.20%**

- Track **effectiveness** of mitigation monitoring program & identify **trends** in incidents of non-compliance as a means of focusing mitigation efforts
- Categories:
  - truck protocols
  - equipment emission and noise level compliance
  - dust mitigation
  - air quality monitoring
  - sediment control measures