233 LANDING ROAD

BRONX, NEW YORK

Remedial Action Work Plan

NYC BCP Number: 15RHAN334X

Prepared for:

Bowery Residents' Committee

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APRIL 2015

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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/Demolition
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
DCR	Declaration of Covenants and Restrictions
ECs/ICs	Engineering and Institutional Controls
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
VCA	Voluntary Cleanup Agreement
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYC VCP	New York City Voluntary Cleanup Program
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYCRR	New York Codes Rules and Regulations
NYC OER	New York City Office of Environmental Remediation
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
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
SVOC	Semi-Volatile Organic Compound
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

CERTIFICATION

I, Stephen M. Kline, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial action for the 233 Landing Road Site (NYC VCP Site No. and OER Project No. 15RHAN334X).

I, Benjamin Alter am a Qualified Environmental Professional as defined in §43-140. I have primary direct responsibility for implementation of the remedial action for the 233 Landing Road Site (NYC VCP Site No. and OER Project No. 15RHAN334X).

I certify that 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. Importation of all soil, fill and other material from off-Site will be 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.

Stephen M. Kline

Name

NYS080431

NYS PE License Number

Signature

4/24/2015

Date

PE Stamp

Benjamin Alter

QEP Name

QEP Signature

4/24/2015

Date

EXECUTIVE SUMMARY

Bowery Residents' Committee has enrolled in the New York City Voluntary Brownfield Cleanup Program (NYC VCP) to investigate and remediate a 37,026-square foot site located at 233 Landing Road in Bronx, New York. This Site is listed as an E-Designated Site (E-189). 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 Current Usage

The Site is located at 233 Landing Road in the Fordham Manor section in Bronx, New York and is identified as Block 3236 and Lot 25 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 37,026-square feet in area and is bounded by Fordham Landing Park to the north, Landing Road to the south, Fordham Landing Park to the east, and the Major Deegan Expressway to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is used for parking and contains two temporary structures: a guard shack and a trailer.

Summary of Proposed Redevelopment Plan

The proposed future use of the Site will consist of a new 9-story residential building with a cellar. The new building will occupy approximately 60% of the property, with an upper and lower exterior recreation yard, entrances and landscaping composing the remaining 40%. The building will include a cellar, with uses to include offices, conference room, community room, storage, laundry, bicycle storage, compactor room, and utility rooms. Excavation will be down to approximately thirteen feet for footings and foundation. Excavation is not anticipated to extend below the groundwater table. Layout of the proposed site development is presented in Figure 3. The current zoning designation is featured commercial property (C2-4/R7-1). The proposed use is consistent with existing zoning for the property.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

Summary of the Remedy

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 action will consist of:

1. Preparation of a Community Protection Statement and implementation of a Citizen Participation Plan.
2. Perform a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establish Track 4 Soil Cleanup Objectives (SCOs). Excavation and removal of soil/fill exceeding SCOs.
4. Construction and maintenance of an engineered composite cover consisting of 10-inch concrete foundation slab and a minimum of two feet of clean fill or concrete cover in the remaining portions of the Site as part of new development; to prevent human exposure to residual soil/fill remaining under the Site;
5. Installation of a vapor barrier system beneath the building slab and outside foundation sidewalls below grade.
6. Installation and operation of an active sub-slab depressurization system.
7. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
8. Demarcation of residual soil/fill.
9. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

10. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media onsite.

11. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.

12. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

13. 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 an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

16. Recording of a Declaration of Covenants and Restrictions that includes a listing of Engineering Controls and Institutional Controls 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. The property will continue to be registered with an E-Designation by 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 Office of Environmental Remediation created the New York City Voluntary Cleanup Program (NYC VCP) to provide governmental oversight for the cleanup of contaminated property in NYC. This Remedial Action Work Plan ("cleanup plan") describes the findings of prior environmental studies that show the location of 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. This cleanup plan 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.

Remedial Investigation and Cleanup Plan. Under the NYC BCP, a thorough cleanup 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 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 the performance of 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 Health and Safety Plan that is designed to protect community residents and on-Site workers. The elements of this plan are in compliance with safety requirements of the United States Occupational Safety and Health Administration. This plan includes many protective elements including those discussed below.

Site Safety Coordinator. This project has a designated Site safety coordinator to implement the Health and Safety Plan. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies. The Site safety coordinator is yet to be determined, OER will be provided with relevant contact information once available.

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 NYC noise control standards. If you observe problems in these areas, please contact the onsite Project Manager through Bowery Residents Committee at 212-803-5716 or NYC Office of Environmental Remediation Project Manager Samantha Morris at 212-341-2082.

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.

Storm-Water Management. To limit the potential for soil erosion and discharge, this cleanup plan has provisions for storm-water management. The main elements of the storm water 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 are Monday through Friday, 7:00 AM to 5:00 PM.

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, provides project contact names and numbers, and locations of 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 Bowery Residents Committee at 212-803-5716, the NYC Office of Environmental Remediation Project Manager Samantha Morris at 212-341-2082, 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, odors 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 all 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-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 a Remedial Action Report) that will be available for you to review in the public document repositories located at New York Public Library-Francis Martin Library (2150 University Avenue, Bronx, NY).

Long-Term Site Management. To provide long-term protection after the cleanup is complete, the property owner may 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 in the property's deed or established through a city environmental designation. 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 SITE BACKGROUND

Bowery Residents' Committee has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 233 Landing Road in the Fordham Manor section of Bronx, New York (the "Site"). This Site is listed as an E-Designated Site (E-189). 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, complies with applicable environmental standards, criteria and guidance and applicable laws and regulations.

1.1 SITE LOCATION AND CURRENT USAGE

The Site is located at 233 Landing Road in the Fordham Manor section in Bronx, New York and is identified as Block 3236 and Lot 25 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 37,026-square feet in area and is bounded by Fordham Landing Park to the north, Landing Road to the south, Fordham Landing Park to the east, and the Major Deegan Expressway to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is used for parking and contains two temporary structures: a guard shack and a trailer.

1.2 PROPOSED REDEVELOPMENT PLAN

The proposed future use of the Site will consist of a new 9-story residential building with a cellar. The new building will occupy approximately 60% of the property, with an upper and lower exterior recreation yard, entrances and landscaping composing the remaining 40%. The building will include a cellar, with uses to include offices, conference room, community room, storage, laundry, bicycle storage, compactor room, and utility rooms. Excavation will be down to approximately thirteen feet for footings and foundation. Excavation is not anticipated to extend

below the groundwater table. Layout of the proposed site development is presented in Figure 3. The current zoning designation is featured commercial property (C2-4/R7-1). The proposed use is consistent with existing zoning for the property.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

Adjoining properties consist of the Major Deegan Expressway, retail and commercial buildings and Fordham Landing Park. Surrounding properties are residential, retail and commercial.

Sensitive Receptors

Sensitive receptors including schools, hospitals and day care facilities were not identified within a 500-foot radius from the Site. The Site is zoned as commercial. The surrounding areas are zoned as commercial and residential. There are several residential apartment buildings located in the 500-foot radius and Fordham Landing Park adjoins the Site to north and east. The Harlem River is located less than 500 feet west of the Site. There are no other streams or wetlands within the 500-foot radius of the Site.

1.4 REMEDIAL INVESTIGATION

A remedial investigation was performed and the results are documented in a companion document called "*Remedial Investigation Report, 233 Landing Road*", dated April, 2015 (RIR).

Summary of Past Uses of Site and Areas of Concern

Based on historical sources and previous investigation reports, the Site was first developed between 1912 and 1914 with a building labeled "Engine Room" and a ten million cubic foot (cu.ft.) above ground, steel gas holder. This holder and engine room were part of the Consolidated Gas Company Knightsbridge Station. The gas holder was decommissioned in 1950 when the Site property was sold to the City of New York. The Site building was subsequently occupied by New York University Engineering Research Department. Between 1954 and 1961, a

portion of the Site was taken over in the construction of Major Deegan Expressway to the west. Between 1984 and 1986 the on-Site building was demolished. The Site has been used a parking lot since then. Onsite structures include a guard shack and a vacant staged trailer.

Based on information gathered during GZA's Phase I ESA dated October 29, 2014, the Areas of Concern (AOC) identified for this Site includes:

1. Previous Site investigations identified contaminated soil onsite, as well as volatile organic compounds (VOCs) in soil gas that have the potential to create vapor intrusion conditions in any permanent structures constructed on the Site.

Summary of the Work Performed under the Remedial Investigation

GZA GeoEnvironmental, Inc. performed the following scope of work:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed seven soil borings across the project Site, and collected fourteen soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed two groundwater monitoring wells on the Site to establish groundwater flow and collected two groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed four soil vapor probes around Site perimeter and collected four samples for chemical analysis to evaluate the potential for vapor intrusion conditions in the proposed structure.

Summary of Environmental Findings

1. Elevation of the property ranges from 30 to 60 feet Local Mean Sea Level (MSL.)
2. Depth to groundwater ranges from 25.2 to 26.1 feet below ground surface (bgs) at the Site.
3. Groundwater flow is generally from southeast to northwest beneath the Site.
4. Bedrock was not encountered during the site investigation.

5. The stratigraphy of the site, from the surface down, consists of fill material consisting of asphalt, brick, concrete, gravel, glass and coarse sand to a depth of 15 feet bgs.

6. Soil/fill samples collected during the remedial investigation were compared to 6NYCRR Part 375-6.8 Track 1 Unrestricted Use Soil Cleanup Objectives (UUSCOs) and Track 2 Restricted Residential Use SCOs. Samples showed that five volatile organic compounds, (VOCs), namely acetone, benzene, toluene, trichloroethene and xylenes were detected above their Unrestricted Use SCO in one or more of samples SB-1(1.5-2.0), SB-2(14.5-15.0) and SB-6(14.5-15.0). PCBs were detected in one sample (SB-3 (1.5-2.0)) above its UUSCO but below its Restricted Residential Use SCO (RUSCO). Several metals including copper, lead, mercury, nickel and zinc were detected at concentrations exceeding their Unrestricted Use SCOs in one or more soil samples. No other metals were detected in soil at concentrations above their RRSCOs. Semi-Volatile Organic Compounds (SVOCs) were detected in four samples: SB-1 (1.5-2.0), SB-4 (1.5-2.0), SB-4 (14.5-15.0), and SB-7(14.5-15.0). Benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected above the RUSCOs in these samples. Overall, soil chemistry is unremarkable and does not indicate any special disposal condition.

7. Groundwater samples were compared to New York State Groundwater Standards. Samples TW-1 and TW-2 had exceedances of the following total and dissolved metals above the Ambient Water Quality Standards (AWQS): iron, magnesium, manganese and sodium. Overall, groundwater chemistry is unremarkable and does not indicate any special treatment or disposal conditions.

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. The highest reported concentrations were for 1,2,4-trimethylbenze at 1,010 $\mu g/m^3$, which was detected soil vapor sample. Soil vapor samples showed several compounds at moderate concentrations. Petroleum-related VOCs, (BTEX) were detected at a maximum concentration of 1,373 $\mu g/m^3$. Chlorinated trichloroethene (TCE) was

detected in two soil vapor samples at a maximum concentration of 174 μg/m^3 which is above the NYSDOH Matrix 2 limit.

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.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

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 below 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). A remedy is then developed 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 effectives;
- Community Acceptance;
- Land use; and
- Sustainability.

The following is a detailed description of the alternative analysis and remedy selection to address impacted media at the Site.

Two remedial action alternatives are considered in this alternative analysis for the site. Alternative 1 is Track 1 alternative that involves establishment of Track 1 SCOs and complete removal of all soil and fill material that exceeds the unrestricted Track1 SCOs. Alternative 2 is Track 4 alternative that involves establishment of Track 4 SCOs and removal of the soil and fill material that exceed Track 4 Site specific SCOs.

These alternatives are:

Alternative 1 includes:

- Selection of 6NYCRR NYSDEC Part 375 Unrestricted Use Track 1SCOs;
- Removal of soil exceeding Track 1 SCOs throughout the Site and confirmation that Track 1 Unrestricted Use SCOs has been achieved with post-excavation endpoint sampling. If soil/fill containing analytes at concentrations above Unrestricted Use SCOs is still present at the base of the excavation, additional excavation will be performed to ensure complete removal of soil that does not meet Track 1 Unrestricted Use SCOs;
- No Engineering or Institutional Controls are required for a Track 1cleanup, but a soil vapor barrier beneath the building slab and along foundation side walls of the new building as a part of development to prevent any potential future exposures from on and off-Site soil vapor; and
- Placement of a final cover consisting of 10-inch concrete slab and a minimum of two feet of clean fill or concrete cover in the rear yard and landscaped areas over the entire Site as part of new development.

Alternative 2 includes:

- Establishment of Track 4 Site-Specific SCOs.
- Removals of soils exceeding Track 4 SCOs and confirmation that Track 4 Site-Specific SCOs have been achieved with post-excavation endpoint sampling. Based on the results of the Remedial Investigation, it is expected that this alternative would require excavation to a minimum depth of approximately 3.5 feet to excavate to depths required by foundation elements. If soil/fill containing analytes at concentrations above Track 4 Site-Specific SCOs is still present at the base of the excavation, or in the rear yard after removal of all soil required for construction of the proposed development is complete, additional excavation will be performed to ensure complete removal of soil that does not meet Track 4 Site-Specific SCOs.

- Installation of a soil vapor barrier beneath the building slab and along foundation side walls of the new building as a part of development to prevent any potential future exposures from on and off-Site soil vapor.
- Installation of an active sub-slab depressurization system (SSDS) beneath the building slab consisting of three loops, three risers and three blower fans.
- Placement of a final cover system consisting of 10-inch concrete foundation slab, and a minimum of two feet of clean fill with demarcation layer, or concrete cover in the remaining portions of the Site as part of new development.
- Establishment of use restrictions including prohibitions on the use of groundwater from the Site; prohibitions on other sensitive 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.
- Continued registration as an E-designated property to memorialize the remedial action and the Engineering and Institutional Controls required by the RAWP.

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 contaminated soil/fill exceeding Track 1 Unrestricted Use SCOs, 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 ensuring the remaining soil/fill on-Site meets Track 4 Site-Specific SCOs, as well as by placement of Institutional and Engineering controls, including a vapor barrier and 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 continued "E" designation of property would ensure that the composite cover system remains intact and protective.

For both Alternatives, potential exposure to the contaminated soils or groundwater during construction would be minimized by implementing a Construction Health and Safety Plan (CHASP), a Soil and Materials Management Plan, and Community Air Monitoring Plan (CAMP). Groundwater is not expected to be encountered during construction and potential use of contact with contaminated groundwater for potable supply would be prevented as its use is prohibited by city laws and regulations. Potential future migration of soil vapors into the new building would be prevented by installing a vapor/waterproofing barrier system below the new building's basement slab and continuing the vapor barrier around the foundation walls.

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. Compliance with SCGs for soil vapor would also be achieved by installing a vapor barrier system below the new building's slab and continuing the vapor barrier around foundation walls as part of the 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 SCGs for soil vapor would also be achieved by installing a vapor barrier system below the new

building's slab, an active sub-slab depressurization system and continuing the vapor barrier around foundation walls as part of the development. A Site Management Plan would ensure that these controls remained protective for the long term.

Health and safety measures contained in the CHASP and CAMP that comply with the applicable SCGs shall 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 would 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 effects on public health and the environment during implementation of the remedial action, including protection of the community, environmental impacts, time until remedial response objectives are achieved, and protection of workers during remedial actions.

Both Alternatives 1 and 2 have similar short-term effectiveness during their respective implementations, as each requires excavation of soil/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 if excavation of greater amounts of historical fill material is encountered below the excavation depth of the proposed building. However, focused attention to means and methods during the remedial action during a Track 1 removal action, including community air monitoring and appropriate truck routing, would minimize or negate the overall impact of these activities.

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

Both Alternatives would employ appropriate measures to prevent short-term impacts, including a CAMP and a Soil/Materials Management Plan (SMMP), during all on-Site soil

disturbance activities and would minimize the release of significant 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 CHASP will be protected from on-Site contaminants (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 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 Engineering Controls.

Alternative 1 would achieve long-term effectiveness and permanence related to on-Site contamination by permanently removing all impacted soil/fill and enabling unrestricted use of the property.

Alternative 2 would provide long-term effectiveness by removing most on-Site contamination and attaining Track 4 SCOs, establishing engineering controls including a composite cover system (10-inch concrete foundation slab with a demarcation layer and composite cover over remaining Site) across the entire Site, establishing institutional controls to ensure long-term management including use restrictions, a Site Management Plan (SMP) and registration as E-designated property. 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 will provide continued high level of protection in perpetuity.

Both alternatives would result in removal of soil contamination exceeding the SCOs providing the highest level, most effective and permanent remedy over the long-term with respect to a remedy

for contaminated soil, which would eliminate any migration to groundwater. **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 would permanently eliminate the toxicity, mobility, and volume of contaminants from on-Site soil by removing all soil in excess of unrestricted use SCOs. Alternative 1 would eliminate a greater total mass of contaminants on Site.

Alternative 2 would permanently reduce the toxicity, mobility, and volume of contaminants from on-Site soil by removing soil in excess of Track 4 SCOs, and remaining soil/fill would be capped with a composite cover, and any remaining soil/fill would meet Track 4 Site-Specific SCOs. Alternative 1 would eliminate a greater total mass of contaminants on Site.

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 proposed remedial actions are both feasible and implementable. The techniques, materials and equipment to implement Alternatives 1 and 2 are readily available and have been proven effective in remediating the contaminants associated with the Site. They use standard materials, services, and well-established technology. The reliability of these remedies is also high. There are no specific 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.

The remedial plan creates an approach that combines the remedial action with the redevelopment of the Site, including the construction of the building foundation. The remedial plan is also cost effective in that it will take into consideration the selection of the closest and most appropriate disposal facilities to reduce transportation and disposal costs during the excavation of soils during the redevelopment of the Site.

The costs associated with the Track 1 alternative are higher than the Track 4 alternative because a higher volume of soil/fill will be excavated for off-Site disposal to achieve a Track 1 status over the entire Site. In both cases, appropriate public health and environmental protections are achieved. However, long-term costs for Site management are eliminated for the Track 1 alternative and are required for the Track 4 alternative.

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.

Based on the overall goals of the remedial program and initial permitting associated with the proposed Site development, no adverse community opinion is anticipated for either alternative. This RAWP will be subject to public review under the NYC VCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedial action. The public comments related to Site remediation will be considered by OER prior to approval of this plan. The Citizen Participation Plan is provided in Appendix 1.

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.

Because of the complete soil removal proposed for the Track 1 alternative, it provides protection of public health and the environment for both the proposed use of the Site and any future use. The Track 1 alternative provides a remedial action that is beneficial to the surrounding community and is consistent with the goals of the City for remediating and redeveloping sites.

The Track 4 alternative also provides environmental and public health protection for the intended use. This alternative would allow the use of engineering controls and institutional controls that would provide protections against vapor migration.

Both alternatives for remedial action at the Site are comparable with respect to the proposed use and to land uses in the vicinity of the Site. The proposed use is consistent with the existing zoning designation for the property and is consistent with recent development patterns. The Site is surrounded by residential properties and both alternatives provide comprehensive protection of public health and the environment for these uses. Improvements in the current condition of the property achieved by both alternatives are also consistent with the City's goals for cleanup of contaminated land and bringing such properties into productive reuse. Both alternatives are equally protective of natural resources and cultural resources. This RAWP will be subject to public review under the NYC VCP and will provide the opportunity for detailed public input on the land use factors described in this section. The public comments will be considered by OER prior to approval of this plan.

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.

Track 1 remediation would use the most energy and produce the most greenhouse gasses, as it would have the largest material to truck off site. While Alternative 2 would result in lower energy use 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 of both alternatives would take into consideration the shortest trucking routes during off-Site disposal of soils, which would reduce greenhouse gas emissions and conserve energy used to fuel trucks. New York City Clean Soil Bank program may be utilized for reuse of native soils. To the extent practicable, energy efficient building materials, appliances, and equipment will be utilized to complete the 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. A complete list of green remedial activities considered as part of the NYC VCP is included in Sustainability Statement, included as Appendix 2.

4.0 REMEDIAL ACTION

4.1 SUMMARY OF PREFERRED REMEDIAL ACTION

The preferred remedial action alternative is Alternative 2, the Track 4 Alternative. The preferred remedial action alternative achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative will achieve all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative 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.

Summarize the remedial action into an itemized list as shown below.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and implementation of a Citizen Participation Plan.
2. Perform a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establish Track 4 Soil Cleanup Objectives (SCOs). Excavation and removal of soil/fill exceeding SCOs.
4. Construction and maintenance of an engineered composite cover consisting of 10-inch concrete foundation slab, and a minimum of two feet of clean fill or concrete cover in the remaining portions of the Site as part of new development to prevent human exposure to residual soil/fill remaining under the Site.
5. Installation of a vapor barrier system beneath the building slab and outside foundation sidewalls below grade.
6. Installation and operation of an active sub-slab depressurization system.
7. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.

8. Demarcation of residual soil/fill.

9. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

10. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media onsite.

11. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.

12. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

13. 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 an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

16. Recording of a Declaration of Covenants and Restrictions that includes a listing of Engineering Controls and Institutional Controls 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.

The property will continue to be registered with an E-Designation by 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

Track 4 Soil Cleanup Objectives (SCOs) are proposed for this project. The SCOs for this Site are listed in Table 1. 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 3. The location of planned excavations is shown in Figure 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.

The NYSDEC Part 375 Restricted Residential SCOs will be used as amended by following Site specific SCOs:

Contaminant	**Track 4 SCOs**
Total SVOCs	250 mg/kg
Lead	1000 mg/kg
Mercury	2.5 mg/kg

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 3**. The location of planned excavations is shown in **Figure 5**.

Estimated Soil/Fill Removal Quantities

The total quantity of soil/fill expected to be excavated and disposed off-Site is approximately 17,000 cubic yards. Disposal facilities will be reported to OER when they are identified and prior to the start of remedial action.

End-Point Sampling

Removal actions for development purposes under this plan will be performed in conjunction with confirmation soil sampling. Number of confirmation samples will be determined during the redevelopment and collected from the base of the excavation at locations to be determined by OER. For comparison to Track 1 SCOs, analytes will include VOCs, SVOC, pesticides, PCBs and metals according to analytical methods described below. For comparison to Track 4 SCOs, analytes will only include trigger compounds and elements established on the Track 4 SCO list.

Hot-spot removal actions, whether established under this RAWP or identified during the remedial program, will be performed in conjunction with post remedial end-point samples to ensure that hot-spots are fully removed. Analytes for end-point sampling will be those parameters that are driving the hot-spot removal action and will be approved by OER. Frequency for hot-spot end-point sample collection is as follows:

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 will 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.

New York State ELAP certified labs will be used for all confirmation and end-point sample analyses. Labs performing confirmation and end-point sample analyses will be reported in the RAR. The RAR will provide a tabular and map summary of all confirmation and end-point sample results and will include all data including non-detects and applicable standards and/or guidance values. End-point samples will be Confirmation samples will be analyzed for compounds and elements as described above utilizing the following methodology:

Soil analytical methods will include:

- 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.

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

The fundamental quality assurance objective with respect to accuracy, precision, and sensitivity of analysis for laboratory analytical data is to achieve the quality control acceptance of the analytical protocol. The accuracy, precision, and completeness requirements will be addressed by the laboratory for all data generated.

One duplicate sample for every 20 samples collected will be submitted to the approved laboratory for analysis of the same parameters. One trip blank will be submitted to the laboratory with each shipment of soil samples.

Collected samples will be appropriately packaged, placed in coolers and transferred under proper Chain of Custody to the analytical laboratory. Samples will be preserved through the use of ice or "cold-packs" to maintain a temperature of 4^{o}C.

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

Prepare field blanks by pouring distilled or deionized water over decontaminated equipment and collecting the water in laboratory provided containers. Trip blanks will be used whenever samples are transported to the laboratory for analysis of VOCs. Trip blanks will not be used for samples to be analyzed for metals or pesticides. One blind duplicate sample will be prepared and submitted for analysis every 20 samples.

Import and Reuse of Soils

Import of soils onto the property and reuse of soils already on-Site is not anticipated. Should material be required, the importation of material will be conducted in conformance with the SMP presented in Appendix 3.

4.3 ENGINEERING CONTROLS

Engineering Controls were employed in the remedial action to address residual contamination remaining at the site. The Site has three primary Engineering Control Systems. These are:

- composite cover system consisting of concrete covered sidewalks, and concrete building slab;
- soil vapor barrier; and
- an active sub-slab depressurization 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 is comprised 10-inch thick concrete building foundation slab and a minimum of two feet of clean fill or concrete cover in the remaining portion of the Site.

Figure 5 shows the location of each cover type built at the Site.

The composite cover system is a permanent engineering control for the Site. The system will be inspected and reported at specified intervals as required by this RAWP and the SMP. A Soil 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 RAR.

Vapor Barrier

Migration of soil vapor will be mitigated with a combination of building slab and vapor

barrier.

As part of development, migration of potential soil vapor from offsite in the future will be achieved with a combination of building slab and vapor barrier. The vapor barrier will consist of a 20-mil polyethylene vapor barrier membrane installed beneath the building slab and along the exterior of the foundation walls. The vapor barrier system will extend throughout the area occupied by the footprint of the new building which is to be constructed at the Site. The specifications for installation will be provided to the construction management company and the foundation contractor or installer of the liner and will be implemented under this plan. The specifications state that all vapor barrier seams, penetrations, and repairs will be sealed either by the tape method or weld method, according to the manufacturer's recommendations and instructions.

The project's Professional Engineer licensed by the State of New York will have primary direct responsibility for overseeing the implementation of the vapor barrier. The extent of the proposed vapor barrier membrane is provided in Figure 7. Once the product has been decided, the product specifications and design details will be provided to the OER prior to the start of construction. The installation of the vapor barrier will be photo-documented and documentation will be provided in the Remedial Action Report. The Remedial Action Report will also include stamped as-built plans and a PE/RA certified letter (on company letterhead) from primary contractor responsible for installation oversight and field inspections. A compatibility letter indicating that the product is compatible with the compounds detected in the soil and soil vapor at the Site will be provided to the OER prior to the start of construction.

Sub-Slab Depressurization System

Migration of soil vapor will be mitigated with the construction of a (active) sub-slab depressurization system. The system will be comprised of three loops beneath the building footprint. These three loops correspond to three risers vented to the roof with three suction fans. Additional details regarding the location of the vents, construction materials, capacity of suction fans will be determined by a NYS PE and provided to OER when available. A figure showing proposed locations of the loops, risers and fans is provided in Figure 8.

4.4 INSTITUTIONAL CONTROLS

Institutional Controls (IC) have been incorporated in this remedial action to manage residual soil/fill and other media and render the Site protective of public health and the environment. Institutional Controls are listed below. Long-term employment of EC/ICs will be implemented under a site-specific Site Management Plan (SMP) that will be included in the RAR. The property will continue to be registered with an E-Designation by the NYC Buildings Department.

Institutional Controls for this remedial action are:

- The property will continue to be registered with an E-Designation by the NYC Buildings Department. This RAWP includes a description of all ECs and ICs and summarizes the requirements of the Site Management Plan which will note that the property owner and property owner's successors and assigns must comply with the approved SMP;
- Submittal of a Site Management Plan in the RAR for approval by OER that provides procedures for appropriate operation, maintenance, monitoring, inspection, reporting and certification of ECs. SMP will require that the property owner and property owner's successors and assigns will submit to OER a periodic written statement that certifies that: (1) controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by OER; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. OER retains the right to enter the Site in order to evaluate the continued maintenance of any controls. This certification shall be submitted at a frequency to be determine by OER in the SMP and will comply with RCNY §43-1407(l)(3).
- 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 use and will not be used for a higher level of use without prior approval by OER.

4.5 SITE MANAGEMENT PLAN

Site Management is the last phase of remediation and begins 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 the DCR and 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 DCR and 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 Brownfield Cleanup Agreement with OER. This includes a plan for: (1) implementation of EC's and ICs; (2) implementation of monitoring programs; (3) operation and maintenance of EC's; (4) inspection and certification of EC's; and (5) reporting.

Site management activities, reporting, and EC/IC certification will be scheduled by OER on a periodic basis to be established in 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 March 31 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.

Investigations reported in the Remedial Investigation Report (RIR) are sufficient to complete a Qualitative Human Health Exposure Assessment (QHHEA). 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 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 Sources

Historic fill material is present at the Site from grade to approximately 3.5 feet below grade, where bedrock was encountered. Based on the results of the RI, the contaminants of concern are:

Soil:

- Metals including Copper, Lead, Mercury, nickel and Zinc exceeded Unrestricted Use SCOs;
- Pesticides 4,4'-DDE and 4,4'-DDD exceeded Unrestricted Use SCOs;
- One PCB Aroclor (1260) exceeded the Unrestricted Use SCOs;
- SVOCs including Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Chrysene, Dibenzo(a,h) anthracene, Indeno (1,2,3-cd)pyrene and Phenol exceeded Unrestricted Use SCOs;
- VOCs including Benzene, Toluene, Trichloroethene (TCE) and Xylenes exceeded unrestricted use SCOs. ;

Groundwater:

- Metals including Iron, Manganese, Magnesium and Sodium exceeded the NYS Ambient Water Quality Standards.

Soil Vapor:

- Petroleum-related VOCs (BTEX) were detected exceeding NYSDOH guidelines;
- Several compounds at moderate concentrations; and

- Chlorinated TCE was detected in two soil vapor samples exceeding the NYSDOH guidelines and Air Guidance Value (AGV).

Nature, Extent, Fate and Transport of Contaminants

Soil: SVOCs and metals are present across the Site. VOC were identified in the southern portion of the Site. Pesticides and PCBs were identified in two samples located on the western portion of the Site. Groundwater contaminants include metals such as iron, manganese, magnesium, and sodium

Petroleum-related VOCs and several compounds were detected in soil vapors throughout the Site. TCE was detected above the monitoring threshold established by the New York State DOH in the eastern portion of the Site and was not detected in soil.

Potential Routes of Exposure

The five elements of an exposure pathway are:

1) the source of contamination;

2) the environmental media and transport mechanisms;

3) the point of exposure;

4) the route of exposure; and

5) the receptor population.

These elements of an exposure pathway may be based on past, present, or future events. An exposure pathway is considered complete when all five elements of an exposure pathway are documented. A potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway cannot be documented. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and will never exist in the future. Three potential primary routes exist by which chemicals can enter the body:

- Ingestion of water, fill, or soil;

- Inhalation of vapors and particulates; and
- Dermal contact with water, fill, soil, or building materials.

Existence of Human Health Exposure

Current Conditions: There is no potential for direct exposure and ingestion of water, soil and fill currently at the site due to the existing impervious asphalt cover. Groundwater is not exposed at the Site, and because the Site is served by the public water supply and groundwater use for potable supply is prohibited, groundwater is not used at the Site and there is no potential for exposure on Site.

Construction/ Remediation Activities: Once redevelopment activities begin, construction workers will come into direct contact with surface and subsurface soils, as a result of on-Site construction and excavation activities. Contact with groundwater is not anticipated due to the depth of water. On-Site construction workers potentially could ingest, inhale or have dermal contact with any exposed impacted soil, and fill. Similarly, off-Site receptors could be exposed to dust and vapors from on-Site activities. During construction, on-Site and off-Site exposures to contaminated dust from on-Site will be addressed through the SMMP, dust controls, and through the implementation of the CAMP and a CHASP.

Proposed Future Conditions: Under future remediated conditions, most or all soils will meet, at minimum, site specific Track 4 SCOs. The site will be fully capped, limiting potential direct exposure to soil and groundwater remaining in place, and engineering controls including a vapor barrier system, an active SSDS and composite cover will prevent potential for inhalation via soil vapor intrusion. The site is served by a public water supply and groundwater is not used at the site. There are no plausible off-site pathways for ingestion, inhalation, or dermal exposure to contaminants derived from the site.

Receptor Populations

On-Site Receptors: The Site is currently used as a parking lot. There are no permanent structures present on-site. During construction, onsite receptors will include construction

workers and visitors. After construction, onsite receptors will include child and adult residents and employees.

Off-Site Receptors: Potential off-site receptors within a 0.25-mile radius of the Site include: adult and child residents, commercial and construction workers, pedestrians, trespassers, and cyclists, based on the following:

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. Public Park– existing and future

Overall Human Health Exposure Assessment

There are no completed exposure pathways for the current site condition as long as the parking lot is maintained. There is a potential complete exposure pathway that requires mitigation during implementation of the remedy. 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 CAMP, the SMMP, and a CHASP. There is no complete exposure pathway under future conditions after the site is developed. The vapor barrier, composite cover with demarcation layer and long-term site management will interrupt any remaining exposure pathways. Continued protection after the remedial action will be achieved by the implementation of site management including periodic inspection and certification of the performance of remedial controls. This assessment takes into consideration the reasonably anticipated use of the site, which includes a residential structure, composite cover, and a subsurface vapor barrier system for the building. 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.

5.0 REMEDIAL ACTION MANAGEMENT

5.1 PROJECT ORGANIZATION AND OVERSIGHT

Principal personnel who will participate in the remedial action will be determined at a later date. The Professional Engineer (PE) and Qualified Environmental Professionals (QEPs) for this project will be determined at a later date.

5.2 SITE SECURITY

Site access will be controlled by fencing, which will be installed around the work area to restrict access to the work area.

5.3 WORK HOURS

The hours for operation of remedial construction will be from 7 AM to 5 PM. These hours conform to the New York City Department of Buildings construction code requirements.

5.4 CONSTRUCTION HEALTH AND SAFETY PLAN

The Health and Safety Plan is included in Appendix 4. The Site Safety Coordinator is to be determined. Once determined, OER will be notified of the name and contact information. 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, including 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 be required to sign an HASP acknowledgment. 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 HASP. 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 baling/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/m^3) 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/m^3 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/m^3 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/m^3 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 to assure safety. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Markout 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.

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 roads 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 NYC VCP 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 potable 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; lose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from holes, 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, haybales; 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. Storm-water 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. If the source of the spill is ongoing and can be identified, it should be stopped it 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 NYC VCP 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 will be provided to the OER once soil disposal facilities have been finalized.

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 day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of 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 excursions, if any;
- 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.

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 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 that the remedial action with the deviation(s) is protective of public health and the environment.

5.13 DATA USABILITY SUMMARY REPORT

The primary objective of a Data Usability Summary Report (DUSR) is to determine whether or not data meets the site specific criteria for data quality and data use. The DUSR provides an evaluation of analytical data without third party data validation. The DUSR for post-remedial samples collected during implementation of this RAWP will be included in the Remedial Action Report (RAR).

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;
- As-built drawings for all constructed remedial elements, required certifications, manifests and other written and photographic documentation of remedial work performed under this remedy;
- Site Management Plan;
- 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 and all material characterization results, QA/QC results for end-point sampling, and other sampling and chemical analysis performed as part of the remedial action and DUSR;
- Test results or other evidence demonstrating that remedial systems are functioning properly;
- Account of the source area locations and characteristics of all contaminated material removed from the Site including a map showing source areas;
- Account 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.
- Recorded Declaration of Covenants and Restrictions.

- Continue registration of the property with an E-Designation by the NYC Department of Buildings.
- Reports and supporting material will be submitted in digital form.

Remedial Action Report Certification

The following certification will appear in front of the Executive Summary of the Remedial Action Report. The certification will include the following statements:

I, _____, am currently a professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the 233 Landing Road Site (NYC VCP Site No. and OER Project No. 15RHAN334X). .

I, _____, am a qualified Environmental Professional. I had primary direct responsibility for implementation remedial program for the 233 Landing Road Site (NYC VCP Site No. and OER Project No. 15RHAN334X). *)*

I certify that the OER-approved Remedial Action Work Plan dated month day year and Stipulations in a letter dated month day, year; if any were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

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 4-month remediation period is anticipated.

From the table below, pick or add items that are appropriate to this project and include estimated completion dates. Tabular presentation of the schedule is acceptable.

Schedule Milestone	Weeks from Remedial Action Start	Duration (weeks)
OER Approval of RAWP	0	-
Fact Sheet 2 announcing start of remedy	0	-
Mobilization	1	1
Remedial Excavation	2	3
Demobilization	12	2
Record Declaration of Covenants and Restrictions	12	2
Submit Remedial Action Report	16	2

APPENDIX 1
CITIZEN PARTICIPATION PLAN

The NYC Office of Environmental Remediation and Bowery Residents' Committee 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, Bowery Residents' Committee 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, Samantha Morris, 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 in the nearest public library that maintains evening and weekend hours. 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. Bowery Residents' Committee will inspect the repositories to ensure that they are fully populated with project information. The repository for this project is:

New York Library-Francis Martin Library

2150 University Avenue, Bronx, NY 10453

718-295-5287

Monday: 11:00 AM to 7:00 PM

Tuesday, Wednesday and Thursday: 10:00 AM to 6:00 PM

Friday and Saturday: 10:00 AM to 5:00 PM

Digital Documentation. NYC OER strongly encourages the use of digital documents in repositories as a means of minimizing paper use while also increasing convenience in access and ease of use.

Identify Issues of Public Concern. No issues of public concern have been identified for this project.

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 prepared by Bowery Residents' Committee, reviewed and approved by OER prior to distribution and mailed by Bowery Residents' Committee. 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. See flow chart on the following page, which identifies when during the NYC VCP public notices are issued: 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 2
SUSTAINABILITY STATEMENT

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

Reuse of Clean, Recyclable Materials.

Reuse of clean, locally-derived recyclable materials reduces consumption of non-renewable virgin resources and can provide energy savings and greenhouse gas reduction.

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.

Reduce Consumption of Virgin and Non-Renewable Resources.

Reduced consumption of virgin and non-renewable resources lowers the overall environmental impact of the project on the region by conserving these resources.

The consumption of virgin and non-renewable resources will be reduced by avoiding use of virgin soils/top-soils as backfill when possible.

An estimate of the quantity (in tons) of virgin and non-renewable resources, the use of which will be avoided 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.

To minimize truck transport for imported material, the use of locally derived backfill materials will be used when possible.

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.

Use of clean fuel improves NYC's air quality by reducing harmful emissions.

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.

The vapor barrier system and active SSDS planned for the development will provide protection against recontamination originating from off-site sources.

An estimate of the area of the Site that utilizes recontamination controls under this plan will be reported in the RAR in square feet.

Storm-water Retention.

Storm-water retention improves water quality by lowering the rate of combined storm-water 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 storm-water 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 proposed site building will meet Enterprise Green Communities standards and will also meet NYSERDA MPP standards. 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 Brownfield Cleanup Program.

Bowery Residents' Committee is participating in OER's Paperless Brownfield 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.

Bowery Residents Committee 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 landscaping will be planted in the rear yard in the eastern portion of the Site.

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 3

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 RAR. Soil screening will be performed during invasive work performed during the remedy and development phases prior to issuance of the Notice of Completion.

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 will be provided to the OER once soil disposal facilities have been finalized. 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 Bronx, New York 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 RAR.

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 RAR.

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 RAR. A manifest system for off-Site transportation of exported materials will be employed. Manifest information will be reported in the RAR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

1.7 MATERIALS REUSE ON-SITE

Soil and fill that is derived from the property that meets the soil cleanup objectives established in this plan may be reused on-Site. The soil cleanup objectives for any on-Site reuse are listed in Table 1. '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 comparable soil/fill material, 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 RAWP are followed. The locations of any reused material will be provided in the RAR.

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. The backfill and cover soil quality objectives are Track 1 Unrestricted Use SCOs.

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 RAWP. The RAR 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.

Source Screening and 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 RAR. 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 STORM-WATER POLLUTION PREVENTION

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAWP (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

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 the Remedial Action Report.

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 the Remedial Action Report.

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 4

HEALTH AND SAFETY PLAN

CONSTRUCTION HEALTH AND SAFETY PLAN

233 LANDING ROAD
BRONX, NEW YORK

ON BEHALF OF:
Bowery Residents' Committee
131 West 25th Street- 12th Floor
New York, NY 10001

PREPARED BY:
GZA GeoEnvironmental Inc.
55 Lane Road, Suite 407
Fairfield, New Jersey 07004

November 2014
File No. 12.0076232.10

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APPENDICES

1.0 INTRODUCTION

1.1 Overview

This project-specific Construction Health and Safety Plan (CHASP) has been developed by GZA GeoEnvironmental, Inc. (GZA) on behalf of Bowery Residents' Committee (Client) to establish the procedures necessary for protection resulting from the excavation of soils at 233 Landing Road, Bronx, New York (Site). The soils will be excavated as part of a plan to redevelop the Site. The procedures in this plan have been developed based on current knowledge regarding the hazards which are known or anticipated for the operations to be conducted at the Site.

1.2 Site Hazards

This CHASP covers the hazards associated with potential chemical and physical exposures. Physical hazards such as injuries from typical excavation field work activities, including the operation of heavy equipment, noise exposure, heat and cold stress, electrical hazards, fire hazards, excavation hazards and general safety hazards associated with walking on working surfaces are covered by this CHASP. Site activities may pose chemical exposure hazards. Potential chemical exposure hazards include skin contact, ingestion and inhalation hazards which may result from the presence of historic fill material throughout the Site. See **Section 2.0** for detailed hazard information.

1.3 Project Team

The organizational structure established for the implementation of health and safety requirements are established by this CHASP. Personnel who have been assigned specific authority to implement and enforce the provisions of this CHASP are identified below.

Name	Project Title/Assigned Role	Phone Numbers
Benjamin Alter	Project Manager	Work: 973-774-3309 Mobile: 973-865-9017
Arsheen Ehtesham	Site Supervisor	Work: 973-774-3316 Mobile: 973-897-4036

The control of Site hazards is dependent upon the degree to which management enforces compliance and employees cooperate with the specified health and safety requirements. Therefore, personnel at all levels of the organization must recognize their individual responsibility to comply. All activities covered by this CHASP must be conducted in compliance with this CHASP and with applicable federal, state, and local health and safety regulations, including 29 CFR 1910.120. Personnel covered by this CHASP who cannot or will not comply must be excluded from Site activities.

2.0 HAZARD ASSESSMENT

The following hazard assessment applies only to the activities within the specified scope of this CHASP.

2.1 Chemical Hazards

The chemical hazard information provided below is based on data provided in GZA's Phase II Environmental Site Assessment (ESA) report dated May 2014. During the investigation, representative Site soil samples were collected from 0.5 to 1.5 feet bg at the four borehole locations (GZA-1 thru GZA-4) and additionally from 10 to 11 feet bg at borehole locations GZA-1 and GZA-2. These samples were analyzed for Target Compound List (TCL) semi-volatile organic compounds (SVOCs), Target Analyte Metals (TAL Metals) and polychlorinated biphenyl (PCBs). Soil analytical results were compared to the New York Restricted Residential Soil Cleanup Objectives (RRSCOs) and the New York Unrestricted Use Soil Cleanup Objectives (UUSCOs). The results of the soil analyses are summarized as follows:

- None of the six soil samples contained exceedances of PCBs.
- Soil sample GZA-1(10-11) contained several targeted SVOCs at concentrations above their RRSCOs, and several other targeted SVOCs at concentrations above their UUSCOs but below their RRSCOs. None of the other five soil samples contained exceedances of any targeted SVOC.
- Three of the soil samples contained lead at a concentration above its UUSCO but below its RRSCO.
- Soil sample GZA-2(10-11) contained copper and mercury, two targeted metals, at concentrations above their UUSCOs and RRSCOs. Five other targeted metals, including lead, were detected in this sample at concentrations above their UUSCOs but below their RRSCOs. Three of the soil samples did not contain any targeted metals at concentrations above their UUSCOs or RRSCOs.

One soil vapor sampling point (SG-1) was installed at the location of soil boring GZA-1. This soil gas sample was analyzed for VOCs using USEPA Method TO+15. Soil vapor analytical results were compared to New York State Department of Health (NYSDOH) Soil Vapor Intrusion Guidance Criteria. Soil vapor sample SG-1 was analyzed for VOCs using USEPA Method TO-15. The following VOCs were detected above one or more of the NYSDOH criteria: 1,3-butadiene, 4-methyl-2-pentanone, benzene, carbon sulfide, chloromethane, n-hexane, xylene, tetrachloroethene, trichloroethene, and vinyl chloride.

Overexposure to metal compounds has been associated with a variety of local and systemic health hazards, both acute and chronic in nature, including lung damage, neurological effects, gastrointestinal effects, kidney and liver damage, allergic dermatitis and other skin disorders. Overexposure to certain PAHs has been associated with the development of skin cancer. Contact of PAH compounds with the skin may cause photosensitization of the skin, producing skin burns after subsequent exposure to ultraviolet radiation.

Exposure to metals and PAHs is most commonly through inhalation and ingestion of dust. Protective measures, such as the wearing of chemically resistant gloves, and use of air-

purifying respirators with dust cartridges are appropriate when handling metal and PAH contaminated materials. Dust levels should be controlled with wetting if necessary, as described in **Section 3.2**.

2.2 Physical Hazards

A variety of physical hazards may be present during Site activities. The most common hazards are struck-by/against hazards; slips, trips, and falls; and temperature extreme (cold and heat) stress. Other physical hazards are due to the use of hand and power tools and material handling. Attached is GZA's "Task Hazard Analysis 5.1: Excavation and Offsite Disposal" (see **Appendix A**). It summarizes the typical physical hazards likely to be encountered during the material excavation and handling portions of the project. Specific safety requirements will covered during safety briefings at the Site.

3.0 AIR MONITORING

Air monitoring falls into two separate categories: direct reading/environmental monitoring, and work zone exposure monitoring. The following Sections summarize the types of environmental monitoring as well as the appropriate response actions applicable to the Site.

3.1 Organic Vapor Monitoring

Volatile organic vapor hazards have been identified for the Site (see Section 2.0). Therefore, organic vapor monitoring with a photoionization detector (PID) will be required for the Site.

Air Monitoring Instruments and Action Levels: Photo-Ionization detector	
0 to 10 ppm	Remain in Level D. Ventilate space with positive pressure. Use colorimetric tubes or other chemical specific device to verify PID readings do not contain low PEL toxic materials (Benzene, Vinyl Chloride, etc.) where applicable. If benzene is present above 1 ppm withdraw from excavation and proceed to level C.
10 to 250 ppm	Withdraw from work area and contact Project Management. Proceed to Level C protection for re-entry, or discontinue operation
> 250 ppm	Secure operations, withdraw from work area, and discontinue work at that location until contaminants can be evaluated and a detailed re-entry plan implemented.

3.2 Total Particulates

Due to the presence of metals and PAHs in soils on-Site, total respirable particulates may be a concern. Dust levels should be visually monitored and if levels become noticeable, soils should be wetted down to control dusty conditions. GZA shall be responsible for evaluating when the wetting of soils is required and the most appropriate method to use. Recommended

measurement techniques for particulate monitoring are described below.

Upwind, downwind and work zone particulate concentrations should be measured at the start of each work day during active handling of excavated materials (including stockpiling and truck loading) and periodically thereafter to establish background conditions.

The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers (µm) in size (PM-10) and capable of integrating over a period of five minutes or less for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate excess of the action level.

- Dust migration will be visually assessed during all work activities, and at no time will the downwind perimeter particulate levels be allowed to exceed a total standard of 10 mg/m^3 (or "nuisance" dust levels).

- If the downwind PM-10 level is 100 micrograms per cubic meter (µg/m^3) greater than the background (upwind perimeter) for a five-minute period, or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques (e.g., soil wetting) provided the downwind PM-10 levels do not exceed 150 µg/m^3 above the upwind level and 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 µg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentrations to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

Particulate Monitoring, Response Levels, and Actions

Parameter	**Monitoring Instrument**	**Response Levels** (above background levels)	**Actions**	**Conditions for Continuing Work Activities**
Particulates < 10 µm (PM-10)	Dust Meter	Fugitive dust migration	1. implement dust suppression techniques	Dust suppression techniques are in place
		>100 µg/m^3 but <150 µg/m^3	1. implement dust suppression techniques	Levels must not exceed 150 µg/m^3 with dust suppression techniques in place
		>150 µg/m^3	1. halt activity 2. re-evaluate activities	Levels decrease below 150 µg/m^3 and fugitive dust migration is prevented

4.0 PERSONAL PROTECTIVE EQUIPMENT

This section describes the personal protective equipment (PPE) that will be worn for the activities covered by this CHASP. Based on available analytical data and the proposed intrusive activities, we anticipate that all activities will require Level D or Modified Level D PPE.

