1815 West Farms Road

Bronx, NEW YORK

Remedial Action Work Plan

NYC VCP Project Number 16CVCP029X
OER Project Number 15EHAN561X

Prepared For:

West Farms Equities
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LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
AS/SVE	Air Sparging/Soil Vapor Extraction
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
C&D	Construction and Demolition
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
DCR	Declaration of Covenants and Restrictions
ECs/ICs	Engineering Controls and Institutional Controls
ELAP	Environmental Laboratory Accreditation Program
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
IRM	Interim Remedial Measure
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYS DEC	New York State Department of Environmental Conservation
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYC VCP	New York City Voluntary Cleanup Program
NYCRR	New York Codes Rules and Regulations
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of

	Environmental Remediation
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
ORC	Oxygen-Release Compound
OSHA	United States Occupational Health and Safety Administration
PCBs	Polychlorinated Biphenyls
PE	Professional Engineer
PID	Photo Ionization Detector
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RI	Remedial Investigation
RMZ	Residual Management Zone
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SSDS	Sub-Slab Depressurization System
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
USGS	United States Geological Survey
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VOC	Volatile Organic Compound

CERTIFICATION

I, Nicholas Andrianas, am currently a registered professional engineer licensed by the State of New York. I performed professional engineering services and had primary direct responsibility for designing the remedial program for the 1815 West Farms Road site, Site --16CVCP029X. I certify to the following:

- I have reviewed this document and the Stipulation List, to which my signature and seal are affixed.
- Engineering Controls developed for this remedial action were designed by me or a person under my direct supervision and designed to achieve the goals established in this Remedial Action Work Plan for this site.
- The Engineering Controls to be constructed during this remedial action are accurately reflected in the text and drawings of the Remedial Action Work Plan and are of sufficient detail to enable proper construction.
- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Import of soil, fill and other material from off-site will be performed in accordance with applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Nicholas A. Andrianas, P.E.
Name

063661
PE License Number

Signature

Date

PE Stamp

I, Victoria Whelan am a Qualified Environmental Professional. I will have primary direct responsibility for implementation of the remedial program for the 1815 West Farms Road site, 16CVCP029X. I certify to the following:

- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Import of all soil, fill and other material from off-site will be performed in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

QEP Name

QEP Signature

Date

EXECUTIVE SUMMARY

West Farms Equities is working with the NYC Office of Environmental Remediation (OER) in the New York City Voluntary Cleanup Program to investigate and remediate a 12,436-square foot site located at 1815 West Farms Road, Bronx, New York. A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP). The remedial action described in this document provides for the protection of public health and the environment consistent with the intended property use, complies with applicable environmental standards, criteria and guidance and conforms with applicable laws and regulations.

Site Location and Background

The Site is located at 1815 West Farms Road in the Crotona Park East/West Farms section of the Bronx, New York and is identified as Block 3015 and Lots 62, 87 & 89 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 12,436-square feet and is bounded by an auto shop to the north, New York City Sanitation Department building to the south, West Farms Road to the east, and Boone Avenue to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is used for office space and miscellaneous storage and is improved with a house utilized for office space and a metal quonset hut used for construction equipment and materials??? storage. Additionally, the open land areas are used for miscellaneous storage of what?.

Summary of Redevelopment Plan

The proposed future use of the Site will consist of an 11-story slab on grade, residential building. The new building will occupy approximately 40% of the site. Layout of the proposed site development is presented in Figure 3. The current zoning designation is R7A. The proposed use is consistent with existing zoning for the property.

The proposed building plans include an 81-unit community development, parking area and recreational area. The maximum depth of soil excavation for development purposes will be approximately five feet below grade in the area of the building footprint and approximately two

feet below grade in open areas. There will be two elevators centrally located in the building that will potentially extend into the shallow bedrock which greatly slopes across the property from the surface to more than 20 feet below grade.

The first floor will house the utility rooms, a compactor room, laundry room and three residential apartments. The 2nd to 9th floors will be improved with residential units. Approximately half of the open space will be used for open air parking, and the remaining open space will be occupied by landscaped areas. The Site is currently improved with a residential house and metal quonset hut, and the hut will be demolished as part of the project.

Summary of Surrounding Property

According to the OER's SPEED application, the Site is bounded by West Farms Road followed by the Sheridan Expressway to the east and Boone Avenue followed by a commercial storage building to the west. A NYC Department of Sanitation Building (zoned R7A R7X for transportation and utility) borders the Site to the south, and an auto shop (zoned R7A for transportation and utility) is located to the north of the Site. No schools, hospitals, or day care facilities are located within 500 feet of the Site.

Summary of Past Site Uses and Areas of Concern

The Site has been historically used for residential and commercial purposes. According to Sanborn Fire Insurance maps, there has been a dwelling located on Lot 89 since at least 1915. A garage has been depicted on Lot 89 since approximately 1950. In 1977, Lot 87 is denoted as 'auto junk.' From 1983-2007, the garage on lot 89 is denoted as auto repair. According to the EDR City Directory the past uses of the Site are:

- 2005 to Present - Walison Corp.
- 1983 to 2000 – Collazo (Residential)
- 1976 – Rivera Efren (Residential)
- 1971 Mrs. Kenny Agnes (Residential)
- 1927- 1961 – Scognamiglio (Residential)

According to a Phase I ESA conducted in November 2013 by Equity Environmental Engineering LLC, the following Areas of Concern (AOCs) were identified for the Site:

- The storage of "auto junk" on a portion of the property could cause the discharge of various fluids which could lead to the contamination of the subject property.
- The use of the property (and adjacent property) as an auto body shop could have caused contamination of the subject property.
- The subject property has multiple "E" designations, one of which is for hazardous materials which requires following the Phase I Environmental Site Assessment (ESA) and Phase II Site Investigation (SI) protocol and appropriate remediation if necessary.
- Vapor encroachment issues could not be ruled out.

Summary of Work Performed under the Remedial Investigation

CA RICH performed the following scope of work:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Drilled 12 soil borings across the project Site, and collected 21 soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed three temporary groundwater monitoring wells throughout the Site to establish groundwater flow and collected three groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed five soil vapor probes around the Site perimeter and collected five samples for chemical analysis.

Summary of Findings of Remedial Investigation

1. Elevation of the property ranges from 20 to 40 feet.
2. Depth to shallow groundwater ranges from 11.65 to 12.60 feet at the Site.

3. Shallow groundwater flow is generally in an easterly direction beneath the Site.

4. The stratigraphy of the site, from the surface down, consists of fine and medium-grained sand down to bedrock. Bedrock is exposed in some areas and greater than 20 feet in other areas at the Site. There is an approximately 20-foot high bedrock outcrop that splits the property into two sides, one along Boone Avenue and one along West Farms Road.

5. Twenty one soil/fill samples collected during the Remedial Investigation were compared to 6NYCRR Part 375-6.8 Track 1 Unrestricted Use Soil Cleanup Objectives (SCOs) and Track 2 Restricted Residential Use SCOs. No Volatile Organic Compounds (VOCs) were detected in any sample above Unrestricted Use SCOs. The presence of multiple SVOCs were detected above Restricted Residential Use SCOs including: benzo(a)anthracene (max. 6,400 ppb), benzo(a)pyrene (max. 5,700 ppb), benzo(b)fluoranthene (max. 5,000 ppb), benzo(k)fluoranthene (max. 5,200 ppb), chrysene (max. 5,400 ppb), dibenzo(a,h)anthracene (max. 1,100 ppb), and indeno(1,2,3-c,d)pyrene (max. 3,800 ppb). Two pesticides, 4,4'-DDE (max. 10 ppb) and 4,4'-DDT (max. 32 ppb), were detected above Unrestricted Use SCOs. No PCBs were detected above Unrestricted Use SCOs. Metals were detected above Unrestricted Use SCOs in all but five samples. Several metals were detected exceeding Unrestricted Use SCOs including copper (max. 52.5 ppm), lead (max. 875 ppm), mercury (max. 6.75 ppm), silver (max. 4.08 ppm), and zinc (max. 389). Of these metals, lead and mercury also exceed Restricted Residential Use SCOs.

6. Groundwater sample results from the RI were compared to New York State 6NYCRR Part 703.5 Class GA groundwater quality standards (GQS). Groundwater results showed two VOCs that exceeded GQS including methylene chloride (max. 11 ppb) and tetrachloroethene (max. 18 ppb). Methylene chloride was also detected in both the Field Blank and Trip Blank. SVOCs, pesticides, and PCBs were not detected in any groundwater samples. Several metals were identified but only lead (max. 0.306 ppm), manganese (max. 0.357 ppm), and sodium (max. 58.2 ppm) exceeded their respective GQSs. Lead in groundwater is a concern.

7. Five soil vapor samples collected during the RI were compared to the compounds listed in Matrices 1 and 2 in the New York State Department of Health (NYSDOH) Final Guidance

for Evaluating Soil Vapor Intrusion. No VOCs were found in soil vapor at concentrations greater than the guidance values. Chlorinated VOCs were detected in the soil vapor at the site at relatively low concentrations. Trichloroethene was detected at a maximum concentration of 29.3 ug/m^3, tetrachloroethene at 7.59 ug/m^3, and 111 TCA at 1.27 ug/m^3, while carbon tetrachloride was not detected in any samples. Petroleum-related VOCs were detected at moderate concentrations in soil vapor throughout the site.

Summary of the Remedial Action

The preferred remedy for the site is Alternative 2, Site Specific SCOs. Data generated during the site investigation support the conclusion that Alternative 1 may be achievable and, in the event that post remedial sampling confirm Unrestricted Use or Restricted Residential Use cleanup levels have been achieved, Alternative 1 will be implemented. The Alternative 2 remedy will remove all soil/fill exceeding Track 4 Site Specific Use SCOs throughout the Site, which will be confirmed with post-excavation sampling. Engineering Controls and Use restrictions are required for a Track 4 cleanup.

The proposed remedial action achieves protection of public health and the environment for the intended use of the property. The proposed remedial action achieves all of the remedial action objectives established for the project and addresses applicable standards, criterion, and guidance; is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants; is cost effective and implementable; and uses standards methods that are well established in the industry.

The proposed remedial alternative is a Track 4 Remedial Action that consists of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establishment of Site Specific Use (Track 4) Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

5. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s).
6. Excavation and removal of soil/fill exceeding Site Specific (Track 4) SCOs. The entire footprint of the building area (about 40% of the property) will be excavated to a depth of approximately five feet below grade for development purposes. A small portion of property will be excavated into shallow bedrock for elevator pits. Approximately 4,000 tons of soil/fill will be removed from the Site and properly disposed at an appropriately licensed or permitted facility.
7. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-Site.
8. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
9. Removal of all USTs that are encountered during soil/fill removal actions. Registration of tanks and reporting of any petroleum spills associated with UST's and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
10. Collection and analysis of confirmatory end-point samples from excavation bottom and in the area of the hot spots (SB-5, SB-12 and SB-9) to determine the performance of the remedy with respect to attainment of SCOs.
11. Import of materials to be used for backfill and cover in compliance with this Plan and in accordance with applicable laws and regulations.
12. Construction of an engineered composite cover consisting of a five-inch thick concrete building slab with an four-inch porous fill sub-base beneath all building areas, four-inch poured concrete on a four-inch compacted gravel sub-base in sidewalk areas, four-inch thick asphalt parking lot and two feet of clean soil in all open and landscaped areas.
13. Installation of a vapor barrier system consisting of vapor barrier beneath the building slab and outside of sub-grade foundation sidewalls to mitigate soil vapor migration into the

building. The vapor barrier system will consist of a Raven Industries' VaporBlock® Plus™ 20-mil vapor barrier, or approved equal, below the slab throughout the full building area. All welds, seams and penetrations will be properly sealed to prevent preferential pathways for vapor migration. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

14. Performance of all activities required for the Remedial Action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.

15. Submission of a Remedial Action Report (RAR) that describes the remedial activities and certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.

16. The property will continue to be registered with a Restrictive Declaration at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

COMMUNITY PROTECTION STATEMENT

The NYC Office of Environmental Remediation (OER) provides governmental oversight for the cleanup of contaminated property in NYC. This Remedial Action Work Plan ("cleanup plan") describes the findings of prior environmental studies, shows the location of identified contamination at the site, and describes the plans to clean up the site to protect public health and the environment.

This cleanup plan provides a very high level of protection for neighboring communities and also includes many other elements that address common community concerns, such as community air monitoring, odor, dust and noise controls, hours of operation, good housekeeping and cleanliness, truck management and routing, and opportunities for community participation. The purpose of this Community Protection Statement is to explain these community protection measures in non-technical language to simplify community review.

Project Information:

- Site Name: 1815 West Farms Road
- Site Address: 1815 West Farms Road, Bronx, NY
- NYC Voluntary Cleanup Program Project Number: 16CVCP029X

Project Contacts:

- OER Project Manager: Horace Zhang, 212-788-8841
- Site Project Manager: Victoria Whelan, 516-576-8844
- Site Safety Officer: William Fitchett, 516-576-8844
- Online Document Repository: http://www.nyc.gov/html/oer/html/repository/RBronx.shtml

Remedial Investigation and Cleanup Plan: Under the oversight of the NYC OER, a thorough study of this property (called a remedial investigation) has been performed to identify past property usage, to sample and test soils, groundwater and soil vapor, and to identify contaminant sources present on the property. The cleanup plan has been designed to address all contaminant sources that have been identified during the study of this property.

Identification of Sensitive Land Uses: Prior to selecting a cleanup, the neighborhood was evaluated to identify sensitive land uses nearby, such as schools, day care facilities, hospitals and residential areas. The cleanup program was then tailored to address the special conditions of this community.

Qualitative Human Health Exposure Assessment: An important part of the cleanup planning for the Site is a study to find all of the ways that people might come in contact with contaminants at the Site now or in the future. This study is called a Qualitative Human Health Exposure Assessment (QHHEA). A QHHEA was performed for this project. This assessment has considered all known contamination at the Site and evaluated the potential for people to come in contact with this contamination. All identified public exposures will be addressed under this cleanup plan.

Health and Safety Plan: This cleanup plan includes a Construction Health and Safety Plan (CHASP) that is designed to protect community residents and on-Site workers. The elements of this RAWP are in compliance with applicable safety requirements of the United States Occupational Safety and Health Administration (OSHA). This RAWP includes many protective elements including those discussed below.

Site Safety Coordinator: This project has a designated Site safety coordinator to implement the CHASP. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies. The Site safety coordinator is identified at the beginning of this Community Protection Statement.

Worker Training: Workers participating in cleanup of contaminated material on this project are required to be trained in a 40-hour hazardous waste operators training course and to take annual refresher training. This pertains to workers performing specific tasks including removing contaminated material and installing cleanup systems in contaminated areas.

Community Air Monitoring Plan: Community air monitoring will be performed during this cleanup project to ensure that the community is properly protected from contaminants, dust and odors. Air samples will be tested in accordance with a detailed plan called the Community Air Monitoring Plan or CAMP. Results will be regularly reported to the NYC Office of Environmental Remediation. This cleanup plan also has a plan to address any unforeseen problems that might occur during the cleanup (called a 'Contingency Plan').

Odor, Dust and Noise Control: This cleanup plan includes actions for odor and dust control. These actions are designed to prevent off-Site odor and dust nuisances and includes steps to be taken if nuisances are detected. Generally, dust is managed by application of physical covers and by water sprays. Odors are controlled by limiting the area of open excavations, physical covers, spray foams and by a series of other actions (called operational measures). The project is also required to comply with applicable NYC noise control standards. If you observe problems in these areas, please contact the onsite Project Manager or NYC Office of Environmental Remediation Project Manager listed on the first page of this Community Protection Statement document.

Quality Assurance: This cleanup plan requires that evidence be provided to illustrate that all cleanup work required under the plan has been completed properly. This evidence will be summarized in the final report, called the Remedial Action Report. This report will be submitted to the NYC Office of Environmental Remediation and will be thoroughly reviewed.

Stormwater Management: To limit the potential for soil erosion and discharge, this cleanup plan has provisions for stormwater management. The main elements of the stormwater

management include physical barriers such as tarp covers and erosion fencing, and a program for frequent inspection.

Hours of Operation: The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. For this cleanup project, the hours of operation will conform to requirements of the NYC Department of Buildings.

Signage: While the cleanup is in progress, a placard will be prominently posted at the main entrance of the property with a laminated project Fact Sheet that states that the project is in the NYC Voluntary Cleanup Program and provides project contact names and numbers, and a link to the document repository where project documents can be viewed.

Complaint Management: The contractor performing this cleanup is required to address all complaints. If you have any complaints, you can call the facility Project Manager or the NYC Office of Environmental Remediation Project Manager listed on the first page of this Community Protection Statement document, or call 311 and mention the Site is in the NYC Voluntary Cleanup Program.

Utility Mark-outs: To promote safety during excavation in this cleanup, the contractor is required to first identify all utilities and must perform all excavation and construction work in compliance with NYC Department of Buildings regulations.

Soil and Liquid Disposal: All soil and liquid material removed from the Site as part of the cleanup will be transported and disposed of in accordance with all applicable City, State and Federal regulations, and required permits will be obtained.

Soil Chemical Testing and Screening: All excavations will be supervised by a trained and properly qualified environmental professional. In addition to extensive sampling and chemical testing of soils on the Site, excavated soil will be screened continuously using hand-

held instruments, by sight, and by smell to ensure proper material handling and management, and community protection.

Stockpile Management: Soil stockpiles will be kept covered with tarps to prevent dust, odor and erosion. Stockpiles will be frequently inspected. Damaged tarp covers will be promptly replaced. Stockpiles will be protected with silt fences. Hay bales will be used, as needed, to protect storm water catch basins and other discharge points.

Trucks and Covers: Loaded trucks leaving the Site will be covered in compliance with applicable laws and regulations to prevent dust and odor. Trucks will be properly recorded in logs and records and placarded in compliance with applicable City, State and Federal laws, including those of the New York State Department of Transportation. If loads contain wet material that can leak, truck liners will be used. All transport of materials will be performed by licensed truckers and in compliance with applicable laws and regulations.

Imported Material: All fill materials proposed to be brought onto the Site will comply with rules outlined in this cleanup plan and will be inspected and approved by a qualified worker located on the Site. Waste materials will not be brought onto the Site. Trucks entering the Site with imported clean materials will be covered in compliance with applicable laws and regulations.

Equipment Decontamination: All equipment used for cleanup work will be inspected and washed, if needed, before it leaves the Site. Trucks will be cleaned at a truck inspection station on the property before leaving the Site.

Housekeeping: Locations where trucks enter or leave the Site will be inspected every day and cleaned regularly to ensure that they are free of dirt and other materials from the Site.

Truck Routing: Truck routes have been selected to: (a) limit transport through residential areas and past sensitive nearby properties; (b) maximize use of city-mapped truck routes; (c)

limit total distance to major highways; (d) promote safety in entry to highways; (e) promote overall safety in trucking; and (f) minimize off-Site line-ups (queuing) of trucks entering the property. Operators of loaded trucks leaving the Site will be instructed not to stop or idle in the local neighborhood.

Final Report: The results of all cleanup work will be fully documented in a final report (called the Remedial Action Report) that will be available for public review online. A link to the online document repository and the public library with Internet access nearest the Site are listed on the first page of this Community Protection Statement document

Long-Term Site Management: If long-term protection is needed after the cleanup is complete, the property owner will be required to comply with an ongoing Site Management Plan that calls for continued inspection of protective controls, such as Site covers. The Site Management Plan is evaluated and approved by the NYC Office of Environmental Remediation. Requirements that the property owner must comply with are defined either in the property's deed or established through a city environmental designation registered with the Department of Buildings. A certification of continued protectiveness of the cleanup will be required from time to time to show that the approved cleanup is still effective.

REMEDIAL ACTION WORK PLAN

1.0 Project Background

West Farms Equities is working with the NYC Office of Environmental Remediation (OER) in the New York City Voluntary Cleanup Program to investigate and remediate a property located at 1815 West Farms Road in the Crotona Park East/West Farms section of Bronx, New York (the "Site"). A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP) in a manner that will render the Site protective of public health and the environment consistent with the contemplated end use. This RAWP establishes remedial action objectives, provides a remedial alternatives analysis that includes consideration of a permanent cleanup, and provides a description of the selected remedial action. The remedial action described in this document provides for the protection of public health and the environment, and complies with applicable environmental standards, criteria and guidance and applicable laws and regulations.

1.1 Site Location and Background

The Site is located at 1815 West Farms Road in the Crotona Park East/West Farms section of the Bronx, New York and is identified as Block 3015 and Lots 62, 87 & 89 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 12,436-square feet and is bounded by an auto shop to the north, New York City Sanitation Department building to the south, West Farms Road to the east, and Boone Avenue to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is used for office space and miscellaneous storage and is improved with a house utilized for office space and a metal Quonset Hut used for construction storage. Additionally, the open land areas are used for miscellaneous storage.

1.2 Redevelopment Plan

The proposed future use of the Site will consist of an 11-story slab on grade residential building. The new building will occupy approximately 40% of the site. Layout of the proposed site development is presented in Figure 3. The current zoning designation is R7A. The proposed use is consistent with existing zoning for the property.

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The first floor will house the utility rooms, a compactor room, laundry room and three residential apartments. The 2nd to 9th floors will be improved with residential units. Approximately half of the open space will be used for open air parking, and the remaining open space will be landscaped areas. The Site is currently improved with a residential house and metal quonset hut to be demolished.

1.3 Description of Surrounding Property

According to the OER's SPEED application, the Site is bound by West Farms Road followed by the Sheridan Expressway to the East and Boone Avenue followed by a commercial storage building to the West. A NYC Department of Sanitation Building (zoned R7A R7X for transportation and utility) borders the Site to the South, and an auto shop (zoned R7A for transportation and utility) is located to the north of the Site. No schools, hospitals, or day care facilities are located within 500 feet of the Site.

Figure 2 shows the surrounding land usage.

1.4 Summary of Past Site Uses and Areas of Concern

The Site has been historically used for residential and commercial purposes. According to Sanborn Fire Insurance maps, there has been a dwelling located on Lot 89 since at least 1915. A garage has been depicted on Lot 89 since approximately 1950. In 1977, Lot 87 is denoted as 'auto junk.' From 1983-2007, the garage on lot 89 is denoted as auto repair. According to the EDR City Directory the past uses of the Site are:

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- The subject property has multiple "E" designations, one of which is for hazardous materials which requires following the Phase I Environmental Site Assessment (ESA) and Phase II Site Investigation (SI) protocol and appropriate remediation if necessary.
- Vapor encroachment issues could not be ruled out.

1.5 Summary of Work Performed under the Remedial Investigation

CA RICH performed the following scope of work:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Drilled 12 soil borings across the entire project Site, and collected 21 soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed three temporary groundwater monitoring wells throughout the Site to establish groundwater flow and collected three groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed five soil vapor probes around Site perimeter and collected five samples for chemical analysis.

1.6 Summary of Findings of Remedial Investigation

A remedial investigation was performed and the results are documented in a companion document called "Remedial Investigation Report, 1815 West Farms Road", dated October 2015 (RIR).

1. Elevation of the property ranges from 20 to 40 feet.
2. Depth to groundwater ranges from 11.65 to 12.60 feet at the Site.
3. Shallow groundwater flow is generally in an easterly direction beneath the Site.
4. The stratigraphy of the site, from the surface down, consists of fine and medium-grained sand down to bedrock. Bedrock is exposed in some areas and greater than 20 feet in

other areas at the Site. There is an approximately 20-foot high bedrock outcrop that splits the Property into two sides, one along Boone Avenue and one along West Farms Road.

5. The sampling results of twenty one soil/fill samples collected during the Remedial Investigation were compared to 6NYCRR Part 375-6.8 Track 1 Unrestricted Use Soil Cleanup Objectives (SCOs) and Track 2 Restricted Residential Use SCOs. No Volatile Organic Compounds (VOCs) were detected in any sample at concentrations greater than Unrestricted Use SCOs. SVOCs were detected at concentrations greater than Restricted Residential Use SCOs including: benzo(a)anthracene (max. 6,400 ppb), benzo(a)pyrene (max. 5,700 ppb), benzo(b)fluoranthene (max. 5,000 ppb), benzo(k)fluoranthene (max. 5,200 ppb), chrysene (max. 5,400 ppb), dibenzo(a,h)anthracene (max. 1,100 ppb), and indeno(1,2,3-c,d)pyrene (max. 3,800 ppb). Two pesticides, 4,4'-DDE (max. 10 ppb) and 4,4'-DDT (max. 32 ppb), were detected at concentrations greater than Unrestricted Use SCOs. No PCBs were detected at concentrations greater than Unrestricted Use SCOs. Metals were detected at concentrations greater than Unrestricted Use SCOs in all but five samples. Several metals were detected at concentrations exceeding Unrestricted Use SCOs including copper (max. 52.5 ppm), lead (max. 875 ppm), mercury (max. 6.75 ppm), silver (max. 4.08 ppm), and zinc (max. 389 ppm). Of these metals, lead and mercury also exceed Restricted Residential Use SCOs.

6. Groundwater sample results from the RI were compared to New York State 6NYCRR Part 703.5 Class GA groundwater quality standards (GQS). Groundwater results showed two VOCs that exceeded GQS including methylene chloride (max. 11 ppb) and tetrachloroethene (max. 18 ppb). Methylene chloride was also detected in both the Field Blank and Trip Blank. SVOCs, pesticides, and PCBs were not detected in any groundwater samples. Several metals were identified but only lead (max. 0.306 ppm), manganese (max. 0.357 ppm), and sodium (max. 58.2 ppm) exceeded their respective GQSs. Lead in groundwater is a concern.

7. Five soil vapor samples collected during the RI were compared to the compounds listed in Matrices 1 and 2 in the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion. Soil vapor samples showed no VOCs in soil vapor exceed the guidance values. Chlorinated VOCs were detected in the soil

vapor at the site, but at relatively low levels. Trichloroethene was detected at a maximum concentration of 29.3 ug/m^3, tetrachloroethene at 7.59 ug/m^3, and 111 TCA at 1.27 ug/m^3, while carbon tetrachloride was not detected in any samples. Petroleum-related VOCs were detected at moderate levels in soil vapor throughout the site.

For more detailed results, consult the RIR. Based on an evaluation of the data and information from the RIR and this RAWP, disposal of significant amounts of hazardous waste is not suspected at this site.

2.0 Remedial Action Objectives

Based on the results of the RI, the following Remedial Action Objectives (RAOs) have been identified for this Site:

Soil

- Prevent direct contact with contaminated soil.
- Prevent exposure to contaminants volatilizing from contaminated soil.

Groundwater

- Prevent direct exposure to contaminated groundwater.
- Prevent exposure to contaminants volatilizing from contaminated groundwater.

Soil Vapor

- Prevent exposure to contaminants in soil vapor.
- Prevent migration of soil vapor into dwelling and other occupied structures.

3.0 Remedial Alternatives Analysis

The goal of the remedy selection process is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing RAOs for media in which chemical constituents were found in exceedance of applicable standards, criteria and guidance values (SCGs). Remedial alternatives are then developed and evaluated based on the following ten criteria:

- Protection of human health and the environment;
- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community acceptance;
- Land use; and
- Sustainability.

As required, a Track 1 Unrestricted Use scenario is evaluated for the remedial action. The following is a detailed description of the alternatives analyzed to address impacted media at the Site:

Alternative 1:

- Selection of NYSDEC 6NYCRR Part 375 Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs).
- Remove soil/fill exceeding Track 1 Unrestricted Use SCOs throughout the Site and confirm that Track 1 Unrestricted Use SCOs have been achieved with post-excavation endpoint sampling in the area of the two hotspots, shown in Figure 4. If soil/fill containing analytes at concentrations above Unrestricted Use SCOs is still present at the base of the excavation after removal of all soil required for construction of the new building's cellar level is complete, additional excavation would be performed to ensure

complete removal of soil/ fill that does not meet Track 1 Unrestricted Use SCOs. In much of the area of excavation, bedrock will be encountered shallower than the final excavation depths.

- No Engineering or Institutional Controls are required for a Track 1 cleanup. As part of development, a vapor barrier would be installed to prevent migration of soil vapor into the building.

Alternative 2:

- Establishment of Site Specific Track 4 SCOs.
- Removal of all soil/fill exceeding Track 4 Site-specific SCOs and confirmation that Track 4 Site-specific SCOs have been achieved with post-excavation end point sampling. Based on the results of the post excavation endpoint samples, this alternative would be achieved by excavating the site for development purposes. As part of development, soil beneath most of the site will be removed to a depth of approximately5 feet, or to bedrock, whichever is shallower.
- Placement of a composite cover system over the entire Site to prevent exposure to remaining soil/fill;
- Installation of a vapor barrier (beneath the building slab and along foundation side walls to prevent migration ofsoil vapor) into the building;
- Establishment of use restrictions including prohibitions on the use of groundwater from the Site; prohibitions of restricted Site uses, such as farming or vegetable gardening, to prevent future exposure pathways; and prohibition of a higher level of land use without OER approval;
- Establishment of an approved Site Management Plan (SMP) to ensure long-term management of these Engineering and Institutional Controls including the performance of periodic inspections and certification that the controls are performing as they were intended. The SMP will note that the property owner and property owner’s successors and assigns must comply with the approved SMP; and
- The property will continue to be registered with an E-Designation at the NYC Buildings Department.

3.1 Threshold Criteria

Protection of Public Health and the Environment

This criterion is an evaluation of the remedy's ability to protect public health and the environment, and an assessment of how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of Engineering Controls or Institutional Controls. Protection of public health and the environment must be achieved for all approved remedial actions.

Alternative 1 would be protective of human health and the environment by removing all soil/fill exceeding Track 1 Unrestricted Use SCO's and groundwater protection standards, thus eliminating potential for direct contact with contaminated soil/fill once construction is complete and eliminating the risk of contaminants leaching into groundwater.

Alternative 2 would achieve comparable protections of human health and the environment by excavation and removal of most of the historic fill at the Site and by ensuring that remaining soil/fill on-Site meets Track 4 Site-Specific SCO's, as well as by placement of Institutional and Engineering Controls, including a composite cover system. The composite cover system would prevent direct contact with any remaining on-Site soil/fill. Implementing Institutional Controls including a Site Management Plan and continuing the E-designation on the property would ensure that the composite cover system remains intact and protective of public health. Establishment of Track 4 Site-Specific SCO's would minimize the risk of contamination leaching into groundwater.

For both Alternatives, potential exposure to contaminated soils or groundwater during construction would be minimized by implementing a Construction Health and Safety Plan, an approved Soil/Materials Management Plan, and Community Air Monitoring Plan (CAMP). Potential contact with contaminated groundwater would be prevented as its use is prohibited by city laws and regulations. Potential future migration of off-Site soil vapors into the new building would be prevented by installing a vapor barrier below the building slab and outside foundations walls below grade.

3.2 Balancing Criteria

Compliance with Standards, Criteria and Guidance (SCGs)

This evaluation criterion assesses the ability of the alternative to achieve applicable standards, criteria and guidance.

Alternative 1 would achieve compliance with the remedial goals, chemical-specific SCGs and RAOs for soil through removal of soil to achieve Track 1 Unrestricted Use SCOs and Protection of Groundwater SCOs. Compliance with SCGs for soil vapor would also be achieved by installing a waterproofing/vapor barrier system below the new building's basement slab and continuing the vapor barrier outside of subgrade foundation walls, as part of development.

Alternative 2 would achieve compliance with the remedial goals, chemical-specific SCGs and RAOs for soil through removal of soil to meet Track 4 Site-Specific SCOs. Compliance with SCG's for soil vapor would also be achieved by installing a waterproofing/vapor barrier system below the new building's basement slab and continuing the vapor barrier outside of subgrade foundation walls. A Site Management Plan would ensure that these controls remained protective for the long term. Health and safety measures contained in the CHASP and Community Air Monitoring Plan (CAMP) will be implemented during Site redevelopment under this RAWP. For both Alternatives, focused attention on means and methods employed during the remedial action would ensure that handling and management of contaminated material would be in compliance with applicable SCGs. These measures will protect on-site workers and the surrounding community from exposure to Site-related contaminants.

Short-Term Effectiveness and Impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their short term effects during the remedial action on public health and the environment during implementation of the remedial action, including protection of the community, protection of onsite workers and environmental impacts.

Both Alternative 1 and 2 have similar short-term effectiveness during their implementation, as each requires excavation of historic fill material. Both alternatives would result in short-term

dust generation impacts associated with excavation, handling, load out of materials, and truck traffic. Short-term impacts could potentially be higher for Alternative 1 since excavation of greater amounts of historical fill material would take place. However, focused attention to means and methods during a Track 1 removal action, including community air monitoring and appropriate truck routing, would minimize the overall impact of these activities.

An additional short-term adverse impact and risks to the community associated with both remedial alternatives is increased truck traffic. Truck traffic will be routed on the most direct course using major thoroughfares where possible and flag persons will be used to protect pedestrians at Site entrances and exits.

The potential adverse impact to the community, workers and the environment for both alternatives would be minimized through implementation of control plans including a Construction Health and Safety Plan, a Community Air Monitoring Plan (CAMP) and a Soil/Materials Management Plan (SMMP), during all on-Site soil disturbance activities and would minimize the release of contaminants into the environment. Both alternatives provide short-term effectiveness in protecting the surrounding community by decreasing the risk of contact with on-Site contaminants. Construction workers operating under appropriate management procedures and a Construction Health and Safety Plan (CHASP) would provide protection from on-Site contaminants by using personal protective equipment would be worn consistent with the documented risks within the respective work zones.

Long-term effectiveness and permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual contamination remaining at the Site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of Engineering Controls/Institutional Controls (ECs/ICs) that may be used to manage contaminant residuals that remain at the Site and assessment of containment systems and ICs that are designed to eliminate exposures to contaminants, and long-term reliability of ECs.

Alternative 1 would achieve long-term effectiveness and permanence related to on-Site contamination by permanently removing all impacted soil/fill above Track 1 Unrestricted Use SCO's. Removal of on-Site contaminant sources will also prevent future groundwater contamination.

Alternative 2 would provide long-term effectiveness by removing most on-Site contamination and attaining Track 4 Site-Specific SCOs; installing a composite cover system across the Site; maintaining use restrictions; establishing an SMP to ensure long-term management of ICs and ECs; and maintaining registration as an E-designated property to memorialize these controls for the long term. The SMP would ensure long-term effectiveness of all ECs and ICs by requiring periodic inspection and certification that these controls and restrictions continue to be in place and are functioning as they were intended, assuring that protections designed into the remedy continue to provide the required level of protection.

Reduction of toxicity, mobility, or volume of contaminated material

This evaluation criterion assesses the remedial alternative's use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a Site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure and treatment of source at the point of exposure. It is preferred to use treatment or removal to eliminate contaminants at a Site, reduce the total mass of toxic contaminants, cause irreversible reduction in contaminants mobility, or reduce of total volume of contaminated media.

Alternative 1 will permanently eliminate the toxicity, mobility, and volume of contaminants from on-Site soil by removing all soil in excess of Track 1 Unrestricted Use SCOs. Alternative 2 would remove most of the historic fill at the Site, and all remaining on-Site soil/fill beneath the new building will meet Track 4 Site-Specific SCO's.

Alternative 1 would remove a greater total mass of contaminants from the Site. The removal of soil to approximately five feet for the new development in both scenarios would lessen the difference in contaminant mass removal between these two alternatives.

Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations, administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials.

The techniques, materials and equipment to implement both Alternatives 1 and 2 are readily available and have been proven to be effective in remediating the contaminants present on the Site. They use standard equipment and technologies that are well established in the industry. The reliability of each remedy is also high. There are no special difficulties associated with any of the activities proposed.

Cost effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (such as construction costs, equipment costs, and disposal costs, engineering expenses) and site management costs (costs incurred after remedial construction is complete) necessary to ensure the continued effectiveness of a remedial action.

Since historic fill at the Site was found to extend to a depth of up to five feet below grade during the RI, and the new building requires excavation to a depth of five feet, the costs associated with both Alternative 1 and Alternative 2 will likely be comparable. Costs associated with Alternative 1 could potentially be higher than Alternative 2 if soil with analytes above Track 1 Unrestricted Use SCOs are encountered below the excavation depth required for development. Additional costs would include installation of additional shoring/underpinning, disposal of additional soil,

and import of clean soil for backfill. However, long-term costs for Alternative 2 are likely higher than Alternative 1 based on implementation of a Site Management Plan as part of Alternative 2.

The remedial plan would couple the remedial action with the redevelopment of the Site, lowering total costs. The remedial plan will also consider the selection of the most appropriate disposal facilities to reduce transportation and disposal costs during cleanup and redevelopment of the Site.

Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action. Observations here will be supplemented by public comment received on the RAWP.
This RAWP will be subject to a public review under the NYC VCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedy. This public comment will be considered by OER prior to approval of this plan. The Citizen Participation Plan for the project is provided in Appendix 2. Observations here will be supplemented by public comment received on the RAWP. Under both alternatives, the overall goals of the remedial program, to protect public health and the environment and eliminate potential contaminant exposures, have been broadly supported by citizens in NYC communities.

Land use

This evaluation criterion addresses the proposed use of the property. This evaluation has considered reasonably anticipated future uses of the Site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, Federal or State land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; and current Institutional Controls applicable to the site.

The current, intended, and reasonably anticipated future land use of the Site and its surroundings are compatible with the selected remedy of soil remediation. The proposed future use of the Site includes a nine-story affordable and supportive housing project to provide 81 dwelling units. Following remediation, the Site will meet either Track 1 Unrestricted Use or Track 4 Site-Specific SCOs, both of which are protective of public health and the environment for its planned residential use. The proposed use is compliant with the property's zoning and is consistent with recent development patterns. The areas surrounding the site are well developed with predominantly commercial structures. The development would remediate a vacant contaminated lot and provide a modern residential building. The proposed development would clean up the property and make it safer, create new employment opportunities, living space for affordable and supportive housing and associated societal benefits to the community, and other economic benefits from land revitalization.

Temporary short-term project impacts are being mitigated through site management controls and truck traffic controls during remediation activities. Following remediation, the Site will meet either Track 1 Unrestricted Use SCOs or Track 4 Site-Specific SCOs, both of which are protective of public health and the environmental for its planned use.

The Site is not in close proximity to important cultural resources, including federal or state historic or heritage sites or Native American religious sites, natural resources, waterways, wildlife refuges, wetlands, or critical habitats of endangered or threatened species. The Site is located in an urban area and not in proximity to fish or wildlife and neither alternative would result in any potential exposure pathways of contaminant migration affecting fish or wildlife. The remedial action is also protective of groundwater natural resources. The Site does not lie in a Federal Emergency Management Agency (FEMA)-designated flood plain. Both alternatives are equally protective of natural resources and cultural resources. Improvements in the current environmental condition of the property achieved by both alternatives considered in this plan are consistent with the City's goals for cleanup of contaminated land.

Sustainability of the Remedial Action

This criterion evaluates the overall sustainability of the remedial action alternatives and the degree to which sustainable means are employed to implement the remedial action including those that take into consideration NYC's sustainability goals defined in PlaNYC: A Greener, Greater New York. Sustainability goals may include: maximizing the recycling and reuse of non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency; and promotion of the use of native vegetation and enhancing biodiversity during landscaping associated with Site development.

While Alternative 2 would potentially result in lower energy usage based on reducing the volume of material transported off-Site, both remedial alternatives are comparable with respect to the opportunity to achieve sustainable remedial action. The remedial plan for either alternative would take into consideration the shortest trucking routes during off-Site disposal of historic fill and other soils, which would reduce greenhouse gas emissions and conserve energy used to fuel trucks. The New York City Clean Soil Bank program is available for reuse of any clean native soils under either alternative. A complete list of green remedial activities considered as part of the NYC VCP is included in a Sustainability Statement.

SELECTION OF THE PREFERRED REMEDY

The preferred remedy for the site is Alternative 2, Site Specific SCOs. Data generated during the site investigation support the conclusion that Alternative 1 may be achievable and, in the event that post remedial sampling confirm Unrestricted Use or Restricted Residential Use cleanup levels have been achieved, thenAlternative 1 will be implemented.

The Alternative 2 remedy will remove all soil/fill exceeding Track 4 Site Specific Use SCOs throughout the Site, which will be confirmed with post-excavation sampling. If soil/fill containing analytes at concentrations above Track 4 Site Specific Use SCOs is still present at the base or walls of the excavation after removal of all soil required for construction of the new building's cellar level and slab are complete, additional excavation would be performed to ensure complete removal of soil/ fill that does not meet Track 4 Site Specific Use SCOs.

Engineering Controls are required for a Track 4 cleanup. A concrete slab covering the entire site and waterproofing membrane would be installed as part of standard building development and are not considered part of the remedy. Additional soil vapor management would not be required in areas.

Use restrictions will be imposed on the site (including prohibitions on any use higher than Restricted Residential, e.g. the use of groundwater from the Site; prohibitions of restricted Site uses, such as farming or vegetable gardening, to prevent future exposure pathways; and prohibition of a higher level of land use without NYSDEC approval). The Site would continue to be encumbered with an E-designation for hazardous material.

4.0 Remedial Action

4.1 Summary of Preferred Remedial Action

The preferred remedial action alternative is Alternative 2, the Site Specific Track 4 remedial action. The preferred remedial action achieves protection of public health and the environment for the intended use of the property. The preferred remedial action will achieve all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective and implementable and uses standards methods that are well established in the industry.

The proposed remedial alternative is a Track 4 Remedial Action that consists of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establishment of Site Specific Use (Track 4) Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s).
6. Excavation and removal of soil/fill exceeding Site Specific (Track 4) SCOs. The entire footprint of the building area (about 40% of the property) will be excavated to a depth of approximately five feet below grade for development purposes. A small portion of property will be excavated into shallow bedrock for elevator pits. Approximately 4,000 tons of soil/fill will be removed from the Site and properly disposed at an appropriately licensed or permitted facility.
7. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-Site.

8. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
9. Removal of all USTs that are encountered during soil/fill removal actions. Registration of tanks and reporting of any petroleum spills associated with USTs and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
10. Collection and analysis of confirmatory end-point samples from excavation bottom and in the area of the hot spots (SB-5, SB-12 and SB-9) to determine the performance of the remedy with respect to attainment of SCOs.
11. Import of materials to be used for backfill and cover in compliance with this Plan and in accordance with applicable laws and regulations.
12. Construction of an engineered composite cover consisting of a five inch thick concrete building slab with an four inch, porous fill sub-base beneath all building areas, four-inch poured concrete on a four-inch compacted gravel sub-base in sidewalk areas, four inch thick asphalt parking lot and two feet of clean soil in all open and landscaped areas.
13. Installation of a vapor barrier system consisting of vapor barrier beneath the building slab and outside of sub-grade foundation sidewalls to mitigate soil vapor migration into the building. The vapor barrier system will consist of a Raven Industries' VaporBlock® Plus™ 20-mil vapor barrier, or approved equal, below the slab throughout thebuilding area. All welds, seams and penetrations will be properly sealed to prevent preferential pathways for vapor migration. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
14. Performance of all activities required for the Remedial Action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
15. Submission of a Remedial Action Report (RAR) that describes the remedial activities and certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.

16. The property will continue to be registered with a Restrictive Declaration at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

4.2 Soil Cleanup Objectives and Soil/ Fill Management

The following Track 4 Site-Specific SCO's will be utilized for this project:

Contaminant	**Site-Specific SCOs**
Total SVOCs	250 ppm
Lead	400 ppm
Mercury	0.81 ppm
Zinc	1000 ppm

Soil and materials management on-Site and off-Site, including excavation, handling and disposal, will be conducted in accordance with the Soil/Materials Management Plan in Appendix 4. Discrete contaminant sources (such as hotspots) identified during the remedial action will be identified by GPS or surveyed. This information will be provided in the Remedial Action Report.

Soil/Fill Excavation and Removal

The area in the building footprint will be excavated to a depth of approximately five feet for development purposes. Two elevator pits will extend into the shallow bedrock. The total quantity of soil/fill expected to be excavated and disposed off-Site is 4,000 tons. For each disposal facility to be used in the remedial action, a letter from the developer/QEP to the receiving facility requesting approval for disposal and a letter back to the developer/QEP

providing approval for disposal will be submitted to OER prior to any transport and disposal of soil at a facility.

The proposed disposal locations for Site-derived impacted materials are listed below. Additional disposal locations established at a later date will be reported promptly to the OER Project Manager.
Disposal facilities will be reported to OER when they are identified and prior to the start of remedial action.

End-point Sampling

End-point samples will be analyzed for compounds and elements as described below utilizing the following methodology:

- Volatile organic compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270;
- Target Analyte List metals; and
- Pesticides/PCBs by EPA Method 8081/8082.

New York State ELAP certified labs will be used for all end-point sample analyses. Labs performing end-point sample analyses will be reported in the RAR. The RAR will provide a tabular and map summary of all end-point sample results and will include all data including non-detects and applicable standards and/or guidance values.

Confirmation End-point Sampling

Removal actions for development purposes under this plan will be performed in conjunction with confirmation end-point soil sampling. Three confirmation samples will be collected from the base of the excavations. To evaluate attainment of 4 Site-specific SCOs , analytes will include those for which SCOs have been developed, according to analytical methods described above. Samples will be analyzed for VOCs, SVOCs, pesticides, and metals according to analytical methods described above.

Hotspot End-point Sampling

End-point samples will be collected from the sidewalls and base of excavation at the two hotspot locations identified during the RI, according to the procedure listed below. The hotspots are located on the eastern side of the Site near West Farms Road, in the area of boring SB-5 and SB-12 and further north in the area of SB-9. In this area, inorganic constituents and multiple SVOCs were detected above Restricted Residential SCO's in soil that is not anticipated to be excavated for development purposes. Samples will be collected at the base of the hotspot, six feet below grade along with four sidewall samples at each location. End-point samples will be analyzed for SCO trigger parameters.

For any hotspots identified during this remedial program, including any hotspots identified during the remedial action, hotspot removal actions will be performed to ensure that hotspots are fully removed and end-point samples will be collected at the following frequency:

1. For excavations less than 20 feet in total perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.
2. For excavations 20 to 300 feet in perimeter:
    - For surface removals, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
    - For subsurface removals, one sample from each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
3. For sampling of volatile organics, bottom samples should be taken within 24 hours of excavation, and should be taken from the zero to six-inch interval at the excavation floor. Samples taken after 24 hours should be taken at six to twelve inches.
4. For contaminated soil removal, post remediation soil samples for laboratory analysis should be taken immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples will be taken pursuant to bullets 1-3 above.

Post-remediation end-point sample locations and depth are proposed to be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during

the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-remediation samples should be biased toward locations and depths of the highest expected contamination.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and "finger print analysis" and required regulatory reporting (i.e. spills hotline) will be performed.

Quality Assurance/Quality Control

QA/QC procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures will be used (1) to document that samples are representative of actual conditions at the Site and (2) identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process. QA/QC samples (field and trip blanks, duplicates, etc.) will be collected and analyzed at an ELAP-certified laboratory.

One blind duplicate sample for every 20 samples collected will be submitted to the approved laboratory for analysis of the same parameters. Trip blanks will be used whenever samples are transported to the laboratory for analysis of VOCs. One trip blank will be submitted to the laboratory with each shipment of soil samples. Trip blanks will not be used for samples to be analyzed for metals, SVOCs or pesticides.

Collected samples will be appropriately packaged, placed in coolers and shipped via overnight courier or delivered directly to the analytical laboratory by field personnel. Samples will be containerized in appropriate laboratory provided glassware and shipped in plastic coolers. Samples will be preserved through the use of ice or "cold-paks" to maintain a temperature of 4oC.

Dedicated disposable sampling materials will be used for the collection endpoint samples, eliminating the need to prepare field equipment (rinsate) blanks. However, if non-disposable equipment is used, (stainless steel scoop, etc.) field rinsate blanks will be prepared at the rate of 1 for every eight samples collected. Decontamination of non-dedicated sampling equipment will consist of the following:

- Gently tap or scrape to remove adhered soil
- Rinse with tap water
- Wash with alconox® detergent solution and scrub
- Rinse with tap water
- Rinse with distilled or deionized water

Field blanks will be prepared by pouring distilled or deionized water over decontaminated equipment and collecting the water in laboratory provided containers.

Import of Soils

Import of soils onto the property will be performed in conformance with the Soil/Materials Management Plan in Appendix 4. Imported soil will meet the lower of:

- Track 1 Unrestricted Use SCOs, and
- Groundwater Protection Standards in Part 375-6.8.

At this time it is not anticipated that soil will be imported to the property with the exception of the clean fill buffer.

Reuse of Onsite Soils

Soil reuse is not planned on this project.

4.3 Engineering Controls

The remedial action will achieve Track 4 Site Specific Use SCOs and Engineering Controls are required. The following design elements incorporated into the project as part of the development will constitute engineering controls:

(1) Composite Cover System

(2) Soil Vapor Barrier System

Composite Cover System

Exposure to residual soil/fill will be prevented by an engineered, composite cover system to be built on the Site. This composite cover system will be comprised of 5 inches5 or 6 of reinforced concrete slab underlain by 4 inches of clean sub-base material in building areas; 4 inches of asphalt pavement underlain by 4 inches of clean sub-base material in parking and sidewalk areas, and 2 feet of clean soil in open space areas. Figure 5 shows the proposed layout for each remedial cover type used on this Site.

The composite cover system will be a permanent engineering control. The system will be inspected and its performance certified at specified intervals as required by this RAWP and the Site Management Plan. A Soil and Materials Management Plan will be included in the Site Management Plan and will outline the procedures to be followed in the event that the composite cover system and underlying residual soil/fill is disturbed after the remedial action is complete. Maintenance of this composite cover system will be described in the Site Management Plan in the Remedial Action Report.

Vapor Barrier System

Migration of soil vapor from onsite or offsite sources into the building will be mitigated with a combination of building slab and vapor barrier. The vapor barrier will consist Raven Industries' VaporBlock® Plus™ 20-mil, or approved equal.. The vapor barrier will extend throughout the area occupied by the footprint of the new building and up the foundation sidewalls and will be installed in accordance with manufacturer specifications.

Product specification sheets are provided in Appendix 6. The Remedial Action Report will include as-built drawings and diagrams; manufacturer documentation; and photographs.
The Remedial Action Report will include a PE-certified letter (on company letterhead) from the primary contractor responsible for installation oversight and field inspections and a copy of the manufacturer’s certificate of warranty.

The vapor barrier system is a permanent engineering control and will be inspected and its performance certified at specified intervals as required by this RAWP and the Site Management Plan. A Soil and Materials Management Plan will be included in the Site Management Plan and will outline the procedures to be followed in the event that the composite cover system and underlying vapor barrier system is disturbed after the remedial action is complete. Maintenance of these systems will be described in the Site Management Plan in the Remedial Action Report.

4.4 Institutional Controls

A series of Institutional Controls (ICs) are required under this Remedial Action to assure permanent protection of public health by elimination of exposure to residual materials. These ICs define the program to operate, maintain, inspect and certify the performance of Engineering Controls and Institutional Controls on this property. Institutional Controls would be implemented in accordance with a Site Management Plan included in the final Remedial Action Report (RAR). Institutional Controls would be:

- Continued registration of the E-Designation for the property. This RAWP includes a description of all ECs and ICs and summarizes the requirements of the SMP which will note that the property owner and property owner's successors and assigns must comply with the approved SMP;
- Vegetable gardens and farming on the Site are prohibited in contact with residual soil materials;
- Use of groundwater underlying the Site is prohibited without treatment rendering it safe for its intended use;
- All future activities on the Site that will disturb residual material must be conducted pursuant to the soil management provisions in an approved SMP;
- The Site will be used for residential purposes and will not be used for a higher level of use without prior approval by OER.

4.5 Site Management Plan

A Track 4 remedial action is proposed and Site Management is required. Site Management will be required and will be the last phase of remediation. Site Management will begin with the

approval of the Remedial Action Report and issuance of the Notice of Completion (NOC) for the Remedial Action. The Site Management Plan (SMP) describes appropriate methods and procedures to ensure implementation of all ECs and ICs that are required by this RAWP. The Site Management Plan is submitted as part of the RAR but will be written in a manner that allows its use as an independent document. Site Management continues until terminated in writing by OER. The property owner is responsible to ensure that all Site Management responsibilities defined in the Site Management Plan are implemented.

The SMP will provide a detailed description of the procedures required to manage residual soil/fill left in place following completion of the remedial action in accordance with the Voluntary Cleanup Agreement with OER. This includes a plan for: (1) implementation of ECs and ICs; (2) operation and maintenance of ECs; (3) inspection and certification of ICs and ECs. Site management activities and EC/IC certification will be scheduled by OER on a periodic basis to be established in the RAR and the SMP and will be subject to review and modification by OER. The Site Management Plan will be based on a calendar year and certification reports will be due for submission to OER by July 30 of the year following the reporting period.

4.6 Qualitative Human Health Exposure Assessment

The objective of the qualitative exposure assessment is to identify potential receptors and pathways for human exposure to the contaminants of concern (COC) that are present at, or migrating from, the Site. The identification of exposure pathways describes the route that the COC takes to travel from the source to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur.

Data and information reported in the Remedial Investigation Report (RIR) are sufficient to complete a Qualitative Human Health Exposure Assessment (QHHEA) for this project. As part of the VCP process, a QHHEA was performed to determine whether the Site poses an existing or future health hazard to the Site's exposed or potentially exposed population. The sampling data from the RI were evaluated to determine whether there is any health risk under current and future conditions by characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. This QHHEA was prepared in accordance with Appendix 3B and

Section 3.3 (b) 8 of the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation.

Known and Potential Contaminant Sources

Based upon the Phase I Environmental Site Assessment performed on the Property in November 2013 by Equity Environmental Engineering and the property inspection, the following Areas of Concern (AOCs) have been identified.

- The storage of "auto junk" on a portion of the property could cause the discharge of various fluids which could lead to the contamination of the subject property.
- The use of the property (and adjacent property) as an auto body shop could have caused contamination of the subject property.
- The subject property has multiple "E" designations, one of which is for hazardous materials which requires following the Phase I Environmental Site Assessment (ESA) and Phase II Site Investigation (SI) protocol and appropriate remediation if necessary.
- Vapor encroachment issues could not be ruled out.

Based on the results of the RIR, the contaminants of concern are:

<u>Soil</u>

Soil/fill samples collected during the RI revealed the presence of seven SVOCs above their respective Restricted Residential SCOs. Indeno(1,2,3-c,d) pyrene, benzo(a)anthracene,at ppb, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-c,d)pyrene were the compounds identified.

Two pesticides (4,4'-DDE and 4,4'-DDT) were detected at concentrations greater than Unrestricted Use SCOs, but less than Restricted Residential SCOs.

Metals were detected at cocnentrations greater than Unrestricted Use SCOs in all but five samples. Lead, Mercury and Zinc were identified in most of the detections; Silver was detected in one sample, and copper was detected in one. Lead was detected in all samples. Mercury was detected in all but two samples. Zinc was detected in all samples, and at concentrations greater

than Unrestricted Use SCOs in seven Samples. Only Lead and Mercury were found at cocnetrations greater than Restricted Residential SCOs.

Groundwater

Groundwater sampling and analyses revealed the presence of two VOCs at concentrations greater than NYS TOGS Standards. Methylene chloride was detected in all three samples and is a known laboratory contaminant. This compound was also detected in both the Field Blank and Trip Blank. Tetrachloroethene (PCE) was detected at 18 ppb in the monitoring well MW-3 sample; the standard for PCE is 5 ppb. Additionally, several metals were detected at cocentrations excess of NYS TOGS Standards.

Soil Vapor

Soil vapor samples collected and analyzed during the RI showed that no VOCs in soil vapor exceed the soil vapor Intrusion guidance values set by the NYSDOH. Chlorinated VOCs were detected in the soil vapor at the site, but at relatively low levels. Petroleum-related VOCs were detected at moderate levels in soil vapor throughout the site. According to the NYSDOH standard, mitigation is not required at the site based upon the VOC concentrations in soil vapor.

Nature, Extent, Fate and Transport of Contaminants

Soil

All contaminants of concern were detected in shallow soils. No parameters were found at concentrations greater than Track 1 Unrestricted Use SCOs samples collected from a depth of greater than 5 feet.. Contaminants identified in the shallow soils do not appear to be migrating to groundwater or volatizing into soil vapor. The main contaminants of concern are SVOCs and Metals. Two pesticides were also identified in shallow soils at concentrations greater than Track 1 Unrestricted Use SCOs, but less than Track 4 Restricted Residential SCOs. The contaminants were found in two samples.

Groundwater

One VOC and several metals were detected in shallow groundwater beneath the Site. Tetrachloroethene was detected in the monitoring well MW-3 sample. Methylene Chloride was detected in all samples, but is a commonly lab contaminant and was also detected in both the field blank and trip blank. Contaminants do not appear to be migrating off-site from an on-site source.

Soil Vapor

No NYSDOH Matrix contaminants (TCE, PCE, TCA, carbon tetrachloride) were detected above therespective matrix guidance values. Petroleum related VOCs were detected at relatively moderate levels.

Receptor Populations

On-Site Receptors: The site is currently utilized as an office space and for construction equipment storage. Onsite receptors are limited to office workers visitors granted access to the property. During construction, potential on-site receptors include construction workers, site representatives, and visitors. Under proposed future conditions, potential on-site receptors include adult and child building residents, workers and visitors.

Off-Site Receptors: Potential off-site receptors within a 500 foot radius of the Site include adult and child residents; commercial and construction workers; pedestrians; and trespassers based on the following land uses within 500 feet of the Site:

1. Commercial Businesses – existing and future
2. Residential Buildings – existing and future
3. Building Construction/ Renovation – existing and future
4. Pedestrians, Trespassers, Cyclists – existing and future
5. Schools – existing and future

Potential Routes of Exposure

Three potential primary routes exist by which chemicals can enter the body: ingestion, inhalation, and dermal absorption. Exposure can occur based on the following potential media:

- Ingestion of groundwater or fill/ soil;

- Inhalation of vapors or particulates; and
- Dermal absorption of groundwater or fill/ soil.

Potential Exposure Points

Current Conditions: The site is currently used as an office space and contains open areas used for storage. Potential exposures exist through ingestion, inhalation, and dermal absorption of soil. There is no exposure togroundwater at the site. The site is served by the public water supply. Groundwater is not used at the site for potable supply and there is no exposure pathway. Because the site is currently undeveloped, there is no potential for soil vapor to accumulate on site. There is a structure on the site utilized as an office space. VOCs in soil vapor were found at relatively low levels. No VOCs were found in excess of the NYSDOH soil vapor intrusion matrices. Therefore, there is not expected to be a high potential for soil vapor intrusion at the Site.

Construction/ Remediation Conditions: During the remedial action, onsite workers will come into direct contact with surface and subsurface soils as a result of on-Site construction and excavation activities. On-Site construction workers potentially could ingest, inhale or have dermal contact with exposed impacted soil and fill. Similarly, off-Site receptors could be exposed to dust and vapors from on-Site activities. Due to the depth of groundwater, direct contact with groundwater is not expected. During construction, on-Site and off-Site exposures to contaminated dust from on-Site will be addressed through the Soil/Materials Management Plan, dust controls, and through the implementation of the Community Air-Monitoring Program and a Construction Health and Safety Plan.

Proposed Future Conditions: Under future remediated conditions, all soils in excess of Track 1 SCOs will be removed. The site will be fully capped, preventing potential direct exposure to soil and groundwater remaining in place, and engineering controls (vapor barrier) will prevent any potential exposure due to inhalation by preventing soil vapor intrusion. The site is served by the public water supply, and groundwater is not used at the site. There are no plausible off-site pathways for oral, inhalation, or dermal exposure to contaminants derived from the site.

Overall Human Health Exposure Assessment

There are potential complete exposure pathways that require mitigation during implementation of the remedy. There are no complete exposure pathways under future conditions after the site is developed. This assessment takes into consideration the reasonably anticipated use of the site, which includes a residential structure, site-wide surface cover, and a subsurface vapor barrier system for the building. Under current conditions, on-site exposure pathways exist for those with access to the Site and trespassers. During remedial construction, on-Site and off-Site exposures to contaminated dust from historic fill material will be addressed through dust controls, and through the implementation of the Community Air Monitoring Program, the Soil/Materials Management Plan, and a Construction Health and Safety Plan. Potential post-construction use of groundwater is not considered an option because groundwater in this area of New York City is not used as a potable water source. There are no surface waters in close proximity to the Site that could be impacted or threatened.

5.0 Remedial Action Management

5.1 Project Organization and Oversight

Principal personnel who will participate in the remedial action include the Project Manager, Victoria Whelan, and the Site Safety Officer, William Fitchett. The Professional Engineer (PE) and Qualified Environmental Professionals (QEP) for this project are Nicholas Andrianas and Victoria Whelan, respectively.

5.2 Site Security

Site access will be controlled by a gated fence.

5.3 Work Hours

The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. The hours of operation will be conveyed to OER during the pre-construction meeting.

5.4 Construction Health and Safety Plan

The Health and Safety Plan is included in Appendix 5. The Site Safety Coordinator will be William Fitchett. Remedial work performed under this RAWP will be in full compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the HASP and applicable laws and regulations. The HASP pertains to remedial and invasive work performed at the Site until the issuance of the Notice of Completion.

All field personnel involved in remedial activities will participate in training required under 29 CFR 1910.120, such as 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining workers training records.
Personnel entering any exclusion zone will be trained in the provisions of the HASP and will comply with all requirements of 29 CFR 1910.120. Site-specific training will be provided to field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a log book or specific form.
An emergency contact sheet with names and phone numbers is included in the CHASP. That document will define the specific project contacts for use in case of emergency.

5.5 Community Air Monitoring Plan

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedences of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the OER Project Manager and included in the Daily Report.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume

provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for OER personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

5.6 Agency Approvals

All permits or government approvals required for remedial construction have been or will be obtained prior to the start of remedial construction. Approval of this RAWP by OER does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

5.7 Site Preparation

Pre-Construction Meeting

OER will be invited to attend the pre-construction meeting at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

Mobilization

Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

Utility Marker Layouts, Easement Layouts

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. All invasive activities will be performed incompliance with applicable laws and regulations including NYC Building Code to assure safety. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Mark-Out Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAWP. The integrity and safety of on-Site and off-Site structures will be maintained during all invasive, excavation or other remedial activity performed under the RAWP.

Dewatering

Dewatering is not anticipated during remediation and construction.

Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations.

Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the site will not track soil, fill or debris off-Site. Such actions may include use of cleaned asphalt or concrete pads or use of stone or other aggregate-based egress paths between the truck inspection station and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

Truck Inspection Station

An outbound-truck inspection station will be set up close to the Site exit. Before exiting the Site, trucks will be required to stop at the truck inspection station and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. Soil and debris will be removed. Brooms, shovels and clean water will be utilized for the removal of soil from vehicles and equipment, as necessary.

Extreme Storm Preparedness and Response Contingency Plan

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an

extreme storm event, the enrollee will undertake the following steps for site preparedness prior to the event and response after the event.

Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the property; loose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from excavated areas, trenches and depressions on the property to high ground or removed from the property; an inventory of the property with photographs will be performed to establish conditions for the site and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the property; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, hay bales; clean storm sewer filters and traps; and secure and protect pumps and hosing.

Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the property, a complete inspection of the property will be performed. A site inspection report will be submitted to OER at the completion of site inspection and after the site security is assessed. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute public safety threats, such as downed power lines or imminent collapse of buildings, structures or equipment will be reported to public safety authorities via appropriate means such as calling 911. Petroleum spills will be reported to NYS DEC within 2 hours of identification and consistent with State regulations. Emergency and spill conditions will also be reported to OER. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed. Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will be collected and appropriately managed.

Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Stormwater control systems and structures will be inspected and maintained as necessary. If soil or fill materials are discharged off site to adjacent properties, property owners and OER will be notified and corrective measure plan designed to remove and clean dislocated material will be submitted to OER and implemented following approval by OER and granting of site access by the property owner. Impacted offsite areas may require characterization based on site conditions, at the discretion of OER. If onsite petroleum spills are identified, a qualified environmental professional will determine the nature and extent of the spill and report to NYS DEC's spill hotline at DEC 800-457-7362 within statutory defined timelines. If the source of the spill is ongoing and can be identified, it should be stopped if this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYS DEC.

Storm Response Reporting

A site inspection report will be submitted to OER at the completion of site inspection. An inspection report established by OER is available on OER's website (www.nyc.gov/oer) and will be used for this purpose. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. The site inspection report will be sent to the OER project manager and will include the site name, address, tax block and lot, site primary and alternate contact name and phone number. Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from the site was dislocated and whether any of the soil left the site; estimates of the volume of soil that left the site, nature of impact, and photographs; description of erosion damage; description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of onsite or offsite exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting to NYS DEC; description of corrective actions; schedule for corrective actions. This report should be completed and submitted to OER project manager with photographs within 24 hours of the time of safe entry to the property after the storm event.

5.8 Traffic Control

Drivers of trucks leaving the Site with soil/fill will be instructed to proceed without stopping in the vicinity of the Site to prevent neighborhood impacts. The planned route on local roads for trucks leaving the site is utilizing the Cross-Bronx Expressway, the major neighboring throroughfare, shown on Figure 7.

5.9 Demobilization

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);
- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination, and;
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (e.g., soil excavators) will be washed at the truck inspection station as necessary. In addition, all investigation and remediation derived waste will be appropriately disposed.

5.10 Reporting and Record Keeping

Daily reports

Daily reports providing a general summary of activities for each day of active remedial work will be emailed to the OER Project Manager by the end of the following business day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of excavation and other remedial work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;

- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP results noting all excursions. CAMP data may be reported;
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the Remedial Action Report.

An alpha-numeric site map will be used to identify locations described in reports submitted to OER and is shown in Figure 10.

Record Keeping and Photo Documentation

Job-site record keeping for all remedial work will be performed. These records will be maintained on-Site during the project and will be available for inspection by OER staff. Representative photographs will be taken of the Site prior to any remedial activities and during major remedial activities to illustrate remedial program elements and contaminant source areas. Photographs will be submitted at the completion of the project in the RAR in digital format (i.e. jpeg files).

5.11 Complaint Management

All complaints from citizens will be promptly reported to OER. Complaints will be addressed and outcomes will also be reported to OER in daily reports. Notices to OER will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

5.12 Deviations From The Remedial Action Work Plan

All changes to the RAWP will be reported to, and approved by, the OER Project Manager and will be documented in daily reports and reported in the Remedial Action Report. The process to be followed if there are any deviations from the RAWP will include a request for approval for the change from OER noting the following:

- Reasons for deviating from the approved RAWP;
- Effect of the deviations on overall remedy; and
- Determination with basis that the remedial action with the deviation(s) is protective of public health and the environment.

6.0 Remedial Action Report

A Remedial Action Report (RAR) will be submitted to OER following implementation of the remedial action defined in this RAWP. The RAR will document that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The RAR will include:

- Information required by this RAWP;
- Text description with thorough detail of all engineering and institutional controls (if Track 1 remedial action is not achieved)
- As-built drawings for all constructed remedial elements;
- Manifests for al soil or fill disposal;
- Photographic documentation of remedial work performed under this remedy;
- Site Management Plan (if Track 1 remedial action is not achieved);
- Description of any changes in the remedial action from the elements provided in this RAWP and associated design documents;
- Tabular summary of all end point sampling results (including all soil test results from the remedial investigation for soil that will remain on site) and all soil/fill waste characterization results, QA/QC results for end-point sampling, and other sampling and chemical analysis performed as part of the remedial action;
- Test results or other evidence demonstrating that remedial systems are functioning properly;

- Account of the source area locations and characteristics of all soil or fill material removed from the Site including a map showing the location of these excavations and hotspots, tanks or other contaminant source areas;
- Full accounting of the disposal destination of all contaminated material removed from the Site. Documentation associated with disposal of all material will include transportation and disposal records, and letters approving receipt of the material;
- Account of the origin and required chemical quality testing for material imported onto the Site;
- Continue registration of the property with an E-Designation by the NYC Department of Buildings (if Track 1 remedial action is not achieved);
- The RAWP and Remedial Investigation Report will be included as appendices to the RAR;
- Reports and supporting material will be submitted in digital form and final PDF's will include bookmarks for each appendix.