4.1 General Site Work

General Site work includes work conducted outside the excavation areas, work involving heavy equipment, and non-intrusive activities which do not generate dust. These activities will require Level D protective equipment. Level D is defined as:

- Hardhat
- Eye protection
- Hearing protection (with site workers at all times and donned when appropriate)
- Steel-toed work boots
- Work clothes

Workers shall wear appropriate hearing protection in during designated hearing protection-required tasks (such as, jack hammering, pile driving etc.). To reduce the exposure to noise, personnel working in areas of excessive noise must use hearing protectors (earplugs or earmuffs). *Rule-of-Thumb: Wherever actual data from sound level meters or noise dosimeters is unavailable, if it is necessary to raise one's voice above a normal conversational level to communicate with others within 3 to 5 feet away, hearing protection should be worn.*

4.2 Excavation Areas and Other Soil Handling

Personnel working in the areas of active excavation but not operating heavy equipment, and any other personnel potentially contacting contaminated materials will be required to wear Modified Level D PPE. Level C PPE and Level B are not expected to be required. Modified Level D is defined as:

- Hardhat
- Eye protection
- Hearing protection (as warranted see above)
- Steel-toed work boots
- Tyvek coveralls
- Disposable nitrile chemically resistant gloves

5.0 SITE CONTROL

To prevent both exposure of unprotected personnel and migration of contamination due to tracking by personnel or equipment, work areas along with personal protective equipment requirements will be clearly identified with signage. Pedestrian traffic will be managed to the

extent possible by the Contractor's Traffic and Pedestrian Control Plan. The Contractor will designate a work zone and support zone as defined below.

5.1 Work Zone

Work zones on Site will be temporary or dynamic, encompassing the work area(s) actively being worked in on that particular day(s). Site personnel will be advised of the current work area(s) as part of site safety meetings.

5.2 Support Zone

The support zone will consist of an area outside the areas of active excavation and soil handling, where equipment and support vehicles will be located. Eating, drinking and smoking will be permitted only in this area. Sanitary facilities will be located on Site. In addition, potable water and water and soap for hand washing will be available at the Site.

5.3 Other Site Control and Safety Measures

The following measures are designed to augment the specific health and safety guidelines provided in this plan. These issues will form the basis of the Site orientation and daily safety meetings discussed in **Section 7.0**, below.

- The Site hazards will be evaluated by the Contractor using the Contractor's Site Safety Checklist.
- No one is to perform field work alone. Team members must be intimately familiar with the procedures for initiating an emergency response.
- Whenever possible, avoid contact with contaminated (or potentially contaminated) surfaces or materials. Walk around (not through) puddles and discolored surfaces. Do not kneel on the ground or set equipment on the ground.
- Eating, drinking, chewing gum or tobacco, smoking or any practice that increases the probability of hand-to-mouth transfer and ingestion of materials is prohibited except in the support zone after proper decontamination as define in **Section 6.0**.
- The use of alcohol or drugs is prohibited during the conduct or field operations.
- PPE will be required for all field personnel unless otherwise approved by the subcontractor's health and safety representatives and/or the Project Superintendent.

5.4 Site Security

The Site shall be occupied only by Contractor personnel and subcontractors during Site work. If possible, access to the work areas during field work will be limited by closing site gates to reduce unauthorized pedestrian traffic. The Contractor Project Manager is responsible for

identifying the presence of all employees on Site.

Equipment left on Site during off hours must be locked, immobilized and/or otherwise secured to prevent theft or unauthorized use or access. The Contractor and subcontractors' employees will not be permitted on Site during off hours without specific client approval.

6.0 DECONTAMINATION

Personnel and equipment will undergo proper decontamination before leaving the Site. Solid waste generated during decontamination will be bagged by the Contractor personnel and stored on site for disposal. Water will be disposed of by on-site infiltration into soil within the exclusion zone.

6.1 Personal Decontamination

Personal decontamination will be accomplished by following a systematic procedure of cleaning and removal of PPE. The Contractor will supply decontamination equipment so that PPE can be brushed to remove gross contamination, scrubbed clean in a detergent solution, and then rinsed clean. To facilitate this, the Contractor will set up a three-basin wash system on Site. Performance of the following steps required in a decontamination sequence will depend on the level of protection worn in accordance with **Section 4.0**:

1. Remove and wipe clean hard hat
2. Brush boots and gloves of gross contamination
3. Scrub boots and gloves clean
4. Rinse boots and gloves
5. Dry non-disposable equipment with paper towels
6. Remove Tyvek coveralls
7. Remove eye protection
8. Remove chemically resistant gloves

Disposable PPE, such as Tyvek coveralls, gloves, and hearing protection, etc. will be placed in trash bags in an on-site container pending a disposal. Alternative chemical decontamination procedures, such as steam-cleaning reusable rubber outer boots, may be used if necessary.

6.2 Equipment Decontamination

Hand tools and portable equipment will be decontaminated upon leaving the active excavation areas using the same procedures for personal decontamination. Since wooden tools are difficult to decontaminate because they absorb chemicals, they will be kept on Site for the project duration and handled only by protected workers. At the end of the Site activities, wooden tools will be discarded if they cannot be decontaminated properly.

Decontamination of large equipment will mitigate the risk of spreading potentially-

contaminated soil off-Site. Large equipment will be decontaminated near the entrance to the Site. The Contractor will use a combination of long-handled brushes, rods and shovels for general exterior cleaning and dislodging contaminated soil caught in tires and the undersides of vehicles and equipment. Prior to leaving the Site, large equipment will be inspected to check that excess material has not adhered to the equipment. If needed, the Contractor will clean the large equipment, including washing tires and undercarriages, with a hose to remove excess adhered soil prior to leaving the Site.

Exposed excavated material will be covered on each truck after loading. The cover will be secured and remain in place until the container has reached the disposal facility.

7.0 MEDICAL MONITORING AND TRAINING REQUIREMENTS

The Contractor will provide training records for site personnel and subcontractors to the Client prior to on-site work. These records will be maintained on site.

7.1 Medical Monitoring

Respiratory protection is not required, given the known levels of soil contamination. Therefore, no medical monitoring requirements will be instituted for this project.

7.2 Training

All personnel covered by this CHASP must have completed the appropriate training requirements specified in 29 CFR 1910.1200 Hazard Communication and 29 CFR 1910.120(e). Site conditions will dictate whether workers will be required to undergo 40-hour HAZWOPER training to don the appropriate dermal protection, which will consist of Tyvek suits, and nitrile gloves.

At least one Contractor employee must be on Site during all activities to act as the Site Foreman. The Site Foreman will be responsible for identifying existing and predictable hazards in surroundings or working conditions that are unsanitary, hazardous, or dangerous to Site workers and or the community, and will have the authorization to take prompt corrective measures to eliminate them. This individual must have documentation of at least three days of supervised field experience as well as completion of the specified 8-hour training course for managers and supervisors. The Contractor should retain records of certifications and training.

7.3 Subcontractors

Subcontractors will be required to provide to the Contractor Project (Site) Manager specific written documentation that each individual assigned to this project has completed the medical monitoring and training requirements specified above. This information must be provided prior to their performing any work on site.

7.4 Site Safety Meetings

Prior to the commencement of on-site investigative activities, a site safety meeting will be held to review the specific requirements of this CHASP. Sign-off sheets will be collected at this meeting (see **Appendix B**). Short safety refresher meetings will be conducted daily or as conditions or work activates change. In addition, the Contractor Project Manager will document that Site visitors have had the required training in accordance with 29 CFR 1910.120 and will provide documented pre-entry safety briefings.

8.0 EMERGENCY ACTION PLAN

OSHA defines emergency response as any "response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual-aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result in an uncontrolled release of a hazardous substance." The Contractor personnel covered by this CHASP may not participate in any emergency response where there are potential safety or health hazards (i.e., fire, explosion, or chemical exposure). The Contractor response actions will be limited to evacuation and medical/first aid as described in this section.

The basic elements of an emergency evacuation plan include employee training, alarm systems, escape routes, escape procedures, critical operations or equipment, rescue and medical duty assignments, designation of responsible parties, emergency reporting procedures, and methods to account for all employees after evacuation.

8.1 Employee Information

General training regarding emergency evacuation procedures are included in the Contractor initial and refresher training courses. As described, employees must be instructed in the specific aspects of emergency evacuation applicable to the site as part of the site safety meeting prior to the commencement of all on-site activities. On-site refresher or update training is required anytime escape routes or procedures are modified or personnel assignments are changed. This information will be provided during the site safety meetings (see **Section 7.4**) and will be documented by the Contractor.

8.2 Emergency Signal and Alarm Systems

An emergency communication system must be in effect at all sites. **The most simple and effective emergency communication system in many situations will be direct verbal communications**. Each site must be assessed at the time of initial site activity and periodically as the work progresses. Verbal communications must be supplemented anytime voices can not be clearly perceived above ambient noise levels (i.e., noise from heavy equipment, trucks, etc.) and anytime a clear line-of-sight can not be easily maintained amongst all personnel because of distance, terrain or other obstructions. The Contractor will maintain an air horn (or whistle) on-Site that will be used to signal an emergency so that it can be heard over other construction noises on-Site.

8.3 Emergency Contacts

Police:	911
Fire:	911
Ambulance:	911
Bronx-Lebanon Hospital Center:	(718) 590-1800

8.4 Hospital Location

Bronx-Lebanon Hospital Center is located at 1650 Grand Concourse, Bronx, NY. The most direct route to the hospital from the Site is shown in **Appendix C** and summarized below:

- Slight right onto W Fordham Rd.
- Turn Right onto Valentine Ave
- Turn right at the 2nd cross street onto E 187th St.
- Take the 1st right onto Grand Concourse.

8.5 Incident Reporting Procedures

Any incident (other than minor first aid treatment) resulting in injury, illness or property damage requires an accident investigation and report. The investigation should be initiated as soon as emergency conditions are under control. The purpose of this investigation is not to attribute blame but to determine the pertinent facts so that repeat or similar occurrences can be avoided.

The investigation should begin while details are still fresh in the mind of anyone involved. The person administering first aid may be able to start the fact gathering process if the injured are able to speak. Pertinent facts must be determined. Questions beginning with who, what, when, where, and how are usually most effective to discover ways to improve job performance in terms of efficiency and quality of work, as well as safety and health concerns.

APPENDIX A
EXCAVATION AND OFFSITE DISPOSAL

GZA GEOENVIRONMENTAL, INC.
JOB HAZARD ANALYSIS WORKSHEET

Job: Excavation and Offsite Disposal		
Analysis By: Adam Swederskas and Rich McGanty	**Reviewed By: Ronald Breton, P.E.**	**Approved By: Jayanti Chatterjee, CIH**
Date: October 30, 2011	**Date: November 13, 2011**	**Date: December 14, 2011**

TASK 5.1
EXCAVATION AND OFFSITE DISPOSAL

HAZARD CONTROLS

GZA Job Tasks	Potential Hazards	Controls
Review Related THA's – 4.4a Excavation and Trenching (Heavy Equipment)		
Excavation, transportation and disposal by GZA and its Subcontractors	Struck by, caught by, run over by equipment	Become familiar with project hazards through review of Job Hazard Analysis and participate in daily safety tailgate meetings.
		Communicate Job Hazard Analysis and Lessons Learned information to work crew prior to initiating work and throughout the project as needed.
		Maintain safe distance from excavation equipment at all times during operation. Do not walk alongside truck during loading operations.
		Wear appropriate safety equipment as required by the Site Specific Health and Safety Plan when in work area (hard hat, steel toe boots, work clothes, high visibility vest, eye and hearing protection, etc.).
		Be aware of Excavator and dump trailer location and traffic routes at all times.
		Stay clear of swing radius of equipment. Stay in clear site of heavy equipment and truck operators' line of site.
		Assess that contractor's Operator's and truck drivers are maintaining communication and coordinating their actions and movements. Inform the subcontractor if improvements need to be made.
		Observe to see if heavy equipment is on stable ground to prevent tipping hazard. If there is concern consult with subcontractor to rectify the hazard.
	Exposure to Hazardous Substances	Be alert for hazardous site contaminants (as indicated by odor, visual characteristics, location, and site history). Assess if contingencies are in place for characterizing hazards and protecting workers by use of appropriate personal protective clothing and respiratory protection, as needed; notify project manager if such conditions are encountered.
	Underground /Overhead Utilities	Assess if utility mark-outs are active and current. If work is in vicinity of overhead lines determine appropriate safe distances. Comply with all OSHA safety requirements relative to working near overhead electrical lines. Refer to THA 4.4a for additional control measures.
	Noise	Wear appropriate hearing protection.
Positioning	Personal injury due to	Wear high visibility vest at all times when out of vehicle

TASK 5.1
EXCAVATION AND OFFSITE DISPOSAL

HAZARD CONTROLS

GZA Job Tasks	Potential Hazards	Controls
trucks/trailers/heavy equipment	vehicle traffic	Use emergency flashers or other appropriate vehicle warning system when placing equipment
	Roadway/traffic hazards	Assess if traffic control devices are in place prior to positioning trucks along roadway. Refer to THA 4.4a for additional control measures.
		Utilize police detail (if necessary) to direct traffic while entering traffic safety zone.
All Site Work	Adverse Weather Conditions	Assess weather conditions prior to on-site work and examine forecast for anticipated period of work.
		Dress appropriately for weather conditions (e.g., precipitation, temperature ranges over anticipated duration of field work).
		Use protective ointments such as sunscreen and chap stick, as appropriate to the field conditions.
		Be aware of the anticipated weather conditions prior to mobilization to the site. Unacceptable field work conditions are not precise, but may include site specific conditions, general location, extreme weather conditions (e.g., icing, lightning, excessive cold or wind), travel conditions, and other factors. Professional judgment is required, and personal assessment of safety must always be individually assessed.
	Slips, trips and falls	Maintain clean and sanitary work area free of tripping/slipping hazards.
		Assess space to work safely and with sound footing.
		Assess for ample lighting, or provide portable lighting.
		Assess for adequate facilities/equipment for hand washing prior to eating.
	Insect Bites; Plant toxins; Poisonous Snakes. Incidental contact	Ticks carry risk of Lyme's and other Diseases. Tick season is basically any field day above 40 degrees F. • Tuck pants into long socks and consider applying DEET (or permethrin pre-treatment) to clothing in season to control exposure to ticks. • Check clothing for ticks frequently • Check whole body immediately upon returning from field and shower.
		Know the appearance of poison ivy and poison sumac in all seasons, and if sensitive to these toxins, carry and use special cleaning soaps/solutions when thought to be exposed. Stock first aid kit with poison ivy/sumac cleaning soaps/solutions.
		Be aware of intermittent seasonal reports of mosquito borne diseases, such as West Nile disease and Eastern Equine Encephalitis (EEE), and their locations relative to your field site. Consider the use DEET or other mosquito repellant.
		Be aware of potential cavity, suspended or ground nesting bee/wasp/hornet nests. Avoid undue disturbance or approach with appropriate safety clothing protection and netting.
		Be aware of terrain likely to harbor poisonous snakes. Avoid reaching or stepping into hidden areas (such as into wood pile, rock pile, debris pile, stone wall, etc.) without pre-inspection.
	Emergency Conditions	Become familiar with emergency contact procedures and the route to nearest hospital.
		Have a first aid kit available.
		It is required that at least one individual in the field has had first aid training.
		Carry a cell phone during all field work for emergency purposes, and confirm that a cell phone signal is available at the site.

APPENDIX B
HEALTH AND SAFETY BRIEFING

ATTACHMENT A
INITIAL HEALTH AND SAFETY PLAN BRIEFING RECORD

Project: _____ Job No.:_____

Project Location: _____

PM: _____ Phone No.:_____

PIC: _____ Phone No.:_____

The undersigned have attended a Health and Safety briefing, consisting of a review of the provisions of the Site Specific H&S Plan, and/or appropriate prior H&S events or concerns, and/or review of anticipated H&S concerns and safety measures for the project.

SUMMARY OF HEALTH AND SAFETY TOPICS COVERED	
	Project Specific Information and Site History
	Site Specific Hazards
	Scope of Work
	Roles and Responsibilities
	H&S Equipment and Site Control Measures
	Evacuation Route, Assembly Point, and Route to Hospital

NAME (printed)	SIGNATURE	COMPANY	DATE

Conducted by: _____ Date: _____

Conducted by: _____ Date: _____

Conducted by: _____ Date: _____

- *USE ADDITIONAL SHEETS AS NECESSACARY*

GZA GeoEnvironmental, Inc.
55 Lane Road
Fairfield, New Jersey 07004

Phone: 973-774-3300
Fax: 973-774-3350

DAILY SAFETY MEETING

Project Name: _____ Date: _____

Project Number: _____ Presented By: _____

Check the Applicable/Reviewed Information:

- ☐ safety is everyone's responsibility
- ☐ site health and safety plan reviewed
- ☐ safety glasses, hard hat, safety boots
- ☐ employee Right-to-Know/MSDS location
- ☐ vehicle safety and driving/road conditions
- ☐ equipment and machinery familiarization
- ☐ portable tool safety and awareness
- ☐ update HASP/THA for new tasks or changing conditions
- ☐ first aid, safety and PPE location
- ☐ sharp objects, rebar and scrap metal hazards
- ☐ latex gloves inner/nitrite gloves outer
- ☐ open pits, excavations and trenching hazards
- ☐ excavation/trenching inspections/documentation
- ☐ full face respirators with proper cartridges
- ☐ upgrade to Level C at: PID (10.6 eV)>____ppm
- ☐ work stoppage at: PID (10.6 eV)>___ppm, % LEL >10%
- ☐ slips, trips and falls
- ☐ strains and sprains
- ☐ anticipated visitors
- ☐ electrical ground fault
- ☐ public safety and fences
- ☐ excavator swing and loading
- ☐ ordering site and housekeeping
- ☐ smoking in designated areas
- ☐ leather gloves for protection
- ☐ effects of the night before? Rain or snow?
- ☐ vibration related injuries
- ☐ noise hazards
- ☐ confined space entry
- ☐ hot work permits
- ☐ overhead utility locations cleared?
- ☐ all underground utilities cleared?
- ☐ daily work scope reviewed
- ☐ fire extinguisher locations
- ☐ eye wash station locations
- ☐ directions to hospital
- ☐ heat and cold stress
- ☐ decontamination steps
- ☐ review emergency protocol
- ☐ parking and laydown area
- ☐ vehicle backing up hazards
- ☐ accidents can be costly
- ☐ no horseplay
- ☐ dust and vapor control
- ☐ refueling procedures
- ☐ flying debris hazards
- ☐ poison ivy/oak/sumac
- ☐ Flex-N-Stretch performed

Other Health and Safety Topics Discovered, Comments, Discussions or Action Items

NAME	SIGNATURE	COMPANY

- Conduct a daily safety meeting prior to beginning of each day.
- Complete this form, obtain signatures and file with the Daily Field Report.

APPENDIX C
ROUTE TO HOSPITAL

Google

Drive 1.0 mile, 5 min

Directions from **233 Landing Rd** to **Bronx-Lebanon Hospital Center**

233 Landing Rd

Bronx, NY 10468

Head **southeast** on **Landing Rd** toward **Cedar Ave**

335 ft / 50 s

Take **W Fordham Rd** to **E 184th St**

0.6 mi / 2 min

2. Slight **left** to stay on **Landing Rd**

167 ft

3. Slight **right** onto **W Fordham Rd**

0.4 mi

4. Turn **right** onto **Jerome Ave**

0.2 mi

Take the 1st **left** onto **E 184th St**

0.2 mi / 1 min

Drive to **Grand Concourse**

0.1 mi / 35 s

6. Turn **left** onto **Grand Concourse**

144 ft

7. Keep **right** to stay on **Grand Concourse**

407 ft

8. Keep **right** to stay on **Grand Concourse**

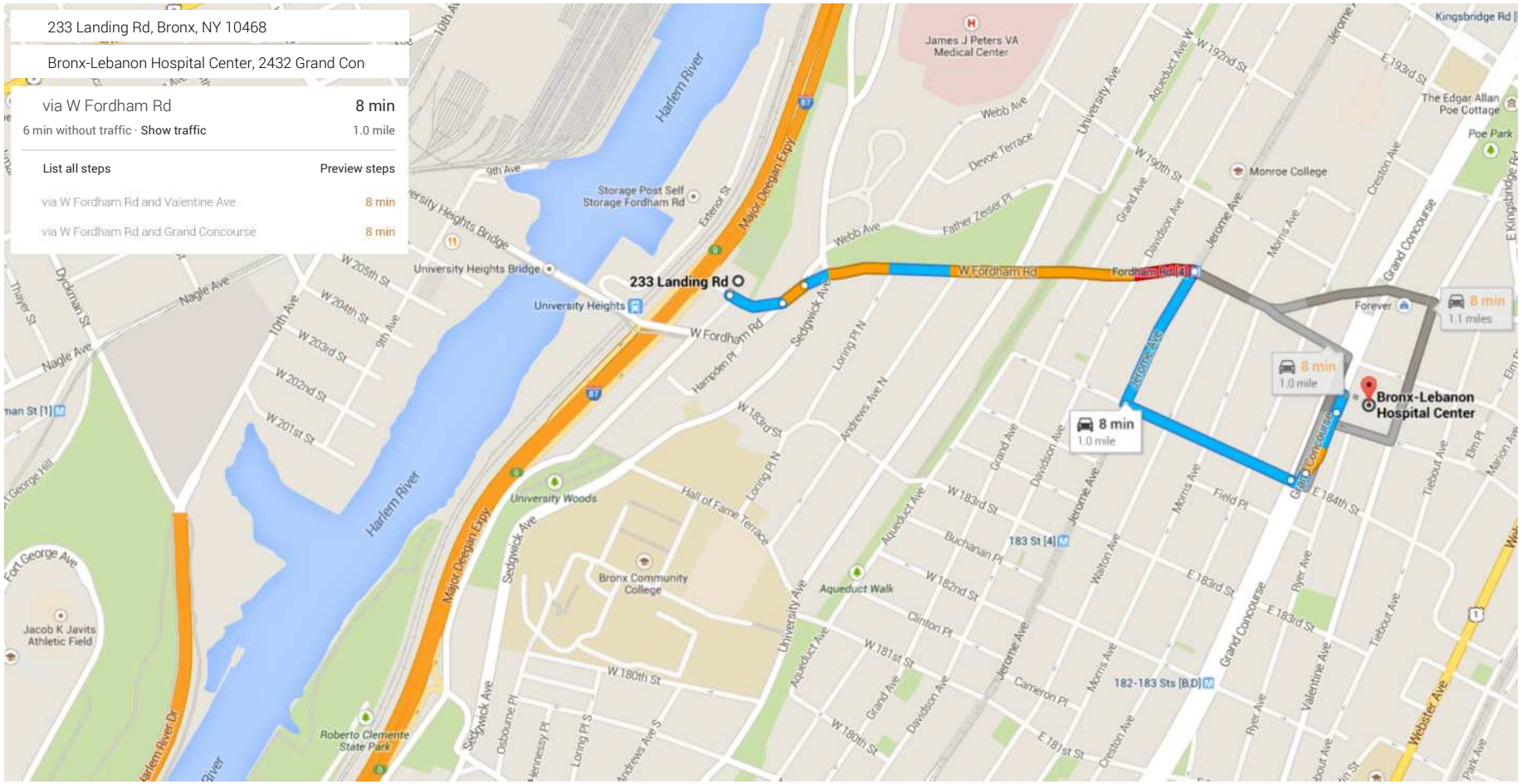
Destination will be on the right

112 ft

Bronx-Lebanon Hospital Center

2432 Grand Concourse #201, Bronx, NY 10458

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.


233 Landing Rd, Bronx, NY 10468
Bronx-Lebanon Hospital Center, 2432 Grand Con
via W Fordham Rd
8 min
6 min without traffic · Show traffic
1.0 mile
List all steps
Preview steps
via W Fordham Rd and Valentine Ave
8 min
via W Fordham Rd and Grand Concourse
8 min
233 Landing Rd
W Fordham Rd
Fordham Rd [4]
Bronx-Lebanon Hospital Center
8 min
1.0 mile
8 min
1.1 miles
8 min
1.0 mile
Harlem River
Major Deegan Expy
University Heights Bridge
University Heights
University Woods
Bronx Community College
Aqueduct Walk
Roberto Clemente State Park
Jacob K Javits Athletic Field
James J Peters VA Medical Center
Monroe College
Forever
183 St [4]
182-183 Sts [B,D]
Map data ©2014 Google 500 ft

APPENDIX 5
PROPOSED REDEVELOPMENT PLANS

233 LANDING ROAD

BOWERY RESIDENTS' COMMITTEE

ABBREVIATIONS:

&	AND	L	METAL OR STEEL ANGLE
@	AT	LAV	LAVATORY
#	POUND OR NUMBER	LIN	LINEN
ø	DIAMETER	LP	LOW POINT OR LIGHTING PANEL
(3)	QUANTITY	LT	LIGHT
		LTP	LIGHTING PANEL
ABV	ABOVE		MAXIMUM
ACM	ASBESTOS CONTAINING MATERIAL	MAX	MECHANICAL
ACT	ACOUSTICAL TILE	MECH	MINIMUM
ADJ	ADJACENT	MIN	MISCELLANEOUS
ADNL	ADDITIONAL	MISC	MEMBRANE
AFF	ABOVE THE FINISHED FLOOR	MMB	MASONRY OPENING
AHU	AIR HANDLER UNIT	MO	MOISTURE RESISTANT
ALT	ALTERNATE	MR	MOUNT(ED)
ALUM	ALUMINUM	MT	
APPVD	APPROVED	NIC	NOT IN CONTRACT
AP	PANEL	NO	NUMBER
		NTS	NOT TO SCALE
BCNY	NEW YORK CITY (NYC) BUILDING CODE	NYC	NEW YORK CITY
BLW	BELOW	OC	ON CENTER
BLKG	BLOCKING	OH	OPPOSITE HAND, OVERHEAD
BLDG	BUILDING		
BO	BRICK OPENING	PH	PHONE
BUR	BUILT UP ROOF	PL	PLATE
		PLYWD	PLY WOOD
CEM	CEMENT	PLAM	PLASTIC LAMINATE
CFA	CLEAR FLOOR AREA	PP	POWER PANEL
CFS	CLEAR FLOOR SPACE	PRL	PICTURE RAIL
CJ	CONTROL JOINT		
CRL	CHAIR RAIL	QT	QUARRY TILE
CLG	CEILING		
CL	CLOSET	(R)	RADIUS
CT	CERAMIC TILE	REL	RELOCATE(D)
CMT	CERAMIC MOSAIC TILE	REINF	REINFORCE(D)
CMU	CONCRETE MASONRY UNIT	RD	ROOF DRAIN
COL	COLUMN	RM	ROOM
CONC	CONCRETE	R	REFRIGERATOR
CONST	CONSTRUCTION		
CONT	CONTINUE(D) CONTINUOUS	SC	SOLID CORE
		SECT	SECTION
DEMO	DEMOLISH	SH	SHOWER
D	DRYER	SIM	SIMILAR TO
DEPT	DEPARTMENT	S	SINK
DET	DETAIL	SD	SMOKE DETECTOR
DIA	DIAMETER	SOG	SLAB ON GRADE
DN	DOWN	SPEC	SPECIFIED / SPECIFICATION
DOB	NYC DEPARTMENT OF BUILDINGS	SPKLR	SPRINKLER(ED)
DS	DOWN SPOUT (LEADER)	SS	STAINLESS STEEL
		ST	STEEL
EJ	EXPANSION JOINT	STOR	STORAGE
ELEC	ELECTRIC, ELECTRICAL	STRUCT	STRUCTURE(AL)
ELEV	ELEVATION, ELEVATOR		
EQ	EQUAL(S)	T	TOILET
EXIST	EXISTING	TELE	TELEPHONE
EXTR	EXTRUDED	TO	TOP OF
		TOS	TOP OF SLAB
FAP	FIRE ALARM (PANEL)	TYP	TYPICAL(LY)
FC	FIRE CODE		
FD	FLOOR DRAIN	UNO	UNLESS NOTED OTHERWISE
FEC	FIRE EXTINGUISHER AND CABINET	UON	UNLESS OTHERWISE NOTED
FIN	FINISH (ES) (ED)	US	UNDERSIDE
1ST	FIRST		
FLR	FLOOR, FLOORING	VB	VINYL BASE
FP	FIRE PROOF	VCT	VINYL COMPOSITION TILE
FT	FOOT OR FEET	VIF	VERIFY IN FIELD
		VP	VISION PANEL
GALV	GALVANIZED		
GA	GAUGE	WP	WATERPROOF(ING)
GC	GENERAL CONTRACTOR	W/	WITH
GFI	GFI	W	WASHER
GND	GROUND	WO	WITHOUT
GB	GRAB BAR	WD	WOOD
GWB, GYP BD	GYPSUM WALLBOARD	WSCT	WAINSCOT
HCP	HANDICAPPED ACCESSIBLE	X	PREFIX INDICATING EXISTING ITEM OR OBJECT (XLP = EXISTING LIGHTING PANEL)
HDWR	HARDWARE		
HP	HIGH POINT		
HM	HOLLOW METAL		

DRAWING SYMBOLS:

- 1 / A-2.0 — SECTION NUMBER / DRAWING NUMBER
- M-3 / A-4.0 — DETAIL NUMBER / DRAWING NUMBER
- 5 / A600 — ELEVATION NUMBER / DRAWING NUMBER
- 2D4 — DOOR TYPE– AS SCHEDULED
- A1 — WINDOW TYPE – AS SCHEDULED
- OFFICE — ROOM NAME
- C08 — ROOM NUMBER
- 100 S.F. — ROOM AREA
- 9'-3" — CEILING HEIGHT – SEE REFLECTED CLG. PLANS
- 5 — PARTITION TYPE – AS SCHEDULED
- EXIT SIGN
- F.E.C. — FIRE EXTINGUISHER CABINET
- S — SMOKE DETECTOR
- CO — CARBON MONOXIDE DETECTOR
- S/CO — COMBINATION SMOKE/CO DETECTOR
- NEW 3 HOUR RATED WALL
- NEW 2 HOUR RATED WALL
- NEW 1 HOUR RATED WALL
- NEW STRUCTURAL STEEL ABOVE
- SHOWN ABOVE
- ℄ — CENTERLINE

MATERIALS SYMBOLS:

- WOOD BLOCKING
- PLYWOOD
- FINISH WOOD
- BATT INSULATION
- GYPSUM BOARD
- CONCRETE BLOCK
- ACOUSTICAL CEILING TILE
- CONCRETE
- EIFS (EXTERIOR INSULATION FINISH SYSTEM)

NOTE:
FOR LIGHTING LEGEND, SEE REFLECTED CEILING PLANS.

DRAWING LIST:

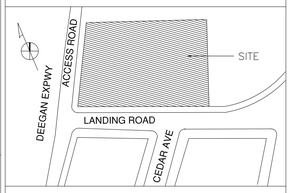
ARCHITECTURAL	
A000	DRAWING LIST, ABBREVIATIONS, SYMBOLS, MATERIALS
A001	ZONING DIAGRAMS AND ANALYSIS
A002	ZONING CALCULATIONS AND DIAGRAMS
A003	BUILDING CODE ANALYSIS AND OCCUPANCY CALCULATIONS
A004	GENERAL AND BUILDING CODE NOTES
A005	FIRE PROTECTION AND EGRESS PLANS
A006	FIRE PROTECTION AND EGRESS PLANS
A007	FIRE PROTECTION AND EGRESS PLANS
A008	ADA DIAGRAMS, NOTES, AND STANDARDS
A009	ENERGY CODE NOTES AND INSPECTION LIST
EN001	ENERGY ANALYSIS
EN002	ENERGY ANALYSIS
A100	SITE PLAN
A101	SITE SURVEY
A200	CELLAR FLOOR PLAN
A201	FIRST FLOOR PLAN
A202	SECOND FLOOR PLAN
A203	THIRD FLOOR PLAN
A204	TYPICAL FLOOR PLAN (4-8)
A205	NINTH FLOOR PLAN
A206	ROOF AND BULKHEAD PLAN
A401	BUILDING ELEVATIONS
A402	BUILDING ELEVATIONS
A403	BUILDING ELEVATIONS
A404	BUILDING ELEVATIONS
A405	BUILDING ELEVATIONS - SECONDARY
A410	BUILDING SECTION
A600	WALL SECTION DETAILS
A800	PARTITION SCHEDULE AND NOTES

STRUCTURAL	
FO-100	FOUNDATION PLAN
S-101	FIRST FLOOR FRAMING PLAN
S-102	SECOND FLOOR FRAMING PLAN
S-103	THIRD FLOOR FRAMING PLAN
S-104	FOURTH FLOOR FRAMING PLAN
S-105	FIFTH-EIGHTH FLOOR FRAMING PLAN
S-106	NINTH FLOOR FRAMING PLAN
S-107	ROOF AND BULKHEAD FRAMING PLAN
S-110	LOADS AND COLUMN SCHEDULES
S-200	GENERAL NOTES
S-201	TYPICAL DETAILS
S-202	TYPICAL DETAILS
S-203	TYPICAL DETAILS

MECHANICAL	
M001.00	MECHANICAL SYMBOL LIST, ABBREVIATIONS AND NOTES
M200.00	MECHANICAL - CELLAR PLAN
M201.00	MECHANICAL - FIRST FLOOR PLAN
M202.00	MECHANICAL - SECOND FLOOR PLAN
M203.00	MECHANICAL - THIRD FLOOR PLAN
M204.00	MECHANICAL - TYPICAL FLOOR PLAN (4-8)
M205.00	MECHANICAL - NINTH FLOOR PLAN
M206.00	MECHANICAL - ROOF AND BULKHEAD PLAN
M300.00	MECHANICAL - RISER DIAGRAMS
M301.00	MECHANICAL - SCHEDULES
M302.00	MECHANICAL - DETAILS SHEET NO. 1
M303.00	MECHANICAL - DETAILS SHEET NO. 2

PLUMBING	
P001.00	PLUMBING SITE PLAN, SYMBOLS, GENERAL NOTES AND SCHEDULES
P200.00	PLUMBING - CELLAR PLAN
P201.00	PLUMBING - FIRST FLOOR PLAN
P202.00	PLUMBING - SECOND FLOOR PLAN
P203.00	PLUMBING - THIRD FLOOR PLAN
P204.00	PLUMBING - TYPICAL FLOOR PLAN (4-8)
P205.00	PLUMBING - NINTH FLOOR PLAN
P206.00	PLUMBING - ROOF AND BULKHEAD PLAN
P300.00	PLUMBING - SANITARY RISER DIAGRAMS
P301.00	PLUMBING - STORM WATER AND GAS RISER DIAGRAMS
P302.00	PLUMBING – DOMESTIC WATER RISER DIAGRAM
P303.00	PLUMBING - KITCHEN RISER DIAGRAMS AND PLAN
P304.00	PLUMBING - DETAILS

KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5958

Structural Engineer:
ROBERT SILMAN ASSOCIATES ENGINEERS
32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7970
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer:
JOSEPH R. LORING AND ASSOCIATES INC.
21 Penn Plaza, New York, NY 10001
tel: 212-563-7400
fax: 212-563-7382

Civil Engineer:
LEONARD J. STRANDBERG & ASSOCIATES
One Edgewater Plaza, Suite 205, Staten Island, NY 10305
tel: 718-420-9693
fax: 718-420-9673

Owner/Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road
233 Landing Road
Bronx, New York 10468

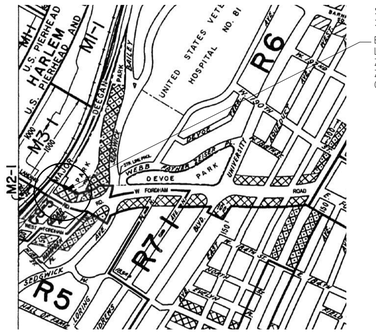
TITLE:
DRAWING LIST, ABBREVIATIONS, SYMBOLS AND MATERIALS

SEAL: STATE OF NEW YORK — ANDREW K. KNOX — 022218 — REGISTERED ARCHITECT

PROJECT NO.: 14008.0
SCALE:
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 1 of 29

DWG. NO.:
A-000.00

ZONING MAP - 3C:



SITE
233 LANDING ROAD

BLOCK:	3236
LOT:	25
ZONING DIZTRICT:	R7-1 WITH C2-4 OVERLAY
ZONING MAP:	3c
COMMUNITY DISTRICT:	7

NORTH

ZONING ANALYSIS:

BUILDING ZONING REFERENCE:
ARTICLE III CHAPTER 3, BULK REGULATIONS FOR COMMUNITY FACILITY BUILDINGS IN COMMERCIAL DISTRICTS

ZONING USE GROUP 3 / COMMUNITY FACILITY (NON-PROFIT INSTITUTION WITH SLEEPING ACCOMMODATIONS)

DESCRIPTION	REQUIRED/ PERMITTED	NYC ZONING RESOLUTION REFERENCE	PROPOSED
ZONING DISTRICT	R7-1 WITH C2-4 OVERLAY		NO CHANGE
MAXIMUM COMMUNITY FACILITY F.A.R.	3.44	33-121(d) ZR 24-111(b)	3.43 **
TOTAL LOT AREA	PER SURVEY		32,103 SF
MAXIMUM ALLOWABLE COMMUNITY FACILITY ZONING FLOOR AREA	3.44 X 32,103 = 110,435SF	ZR 24-111	110,089 SF (SEE FA CALCS)
SIDE YARD REQUIREMENT: R7 DISTRICTS	NOT REQ'D BUT 8' MIN. IF PROVIDED	ZR 33-25	8'-0" @ NORTH P.L.
REAR YARD REQUIREMENT	NONE REQUIRED (REAR LOT LINE NOT ADJACENT TO THE REAR LOT LINE OF ADJOINING LOTS)	ZR 33-261	74' PROVIDED
STREET WALL HEIGHT: ENVELOPE HEIGHT	5.6 : 1 @ WIDE STREET	33-431	COMPLIES
STREET WALL SETBACK	15'-0" SETBACK (WIDE) 20'-0" SETBACK (NARROW)	33-431	PROVIDED
MAX STREET WALL HEIGHT	4 STORY MAX OR 60'-0"	33-431	2-STORY (COMPLIES)
PARKING	NONE REQUIRED	ZR 36-21	NONE PROVIDED
BICYCLE PARKING	1/10,000 SF F.A.	ZR 36-711	11 SPACES MINIMUM PROVIDED**
STREET TREE PLANTING AND PLANTING STRIP	1 TREE PER 25' STREET FRONTAGE	ZR 33-03 ZR 26-41 ZR 26-42	15 TREES PROVIDED **

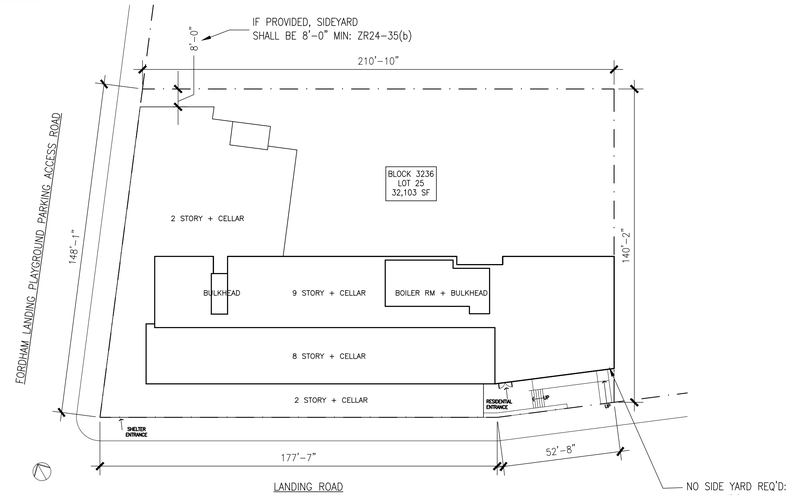
** CALCULATIONS

COMMUNITY FACILITY F.A.R. = PROPOSED FLOOR AREA / LOT AREA = 110,089 / 32,103 = 3.43 < 3.44 MAX ALLOWABLE

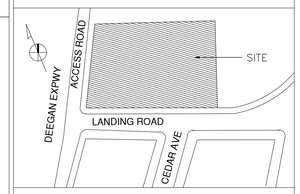
BICYCLE PARKING: 1 / 10,000SF REQ'D = 109.661 / 10,000 = 11 SPACES

STREET TREES: 1 / 25LF STREET FRONTAGE = 378.5 LF / 25 = 15.12 TREES

PLOT PLAN:



KEY PLAN



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Civil Engineer:
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Owner / Sponsor:
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fax: 212-533-1893

Bowery Residents' Committee

Landing Road
233 Landing Road
Bronx, New York 10468

TITLE:

ZONING DIAGRAMS AND ANALYSIS

SEAL:

PROJECT NO.:	14008.0
SCALE:	
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	2 of 29

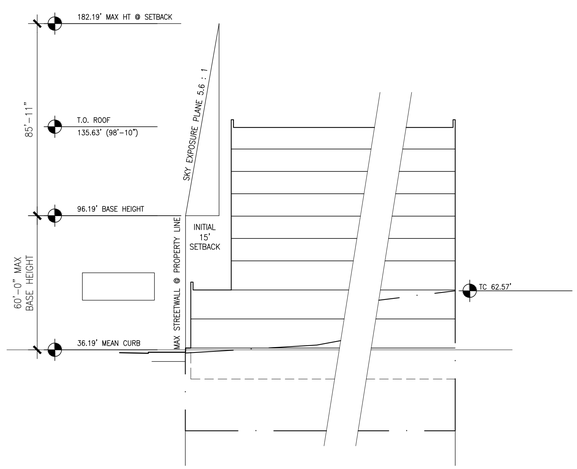
DWG. NO.:

A-001.00

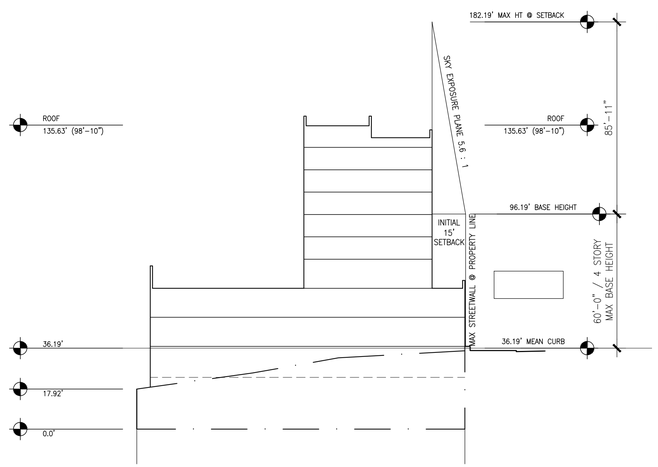
ZONING DIAGRAMS:

MEAN CURB CALCULATIONS:

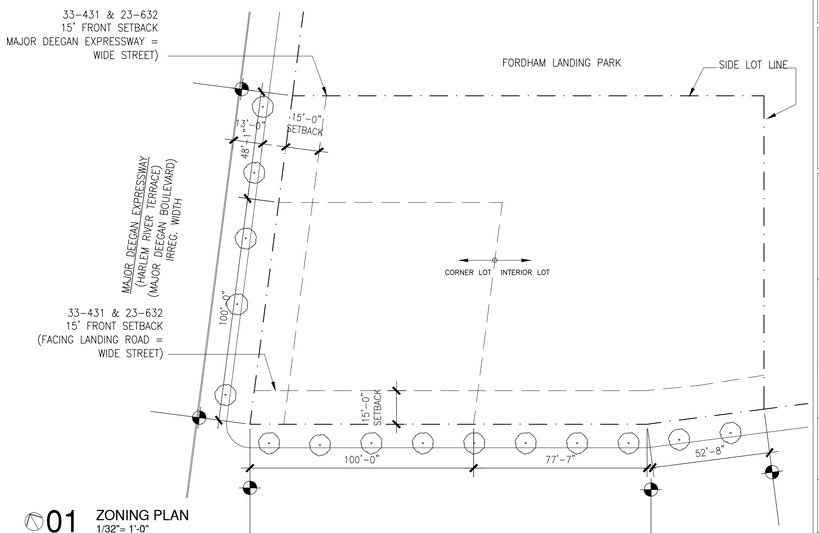
STREET	MEAN CURB ELEVATION
LANDING ROAD	44.66'
MAJOR DEEGAN EXPWY	25.725'
CURB LEVEL	70.385' / 2 = 35.19'



03 ZONING DIAGRAM
1" = 40'



02 ZONING DIAGRAM
1/32"= 1'-0"



01 ZONING PLAN
1/32"= 1'-0"

PLUMBING FIXTURE CALCULATIONS:

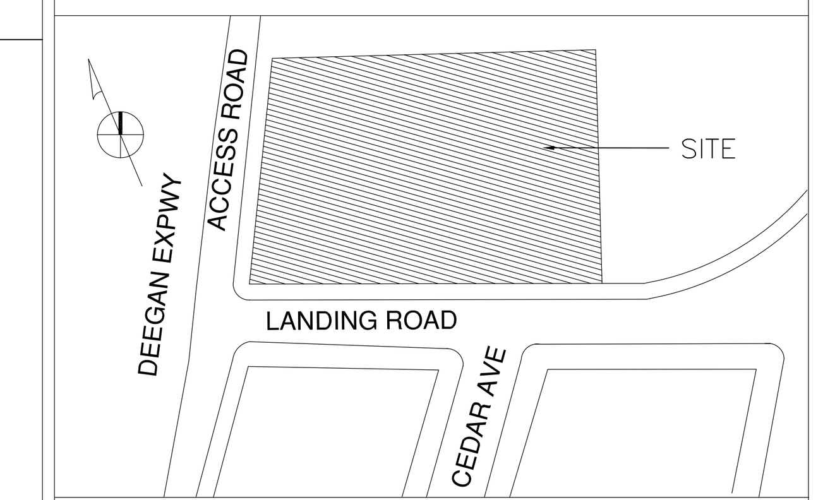
PER 2008 CODE PLUMBING CODE T403.1

OCCUPANCY R-1 (TRANSIENT)		MALE (200 OCCUPANTS)	STAFF B OCCUPANCY ACCESSORY
WATER CLOSETS	REQ'D	1 / 10 (NON TRANSIENT): 1 / 200 = 20 WC 25 PROPOSED :. COMPLIES	1 / 20 OF EACH SEX: 20 MEN = 1 WC MEN 20 WOMEN = 1 WC WOMEN
LAVATORIES	REQ'D	1 / 10 (NON TRANSIENT): 1 / 200 = 20 LAV 25 PROPOSED :. COMPLIES	1 / 25 OF EACH SEX: 20 MEN = 1 LAV MEN 20 WOMEN = 1 LAV WOMEN
SHOWERS	REQ'D	1 / 8 (NON TRANSIENT): 1 / 200 = 25 SHOWERS 26 PROPOSED :. COMPLIES	NONE REQUIRED
DRINKING FOUNTAIN	REQ'D	1 / 100 (NON TRANSIENT): 1 / 200 = 2 DRINKING FOUNTAINS 2 PROPOSED :. COMPLIES	1 / 100: 40 STAFF = 1 DF 2 PROPOSED :. COMPLIES
OCCUPANCY R-2 (APARTMENT HOUSE)			
WATER CLOSETS	REQ'D	1 / DWELLING UNIT	
LAVATORIES	REQ'D	1 / DWELLING UNIT	
BATH / SHOWERS	REQ'D	1 / DWELLING UNIT	
LAUNDRY (AUTOMATIC CLOTHES WASHER)	REQ'D	1 / 20 DWELLING UNITS: 136 UNITS / 20 = 6.8 WASHERS 7 WASHERS PROVIDED :. COMPLIES	

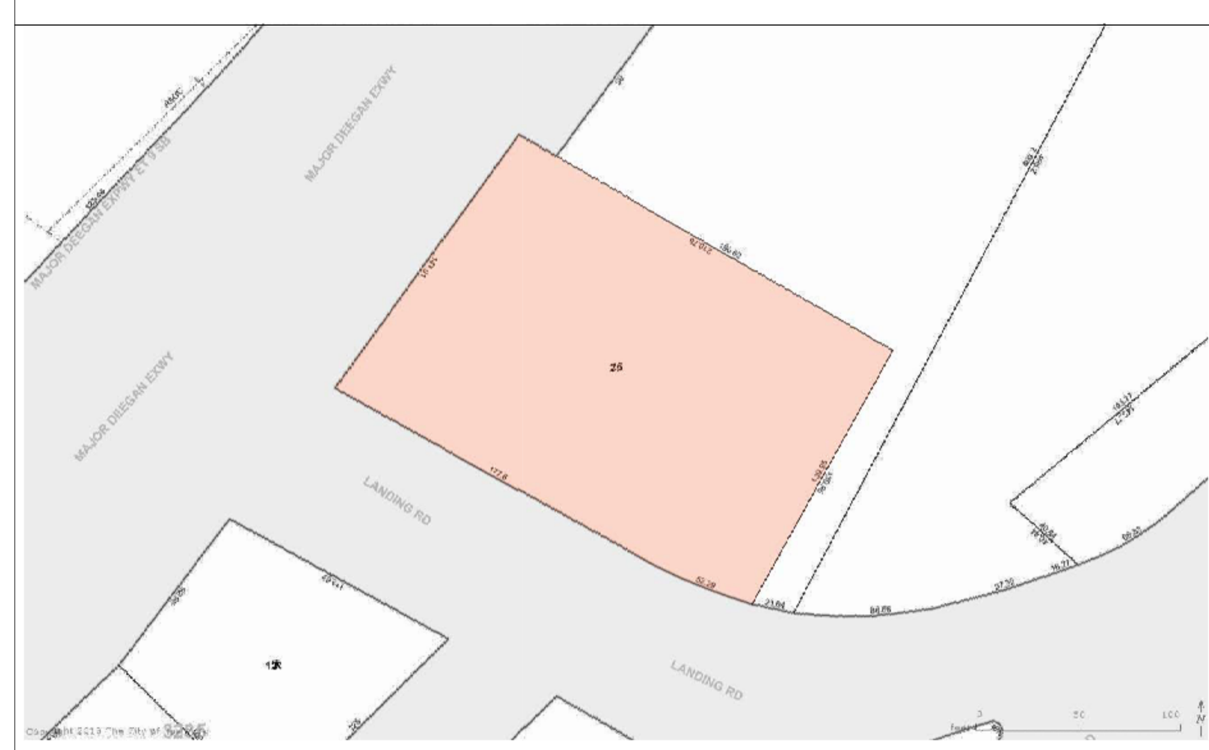
ZONING FLOOR AREA CALCULATIONS:

	3BR	2BR	1BR	0BR Studio	Housing gross floor area	Housing ZFA deduction	Housing ZFA deduction (Envel.)	Housing ZFA deduction (bulkhead)	Housing ZFA	Utility Floor Area	Shelter Beds	Shelter Gross Floor Area	Shelter ZFA Deduction	Shelter ZFA deduction (Envel.)	Shelter ZFA deduction (bulkhead)	Shelter ZFA	Gross Floor Area
roof					1,259			1,259	0								1,259
9		2	1	8	7,629	68	355		7,206								7,629
8		3	1	18	11,551	130	369		11,052								11,551
7		3	1	18	11,551	130	369		11,052								11,551
6		3	1	18	11,551	130	369		11,052								11,551
5		3	1	18	11,551	130	369		11,052								11,551
4		3	1	18	11,551	130	369		11,052								11,551
3		1	1	13	11,443	138	358	536	10,411			297			297		11,740
2					435				435		115	18,994	150	485		18,359	19,429
1					435				435		85	18,554	107	464		17,983	18,989
Cellar 1					2,653					5,055		2,036					9,744
Totals	0	18	7	111	81,609	856	2,558	1,795	73,747	5,055	200	39,881	257	949	297	36,342	126,545
Total housing units		136															
Gross Building Floor Area								126,545	sf								
New Building Total Zoning Floor Area (ZFA)								110,089	sf								
Zoning District		R7-1 w/ C2-4 overlay															
Lot Area		32,103	sf	per survey													
Max CFZsf w/sleeping		3.44		per ZR24-111				110,435	sf		remaining ZFA:		346				

KEY PLAN



TAX MAP:

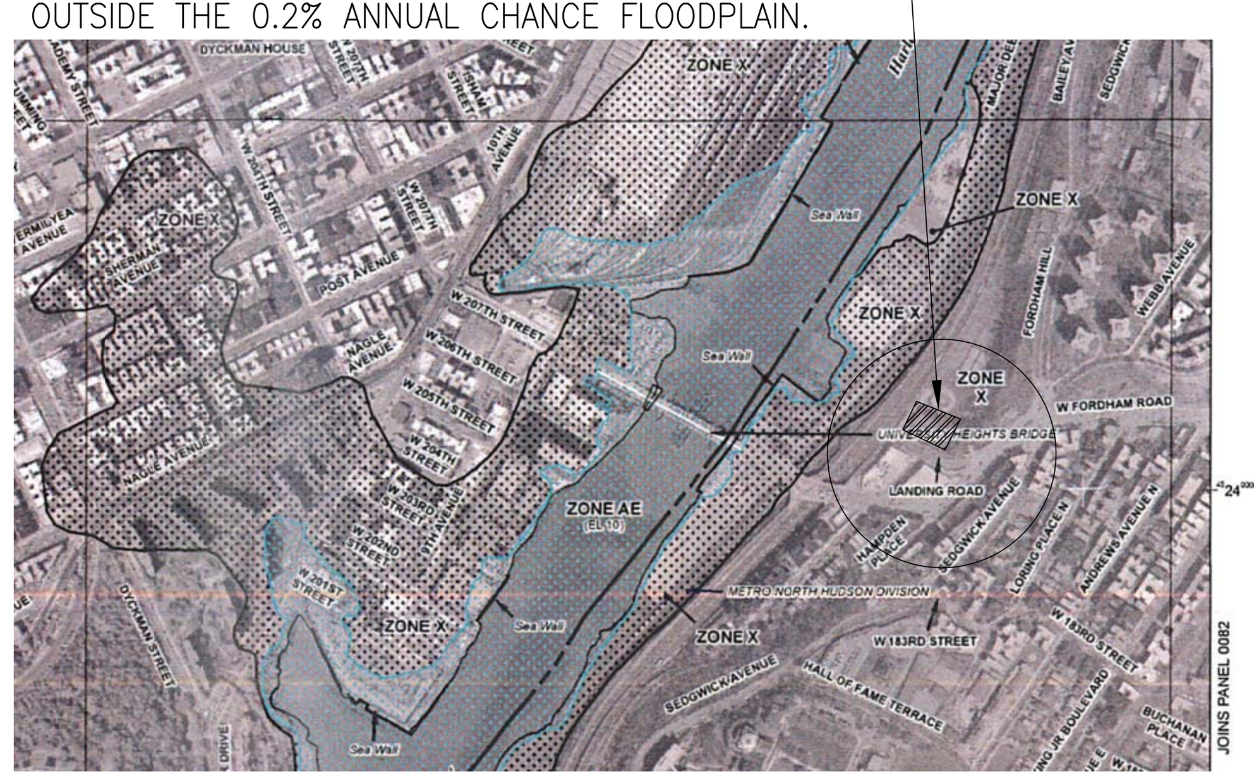


FEMA FLOOD MAP:

MAP #3604970081F, PANEL 81/ 457

SITE

THE SITE IS LOCATED IN ZONE X, NOTED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.



ZONING FLOOR AREA DEDUCTION CALCULATIONS:

ENVELOPE DEDUCTION:

PER ZONING DEFINITION OF FLOOR AREA (12-10 "FLOOR AREA") THE FLOOR AREA OF A BUILDING SHALL NOT INCLUDE (12) EXTERIOR WALL THICKNESS UP TO 8" WHERE [ii (1)] THE AREA WEIGHTED AVERAGE U-FACTOR OF ALL OPAQUE ABOVE-GRADE WALL ASSEMBLIES SHALL BE NO MORE THAN 80% OF THE PRESCRIBED REQUIREMENTS OF THE NYCECC (SEE TABLE 2a BELOW FOR COMPLIANCE)

AND

WHERE [ii (2)] THE AREA WEIGHTED AVERAGE U-FACTOR OF ALL ABOVE GRADE EXTERIOR WALLS ASSEMBLIES INCLUDING FENESTRATION SHALL BE NO MORE THAN 90% OF THE PRESCRIBED REQUIREMENTS OF THE NYCECC (SEE TABLE 2b BELOW FOR COMPLIANCE)

Table 1	Inputs from the project proposed design			
Type ID	Assembly Type	Area (SF)	Proposed U-Value	Area Percentage
1	Brick Masonry + CMU Wall	39,683	0.052	57%
2	Cement Panel + Stud Wall	17,288	0.056	25%
3	Curtain wall	3,477	0.45	5%
4	Windows	7,477	0.45	11%
5	Storefront	1,081	0.43	2%

Table 2a	Calculations for Opaque wall requirement per ZR12-10						
Type ID	Opaque Wall ONLY	Area (SF)	% Area	Baseline U-Value	Baseline Weighted U-Value	Proposed U-Value	Proposed Weighted U-Value
1	Brick Masonry + CMU Wall	39,683	70%	0.09	0.063	0.052	0.036
2	Cement Panel + Stud Wall	17,288	30%	0.09	0.027	0.056	0.017
	TOTAL	56,971		Avg. U-Value	0.090		0.053
		Target: 20% better than baseline = .072					Complies

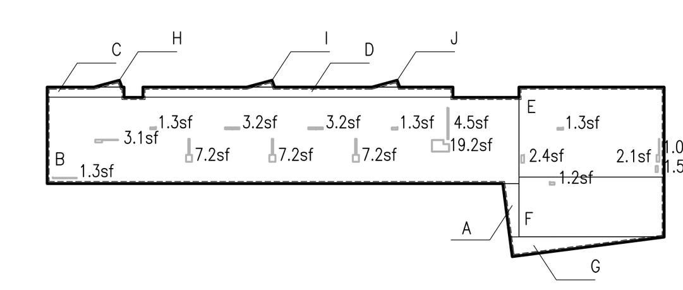
Table 2b	Calculations of above grade walls (opaque + glazing) requirement						
Type ID	Opaque wall + Glazing	Baseline % of Area	Baseline U-Value	Baseline Weighted U-Value	Proposed % of Area	Proposed U-Value	Proposed Weighted U-Value
1	Brick Masonry + CMU Wall	57%	0.09	0.051	57%	0.052	0.030
2	Cement Panel + Stud Wall	25%	0.09	0.023	25%	0.056	0.014
3	Curtain wall	5%	0.5	0.025	5%	0.45	0.023
4	Windows	11%	0.55	0.061	11%	0.45	0.050
5	Storefront	2%	0.5	0.010	2%	0.43	0.009
6	Doors - Hollow Metal	0.27%	0.7	0.002	0.27%	0.25	0.001
7	Doors - Glazed	0.31%	0.85	0.003	0.31%	0.85	0.003
	Average U-Value			0.025			0.018
	Target: 10% better than baseline = 0.0225						Complies

A: 75.2 SF
B: 4513 SF
C: 85 SF
D: 348 SF
E: 1445 SF
F: 961 SF
G: 169.5 SF
H: 10.7 SF
I: 10.7 SF
J: 10.7 SF

TOTAL GROSS FA = 7,629 SF

LESS MECH/PLUMBING SHAFTS = 68 SF
LESS ENVELOPE DEDUCTION = 355 SF

TOTAL ZONING AREA @ TYP FL = 7206 SF



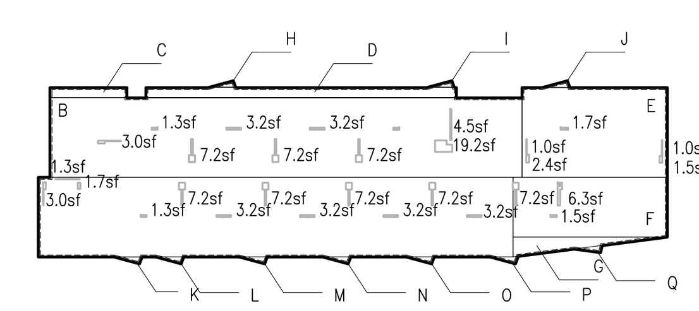
05 FLOOR AREA CALC - 9th Floor
1/64" = 1'-0"

A: 4188 SF
B: 4175.7 SF
C: 87.4 SF
D: 353 SF
E: 1450 SF
F: 1020 SF
G: 169.5 SF
H: 10.7 SF
I: 10.7 SF
J: 10.7 SF
K: 10.7 SF
L: 10.7 SF
M: 10.7 SF
N: 10.7 SF
N: 10.7 SF
O: 10.7 SF
P: 10.7 SF
Q: 10.7 SF

TOTAL GROSS FA = 11,551 SF

LESS MECH/PLUMBING SHAFTS = 130 SF
LESS ENVELOPE DEDUCTION = 369.9 SF

TOTAL ZONING AREA @ TYP FL = 11,051.1 SF



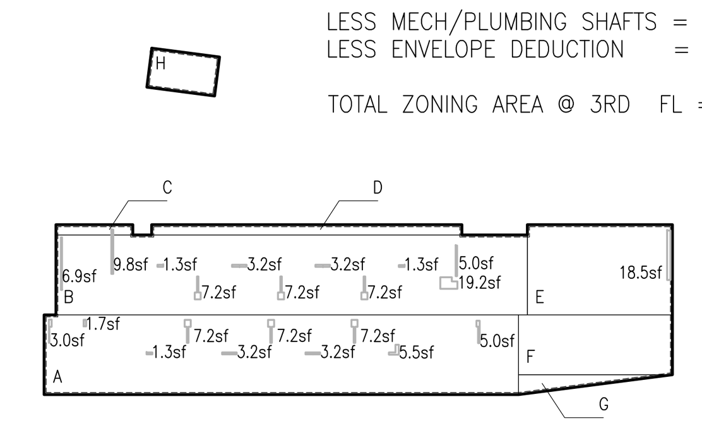
04 FLOOR AREA CALC - TYPICAL (4-8th Floor)
1/64" = 1'-0"

A: 4188 SF
B: 4175.7 SF
C: 87.4 SF
D: 353 SF
E: 1450 SF
F: 1020 SF
G: 169.5 SF
H: 297 SF

TOTAL GROSS FA = 11,740 SF

LESS MECH/PLUMBING SHAFTS = 138 SF
LESS ENVELOPE DEDUCTION = 404 SF

TOTAL ZONING AREA @ 3RD FL = 11,198 SF



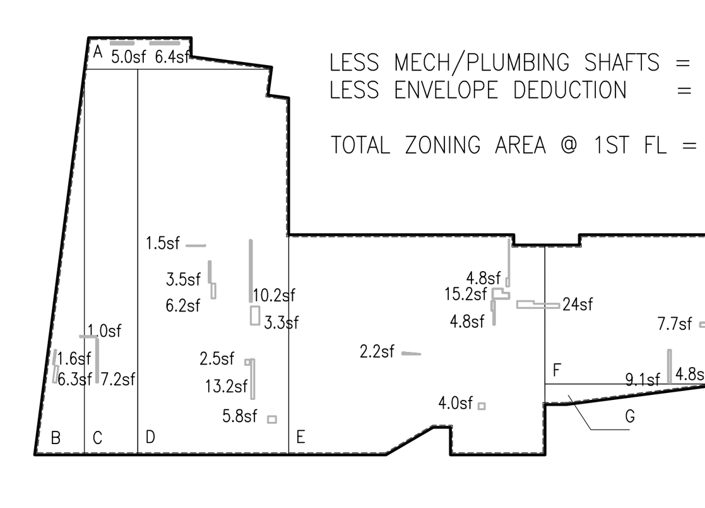
03 FLOOR AREA CALC - 3rd Floor
1/64" = 1'-0"

A: 629 SF
B: 1066 SF
C: 2279 SF
D: 6448.3 SF
E: 6097 SF
F: 2934.3 SF
G: 227 SF

TOTAL GROSS FA = 19429.3 SF

LESS MECH/PLUMBING SHAFTS = 150 SF
LESS ENVELOPE DEDUCTION = 484.9 SF

TOTAL ZONING AREA @ 1ST FL = 19,045.4 SF



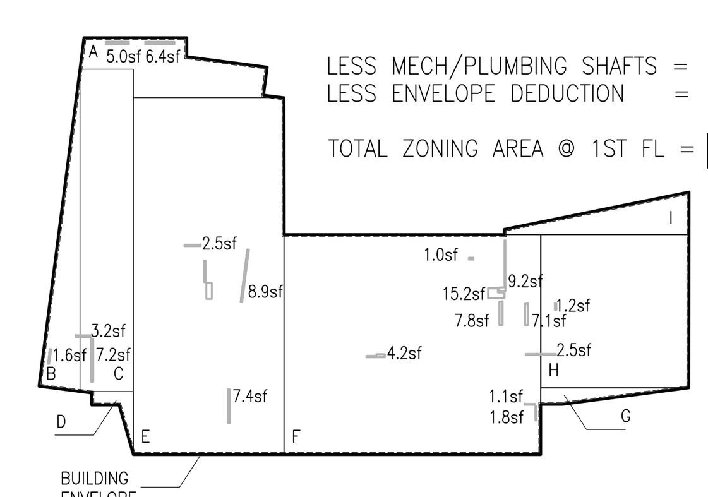
02 FLOOR AREA CALC - 2nd Floor
1/64" = 1'-0"

A: 853 SF
B: 735 SF
C: 1906.3 SF
D: 102.4 SF
E: 5966 SF
F: 6259.3 SF
G: 153.9 SF
H: 2520.8 SF
I: 491.9 SF

TOTAL GROSS FA = 18,989.6 SF

LESS MECH/PLUMBING SHAFTS = 107 SF
LESS ENVELOPE DEDUCTION = 464.7 SF

TOTAL ZONING AREA @ 1ST FL = 18417.9 SF



01 FLOOR AREA CALC - 1st Floor
1/64" = 1'-0"

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5958

Structural Engineer:
ROBERT SILMAN ASSOCIATES ENGINEERS
32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7970
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer:
JOSEPH R. LORING AND ASSOCIATES INC.
21 Penn Plaza, New York, NY 10001
tel: 212-563-7400
fax: 212-563-7382

Civil Engineer:
LEONARD J. STRANDBERG & ASSOCIATES
One Edgewater Plaza, Suite 205, Staten Island, NY 10305
tel: 718-420-9693
fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

ZONING CALCULATIONS AND DIAGRAMS

SEAL: STATE OF NEW YORK · ANDREW B. KNOX · 022216 · REGISTERED ARCHITECT

PROJECT NO.: 14008.0

SCALE:

BY: KM / MR / MVR / MG

CHECK: AK

DATE: DECEMBER 22, 2014

PAGE: 3 of 29

DWG. NO.:

A-002.00

OCCUPANCY CALCULATION:

ROOF				
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ
R01	Boiler Room	549 SF	–	300
	Remainder of Roof (Servicing)	5,785 SF	–	–
	Total Occupant Load – R Residential –			
	Total Occupant Load – Incidental –			
	TOTAL MAXIMUM OCCUPANT LOAD @ ROOF –			

NINTH FLOOR				
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ
900A	Corridor A	992 SF	–	–
901	Common Lounge	334 SF	Accesory to R2	12
908	Refuse Room	26 SF	Incidental Use	300
A	Apt. 0 Bed	308 SF	R2	200
B	Apt. 2 Bed	723 SF	R2	200
C	Apt. 2 Bed	725 SF	R2	200
O	Apt. 1 Bed	636 SF	R2	200
P	Apt. 0 Bed	308 SF	R2	200
Q	Apt. 0 Bed	308 SF	R2	200
R	Apt. 0 Bed	308 SF	R2	200
S	Apt. 0 Bed	308 SF	R2	200
T	Apt. 0 Bed	308 SF	R2	200
U	Apt. 0 Bed	308 SF	R2	200
V	Apt. 0 Bed ADA	334 SF	R2	200
	Common Terrace	1130 SF	Public Assembly	15
	Total Occupant Load – R Residential –			
	Total Occupant Load – Incidental –			
	TOTAL MAXIMUM OCCUPANT LOAD @ NINTH –			

TYPICAL FLOOR				
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ
400A	Corridor	997 SF	–	–
408	Refuse Room	26 SF	Incidental Use	300
A	Apt. 0 Bed	308 SF	R2	200
B	Apt. 2 Bed	723 SF	R2	200
C	Apt. 2 Bed	744 SF	R2	200
D	Apt. 0 Bed	308 SF	R2	200
E	Apt. 0 Bed	308 SF	R2	200
F	Apt. 0 Bed	308 SF	R2	200
G	Apt. 0 Bed	308 SF	R2	200
H	Apt. 0 Bed	308 SF	R2	200
I	Apt. 0 Bed	308 SF	R2	200
J	Apt. 0 Bed	298 SF	R2	200
K	Apt. 0 Bed	307 SF	R2	200
L	Apt. 0 Bed	308 SF	R2	200
M	Apt. 0 Bed	294 SF	R2	200
N	Apt. 2 Bed	725	R2	200
O	Apt. 1 Bed	636 SF	R2	200
P	Apt. 0 Bed	308 SF	R2	200
Q	Apt. 0 Bed	308 SF	R2	200
R	Apt. 0 Bed	308 SF	R2	200
S	Apt. 0 Bed	308 SF	R2	200
T	Apt. 0 Bed	308 SF	R2	200
U	Apt. 0 Bed	308 SF	R2	200
V	Apt. 0 Bed ADA	334 SF	R2	200
	Total Occupant Load – R Residential –			
	Total Occupant Load – Incidental –			
	TOTAL MAXIMUM OCCUPANT LOAD @ TYPICAL FLOOR –			

THIRD FLOOR				
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ
300A	Corridor	782 SF	–	–
301	Entry Lobby	700 SF	Accessory to R2	200
301A	Entry Vestibule	113 SF	–	–
302	Community Room	1091 SF	Incidential Use	15
302A	Pantry	227 SF	Accessory to R2	200
302B	Small Group	98 SF	Incidential Use	15
302C	Office	121 SF	Business	100
303	Housing Office	161 SF	Business	100
305	Rear Vestibule	50 SF	–	–
306	Laundry	375 SF	Accessory to R2	200
308	Refuse Room	20 SF	Incidental Use	300
H	Apt. 0 Bed	308 SF	R2	200
I	Apt. 0 Bed	308 SF	R2	200
J	Apt. 0 Bed	308 SF	R2	200
K	Apt. 0 Bed	308 SF	R2	200
L	Apt. 0 Bed	308 SF	R2	200
M	Apt. 0 Bed	308 SF	R2	200
G	Apt. 1 Bed	617 SF	R2	200
P	Apt. 0 Bed	308 SF	R2	200
Q	Apt. 0 Bed	308 SF	R2	200
R	Apt. 0 Bed	308 SF	R2	200
S	Apt. 0 Bed	308 SF	R2	200
T	Apt. 0 Bed	308 SF	R2	200
U	Apt. 0 Bed	308 SF	R2	200
V	Apt. 0 Bed ADA	334 SF	R2	200
N	Apt. 2 Bed	744	R2	200
	Mechanical Equipment	860 SF	Incidential Use	300
	Housing Terrace	3173 Sf	Public Assembly	15
	Total Occupant Load – R Residential –			
	Total Occupant Load – Incidental –			
	TOTAL MAXIMUM OCCUPANT LOAD @ THIRD –			

SECOND FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
200A	Corridor	2050 SF	–	–	–
200B	Corridor B	456 SF	–	–	–
200C	Corridor C	461 SF	–	–	–
201	Lounge Recreation	1308 SF	Accesory to R1	12	109
201A	Storage	80 SF	Incidential Use	300	0
201B	Shift Super	126 SF	B Accessory to R1	100	1
202	Interview 1	96 SF	B Accessory to R1	100	1
203	Storage 1	29 SF	Incidential Use	300	1
206	Telecom	41 SF	Incidential Use	300	1
207	Operations 1	206 SF	B Accessory to R1	100	2
208	Interview 2	120 SF	B Accessory to R1	100	1
209	Operations 2	175 SF	B Accessory to R1	100	2
210	Storage 2	43 SF	Incidential Use	300	1
212	Social Services	926 SF	B Accessory to R1	100	9
212A	Asst. Director	123 SF	B Accessory to R1	100	1
212B	Clin. Coord.	92 SF	B Accessory to R1	100	1
212C	File Storage	49 SF	B Accessory to R1	100	0
212E	Operations Coord.	87 SF	B Accessory to R1	100	1
212F	Operations Dir.	179 SF	B Accessory to R1	100	1
214	Staff Meeting	537 SF	B Accessory to R1	100	5
215	Trash Compactor	140 SF	Incidential Use	300	1
216	Storage Linens	127 SF	Incidential Use	300	1
E	Dorm 17 Beds	1145 SF	R1	50	22
F	Dorm 21 Beds	1294 SF	R1	50	25
G	Dorm 23 Beds	1332 SF	R1	50	26
H	Dorm 13 Beds	902 SF	R1	50	18
I	Dorm 16 Beds	956 SF	R1	50	19
J	Dorm 24 Beds	1483 SF	R1	50	29
	Total Occupant Load – R Residential –				278
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ SECOND –				278

FIRST FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
100A	Corridor	2275 SF	–	–	–
100B	Corridor B	330 SF	–	–	–
101	Entry Lobby	495 SF	Public Assembly	15	33
101A	Entry Vestibule	66 SF	–	–	–
101B	1 to 1	95 SF	B Accessory to R1	100	1
102	Shelter Lobby	771 SF	–	–	–
103	Security Director	146 SF	B Accessory to R1	100	1
104	Media Lounge	282 SF	Accessory to R1	12	23
105	Vestibule	80 SF	–	–	–
108	Dinning Hall	2199 SF	Public Assembly	15	146
109	Kitchen	1050 SF	Kitchen	200	5
109A	Servery	224 SF	Kitchen	200	1
109B	Office	90 SF	Business	100	1
111	Social Services	926 SF	B Accessory to R1	100	9
111B	Exam Room	98 SF	B Accessory to R1	100	1
111C	Psych	76 SF	B Accessory to R1	100	1
111D	Director's Office	155 SF	B Accessory to R1	100	2
111E	Clinical Director	113 SF	B Accessory to R1	100	1
111F	Interview 2	106 SF	B Accessory to R1	100	1
112	Interview 1	115 SF	B Accessory to R1	100	1
113	Site Coord.	146 SF	B Accessory to R1	100	2
A	Dorm 17 Beds	1203 SF	R1	50	24
B	Dorm 21 Beds	1350 SF	R1	50	27
C	Dorm 23 Beds	1385 SF	R1	50	27
D	Dorm 25 Beds	1498 SF	R1	50	29
	Lower Terrace	1536 SF	Accessory to R1	200	7
	Upper Terrace	3167 SF	Accessory to R1	200	15
	Total Occupant Load – R Residential –				358
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ FIRST –				358

CELLAR FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
C0A	Housing Corridor	406 SF	–	–	–
C0B	Shared Corridor	585 SF	–	–	–
C0C	Shared Corridor	864 SF	–	–	–
C01	Community Facility	2133 SF	Business	100	21
C01A	Conference Room	473 SF	Business	100	4
C01B	Storage	156 SF	Incidential Use	300	0
C01C	Private Office	120 SF	Business	100	1
C01D	Private Office	144 SF	Business	100	1
C01G	Break Room	223 SF	Assembly	14	2
C02	Shared Storage	612 SF	Incidential Use	300	2
C03	Housing Maintenance	561 SF	Incidential Use	300	1
C04	Shelter Maintenance	323 SF	Incidential Use	300	1
C05	Shelter Client Storage	209 SF	Incidential Use	300	1
C06	Housing Storage	1054 SF	Incidential Use	300	3
C06B	Super's Office	211 SF	Business	100	2
C07	Housing Compactor Room	415 SF	Incidential Use	300	1
C08	Housing Bike Storage	624 SF	Incidential Use	300	2
C09	Shelter Bike Storage	271 SF	Incidential Use	300	1
C10	Shelter Callahan Storage	358 SF	Incidential Use	300	1
C11	Shelter Laundry	169 SF	Accessory to R1	300	1
C12	Electrical Service	301 SF	Incidential Use	300	1
C13	Emergency Service	80 SF	Incidential Use	300	1
C14	Telecom Room	139 SF	Incidential Use	300	1
C15 *	Gas Service Room	205 SF	Incidential Use	300	1
C16	Fire Pump Room	C16	Incidential Use	300	1
C17	Water Service/ Waste Pump Rm	434 SF	Incidential Use	300	1
	Total Occupant Load – R Residential –				51
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ CELLAR –				51
		TOTAL OCCUPANT LOAD IN BUILDING –			1167

BUILDING CODE ANALYSIS:

THE APPLICABLE BUILDING CODE IS BUILDING CODE OF NEW YORK CITY 2008 EDITION

THE PROPOSED BUILDING IS A MIXED-USE NINE-STORY + CELLAR, NON-COMBUSTIBLE MASONRY STRUCTURE. THE ENTIRE BUILDING WILL BE SPRINKLERED. THE FOLLOWING IS A SUMMARY OF THE PROPOSED BUILDING DESIGN TYPE:

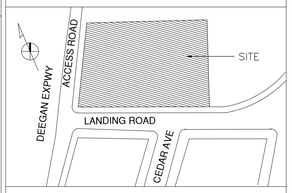
PROPOSED OCCUPANCY TYPE: "R-2" RESIDENTIAL APARTMENT HOUSE (FLOORS 3-9)
"R-1" HOMELESS SHELTER (FLOORS 1-2)

CONSTRUCTION TYPE I(B). NON-COMBUSTIBLE WALLS, FLOORS, STRUCTURAL FRAME AND ROOF STRUCTURE.

ITEM	SECTION	NYC BUILD CODE (2008)
	310.1.2	R-2 RESIDENTIAL APARTMENT HOUSE
	310.1.1	R-1 HOMELESS SHELTER
	T601, 602	I-B
	T503	MAX ALLOWED 160', UNLIMITED STORIES AND AREA
FIRE RESISTANCE RATING (FR)		
	T601	2-HR EXCEPT WHERE SUPPORTING A ROOF = 1-HR
	T601	2-HR EXCEPT WHERE SUPPORTING A ROOF = 1-HR
	T601	0-HR
	T602	1-HR
	T601	2-HR
	T601	1-HR
		N/A
	T1016.1.2	1-HR F.R. (NONCOMBUSTIBLE)
	T1016.1.1	0 HR F.R., SPRINKLER BLDG.
	T705.4	3-HR
	T706.3.7	2-HR
	709	N/A
	1019.1	2-HR WHEN > 4 STY OR LESS. 1-HR WHEN < 4 STY
	1020.3	1-HR
	707.4	2-HR
	302.4	1 HR F.R.
	1505	CLASS B
	303.1.1 T1004.1.2	NOT CONSIDERED AS ASSEMBLY WHEN < 75 PERSONS; FIRE BARRIER NOT REQ'D FOR ACCESSORY USE <10% FLOOR AREA OF ANY FLOOR; OTHERWISE, I-HR F.R. REQ'D IN SPK. BLDG
	403.9.1	NOT REQUIRED IN R-2 OCCUPANCY
	3001	DESIGN AND CONSTRUCTION SHALL COMPLY
INCIDENTAL USE AREAS (AS PER BC 508.2)		
	302.1.1	1-HR F.R. (WITH AUTOMATIC SPRINKLER SYSTEM)
	302.1.1	1-HR F.R. (WITH AUTOMATIC SPRINKLER SYSTEM)
	302.1.1	1-HR F.R. (WITH AUTOMATIC SPRINKLER SYSTEM)
	302.1.1	1-HR F.R.
	707.13.4	3-HR F.R.
DUCTS AND AIR TRANSFER OPENINGS		
	716	1-1/2HR @ LESS THAN 3 HR RATED ASSEMBLIES
	716	NOT REQ'D
MEANS OF EGRESS		
	T1018.1	2 FOR OCCUPANT LOAD < THAN 500
	1003.2	7'-6" MINIMUM IN CORRIDORS
	1003.3.1	84" ALLOWED FOR PROTRUDING OBJECT < 50% OF THE AREA
	1009.1	MIN. 44" AND AS DETERMINED BY 1005.1 (.3"/OCCUPANT)
	1009.2	84" FOR R-1 / 80" FOR R-2
	1016.2.3	MIN. 44" (36" WITHIN R-1 DWELLING UNITS)
	1016.2.4	MIN. 44" (30" WITHIN R-2 DWELLING UNITS)
	1013.3	75'
	1016.3.4	40' FOR R-2 OR 80' IF 2-HR RATED CORRIDOR IS PROVIDED
	1016.3	20' WHERE MORE THAN ONE EXIT IS REQUIRED
	1008.1.1.3	MIN. 6'-8"' ; MIN. 6'-6" FOR DWELLING UNITS
	1008.1.1.1	MIN. 32", EXCEPT PER BC 1105.1.6, IIC A117 SEC 404 AND 1003.5 (36")
	T 1015.1	200' WITH AUTOMATIC SPRINKLER SYSTEM
ACCESSIBILITY		
	1107.6.2	REQUIRED TYPE B UNITS FOR R-2 OCCUPANCY GROUP
	1107.6.1.1	1% (OF 200) SHOWERS = 2; 5% (OF 200) UNITS = 10
	1007.3	EXCEPTION 2 – NOT REQ'D @ SPRINKLERED BUILDINGS
	1007.4	NOT REQ'D AT BUILDINGS EQUIPPED WITH AUTOMATIC SPRINKLER SYSTEM
INTERIOR ENVIRONMENT		
	1208.1	8'-0" MIN DIM, KITCHENETTES CLEAR PASSAGEWAY MIN. 3'-0"
	1208.1.4	6'-0" MIN DIMENSION IN R-1 DWELLING UNIT
	1208.3.1.3	60SF NET AREA REQ'D FOR R-1 DWELLING UNIT
	1208.3.2	150SF MIN. NET FLOOR AREA EXCEPT FOR R-1 SLEEPING RMS.
	1208.2 1208.3	8'-0" HABITABLE ROOMS AND SPACES; OCCUPIABLE, HABITABLE, CORRIDORS MIN. 7'-6"; BATH, KITCHENETTE, STORAGE, LAUNDRY NOT <7';
	1203.4.1.1	MIN 4% OF FLOOR AREA AT THE OCCUPIABLE SPACE
	1203.4.1.2.1	MIN 5% OF FLOOR AREA AT THE HABITABLE SPACE AND MIN 12SF GLAZED AREA PROVIDING 6SF OPENABLE AREA OR 5.5SF MIN FOR CASEMENT WINDOW
	1205.2	NET GLAZED AREA SHALL BE MIN 10% OF FLOOR AREA OF THE ROOM SERVED AND MIN 12SF PER GLAZED AREA
	1213.2 – 3	EVERY DWELLING UNIT A RM MIN. 150 NSF; OTHER HABITABLE MIN. 80 NSF
	1213.2 1213.3	REFUSE CHUTE REQUIRED FOR R-2 > 5 STY AND 12 UNITS. REFUSE COMPACTING SYSTEM REQUIRED FOR R-1 OCCUPANCIES AND R-2 OCCUPANCIES > 4 STY AND 12 UNITS.

*COMMUNITY SERVICE FACILITY CONSIDERED AN ACCESSORY USE TO R2 OCCUPANCY. PER NYC BUILDING CODE SECTION 302.2, ALLOWED. OCCUPANCY PER T1004.1.2, ASSEMBLY UNCONCENTRATED WITH TABLES & CHAIRS IS 15 SF/ PERSON. THE OCCUPANT LOAD SHALL BE BASED ON ACTUAL NUMBER OF OCCUPANTS FOR WHOM THE SPACE IS DESIGNED. 1090 SF/15 SF PER PERSON = 72 PERSONS.

KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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JOSEPH R. LORING AND ASSOCIATES INC.
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Civil Engineer:
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One Edgewater Plaza, Suite 205, Staten Island, NY 10305
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Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
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Bowery Residents' Committee

Landing Road
233 Landing Road
Bronx, New York 10468

TITLE:

BUILDING CODE ANALYSIS AND OCCUPANCY CALCULATIONS

SEAL:

STATE OF NEW YORK · ANDREW M. KNOX · 022216 · REGISTERED ARCHITECT

PROJECT NO.: 14008.0

SCALE:

BY: KM / MR / MVR / MG CHECK: AK

DATE: DECEMBER 22, 2014

PAGE: 4 of 29

DWG. NO.:

A-003.00

GENERAL NOTES

(1) THESE NOTES ARE PART OF THE PLANS AND SPECIFICATIONS AND ARE TO BE COMPLIED WITH IN ALL RESPECTS. MORE RESTRICTIVE NOTES MENTIONED ELSEWHERE SHALL TAKE PRECEDENCE. NOTES MENTIONED IN ANY DRAWING SHALL APPLY TO ALL CONTRACT DRAWINGS.

(2) THE PROJECT INCLUDES PROVISIONS OF ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR CONSTRUCTION OF A NEW APARTMENT BUILDING AT 267, 269 WEST 154TH STREET.

(3) IN ADDITION TO THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION THE CONTRACTOR IS DIRECTED TO THE "SUPPLEMENTAL GENERAL CONDITIONS" FOR IMPORTANT CLARIFICATION [PERTAINING TO SUBSTITUTIONS, PROJECT ADMINISTRATION, CHANGES IN THE WORK, SCHEDULE PAYMENTS, INSURANCE REQUIREMENTS AND EMPLOYMENT POLICIES.

(4) ALL WORK SHALL COMPLY WITH FEDERAL STATE, AND LOCAL CODES, INCLUDING THE NEW YORK CITY BUILDING CODE, NYC/DOB RULES AND REGULATIONS, NYC/FIRE DEPARTMENT, O.S.H.A., ETC.

(5) THE FOLLOWING REGULATIONS (INCLUDING BUT NOT LIMITED TO) ARE APPLICABLE TO THIS PROJECT:

A) NYC ZONING RESOLUTION
B) NYC BUILDING CODE 2008 EDITION WITH AMENDMENTS
C) HOUSING MAINTENANCE CODE
D) NYC ENERGY CODE
E) NEW YORK CITY HANDICAPPED ACCESSIBILITY CODES AS INCORPORATED INTO THE NYC BUILDING CODE
F) UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS) RECOGNIZED BY ADA AS EQUIVALENT TO ADAAG
G) NFPA 101 LIFE SAFETY CODE

OF THE ABOVE, IN CASE OF CONFLICTING REQUIREMENTS, THE STRICTER CODE SHALL APPLY.

(6) ALL MATERIALS, ASSEMBLIES, FORMS AND METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL MEET THE FOLLOWING REQUIREMENTS, INCLUDING THOSE OF NYC AGENCIES:

A) THEY SHALL HAVE BEEN ACCEPTABLE PRIOR TO THE EFFECTIVE DATE OF THE CODE BY THE NYC B.S.A.
B) THEY SHALL HAVE BEEN ACCEPTED FOR USE UNDER THE PRESCRIBED TEST METHODS BY THE NYC/DOB COMMISSIONER.
C) APPROVED BY THE NYC BOARD OF STANDARDS AND APPEALS (ARTICLE 7(27.131)).
D) THEY SHALL BE IN ACCORDANCE WITH AUTHORITIES AND UTILITY COMPANIES HAVING JURISDICTION.
E) THEY SHALL BE AS SPECIFIED.

(7) INTERIOR FINISH: MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH THE SURFACE FLAME SPREAD RATING OBTAINED AS PRESCRIBED IN ASTM 3-54-1961, STANDARD METHOD OR TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS AS PER (27-348). CORRIDOR FINISHES SHALL BE CLASS 'A'.

(8) ALL EXITS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES

(9) ILLUMINATION OF AT LEAST 5 FOOT CANDLES MEASURED AT THE FLOOR LEVEL SHALL BE MAINTAINED CONTINUOUSLY DURING OCCUPANCY, IN EXITS AND THEIR ACCESS FACILITIES (27-381).

(10) THE EXISTING STRUCTURE, COMPONENTS, OR ASSEMBLIES SHALL NOT BE OVERLOADED AT ANY TIME. PROVIDE AND MAINTAIN REQUIRED SAFETY SYSTEMS AS MAY BE NECESSARY. PROVIDE COORDINATED SAFETY PLAN(S) FOR FIRE PROTECTION, PROTECTION OF EGRESS, STAGING, AND PHASING.

(11) IN THE EVENT OF CONFLICTS OR DISCREPANCIES AMONG THE CONTRACT DOCUMENTS, INTERPRETATIONS WILL BE BASED ON THE FOLLOWING PRIORITIES.

A) THE AGREEMENT
B) ADDENDA, WITH THOSE OF LATER DATE HAVING PRECEDENCE OVER THOSE OF EARLIER DATE
C) THE SUPPLEMENTARY CONDITIONS
D) THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION
E) SPECIFICATIONS
F) DRAWINGS

(12) IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS OR WITH EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

(13) WRITTEN DIMENSIONS TAKE PRECEDENCE OVER DRAWINGS. DO NOT SCALE DRAWINGS

(14) CONTRACTOR SHALL BE REQUIRED TO FILE A WORK DRAWING WITH THE METROPOLITAN TRANSPORTATION COORDINATION COUNCIL (MTCCC) IF THE STREET FRONTING THE SITE WILL BE OBSTRUCTED FOR CONSTRUCTION OPERATIONS.

(15) CONTRACTOR SHALL SUBMIT A LIST OF REQUIRED PERMITS FOR CONSTRUCTION, EQUIPMENT, MECHANICAL/ELECTRICAL SUPPLIES, ETC. INCLUDING FILING FOR RESPONSIBILITY, DATE FILED, AND ANTICIPATED COMPLETION.

(16) CONTRACTOR SHALL SECURE ALL PERMITS

(17) CONTRACTOR SHALL BE RESPONSIBLE FOR FILING FOR APPROVAL, OBTAIN PERMITS AND SIGNOFFS FOR THE FOLLOWING ITEMS, AND AS REQUIRED BY ALL AUTHORITIES:

A) FIRE SUPPRESSION SYSTEM
B) ELEVATOR
C) SPRINKLER & STANDPIPE SYSTEMS
D) SIDEWALK SCHEDULE, SCAFFOLDING, CHUTES, FENCES, & ANY OTHER PEDESTRIAN PROTECTION AS REQ'D BY NYC BLDG CODE
E) ALL MECHANICAL, ELECTRICAL, AND PLUMBING PERMITS AND TESTS
F) EQUIPMENT USE PERMITS FOR ALL HVAC UNITS
G) BUILDING PAVERS PLAN-- INCLUDING PREPARATION OF PLAN FOR FILING.

(18) CONTROLLED INSPECTIONS ITEMS REQUIRE 72 HOUR PRIOR WRITTEN NOTICE TO THE GENERAL CONTRACTOR

(19) CONTRACTOR SHALL NOTIFY DOB 24-48 HOURS PRIOR TO COMMENCEMENT OF EARTHWORK AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION OF FOOTINGS, NOTICE SHALL BE GIVEN TO THE DEPARTMENT OF BUILDINGS (27-723)

(20) CONTRACTOR SHALL SCHEDULE FINAL INSPECTION AT 75% PROJECT COMPLETION WITH THE BUILDING DEPARTMENT AND FIRE DEPARTMENT WITH SUFFICIENT LEAD TIME SO THAT APPROVALS DO NOT IMPEDE OBTAINING CERTIFICATE OF OCCUPANCY.

(21) CONTRACTOR IS RESPONSIBLE FOR OBTAINING CERTIFICATE OF OCCUPANCY

(22) THE CONTRACTOR(S) SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND CLEARANCES IN THE FIELD BEFORE ORDERING MATERIALS OR STARTING WORK, AND SHALL BE RESPONSIBLE FOR ANY CHANGE OR DEVIATION FROM THE CONTRACT DOCUMENTS. ANY DISCREPANCY OR INCONSISTENCY SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT FOR CLARIFICATION

(23) THE GENERAL CONTRACTOR COORDINATE ALL WORK WITH ALL TRADES AND VERIFY / COORDINATE LOCATIONS OF ALL MECHANICAL, ELECTRICAL AND STRUCTURAL ITEMS WITH ARCHITECTURAL. ALL OPENINGS AFFECTING STRUCTURAL ELEMENTS (BEARING WALLS, FOUNDATION WALLS, AND FLOOR/ROOF SLABS) SHALL BE CONFIRMED IN A COORDINATION DRAWING WITH THE STRUCTURAL ENGINEER AND ARCHITECT PRIOR TO EXECUTION.

(24) CONTRACTOR SHALL VERIFY BY SURVEY ANY INFRINGEMENT BY ADJOINING STRUCTURES PRIOR TO BEGINNING WORK WHICH WILL IMPACT BUILDING DIMENSIONS OR LAYOUT AND NOTIFY THE ARCHITECT AND OWNER.

(25) NOT USED

(29) CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND RESTORING TO ORIGINAL (OR NEW) CONDITION ANY DAMAGE TO ADJACENT STRUCTURES

(30) CONTRACTOR SHALL BE RESPONSIBLE FOR BLACK AND WHITE PHOTOGRAPHIC DOCUMENTATION OF EXISTING CONDITIONS INCLUDING CONDITION OF ADJOINING STRUCTURES PRIOR TO BEGINNING WORK. COPIES BEARING DATES SHALL BE DISTRIBUTED TO OWNER AND ARCHITECT.

(31) TYPICAL DIMENSIONS ARE FROM FINISH FACE TO FINISH FACE OF PARTITION UNLESS OTHERWISE NOTED.

(32) CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGES, COLLAPSE, DISTORTIONS AND MIS-ALIGNMENT ACCORDING TO APPLICABLE CODES, STANDARDS AND GOOD PRACTICE.

(33) ALL PENETRATIONS OF RATED CONSTRUCTION SHALL COMPLY WITH SECTION C26-504.5, B & D.

(34) FLAMMABLE OR TOXIC MATERIALS SHALL NOT BE PERMITTED. AVOID WELDING AND GAS EQUIPMENT. ALL MATERIALS SHALL COMPLY WITH NYC LIMITS FOR V.O.C.'S.

(35) ALL PARTITIONS EXTEND TO THE UNDERSIDE OF THE STRUCTURE OR SLAB ABOVE. NOTE THAT ALL FLOOR ELEVATIONS ARE GIVEN FROM TOP OF CONCRETE SLAB.

(36) SUSPENDED CEILINGS SHALL COMPLY WITH APPLICABLE CODES, WITH METAL HANGERS, PURLINS AND RUNNERS. ACOUSTICAL CEILINGS AND SUSPENSION SYSTEMS SHALL BE OF NON-COMBUSTIBLE MATERIALS AND SHALL COMPLY WITH NYC CODE, INCLUDING REFERENCE STANDARD 5-16. CORRIDORS AND EGRESS PATHS SHALL HAVE FIRE RATED CEILING/FLOOR ASSEMBLIES TO CODE REQUIREMENTS. PENETRATIONS AT FIRE RATED CEILING ASSEMBLIES (IE, FOR LIGHTING, ACCESS DOORS, ETC), SHALL BE PROTECTED BY FIRE RATED ASSEMBLIES RATED AND LISTED BY U.L.

(37) COORDINATE INSTALLATION OF FINISHES, PARTITIONS AND DOOR FRAMES AND SETTING OF STAIR PLATFORMS WITH GYPSUM UNDERLAYMENT SYSTEM.

(38) ALL EXPOSED HORIZONTAL PIPING AND VERTICAL AND HORIZONTAL SPRINKLER PIPING (INCLUDING VALVE AND SWITCH ASSEMBLIES) SHALL BE CONCEALED IN GYPSUM BOARD ENCLOSURES EXCEPT WHERE NOTED OTHERWISE. ALL SPRINKLER PIPING WITHIN APARTMENTS SHALL BE CONCEALED IN GYPSUM BOARD SOFFITS OR WALLS.