CERTIFICATION

I, Nicholas Andrianas, am currently a registered professional engineer licensed by the State of New York. I performed professional engineering services and had primary direct responsibility for designing the remedial program for the 1815 West Farms Road site, Site --16CVCP029X. I certify to the following:

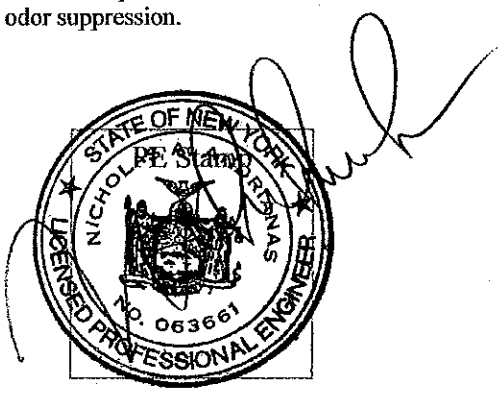
- I have reviewed this document and the Stipulation List, to which my signature and seal are affixed.
- Engineering Controls developed for this remedial action were designed by me or a person under my direct supervision and designed to achieve the goals established in this Remedial Action Work Plan for this site.
- The Engineering Controls to be constructed during this remedial action are accurately reflected in the text and drawings of the Remedial Action Work Plan and are of sufficient detail to enable proper construction.
- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Import of soil, fill and other material from off-site will be performed in accordance with applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Nicholas A. Andrianas, P.E.
Name

063661
PE License Number

Signature

12/12/15
Date



I, Victoria Whelan am a Qualified Environmental Professional. I will have primary direct responsibility for implementation of the remedial program for the 1815 West Farms Road site, 16CVCP029X. I certify to the following:

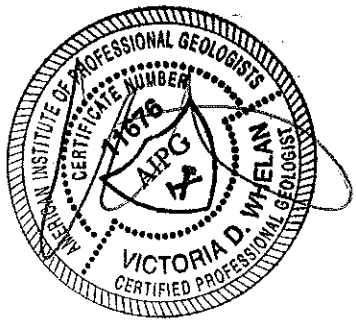
- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Import of all soil, fill and other material from off-site will be performed in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Victoria Whelan
QEP Name

QEP Signature

QEP# 09140003

12/14/15
Date

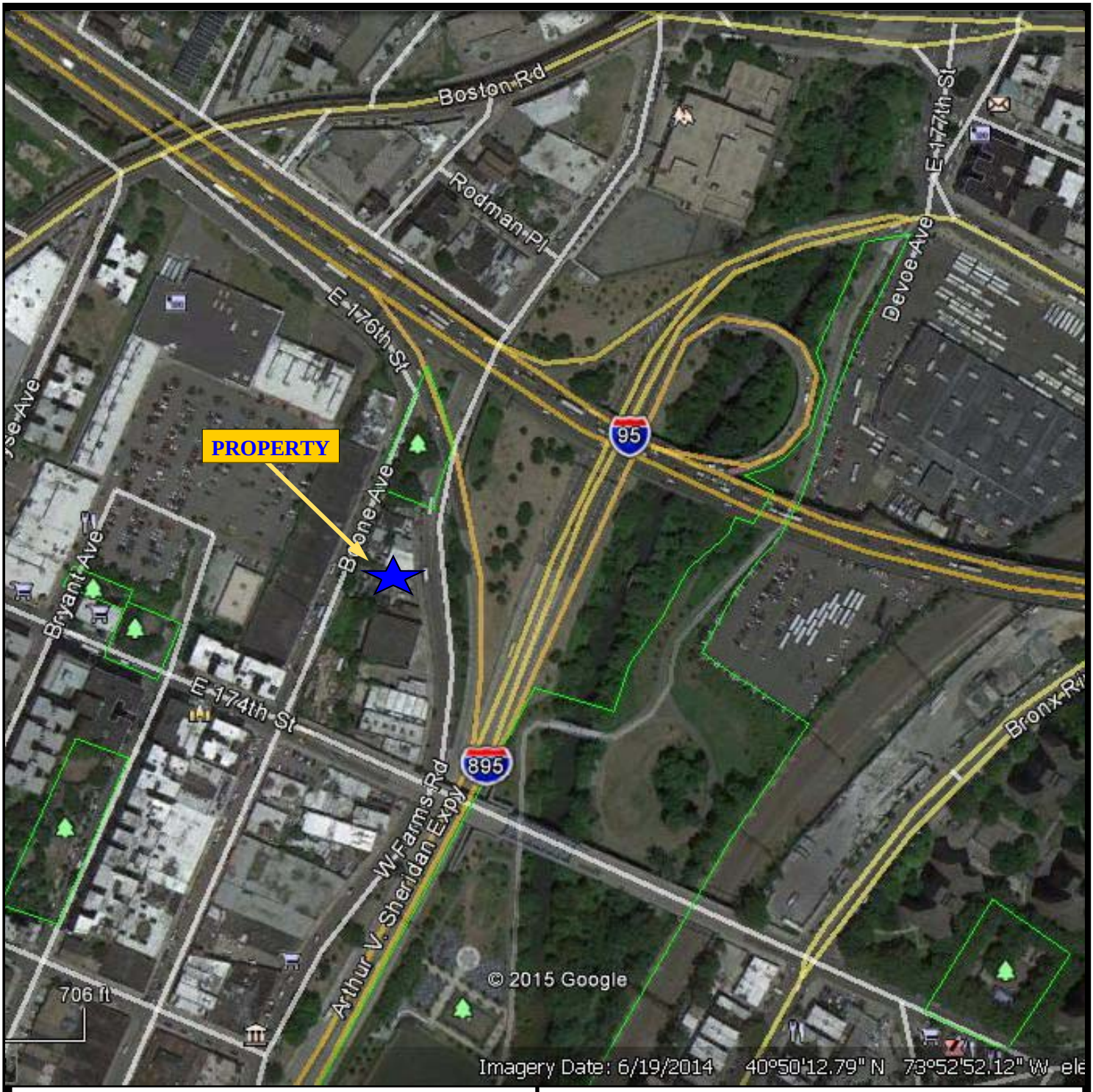


7.0 Schedule

The table below presents a schedule for the proposed remedial action and reporting. If the schedule for remediation and development activities changes, it will be updated and submitted to OER. Currently, a 18 month remediation period is anticipated.

Schedule Milestone	**Weeks from Remedial Action Start**	**Duration (weeks)**
OER Approval of RAWP	-	3
Fact Sheet 2 announcing start of remedy	3	3
Mobilization	TBD	TBD
Remedial Excavation	TBD	TBD
Demobilization	TBD	TBD
Record Declaration of Covenants and Restrictions	TBD	TBD
Submit Remedial Action Report	TBD	TBD

FIGURES

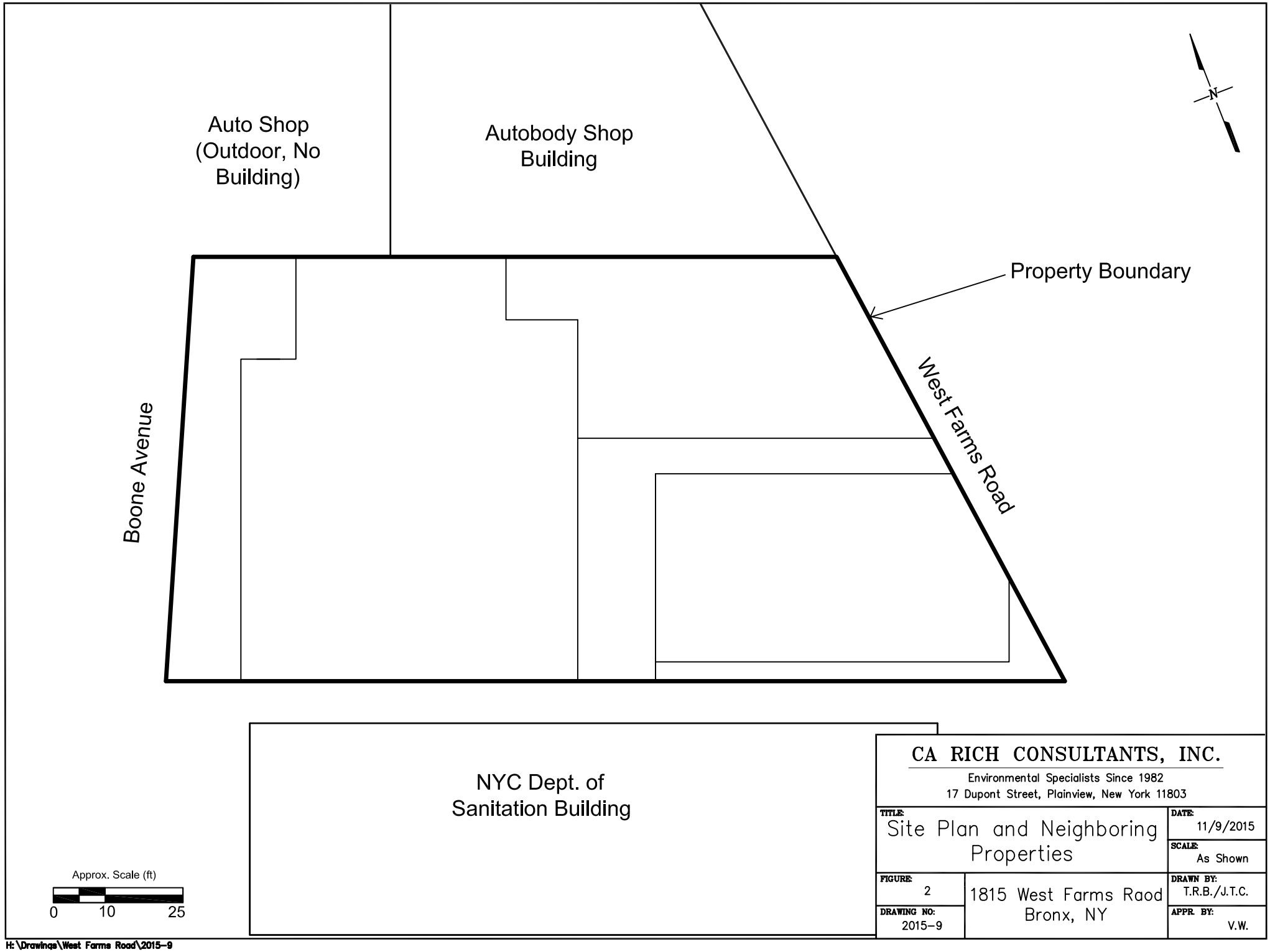


N

Adapted from Google Earth

CA RICH CONSULTANTS, INC.
17 Dupont Street,
Plainview, NY 11803

TITLE: **SITE LOCATION MAP**	*DATE:* **9/18/15**
	SCALE: **Not shown**
FIGURE: **1**	**1815 West Farms Road Bronx, NY**
DRAWING:	*DRAWN BY:* **WJF**
	APPR. BY: **VW**



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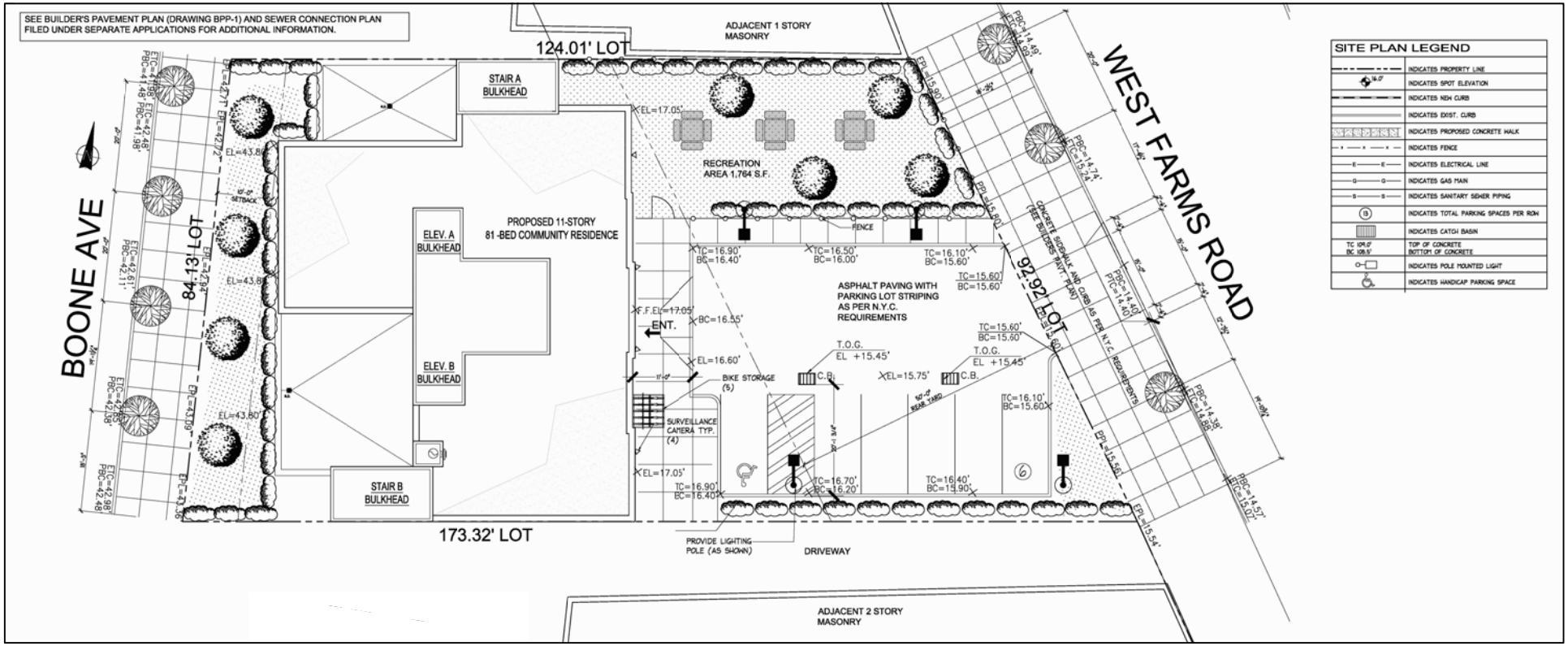
TITLE: Site Plan and Neighboring Properties		DATE: 11/9/2015
		SCALE: As Shown
FIGURE: 2	1815 West Farms Raod Bronx, NY	DRAWN BY: T.R.B./J.T.C.
DRAWING NO: 2015-9		APPR. BY: V.W.

H:\Drawings\West Farms Road\2015-9



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TITLE: Development Plans		DATE: 11/9/2015
		SCALE: As Shown
FIGURE: 3	1815 West Farms Road Bronx, NY	DRAWN BY: T.R.B./J.T.C.
DRAWING NO: 2015–14		APPR. BY: V.W.

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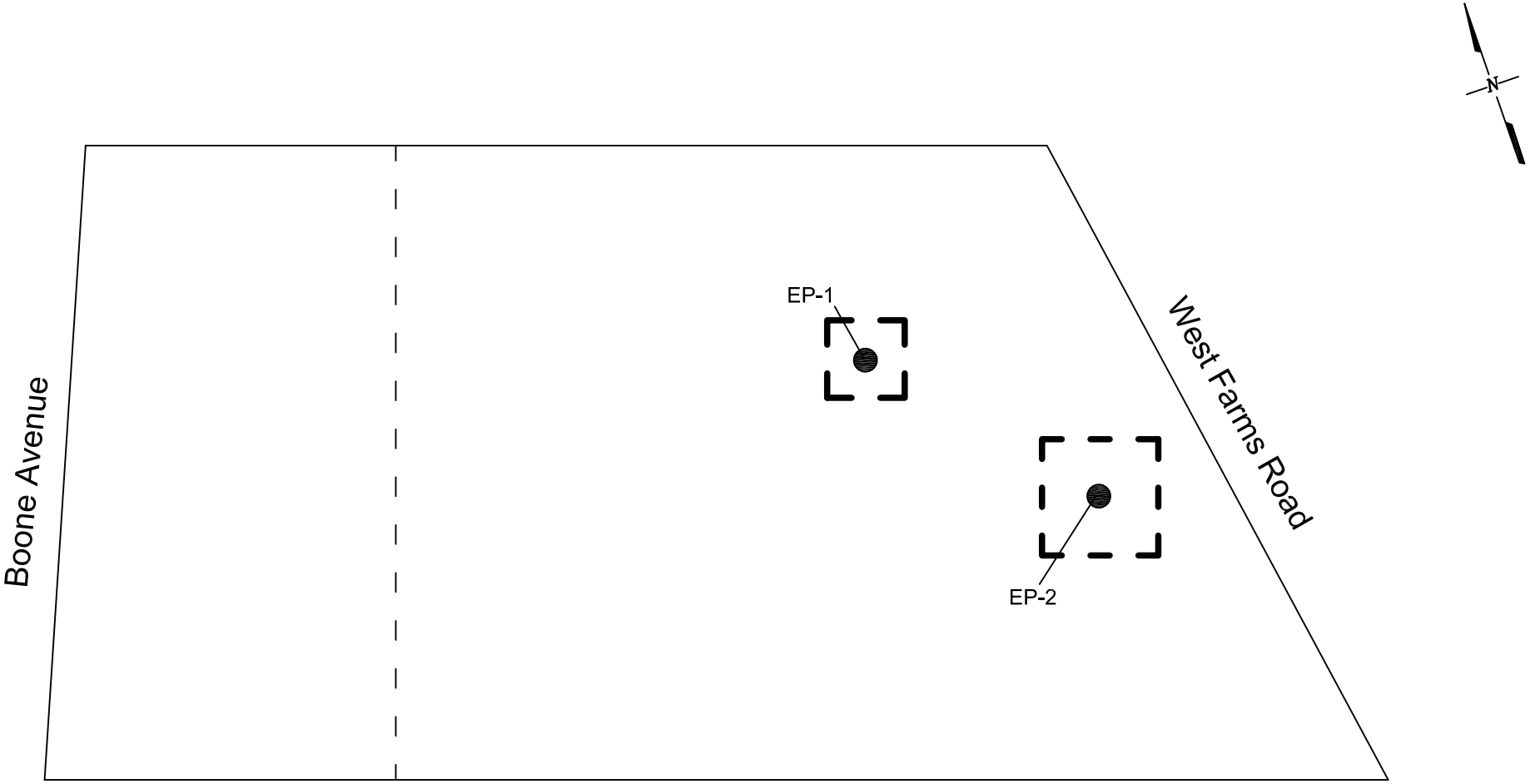

Legend

- Endpoint Sample Location (from 6 feet below grade)
- Hot Spot Location

Approx. Scale (ft)

0 10 25 50

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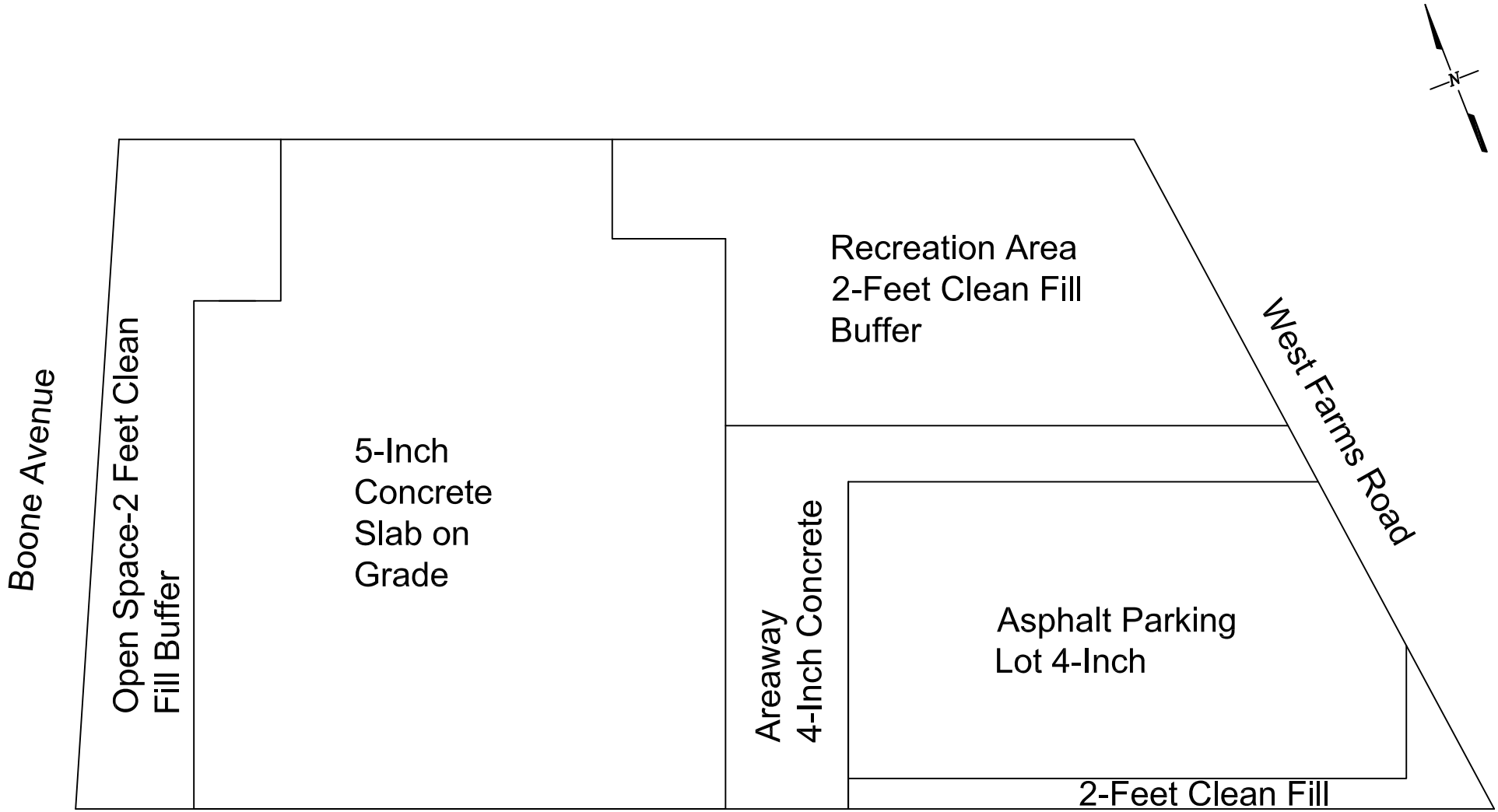
TITLE: Endpoint Sample Location Map		DATE: 11/9/2015
		SCALE: As Shown
FIGURE: 4	1815 West Farms Road Bronx, NY	DRAWN BY: T.R.B./J.T.C.
DRAWING NO: 2015-8		APPR. BY: V.W.

H:\Drawings\West Farms Road\2015-8



Approx. Scale (ft)

0 10 25

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TITLE: Site Wide Composite Cover System		DATE: 11/9/2015
		SCALE: As Shown
FIGURE: 5	1815 West Farms Raod Bronx, NY	DRAWN BY: T.R.B./J.T.C.
DRAWING NO: 2015-10		APPR. BY: V.W.

H:\Drawings\West Farms Road\2015-10

mapquest

Trip to:

Cross Bronx Expy W

Bronx, NY 10460

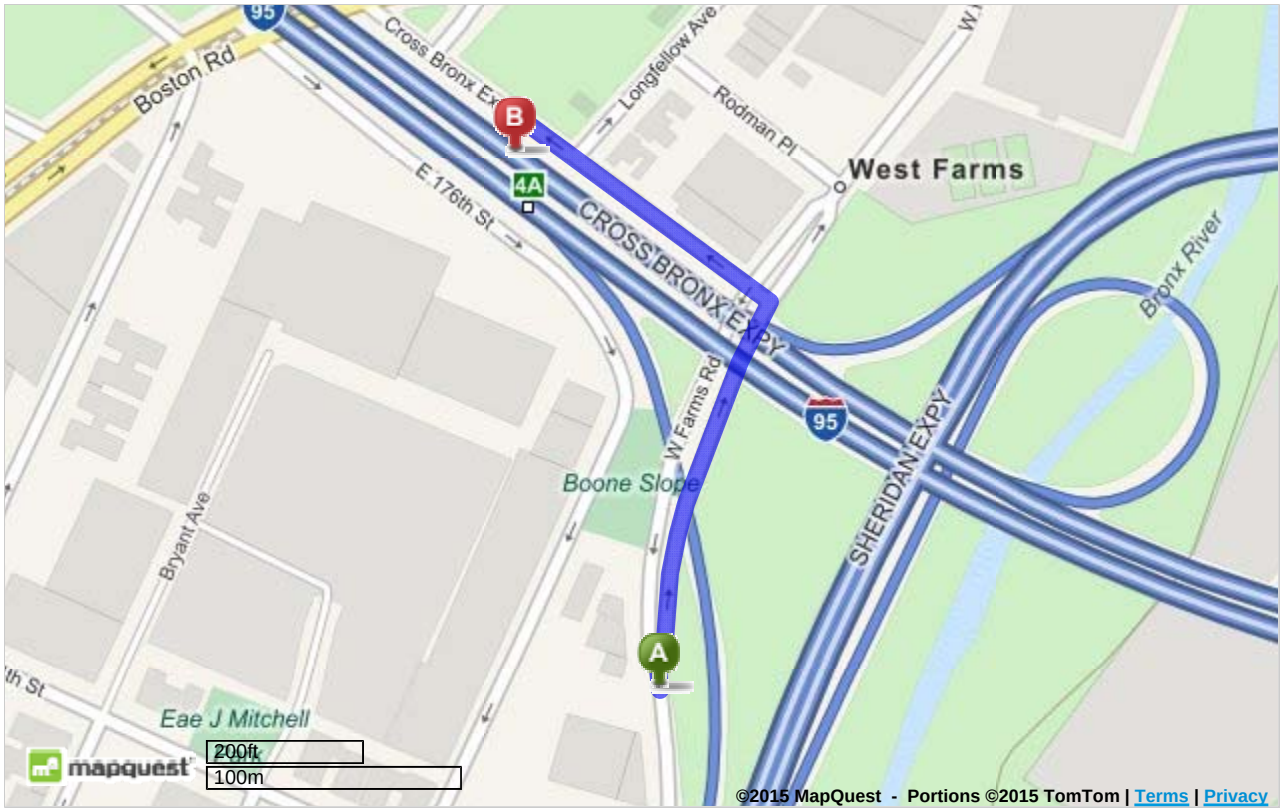
0.20 miles /

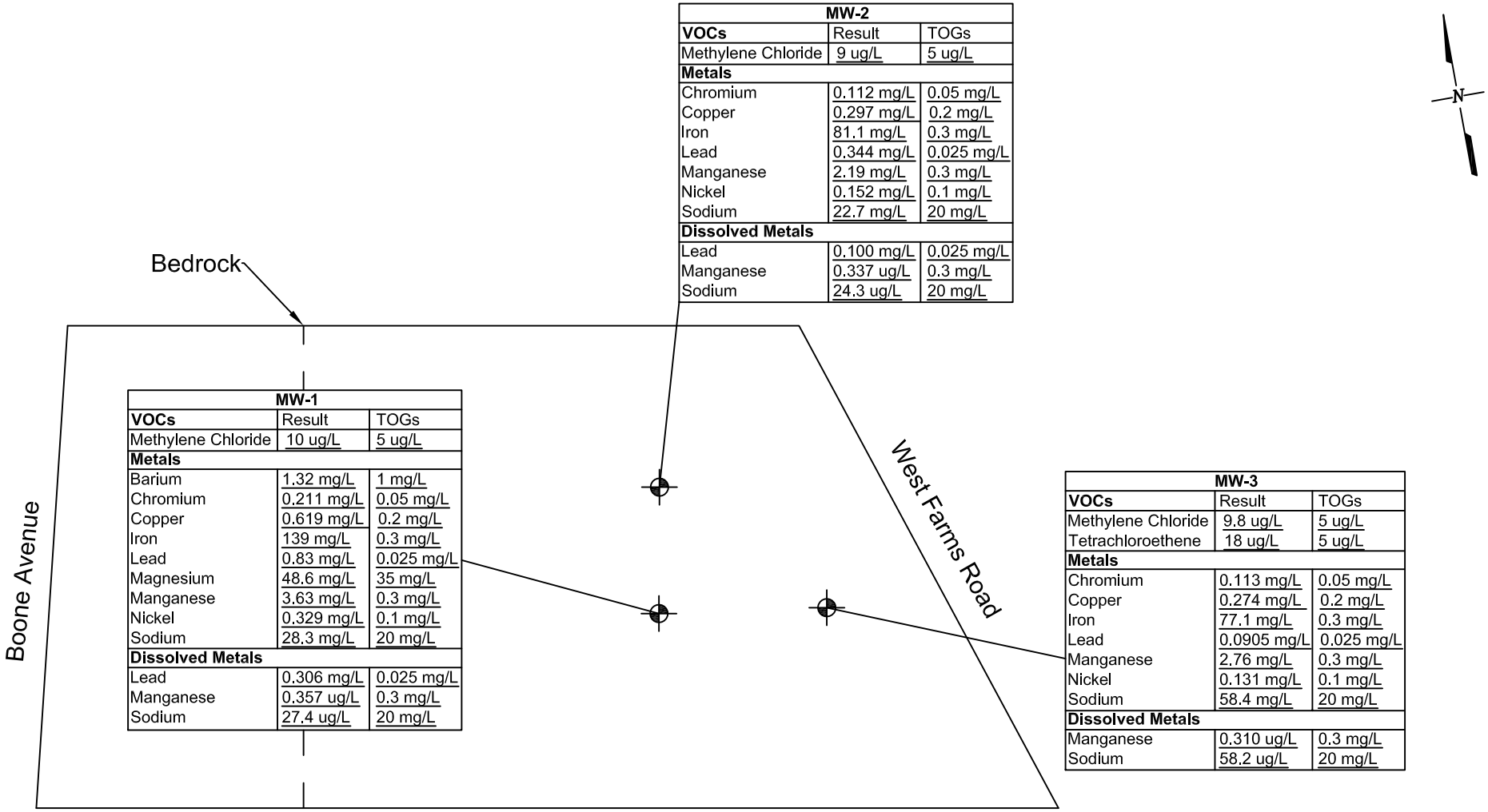
Notes

Figure 6

A	**1815 W Farms Rd**, Bronx, NY 10460-6026	**Download Free App**
	1. Start out going **north** on **W Farms Rd** toward **Cross Bronx Expy**. Map	**0.1 Mi** *0.1 Mi Total*
	2. Take the 1st **left** onto **Cross Bronx Expy**. Map *If you reach Rodman Pl you've gone a little too far*	**0.09 Mi** *0.2 Mi Total*
	3. **CROSS BRONX EXPY W**. Map *Your destination is just past Longfellow Ave* *If you reach Bryant Ave you've gone a little too far*	
B	**Cross Bronx Expy W**, Bronx, NY 1046040.838767, -73.882895 (Address is approximate)	

Total Travel Estimate: **0.20 miles - about**





MW-2		
VOCs	Result	TOGs
Methylene Chloride	9 ug/L	5 ug/L
Metals		
Chromium	0.112 mg/L	0.05 mg/L
Copper	0.297 mg/L	0.2 mg/L
Iron	81.1 mg/L	0.3 mg/L
Lead	0.344 mg/L	0.025 mg/L
Manganese	2.19 mg/L	0.3 mg/L
Nickel	0.152 mg/L	0.1 mg/L
Sodium	22.7 mg/L	20 mg/L
Dissolved Metals		
Lead	0.100 mg/L	0.025 mg/L
Manganese	0.337 ug/L	0.3 mg/L
Sodium	24.3 ug/L	20 mg/L

MW-1		
VOCs	Result	TOGs
Methylene Chloride	10 ug/L	5 ug/L
Metals		
Barium	1.32 mg/L	1 mg/L
Chromium	0.211 mg/L	0.05 mg/L
Copper	0.619 mg/L	0.2 mg/L
Iron	139 mg/L	0.3 mg/L
Lead	0.83 mg/L	0.025 mg/L
Magnesium	48.6 mg/L	35 mg/L
Manganese	3.63 mg/L	0.3 mg/L
Nickel	0.329 mg/L	0.1 mg/L
Sodium	28.3 mg/L	20 mg/L
Dissolved Metals		
Lead	0.306 mg/L	0.025 mg/L
Manganese	0.357 ug/L	0.3 mg/L
Sodium	27.4 ug/L	20 mg/L

MW-3		
VOCs	Result	TOGs
Methylene Chloride	9.8 ug/L	5 ug/L
Tetrachloroethene	18 ug/L	5 ug/L
Metals		
Chromium	0.113 mg/L	0.05 mg/L
Copper	0.274 mg/L	0.2 mg/L
Iron	77.1 mg/L	0.3 mg/L
Lead	0.0905 mg/L	0.025 mg/L
Manganese	2.76 mg/L	0.3 mg/L
Nickel	0.131 mg/L	0.1 mg/L
Sodium	58.4 mg/L	20 mg/L
Dissolved Metals		
Manganese	0.310 ug/L	0.3 mg/L
Sodium	58.2 ug/L	20 mg/L

Approx. Scale (ft)

0 10 25 50

Legend

Groundwater Monitoring Well

TOGs - NYSDEC Technical and Operational Guidance Series (1.1.1) Ambient water Quality Standards and Guidance Values and Groundwater Effluent Limitations June 1998

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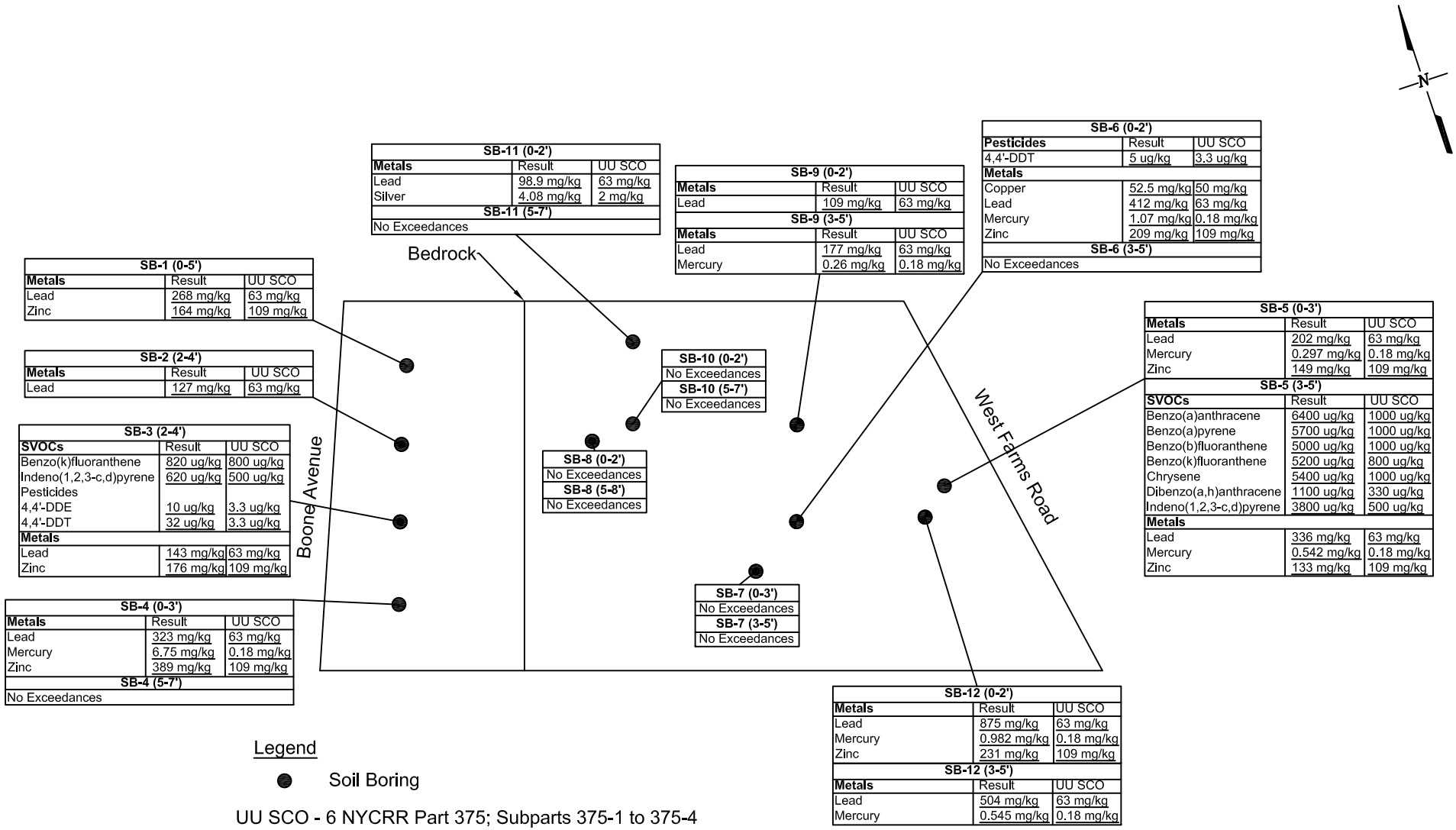
17 Dupont Street, Plainview, New York 11803

TITLE: Summary of Groundwater Exceedances over TOGS		DATE: 11/9/2015
		SCALE: As Shown
FIGURE: 7	1815 West Farms Road Bronx, NY	DRAWN BY: T.R.B./J.T.C.
DRAWING NO: 2015-11		APPR. BY: V.W.

H:\Drawings\West Farms Road\2015-11



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17 Dupont Street, Plainview, New York 11803

TITLE: Summary of Soil Exceedances over Unrestricted Use	DATE: 11/9/2015
	SCALE: As Shown
FIGURE: 8	DRAWN BY: T.R.B.
DRAWING NO: 2015-6	APPR. BY: V.W.
1815 West Farms Road Bronx, NY	

H:\Drawings\West Farms Road\2015-6

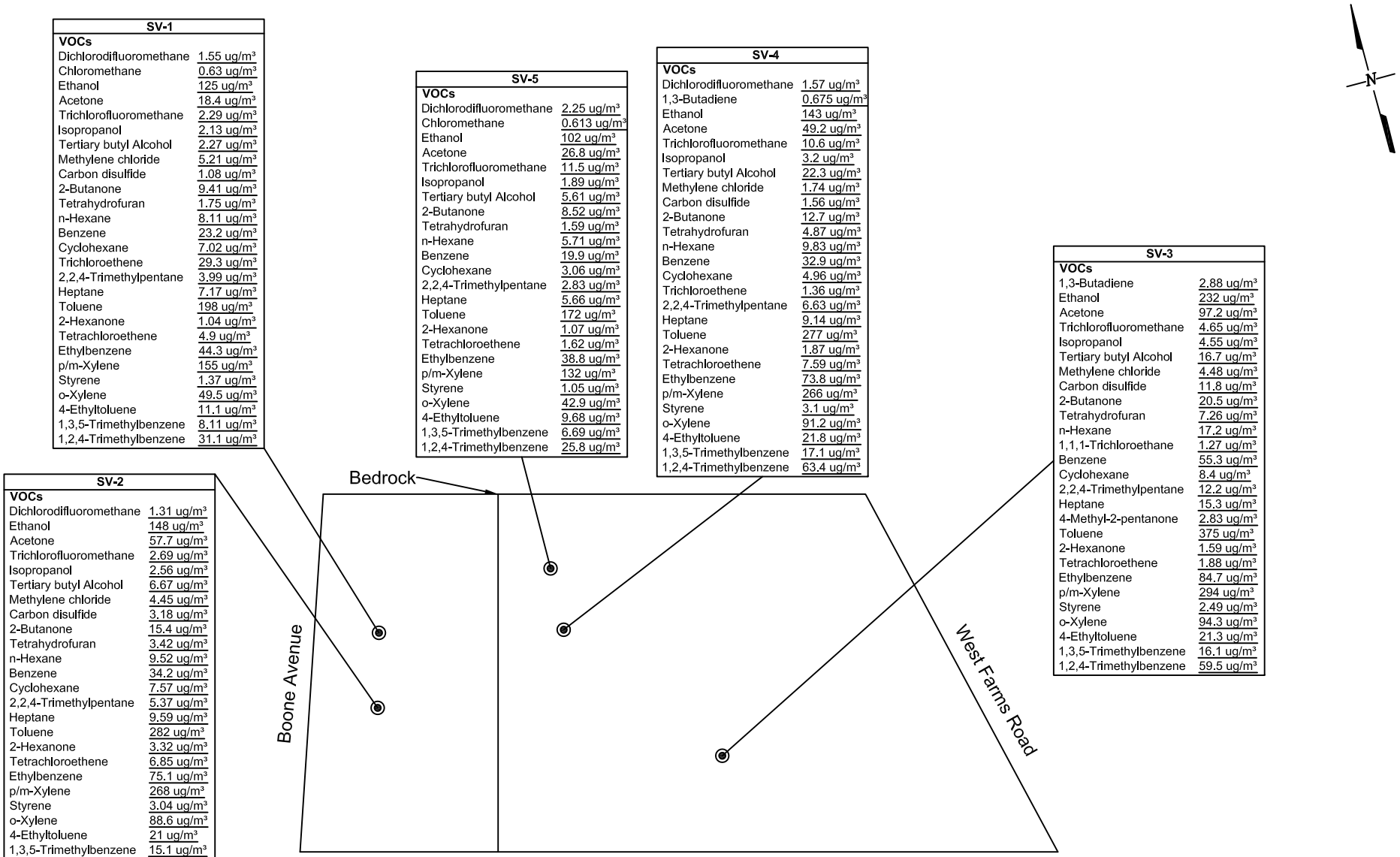
SV-1	
VOCs	
Dichlorodifluoromethane	1.55 ug/m³
Chloromethane	0.63 ug/m³
Ethanol	125 ug/m³
Acetone	18.4 ug/m³
Trichlorofluoromethane	2.29 ug/m³
Isopropanol	2.13 ug/m³
Tertiary butyl Alcohol	2.27 ug/m³
Methylene chloride	5.21 ug/m³
Carbon disulfide	1.08 ug/m³
2-Butanone	9.41 ug/m³
Tetrahydrofuran	1.75 ug/m³
n-Hexane	8.11 ug/m³
Benzene	23.2 ug/m³
Cyclohexane	7.02 ug/m³
Trichloroethene	29.3 ug/m³
2,2,4-Trimethylpentane	3.99 ug/m³
Heptane	7.17 ug/m³
Toluene	198 ug/m³
2-Hexanone	1.04 ug/m³
Tetrachloroethene	4.9 ug/m³
Ethylbenzene	44.3 ug/m³
p/m-Xylene	155 ug/m³
Styrene	1.37 ug/m³
o-Xylene	49.5 ug/m³
4-Ethyltoluene	11.1 ug/m³
1,3,5-Trimethylbenzene	8.11 ug/m³
1,2,4-Trimethylbenzene	31.1 ug/m³

SV-2	
VOCs	
Dichlorodifluoromethane	1.31 ug/m³
Ethanol	148 ug/m³
Acetone	57.7 ug/m³
Trichlorofluoromethane	2.69 ug/m³
Isopropanol	2.56 ug/m³
Tertiary butyl Alcohol	6.67 ug/m³
Methylene chloride	4.45 ug/m³
Carbon disulfide	3.18 ug/m³
2-Butanone	15.4 ug/m³
Tetrahydrofuran	3.42 ug/m³
n-Hexane	9.52 ug/m³
Benzene	34.2 ug/m³
Cyclohexane	7.57 ug/m³
2,2,4-Trimethylpentane	5.37 ug/m³
Heptane	9.59 ug/m³
Toluene	282 ug/m³
2-Hexanone	3.32 ug/m³
Tetrachloroethene	6.85 ug/m³
Ethylbenzene	75.1 ug/m³
p/m-Xylene	268 ug/m³
Styrene	3.04 ug/m³
o-Xylene	88.6 ug/m³
4-Ethyltoluene	21 ug/m³
1,3,5-Trimethylbenzene	15.1 ug/m³
1,2,4-Trimethylbenzene	56 ug/m³

SV-5	
VOCs	
Dichlorodifluoromethane	2.25 ug/m³
Chloromethane	0.613 ug/m³
Ethanol	102 ug/m³
Acetone	26.8 ug/m³
Trichlorofluoromethane	11.5 ug/m³
Isopropanol	1.89 ug/m³
Tertiary butyl Alcohol	5.61 ug/m³
2-Butanone	8.52 ug/m³
Tetrahydrofuran	1.59 ug/m³
n-Hexane	5.71 ug/m³
Benzene	19.9 ug/m³
Cyclohexane	3.06 ug/m³
2,2,4-Trimethylpentane	2.83 ug/m³
Heptane	5.66 ug/m³
Toluene	172 ug/m³
2-Hexanone	1.07 ug/m³
Tetrachloroethene	1.62 ug/m³
Ethylbenzene	38.8 ug/m³
p/m-Xylene	132 ug/m³
Styrene	1.05 ug/m³
o-Xylene	42.9 ug/m³
4-Ethyltoluene	9.68 ug/m³
1,3,5-Trimethylbenzene	6.69 ug/m³
1,2,4-Trimethylbenzene	25.8 ug/m³

SV-4	
VOCs	
Dichlorodifluoromethane	1.57 ug/m³
1,3-Butadiene	0.675 ug/m³
Ethanol	143 ug/m³
Acetone	49.2 ug/m³
Trichlorofluoromethane	10.6 ug/m³
Isopropanol	3.2 ug/m³
Tertiary butyl Alcohol	22.3 ug/m³
Methylene chloride	1.74 ug/m³
Carbon disulfide	1.56 ug/m³
2-Butanone	12.7 ug/m³
Tetrahydrofuran	4.87 ug/m³
n-Hexane	9.83 ug/m³
Benzene	32.9 ug/m³
Cyclohexane	4.96 ug/m³
Trichloroethene	1.36 ug/m³
2,2,4-Trimethylpentane	6.63 ug/m³
Heptane	9.14 ug/m³
Toluene	277 ug/m³
2-Hexanone	1.87 ug/m³
Tetrachloroethene	7.59 ug/m³
Ethylbenzene	73.8 ug/m³
p/m-Xylene	266 ug/m³
Styrene	3.1 ug/m³
o-Xylene	91.2 ug/m³
4-Ethyltoluene	21.8 ug/m³
1,3,5-Trimethylbenzene	17.1 ug/m³
1,2,4-Trimethylbenzene	63.4 ug/m³

SV-3	
VOCs	
1,3-Butadiene	2.88 ug/m³
Ethanol	232 ug/m³
Acetone	97.2 ug/m³
Trichlorofluoromethane	4.65 ug/m³
Isopropanol	4.55 ug/m³
Tertiary butyl Alcohol	16.7 ug/m³
Methylene chloride	4.48 ug/m³
Carbon disulfide	11.8 ug/m³
2-Butanone	20.5 ug/m³
Tetrahydrofuran	7.26 ug/m³
n-Hexane	17.2 ug/m³
1,1,1-Trichloroethane	1.27 ug/m³
Benzene	55.3 ug/m³
Cyclohexane	8.4 ug/m³
2,2,4-Trimethylpentane	12.2 ug/m³
Heptane	15.3 ug/m³
4-Methyl-2-pentanone	2.83 ug/m³
Toluene	375 ug/m³
2-Hexanone	1.59 ug/m³
Tetrachloroethene	1.88 ug/m³
Ethylbenzene	84.7 ug/m³
p/m-Xylene	294 ug/m³
Styrene	2.49 ug/m³
o-Xylene	94.3 ug/m³
4-Ethyltoluene	21.3 ug/m³
1,3,5-Trimethylbenzene	16.1 ug/m³
1,2,4-Trimethylbenzene	59.5 ug/m³



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17 Dupont Street, Plainview, New York 11803

TITLE: Summary of Detections in Soil Vapor		DATE: 11/9/2015
		SCALE: As Shown
FIGURE: 9	1815 West Farms Road Bronx, NY	DRAWN BY: T.R.B./J.T.C.
DRAWING NO: 2015-13		APPR. BY: V.W.

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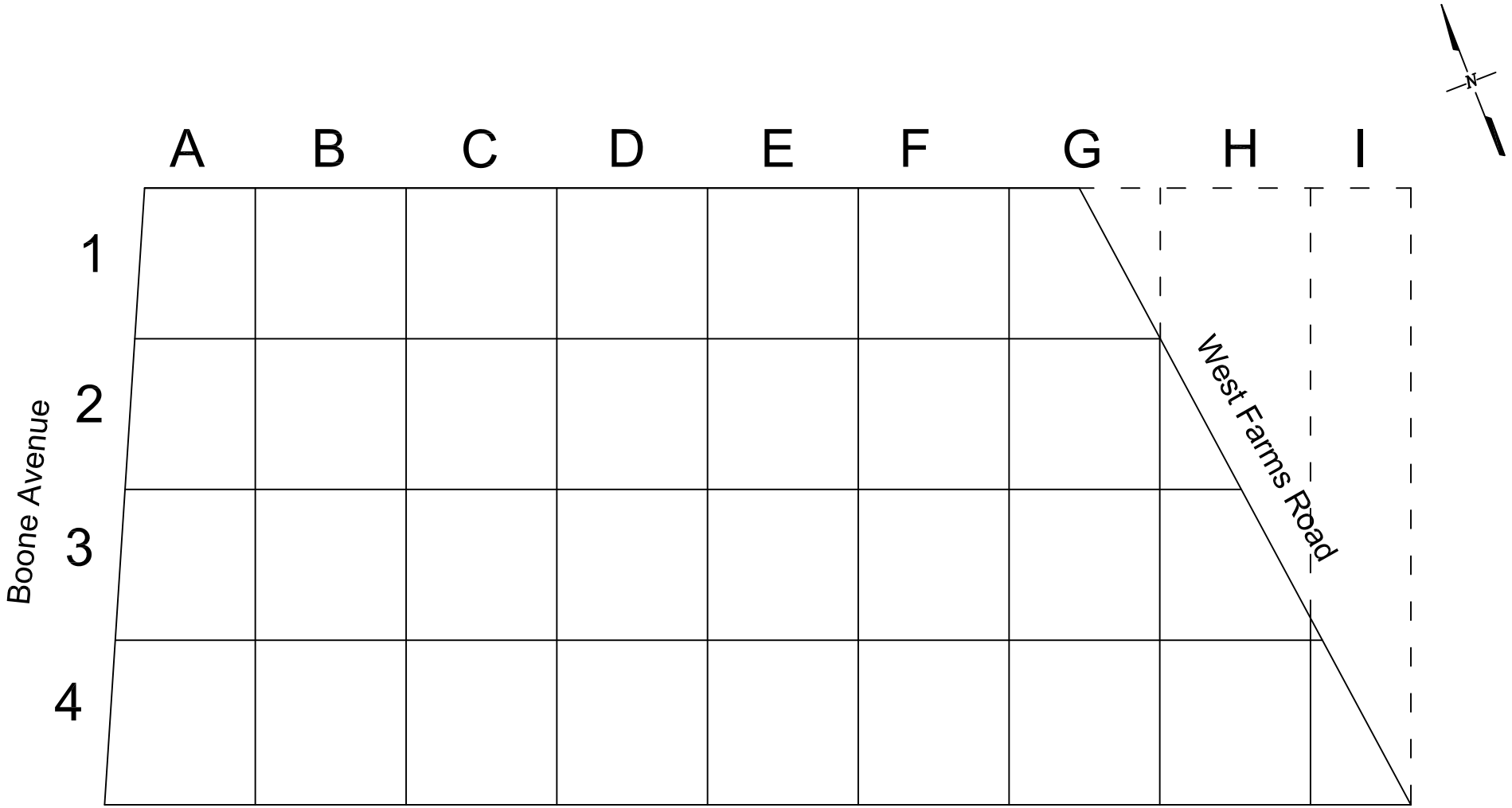

Boxes are approximately 20ft x 20ft

Approx. Scale (ft)

0 10 25

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17 Dupont Street, Plainview, New York 11803

TITLE: Alphanumeric Grid		DATE: 11/9/2015
		SCALE: As Shown
FIGURE: 10	1815 West Farms Raod Bronx, NY	DRAWN BY: T.R.B./J.T.C.
DRAWING NO: 2015-15		APPR. BY: V.W.

H:\Drawings\West Farms Road\2015-15

TABLES

Table 1
Summary of Volatile Organic Compounds in Groundwater
1815 West Farms Road
Bronx, NY

	Sample ID:		MW-1	MW-2	MW-3	Field Blank	Trip Blank
	Sampling Date:		9/14/2015	9/14/2015	9/14/2015	9/14/2015	9/14/2015
VOCs	TOGS	Units	Q	Q	Q	Q	Q
1,1,1,2-Tetrachloroethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroe	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	1	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4,5-Tetramethylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	3	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.6	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	3	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-dichloropropane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	3	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dioxane	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	NA	PPB	1 U	1 U	1 U	1 U	1 U
2-Chloroethyl vinyl ether	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	NA	PPB	1 U	1 U	1 U	1 U	1 U
2-Propanol	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Isopropyltoluene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone	NA	PPB	1 U	1 U	1 U	1 U	1 U
Acetone	50	PPB	2.8 B	2.3 B	3.2 B	2.6 B	2.7 B
Benzene	1	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromobenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	50	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	5	PPB	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodifluoromethane	NA	PPB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Chloroethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	7	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	5	PPB	0.5 U	0.5 U	1.6 J	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.4	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	50	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Diisopropyl ether	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethanol	NA	PPB	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Ethylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Freon-114	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m,p-Xylene	5	PPB	1 U	1 U	1 U	1 U	1 U
Methyl Acetate	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	10	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	5	PPB	10 B	9 B	9.8 B	9.8 B	11 B
Naphthalene	10	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Diethylbenzene	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Ethyltoluene	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
t-Butyl alcohol	NA	PPB	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
tert-Butylbenzene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	PPB	0.5 U	0.98 J	18 *	0.5 U	0.5 U
Toluene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	PPB	0.5 U	0.5 U	1.6 J	0.5 U	0.5 U
Trichlorofluoromethane	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl acetate	NA	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	5	PPB	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes

Q - Qualifier

U - Not Detected

NA - Not Available

J - Estimated Value

* - Calibration exceeds method requirement.

B - The analyte was detected in the associated method blank.

**NYSDEC Technical and Operational Guidance Series (1.1.1)

Ambient water Quality Standards and Guidance Values and Groundwater Effluent Limitations June 1998

Value detected above NY TOGs limit.

All concentrations are reported in micrograms per liter (ug/L) or parts per billion.

Table 2
Summary of Semi-Volatile Organic Compounds in Groundwater
1815 West Farms Road
Bronx, NY

	Sample ID		MW-1		MW-2		MW-3		Field Blank	
	Sampling Date:		9/14/2015		9/14/2015		9/14/2015		9/14/2015	
SVOCs	TOGS*	Unit		Q		Q		Q		Q
1,2,4-Trichlorobenzene	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	3	PPB	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichlorobenzene	3	PPB	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dichlorobenzene	3	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2,4,5-Trichlorophenol	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2,4,6-Trichlorophenol	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2,4-Dichlorophenol	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2,4-Dimethylphenol	50	PPB	1	U	1	U	1	U	1	U
2,4-Dinitrophenol	10	PPB	1	U	1	U	1	U	1	U
2,4-Dinitrotoluene	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2,6-Dinitrotoluene	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2-Chloronaphthalene	10	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2-Chlorophenol	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2-Methylnaphthalene	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2-Methylphenol	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2-Nitroaniline	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
2-Nitrophenol	NA	PPB	1	U	1	U	1	U	1	U
3,3´-Dichlorobenzidine	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
3+4-Methylphenol	1	PPB	0.5	U	0.5	U	0.5	U	0.5	U
3-Nitroaniline	5	PPB	1	U	1	U	1	U	1	U
4,6-Dinitro-2-methylphenol	NA	PPB	1	U	1	U	1	U	1	U
4-Bromophenyl phenyl ether	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
4-Chloro-3-methylphenol	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
4-Chloroaniline	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
4-Chlorophenyl phenyl ether	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
4-Nitroaniline	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
4-Nitrophenol	NA	PPB	1	U	1	U	1	U	1	U
Acenaphthene	20	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Acenaphthylene	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Acetophenone	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Aniline	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Anthracene	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Atrazine	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Azobenzene	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Benzaldehyde	NA	PPB	1	U	1	U	1	U	1	U
Benzidine	NA	PPB	1	U	1	U	1	U	1	U
Benzo(a)anthracene	0.002	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Benzo(a)pyrene	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Benzo(b)fluoranthene	0.002	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Benzo(g,h,i)perylene	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Benzo(k)fluoranthene	0.002	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Benzoic acid	NA	PPB	1	U	1	U	1	U	1	U
Benzyl alcohol	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Biphenyl	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Bis(2-chloroethoxy)methane	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Bis(2-chloroethyl)ether	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Bis(2-chloroisopropyl)ether	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Bis(2-ethylhexyl)phthalate	5	PPB	1	U	1	U	1	U	1	U
Butyl benzyl phthalate	NA	PPB	1	U	1	U	1	U	1	U
Caprolactam	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Carbazole	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Chrysene	0.002	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Dibenzo(a,h)anthracene	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Dibenzofuran	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Diethyl phthalate	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Dimethyl phthalate	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Di-n-butyl phthalate	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Di-n-octyl phthalate	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Fluoranthene	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Fluorene	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobenzene	0.04	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	0.5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorocyclopentadiene	5	PPB	1	U	1	U	1	U	1	U
Hexachloroethane	5	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Indeno(1,2,3-c,d)pyrene	0.002	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Isophorone	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	10	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Nitrobenzene	0.4	PPB	0.5	U	0.5	U	0.5	U	0.5	U
N-Nitrosodimethylamine	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
N-Nitrosodi-n-propylamine	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
N-Nitrosodiphenylamine	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Parathion	NA	PPB	1	U	1	U	1	U	1	U
Pentachlorophenol	NA	PPB	1	U	1	U	1	U	1	U
Phenanthrene	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Phenol	NA	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Pyrene	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U
Pyridine	50	PPB	0.5	U	0.5	U	0.5	U	0.5	U

Notes
Q - Qualifier
NA - Not Available
U - Not Detected

*NYSDEC Technical and Operational Guidance Series (1.1.1) Ambient water Quality Standards and Guidance Values and Groundwater Effluent Limitations June 1998

All concentrations are reported in micrograms per liter (ug/L) or parts per billion.

Table 3
Summary of Pesticides and PCBs in Groundwater
1815 West Farms Road
Bronx, NY

	Sample ID		MW-1		MW-2		MW-3		Field Blank	
	Sampling Date:		9/14/2015		9/14/2015		9/14/2015		9/14/2015	
PESTICIDES	TOGS*	Units		Q		Q		Q		Q
4,4´-DDD	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
4,4´-DDE	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
4,4´-DDT	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Aldrin	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
alpha-BHC	0.01	PPB	0.01	U	0.01	U	0.01	U	0.01	U
alpha-Chlordane	NA	PPB	0.05	U	0.05	U	0.05	U	0.05	U
beta-BHC	0.04	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Chlorobenzilate	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
DBCP	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
delta-BHC	0.04	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Dieldrin	0.004	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Endosulfan I	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Endosulfan II	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Endosulfan sulfate	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Endrin	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Endrin aldehyde	5	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Endrin ketone	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
gamma-BHC	0.05	PPB	0.01	U	0.01	U	0.01	U	0.01	U
gamma-Chlordane	NA	PPB	0.05	U	0.05	U	0.05	U	0.05	U
Heptachlor	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Heptachlor epoxide	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Hexachlorobenzene	0.04	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Hexachlorocyclopentadiene	5	PPB	0.03	U	0.03	U	0.03	U	0.03	U
Methoxychlor	NA	PPB	0.01	U	0.01	U	0.01	U	0.01	U
Toxaphene	NA	PPB	0.06	U	0.06	U	0.06	U	0.06	U
PCBs										
Aroclor 1016	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1221	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1232	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1242	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1248	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1254	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1260	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1262	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U
Aroclor 1268	0.1	PPB	0.25	U	0.25	U	0.25	U	0.25	U

Notes
U - Not Detected
NA - Not Available
Q - Qualifier

*NYSDEC Technical and Operational Guidance Series (1.1.1) Ambient water Quality Standards and Guidance Values and Groundwater Effluent Limitations June 1998

All concentrations are reported in micrograms per liter (ug/L) or parts per billion.

Table 4
Summary of Metals in Groundwater
1815 West Farms Road
Bronx, NY

Sample ID			MW-1		MW-2		MW-3		Field Blank	
Sampling Date:			9/14/2015		9/14/2015		9/14/2015		9/14/2015	
	TOGS*	Units		Q		Q		Q		Q
TOTAL METALS										
Aluminum	NA	PPM	111		48.8		47.3		0.005	U
Antimony	0.003	PPM	0.005	U	0.005	U	0.005	U	0.005	U
Arsenic	0.025	PPM	0.0135	J	0.0113	J	0.0135	J	0.01	U
Barium	1	PPM	1.32		0.727		0.885		0.005	U
Beryllium	0.003	PPM	0.005	U	0.005	U	0.005	U	0.005	U
Cadmium	0.005	PPM	0.005	U	0.005	U	0.005	U	0.005	U
Calcium	NA	PPM	84.4		74.1		96.9		0.005	U
Chromium	0.05	PPM	0.211		0.112		0.113		0.005	U
Cobalt	NA	PPM	0.0155	J	0.005	U	0.012	J	0.005	U
Copper	0.2	PPM	0.619		0.297		0.274		0.005	U
Iron	0.3	PPM	139		81.1		77.1		0.005	U
Lead	0.025	PPM	0.83		0.344		0.0905		0.005	U
Magnesium	35	PPM	48.6		25.6		32.1		0.005	U
Manganese	0.3	PPM	3.63		2.19		2.76		0.005	U
Mercury	0.0007	PPM	0.00015	U	0.00015	U	0.00015	U	0.00015	U
Nickel	0.1	PPM	0.329		0.152		0.131		0.005	U
Potassium	NA	PPM	42.5		18.9		24.9		0.05	U
Selenium	0.01	PPM	0.01	U	0.01	U	0.01	U	0.01	U
Silver	0.05	PPM	0.005	U	0.005	U	0.005	U	0.005	U
Sodium	20	PPM	28.3		22.7		58.4		0.01	U
Thallium	0.0005	PPM	0.01	U	0.01	U	0.01	U	0.01	U
Vanadium	NA	PPM	0.242		0.128		0.129		0.005	U
Zinc	2	PPM	0.639		0.27		0.343		0.005	U
DISSOLVED METALS										
Aluminum	NA	PPM	0.0577		0.0627		0.0620			
Antimony	0.003	PPM	0.00500	U	0.00500	U	0.00500	U		
Arsenic	0.025	PPM	0.0100	U	0.0100	U	0.0100	U		
Barium	1	PPM	0.221		0.204		0.482			
Beryllium	0.003	PPM	0.00500	U	0.00500	U	0.00500	U		
Cadmium	0.005	PPM	0.00500	U	0.00500	U	0.00500	U		
Calcium	NA	PPM	77.7		74.0		99.5			
Chromium	0.05	PPM	0.00500	U	0.00500	U	0.00500	U		
Cobalt	NA	PPM	0.00500	U	0.00500	U	0.00500	U		
Copper	0.2	PPM	0.00811	J	0.00500	U	0.00500	U		
Iron	0.3	PPM	0.0599		0.0539		0.0964			
Lead	0.025	PPM	0.306		0.100		0.00933	J		
Magnesium	35	PPM	12.2		12.2		17.9			
Manganese	0.3	PPM	0.357		0.337		0.310			
Mercury	0.0007	PPM	0.000170	U	0.000170	U	0.000170	U		
Nickel	0.1	PPM	0.00500	U	0.00500	U	0.00500	U		
Potassium	NA	PPM	10.6		10.4		15.4			
Selenium	0.01	PPM	0.0100	U	0.0100	U	0.0100	U		
Silver	0.05	PPM	0.00500	U	0.00500	U	0.00500	U		
Sodium	20	PPM	27.4		24.3		58.2			
Thallium	0.0005	PPM	0.0100	U	0.0100	U	0.0100	U		
Vanadium	NA	PPM	0.00500	U	0.00500	U	0.00500	U		
Zinc	2	PPM	0.0181	J	0.0145	J	0.0371			

Notes
Q - Qualifier
NA - Not Available
J - Estimated Value
U - Not Detected

*NYSDEC Technical and Operational Guidance Series (1.1.1) Ambient water Quality Standards and Guidance Values and Groundwater Effluent Limitations June 1998

Value detected above NY TOGs limit.

All concentrations are reported in milligrams per liter (mg/L) or parts per million.

Table 5
Summary of Volatile Organic Compounds in Soil Samples
1815 West Farms Road
Bronx, NY

		Sample ID		SB-1 (0-5')		SB-2 (2-4')		SB-3 (2-4')		SB-4 (0-3')		SB-4 (5-7')		SB-5 (0-3')		SB-5 (3-5')		SB-6 (0-2')		SB-6 (3-5')		SB-7 (0-3')		SB-7 (3-5')	
		Sampling Date:		9/10/2015		9/10/2015		9/10/2015		9/10/2015		9/10/2015		9/10/2015		9/10/2015		9/10/2015		9/10/2015		9/10/2015		9/10/2015	
VOC	Unr. Use*	Rest. Res.**	Units		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
1,1,1,2-Tetrachloroethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,1,1-Trichloroethane	680	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,1,2,2-Tetrachloroethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,1,2-Trichloro-1,2,2-trifluoroet	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,1,2-Trichloroethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,1-Dichloroethane	270	26000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,1-Dichloroethene	330	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,1-Dichloropropene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2,3-Trichlorobenzene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2,3-Trichloropropane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2,4,5-Tetramethylbenzene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2,4-Trichlorobenzene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2,4-Trimethylbenzene	3600	52000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2-Dibromo-3-chloropropane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2-Dibromoethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2-Dichlorobenzene	1100	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2-Dichloroethane	20	3100	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,2-Dichloropropane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,3,5-Trimethylbenzene	8400	52000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,3-Dichlorobenzene	2400	49000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,3-dichloropropane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,4-Dichlorobenzene	1800	13000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
1,4-Dioxane	100	13000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
2,2-Dichloropropane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
2-Butanone	120	100000	PPB	5.1	U	5.1	U	5.4	U	5.4	U	5.1	U	5.9	U	5.8	U	6.3	U	5.9	U	5.9	U	6	U
2-Chloroethyl vinyl ether	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
2-Chlorotoluene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
2-Hexanone	NA	NA	PPB	5.1	U	5.1	U	5.4	U	5.4	U	5.1	U	5.9	U	5.8	U	6.3	U	5.9	U	5.9	U	6	U
2-Propanol	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
4-Chlorotoluene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
4-Isopropyltoluene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
4-Methyl-2-pentanone	NA	NA	PPB	5.1	U	5.1	U	5.4	U	5.4	U	5.1	U	5.9	U	5.8	U	6.3	U	5.9	U	5.9	U	6	U
Acetone	50	100000	PPB	5.1	U	5.1	U	5.4	U	5.4	U	5.1	U	5.9	U	5.8	U	6.3	U	5.9	U	5.9	U	6	U
Acrolein	NA	NA	PPB	13	U	13	U	13	U	13	U	13	U	15	U	14	U	16	U	15	U	15	U	15	U
Acrylonitrile	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Benzene	60	4800	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Bromobenzene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Bromochloromethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Bromodichloromethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Bromoform	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Bromomethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Carbon disulfide	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Carbon tetrachloride	760	2400	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Chlorobenzene	1100	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Chlorodifluoromethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Chloroethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Chloroform	370	49000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Chloromethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
cis-1,2-Dichloroethene	250	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
cis-1,3-Dichloropropene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Cyclohexane	NA	NA	PPB	2	U	2	U	2.1	U	2.1	U	2	U	2.3	U	2.3	U	2.5	U	2.4	U	2.4	U	2.4	U
Dibromochloromethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Dibromomethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Dichlorodifluoromethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Diisopropyl ether	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Ethanol	NA	NA	PPB	10	U	10	U	11	U	11	U	10	U	12	U	12	U	13	U	12	U	12	U	12	U
Ethylbenzene	1000	41000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Freon-114	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Hexachlorobutadiene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Isopropylbenzene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
m,p-Xylene	260	100000	PPB	2	U	2	U	2.1	U	2.1	U	2	U	2.3	U	2.3	U	2.5	U	2.4	U	2.4	U	2.4	U
Methyl Acetate	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Methyl tert-butyl ether	930	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Methylene chloride	50	100000	PPB	23	B	19	B	8.7	B	7.7	B	6.7	B	8	B	7.4	B	8.2	B	6.3	B	10	B	6.9	B
Naphthalene	12000	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
n-Butylbenzene	12000	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
n-Propylbenzene	3900	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
o-Xylene	260	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
p-Diethylbenzene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
p-Ethyltoluene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
sec-Butylbenzene	11000	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Styrene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
t-Butyl alcohol	NA	NA	PPB	2.5	U	2.6	U	2.7	U	2.7	U	2.5	U	2.9	U	2.9	U	3.1	U	3	U	3	U	3	U
tert-Butylbenzene	5900	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Tetrachloroethene	1300	19000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Toluene	700	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
trans-1,2-Dichloroethene	190	100000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
trans-1,3-Dichloropropene	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Trichloroethene	470	21000	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Trichlorofluoromethane	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Vinyl acetate	NA	NA	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U
Vinyl chloride	20	900	PPB	1	U	1	U	1.1	U	1.1	U	1	U	1.2	U	1.2	U	1.3	U	1.2	U	1.2	U	1.2	U

Notes:
Q - Qualifier
U - Not Detected
J - Estimated Value
NA - Not Available
B - Analyte detected in assoiciated method blank
*6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6; Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
**6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6; Table 375-6.8(a): Restricted Residential Soil Cleanup Objectives
All concentrations are reported in micrograms per liter (ug/L) or parts per billion.

Table 6
Summary of Semi-Volatile Organic Compounds
1815 West Farms Road
Bronx, NY

SVOC	Unr. Use	Sample ID / Sampling Date: / Rest. Res.	Units	SB-1 (0-5') 9/10/2015	Q	SB-2 (2-4') 9/10/2015	Q	SB-3 (2-4') 9/10/2015	Q	SB-4 (0-3') 9/10/2015	Q	SB-4 (5-7') 9/10/2015	Q	SB-5 (0-3') 9/10/2015	Q	SB-5 (3-5') 9/10/2015	Q	SB-6 (0-2') 9/10/2015	Q	SB-6 (3-5') 9/10/2015	Q	SB-7 (0-3') 9/10/2015	Q	SB-7 (3-5') 9/10/2015	Q
1,2,4-Trichlorobenzene	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
1,2-Dichlorobenzene	1100	100000	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
1,3-Dichlorobenzene	2400	49000	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
1,4-Dichlorobenzene	1800	13000	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2,4,5-Trichlorophenol	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2,4,6-Trichlorophenol	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2,4-Dichlorophenol	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2,4-Dimethylphenol	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2,4-Dinitrophenol	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
2,4-Dinitrotoluene	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2,6-Dinitrotoluene	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
2-Chloronaphthalene	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2-Chlorophenol	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2-Methylnaphthalene	NA	NA	PPB	26	U	26	U	37	J	27	U	26	U	38	J	44	J	31	U	30	U	30	U	30	U
2-Methylphenol	330	100000	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2-Nitroaniline	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
2-Nitrophenol	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
3,3´-Dichlorobenzidine	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
3+4-Methylphenol	330	100000	PPB	26	U	26	U	26	U	27	U	26	U	29	U	50	J	31	U	30	U	30	U	30	U
3-Nitroaniline	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
4,6-Dinitro-2-methylphenol	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
4-Bromophenyl phenyl ether	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
4-Chloro-3-methylphenol	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
4-Chloroaniline	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
4-Chlorophenyl phenyl ether	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
4-Nitroaniline	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
4-Nitrophenol	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Acenaphthene	20000	100000	PPB	26	U	26	U	68	J	27	U	26	U	29	U	54	J	44	J	30	U	30	U	30	U
Acenaphthylene	100000	100000	PPB	40	J	26	U	200	J	58	J	26	U	92	J	520		69	J	30	U	30	U	30	U
Acetophenone	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Aniline	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Anthracene	100000	100000	PPB	61	J	26	U	200	J	80	J	26	U	96	J	1200		120	J	30	U	30	U	30	U
Atrazine	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Azobenzene	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Benzaldehyde	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Benzidine	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Benzo(a)anthracene	1000	1000	PPB	230	J	100	J	860	m	460	m	26	U	520	m	6400	D	440	m	30	U	30	U	30	U
Benzo(a)pyrene	1000	1000	PPB	230		100	J	840		480		26	U	520		5700		390		30	U	30	U	30	U
Benzo(b)fluoranthene	1000	1000	PPB	240	J	120	J	880		490		26	U	480		5000		390		30	U	30	U	30	U
Benzo(g,h,i)perylene	100000	100000	PPB	170	J	73	J	600		310		26	U	330		3200		230	J	30	U	30	U	30	U
Benzo(k)fluoranthene	800	3900	PPB	240	J	93	J	820	m	460	m	26	U	500	m	5200	m	390	m	30	U	30	U	30	U
Benzoic acid	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Benzyl alcohol	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Biphenyl	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Bis(2-chloroethoxy)methane	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Bis(2-chloroethyl)ether	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Bis(2-chloroisopropyl)ether	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Bis(2-ethylhexyl)phthalate	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	74	J	29	U	31	U	30	U	30	U	30	U
Butyl benzyl phthalate	NA	NA	PPB	26	U	42	J	26	U	27	U	26	U	800		29	U	410		99	J	30	U	30	U
Caprolactam	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Carbazole	NA	NA	PPB	26	U	26	U	97	J	40	J	26	U	40	J	160	J	50	J	30	U	30	U	30	U
Chrysene	1000	3900	PPB	260	J	120	J	900		560		26	U	510		5400		490		30	U	30	U	30	U
Dibenzo(a,h)anthracene	330	330	PPB	48	J	26	U	170	m	100	J	26	U	97	J	1100	m	77	J	30	U	30	U	30	U
Dibenzofuran	7000	59000	PPB	26	U	26	U	43	J	27	U	26	U	29	U	76	J	31	U	30	U	30	U	30	U
Diethyl phthalate	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Dimethyl phthalate	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Di-n-butyl phthalate	NA	NA	PPB	28	J	26	U	36	J	64	J	26	U	81	J	29	U	58	J	30	U	30	U	30	U
Di-n-octyl phthalate	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Fluoranthene	100000	100000	PPB	440		210	J	1600		810		31	J	930		12000	D	990		30	U	30	U	30	U
Fluorene	30000	100000	PPB	26	U	26	U	72	J	28	J	26	U	29	U	170	J	41	J	30	U	30	U	30	U
Hexachlorobenzene	330	1200	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Hexachlorobutadiene	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Hexachlorocyclopentadiene	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Hexachloroethane	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Indeno(1,2,3-c,d)pyrene	500	500	PPB	170	J	75	J	620		340		26	U	350		3800		260	J	30	U	30	U	30	U
Isophorone	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Naphthalene	12000	100000	PPB	30	J	26	U	59	J	33	J	26	U	88	J	290	J	38	J	30	U	30	U	30	U
Nitrobenzene	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
N-Nitrosodimethylamine	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
N-Nitrosodi-n-propylamine	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
N-Nitrosodiphenylamine	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Parathion	NA	NA	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Pentachlorophenol	800	6700	PPB	53	U	52	U	53	U	53	U	51	U	59	U	58	U	62	U	60	U	60	U	60	U
Phenanthrene	100000	100000	PPB	200	J	90	J	870		390		26	U	280	J	1800		580		30	U	30	U	30	U
Phenol	330	100000	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U
Pyrene	100000	100000	PPB	420		180	J	1600		780		30	J	890		11000	D	950		31	J	30	U	30	U
Pyridine	NA	NA	PPB	26	U	26	U	26	U	27	U	26	U	29	U	29	U	31	U	30	U	30	U	30	U

Notes:
U - Not Detected
J - Estimated Value
NA - Not Available
B - Analyte detected in assoiciated method blank
All concentrations are reported in micrograms per liter (ug/L) or parts per billion

*6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6;
Table 375-6.8(a):UnrestrictedUse Soil Cleanup Objectives

Exceeds Unrestricted Use SCOs
Exceeds Restricted Residential SCOs

Table 7
Summary of Pesticides and PCBs in Soil Samples
1815 West Farms Road
Bronx, NY

		Sample ID		SB-1 (0-5')		SB-2 (2-4')	SB-3 (2-4')	SB-4 (0-3')	SB-4 (5-7')	SB-5 (0-3')	SB-5 (3-5')	SB-6 (0-2')	SB-6 (3-5')	SB-7 (0-3')	SB-7 (3-5')
		Sampling Date:		9/10/2015		9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015
PESTICIDES	Unr. Use*	Rest. Use**	Units		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
4,4´-DDD	3.3	13000	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
4,4´-DDE	3.3	8900	PPB	1	U	1 U	10	1.1 U	1 U	1.2 U	1.2 U	1.5 J	1.2 U	1.2 U	1.2 U
4,4´-DDT	3.3	7900	PPB	1	U	1.3 J	32	1.1 U	1.2 J	1.2 U	1.2 U	5 P	1.2 U	1.2 U	1.2 U
Aldrin	5	97	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
alpha-BHC	20	480	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
alpha-Chlordane	94	4200	PPB	6.2	U	6.2 U	6.4 U	6.4 U	6.1 U	6.9 U	7 U	7.5 U	7.2 U	7.3 U	7.3 U
beta-BHC	36	360	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Chlorobenzilate	NA	NA	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
DBCP	NA	NA	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
delta-BHC	40	100000	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Dieldrin	5	200	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Endosulfan I	2400	24000	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Endosulfan II	2400	24000	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Endosulfan sulfate	2400	24000	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.8 J	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Endrin	14	11000	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Endrin aldehyde	NA	NA	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Endrin ketone	NA	NA	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
gamma-BHC	100	1300	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
gamma-Chlordane	NA	NA	PPB	6.2	U	6.2 U	6.4 U	6.4 U	6.1 U	6.9 U	7 U	7.5 U	7.2 U	7.3 U	7.3 U
Heptachlor	42	2100	PPB	2.1	U	2.1 U	2.1 U	2.1 U	2 U	2.3 U	2.3 U	2.5 U	2.4 U	2.4 U	2.4 U
Heptachlor epoxide	NA	NA	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.5 J	1.2 U	1.2 U	1.2 U
Hexachlorobenzene	330	1200	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Hexachlorocyclopentadiene	NA	NA	PPB	3.1	U	3.1 U	3.2 U	3.2 U	3 U	3.5 U	3.5 U	3.8 U	3.6 U	3.6 U	3.6 U
Methoxychlor	NA	NA	PPB	1	U	1 U	1.1 U	1.1 U	1 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U
Toxaphene	NA	NA	PPB	13	U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	15 U	15 U	15 U
PCBS															
Aroclor 1016	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1221	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1232	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1242	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1248	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1254	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1260	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1262	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U
Aroclor 1268	100	1000	PPB	10	U	10 U	11 U	11 U	10 U	12 U	12 U	13 U	12 U	12 U	12 U

Table 7 (continued)
Summary of Pesticides and PCBs in Soil Samples
1815 West Farms Road
Bronx, NY

		Sample ID:		SB-8 (0-2')		SB-8 (5-8')	SB-9 (0-2')	SB-9 (3-5')	SB-10 (0-2')	SB-10 (5-7')	SB-11 (0-2')	SB-11 (5-7')	SB-12 (0-2')	SB-12 (3-5')
		Sampling Date:		9/10/2015		9/10/2015	9/11/2015	9/11/2015	9/11/2015	9/11/2015	9/11/2015	9/11/2015	9/11/2015	9/11/2015
PESTICIDES	Unr. Use*	Rest. Res.**	Units		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
4,4´-DDD	3.3	13000	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
4,4´-DDE	3.3	8900	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
4,4´-DDT	3.3	7900	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Aldrin	5	97	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
alpha-BHC	20	480	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
alpha-Chlordane	94	4200	PPB	6.6	U	6.4 U	7 U	7.3 U	6.5 U	6.5 U	7 U	6.8 U	7.1 U	7.6 U
beta-BHC	36	360	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Chlorobenzilate	NA	NA	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
DBCP	NA	NA	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
delta-BHC	40	100000	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Dieldrin	5	200	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Endosulfan I	2400	24000	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Endosulfan II	2400	24000	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Endosulfan sulfate	2400	24000	PPB	1.1	U	1.1 U	1.7 J	1.2 U	1.8 J	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Endrin	14	11000	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Endrin aldehyde	NA	NA	PPB	1.1	U	1.1 U	1.2 U	1.2 U	3.2 P	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Endrin ketone	NA	NA	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
gamma-BHC	100	1300	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
gamma-Chlordane	NA	NA	PPB	6.6	U	6.4 U	7 U	7.3 U	6.5 U	6.5 U	7 U	6.8 U	7.1 U	7.6 U
Heptachlor	42	2100	PPB	2.2	U	2.1 U	2.3 U	2.4 U	2.2 U	2.2 U	2.3 U	2.3 U	2.4 U	2.5 U
Heptachlor epoxide	NA	NA	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Hexachlorobenzene	330	1200	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Hexachlorocyclopentadiene	NA	NA	PPB	3.3	U	3.2 U	3.5 U	3.6 U	3.2 U	3.2 U	3.5 U	3.4 U	3.5 U	3.8 U
Methoxychlor	NA	NA	PPB	1.1	U	1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.3 U
Toxaphene	NA	NA	PPB	14	U	13 U	15 U	15 U	14 U	14 U	15 U	14 U	15 U	16 U
PCBS														
Aroclor 1016	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1221	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1232	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1242	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1248	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1254	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1260	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1262	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U
Aroclor 1268	100	1000	PPB	11	U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	12 U	13 U

Notes:
U - Not Detected
J - Estimated Value
NA - Not Available
B - Analyte detected in assoiciated method blank
All concentrations are reported in micrograms per liter (ug/L) or parts per billion

*6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6;
Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives

**6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6;
Table 375-6.8(a): Restricted Residential Soil Cleanup Objectives

Exceeds Unrestricted Use SCOs

P Secondary column exceeds 40% difference for GC test.

Table 8
Summary of Metals in Soil Samples
1815 West Farms Road
Bronx, NY

METALS	Unr. Use*	Sample ID: / Sampling Date: Res.	Res.**	Unit	SB-1 (0-5') 9/10/2015	Q	SB-2 (2-4') 9/10/2015	Q	SB-3 (2-4') 9/10/2015	Q	SB-4 (0-3') 9/10/2015	Q	SB-4 (5-7') 9/10/2015	Q	SB-5 (0-3') 9/10/2015	Q	SB-5 (3-5') 9/10/2015	Q	SB-6 (0-2') 9/10/2015	Q	SB-6 (3-5') 9/10/2015	Q	SB-7 (0-3') 9/10/2015	Q	SB-7 (3-5') 9/10/2015	Q
Aluminum	NA	NA		PPM	12300	D	12500	D	12600	D	11900	D	12500	D	11100	D	12600	D	9980	D	13400	D	15800	D	15200	D
Antimony	NA	NA		PPM	0.207	U	0.21	U	0.21	U	0.21	U	0.199	U	0.23	U	0.489	J	0.243	U	0.237	U	0.239	U	0.241	U
Arsenic	13	16		PPM	4.44		4.46		4.78		5.89		1.64		5.11		8.3		8.13		3.13		3.47		4.27	
Barium	350	400		PPM	195		78.2		145		150		74.3		116		112		151		63.2		69.2		36.7	
Beryllium	7.2	72		PPM	0.103	U	0.105	U	0.105	U	0.105	U	0.0994	U	0.115	U	0.116	U	0.121	U	0.118	U	0.12	U	0.121	U
Cadmium	2.5	4.3		PPM	1.01		0.124	J	0.414	J	1.47		0.0994	U	0.844		0.122	J	0.494		0.118	U	0.12	U	0.121	U
Calcium	NA	NA		PPM	1410		1660		4010		1900		1190		4360		1590		1850		855		837		981	
Chromium	NA	180		PPM	20.1		20.3		19.6		19.3		24.3		17.8		19.2		16.6		13.8		17		18.8	
Cobalt	NA	NA		PPM	0.103	U	0.105	U	0.105	U	0.105	U	0.0994	U	0.115	U	0.116	U	0.121	U	0.118	U	0.12	U	0.121	U
Copper	50	270		PPM	39.8		23.9		32.3		28.7		43.2		39.5		26.9		52.5		8.89		9.33		11.4	
Iron	NA	NA		PPM	20000	D	17500	D	17600	D	18000	D	20700	D	15700	D	35000	D	14500	D	14500	D	18000	D	19100	D
Lead	63	400		PPM	268		127		143		323		31.9		202		336		412		32.3		30.4		8.76	
Magnesium	NA	NA		PPM	3030		3050		2720		2780		5590		3110		2370		1760		2240		2860		2900	
Manganese	1600	2000		PPM	322		287		320		353		255		250		337		312		223		245		203	
Mercury	0.18	0.81		PPM	0.115		0.114		0.175		6.75	D	0.0208		0.297		0.542		1.07	D	0.103		0.0653		0.0237	
Nickel	30	310		PPM	18.8		15.7		15.3		16.2		16.9		15.8		14.7		14.5		10.3		13.2		11.6	
Potassium	NA	NA		PPM	1850		1240		1130		1130		3250		1090		1240		709		728		1460		1280	
Selenium	3.9	180		PPM	1.05		0.865		1.02		1.04		0.867		1.02		1.26		1.14		0.655		0.994		0.841	
Silver	2	180		PPM	0.103	U	0.105	U	0.149	J	0.143	J	0.0994	U	0.31	J	0.143	J	0.276	J	0.118	U	0.12	U	0.121	U
Sodium	NA	NA		PPM	150		82.5		124		114		95		183		199		130		73.3		67.3		47.2	
Thallium	NA	NA		PPM	0.31	U	0.315	U	0.315	U	0.314	U	0.298	U	0.346	U	0.349	U	0.364	U	0.355	U	0.359	U	0.362	U
Vanadium	NA	NA		PPM	30.5		31.2		28.2		31		41.5		26.4		28.2		30.5		21.7		25.9		31.3	
Zinc	109	10000		PPM	164		98.6		176		389		94.2		149		133		209		57.6		67.1		41.8	

Table 8 (continued)
Summary of Metals in Soil Samples
1815 West Farms Road
Bronx, NY

METALS	Unr. Use*	Sample ID / Sampling Date: Res.	Res.**	Units	SB-8 (0-2') 9/10/2015	Q	SB-8 (5-8') 9/10/2015	Q	SB-9 (0-2') 9/11/2015	Q	SB-9 (3-5') 9/11/2015	Q	SB-10 (0-2') 9/11/2015	Q	SB-10 (5-7') 9/11/2015	Q	SB-11 (0-2') 9/11/2015	Q	SB-11 (5-7') 9/11/2015	Q	SB-12 (0-2') 9/11/2015	Q	SB-12 (3-5') 9/11/2015	Q
Aluminum	NA	NA		PPM	7860	D	9430	D	15100	D	24800	D	16000	D	8870	D	15100	D	12900	D	13200	D	12100	D
Antimony	NA	NA		PPM	0.221	U	0.209	U	0.234	U	0.239	U	0.217	U	0.221	U	0.232	U	0.223	U	0.234	U	0.247	U
Arsenic	13	16		PPM	2.51		1.15		5.15		5.96		4.81		2.6		4.12		3.78		6.87		9.71	
Barium	350	400		PPM	32.4		49.7		85.2		109		51.9		43.4		92.9		35.7		163		179	
Beryllium	7.2	72		PPM	0.11	U	0.104	U	0.117	U	0.119	U	0.109	U	0.111	U	0.116	U	0.111	U	0.117	U	0.123	U
Cadmium	2.5	4.3		PPM	0.11	U	0.104	U	0.21	J	0.119	U	0.109	U	0.111	U	1.25		0.111	U	1.53		0.123	U
Calcium	NA	NA		PPM	1460		1430		2560		2010		790		1340		3870		608		3690		2730	
Chromium	NA	180		PPM	12.9		16.9		17.1		19.7		24.5		12.8		17.4		18.1		20.1		15.5	
Cobalt	NA	NA		PPM	0.11	U	0.104	U	0.117	U	0.119	U	0.109	U	0.111	U	0.116	U	0.111	U	0.117	U	0.123	U
Copper	50	270		PPM	11.9		22.7		21.5		30		38.9		12.2		39.8		15.5		44.1		33.7	
Iron	NA	NA		PPM	13800	D	14900	D	20400	D	32400	D	21000	D	14000	D	20200	D	18200	D	17500	D	14300	D
Lead	63	400		PPM	6.64		3.46		109		177		32		5.32		98.9		8.28		875		504	
Magnesium	NA	NA		PPM	2410		3300		3200		2660		3320		2540		3430		2760		2700		2140	
Manganese	1600	2000		PPM	240		172		310		314		217		373		307		242		304		308	
Mercury	0.18	0.81		PPM	0.0122	J	0.00817	U	0.146		0.26		0.0181		0.00827	U	0.0621		0.039		0.982	D	0.545	
Nickel	30	310		PPM	12.1		19.4		13.4		17.4		17		12		14.3		12.9		16.5		13.5	
Potassium	NA	NA		PPM	796		2340		1090		1080		1450		1330		1150		1160		1090		968	
Selenium	3.9	180		PPM	0.602		0.511	J	0.945		0.949		0.218	J	0.221	U	0.268	J	0.223	U	0.412	J	0.506	J
Silver	2	180		PPM	0.11	U	0.104	U	0.117	U	0.157	J	0.109	U	0.111	U	4.08		0.111	U	0.294	J	0.47	J
Sodium	NA	NA		PPM	43.5		102		86		104		267		69.4		74.7		313		219		238	
Thallium	NA	NA		PPM	0.331	U	0.442	J	0.351	U	0.358	U	0.326	U	0.332	U	0.348	U	0.334	U	0.351	U	0.37	U
Vanadium	NA	NA		PPM	19.4		24.2		27.3		26.7		31.9		19.6		28.4		28.5		28.6		25.2	
Zinc	109	10000		PPM	71		52.5		84.1		109		48.4		37.3		69.9		30.9		231		71.2	

Notes:

U - Not Detected
J - Estimated Value
NA - Not Available
B - Analyte detected in assoiciated method blank
D - Analyte concentration was obtained through diluted analysis or from analysis using reduced sample volume
All concentrations are reported in milligrams per liter (mg/L) or parts per million

*6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6; Table 375-6.8(a):Restricted Residential Soil Cleanup Objectives

**6 NYCRR Part 375; Subparts 375-1 to 375-4 & 375-6; Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives

Exceeds Unrestricted Use SCOs
Exceeds Restricted Residential SCOs

Table 9
Summary of VOCs in Soil Vapor
1815 West Farms Road
Bronx, NY

LOCATION		SV-1		SV-2		SV-3		SV-4		SV-5		*NYSDOH 2006 Sub-Slab Vapor	
SAMPLING DATE		9/11/2015		9/11/2015		9/11/2015		9/11/2015		9/11/2015			
SAMPLE DEPTH		2 ft.		2 ft.		5 ft.		5 ft.		3 ft.			
Volatile Organic Compounds	Units		Q		Q		Q		Q		Q	Matrix 1	Matrix 2
Dichlorodifluoromethane	ug/m3	1.55		1.31		0.989	U	1.57		2.25		NA	NA
Chloromethane	ug/m3	0.63		0.413	U	0.413	U	0.413	U	0.613		NA	NA
Freon-114	ug/m3	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	NA	NA
Vinyl chloride	ug/m3	0.511	U	0.511	U	0.511	U	0.511	U	0.511	U	>50	NA
1,3-Butadiene	ug/m3	0.442	U	0.442	U	2.88		0.675		0.442	U	NA	NA
Bromomethane	ug/m3	0.777	U	0.777	U	0.777	U	0.777	U	0.777	U	NA	NA
Chloroethane	ug/m3	0.528	U	0.528	U	0.528	U	0.528	U	0.528	U	NA	NA
Ethanol	ug/m3	125		148		232		143		102		NA	NA
Vinyl bromide	ug/m3	0.874	U	0.874	U	0.874	U	0.874	U	0.874	U	NA	NA
Acetone	ug/m3	18.4		57.7		97.2		49.2		26.8		NA	NA
Trichlorofluoromethane	ug/m3	2.29		2.69		4.65		10.6		11.5		NA	NA
Isopropanol	ug/m3	2.13		2.56		4.55		3.2		1.89		NA	NA
1,1-Dichloroethene	ug/m3	0.793	U	0.793	U	0.793	U	0.793	U	0.793	U	NA	>100
Tertiary butyl Alcohol	ug/m3	2.27		6.67		16.7		22.3		5.61		NA	NA
Methylene chloride	ug/m3	5.21		4.45		4.48		1.74		1.74	U	NA	NA
3-Chloropropene	ug/m3	0.626	U	0.626	U	0.626	U	0.626	U	0.626	U	NA	NA
Carbon disulfide	ug/m3	1.08		3.18		11.8		1.56		0.623	U	NA	NA
Freon-113	ug/m3	1.53	U	1.53	U	1.53	U	1.53	U	1.53	U	NA	NA
trans-1,2-Dichloroethene	ug/m3	0.793	U	0.793	U	0.793	U	0.793	U	0.793	U	NA	NA
1,1-Dichloroethane	ug/m3	0.809	U	0.809	U	0.809	U	0.809	U	0.809	U	NA	NA
Methyl tert butyl ether	ug/m3	0.721	U	0.721	U	0.721	U	0.721	U	0.721	U	NA	NA
2-Butanone	ug/m3	9.41		15.4		20.5		12.7		8.52		NA	NA
cis-1,2-Dichloroethene	ug/m3	0.793	U	0.793	U	0.793	U	0.793	U	0.793	U	NA	>100
Ethyl Acetate	ug/m3	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	NA	NA
Chloroform	ug/m3	0.977	U	0.977	U	0.977	U	0.977	U	0.977	U	NA	NA
Tetrahydrofuran	ug/m3	1.75		3.42		7.26		4.87		1.59		NA	NA
1,2-Dichloroethane	ug/m3	0.809	U	0.809	U	0.809	U	0.809	U	0.809	U	NA	NA
n-Hexane	ug/m3	8.11		9.52		17.2		9.83		5.71		NA	NA
1,1,1-Trichloroethane	ug/m3	1.09	U	1.09	U	1.27		1.09	U	1.09	U	NA	>100
Benzene	ug/m3	23.2		34.2		55.3		32.9		19.9		NA	NA
Carbon tetrachloride	ug/m3	1.26	U	1.26	U	1.26	U	1.26	U	1.26	U	>50	NA
Cyclohexane	ug/m3	7.02		7.57		8.4		4.96		3.06		NA	NA
1,2-Dichloropropane	ug/m3	0.924	U	0.924	U	0.924	U	0.924	U	0.924	U	NA	NA
Bromodichloromethane	ug/m3	1.34	U	1.34	U	1.34	U	1.34	U	1.34	U	NA	NA
1,4-Dioxane	ug/m3	0.721	U	0.721	U	0.721	U	0.721	U	0.721	U	NA	NA
Trichloroethene	ug/m3	29.3		1.07	U	1.07	U	1.36		1.07	U	>50	NA
2,2,4-Trimethylpentane	ug/m3	3.99		5.37		12.2		6.63		2.83		NA	NA
Heptane	ug/m3	7.17		9.59		15.3		9.14		5.66		NA	NA
cis-1,3-Dichloropropene	ug/m3	0.908	U	0.908	U	0.908	U	0.908	U	0.908	U	NA	NA
4-Methyl-2-pentanone	ug/m3	2.05	U	2.05	U	2.83		2.05	U	2.05	U	NA	NA
trans-1,3-Dichloropropene	ug/m3	0.908	U	0.908	U	0.908	U	0.908	U	0.908	U	NA	NA
1,1,2-Trichloroethane	ug/m3	1.09	U	1.09	U	1.09	U	1.09	U	1.09	U	NA	NA
Toluene	ug/m3	198		282		375		277		172		NA	NA
2-Hexanone	ug/m3	1.04		3.32		1.59		1.87		1.07		NA	NA
Dibromochloromethane	ug/m3	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	NA	NA
1,2-Dibromoethane	ug/m3	1.54	U	1.54	U	1.54	U	1.54	U	1.54	U	NA	NA
Tetrachloroethene	ug/m3	4.9		6.85		1.88		7.59		1.62		NA	>100
Chlorobenzene	ug/m3	0.921	U	0.921	U	0.921	U	0.921	U	0.921	U	NA	NA
Ethylbenzene	ug/m3	44.3		75.1		84.7		73.8		38.8		NA	NA
p/m-Xylene	ug/m3	155		268		294		266		132		NA	NA
Bromoform	ug/m3	2.07	U	2.07	U	2.07	U	2.07	U	2.07	U	NA	NA
Styrene	ug/m3	1.37		3.04		2.49		3.1		1.05		NA	NA
1,1,2,2-Tetrachloroethane	ug/m3	1.37	U	1.37	U	1.37	U	1.37	U	1.37	U	NA	NA
o-Xylene	ug/m3	49.5		88.6		94.3		91.2		42.9		NA	NA
4-Ethyltoluene	ug/m3	11.1		21		21.3		21.8		9.68		NA	NA
1,3,5-Trimethylbenzene	ug/m3	8.11		15.1		16.1		17.1		6.69		NA	NA
1,2,4-Trimethylbenzene	ug/m3	31.1		56		59.5		63.4		25.8		NA	NA
Benzyl chloride	ug/m3	1.04	U	1.04	U	1.04	U	1.04	U	1.04	U	NA	NA
1,3-Dichlorobenzene	ug/m3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	NA	NA
1,4-Dichlorobenzene	ug/m3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	NA	NA
1,2-Dichlorobenzene	ug/m3	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	NA	NA
1,2,4-Trichlorobenzene	ug/m3	1.48	U	1.48	U	1.48	U	1.48	U	1.48	U	NA	NA
Hexachlorobutadiene	ug/m3	2.13	U	2.13	U	2.13	U	2.13	U	2.13	U	NA	NA

Notes:
Q *Qualifer*
U *Undetected*
NA Not Available

*NYSDOH Guidance for Evaluating Soil Vapor in the State of New York Oct. 2006 Matrix 1 & 2 levels for "No Further Action"
Samples collected over an approximate 2-hour time period

APPENDIX 1

PROPOSED DEVELOPMENT PLANS

Architect's Statement
(Pre-Construction)

Project Name ("Project"):

Address(es) 1817 West Farms Rd. Block 3015 Lot(s) 62,89,87 DOB Job No.220477981

Drawings and Specifications: refer to HPD- BLDS Design Drawings dated 10/23/15

The undersigned states as follows:

1. I am the architect of record for the Project.

2. The Drawings and Specifications are for the construction of _11 sty residential building w/ no cellar_.

3. In my professional opinion, if the Project is constructed in accordance with the Drawings and Specifications, the completed building(s) in the Project will be in compliance with the requirements contained in the following laws and regulations:

   (a) Local Law 58/87 OR Chapter 11 of the 2008 New York City Building Code;

   (b) Section 804(f)(3)(C) of the federal Fair Housing Act (42 U.S.C. 3604(f)(3)(C)) and implementing regulations at 24 CFR 100.205 (collectively "FHA"); and

   (c) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and implementing regulations at 24 part CFR 8.

4. Compliance with the FHA is based on the Drawings and Specifications meeting the following architectural standards set forth in 24 CFR 100.205:
ICC/ ANSI A117.1-2009 (accessible and usable buildings and facilities, used with Fair Housing Act , HUD regulations and the guidelines)

5. The following units have been designated to meet the requirements of Section 504 of the Rehabilitation Act of 1973:

MOBILITY IMPAIRED UNITS 5% x81 UNITS = 4.05 = 5 UNITS UNITS: 407,507,607,707 & 807

(Hearing/Vision-impaired): 2% x81 UNITS = 1.62 = 2 UNITS UNITS: 503 & 803

I understand that the City of New York, acting by and through its Department of Housing Preservation and Development ("HPD"), is relying on the statements contained herein.

Name _Mitchell D. Newman, A.I.A.

Signature _____

Date__10/23/15_____

Architect's Seal

SPECIAL INSPECTION CATEGORIES

Y	N	SPECIAL INSPECTIONS	CODE / SECTION
-	-	STRUCTURAL STEEL - WELDING	BC 1704.3.1
X	-	STRUCTURAL STEEL - DETAILS	BC 1704.3.2
X	-	STRUCTURAL STEEL - HIGH STRENGTH BOLTING	BC 1704.3.3
X	-	STRUCTURAL COLD - FORMED STEEL	BC 1704.3.4
X	-	CONCRETE - CAST-IN-PLACE	BC 1704.4.4
X	-	CONCRETE - PRECAST	BC 1704.4.4
-	-	CONCRETE - PRESTRESSED	BC 1704.4.4
X	-	MASONRY	BC 1704.5
-	-	WOOD - INSTALLATION OF HIGH-LOAD DIAPHRAGMS	BC 1704.6.1
-	-	WOOD - INSTALLATION OF METAL-PLATE-CONNECTED TRUSSES	BC 1704.6.2
-	-	WOOD - INSTALLATION OF PREFABRICATED I-JOISTS	BC 1704.6.3
-	-	SUBGRADE INSPECTION	BC 1704.7.1
-	-	SUBSURFACE CONDITIONS - FILL PLACEMENT & IN-PLACE DENSITY	BC 1704.7.2, BC 1704.7.3
X	-	SUBSURFACE INVESTIGATIONS (BORINGS / TEST PITS) (TR4)	BC 1704.7.4
-	-	DEEP FOUNDATION ELEMENTS (TR5)	BC 1704.8
-	-	HELICAL PILES (BB # 2014-014) (TR5H)	BC 1704.8.5
-	-	VERTICAL MASONRY FOUNDATION ELEMENTS	BC 1704.9
-	-	WALL PANELS, CURTAIN WALLS, AND VENEERS	BC 1704.10
X	-	SPRAYED FIRE-RESISTANT MATERIALS	BC 1704.11
-	-	MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	BC 1704.12
-	-	EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)	BC 1704.13
-	-	ALTERNATIVE MATERIALS - OTCR BUILDINGS BULLETIN #	BC 1704.14
-	-	SMOKE CONTROL SYSTEMS	BC 1704.15
X	-	MECHANICAL SYSTEMS	BC 1704.16
-	-	FUEL-OIL STORAGE AND FUEL-OIL PIMPING SYSTEMS	BC 1704.17
-	-	HIGH-PRESSURE STEAM PIPING (WELDING)	BC 1704.18
-	-	HIGH TEMPERATURE HOT WATER PIPING (WELDING)	BC 1704.18
-	-	HIGH-PRESSURE FUEL-GAS PIPING (WELDING)	BC 1704.19
X	-	STRUCTURAL STABILITY - EXISTING BUILDINGS	BC 1704.20.1
X	-	EXCAVATIONS - SHEETING, SHORING, AND BRACING	BC 1704.20.2
X	-	UNDERPINNING	BC 1704.20.3, BC 1814
-	-	MECHANICAL DEMOLITION	BC 1704.20.4
-	-	RAISING AND MOVING OF A BUILDING	BC 1704.20.5
-	-	SOIL PERCOLATION TEST - PRIVATE ON-SITE STORM WATER DRAINAGE DISPOSAL SYSTEMS, AND DETENTION FACILITIES	BC 1704.21.1.2
X	-	PRIVATE ON-SITE STORM WATER DRAINAGE DISPOSAL SYSTEMS, AND DETENTION FACILITIES INSTALLATION	BC 1704.21.2
-	-	INDIVIDUAL ON-SITE PRIVATE SEWAGE DISPOSAL SYSTEMS INSTALLATION	BC 1704.22
-	-	SOIL PERCOLATION TEST - INDIVIDUAL ON-SITE PRIVATE SEWAGE DISPOSAL SYSTEM	BC 1704.22
X	-	SPRINKLER SYSTEMS	BC 1704.23
-	-	STANDPIPE SYSTEMS	BC 1704.24
-	-	HEATING SYSTEMS	BC 1704.25
-	-	CHIMNEYS	BC 1704.26
X	-	FIRE-RESISTANT PENETRATIONS AND JOINTS	BC 1704.27
-	-	ALUMINUM WELDING	BC 1704.28
-	-	FLOOD ZONE COMPLIANCE (ATTACH FEMA ELEVATION/ DRY FLOODPROOFING CERTIFICATE WHERE APPLICABLE)	BC 1704.29, BC G105
-	-	LUMINOUS EGRESS PATH MARKINGS (TR7)	BC 1704.30, BC 1024.8
-	-	EMERGENCY AND STANDBY POWER SYSTEMS (GENERATORS)	BC 1704.31
-	-	POST-INSTALLED ANCHORS (BB# 2014-012, 2014-013)	BC 1704.32
-	-	SEISMIC ISOLATION SYSTEMS	BC 1707.8
X	-	CONCRETE DESIGN MIX (TR3)	BC 1905.3, BC 1913.5
X	-	CONCRETE SAMPLING AND TESTING	BC 1905.6, BC 1913.10

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PROGRESS INSPECTION CATEGORIES

Y	N	PROGRESS INSPECTIONS	CODE / SECTION
-	-	PRELIMINARY	28-116.2.1, BC 110.2
X	-	FOOTING AND FOUNDATION	BC 110.3.1
-	-	LOWEST FLOOR ELEVATION (ATTACH FEMA FORM)	BC 110.3.2
-	-	STRUCTURAL WOOD FRAME	BC 110.3.3
X	-	ENERGY CODE COMPLIANCE INSPECTIONS (TR8)	BC 110.3.5
X	-	FIRE-RESISTANCE RATED CONSTRUCTION	BC 110.3.4
-	-	PUBLIC ASSEMBLY EMERGENCY LIGHTING	28-116.2.2
X	-	FINAL*	28-116.2.4.2, BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY 101-10

ENERGY CODE PROGRESS INSPECTION ITEMS:

A. PROTECTION OF FOUNDATION INSULATION
B. INSULATION PLACEMENT AND -VALUES
C. FENESTRATION THERMAL VALUES AND RATINGS
D. FENESTRATION RATINGS FOR AIR LEAKAGE
E. FENESTRATION AREAS
F. AIR SEALING AND INSULATION- VISUAL
G. VESTIBULES
H. DAMPERS INTEGRAL TO BUILDING ENVELOPE
I. HVAC AND SERVICE WATER HEATING EQUIPMENT
I. HVAC AND SERVICE WATER HEATING SYSTEM CONTROLS
J. DUCT PLENUM AND PIPING INSULATION AND SEALING
K. DUCT LEAKAGE TESTING
L. ELECTRICAL METERING
M. LIGHTING IN DWELLING UNITS
N. INTERIOR LIGHTING POWER
O. EXTERIOR LIGHTING POWER
P. LIGHTING CONTROLS
Q. EXIT SIGNS
R. ELECTRICAL MOTORS
S. MAINTENANCE INFORMATION
T. PERMANENT CERTIFICATE

NEW BUILDING APPLICATION #	
EXCAVATION/FOUNDATION	
STRUCTURAL /SUPERSTRUCTURE	
PLUMBING/ MECHANICAL/ BOILER	
SPRINKLER/ STANDPIPE APP.#	
FIRE ALARM APPLICATION #	
BPP APPLICATION #	
TEMPORARY STANDPIPE APP. #	
FIRE PROTECTION PLAN #	
SOE APPLICATION #	
ELEVATOR APPLICATION #	

MECHANICAL ENGINEER:

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STRUCTURAL ENGINEER:

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TEL: 845-300-2082

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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LIST OF DRAWINGS:

ARCHITECTURAL

CIVIL

PROPERTY SURVEY

STRUCTURAL

MECHANICAL

FIRE ALARM

PLUMBING

SCP-100 SITE CONNECTION

ELECTRICAL

SPRINKLER

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

COVER SHEET AND DRAWING LIST

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **NONE**

DRAWING NO:

T-001.00

FILE No. :

SHEET:

1-1

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NEW YORK CITY BUILDING CODE (LL76/68 AS AMENDED)
2. THE OWNER SHALL BE RESPONSIBLE FOR THE SAFE MAINTENANCE OF THE BUILDING AND ITS FACILITIES (C27-127, C27-128).
3. ALL MATERIALS, ASSEMBLIES, FORMS AND METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL MEET THE FOLLOWING REQUIREMENTS.
   A. IT SHALL HAVE BEEN ACCEPTABLE PRIOR TO THE EFFECTIVE DATE OF THE CODE BY THE BOARD OR
   B. SHALL HAVE BEEN ACCEPTED FOR USE UNDER THE PRESCRIBED CODE TEST METHODS BY THE COMMISSIONER OR
   C. APPROVED BY THE BOARD OF STANDARDS AND APPEALS. (C27-131)
4. AT LEAST 24 HOUR WRITTEN NOTICE SHALL BE GIVEN TO THE COMMISSIONER BEFORE COMMENCEMENT OF WORK. (C27-195)
5. FIVE DAYS PRIOR NOTICE SHALL BE GIVEN TO ADJOINING LOT OWNER AFFECTED BY FOUNDATION; EARTHWORK OR DEMOLITION WORK. (C27-165 AND C27-169)
6. NO WORK TO BE DONE BEYOND THE BUILDING LINES WITHOUT APPROVAL OF THE NYC DOT AND NYC DEPARTMENT OF BUILDINGS.
7. SIDEWALKS TO BE LAID IN ACCORDANCE WITH RULES OF THE NYC DEPT. OF BUILDINGS AND NYC DOT
8. BORING DIAGRAM WILL BE FILED BEFORE CONSTRUCTION IS STARTED AS PER SUB-ARTICLE C27-662 ADMINISTRATIVE CODE.
9. AN ACCURATE AND COMPLETE FINAL SURVEY, MADE BY A LICENSED SURVEYOR SHALL BE SUBMITTED AFTER COMPLETION OF WORK SHOWING THE LOCATION OF NEW BUILDING, ELEVATION OF FIRST FLOOR, FINISHED GRADES OF OPEN SPACES, ESTABLISHED CURB LEVEL, LOCATION AND BOUNDARIES OF LOT. (C27-219)
10. ALL ELEVATIONS SHALL REFER TO THE DATUM IN USE BY THE NYC DEPT OF BUILDINGS, NYC DOT, BOROUGH OF THE BRONX. (C27-158)
11. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
12. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND ARCHITECTS OFFICE MUST BE NOTIFIED OF ANY VARIATION FROM THE DIMENSIONS SHOWN BY THESE DRAWINGS.
13. ALL CONSTRUCTION, DIMENSIONS AND DETAILS SHALL CONCUR WITH AND BE DETERMINED FROM THESE DRAWINGS ONLY.
14. ALL MATERIALS AND CONSTRUCTION TO BE INCORPORATED IN THE WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE ASTM SPECIFICATIONS APPLICABLE, AND TO CONFORM TO THE STANDARDS AND RECOMMENDATIONS OF THE VARIOUS TRADE INSTITUTES (A.C.I., A.I.S.C. ETC.) WHERE APPLICABLE. ALL MATERIALS INCORPORATED INTO THE WORK SHALL BE NEW.
15. CONTRACTORS SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGED, BREAKAGES, COLLAPSE, DISTORTIONS AND OFF-ALIGNMENT ACCORDING TO APPLICABLE CODES, STANDARDS AND GOOD PRACTICE.
16. CONSTRUCTION SHALL COMPLY WITH ALL FEDERAL STATE AND LOCAL CODES, ORDINANCES, RULES AND REGULATIONS PERTAINING TO LABOR AND MATERIALS.
17. ALL NOTES HEREIN MENTIONED WITH THOSE ON THE VARIOUS DRAWINGS, SHALL APPLY TO ALL DRAWINGS AND FORM PART OF THE CONTRACT.
18. EACH CONTRACTOR WILL BE HELD STRICTLY RESPONSIBLE FOR HIS WORK, ANY DISCREPANCIES IN THE PLANS OR DETAILS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
19. POSTED OCCUPANCY AND USE, ALL BUILDING SHALL BE POSTED WITH A SIGN IN A FORM PRESCRIBED BY THE DEPARTMENT, PERMANENTLY AFFIXED, PLACED IN A CONSPICUOUS LOCATION IN PUBLIC HALL OR CORRIDOR, STATING, LIVE LOADS AND OCCUPANT LOADS IN THE BUILDING AND ALL PARTS THEREOF C27-225 CY GROUP J-21 IS EXEMPTED FROM THIS REQUIREMENT.
20. THE FOLLOWING ITEMS OF WORK SHALL BE SUBJECT TO CONTROLLED INSPECTION, MADE AND WITNESSED BY OR UNDER THE DIRECT SUPERVISION OF AN ARCHITECT OR ENGINEER RETAINED BY THE OWNER AND ACCEPTABLE TO ARCHITECT OF RECORD. TEST REPORTS AND CERTIFICATE OF INSPECTION SHALL BE FILED WITH THE BUILDING.
   A. TEST BORING OPERATIONS. C27-720
   B. INSPECTION OF SUBGRADE PRIOR TO CONSTRUCTION. C27-723
   C. UNDERPINNING OPERATION AND BRACING EXCAVATED SURFACE SHORING, EXTENDED MORE THAN 10 FEET BELOW LEGALLY ESTABLISHED GRADE AND IN ACCORDANCE WITH THE DRAWINGS SUBMITTED TO AND APPROVED BY THIS OFFICE. C27-724
   D. FIRESTOPPING OF:
      1. HOLLOW PARTITIONS AND FURRED SPACES.
      2. CONCEALED SPACES WITHIN STAIR CONSTRUCTION.
      3. CEILING SPACES
      4. EXTERIOR CORNICES
      5. DUCT AND PIPE CHASES
   E. CONCRETE MATERIALS FOR STRUCTURAL ELEMENTS PROPORTIONED ON THE BASIS OF CALCULATED STRESSES 20% OR GREATER OF BASIC ALLOWABLE VALUE (TABLE 10-1).
   F. STEEL WELDING OPERATIONS AND TENSIONING OF HIGH STRENGTH BOLTS (TABLE 10-2)
   G. PLACING OF CONCRETE. (C27-607) (TABLE 10-1)
   H. VENTILATION AS PER SECTION C27-779.
   I. MASONRY FOR PLACEMENT, BEDDING AND SIZE. (TABLE 10-2)
21. ALL MATERIALS, ASSEMBLIES AND METHODS OF CONSTRUCTION REGULATED BY THE CODE AND NOT LISTED ABOVE SHALL BE SUBJECT TO SEMI-CONTROLLED INSPECTION BY THE PERSON SUPERINTENDING THE CONSTRUCTION. SIGNED COPIES OF ALL TEST AND INSPECTION REPORTS SHALL BE FILED THROUGH THE ARCHITECT WITH THE DEPARTMENT OF BUILDINGS.
22. ALL MATERIALS AND ASSEMBLIES REQUIRED TO HAVE A FIRE RESISTANCE RATING SHALL COMPLY WITH ONE OF THE FOLLOWING:
   A. IT SHALL CONFORM WITH NFBU "FIRE RESISTANCE RATINGS" - "DECEMBER 1964" OR,
   B. IT SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E-119-1961, "STANDARD METHODS OF FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS" AND ACCEPTED BY THE COMMISSIONER OR,
   C. IT SHALL HAVE BEEN ACCEPTABLE PRIOR TO THE EFFECTIVE DATE OF THE CODE.
23. WHERE PIPES, WIRES, CONDUITS, DUCTS, ETC., PIERCE FIRE PROTECTION OF INDIVIDUALLY ENCASED STRUCTURAL MEMBERS, SUCH PENETRATION SHALL NOT EXCEED 2 PERCENT OF ANY ONE FACE SUCH PROTECTION, AND SHALL BE CLOSED OFF WITH CLOSE FITTING METAL ESCUTCHEONS OR PLATES. (C27-324)
24. LINTELS SUPPORTING MASONRY WALLS OVER 4 FEET IN WIDTH SHALL BE FIRE PROTECTED WITH MATERIALS HAVING THE REQUIRED FIRE RESISTANCE-RATING OF THE WALL SUPPORTED (C27-326)
25. CEILINGS THAT CONTRIBUTE TO THE REQUIRED FIRE RESISTANCE RATING OF A FLOOR OR ROOF ASSEMBLY SHALL BE CONTINUOUS BETWEEN FIRE DIVISIONS, FIRE SEPARATIONS OR VERTICAL PARTITIONS HAVING THE SAME FIRE RESISTANCE RATING AS THE CEILING. CONCEALED SPACE ABOVE SUCH CEILING, UNLESS SPRINKLERED, SHALL BE FIRESTOPPED INTO AREAS NOT EXCEEDING 3,000 SQ.FT. ACCESS TO SUCH SPACE MAY BE THROUGH ONE OR MORE OPENINGS NOT EXCEEDING 9 SQ.FT. AND PROTECTED BY SELF-CLOSING OPENING PROTECTIVE. (C27-327)
26. OPENING PROTECTIVES INCLUDING FRAMES, SELF-CLOSING DEVICES AND HARDWARE, SHALL COMPLY WITH ASTM E-152-1966 "STANDARD METHODS OF FIRE TEST OF DOOR ASSEMBLIES" AND ASTM E-163, 1965 "STANDARD METHODS OF FIRE TEST OF WINDOW ASSEMBLIES" AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA NO.8-1967"INSTALLATION OF FIRE DOORS AND WINDOW". OPENING PROTECTIVES SHALL BE LABELED, CERTIFYING PERFORMANCE RATING, AND SHALL HAVE BEEN ACCEPTED BY THE COMMISSIONER OR THE BOARD OF STANDARDS AND APPEALS C27-339.
27. ROOF SHALL BE COVERED WITH CLASS "A" ROOF COVERING MEETING THE REQUIREMENTS OF ASTM-108 "STANDARD METHODS OF FIRE TESTS OF ROOF COVERINGS" - 1965, OR REFERENCE STANDARD RS5-9, "ROOF COVERING CLASSIFICATIONS". (C27-337)
28. FIRESTOPPING: CONCEALED SPACES WITHIN PARTITIONS, WALLS, FLOORS, ROOFS, STAIRS, FURRING PIPE SPACES, COLUMN ENCLOSURES, ETC. SHALL BE FIRESTOPPED (EXCEPTED WHERE CONCEALED SPACED IS SPRINKLERED OR IS CONSTRUCTED AS A SHAFT) AS FOLLOWS:
   A. CONSTRUCTION GROUP 1: WITH NON-COMBUSTIBLE MATERIAL THAT CAN BE SHAPED.
   B. NON-COMBUSTIBLE FIRESTOPPING MAY BE MASONRY SET IN MORTAR, CONCRETE, 3/4" MORTAR OR PLASTER ON NON-COMBUSTIBLE LATH & PLASTER BOARD AT LEAST 3/8" THICK, SHEET METAL OF AT LEAST 0.002" THICK, SOLID WEB METAL STRUCTURAL MEMBERS, 1/4" MINIMUM CEMENT BOARD OR EQUIVALENT MATERIALS, MINERAL, SLAG, OR ROCKWOOL WHEN COMPACTED INTO CONFINED SPACES. (C27-345)
29. INTERIOR FINISH: MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH THE SURFACE FLAME-SPREAD RATING OBTAINED AS PRESCRIBED IN ASTM E-84-1961 "STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS" AS PER C27-345.
30. ALL EXITS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES.
31. STAIRS SHALL HAVE HANDRAILS ON EACH SIDE (EXCEPT THAT STAIRS LESS THAN 44 INCHES IN WIDTH), HAVING FINGER CLEARANCE OF 1 1/2 INCHES, PROJECTING NOT MORE THAN 3 1/2 INCHES INTO THE REQUIRED STAIR WIDTH. HEIGHT OF HANDRAIL SHALL BE BETWEEN 30" AND 34" ABOVE THE TREAD NOSING. HANDRAILS SHALL BE RETURNED TO WALLS AND POSTS AT THEIR TERMINATION. MATERIALS OF HANDRAILS SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 150. HANDRAILS SHALL BE DESIGNED TO RESIST A SIMULTANEOUS APPLICATION OF A LATERAL FORCE OF 40 PLF AND A VERTICAL LOAD OF 50 PLF. LANDINGS AND PLATFORMS SHALL BE ENCLOSED ON SIDES BY WALL OR RAILINGS AT LEAST 3'-0" HIGH. RISERS SHALL BE A MAXIMUM 7" HIGH, TREADS MINIMUM 11" WIDE INCLUDING NOSING AND THE SUM OF 2 RISERS PLUS ONE TREAD EXCLUSIVE OF NOSING SHALL BE NOT LESS THAN 24 OR MORE THAN 25 1/2".
32. TREAD STRINGERS AND LANDINGS SHALL BE BUILT OF/OR SURFACED WITH NONSKID MATERIALS.
33. VENTILATION OF EACH REQUIRED STAIR EXTENDING TO THE ROOF WILL CONSIST OF WINDOWS AND LOUVERS MIN. 20 SQ.FT. OF 1/4" GLASS GLAZING IN WINDOWS, MIN 144 SQ. IN. OF LOUVER C27-375.
34. ILLUMINATION OF AT LEAST 5 FOOT CANDLES MEASURED AT THE FLOOR LEVEL SHALL BE MAINTAINED CONTINUOUSLY IN EXITS AND THEIR ACCESS FACILITIES.
35. EXIT LIGHTING SHALL BE ON CIRCUITS THAT ARE SEPARATE FROM ANY OTHER CIRCUITS, TAKEN OFF AHEAD OF THE MAIN SWITCH, WHERE MORE THAN FOUR LIGHTS ARE REQUIRED AS PER SECTION C27-382.
36. LOCATION OF EVERY EXIT ON EVERY FLOOR SHALL BE CLEARLY INDICATED BY EXIT SIGNS, PLACED, IF REQUIRED AT AN ANGLE WITH THE EXIT OPENING. INSTALL DIRECTIONAL SIGNS TO SERVE AS GUIDE FROM ALL PORTIONS OF THE CORRIDOR OR FLOOR, SIGNS SHALL BE ON SEPARATE CIRCUITS, TAKEN OFF AHEAD OF THE MAIN SWITCH. (C27-383) OCCUPANCY CLASS J-2 IS EXEMPTED FROM THE REQUIREMENT.
37. EXIT SIGNS SHALL BE INTERNALLY LIGHTED, HAVING AN INITIAL BRIGHTNESS OF THE LETTERS OF AT LEAST 25 FEET, LAMBERT, LETTERS SHALL BE RED, THE BACKGROUND SHALL BE WHITE. LETTERS SHALL BE BLOCK LETTERING, AT LEAST 4 1/2" HIGH WITH 9/16" STROKES.
38. REQUIRED FOR MULTIPLE DWELLINGS, BUILDING ENTRANCE DOORS AND OTHER EXTERIOR DOORS SHALL BE PROVIDED WITH HEAVY DUTY LOCK SETS WITH AUXILIARY LATCH BOLTS TO PREVENT THE LATCH FROM BEING MANIPULATED BY OTHER THAN A KEY.
39. DOORS TO DWELLING UNITS SHALL BE REQUIRED WITH A HEAVY DUTY DEAD BOLT OR OPERABLE BY KEY FROM OUTSIDE AND THUMB TURN FROM INSIDE AND A CHAIN DOOR GUARD. ALL OPERABLE WINDOWS SHALL BE EQUIPPED WITH SASH LOCKS.
40. ALL TOILETS SHALL HAVE WATERPROOFED FLOOR AND 6" BASE. WAINSCOT SHALL BE PROVIDED WHERE CALLED FOR ON DRAWINGS. (FOR FIN. MAT. SEE FINISH SCHEDULE) AS PER SECTION D26-31.03 H.M.C. AND SECTION 76 M.D.L.
41. ALL INTERIOR TOILETS SHALL BE MECHANICALLY VENTILATED IN ACCORDANCE WITH SECTION C27-759 OF THE BUILDING CODE.
42. ALL DOORS SHALL BE 7'0" HIGH UNLESS OTHERWISE NOTED.
43. ALL ELEVATOR DOORS SHALL HAVE ELECTRIC INTERLOCKS IN ACCORDANCE WITH SECTION C29-994.
44. SUSPENDED CEILINGS SHALL COMPLY WITH SECTION C27-350 OF THE BUILDING CODE, WITH METAL HANGERS, PURLINS AND RUNNERS AS REQUIRED.
45. ALL DOORS TO REQUIRED EXIT STAIRS IN O.G. J-2 SHALL BE 3'-0" WIDE EXCEPT IF OTHERWISE NOTED. C27-357.
46. DOORS AND ASSEMBLIES SHALL HAVE THE FOLLOWING FIRE RESISTIVE RATINGS (C27-371) DOORS TO STAIRS 1 1/2 HOUR, EXCEPT WHERE OTHERWISE NOTED. DOORS TO ELEVATOR SHAFT 1 1/2 HOUR.
47. CORRIDORS AND EXIT PASSAGEWAYS SHALL HAVE A MIN. CLEAR HEIGHT OF 7'-6" FOR AT LEAST 75% OF THE FLOOR AREA WITH NO POINT LESS THAN 7 FT. IN HEIGHT, PROJECTION BELOW THE CEILING SHALL NOT OBSTRUCT FULL VIEW OF EXIT SIGNS (C27-369)
48. ELEVATOR SHAFTS SHALL BE ENCLOSED WITH CONSTRUCTION FOR 2 HOUR FIRE RATING IN ACCORDANCE WITH NEW YORK CITY BUILDING CODE - TABLE 3-4.
49. INTERIOR REQUIRED STAIR SHALL BE ENCLOSED WITH 2 HOUR FIRE RATING IN ACCORDANCE WITH NEW YORK CITY BUILDING CODE TABLE 3-4.
50. ALL VENT DUCT SHAFTS SHALL BE ENCLOSED WITH 2 HOUR ENCLOSURE. NO DUCT VENTS TO PASS THROUGH STAIR ENCLOSURES. 1 1/2 HOUR AUTOMATIC SELF-CLOSING FIRE DAMPERS TO BE INSTALLED IN VENT DUCTS WHEN THEY PIERCE PUBLIC CORRIDORS
51. MASONRY MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF RS 10-1, SECTION 3, AND TO COMPLY WITH C27-601 FOR CERTIFICATION.
52. ALL MASONRY NON-LOAD BEARING WALLS SHALL BE BONDED IN ACCORDANCE WITH SECTION 7, RS 10-1.
53. EXTERIOR MASONRY WALLS SHALL COMPLY WITH REFERENCE STANDARD RS 10-1.
54. ALL EXTERIOR MASONRY WALL WILL BE LAID UPON ONE PART PORTLAND CEMENT, ONE PART LIME AND SIX PARTS SAND; ALL JOINTS THOROUGHLY FILL IN. ALL MORTAR TO COMPLY WITH TABLE RS 10-1-2 BUILDING CODE. ALL BRICK SHALL BE GRADE S.W. TYPE F.B.S. CONTRACTOR TO FILE FORMS 10H AND 10J.
55. CONCRETE BLOCK SHALL BE TYPE APPROVED BY THE BOARD OF STANDARDS AND APPEALS.
56. EXTERIOR WALLS TO BE 16" THICK, CONSISTING OF 4" BRICK ON EXTERIOR, 2" AIR SPACE AND 10" SOLID CONCRETE BLOCK BACK UP BONDED WITH METAL TIES IN ACCORDANCE WITH RS-10-1 SECTION 7.3 B.C.
57. ALL CORNERS OF PARAPET WALLS SHALL BE REINFORCED WITH CORROSION RESISTANT STEEL TIES AT VERTICAL INTERVALS OF 12", SAME SHALL EXTEND AROUND CORNERS FOR 4'-0" IN BOTH DIRECTIONS AND AND SPLICES SHALL BE LAPPED AT LEAST 6".
58. WHERE GLASS FACING IS USED, THICKNESS AND AREA COMPLIES WITH C27-643.
59. INTERIOR WALLS, PARTITIONS, FLOOR AND CEILING CONSTRUCTION AND MECHANICAL EQUIPMENT SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SUB-ARTICLE C27-629 O.B.C. TO PROVIDE MIN. PROTECTION FOR EACH DWELLING UNIT FROM EXTRANEOUS NOISES EMANATING FROM OTHER DWELLING UNITS AND FROM MECHANICAL EQUIPMENT. IN ADDITION, EXTERIOR MECHANICAL EQUIPMENT SHALL CONFORM TO THE NOISE REDUCTION REQUIREMENTS OF C27-768.
60. PARTITIONS SHALL REST DIRECTLY UPON THE CONCRETE FLOOR CONSTRUCTION AND SHALL EXTEND TO THE CONCRETE CONSTRUCTION OF THE FLOOR OR ROOF ABOVE.
61. PIPE SPACE AND WALL FURRING SHALL CONSIST OF METAL CHANNELS AND 5/8" GYPSUM WALLBOARD EXCEPT AS OTHERWISE SHOWN.
62. A MINIMUM CEILING HEIGHT OF 8'-0" SHALL BE MAINTAINED IN ALL LIVING ROOMS.
63. WALLS, PARTITIONS AND FLOOR AND CEILING CONSTRUCTION - MIN. STC RATING 50 FOR AIRBORNE NOISE, MIN 35 STC RATING REQUIRED APARTMENT ENTRANCE DOORS.
64. EQUIPMENT USE PERMITS, INSPECTIONS AND TESTS
   PERMITS SHALL BE OBTAINED FOR USE OF THE FOLLOWING EQUIPMENT:
   A. AIR CONDITIONING AND VENTILATION SYSTEMS (C27-782).
   B. ELEVATORS
   C. FUEL BURNING EQUIPMENT. (C27-778)
   D. PLUMBING PIPING (C27-919)
   E. STANDPIPE SYSTEMS (C27-951)
   F. SPRINKLER SYSTEMS (C27-967)
   G. SMOKE TEST (C27-868)
   EQUIPMENT REQUIRING USE PERMITS SHALL BE INSPECTED AND TESTED TO DETERMINE PROPER FUNCTIONING AND COMPLIANCE WITH THE BUILDING CODE AND OTHER APPLICABLE LAWS AND REGULATIONS. ALL INSPECTIONS AND TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIRED INSPECTIONS AND TEST PROCEDURES; AND SIGNED COPIES OF REQUIRED INSPECTIONS AND TEST REPORTS SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS AND FORM PART OF THE PAPERS ACCOMPANYING THE PERMIT APPLICATION. IN THE CASE OF HEATING SYSTEM, A SIGNED STATEMENT BY ARCHITECT OR ENGINEER SHALL BE SUBMITTED WITH THE PERMIT APPLICATION, STATING THAT THE SYSTEM HAS BEEN OPERATED AND FUNCTIONS SATISFACTORY, AND THAT TO THE BEST OF KNOWLEDGE AND BELIEF, THE SYSTEM WILL MEET THE CODE TEMPERATURE REQUIREMENT.
65. SPRINKLER SYSTEM SHALL COMPLY WITH SECTION C27-954 N.Y.B.C. SEPARATE SPRINKLER APPLICATION SHALL BE FILED AND APPROVAL OBTAINED.
66. STANDPIPE WILL BE INSTALLED IN ACCORDANCE WITH SECTION (C27-932) OF THE BUILDING CODE. SEPARATE STANDPIPE APPLICATION WILL BE FILED.
67. SEPARATE ELEVATOR APPLICATION WILL BE FILED.
68. VIEWING MIRRORS SHALL BE PROVIDED IN ELEVATORS AS PER SECTION D26-20.03 H.M.C.
69. MECHANICAL VENTILATION, AIR CONDITIONING AND REFRIGERATION
   A. ALL FINAL INSPECTION AND TESTS OF A REQUIRED VENTILATING SYSTEM SHALL BE MADE (THE ARCHITECT OR ENGINEER NEED NOT TO BE IN THE EMPLOY OF THE OWNER) AS PER C27-771.
   B. ALL INSPECTION AND TEST OF A REFRIGERATION SYSTEM SHALL BE MADE (THE ARCHITECT OR ENGINEER NEED NOT TO BE IN THE EMPLOY OF THE OWNER) AS PER C27-771.
70. HEATING AND COMBUSTION EQUIPMENT
   A. ALL FINAL INSPECTIONS AND TESTS FOR BOILERS SHALL BE SUBJECT TO THE PROVISIONS FOR CONTROLLED INSPECTION (SUCH INSPECTIONS AND TESTS, HOWEVER, MAY BE MADE BY DEPARTMENT INSPECTORS OR BY A DULY AUTHORIZED INSURANCE COMPANY INSPECTOR) PER C27-793.
   B. ALL APPLICATIONS FOR EQUIPMENT USE PERMIT FOR HEATING SYSTEMS SHALL BE ACCOMPANIED BY A SIGNED STATEMENT BY AN ARCHITECT OR ENGINEER SYSTEM WILL MEET THE CODE TEMPERATURE REQUIREMENTS PER C27-187. STATING THAT THE SYSTEM HAS BEEN OPERATED AND FUNCTIONS SATISFACTORILY AND THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF THE
71. FIRE EXTINGUISHING EQUIPMENT
   A. PER C27-951 - INSPECTIONS AND TESTS OF STANDPIPES ARE SUBJECT TO CONTROLLED INSPECTION, IF APPLICANT DOES NOT CHOOSE TO HAVE TESTS WITNESSED BY REPRESENTATIVE OF DEPARTMENTS.
   B. PER C-27-967, C27-932 - INSPECTIONS AND TEST OF SPRINKLER SYSTEMS ARE SUBJECT TO CONTROLLED INSPECTION, IF APPLICANT DOES NOT CHOOSE TO HAVE TESTS WITNESSED BY REPRESENTATIVE.
72. INSPECTION DURING PROGRESS OF WORK:
   A. THE COMMISSIONER MAY ACCEPT SIGNED STATEMENTS BY ARCHITECTS AND ENGINEERS AND SUPPORTING INSPECTIONS AND TESTS REPORTS WITHOUT VERIFYING INSPECTION OR TEST BY DEPARTMENT INSPECTORS PER C27-209.
73. ALL PERMITS ISSUED BY THE DEPARTMENT OF BUILDINGS SHALL BE POSTED IN A CONSPICUOUS PLACE OPEN TO THE PUBLIC INSPECTION FOR THE ENTIRE TIME OF THE PROSECUTION OF THE WORK OF THE USE AND OPERATION OF THE EQUIPMENT OR UNTIL THE EXPIRATION OF THE PERMIT.
74. A REFUSE COLLECTING ROOM IN COMPLIANCE WITH C27-836 B.C. AND C27-837 B.C. AND RULES AND THE DEPARTMENT OF BUILDINGS SHALL BE PROVIDED FOR REFUSE REDUCTION SYSTEM WHICH UTILIZES METHODS OTHER THAN BURNING. SUCH ROOM SHALL BE USED FOR NO OTHER PURPOSE AND SHALL BE SEPARATED FROM ALL OTHER OCCUPANCIES BY 2 HR. FIRE RATED PARTITIONS. DOORS INTO SUCH SPACES SHALL BE F.P.S.C. 1 1/2 HOUR.
75. REFUSE COLLECTING ROOM SHALL BE SPRINKLERED.
76. THE COMPACTING MACHINE SHALL BE LOCATED WITHIN THE REFUSE ROOM (C27-836 B.C)
77. COMPACTING EQUIPMENT SHALL MEET THE CRITERIA OF THE ENVIRONMENTAL PROTECTION ADMINISTRATION AND BE APPROVED (C27-836 B.C.) ALSO ALL REQUIREMENTS OF ANY OTHER AUTHORITY HAVING JURISDICTION.
78. REFUSE CHUTE SHALL BE CONSTRUCTED STRAIGHT AND PLUMB WITHOUT PROJECTIONS OF ANY KIND SUPPORTED AT EACH FLOOR.
79. REFUSE CHUTE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS AND ANY OTHER AUTHORITY HAVING JURISDICTION.
80. REFUSE CHUTE SHALL EXTEND THROUGH THE ROOF AT LEAST 4'-0" AND BE OPEN TO AIR. OPENING TO BE EQUAL TO 1 S.F. AS PER SECTION C27-875.
81. INSPECTION OF REQUIRED SPRINKLERS SHALL COMPLY WITH D 26-21.07.
82. PROVIDE A SAFETY TYPE WASTE CAN AT EACH ENTRANCE AND EXIT DOOR.
83. JANITORIAL SERVICES TO COMPLY WITH D 26-22.03.
84. OBLIGATIONS OF THE OWNER SHALL COMPLY WITH D 26-22.03
85. CENTRAL HEAT, ELECTRIC OR GAS HEATING SYSTEM SHALL COMPLY WITH D 26-17.01. THE SUPPLY OF HOT WATER SHALL COMPLY WITH D 26-17.07
86. GAS APPLIANCES TO COMPLY WITH SECTION 64 M.D.L. AND C27-879 B.C.
87. PUBLIC HALL LIGHTING SHALL COMPLY WITH ARTICLE 14 ARTICLE 19 H.M.C,.
88. MAIL SERVICE WILL BE PROVIDED IN ACCORDANCE WITH D 26-21.05 - D 26-21.01 H.M.C,.
89. STREET NUMBERS WILL BE PROVIDED IN ACCORDANCE WITH D 26-21.05.
90. FLOOR NUMBERS TO BE PROVIDED IN ACCORDANCE WITH D 26-21.05.
91. FLOOR NUMBERS TO BE PROVIDED ON ALL FLOORS IN STAIR HALL AND AT ELEVATOR LANDINGS IN ACCORDANCE WITH SECTION D 26-21.03 AND RULES OF THE DEPARTMENT OF BUILDINGS.
92. ALL DUCT SHAFT OFFSET SHALL BE ENCASED WITH 2 HOUR FIRE RATING. IF 288 SQ. INCH OR MORE.
93. PROVIDE SMOKE DETECTORS WITHIN APARTMENTS AS REQUIRED PER SECTION C27- 978 AND D 6-20.08
94. RADIO AND TV WIRES AND ANTENNA SHALL COMPLY WITH SECTION 62 M.D.L. AND SHALL BE PLACED A MIN. OF 10'-0" ABOVE HIGHEST POINT ON ROOF.
95. BUILDING TO BE RATPROOFED IN ACCORDANCE WITH SECTION 80 M.D.L.
96. ALL CLEANING OF WINDOWS WILL BE IN CONFORMITY WITH THE WINDOW CLEANING CODE.
97. FIREPROOFING
   A. THE OCCUPANCY CLASSIFICATION OF THE BUILDING IS OCCUPANCY GROUP (O.G.) J-2, SUB-ARTICLE C27-237 B.C. AND CLASS"A" MULTIPLE DWELLING AS PER SECTION 4.8 M.D.L.
   B. THE VARIOUS OCCUPANCIES REQUIRED TO BE SEPARATED FROM EACH OTHER BY FIRE SEPARATING OR DIVISIONS AS PER C27-240 B.C. SHALL BE SO SEPARATED BY PARTITIONS HAVING THE REQUIRED FIRE RATING IN ACCORDANCE WITH C-27:383 B.C.
   C. THE CONSTRUCTION CLASSIFICATION OF THE BUILDING IS CONSTRUCTION GROUP 1 NON-COMBUSTIBLE CLASS 1D AND SUB-ARTICLE C27-269 B.C. IN ACCORDANCE WITH AREA AND HEIGHT LIMITATIONS AS SPECIFIED IN SUB-ARTICLE C27-301 B.C. AND C27-305 B.C. THE CONSTRUCTION ELEMENTS SHALL BE OF THE REQUIRED MINIMUM FIRE RESISTANCE RATINGS AS OUTLINED IN TABLE 3-4 AND DEFINED IN SUB-ARTICLE 27-318.
98. EXIT DOORS SHALL BE READILY OPENABLE AT ALL TIMES FROM THE SIDE WHICH EGRESS IS TO BE MADE. DOORS OPENING INTO INTERIOR ENCLOSED STAIR SHALL NOT BE LOCKED FROM EITHER SIDE EXCEPT THAT DOORS MAY BE LOCKED TO PREVENT ACCESS TO THE STAIR FROM THE OUTDOORS AT THE STREET LEVEL.
99. ALL WIRE GLASS IN RATED DOORS AND WINDOWS WILL BE OF A TYPE APPROVED BY THE B.S.A.
100. FIRE DIVISION SHALL COMPLY WITH PROVISIONS OF SECTION C27-340 AND SHALL BE CONTINUOUS THROUGH ANY CONCEALED SPACE IN FLOOR OR ROOF CONSTRUCTION.
101. DIFFERENT TENANT STORES, APARTMENTS, ETC., NOT SEPARATED BY FIRE DIVISIONS SHALL BE SEPARATED BY FIRE SEPARATIONS, BUT NOT LESS THAN 1 HOUR SEPARATIONS SHALL CONTINUE THROUGH CONCEALED SPACES ABOVE (C27-34).
102. OPENINGS IN FIRE DIVISIONS AND SEPARATIONS TO COMPLY WITH SECTION C27-34.
103. NO CONDUITS, PIPES, MEDICINE CABINETS, ETC. SHALL ENCROACH ON PARTITIONS ENCLOSING STAIRS OR ELEVATOR SHAFTS OR OTHER RATED PARTITIONS.
104. CONDUITS IN FIRE-RATED PARTITIONS WILL NOT EXCEED 3/4 INCH DIAMETER OUTLETS IN SUCH PARTITIONS WILL BE BACKED UP WITH APPROVED MATERIALS.
105. PENETRATION OF OPENINGS IN WALLS, PARTITIONS, OR FLOORS FOR PIPE SLEEVES, MEDICINE CABINETS, HAMPERS ELECTRIC DEVICES, ETC., SHALL BE PACKED AND SEALED.
106. FIRE PREVENTION APPLICATIONS WILL BE FILED IF REQUIRED FOR ALL INSTALLATIONS.
107. WOOD REQUIRED TO BE FIREPROOFED SHALL BE TESTED IN ACCORDANCE WITH REFERENCE STANDARDS RS 5-3 AND RS 5-4.
108. TOILET ROOM SIDE OF PARTITIONS SHALL BE 5/8" WATER RESISTANT GYPSUM WALLBOARD.
109. VENTILATION SHAFT WALLS 288 SQ. INCH OR OVER SHALL BE AS FOLLOWS: ONE LAYER 1" GYP. BD. FIRESHAFT & 2 LAYERS 1/2" TYPE X GYP. BD. FOR A TOTAL OF 2"- INSTALLATION AS RECOMMENDED BY MANUFACTURER.
110. INTERIOR FINISH CLASS

INTERIOR FINISH CLASS	REQUIRED FIRE RESISTANCE
A STAIR ENCLOSURE (INCLUDING SEPARATION)	2 HR. REQUIRED FIRE RESISTANCE RATING
A ELEVATOR SHAFT	2 HR. REQUIRED FIRE RESISTANCE RATING
A DUCT SHAFT (288 SQ. IN. OR MORE)	2 HR. REQUIRED FIRE RESISTANCE RATING
A PUBLIC HALL (CORRIDOR)	1 HR. REQUIRED FIRE RESISTANCE RATING
A EXIT PASSAGEWAY (GRADE LEVEL)	2 HR. REQUIRED FIRE RESISTANCE RATING TABLE 3-4
B & C INTERIOR PARTITIONS & FURRING	0 HR. REQUIRED FIRE RESISTANCE RATING TABLE 3-4
FLOOR CONSTRUCTION	1 HR. REQUIRED FIRE RESISTANCE RATING TABLE 3-4

111. INTERIOR FINISH TO HAVE FLAME SPREAD RATINGS IN ACCORDANCE WITH TABLE 5-4 AND ALL INTERIOR FINISH TO COMPLY WITH SUB-ARTICLE C27-339 B.C. SEE SEC. C27-348 FOR EXCEPTION.
112. ALL COMBUSTIBLE FLOORING TO HAVE FLAME SPREAD RATING IN ACCORDANCE WITH SUB-ARTICLE C27-351 B.C.
113. FINISH FLOORING IN ALL EXITS SHALL BE OF NON-COMBUSTIBLE MATERIALS (C26-504.13)
114. BUILDING SPACE CLASSIFICATION

BUILDING SPACE CLASSIFICATION	OCCUPANCY	FIRE INDEX
BLDG. STORAGE	B-2	2
BOILER ROOM	D-2	2
ELECTRICAL SERVICE	D-2	2
REFUSE COLLECTION ROOM	D-2	2
TENANT'S LAUNDRY	J-2 ACCESSORY	1
TENANT'S STORAGE	B-2	2
RESIDENTIAL (APT. HOUSE)	J-2	1
COMMUNITY ROOMS	F-3	2

115. ENERGY CONSERVATION CODE NOTES
   ALL PERTINENT DATA AND DESIGN CRITERIA REGARDING THE FOLLOWING CONFORM WITH THE NEW YORK CITY BUILDING CODE:
   A. "U" VALUES OF THE ENVELOPE SUB-SYSTEM.
   B. DESIGN INSIDE AIR TEMPERATURE OF EACH ROOM THAT IS TO BE HEATED AND/OR COOLED. (72 DEG., F. FOR HEATING, 78 DEG. F. FOR COOLING.)
   C. DESIGN OUTDOOR AIR TEMPERATURE (15 DEG. F. WINTER, 89 DEG. F. SUMMER).
   D. DESIGN HEAT LOSS AND/OR GAIN THROUGH EACH EXTERIOR FACADE IN BTU/HR.
   E. "R" VALUES OF INSULATING MATERIALS.
   F. SIZE AND TYPE OF APPARATUS AND EQUIPMENT AND SYSTEM CONTROLS IS IN CONFORMANCE WITH THE REQUIREMENTS OF THE CODE.
   G. ELECTRICAL LIGHTING AND POWER DESIGN DATA.
   H. FIRE PROTECTION CONSTRUCTION REQUIREMENTS, INCLUDING BUILDING CODE LIMITATIONS REGARDING USE OF INSULATION OR EQUIPMENT.
   I. ALL NECESSARY APPROVALS FOR ELECTRICAL WORK FROM THE BUREAU OF GAS AND ELECTRICITY WILL BE OBTAINED.
116. PHYSICAL DISABILITY NOTES (L.L. 58/87)
   A. THE PRIMARY ENTRANCES (RESIDENTIAL LOBBIES) SHALL BE ACCESSIBLE.
   B. THERE SHALL BE A UNOBSTRUCTED ROUTE FROM RESIDENTIAL LOBBIES TO ALL APARTMENTS.
   C. ALL SADDLES AT THE APARTMENT ENTRANCES AND BATHROOMS SHALL HAVE SLOPE OF 2:1 MAX.
   D. ALL APARTMENT KITCHENS AND BATHROOMS SHALL BE DESIGNED AND EQUIPPED TO BE HANDICAPPED USABLE AS REQUIRED.
   E. ALL DOORS IN APARTMENTS SHALL BE A MINIMUM OF 2'-10" (2"-8" CLEAR MIN.)
117. ALL P-TAC UNITS, SLEEVES AND LOUVERS TO BE FACTORY FINISHED
118. ELEVATOR FILED FOR UNDER SEPARATE APPLICATION.
119. PUBLIC ASSEMBLY IF REQUIRED TO BE FILED UNDER SEPARATE APPLICATION PRIOR TO C. OF O.
120. PER TABLE 4.1
   F-3 ASSEMBLY/J2 RESIDENTIAL- MAX. 17,500.0 S.F./ FLOOR - 6 STORIES, 75'-0" HT.
121. PER TABLE 5-2
   FIRE DIVISIONS BETWEEN F3 & J2 - (1) HRS.
122. SEPARATE FIRE ALARM APPLICATION WILL BE FILED

HOUSING MAINTENANCE NOTES

D 26 10.01	OWNER & TENANT OBLIGATION
D 26 11.01.03-11.05	CLEANING
D 26 12.01-12.03	PAINTING
D 26 13.03	RODENT & INSECT ERADICATION
D 26 14.03	RECEPTACLE FOR WASTE
D 26 15.01	WATER SUPPLY
D 26 16.01-16.03	PLUMBING & DRAINAGE
D 26 17.01-17.07	HEAT & HOT WATER
D 26 18.01-18.03	GAS APPLIANCES
D 26 19.01-19.03	ARTIFICIAL LIGHTING
D 26 20.01-20.05	PEEPHOLES & LOCKS
D 26 21.05	STREET NUMBER
D 26 30.11	LIGHTING & VIOLATION
D 26 31.13	SANITARY FACILITIES
D 26 32.07	FIRE PROTECTION-KITCHEN & KITCHENETTES
D 26 33.03	MAXIMUM PERMITTED OCCUPANCY
D 26 34.13	OCCUPANCY OF CELLARS & BASEMENTS

MULTIPLE DWELLING NOTES

1. BUILDING TO CONFORM WITH ART. 6, M.D.L. AND DEPARTMENT RULES AND REGULATIONS AND M.D.C. FOR CLASS "A" MULTIPLE DWELLING.
2. ALL APARTMENT ENTRANCE DOORS AND DOORS TO PUBLIC STAIR HALLS TO BE HOUR APPROVED FIREPROOF, SELF-CLOSING, INCLUDING THE DOOR ASSEMBLY OR SOLID WOOD, SELF-CLOSING DOOR AND PROVIDED WITH APPROVED TYPE PEEPHOLES AS PER SEC. 51A, M.D.L.
3. OCCUPANCY TO COMPLY WITH D26-33.03 HMC.
4. OWNER TO FILE REGISTRATION STATEMENT AS PER D26-41.01, D26-41.03.
5. OWNER TO PROVIDE A SIGN IDENTIFYING OWNER AND MANAGER AND SUPERINTENDENT AS D26-41.15.
6. PREMISES TO COMPLY WITH D26-17.01 AND D26-17.07 HEATING AND HOT WATER SUPPLY.
7. FLOOR SIGNS DESIGNATING FLOORS TO BE PROVIDED AT EACH FLOOR AS PER D26-21.03 HMC.
8. PROPER HOUSE MEMBERS TO BE PROPERLY DISPLAYED AS PER DEPT. RULES AND REGULATIONS AND SHALL COMPLY TO D26-21.05 HMC.
9. PREMISES TO COMPLY WITH SEC. 37 AND 64 M.D.L. IN REFERENCE TO ARTIFICIAL LIGHTING AND GAS METERS AND APPLIANCES.
10. OWNER OR OCCUPANTS IN CONTROL IN A DWELLING SHALL PROVIDE RECEPTACLES MATTERS AS PER SEC. D26-14.03 AND D26-14.05 INCLUSIVE HMC.
11. DRAINAGE OF ROOFS AND COURT SHALL COMPLY WITH D26-16.03 HMC.
12. CONTROL HEAT, ELECTRIC OR GAS HEATING SYSTEM SHALL COMPLY WITH D26-17.01 HMC.
13. THE SUPPLY OF HOT WATER SHALL COMPLY TO D26-17.07 HMC.
14. NIGHT LIGHTING IN PUBLIC PARTS OF DWELLING SHALL COMPLY TO D26-19.03, D29-19.05 AND D26-19.07 HMC.
15. PEEPHOLES SHALL COMPLY TO D26-20.01 HMC.
16. INSPECTION OF REQUIRED SPRINKLERS SHALL COMPLY TO D26-21.07 HMC.
17. OBLIGATIONS OF OWNER SHALL COMPLY WITH D26-22.03 HMC.
18. FACILITIES AND EQUIPMENT SHALL COMPLY TO D26-32.01 HMC.
19. LIGHTING AND VENTILATION SHALL COMPLY TO D26-32.01 HMC.
20. REGISTRATION STATEMENTS; TIME TO FILE & CONTENTS SHALL COMPLY TO D26-41.01 AND D26-41.03 HMC.
21. POSTING OF SERIAL NUMBER SHALL BE DONE IN ACCORDANCE TO D26-41.15 HMC.
22. ALL STAIRS TO HAVE 7'-0" MINIMUM HEADROOM AND TO COMPLY WITH SEC. 52 M.D.L.
23. ALL GUARD RAILS INTERIOR AND EXTERIOR TO BE 3'-6" HIGH.
24. PROVIDE EXTERIOR LIGHTING AS PER SEC. 26-35 M.D.L.
25. BUILDING ENTRANCE DOORS TO BE SELF-CLOSING AND TO HAVE SELF-LOCKING DEVICE AS PER SEC. 50A, M.D.L.
26. PROVIDE MAIL SERVICE AS PER D26-21
27. JANITORIAL SERVICE, D26-22.03.
28. COLLECTION OF WASTE MATTER, D26-14.05.
29. NEW STEEL STAIRS IN CELLAR TO HAVE CLOSED RISERS, 3'-0" PLATFORM AND LANDING, AND SHALL HAVE 2'-8" HIGH HANDRAIL AND TO HAVE 7-3/4" MAXIMUM RISER AND 9 1/2" TREAD WITH 1-1/8" NOSING, AS PER SEC. 52, M.D.L.