(39) CEILING AND WALL MOUNTED ELECTRICAL DEVICES SHALL BE CONCEALED, EXCEPT IN THE FOLLOWING AREAS AND WHERE NOTED OTHERWISE:

MECHANICAL ROOMS
STORAGE ROOMS
JANITOR CLOSETS
TRASH ROOMS
CRAWL SPACE

(40) MECHANICAL/ELECTRICAL TRADES TO SUBMIT SHOP DRAWINGS LOCATING ANY AND ALL REQUIRED ACCESS PANELS AND EXPOSED CLEANOUT LOCATIONS WHETHER OR NOT SUPPLIED AND INSTALLED BY OTHERS. TO SUIT ARCHITECTURAL APPEARANCE, ARCHITECT MAY REQUIRE MINOR RELOCATION OF THESES SYSTEMS FOR ACCESS PANEL PLACEMENT. CONTRACTOR SHALL SUPPLY AND INSTALL ALL ACCESS DOORS AS REQUIRED BY ALL TRADES INCLUDING ANY NOT SHOWN ON THE DRAWINGS.

(41) THIN SET MORTAR, MEMBRANE WATER PROOFING AND MODIFIED MORTAR MUDSET MATERIALS SHALL BE COMPATIBLE AND CERTIFIED BY THEIR RESPECTIVE MANUFACTURERS.

(42) BUILDING SHALL BE MASTER METERED FOR ELECTRIC, WATER AND GAS SERVICE.

INSPECTIONS AND TESTS:

SPECIAL INSPECTIONS

1704.3.1	STRUCTURAL STEEL WELDING
1704.3.2, 1704.3.3	STRUCTURAL STEEL ERECTION AND BOLTING
1704.3.4	STRUCTURAL COLD-FORMED STEEL
1704.4	CONCRETE CAST IN PLACE
1704.4	CONCRETE PRECAST
1704.5	MASONRY
1704.7.1	SOILS - SITE PREPARATION
1704.7.2, 1704.7.3	SOILS - FILL PLACEMENT / IN PLACE DENSITY
1704.11	SPRAYED FIRE RESISTANT MATERIALS
1704.12	EIFS
1704.14	SMOKE CONTROL SYSTEMS
1704.15	MECHANICAL SYSTEMS
1704.19, 3304.4.1	EXCAVATION / SHEETING, SHORING AND BRACING
BB 220.019	ADHESIVE ANCHORAGE
1704.19	STRUCTURAL SAFETY / STABILITY
1704.2	SITE STORM DRAINAGE DISPOSAL AND DETENTION SYSTEM
1704.21	SPRIKLER SYSTEMS
1704.23	HEATING SYSTEMS
1704.25	FIRESTOP, DRAFTSTOP, AND FIREBLOCK SYSTEMS
1905.6	CONCRETE TEST CYLINDERS
1905.3	CONCRETE DESIGN MIX

PROGRESS INSPECTIONS

109.3.1	FOOTING AND FOUNDATION
109.3.3	FRAME INSPECTION
109.3.5	ENERGY CODE COMPLIANCE
109.3.4	FIRE RESISTANT RATED CONSTRUCTION

ENERGY CODE INSPECTIONS

SEE A-00X

NOTES:

1. SPECIAL INSPECTIONS REQUIRED BY OTHER APPLICATIONS RELATED TO THE PROJECT SHALL BE COORDINATED BY THE GC INCLUDING BUT NOT LIMITED TO SPRINKLER (1704.22) AND STANDPIPE (1704.22), FIRE ALARM (BC907, BC1704.13), SITE CONNECTION, ELEVATOR, BOILER, ETC.
2. SOILS INVESTIGATIONS (BORINGS/TEST PITS) PER 1704.7.4 ARE REQUIRED OF THE PROFESSIONAL WHO PREPARES THE REPORT AND SHALL BE PROVIDED AT THE TIME OF FILING TO THE ARCHITECT'S FILING REPRESENTATIVE.
3. CONSTRUCTION SCHEDULING: IN ACCORDANCE WITH 28-116 AND SECTION BC 109, CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING CONSTRUCTION TO ALLOW FOR ALL REQUIRED SPECIAL INSPECTIONS AND PROGRESS INSPECTIONS TO TAKE PLACE.
4. SPECIAL INSPECTIONS ITEMS REQUIRE 72 HOUR PRIOR WRITTEN NOTICE FROM THE GENERAL CONTRACTOR TO THE SPECIAL INSPECTOR, ARCHITECT AND OWNER.
5. CONTRACTOR SHALL NOTIFY DOB 24-48 HOURS PRIOR TO COMMENCEMENT OF EARTHWORK AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION OF FOOTINGS, NOTICE SHALL BE GIVEN TO THE DEPARTMENT OF BUILDINGS (27-723).
6. ROOFS, CEILINGS, EXTERIOR WALLS, INTERIOR WALLS, FLOORS, FOUNDATIONS, BASEMENTS AND ANY OTHER CONSTRUCTION SHALL NOT BE COVERED OR ENCLOSED UNTIL REQUIRED PROGRESS INSPECTIONS ARE COMPLETED OR THE PROGRESS INSPECTOR INDICATES THAT SUCH COVERING OR ENCLOSURE MAY PROCEED, AT EACH STAGE OF CONSTRUCTION, AS APPLICABLE. (28-116, BC 109)
7. IN ACCORDANCE WITH SECTION BC 109.9, WHERE AN INSPECTION OR TEST FAILS, THE CONSTRUCTION SHALL BE CORRECTED.
8. CONTRACTOR SHALL SCHEDULE FINAL INSPECTION AT 75% PROJECT COMPLETION WITH THE BUILDING DEPARTMENT AND FIRE DEPARTMENT WITH SUFFICIENT LEAD TIME SO THAT APPROVALS DO NOT IMPEDE OBTAINING CERTIFICATE OF OCCUPANCY.

SMOKE / CARBON MONOXIDE DETECTION:

1. SMOKE/CARBON OMONOXIDE DETECTORS OR DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH HOUSING MAINTENANCE CODE, MULTIPLE DWELLING LAW, THE NYC BUILDING CODE AND THE NYC ELECTRICAL CODE.
2. SMOKE AND CARBON MONOXIDE DETECTORS MAY BE COMBINED PROVIDING THE DEVICES COMPLY WITH THE PROVISIONS OF THE ADMINISTRATIVE CODE OF THE CITY OF NEW YORK AND ANY APPLICABLE RULES PROMULGATED THEREUNDER.
3. EACH SMOKE/CARBON MONOXIDE DETECTOR SHALL BE INSTALLED IN ACCORDANCE WITH REFERENCE STANDARD 17-12 OF THE NYC BUILDING CODE.
4. EACH SMOKE/CARBON MONOXIDE DETECTOR SHALL BE INSTALLED OUTSIDE OF EACH SLEEPING ROOM IN THE IMMEDIATE VICINITY OR WITHIN 15' OF THE ENTRANCE TO A SLEEPING ROOM.
5. EACH SMOKE/CARBON MONOXIDE DETECTOR SHALL BE OF A TYPE THAT ALLOWS FOR READILY TESTING OF SUCH DEVICE.
6. DUPLEX UNITS SHALL HAVE A DEVICE ON EACH LEVEL IF ONLY ONE MEANS OF EGRESS IS PROVIDED FROM EACH LEVEL.
7. CEILING MOUNTED DEVICES SHALL BE A MINIMUM DISTANCE OF 4" FROM ANY WALL.
8. WALL MOUNTED DEVICES SHALL BE A MINIMUM OF 4" TO A MAXIMUM OF 12" FROM THE CEILING.
9. EACH DWELLING UNIT SHALL BE EQUIPPED WITH AN APPROVED TYPE SMOKE/CARBON MONOXIDE DETECTOR DEVICE AS PER NYC BUILDING CODE SECTION 27-980.
10. SUCH SMOKE/CARBON MONOXIDE DETECTOR MUST BE EITHER THE IONIZATION OR PHOTO-ELECTRIC TYPE AS PER NYC BUILDING CODE SECTION 27-981.
11. DEVICES SHALL BE POWERED FROM THE BUILDING ELECTRICAL SUPPLY WITHOUT ANY SWITCHES, AND PROVIDED WITH BATTERY BACKUP. [LL 7/04]

MULTIPLE DWELLING LAW NOTES:

THE PREMISES SHALL COMPLY WITH THE PROVISIONS OF ARTICLE THREE OF THE MULTIPLE DWELLING LAW (MDL), GENERAL PROVISIONS, FOR BUILDINGS ERECED AFTER APRIL 18, 1929.

1. PREMISES TO COMPLY WITH SEC 21 MDL: SIZE OF ROOMS.
A) IN EACH CLASS "A" APARTMENT THERE SHALL BE AT LEAST ONE LIVING ROOM OF 150 SQ FT IN FLOOR AREA WITH AT LEAST EIGHT FEET IN ITS LEAST HORIZONTAL DIMENSION. THE CEILINGS SHALL BE AT LEAST EIGHT FEET IN HEIGHT.
B) EVERY ROOM SHALL HAVE AT LEAST 400 SQUARE FEET OF AIR FOR EACH ADULT AND 200 SQUARE FEET FOR EACH CHILD OCCUPYING THE ROOM. NO MORE THAN TWO ADULTS SHALL OCCUPY ANY ROOM.

2. PREMISES TO COMPLY WITH SEC 33 MDL: COOKING SPACES
A) CEILING AND WALLS, EXCLUSIVE OF DOOR SHALL BE FIRE RETARDED.
B) ALL COMBUSTIBLE MATERIAL IMMEDIATELY UNDERNEATH OR WITHIN ONE FOOT OF ANY COOKING APPARATUS SHALL BE FIRE-RETARDED OR COVERED WITH 26 GAUGE SHEET METAL, OR WITH FIRE RESISTIVE MATERIAL OF EQUIVALENT RATING.
C) THERE SHALL ALWAYS BE AT LEAST 2'-0" OF CLEAR SPACE ABOVE ANY EXPOSED COOKING SURFACE.
D) ALL KITCHENETTES SHALL BE PROVIDED W/ EITHER A LAWFUL WINDOW, SKYLIGHT, OR VENTILATION SYSTEM.

3. PREMISES TO COMPLY WITH SEC 37 MDL: ARTIFICIAL HALL LIGHTING.
A) ENTRY VESTIBULES, STAIRS AND PUBLIC HALLS SHALL BE PROVIDED WITH LIGHTS, EACH OF AT LEAST 60 WATTS INCANDESCENT, OR 20 WATTS FLOURESCENT.
B) ALL SUCH LIGHTS SHALL BE KEPT BURNING FROM SUNSET TO SUNRISE.

4. PREMISES TO COMPLY WITH SEC 50-A MDL: ENTRANCES: DOORS, LOCKS AND INTERCOMMUNICATION SYSTEMS.
A) BUILDING ENTRANCES AND ALL OTHER ENTRANCES SHALL BE EQUIPPED WITH APPROVED TYPED AUTOMATIC SELF-CLOSING AND SELF-LOCKING UNITS. SUCH DOORS SHALL BE KEPT LOCKED AT ALL TIMES EXCEPT WHEN AN ATTENDANT IS ON DUTY.
B) EVERY CLASS "A" MULTIPLE DWELLING CONTAINING EIGHT OR MORE APARTMENTS SHALL BE EQUIPPED WITH AN APPROVED-TYPE INTERCOMMUNICATION SYSTEM LOCATED AT AN AUTOMATIC SELF-LOCKING DOOR, GIVING ACCESS TO MAIN ENTRANCE HALL OR LOBBY.

5. PREMISES TO COMPLY WITH SEC 75 MDL: BELLS, MAIL RECEPTACLES
A) ALL BELLS SHALL BE KEPT IN GOOD WORKING ORDER
B) ALL MAIL DELIVERIES SHALL CONFORM TO THE REGULATIONS OF THE POST OFFICE DEPARTMENT

6. PREMISES TO COMPLY IWTH SEC 58 MDL: INCOMBUSTIBLE MATERIAL
A) ALL INCOMBUSTIBLE MATERIALS SHALL BE CAPABLE OF WITHSTANDING STANDARD TESTS AS PRESCRIBED BY BUILDING CODE.

7. PREMISES TO COMPLY WITH SEC 62 MDL: PARAPETS, GUARD RAILINGS AND WIRES.
A) ALL OPEN AREAS OF ROOF, TERRACE, AREAWAY, OUTSIDE STAIR, OUTSIDE STAIR LANDING, RETAINING WALL, AND PORCH SHALL BE PROTECTED BY A PARAPET. ALL PARAPETS AND GUARD RAILINGS SHALL BE THREE FEET SIX INCHES IN HEIGHT. ALL WIRES OVER THE ROOF SHALL BE KEPT TEN FEET OR MORE ABOVE THE ROOF, AND NO WIRES OF ANY KIND SHALL BE ATTACHED TO THE FIRE ESCAPE.

8. PREMISES TO COMPLY WITH SEC 64 MDL: LIGHTING; GAS METERS; GAS AND OIL APPLIANCES
A) THE BUILDING WILL BE ADEQUATELY EQUIPPED THROUGHOUT ALL STORIES AND CELLARS FOR LIGHTING BY ELECTRICITY.
B) GAS RANGES WILL BE A.G.A. OR B.S.&A. APPROVED.

9. PREMISES TO COMPLY WITH SEC 75 MDL: WATER SUPPLY
A) IN ALL SPACES FOR COOKING, THERE IS A SINK WITH HOT AND COLD RUNNING WATER AND A TWO-INCH WASTE AND TRAP. NO REQUIRED SICK SHALL BE WITHIN A WATER CLOSET.

10. PREMISES TO COMPLY WITH SEC 76 MDL: WATER CLOSET AND BATH ACCOMODATIONS
A) THE FLOOR OF EVERY BATHROOM SHALL BE MADE WATERPROOF WITH MATERIAL APPROVED BY THE DEPARTMENT, AND SUCH WATERPROOFING SHALL EXTEND SIX INCHES OR MORE ABOVE THE FLOOR, EXCEPT AT THE DOOR.
B) THE WALLS OF EVERY BATHROOM SHALL BE MADE OF WATER RESISTANT GYPSUM BOARD, BSA CAL 486-39-SM)
C) BATHROOM SHALL BE EQUIPPED WITH AT LEAST ONE LAWFUL WINDOW, SKYLIGHT, OR VENTILATION SYSTEM. SUCH WINDOW SHALL BE AT LEAST THREE FEET IN AREA AND SHALL BE MADE SO THAT HALF ITS AREA CAN BE READILY OPENED.

11. PREMISES TO COMPLY WITH SEC 77 MDL: PLUMBING AND DRAINAGE
A) LAWFUL PROVISIONS FOR WATER BORNE WASTE SHALL BE PROVIDED.
B) ALL COURTS, ROOFS, YARDS, AND AREAWAYS SHALL BE PROPERLY DRAINED

12. PREMISES TO COMPLY WITH SEC 78 MDL: REPAIRS
A) THIS MULTIPLE DWELLING SHALL BE KEPT IN GOOD REPAIR.

13. PREMISES TO COMPLY WITH SECT 79 MDL: HEAT
A) THIS DWELLING SHALL PROVIDE HEAT. BETWEEN THE HOURS OF SIX AM AND TEN PM, A TEMPERATURE OF SIXTY-EIGHT DEGREES FAHRENHEIT SHALL BE MAINTAINED WHEN THE OUTSIDE TEMPERATURE FALLS BETWEEN FIFTY FIVE DEGREES FAHRENHEIT. BETWEEN THE HOURS OF TEN PM AND SIX AM, A TEMPERATURE OF FIFTY-FIVE DEGREES SHALL BE MAINTAINED WHEN THE OUTSIDE TEMPERATURE FALLS BELOW FORTY DEGREES FAHRENHEIT.

14. PREMISES TO COMPLY WITH SEC 80 MDL: CLEANLINESS
A) THIS BUILDING AND THE LOT ON WHICH IT IS SITUATED SHALL BE KEPT CLEAN

15. PREMISES TO COMPLY WITH SEC 81 MDL: RECEPTACLES FOR WASTE MATTER
A) PROPER RECEPTACLES FOR WASTE MATTER SHALL BE PROVIDED

16. PREMISES TO COMPLY WITH SEC 83 MDL: JANITOR OR HOUSEKEEPER
A) WHENEVER A DWELLING IS OCCUPIED BY THIRTEEN OR MORE FAMILIES, THE OWNER MUSE RESIDE THEREIN OR PROVIDE A RESPONSIBLE PERSON ON HIS BEHALF.

2011 NYC ENERGY CONSERVATION CODE:

1. OUTDOOR DESIGN CONDITIONS AS PER TABLE E302.1:
NYC ZONE: 10B
WINTER: 13 DEGREES F DRY BULB
SUMMER: 89 DEGREES F DRY BULB, 73 DEGREES F COINCIDENT WET BULB
DEGREE DAYS: 4910

2. INDOOR DESIGN CONDITIONS AS PER TABLE E402.1.3.5:
WINTER: 68 DEGREES F DB
SUMMER: 78 DEGREES F

3. INSULATE AS PER TABLE E802.2(1) (GLAZED AREA 10 PERCENT OR LESS OF ABOVE-GRADE WALL AREA): WINDOWS AND GLASS DOORS - UNRATED. ROOF ASSEMBLIES SHALL BE INSULATED WITH 9.0" FIBERGLASS WITH VAPOR BARRIER (R29).

4. AIR LEAKAGE AS PER E802.3 (AAMA/WDMA 101/I.S.2).
WINDOWS: 0.5 CFM/LF (DOUBLE GLAZED)
DOORS: 1.0 CFM/LF
EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES; OPENINGS BETWEEN WALLS AND ROOF/CEILINGS AND BETWEEN WALL PANELS; PENETRATIONS THROUGH WALLS, FLOORS AND ROOFS FOR UTILITY SERVICES; AND ALL SUCH OPENINGS IN THE BUILDING ENVELOPE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR SEALED. PROVIDE SELF-CLOSING VESTIBULE DOOR AND MAIN DOOR AT MAIN ENTRANCE TO REDUCE INFILTRATION LOSSES.

5. COMPLY WITH E803.2.1 REGARDING HEATING LOAD CALCULATIONS.

6. PROVIDE CONTROLS TO COMPLY WITH TABLE E402.1.3.5 AND 803.2.3.1.

7. PROVIDE SHUTOFF DAMPERS FOR MECHANICAL SUPPLY SYSTEMS AS PER E803.2.7 AND E803.3.3.4.

8. COMPLY WITH E803.2.6 AS REGARDS COOLING.

9. INSULATE DUCTS AS PER E803.2.8.

10. CONSTRUCT DUCTS AS PER E803.2.8.1.

11. INSULATE PIPING AS PER E803.3.7 & TABLE E803.3.7:
A. FOR HOT WATER PIPE LESS THAN OR EQUAL TO 1-1/2", PROVIDE 1" INSULATION.
B. FOR HOT WATER PIPE GREATER THAN 1 1/2 INCH, PROVIDE 2 INCH INSULATION.

12. HEATING AND VENTILATING EQUIPMENT AND COMPONENTS SHALL MEET EFFICIENCY STANDARDS AS REGARDS RECOVERY RATES, FUEL COMBUSTION, AND STANDBY LOSSES AS PER TABLE E803.2.2(5) AND TABLE 803.2.6.

13. HEATING AND VENTILATING EQUIPMENT AND COMPONENTS SHALL MEET PERFORMANCE REQUIREMENTS AS PER E803.3.2, E803.2.2, E803.2.2(5).

14. WATER HEATERS, STORAGE TANKS, BOILERS & PIPING SHALL MEET EFFICIENCY STANDARDS AS REGARDS RECOVERY RATES, FUEL COMBUSTION,, AND STANDBY LOSSES AS PER TABLE 504.2.

15. INSTALL ELECTRIC SERVICE AND LIGHTING AS PER SECTION 805. EXTERIOR LIGHTING CONTROLS TO COMPLY WITH E805.2.2.

HOUSING MAINTENANCE CODE NOTES:

1. OWNER SHALL FILE REGISTRATION STATEMENT AS PER 27-2098 OF HMC.
2. OWNER SHALL PROVIDE A SIGN IDENTIFYING OWNER, MANAGEMENT, AND SUPERINTENDENT AS PER 27-2104 OF HMC.
3. FLOOR SIGNS SHALL BE PLACED AND MAINTAINED ON EACH FLOOR LEVEL AS PER 27-2048 HMC.
4. ALL APARTMENT ENTRANCE DOORS SHALL BE A MINIMUM OF 3/4 HOUR RATED, SELF CLOSING WITH PEEPHOLE AS PER 27-2041 HMC, AND LOCKS AS PER 27-2043 OF HMC.
5. MIRRORS IN ELEVATORS SHALL BE AS PER 27-2042 OF HMC.
6. THE BUILDING'S HEATING AND HOT WATER SUPPLY SHALL COMPLY WITH 27-2028, 27-2029, 27-2030, AND 27-2031 OF HMC.
7. LIGHTING SHALL BE PROVIDED AS PER 27-2038, 27-2039, AND 27-2040 OF HMC AND C26-605AC, C26-1203AC AND SECTION 26 TO 35 OF MDL.
8. GARBAGE COLLECTION AND STORAGE IN RECEPTACLES SHALL COMPLY WITH 27-2021 AND 27-2022 OF HMC.
9. U.S. MAIL SERVICE SHALL BE PROVIDED AS PER 27-2047 OF HMC.
10. THE BUILDING STREET NUMBER SHALL BE DISPLAYED AS PER 27-2049 OF HMC.
11. JANITORIAL SERVICES SHALL BE PROVIDED AS PER 27-2053 OF HMC.
OWNER SHALL POINT ALL PUBLIC PARTS OF A MULTIPLE DWELLING AS PER 27-2013 OF HMC.
13. INTERIOR OF DWELLING UNIT SHALL BE CLEANED AS PER 27-2012 OF HMC.
14. DUTIES OF OWNER SHALL BE A S PER 27-2005 OF HMC.
15. DUTIES OF TENANTS SHALL BE AS PER 27-2006 AND 27-2007 OF HMC.
16. OWNER'S RIGHT OF ACCESS SHALL BE AS PER 27-2008 OF HMC.
17. EXTERMINATION AND RODENT ERADICATION SHALL BE AS PER 27-2018 AND 27-2019 OF HMC.
18. WATER SHALL BE SUPPLIED AS PER 27-2024 AND 27-2025 OF HMC.
19. THE PLUMBING AND DRAINAGE SYSTEM SHALL BE MAINTAINED AS PER 27-2026 OF HMC.
20. DRAINAGE OF ROOF AND COURTYARDS SHALL BE AS PER 27-2027 OF HMC.
21. NATURAL LIGHT AND VENTILATION SHALL BE PROVIDED AS PER 27-2057 AND 27-2058 OF HMC.
22. SANITARY FACILITIES IN MULTIPLE DWELLING, LIGHT AND VENTILATION FOR TOILET COMPARTMENT SHALL BE AS PER 27-2063, 27-2064, 27-2065, 27-2066, AND 27-2068 OF HMC.
23. KITCHENS AND KITCHENETTES SHALL BE PROVIDED WITH PROPER FACILITIES, EQUIPMENTS, LIGHTINGS, VENTILATION AND FIRE PROTECTION AS PER 27-2070, 27-2071 AND 27-2072 OF HMC.
24. MINIMUM ROOM SIZE SHALL BE AS PER 27-2074 AND MAXIMUM OCCUPANCY SHALL BE AS PER 27-2075 OF HMC.
25. OCCUPANCY OF CELLARS & BASEMENTS SHALL BE AS PER 27-2081, 27-2082 AND 27-2083 OF HMC.

MECHANICAL EQUIPMENT INFORMATION:

SEE MECHANICAL DRAWINGS FOR INFORMATION ON MEA & BSA REFERENCE STANDARDS AS WELL AS MANUFACTURER NAME & MODEL NUMBER. MECHANICAL DRAWINGS ARE FILED UNDER A SEPARATE APPLICATION.

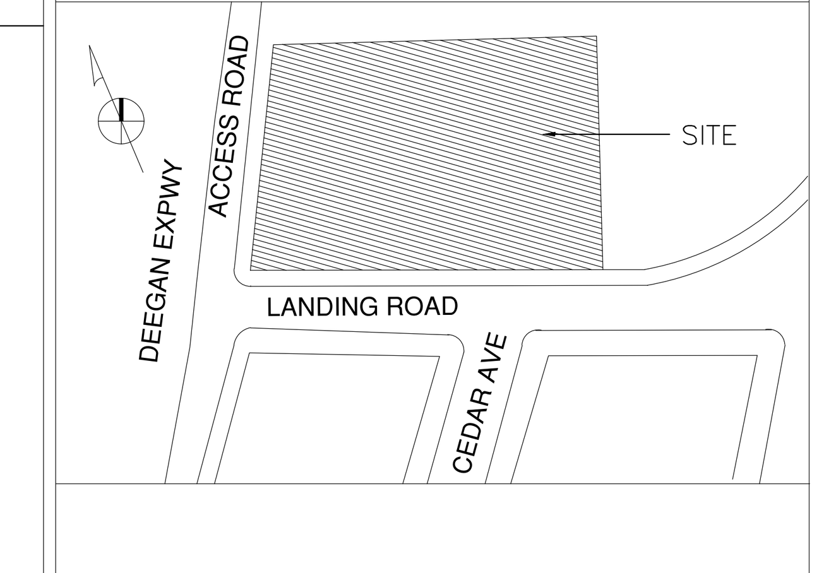
SEISMIC DEISGN NOTES

STRUCTURAL DESIGN COMPLIES WITH NEW YORK CITY BUILDING CODE 2008 EDITION. SEE STRUCTURAL DRAWINGS FOR COMPLETE NOTES.

ACCESSIBILITY NOTES

1. PROPOSED WORK SHALL COMPLY W/ NYC BUILDING CODE CHAPTER 11 AND ICC A117.1

KEY PLAN



RELATED APPLICATIONS

RELATED APPLICATIONS FILED SEPARATELY:

- BPP
- BOILER
- PUBLIC ASSEMBLY
- SITE CONNECTION
- SPRINKLER
- FIRE ALARM

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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fax: 212-226-5958

Structural Engineer:
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32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7970
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer:
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Civil Engineer:
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fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

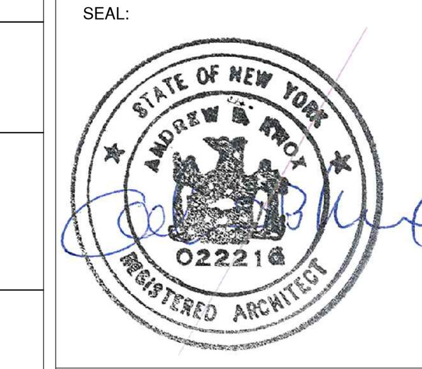
Bowery Residents' Committee

Landing Road
233 Landing Road
Bronx, New York 10468

TITLE:

GENERAL AND BUILDING CODE NOTES

SEAL:

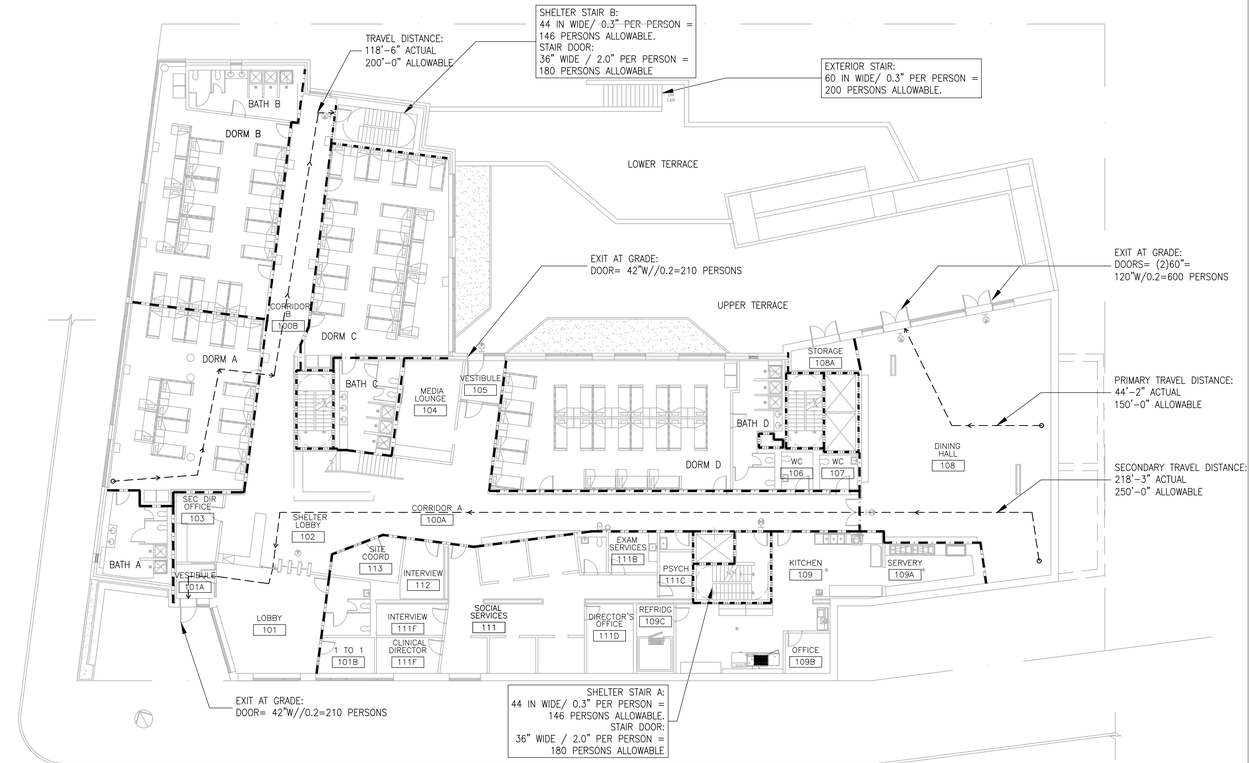


PROJECT NO. : 14008.0
SCALE:
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 5 of 29

DWG. NO. :

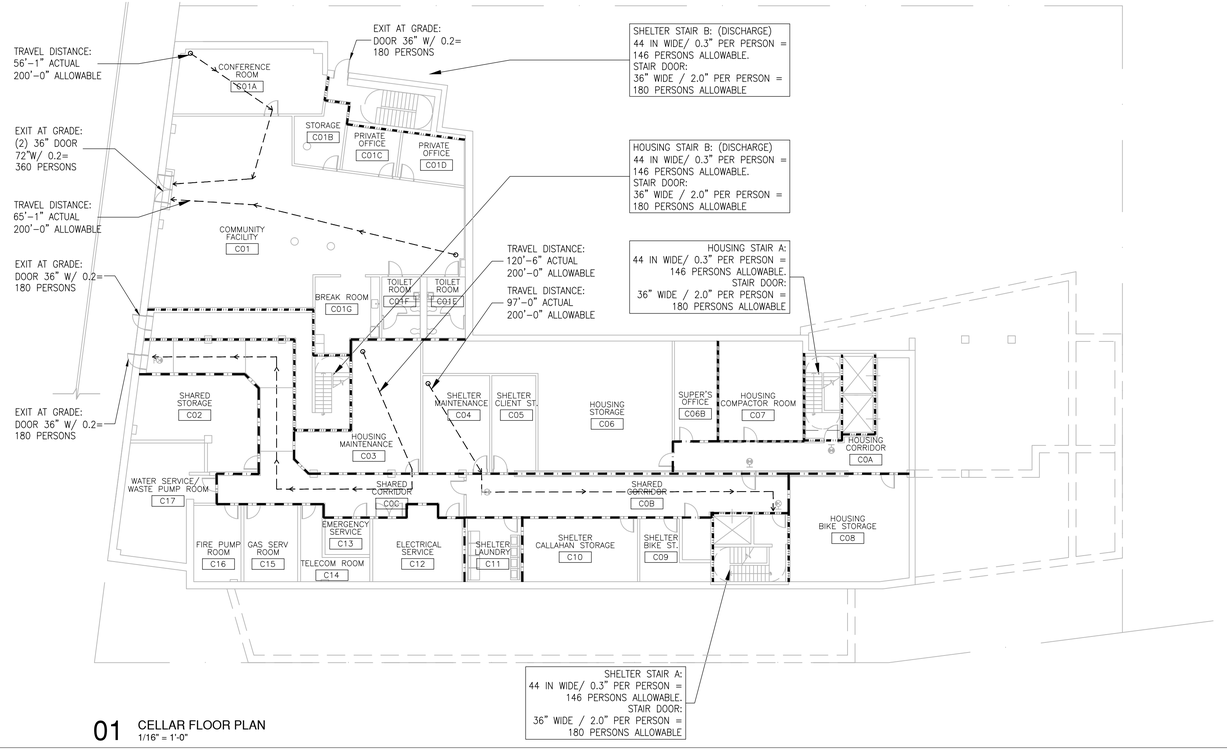
A-004.00

FIRST FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
100A	Corridor	2275 SF	–	–	–
100B	Corridor B	330 SF	–	–	–
101	Entry Lobby	495 SF	Public Assembly	15	33
101A	Entry Vestibule	66 SF	–	–	–
101B	1 to 1	95 SF	B Accessory to R1	100	1
102	Shelter Lobby	771 SF	–	–	–
103	Security Director	146 SF	B Accessory to R1	100	1
104	Media Lounge	282 SF	Accessory to R1	12	23
105	Vestibule	80 SF	–	–	–
108	Dinning Hall	2199 SF	Public Assembly	15	146
109	Kitchen	1050 SF	Kitchen	200	5
109A	Servery	224 SF	Kitchen	200	1
109B	Office	90 SF	Business	100	1
111	Social Services	926 SF	B Accessory to R1	100	9
111B	Exam Room	98 SF	B Accessory to R1	100	1
111C	Psych	76 SF	B Accessory to R1	100	1
111D	Director's Office	155 SF	B Accessory to R1	100	2
111E	Clinical Director	113 SF	B Accessory to R1	100	1
111F	Interview 2	106 SF	B Accessory to R1	100	1
112	Interview 1	115 SF	B Accessory to R1	100	1
113	Site Coord.	146 SF	B Accessory to R1	100	2
A	Dorm 17 Beds	1203 SF	R1	50	24
B	Dorm 21 Beds	1350 SF	R1	50	27
C	Dorm 23 Beds	1385 SF	R1	50	27
D	Dorm 25 Beds	1498 SF	R1	50	29
	Lower Terrace	1536 SF	Accessory to R1	200	7
	Upper Terrace	3167 SF	Accessory to R1	200	15
	Total Occupant Load – R Residential –				358
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ FIRST –				358



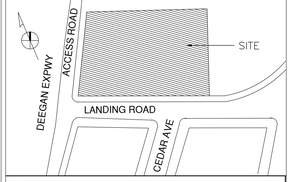
02 FIRST FLOOR PLAN
1/16" = 1'-0"

CELLAR FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
C0A	Housing Corridor	406 SF	–	–	–
C0B	Shared Corridor	585 SF	–	–	–
C0C	Shared Corridor	864 SF	–	–	–
C01	Community Facility	2133 SF	Business	100	21
C01A	Conference Room	473 SF	Business	100	4
C01B	Storage	156 SF	Incidential Use	300	0
C01C	Private Office	120 SF	Business	100	1
C01D	Private Office	144 SF	Business	100	1
C01G	Break Room	223 SF	Assembly	14	2
C02	Shared Storage	612 SF	Incidential Use	300	2
C03	Housing Maintenance	561 SF	Incidential Use	300	1
C04	Shelter Maintenance	323 SF	Incidential Use	300	1
C05	Shelter Client Storage	209 SF	Incidential Use	300	1
C06	Housing Storage	1054 SF	Incidential Use	300	3
C06B	Super's Office	211 SF	Business	100	2
C07	Housing Compactor Room	415 SF	Incidential Use	300	1
C08	Housing Bike Storage	624 SF	Incidential Use	300	2
C09	Shelter Bike Storage	271 SF	Incidential Use	300	1
C10	Shelter Callahan Storage	358 SF	Incidential Use	300	1
C11	Shelter Laundry	169 SF	Accessory to R1	300	1
C12	Electrical Service	301 SF	Incidential Use	300	1
C13	Emergency Service	80 SF	Incidential Use	300	1
C14	Telecom Room	139 SF	Incidential Use	300	1
C15 `	Gas Service Room	205 SF	Incidential Use	300	1
C16	Fire Pump Room	C16	Incidential Use	300	1
C17	Water Service/ Waste Pump Rm	434 SF	Incidential Use	300	1
	Total Occupant Load – R Residential –				51
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ CELLAR –				51



01 CELLAR FLOOR PLAN
1/16" = 1'-0"

KEY PLAN



LEGEND

- 3 HOUR RATED WALL
- 2 HOUR RATED WALL
- 1 HOUR RATED WALL
- DIRECTION+PATH OF TRAVEL
- EXIT SIGN

NOTES:
1. ALL OPENINGS IN 1-HR RATED ASSEMBLIES SHALL BE 45 MIN. PROTECTED.
2. ALL OPENINGS IN 2-HR RATED ASSEMBLIES SHALL BE 90 MIN. PROTECTED.
3. ALL OPENINGS IN 3-HR RATED ASSEMBLIES SHALL BE S-HR PROTECTED.
4. TYPICAL FIRE RESISTANCE RATINGS:
   STAIR ENCLOSURES 2-HR
   ELEVATOR SHAFTS 2-HR
   DUCT SHAFTS 2-HR
   CORRIDORS 1-HR
   TRASH CHUTE 3-HR
5. TRAVEL DISTANCES COMPLY WITH T1015.1= OCCUPANCY R= 200' W/ SPRINKLER SYSTEM
6. PUBLIC ASSMEBLY TRAVEL DISTANCES COMPLY W/ BC 1024.7=150' PRIMARY, 250' SECONDARY

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
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Structural Engineer:
ROBERT SILMAN ASSOCIATES ENGINEERS
32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7970
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer:
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One Edgewater Plaza, Suite 205, Staten Island, NY 10305
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fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

FIRE PROTECTION AND EGRESS PLANS

SEAL:

PROJECT NO.: 14008.0

SCALE:

BY: KM / MR / MVR / MG CHECK: AK

DATE: DECEMBER 22, 2014

PAGE: 6 of 29

DWG. NO.:

A-005.00

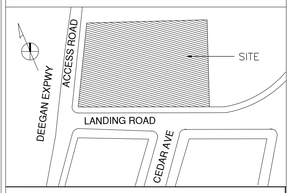
SECOND FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
200A	Corridor	2050 SF	–	–	–
200B	Corridor B	456 SF	–	–	–
200C	Corridor C	461 SF	–	–	–
201	Lounge Recreation	1308 SF	Accesory to R1	12	109
201A	Storage	80 SF	Incidential Use	300	0
201B	Shift Super	126 SF	B Accessory to R1	100	1
202	Interview 1	96 SF	B Accessory to R1	100	1
203	Storage 1	29 SF	Incidential Use	300	1
206	Telecom	41 SF	Incidential Use	300	1
207	Operations 1	206 SF	B Accessory to R1	100	2
208	Interview 2	120 SF	B Accessory to R1	100	1
209	Operations 2	175 SF	B Accessory to R1	100	2
210	Storage 2	43 SF	Incidential Use	300	1
212	Social Services	926 SF	B Accessory to R1	100	9
212A	Asst. Director	123 SF	B Accessory to R1	100	1
212B	Clin. Coord.	92 SF	B Accessory to R1	100	1
212C	File Storage	49 SF	B Accessory to R1	100	0
212E	Operations Coord.	87 SF	B Accessory to R1	100	1
212F	Operations Dir.	179 SF	B Accessory to R1	100	1
214	Staff Meeting	537 SF	B Accessory to R1	100	5
215	Trash Compactor	140 SF	Incidential Use	300	1
216	Storage Linens	127 SF	Incidential Use	300	1
E	Dorm 17 Beds	1145 SF	R1	50	22
F	Dorm 21 Beds	1294 SF	R1	50	25
G	Dorm 23 Beds	1332 SF	R1	50	26
H	Dorm 13 Beds	902 SF	R1	50	18
I	Dorm 16 Beds	956 SF	R1	50	19
J	Dorm 24 Beds	1483 SF	R1	50	29
	Total Occupant Load – R Residential –				278
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ SECOND –				278

02 THIRD FLOOR PLAN
1/16" = 1'-0"

THIRD FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
300A	Corridor	782 SF	–	–	–
301	Entry Lobby	700 SF	Accessory to R2	200	4
301A	Entry Vestibule	113 SF	–	–	–
302	Community Room	1091 SF	Incidential Use	15	70
302A	Pantry	227 SF	Accessory to R2	200	2
302B	Small Group	98 SF	Incidential Use	15	6
302C	Office	121 SF	Business	100	1
303	Housing Office	161 SF	Business	100	1
305	Rear Vestibule	50 SF	–	–	–
306	Laundry	375 SF	Accessory to R2	200	6
308	Refuse Room	20 SF	Incidental Use	300	1
H	Apt. 0 Bed	308 SF	R2	200	1
I	Apt. 0 Bed	308 SF	R2	200	1
J	Apt. 0 Bed	308 SF	R2	200	1
K	Apt. 0 Bed	308 SF	R2	200	1
L	Apt. 0 Bed	308 SF	R2	200	1
M	Apt. 0 Bed	308 SF	R2	200	1
G	Apt. 1 Bed	617 SF	R2	200	2
P	Apt. 0 Bed	308 SF	R2	200	1
Q	Apt. 0 Bed	308 SF	R2	200	1
R	Apt. 0 Bed	308 SF	R2	200	1
S	Apt. 0 Bed	308 SF	R2	200	1
T	Apt. 0 Bed	308 SF	R2	200	1
U	Apt. 0 Bed	308 SF	R2	200	1
V	Apt. 0 Bed ADA	334 SF	R2	200	1
N	Apt. 2 Bed	744	R2	200	4
	Mechanical Equipment	860 SF	Incidential Use	300	1
	Housing Terrace	3173 Sf	Public Assembly	15	210
	Total Occupant Load – R Residential –				321
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ THIRD –				321

01 SECOND FLOOR PLAN
1/16" = 1'-0"

KEY PLAN



LEGEND

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- 2 HOUR RATED WALL
- 1 HOUR RATED WALL
- DIRECTION+PATH OF TRAVEL
- EXIT SIGN

NOTES:
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   ELEVATOR SHAFTS 2-HR
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5. TRAVEL DISTANCES COMPLY WITH T1015.1= OCCUPANCY R= 200' W/ SPRINKLER SYSTEM
6. PUBLIC ASSMEBLY TRAVEL DISTANCES COMPLY W/ BC 1024.7=150' PRIMARY, 250' SECONDARY

DATE	ISSUES / REVISIONS
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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

FIRE PROTECTION AND EGRESS PLANS

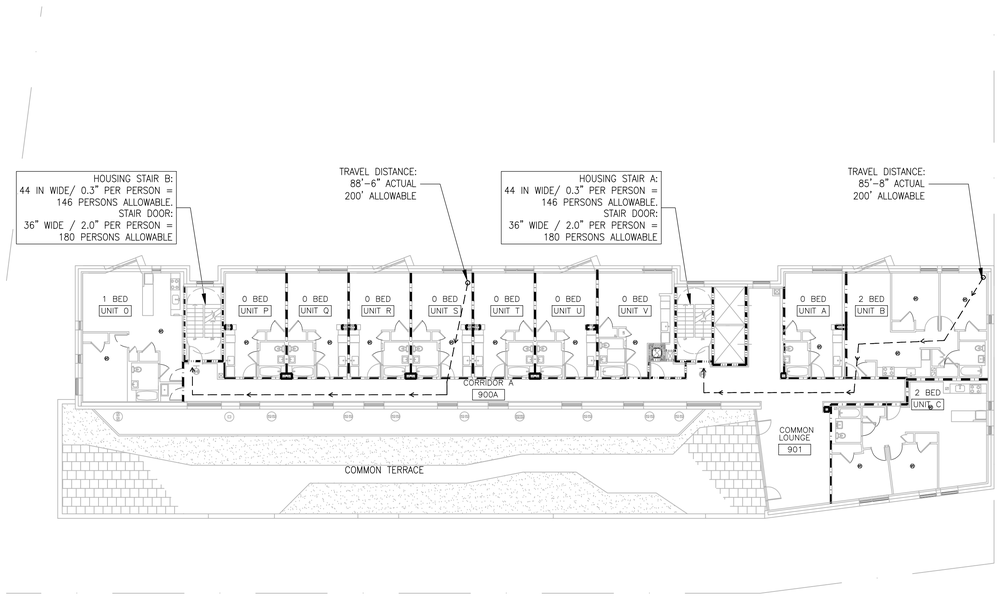
SEAL: ANDREW K. KNOX — 022218 — REGISTERED ARCHITECT — STATE OF NEW YORK

PROJECT NO. :	14008.0
SCALE:	
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	7 of 29

DWG. NO. :

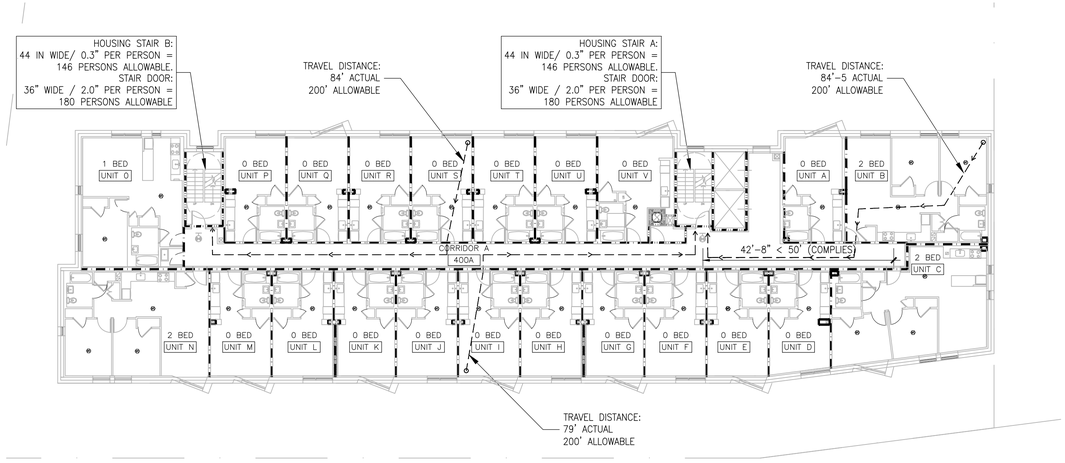
A-006.00

NINTH FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
900A	Corridor A	992 SF	–	–	–
901	Common Lounge	334 SF	Accesory to R2	12	30
908	Refuse Room	26 SF	Incidental Use	300	1
A	Apt. 0 Bed	308 SF	R2	200	1
B	Apt. 2 Bed	723 SF	R2	200	4
C	Apt. 2 Bed	725 SF	R2	200	4
O	Apt. 1 Bed	636 SF	R2	200	2
P	Apt. 0 Bed	308 SF	R2	200	1
Q	Apt. 0 Bed	308 SF	R2	200	1
R	Apt. 0 Bed	308 SF	R2	200	1
S	Apt. 0 Bed	308 SF	R2	200	1
T	Apt. 0 Bed	308 SF	R2	200	1
U	Apt. 0 Bed	308 SF	R2	200	1
V	Apt. 0 Bed ADA	334 SF	R2	200	1
	Common Terrace	1130 SF	Public Assembly	15	75
	Total Occupant Load – R Residential –				124
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ NINTH –				124



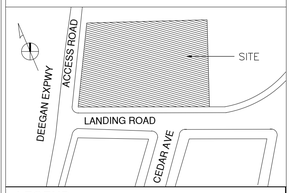
02 NINTH FLOOR PLAN
1/16" = 1'-0"

TYPICAL FLOOR					
ROOM #	ROOM/ SPACE	FLOOR AREA (NET SF)	OCC GROUP	MAX SF/ Occ	OCCUPANT LOAD
400A	Corridor	997 SF	–	–	–
408	Refuse Room	26 SF	Incidental Use	300	1
A	Apt. 0 Bed	308 SF	R2	200	1
B	Apt. 2 Bed	723 SF	R2	200	4
C	Apt. 2 Bed	744 SF	R2	200	4
D	Apt. 0 Bed	308 SF	R2	200	1
E	Apt. 0 Bed	308 SF	R2	200	1
F	Apt. 0 Bed	308 SF	R2	200	1
G	Apt. 0 Bed	308 SF	R2	200	1
H	Apt. 0 Bed	308 SF	R2	200	1
I	Apt. 0 Bed	308 SF	R2	200	1
J	Apt. 0 Bed	298 SF	R2	200	1
K	Apt. 0 Bed	307 SF	R2	200	1
L	Apt. 0 Bed	308 SF	R2	200	1
M	Apt. 0 Bed	294 SF	R2	200	1
N	Apt. 2 Bed	725	R2	200	4
O	Apt. 1 Bed	636 SF	R2	200	2
P	Apt. 0 Bed	308 SF	R2	200	1
Q	Apt. 0 Bed	308 SF	R2	200	1
R	Apt. 0 Bed	308 SF	R2	200	1
S	Apt. 0 Bed	308 SF	R2	200	1
T	Apt. 0 Bed	308 SF	R2	200	1
U	Apt. 0 Bed	308 SF	R2	200	1
V	Apt. 0 Bed ADA	334 SF	R2	200	1
	Total Occupant Load – R Residential –				33
	Total Occupant Load – Incidental –				0
	TOTAL MAXIMUM OCCUPANT LOAD @ TYPICAL FLOOR –				33



01 TYPICAL FLOOR PLAN (4-8)
1/16" = 1'-0"

KEY PLAN



LEGEND

- 3 HOUR RATED WALL
- 2 HOUR RATED WALL
- 1 HOUR RATED WALL
- DIRECTION+PATH OF TRAVEL
- EXIT SIGN

NOTES:
1. ALL OPENINGS IN 1-HR RATED ASSEMBLIES SHALL BE 45 MIN. PROTECTED.
2. ALL OPENINGS IN 2-HR RATED ASSEMBLIES SHALL BE 90 MIN. PROTECTED.
3. ALL OPENINGS IN 3-HR RATED ASSEMBLIES SHALL BE S-HR PROTECTED.
4. TYPICAL FIRE RESISTANCE RATINGS:
   STAIR ENCLOSURES 2-HR
   ELEVATOR SHAFTS 2-HR
   DUCT SHAFTS 2-HR
   CORRIDORS 1-HR
   TRASH CHUTE 3-HR
5. TRAVEL DISTANCES COMPLY WITH T1015.1= OCCUPANCY R= 200' W/ SPRINKLER SYSTEM
6. PUBLIC ASSMEBLY TRAVEL DISTANCES COMPLY W/ BC 1024.7=150' PRIMARY, 250' SECONDARY

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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Mechanical/Electrical/Plumbing Engineer:
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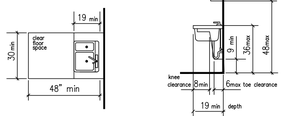


Kitchen Sink
Clear Floor Space

Kitchen Sink
Clearance Diagram

ADA ACCESSIBILITY GENERAL NOTES

1. ACCESSIBILITY STANDARDS PER ANSI 117.1–2003.

2. PROPOSED RESIDENTIAL COOKING AREAS, PROPOSED BATHROOMS AND DWELLINGS SHALL BE ACCESSIBLE OR TYPE B DWELLING UNITS (ANSI SECTIONS 1002 & 1004) PER NYC BUILDING CODE.