FIRE PROTECTION NOTES:

1. ALL MATERIALS OR ASSEMBLIES REQUIRED TO HAVE A FIRE RESISTANCE RATING SHALL COMPLY WITH ONE OF THE FOLLOWING:
   (A) IT SHALL CONFORM WITH NFBU "FIRE RESISTANCE RATINGS - DECEMBER 1984" OR
   (B) IT SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E-:119-1961, "STANDARD METHODS OF FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS" AND ACCEPTED BY THE COMMISSIONER OR,
   (C) IT SHALL HAVE BEEN ACCEPTABLE PRIOR TO_THE EFFECTIVE DATE OF THE CODE.

2. WHERE PIPES, WIRES, CONDUITS, DUCTS. ETC., PIERCE FIRE PROTECTION OF INDIVIDUALLY ENCASED STRUCTURAL MEMBERS, SUCH PENETRATION SHALL NOT EXCEED 2 PERCENT OF ANY ONE FACE OF SUCH PROTECTION, AND SHALL BE CLOSED OFF WITH CLOSE FITTING METAL ESCUTCHEONS OR PLATES. C.26-502.2(a)

3. CEILINGS THAT CONTRIBUTE TO THE REQUIRED FIRE-RESISTANCE RATING OF A FLOOR OR ROOF ASSEMBLY SHALL BE CONTINUOUS BETWEEN FIRE DIVISIONS, FIRE SEPARATIONS OR VERTICAL PARTITIONS HAVING THE SAME FIRE RESISTANCE RATING AS THE CEILING CONCEALED SPACE ABOVE SUCH CEILING, UNLESS SPRINKLED, SHALL BE FIRESTOPPED INTO AREAS NOT EXCEEDING 3,000 SQ.FT. ACCESS TO SUCH OPENINGS NOT TO EXCEED 9 SQ.FT., AND PROTECTED BY SELF-CLOSING OPENING PROTECTIVES. C26-502.5

4. OPENING PROTECTIVES INCLUDING FRAMES, SELF-CLOSING DEVICES AND HARDWARE SHALL COMPLY WITH ASTM E-152-1966, "STAND. METHODS OF FIRE TEST OF DRS & WD ASSEM", INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA NO.80-1967, "INSTALLATION OF FIRE DOORS AND WINDOWS", OPENING PROTECTIVES SHALL BE LABELED, CERTIFYING PERFORMANCE RATING, AND SHALL HAVE BEEN ACCEPTED BY THE COMMISSIONER OR THE BOARD OF STANDARDS AND APPEALS. C26-502.7

5. DIFFERENT TENANT APARTMENTS, SUITES, STORES, OFFICES, ETC., NOT SEPARATED BY FIRE DIVISION, SHALL BE SEPARATED BY FIRE SEPARATION, NOT LESS THAN 1 HOUR SEPARATION AND SHALL CONTINUE THROUGH CONCEALED SPACES ABOVE. C26-504.3A

6. DUCTS, PIPES AND CONDUITS PASSING THROUGH RATED CONSTRUCTION SHALL HAVE SPACES NOT EXCEEDING 1/2 INCH, PACKED WITH MINERAL WOOL AND CLOSED OFF WITH CLOSE FITTING METAL ESCUTCHEONS. AGGREGATE NET AREA OF SUCH OPENING SHALL NOT EXCEED 25 SQ.IN., IN ANY 100 SQ.FT. OF WALL OR FLOOR AREA, UNLESS PROTECTED BY RATED SELF-CLOSING DEVICES. C26-504.5

7. FIRESTOPPING: CONCEALED SPACES WITHIN PARTITIONS, WALLS, FLOORS, STAIRS, FURRING, PIPE SPACES, COLUMN ENCLOSURES, ETC., SHALL BE FIRESTOPPED (EXCEPT WHERE CONCEALED SPACE IS SPRINKLED) AS FOLLOWS:
   (A) CONSTRUCTION GROUP 1: WITH NON-COMBUSTIBLE MATERIALS THAT CAN BE SHAPE
   (B) CONSTRUCTION GROUP 2: WITH 2-INCH NOMINAL THICKNESS WOOD, OR 1/2" EXTERIOR TYPE PLYWOOD. NON-COMBUSTIBLE MATERIALS SHALL BE USED IN CONCEALED SPACES OF FIRE DIVISIONS OR WHERE IN CONTACT WITH FIREPLACES, FLUES, CHIMNEYS.
   (C) NON-COMBUSTIBLE FIRESTOPPING MAY BE MASONRY SET IN MORTAR, CONCRETE, 3/4" MORTAR OR PLASTER ON NON-COMBUSTIBLE LATH, PLASTERBOARD AT LEAST 3/8" THICK, SHEET METAL AT LEAST 0.222" THICK, SOLID WEB METAL STRUCTURAL MEMBERS 1/4" MINIMUM ASBESTOS-CEMENT BOARD OF EQUIVALENT MATERIALS, MINERALS, SLAG, OR ROCKWOOD WHEN COMPACTED INTO CONFINED SPACE. C26-504.7.

8. INTERIOR FINISH: MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH THE SURFACE FLAME-SPREAD RATING OBTAINED AS PRESCRIBED IN ASTM E-84-1961 "STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS." INTERIOR FINISH SHALL BE GROUPED IN THE FOLLOWING CLASSES: C26-504.10.

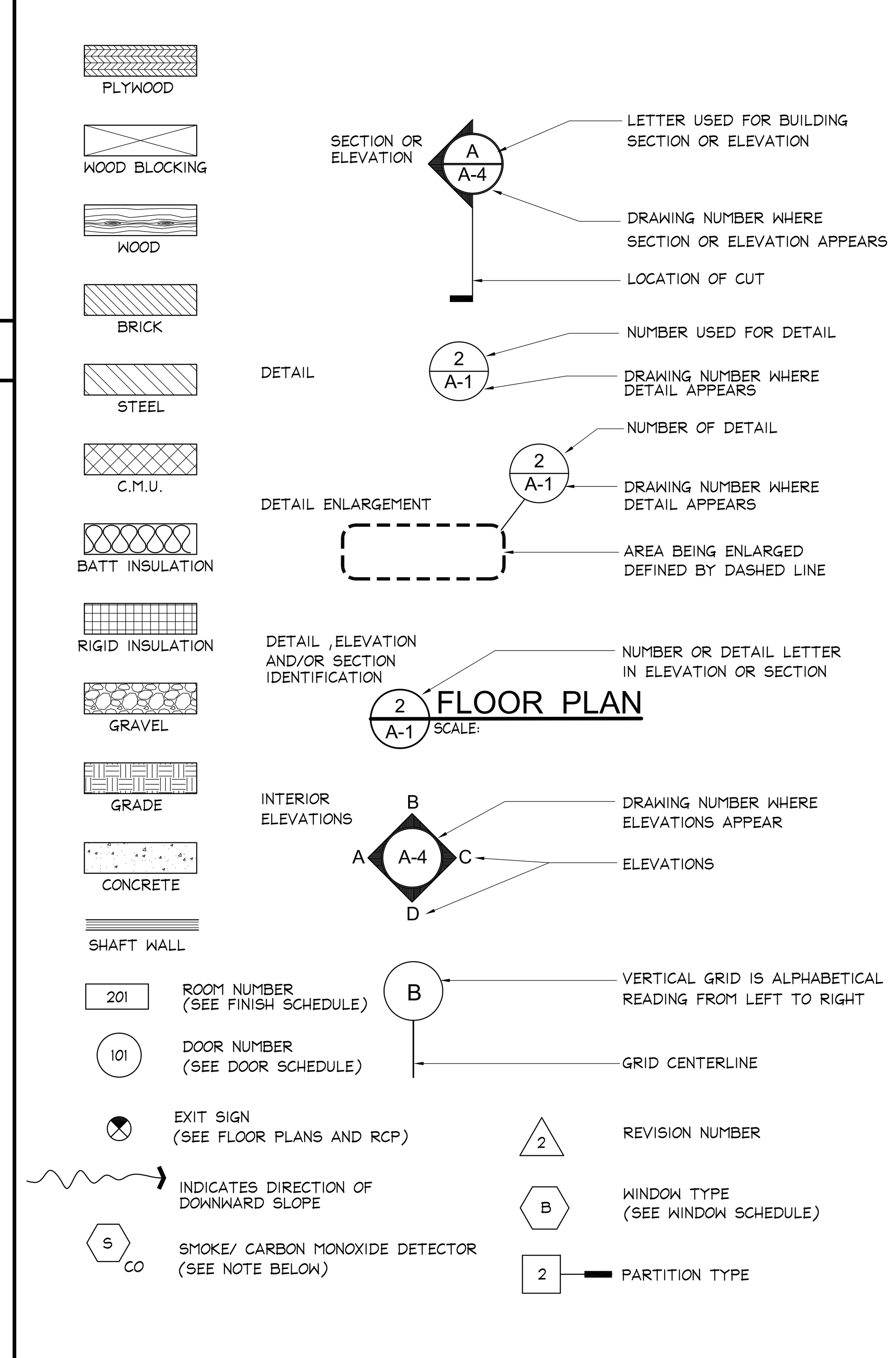
INTERIOR FINISH CLASS:	A	B	C	D
FLAME SPREAD RATING:	0 - 25	26 - 75	76 - 225	OVER - 225

INTERIOR FINISH, EXCEPT FINISH FLOORING AND FLOOR COVERING, WALL COVERINGS AND COATINGS LESS THAN 0.036 IN TOTAL THICKNESS, SHALL HAVE FLAME-SPREAD RATING NOT GREATER THAN THAT OF THE FOLLOWING INTERIOR FINISH CLASSES:

OCCUPANCY GROUP	J-1:J-2		C:F4		F-1a:F-1b	
	AH-1:H-2	G,B,D 1	B2:D2	J-3	F-2:F-3	E
EXITS & SHAFTS	A	A	A	B	A	A
CORRIDORS	A	A	A	B	B	B
ROOMS:1,500 OR MORE	B	B	B	D	B	C
ROOMS:1,500 OR LESS	B	C	C	D	B	C

NOTE: 20% OF WALL AND CEILING AREA OF ANY ROOM SPACE OR CORRIDOR MAY BE FINISHED WITH MATERIALS HAVING A CLASS C RATING, WHERE CLASS A OR B WOULD BE REQUIRED. MATERIALS IN EXCESS OF 20% OF AGGREGATE WALL AND CEILING SHALL HAVE THE FOLLOWING MAXIMUM SMOKE DEVELOPED RATINGS: EXITS, CORRIDORS - 25:H-1 AND H-2 OCCUPANCIES- 50 ROOMS HAVING A NET FLOOR AREA PER OCCUPANT OF 10 SQ.FT. OR LESS - 100.

LEGENDS & SYMBOLS



CARBON MONOXIDE NOTE:

Carbon Monoxide Detector Notes (CO)
As per New York City Law Requirement:
Local Law 7/2004 requires the installation of CO detectors (alarms) in all new apartment buildings.

Types of Carbon Monoxide Detectors required:
CO detectors must be "UL" approved.New buildings must have detectors that are hard-wired to the building's electrical systems.
The installation of a combination smoke alarm/ CO detector is allowed.

Installation of Carbon Monoxide Detectors:
CO detectors must be installed within 15 feet of the primary entrance of each bedroom. CO detectors do not have to be installed on or near the ceiling.
They can be installed at other room locations and at heights recommended by the manufacturer. To ensure proper operation, do not install CO detectors next to bathrooms, which are sources of humidity, or near gas stoves, gas dryers, etc. Detectors should not be placed in areas likely to be damaged by children or pets.

ABBREVIATIONS

AFF - Above Finish Floor
ACT - Acoustic Ceiling Tile
AC - Air Conditioning
@ At
AL - Aluminum
B/C - Bottom of Curb
BLK - Block
BRK - Brick
BUR - Built Up Roofing
BM - Beam
C. - Courses
CB - Catch Basin
CI - Cast Iron
CJ - Control Joint
CL - Center Line
CR - Clothing Rod
CS - Cast Stone
CT - Ceramic Tile
CO - Clean Out
CEM - Cement
CLO - Closet
CLG - Ceiling
COL - Column
CON - Concrete
CONSTR - Construction
CONT - Continuous
CONV - Convector
CPT - Carpet
DA - Double Acting
DF - Drinking Fountain
DH - Double Hung
DOP - Door Opening
DIM - Dimensions
DN - Down
DIA - Diameter
EA- Each
EWC - Elec. Water Cooler
EL - Elevation
ELEC - Electric
ENCL - Enclosure
EQL SP - Equally Spaced
EXP JT - Expansion Joint
E.I.F.S. - Exterior Insulated Finish System
EXP'D - EXPOSED
FAI - Fresh Air Intake
FD - Floor Drain
FDN - Foundation
FEXT - Fire Extinguisher
FF - Finish Floor
FIN - Finish
FLR - Floor
FPSC - Fireproof Self Closing
FPRF - Fireproofing
FR - Fire Resistive / Fire Rated
FS - Full Size
FTG - Footing
GL - Glass
GR - Grade
GRL - Grille
GYP BD - Gypsum Board
HC - Hose Cabinet
HM - Hollow Metal
HPT - High Point
HVAC - Heating Vent & Air Cond
HNDRL - Handrail
HGT - Height
INSUL - Insulation
JB - Junction Box
JC - Janitor's Closet
JT - Joint
KD - Knock Down
LPT - Low Point
LAV - Lavatory
LDR - Leader
MAS - Masonry
MC - Medicine Cabinet
MO - Masonry Opening
MS - Marble Saddle
MFG - Manufacturing or Manufacturer
N/C - Not in Contact
NTS - Not to Scale
OC - On Center
Pnt - Paint
PR - Pair
PTN - Partition
PL - Plate
PVMT - Pavement
PT - Pressure Treated
QT - Quarry Tile
R - Riser
RA - Return air
RAD - Radiator
RD - Roof Drain
REFR - Refrigerator
REG - Register
RESIL - Resilient
RM - Room
RO - Rough Opening
RBR - Rubber Tile
RMU - Renaissance Masonry Unit
SA - Supply air
SC - Solid Core
SP - Standpipe
SSK - Service Sink
SST - Stainless Steel
STD - Standard
STOR - Storage
STL - Steel
ST - Street
T - Tread
T&B - Top and Bottom
TEL - Telephone
TSL - Top of Slab
TST - Top of Steel
TC - Top of Concrete
TER - Terrazzo
TW - Top of Wall
TYP - Typical
T/C - Top of Curb
T.V.E.S. - Tapered Vinyl Edge Strip
UR - Urinal
UNFIN - Unfinished
UON - Unless Otherwise Noted
VIF - Verify in Field
VCT - Vinyl Composition Tile
VWC - Vinyl Wall Covering
WC - Water Closet
WGL - Wire Glass
WI - Wrought Iron
Wd - Wood
YD - Yard Drain

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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PROJECT:
WEST FARMS SRO
BOONE AVE AND WEST FARMS RD.
BRONX, N.Y.

TITLE:
GENERAL NOTES, LEGENDS & ABBREVIATIONS

STAMP:

DATE:	11/14/14
JOB #:	12-24
DRAWN BY:	OW
SCALE:	1/4"= 1'-0"

DRAWING NO:
G-001.00

FILE No. :
SHEET:

ACCESSIBILITY SERVICES
BRINGING YOU UP TO CODE
Accessibility Detail Sheet
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dmarinelli@accessibility-services.com

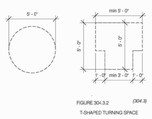
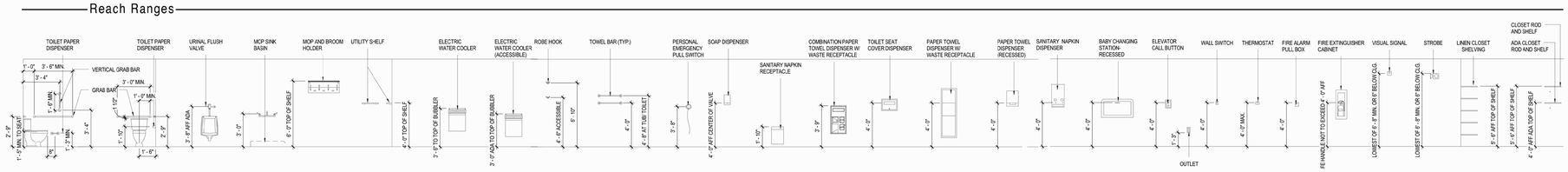


FIGURE 304.3.2
T-SHAPED TURNING SPACE

Reach Ranges



Accessible Compartments

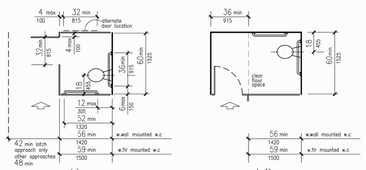


Fig 30
Toilet Stalls

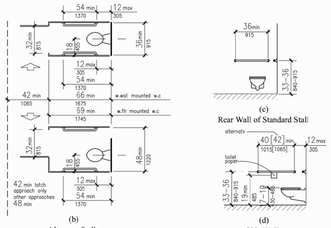


Fig 31
Lavatory Clearances

Fig 32
Clear Floor Space at Lavatories

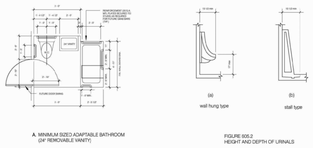
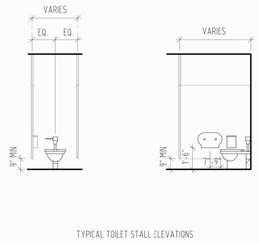
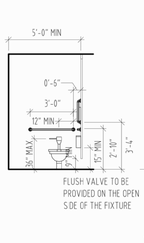

A. MINIMUM SIZED ADAPTABLE BATHROOM (W/ REMOVABLE VANITY)

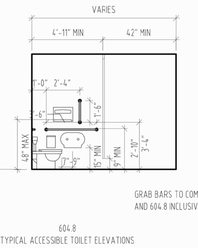
FIGURE 605.2
HEIGHT AND DEPTH OF URINALS

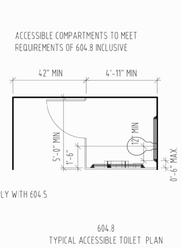
Accessible Compartments, Fountains, and Lavatories

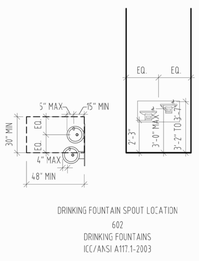

TYPICAL TOILET STALL ELEVATIONS

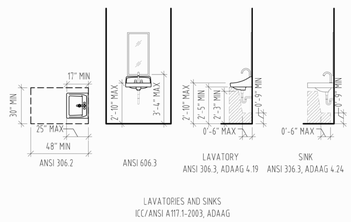

TYPICAL TOILET STALL PLAN


FLUSH VALVE TO BE PROVIDED ON THE OPEN SIDE OF THE FIXTURE


GRAB BARS TO COMPLY WITH 604.5 AND 604.8 INCLUSIVE
604.8
TYPICAL ACCESSIBLE TOILET ELEVATIONS


ACCESSIBLE COMPARTMENTS TO MEET REQUIREMENTS OF 604.8 INCLUSIVE
604.8
TYPICAL ACCESSIBLE TOILET PLAN


DRINKING FOUNTAIN SPOUT LOCATION
602
DRINKING FOUNTAINS
ICC/ANSI A117.1-2003



LAVATORIES AND SINKS
ICC/ANSI A117.1-2003, ADAAG

Obstructed Reach

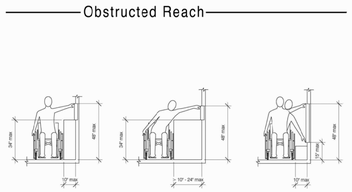


FIGURE 308.3.2
OBSTRUCTED HIGH SIDE REACH

FIGURE 308.3.1
UNOBSTRUCTED SIDE REACH

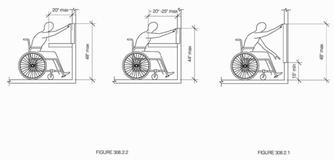


FIGURE 308.2.2
OBSTRUCTED HIGH FORWARD REACH

FIGURE 308.2.1
UNOBSTRUCTED FORWARD REACH

Showers

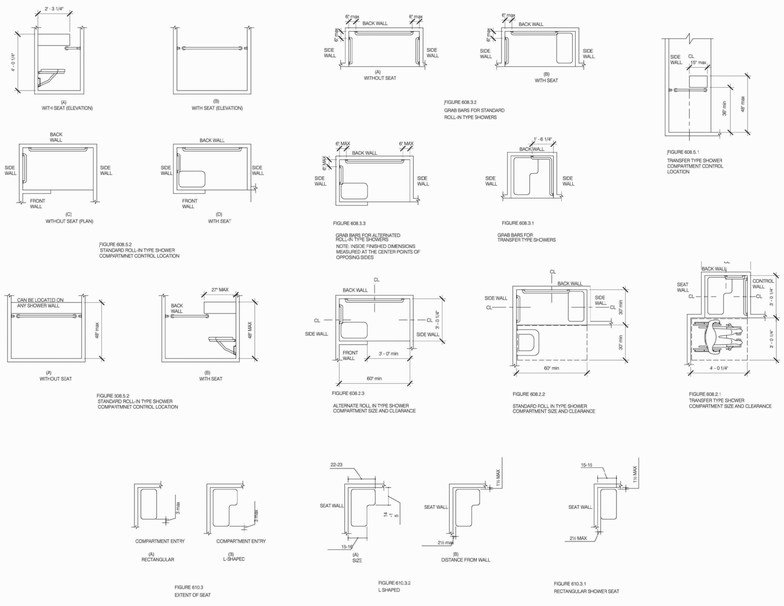


FIGURE 608.5.2
STANDARD ROLL-IN TYPE SHOWER COMPARTMENT CONTROL LOCATION
FIGURE 608.3.3
GRAB BARS FOR ALTERNATE ROLL-IN TYPE SHOWER
NOTE: INSIDE FINISHED DIMENSIONS MEASURED AT THE CENTER POINTS OF OPPOSING SIDES
FIGURE 608.5.2
STANDARD ROLL-IN TYPE SHOWER COMPARTMENT CONTROL LOCATION
FIGURE 610.3
EXTENT OF SEAT
FIGURE 608.3.2
GRAB BARS FOR STANDARD ROLL-IN TYPE SHOWERS
FIGURE 608.3.3
GRAB BARS FOR ALTERNATE ROLL-IN TYPE SHOWER
FIGURE 608.3.1
GRAB BARS FOR TRANSFER TYPE SHOWERS
FIGURE 608.3.3
ALTERNATE ROLL IN TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE
FIGURE 608.2.2
STANDARD ROLL IN TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE
FIGURE 608.5.1
TRANSFER TYPE SHOWER COMPARTMENT CONTROL LOCATION
FIGURE 608.2.1
TRANSFER TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE
FIGURE 610.3.2
L-SHAPED
FIGURE 610.3.1
RECTANGULAR SHOWER SEAT

Doors

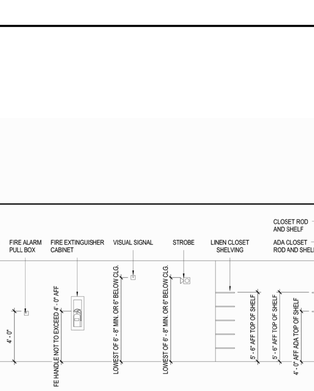


Fig 25
Maneuvering Clearances at Doors

Kitchen Clearances

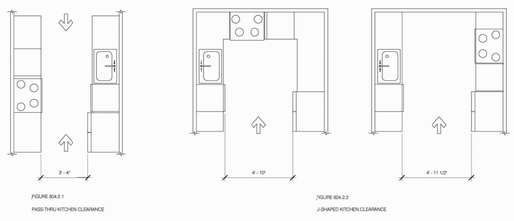


FIGURE 804.2.1
PASS-THRU KITCHEN CLEARANCE
FIGURE 804.2.2
J-SHAPED KITCHEN CLEARANCE

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

NEWMAN DESIGN
ARCHITECTURE • URBAN PLANNING
NEWMAN DESIGN ARCHITECTS PLLC
210 West Rogues Path • Cold Spring Hills, NY 11743
TEL: 212.673.3110 • TEL: 631.673.3111 • FAX: 631.673.2031
www.ndarchitects.com

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

HANDICAP REQUIREMENTS

STAMP:

DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**1/4"= 1'-0"**

DRAWING NO:

G-002.00

FILE No. :

SHEET:

0-0

MECHANICAL DEDUCTIONS:

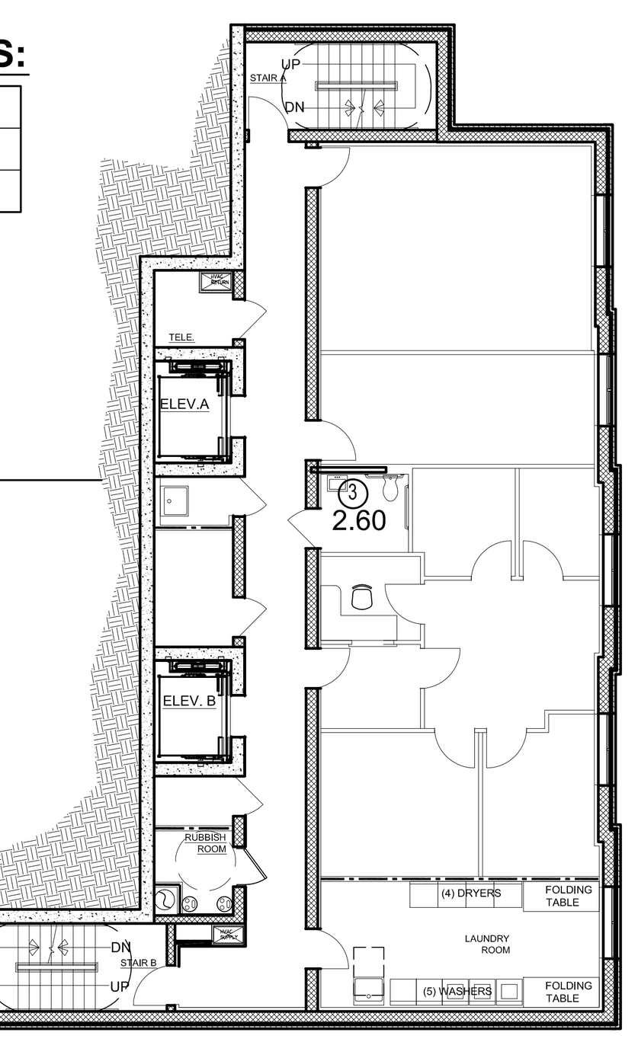
MECHANICAL DEDUCTIONS:

1.	10.08' x 23.61'	238.0 S.F.
2.	13.58' x 12.29'	167.0 S.F.
3.	13.58' x 11.63'	158.0 S.F.
4.		
	TOTAL S.F.	563.00 S.F.

1ST FLOOR

MECHANICAL DEDUCTIONS:

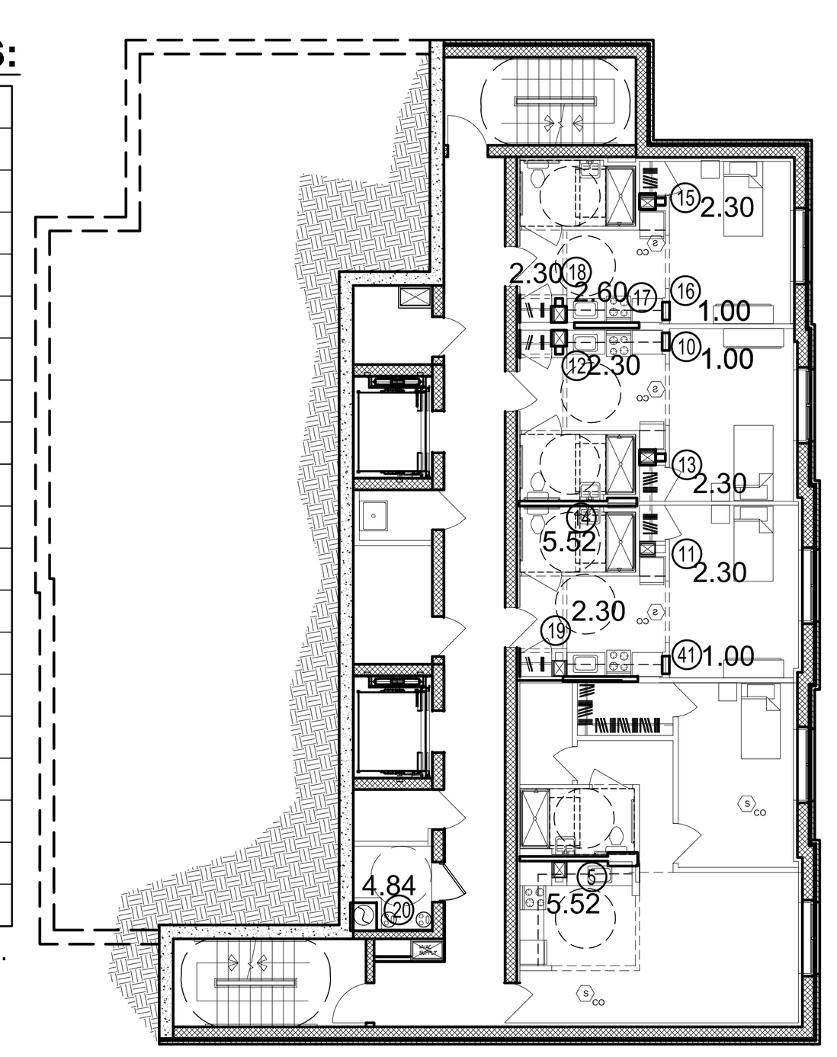
1.		
2.		
3.		
	TOTAL S.F.	0 S.F.



2ND FLOOR

MECHANICAL DEDUCTIONS:

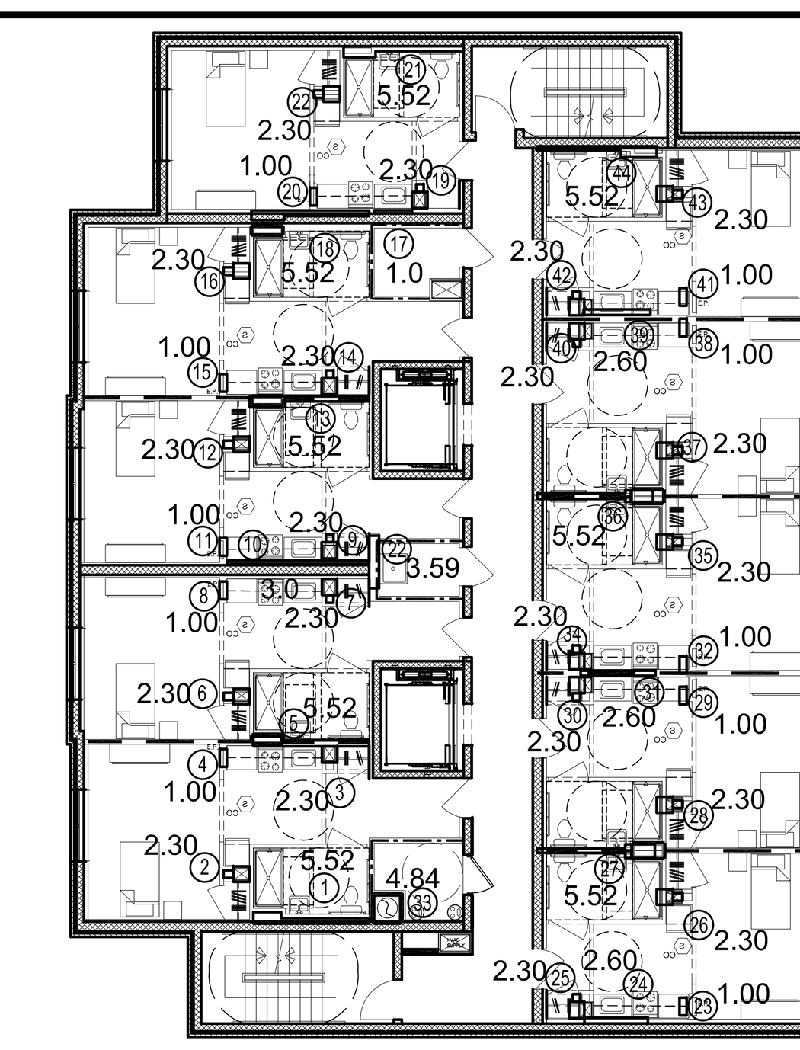
1.	———	———
2.	———	———
3.	———	———
4.	———	———
5.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
6.	———	———
7.	———	———
8.	———	———
9.	———	———
10.	6"x 2'-0"=	1.0 S.F.
11.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
12.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
13.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
14.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
15.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
16.	6"x 2'-0"=	1.0 S.F.
17.	(6"x5.35')	2.6 S.F.
18.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
19.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
20.	2'-1"x 2'-4"=	4.84 S.F.
	TOTAL S.F.	31.98 S.F.



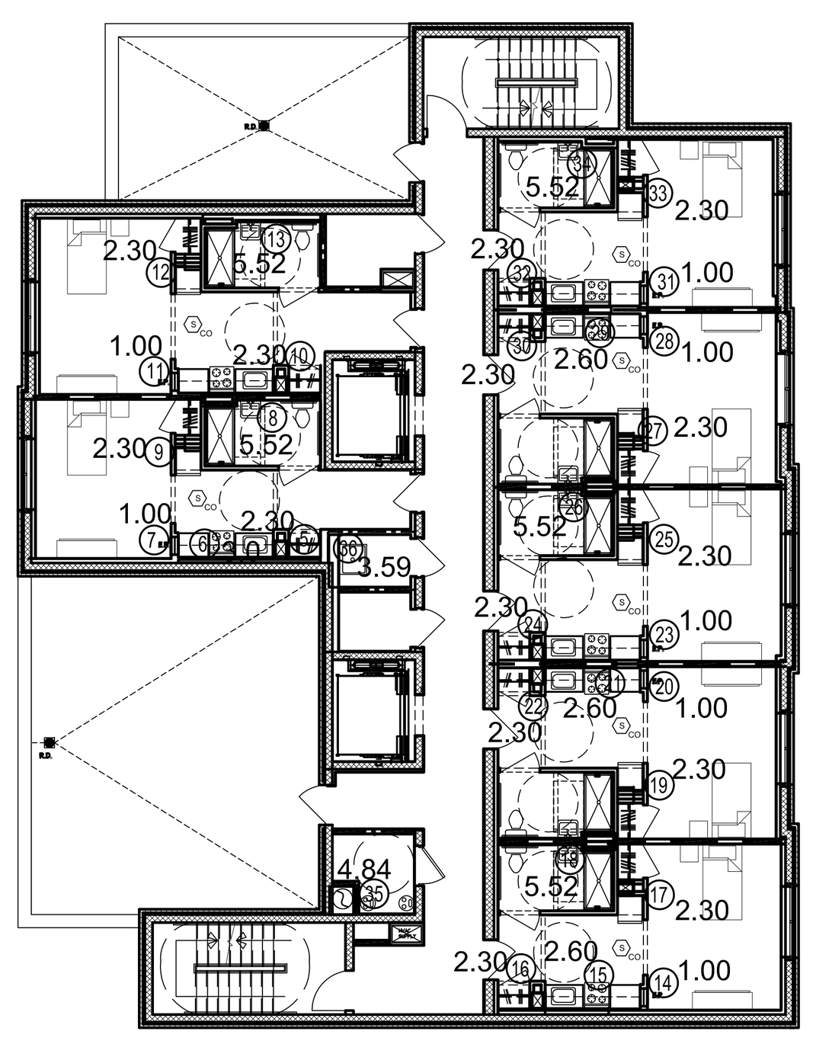
3RD FLOOR

MECHANICAL DEDUCTIONS:

1.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
2.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
3.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
4.	6"x 2'-0"=	1.0 S.F.
5.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
6.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
7.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
8.	6"x 2'-0"=	1.0 S.F.
9.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
10.	(3"x11.83')	3.0 S.F.
11.	6"x 2'-0"=	1.0 S.F.
12.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
13.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
14.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
15.	6"x 2'-0"=	1.0 S.F.
16.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
17.	4"x 3'-0"=	1.0 S.F.
18.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
19.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
20.	6"x 2'-0"=	1.0 S.F.
21.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
22.	10x 4'-4"=	3.59 S.F.
23.	6"x 2'-0"=	1.0 S.F.
24.	(6"x5.35')	2.6 S.F.
25.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
26.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
27.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
28.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
29.	6"x 2'-0"=	1.0 S.F.
30.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
31.	(6"x5.35')	2.6 S.F.
32.	6"x 2'-0"=	1.0 S.F.
33.	2'-1"x 2'-4"=	4.84 S.F.
34.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
35.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
36.	(7 1/2"x10") +(1'-4"x 1'-4")=	5.52 S.F.
37	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
38.	6"x 2'-0"=	1.0 S.F.
39.	(6"x5.35')	2.6 S.F.
40.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
41.	6"x 2'-0"=	1.0 S.F.
42.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
43.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
44.	(7 1/2"x10") +(1'-4"x 1'-4")=	5.52 S.F.
	TOTAL S.F.	115.79 S.F.



4TH-10TH FLOOR



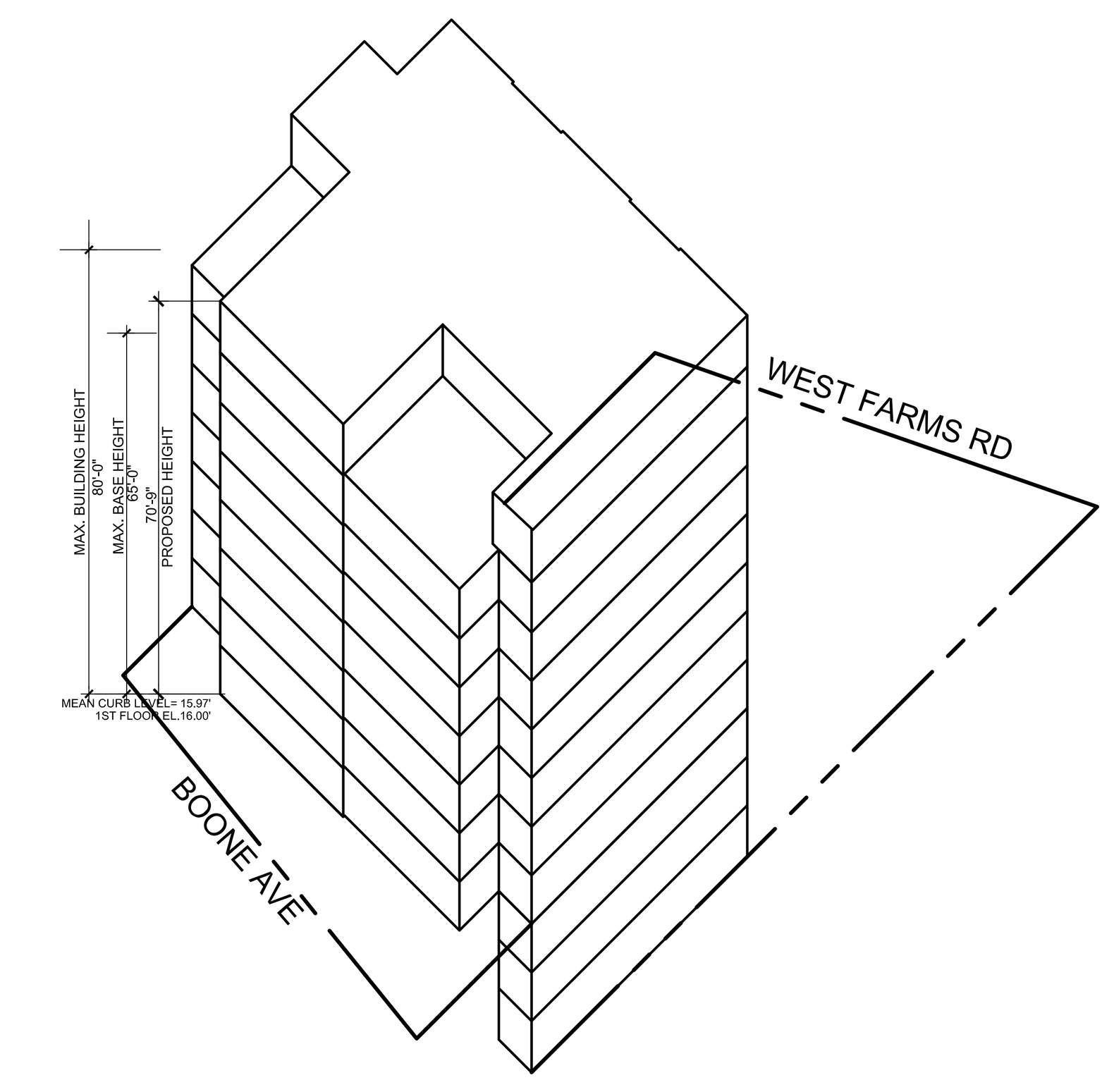
11TH FLOOR

MECHANICAL DEDUCTIONS:

1.	———	———
2.	———	———
3.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
4.	———	———
5.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
6.	(3"x11.83')	3.0 S.F.
7.	6"x 2'-0"=	1.0 S.F.
8.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
9.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
10.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
11.	6"x 2'-0"=	1.0 S.F.
12.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
13.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
14.	6"x 2'-0"=	1.0 S.F.
15.	(6"x5.35')	2.6 S.F.
16.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
17.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
18.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
19.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
20.	6"x 2'-0"=	1.0 S.F.
21.	(6"x5.35')	2.6 S.F.
22.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
23.	6"x 2'-0"=	1.0 S.F.
24.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
25.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
26.	(4"x7'-4") +(1'-4"x 2'-4")=	5.52 S.F.
27.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
28.	6"x 2'-0"=	1.0 S.F.
29.	(6"x5.35')	2.6 S.F.
30.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
31.	6"x 2'-0"=	1.0 S.F.
32.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
33.	(7 1/2"x10") +(1'-4"x 1'-4")=	2.3 S.F.
34.	(7 1/2"x10") +(1'-4"x 1'-4")=	5.52 S.F.
35.	2'-1"x 2'-4"=	4.84 S.F.
36.	10x 4'-4"=	3.59 S.F.
	TOTAL S.F.	88.33 S.F.

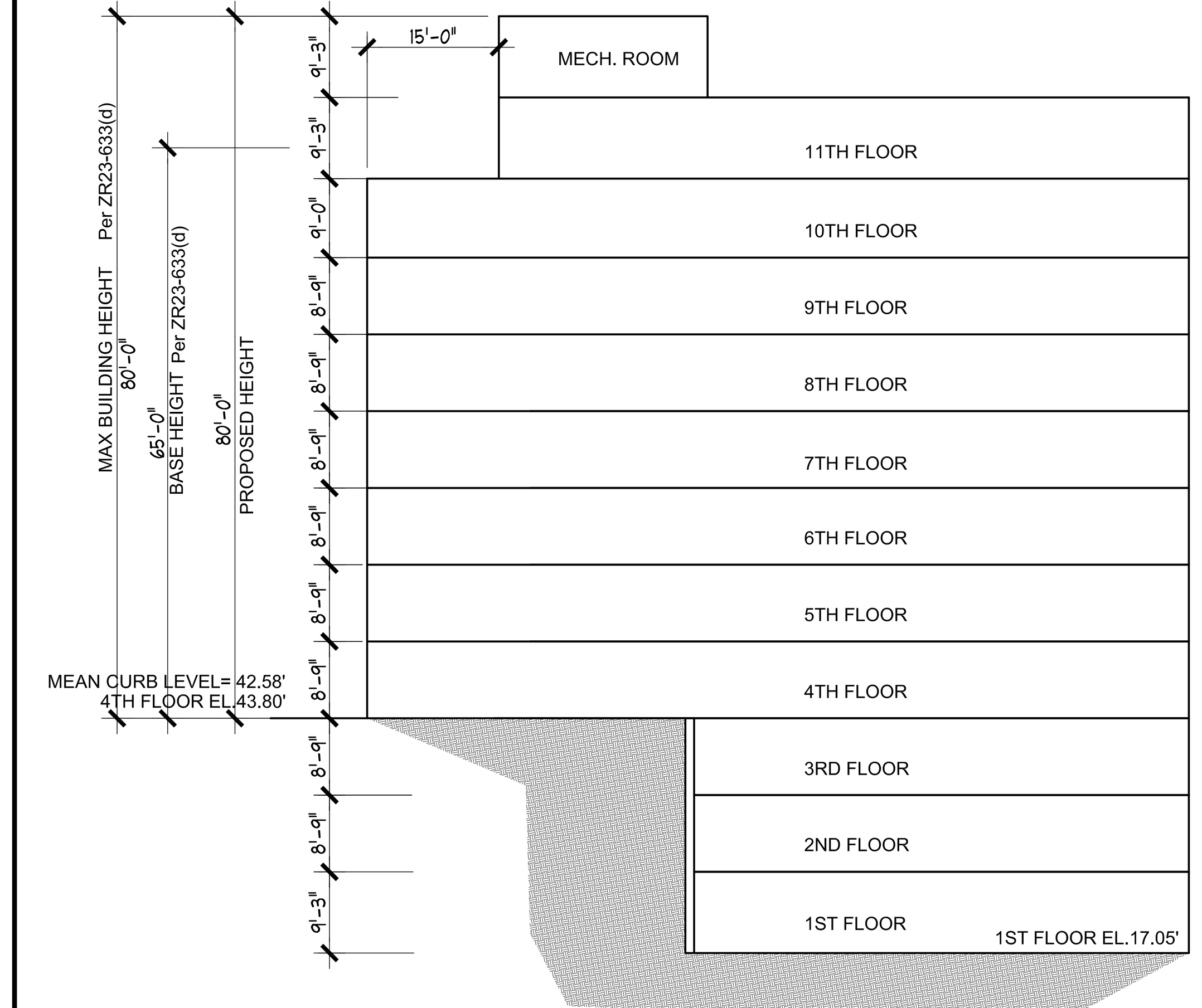
AXONOMETRIC DIAGRAM

N.T.S.



SECTION DIAGRAM

N.T.S.



DETERMINATION OF BASE PLANE
(PER N.Y.C. ZONING SECTIONS 12-10)

BASE PLANE= MEAN ELEVATION @ STREET WALL
EL. 42.98+ EL. 42.85'+ EL.42.61'+ EL.42.48'+EL.41.98' = 212.9 / 5= EL. 42.58'

BASE PLANE = MEAN EL. 42.58'

ZONING CALCULATIONS: as per N.Y.C. ZONING ORDINANCE

ADDRESS: BOONE AVE
BRONX, NY

ZONING REGULATIONS as per N.Y.C. ZONING ORDINANCE

ZONING ORDINANCE	BLOCK -3015 , LOTS- 62, 87, 89 BOROUGH - Bronx	
-	AREA OF SITE (LOT AREA):	12,436 sq. ft.
-	BUILDING AREA:	49,586 sq. ft. (gross without deductions)
Z 22-12	USE GROUP	3A
NYC 308.2	OCCUPANCY GROUP	R-2 RESIDENTIAL
NYC TABLE 601	CONSTRUCTION TYPE	I B
-	ZONING MAP	3d
-	ZONING DISTRICT	R7A

		REQUIRED	PROVIDED	
24-05	STREET TREE PLANTING IN ACCORDANCE TO Z 26-41 1 tree per 25' of street frontage 177' street frontage/25 trees= 7.0 trees required	7	7	OK
24-11	MAXIMUM LOT COVERAGE PERMITTED: BUILDING FOOTPRINT / LOT AREA= 5,130 sf /12,436 sf= 41.25%	65%	41%	OK
24-111b	MAXIMUM FLOOR AREA: COMMUNITY FACILITY	4.0	3.87	OK
24-35	REQUIRED SIDE YARD: NONE REQUIRED	0	0	OK
24-382(b)	REQUIRED REAR YARD: (THROUGH LOT) REAR YARD EQUIVALENT	10'+50'=60'	10'+50'=60'	OK
25-31	REQUIRED OFF STREET PARKING PHILANTHROPIC INSTITUTIONS w/ SLEEPING ACCOMMODATIONS;	0	6	OK
25-80	BICYCLE PARKING= 1 PER 10,000 SF. 49,586 SF. / 10,000 SF.= 5 Bicycle parking (OUTSIDE)	5	5	OK
28-24	LAUNDRY FACILITIES - 1 washing machine per 20 d.u. (81 d.u./20=5)	5	5	OK
	1 dryer per 40 d.u. (81 d.u./ 40= 3)	3	4	
	provide one exterior wall with windows measuring not less than 9.5% of floor space in room.			

	GROSS RESIDENTIAL (NOT IN FAR)	GROSS RESIDENTIAL (IN FAR)	MECHANICAL DEDUCTIONS	NET F.A.R.
FIRST FL.	-	3,225.83 s.f.	563.00 s.f.	2,662.83 s.f.
2ND FL.	-	3,225.83 s.f.	0.00 s.f.	3,225.83 s.f.
3RD FL.		3,225.83 s.f.	31.98 s.f.	3,193.85 s.f.
4TH FL.-10TH FL. (total 7 floors)	-	5,123.97 s.f.x 7= 35,867.79 s.f.	115.79 s.f.x 7= 810.53 s.f.	35,057.26 s.f.
11TH FL.	-	4,040.74 s.f.	88.33 s.f.	3,952.41 s.f.
TOTAL BLDG. AREA	-	49,586.02 s.f.	1,493.84 s.f.	48,092.18 s.f.

FLOOR AREA RATIO (F.A.R.)

ZONING ORDINANCE		AREA s.f.	MAX. FAR	PERMITTED	PROPOSED
24-10	Max. lot coverage	5,130.00 s.f./ 12,436 s.f.=		65% see chart on this sheet	41% see chart on this sheet
24-111b	MAX. FL. AREA	12,436 sq. ft. (site)	4.0	12,436 (site) x 4.0= 49,744 s.f.	48,092.18 s.f./ 12,436= 3.87

UNIT DISTRIBUTION

FLOORS	UNITS PER FLOOR	MOBILITY IMPAIRED UNITS	VISION IMPAIRED UNITS
FIRST FL.	(0) SRO UNITS	———	———
2ND FL.	(0) SRO UNITS	———	———
3RD FL.	(4) SRO UNITS	———	———
4TH FL.	(10) SRO UNITS	(1) SRO UNIT APT. (407)	———
5TH FL.	(10) SRO UNITS	(1) SRO UNIT APT. (507)	(1) SRO UNIT APT. (503)
6TH FL.	(10) SRO UNITS	(1) SRO UNIT APT. (607)	———
7TH FL.	(10) SRO UNITS	(1) SRO UNIT APT. (707)	———
8TH FL.	(10) SRO UNITS	(1) SRO UNIT APT. (807)	(1) SRO UNIT APT. (803)
9TH FL.	(10) SRO UNITS	———	———
10TH FL.	(10) SRO UNITS	———	———
11TH FL.			
TOTAL UNITS	81 SRO UNITS	5 MOBILITY IMPAIRED UNITS	2 VISION IMPAIRED UNITS

GENERAL NOTES

THIS PROJECT HAS BEEN DESIGNED TO COMPLY WITH THE 2014 CITY OF NEW YORK BUILDING CODE

MAXIMUM ALLOWABLE FIRE AREA:
UNLIMITED; BUILDING WILL BE FULLY SPRINKLERED

OCCUPANCY LOAD AND MEANS OF EGRESS:
SEE DRAWINGS A002 (EGRESS DRAWINGS)

SEISMIC:
THE DESIGN, DETAILS & NOTES INCLUDED HEREIN ARE IN COMPLIANCE WITH LOCAL LAW 170-95 (EARTHQUAKE CODE)

NOTES:
- ALL UTILITY POLES, TREES AND HYDRANTS SHALL BE A MINIMUM OF 7'-0" AWAY FROM CURB CUTS.
- BUILDING ENTRANCE IS WITHIN 250' OF A FIRE HYDRANT
- COMPLIES FULLY WITH NEW YORK STATE ENERGY CODE
- ALL PLUMBING FIXTURES TO COMPLY WITH THE WATER CONSERVATION REQUIREMENTS.
- ALL DOORS AT FIRST FLOOR LEVEL ARE AT GRADE PROVIDE H.C. SADDLES
- BUILDING AS DESIGNED CONFORMS WITH SECTION 1003 OF THE BUILDING CODE OF NEW YORK CITY.
- ALL UNITS COMPLY WITH CHAPTER 11- ACCESSIBILITY OF THE BUILDING CODE OF NEW YORK STATE AND ANSI A117.1 FOR HANDICAP ADAPTABLE
- SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1110 AT ALL STAIRS, ELEVATORS, FRONT DOORS, PARKING SPACES AND LOADING ZONE.

CHAPTER 7 - FIRE RESISTANCE RATED CONSTRUCTION
EXTERIOR WALLS - SECTION BC 704
Allowable area of openings (704.8)
Table 704.8 - maximum area of exterior wall openings
Classification of opening- unprotected openings with fire separation greater than 30 feet= No limit required
Vertical Separation of Openings- not required per Section 704.9, exception (2)
** building is fully sprinkled **
Shaft Enclosures - Section 707
Fire-resistance rating (707.4) not less than two hours when penetrating three stories or more and not less than one hour where penetrating fewer than three stories. Stories include cellar. Shaft enclosures shall be constructed as fire barriers in accordance with section 706. Fire enclosures shall have a fire resistance rating not less than the floor assembly penetrating, but not greater than two hours.

N.Y.C. BUILDING CODE ALLOWABLE HT. & BLDG. AREAS

TABLE 503—continued
ALLOWABLE HEIGHT AND BUILDING AREAS[a]
Height limitations shown as stories and feet above grade plane.
Area limitations as determined by the definition of "Area, building," per floor.

GROUP	Hgt(S)	TYPE I A	TYPE I B	TYPE II A	TYPE II B	TYPE III A	TYPE III B	TYPE IV HT	TYPE V A	TYPE V B
	Hgt (feet)	UL	160e	65	55	65	55	65	50	40
R-1	S A	UL UL	UL UL	6 UL	NP NP	6 24,000	NP NP	6 20,500	NP NP	NP NP
R-2	S A	UL UL	UL UL	6 UL	NP NP	6 24,000	3 5,600	6 20,500	NP NP	NP NP
R-3	S A	UL UL	UL UL	6 17,500	3 10,500	6 14,700	3 5,600	6 30,000	3 8,400	3 5,500
S-1	S A	UL UL	6 48,000	5 12,000	3 7,500	4 7,500	3 7,500	4 7,500	3 5,000	2 1,000
S-2[b,c]	S A	UL UL	UL UL	6 15,000	3 10,000	6 10,000	4 8,500	6 10,000	3 8,400	2 5,500
U[c]	S A	UL UL	5 35,000	4 19,000	2 8,500	3 14,000	2 8,500	4 18,000	2 9,000	1 5,500

Permitted Obstructions in Certain Districts
(AS PER N.Y.C. ZONING 23-621)

A DORMER MAY BE ALLOWED AS A PERMITTED OBSTRUCTION:
* WITHIN A REQUIRED SETBACK DISTANCE:
23-633 REQUIRED SETBACK DISTANCE= 15'
PROVIDED SETBACK DISTANCE= 0"

*DORMER MAY EXCEED A MAX. BASE HT. PROVIDED THAT ON ANY STREET FRONTAGE, THE AGGREGATE WIDTH OF ALL DORMERS AT THE MAX. BASE HT. DOES NOT EXCEED 60% OF THE LENGTH OF THE STREET WALL OF THE HIGHEST STORY ENTIRELY BELOW THE MAX. BASE HEIGHT:

DORMER @ BOONE AVE:
Width of street wall @ highest sty. below max. base ht.= 70.75'
Max. width of dormer @ max base ht.: 60% of 70.75' = 42.45' (max. allowed)

*FOR EACH FOOT OF HEIGHT ABOVE THE MAX. BASE HT., THE AGGREGATE WIDTH OF ALL DORMERS SHALL BE DECREASED BY ONE PERCENT OF THE STREET WALL WIDTH OF THE HIGHEST STORY ENTIRELY BELOW THE MAX. BASE HEIGHT

Ft. Above Max. building base ht.= 5.75'
Required Ht. Decrease = 5.75' ht. (above max. base ht.) x 1% (decrease per ft.)= 5.75%

Max allowed width of Dormer exceeding base ht.=
= (max. width of dormer) - (1% decrease of width of street wall)
= 42.45' - [5.75% of 80.00']= 42.45'- 4.6'= 37.85

Provided width of Dormer= 31.25' < 37.85' max. ok.

N.Y.C. CONSTRUCTION CLASSIFICATION

Fire Resistance Rating Requirements for Building Elements

TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hours)

BUILDING ELEMENT	TYPE I A	TYPE I B	TYPE II A[d]	TYPE II B	TYPE III A[d]	TYPE III B	TYPE IV HT	TYPE V[i] A[d]	TYPE V[i] B
Structural frame[a] Including columns, girders, trusses	3[b]	2[b]	1	0	1	0	HT	1	0
Bearing walls Exterior[f,g]	3	2	1	0	2	2	2	1	0
Bearing walls Interior	3[b]	2[b]	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions Exterior			See Table 602						
Nonbearing walls and partitions Interior[e]	0	0	0	0	0	0	See Section 602.4.6	0	0
Floor construction[h] Including supporting beams and joists	2	2	1	0	1	0	HT	1	0
Roof construction Including supporting beams and joists	$1^1/_2$[c]	1[c]	1[c]	0[c]	1[c]	0	HT	1[c]	0

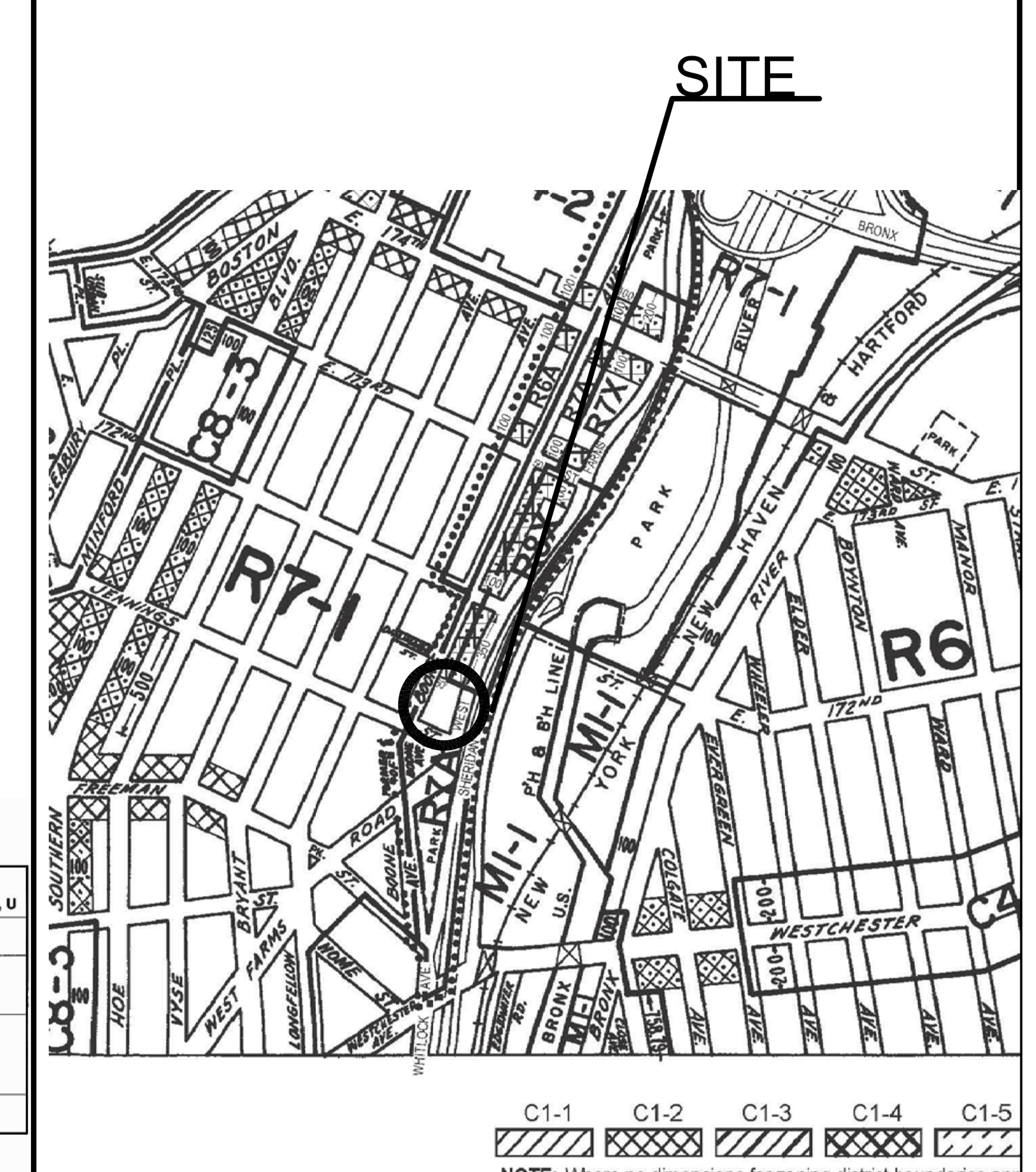
For SI: 1 foot = 304.8 mm.
a. The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and bracing members designed to carry gravity loads. The members of floor or roof panels which have no connection to the columns shall be considered secondary members and not a part of the structural frame.
b. Roof supports: Fire-resistance ratings of structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.
c. 1. Except in Factory-Industrial (F-1), Hazardous (H), Mercantile (M) and Moderate-Hazard Storage (S-1) occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
2. Except in Factory-Industrial (F) occupancies subject to regulation under Sections 264(1) and 264(2) of the *New York State Labor Law*, and in Group I-1, R-1, and Group R-2 occupancies, in all occupancies heavy timber shall be allowed where a 1-hour or less fire-resistance rating is required.
3. Except in Factory-Industrial (F) occupancies subject to regulation under Sections 264(1) and 264(2) of the *New York State Labor Law*, and in Group I-1, R-1, and Group R-2 occupancies, in Type I and II construction, fire-retardant–treated wood shall be allowed in buildings including girders and trusses as part of the roof construction when the building is:
i. Type II construction of any height; or
ii. Type I construction two stories or less; or when over two stories, the vertical distance from the upper floor to the roof is 20 feet or more.

TABLE 602
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE[a,e]

FIRE SEPARATION DISTANCE (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H	OCCUPANCY GROUP F-1, M, S-1	OCCUPANCY GROUP A, B, E, F-2, I, R[b], S-2, U
< 5[c]	All	3	2	1
≥ 5 to < 10	IA Others	3 2	2 1	1 1
≥ 10 to < 30	IA, IB IIB, VB Others	2 1 1	1 0 1	1 1 1
≥ 30	All	0	0	0

For SI: 1 foot = 304.8 mm.
a. Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table 601.
b. Group R-3 and Group U when used as accessory to Group R-3, shall not be required to have a fire-resistance rating where the fire separation distance is 3 feet or more.

ZONING MAP MAP 3D



	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION
REV.	DATE	DESCRIPTION

REVISIONS:

NEWMAN DESIGN
ARCHITECTURE • URBAN PLANNING
NEWMAN DESIGN ARCHITECTS PLLC
210 West Rogues Path • Cold Spring Hills, NY 11743
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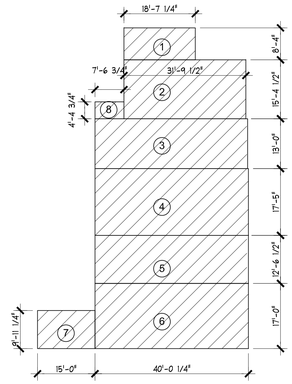
PROJECT:
WEST FARMS SRO
BOONE AVE AND WEST FARMS RD.
BRONX, N.Y.

TITLE:
ZONING & DIAGRAMS

STAMP:

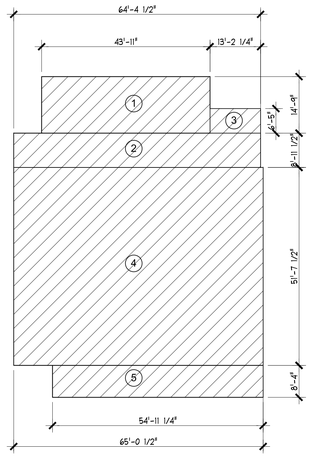
DATE: 11/14/14
JOB #: 12-24
DRAWN BY: OW
SCALE: AS NOTED
DRAWING NO: **Z-001.00**

FILE No. : SHEET:



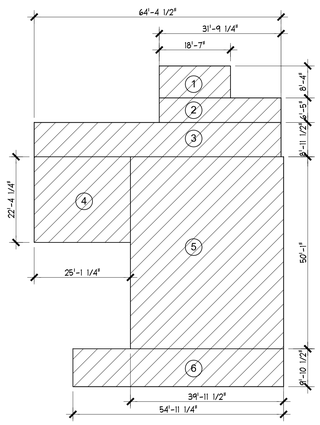
1ST - 3RD FLOOR

1ST THRU 3RD FLOOR		
1	8.33'x 18.60'=	154.94 S.F.
2	15.38'x 31.79'=	488.93 S.F.
3	13.00'x 40.02'=	520.26 S.F.
4	17.42'x 40.02'=	697.15 S.F.
5	12.54'x 40.02'=	501.85 S.F.
6	17.00'x 40.02'=	680.34 S.F.
7	9.94'x 15.00'=	149.10 S.F.
8	4.40'x 7.56'=	33.26 S.F.
	TOTAL=	3,225.83 S.F.



4TH - 10TH FLOOR

4TH THRU 10TH FLOOR		
1	14.75'x 43.92=	647.82 S.F.
2	8.96'x 64.38'=	576.84 S.F.
3	6.42'x 13.19'=	84.68 S.F.
4	51.63'x 65.02'=	3,356.98 S.F.
5	8.33'x 54.94'=	457.65 S.F.
	TOTAL=	5,123.97 S.F.



11TH FLOOR

11TH FLOOR		
1	8.33'x 18.60'=	154.94 S.F.
2	6.42'x 31.77'=	203.96 S.F.
3	8.96'x 64.38'=	576.84 S.F.
4	22.35'x 25.10'=	560.99 S.F.
5	50.08'x 39.96'=	2,001.20 S.F.
6	9.88'x 54.94'=	542.81 S.F.
7		
8		
	TOTAL=	4,040.74 S.F.

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
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	11/14/14	INITIAL HPD SUBMISSION

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PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

ZONING DIAGRAM & CALCULATIONS

STAMP:

DATE: 11/14/14
JOB #: **12-24**
DRAWN BY: OW
SCALE: **AS NOTED**

DRAWING NO:

Z-002.00

FILE No. :

SHEET:

N.Y.ENERGY CONSERVATION CONSTRUCTION CODE: COMcheck

COMcheck Software Version 4.0.0

Envelope Compliance Certificate

Project Information

Energy Code:	90.1 (2007) Standard
Project Title:	BOONE AVE SRO
Location:	Bronx County, New York
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	10%

Construction Site: BOONE AVE & WEST FARMS RD BRONX, NY

Owner/Agent:

Designer/Contractor:

Building Area	Floor Area
1-GROSS BLDG AREA (Multifamily) : Residential	49614

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor[a]
Roof 1: Other Roof, [Bldg. Use 1 - GROSS BLDG AREA] (b)	5212	---	---	0.040	0.027
Floor 1: Slab-On-Grade Heated, Horizontal with vertical >= 4 ft., [Bldg. Use 1 - GROSS BLDG AREA] (c)	5426	---	9.0	0.248	0.704
Exterior Wall 1 FRONT: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	7477	15.0	5.0	0.080	0.090
Window A: Metal Frame with Thermal Break, Perf. Type: Energy code default, Double Pane with Low-E, Tinted , SHGC 0.50, [Bldg. Use 1 - GROSS BLDG AREA]	1560	---	---	0.900	0.550
Window C: Metal Frame Curtain Wall/Storefront, Perf. Type: Energy code default, Double Pane with Low-E, Tinted , SHGC 0.50, [Bldg. Use 1 - GROSS BLDG AREA]	89	---	---	0.900	0.500
Exterior Wall 2 FRONT: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	844	15.0	5.0	0.080	0.090
Exterior Wall 1 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	910	15.0	5.0	0.080	0.090
Window A: Metal Frame with Thermal Break, Perf. Type: Energy code default, Double Pane with Low-E, Tinted , SHGC 0.50, [Bldg. Use 1 - GROSS BLDG AREA]	210	---	---	0.900	0.550
Exterior Wall 2 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	2221	15.0	5.0	0.080	0.090
Window A: Metal Frame with Thermal Break, Perf. Type: Energy code default, Double Pane with Low-E, Tinted , SHGC 0.50, [Bldg. Use 1 - GROSS BLDG AREA]	480	---	---	0.900	0.550
Exterior Wall 3 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	1880	15.0	5.0	0.080	0.090
Window 7: Metal Frame with Thermal Break, Perf. Type: Energy code default, Double Pane with Low-E, Tinted , SHGC 0.50, [Bldg. Use 1 - GROSS BLDG AREA]	420	---	---	0.900	0.550

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor[a]
GROSS BLDG AREA]					
Exterior Wall 4 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	440	15.0	5.0	0.080	0.090
Exterior Wall 5 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - GROSS BLDG AREA]	153	---	5.0	0.143	0.090
Exterior Wall 6 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - GROSS BLDG AREA]	267	---	5.0	0.143	0.090
Door 2: Insulated Metal, Swinging, [Bldg. Use 1 - GROSS BLDG AREA]	21	---	---	0.150	0.700
Exterior Wall 7 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - GROSS BLDG AREA]	73	---	5.0	0.143	0.090
Exterior Wall 8 REAR: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	136	15.0	5.0	0.080	0.090
Door 3: Insulated Metal, Swinging, [Bldg. Use 1 - GROSS BLDG AREA]	21	---	---	0.150	0.700
Exterior Wall 1 SIDE 1: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	719	15.0	5.0	0.080	0.090
Exterior Wall 2 SIDE 1: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - GROSS BLDG AREA]	2972	---	5.0	0.143	0.090
Exterior Wall 3 SIDE 1: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - GROSS BLDG AREA]	2593	---	5.0	0.143	0.090
Exterior Wall 1 SIDE 2: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	1351	15.0	5.0	0.080	0.090
Exterior Wall 2 SIDE 2: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - GROSS BLDG AREA]	2311	---	5.0	0.143	0.090
Exterior Wall 3 SIDE 2: Concrete Block:8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - GROSS BLDG AREA]	1821	15.0	5.0	0.080	0.090
Exterior Wall 4 SIDE 2: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - GROSS BLDG AREA]	542	---	5.0	0.143	0.090

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) 'Other' components require supporting documentation for proposed U-factors.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

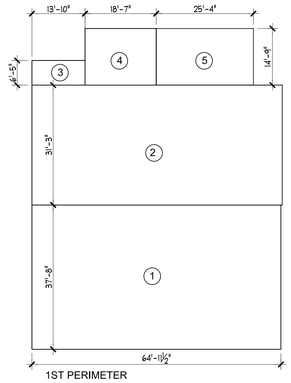
Envelope PASSES: Design 9% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 4.0.0 and to comply with the mandatory requirements listed in the Inspection Checklist.

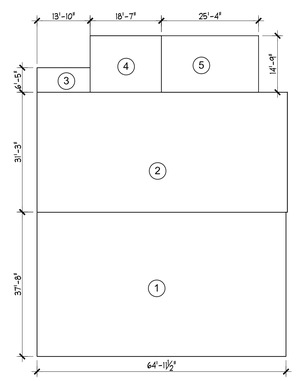
Name - Title Signature Date

GROSS AREA CALCULATIONS OF BUILDING:



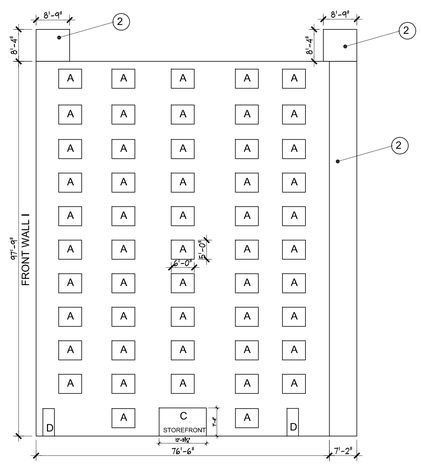
1ST PERIMETER

1ST FLOOR SLAB ON GRADE		
	AREAS	
1.	37.66'x 64.95'=	2,446.01 S.F.
2.	31.25'x 64.95'=	2,029.68 S.F.
3.	6.41'x 13.83'=	88.65 S.F.
4.	14.75'x 18.58'=	274.05 S.F.
5.	14.75'x 25.33'=	373.61 S.F.
	TOTAL=	5,212.00 S.F.



ROOF PERIMETER

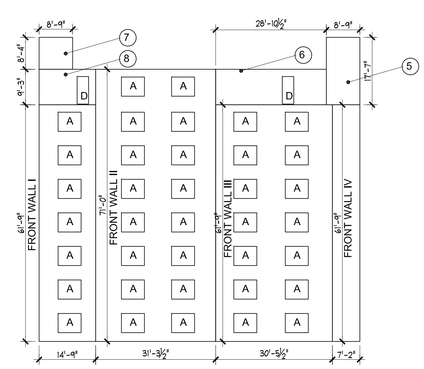
ROOF AREAS: building footprint		
	AREAS	
1.	37.66'x 64.95'=	2,446.01 S.F.
2.	31.25'x 64.95'=	2,029.68 S.F.
3.	6.41'x 13.83'=	88.65 S.F.
4.	14.75'x 18.58'=	274.05 S.F.
5.	14.75'x 25.33'=	373.61 S.F.
	TOTAL=	5,212 S.F.



FRONT WALL AREAS:		
I	76.50'x 97.75'=	7,477.88 S.F.
	——	——
	——	——
	SUBTOTAL=	7,477.88 S.F.
II	97.75'x 7.16'=	699.89 S.F.
	8.25'x 8.75'=	72.18 S.F.
	8.25'x 8.75'=	72.18 S.F.
	SUBTOTAL=	844.25 S.F.
	——	——
	——	——
	——	——
	——	——
	——	——
	TOTAL=	8,322.13 S.F.

WINDOWS/ DOORS/ STOREFRONT			
FRONT WALL I	A	6' x 5'= 30.00 s.f. x 52 windows=	1,560 s.f.
	C	12.25' x 7.33'= 72.05 s.f. storefront=	89.79 s.f.

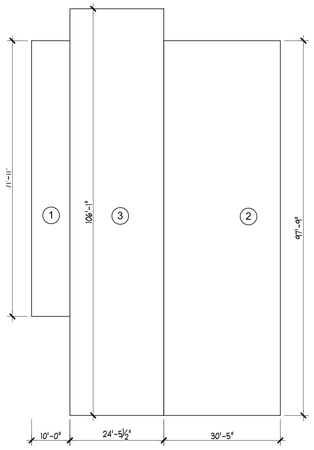
AS PER NYC ENERGY CONSTRUCTION CODE SECTION 502.2.2:
- ABOVE GRADE WALLS ARE THOSE WALLS COMPLETELY ABOVE GRADE OR MORE THAN 15% ABOVE GRADE
- BELOW GRADE WALLS ARE BASEMENT OR FIRST FLOOR EXTERIOR WALLS THAT ARE AT LEAST 85% BELOW GRADE



REAR WALL AREAS:		
I	14.75'x 61.75'=	910.81 S.F.
2	31.29'x 71.00'=	2,221.59 S.F.
3	30.45'x 61.75'=	1,880.80 S.F.
4	7.20'x 61.75'=	444.60 S.F.
5	8.75'x 17.56'=	153.65 S.F.
6	9.25'x 28.87'=	267.09 S.F.
7	8.75'x 8.33'=	72.88 S.F.
8	14.75'x 9.25'=	136.43 S.F.
	TOTAL=	6,087.85 S.F.

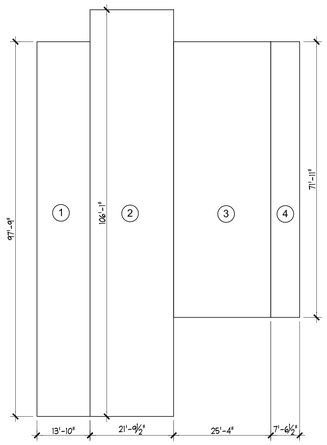
WINDOWS/ DOORS/ STOREFRONT			
FRONT WALL 1	A	6' x 5'= 30.00 s.f. x 7 windows=	210.00 s.f.
FRONT WALL 2	A	6' x 5'= 30.00 s.f. x 16 windows=	480.00 s.f.
FRONT WALL 3	A	6' x 5'= 30.00 s.f. x 14 windows=	420.00 s.f.
FRONT WALL 4		——	
		——	
		——	
FRONT WALL 5		——	
		——	
FRONT WALL 6	D	3' x 7.16'= 21.48 s.f. DOOR=	21.48 s.f.
		——	
		——	
FRONT WALL 7		——	
		——	
FRONT WALL 8	D	3' x 7.16'= 21.48 s.f. DOOR=	21.48 s.f.

AS PER NYC ENERGY CONSTRUCTION CODE SECTION 502.2.2:
- ABOVE GRADE WALLS ARE THOSE WALLS COMPLETELY ABOVE GRADE OR MORE THAN 15% ABOVE GRADE
- BELOW GRADE WALLS ARE BASEMENT OR FIRST FLOOR EXTERIOR WALLS THAT ARE AT LEAST 85% BELOW GRADE



SIDE 1 WALL AREAS:		
I	10.00'x 71.93'=	719.30 S.F.
2	30.41'x 97.75'=	2,972.57 S.F.
3	24.45'x 106.08'=	2,593.65 S.F.
	TOTAL=	6,285.52 S.F.

AS PER NYC ENERGY CONSTRUCTION CODE SECTION 502.2.2:
- ABOVE GRADE WALLS ARE THOSE WALLS COMPLETELY ABOVE GRADE OR MORE THAN 15% ABOVE GRADE
- BELOW GRADE WALLS ARE BASEMENT OR FIRST FLOOR EXTERIOR WALLS THAT ARE AT LEAST 85% BELOW GRADE



SIDE 2 WALL AREAS:		
I	13.83'x 97.75'=	1,351.88 S.F.
2	21.79'x 106.08'=	2,311.48 S.F.
3	25.33'x 71.93'=	1,821.98 S.F.
4	7.54'x 71.93'=	542.35 S.F.
	TOTAL=	6,027.69 S.F.

AS PER NYC ENERGY CONSTRUCTION CODE SECTION 502.2.2:
- ABOVE GRADE WALLS ARE THOSE WALLS COMPLETELY ABOVE GRADE OR MORE THAN 15% ABOVE GRADE
- BELOW GRADE WALLS ARE BASEMENT OR FIRST FLOOR EXTERIOR WALLS THAT ARE AT LEAST 85% BELOW GRADE

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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210 West Rogues Path • Cold Spring Hills, NY 11743
TEL: 212.673.3110 • TEL: 631.673.3111 • FAX: 631.673.2031
www.ndarchitects.com

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

N.Y. ENERGY CONSERVATION CONSTRUCTION CODE

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

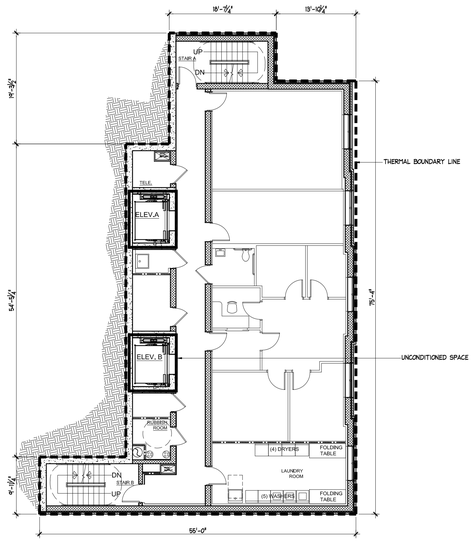
DRAWING NO:

EN-101.00

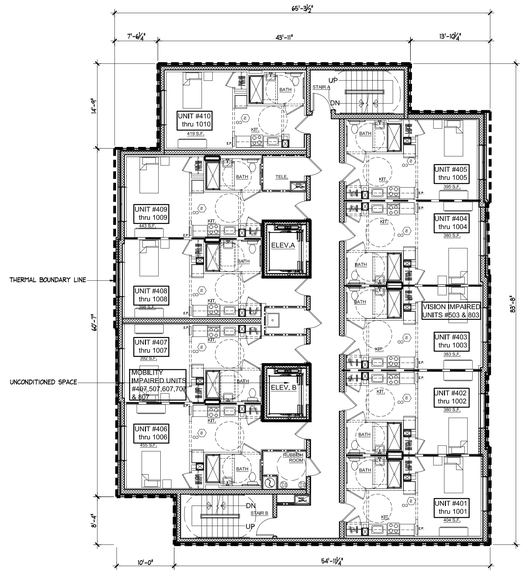
FILE No. :

SHEET:

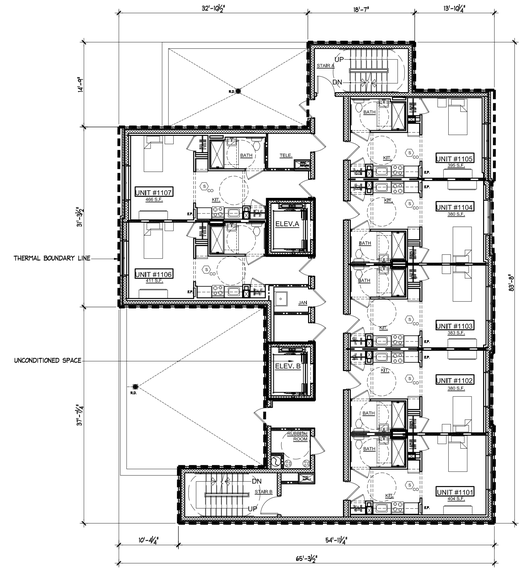
CONTINUOUS INSULATION DIAGRAM



1 EN102 1ST- 3RD FLOOR
Scale: 1/8" = 1'-0"



2 EN102 4TH - 10TH FLOOR
Scale: 1/8" = 1'-0"



3 EN102 11TH FLOOR
Scale: 1/8" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

NYECCC BUILDING ENVELOPE

STAMP:

DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**AS NOTED**

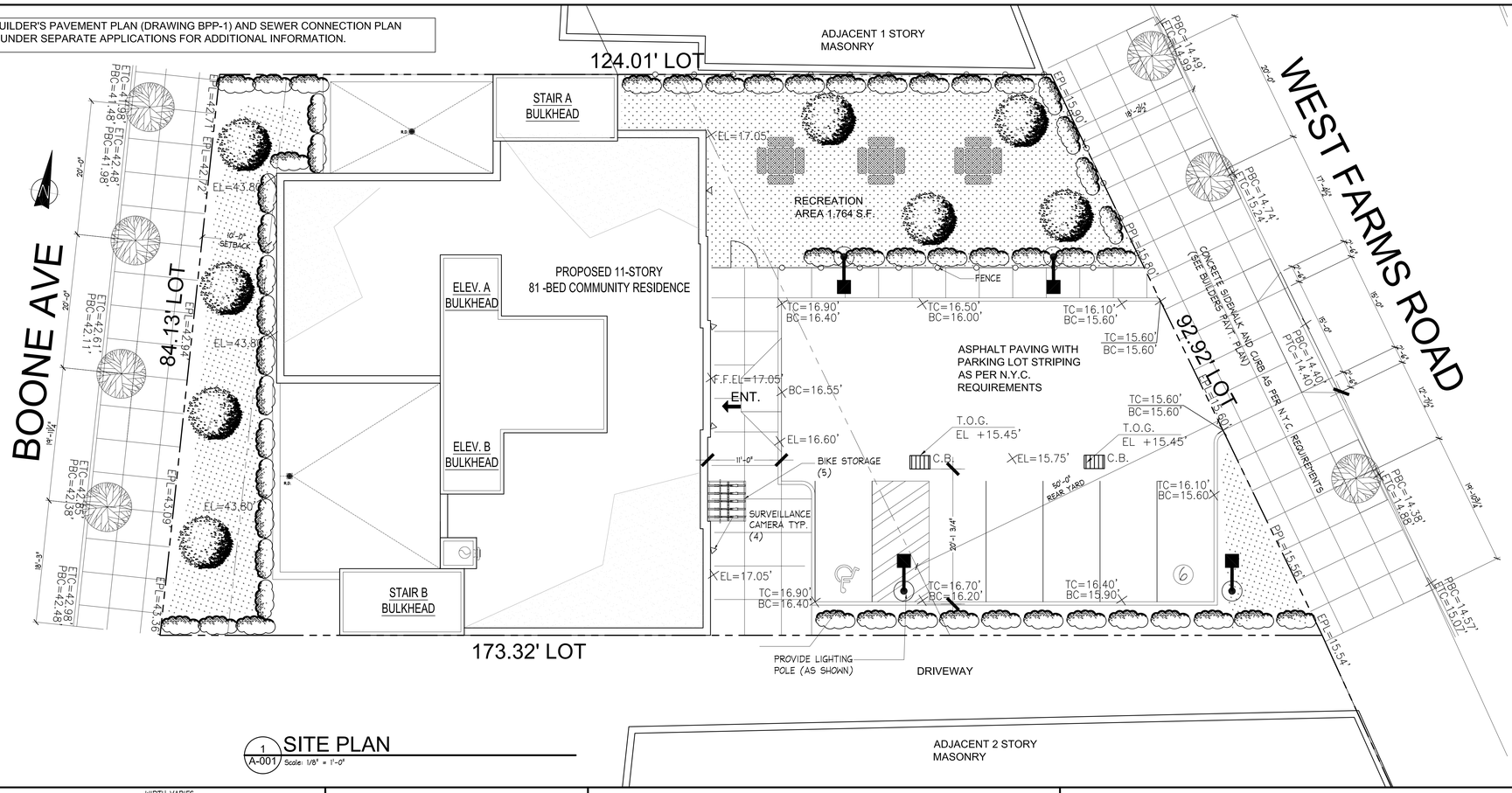
DRAWING NO:

EN-102.00

FILE No. :

SHEET:

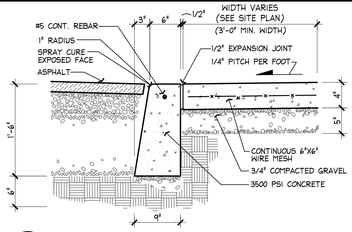
SEE BUILDER'S PAVEMENT PLAN (DRAWING BPP-1) AND SEWER CONNECTION PLAN FILED UNDER SEPARATE APPLICATIONS FOR ADDITIONAL INFORMATION.



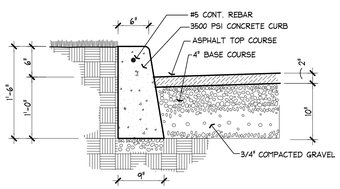
SITE PLAN LEGEND

	INDICATES PROPERTY LINE
16.0'	INDICATES SPOT ELEVATION
	INDICATES NEW CURB
	INDICATES EXIST. CURB
	INDICATES PROPOSED CONCRETE WALK
x x x	INDICATES FENCE
E E	INDICATES ELECTRICAL LINE
G G	INDICATES GAS MAIN
S S	INDICATES SANITARY SEWER PIPING
13	INDICATES TOTAL PARKING SPACES PER ROW
	INDICATES CATCH BASIN
TC 109.0' BC 108.5'	TOP OF CONCRETE BOTTOM OF CONCRETE
	INDICATES POLE MOUNTED LIGHT
	INDICATES HANDICAP PARKING SPACE

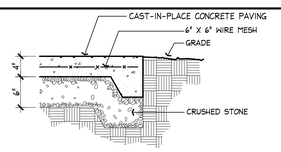
1 A-001 SITE PLAN
Scale: 1/8" = 1'-0"



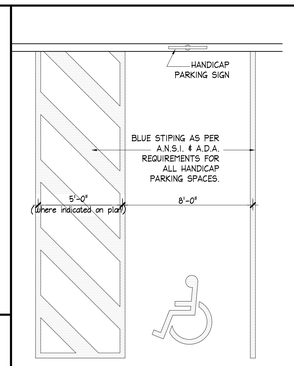
2 A-001 TYPICAL CONCRETE SIDEWALK/ ASPHALT
Scale: 1" = 1'-0"



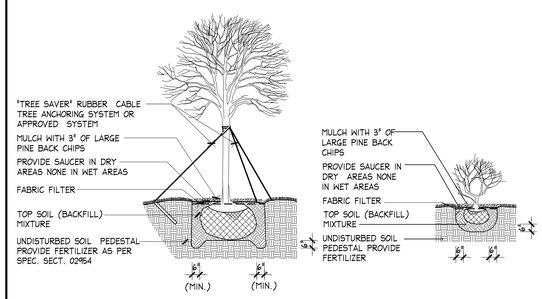
3 A-001 TYPICAL CONCRETE CURB / PLANTER
Scale: 1" = 1'-0"



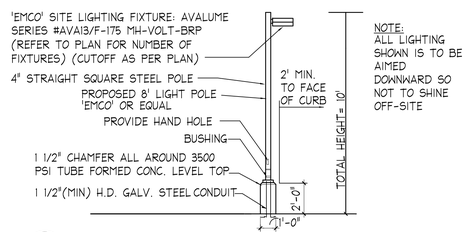
4 A-001 TYPICAL CONCRETE WALK / GRADE
Scale: 1" = 1'-0"



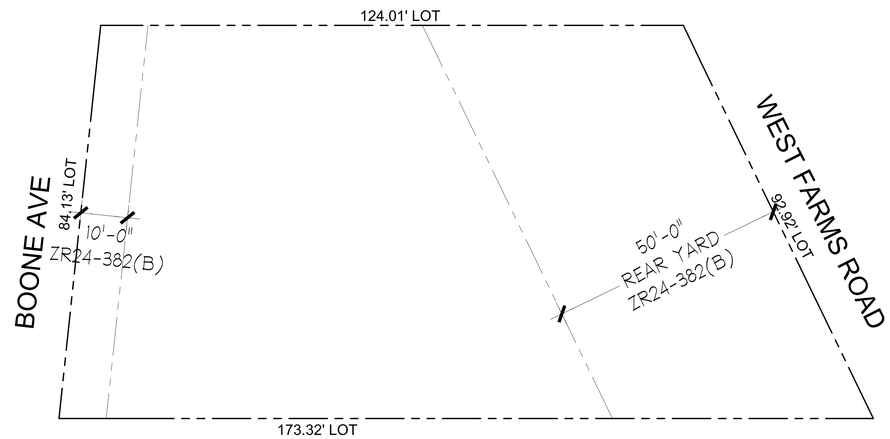
5 A001 TYPICAL HANDICAP PARKING
Scale: 1/4" = 1'-0"



6 A-001 TYP. TREE & SHRUB PLANTING DETAILS
Scale: N.T.S.



7 A-001 TYPICAL LIGHTPOLE DETAIL
Scale: 3/16" = 1'-0"



ZONING LOT DIAGRAM

ZR24-382(b)
REAR YARD EQUIVALENT FOR THROUGH LOT

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

SITE PLAN & DETAILS

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

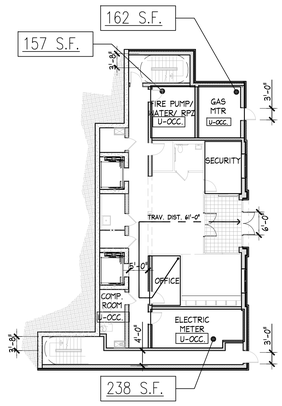
DRAWING NO:

A-001.00

FILE No. :

SHEET:

EGRESS PLANS



1 A-002 EGRESS - FIRST FL.
Scale: 1/16" = 1'-0"

OCCUPANT LOAD CALCULATION- CELLAR

ROOM	OCCUPANCY CLASSIFICATION NYC 302.1	DESIGNATION GROUP	TOTAL FLOOR AREA	FLOOR AREA PER OCCUPANT TABLE 1004.1.2	TOTAL OCCUPANTS
FIRE PUMP/ WATER/RPZ	U - UTILITY	U	157 S.F.	300 S.F.	1 OCCUPANT
GAS METER ROOM	U - UTILITY	U	162 S.F.	300 S.F.	1 OCCUPANT
ELECTRIC METER	U - UTILITY	U	238 S.F.	300 S.F.	1 OCCUPANT
OFFICE	RESIDENTIAL	R-2	103 S.F.	200 S.F.	1 OCCUPANT
SECURITY	RESIDENTIAL	R-2	129 S.F.	200 S.F.	1 OCCUPANT
TOTAL OCCUPANTS					5 OCCUPANTS

EXIT REQUIREMENTS - CELLAR

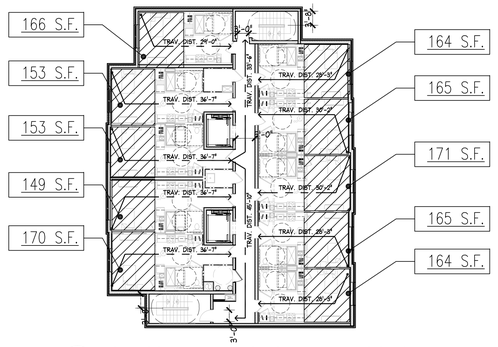
FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION GROUP SECTION 303	LOCATION	EGRESS WIDTH PER OCCUPANT TABLE 1005.1 (INCHES/ OCCUPANT)	TOTAL OCCUPANTS SECTION 1004.1.2	UNITS REQUIRED (EGRESS FACTOR x OCCUP	UNITS PROVIDED
1ST	RESIDENTIAL	R-2	DOORS Section 1008.1.1.1 > 32" min. width	0.2	5	4.8" (32" MIN.)	(4) 36" =144"
			CORRIDOR Section 1016.2 > 44" min. width	0.2	5	4.8" (44" MIN.)	60"

EXIT WIDTH AND LENGTH REQUIREMENTS

SEE EGRESS DIAGRAM FOR ADDITIONAL INFORMATION

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION SECTION 303	COMPONENT	MAX. TRAVEL DISTANCE with sprinkler	PROVIDED	MIN WIDTH	PROVIDED
1ST	RESIDENTIAL	R-2	TRAVEL DISTANCE TO EXITS: SECTION 1015.1	200 FEET	61'-0"	—	—
			CORRIDOR WIDTH 1016.2	—	—	44 INCHES	60 INCHES
			MAX DEAD END LENGTH 1016.3	20 FEET	—	—	—

DENOTES NET BUILDING AREA FOR EXITING CALCULATIONS
MAXIMUM TRAVEL DISTANCE TO EXIT (SPRINKLED BUILDING) = 200'



4 A-002 EGRESS - 4TH THROUGH 10TH FLOORS
Scale: 1/16" = 1'-0"

OCCUPANT LOAD CALCULATION- 1ST FLOOR

ROOM	OCCUPANCY CLASSIFICATION NYC 302.1	DESIGNATION GROUP	TOTAL FLOOR AREA	FLOOR AREA PER OCCUPANT TABLE 1004.1.2	TOTAL OCCUPANTS
#401-1001	RESIDENTIAL	R-2	168 S.F.	200 S.F.	1 OCCUPANTS
#402-1002	RESIDENTIAL	R-2	165 S.F.	200 S.F.	1 OCCUPANTS
#403-1003	RESIDENTIAL	R-2	193 S.F.	200 S.F.	1 OCCUPANTS
#404-1004	RESIDENTIAL	R-2	165 S.F.	200 S.F.	1 OCCUPANTS
#405-1005	RESIDENTIAL	R-2	168 S.F.	200 S.F.	1 OCCUPANTS
#406-1006	RESIDENTIAL	R-2	193 S.F.	200 S.F.	1 OCCUPANTS
#407-1007	RESIDENTIAL	R-2	189 S.F.	200 S.F.	1 OCCUPANTS
#408-1008	RESIDENTIAL	R-2	153 S.F.	200 S.F.	1 OCCUPANTS
#409-1009	RESIDENTIAL	R-2	153 S.F.	200 S.F.	1 OCCUPANTS
#410-1010	RESIDENTIAL	R-2	166 S.F.	200 S.F.	1 OCCUPANTS
TOTAL OCCUPANTS					10 OCCUPANTS

EXIT REQUIREMENTS - 1ST FL.

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION GROUP SECTION 303	LOCATION	EGRESS WIDTH PER OCCUPANT TABLE 1005.1 (INCHES/ OCCUPANT)	TOTAL OCCUPANTS SECTION 1004.1.2	UNITS REQUIRED (EGRESS FACTOR x OCCUP	UNITS PROVIDED
4TH - 10TH	RESIDENTIAL	R-2	STAIR A&B Section 1009.1 > 36" min. width	0.3	10	3.0"(36" MIN.)	(2) 44"= 88"
			DOORS Section 1008.1.1.1 > 32" min. width	0.2	10	2.0"(32" MIN.)	(2) 36"= 72"
			CORRIDOR Section 1016.2 > 44" min. width	0.2	10	2.0"(44" MIN.)	60"

EXIT WIDTH AND LENGTH REQUIREMENTS

SEE EGRESS DIAGRAM FOR ADDITIONAL INFORMATION

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION SECTION 303	COMPONENT	MAX. TRAVEL DISTANCE with sprinkler	PROVIDED	MIN WIDTH	PROVIDED
4TH - 10TH	RESIDENTIAL	R-2	TRAVEL DISTANCE TO EXITS: SECTION 1015.1	200 FEET	45'-10"	—	—
			CORRIDOR WIDTH 1016.2	—	—	44 INCHES	60 INCHES
			MAX DEAD END LENGTH 1016.3	40 FEET	—	—	—

DENOTES NET BUILDING AREA FOR EXITING CALCULATIONS
MAXIMUM TRAVEL DISTANCE TO EXIT (SPRINKLED BUILDING) = 200'
MAXIMUM TRAVEL DISTANCE TO EXIT PROVIDED = 45'-10"

2 A-002 EGRESS - 2ND FLOOR
Scale: 1/16" = 1'-0"

OCCUPANT LOAD CALCULATION- 1ST FLOOR

ROOM	OCCUPANCY CLASSIFICATION NYC 302.1	DESIGNATION GROUP	TOTAL FLOOR AREA	FLOOR AREA PER OCCUPANT TABLE 1004.1.2	TOTAL OCCUPANTS
LAUNDRY	RESIDENTIAL	R-2	264 S.F.	200 S.F.	1 OCCUPANT
MULTIPURPOSE ROOM	RESIDENTIAL	R-2	447 S.F.	200 S.F.	2 OCCUPANT
COMPUTER ROOM	RESIDENTIAL	R-2	187 S.F.	200 S.F.	1 OCCUPANT
CONFERENCE ROOM	RESIDENTIAL	R-2	116 S.F.	200 S.F.	1 OCCUPANT
DIRECT. OFFICE	RESIDENTIAL	R-2	168 S.F.	200 S.F.	1 OCCUPANT
TOTAL OCCUPANTS					6 OCCUPANTS

EXIT REQUIREMENTS - 1ST FL.

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION GROUP SECTION 303	LOCATION	EGRESS WIDTH PER OCCUPANT TABLE 1005.1 (INCHES/ OCCUPANT)	TOTAL OCCUPANTS SECTION 1004.1.2	UNITS REQUIRED (EGRESS FACTOR x OCCUP	UNITS PROVIDED
2ND	RESIDENTIAL	R-2	STAIR A&B Section 1009.1 > 36" min. width	0.3	6	1.8"(36" MIN.)	(2) 44"= 88"
			DOORS Section 1008.1.1.1 > 32" min. width	0.2	6	1.2"(32" MIN.)	(2) 36"= 72"
			CORRIDOR Section 1016.2 > 44" min. width	0.2	6	1.2"(44" MIN.)	60"

EXIT WIDTH AND LENGTH REQUIREMENTS

SEE EGRESS DIAGRAM FOR ADDITIONAL INFORMATION

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION SECTION 303	COMPONENT	MAX. TRAVEL DISTANCE with sprinkler	PROVIDED	MIN WIDTH	PROVIDED
2ND	RESIDENTIAL	R-2	TRAVEL DISTANCE TO EXITS: SECTION 1015.1	200 FEET	45'-0"	—	—
			CORRIDOR WIDTH 1016.2	—	—	44 INCHES	60 INCHES
			MAX DEAD END LENGTH 1016.3	40 FEET	—	—	—

DENOTES NET BUILDING AREA FOR EXITING CALCULATIONS
MAXIMUM TRAVEL DISTANCE TO EXIT (SPRINKLED BUILDING) = 200'
MAXIMUM TRAVEL DISTANCE TO EXIT PROVIDED = 45'-0"

5 A-002 EGRESS - 11THFLOOR
Scale: 1/16" = 1'-0"

OCCUPANT LOAD CALCULATION- 1ST FLOOR

ROOM	OCCUPANCY CLASSIFICATION NYC 302.1	DESIGNATION GROUP	TOTAL FLOOR AREA	FLOOR AREA PER OCCUPANT TABLE 1004.1.2	TOTAL OCCUPANTS
#1101	RESIDENTIAL	R-2	164 S.F.	200 S.F.	1 OCCUPANTS
#1102	RESIDENTIAL	R-2	165 S.F.	200 S.F.	1 OCCUPANTS
#1103	RESIDENTIAL	R-2	171 S.F.	200 S.F.	1 OCCUPANTS
#1104	RESIDENTIAL	R-2	165 S.F.	200 S.F.	1 OCCUPANTS
#1105	RESIDENTIAL	R-2	164 S.F.	200 S.F.	1 OCCUPANTS
#1106	RESIDENTIAL	R-2	153 S.F.	200 S.F.	1 OCCUPANTS
#1107	RESIDENTIAL	R-2	153 S.F.	200 S.F.	1 OCCUPANTS
TOTAL OCCUPANTS					7 OCCUPANTS

EXIT REQUIREMENTS - 1ST FL.

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION GROUP SECTION 303	LOCATION	EGRESS WIDTH PER OCCUPANT TABLE 1005.1 (INCHES/ OCCUPANT)	TOTAL OCCUPANTS SECTION 1004.1.2	UNITS REQUIRED (EGRESS FACTOR x OCCUP	UNITS PROVIDED
11TH	RESIDENTIAL	R-2	STAIR A&B Section 1009.1 > 36" min. width	0.3	8	2.4"(36" MIN.)	(2) 44"= 88"
			DOORS Section 1008.1.1.1 > 32" min. width	0.2	8	1.6"(32" MIN.)	(2) 36"= 72"
			CORRIDOR Section 1016.2 > 44" min. width	0.2	8	1.6"(44" MIN.)	60"

EXIT WIDTH AND LENGTH REQUIREMENTS

SEE EGRESS DIAGRAM FOR ADDITIONAL INFORMATION

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION SECTION 303	COMPONENT	MAX. TRAVEL DISTANCE with sprinkler	PROVIDED	MIN WIDTH	PROVIDED
11TH	RESIDENTIAL	R-2	TRAVEL DISTANCE TO EXITS: SECTION 1015.1	200 FEET	45'-10"	—	—
			CORRIDOR WIDTH 1016.2	—	—	44 INCHES	60 INCHES
			MAX DEAD END LENGTH 1016.3	40 FEET	—	—	—

DENOTES NET BUILDING AREA FOR EXITING CALCULATIONS
MAXIMUM TRAVEL DISTANCE TO EXIT (SPRINKLED BUILDING) = 200'
MAXIMUM TRAVEL DISTANCE TO EXIT PROVIDED = 72'-3"

3 A-002 EGRESS - 3RD FL
Scale: 1/16" = 1'-0"

OCCUPANT LOAD CALCULATION- 1ST FLOOR

ROOM	OCCUPANCY CLASSIFICATION NYC 302.1	DESIGNATION GROUP	TOTAL FLOOR AREA	FLOOR AREA PER OCCUPANT TABLE 1004.1.2	TOTAL OCCUPANTS
#301	RESIDENTIAL	R-2	165 S.F.	200 S.F.	1 OCCUPANTS
#302	RESIDENTIAL	R-2	166 S.F.	200 S.F.	1 OCCUPANTS
#303	RESIDENTIAL	R-2	171 S.F.	200 S.F.	1 OCCUPANTS
#304	RESIDENTIAL	R-2	165 S.F.	200 S.F.	1 OCCUPANTS
TOTAL OCCUPANTS					5 OCCUPANTS

EXIT REQUIREMENTS - 1ST FL.

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION GROUP SECTION 303	LOCATION	EGRESS WIDTH PER OCCUPANT TABLE 1005.1 (INCHES/ OCCUPANT)	TOTAL OCCUPANTS SECTION 1004.1.2	UNITS REQUIRED (EGRESS FACTOR x OCCUP	UNITS PROVIDED
3RD	RESIDENTIAL	R-2	STAIR A&B Section 1009.1 > 36" min. width	0.3	9	2.7"(36" MIN.)	(2) 44"= 88"
			DOORS Section 1008.1.1.1 > 32" min. width	0.2	9	1.8"(32" MIN.)	(2) 36"= 72"
			CORRIDOR Section 1016.2 > 44" min. width	0.2	9	1.8"(44" MIN.)	60"

EXIT WIDTH AND LENGTH REQUIREMENTS

SEE EGRESS DIAGRAM FOR ADDITIONAL INFORMATION

FLOOR	OCCUPANCY GROUP NYC SECTION 302.1	DESIGNATION SECTION 303	COMPONENT	MAX. TRAVEL DISTANCE with sprinkler	PROVIDED	MIN WIDTH	PROVIDED
3RD	RESIDENTIAL	R-2	TRAVEL DISTANCE TO EXITS: SECTION 1015.1	200 FEET	45'-10"	—	—
			CORRIDOR WIDTH 1016.2	—	—	44 INCHES	60 INCHES
			MAX DEAD END LENGTH 1016.3	40 FEET	—	—	—

DENOTES NET BUILDING AREA FOR EXITING CALCULATIONS
MAXIMUM TRAVEL DISTANCE TO EXIT (SPRINKLED BUILDING) = 200'
MAXIMUM TRAVEL DISTANCE TO EXIT PROVIDED = 49'-4"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

NEWMAN DESIGN
ARCHITECTURE • URBAN PLANNING
NEWMAN DESIGN ARCHITECTS PLLC
210 West Rogues Path • Cold Spring Hills, NY 11743
TEL: 212.673.3110 • TEL: 631.673.3111 • FAX: 631.673.2031
www.ndarchitects.com

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

EGRESS:1ST - 9TH FLOOR

STAMP:

DATE:	11/14/14
JOB #:	12-24
DRAWN BY:	OW
SCALE:	AS NOTED

DRAWING NO:

A-002.00

FILE No. :

SHEET:

ACCESSIBILITY NOTES

REQUIREMENTS FOR PEOPLE WITH HEARING & VISUAL IMPAIRMENTS:

THE PROJECT SHOULD HAVE APPLIANCES/ ACCESSORIES AVAILABLE TO BE INSTALLED AND SHOULD BE ABLE TO PROVIDE TO TENANTS AND PROSPECTIVE TENANTS, INFORMATION ON THE AVAILABLE ACCOMMODATIONS.

HEARING:

1. VISUAL ALARMS SHOULD BE AVAILABLE. ALARMS SHOULD BE INSTALLED IN ACCORDANCE WITH EITHER CONNECTED TO THE BUILDING EMERGENCY ALARM SYSTEM OR PLUGGED INTO A STANDARD 110 VOLT ELECTRICAL RECEPTACLE.
2. PROVIDE AN ELECTRICAL OUTLET ADJACENT TO THE TELEPHONE OUTLET TO PERMIT USE OF A TELECOMMUNICATIONS DEVICE FOR THE DEAF (TDD).
3. PEEP SIGHTS SHOULD BE AVAILABLE FOR INSTALLATION ON ALL DOORS LEADING TO THE UNIT.
4. THE BUZZER OR DOOR BELL, AT THE TIME OF OCCUPANCY BY A HEARING IMPAIRED PERSON SHOULD BE WIRED TO PROVIDE A FLASHING-LIGHT SIGNAL.

VISUAL

5. ANY LIGHTING FIXTURES PROVIDED IN THE UNIT SHOULD BE EQUIPPED WITH RECEPTACLES CAPABLE OF HANDLING 150-WATT BULBS.
6. COOK TOPS CONTROLS SHOULD BE MOUNTED ON THE FRONT OR SIDE OF THE RANGE AND CONTROLS WITH TACTILE MARKINGS SHOULD BE AVAILABLE FOR INSTALLATION IF REQUIRED BY THE TENANTS.
7. BASEBOARDS, DOORS AND FRAMES AND WINDOW FRAMES SHOULD BE PAINTED TO CONTRAST WITH THE WALL AND FLOOR COLOR, FOR TENANTS WITH RESIDUAL VISION.

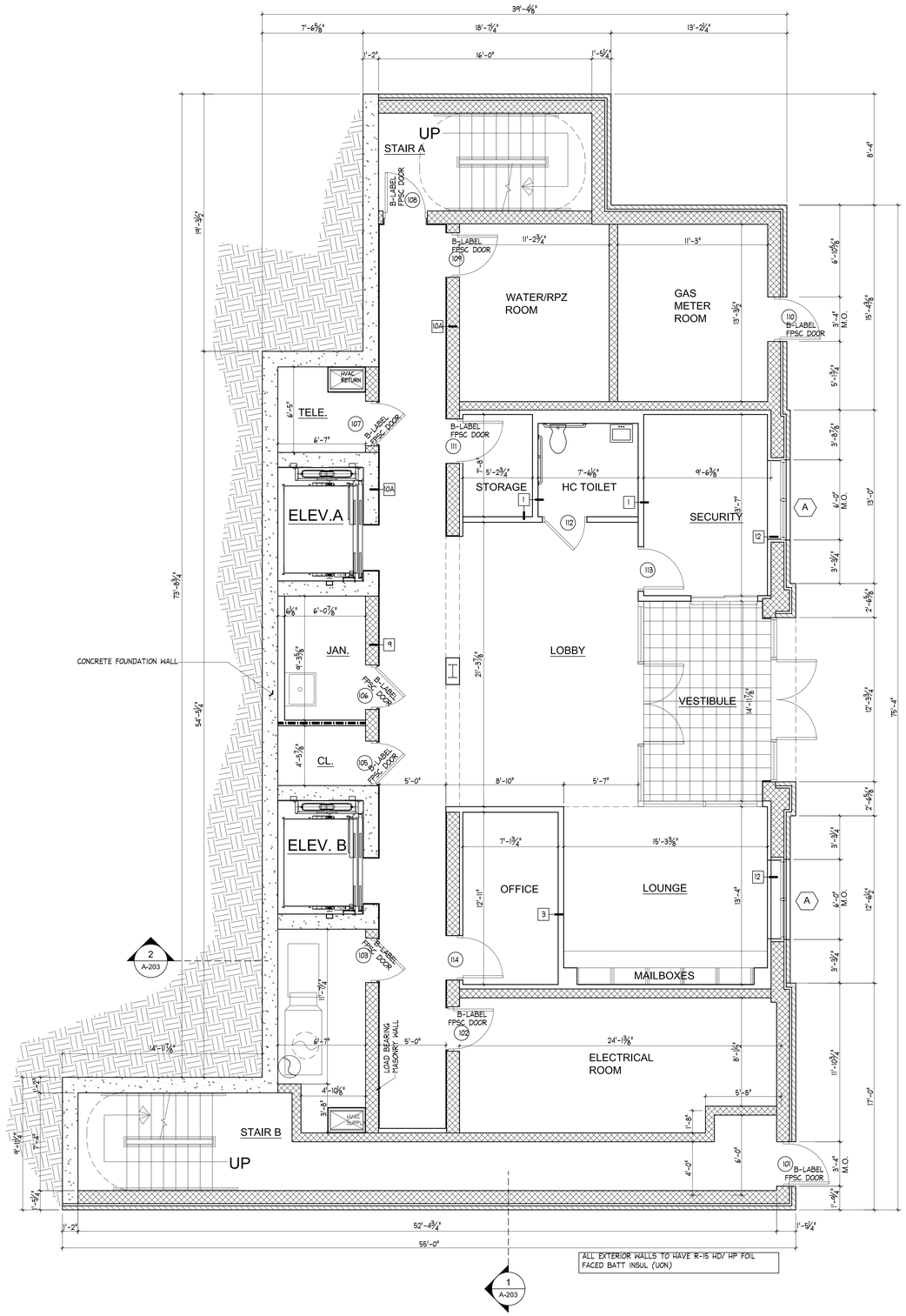
LEGEND:

- (05) DOOR TAG DESIGNATION
- (A) WINDOW TAG DESIGNATION
- 3 WALL TAG DESIGNATION
- EL.=0.00' ELEVATION MARK & HEIGHT
- EXIT WALL MOUNTED EMERGENCY LIGHT W/ BATTERY BACK UP
- CEILING MOUNTED EXIT LIGHT W/ DIRECTIONAL ARROWS. DARK AREA INDICATES FACE ORIENTATION. PROVIDE UNIT W/ EMERGENCY BATTERY BACK UP- 'MCPHILBIN' 45V-LINE EDGE LIT LED SERIES. SUBMIT CATALOGUE CUTS FOR ARCHITECT'S APPROVAL
- WALL MOUNTED EXIT LIGHT W/ SAME FEATURES AS ABOVE
- (2) TWO HOUR FIRE RATED WALL
- (1) ONE HOUR FIRE RATED WALL
- (2) TWO HOUR FIRE RATED CONCRETE MASONRY WALL (U.O.N.- SEE PARTITION TYPES)

NOTES:

1- SEE DRAWING A- 301 FOR ELEVATORS DETAILS
2- SEE DRAWING A-302 AND A-303 FOR STAIRS DETAILS
3- ALL SHAFT WALLS ARE TWO HR. RATED. (U.O.N.)
4- SEE DRAWINGS A-500's FOR APARTMENT LAYOUT BLOW UPS

5- THE BUILDING IS IN COMPLIANCE WITH THE AIR LEAKAGE PROVISIONS AS REQUIRED BY 502.4



1 A101 1ST FLOOR
Scale: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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NEWMAN DESIGN ARCHITECTS PLLC
210 West Rogues Path • Cold Spring Hills, NY 11743
TEL: 212.673.3110 • TEL: 631.673.3111 • FAX: 631.673.2031
www.ndarchitects.com

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

FIRST FLOOR

STAMP:

DATE:	11/14/14
JOB #:	12-24
DRAWN BY:	OW
SCALE:	AS NOTED

DRAWING NO:

A-101.00

FILE No. :

SHEET:

ACCESSIBILITY NOTES

REQUIREMENTS FOR PEOPLE WITH HEARING & VISUAL IMPAIRMENTS:

THE PROJECT SHOULD HAVE APPLIANCES/ ACCESSORIES AVAILABLE TO BE INSTALLED AND SHOULD BE ABLE TO PROVIDE TO TENANTS AND PROSPECTIVE TENANTS, INFORMATION ON THE AVAILABLE ACCOMMODATIONS.

HEARING:

1. VISUAL ALARMS SHOULD BE AVAILABLE. ALARMS SHOULD BE INSTALLED IN ACCORDANCE WITH EITHER CONNECTED TO THE BUILDING EMERGENCY ALARM SYSTEM OR PLUGGED INTO A STANDARD 110 VOLT ELECTRICAL RECEPTACLE.
2. PROVIDE AN ELECTRICAL OUTLET ADJACENT TO THE TELEPHONE OUTLET TO PERMIT USE OF A TELECOMMUNICATIONS DEVICE FOR THE DEAF (TDD).
3. PEEP SIGHTS SHOULD BE AVAILABLE FOR INSTALLATION ON ALL DOORS LEADING TO THE UNIT.
4. THE BUZZER OR DOOR BELL, AT THE TIME OF OCCUPANCY BY A HEARING IMPAIRED PERSON SHOULD BE WIRED TO PROVIDE A FLASHING-LIGHT SIGNAL.

VISUAL

5. ANY LIGHTING FIXTURES PROVIDED IN THE UNIT SHOULD BE EQUIPPED WITH RECEPTACLES CAPABLE OF HANDLING 150-WATT BULBS.
6. COOK TOPS CONTROLS SHOULD BE MOUNTED ON THE FRONT OR SIDE OF THE RANGE AND CONTROLS WITH TACTILE MARKINGS SHOULD BE AVAILABLE FOR INSTALLATION IF REQUIRED BY THE TENANTS.
7. BASEBOARDS, DOORS AND FRAMES AND WINDOW FRAMES SHOULD BE PAINTED TO CONTRAST WITH THE WALL AND FLOOR COLOR, FOR TENANTS WITH RESIDUAL VISION.

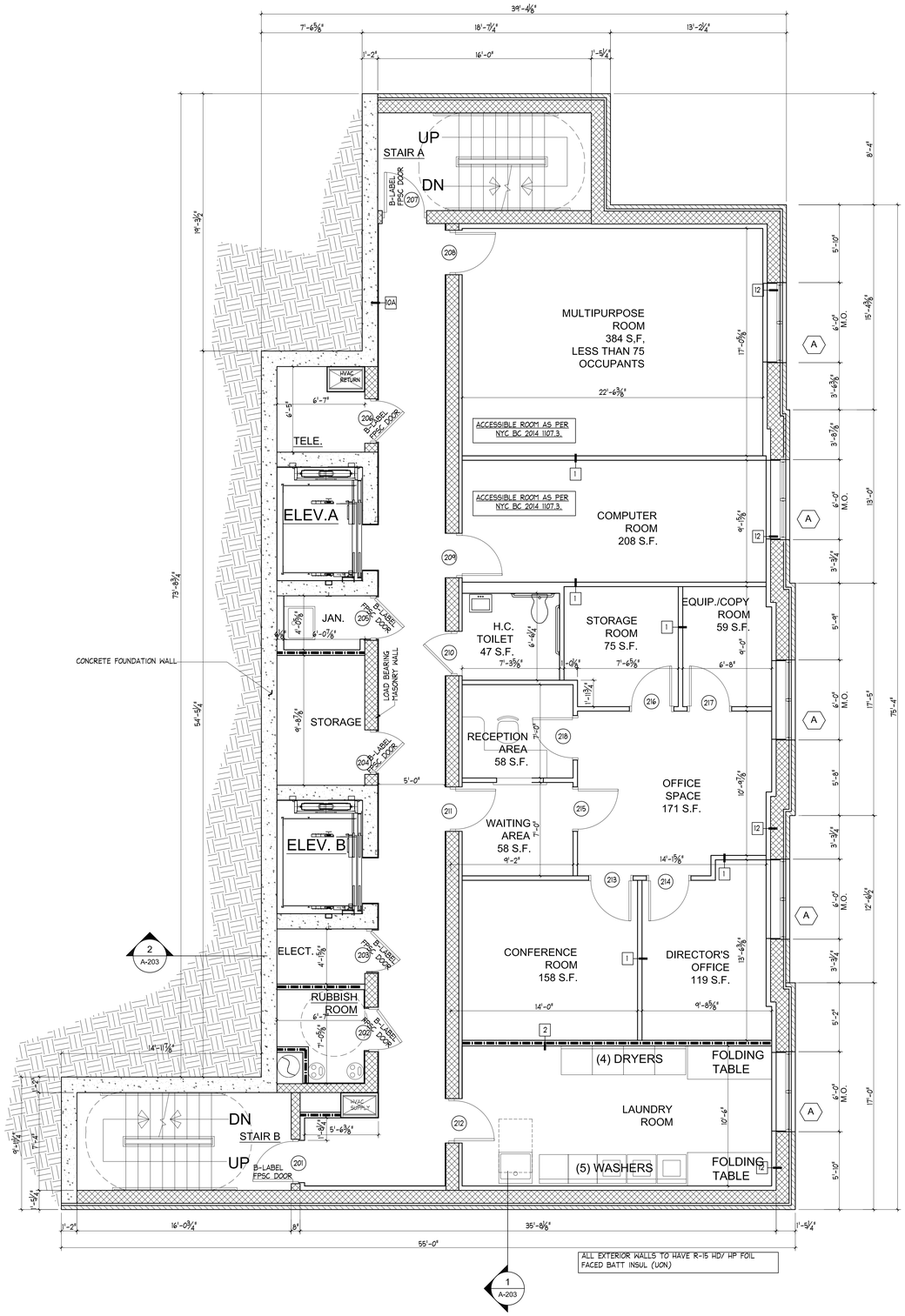
LEGEND:

- (09) — DOOR TAG DESIGNATION
- (A) — WINDOW TAG DESIGNATION
- 3 — WALL TAG DESIGNATION
- EL.100' — ELEVATION MARK & HEIGHT
- EM — WALL MOUNTED EMERGENCY LIGHT W/ BATTERY BACK UP
- CEILING MOUNTED EXIT LIGHT W/ DIRECTIONAL ARROWS. DARK AREA INDICATES FACE ORIENTATION. PROVIDE UNIT W/ EMERGENCY BATTERY BACK UP- 'MCPHILBIN' 45V-LINE EDGE LIT LED SERIES. SUBMIT CATALOGUE CUTS FOR ARCHITECT'S APPROVAL
- WALL MOUNTED EXIT LIGHT W/ SAME FEATURES AS ABOVE
- (2) TWO HOUR FIRE RATED WALL
- (1) ONE HOUR FIRE RATED WALL
- (2) TWO HOUR FIRE RATED CONCRETE MASONRY WALL (U.O.N- SEE PARTITION TYPES)

NOTES:

1- SEE DRAWING A- 301 FOR ELEVATORS DETAILS
2- SEE DRAWING A-302 AND A-303 FOR STAIRS DETAILS
3- ALL SHAFT WALLS ARE TWO HR. RATED. (U.O.N.)
4- SEE DRAWINGS A-600's FOR APARTMENT LAYOUT BLOW UPS

5- THE BUILDING IS IN COMPLIANCE WITH THE AIR LEAKAGE PROVISIONS AS REQUIRED BY 502.4



1 A102 — 2ND FLOOR
Scale: 1/4" = 1'-0"

0 2' 4' 8'
SCALE: 1/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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www.ndarchitects.com

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

SECOND FLOOR

STAMP:

DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**AS NOTED**

DRAWING NO:

A-102.00

FILE No. :

SHEET:

LIGHT AND VENTILATION REQUIREMENTS TABLE PER SUBCHAPTER 12, ARTICLES 3&6

TYP. UNIT	ROOM NAME	FLOOR AREA	VENT. REQ'D 5%	VENT. PROVIDED*	LIGHT REQ'D 10%	LIGHT PROVIDED*
#301	1 BEDROOM	182 S.F.	9.0 S.F.	13.2 S.F.	18.0 S.F.	22.8 S.F.
#302	STUDIO	165 S.F.	8.0 S.F.	13.2 S.F.	16.0 S.F.	22.8 S.F.
#303	STUDIO	171 S.F.	8.6 S.F.	13.2 S.F.	17.2 S.F.	22.8 S.F.
#304	STUDIO	165 S.F.	8.0 S.F.	13.2 S.F.	16.0 S.F.	22.8 S.F.

NOTE:
AS PER N.Y.C. BLDG. CODE ART.8 SECTION 27-758 (a), THE KITCHENETTES FOR THE UNITS ABOVE ARE 80 S.F. or UNDER , THEREFORE ARE NOT REQUIRED TO HAVE NATURAL VENTILATION.
*SEE SHEET A-502 FOR WINDOW LIGHT AND VENT CALCS

ACCESSIBILITY NOTES

REQUIREMENTS FOR PEOPLE WITH HEARING & VISUAL IMPAIRMENTS:

THE PROJECT SHOULD HAVE APPLIANCES/ ACCESSORIES AVAILABLE TO BE INSTALLED AND SHOULD BE ABLE TO PROVIDE TO TENANTS AND PROSPECTIVE TENANTS, INFORMATION ON THE AVAILABLE ACCOMMODATIONS.

HEARING:

1. VISUAL ALARMS SHOULD BE AVAILABLE. ALARMS SHOULD BE INSTALLED IN ACCORDANCE WITH EITHER CONNECTED TO THE BUILDING EMERGENCY ALARM SYSTEM OR PLUGGED INTO A STANDARD 110 VOLT ELECTRICAL RECEPTACLE.
2. PROVIDE AN ELECTRICAL OUTLET ADJACENT TO THE TELEPHONE OUTLET TO PERMIT USE OF A TELECOMMUNICATIONS DEVICE FOR THE DEAF (TDD).
3. PEEP SIGHTS SHOULD BE AVAILABLE FOR INSTALLATION ON ALL DOORS LEADING TO THE UNIT.
4. THE BUZZER OR DOOR BELL, AT THE TIME OF OCCUPANCY BY A HEARING IMPAIRED PERSON SHOULD BE WIRED TO PROVIDE A FLASHING-LIGHT SIGNAL.

VISUAL

5. ANY LIGHTING FIXTURES PROVIDED IN THE UNIT SHOULD BE EQUIPPED WITH RECEPTACLES CAPABLE OF HANDLING 150-WATT BULBS.
6. COOK TOPS CONTROLS SHOULD BE MOUNTED ON THE FRONT OR SIDE OF THE RANGE AND CONTROLS WITH TACTILE MARKINGS SHOULD BE AVAILABLE FOR INSTALLATION IF REQUIRED BY THE TENANTS.
7. BASEBOARDS, DOORS AND FRAMES AND WINDOW FRAMES SHOULD BE PAINTED TO CONTRAST WITH THE WALL AND FLOOR COLOR, FOR TENANTS WITH RESIDUAL VISION.

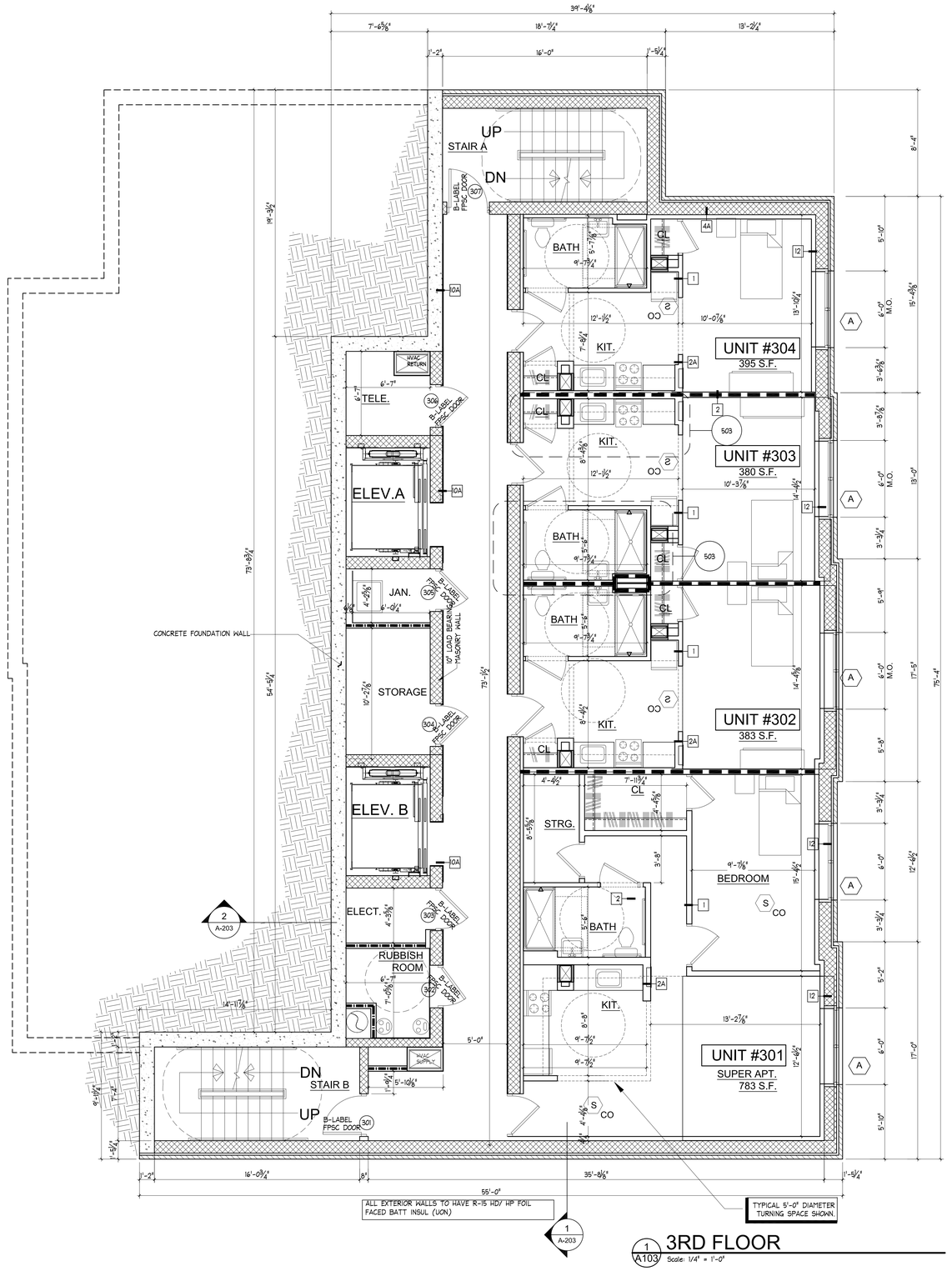
PROPOSED HABITABLE ROOM SIZE IN THE EFFICIENCY UNITS ARE ±190 S.F. WHICH IS GREATER THAN 150 S.F. MIN. REQUIRED AS PER NYC 2014 BC.

LEGEND:

- (03) DOOR TAG DESIGNATION
- (A) WINDOW TAG DESIGNATION
- 3 WALL TAG DESIGNATION
- EL.+100' ELEVATION MARK & HEIGHT
- WALL MOUNTED EMERGENCY LIGHT W/ BATTERY BACK UP
- CEILING MOUNTED EXIT LIGHT W/ DIRECTIONAL ARROWS. DARK AREA INDICATES FACE ORIENTATION. PROVIDE UNIT W/ EMERGENCY BATTERY BACK UP- 'MCPHILBIN' 45V-LINE EDGE LIT LED SERIES. SUBMIT CATALOGUE CUTS FOR ARCHITECT'S APPROVAL
- WALL MOUNTED EXIT LIGHT W/ SAME FEATURES AS ABOVE
- (2) TWO HOUR FIRE RATED WALL
- (1) ONE HOUR FIRE RATED WALL
- (2) TWO HOUR FIRE RATED CONCRETE MASONRY WALL (U.O.N- SEE PARTITION TYPES)

NOTES:
1- SEE DRAWING A- 301 FOR ELEVATORS DETAILS
2- SEE DRAWING A-302 AND A-303 FOR STAIRS DETAILS
3- ALL SHAFT WALLS ARE TWO HR. RATED. (U.O.N.)
4- SEE DRAWINGS A-600's FOR APARTMENT LAYOUT BLOW UPS

5- THE BUILDING IS IN COMPLIANCE WITH THE AIR LEAKAGE PROVISIONS AS REQUIRED BY 502.4



1 A103 3RD FLOOR
Scale: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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TEL: 212.673.3110 • TEL: 631.673.3111 • FAX: 631.673.2031
www.ndarchitects.com

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.
BRONX, N.Y.

TITLE:

THIRD FLOOR

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

DRAWING NO:

A-103.00

FILE No. :

SHEET:

LIGHT AND VENTILATION REQUIREMENTS TABLE PER SUBCHAPTER 12, ARTICLES 3&6

TYP. UNIT	ROOM NAME	FLOOR AREA	VENT. REQ'D 5%	VENT. PROVIDED*	LIGHT REQ'D 10%	LIGHT PROVIDED*
#401-1001	STUDIO	160 S.F.	8.0 S.F.	13.2 S.F.	16.0 S.F.	22.8 S.F.
#402-1002	STUDIO	160 S.F.	8.0 S.F.	13.2 S.F.	16.0 S.F.	22.8 S.F.
#403-1003	STUDIO	170 S.F.	8.5 S.F.	13.2 S.F.	17.0 S.F.	22.8 S.F.
#404-1004	STUDIO	170 S.F.	8.5 S.F.	13.2 S.F.	17.0 S.F.	22.8 S.F.
#405-1005	STUDIO	170 S.F.	8.5 S.F.	13.2 S.F.	17.0 S.F.	22.8 S.F.
#406-1006	STUDIO	170 S.F.	8.5 S.F.	13.2 S.F.	17.0 S.F.	22.8 S.F.
#407-1007	STUDIO	154 S.F.	7.7 S.F.	13.2 S.F.	15.4 S.F.	22.8 S.F.
#408-1008	STUDIO	154 S.F.	7.7 S.F.	13.2 S.F.	15.4 S.F.	22.8 S.F.
#409-1009	STUDIO	170 S.F.	8.5 S.F.	13.2 S.F.	17.0 S.F.	22.8 S.F.
#410-1010	STUDIO	154 S.F.	7.7 S.F.	13.2 S.F.	15.4 S.F.	22.8 S.F.

NOTE:
AS PER N.Y.C. BLDG. CODE ART.8 SECTION 27-758 (a). THE KITCHENETTES FOR THE UNITS ABOVE ARE 80 S.F. or UNDER , THEREFORE ARE NOT REQUIRED TO HAVE NATURAL VENTILATION.
*SEE SHEET A-502 FOR WINDOW LIGHT AND VENT CALCS

ACCESSIBILITY NOTES

REQUIREMENTS FOR PEOPLE WITH HEARING & VISUAL IMPAIRMENTS:

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HEARING:

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3. PEEP SIGHTS SHOULD BE AVAILABLE FOR INSTALLATION ON ALL DOORS LEADING TO THE UNIT.
4. THE BUZZER OR DOOR BELL, AT THE TIME OF OCCUPANCY BY A HEARING IMPAIRED PERSON SHOULD BE WIRED TO PROVIDE A FLASHING-LIGHT SIGNAL.

VISUAL

5. ANY LIGHTING FIXTURES PROVIDED IN THE UNIT SHOULD BE EQUIPPED WITH RECEPTACLES CAPABLE OF HANDLING 150-WATT BULBS.
6. COOK TOPS CONTROLS SHOULD BE MOUNTED ON THE FRONT OR SIDE OF THE RANGE AND CONTROLS WITH TACTILE MARKINGS SHOULD BE AVAILABLE FOR INSTALLATION IF REQUIRED BY THE TENANTS.
7. BASEBOARDS, DOORS AND FRAMES AND WINDOW FRAMES SHOULD BE PAINTED TO CONTRAST WITH THE WALL AND FLOOR COLOR, FOR TENANTS WITH RESIDUAL VISION.

PROPOSED HABITABLE ROOM SIZE IN THE EFFICIENCY UNITS ARE ±190 S.F. WHICH IS GREATER THAN 150 S.F. *MIN. REQUIRED AS PER NYC 2014 BC.