2. THE ONE PROPOSED ELEVATOR WITHIN THE BUILDING IS PART OF THE ACCESSIBLE ROUTE.

3. ALL DOORS/DOOR HARDWARE AND MANEUVERING CLEARANCES WITHIN THE BUILDING THAT ARE PART OF THE ACCESSIBLE ROUTE SHALL COMPLY WITH ANSI SECTION 404.

4. PROVIDE REINFORCEMENT FOR GRAB BARS AT ALL UNITS. THIS SHALL CONSIST OF 20 GA METAL PLATES SECURED TO STUDS BEHIND THE LOCATIONS OF THE GRAB BARS SHOWN HERE. GRAB BARS ARE REQUIRED AT ALL PUBLIC ACCESSIBLE TOILETS

ANSI A117.1 NOTES

CHAPTER 3

SECTION 303: CHANGES IN LEVEL
BEVEL 1/4" VERTICAL + 1/4" SLOPED AT 1:2

SECTION 304: TURNING SPACE
60" DIAMETER CIRCLE OR T–SHAPED TURNING SPACE PER F304.3

SECTION 305: DOOR SWING
30X48 CFS
305.5 FORWARD OR PARALLEL APPROACH TO AN ELEMENT
305.6 ONE FULL UNOBSTRUCTED SIDE OF CRF SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE OR ADJOIN ANOTHER CFS

SECTION 306: KNEE & TOE CLEARANCE
306.2 TOE CLEARANCE BETWEEN FLOOR AND +9" CAN HAVE A MAX. DEPTH OF 25" UNDER AN ELEMENT & SHALL EXTEND 17" MINIMUM UNDER AN ELEMENT WHERE REQUIRED AT AN ELEMENT. 30" WIDTH MIN.

306.3 KNEE CLEARANCE
IS BETWEEN 9 & 27" ABOVE THE FLOOR
CAN EXTEND A MAX. OF 25" UNDER AN ELEMENT AT 9" ABOVE THE FLOOR.
MIN DEPTH = 11" AT 9" AFF TO 8" MIN. AT 27" AFF (F306.3(a))
WIDTH = 30" MIN.

SECTION 308 REACH RANGES
308.2 FORWARD REACH
UNOBSTRUCTED = 15" – 48"
OBSTRUCTED = 48" WHERE DEPTH IS 20", 44" WHERE DEPTH IS GREATER THAN 20"

CHAPTER 4 – ACCESSIBLE ROUTES

T403.5 WIDTH = 36" MIN.

SECTION 404 – DOORS
CLEAR WIDTH @ 90 DEGREES = 32"

MANUVERING CLEARANCES PER F404.2.2

405–RAMPS
405.2 – RAMPS SHALL HAVE A SLOPE NO STEEPER THAN 1:12
405.3 – CROSS SLOPE SHALL NOT BE STEEPER THAN 1:48
405.5 – CLEAR WIDTH SHALL BE 36" MINIMUM
405.7 – LANDINGS SHALL HAVE A MAX. SLOPE OF 1:48
WIDTH SHALL BE AT LEAST AS WIDE AS THE RAMP LANDINGS SHALL HAVE A CLEAR LENGTH OF 60" MIN. MANUVERING CLEARANCES AT DOORWAYS ADJACENT TO LANDINGS SHALL BE PERMITTED TO OVERLAP THE LANDING

CHAPTER 6 – PLUMBING ELEMENTS & FACILITIES
SECTION 603 – TOILET & BATHING ROOMS
CLEARANCES:
TURNING SPACE SHALL BE PROVIDED PER SECTION 304
603.2.2 CLEAR FLOOR SPACES (CFS), CLEARANCES AT FIXTURES, & TURNING SPACES SHALL BE PERMITTED TO OVERLAP.
603.2.3 DOORS SHALL NOT SWING INTO THE CFS OR CLEARANCE FOR ANY FIXTURE
603.0 MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE AT 40" AFF
COAT HOOKS SHALL BE LOCATED PER SECTION 308

SECTION 604 – WATER CLOSETS & TOILET COMPARTMENTS
THE WATER CLOSET SHALL BE LOCATED WITH A WALL OR PARTITION TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 16–18 INCHES MAX. FROM THE SIDE WALL OR PARTITION PER 604.2

604.3.1 CLEARANCE AROUND THE WATER CLOSET SHALL BE 60" X 56".

604.3.2 REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, GRAB BARS, PAPER DISPENSERS, NAPKIN RECEPTACLES, COAT HOOKS, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AT OTHER FIXTURES AND THE TURNING SPACE.

604.4 WATER CLOSET HEIGHT SHALL BE 17 TO 19" AFF

604.5 GRAB BARS:
– FIXED SIDE WALL GRAB BARS SHALL BE 42" MINIMUM LOCATED 12" MAXIMUM. FROM THE REAR WALL. I
– VERTICAL GRAB BAR 18 INCHES MIN. IN LENGTH SHALL BE MOUNTED WITH THE BOTTOM OF THE BAR LOCATED BETWEEN 39 AND 41 INCHES AFF, AND THE CENTERLINE OF THE BAR LOCATED 39–41 INCHES FROM THE REAR WALL PER 604.5.1

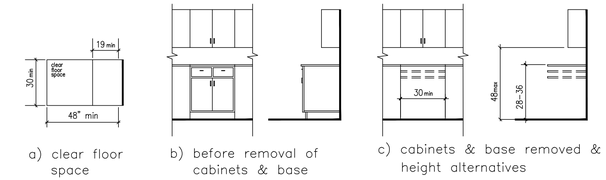
604.5 (CONT) – REAR WALL GRAB BARS SHALL BE 36 INCHES MIN. IN LENGTH AND EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12 INCHES MIN. ON THE SIDE CLOSEST TO THE WALL AND 24" MIN. ON THE TRANSFER SIDE PER 604.5.2

604.6 HAND OPERATED FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET

604.7 TOILET PAPER DISPENSERS SHALL BE 7 TO 9 INCHES IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTER LINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 15 TO 48 INCHES ABOVE THE FLOOR AND SHALL NOT BE LOCATED BEHIND THE GRAB BARS.

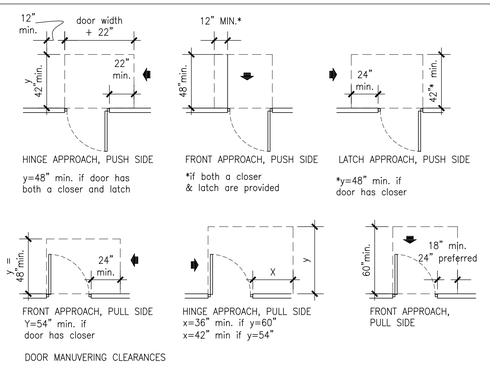
604.8 WHEELCHAIR ACCESSIBLE COMPARTMENTS.
MINIMUM SIZE 60" X 56" (WALL HUNG) OR 59" (FLOOR MOUNTED) DOORS SHALL BE LOCATED IN THE FRONT PARTITION OR IN THE SIDE WALL LOCATED THE FURTHEST FROM THE WATER CLOSET PER 604.8.3 THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE TOE CLEARANCE 9" AFF MINIMUM AND EXTENDING 6" BEYOND THE COMPARTMENT SIDE FACE OF THE PARTITION PER 604.8.5.

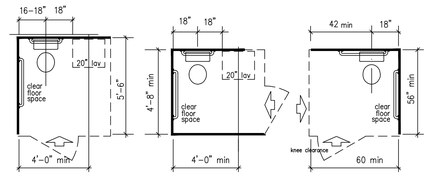
SECTION 606 – LAVATORIES & SINKS
606.2 – 30X48 CFS POSITIONED FOR FORWARD APPROACH W/ KNEE & TOE CLEARANCES PROVIDED
606.3 – 34" MAX. AFF
606.6 – EXPOSED PIPES & SURFACES SHALL BE INSULATED



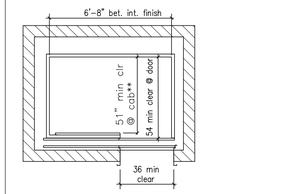
a) clear floor space
b) before removal of cabinets & base
c) cabinets & base removed & height alternatives

Kitchen Counter Work Surface



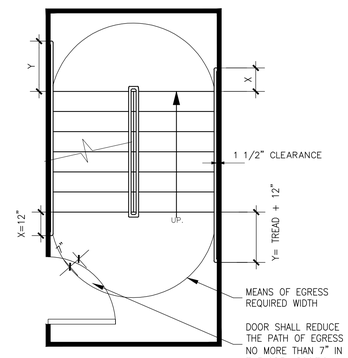


Clear Floor Space in type A Dwelling Units
Fig. 1002.11.5.2

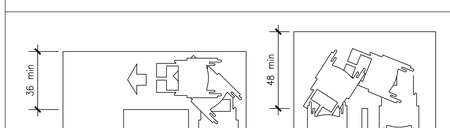


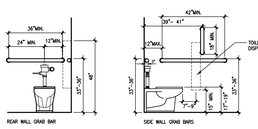
Inside Dimensions of Elevator Cabs
Fig 407.4.1(b): Side (Off–Centered Door) Location

**SEE ALSO BC3002.4 FOR REQUIREMENTS FOR BUILDINGS OVER 5 STORIES TO ACCOMMODATE AN AMBULANCE STRETCHER OF 24" X 76"

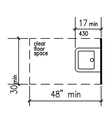


STAIR HANDRAILS



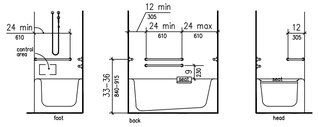


Water Closet Clearances

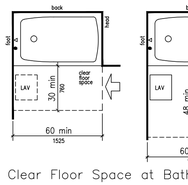


CLEAR FLOOR SPACE AT LAVATORIES

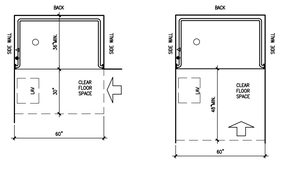
LAVATORY CLEARANCE



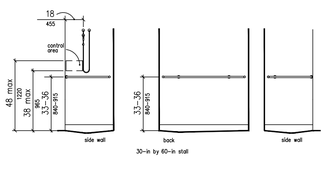
Grab Bars at Bathtubs



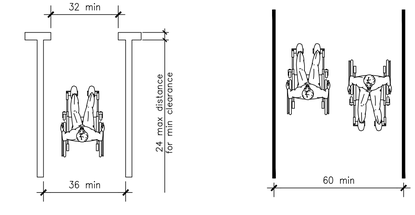
Clear Floor Space at Bathtubs



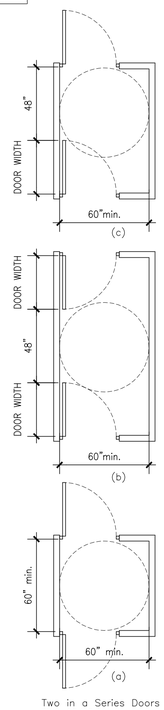
Shower Size and Clearances



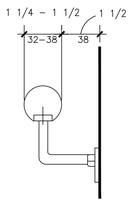
Grab Bars at Shower Stalls



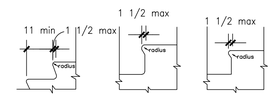
Clear Width at Turn Fig. 403.5.1



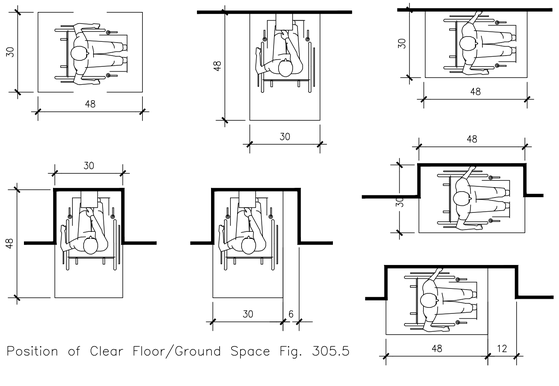
Two in a Series Doors
Fig. 404.2.5



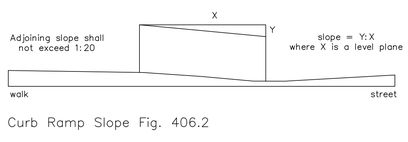
HANDRAIL CROSS SECTION
FIG. 505.7



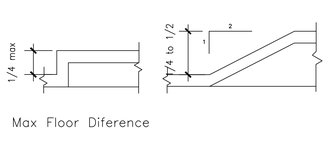
STAIR NOSING
FIG. 504.5



Position of Clear Floor/Ground Space Fig. 305.5

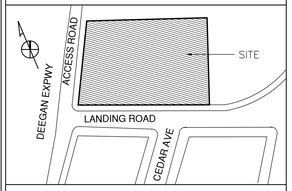


Curb Ramp Slope Fig. 406.2



Max Floor Diference

KEY PLAN



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11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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Bowery Residents' Committee

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233 Landing Road
Bronx, New York 10468

TITLE:
ADA DIAGRAMS, NOTES, AND STANDARDS

SEAL:

STATE OF NEW YORK · ANDREW M. KNOX · 022218 · REGISTERED ARCHITECT

PROJECT NO.:	14008.0
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BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	9 of 29

DWG. NO.:

A-008.00

NYC ENERGY CONSERVATION CODE NOTES AND INSPECTIONS

1. Required progress inspections. The following progress inspections and/or testing listed below in Table II shall be required when applicable to the scope of work. Energy Code sections cited in Tables II shall be understood to include the section, all subsections, all tables and, when ASHRAE 90.1 is used, appendices related to the cited Energy Code section.
2. Construction scheduling instructions. In accordance with Article 116 of Title 28 and Section BC 109, construction shall be scheduled to allow required progress inspections to take place, and that roofs, ceilings, exterior walls, interior walls, floors, foundations, basements and any other construction shall not be covered or enclosed until required progress inspections are completed or the progress inspector indicates that such covering or enclosure may proceed, at each stage of construction, as applicable.
3. Inspection or test failure. In accordance with Section BC 109.9 and ECC 104.2.3, where an inspection or test fails, the construction shall be corrected and must be made available for reinspection and/or retesting by the progress inspector until it complies. For additions and alterations, the applicant must clearly indicate what portions of the altered systems should be inspected and/or tested, and what inspection and/or testing may be outside the scope of the work.
4. Deferred submittals. Drawings showing design intent and performance criteria matching those in the energy analysis may be submitted as supporting documentation provided that, in accordance with Section 28-104.2.6 of the Administrative Code, the applicant lists such deferred submittals in the construction drawings and submits them for approval prior to installation or construction. If required, the energy analysis must be updated when deferred submittals are provided for approval.
5. Energy Analysis of Constructed Conditions. In accordance with Section 28-104.3 of the Administrative Code and section ECC 103.4, if constructed work differs from the last-approved full energy analysis, an as-built energy analysis shall be submitted to the Department, listing the actual values used in the building for all applicable Energy Code-regulated items and demonstrating that the building complies with the Energy Code. Such energy analysis shall be signed and sealed by a registered design professional. The progress inspector shall certify that to the best of his or her knowledge and belief the building as built complies with such signed and sealed energy analysis and construction drawings for energy code compliance; where no trade-offs have been used among disciplines, more than one registered design professional may sign and seal the elements of the energy analysis. The energy analysis shall be approved or accepted by the Department prior to sign-off.

TABLE II
PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE COMMERCIAL BUILDINGS

IIA Envelope Inspections

	Inspection/Test	Periodic (minimum)	Reference Standard (See ECC Chapter 6) or Other Criteria	ECC or Other Citation
IIA1	**Protection of exposed foundation insulation:** Insulation shall be visually inspected to verify proper protection where applied to the exterior of basement or cellar walls, crawl-space walls and/or the perimeter of slab-on-grade floors.	As required during foundation work and prior to backfill	Approved construction documents	303.2.1; ASHRAE 90.1 - 5.8.1.7
IIA2	**Insulation placement and R-values:** Installed insulation for each component of the conditioned space envelope and at junctions between components shall be visually inspected to ensure that the R-values are marked, that such R-values conform to the R-values identified in the construction documents and that the insulation is properly installed. Certifications for unmarked insulation shall be similarly visually inspected.	As required to verify continuous enclosure while walls, ceilings and floors are open	Approved construction documents	303.1, 303.1.1, 303.1.2, 502.1, 502.2; ASHRAE 90.1 -5.5, 5.6 or 11; 5.8.1
IIA3	**Fenestration thermal values and product ratings:** U-factors and SHGC values of installed fenestration shall be visually inspected for conformance with the U-factors and SHGC values identified in the construction drawings by verifying the manufacturer's NFRC labels or, where not labeled, using the ratings in ECC Tables 303.1.3(1), (2) and (3). Where ASHRAE 90.1 is used, visible light transmittance values shall also be verified.	As required during installation	Approved construction documents; NFRC 100, NFRC 200	303.1, 303.1.3, 502.3; ASHRAE 90.1 -5.5; 5.6 or 11; 5.8.2
IIA4	**Fenestration and door assembly product ratings for air leakage:** Windows and sliding or swinging door assemblies, except site-built windows and/or doors, shall be visually inspected to verify that installed assemblies are listed and labeled by the manufacturer to the referenced standard. For curtain wall, storefront glazing, commercial entrance doors and revolving doors, the testing reports shall be reviewed to verify that the installed assembly complies with the standard cited in the approved plans.	As required during installation; prior to final construction inspection	NFRC 400, AAMA/WDMA/CSA 101/I.S.2/A440 ASTM E283; ANSI/DASMA 105	502.4; ASHRAE 90.1 -5.4.3.2
IIA5	**Fenestration areas:** Dimensions of windows, doors and skylights shall be verified by visual inspection.	Prior to final construction inspection	Approved construction documents	502.3; ASHRAE 90.1 - 5.5.4, 5.6 or 11
IIA6	**Sealing:** Openings and penetrations in the building envelope, including site-built fenestration and doors, shall be visually inspected to verify that a continuous air barrier around the envelope forms an air-tight enclosure. The progress inspector shall visually inspect to verify that materials and/or assemblies have been tested and meet the requirements of the respective standards, or that the building is tested and meets the requirements of the standard, in accordance with the standard(s) cited in the approved plans.	As required during construction	Approved construction documents; ASTM E2178, ASTM E2357, ASTM E1677, ASTM E779, ASTM E283.	502.4.3, 502.4.7; ASHRAE 90.1 - 5.4.3
IIA9	**Building entrance vestibules**: Required entrance vestibules shall be visually inspected for proper operation.	Prior to final construction inspection	Approved construction documents	502.4.6; ASHRAE 90.1 - 5.4.3.4

IIB Mechanical and Service Water Heating Inspections

IIB2	**Outdoor air intakes and exhaust openings** : Dampers for stair and elevator shaft vents and other outdoor air intakes and exhaust openings integral to the building envelope shall be visually inspected to verify that such dampers, except where permitted to be gravity dampers, comply with approved construction drawings. Manufacturer's literature shall be reviewed to verify that the product has been tested and found to meet the standard.	As required during installation	Approved construction documents; AMCA 500D	502.4.4; ASHRAE 90.1 - 6.4.3.4
IIB3	**HVAC, service water heating and pool equipment sizing and performance:** Equipment sizing, efficiencies and other performance factors of all major equipment units, as determined by the applicant of record, and no less than 15% of minor equipment units, shall be verified by visual inspection and, where necessary, review of manufacturer's data. Pool heaters and covers shall be verified by visual inspection.	Prior to final plumbing and construction inspection	Approved construction documents	503.2, 504.2, 504.7; ASHRAE 90.1 - 6.3, 6.4.1, 6.4.2, 6.8; 7.4, 7.8
IIB4	**HVAC system controls and economizers and service hot water system controls:** No less than 20% of each type of required controls and economizers shall be verified by visual inspection and tested for functionality and proper operation. Such controls shall include, but are not limited to: · Thermostatic · Set point overlap restriction · Off-hour · Shutoff damper · Snow-melt system · Demand control systems · Outdoor heating systems · Zones · Economizers · Air systems · Variable air volume fan · Hydronic systems · Heat rejection equipment fan speed · Complex mechanical systems serving multiple zones · Ventilation · Energy recovery systems · Hot gas bypass limitation · Temperature · Service water heating · Hot water system · Pool heater and time switches · Exhaust hoods · Radiant heating systems.	After installation and prior to final electrical and construction inspection, except that for controls with seasonally dependent functionality, such testing shall be performed before sign-off for issuance of a Final Certificate of Occupancy	Approved construction documents, including control system narratives; ASHRAE Guideline 1: The HVAC Commissioning Process where applicable	503.2.4, 503.2.5.1, 503.2.11, 503.3, 503.4, 504.3, 504.6 504.7; ASHRAE 90.1 - 6.3, 6.4, 6.5, 6.7.2.4, 7.4.4, 7.4.5
	Controls with seasonally dependent functionality: Controls whose complete operation cannot be demonstrated due to prevailing weather conditions typical of the season during which progress inspections will be performed shall be permitted to be signed off for the purpose of a Temporary Certificate of Occupancy with only a visual inspection, provided, however, that the progress inspector shall perform a supplemental inspection where the controls are visually inspected and tested for functionality and proper operation during the next immediate season thereafter. The owner shall provide full access to the progress inspector within two weeks of the progress inspector's request for such access to perform the progress inspection. For such supplemental inspections, the Department shall be notified by the approved progress inspection agency of any unresolved deficiencies in the installed work within 180 days of such supplemental inspection.			
IIB5	**Duct, plenum and piping insulation and sealing:** Installed duct and piping insulation shall be visually inspected to verify proper insulation placement and values. Joints, longitudinal and transverse seams and connections in ductwork shall be visually inspected for proper sealing.	After installation and prior to closing shafts, ceilings and walls	Approved construction documents; SMACNA Duct Construction Standards, Metal and Flexible	503.2.7, 503.2.8, 504.5; ASHRAE 90.1 - 6.3, 6.4.4.2, 6.8.2, 6.8.3; 7.4.3

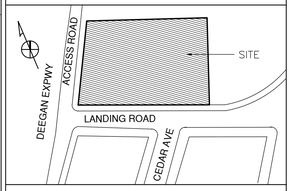
IIC Electrical Power and Lighting Systems

IIC1	**Electrical metering:** The presence and operation of individual meters or other means of monitoring individual apartments shall be verified by visual inspection for all apartments.	Prior to final electrical and construction inspection	Approved construction documents	505.7
IIC2	**Lighting in dwelling units:** Lamps in permanently installed lighting fixtures shall be visually inspected to verify compliance with high-efficacy requirements.	Prior to final electrical and construction inspection	Approved construction documents	505.5.3
IIC3	**Interior lighting power:** Installed lighting shall be verified for compliance with the lighting power allowance by visual inspection of fixtures, lamps, ballasts and transformers.	Prior to final electrical and construction inspection	Approved construction documents	505.5; ASHRAE 90.1 -9.1, 9.2, 9.5, 9.6; 1RCNY §101-07(c)(3)(v)(C)4
IIC4	**Exterior lighting:** Installed lighting shall be verified for compliance with source efficacy and/or the lighting power allowance by visual inspection	Prior to final electrical and construction inspection	Approved construction documents	505.6; ASHRAE 90.1 - 9.4.4, 9.4.5; 1RCNY §101-07(c)(3)(v)(C)4
IIC5	**Lighting controls**: Each type of required lighting controls, including: · occupant sensors · manual interior lighting controls · light-reduction controls · automatic lighting shut-off · daylight zone controls · sleeping unit controls · exterior lighting controls shall be verified by visual inspection and tested for functionality and proper operation	Prior to final electrical and construction inspection	Approved construction documents, including control system narratives	505.2, 505.2.2.2; ASHRAE 90.1 - 9.4.1, 9.4.1.2 (as modified by section ECC A102)
IIC6	**Exit signs:** Installed exit signs shall be visually inspected to verify that the label indicates that they do not exceed maximum permitted wattage.	Prior to final electrical and construction inspection	Approved construction documents	505.4; ASHRAE 90.1 - 9.4.3
IIC8	**Electric motors (including but not limited to fan motors):** Where required by the construction documents for energy code compliance, motor listing or labels shall be visually inspected to verify that they comply with the respective energy requirements in the construction documents.	Prior to final electrical and construction inspection	Approved construction documents	503.2.10; ASHRAE 90.1 - 10.4

IID Other

IID1	**Maintenance information:** Maintenance manuals for mechanical, service hot water and electrical equipment and systems requiring preventive maintenance shall be reviewed for applicability to installed equipment and systems before such manuals are provided to the owner. Labels required for such equipment or systems shall be inspected for accuracy and completeness.	Prior to sign-off or issuance of Final Certificate of Occupancy	Approved construction documents, including electrical drawings where applicable; ASHRAE Guideline 4: Preparation of Operating and Maintenance Documentation for Building Systems	303.3, 503.2.9.3; ASHRAE 90.1 - 4.2.2.3, 6.7.2.2, 8.7.2

KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5958

Structural Engineer:
ROBERT SILMAN ASSOCIATES ENGINEERS
32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7570
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer
JOSEPH R. LORING AND ASSOCIATES INC.
21 Penn Plaza, New York, NY 10001
tel: 212-563-7400
fax: 212-563-7382

Civil Engineer:
LEONARD J. STRANDBERG & ASSOCIATES
One Edgewater Plaza, Suite 205, Staten Island, NY 10305
tel: 718-420-9693
fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road
233 Landing Road
Bronx, New York 10468

TITLE:

ENERGY CODE NOTES AND INSPECITON LIST

SEAL: STATE OF NEW YORK · ANDREW S. KNOX · 022218 · REGISTERED ARCHITECT

PROJECT NO. : 14008.0
SCALE:
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 10 of 29

DWG. NO. :

A-009.00

COM*check* Software Version 3.9.4

Envelope Compliance Certificate

2010 New York Energy Conservation Construction Code

Section 1: Project Information

Project Type: New Construction
Project Title : LANDING ROAD

Construction Site:
233 Landing Road
Bronx, NY 10468

Owner/Agent:
Bronx Residents' Committee
131 West 25th Street, 12th Floor
New York, NY 10001
212-803-5700

Designer/Contractor:
Edelman Sultan Knox Wood/Architects LLP
100 Lafayette Street, Suite 204
New York, NY 10013
212-431-4901

Section 2: General Information

Building Location (for weather data): **Bronx, New York**
Climate Zone: **4a**
Building Space Conditioning Type(s): **Residential**
Vertical Glazing / Wall Area Pct.: **22%**

Activity Type(s)	Floor Area
Housing (Multifamily)	82694
Shelter (Dormitory)	39024

Section 3: Requirements Checklist

Envelope PASSES Design 5% better than code

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Insulation Entirely Above Deck	20144	---	30.0	0.032	0.048
Exterior Wall 1 (brick): Concrete Block:8", Partially Grouted, Cells Empty,Normal Density , Furring: Metal	34539	1.0	15.0	0.055	0.090
Window 1 (fix): Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.26 (b)	3002	---	---	0.420	0.550
Window 2 (cas): Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.25 (b)	2014	---	---	0.470	0.550
Window 3 (fix): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	117	---	---	0.430	0.500
Window 4 (awn): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	27	---	---	0.470	0.500
Door 2: Glass (> 50% glazing) Metal Frame, Non-Entrance Door, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	63	---	---	0.850	0.550
Door 3: Insulated Metal, Swinging	21	---	---	0.250	0.700
Exterior Wall 2 (panel): Concrete Block:8", Partially Grouted, Cells Empty,Normal Density , Furring: Metal	3673	0.0	15.0	0.055	0.090
Window 1 (fix): Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.26 (b)	124	---	---	0.420	0.550
Window 2 (cas): Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.25 (b)	432	---	---	0.470	0.550
Window 3 (fix): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	746	---	---	0.430	0.500
Window 4 (awn): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	447	---	---	0.470	0.500
Window 5 (spa): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	173	---	---	0.430	0.500
Door 1: Glass (> 50% glazing) Metal Frame, Entrance Door, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	25	---	---	0.850	0.850
Door 2: Glass (> 50% glazing) Metal Frame, Non-Entrance Door, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	23	---	---	0.850	0.550
Exterior Wall 3 (panel): Steel-Framed, 16" o.c.	9917	0.0	15.0	0.056	0.064
Window 1 (fix): Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.26 (b)	1013	---	---	0.420	0.550
Window 2 (cas): Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.25 (b)	843	---	---	0.470	0.550
Window 3 (fix): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	1177	---	---	0.430	0.500
Window 4 (awn): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	1003	---	---	0.470	0.500
Window 5 (spa): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	314	---	---	0.430	0.500
Exterior Wall 4 (brick): Concrete Block:6", Partially Grouted, Cells Empty,Norma Density , Furring: Metal	5505	1.0	15.0	0.056	0.090
Window 2 (cas): Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.25 (b)	49	---	---	0.470	0.550
Window 3 (fix): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	303	---	---	0.430	0.500
Door 1: Glass (> 50% glazing) Metal Frame, Entrance Door, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	26	---	---	0.850	0.850
Door 2: Glass (> 50% glazing) Metal Frame, Non-Entrance Door, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	80	---	---	0.850	0.550
Door 3: Insulated Metal, Swinging	61	---	---	0.250	0.700
Basement Wall 1: Solid Concrete 12" Thickness, Normal Density, Furring: Metal, Wall Ht 12.0, Depth B.G. 9.0	1866	1.0	15.0	0.057	0.108
Window 3 (fix): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	191	---	---	0.430	0.500
Window 5 (spa): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	20	---	---	0.430	0.500
Door 3: Insulated Metal, Swinging	84	---	---	0.250	0.700
Basement Wall 2: Solid Concrete 12" Thickness, Normal Density, Furring: Metal, Wall Ht 12.0, Depth B.G. 9.0	1471	0.0	0.0	0.410	0.108
Window 3 (fix): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	20	---	---	0.430	0.500
Window 5 (spa): Metal Frame Curtain Wall/Storefront, Perf. Type: Other testing/cert. Product ID: NA, SHGC 0.35 (b)	20	---	---	0.430	0.500
Door 3: Insulated Metal, Swinging	21	---	---	0.250	0.700
Floor 1: Slab-On-Grade:Unheated, Horizontal with vertical 4 ft.	145	---	15.0	---	---

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestrations product performance must be certified in accordance with NFRC and requires supporting documentation.

Air Leakage, Component Certification, and Vapor Retarder Requirements:

- ☐ 1. All joints and penetrations are caulked, gasketed or covered with a moisture vapor-permeable wrapping material installed in accordance with the manufacturer's installation instructions.
- ☐ 2. Windows, doors, and skylights certified as meeting leakage requirements.
- ☐ 3. Component R-values & U-factors labeled as certified.
- ☐ 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- ☐ 5. "Other" components have supporting documentation for proposed U-Factors.
- ☐ 6. Insulation installed according to manufacturer's instructions, in substantial contact with the surface being insulated, and in a manner that achieves the rated R-value without compressing the insulation.
- ☐ 7. Stair, elevator shaft vents, and other outdoor air intake and exhaust openings in the building envelope are equipped with motorized dampers.
- ☐ 8. Cargo doors and loading dock doors are weather sealed.
- ☐ 9. Recessed lighting fixtures installed in the building envelope are Type IC rated as meeting ASTM E283, are sealed with gasket or caulk,
- ☐ 10. Building entrance doors have a vestibule equipped with self-closing devices.
  Exceptions:
  - ☐ Building entrances with revolving doors.
  - ☐ Doors not intended to be used as a building entrance.
  - ☐ Doors that open directly from a space less than 3000 sq. ft. in area.
  - ☐ Doors used primarily to facilitate vehicular movement or materials handling and adjacent personnel doors.
  - ☐ Doors opening directly from a sleeping/dwelling unit.

Section 4: 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 system has been designed to meet the 2010 New York Energy Conservation Construction Code requirements in COMcheck Version 3.9.4 and to comply with the mandatory requirements in the Requirements Checklist.

When a Registered Design Professional has stamped and signed this page, they are attesting that to the best of his/her knowledge, belief, and professional judgment, such plans or specifications are in compliance with this Code.

Andrew Knox R.A. — Name - Title
Signature
12/22/2014 — Date

STATE OF NEW YORK · ANDREW B. KNOX · 022216 · REGISTERED ARCHITECT

COM*check* Software Version 3.9.4

Interior Lighting and Power Compliance Certificate

2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard)

Section 1: Project Information

Project Type: New Construction
Project Title : 233 Landing Road

Construction Site:
233 Landing Road
Bronx, NY 10468

Owner/Agent:
Bowery Residence Committee
131 W 25th Street
New York, NY 10001

Designer/Contractor:
Karen Golistick
Golistick Lighting Design, Ltd.
2 Gabriel Court
White Plains, NY 10605
914-328-7674
kgolistick@golisticklighting.com

Section 2: Interior Lighting and Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
Dormitory	137441	1	137441
		Total Allowed Watts =	137441

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Dormitory (137441 sq.ft.)				
Linear Fluorescent 1: Type GA-4: 48" T8 32W: Electronic:	2	42	64	2688
Linear Fluorescent 2: Type GA-6: Other: Electronic:	4	1	100	100
Linear Fluorescent 3: Type GA-8: Other: Electronic:	4	5	128	640
Linear Fluorescent 4: Type GA-12: Other: Electronic:	6	2	192	384
Linear Fluorescent 5: Type GB: Other: Electronic:	2	16	64	1024
LED 1: Type GC: Other:	1	58	18	1044
LED 2: Type GD: Other:	2	45	36	1620
Compact Fluorescent 1: Type GE: Quad 2-pin 26W: Electronic:	1	11	26	286
Compact Fluorescent 2: Type GF: Circline 22W: Electronic:	1	131	22	2882
Linear Fluorescent 6: Type GG-8: 48" T8 32W: Electronic:	2	2	64	128
Linear Fluorescent 7: Type GG-12: Other: Electronic:	3	4	96	384
Linear Fluorescent 8: Type GG-16: Other: Electronic:	4	1	128	128
Linear Fluorescent 9: Type GG-20: Other: Electronic:	5	1	160	160
Linear Fluorescent 10: Type GH: 48" T8 32W: Electronic:	1	182	32	5824
Compact Fluorescent 3: Type GI: Triple 4-pin 32W: Electronic:	1	18	32	576
Compact Fluorescent 4: Type GJ: Quad 2-pin 28W: Electronic:	2	35	52	1820
Compact Fluorescent 5: Type GK: Triple 4-pin 32W: Electronic:	1	10	32	320
Linear Fluorescent 11: Type A-1: 48" T8 32W: Electronic:	2	41	64	2624
Linear Fluorescent 12: Type B: 48" T8 32W: Electronic:	1	165	32	5280
Linear Fluorescent 13: Type B-1: 48" T8 32W: Electronic:	1	68	32	2176
Linear Fluorescent 14: Type D: 48" T8 32W: Electronic:	1	44	32	1408
Linear Fluorescent 15: Type D-1: 36" T8 25W: Electronic:	1	19	25	475
Linear Fluorescent 16: Type E: 24" T8 17W: Electronic:	2	48	34	1632
Compact Fluorescent 6: Type F: Triple 4-pin 32W: Electronic:	1	15	32	480
Linear Fluorescent 17: Type Q: 48" T8 32W: Electronic:	1	11	32	352
Compact Fluorescent 7: Type H-1: Quad 4-pin 13W: Electronic:	1	43	13	559
Linear Fluorescent 18: Type I: 24" T8 17W: Electronic:	8	1	141	141
Compact Fluorescent 8: Type K: Quad 4-pin 13W: Electronic:	1	36	13	468
Linear Fluorescent 19: Type L: 48" T8 32W: Electronic:	1	13	32	416
LED 3: Type Q-1: Other:	1	107	20	2140
Compact Fluorescent 9: Type R: Triple 4-pin 32W: Electronic:	1	97	32	3104
Linear Fluorescent 20: Type S: 48" T8 32W: Electronic:	2	44	64	2816
Linear Fluorescent 21: Type P: 48" T8 32W: Electronic:	2	28	64	1792
		Total Proposed Watts =		45871

Interior Lighting PASSES: Design 67% better than code.

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard) requirements in COMcheck Version 3.9.4 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title
Signature
Date

Section 5: Post Construction Compliance Statement

Record Drawings and Operating and Maintenance Manuals:

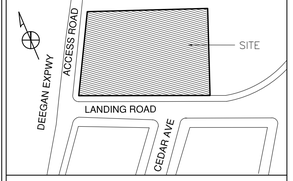
- ☐ 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Andrew Knox R.A. — Lighting Designer or Contractor Name
Signature
12/22/2014 — Date

STATE OF NEW YORK · ANDREW B. KNOX · 022216 · REGISTERED ARCHITECT

NOTE: SEE A–009 TABLE II FOR ENERGY CODE PROGRESS INSPECTIONS

KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5958

Structural Engineer:
ROBERT SILMAN ASSOCIATES ENGINEERS
32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7970
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer:
JOSEPH R. LORING AND ASSOCIATES INC.
21 Penn Plaza, New York, NY 10001
tel: 212-563-7400
fax: 212-563-7382

Civil Engineer:
LEONARD J. STRANDBERG & ASSOCIATES
One Edgewater Plaza, Suite 205, Staten Island, NY 10305
tel: 718-420-9693
fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

ENERGY ANALYSIS

SEAL:

STATE OF NEW YORK · ANDREW B. KNOX · 022216 · REGISTERED ARCHITECT

PROJECT NO.: 14008.0
SCALE: AS SHOWN
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 11 of 29

DWG. NO.:

EN-001.00

COMcheck Software Version 3.9.4

Exterior Lighting Compliance Certificate

2010 New York Energy Conservation Construction Code

Section 1: Project Information

Project Type: **New Construction**
Project Title : Landing Road BRC
Exterior Lighting Zone: **2 (Residential mixed use area)**

Construction Site:
233 Landing Road
Bronx, NY 10468

Owner/Agent:
Bowery Residence Committee
131 W. 25th Street
12th Floor
New York, NY 10001

Designer/Contractor:
Loring Consulting Engineers
21 Pennsylvania Plaza
New York, NY 10001-2727

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Illuminated length of facade wall or surface	680 ft	2.5	No	1700	1620
			Total Tradable Watts* =	0	0
			Total Allowed Watts =	1700	
			Total Allowed Supplemental Watts** =	600	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.
** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Illuminated length of facade wall or surface (680 ft): Non-tradable Wattage				
LED 1: LED Other Fixture Unit 90W:	1	18	90	1620
			Total Tradable Proposed Watts =	0

Section 4: Requirements Checklist

Lighting Wattage:

☐ 1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.
Compliance: Passes.

Controls, Switching, and Wiring:

☐ 2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.
☐ 3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.
☐ 4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
☐ 5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

Exterior Lighting Efficacy:

☐ 6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt.

Exceptions:

☐ Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
☐ Lighting that is specifically designated as required by a health or life safety statue, ordinance, or regulation.
☐ Emergency lighting that is automatically off during normal building operation.
☐ Lighting that is controlled by motion sensor.

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2010 New York Energy Conservation Construction Code requirements in COMcheck Version 3.9.4 and to comply with the mandatory requirements in the Requirements Checklist.

CHARLES JOHNSON - SVP — Name - Title
Signature
12/22/14 — Date

STATE OF NEW YORK · CHARLES F. JOHNSON III · No. 080545 · LICENSED PROFESSIONAL ENGINEER

COMcheck Software Version 3.9.4

Mechanical Compliance Certificate

2010 New York Energy Conservation Construction Code

Section 1: Project Information

Project Type: **New Construction**
Project Title : Landing Road BRC

Construction Site:
233 Landing Road
Bronx, NY 10468

Owner/Agent:
Bowery Residence Committee
131 W. 25th Street
12th Floor
New York, NY 10001

Designer/Contractor:
Loring Consulting Engineers
21 Pennsylvania Plaza
New York, NY 10001-2727

Section 2: General Information

Building Location (for weather data): **Bronx, New York**
Climate Zone: **4a**

Section 3: Mechanical Systems List

Quantity	System Type & Description
24	PTAC B (Single Zone w/ Perimeter System) : Packaged Terminal Heat Pump Heating Mode: Capacity = 16 kBtu/h, Proposed Efficiency = 3.00 COP, Required Efficiency = 2.95 COP Cooling Mode: Capacity = 10 kBtu/h, Proposed Efficiency = 12.00 EER, Required Efficiency = 10.23 EER Fan System: None
131	PTAC C (Single Zone w/ Perimeter System) : Packaged Terminal Heat Pump Heating Mode: Capacity = 17 kBtu/h, Proposed Efficiency = 3.00 COP, Required Efficiency = 2.87 COP Cooling Mode: Capacity = 13 kBtu/h, Proposed Efficiency = 11.40 EER, Required Efficiency = 9.57 EER Fan System: None
24	PTAC D (Single Zone w/ Perimeter System) : Packaged Terminal Heat Pump Heating Mode: Capacity = 17 kBtu/h, Proposed Efficiency = 3.00 COP, Required Efficiency = 2.83 COP Cooling Mode: Capacity = 14 kBtu/h, Proposed Efficiency = 10.50 EER, Required Efficiency = 9.23 EER Fan System: None
1	RTU (Multiple-Zone w/ Perimeter System) : Cooling: 1 each - Single Package DX Unit, Capacity = 520 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.00 EER, Required Efficiency = 10.00 EER Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 1 Supply, Multi-Zone VAV, 24000 CFM, 15.0 motor nameplate hp FAN 2 Return, Multi-Zone VAV, 24000 CFM, 15.0 motor nameplate hp
1	Boiler Plant 1: Heating: Hot Water Boiler, Capacity 2712 kBtu/h, Gas, with Waterloco Heat Pump Proposed Efficiency: 90.00 % Ec, Required Efficiency: 80.00 % Ec
1	Boiler Plant 2: Heating: Hot Water Boiler, Capacity 904 kBtu/h, Gas, with Waterloop Heat Pump Proposed Efficiency: 90.00 % Et, Required Efficiency: 75.00 % Et

Section 4: Requirements Checklist

Requirements Specific To: PTAC B :

☐ 1. Equipment minimum efficiency: Heat Pump: 2.95 COP 10.23 EER

Requirements Specific To: PTAC C :

☐ 1. Equipment minimum efficiency: Heat Pump: 2.87 COP 9.57 EER

Requirements Specific To: PTAC D :

☐ 1. Equipment minimum efficiency: Heat Pump: 2.83 COP 9.23 EER

Requirements Specific To: RTU :

☐ 1. Equipment minimum efficiency: Single Package Unit: 10.00 EER (9.7 IPLV)
☐ 2. Minimum one temperature control device per zone
☐ 3. Integrated economizer is required for this location and system.
☐ 4. Cooling system provides a means to relieve excess outdoor air during economizer operation.
☐ 5. Systems serving more than one zone must be VAV systems
☐ 6. Single-duct VAV terminals reduce primary air before reheating
☐ 7. Controls capable of resetting supply air temp (SAT) by 25% of SAT-room temp difference
Exception(s):
☐ Systems that prevent reheating, recooling or mixing of heated and cooled supply air
☐ Seventy five percent of the energy for reheating is from site-recovered or site solar energy sources.
☐ Zones with peak supply air quantities of 300 cfm (142 L/s) or less.
☐ 8. VAV fan >= 10 hp are driven by mechanical or electrical variable speed drive, or driven by vane-axial with variable speed blades, or operate with motor demand <=30% design kW at 50% design flow - calculations required
☐ 9. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation
☐ 10.Hot gas bypass limited to 25% of total cooling capacity
☐ 11.VAV fans with static pressure sensors are placed in a position such that the controller setpoint is no greater than one-third the total design fan static pressure. If placement results in the sensor being located downstream of major duct splits, multiple sensors are installed in each major branch.
Exception(s):
☐ Systems with DDC of individual zone boxes reporting to the central control panel and reset of static pressure setpoint based on the zone requiring the most pressure.
☐ 12.Systems with DDC of individual zone boxes reporting to the central control panel has static pressure setpoint reset based on the zone requiring the most pressure.

Requirements Specific To: Boiler Plant 1 :

☐ 1. Equipment minimum efficiency: Boiler Combustion Efficiency 80% Ec
☐ 2. Loop temperature controlled with 20 degrees F deadband where neither cooling tower/fluid cooler nor boiler can operate
☐ 3. Two-position valve on each heat pump having total heat pump system power >10hp
☐ 4. Newly purchased heating equipment meets the efficiency requirements
- used equipment must meet 80% Et @ maximum capacity
☐ 5. Systems with multiple boilers have automatic controls capable of sequencing boiler operation
☐ 6. Hydronic heating systems comprised of a single boiler and >500 kBtu/h input design capacity include either a multistaged or modulating burner

Requirements Specific To: Boiler Plant 2 :

☐ 1. Equipment minimum efficiency: Boiler Thermal Efficiency 75% Et 80% Ec
☐ 2. Loop temperature controlled with 20 degrees F deadband where neither cooling tower/fluid cooler nor boiler can operate
☐ 3. Two-position valve on each heat pump having total heat pump system power >10hp
☐ 4. Newly purchased heating equipment meets the efficiency requirements
- used equipment must meet 80% Et @ maximum capacity
☐ 5. Systems with multiple boilers have automatic controls capable of sequencing boiler operation
☐ 6. Hydronic heating systems comprised of a single boiler and >500 kBtu/h input design capacity include either a multistaged or modulating burner

Generic Requirements: Must be met by all systems to which the requirement is applicable:

☐ 1. Plant equipment and system capacity no greater than needed to meet loads
Exception(s):
☐ Standby equipment automatically off when primary system is operating
☐ Multiple units controlled to sequence operation as a function of load
☐ 2. Minimum one temperature control device per system

☐ 3. Minimum one humidity control device per installed humidification/dehumidification system
☐ 4. Load calculations per ASHRAE/ACCA Standard 183.
☐ 5. Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
Exception(s):
☐ Continuously operating zones
☐ 6. Outside-air source for ventilation; system capable of reducing OSA to required minimum
☐ 7. R-5 supply and return air duct insulation in unconditioned spaces
R-8 supply and return air duct insulation outside the building
R-8 insulation between ducts and the building exterior when ducts are part of a building assembly
Exception(s):
☐ Ducts located within equipment
☐ Ducts with interior and exterior temperature difference not exceeding 15°F.
☐ 8. Mechanical fasteners and sealants used to connect ducts and air distribution equipment
☐ 9. Ducts sealed - longitudinal seams on rigid ducts; transverse seams on all ducts; UL 181A or 181B tapes and mastics
☐ 10.Hot water pipe insulation: 1.5 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in.
Chilled water/refrigerant/brine pipe insulation: 1.5 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in.
Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.
Exception(s):
☐ Piping within HVAC equipment.
☐ Fluid temperatures between 55 and 105°F.
☐ Fluid not heated or cooled with renewable energy.
☐ Piping within room fan-coil (with AHRI440 rating) and unit ventilators (with AHRI840 rating).
☐ Runouts <4 ft in length.
☐ 11.Operation and maintenance manual provided to building owner
☐ 12.Hot water distribution systems >= 300 kBtu/h must have one of the following:
a) controls that reset supply water temperature by 25% of supply/return delta T
b) mechanical or electrical adjustable-speed pump drive(s)
c) two-way valves at all heating coils
d) multiple-stage pumps
e) other system controls that reduce pump flow by at least 50% based on load
- calculations required
Exception(s):
☐ Where the supply temperature reset controls cannot be implemented without causing improper operation of heating, cooling, humidification, or dehumidification systems.
☐ Hydronic systems that use variable flow to reduce pumping energy.
☐ 13.Balancing devices provided in accordance with IMC 603.17
☐ 14.Demand control ventilation (DCV) present for high design occupancy areas (>40 person/1000 ft2 in spaces >500 ft2) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
Exception(s):
☐ Systems with heat recovery.
☐ Multiple-zone systems without DDC of individual zones communicating with a central control panel.
☐ Systems with a design outdoor airflow less than 1200 cfm.
☐ Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
☐ 15.Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings
Exception(s):
☐ Gravity dampers acceptable in buildings <3 stories
☐ 16.Automatic controls for freeze protection systems present
☐ 17.Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted
Exception(s):
☐ Hazardous exhaust systems, commercial kitchen and clothes dryer exhaust systems that the International Mechanical Code prohibits the use of energy recovery systems.
☐ Systems serving spaces that are heated and not cooled to less than 60°F.
☐ Where more than 60 percent of the outdoor heating energy is provided from site-recovered or site solar energy.
☐ Heating systems in climates with less than 3600 HDD.
☐ Cooling systems in climates with a 1 percent cooling design wet-bulb temperature less than 64°F.
☐ Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
☐ Laboratory fume hood exhaust systems that have either a variable air volume system capable of reducing exhaust and makeup air volume to 50 percent or less of design values or, a separate make up air supply meeting the following makeup air requirements:

a) at least 75 percent of exhaust flow rate, b) heated to no more than 2°F below room setpoint temperature, c) cooled to no lower than 3°F above room setpoint temperature, d) no humidification added, e) no simultaneous heating and cooling.

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2010 New York Energy Conservation Construction Code requirements in COMcheck Version 3.9.4 and to comply with the mandatory requirements in the Requirements Checklist.

CHARLES JOHNSON - SVP — Name - Title
Signature
12/22/14 — Date

Section 6: Post Construction Compliance Statement

☐ HVAC record drawings of the actual installation, system capacities, calibration information, and performance data for each equipment provided to the owner.
☐ HVAC O&M documents for all mechanical equipment and system provided to the owner by the mechanical contractor.
☐ Written HVAC balancing and operations report provided to the owner.

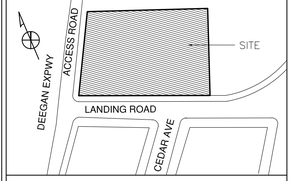
The above post construction requirements have been completed.

Principal Mechanical Designer-Name
Signature
Date

STATE OF NEW YORK · CHARLES F. JOHNSON III · No. 080545 · LICENSED PROFESSIONAL ENGINEER

NOTE: SEE A-009 TABLE II FOR ENERGY CODE PROGRESS INSPECTIONS

KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5958

Structural Engineer:
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fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer:
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

ENERGY ANALYSIS

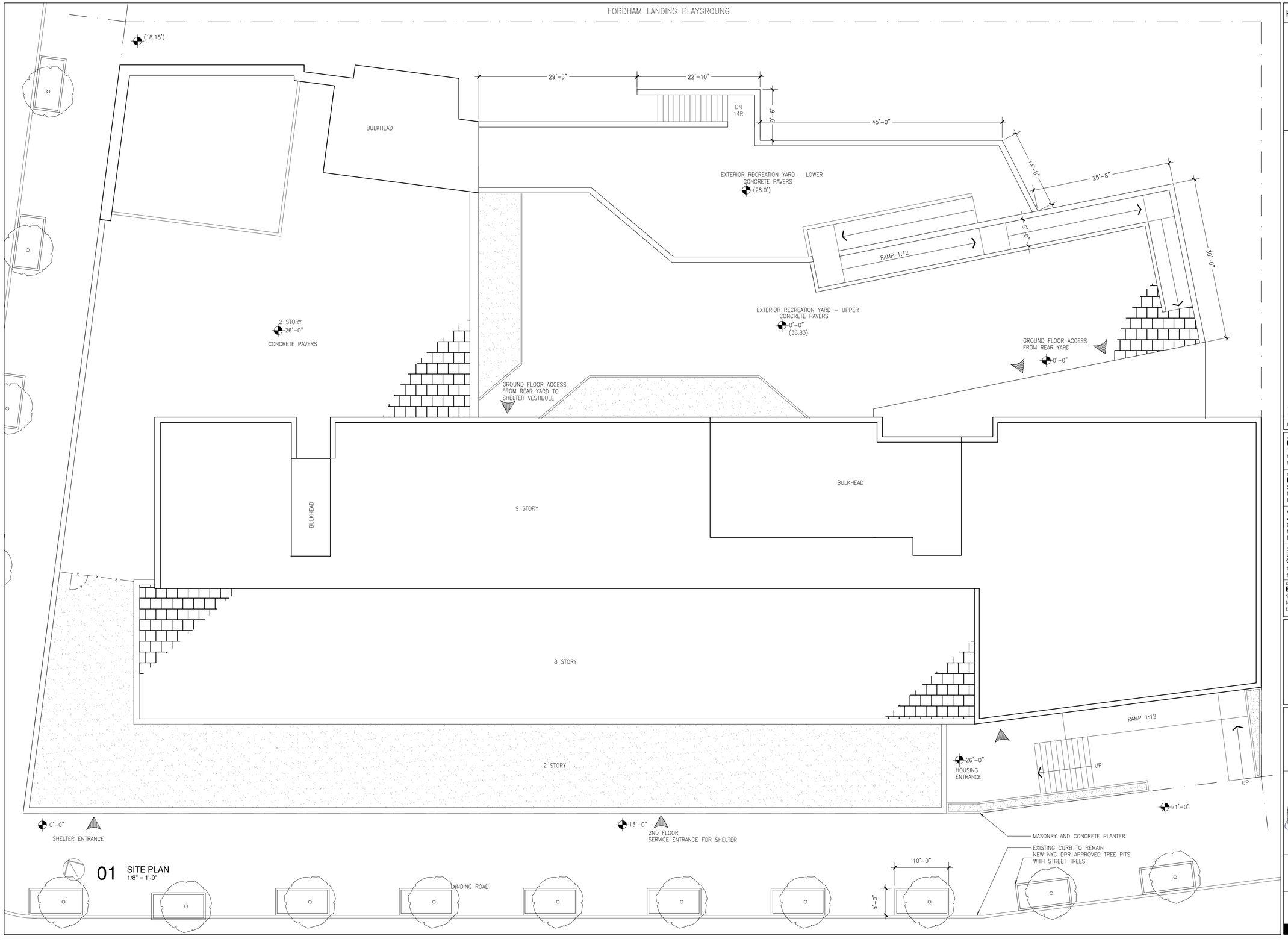
SEAL:

STATE OF NEW YORK · ANDREW M. KNOX · 022216 · REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	AS SHOWN
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	12 of 29

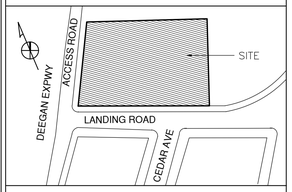
DWG. NO.:

EN-002.00



01 SITE PLAN
1/8" = 1'-0"

KEY PLAN



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Bowery Residents' Committee

Landing Road

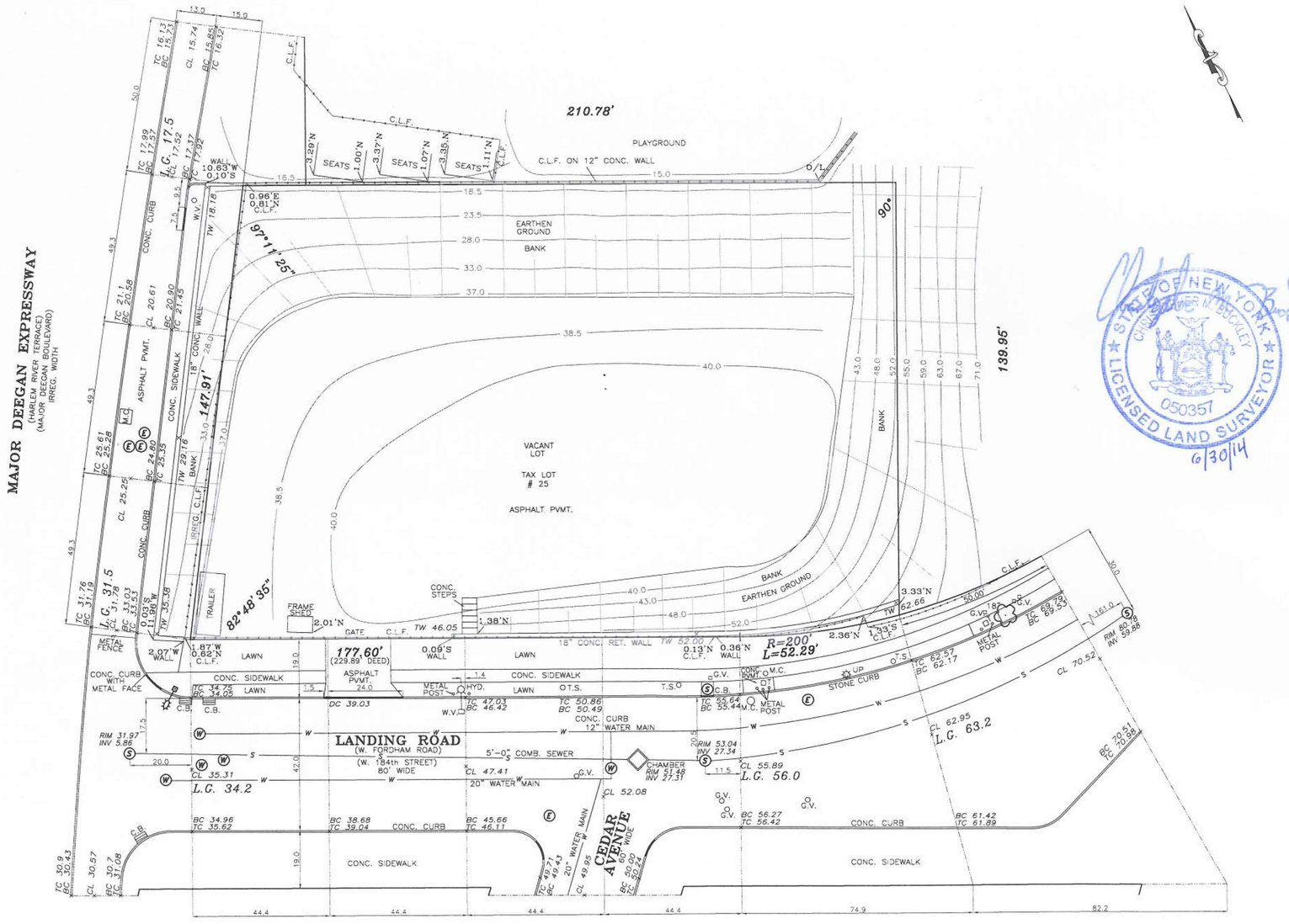
233 Landing Road
Bronx, New York 10468

TITLE:
SITE PLAN

SEAL:
STATE OF NEW YORK
ANDREW M. KNOX
022218
REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	13 of 29

DWG. NO.:
A-100.00



LEGEND:
CATCH BASIN — C.B.
TREE DIAMETER — ⊙ 3"
UTILITY POLE — ☼
VALVES — GAS G.V. WATER V.
OVERHEAD SERVICE WIRES — O.H.S.
CURB AND CURB CUT
MANHOLES: SEWER (S) TELEPHONE (T) ELECTRIC (E)
SEWER — S
WATER — W
FIRE HYDRANT — hmb.
TRAFFIC SIGN — T.S. CELLAR ENTRANCE — C.E. PARKING METER — P.M.
CHAIN LINK FENCE — C.L.F. PLATFORM — PLT. PAVEMENT — PVMT.
METAL FENCE — M.F. WOOD FENCE — W.F. VINYL FENCE — V.F.
AIR CONDITIONER — A.C. BAY WINDOW — B.W. AREA WAY — A.W.
EXISTING ELEVATION — EL 43.54 TOP OF CURB — TC 43.54
BOTTOM OF CURB — BC 43.53 DROP CURB — DC 43.54
CENTER LINE OF STREET — CL 43.54 LEGAL GRADES — LG 43.60
TEMPORARY WOOD FENCE — T.W.F. FIRE ESCAPE — F.E.
TOP OF WALL — TW 12.34 BOTTOM OF WALL — TW 11.12

NOTES & DISCLAIMERS:

1. ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), WHICH IS 1.50 FEET ABOVE THE BRONX BOROUGH DATUM.
2. CONSULT WITH THE HIGHWAY DEPARTMENT BEFORE DESIGNING, INSTALLING OR MODIFYING ANY NEW OR EXISTING CURBS, WALKS OR ROADWAYS IN THE STREETS SHOWN HEREON.
3. SUBSURFACE INFORMATION SHOWN HEREON WAS OBTAINED FROM VARIOUS CITY DEPARTMENTS AND/OR PRIVATE UTILITY COMPANIES. THE SURVEYOR DOES NOT CERTIFY AS TO THE ACCURACY OR COMPLETENESS OF THIS DATA AND ALL USERS OF THIS SURVEY AGREE TO HOLD THE SURVEYOR HARMLESS FOR SAME. THE LOCATION OF SAID UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND MUST BE CONFIRMED BY THE USER OF THIS SURVEY PRIOR TO CONSTRUCTION OR PURCHASING PROPERTY.
4. THIS IS TO CERTIFY THAT THERE ARE NO VISIBLE STREAMS OR NATURAL COURSES IN THE PROPERTY AS SHOWN ON THE SURVEY.
5. NO SUBSURFACE UTILITY INFORMATION WITHIN THE PROPERTY IS SHOWN. CONTACT ONE CALL TO HAVE ALL SUBSURFACE UTILITY INFORMATION WITHIN THE PROPERTY MARKED OUT PRIOR TO CONSTRUCTION. THE SURVEYOR WILL NOT BE LIABLE OR HELD RESPONSIBLE FOR DAMAGES TO SUBSURFACE UTILITIES EITHER WITHIN OR OUTSIDE THE SURVEYED PROPERTY DUE TO CONSTRUCTION.
6. THE USER OF THE SURVEY EXPRESSLY UNDERSTANDS AND AGREES THAT THE SURVEYOR MAKES NO CLAIM AND DOES NOT GUARANTEE THAT THE SEWERS SHOWN HEREON ARE PUBLIC OR THAT ANY PROPERTIES SHOWN ON THIS SURVEY WILL BE ABLE TO CONNECT TO SAME.
7. THE USER OF THIS SURVEY EXPRESSLY AGREES AND UNDERSTANDS THAT SHOULD CHRISTOPHER BUCKLEY, CHRISTOPHER BUCKLEY L.S.P.C., PRECISION SURVEYS, EMPLOYEES OF OFFICES THEREOF, BE FOUND LIBEL IN A COURT OF LAW FOR ERRORS OR EMISSIONS ARISING FROM THIS SURVEY THAT THE LIMIT OF LIABILITY IS THE PRICE PAID FOR THIS SURVEY
8. DO NOT USE THIS SURVEY UNLESS YOU AGREE AND CONSENT TO ALL OF THE ABOVE.

NOTE:
UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYORS BLACK INKED OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY. GUARANTEES OR CERTIFICATIONS INDICATED HEREON SHALL RUN ONLY TO THE PERSON AND/OR PERSONS FOR WHOM THE SURVEY IS PREPARED, AND ONLY ON HIS/HER BEHALF TO THE TITLE COMPANY, GOVERNMENTAL AGENCY AND LENDING INSTITUTION LISTED HEREON, AND TO THE ASSIGNEES OF THE LENDING INSTITUTION GUARANTEES OR CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

NOTE
AREA INDICATED IS SHOWN ON FINAL SECTION MAP #16, CITY OF NEW YORK, BOROUGH OF BRONX.

NOTE
PLEASE CONTACT APPROPRIATE UTILITY FOR GAS MAIN INFORMATION

LOT AREA IS 32103.1 S.F.
FOR BUILDING DEPARTMENT USE ONLY

STATE OF NEW YORK
CHRISTOPHER M. BUCKLEY
LICENSED LAND SURVEYOR
050357
6/30/14

TOPOGRAPHIC SURVEY

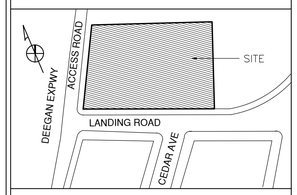
LOCATED AT:
233 Landing Road
Borough and County of Bronx
City and State of New York

TAX DESIG: Block 3236, Lot 25

Precision Surveys
TITLE • ARCHITECTURAL • BOUNDARY • CONSTRUCTION
40 Franklin Ave. Franklin Square, N.Y. 11010
Phone (718)472-1571 • (516)488-1608 • Fax (516)488-2039
CHRISTOPHER M. BUCKLEY
PROFESSIONAL LAND SURVEYOR

CERTIFIED TO: West 25th Street Housing Development Corporation
DATE: June 30, 2014
SCALE: NOT TO SCALE
Job No. 33937
Drawn By: LG

KEY PLAN



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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bronx, New York 10468

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SITE SURVEY

SEAL:
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ANDREW M. KNOX
022218
REGISTERED ARCHITECT

PROJECT NO.: 14008.0
SCALE: 1/8" = 1'-0"
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 14 of 29

DWG. NO.:
A-101.00

LEGEND

SMOKE/CARBON MONOXIDE DETECTOR

EXIT SIGN

CL = TYPICAL APARTMENT UNIT CLOSET, SEE 11/A902

LIN = TYPICAL APARTMENT UNIT LINEN CLOSET, SEE 10/A902

TYPICAL CLEAR FLOOR SPACE (CFS) @ DOORS PER ANSI 117.1-2003 SECTION 404. SEE ALSO A-003 FOR COMPLETE ADA DETAILS/DIMS

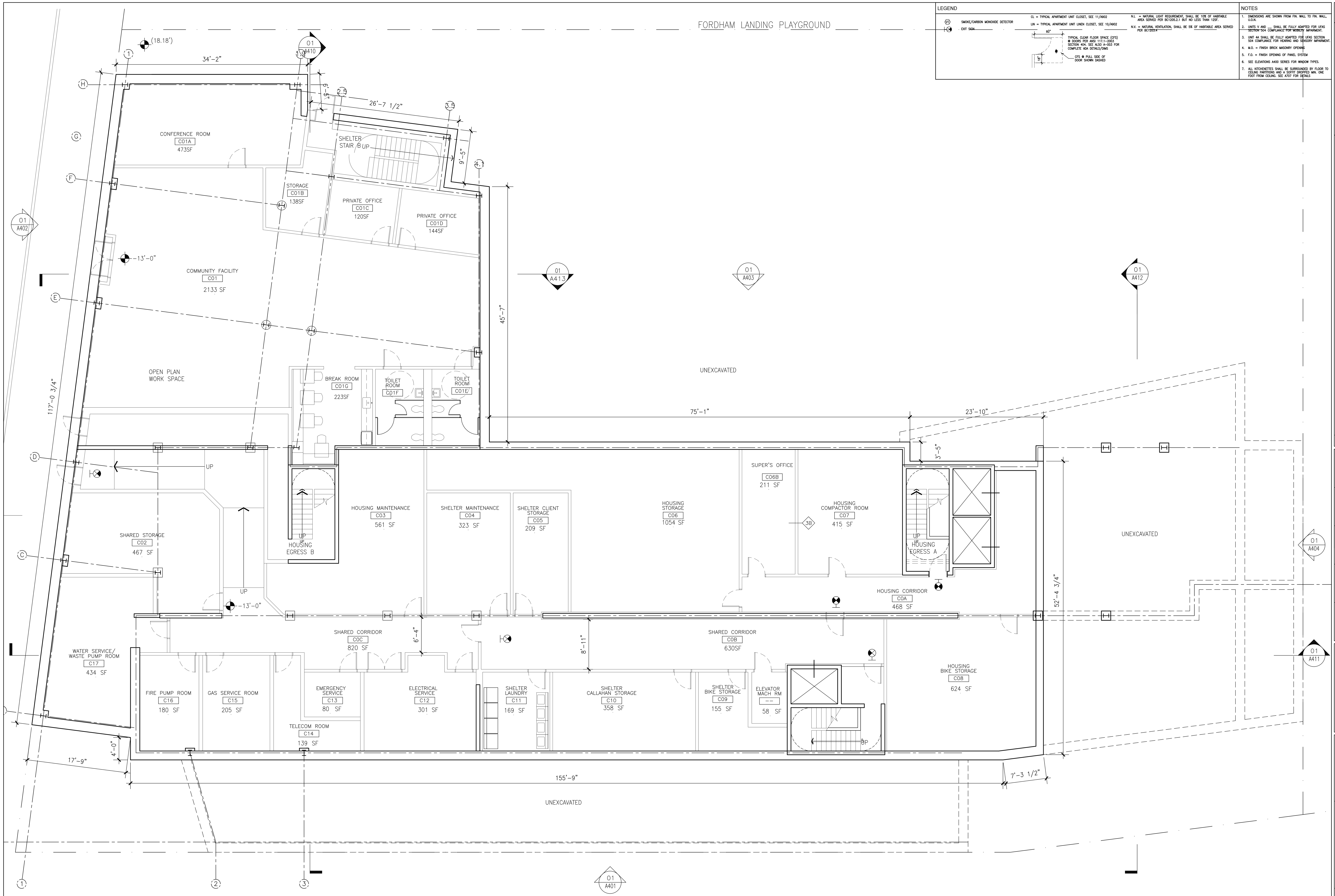
CFS @ PULL SIDE OF DOOR SHOWN DASHED

N.L = NATURAL LIGHT REQUIREMENT, SHALL BE 10% OF HABITABLE AREA SERVED PER BC1205.2.1 BUT NO LESS THAN 12SF.

N.V. = NATURAL VENTILATION, SHALL BE 5% OF HABITABLE AREA SERVED PER BC1203.4

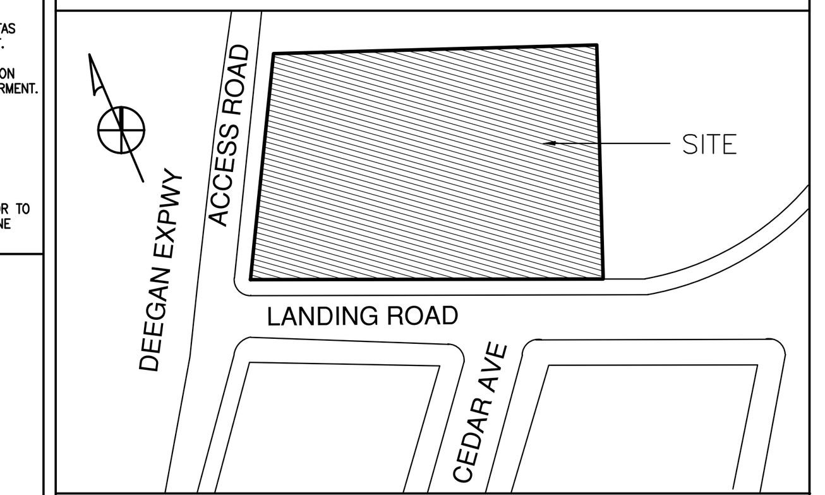
NOTES

1. DIMENSIONS ARE SHOWN FROM FIN. WALL TO FIN. WALL, U.O.N.
2. UNITS V AND __ SHALL BE FULLY ADAPTED FOR UFAS SECTION 504 COMPLIANCE FOR MOBILITY IMPAIRMENT.
3. UNIT 4A SHALL BE FULLY ADAPTED FOR UFAS SECTION 504 COMPLIANCE FOR HEARING AND SENSORY IMPAIRMENT.
4. M.O. = FINISH BRICK MASONRY OPENING
5. F.O. = FINISH OPENING OF PANEL SYSTEM
6. SEE ELEVATIONS A400 SERIES FOR WINDOW TYPES.
7. ALL KITCHENETTES SHALL BE SURROUNDED BY FLOOR TO CEILING PARTITIONS AND A SOFFIT DROPPED MIN. ONE FOOT FROM CEILING. SEE A707 FOR DETAILS



01 CELLAR FLOOR PLAN
1/8" = 1'-0"

KEY PLAN



SHELTER OCCUPANCY NOT INCLUDED IN SUPPORTIVE HOUSING

SUPPORTIVE HOUSING EGRESS TO GROUND FLOOR

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5958

Structural Engineer:
ROBERT SILMAN ASSOCIATES ENGINEERS
32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7970
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer:
JOSEPH R. LORING AND ASSOCIATES INC.
21 Penn Plaza, New York, NY 10001
tel: 212-563-7400
fax: 212-563-7382

Civil Engineer:
LEONARD J. STRANDBERG & ASSOCIATES
One Edgewater Plaza, Suite 205, Staten Island, NY 10305
tel: 718-420-9693
fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

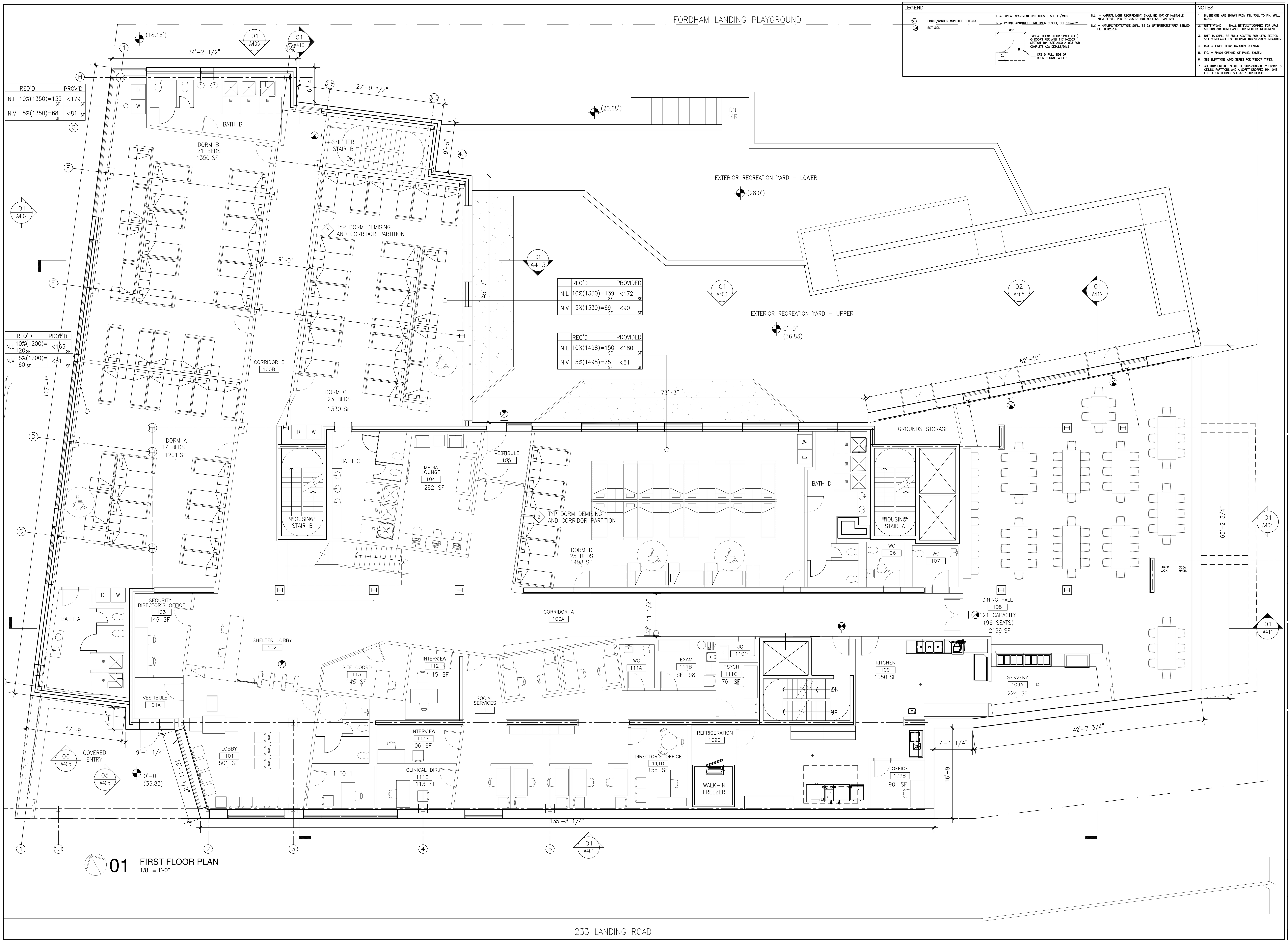
233 Landing Road
Bronx, New York 10468

TITLE:
CELLAR FLOOR PLAN

SEAL: STATE OF NEW YORK · ANDREW B. KNOX · 022216 · REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	15 of 29

DWG. NO.:
A-200.00



	REQ'D	PROV'D
N.L	10%(1350)=135 SF	<179 SF
N.V	5%(1350)=68 SF	<81 SF

	REQ'D	PROV'D
N.L	10%(1200)= 120 SF	<163 SF
N.V	5%(1200)= 60 SF	<81 SF

	REQ'D	PROVIDED
N.L	10%(1330)=139 SF	<172 SF
N.V	5%(1330)=69 SF	<90 SF

	REQ'D	PROVIDED
N.L	10%(1498)=150 SF	<180 SF
N.V	5%(1498)=75 SF	<81 SF

01 FIRST FLOOR PLAN
1/8" = 1'-0"

LEGEND

- SMOKE/CARBON MONOXIDE DETECTOR
- EXIT SIGN

CL = TYPICAL APARTMENT UNIT CLOSET, SEE 11/A902
LIN = TYPICAL APARTMENT UNIT LINEN CLOSET, SEE 10/A902

TYPICAL CLEAR FLOOR SPACE (CFS) @ DOORS PER ANSI 117.1-2003 SECTION 404. SEE ALSO A-003 FOR COMPLETE ADA DETAILS/DIMS

CFS @ PULL SIDE OF DOOR SHOWN DASHED

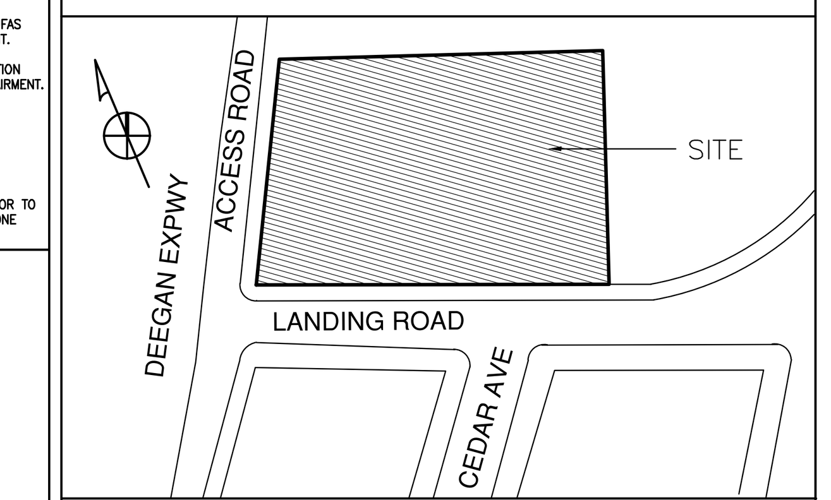
N.L = NATURAL LIGHT REQUIREMENT, SHALL BE 10% OF HABITABLE AREA SERVED PER BC1205.2.1 BUT NO LESS THAN 12SF.

N.V. = NATURAL VENTILATION, SHALL BE 5% OF HABITABLE AREA SERVED PER BC1203.4

NOTES

1. DIMENSIONS ARE SHOWN FROM FIN. WALL TO FIN. WALL, U.O.N.
2. UNITS V AND __ SHALL BE FULLY ADAPTED FOR UFAS SECTION 504 COMPLIANCE FOR MOBILITY IMPAIRMENT.
3. UNIT 4A SHALL BE FULLY ADAPTED FOR UFAS SECTION 504 COMPLIANCE FOR HEARING AND SENSORY IMPAIRMENT.
4. M.O. = FINISH BRICK MASONRY OPENING
5. F.O. = FINISH OPENING OF PANEL SYSTEM
6. SEE ELEVATIONS A400 SERIES FOR WINDOW TYPES.
7. ALL KITCHENETTES SHALL BE SURROUNDED BY FLOOR TO CEILING PARTITIONS AND A SOFFIT DROPPED MIN. ONE FOOT FROM CEILING. SEE A707 FOR DETAILS

KEY PLAN



SHELTER OCCUPANCY NOT INCLUDED IN SUPPORTIVE HOUSING
SUPPORTIVE HOUSING EGRESS TO GROUND FLOOR

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5958

Structural Engineer:
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Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
FIRST FLOOR PLAN

SEAL: STATE OF NEW YORK · ANDREW B. KNOX · 022216 · REGISTERED ARCHITECT

PROJECT NO. :	14008.0
SCALE:	1/8" = 1'-0"
BY:	KM / MR / MVR / MG
CHECK:	AK
DATE:	DECEMBER 22, 2014
PAGE:	16 of 29

DWG. NO. :
A-201.00

FORDHAM LANDING PLAYGROUND

	REQ'D	PROVIDED
N.L	10%(1294)=129 SF	<136
N.V	5%(1294)=65 SF	<81

	REQ'D	PROVIDED
N.L	10%(1145)= 114 SF	<136 SF
N.V	5%(1145)= 57 SF	<81 SF

	REQ'D	PROVIDED
N.L	10%(1332)=133 SF	<137 SF
N.V	5%(1332)=66 SF	<81 SF

	REQ'D	PROVIDED
N.L	10%(884)=88 SF	<93 SF
N.V	5%(884)=44 SF	<54 SF

	REQ'D	PROVIDED
N.L	10%(942)=94 SF	=94 SF
N.V	5%(942)=47 SF	<54 SF

	REQ'D	PROVIDED
N.L	10%(1434)=143 SF	<144 SF
N.V	5%(1434)=72 SF	<81 SF

LEGEND

- SMOKE/CARBON MONOXIDE DETECTOR
- EXIT SIGN
- CL = TYPICAL APARTMENT UNIT CLOSET, SEE 11/A402
- LIN'N TYPICAL APARTMENT UNIT LINEN CLOSET, SEE 10/A402
- 60" TYPICAL CLEAR FLOOR SPACE (CFS) @ DOORS PER ANSI 117.1-2003 SECTION 404. SEE ALSO A-003 FOR COMPLETE ADA DETAILS/DWG
- 18" CFS @ PULL SIDE OF DOOR SHOWN DASHED
- N.L. = NATURAL LIGHT REQUIREMENT, SHALL BE 10% OF HABITABLE AREA SERVED PER BC1205.2.1 BUT NO LESS THAN 12SF.
- N.V. = NATURAL VENTILATION, SHALL BE 5% OF HABITABLE AREA SERVED PER BC1203.4

NOTES

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4. M.O. = FINISH BRICK MASONRY OPENING
5. F.O. = FINISH OPENING OF PANEL SYSTEM
6. SEE ELEVATIONS A400 SERIES FOR WINDOW TYPES.
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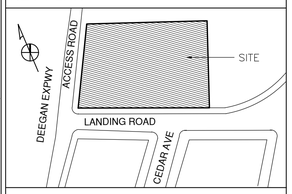
01 SECOND FLOOR PLAN
1/8" = 1'-0"

233 LANDING ROAD

KEY PLAN



SHELTER OCCUPANCY
NOT INCLUDED IN SUPPORTIVE HOUSING

SUPPORTIVE HOUSING
EGRESS TO GROUND FLOOR

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
tel: 212-431-4901
fax: 212-226-5956

Structural Engineer:
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Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
SECOND FLOOR PLAN

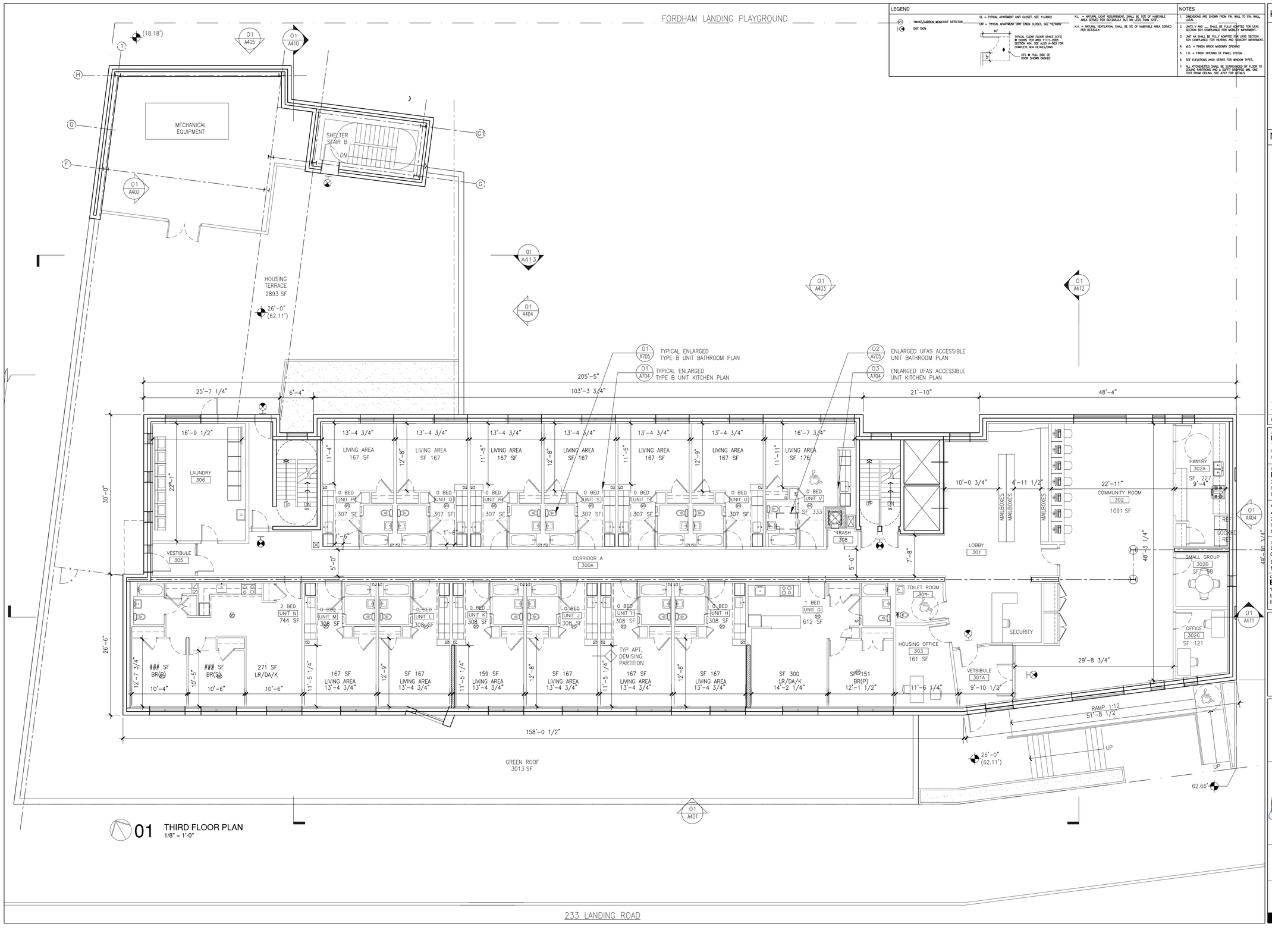
SEAL:

STATE OF NEW YORK
ANDREW M. KNOX
022216
REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	17 of 29

DWG. NO.:
A-202.00

FORDHAM LANDING PLAYGROUND



01 THIRD FLOOR PLAN
1/8" = 1'-0"

233 LANDING ROAD

LEGEND

SMOKE/CARBON MONOXIDE DETECTOR

EXIT SIGN

CL = TYPICAL APARTMENT UNIT CLOSET, SEE 11/A402

LW = TYPICAL APARTMENT UNIT LINEN CLOSET, SEE 10/A402

N.L. = NATURAL LIGHT REQUIREMENT, SHALL BE 10% OF HABITABLE AREA SERVED PER BC1205.2.1 BUT NO LESS THAN 12SF.

N.V. = NATURAL VENTILATION, SHALL BE 5% OF HABITABLE AREA SERVED PER BC1203.4.

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5. F.O. = FINISH OPENING OF PANEL SYSTEM
6. SEE ELEVATIONS A400 SERIES FOR WINDOW TYPES.
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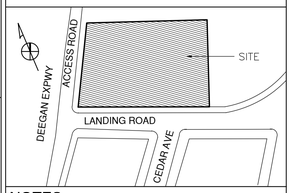
KEY PLAN



NOTES

1. APARTMENT ENTRY DOORS TO BE 16 GAUGE HOLLOW METAL WITH 14 GAUGE HOLLOW METAL FRAMES.
2. APARTMENT INTERIOR DOORS TO BE HOLLOW CORE WOOD WITH 16 GAUGE HOLLOW METAL FRAMES, NATURAL FINISH.

SHELTER OCCUPANCY
SUPPORTIVE HOUSING
EGRESS TO GROUND FLOOR

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
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Structural Engineer:
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Civil Engineer:
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fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
THIRD FLOOR PLAN

SEAL:
STATE OF NEW YORK · ANDREW K. KNOX · 022218 · REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	18 of 29

DWG. NO.:
A-203.00

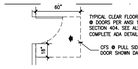
LEGEND

SMOKE/CARBON MONOXIDE DETECTOR

EXIT SIGN

CL = TYPICAL APARTMENT UNIT CLOSET, SEE 11/A402

LIN = TYPICAL APARTMENT UNIT LINEN CLOSET, SEE 10/A402



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N.V. = NATURAL VENTILATION, SHALL BE 5% OF HABITABLE AREA SERVED PER BC1203.4

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6. SEE ELEVATIONS A400 SERIES FOR WINDOW TYPES.
7. ALL KITCHENETTES SHALL BE SURROUNDED BY FLOOR TO CEILING PARTITIONS AND A SOFFIT DROPPED MIN. ONE FOOT FROM CEILING. SEE A707 FOR DETAILS

	REQ'D	PROVIDED
N.L	10%(296)=30 SF	<46 SF
N.V	5%(296)=15 SF	<31 SF

	REQ'D	PROVIDED
N.L	10%(161)=16 SF	<29.5 SF
N.V	5%(161)=8 SF	<14 SF

	REQ'D	PROVIDED
N.L	10%(161)=16 SF	<34.5 SF
N.V	5%(161)=8 SF	<14 SF

	REQ'D	PROVIDED
N.L	10%(180)=18 SF	<29.5 SF
N.V	5%(180)=9 SF	<14 SF

	REQ'D	PROVIDED
N.L	10%(164)=16 SF	<29.5 SF
N.V	5%(164)=8 SF	<14 SF

BAY WINDOW SHOWN FOR FOURTH FLOOR. SEE ELEVATION FOR LOCATIONS OF BAY WINDOW ON EACH FLOOR

	REQ'D	PROVIDED
N.L	10%(139)=14 SF	<33 SF
N.V	5%(139)=7 SF	<22.5 SF

	REQ'D	PROVIDED
N.L	10%(131)=13 SF	<28.5 SF
N.V	5%(131)=7.5 SF	<27 SF

	REQ'D	PROVIDED
N.L	10%(131)=13 SF	<28.5 SF
N.V	5%(131)=7.5 SF	<27 SF

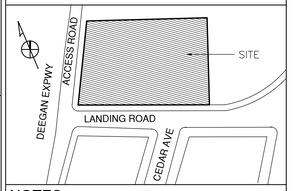
	REQ'D	PROVIDED
N.L	10%(134)=13 SF	<29.5 SF
N.V	5%(134)=13 SF	<14 SF

	REQ'D	PROVIDED
N.L	10%(110)=11 SF	<20 SF
N.V	5%(110)=5.5 SF	<14 SF

	REQ'D	PROVIDED
N.L	10%(275)=28 SF	<37 SF
N.V	5%(275)=14 SF	<27 SF

01 TYPICAL FLOOR PLAN (4-8)
1/8" = 1'-0"

KEY PLAN



NOTES

1. APARTMENT ENTRY DOORS TO BE 16 GAUGE HOLLOW METAL WITH 14 GAUGE HOLLOW METAL FRAMES.
2. APARTMENT INTERIOR DOORS TO BE HOLLOW CORE WOOD WITH 16 GAUGE HOLLOW METAL FRAMES, NATURAL FINISH.