MOBILITY IMPAIRED UNITS
5% x81 UNITS = 4.05 = 5 UNITS
UNITS: 407,507,607,707 & 807
VISION IMPAIRED UNITS
2% x81 UNITS = 1.62 = 2 UNITS
UNITS: 503 & 803

LEGEND:

- DOOR TAG DESIGNATION
- WINDOW TAG DESIGNATION
- WALL TAG DESIGNATION
- ELEVATION MARK & HEIGHT
- WALL MOUNTED EMERGENCY LIGHT W/ BATTERY BACK UP
- CEILING MOUNTED EXIT LIGHT W/ DIRECTIONAL ARROWS. DARK AREA INDICATES FACE ORIENTATION. PROVIDE UNIT W/ EMERGENCY BATTERY BACK UP- 'MCPHILLBIN' 45V-LINE EDGE LIT LED SERIES. SUBMIT CATALOGUE CUTS FOR ARCHITECT'S APPROVAL
- WALL MOUNTED EXIT LIGHT W/ SAME FEATURES AS ABOVE
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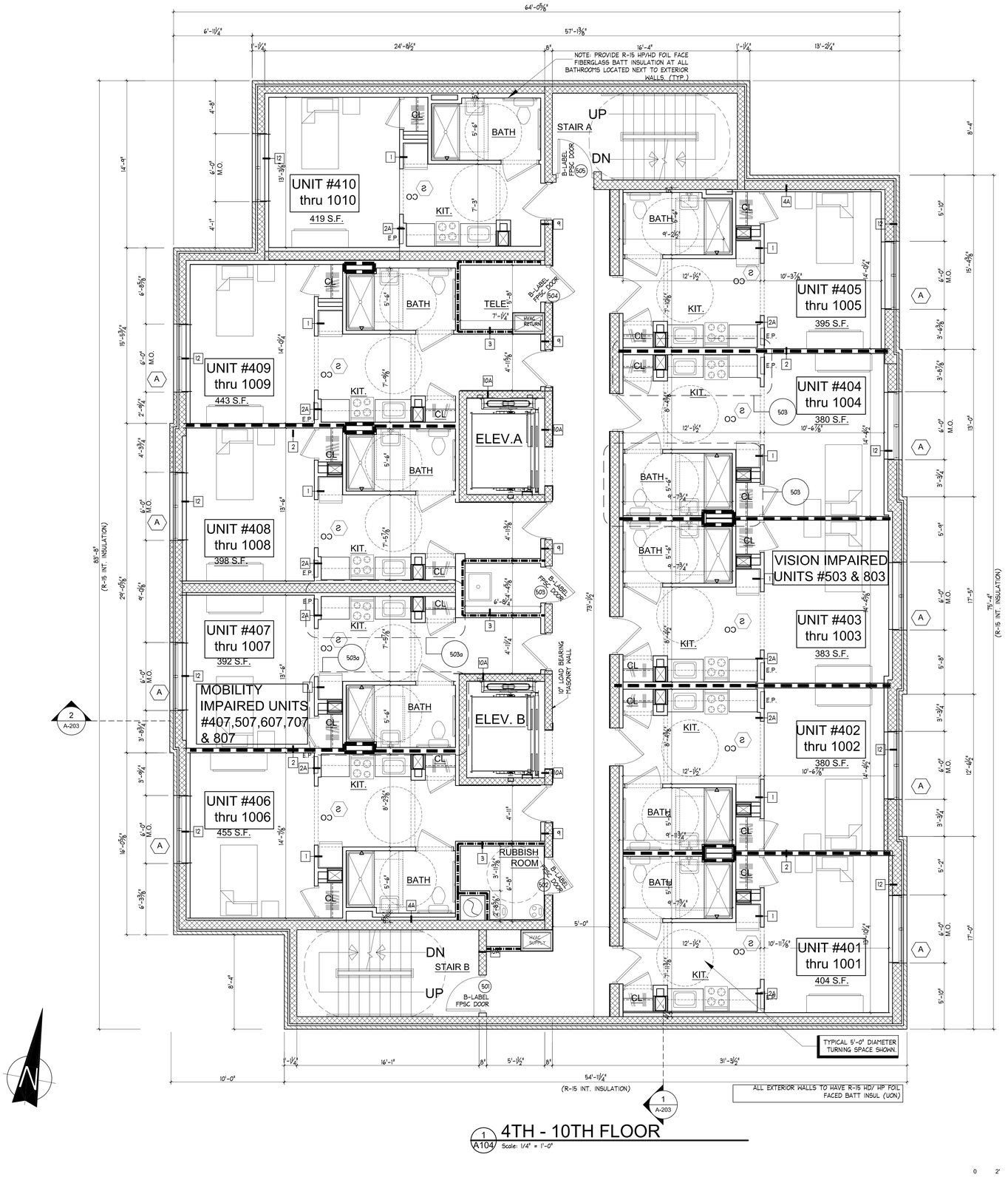
NOTES:
1- SEE DRAWING A- 301 FOR ELEVATORS DETAILS
2- SEE DRAWING A-302 AND A-303 FOR STAIRS DETAILS
3- ALL SHAFT WALLS ARE TWO HR. RATED. (U.O.N.)
4- SEE DRAWINGS A-500's FOR APARTMENT LAYOUT BLOW UPS

5- THE BUILDING IS IN COMPLIANCE WITH THE AIR LEAKAGE PROVISIONS AS REQUIRED BY 502.4



1 A104 4TH - 10TH FLOOR
Scale: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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NEWMAN DESIGN ARCHITECTS PLLC
210 West Rogues Path • Cold Spring Hills, NY 11743
TEL: 212.673.3110 • TEL: 631.673.3111 • FAX: 631.673.2031
www.ndarchitects.com

PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

4TH - 10TH FLOOR TYP.

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

DRAWING NO:

A-104.00

FILE No. :

SHEET:

LIGHT AND VENTILATION REQUIREMENTS TABLE PER SUBCHAPTER 12, ARTICLES 3&6

TYP. UNIT	ROOM NAME	FLOOR AREA	VENT. REQ'D 5%	VENT. PROVIDED*	LIGHT REQ'D 10%	LIGHT PROVIDED*
#1101	STUDIO	160 S.F.	8.0 S.F.	13.2 S.F.	16.0 S.F.	22.8 S.F.
#1102	STUDIO	154 S.F.	7.7 S.F.	13.2 S.F.	15.4 S.F.	22.8 S.F.
#1103	STUDIO	170 S.F.	8.5 S.F.	13.2 S.F.	17.0 S.F.	22.8 S.F.
#1104	STUDIO	154 S.F.	7.7 S.F.	13.2 S.F.	15.4 S.F.	22.8 S.F.
#1105	STUDIO	160 S.F.	8.0 S.F.	13.2 S.F.	16.0 S.F.	22.8 S.F.
#1106	STUDIO	223 S.F.	11.2 S.F.	13.2 S.F.	22.4 S.F.	22.8 S.F.
#1107	STUDIO	170 S.F.	8.5 S.F.	13.2 S.F.	17.0 S.F.	22.8 S.F.

NOTE:
AS PER N.Y.C. BLDG. CODE ART.8 SECTION 27-758 (a), THE KITCHENETTES FOR THE UNITS ABOVE ARE 80 S.F. or UNDER , THEREFORE ARE NOT REQUIRED TO HAVE NATURAL VENTILATION.
*SEE SHEET A-502 FOR WINDOW LIGHT AND VENT CALCS

ACCESSIBILITY NOTES

REQUIREMENTS FOR PEOPLE WITH HEARING & VISUAL IMPAIRMENTS:

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HEARING:

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4. THE BUZZER OR DOOR BELL, AT THE TIME OF OCCUPANCY BY A HEARING IMPAIRED PERSON SHOULD BE WIRED TO PROVIDE A FLASHING-LIGHT SIGNAL.

VISUAL

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6. COOK TOPS CONTROLS SHOULD BE MOUNTED ON THE FRONT OR SIDE OF THE RANGE AND CONTROLS WITH TACTILE MARKINGS SHOULD BE AVAILABLE FOR INSTALLATION IF REQUIRED BY THE TENANTS.
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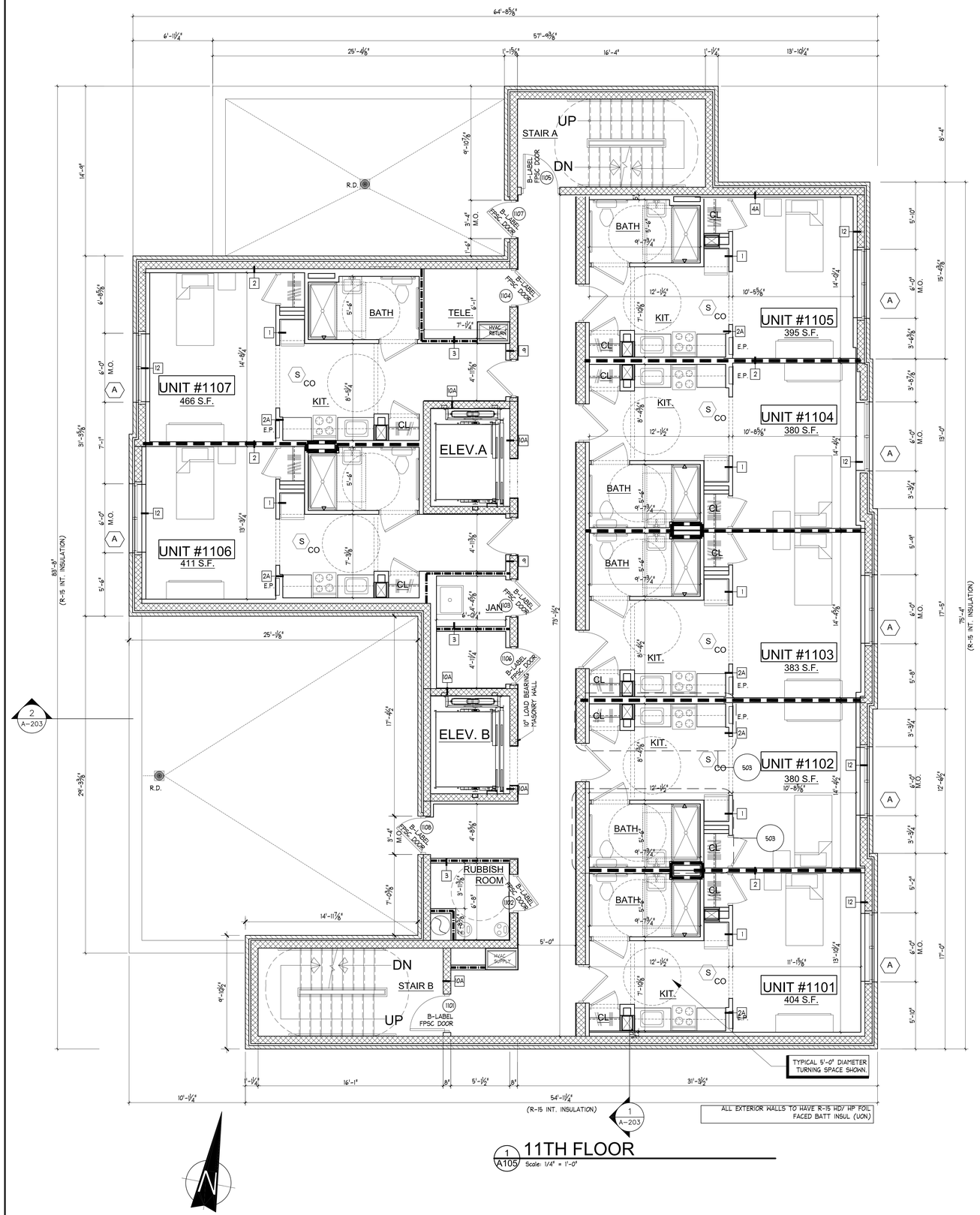
MOBILITY IMPAIRED UNITS
5% x81 UNITS = 4.05 = 5 UNITS
UNITS: 407,507,607,707 & 807
VISION IMPAIRED UNITS
2% x81 UNITS = 1.62 = 2 UNITS
UNITS: 503 & 803

LEGEND:

- DOOR TAG DESIGNATION
- WINDOW TAG DESIGNATION
- WALL TAG DESIGNATION
- ELEVATION MARK & HEIGHT
- WALL MOUNTED EMERGENCY LIGHT W/ BATTERY BACK UP
- CEILING MOUNTED EXIT LIGHT W/ DIRECTIONAL ARROWS. DARK AREA INDICATES FACE ORIENTATION. PROVIDE UNIT W/ EMERGENCY BATTERY BACK UP- 'MCPHILBIN' 45V-LINE EDGE LIT LED SERIES. SUBMIT CATALOGUE CUTS FOR ARCHITECT'S APPROVAL
- WALL MOUNTED EXIT LIGHT W/ SAME FEATURES AS ABOVE
- (2) TWO HOUR FIRE RATED WALL
- (1) ONE HOUR FIRE RATED WALL
- (2) TWO HOUR FIRE RATED CONCRETE MASONRY WALL (U.O.N- SEE PARTITION TYPES)

NOTES:
1- SEE DRAWING A- 301 FOR ELEVATORS DETAILS
2- SEE DRAWING A-302 AND A-303 FOR STAIRS DETAILS
3- ALL SHAFT WALLS ARE TWO HR. RATED. (U.O.N.)
4- SEE DRAWINGS A-500's FOR APARTMENT LAYOUT BLOW UPS

5- THE BUILDING IS IN COMPLIANCE WITH THE AIR LEAKAGE PROVISIONS AS REQUIRED BY 502.4



1 A105 — 11TH FLOOR
Scale: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.
BRONX, N.Y.

TITLE:

11TH FLOOR

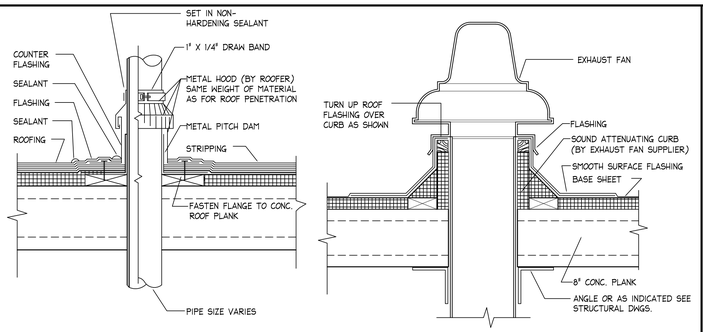
STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**
DRAWING NO:

A-105.00

FILE No. :

SHEET:

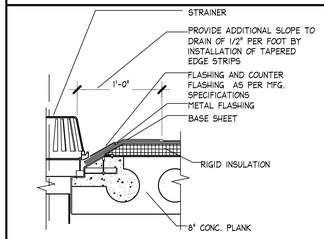


2 A106 **PIPE FLASHING** AT ROOF

N.T.S.

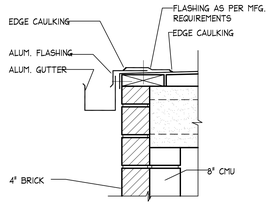
3 A106 **DETAIL** TYPICAL EXHAUST FAN

Scale: 1 1/2" = 1'-0"



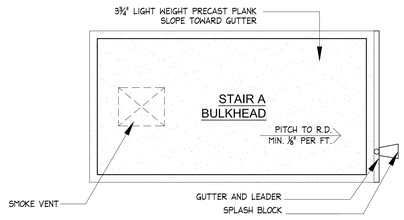
4 A106 **ROOF DRAIN**

N.T.S.



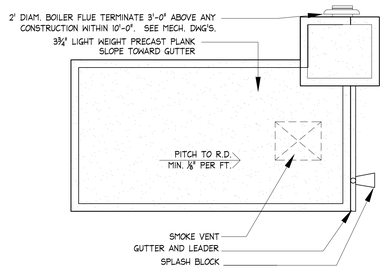
5 A106 **DETAIL** AT GUTTER

SCALE: 1-1/2"=1'-0"



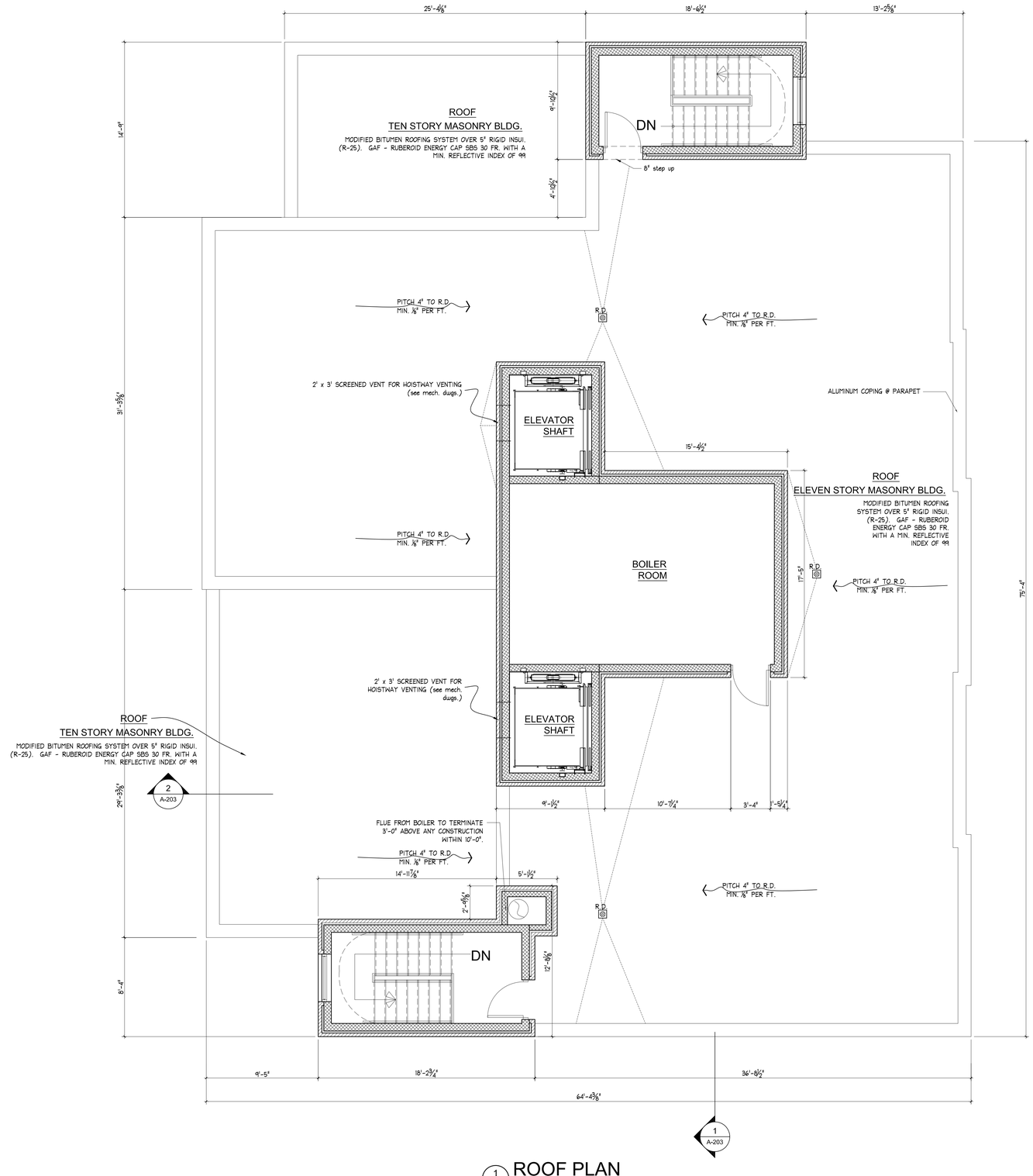
6 A106 STAIR B BULKHEAD

Scale: 1/8" = 1'-0"



7 A106 STAIR A BULKHEAD

Scale: 1/8" = 1'-0"



1 A106 **ROOF PLAN**

Scale: 1/4" = 1'-0"

NOTES:

1. PARAPET HEIGHTS ARE MEASURED FROM TOP OF HIGH POINT OF ROOF PLANK TO TOP OF COPING.
2. FOR STAIR PLANS, SECTIONS & DETAILS, SEE DRAWING A-302-303
3. FOR ELEVATOR MACHINE ROOM PLANS, SECTIONS & DETAILS, SEE DRAWING A-301
4. ROOFING IS MODIFIED BITUMEN ROOF OVER RIGID INSULATION (UON)
5. SEE MECHANICAL & ELECTRICAL DRAWINGS FOR ADDITIONAL ROOF PENETRATIONS.
6. PROVIDE A MIN. 20 YEAR ROOFING WARRANTY

- ALL DIMENSIONS ARE TAKEN FROM THE PREDOMINANT BUILDING FACE OF BRICK.
- PROVIDE CRICKETS @ ALL ROOF TOP EQUIPMENT AS REQUIRED TO PITCH AWAY FROM EQUIPMENT

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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BRONX, N.Y.

TITLE:

ROOF PLAN & DETAILS

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

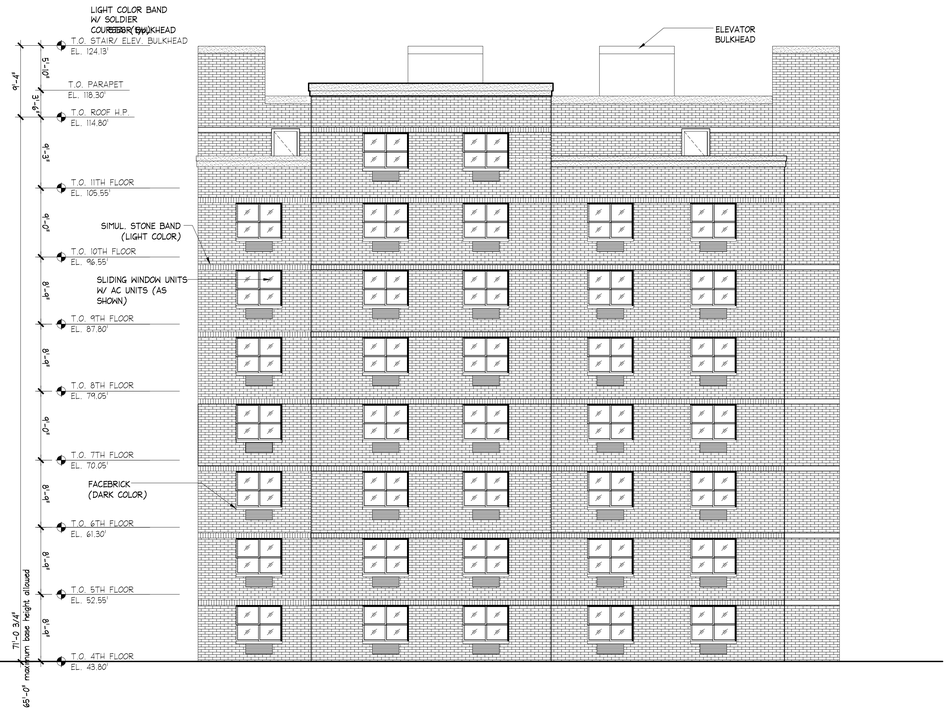
DRAWING NO:

A-106.00

FILE No. :

SHEET:

1 A-201 REAR ELEVATION (West Farms Road)
Scale: 1/8" = 1'-0"



2 A-201 FRONT ELEVATION (Boone Avenue)
Scale: 1/8" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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TITLE:

FRONT & REAR ELEVATIONS

STAMP:

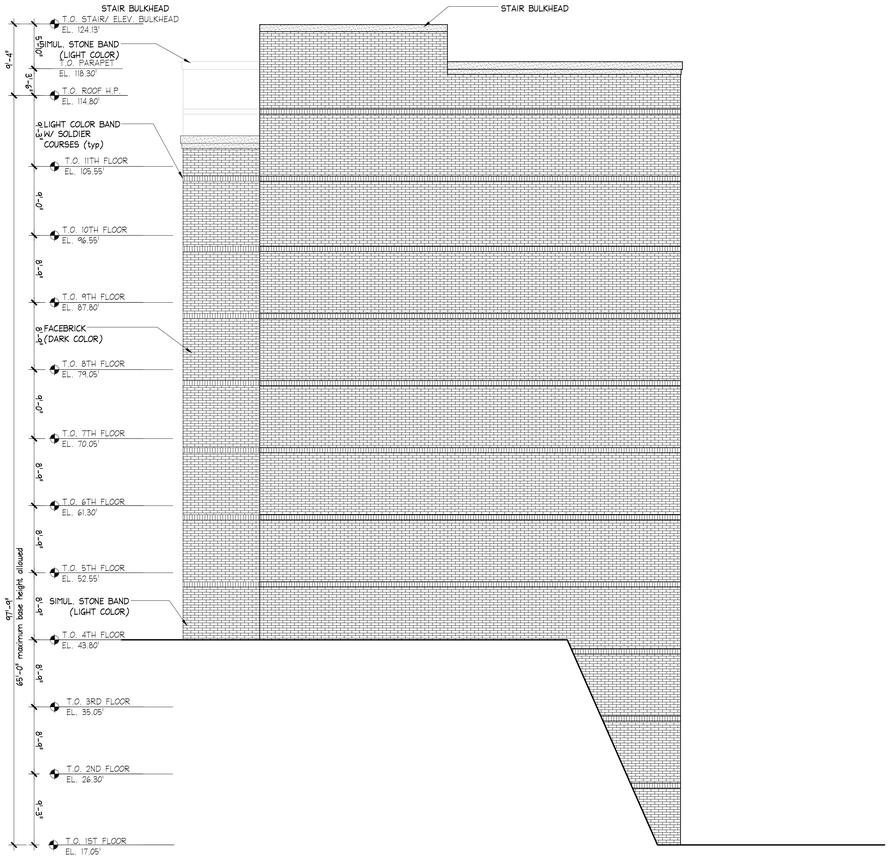
DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**AS NOTED**

DRAWING NO:

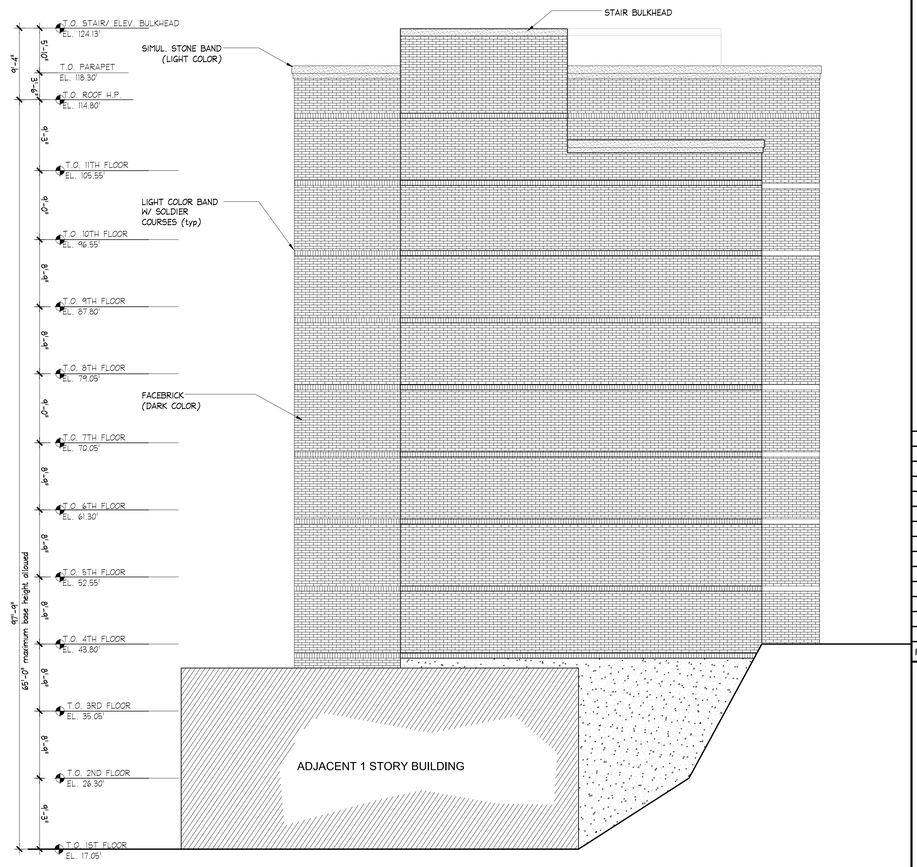
A-201.00

FILE No. :

SHEET:



1 SIDE ELEVATION
A-202 Scale: 1/8" = 1'-0"



2 SIDE ELEVATION
A-202 Scale: 1/8" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
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TITLE:

SIDE ELEVATIONS

STAMP:

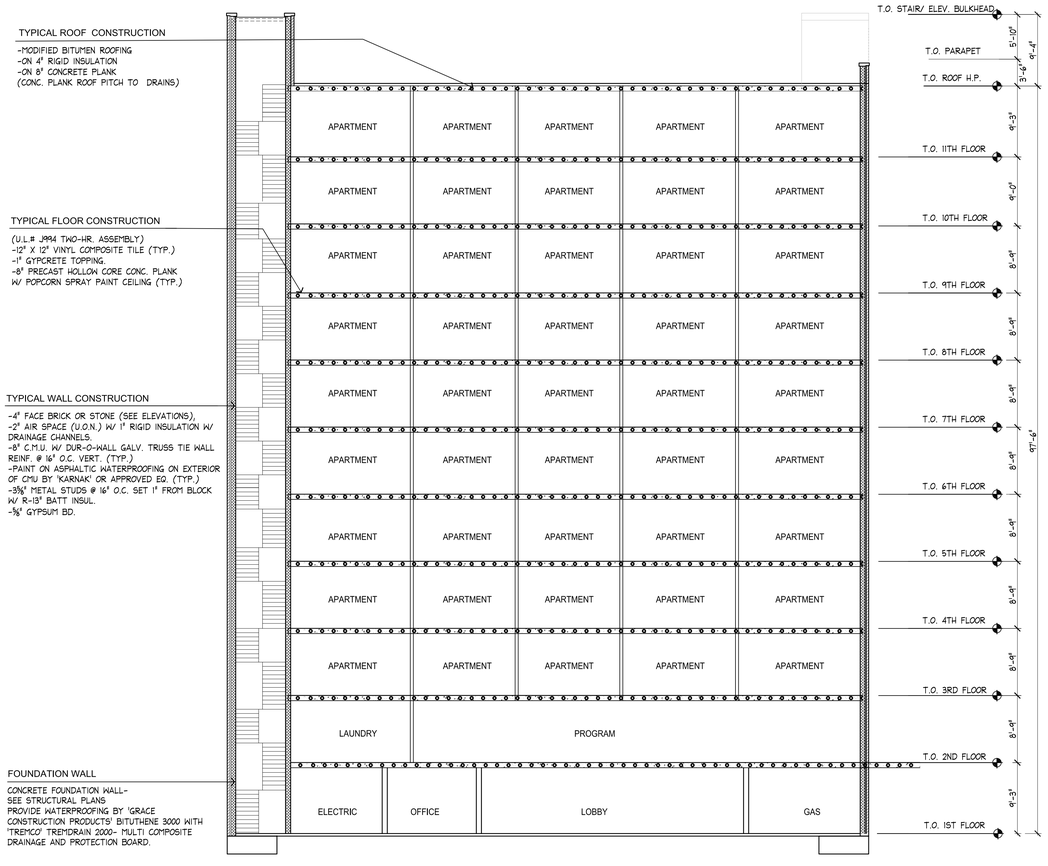
DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**AS NOTED**

DRAWING NO:

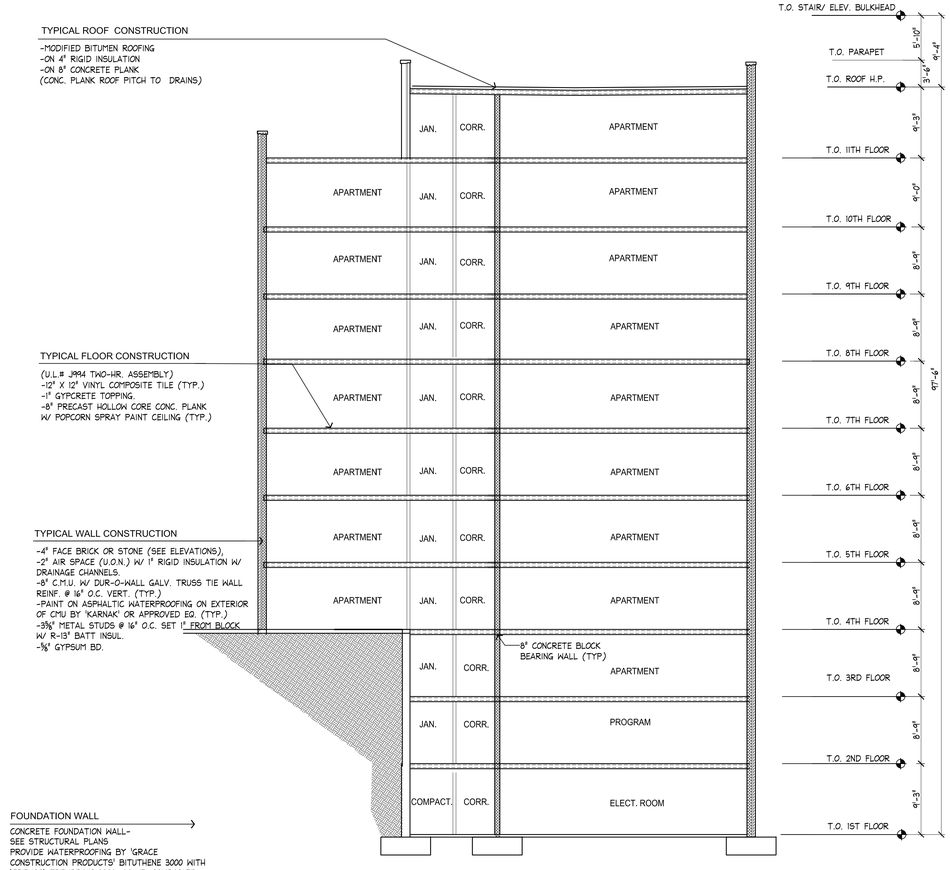
A-202.00

FILE No. :

SHEET:



1 A203 LONGITUDINAL SECTION THRU BUILDING
Scale: 1/8" = 1'-0"



2 A203 CROSS SECTION THRU BUILDING
Scale: 1/8" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
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TITLE:

BUILDING CROSS SECTIONS

STAMP:

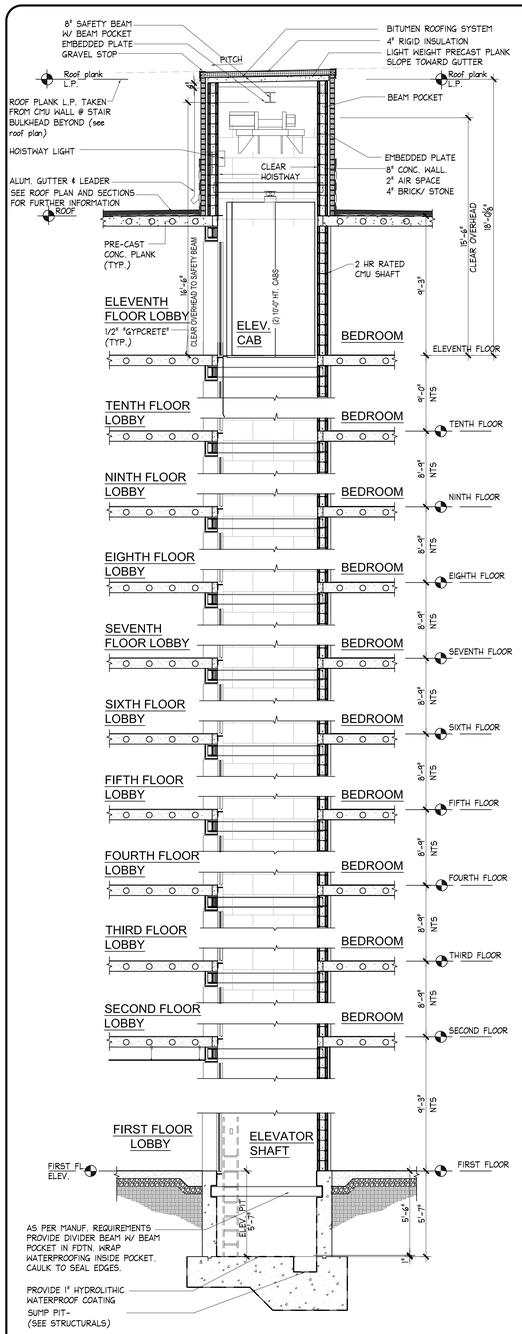
DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**AS NOTED**

DRAWING NO:

A-203.00

FILE No. :

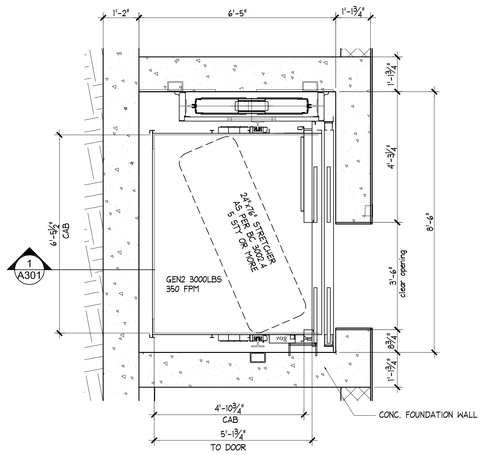
SHEET:



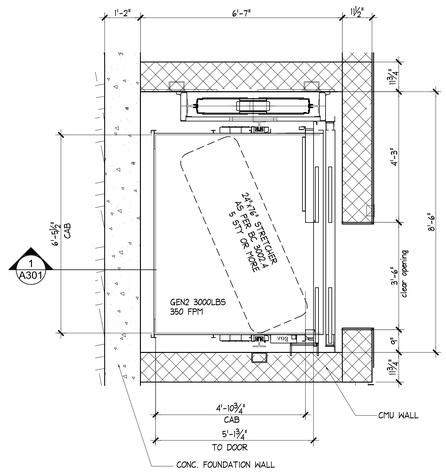
1 A301 ELEVATORS A & B SECTION
Scale: 1/4" = 1'-0"

PROVIDE:
-LIGHTED CALL BUTTON @ EACH LANDING
-POSITION INDICATOR IN THE CAR
-PROMINENT DIRECTION ARROWS IN THE CAR AND AT EACH LANDING
-SHATTERPROOF MIRROR MOUNTED ON ONE UPPER CORNER OF THE CAR TO ALLOW OVERVIEW OF THE CAR BEFORE ENTRANCE
-FLOOR DESIGNATION MOUNTED ON BOTH JAMBS OF EVERY DOOR
-CAR POSITION INDICATOR IN MAIN LOBBY
-AUDIBLE SIGNALS WHICH SOUND AT EACH FLOOR; SOUNDING ONCE IN THE UP DIRECTION AND TWICE IN THE DOWN DIRECTION.
-EMERGENCY CALL PHONE CONNECTED TO THE SECURITY OFFICE.
-AN IN CAR ALARM BUTTON
-ELEVATOR CABS TO BE ADA/ ANSI COMPLIANT AND MUST PROVIDE STRETCHER SIZED ELEVATOR CABS.

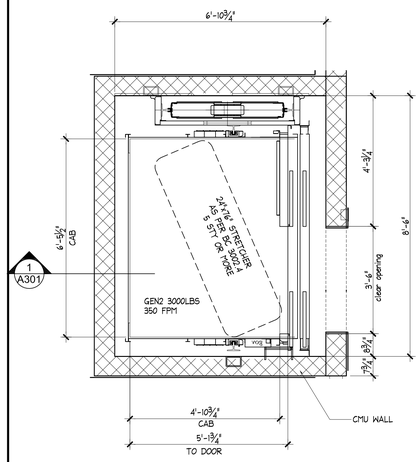
ELEVATORS (1 & 2) ARE 'OTIS'- GEN2 ELEVATORS
WITH 3,000 LB. CAPACITY, BOTH CABS TO BE 9'-7" HEIGHT BY
'OTIS' ELEVATOR W/ 350 FPM SPEED



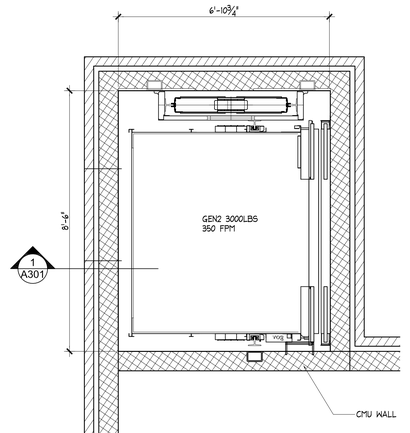
1 A301 ELEV'S. A AND B PLAN @ 1ST & 2ND FLOOR
Scale: 1/2" = 1'-0"



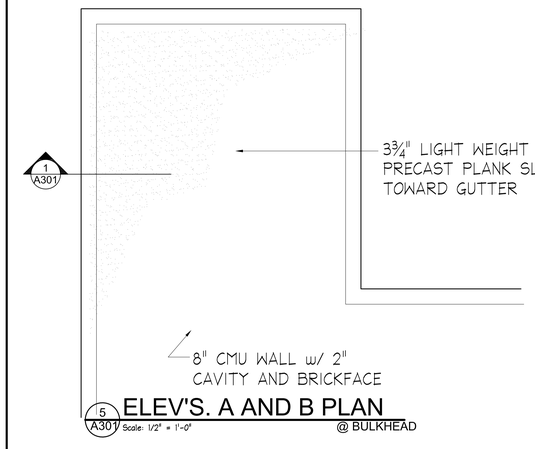
2 A301 ELEV'S. A AND B PLAN @ 3RD FLOOR
Scale: 1/2" = 1'-0"



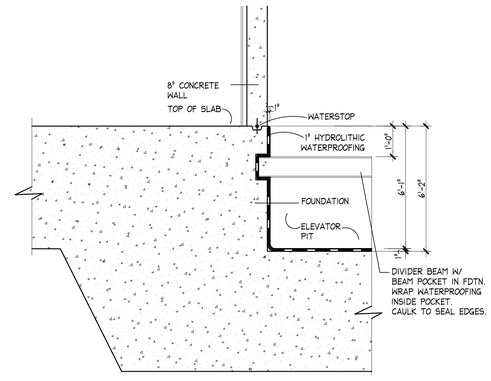
3 A301 ELEV'S. A AND B PLAN @ 4TH - 11TH FLOOR
Scale: 1/2" = 1'-0"



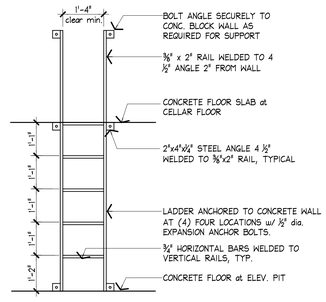
14 A301 ELEV'S. A AND B PLAN @ ROOF
Scale: 1/2" = 1'-0"



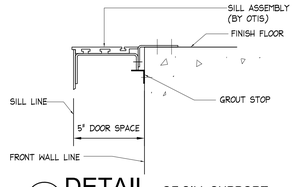
5 A301 ELEV'S. A AND B PLAN @ BULKHEAD
Scale: 1/2" = 1'-0"



8 A301 DETAIL OF ELEVATOR PIT WATERPROOFING
Scale: 1/2" = 1'-0"



6 A301 DETAIL OF ELEVATOR PIT LADDER
Scale: 1/2" = 1'-0"



7 A301 DETAIL OF SILL SUPPORT
Scale: 1/2" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
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BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

ELEVATOR SECTIONS & PLANS

STAMP:

DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**1/4"= 1'-0"**

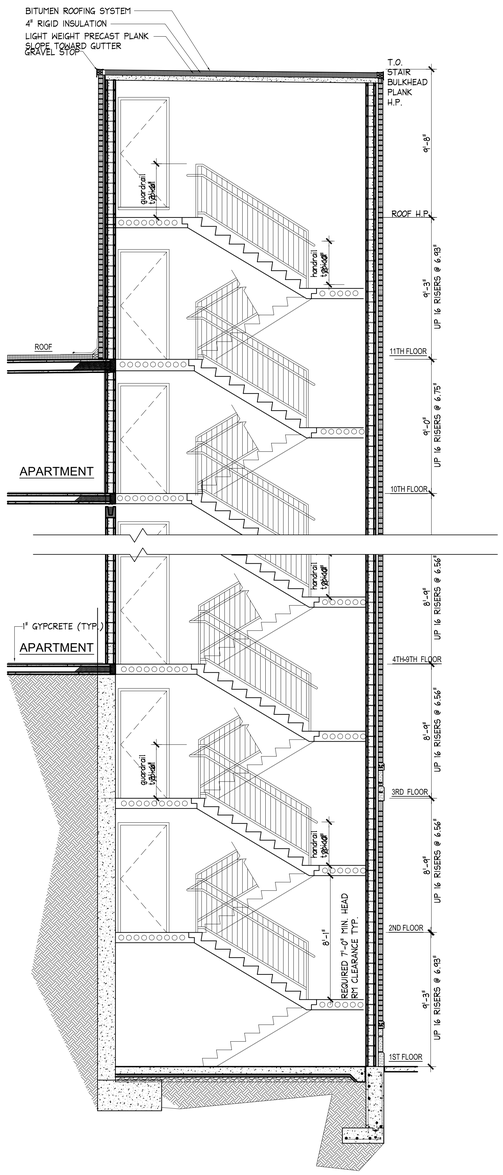
DRAWING NO:

A-301.00

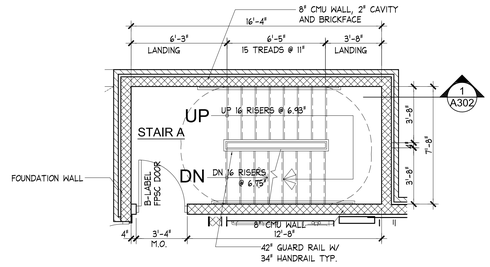
FILE No. :

SHEET:

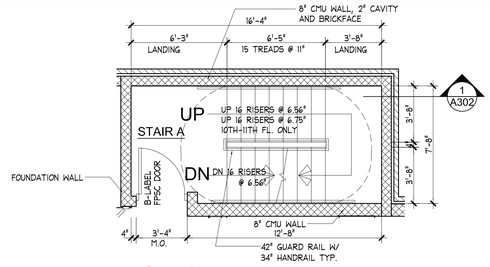
1-1



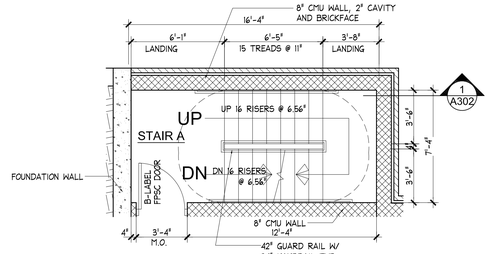
1 A302 SECTION STAIR A
Scale: 1/4" = 1'-0"



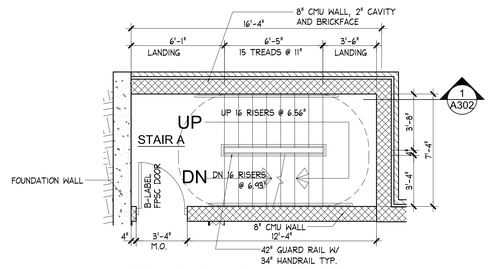
6 A302 STAIR "A" PLAN
Scale: 1/4" = 1'-0" @11TH FLOOR



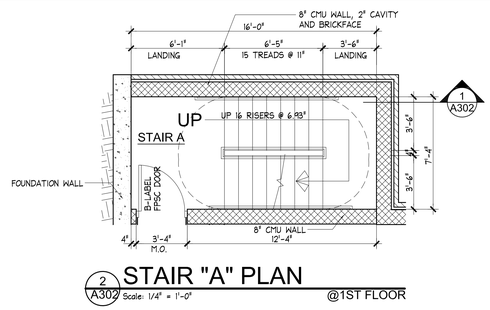
5 A302 STAIR "A" PLAN
Scale: 1/4" = 1'-0" @4TH-10TH FLOOR



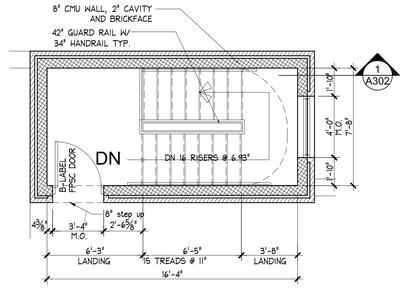
4 A302 STAIR "A" PLAN
Scale: 1/4" = 1'-0" @3RD FLOOR



3 A302 STAIR "A" PLAN
Scale: 1/4" = 1'-0" @2ND FLOOR



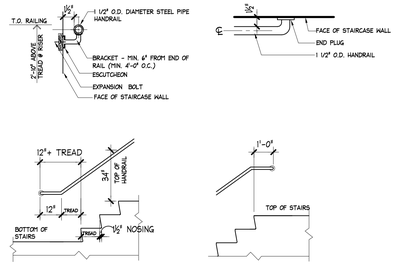
2 A302 STAIR "A" PLAN
Scale: 1/4" = 1'-0" @1ST FLOOR



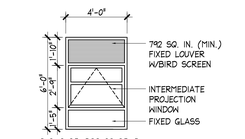
7 A302 STAIR "A" PLAN
Scale: 1/4" = 1'-0" @ROOF

NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL STAIR APPLICATIONS FOR APPROVAL PRIOR TO FABRICATION

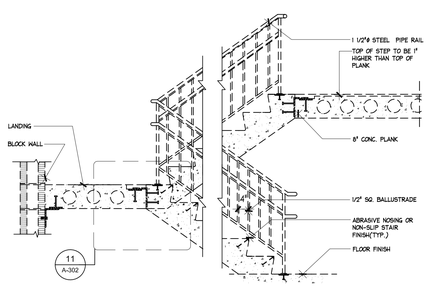
NOTES:
1) ALL STAIR ENCLOSURES ARE (2) HOUR WALLS AND FLOORS.
2) ALL DOORS TO STAIRS ARE 90 MIN. RATED FPSC DOORS.
3)SEE DETAILS ON SHEET A-304 FOR RAILING & OTHER DETAILS.



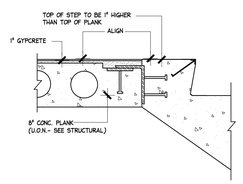
8 A-302 HAND RAILING DETAILS
N.T.S.



ALUMINUM STAIR-FIRE WINDOW
10 A-302 Scale: 1/4" = 1'-0"



9 A-302 STAIR DETAIL
N.T.S.



11 A-302 STAIR DETAIL
N.T.S.

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

STAIR A SECTION & PLANS

STAMP:

DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**1/4"= 1'-0"**

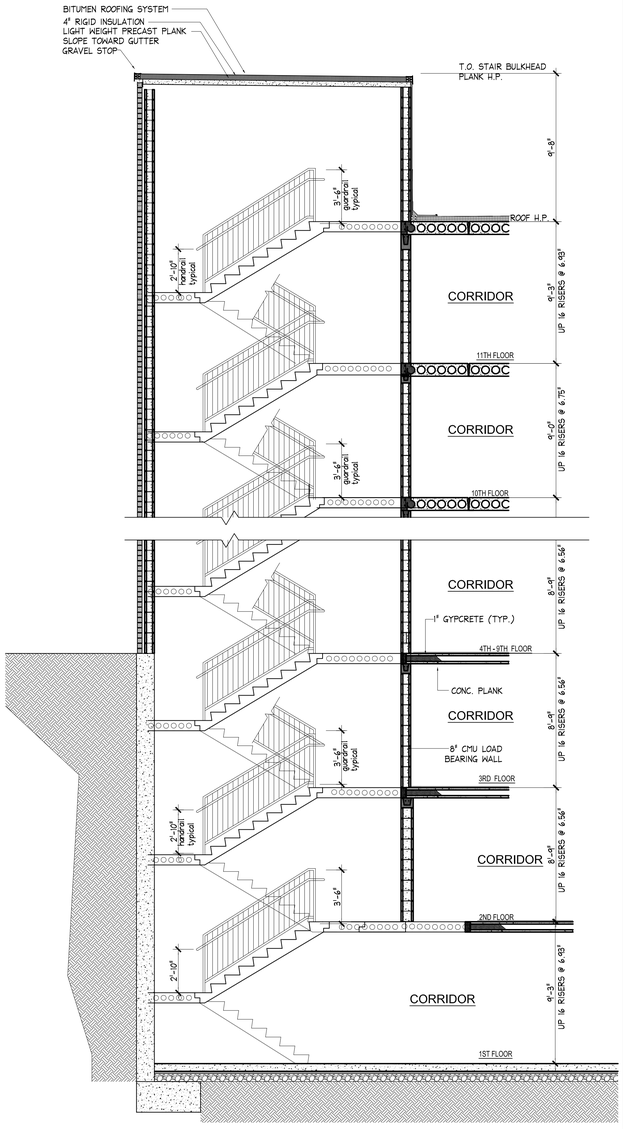
DRAWING NO:

A-302.00

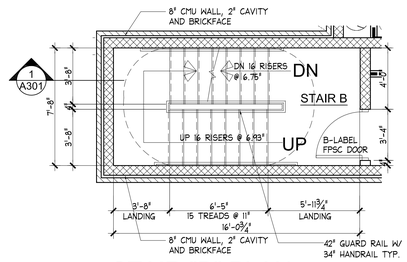
FILE No. :

SHEET:

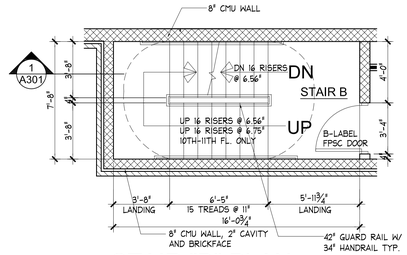
0-0



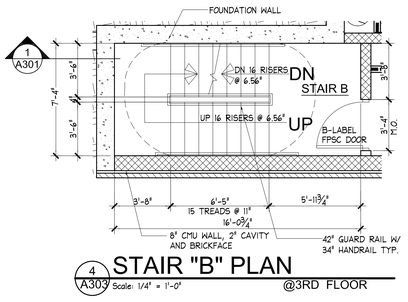
1 A303 SECTION STAIR B
Scale: 1/4" = 1'-0"



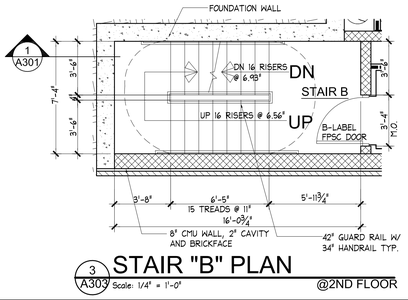
6 A303 STAIR "B" PLAN
Scale: 1/4" = 1'-0" @11TH FLOOR



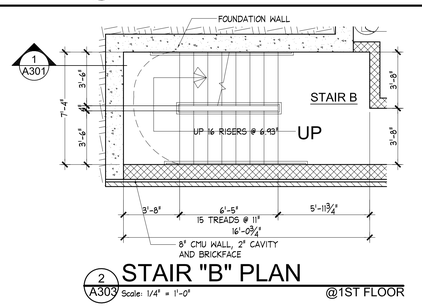
5 A303 STAIR "B" PLAN
Scale: 1/4" = 1'-0" @4TH-10TH FLOOR



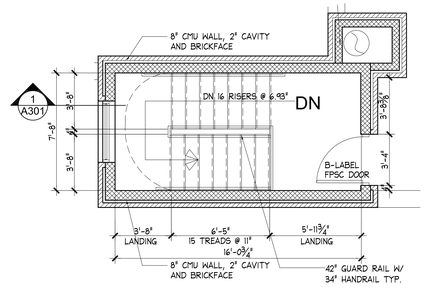
4 A303 STAIR "B" PLAN
Scale: 1/4" = 1'-0" @3RD FLOOR



3 A303 STAIR "B" PLAN
Scale: 1/4" = 1'-0" @2ND FLOOR



2 A303 STAIR "B" PLAN
Scale: 1/4" = 1'-0" @1ST FLOOR



7 A303 STAIR "B" PLAN
Scale: 1/4" = 1'-0" @ROOF

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

STAIR B SECTION & PLANS

STAMP:

DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**1/4"= 1'-0"**

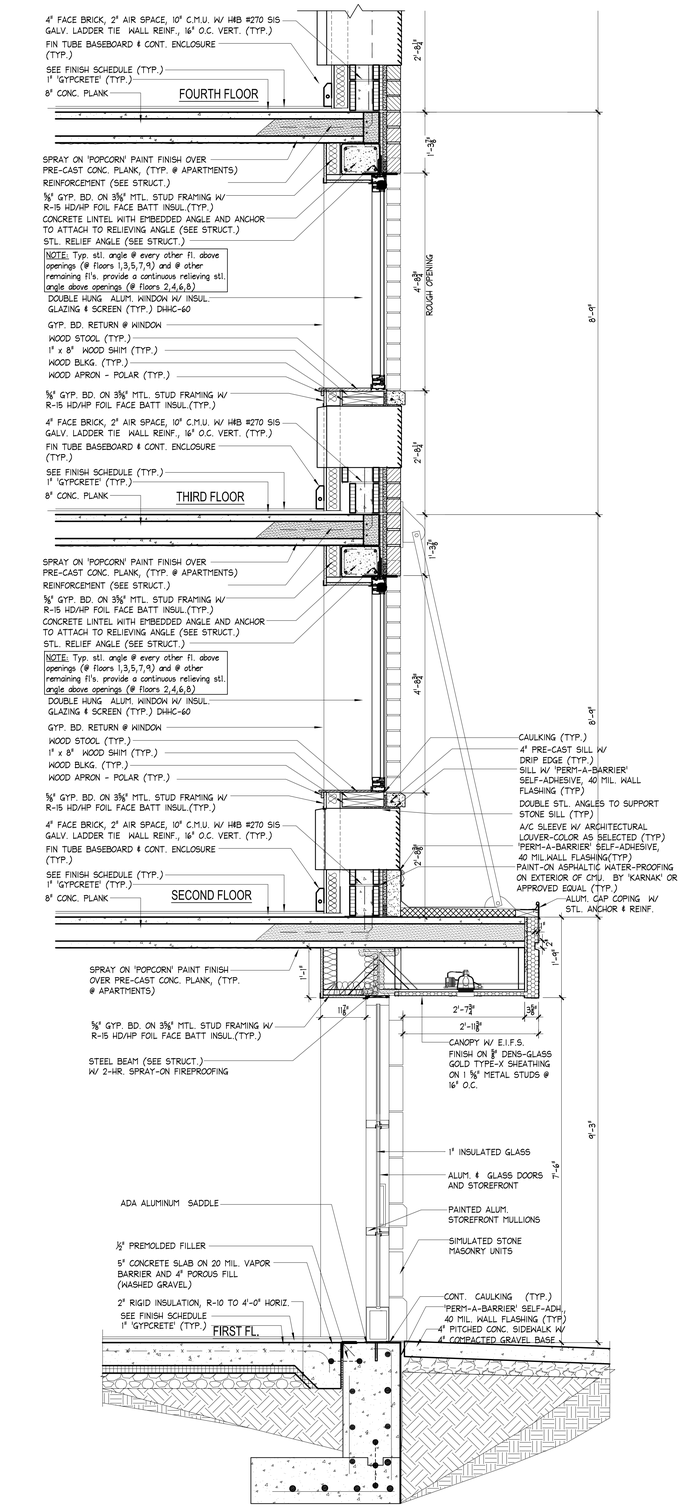
DRAWING NO:

A-303.00

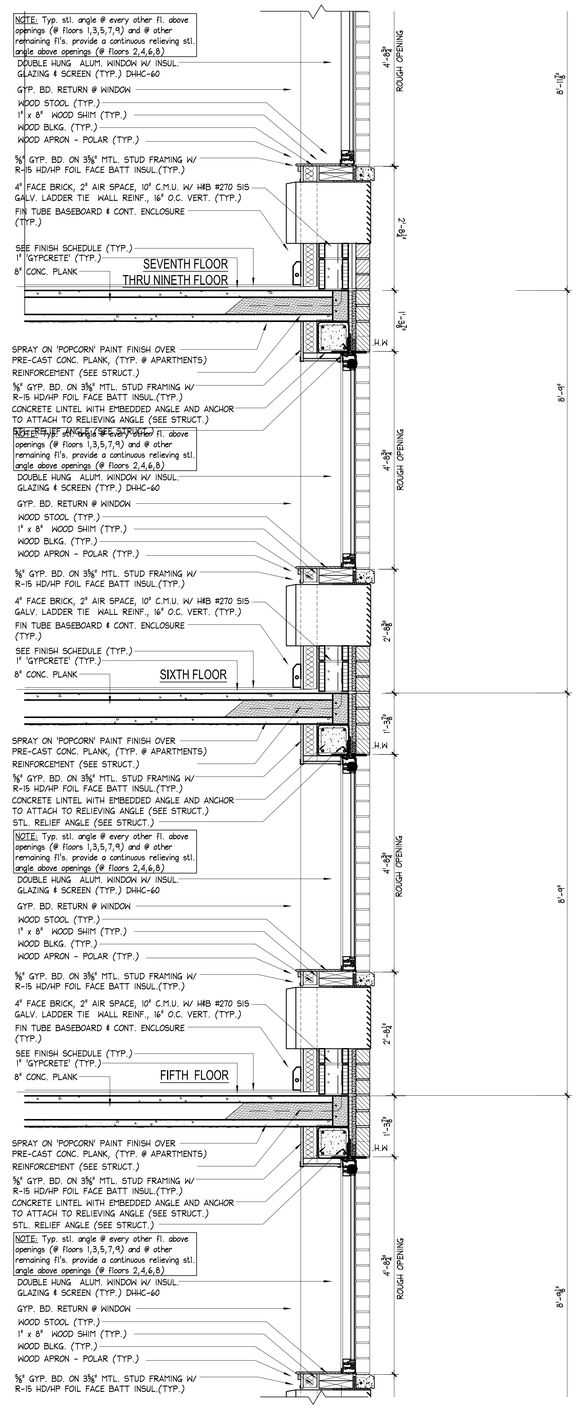
FILE No. :

SHEET:

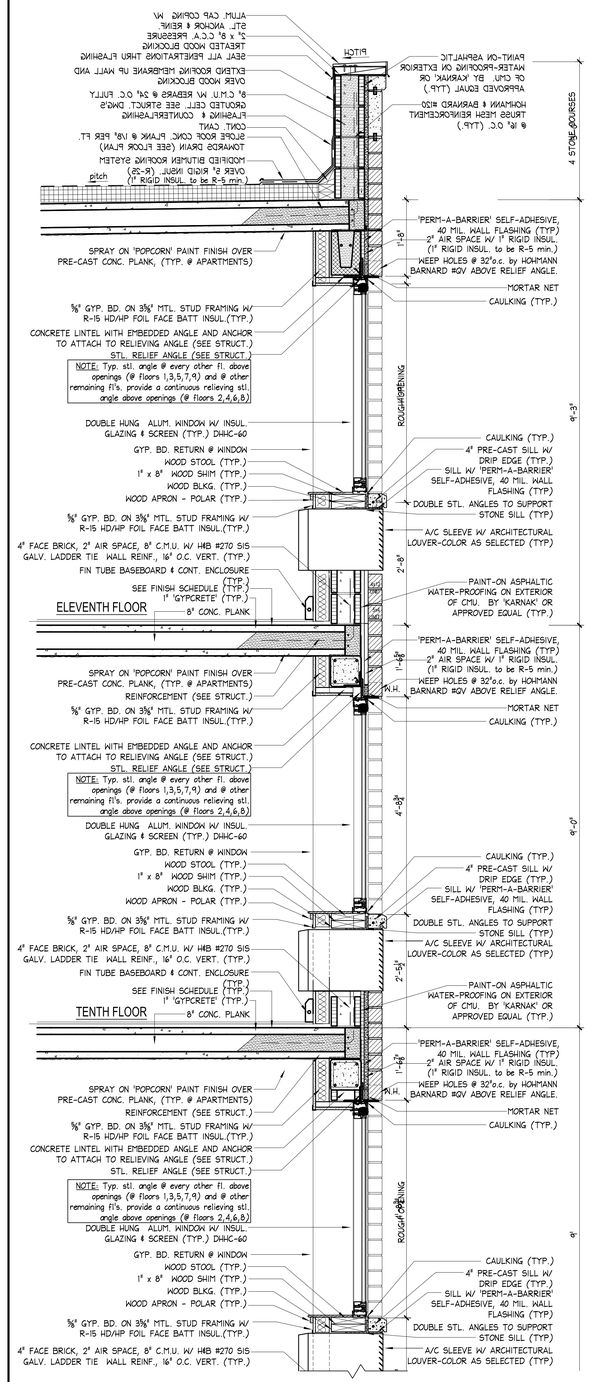
0-0



1 A401 WALL SECTION @ 1ST THRU 11TH FLOOR
Scale: 3/4" = 1'-0"



2 A401 WALL SECTION @ 1ST THRU 11TH FLOOR
Scale: 3/4" = 1'-0"



3 A401 WALL SECTION @ 1ST THRU 11TH FLOOR
Scale: 3/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

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BRONX, N.Y.