SHELTER OCCUPANCY
SUPPORTIVE HOUSING
EGRESS TO GROUND FLOOR

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
TYPICAL FLOOR PLAN (4-8)

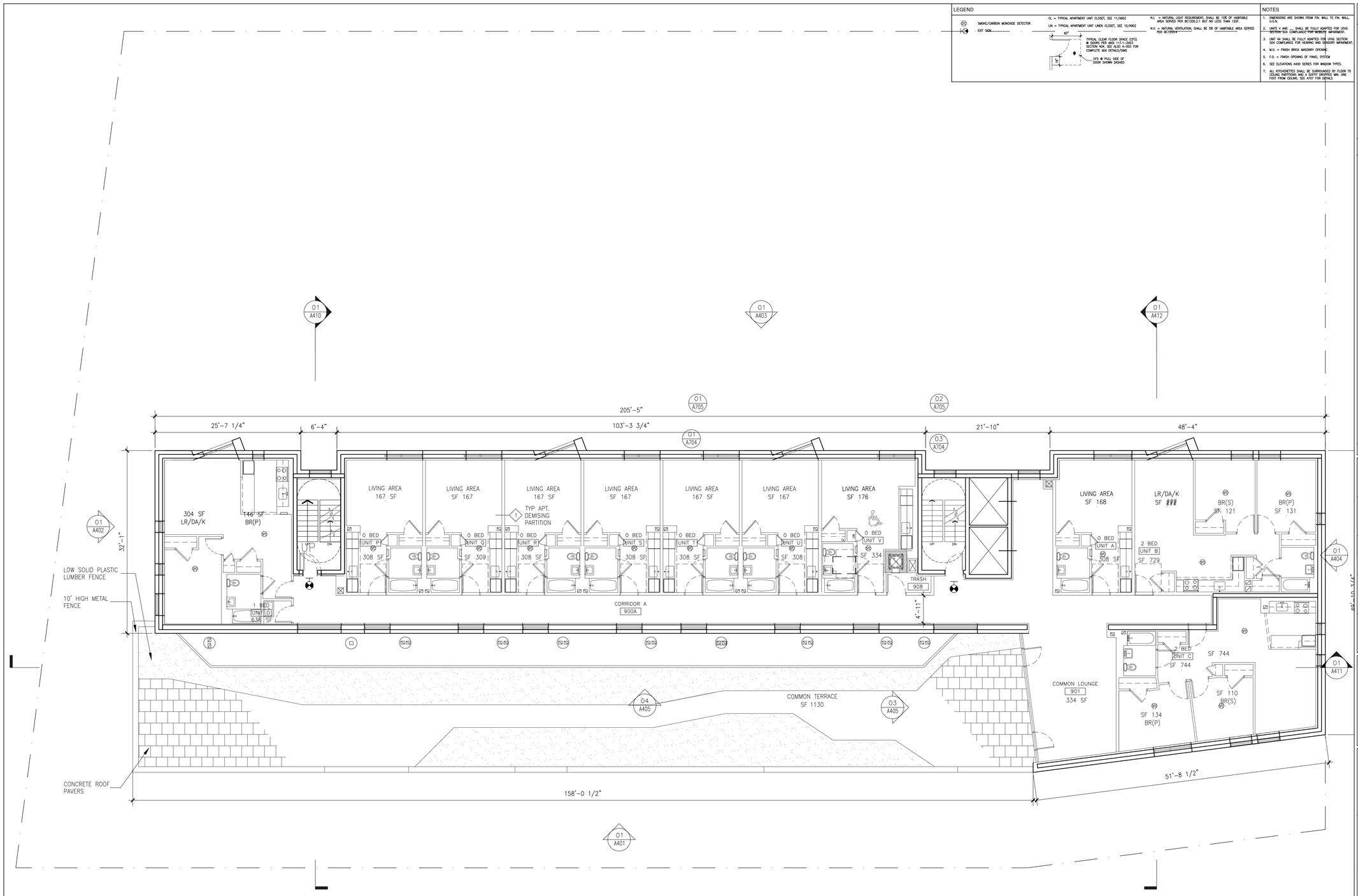
SEAL:

STATE OF NEW YORK · ANDREW M. KNOX · 022218 · REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	19 of 29

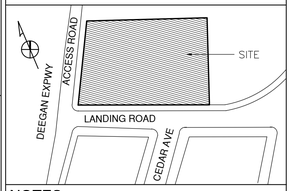
DWG. NO.:

A-204.00



01 NINTH FLOOR PLAN
1/8" = 1'-0"

KEY PLAN



NOTES

1. APARTMENT ENTRY DOORS TO BE 16 GAUGE HOLLOW METAL WITH 14 GAUGE HOLLOW METAL FRAMES.
2. APARTMENT INTERIOR DOORS TO BE HOLLOW CORE WOOD WITH 16 GAUGE HOLLOW METAL FRAMES, NATURAL FINISH.

SHELTER OCCUPANCY
SUPPORTIVE HOUSING
EGRESS TO GROUND FLOOR

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
NINTH FLOOR PLAN

SEAL:
STATE OF NEW YORK · ANDREW S. KNOX · 022218 · REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	20 of 29

DWG. NO.:
A-205.00

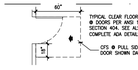
LEGEND

SMOKE/CARBON MONOXIDE DETECTOR

EXIT SIGN

CL = TYPICAL APARTMENT UNIT CLOSET, SEE 11/A402

LIN = TYPICAL APARTMENT UNIT LINEN CLOSET, SEE 10/A402



N.L. = NATURAL LIGHT REQUIREMENT, SHALL BE 10% OF HABITABLE AREA SERVED PER BC1205.2.1 BUT NO LESS THAN 125F.

N.V. = NATURAL VENTILATION, SHALL BE 5% OF HABITABLE AREA SERVED PER BC1203.4

NOTES

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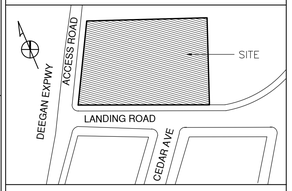
3. UNIT 4A SHALL BE FULLY ADAPTED FOR UFAS SECTION 504 COMPLIANCE FOR HEARING AND SENSORY IMPAIRMENT.
4. M.O. = FINISH BRICK MASONRY OPENING
5. F.O. = FINISH OPENING OF PANEL SYSTEM
6. SEE ELEVATIONS A400 SERIES FOR WINDOW TYPES.
7. ALL KITCHENETTES SHALL BE SURROUNDED BY FLOOR TO CEILING PARTITIONS AND A SOFFIT DROPPED MIN. ONE FOOT FROM CEILING. SEE A707 FOR DETAILS

01 ROOF PLAN
1/8" = 1'-0"

O1 A401

KEY PLAN



SHELTER OCCUPANCY
NOT INCLUDED IN SUPPORTIVE HOUSING

SUPPORTIVE HOUSING
EGRESS TO GROUND FLOOR

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
100 Lafayette Street, Suite 204, New York, NY 10013
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fax: 212-226-5958

Structural Engineer:
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32 Old Slip, 10th Floor New York, NY 10005
tel: 212-620-7970
fax: 212-620-8157

Mechanical/Electrical/Plumbing Engineer
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fax: 212-563-7382

Civil Engineer:
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One Edgewater Plaza, Suite 205, Staten Island, NY 10305
tel: 718-420-9693
fax: 718-420-9673

Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

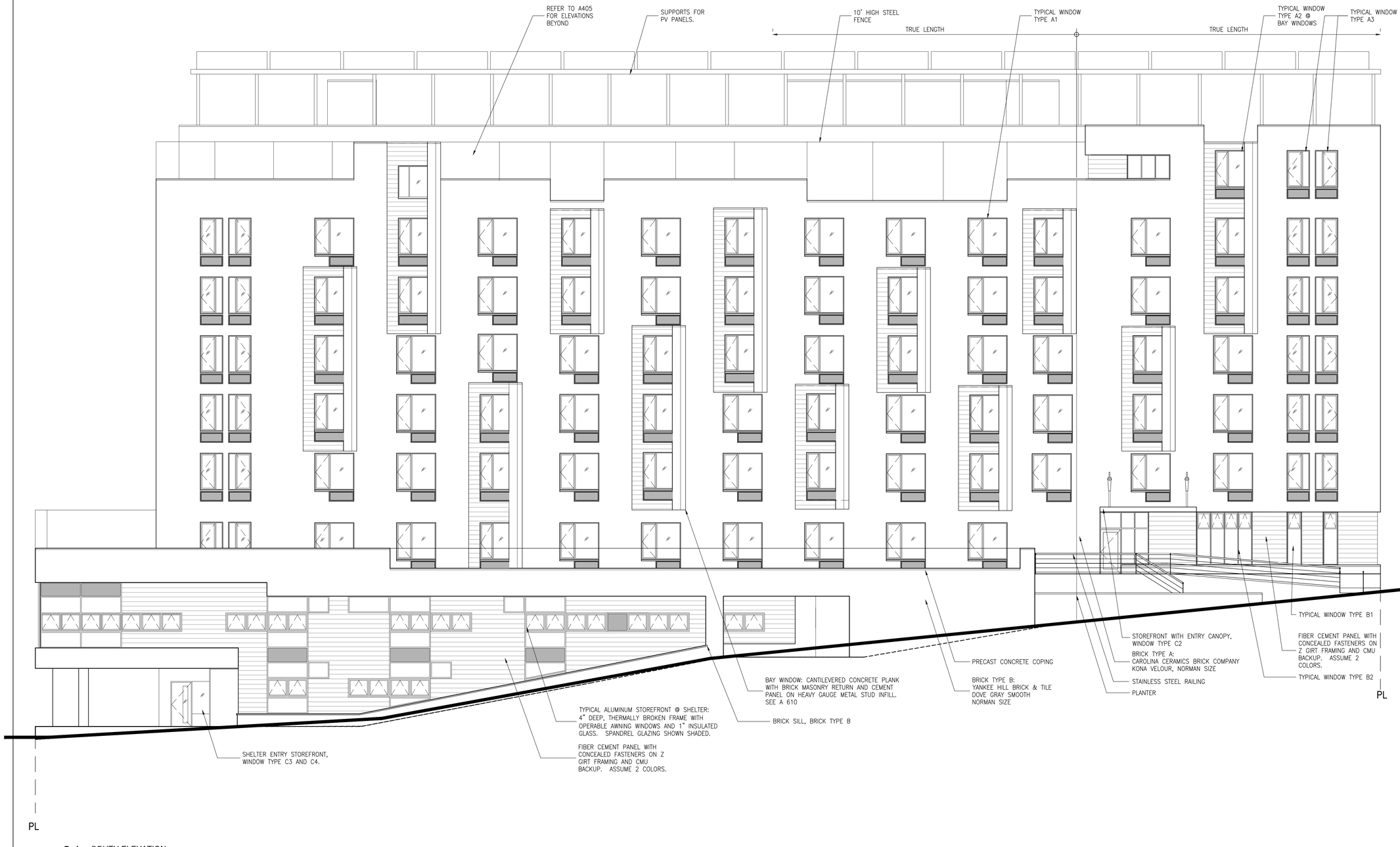
233 Landing Road
Bronx, New York 10468

TITLE:
ROOF PLAN

SEAL:

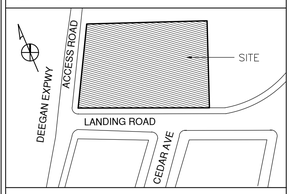
PROJECT NO.: 14008.0
SCALE: 1/8" = 1'-0"
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 21 of 29

DWG. NO.:
A-206.00



01 SOUTH ELEVATION
1/8" = 1'-0"

KEY PLAN



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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bronx, New York 10468

TITLE:
BUILDING ELEVATIONS

SEAL:
STATE OF NEW YORK ANDREW K. KNOX 022218 REGISTERED ARCHITECT

PROJECT NO.: 14008.0
SCALE: 1/8" = 1'-0"
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014

DWG. NO.:
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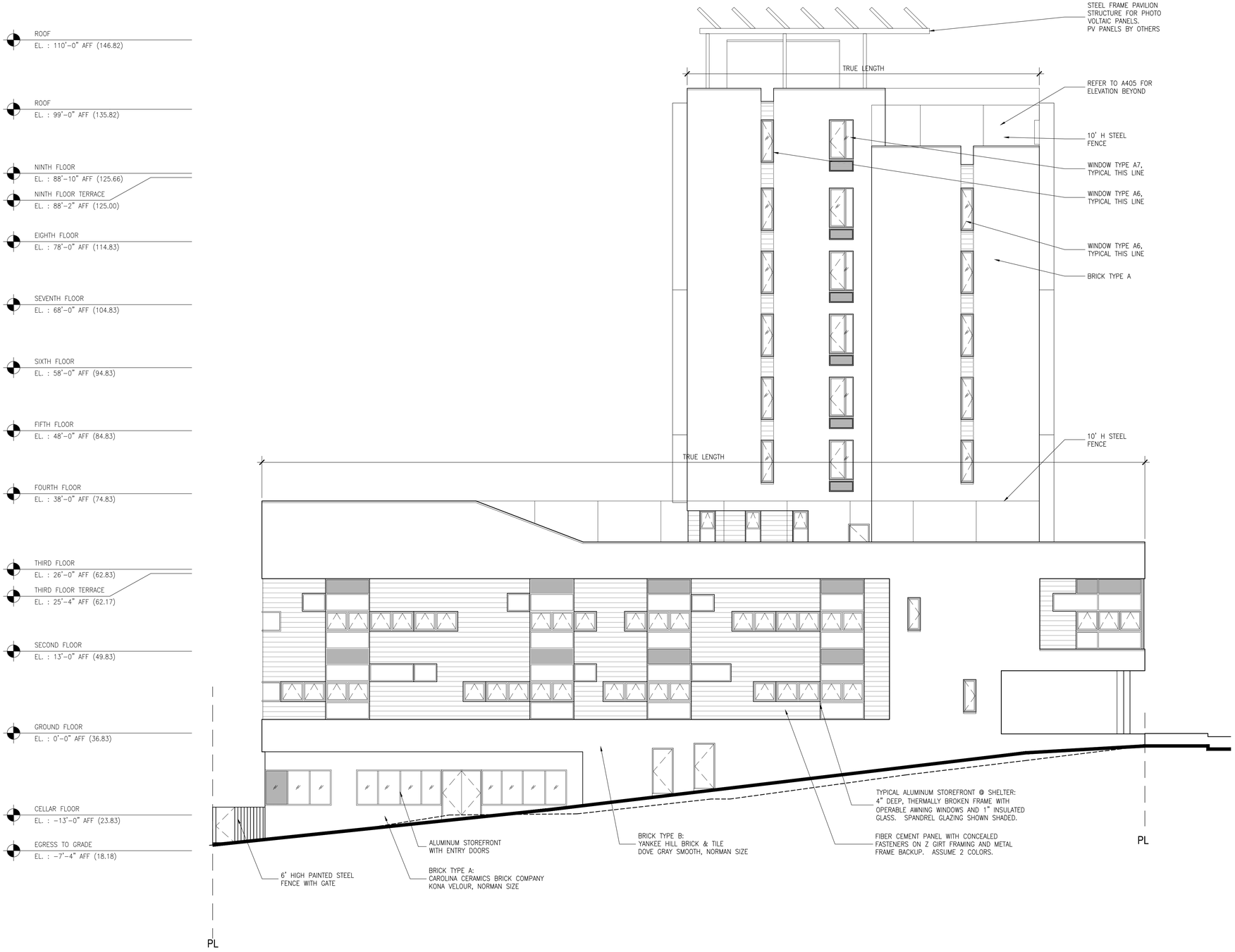
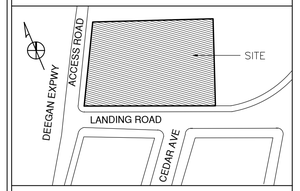


01 WEST ELEVATION
1/8" = 1'-0"

KEY PLAN



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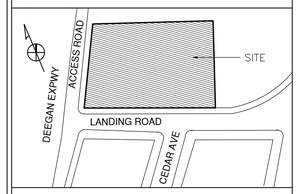
A-402.00

01 NORTH ELEVATION
1/8" = 1'-0"

KEY PLAN



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BY: KM / MR / MVR / MG	CHECK: AK
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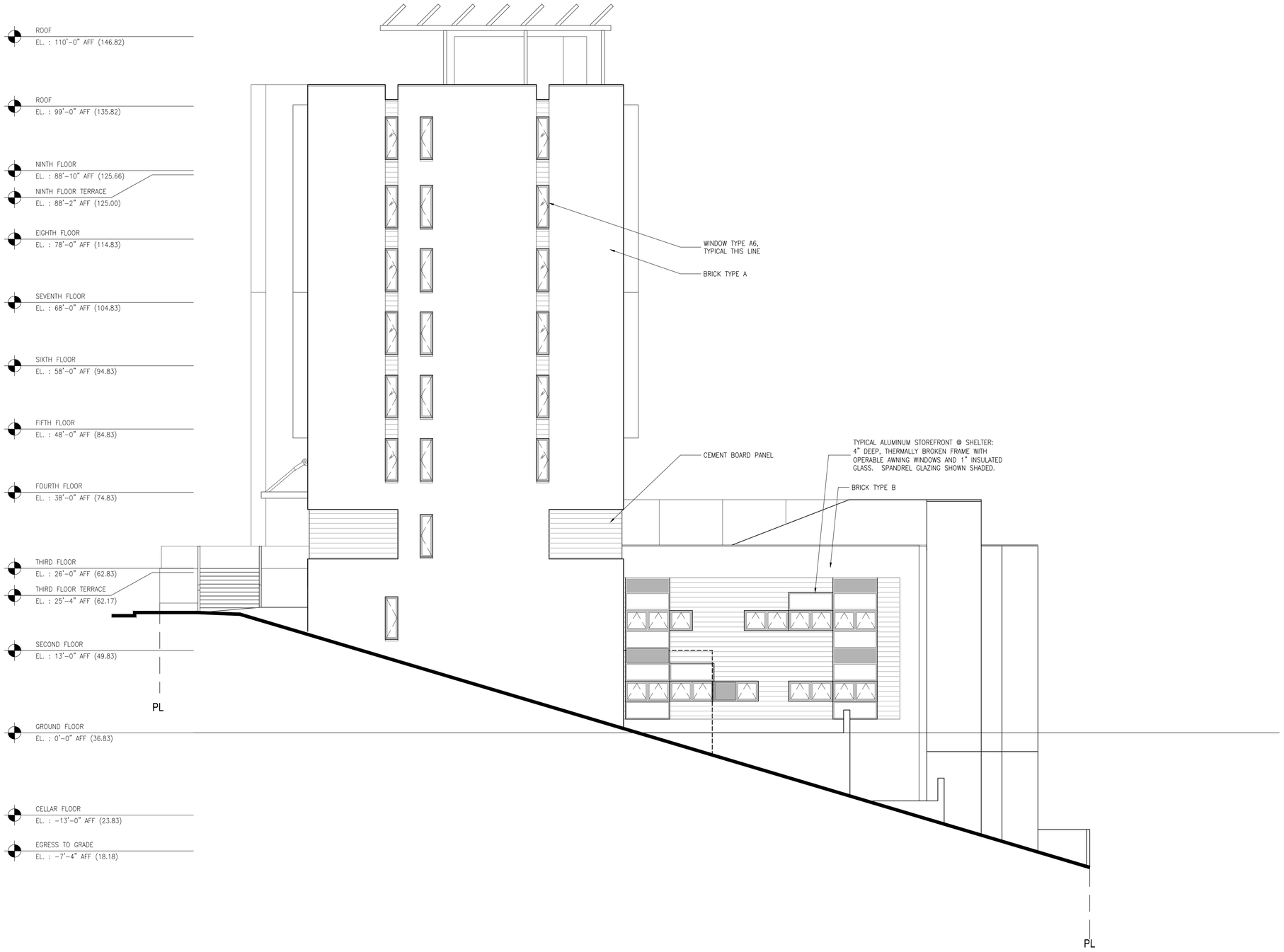
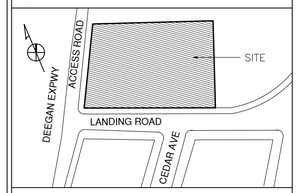
A-403.00



01 EAST ELEVATION
1/8" = 1'-0"

KEY PLAN



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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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233 Landing Road
Bronx, New York 10468

TITLE:
BUILDING ELEVATIONS

SEAL:

PROJECT NO. :	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
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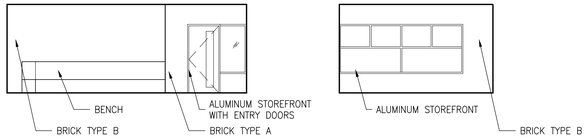
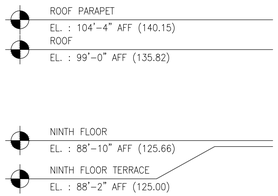
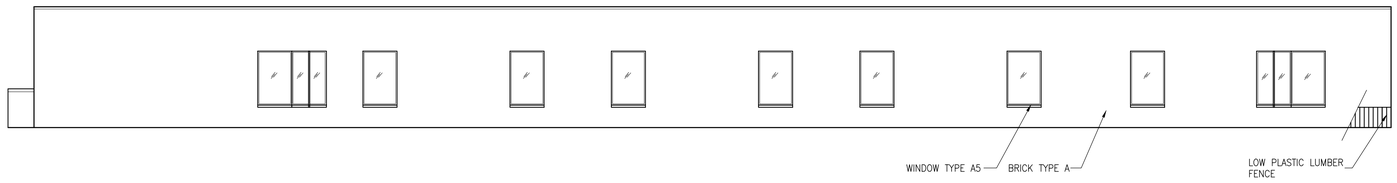


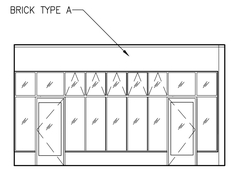
06 PARTIAL ELEVATION
1/8" = 1'-0"

05 PARTIAL ELEVATION
1/8" = 1'-0"

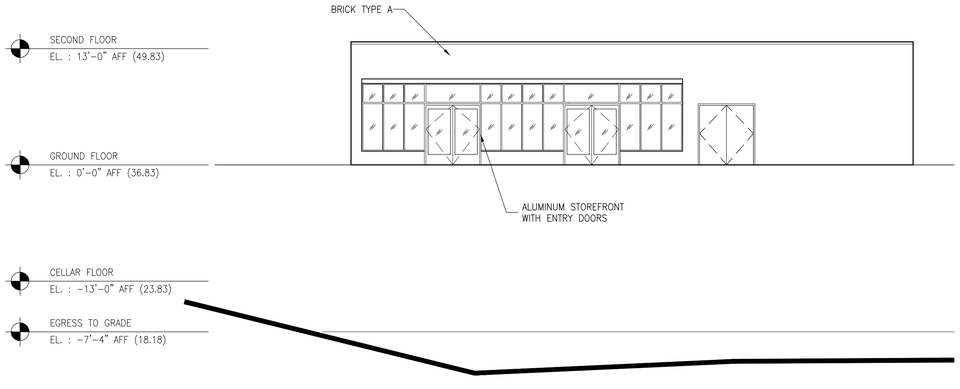




04 PARTIAL ELEVATION
1/8" = 1'-0"



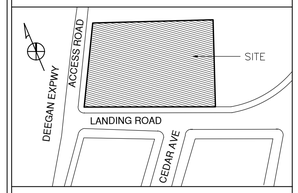
03 PARTIAL ELEVATION
1/8" = 1'-0"



02 PARTIAL ELEVATION
1/8" = 1'-0"

01 PARTIAL ELEVATION
1/8" = 1'-0"

KEY PLAN



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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

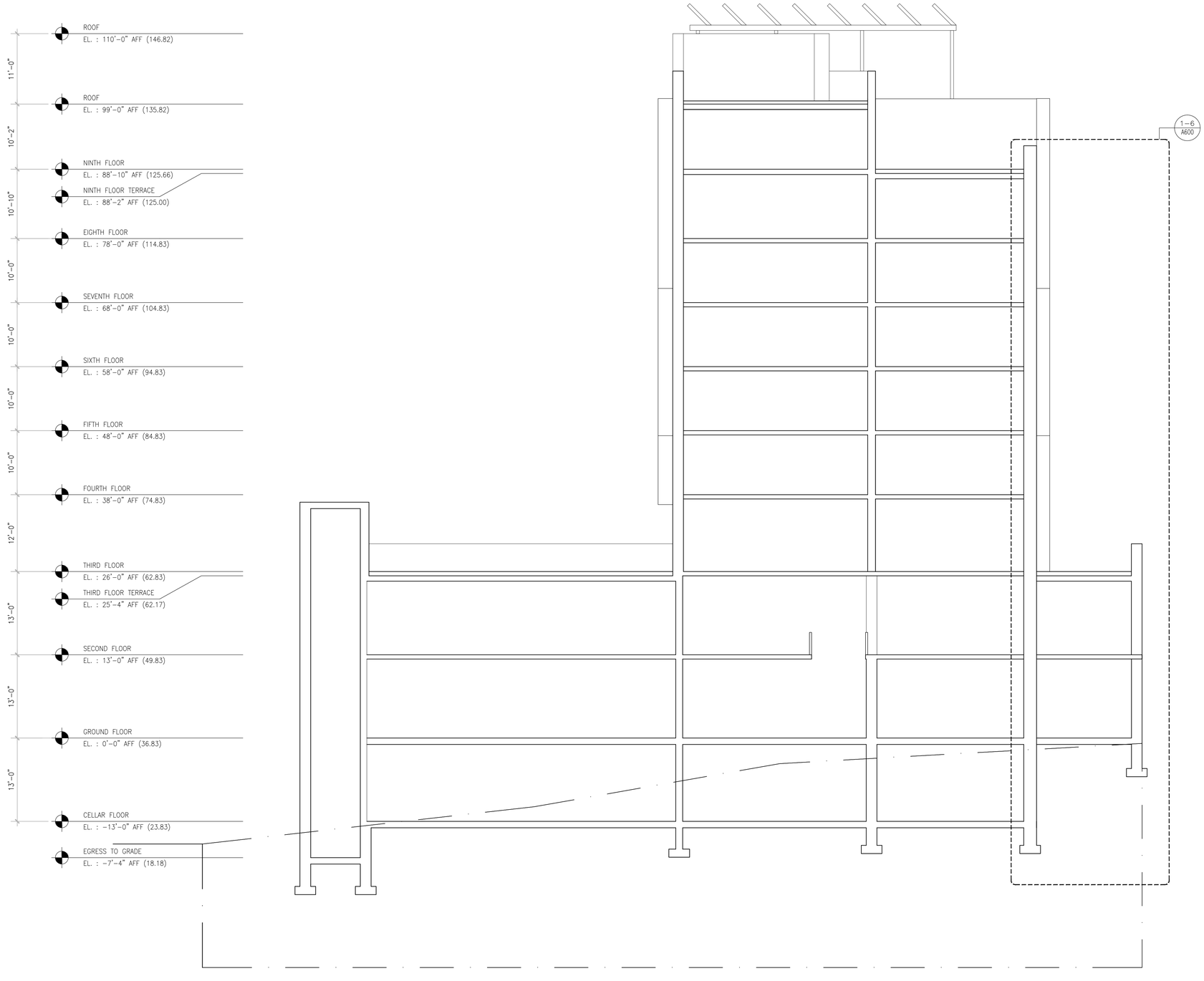
233 Landing Road
Bronx, New York 10468

TITLE:
BUILDING ELEVATIONS
SECONDARY

SEAL:

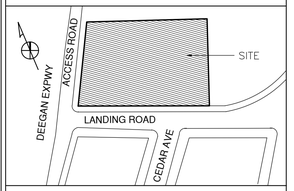
PROJECT NO.: 14008.0
SCALE: 1/8" = 1'-0"
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 26 of 29

DWG. NO.:
A-405.00



01 BUILDING SECTION: NORTH - SOUTH
1/8" = 1'-0"

KEY PLAN



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Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
BUILDING SECTION

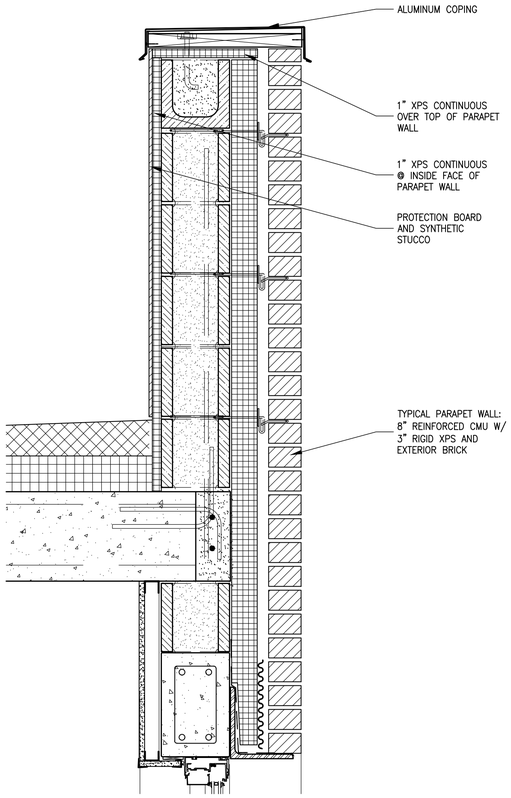
SEAL:

STATE OF NEW YORK
ANDREW K. KNOX
022218
REGISTERED ARCHITECT

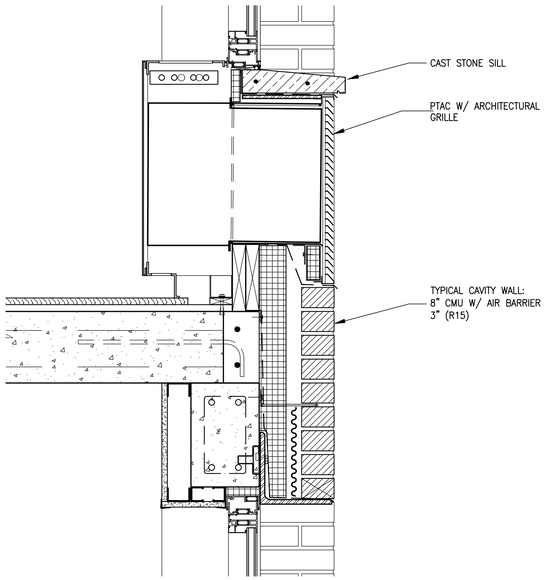
PROJECT NO. :	14008.0
SCALE:	1/8" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	27 of 29

DWG. NO. :

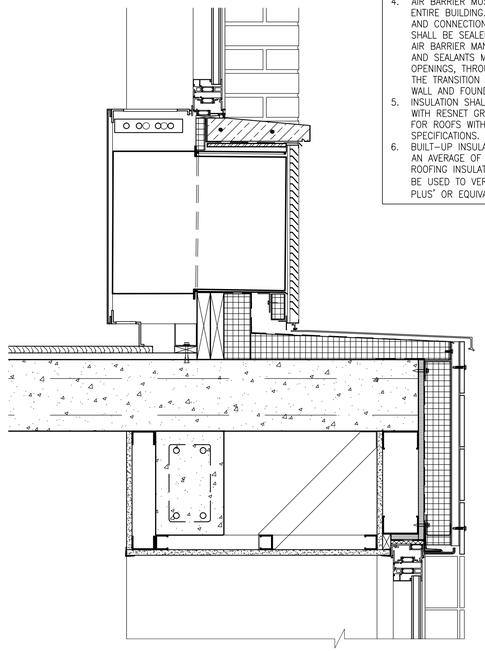
A-410.00



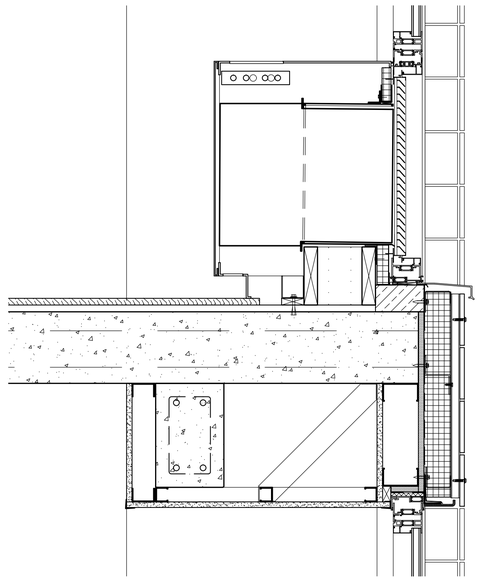
06 TYPICAL WALL SECTION DETAIL
SCALE: 1-1/2"=1'-0"



05 TYPICAL WALL SECTION DETAIL
SCALE: 1-1/2"=1'-0"



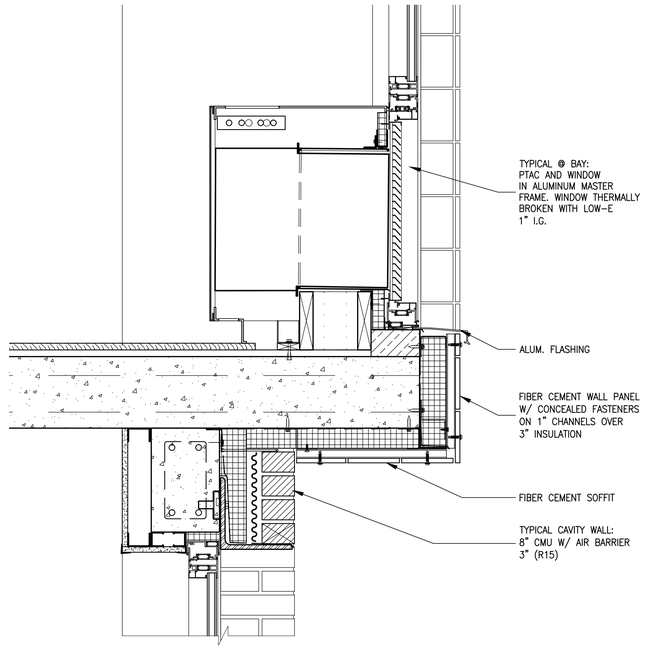
04 TYPICAL WALL SECTION DETAIL
SCALE: 1-1/2"=1'-0"



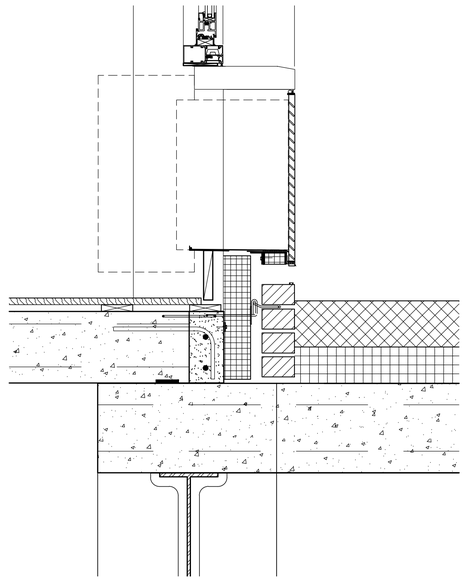
03 TYPICAL WALL SECTION DETAIL
SCALE: 1-1/2"=1'-0"

EXTERIOR DETAIL NOTES

1. SEE ELEVATIONS FOR BRICK PATTERNS. PROJECTIONS, VOIDS, AND RECESSED BRICKS SHOWN ON DETAILS ARE REPRESENTATIVE AND PATTERNS SHALL BE AS SHOWN ON ELEVATION SHEETS.
2. BATT INSULATION MUST BE IN CONTACT WITH THE INTERIOR WALL SURFACE (GWB) AND COMPLETELY FILL THE INTERIOR WALL CAVITY. IT MUST BE INSTALLED PROPERLY USING SPLICES TO SURROUND WIRES, ELECTRICAL BOXES, AND OTHER OBSTRUCTIONS IN THE CAVITY.
3. CONTINUOUS INTERIOR AND/OR EXTERIOR INSULATION IS REQUIRED ABOVE GRADE AS DETAILED AND SHALL BE INSTALLED WITHOUT BREAKS AT ALL LOCATIONS.
4. AIR BARRIER MUST BE CONTINUOUS AROUND THE ENTIRE BUILDING. ALL PENETRATIONS, TRANSITIONS, AND CONNECTIONS BETWEEN DISSIMILAR MATERIALS SHALL BE SEALED IN A MANNER APPROVED BY AIR BARRIER MANUFACTURER. FLASHING MATERIALS AND SEALANTS MUST BE USED AT WINDOW OPENINGS, THROUGH WALL PENETRATIONS, AND THE TRANSITION BETWEEN WALL AND ROOF AND WALL AND FOUNDATION.
5. INSULATION SHALL BE INSTALLED IN COMPLIANCE WITH RESNET GRADE 1 INSTALLATION OR GRADE 2 FOR ROOFS WITH CONTINUOUS INSULATION. SEE SPECIFICATIONS.
6. BUILT-UP INSULATION ON ROOFS SHALL ACHIEVE AN AVERAGE OF R30. CONTRACTOR SHALL SUBMIT ROOFING INSULATION CALCULATIONS WHICH CAN BE USED TO VERIFY EFFECTIVE R-VALUE. "TAPER PLUS" OR EQUIVALENT SOFTWARE SHALL BE USED.



02 TYPICAL WALL SECTION DETAIL
SCALE: 1-1/2"=1'-0"



01 TYPICAL WALL SECTION DETAIL
SCALE: 1-1/2"=1'-0"

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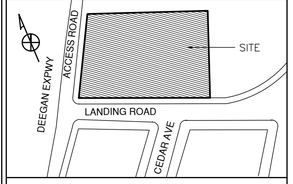

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233 Landing Road
Bronx, New York 10468

TITLE:
WALL SECTION DETAILS

SEAL:

PROJECT NO.: 14008.0
SCALE: 1 1/2" = 1'-0"
BY: KM / MR / MVR / MG
CHECK: AK
DATE: DECEMBER 22, 2014
PAGE: 28 of 29

DWG. NO.:
A-600.00

GENERAL PARTITION NOTES

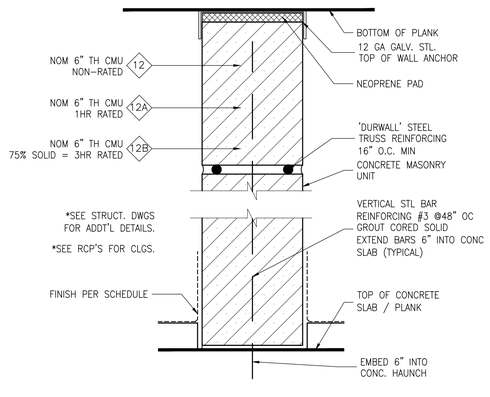
MASONRY PARTITIONS:

1. FOR CMU TYPES, SEE SPECIFICATIONS.
2. FIRE RATINGS SHALL BE IN ACCORDANCE WITH OR EXCEED NYC BUILDING CODE REFERENCE STANDARD RS5-2 AND NATIONAL CONCRETE MASONRY ASSOC. ASTM E-119-61.
3. SOUND TRANSMISSION CLASS (STC) RATINGS SHALL BE IN ACCORDANCE WITH NYC BUILDING CODE REFERENCE STANDARD RS 12-2 AND NATIONAL CONCRETE MASONRY ASSOC. ASTME E-90-61T AND ASTM E-90-66T.

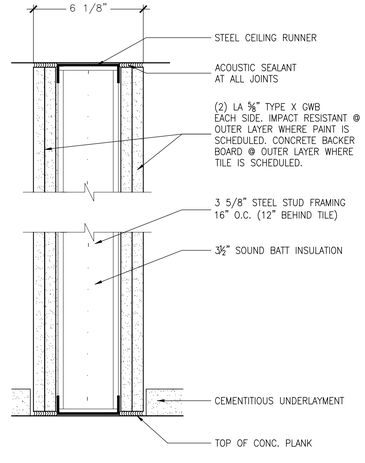
CMU TKNS	FIRE RATING	STC RATING BLOCK ALONE	STC RATING WITH 3/4" FURRING & INSULATION
6"	3 HOURS	46	61

WALL BOARD / METAL FRAMING NOTES:

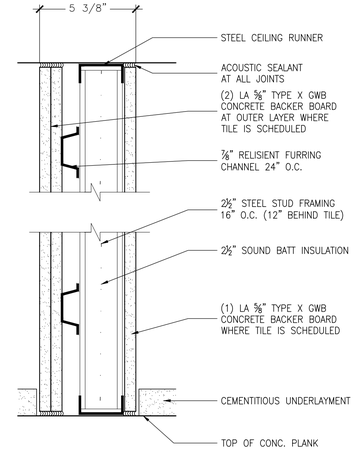
1. FIRE AND STC RATINGS SHALL BE IN ACCORDANCE WITH NYC BUILDING CODE REFERENCE STANDARDS.
2. FOR STUD GAUGES, SEE SPECIFICATION UON
3. FRAMING SHALL BE 16" O.C., 12" O.C. @ TILE OR CABINETRY/MILLWORK
4. MOISTURE/MOLD RESISTANT GWB REQUIRED AT ALL KITCHENS, BATHS, AND PARTITIONS BELOW GRADE.
5. CONCRETE BACKER BOARD IS REQUIRED REQUIRED BEHIND VERTICAL WALL TILE.
6. AT PARTITIONS ON SLAB ON GRADE, PROVIDE BITUMINOUS COATING AT ALL TRACK AND 8"H ON STUDS.
7. WALLS, CEILINGS, AND FLOORS THAT SEPARATE APARTMENTS FROM EACH OTHER AND FROM COMMON SPACES AND CHASES MUST BE AIR SEALED TO FORM A CONTINUOUS AIR BARRIER SURROUNDING THE APARTMENT.
8. THE COMPARTMENTALIZATION AIR BARRIER SHALL BE UNBROKEN. AIR BARRIER MATERIALS SHALL BE SUBMITTED AND APPROVED FOR COMPLIANCE WITH SPECIFICATION.



3 / 3A / 3B — INTERIOR 6" CMU WALL
3" = 1'-0"
0HR / 1HR / 3HR UL DES U904

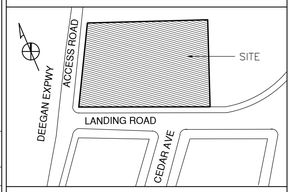


2 — DEMISING PARTITION BETWEEN DORMATORIES
3" = 1'-0"
1HR UL DES U419 STC =51



1 — DEMISING PARTITION BETWEEN APARTMENTS
3" = 1'-0"
1HR UL DES U419 STC =59

KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

PARTITION SCHEDULE AND NOTES

SEAL:

STATE OF NEW YORK · ANDREW M. KNOX · 022218 · REGISTERED ARCHITECT

PROJECT NO.:	14008.0
SCALE:	3" = 1'-0"
BY: KM / MR / MVR / MG	CHECK: AK
DATE:	DECEMBER 22, 2014
PAGE:	29 of 29

DWG. NO.:

A-800.00

LEGEND

INDICATES LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL, 8" NOMINAL THICKNESS, UNIT STRENGTH 1900 PSI MIN. TO BE #6 @ 4'-0" O.C. UNLESS OTHERWISE NOTED ON ELEVATION DRAWINGS

INDICATES "PARTITION" LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL. 6" NOMINAL THICKNESS U.O.N. "PARTITION" WALL VERTICAL REINFORCEMENT TO BE MINIMUM #4 @ 32" O.C., U.O.N. AND f'm TO BE 1,500 PSI

10 — INDICATES 10" STRUCTURAL SLAB ON GRADE, SEE TYPICAL DETAILS

INDICATES WALL BELOW

INDICATES WALL ABOVE

INDICATES STEEL BEAM

BP— — INDICATES STEEL BEAM BEARING PLATE

I/□/O — INDICATES STEEL COLUMN, SEE SCHEDULE FOR SIZE

L— — INDICATES PRECAST CONCRETE LINTEL SIZE AND REINFORCING AS PER DETAILS AND SCHEDULE

INDICATES COLUMN UP/DOWN

PC# — INDICATES PRECAST CONCRETE PLANK, DESIGN BY SUPPLIER, # INDICATES THICKNESS IN INCHES

INDICATES OPENING, PROVIDE REINFORCING WITHIN PLANK AS REQUIRED BY MANUFACTURER

#T — INDICATES CAISSON PILE, # INDICATES AXIAL CAPACITY IN TONS

NOTES:

1. COORDINATE ALL OPENINGS WITH MEP AND ARCH'L. DWGS. FOR EXACT LOCATIONS AND SIZES. DO NOT CUT OR CORE OPENINGS WITHOUT WRITTEN APPROVAL WITH PLANK MANUFACTURER/SUPPLIER.
2. UNDERPINNING IS NOT REQUIRED FOR THIS PROJECT. THERE IS NO EXCAVATION BELOW ADJACENT EXISTING FOUNDATIONS.