TITLE:

TYP. WALL SECTION

STAMP:

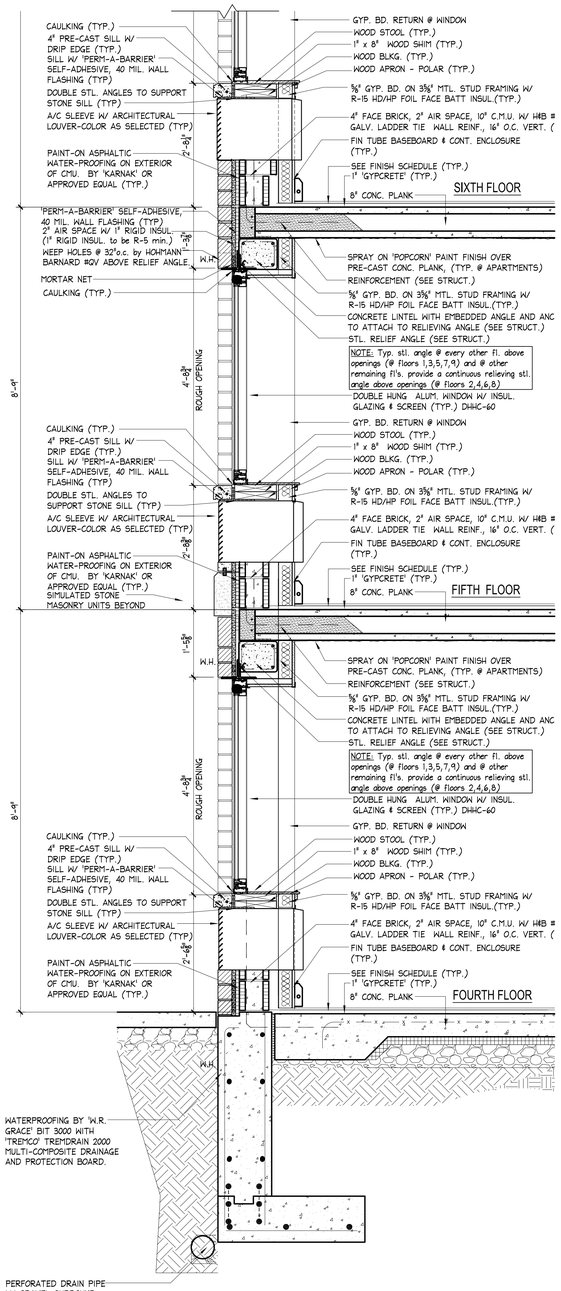
DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

DRAWING NO:

A-401.00

FILE No. :

SHEET:



1 A402 WALL SECTION @ 4TH THRU 11TH FLOOR
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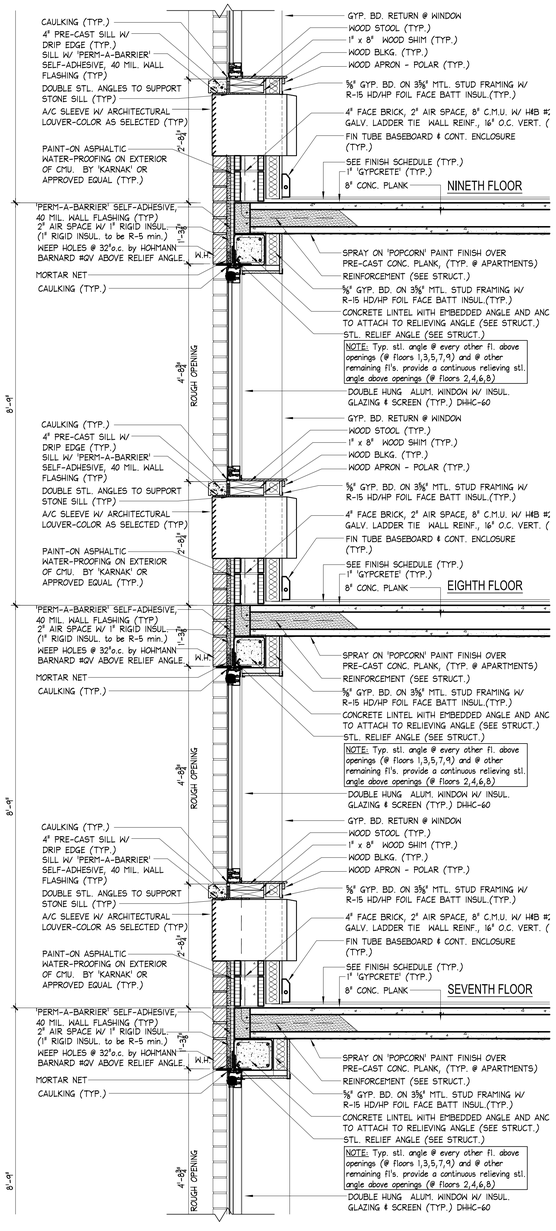

2 A402 WALL SECTION @ 4TH THRU 11TH FLOOR
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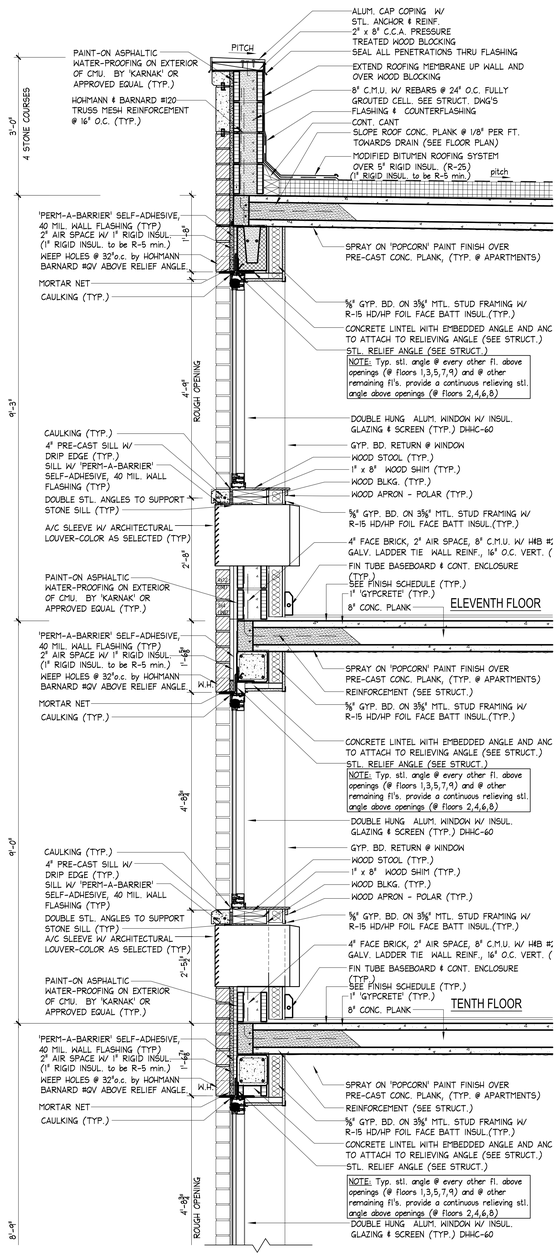

3 A402 WALL SECTION @ 4TH THRU 11TH FLOOR
Scale: 3/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
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TYP. WALL SECTION

STAMP:

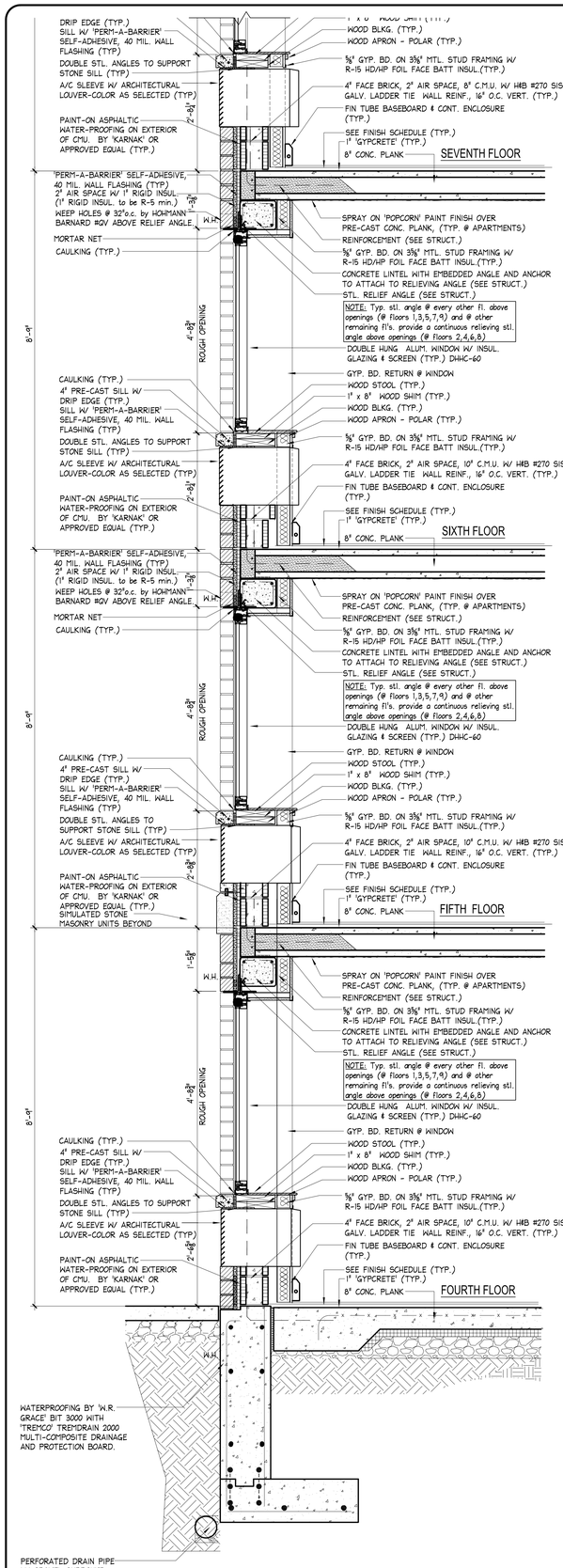
DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

DRAWING NO:

A-402.00

FILE No. :

SHEET:



1 A403 WALL SECTION @ 4TH THRU 11TH FLOOR
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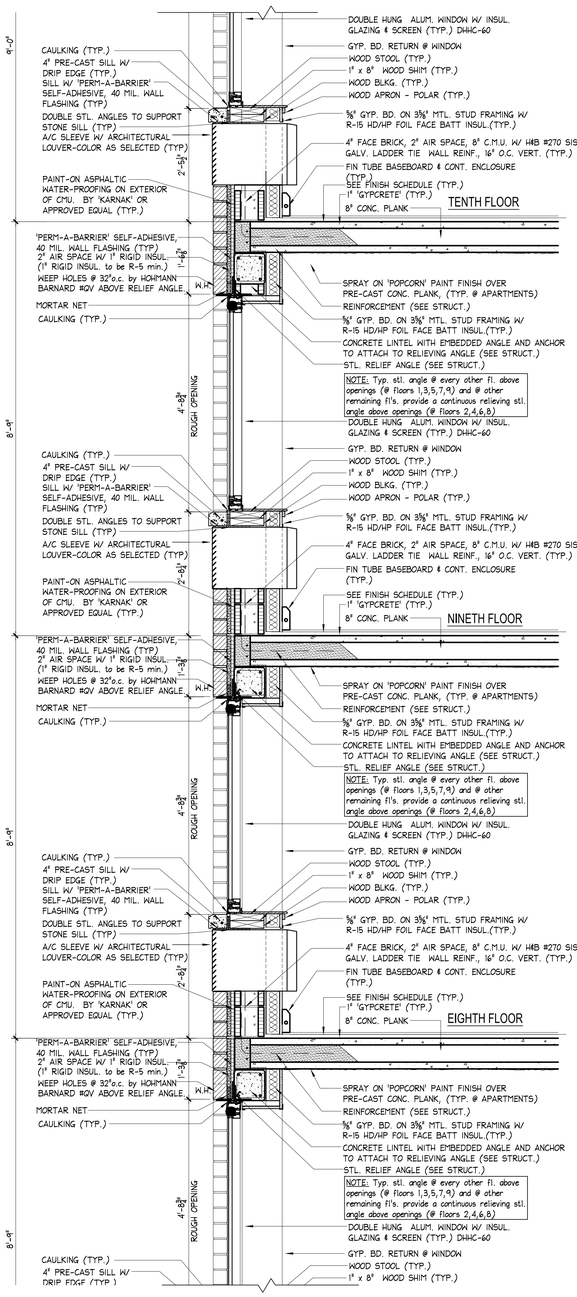

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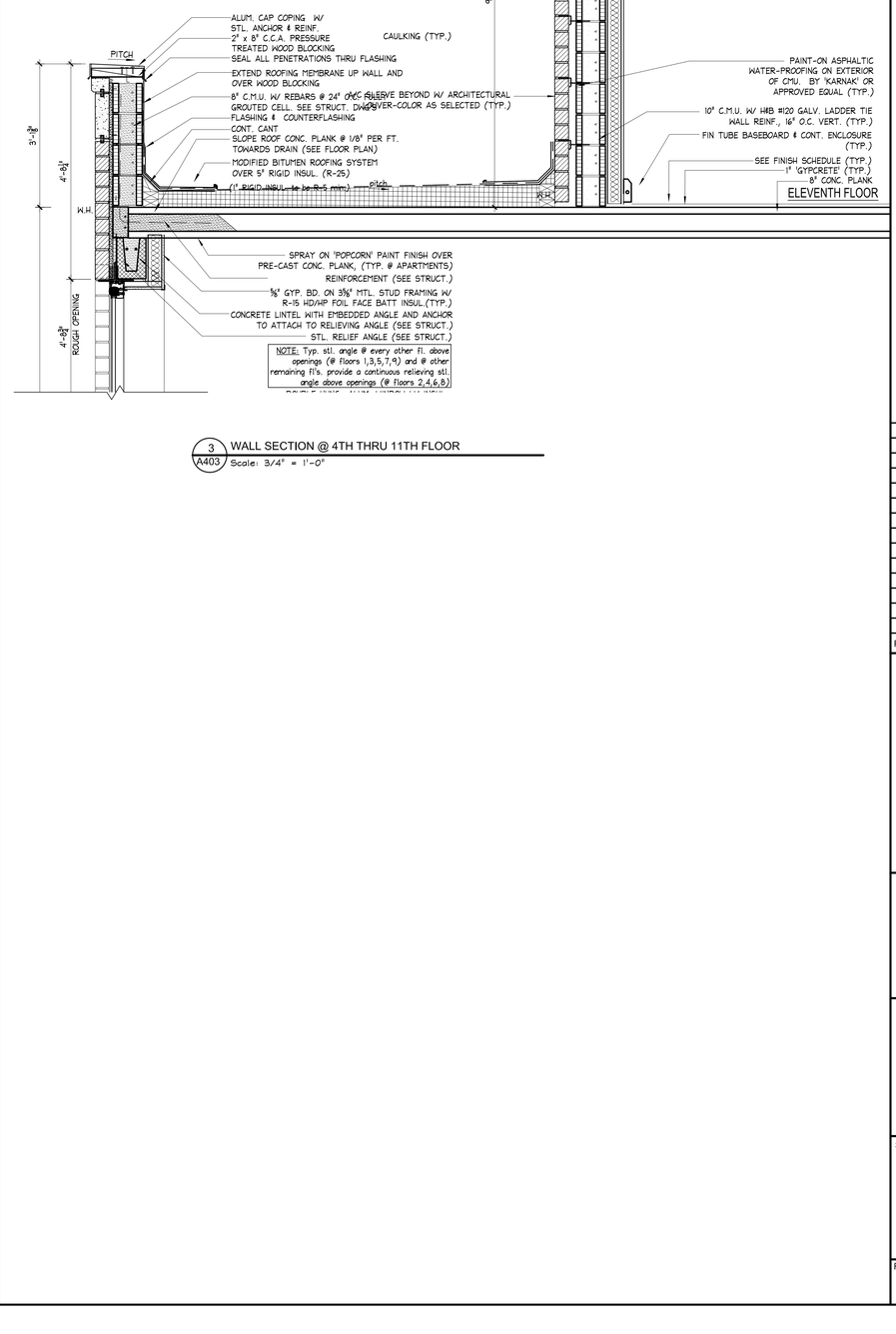

3 A403 WALL SECTION @ 4TH THRU 11TH FLOOR
Scale: 3/4" = 1'-0"

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
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BRONX, N.Y.

TITLE:

TYP. WALL SECTION

STAMP:

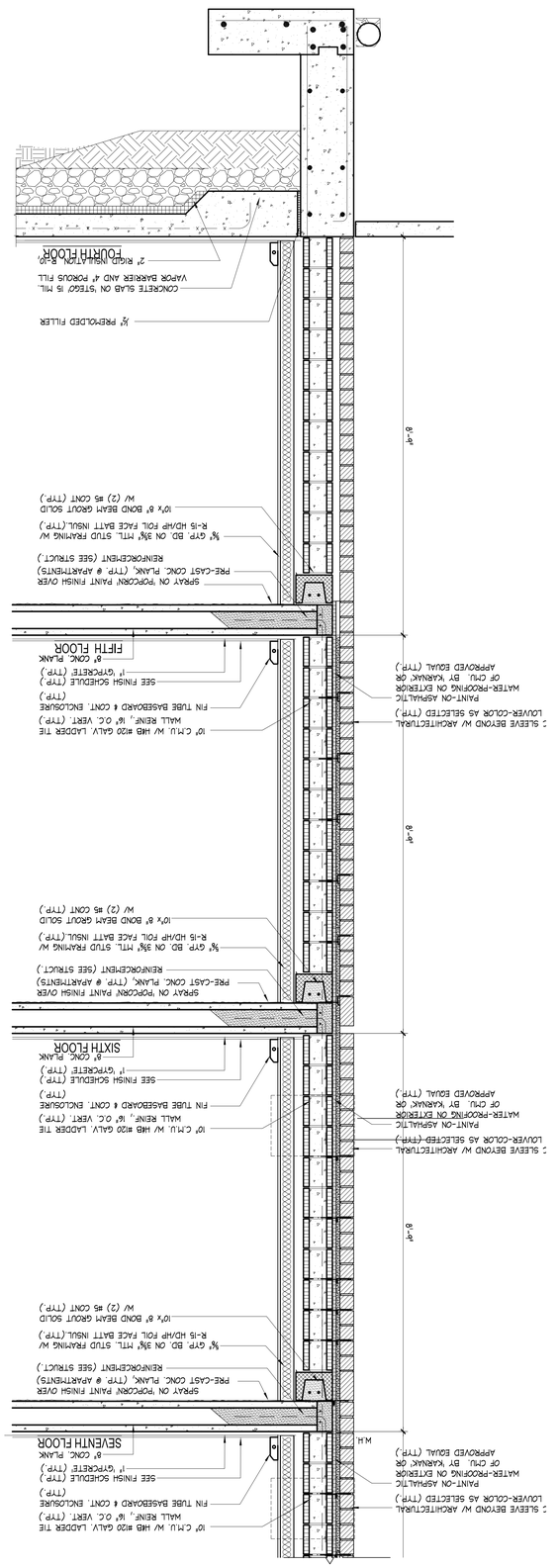
DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**AS NOTED**

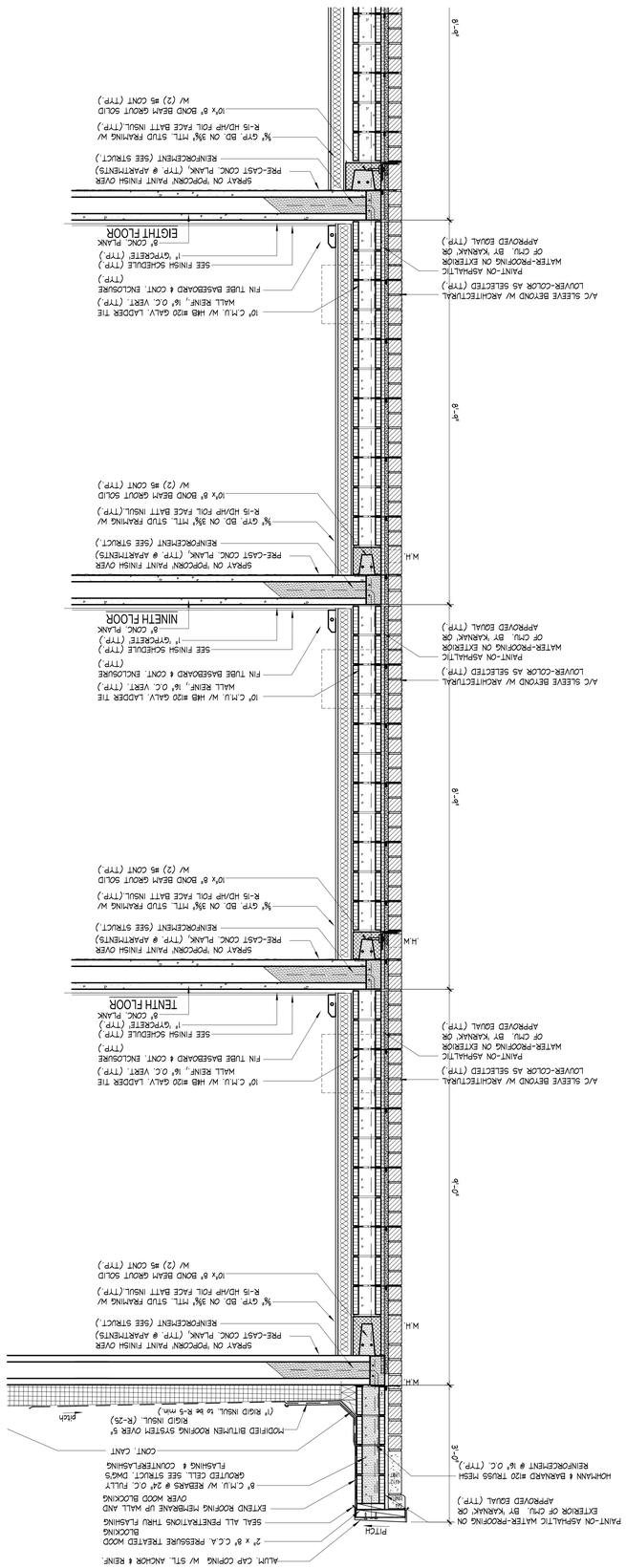
DRAWING NO:

A-403.00

FILE No. :

SHEET:





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BRONX, N.Y.

TITLE:

TYP. WALL SECTION

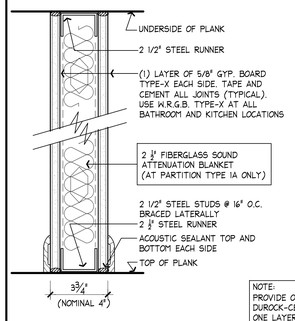
REVISIONS:		
REV.	DATE	DESCRIPTION
	11/14/14	INITIAL HPD SUBMISSION
	02/05/15	HPD SUBMISSION REVISION
	03/16/15	HPD COMMENTS
	04/07/15	HPD COMMENTS
	06/18/15	INITIAL DOB FILING
	07/16/15	HPD BLDS SUBMISSION
	07/28/15	BUILDING LAYOUT REVISION
	08/27/15	HPD COMMENTS
	10/23/15	HPD COMMENTS

STAMP:

DATE:	**11/14/14**
JOB #:	**12-24**
DRAWN BY:	**OW**
SCALE:	**AS NOTED**
DRAWING NO:	**A-404.00**

FILE No.: SHEET:

WALL TYPES



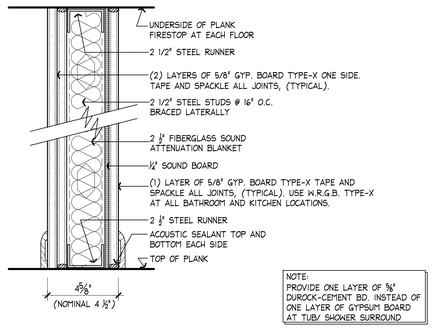
NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK-CEMENT BD. INSTEAD OF ONE LAYER OF GYPSUM BOARD AT TUB/ SHOWER SURROUND

NON RATED PARTITION

SCALE: 3"=1'-0"

STC 50

1



NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK-CEMENT BD. INSTEAD OF ONE LAYER OF GYPSUM BOARD AT TUB/ SHOWER SURROUND

ONE HR. RATED PARTITION

MEA # 111-72 M BSA #-36-66 SM

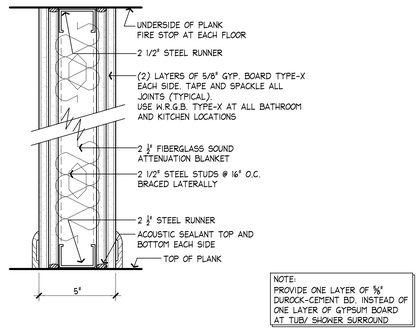
2A- SAME AS TYPE 2 WITH 6" STUD IN LIEU OF 2½" STUDS AND A MINIMUM OF (2) LAYERS GWB. BEHIND ANY RECESSED BOXES OR PANELS.

SCALE: 3"=1'-0"

UL# U475

STC 50

2



NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK-CEMENT BD. INSTEAD OF ONE LAYER OF GYPSUM BOARD AT TUB/ SHOWER SURROUND

TWO HR. RATED PARTITION

BSA #-1020-65 SM

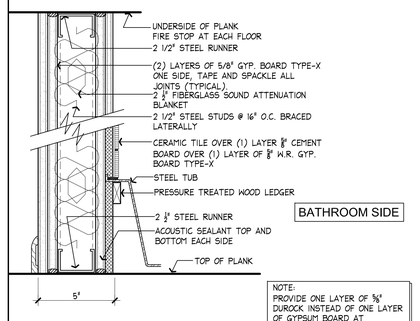
3A- SAME AS TYPE 3 EXCEPT WITH 6" STUDS

SCALE: 3"=1'-0"

UL# U411

STC 53

3



NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK INSTEAD OF ONE LAYER OF GYPSUM BOARD AT CERAMIC TILE LOCATIONS.

TWO HR. RATED PARTITION at BATHTUB

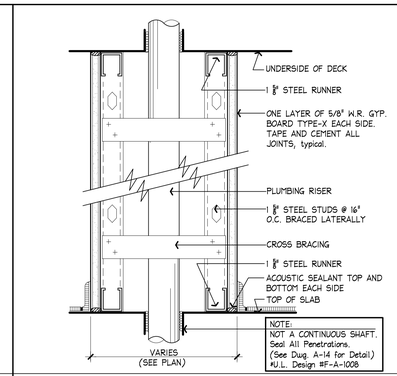
BSA #-301-60 SM

SCALE: 3"=1'-0"

UL# U411

STC 50

3B



NOTE: NOT A CONTINUOUS SHAFT. Seal All Penetrations. (See Dwg. A-14 for Detail) *U.L. Design #F-A-1008

ONE HR. RATED PLUMBING CHASE PARTITION

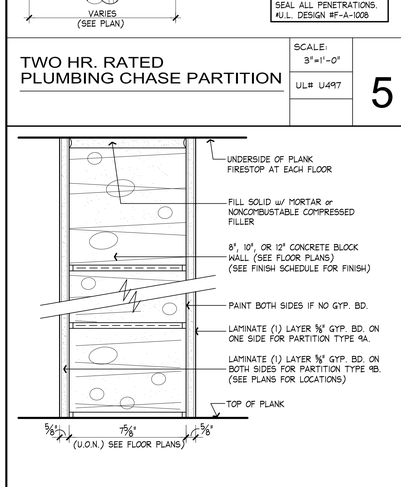
4A- SAME AS TYPE 4 ON ONE SIDE ONLY

SCALE: 3"=1'-0"

UL# N/R

STC N/A

4



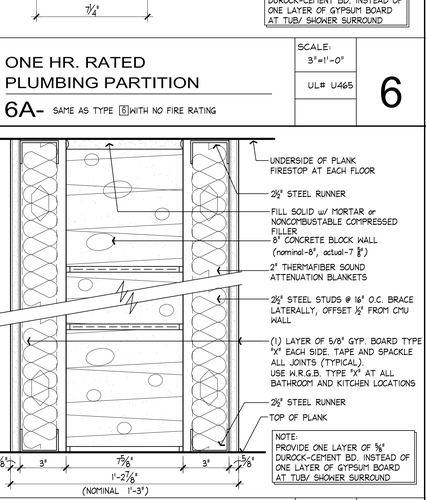
NOTE: NOT A CONTINUOUS SHAFT. SEAL ALL PENETRATIONS. *U.L. DESIGN #F-A-1008

TWO HR. RATED PLUMBING CHASE PARTITION

SCALE: 3"=1'-0"

UL# U497

5



NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK-CEMENT BD. INSTEAD OF ONE LAYER OF GYPSUM BOARD AT TUB/ SHOWER SURROUND

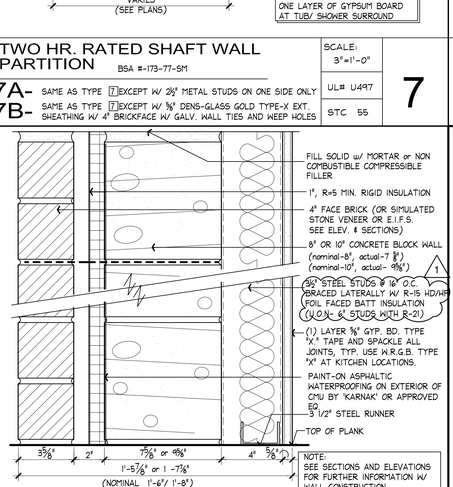
ONE HR. RATED PLUMBING PARTITION

6A- SAME AS TYPE 6 WITH NO FIRE RATING

SCALE: 3"=1'-0"

UL# U465

6



NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK-CEMENT BD. INSTEAD OF ONE LAYER OF GYPSUM BOARD AT TUB/ SHOWER SURROUND

TWO HR. RATED SHAFT WALL PARTITION

BSA #-173-77-SM

7A- SAME AS TYPE 7 EXCEPT W/ 2½" METAL STUDS ON ONE SIDE ONLY

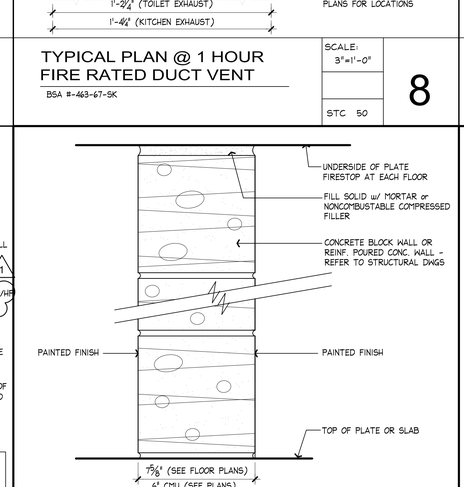
7B- SAME AS TYPE 7 EXCEPT W/ 5/8" DENS-GLASS GOLD TYPE-X EXT. SHEATHING W/ 4" BRICKFACE W/ GALV. WALL TIES AND WEEP HOLES

SCALE: 3"=1'-0"

UL# U497

STC 55

7



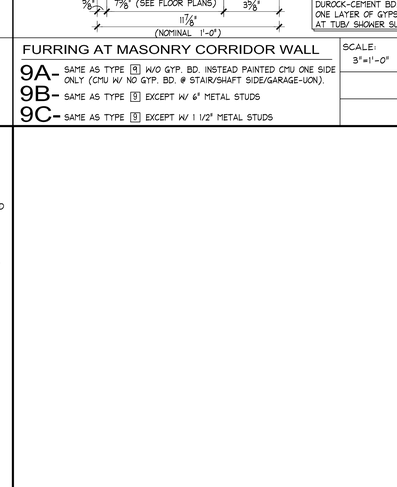
TYPICAL PLAN @ 1 HOUR FIRE RATED DUCT VENT

BSA #-463-67-SK

SCALE: 3"=1'-0"

STC 50

8



NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK-CEMENT BD. INSTEAD OF ONE LAYER OF GYPSUM BOARD AT TUB/ SHOWER SURROUND

FURRING AT MASONRY CORRIDOR WALL

9A- SAME AS TYPE 9 W/O GYP. BD. INSTEAD PAINTED CMU ONE SIDE ONLY (CMU W/ NO GYP. BD. @ STAIR/SHAFT SIDE/GARAGE-UON).

9B- SAME AS TYPE 9 EXCEPT W/ 6" METAL STUDS

9C- SAME AS TYPE 9 EXCEPT W/ 1 1/2" METAL STUDS

SCALE: 3"=1'-0"

9

INTERIOR MASONRY WALL

10A- SAME AS TYPE 10 WITH GYP. BD. ON ONE SIDE ONLY (STAIR, MECH. RMS. OR SHAFT SIDE- NO GYP. BD.).

10B- SAME AS TYPE 10 WITH 6" CMU

SCALE: 3"=1'-0"

10

NOTE: PROVIDE ONE LAYER OF 5/8" DUROCK-CEMENT BD. INSTEAD OF ONE LAYER OF GYPSUM BOARD AT TUB/ SHOWER SURROUND

FURRED INTERIOR MASONRY

11A- SAME AS TYPE 11 EXCEPT 6" METAL STUDS @ PLUMBING SIDE ONLY

SCALE: 3"=1'-0"

11

NOTE: SEE SECTIONS AND ELEVATIONS FOR FURTHER INFORMATION W/ WALL CONSTRUCTION

TYP. EXTERIOR MASONRY WALL

12A- SAME AS TYPE 12 EXCEPT WITHOUT GYP. BD. OR METAL STUDS @ STAIR OR SHAFT SIDE

12B- SAME AS TYPE 12 EXCEPT WITH 6" METAL STUDS

SCALE: 3"=1'-0"

12

TWO HR. RATED CONCRETE OR MASONRY WALL

13A- SAME AS TYPE 13 EXCEPT PAINT ON ONE SIDE ONLY. (NO PAINT @ SHAFT SIDE)

SCALE: 3"=1'-0"

UL# U905

13

REV.	DATE	DESCRIPTION
	11/14/14	INITIAL HPD SUBMISSION
	02/05/15	HPD SUBMISSION REVISION
	03/16/15	HPD COMMENTS
1	04/07/15	PREFOCUMENT SUBMISSION
	06/18/15	INITIAL DOB FILING
	07/16/15	HPD BLDS SUBMISSION
	07/28/15	BUILDING LAYOUT REVISION
	08/27/15	HPD COMMENTS
	10/23/15	HPD COMMENTS

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210 West Rogues Path • Cold Spring Hills, NY 11743
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PROJECT:

WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

TYP. WALL DETAILS

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

DRAWING NO:

A-501.00

FILE No. :

SHEET:

DOOR SCHEDULE

FIRST FLOOR

NO.	LOCATION	SIZE	DOOR TYPE	DOOR THK.	DOOR MAT.	FRAME JAMB	FRAME MAT.	CNST.	F.R.	HDWR	SADDLE	REMARKS
101	STAIR B	3'-0" x 7'-0"	B	1 3/4"	HM	4A	HM	WELD	B	B	T1	FPSC, 90 MINUTE 'B' LABEL
102	ELECTRIC ROOM	3'-0" x 7'-0"	C1	1 3/4"	HM	4A	HM	WELD	B	E	=	FPSC, 90 MINUTE 'B' LABEL
103	COMPACTOR/ REFUSE ROOM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
104	-	-	-	-	-	-	-	-	-	-	-	-
105	CLOSET	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
106	JANITOR'S CLOSET	3'-0" x 7'-0"	A	1 3/4"	HM	4	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
107	TEL / COM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
108	STAIR A	3'-0" x 7'-0"	B	1 3/4"	HM	3A	HM	WELD	B	B	T1	FPSC, 90 MINUTE 'B' LABEL
109	WATER RPZ ROOM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
110	GAS ROOM	3'-0" x 7'-0"	A	1 3/4"	HM	3A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
111	STORAGE	3'-0" x 7'-0"	A	1 3/4"	HM	1	HM	WELD	-	E	-	-
112	HC TOILET	3'-0" x 7'-0"	A	1 3/4"	HM	2	HM	WELD	B	G	T3	FPSC, 90 MINUTE 'B' LABEL
113	SECURITY	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	-	-	H	-	-
114	OFFICE	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	-	-	H	-	-

SECOND FLOOR

NO.	LOCATION	SIZE	DOOR TYPE	DOOR THK.	DOOR MAT.	FRAME JAMB	FRAME MAT.	CNST.	F.R.	HDWR	SADDLE	REMARKS
201	STAIR B	3'-0" x 7'-0"	B	1 3/4"	HM	4A	HM	WELD	B	B	T1	FPSC, 90 MINUTE 'B' LABEL
202	REFUSE ROOM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
203	ELECTRIC ROOM	3'-0" x 7'-0"	C1	1 3/4"	HM	4A	HM	WELD	B	E	=	FPSC, 90 MINUTE 'B' LABEL
204	STORAGE	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
205	JANITOR'S CLOSET	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
206	TEL / COM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
207	STAIR A	3'-0" x 7'-0"	B	1 3/4"	HM	4A	HM	WELD	B	B	T1	FPSC, 90 MINUTE 'B' LABEL
208	MULTIPURPOSE ROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
209	COMPUTER ROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
210	HC TOILET	3'-0" x 7'-0"	A	1 3/4"	HM	2	HM	WELD	B	G	T3	FPSC, 90 MINUTE 'B' LABEL
211	WAITING ROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
212	LAUNDRY ROOM	3'-0" x 7'-0"	B	1 3/4"	HM	4	HM	WELD	B	F	T3	FPSC, 90 MINUTE 'B' LABEL
213	CONFERENCE ROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
214	DIRECTORS OFFICE	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
215	WAITING ROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
216	STORAGE ROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
217	COPY ROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	WELD	B	H	-	-
218	WAITING ROOM	3'-0" x 7'-0"	A		WD	1	WD	-	-	H	-	-

TYPICAL FLOORS (4TH THROUGH 11TH)

NO.	LOCATION	SIZE	DOOR TYPE	DOOR THK.	DOOR MAT.	FRAME JAMB	FRAME MAT.	CNST.	F.R.	HDWR	SADDLE	REMARKS
301	STAIR B	3'-0" x 7'-0"	B	1 3/4"	HM	4A	HM	WELD	B	B	T1	FPSC, 90 MINUTE 'B' LABEL
302	REFUSE ROOM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
303	ELECTRIC ROOM	3'-0" x 7'-0"	C1	1 3/4"	HM	4A	HM	WELD	B	E	=	FPSC, 90 MINUTE 'B' LABEL
304	STORAGE	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
305	JANITOR'S CLOSET	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
306	TEL / COM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
307	STAIR A	3'-0" x 7'-0"	B	1 3/4"	HM	4A	HM	WELD	B	B	T1	FPSC, 90 MINUTE 'B' LABEL

TYPICAL FLOORS (4TH THROUGH 11TH)

NO.	LOCATION	SIZE	DOOR TYPE	DOOR THK.	DOOR MAT.	FRAME JAMB	FRAME MAT.	CNST.	F.R.	HDWR	SADDLE	REMARKS
401-1101	STAIR B	3'-0" x 7'-0"	B	1 3/4"	HM	4A	HM	WELD	B	B	-	FPSC, 90 MINUTE 'B' LABEL
402-1102	RUBBISH ROOM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	H	-	FPSC, 90 MINUTE 'B' LABEL
403-1103	JANITOR'S CLOSET	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
404-1104	TEL / COM	3'-0" x 7'-0"	A	1 3/4"	HM	4A	HM	WELD	B	E	-	FPSC, 90 MINUTE 'B' LABEL
405-1105	STAIR A	3'-0" x 7'-0"	B	1 3/4"	HM	4A	HM	WELD	B	B	-	FPSC, 90 MINUTE 'B' LABEL

ROOF LEVEL

NO.	LOCATION	SIZE	DOOR TYPE	DOOR THK.	DOOR MAT.	FRAME JAMB	FRAME MAT.	CNST.	F.R.	HDWR	SADDLE	REMARKS
R01	STAIR B	3'-0" x 7'-0"	A	1 3/4"	HM	3A	HM	WELD	B	D	T2	FPSC (SEE NOTES BELOW)
R02	STAIR A	3'-0" x 7'-0"	A	1 3/4"	HM	3A	HM	WELD	B	D	T2	FPSC (SEE NOTES BELOW)

TYPICAL APARTMENTS

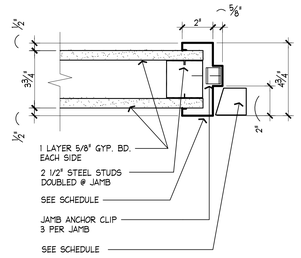
NO.	LOCATION	SIZE	DOOR TYPE	DOOR THK.	DOOR MAT.	FRAME JAMB	FRAME MAT.	CNST.	F.R.	HDWR	SADDLE	REMARKS
T1	APARTMENT ENTRANCE	3'-0" x 7'-0"	D	1 3/4"	HM	2, 5	HM	WELD	B	A	T2	FPSC, 90 MINUTE 'B' LABEL, PEEP HOLE
T2	H.C. ADAPTABLE BATHROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	-	-	G	T3	-
T3	COAT CLOSET	2'-4" x 7'-0"	E	1 3/8"	WD	1	WD	-	-	-	-	HARDWARE BY DOOR MANUFACTURER
T4	CLOSET	2'-6" x 7'-0"	E	1 3/8"	WD	1	WD	-	-	-	-	HARDWARE BY DOOR MANUFACTURER

SUPER APARTMENT

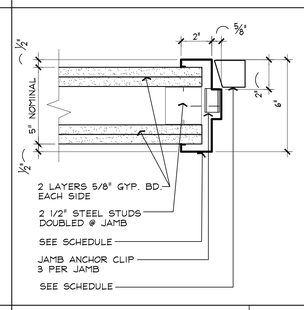
NO.	LOCATION	SIZE	DOOR TYPE	DOOR THK.	DOOR MAT.	FRAME JAMB	FRAME MAT.	CNST.	F.R.	HDWR	SADDLE	REMARKS
S1	APARTMENT ENTRANCE	3'-0" x 7'-0"	D	1 3/4"	HM	2, 5	HM	WELD	B	A	T2	FPSC, 90 MINUTE 'B' LABEL, PEEP HOLE
S2	H.C. ADAPTABLE BATHROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	-	-	G	T3	-
S3	STORAGE	2'-6" x 7'-0"	A	1 3/8"	WD	1	WD	-	-	G	T3	-
S4	CLOSET	2'-6" x 7'-0"	A	1 3/8"	WD	1	WD	-	-	G	T3	-
S5	BEDROOM	3'-0" x 7'-0"	A	1 3/8"	WD	1	WD	-	-	G	T3	-

NOTE :
- -PROVIDE REDUCER STRIP @ ALL DISSIMILIAR FLOOR MATERIALS.
- -ALL DOORS @ ROOF LEVEL TO BE HEAVY GAUGE (12 GA. FRAMES & 14 GA. DOORS) W/ "SUPER HEAVY DUTY" HINGES AND CHAINS.
- -ALL EXTERIOR DOORS TO HAVE 4" HIGH FRAMES @ HEAD TO WORK W/ MASONRY DIMENSION.
- -ALL EXTERIOR DOORS AND FRAMES SHOULD BE GALVANIZED AND SHOP PRIMED.
- -ALL EXIT DOORS TO HAVE PANIC BAR RELEASES.
- -SEE SPECIFICATIONS SECTION 6B FOR DOOR SPEC.
- -ALL WOOD DOORS (WD) TO BE MOLDED HARDBOARD.
- -ALL DOORS TO BE 7'-0" HT., UNLES OTHERWISE NOTED.
- -FOR ALL FUTURE OUTWARD DOOR SWINGS- PROVIDE DOOR BUCK TO ALLOW REMOUNTING OF DOOR ON SAME FRAME.

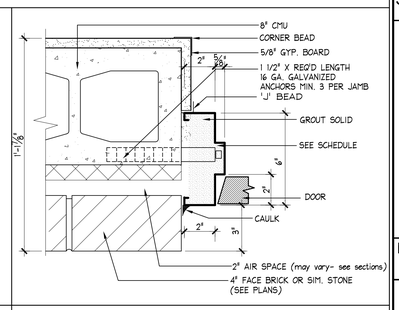
JAMB TYPES



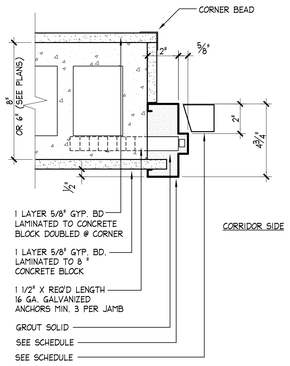
JAMB TYPE 1 — SCALE: 3"=1'-0" — 1



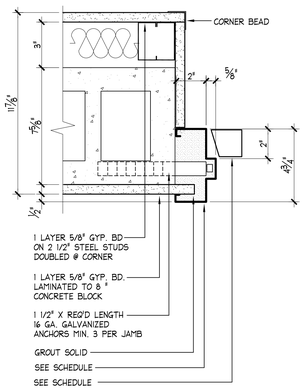
JAMB TYPE 2 — SCALE: 3"=1'-0" — 2



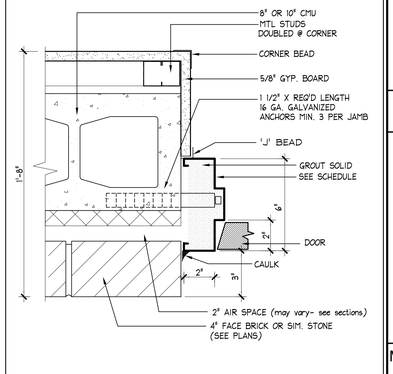
JAMB TYPE 3 — SCALE: 3"=1'-0" — 3
(3A- SAME AS #3 WITHOUT GYP. BD. @ INTERIOR)



JAMB TYPE 4 — SCALE: 3"=1'-0" — 4
(4A - SAME AS #4 WITHOUT GYP. BD. ON OPPOSITE SIDE)



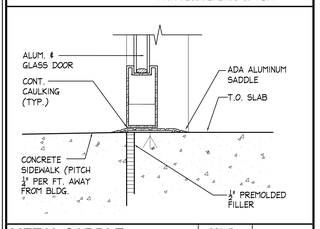
JAMB TYPE 5 — SCALE: 3"=1'-0" — 5
(5A- SAME AS #5 WITHOUT GYP. BD. @ INTERIOR)
(5B- SAME AS #5 WITH FURRING ON BOTH SIDES)



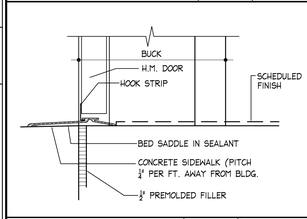
JAMB TYPE 6 — SCALE: 3"=1'-0" — 6

SADDLE TYPES

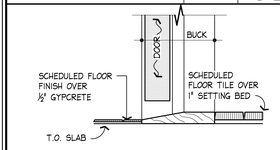
NOTE: ALL SADDLES AND THRESHOLDS SHALL COMPLY WITH REQUIREMENTS OF ADA



METAL SADDLE — SCALE: 3"=1'-0" — T1



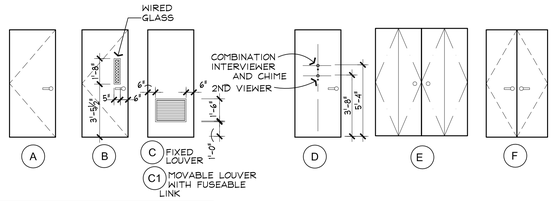
METAL SADDLE W/ WEATHER STRIP — SCALE: 3"=1'-0" — T2



MARBLE SADDLE — SCALE: 3"=1'-0" — T3

DOOR TYPES

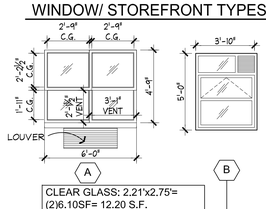
SCALE: 1/4"=1'-0"



ALL GLAZING IN EXTERIOR DOORS, SIDELIGHTS AND TRANSOMS IS 1" INSULATED, TEMPERED, GLAZING IN ALUMINUM FRAMING. ALL GLAZING IN INTERIOR DOORS, SIDELIGHTS, AND TRANSOMS IS ¼" TEMPERED GLAZING IN ALUMINUM FRAMING. UNLESS NOTED OTHERWISE - ALL WIRED GLASS IS IN STEEL FRAME, AND IS TO MEET FIRE RATED REQUIREMENTS OF DOOR.

WINDOW/ STOREFRONT TYPES

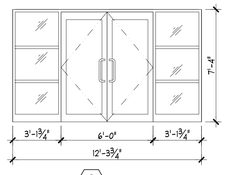
1/4"=1'-0"



CLEAR GLASS: 2.21'x2.75'= (2)6.10SF= 12.20 S.F.
CLEAR GLASS: 1.92'x2.75'= (2)5.30SF= 10.60 S.F.
CLEAR GLASS TOTAL =22.80 SF

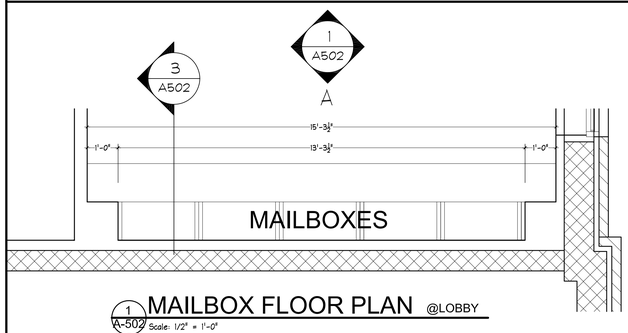
VENT OPENING: 2.13'x3.10'= (2)6.60S.F. = 13.20 SF

ALUMINUM STAIR-FIRE WINDOW W/ MIN. OPEN AREA LOUVER OF 144 SQ. INCH W/ INSECT SCREEN

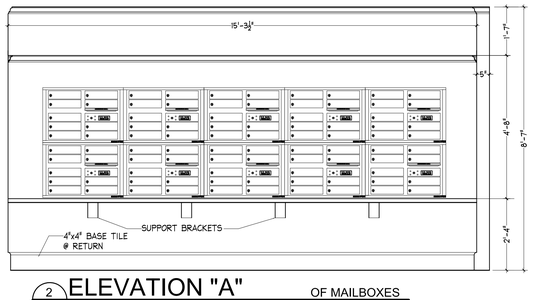


-ALL WINDOWS ARE DOUBLE HUNG, ALUMINUM FRAME WINDOWS WITH 1" INSULATED, DOUBLE GLAZED LOW-E CLEAR GLASS.
-WINDOWS TO HAVE A MINIMUM PERFORMANCE GRADE OF HC-60.
-PROVIDE ALUMINUM MESH INSECT SCREEN.
-PROVIDE SECURITY GRILLES AT ALL FIRST FLOOR AND CELLAR WINDOWS.

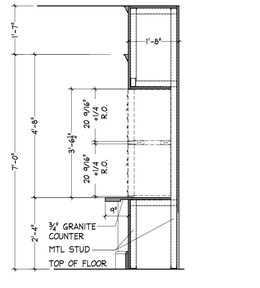
NOTE: WINDOWS TO HAVE 31DBA ATTENUATION TO 45DBA INSIDE UNITS. PROVIDE MAXIMUM



1 A-502 MAILBOX FLOOR PLAN @LOBBY
Scale: 1/2" = 1'-0"



2 A-502 ELEVATION "A" OF MAILBOXES
Scale: 1/2" = 1'-0"



3 A-502 SECTION OF MAILBOXES
Scale: 1/2" = 1'-0"

NOTE:
MAILBOX COMPARTMENT MUST MEET A MINIMUM SIZE REQUIREMENT 12"W x 15"D x 3"H

REV.	DATE	DESCRIPTION
	10/23/15	HPD COMMENTS
	08/27/15	HPD COMMENTS
	07/28/15	BUILDING LAYOUT REVISION
	07/16/15	HPD BLDS SUBMISSION
	06/18/15	INITIAL DOB FILING
	04/07/15	HPD COMMENTS
	03/16/15	HPD COMMENTS
	02/05/15	HPD SUBMISSION REVISION
	11/14/14	INITIAL HPD SUBMISSION

REVISIONS:

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WEST FARMS SRO

BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

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DOOR & WINDOW SCHEDULE

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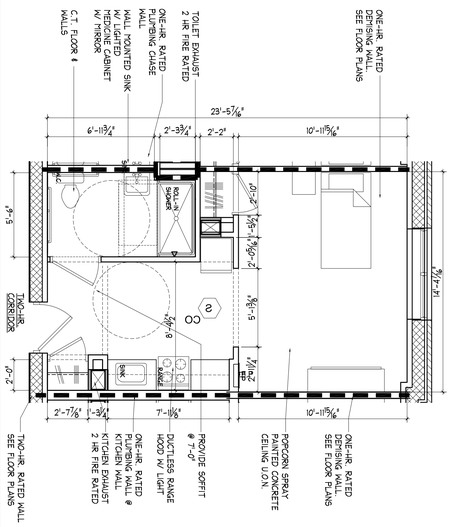
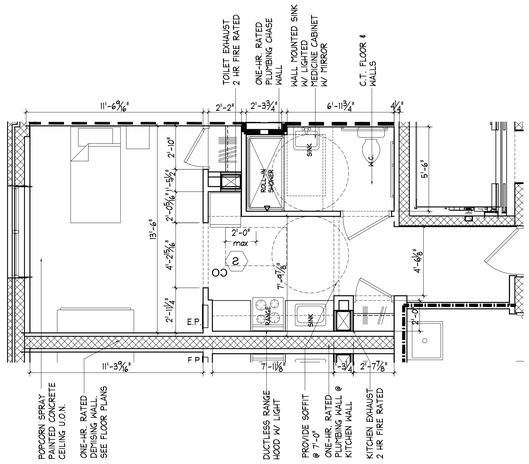


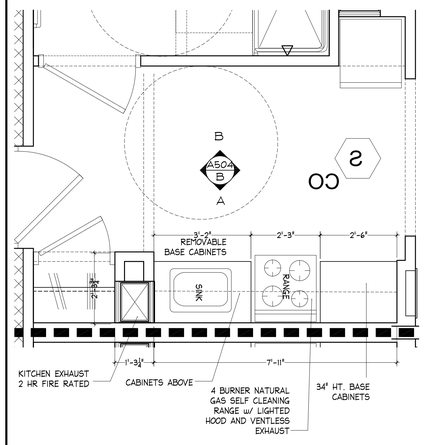
SCALE: 1/4"=1'-0"

TYP. APARTMENT LAYOUT



SCALE: 1/4"=1'-0"

TYP. APARTMENT LAYOUT



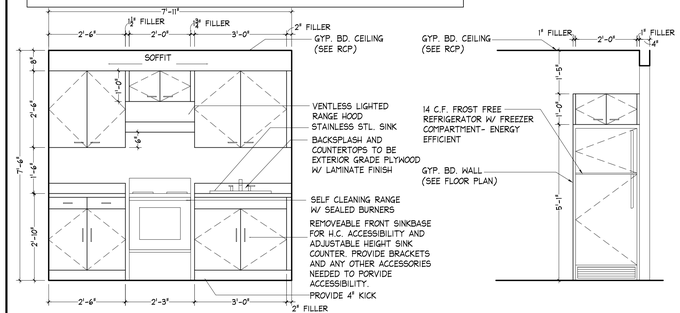
TYP. APARTMENT KITCHENETTE

SCALE: 1/2" = 1'-0"

NOTES:

SEE KITCHEN REQUIREMENTS ON SHEET # G-002 FOR ADJUSTABLE COUNTER SEGMENTS TO MEET ADAPTABLE ACCESSIBILITY REQUIREMENTS. ALSO SEE THIS SECTION FOR CABINET, WALL AND FLOOR FINISHES IN THESE AREAS. TYPICAL FOR ALL KITCHENS.

EXTEND FLOOR AND WALL FINISHES UNDER AND BEHIND ALL VANITIES IN BATHROOMS IN PREPARATION FOR FUTURE CONVERSIONS FOR ACCESSIBLE LAVATORIES.

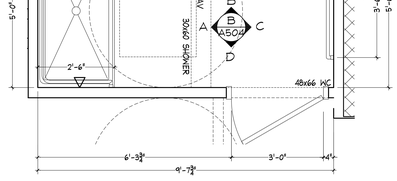


INTERIOR ELEVATION A

SCALE: 1/2" = 1'-0"

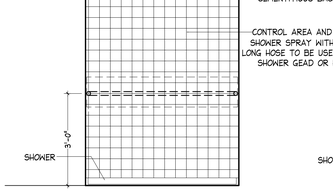
INTERIOR ELEVATION B

SCALE: 1/2" = 1'-0"



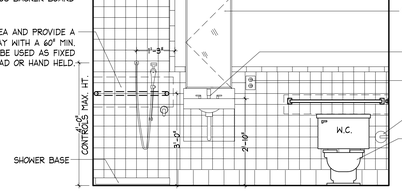
TYP. APARTMENT BATHROOM

SCALE: 1/2" = 1'-0"



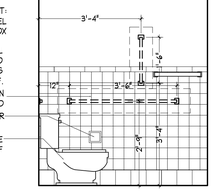
INTERIOR ELEVATION A

SCALE: 1/2" = 1'-0"



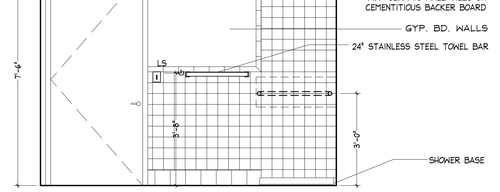
INTERIOR ELEVATION B

SCALE: 1/2" = 1'-0"



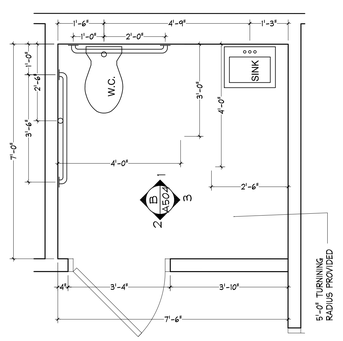
INTERIOR ELEVATION C

SCALE: 1/2" = 1'-0"



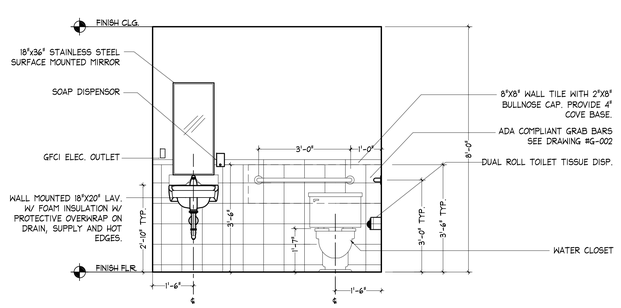
INTERIOR ELEVATION D

SCALE: 1/2" = 1'-0"



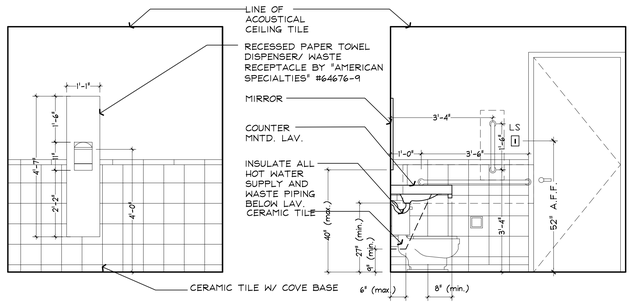
TYP. H.C. TOILET

SCALE: 1/2" = 1'-0"



INTERIOR ELEVATION 1

SCALE: 1/2" = 1'-0"

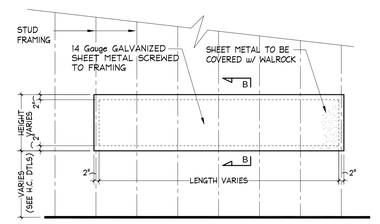


INTERIOR ELEVATION 2

SCALE: 1/2" = 1'-0"

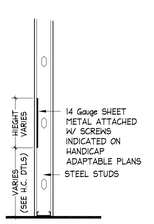
INTERIOR ELEVATION 3

SCALE: 1/2" = 1'-0"



ELEVATION OF TYPICAL WALL REINFORCEMENT FOR GRAB BARS AT HANDICAP ADAPTABLE BATHROOMS

NOT TO SCALE



SECTION THRU TYPICAL WALL REINFORCEMENT

NOT TO SCALE

NOTE:
EXTEND FLOOR AND WALL FINISHES UNDER AND BEHIND ALL VANITIES/CABINETS IN BATHROOMS/ KITCHENS IN PREPARATION FOR FUTURE CONVERSIONS FOR ACCESSIBILITY. SEE PLANS FOR REVERSE KITCHEN/ BATHROOM LAYOUTS.

NOTE:
-ALL TOILET ACCESSORIES NOTED IN BATHROOM ARE TYPICAL FOR ALL BATHROOMS.
-PROVIDE BLOCKING FOR GRAB BARS @ ALL TUBS AND TOILETS
-SEE G-002 DRAWING FOR ADDITIONAL INFORMATION NOT NOTED HERE.

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	07/28/15	BUILDING LAYOUT REVISION
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PROJECT:

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BOONE AVE AND WEST FARMS RD.

BRONX, N.Y.

TITLE:

TYP. APARTMENT LAYOUT BATHROOM & KITCHEN

STAMP:

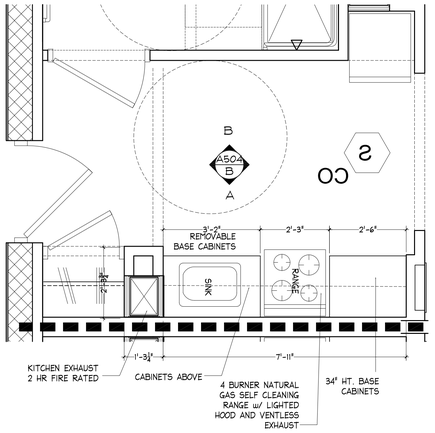
DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

DRAWING NO:

A-503.00

FILE No. :

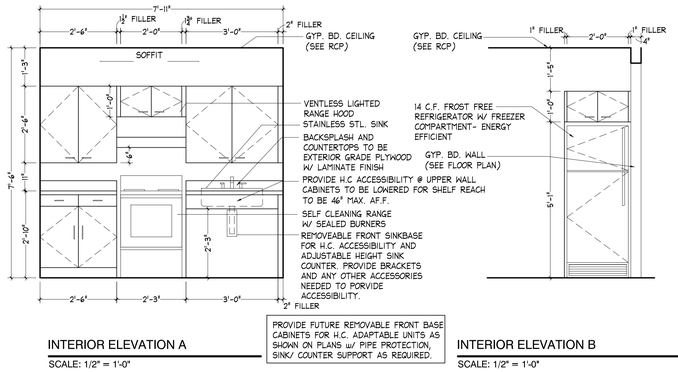
SHEET:



TYP. APARTMENT KITCHENETTE H.C. ADAPTABLE

SCALE: 1/2" = 1'-0"

TYPICAL:



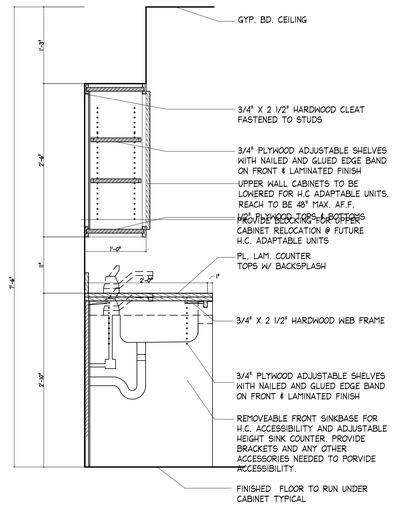
INTERIOR ELEVATION A

SCALE: 1/2" = 1'-0"

PROVIDE FUTURE REMOVABLE FRONT BASE CABINETS FOR H.C. ADAPTABLE UNITS AS SHOWN ON PLANS w/ PIPE PROTECTION, SINK/ COUNTER SUPPORT AS REQUIRED.

INTERIOR ELEVATION B

SCALE: 1/2" = 1'-0"



TYPICAL SECTION

Scale: 1" = 1'-0"

NOTE: PROVIDE SOLID BLOCKING FOR ALL MILLWORK AND AS NOTED ON THIS SHEET

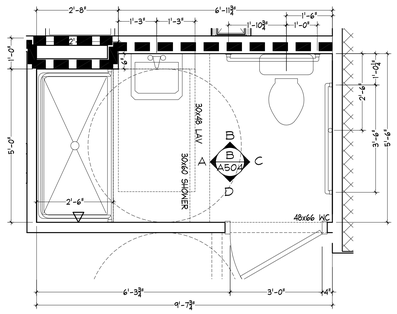
THE PROJECT SHOULD HAVE APPLIANCES/ ACCESSORIES AVAILABLE TO BE INSTALLED AND SHOULD BE ABLE TO PROVIDE TO TENANTS AND PROSPECTIVE TENANTS, INFORMATION ON THE AVAILABLE ACCOMMODATIONS.

REQUIREMENTS FOR PEOPLE WITH VISUAL IMPAIRMENTS:

1. ANY LIGHTING FIXTURES PROVIDED IN THE UNIT SHOULD BE EQUIPPED WITH RECEPTACLES CAPABLE OF HANDLING 150-WATT BULBS.
2. COOK TOPS CONTROLS SHOULD BE MOUNTED ON THE FRONT OR SIDE OF THE RANGE AND CONTROLS WITH TACTILE MARKINGS SHOULD BE AVAILABLE FOR INSTALLATION IF REQUIRED BY THE TENANTS.

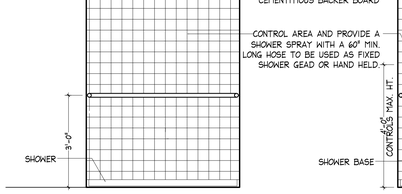
REQUIREMENTS FOR HANDICAPPED PEOPLE:

3. RANGES AND COOKTOPS. THE LOCATION OF CONTROLS FOR RANGES AND COOK-TOPS SHALL NOT REQUIRE REACHING ACROSS BURNERS.
4. OVENS. OVENS SHALL BE OF THE SELF-CLEANING TYPE OR BE LOCATED ADJACENT TO AN ADJUSTABLE HEIGHT COUNTER WITH KNEE SPACE BELOW. OVENS SHALL HAVE CONTROLS ON FRONT PANELS; THEY MAY BE LOCATED ON EITHER SIDE OF THE DOOR.
5. REFRIGERATOR/FREEZER. PROVISION SHALL BE MADE FOR REFRIGERATORS WHICH ARE:
   (1) OF THE VERTICAL SIDE-BY-SIDE REFRIGERATOR/FREEZER TYPE; OR
   (2) OF THE OVER-AND-UNDER TYPE AND MEET THE FOLLOWING REQUIREMENTS:
   (A) HAVE AT LEAST 50 PERCENT OF THE FREEZER SPACE BELOW 54 IN ABOVE THE FLOOR.
   (B) HAVE 100 PERCENT OF THE REFRIGERATOR SPACE AND CONTROLS BELOW 54 IN .
   (C) FREEZERS WITH LESS THAN 100 PERCENT OF THE STORAGE VOLUME BELOW 54IN. SHALL BE THE SELF-DEFROSTING TYPE.
6. KITCHEN STORAGE. CABINETS, DRAWERS, AND SHELF AREAS SHALL HAVE THE FOLLOWING FEATURES:
   (1) MAXIMUM HEIGHT SHALL BE 48 IN (1220 MM) FOR AT LEAST ONE SHELF OF ALL CABINETS AND STORAGE SHELVES MOUNTED ABOVE WORK COUNTERS.
   (2) DOOR PULLS OR HANDLES FOR WALL CABINETS SHALL BE MOUNTED AS CLOSE TO THE BOTTOM OF CABINET DOORS AS POSSIBLE. DOOR PULLS OR HANDLES FOR BASE CABINETS SHALL BE MOUNTED AS CLOSE TO THE TOP OF CABINET DOORS AS POSSIBLE.



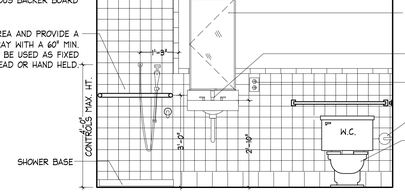
TYP. APARTMENT BATHROOM H.C. ADAPTABLE

SCALE: 1/2" = 1'-0"



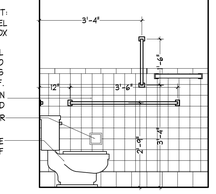
INTERIOR ELEVATION A

SCALE: 1/2" = 1'-0"



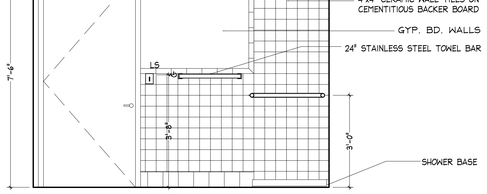
INTERIOR ELEVATION B

SCALE: 1/2" = 1'-0"



INTERIOR ELEVATION C

SCALE: 1/2" = 1'-0"



INTERIOR ELEVATION D

SCALE: 1/2" = 1'-0"

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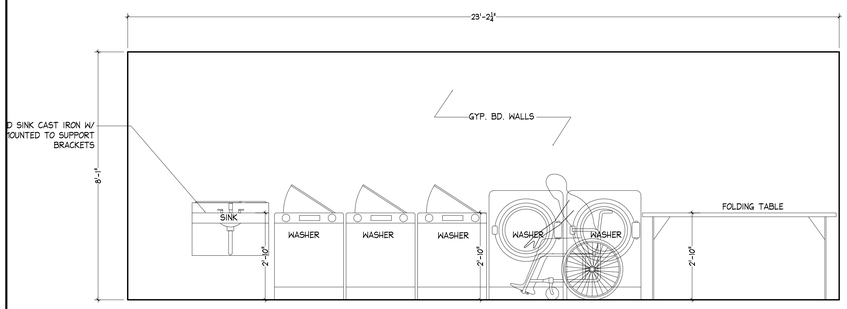
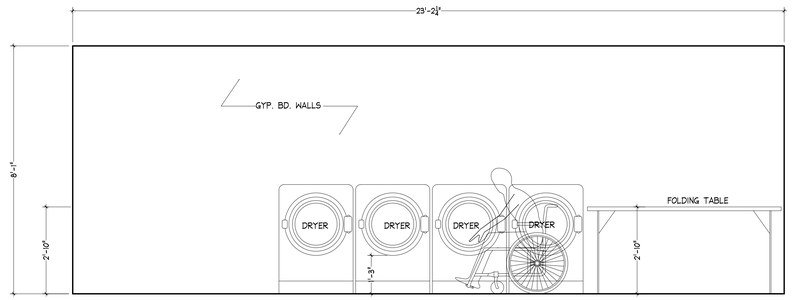


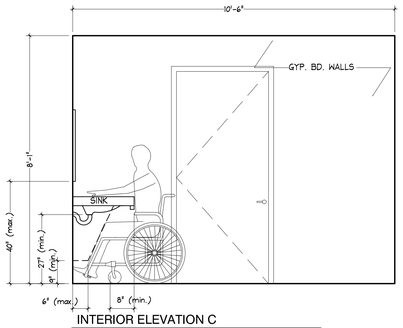
INTERIOR ELEVATION A

SCALE: 1/2" = 1'-0"



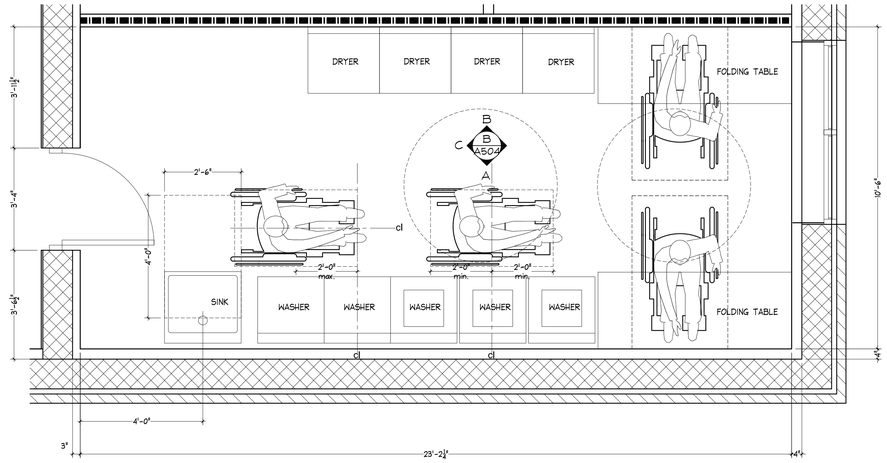
INTERIOR ELEVATION B

SCALE: 1/2" = 1'-0"



INTERIOR ELEVATION C

SCALE: 1/2" = 1'-0"



LAUNDRY ROOM LAYOUT

SCALE: 1/2" = 1'-0"

FINISH SCHEDULE

NO.	ROOM	FLOOR MATERIAL	FLOOR BASE	WALLS MATERIAL	WALLS FINISH	CEILING MATERIAL	CEILING FINISH	NOTES SEE GENERAL NOTES
1ST FLOOR								
	STAIR A & B	PAINTED CONC.	_	MASONRY	Pt.	CONCRETE PLANK	PT.	Pt. BOTTOM OF LANDING. PROVIDE BLOCK FILLER ON CMU AND STAIR
	JAN. CL.	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	-	A.C.T.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	CL.	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	-	A.C.T.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	H.C. TOILET ROOM	C.T.	4" C.T.	GYP. BD.	C.T./ Pt.	_	A.C.T.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	CORRIDOR	12"x12" V.C.T.	4" VINYL BASE	GYP. BD.	Pt.	-	A.C.T.	-
	COMPACTOR ROOM/ REFUSE STORAGE	PAINT CONCRETE	-	MASONRY	PT.	CONCRETE PLANK	-	-
	FIRE PUMP/ WATER/ RPZ ROOM	PAINT CONCRETE	-	MASONRY	PT.	CONCRETE PLANK	-	-
	ELECTRIC	PAINT CONCRETE	_	MASONRY	Pt.	CONCRETE PLANK	-	-
	GAS METER	PAINT CONCRETE	-	MASONRY	Pt.	CONCRETE PLANK	_	-
	STORAGE	PAINT CONCRETE	4" VINYL BASE	GYP. BD.	Pt.	-	A.C.T.	-
	SECURITY	PORCELAIN PAVERS	8" PAVERS	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	OFFICE	PORCELAIN PAVERS	8" PAVERS	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	VESTIBULE	PORCELAIN PAVERS	8" PAVERS	GYP. BD.	VWC	A.C.T.	_	INSTALL 12"x12" DURA-TILE XLT-50 W/ RECESSED FRAME BY 'PAHLING' (NOTE 3)
	LOBBY	PORCELAIN PAVERS	8" PAVERS	GYP. BD.	VWC	A.C.T.	_	-
2ND FLOOR								
	STAIR A & B	PAINTED CONC.	_	MASONRY	Pt.	CONCRETE PLANK	PT.	Pt. BOTTOM OF LANDING. PROVIDE BLOCK FILLER ON CMU AND STAIR
	LAUNDRY	C.T.	12" C.T.	GYP. BD.	C.T./ PT.	-	A.C.T.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	JAN. CL.	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	-	A.C.T.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	RUBBISH ROOM	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	A.C.T.	POPCORN SPRAY Pt.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	STORAGE	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	PLANK	POPCORN SPRAY Pt.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	TELE	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	PLANK	POPCORN SPRAY Pt.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	CONFERENCE ROOM	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	DIRECTORS OFFICE	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	OFFICE SPACE	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	WAITING ROOM	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	RECEPTION AREA	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	_
	H.C. TOILET ROOM	C.T.	4" C.T.	GYP. BD.	C.T./ Pt.	_	A.C.T.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	STORAGE ROOM	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	COPY ROOM	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	COMPUTER ROOM	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
	MULTIPURPOSE ROOM	C.T.	4" C.T.	GYP. BD.	Pt.	A.C.T.	A.C.T.	-
TYPICAL FLOORS (3RD THROUGH 11TH)								
	STAIR A & B	PAINTED CONC.	-	MASONRY	PT.	CONCRETE PLANK	PT.	Pt. BOTTOM OF LANDING. PROVIDE BLOCK FILLER ON CMU AND STAIR
	RUBBISH ROOM	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	A.C.T.	POPCORN SPRAY Pt.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	CORRIDOR	12"x12" V.C.T.	4" VINYL BASE	GYP. BD.	Pt.	CONCRETE PLANK	POPCORN SPRAY Pt.	_
	JANITORS CLOSET	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	PLANK	POPCORN SPRAY Pt.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	STORAGE	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	PLANK	POPCORN SPRAY Pt.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
	TELE	C.T.	6" C.T.	GYP. BD./ CEMENT BD.	C.T./ Pt.	PLANK	POPCORN SPRAY Pt.	C.T. WAINSCOTE @ 48"A.F.F. W/ TRIM / PAINT ABOVE
TYPICAL APARTMENT								
	LINEN CLOSET	12"x12" V.C.T.	4" VINYL BASE	GYP. BD.	Pt.	PLANK/ GYP. BD.	POPCORN SPRAY /Pt.	_
	COAT CLOSET	12"x12" V.C.T.	4" VINYL BASE	GYP. BD.	Pt.	GYP. BD.	Pt.	_
	KITCHEN	12"x12" V.C.T.	4" VINYL BASE	GYP. BD.	Pt.	GYP. BD.	Pt.	SEE NOTE (9)
	BEDROOM/LIVING RM./ DINING RM.	12"x12" V.C.T.	4" VINYL BASE	GYP. BD.	Pt.	CONCRETE PLANK	POPCORN SPRAY Pt.	_
	BEDROOM CLOSET	12"x12" V.C.T.	4" VINYL BASE	GYP. BD.	Pt.	CONCRETE PLANK	POPCORN SPRAY Pt.	_
	BATHROOM (INCL. H.C.)	C.T.	C.T.	GYP. BD./CEMENT BD./ MRBD	C.T./ Pt.	GYP. BD.	Pt.	SEE NOTES (1) (2) (5); 42" HIGH C.T. WAINSCOTE
ROOF LEVEL								
	STAIR A	PAINTED CONC.	_	MASONRY	Pt.	CONCRETE PLANK	Pt.	Pt. BOTTOM OF LANDING. PROVIDE BLOCK FILLER ON CMU AND STAIR
	STAIR B	PAINTED CONC.	_	MASONRY	Pt.	CONCRETE PLANK	Pt.	Pt. BOTTOM OF LANDING. PROVIDE BLOCK FILLER ON CMU AND STAIR

GENERAL NOTES:

(1) FOR ALL APARTMENT BATHROOMS- PROVIDE C.T. WAINSCOTE @ 48"A.F.F. WITH A 4" BULLNOSE EDGE ON ALL WALLS AS SHOWN ON INTERIOR ELEV., AT TUB AREA C.T. IS TO BE PROVIDED FULL HEIGHT.

(2) PROVIDE 1" THICK LATICRETE SETTING BED UNDER ALL CERAMIC TILE FLOORS.

(3) PROVIDE ¾" THICK GYPCRETE UNDER ALL PORCELAIN PAVERS.

(4) PROVIDE ¾" THICK GYPCRETE UNDER ALL OTHER FINISHED FLOOR SURFACES THROUGHOUT THE BUILDING.

(5) SEE SPECIFICATIONS FOR MILLWORK.

(6) PROVIDE SOUND INSULATION AT CEILING AND WALLS OF MECH. & BOILER ROOM, MIN. STC RATING =53

(7) PROVIDE BLOCK FILLER ON ALL MASONRY WALLS TO BE PAINTED.

(8) A.C.T. IN KITCHEN AND LAUNDRY ROOM TO BE VINYL FACED WITH WASHABLE FINISH.

(9) PROVIDE CEMENTIOUS UNDERLAYMENT BEHIND CERAMIC TILE WITHIN THE TUB SURROUND

(10) ALL ADHESIVES, CAULKS AND SEALANTS MUST COMPLY WITH HAVING LOW/ NO VOC. ALL ADHESIVES MUST COMPLY WITH RULE 1168 OF THE SOUTH COAST AIR QUALITY MANAGEMNT DISTRICT. ALL CAULKS AND SEALANTS MUST COMPLY WITH REGULATION 8, RULE 51 OF THE BAY AREA QUALITY MANAGEMENT DISTRICT.

(11) ALL INTERIOR PAINTS AND PRIMERS MUST MEET GREEN SEAL LIMITS FOR VOC'S

(12) ALL PARTICLEBOARD AND MDF WILL BE CERTIFIED COMPLIANT WITH ANSI A208.1 OR A208.2

(13) ALL WALL, FLOOR AND JOINT PENETRATIONS WILL BE SEALED WITH A LOW VOC CAULK ALONG WITH RODENT AND CORROSION PROOF SCREENS FOR LARGE OPENINGS.

(14) ALL WET AREAS WILL HAVE SMOOTH, DURABLE, AND CLEANABLE SURFACES. NOT VINYL WALLPAPER OR UNSEALED GROUT TO BE USED.

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BRONX, N.Y.

TITLE:

LAUNDRY ROOM LAYOUT & FINISH SCHEDULE

STAMP:

DATE: **11/14/14**
JOB #: **12-24**
DRAWN BY: **OW**
SCALE: **AS NOTED**

DRAWING NO:

A-504.00

FILE No. :

SHEET:

APPENDIX 2

CITIZEN PARTICIPATION PLAN

The NYC Office of Environmental Remediation and West Farms Equities have established this Citizen Participation Plan because the opportunity for citizen participation is an important component of the NYC Voluntary Cleanup Program. This Citizen Participation Plan describes how information about the project will be disseminated to the Community during the remedial process. As part of its obligations under the NYC VCP, West Farms Equities will maintain a repository for project documents and provide public notice at specified times throughout the remedial program. This Plan also takes into account potential environmental justice concerns in the community that surrounds the project Site. Under this Citizen Participation Plan, project documents and work plans are made available to the public in a timely manner. Public comment on work plans is strongly encouraged during public comment periods. Work plans are not approved by the NYC Office of Environmental Remediation (OER) until public comment periods have expired and all comments are formally reviewed. An explanation of cleanup plans in the form of a public meeting or informational session is available upon request to OER's project manager assigned to this Site, Horace Zhang, who can be contacted about these issues or any others questions, comments or concerns that arise during the remedial process at (212) 788-8841.

Project Contact List: OER has established a Site Contact List for this project to provide public notices in the form of fact sheets to interested members of the Community. Communications will include updates on important information relating to the progress of the cleanup program at the Site as well as to request public comments on the cleanup plan. The Project Contact List includes owners and occupants of adjacent buildings and homes, principal administrators of nearby schools, hospitals and day care centers, the public water supplier that serves the area, established document repositories, the representative Community Board, City Council members, other elected representatives and any local Brownfield Opportunity Area (BOA) grantee organizations. Any member of the public or organization will be added to the

Site Contact List on request. A copy of the Site Contact List is maintained by OER's project manager. If you would like to be added to the Project Contact List, contact NYC OER at (212) 788-8841 or by email at brownfields@cityhall.nyc.gov.

Repositories: A document repository is maintained online. Internet access to view OER's document repositories is available at public libraries. This document repository is intended to house, for community review, all principal documents generated during the cleanup program including Remedial Investigation plans and reports, Remedial Action work plans and reports, and all public notices and fact sheets produced during the lifetime of the remedial project. The library nearest the Site is:

The New York Public Library (website: NYPL.org)
1215 Morrison Avenue, Bronx NY 10472
(718) 842-1235
Sunday and Wednesday: Closed
Monday, Tuesday and Thursday: 10am-7pm
Friday and Saturday: 10am-5pm

Digital Documentation: NYC OER requires the use of digital documents in our repository as a means of minimizing paper use while also increasing convenience in access and ease of use.

Issues of Public Concern: At this time no issues of concern have been identified from the public.

Public Notice and Public Comment: Public notice to all members of the Project Contact List is required at three major steps during the performance of the cleanup program (listed below) and at other points that may be required by OER. Notices will include Fact Sheets with descriptive project summaries, updates on recent and upcoming project activities, repository information, and important phone and email contact information. All notices will be reviewed and approved by OER prior to distribution and mailed by the Enrollee. Public comment is solicited in public notices for all work plans developed under the NYC Voluntary Cleanup

Program. Final review of all work plans by OER will consider all public comments. Approval will not be granted until the public comment period has been completed.

Citizen Participation Milestones: Public notice and public comment activities occur at several steps during a typical NYC VCP project. These steps include:

- **Public Notice of the availability of the Remedial Investigation Report and Remedial Action Work Plan and a 30-day public comment period on the Remedial Action Work Plan:** Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the availability of the Remedial Investigation Report and Remedial Action Work Plan and the initiation of a 30-day public comment period on the Remedial Action Work Plan. The Fact Sheet summarizes the findings of the RIR and provides details of the RAWP. The public comment period will be extended an additional 15 days upon public request. A public meeting or informational session will be conducted by OER upon request.
- **Public Notice announcing the approval of the RAWP and the start of remediation:** Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the approval of the RAWP and the start of remediation.
- **Public Notice announcing the completion of remediation, designation of Institutional and Engineering Controls and issuance of the Notice of Completion:** Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the completion of remediation, providing a list of all Institutional and Engineering Controls implemented for to the Site and announcing the issuance of the Notice of Completion.

APPENDIX 3

SUSTAINABILITY STATEMENT

This Sustainability Statement documents sustainable activities and green remediation efforts planned under this remedial action.

Reuse of Clean, Recyclable Materials and Reduced Consumption of Non-Renewable Resources: Reuse of clean, locally-derived recyclable materials reduces consumption of non-renewable virgin resources and can provide energy savings and greenhouse gas reduction. When possible, the use of sustainable, recycled products such as RCA blend will be incorporated.

An estimate of the quantity (in tons) of clean, non-virgin materials (reported by type of material) reused under this plan will be quantified and reported in the RAR.

Reduced Energy Consumption and Promotion of Greater Energy Efficiency: Reduced energy consumption lowers greenhouse gas emissions, improves local air quality, lessens in-city power generation requirements, can lower traffic congestion, and provides substantial cost savings.

Best efforts will be made to quantify energy efficiencies achieved during the remediation and will be reported in the Remedial Action Report (RAR). Where energy savings cannot be easily quantified, a gross indicator of the amount of energy saved or the means by which energy savings was achieved will be reported.

Conversion to Clean Fuels: Use of clean fuel improves NYC's air quality by reducing harmful emissions.

Natural gas will be utilized for fuel in the new building. An estimate of the volume of clean fuels used during remedial activities will be quantified and reported in the RAR.

Recontamination Control: Recontamination after cleanup and redevelopment is completed undermines the value of work performed, may result in a property that is less protective of public health or the environment, and may necessitate additional cleanup work later or impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of contamination from off-Site.
An estimate of the area of the Site that utilizes recontamination controls under this plan will be reported in the RAR in square feet.

Stormwater Retention: Stormwater retention improves water quality by lowering the rate of combined stormwater and sewer discharges to NYC's sewage treatment plants during periods of precipitation, and reduces the volume of untreated influent to local surface waters.
An estimate of the enhanced stormwater retention capability of the redevelopment project will be included in the RAR.

Linkage with Green Building: Green buildings provide a multitude of benefits to the city across a broad range of areas, such as reduction of energy consumption, conservation of resources, and reduction in toxic materials use.
The number of Green Buildings that are associated with this brownfield redevelopment property will be reported in the RAR. The total square footage of green building space created as a function of this brownfield redevelopment will be quantified for residential, commercial and industrial/manufacturing uses.

Paperless Voluntary Cleanup Program: West Farms Equities is participating in OER's Paperless Voluntary Cleanup Program. Under this program, submission of electronic documents will replace submission of hard copies for the review of project documents, communications and milestone reports.

Low-Energy Project Management Program: West Farms Equities is participating in OER's low-energy project management program. Under this program, whenever possible, meetings are held using remote communication technologies, such as videoconferencing and

teleconferencing to reduce energy consumption and traffic congestion associated with personal transportation.

Trees and Plantings: Trees and other plantings provide habitat and add to NYC's environmental quality in a wide variety of ways. Native plant species and native habitat provide optimal support to local fauna, promote local biodiversity, and require less maintenance. Trees and grass areas are anticipated to be a part of the proposed redevelopment.

An estimate of the land area that will be vegetated, including the number of trees planted or preserved, will be reported in square feet in the RAR.

APPENDIX 4

SOIL/MATERIALS MANAGEMENT PLAN

1.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional and will be reported in the final remedial report. Soil screening will be performed during invasive work performed during the remedy and development phases prior to issuance of final signoff by OER.

1.2 Stockpile Methods

Excavated soil from suspected areas of contamination (e.g., hot spots, USTs, drains, etc.) will be stockpiled separately and will be segregated from clean soil and construction materials. Stockpiles will be used only when necessary and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on, at minimum, double layers of 8-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters and other discharge points.

1.3 Characterization of Excavated Materials

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations. Soils proposed for reuse on-Site will be managed as defined in this plan.

1.4 Materials Excavation, Load-Out, and Departure

The PE/QEP overseeing the remedial action will:

- oversee remedial work and the excavation and load-out of excavated material;
- ensure that there is a party responsible for the safe execution of invasive and other work performed under this work plan;
- ensure that Site development activities and development-related grading cuts will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP;
- ensure that the presence of utilities and easements on the Site has been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;
- ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site;
- ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Open and uncontrolled mechanical processing of historical fill and contaminated soil on-Site will not be performed without prior OER approval.

1.5 Off-Site Materials Transport

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with

applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance. Off-Site queuing will be minimized.

Outbound truck transport routes are described in the remedial report. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

1.6 Materials Disposal Off-Site

The following documentation will be established and reported by the PE/QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with applicable laws and regulations: (1) a letter from the PE/QEP or Enrollee to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed is regulated material generated at an environmental remediation Site in New York City under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE/QEP or Enrollee. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from each disposal facility stating it is in receipt of the correspondence (1, above) and is approved to accept the material. These documents will be included in the final remedial report.

The Remedial Action Report will include an itemized account of the destination of all material removed from the Site during this remedial action. Documentation associated with disposal of all material will include records and approvals for receipt of the material. This information will be presented in the final remedial report.

All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with applicable laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the final remedial report. A manifest system for off-Site transportation of exported materials will be employed. Manifest information will be reported in the final remedial report. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e., clean soil removed for development purposes), including transport to a Part 360-16 Registration Facility, a formal request will be made for approval by OER with an associated plan compliant with 6NYCRR Part 360-16. This request and plan will include the location, volume and a description of the material to be recycled, including verification that the material is not impacted by site uses and that the material complies with receipt requirements for recycling under 6NYCRR Part 360. This material will be appropriately handled on-Site to prevent mixing with impacted material.

1.7 Materials Reuse On-Site

Soil and fill that is derived from the property that meets the Soil Cleanup Objectives (SCOs) established in this plan may be reused on-Site. The SCOs for on-Site reuse are listed in Section 4.2 of this cleanup plan. ‘Reuse on-Site’ means material that is excavated during the remedy or development, does not leave the property, and is relocated within the same property and on land with comparable levels of contaminants in soil/fill material, compliant with applicable laws and regulations, and addressed pursuant to the NYC VCP agreement subject to Engineering and Institutional Controls. The PE/QEP will ensure that reused materials are segregated from other materials to be exported from the Site and that procedures defined for material reuse in this remedial plan are followed. The expected location for placement of reused material is shown in Section 4.2.

Organic matter (wood, roots, stumps, etc.) or other waste derived from clearing and grubbing of the Site will not be buried on-Site. Soil or fill excavated from the site for grading or other purposes will not be reused within a cover soil layer or within landscaping berms.

1.8 Demarcation

After completion of hotspot removal and any other invasive remedial activities, and prior to backfilling, the top of the residual soil/fill will be defined by one of three methods: (1) placement of a demarcation layer. The demarcation layer will consist of geosynthetic fencing or equivalent material to be placed on the surface of residual soil/fill to provide an observable reference layer. A description or map of the approximate depth of the demarcation layer will be provided in the SMP; or (2) a land survey of the top elevation of residual soil/fill before the placement of cover soils, pavement and associated sub-soils, or other materials or structures or, (3) all materials beneath the approved cover will be considered impacted and subject to site management after the remedy is complete. Demarcation may be established by one or any combination of these three methods. As appropriate, a map showing the method of demarcation for the Site and all associated documentation will be presented in the RAR.

This demarcation will constitute the top of the site management horizon. Materials within this horizon require adherence to special conditions during future invasive activities as defined in the Site Management Plan.

1.9 Import of Backfill Soil From Off-Site Sources

This Section presents the requirements for imported fill materials to be used below the cover layer and within the clean soil cover layer. All imported soils will meet OER-approved backfill and cover soil quality objectives for this Site. Imported soils will not exceed groundwater protection standards established in Part 375. Imported soils for Track 1 remedial action projects will not exceed Track 1 SCO’s.

A process will be established to evaluate sources of backfill and cover soil to be imported to the Site, and will include an examination of source location, current and historical use(s), and any

applicable documentation. Material from industrial sites, spill sites, environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The following potential sources may be used pending attainment of backfill and cover soil quality objectives:

- Clean soil from construction projects at non-industrial sites in compliance with applicable laws and regulations;
- Clean soil from roadway or other transportation-related projects in compliance with applicable laws and regulations;
- Clean recycled concrete aggregate (RCA) from facilities permitted or registered by the regulations of NYS DEC.
- All materials received for import to the Site will be approved by a PE/QEP and will be in compliance with provisions in this remedial plan. The final remedial report will report the source of the fill, evidence that an inspection was performed on the source, chemical sampling results, frequency of testing, and a Site map indicating the locations where backfill or soil cover was placed.
- All material will be subject to source screening and chemical testing.
- Inspection of imported fill material will include visual, olfactory and PID screening for evidence of contamination. Materials imported to the Site will be subject to inspection, as follows:
- Trucks with imported fill material will be in compliance with applicable laws and regulations and will enter the Site at designated locations;
- The PE/QEP is responsible to ensure that every truck load of imported material is inspected for evidence of contamination; and
- Fill material will be free of solid waste including pavement materials, debris, stumps, roots, and other organic matter, as well as ashes, oil, perishables or foreign matter.

Composite samples of imported material will be taken at a minimum frequency of one sample for every 500 cubic yards of material. Once it is determined that the fill material meets imported backfill or cover soil chemical requirements and is non-hazardous, and lacks petroleum contamination, the material will be loaded onto trucks for delivery to the Site.

Recycled concrete aggregate (RCA) will be imported from facilities permitted or registered by NYSDEC. Facilities will be identified in the final remedial report. A PE/QEP is responsible to ensure that the facility is compliant with 6NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as cover material.

1.10 Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the groundwater meets the City's discharge criteria. The dewatering fluid will be pretreated as necessary to meet the NYC DEP discharge criteria. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility.

Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by New York State Department of Environmental Conservation.

1.11 Stormwater Pollution Prevention

Applicable laws and regulations pertaining to stormwater pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this remedial plan (silt fences and barriers, and hay bale checks) will be installed around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors.

Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence toe anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

1.12 Contingency Plan for Unknown Contamination Sources

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during invasive Site work will be promptly communicated to OER's Project Manager. Petroleum spills will be reported to the NYS DEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to OER. Chemical analytical testing will be performed for TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, as appropriate.

1.13 Odor, Dust, and Nuisance Control

Odor Control

All necessary means will be employed to prevent on- and off-Site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. OER will be notified of all odor

complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEP's certifying this remedial plan.

Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.
- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress and other roadways to provide a clean and dust-free road surface.

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEP's responsible for certifying this remedial plan.

Other Nuisances

Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

Rodent control will be provided during Site clearing and grubbing and during the remedial program, as necessary, to prevent nuisances.

APPENDIX 5

CONSTRUCTION HEALTH AND SAFETY PLAN

CONSTRUCTION
HEALTH & SAFETY PLAN

1815 West Farms Road
Bronx, New York
(Block 3015, Lots 62, 87, & 89)
NYC VCP Project Number 16CVCP029X
OER Project Number 15EHAN561X

November 2015

Prepared for:

Walison Corp.
1815 West Farms Road
Bronx, New York 10460

Prepared by:

CA RICH CONSULTANTS, INC.
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Construction Health & Safety Plan

Soil Excavation

1815 West Farms Road
Bronx, New York

1.0 INTRODUCTION

This Construction Health and Safety Plan ("CHASP") has been developed for utilization during construction activities located at the above-referenced site in the Bronx, New York (the Site). The CHASP is to be enforced by CA RICH's Project Health and Safety Manager, the on-site Health & Safety Coordinator (HSC) or their assignee. The on-site HSC will interact with the Project Manager and is vested with the authority to make field decisions including the termination of on-site activities if an imminent health and safety hazard, condition or related concern arises and will be reported in the attached incident reporting log. Information and protocol in the CHASP is applicable to all on-site personnel who will be entering the designated work zone.

2.0 POTENTIAL HAZARDS

2.1 Chemical Hazards

The known chemicals of concern according to CA RICH's Phase II Environmental Site Assessment (ESA) consist of SVOCs, Pesticides, and Metals that were detected in the soil below the New York State Department of Environmental Conservation (NYSDEC) Part 315 Restricted Residential Soil Cleanup Objectives.

During the construction activities, CA RICH will operate as if there is a potential hazard from the above-listed compounds. Physical properties and toxicological information is included in Appendix A.

2.2 Other Health & Safety Risks

Normal physical hazards associated with using excavation equipment and hand tools as well as hazards associated with adverse climatic conditions (heat & cold) or physical site-related debris represent a certain degree of risk to be assumed by on-site personnel.

Certain provisions in this Plan, specifically the use of personnel protective equipment, may tend to increase the risk of physical injury, as well as susceptibility to cold or heat stress. This is primarily due to restrictions in dexterity, hearing, sight, and normal body heat transfer inherent in the use of protective gear.

3.0 RISK MANAGEMENT

3.1 Work / Exclusion Zones

The Tax Map designations for the Property are Block: 3015; Lot: 62, 87, & 89 The work scope will involve the excavation of the Site for a new building foundation. All work (including, but not limited to the grading and excavation) activities conducted will establish a work/exclusion zone. Access to this area will be limited to properly trained, properly protected personnel directly involved with the work. Enforcement of the work/exclusion zone boundaries is the responsibility of the on-site Health & Safety Coordinator (HSC) or his/her properly trained assignee.

3.2 Personnel Protection

Health & Safety regulatory personnel have developed different levels of personnel protection to deal with differing degrees of potential risks of exposure to chemical constituents. The levels are designated as **A, B, C,** and **D** and are ranked according to the amount of personnel protection afforded by each level. Level **A** is the highest level of protection and Level **D** is the lowest level of protection.

The different levels are primarily dependent upon the degree of respiratory protection necessary, in conjunction with appropriate protective clothing. Levels of protection mandate a degree of respiratory protection. However, flexibility exists within the lower levels (B, C, and D) concerning proper protective clothing.

The four levels of protection were developed for utilization in situations which involve suspected or known atmospheric and/or environmental hazards including airborne contamination and skin-affecting substances.

It is anticipated that all of the work will be performed using Level D protection (no respiratory protection with protective clothing requirements limited to long sleeved shirts, long pants or coveralls, work gloves and steel-toe leather work boots).

Level D may be modified by the HSC to include protective clothing or equipment (Saran-coated disposable coveralls or PVC splash suits, safety glasses, hard hat with face shield, and chemically resistant boots) based upon physical hazards, skin contact concerns, and “real time” air monitoring.

Real time air monitoring for total airborne organics using either an OVA or a PID will determine if and when an upgrade from Level D to a higher level of respiratory protection is warranted. Decisions for an upgrade from Level D to higher levels of protection, mitigative actions, and/or suspension of work are the responsibility of the Project Manager and/or the designated on-site HSC.

3.3 Air Monitoring

The HSC or his/her properly trained assignee will conduct real time air monitoring for total organic vapors and total particulates. Real time air monitoring refers to the utilization of instrumentation, which yields immediate measurements. The utilization of real time monitoring helps determine immediate or long-term risks to on-site personnel and the general public, the appropriate level of personnel respiratory protection necessary, and actions to mitigate the recognized hazard.

3.3.1. Particulate Monitoring

A. Instrumentation

Dust particulates in air will be monitored using a light scattering technique MINIRAM Model PDM-3 Miniature Real-time Aerosol Monitor (MINIRAM) or equivalent. The MINIRAM is capable of measuring airborne dust particles within the range of 10 to 100,000 micrograms per cubic meter (µg/m^3). Particulate monitoring will only be necessary during major excavation activities.

B. Application

Dust monitoring will occur at regular intervals during major excavation activities. Monitoring will be conducted in upgradient and downgradient locations, relative to prevailing wind direction) along the perimeter of the work zone. The HSC or his assignee will perform the monitoring. As outlined in the NYSDOH Community Air Monitoring Plan, if particulate levels in the downwind location are 150 mg/m^3 greater than those measured in the upwind location, dust suppression techniques shall be employed.

3.3.2 Organic Vapor

A. Instrumentation

Real-time monitoring for total organic vapor (TOV) utilizes either a photo-ionization detector (PID) or flame ionization detector (FID). The appropriate PID is an intrinsically safe HNU Systems Model PI-101 PID; a MiniRae PID or an equivalent PID, which is factory calibrated to benzene. The appropriate FID is a Foxboro model 128 Organic vapor Analyzer (OVA) or an equivalent FID, which is factory calibrated to methane.

B. Application

Organic vapor monitoring is performed as outlined in the NYSDOH Community Air Monitoring Plan. Specifically, monitoring shall be conducted at the downwind perimeter of the work zone periodically during work activities. If TOV levels exceed 5 milligrams per meter cubed (mg/m^3) above established pre-work background levels, work activities will be halted and monitoring will be continued under the provision of a Vapor Emission Response Plan (outlined in Section 5).

3.4 Worker Training

Personnel overseeing the excavation of the contaminated soil will be properly trained. This includes the Health & Safety Coordinator and the Project Health and Safety Manager. The HSC will also designate and train a site worker, such as a foreman, to act as their assignee.

Prior to any work, all workers involved with the project should be aware of the potential chemical, physical and biological hazards discussed in this document, as well as the general safety practices outlined below. A safety briefing by the on-site HSC and/or assignee shall take place at the outset of work activities.

The HSC will be available to address environmentally-related health & safety issues a site worker (such as an equipment operator or laborer) may have regarding the site conditions. Once an issue is brought to the HCS's attention, he or she will evaluate the issue and apply the procedures outlined in this Health & Safety Plan.

3.5 General Safety Practices

The following safety practices shall be followed by all project personnel.

1. Avoid unnecessary skin exposure to subsurface materials. Sleeved shirts tucked into long pants (or coveralls), work gloves, and steel-toe leather work boots are required unless modified gear is approved by the HSC. Remove any excess residual soil from clothes prior to leaving the site.

2. No eating, drinking, gum or tobacco chewing, or smoking allowed in designated work areas. Thoroughly wash hands prior to these activities outside the work area. Avoid sitting on the ground during breaks or while eating and drinking. Thoroughly wash all exposed body areas at the end of the workday.

3. Some symptoms of acute exposure include: dizziness, light-headedness, drowsiness, headache, and nose/eye/skin irritation. If these symptoms are experienced or strong odor is detected, leave the work area and immediately report the incident to the on-site HSC.

3.6 Enforcement

Enforcement of the Site Safety Plan will be the responsibility of the HSC or the assignee. The Coordinator should be on-site as needed, based on the work being performed and performs or directly oversees all aspects of the Health & Safety Plan including: air monitoring; environmental mitigation; personnel respiratory and skin protection; general safety practices; documentation; emergency procedures and protocol; and reporting and recordkeeping as described below.

3.7 Reporting & Recordkeeping

Incidents involving injury, symptoms of exposure, discovery of contained (potentially hazardous) materials, or unsafe work practices and/or conditions should be immediately reported to the HSC.

A logbook must be maintained on-site to document all aspects of HASP enforcement. The log is paginated and dated with entries made on a daily basis in waterproof ink, initialed by the HSC or assignee. Log entries should include date and time of instrument monitoring, instrument type, measurement method, test results, calibration and maintenance information, as well as appropriate mitigative actions responding to detections. Miscellaneous information to be logged may include weather conditions, reported complaints or symptoms, regulatory inspections, and reasons to upgrade personnel protection above the normal specification (Level D).

4.0 EMERGENCIES

4.1 EMERGENCY RESPONSE SERVICES

(1) **HOSPITAL**
New York Founding Hospital **(718) 617-4010**
1026 E 180th Street
Bronx, NY 10460

(2) **AMBULANCE** **911**

(3) **FIRE DEPARTMENT** **911**
HAZARDOUS MATERIALS

(4)	**POLICE DEPARTMENT**	**911**
(5)	**POISON CONTROL CENTER**	**(800) 222-1222**

The preceding list and associated attached map (Figure 1) illustrating the fastest route to the nearest hospital must be conspicuously posted in areas of worker congregation and adjacent to all on-site telephones (if any).

4.2 EMERGENCY PROCEDURES

4.2.1 Contact or Exposure to Suspected Hazardous Materials

In the event of a fire, chemical discharge, medical emergency, workers are instructed to immediately notify the HSC and proper emergency services (posted). Should physical contact with unknown or questionable materials occur, immediately wash the affected body areas with clean water and notify the HSC. Anyone experiencing symptoms of exposure should exit the work area, notify the HSC, and seek medical attention.

4.2.2 Ingress/Egress

Clear paths of ingress/egress to work zones and site entrances/exits must be maintained at all times. Unauthorized personnel are restricted from accessing the site.

5.0 VAPOR EMISSIONS REPONSE PLAN

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities can resume. If the organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities can resume provided:

- The organic vapor level 200 ft. downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 mg/m^3 over background.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

Major Vapor Emission

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, the site soil will be misted with water and the downwind area will be monitored. If the water mist does not mitigate the elevated levels all work activities must be halted.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and, if organic vapor levels are approaching 5 ppm above background for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect;

However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background.

Major Vapor Emission Response Plan

Upon activation, the following activities will be undertaken:

1. All Emergency Response Contacts as listed in the Health & Safety Plan of the Remedial Action Work Plan will go into effect.

2. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation.

3. Frequent air monitoring will be conducted at 30 minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

6.0 HEALTH & SAFETY PLAN REFERENCES

1. American Conference Governmental Industrial Hygienists, 1989; Threshold Limit Values and Biological Exposure Indices, 111 Pp.

2. Geoenvironmental Consultants, Inc.; 1987; Safety & Operations At Hazardous Materials Sites

3. NIOSH Guide To Chemical Hazards, 2002, US Department Of Health And Human Services, Centers For Disease Control

4. US Department Of Labor Occupational Safety & Health Administration, 1989; Hazardous Waste Operations And Emergency Response Interim Final Rule, 29 CFR Part 1910

5. Sax, N. I. Dangerous Properties Of Industrial Materials; © 1984

7.0 KEY PERSONNEL

Responsibility	Name and Phone Number	Task Description
Project Manager	Victoria Whelan (516) 576-8844	Oversee and coordinate all technical aspects for the project
Site Safety Officer	William Fitchett (516) 576-8844	Coordinate and inspect all health and safety operations from the project site
Client Representative	Sabah Rajput (718) 991-1700	
Project Manager Alternate	Jessica Proscia (516) 576-8844	
Site Safety Officer Alternate	Tom Brown (516) 576-8844	
Site Supervisor	Akif Chughtai (718) 991-1700	

FIGURE

mapquest

Notes

Figure 1

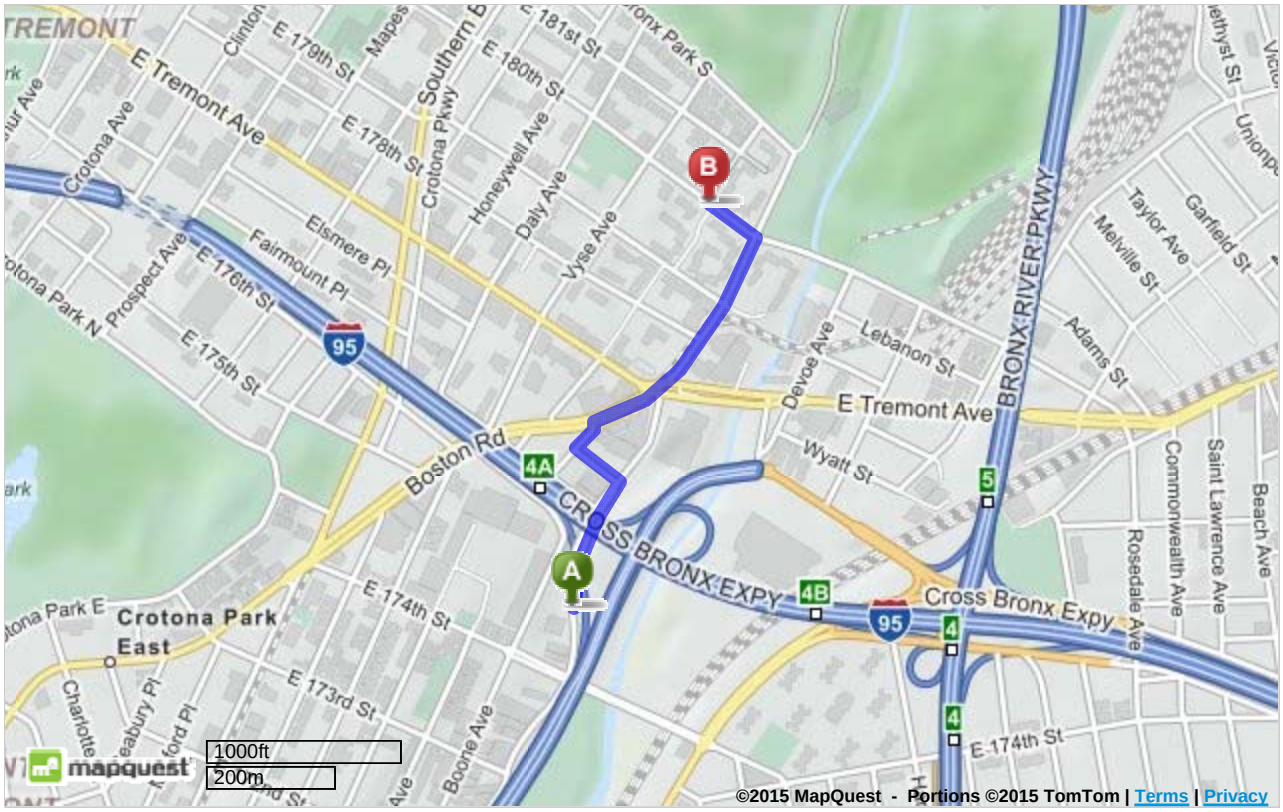
Trip to:

New York Foundling Hospital
1026 E 180th St

Bronx, NY 10460
(718) 617-4010
0.60 miles / 2 minutes

A	**1815 W Farms Rd**, Bronx, NY 10460-6026	**Download Free App**
	1. Start out going **north** on **W Farms Rd** toward **Cross Bronx Expy**. Map	**0.2 Mi** *0.2 Mi Total*
	2. Turn **left** onto **Rodman Pl**. Map *Rodman Pl is just past Cross Bronx Expy* *If you reach E Tremont Ave you've gone about 0.1 miles too far*	**0.06 Mi** *0.2 Mi Total*
	3. Turn **right** onto **Longfellow Ave**. Map	**0.04 Mi** *0.3 Mi Total*
	4. Turn **slight right** onto **Boston Rd**. Map *Howard Johnson Express Inn Bronx is on the corner*	**0.3 Mi** *0.5 Mi Total*
	5. Turn **left** onto **E 180th St**. Map *E 180th St is just past E 179th St* *If you reach Bronx Park S you've gone about 0.1 miles too far*	**0.06 Mi** *0.6 Mi Total*
	6. **1026 E 180TH ST** is on the **left**. Map *Your destination is just past Bryant Ave* *If you reach Vyse Ave you've gone a little too far*	
B	**New York Foundling Hospital** 1026 E 180th St, Bronx, NY 10460 (718) 617-4010	

Total Travel Estimate: **0.60 miles - about 2 minutes**



Appendix A

Toxicological Information

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Search the Pocket Guide

SEARCH

Enter search terms separated by spaces.

Tetrachloroethylene

Synonyms & Trade Names Perchlorethylene, Perchloroethylene, Perk, Tetrachlorethylene

CAS No. 127-18-4	**RTECS No.** KX3850000 (/niosh-rtecs/KX3ABF10.html)	**DOT ID & Guide** 1897 160 (http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=160)
Formula $Cl_2C=CCl_2$	**Conversion** 1 ppm = 6.78 mg/m^3	**IDLH** Ca [150 ppm] See: 127184 (/niosh/idlh/127184.html)
Exposure Limits **NIOSH REL** : Ca Minimize workplace exposure concentrations. See Appendix A (nengapdxa.html) **OSHA PEL** † (nengapdxg.html): TWA 100 ppm C 200 ppm (for 5 minutes in any 3-hour period), with a maximum peak of 300 ppm		**Measurement Methods** **NIOSH** 1003 (/niosh/docs/2003-154/pdfs/1003.pdf); **OSHA** 1001 (/niosh/docs/2003-154/pdfs/1001.pdf) See: NMAM (/niosh/docs/2003-154/) or OSHA Methods (http://www.osha.gov/dts/sltc/methods/index.html)

Physical Description Colorless liquid with a mild, chloroform-like odor.

MW:	BP:	FRZ:	Sol:	VP:	IP:
165.8	250°F	-2°F	0.02%	14 mmHg	9.32 eV
Sp.Gr: 1.62	**Fl.P:** NA	**UEL:** NA	**LEL:** NA		

Noncombustible Liquid, but decomposes in a fire to hydrogen chloride and phosgene.

Incompatibilities & Reactivities Strong oxidizers; chemically-active metals such as lithium, beryllium & barium; caustic soda; sodium hydroxide; potash

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]

Target Organs Eyes, skin, respiratory system, liver, kidneys, central nervous system

Cancer Site [in animals: liver tumors]

Personal Protection/Sanitation (See protection codes (protect.html))
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: No recommendation
Provide: Eyewash, Quick drench

First Aid (See procedures (firstaid.html))
Eye: Irrigate immediately
Skin: Soap wash promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection (pgintrod.html#mustread)

See also: INTRODUCTION (/niosh/npg/pgintrod.html) See ICSC CARD: 0076 (/niosh/ipcsneng/neng0076.html) See MEDICAL TESTS: 0179 (/niosh/docs/2005-110/nmed0179.html)

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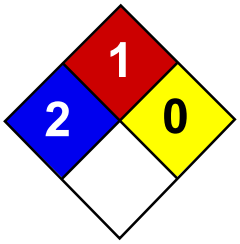
Content source: National Institute for Occupational Safety and Health (NIOSH) Education and Information Division

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, 24 Hours/Every Day - cdcinfo@cdc.gov



Material Safety Data Sheet
Silver MSDS

Section 1: Chemical Product and Company Identification

Product Name: Silver

Catalog Codes: SLS4222, SLS2005, SLS3427, SLS1210, SLS2632, SLS4054, SLS1837

CAS#: 7440-22-4

RTECS: VW3500000

TSCA: TSCA 8(b) inventory: Silver

CI#: Not applicable.

Synonym:

Chemical Formula: Ag

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Silver	7440-22-4	100

Toxicological Data on Ingredients: Silver: ORAL (LD50): Acute: 100 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact: No known effect on skin contact, rinse with water for a few minutes.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Splash goggles. Lab coat.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.01 (mg/m3) from OSHA (PEL) TWA: 0.01 (mg/m3) from OSHA NIOSH Australia: TWA: 0.1 (mg/m3)Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid metallic powder. Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 107.87 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 2212°C (4013.6°F)

Melting Point: 961°C (1761.8°F)

Critical Temperature: Not available.

Specific Gravity: 10.4 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Is not dispersed in cold water, hot water.

Solubility: Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 100 mg/kg [Mouse].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Very hazardous in case of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification:

Identification:

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Rhode Island RTK hazardous substances: Silver Pennsylvania RTK: Silver Minnesota: Silver Massachusetts RTK: Silver New Jersey: Silver TSCA 8(b) inventory: Silver TSCA 8(a) PAIR: Silver TSCA 8(d) H and S data reporting: Silver SARA 313 toxic chemical notification and release reporting: Silver: 1% CERCLA: Hazardous substances.: Silver: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC): R41- Risk of serious damage to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Not applicable. Lab coat. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:26 PM

Last Updated: 05/21/2013 12:00 PM

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Mercury compounds [except (organo) alkyls] (as Hg)

Synonyms & Trade Names Mercury metal: Colloidal mercury, Metallic mercury, Quicksilver
Synonyms of "other" Hg compounds vary depending upon the specific compound.

CAS No. 7439-97-6 (metal)	**RTECS No.** OV4550000 (metal) (/niosh-rtecs/OV456D70.html)	**DOT ID & Guide** 2809 172 (http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=172) (metal)
Formula Hg (metal)	**Conversion**	**IDLH** 10 mg/m^3 (as Hg) See: 7439976 (/niosh/idlh/7439976.html)
Exposure Limits **NIOSH REL** : Hg Vapor: TWA 0.05 mg/m^3 [skin] Other: C 0.1 mg/m^3 [skin] **OSHA PEL** † (nengapdxg.html): TWA 0.1 mg/m^3		**Measurement Methods** **NIOSH** 6009 (/niosh/docs/2003-154/pdfs/6009.pdf); **OSHA** ID140 (http://www.osha.gov/dts/sltc/methods/inorganic/id140/id140.html) See: NMAM (/niosh/docs/2003-154/) or OSHA Methods (http://www.osha.gov/dts/sltc/methods/index.html)

Physical Description Metal: Silver-white, heavy, odorless liquid. [Note: "Other" Hg compounds include all inorganic & aryl Hg compounds except (organo) alkyls.]

MW:	BP:	FRZ:	Sol:	VP:	IP:
200.6	674°F	-38°F	Insoluble	0.0012 mmHg	?

Sp.Gr:	Fl.P:	UEL:	LEL:
13.6 (metal)	NA	NA	NA

Metal: Noncombustible Liquid

Incompatibilities & Reactivities Acetylene, ammonia, chlorine dioxide, azides, calcium (amalgam formation), sodium carbide, lithium, rubidium, copper

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria

Target Organs Eyes, skin, respiratory system, central nervous system, kidneys

Personal Protection/Sanitation (See protection codes (protect.html))	**First Aid** (See procedures (firstaid.html)) **Eye:** Irrigate immediately

Skin: Prevent skin contact **Eyes:** No recommendation **Wash skin:** When contaminated **Remove:** When wet or contaminated **Change:** Daily	**Skin:** Soap wash promptly **Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

Mercury vapor:

NIOSH

Up to 0.5 mg/m^3:
(APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern†
(APF = 10) Any supplied-air respirator

Up to 1.25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern†(canister)

Up to 2.5 mg/m^3:
(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern†
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern†
(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and cartridge(s) providing protection against the compound of concern(canister)
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 10 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern
Any appropriate escape-type, self-contained breathing apparatus

Other mercury compounds: NIOSH/OSHA

Up to 1 mg/m^3:
(APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern†
(APF = 10) Any supplied-air respirator

Up to 2.5 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the

compound of concern†(canister)

Up to 5 mg/m^3:
(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern†
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern†
(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and cartridge(s) providing protection against the compound of concern(canister)
(APF = 50) Any self-contained breathing apparatus with a full facepiece
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Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection (pgintrod.html#mustread)

See also: INTRODUCTION (/niosh/npg/pgintrod.html) See ICSC CARD: 0056 (/niosh/ipcsneng/neng0056.html) See MEDICAL TESTS: 0136 (/niosh/docs/2005-110/nmed0136.html)

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Lead

Synonyms & Trade Names Lead metal, Plumbum

CAS No. 7439-92-1	RTECS No. OF7525000 (/niosh-rtecs/OF72D288.html)	DOT ID & Guide
Formula Pb	**Conversion**	**IDLH** 100 mg/m^3 (as Pb) See: 7439921 (/niosh/idlh/7439921.html)

Exposure Limits

NIOSH REL *: TWA (8-hour) 0.050 mg/m^3 See Appendix C (nengapdxc.html) [*Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.]

OSHA PEL *: [1910.1025] TWA 0.050 mg/m^3 See Appendix C (nengapdxc.html) [*Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.]

Measurement Methods

NIOSH 7082 (/niosh/docs/2003-154/pdfs/7082.pdf), 7105 (/niosh/docs/2003-154/pdfs/7105.pdf), 7300 (/niosh/docs/2003-154/pdfs/7300.pdf), 7301 (/niosh/docs/2003-154/pdfs/7301.pdf), 7303 (/niosh/docs/2003-154/pdfs/7303.pdf), 7700 (/niosh/docs/2003-154/pdfs/7700.pdf), 7701 (/niosh/docs/2003-154/pdfs/7701.pdf), 7702 (/niosh/docs/2003-154/pdfs/7702.pdf), 9100 (/niosh/docs/2003-154/pdfs/9100.pdf), 9102 (/niosh/docs/2003-154/pdfs/9102.pdf), 9105 (/niosh/docs/2003-154/pdfs/9105.pdf);
OSHA ID121 (http://www.osha.gov/dts/sltc/methods/inorganic/id121/id121.html), ID125G (http://www.osha.gov/dts/sltc/methods/inorganic/id125g/id125g.html), ID206 (http://www.osha.gov/dts/sltc/methods/inorganic/id206/id206.html)
See: NMAM (/niosh/docs/2003-154/) or OSHA Methods (http://www.osha.gov/dts/sltc/methods/index.html)

Physical Description A heavy, ductile, soft, gray solid.

MW: 207.2	BP: 3164°F	MLT: 621°F	Sol: Insoluble	VP: 0 mmHg (approx)	IP: NA
Sp.Gr: 11.34	Fl.P: NA	UEL: NA	LEL: NA		

Noncombustible Solid in bulk form.

Incompatibilities & Reactivities Strong oxidizers, hydrogen peroxide, acids

Exposure Routes inhalation, ingestion, skin and/or eye contact

Symptoms lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition;

constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension

Target Organs Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue

Personal Protection/Sanitation (See protection codes (protect.html))
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: Daily
Remove: When wet or contaminated
Change: Daily

First Aid (See procedures (firstaid.html))
Eye: Irrigate immediately
Skin: Soap flush promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations
(See Appendix E) (nengapdxe.html)
NIOSH/OSHA

Up to 0.5 mg/m^3:
(APF = 10) Any air-purifying respirator with an N100, R100, or P100 filter (including N100, R100, and P100 filtering facepieces) except quarter-mask respirators.
Click here (pgintrod.html#nrp) for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 1.25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 2.5 mg/m^3:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here (pgintrod.html#nrp) for information on selection of N, R, or P filters.
(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 50 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Up to 100 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here (pgintrod.html#nrp) for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection (pgintrod.html#mustread)

See also: INTRODUCTION (/niosh/npg/pgintrod.html) See ICSC CARD: 0052 (/niosh/ipcsneng/neng0052.html) See MEDICAL TESTS: 0127 (/niosh/docs/2005-110/nmed0127.html)

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Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, 24 Hours/Every Day - cdcinfo@cdc.gov

Safety Data Sheet

Revision Date: 05/15/14
www.restek.com

1. IDENTIFICATION

Catalog Number / Product Name:	**31279, 31279-5XX, & 31379 / Indeno (1,2,3-cd) pyrene Standard**
Company:	Restek Corporation
Address:	110 Benner Circle Bellefonte, Pa. 16823
Phone#:	814-353-1300
Fax#:	814-353-1309
Emergency#:	800-424-9300 (CHEMTREC) 703-527-3887 (Outside the US)
Email:	sds@restek.com
Revision Number:	8
Intended use:	For Laboratory use only

2. HAZARD(S)IDENTIFICATION

Emergency Overview:

GHS Hazard Symbols:

GHS Classification:	Carcinogenicity Category 2
GHS Hazard:	Suspected of causing cancer.
GHS Precautions:	
Safety Precautions:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
First Aid Measures:	IF exposed or concerned: Get medical advice/attention.
Storage:	Store locked up.
Disposal:	Dispose of contents/container according to section 13 of the SDS.
Single Exposure Target Organs:	No data available.
Repeated Exposure Target Organs:	No data available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	EINEC #	% Composition
Dichloromethane	75-09-2	200-838-9	99.900000
indeno (1,2,3-c,d) pyrene	193-39-5		0.100000

4. FIRST-AID MEASURES

Inhalation:	Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately
Eyes:	Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate

	medical attention and monitor the eye daily as advised by your physician. Serious harm (damage) may result if treatment is delayed. Continue to flush eyes while awaiting medical attention
Skin Contact:	Wash with soap and water. Remove contaminated clothing, launder immediately, and discard contaminated leather goods. Get medical attention immediately.
Ingestion:	Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this SDS. Never give anything by mouth to an unconscious person

5. FIRE- FIGHTING MEASURES

Extinguishing Media:	Use methods suitable to fight surrounding fire.
Fire Fighting Methods and Protection:	Use methods for the surrounding fire.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment:	Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.
Methods for Clean-up:	Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

7. HANDLING AND STORAGE

Handling Technical Measures and Precautions:	Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

United States:

Chemical Name	CAS No.	IDLH	ACGIH STEL	ACGIH TLV-TWA	OSHA Exposure Limit
Dichloromethane	75-09-2	2300 ppm IDLH		50 ppm TWA	25 ppm TWA; 125 ppm STEL (15 min. TWA)
indeno (1,2,3-c,d) pyrene	193-39-5	ND		No TLV	No data available.

Personal Protection:

Engineering Measures:	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.
Respiratory Protection:	Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.
Eye Protection:	Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.
Skin Protection:	Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Medical Conditions Aggravated By Exposure:	Eye disease Skin disease including eczema and sensitization Respiratory disease including asthma and bronchitis

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance, color:	Colorless
Odor:	Strong
Physical State:	No data available.

pH:	No data available
Vapor Density:	2.93 (air = 1)
Melting Point:	-96.7 ℃
Flash Point:	No data available.
Upper Flammable/Explosive Limit, % in air:	No data available.
Lower Flammable/Explosive Limit, % in air:	No data available.
Autoignition Temperature:	556 deg C
Decomposition Temperature:	No data available.
Specific Gravity:	1.3254 - 1.3258 g/cm3 at 20 ℃
Evaporation Rate:	No data available.
Odor Threshold:	ND
Solubility:	Moderate; 50-99%
Partition Coefficient: n-octanol in water:	No data available.
VOC % by weight:	0.00
Molecular Weight:	No data available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	No data available.Contamination High temperatures
Materials to Avoid / Chemical Incompatiability:	Strong oxidizing agents Caustics (bases)
Hazardous Decomposition Products:	Carbon dioxide Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Routes of Entry:	Inhalation Absorption Ingestion Skin contact Eye contact
Target Organs Potentially Affected By Exposure:	Skin, Cardiovascular System, Eyes, Liver
Chemical Interactions That Change Toxicity:	None Known

Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation:	Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache.
Inhalation Toxicity:	Harmful! Can cause systemic damage (see "Target Organs)Inhalation may cause severe central nervous system depression (including unconsciousness).
Skin Contact:	Contact causes severe skin irritation and possible burns.
Skin Absorption:	Harmful if absorbed through the skin. May cause severe irritation and systemic damage.
Eye Contact:	Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in tearing and reddening, but not likely to permanently injure eye tissue. Temporary vision impairment (cloudy or blurred vision) is possible.
Ingestion Irritation:	Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea.
Ingestion Toxicity:	Harmful if swallowed. May cause systemic poisoning.

Long-Term (Chronic) Health Effects:

Carcinogenicity:	Contains a probable or known human carcinogen.
Reproductive and Developmental Toxicity:	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Inhalation:	Upon prolonged and/or repeated exposure, can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache.Harmful! Can cause systemic damage upon prolonged and/or repeated exposure (see "Target Organs)
Skin Absorption:	Upon prolonged or repeated exposure, harmful if absorbed through the skin. May cause severe irritation and systemic damage

Component Toxicological Data:

NIOSH:

Chemical Name	CAS No.	LD50/LC50
Methane, dichloro-	75-09-2	Oral LD50 Rat >2000 mg/kg

Component Carcinogenic Data:

OSHA:

Chemical Name	CAS No.	
Methylene chloride	75-09-2	25 ppm TWA (8 hr.); 125 ppm STEL (15 min.); 12.5 ppm Action Level (see 29 CFR 1910.1051); effective date for respiratory

		protection for certain employers to acheive the 8-hour TWA PEL is August 31, 1998; the start up date to install engineering controls is December 10, 1998.; {OSHA - 29 CFR 1910 Specifically Regulate
Indeno[1,2,3-cd]pyrene	193-39-5	Present

ACGIH:

Chemical Name	CAS No.	
Dichloromethane	75-09-2	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

NIOSH:

Chemical Name	CAS No.	
Methylene chloride	75-09-2	potential occupational carcinogen

NTP:

Chemical Name	CAS No.
No data available.	

IARC:

Chemical Name	CAS No.	Group No.
No data.		Group 1
No data.		Group 2A
Dichloromethane	75-09-2	Group 2B
Indeno(1,2,3-cd)pyrene	193-39-5	Group 2B

12. ECOLOGICAL INFORMATION

Overview:	Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.Keep out of waterways.
Mobility:	No data
Persistence:	No data
Bioaccumulation:	No data
Degradability:	No data
Ecological Toxicity Data:	No data available.

13. DISPOSAL CONSIDERATIONS

Waste Description of Spent Product:	Spent or discarded material is a hazardous waste.
Disposal Methods:	Incinerate spent or discarded material a permitted hazardous waste facility.
Waste Disposal of Packaging:	Comply with all Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORTATION INFORMATION

United States:	
DOT Proper Shipping Name:	Dichloromethane
UN Number:	UN1593
Hazard Class:	6.1
Packing Group:	III
International:	
IATA Proper Shipping Name:	Dichloromethane
UN Number:	UN1593
Hazard Class:	6.1
Packing Group:	III
Marine Pollutant:	No

15. REGULATORY INFORMATION

United States:

Chemical Name	CAS#	CERCLA	SARA 313	SARA EHS 313	TSCA
Dichloromethane	75-09-2	X	X	-	X
indeno (1,2,3-c,d) pyrene	193-39-5	X	X	-	X

The following chemicals are listed on CA Prop 65:

Chemical Name	CAS #	Regulation

Dichloromethane	75-09-2	Prop 65 Cancer
Dichloromethane (Methylene chloride)		
Indeno [1,2,3-cd]pyrene	193-39-5	Prop 65 Cancer

State Right To Know Listing:

Chemical Name	CAS#	New Jersey	Massachusetts	Pennsylvania	California
Dichloromethane	75-09-2	X	X	X	X
indeno (1,2,3-c,d) pyrene	193-39-5	X	X	X	X

16. OTHER INFORMATION

Prior Version Date: 05/27/11

Disclaimer: Restek Corporation provides the descriptions, data and information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. It is provided for your guidance only. Because many factors may affect processing or application/use, Restek Corporation recommends you perform an assessment to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including fitness for a particular purpose, are made regarding prodcuts described, data or information set forth. In no case shall the descriptions, information, or data provided be considered a part of our terms and conditions of sale. Further, the descriptions, data and information furnished hereunder are given gratis. No obligation or liability for the description, data and information given are assumed. All such being given and accepted at your risk.

Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Revision Date 10-Feb-2015 **Revision Number** 1

1. Identification

Product Name **Dibenz[a,h]anthracene, 99% (UV-Vis)**

Cat No. : **AC406430010; AC406432500**

Synonyms 1,2:5,6-Dibenz(a)anthracene.

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Carcinogenicity	Category 1B

Label Elements

Signal Word
Danger

Hazard Statements
May cause cancer

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required
Response
IF exposed or concerned: Get medical attention/advice
Storage
Store locked up
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

Component	CAS-No	Weight %
Dibenzo(a,h)anthracene	53-70-3	99

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes.

Inhalation Move to fresh air.

Ingestion Do not induce vomiting.

Most important symptoms/effects No information available.
Notes to Physician Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media No information available

Flash Point
Method - No information available

Autoignition Temperature No information available
Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
None known
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
1	1	0	N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.
Environmental Precautions See Section 12 for additional ecological information. Avoid release to the environment.

Collect spillage.

Methods for Containment and Clean Up No information available.

7. Handling and storage

Handling Ensure adequate ventilation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Off-white
Odor	No information available
Odor Threshold	No information available
pH	
Melting Point/Range	265 °C
Boiling Point/Range	
Flash Point	
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Relative Density	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C22H14
Molecular Weight	278.34

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use conditions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Component Information

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Dibenzo(a,h)anthracene	53-70-3	Group 2A	Reasonably Anticipated	Not listed	X	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

Component	log Pow
Dibenzo(a,h)anthracene	6.5

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Dibenzo(a,h)anthracene - 53-70-3	U063	-

14. Transport information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Dibenzo(a,h)anthracene	X	-	X	200-181-8	-		-	-	-	X	-

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Dibenzo(a,h)anthracene	53-70-3	99	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Dibenzo(a,h)anthracene	-	-	X	X

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
Dibenzo(a,h)anthracene	1 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Dibenzo(a,h)anthracene	53-70-3	Carcinogen	0.2 µg/day	Carcinogen

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Dibenzo(a,h)anthracene	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D2A Very toxic materials

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Revision Date 10-Feb-2015
Print Date 10-Feb-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS

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Search the Pocket Guide

SEARCH

Enter search terms separated by spaces.

DDT

Synonyms & Trade Names p,p'-DDT; Dichlorodiphenyltrichloroethane; 1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane

CAS No. 50-29-3	**RTECS No.** KJ3325000 (/niosh-rtecs/KJ32BC48.html)	**DOT ID & Guide** 2761 151 (http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=151)
Formula $(C_6H_4Cl)_2CHCCl_3$	**Conversion**	**IDLH** Ca [500 mg/m^3] See: 50293 (/niosh/idlh/50293.html)
Exposure Limits **NIOSH REL** : Ca TWA 0.5 mg/m^3 See Appendix A (nengapdxa.html) **OSHA PEL** : TWA 1 mg/m^3 [skin]		**Measurement Methods** **NIOSH** S274 (II-3) See: NMAM (/niosh/docs/2003-154/) or OSHA Methods (http://www.osha.gov/dts/sltc/methods/index.html)

Physical Description Colorless crystals or off-white powder with a slight, aromatic odor. [pesticide]

MW: 354.5	**BP:** 230°F (Decomposes)	MLT: 227°F	**Sol:** Insoluble	**VP:** 0.0000002 mmHg	**IP:** ?
Sp.Gr: 0.99	**Fl.P:** 162-171°F	**UEL:** ?	**LEL:** ?		

Combustible Solid

Incompatibilities & Reactivities Strong oxidizers, alkalis

Exposure Routes inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms irritation eyes, skin; paresthesia tongue, lips, face; tremor; anxiety, dizziness, confusion, malaise (vague feeling of discomfort), headache, lassitude (weakness, exhaustion); convulsions; paresis hands; vomiting; [potential occupational carcinogen]

Target Organs Eyes, skin, central nervous system, kidneys, liver, peripheral nervous system

Cancer Site [in animals: liver, lung & lymphatic tumors]

Personal Protection/Sanitation (See protection codes (protect.html)) **Skin:** Prevent skin contact	**First Aid** (See procedures (firstaid.html)) **Eye:** Irrigate immediately **Skin:** Soap wash promptly

Eyes: Prevent eye contact **Wash skin:** When contaminated/Daily **Remove:** When wet or contaminated **Change:** Daily **Provide:** Eyewash, Quick drench	**Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here (pgintrod.html#nrp) for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection (pgintrod.html#mustread)

See also: INTRODUCTION (/niosh/npg/pgintrod.html) See ICSC CARD: 0034 (/niosh/ipcsneng/neng0034.html) See MEDICAL TESTS: 0065 (/niosh/docs/2005-110/nmed0065.html)

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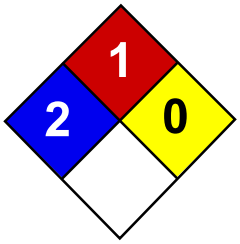
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, 24 Hours/Every Day - cdcinfo@cdc.gov



Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Copper MSDS

Section 1: Chemical Product and Company Identification

Product Name: Copper

Catalog Codes: SLC4939, SLC2152, SLC3943, SLC1150, SLC2941, SLC4729, SLC1936, SLC3727, SLC5515

CAS#: 7440-50-8

RTECS: GL5325000

TSCA: TSCA 8(b) inventory: Copper

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: Cu

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Copper	7440-50-8	100

Toxicological Data on Ingredients: Copper LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 1 (mg/m3) from ACGIH [1990] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 63.54 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 2595°C (4703°F)

Melting Point: 1083°C (1981.4°F)

Critical Temperature: Not available.

Specific Gravity: 8.94 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: The substance is toxic to lungs, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of ingestion. Hazardous in case of inhalation. Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Copper Massachusetts RTK: Copper TSCA 8(b) inventory: Copper CERCLA: Hazardous substances.: Copper

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R36- Irritating to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Coal tar pitch volatiles

Synonyms & Trade Names Synonyms vary depending upon the specific compound (e.g., pyrene, phenanthrene, acridine, chrysene, anthracene & benzo(a)pyrene). [Note: NIOSH considers coal tar, coal tar pitch, and creosote to be coal tar products.]

CAS No.	RTECS No.	DOT ID & Guide
65996-93-2	GF8655000 (/niosh-rtecs/GF841098.html)	2713 153 (http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=153) (acridine)
	Conversion	**IDLH** Ca [80 mg/m^3] See: 65996932 (/niosh/idlh/65996932.html)

Exposure Limits

NIOSH REL : Ca TWA 0.1 mg/m^3 (cyclohexane-extractable fraction)
See Appendix A (nengapdxa.html)
See Appendix C (nengapdxc.html)
OSHA PEL : TWA 0.2 mg/m^3 (benzene-soluble fraction) [1910.1002] See Appendix C (nengapdxc.html)

Measurement Methods
OSHA 58 (http://www.osha.gov/dts/sltc/methods/organic/org058/org058.html)
See: NMAM (/niosh/docs/2003-154/) or OSHA Methods (http://www.osha.gov/dts/sltc/methods/index.html)

Physical Description Black or dark-brown amorphous residue.

Properties vary depending upon the specific compound.					

Combustible Solids

Incompatibilities & Reactivities Strong oxidizers

Exposure Routes inhalation, skin and/or eye contact

Symptoms dermatitis, bronchitis, [potential occupational carcinogen]

Target Organs respiratory system, skin, bladder, kidneys

Cancer Site [lung, kidney & skin cancer]

Personal Protection/Sanitation (See protection codes (protect.html))	First Aid (See procedures (firstaid.html))
Skin: Prevent skin contact **Eyes:** Prevent eye contact **Wash skin:** Daily **Remove:** No recommendation **Change:** Daily	**Eye:** Irrigate immediately **Skin:** Soap wash immediately **Breathing:** Respiratory support **Swallow:** Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here (pgintrod.html#nrp) for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection (pgintrod.html#mustread)

See also: INTRODUCTION (/niosh/npg/pgintrod.html) See ICSC CARD: 1415 (/niosh/ipcsneng/neng1415.html) See MEDICAL TESTS: 0054 (/niosh/docs/2005-110/nmed0054.html)

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Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA
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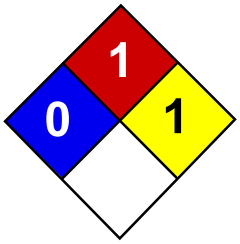

Material Safety Data Sheet
Zinc Metal MSDS

Section 1: Chemical Product and Company Identification

Product Name: Zinc Metal

Catalog Codes: SLZ1054, SLZ1159, SLZ1267, SLZ1099, SLZ1204

CAS#: 7440-66-6

RTECS: ZG8600000

TSCA: TSCA 8(b) inventory: Zinc Metal

CI#: Not applicable.

Synonym: Zinc Metal Sheets; Zinc Metal Shot; Zinc Metal Strips

Chemical Name: Zinc Metal

Chemical Formula: Zn

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Zinc Metal	7440-66-6	100

Toxicological Data on Ingredients: Zinc Metal LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 480°C (896°F)

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of open flames and sparks, of heat, of oxidizing materials, of acids, of alkalis, of moisture. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards:
Zinc + NaOH causes ignition. Oxidation of zinc by potassium proceeds with incandescence. Residues from zinc dust /acetic acid reduction operations may ignite after long delay if discarded into waste bins with paper. Incandescent reaction when Zinc and Arsenic or Tellurium, or Selenium are combined. When hydrazine mononitrate is heated in contact with zinc, a flamming decomposition occurs at temperatures a little above its melting point. Contact with acids and alkali hydroxides (sodium hydroxide, postasium hydroxide, calcium hydroxide, etc.) results in evolution of hydrogen with sufficient heat of reaction to ignite the hydrogen gas. Zinc foil ignites if traces of moisture are present. It is water reactive and produces flammable gases on contact with water. It may ignite on contact with water or moist air.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Flammable solid that, in contact with water, emits flammable gases. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Cover with dry earth, sand or other non-combustible material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids, alkalis, moisture.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Keep from any possible contact with water. Do not allow water to get into container because of violent reaction.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid. Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 65.39 g/mole

Color: Bluish-grey

pH (1% soln/water): Not applicable.

Boiling Point: 907°C (1664.6°F)

Melting Point: 419°C (786.2°F)

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials, moisture

Incompatibility with various substances:
Reactive with oxidizing agents, acids, alkalis. Slightly reactive to reactive with moisture. The product may react violently with water to emit flammable but non toxic gases.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with acids, halogenated hydrocarbons, NH_4NO_3, barium oxide, $Ba(NO_3)_2$, Cadmium, CS_2, chlorates, Cl_2, CrO_3, F_2, Hydroxylamine, $Pb(N_3)_2$, $MnCl_2$, HNO_3, performic acid, $KClO_3$, KNO_3, N_2O_2, Selenium, $NaClO_3$, Na_2O_2, Sulfur, Te, water, $(NH_4)_2S$, As_2O_3, CS_2, $CaCl_2$, chlorinated rubber, catalytic metals, halocarbons, o-nitroanisole, nitrobenzene, nonmetals, oxidants, paint primer base, pentacarbonoyliron, transition metal halides, seleninyl bromide, HCl, H_2SO_4, (Mg +$Ba(NO_3)_2$ +BaO_2), (ethyl acetoacetate +tribromoneopentyl alcohol. Contact with Alkali Hydroxides(Sodium Hydroxide, Potassium Hydroxide, Calcium Hydroxide, etc) results in evolution of hydrogen. Ammonium nitrate + zinc + water causes a violent reaction with evolution of steam and zinc oxide. May react with water.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause skin irritation. Dermal exposure to zinc may produce leg pains, fatigue, anorexia and weight loss. Eyes: May cause eye irritation. Ingestion: May be harmul if swallowed. May cause digestive tract irritation with tightness in throat, nausea, vomiting, diarrhea, loss of appetite, malaise, abdominal pain. fever, and chills. May affect behavior/central nervous system and autonomic nervous system with ataxia, lethargy, staggering gait, mild derrangement in cerebellar function, lightheadness, dizzness, irritability, muscular stiffness, and pain. May also affect blood. Inhalation: Inhalation of zinc dust or fumes may cause respiratory tract and mucous membrane irritation with cough and chest pain. It can also cause "metal fume fever", a flu-like condition characterized appearance of chills, headached fever, maliase, fatigue, sweating, extreme thirst, aches in the legs and chest, and difficulty in breathing. A sweet taste may also be be present in metal fume fever, as well as a dry throat, aches, nausea, and vomiting, and pale grey cyanosis. The toxicological properties of this substance have not been fully investisgated.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: Not available.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
New York release reporting list: Zinc Metal Rhode Island RTK hazardous substances: Zinc Metal Pennsylvania RTK: Zinc Metal Florida: Zinc Metal Michigan critical material: Zinc Metal Massachusetts RTK: Zinc Metal New Jersey: Zinc Metal California Director's List of Hazardous Substances: Zinc Metal TSCA 8(b) inventory: Zinc Metal TSCA 12(b) one time export: Zinc Metal SARA 313 toxic chemical notification and release reporting: Zinc Metal CERCLA: Hazardous substances.: Zinc Metal: 1000 lbs. (453.6 kg)

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not Available

DSCL (EEC):
R15- Contact with water liberates extremely flammable gases. R17- Spontaneously flammable in air. S7/8- Keep container tightly closed and dry.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 1

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 1

Reactivity: 1

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 12:18 AM

Last Updated: 05/21/2013 12:00 PM

APPENDIX 6

MANUFACTURER'S SPECIFICATIONS OF THE VAPOR BARRIER

VAPORBLOCK® PLUS™ VBP20

Under-Slab Vapor / Gas Barrier

RAVEN INDUSTRIES

Product Description

VaporBlock® Plus™ 20 is a seven-layer co-extruded barrier made from state-of-the-art polyethylene and EVOH resins to provide unmatched impact strength as well as superior resistance to gas and moisture transmission. VaporBlock® Plus™ 20 is a highly resilient underslab / vertical wall barrier designed to restrict naturally occurring gases such as radon and/or methane from migrating through the ground and concrete slab. VaporBlock® Plus™ 20 is more than 100 times less permeable than typical high-performance polyethylene vapor retarders against Methane, Radon and other harmful VOCs.

VaporBlock® Plus™ 20 is one of the most effective underslab gas barriers in the building industry today far exceeding ASTM E-1745 (Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs) Class A, B and C requirements. Available in a 20 (Class A) mil thicknesses designed to meet the most stringent requirements. VaporBlock® Plus™ 20 is produced within the strict guidelines of our ISO 9001:2008 Certified Management System.

Product Use

VaporBlock® Plus™ 20 resists gas and moisture migration into the building envelop when properly installed to provide protection from toxic/harmful chemicals. It can be installed as part of a passive or active control system extending across the entire building including floors, walls and crawl spaces. When installed as a passive system it is recommended to also include a ventilated system with sump(s) that could be converted to an active control system with properly designed ventilation fans.

VaporBlock® Plus™ 20 works to protect your flooring and other moisture-sensitive furnishings in the building's interior from moisture and water vapor migration, greatly reducing condensation, mold and degradation.

Size & Packaging

VaporBlock® Plus™ 20 is available in 10' x 150' rolls to maximize coverage. All rolls are folded on heavy-duty cores for ease in handling and installation. Other custom sizes with factory welded seams are available based on minimum volume requirements. Installation instructions and ASTM E-1745 classifications accompany each roll.

Under-Slab Vapor/Gas Retarder

Product	Part #
VaporBlock Plus 20	VBP 20

APPLICATIONS

- Radon Barrier
- Methane Barrier
- VOC Barrier
- Under-Slab Vapor Retarder
- Foundation Wall Vapor Retarder

VaporBlock® Plus™
UNDERSLAB VAPOR RETARDER / GAS BARRIER

VAPORBLOCK® PLUS™ VBP20

ISO 9001:2008 CERTIFIED MANAGEMENT SYSTEM

Under-Slab Vapor / Gas Barrier

		VAPORBLOCK PLUS 20	
PROPERTIES	**TEST METHOD**	**IMPERIAL**	**METRIC**
Appearance		White/Gold	
Thickness, Nominal		20 mil	0.51 mm
Weight		102 lbs/MSF	498 g/m²
Classification	ASTM E 1745	CLASS A, B & C	
Tensile Strength lbf/in (N/cm) average MD & TD (new material)	ASTM E 154 Section 9 (D-882)	58 lbf	102 N
Impact Resistance	ASTM D 1709	2600 g	
Maximum Use Temperature		180° F	82° C
Minimum Use Temperature		-70° F	-57° C
Permeance (new material)	ASTM E 154 Section 7 ASTM E 96 Procedure B	0.0098 Perms grains/(ft²·hr·in·Hg)	0.0064 Perms g/(24hr·m²·mm Hg)
(after conditioning) Perms (same measurement as above permeance)	ASTM E 154 Section 8, E96 Section 11, E96 Section 12, E96 Section 13, E96	0.0079 0.0079 0.0097 0.0113	0.0052 0.0052 0.0064 0.0074
WVTR	ASTM E 96 Procedure B	0.0040 grains/hr-ft²	0.0028 gm/hr-m²
Radon Diffusion Coeffiecient	K124/02/95	< 1.1 x 10^{-13} m²/s	
Methane Permeance	ASTM D 1434	< 1.7 x 10^{-10} m²/d• atm 0.32 GTR (Gas Transmission Rate) ml/m²•D•ATM	

VaporBlock® Plus™ Placement

All instructions on architectural or structural drawings should be reviewed and followed.
Detailed installation instructions accompany each roll of VaporBlock® Plus™ and can also be located on our website.
ASTM E-1643 also provides general installation information for vapor retarders.

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VaporBlock® Plus™ is a seven-layer co-extruded barrier made using high quality virgin-grade polyethylene and EVOH resins to provide unmatched impact strength as well as superior resistance to gas and moisture transmission.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at www.RavenEFD.com

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