RETAINING WALL FOR 10'-0" GRADE DIFFERENCE (OVEREXCAVATE 2'-0" MINIMUM BELOW BOTTOM OF FOOTING, PACK FILL AND PROOF ROLL)

RETAINING WALL FOR 10'-0" GRADE DIFFERENCE (OVEREXCAVATE 2'-0" MINIMUM BELOW BOTTOM OF FOOTING, PACK FILL AND PROOF ROLL)

UNEXCAVATED

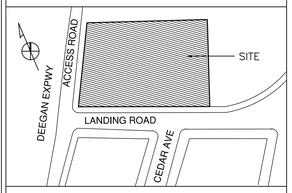
FOUNDATION FRAMING PLAN

SCALE: ⅛"=1'-0"

1 / FO-100

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
FOUNDATION PLAN

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · No. 087018 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
FO-100.00

LEGEND

- INDICATES LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL, 8" NOMINAL THICKNESS, UNIT STRENGTH 1900 PSI MIN U.O.N. ALL CMU REINFORCING TO BE #6 @ 4'-0" O.C. UNLESS OTHERWISE NOTED ON ELEVATION DRAWINGS.
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- INDICATES WALL BELOW
- INDICATES WALL ABOVE
- INDICATES STEEL BEAM
- BP–_ INDICATES STEEL BEAM BEARING PLATE
- I/□/O INDICATES STEEL COLUMN, SEE SCHEDULE FOR SIZE
- L–_ INDICATES PRECAST CONCRETE LINTEL SIZE AND REINFORCING AS PER DETAILS AND SCHEDULE
- INDICATES COLUMN UP/DOWN
- PC# INDICATES PRECAST CONCRETE PLANK, DESIGN BY SUPPLIER, # INDICATES THICKNESS IN INCHES
- INDICATES OPENING, PROVIDE REINFORCING WITHIN PLANK AS REQUIRED BY MANUFACTURER

NOTES:

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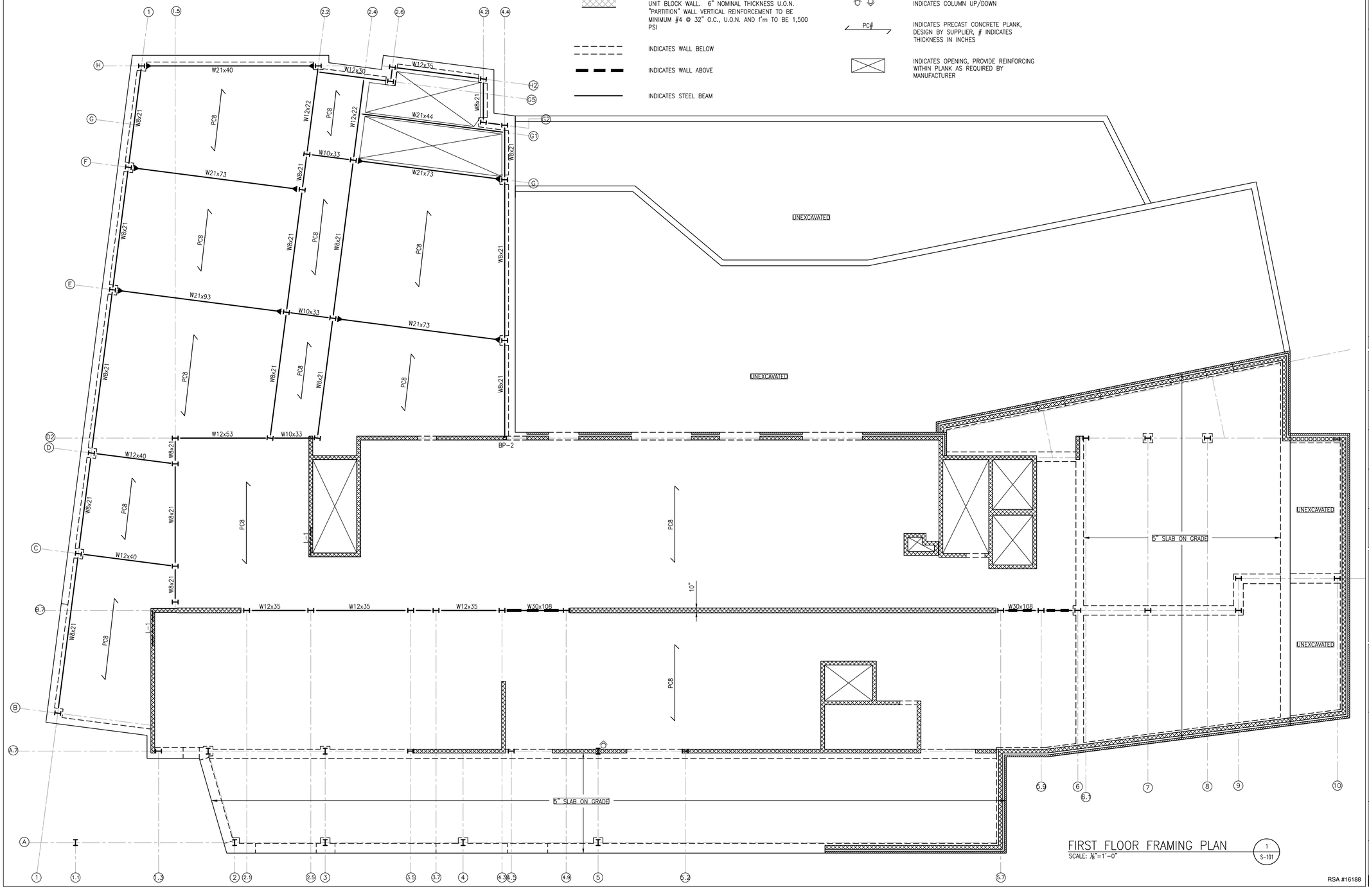
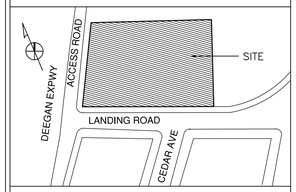


FIRST FLOOR FRAMING PLAN (1 / S-101)
SCALE: 1/8"=1'-0"

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
FIRST FLOOR FRAMING PLAN

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · No. 087016 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
S-101.00

LEGEND

- INDICATES LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL, 8" NOMINAL THICKNESS, UNIT STRENGTH 1900 PSI MIN U.O.N. ALL CMU REINFORCING TO BE #6 @ 4'-0" O.C. UNLESS OTHERWISE NOTED ON ELEVATION DRAWINGS.
- INDICATES CMU WALL WITH BRICK FACADE, 4" NOMINAL BRICK THICKNESS, U.O.N.
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NOTES:

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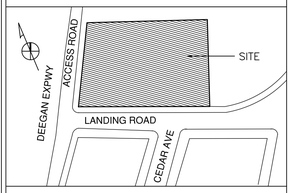
SECOND FLOOR FRAMING PLAN
SCALE: ⅛"=1'–0"

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
SECOND FLOOR FRAMING PLAN

SEAL:
STATE OF NEW YORK · JOSEPH F. TORTORELLA · No. 087018 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
S-102.00

LEGEND

- INDICATES LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL, 8" NOMINAL THICKNESS, UNIT STRENGTH 1900 PSI MIN U.O.N. ALL CMU REINFORCING TO BE #6 @ 4'-0" O.C. UNLESS OTHERWISE NOTED ON ELEVATION DRAWINGS.
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- INDICATES WALL BELOW
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- INDICATES OPENING, PROVIDE REINFORCING WITHIN PLANK AS REQUIRED BY MANUFACTURER

NOTES:

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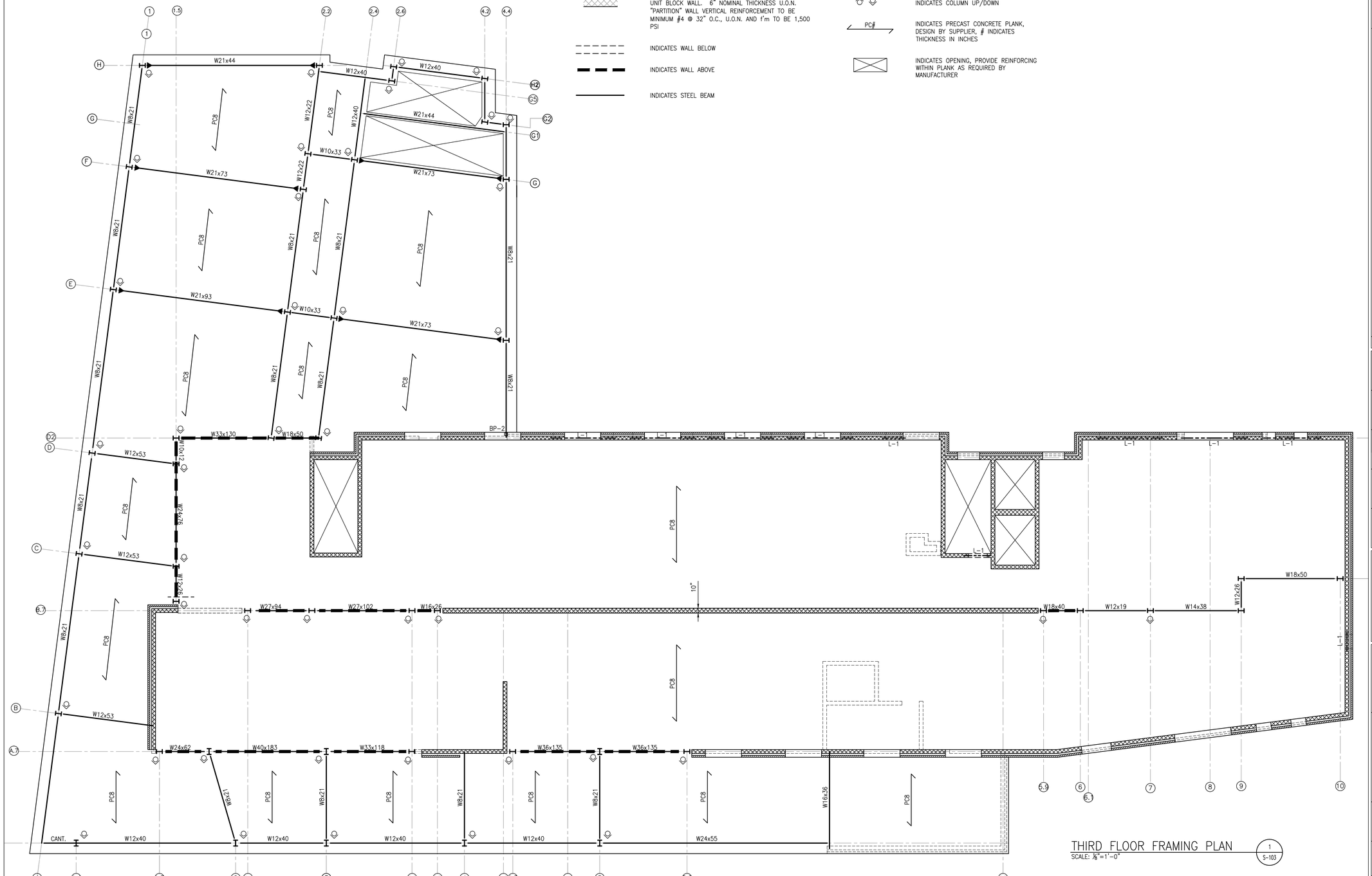
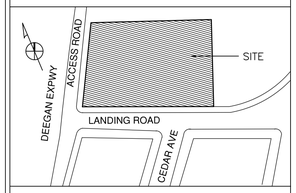


THIRD FLOOR FRAMING PLAN (1 / S-103)
SCALE: 1/8"=1'-0"

RSA #16188

KEY PLAN



11.21.14 DESIGN DEVELOPMENT SUBMISSION
DATE ISSUES / REVISIONS

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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TITLE:
THIRD FLOOR FRAMING PLAN

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · No. 087019 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
S-103.00

LEGEND

- INDICATES LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL, 8" NOMINAL THICKNESS, UNIT STRENGTH 1900 PSI MIN U.O.N. ALL CMU REINFORCING TO BE #6 @ 4'-0" O.C. UNLESS OTHERWISE NOTED ON ELEVATION DRAWINGS.
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NOTES:

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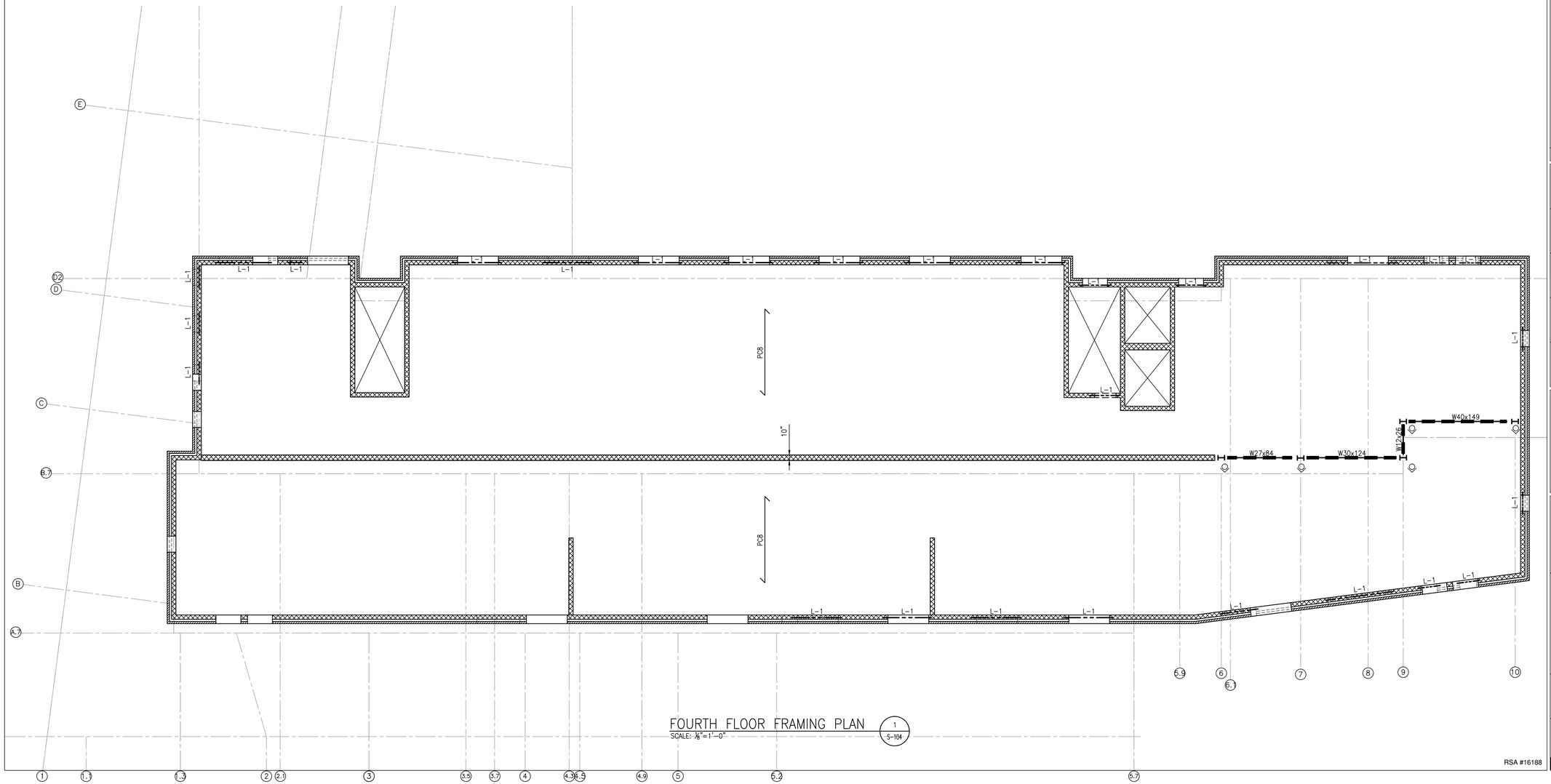
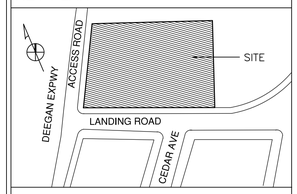


FOURTH FLOOR FRAMING PLAN (1 / S-104)
SCALE: ⅛"=1'-0"

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
FOURTH FLOOR FRAMING PLAN

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · No. 087016 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
S-104.00

LEGEND

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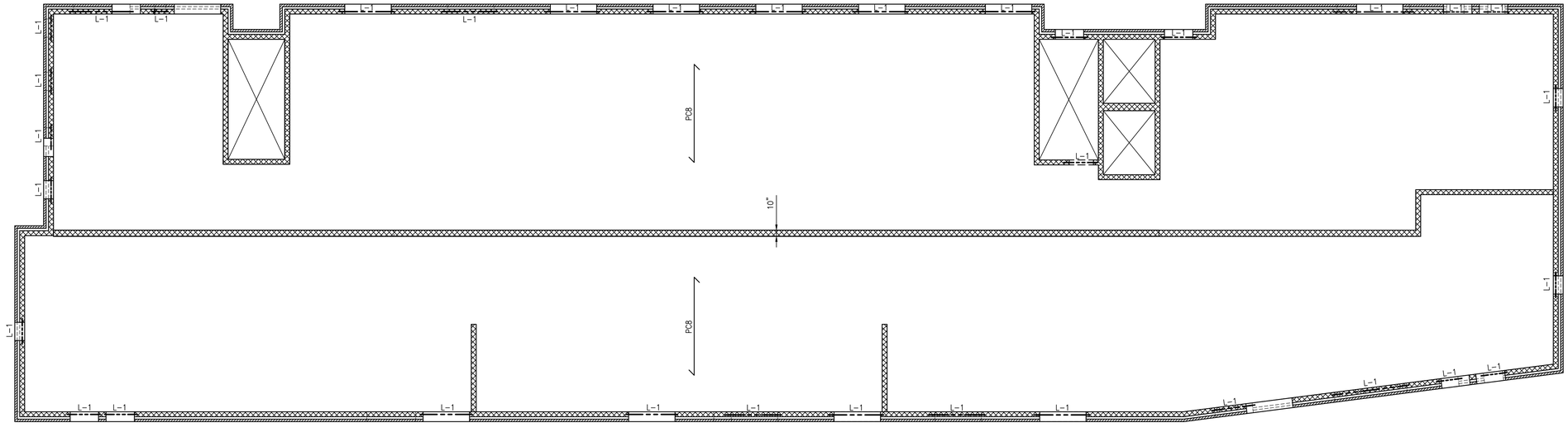
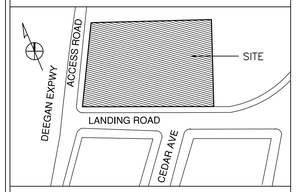


FIFTH THROUGH EIGHT FLOOR FRAMING PLAN (1 / S-105)
SCALE: 1/8"=1'–0"

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
TYPICAL FRAMING PLAN-
FIFTH THROUGH EIGHTH FLOORS

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLI · LICENSED PROFESSIONAL ENGINEER · No. 087018

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

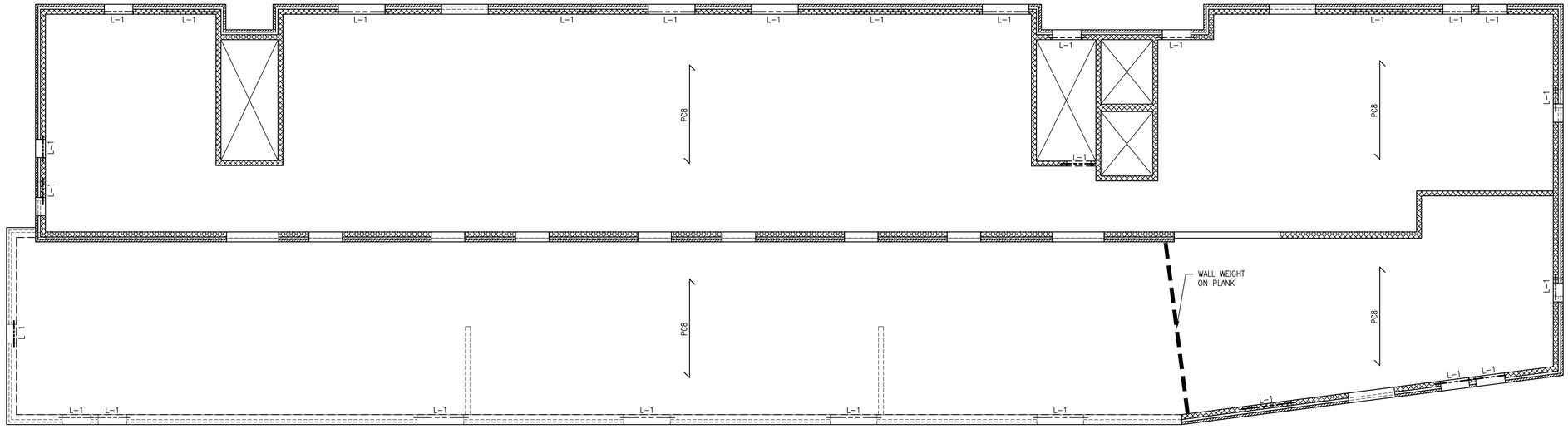
DWG. NO.:
S-105.00

LEGEND

- INDICATES LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL, 8" NOMINAL THICKNESS, UNIT STRENGTH 1900 PSI MIN U.O.N. ALL CMU REINFORCING TO BE #6 @ 4'-0" O.C. UNLESS OTHERWISE NOTED ON ELEVATION DRAWINGS.
- INDICATES CMU WALL WITH BRICK FACADE, 4" NOMINAL BRICK THICKNESS, U.O.N.
- INDICATES "PARTITION" LIGHTWEIGHT CONCRETE MASONRY UNIT BLOCK WALL. 6" NOMINAL THICKNESS U.O.N. "PARTITION" WALL VERTICAL REINFORCEMENT TO BE MINIMUM #4 @ 32" O.C., U.O.N. AND f'm TO BE 1,500 PSI
- INDICATES WALL BELOW
- INDICATES WALL ABOVE
- INDICATES STEEL BEAM
- BP–_ INDICATES STEEL BEAM BEARING PLATE
- I/□/○ INDICATES STEEL COLUMN, SEE SCHEDULE FOR SIZE
- L–_ INDICATES PRECAST CONCRETE LINTEL SIZE AND REINFORCING AS PER DETAILS AND SCHEDULE
- INDICATES COLUMN UP/DOWN
- PC# INDICATES PRECAST CONCRETE PLANK, DESIGN BY SUPPLIER, # INDICATES THICKNESS IN INCHES
- INDICATES OPENING, PROVIDE REINFORCING WITHIN PLANK AS REQUIRED BY MANUFACTURER

NOTES:

1. COORDINATE ALL OPENINGS WITH MEP AND ARCH'L. DWGS. FOR EXACT LOCATIONS AND SIZES. DO NOT CUT OR CORE OPENINGS WITHOUT WRITTEN APPROVAL WITH PLANK MANUFACTURER/SUPPLIER.

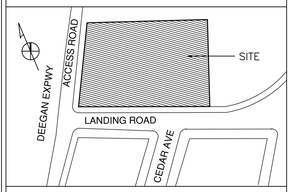


NINTH FLOOR FRAMING PLAN
SCALE: 3/8"=1'-0"

1
S–106

RSA #16188

KEY PLAN



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Bowery Residents' Committee

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Bronx, New York 10468

TITLE:
NINTH FLOOR FRAMING PLAN

SEAL:

STATE OF NEW YORK · JOSEPH F. TORTORELLI · LICENSED PROFESSIONAL ENGINEER · No. 087018

PROJECT NO.:	14008.0
SCALE:	1/8" = 1'-0"
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
S-106.00

LEGEND

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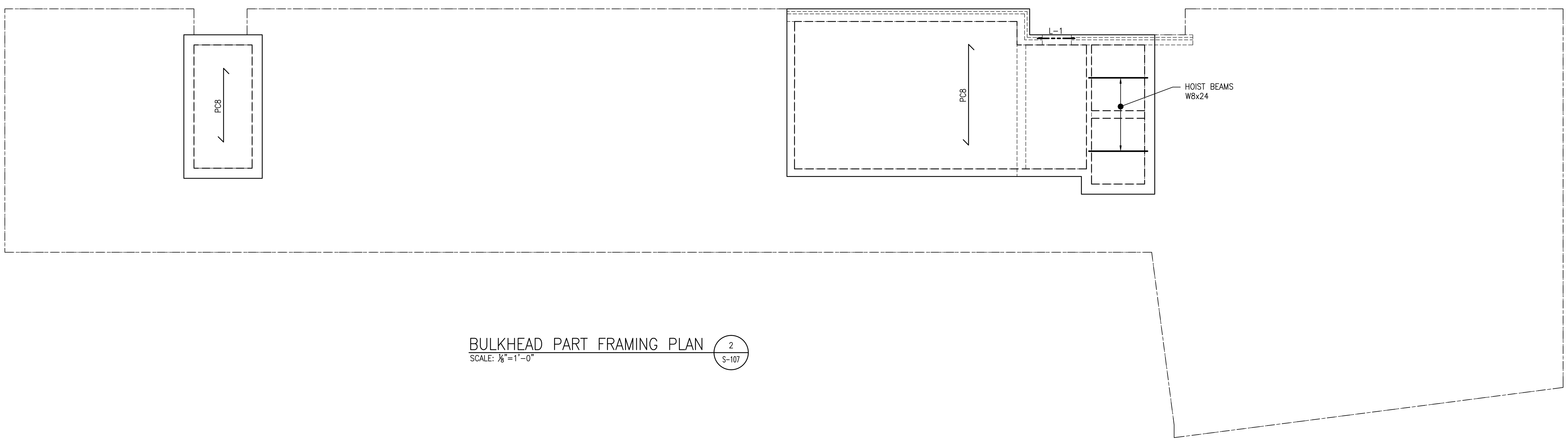
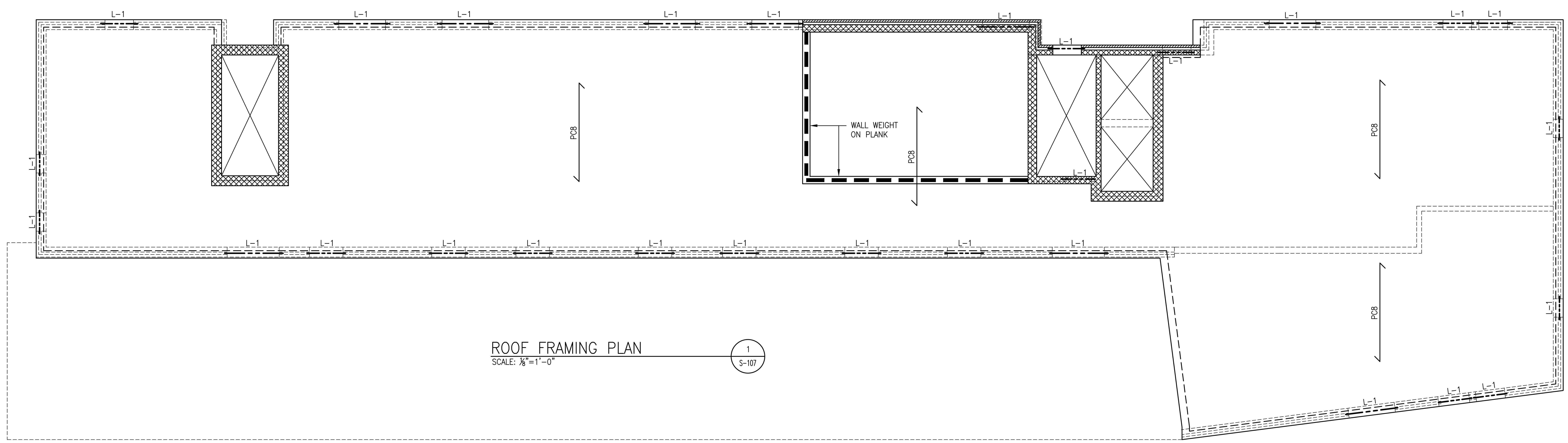


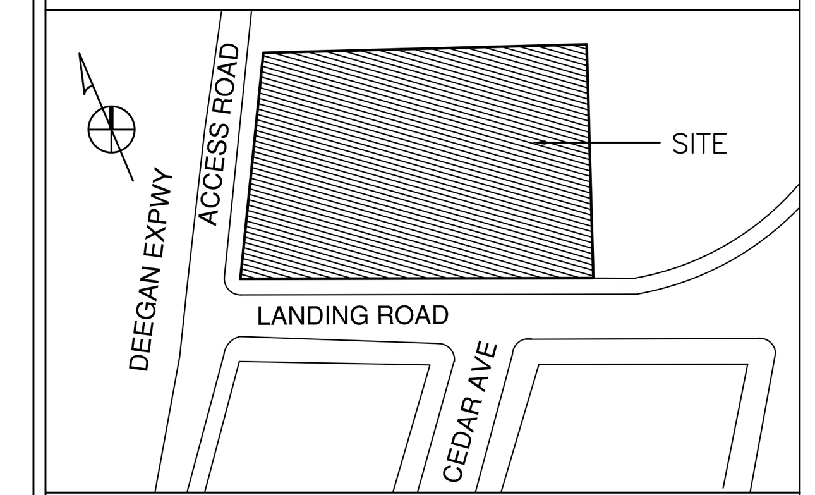
BULKHEAD PART FRAMING PLAN (2 / S-107)
SCALE: 1/8"=1'–0"



ROOF FRAMING PLAN (1 / S-107)
SCALE: 1/8"=1'–0"

RSA #16188

KEY PLAN



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Bowery Residents' Committee

Landing Road

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Bronx, New York 10468

TITLE:
ROOF AND BULKHEAD PART FRAMING PLANS

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · LICENSED PROFESSIONAL ENGINEER · No. 067018

PROJECT NO.: 14008.0	
SCALE: 1/8" = 1'-0"	
BY: KMH	CHECK: ES
DATE: NOVEMBER 21, 2014	
PAGE: of	

DWG. NO.: S-107.00

DESIGN LOAD PARAMETERS

GOVERNING CODE:
NYC BUILDING CODE, 2008
BUILDING CATEGORY:
II
ROOF SNOW LOAD:

25	PSF	P_g GROUND SNOW LOAD
15.75	PSF	P_f FLAT ROOF SNOW LOAD
0.9		C_e SNOW EXPOSURE FACTOR
1.0		I_s SNOW LOAD IMPORTANCE FACTOR
1.0		C_t THERMAL FACTOR

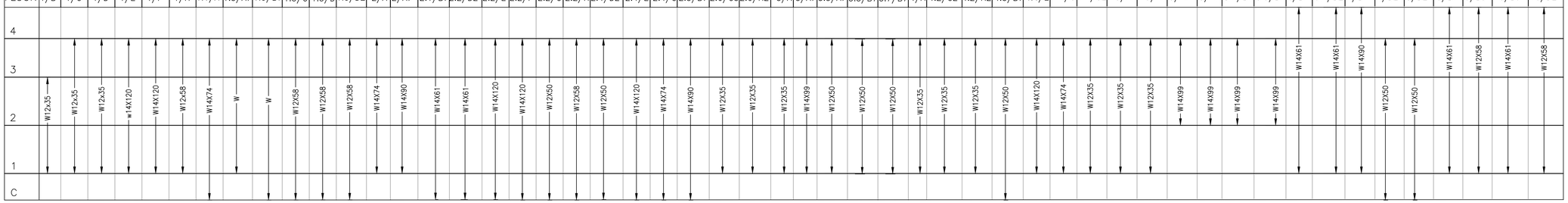
WIND LOAD:

98	MPH	V BASIC WIND SPEED (3-SEC. GUST)
1.0		I_w WIND IMPORTANCE FACTOR
B		WIND EXPOSURE(S)
±0.18		GC_{pi} INTERNAL PRESSURE COEFF.
21	PSF	q_H C&C VELOCITY PRESSURE AT MEAN ROOF HEIGHT

SEISMIC DESIGN DATA (PENDING CONFIRMATION UPON RECEIPT OF GEOTECHNICAL REPORT):

1.0		I SEISMIC IMPORTANCE FACTOR
		OCCUPANCY CATEGORY
0.362	%g	S_S SHORT PERIOD MAPPED SPECTRAL RESPONSE ACCELERATION
0.07	%g	S_1 1 SECOND PERIOD MAPPED SPECTRAL RESPONSE ACCELERATION
D		SITE CLASS
0.367	%g	S_{DS} SHORT PERIOD SPECTRAL RESPONSE COEFF.
0.113	%g	S_{D1} 1 SECOND SPECTRAL RESPONSE COEFF.
C		SEISMIC DESIGN CATEGORY
ORDINARY REINFORCED MASONRY SHEAR WALLS		BASIC SEISMIC-FORCE RESISTING SYSTEM(S)
1025	KIPS	DESIGN BASE SHEAR
0.06		C_S SEISMIC RESPONSE COEFFICIENT
2 1/2		R RESPONSE MODIFICATION FACTOR
EQUIVALENT LATERAL FORCE METHOD		ANALYSIS PROCEDURE

COLUMN SCHEDULE

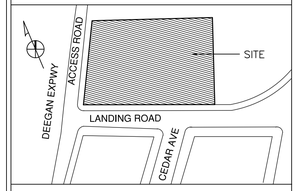


LOADING SCHEDULE

Floor		Cellar Floor				1st Floor					2nd Floor				3rd Floor							4th–8th Floor		9th Floor				Roof		Bulkhead
Loads	psf	MECHANICAL	STORAGE	ASSEMBLY	CORRIDOR	LOBBY	CORRIDOR	ASSEMBLY	OFFICE	RESIDENTIAL	CORRIDOR	OFFICE	ASSEMBLY	RESIDENTIAL	CORRIDOR	MECHANICAL	LAUNDRY	TERRACE	ROOF	OFFICE	RESIDENTIAL	CORRIDOR	RESIDENTIAL	CORRIDOR	RESIDENTIAL	ASSEMBLY	TERRACE	MECH.	ROOF	ROOF
Construction Dead Loads																														
8" Precast Concrete Plank	54	–	–	–	–	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
10" Precast Concrete Plant	67	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5" Slab	62.5	62.5	62.5	62.5	62.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Superimposed Dead Loads																														
Floor Finish	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	–	–	5	5	5	5	5	5	5	5	–	–	–
Ceiling	5	–	–	–	–	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
MEP	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	–	–
Partition	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	–	–	12	12	12	12	12	12	12	12	–	–	–
Roofing/Insulation	25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25	25	–	–	–	–	–	–	–	–	–	25	25
Terrace Pavers	25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25	–	–	–	–	–	–	–	–	25	–	–	–
		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Live Loads																														
Lobby/Corridor/Assembly	100	–	–	100	100	100	100	100	–	–	–	–	100	–	–	–	100	–	–	–	–	–	–	–	–	100	–	–	–	–
Residential	40	–	–	–	–	–	–	–	–	40	40	–	–	40	40	–	–	–	–	–	40	40	40	40	40	–	–	–	–	–
Office	50	–	–	–	–	–	–	–	50	–	–	50	–	–	–	–	–	–	–	50	–	–	–	–	–	–	–	–	–	–
Storage	125	–	125	–	–	–	–	–		–	–		–	–	–	–	–	–	–		–	–	–	–	–	–	–	–	–	–
Mechanical	75	75	–	–	–	–	–	–	–	–	–	–	–	–	–	75	–	–	–	–	–	–	–	–	–	–	–	75	–	75
Terrace	100	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100	–	–	–	–	–	–	–	–	100	–	–	–
Roof – Snow	20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	20	–	–	–	–	–	–	–	20	–	20	20
Total Construction Dead Load		62.5	62.5	62.5	62.5	54	54	54	54	54	54	0	0	54	54	54	0	54	54	54	54	54	54	54	54	54	54	54	54	54
Total Superimposed Dead Load		22	22	22	22	27	27	27	27	27	27	27	27	27	27	27	27	60	35	27	27	27	27	27	27	27	52	10	30	30
Total Live Load		75	125	100	100	100	100	100	50	40	40	50	100	40	40	75	100	120	20	50	40	40	40	40	40	100	120	75	20	95
Total Load		159.5	209.5	184.5	184.5	181	181	181	131	121	121	77	127	121	121	156	127	234	109	131	121	121	121	121	121	181	226	139	104	179

RSA #16188

KEY PLAN



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TITLE:
LOADS AND COLUMN SCHEDULES

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · LICENSED PROFESSIONAL ENGINEER · No. 087016

PROJECT NO.: 14008.0
SCALE: 1/8" = 1'-0"
BY: KMH CHECK: ES
DATE: NOVEMBER 21, 2014
PAGE: of
DWG. NO.:

S-110.00

GENERAL NOTES

1. ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND SHALL CONFORM TO THE PROJECT SPECIFICATIONS, INCLUDING THE NEW YORK CITY BUILDING CODE LATEST EDITION.

2. CONTRACTOR SHALL PERFORM ALL NECESSARY PROTECTIONS INCLUDING BUT NOT LIMITED TO ACCORDANCE WITH NYCBC CHAPTER 33. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING, BRACING, SHEETING AND MAKE SAFE ALL FLOORS, ROOFS, WALLS AND ADJACENT PROPERTY AS PROJECT CONDITIONS REQUIRE. SHORING AND SHEETING SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE PROJECT JURISDICTION HIRED BY THE CONTRACTOR WHO SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR THE OWNER'S REVIEW.

3. CONTRACTOR IS RESPONSIBLE TO PROTECT ADJOINING PROPERTIES PER NYCBC SECTION 3309. EXCAVATIONS SHALL BE PROTECTED PER NYCBC SECTION 3304.7, AND THE CONTRACTOR SHALL FILE A SUPPORT OF EXCAVATION APPLICATION IN ACCORDANCE WITH NYCBC.

4. DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION GIVEN IN STRUCTURAL DRAWINGS ARE BASED ON INFORMATION CONTAINED IN VARIOUS ORIGINAL DESIGN AND CONSTRUCTION DOCUMENTS PROVIDED BY THE OWNER, AND LIMITED FIELD OBSERVATIONS AND MEASUREMENTS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PERTAINING TO EXISTING CONDITIONS BY ACTUAL MEASUREMENT AND OBSERVATION AT THE SITE. ALL DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN IN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER OF RECORD FOR HIS EVALUATION BEFORE THE AFFECTED CONSTRUCTION IS PUT IN PLACE.

5. THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. THESE NOTES HIGHLIGHT RATHER THAN REPLACE THE SPECIFICATIONS CONTAINED IN THE PROJECT MANUAL. PLEASE NOTIFY THE ENGINEER OF ANY CONFLICTS. REFER TO THE SPECIFICATION FOR WORK NOT SHOWN ON THE DRAWINGS.

FOUNDATIONS

1. BUILDING FOUNDATIONS SHALL BEAR ON CAISSONS AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, GEOTECH CONSULTANTS.

2. DO NOT PLACE BACKFILL AGAINST BASEMENT WALLS UNTIL ALL FLOORS BRACING THESE WALLS ARE IN PLACE AND HAVE ATTANED THEIR 28 DAY STRENGTH.

3. ALL EXTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 4'-0" BELOW FINAL GRADE.

4. CONCRETE SHALL BE POURED IN DRY EXCAVATIONS. CONTRACTOR SHALL NOTE SOIL AND WATER CONDITIONS AS SHOWN BY BORINGS AND DEPTHS OF FOOTING AS SHOWN ON FOUNDATION PLANS.

5. UNDERPINNING IS NOT REQUIRED FOR THIS PROJECT. THERE IS NO EXCAVATION BELOW ADJACENT EXISTING FOUNDATIONS.

CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE ACI FOLLOWING GOVERNING STANDARDS.
   A. AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318), LATEST EDITION.
   B. ACI "MANUAL OF CONCRETE PRACTICE" LATEST EDITION
   C. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE" LATEST EDITION

2. ALL CONCRETE COMPOSITE ON METAL DECK SHALL BE LIGHT WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.

3. ALL OTHER CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.

4. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 OR A775 EPOXY COATED WHEN CALLED OUT ON PLAN. REINFORCING STEEL SHALL BE DETAILED ACCORDING TO THE ACI "DETAILS AND DETAILING OF REINFORCEMENT", (ACI 315), LATEST EDITION.

5. WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185, WITH A MINIMUM YIELD STRENGTH OF 65,000 PSI.

6. PROVIDE MINIMUM SHRINKAGE AND TEMPERATURE REINFORCEMENT, AS REQUIRED BY ACI 318, IN ALL SLABS AND WALLS WHERE REINFORCEMENT IS NOT INDICATED ON DRAWINGS.

7. COORDINATE SIZE AND LOCATION OF ALL OPENINGS AND PIPE SLEEVES WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. MINIMUM CONCRETE BETWEEN SLEEVES SHALL BE 6".

8. ALL GROUT SHALL BE NONSHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI.

9. PROVIDE CLEARANCE FROM FACE OF CONCRETE TO REINFORCEMENT AS FOLLOWS:
   SLABS" ¾"
   BEAMS, COLUMNS: 1 ½"
   FOOTINGS: 3"
   EXTERIOR WALLS: 2" FOR #6 OR LARGER, 1 ½" FOR #5 OF SMALLER
   INTERIOR WALLS: ¾"

10. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. NO CONCRETE WORK SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS.

11. CLEAN AND ROUGHEN TO ¼" AMPLITUDE ALL EXISTING CONCRETE SURFACES TO RECEIVE NEW CONCRETE PRIOR TO PLACEMENT.

12. SEE OTHER DRAWINGS IN THIS PROJECT FOR SIZE AND LOCATIONS OF EQUIPMENT PADS, INSERT AND EMBED ITEMS.

13. REINFORCING DOWELS, WATERSTOPS AND OTHER EMBED ITEMS SHALL BE INSTALLED AND SECURED PRIOR TO CONCRETE PLACEMENT. "WET-SETTING" OF EMBEDDED ITEMS IS NOT PERMITTED.

14. WELDED WIRE FABRIC REINFORCEMENT IN COMPOSITE CONSTRUCTION SHALL HAVE TENSION SPLICES AND BE ANCHORED AT DISCONTINUOUS EDGES.

CONCRETE BLOCK

1. ALL CONCRETE BLOCK WORK SHALL CONFORM TO THE "NATIONAL CONCRETE MASONRY ASSOCIATION SPECIFICATIONS," LATEST EDITION AND "ACI 530-BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", LATEST EDITION.

2. CONCRETE BLOCK SHALL BE OF LIGHTWEIGHT AGGREGATE AND CONFORM TO THE FOLLOWING STANDARDS: SOLID/HOLLOW BLOCK: ASTM C90, GRADE N1.

NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNIT, PSI	NET AREA COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY, F'm, PSI USING TYPE S MORTAR
1900	1500
2800	2000
3750	2500
4800	3000

   UNLESS OTHERWISE NOTED ON PLANS AND/ OR ELEVATIONS, CONCRETE BLOCK UNIT STRENGTH SHALL BE 1900 PSI MIN. NOTE: CONCRETE BLOCK WITH UNIT STRENGTH HIGHER THAN 1900 PSI REQUIRE LONGER DELIVERY LEAD TIMES.

3. ALL MORTAR SHALL BE ASTM C270, TYPE S.

4. ALL GROUT FOR FILLING CELLS SHALL BE ASTM C 476 WITH MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI BUT NOT LESS THAN THE COMPRESSIVE STRENGTH OF THE MASONRY ASSEMBLY, F'M". WHERE GROUT CELLS DO NOT EXCEED 4" IN DIAMETER FINE GROUT SHALL BE USED.

5. ALL BLOCK DIMENSIONS INDICATED ON STRUCTURAL PLANS ARE NOMINAL DIMENSIONS.

6. ALL CONCRETE BLOCK BELOW GRADE SHALL BE FILLED SOLID WITH GROUT.

7. CONCRETE BLOCK BELOW BEAM OR TRUSS BEARING POINTS SHALL BE FILLED SOLID FOR A MINIMUM OF TWO COURSES IN DEPTH AND A MINIMUM OF 32" IN WIDTH, U.O.N.

8. INSTALL STANDARD WEIGHT LADDER JOINT REINFORCEMENT AT 16" O/C (SPACED VERTICALLY).

9. UNLESS NOTED OTHERWISE ALL MASONRY WALLS SHALL BE REINFORCED WITH #4@48" O/C VERTICAL. GROUT ALL REINFORCED CELLS SOLID. PROVIDE DOWELS TO MATCH VERTICAL REINFORCING AT FOUNDATION.

PRECAST CONCRETE PLANK

1. ALL PRECAST CONCRETE PLANK WORK SHALL CONFORM TO THE "PRESTRESSED CONCRETE INSTITUTE SPECIFICATION", LATEST EDITION.

2. PRECAST CONCRETE PLANK MANUFACTURER SHALL RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER (LICENSED IN THE PROJECT JURISDICTION) WHO SHALL CERTIFY TO THE ARCHITECT AND ENGINEER AND ASSUME RESPONSIBILITY AS FOLLOWS:
   A. THE DESIGN OF THE PLANKS IS SAFE FOR THE LOADS SPECIFIED IN THE LOADING SCHEDULE.
   B. THE STRENGTH OF THE CONCRETE IS AS CALLED FOR IN THE DESIGN SUBMITTED.
   C. THE PLANK WAS FABRICATED IN ACCORDANCE WITH THE DESIGN PRACTICE.
   D. THE PLANK WAS ERECTED IN ACCORDANCE WITH THE DESIGN AS WELL AS ACCEPTABLE STANDARDS OF CONCRETE AND ENGINEER PRACTICE.
   E. FILE "STATEMENTS B" WITH THE LOCAL DEPARTMENT OF BUILDING FOR PLANK WORK.

3. PRECAST CONCRETE PLANK MANUFACTURER SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.

4. ALL OPENINGS IN THE PLANK MUST BE SHOP DETAILED FIRST. PLANK PARALLEL AND ADJACENT TO THE OUTSIDE WALL SHALL BE FULL WIDTH.

5. GROUTING OF PLANK KEYS AND UNDER BEARING WALL ABOVE SHALL BE NON SHRINK, NONMETALLIC GROUT 3,000 PSI AT 28 DAYS. GROUT BEFORE BEARING WALLS ABOVE ARE STARTED.

6. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE USED FOR CONCRETE PLANK SHALL BE 5,000 PSI AT 28 DAYS AND MADE AND TESTED AS PER ASTM C31 AND C39. INSPECTION AND CONCRETE REPORTS SHALL BE FILED WITH THE LOCAL DEPARTMENT OF BUILDINGS.

7. TESTING AND PRODUCT VERIFICATION SHALL BE AVAILABLE FOR DISTRIBUTION.

8. OPENINGS AND INSERTS IN PLANK REQUIRED BY FIELD CONDITIONS SHALL BE APPROVED BY PLANK MANUFACTURER.

9. ALL BEARING PADS TO BE KOROLATH. MASONITE BEARING PADS SHALL NOT BE USED.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING GOVERNING STANDARDS:
   A. AISC "STEEL CONSTRUCTION MANUAL" THIRTEENTH EDITION AND THE BUILDING CODE OF THE CITY OF NEW YORK 2008.
   B. THE AMERICAN WELDING SOCIETY (AWS D1.1) "CODE FOR WELDING IN BUILDING CONSTRUCTION," LATEST EDITION.

2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
   A. WIDE FLANGE BEAMS, COLUMNS AND STRUCTURAL TEES: ASTM A992
   B. HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE B
   C. STRUCTURAL PIPE SECTIONS: ASTM A53, GRADE B.
   D. CHANNELS, ANGLES AND PLATES: ASTM A36 UNLESS OTHERWISE NOTED.
   E. BOLTED CONNECTIONS OF BEAMS/GIRDERS ARE TO BE DESIGNED AS FOLLOWS:
      a. STANDARD BEAM TO BEAM/GIRDER: A325 OR A490 BEARING TYPE BOLTS (¾" DIAMETER MINIMUM WITH HARDENED WASHERS).
      b. BEAM/GIRDER TO COLUMN CONNECTIONS: A325-SC OR A490-SC TYPE BOLTS (¾" DIAMETER MINIMUM WITH HARDENED WASHERS).
   F. ANCHOR BOLTS: ASTM F1554, GRADE 36.
   G. STRUCTURAL STEEL NOTED TO BE STAINLESS STEEL SHALL BE ASTM A276 STAINLESS STEEL GRADE 304.

3. STEEL CONNECTION SHALL BE STANDARD AISC FRAMED BEAM CONNECTIONS, AND SHALL BE DESIGNED BY A LICENSED ENGINEER WORKING FOR THE FABRICATOR, WHO SHALL PROVIDE CALCULATIONS, UTILIZING ASD OR LRFD LOADS AND PROCEDURES.
   A. FOR NON-COMPOSITE MEMBERS. PROVIDE CONNECTIONS BASED ON REACTION AS DETERMINED FROM AISC UNIFORM LOAD TABLE. (UNLESS OTHERWISE NOTED ON PLANS.)
   B. FOR COMPOSITE MEMBERS. PROVIDE CONNECTIONS BASED ON 1.5 x REACTION FROM AISC UNIFORM LOAD TABLE. (UNLESS OTHERWISE NOTED ON PLANS.)
   C. REINFORCING IS TO BE PROVIDED AT CONNECTIONS WHERE CUTS REDUCE THE SHEAR OR MOMENT CAPACITY BELOW THAT REQUIRED TO SUSTAIN THE REACTION. FLANGES AND WEB ARE TO BE REINFORCED WHERE THE LOCAL CAPACITY TO SUSTAIN CONNECTION LOAD IS INADEQUATE.
   D. CONNECTIONS SHALL BE DESIGNED FOR SHEAR AND ECCENTRICITY, CONSIDERING THAT THE CONNECTION IS AN EXTENSION OF THE BEAM AND GIRDERS.

4. MINIMUM WELD SIZE IS ¼" FILLET UNLESS NOTED OTHERWISE.

5. ALL BEAMS EXCEPT CANTILEVER BEAMS SHALL BE FABRICATED AND INSTALLED WITH NATURAL CAMBER UP. CANTILEVER BEAMS SHALL BE FABRICATED AND INSTALLED SO THAT NATURAL CAMBER RAISES CANTILEVER END.

6. FIELD CUTTING OR BURNING OF STEEL IS PROHIBITED EXCEPT WITH THE EXPRESSED WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

7. WELDING SHALL BE PERFORMED BY CERTIFIED LICENSED, AWS-QUALIFIED WELDERS. ELECTRODES SHALL BE AWS 5.1, CLASS E70XX (USE LOW HYDROGEN ELECTRODES FOR A572, GRADE 50 STEEL). WELDING ELECTRODES FOR ASTM A276-97 STAINLESS STEEL, GRADE 304, SHALL CONFORM TO AWS A5.4 FOR SHIELDED METAL ARC WELDING, ELECTRODE CLASS E304; OR AWS A5.9 FOR GAS METAL ARC WELDING, ELECTRODE CLASS ER304, Ft=70 ksi.

8. SHOP PAINT EXTERIOR EXPOSED STEEL MEMBERS, STEEL MEMBERS NOT ENCASED IN CONCRETE OR SPRAY FIREPROOFED, AND ALL STEEL MEMBERS AT THE EXTERIOR WALL WITH TNEMEC #10-69. FIELD PAINT ALL EXTERIOR EXPOSED MEMBERS WITH TNEMEC 530 OMNITHANE OR APPROVED EQUAL.

9. LINTELS SHALL BE INSTALLED OVER ALL OPENINGS IN MASONRY WALLS AS FOLLOWS:

MASONRY OPENING	LINTEL
4'-0" OR LESS	L 4" x 3 ½" x 5/16" L.L.V.
4'-1" TO 7'-0"	L 6" x 3 ½" x 5/16" L.L.V.

   A. 3 1/2" LEGS ARE HORIZONTAL.
   B. PROVIDE ONE ANGLE FOR EACH 4" OF WALL THICKNESS.
   C. PROVIDE L 5" x 5" x 5/16" ANGLES FOR 6" THICK WALLS AND PARTITIONS WITH OPENINGS UP TO 6'-0".
   D. PROVIDE MINIMUM 6" BEARING AT EACH END.
   E. LINTELS OVER 4'-0" SHALL BE FIREPROOFED.

10. SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. NO FABRICATION OF STEEL SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS.

11. PROVIDE MECHANICALLY GALVANIZED BOLTS FOR EXTERIOR APPLICATIONS.

12. ALL STEEL CONNECTIONS MUST MEET THE REQUIREMENTS OF SECTION 2213 OF THE NYC BUILDING CODE.

POST INSTALLED ADHESIVE AND MECHANICAL ANCHORS

1. POST INSTALLED ANCHORAGE SHALL BE INSTALLED PER MANUFACTURER TECHNICAL DATA TO INTACT BASE MATERIAL. NOTIFY ENGINEER OF RECORD PRIOR TO INSTALLATION IF BASE MATERIAL CONDITION DEVIATES FROM STRUCTURAL DRAWINGS OR MANUFACTURER TECHNICAL DATA.

2. MANUFACTURER DATA FOR ALTERNATE ANCHORAGE PROPOSED BY CONTRACTOR SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW AND APPROVAL. SUBMITTAL SHALL INCLUDE THE ICC EVALUATION SERVICE REPORT WITH ICC TESTED CAPACITY MEETING OR EXCEEDING CAPACITY OF ANCHORAGE SPECIFIED IN CONTRACT DOCUMENTS.

3. UNLESS OTHERWISE INDICATED, POST INSTALLED ANCHORAGE SHALL BE ADHESIVE TYPE HILTI HIT-HY150 MAX INTO CONCRETE OR STONE BASE MATERIAL OR HILTI-HIT HY70 INTO BRICK MASONRY BASE MATERIAL.

SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS REQUIRED BY THE LOCAL JURISDICTION SHALL BE PERFORMED BY A TESTING AGENCY PROVIDED BY THE OWNER FOR THE FOLLOWING ITEMS:
   A. STRUCTURAL STEEL - WELDING (BC 1704.3.1)
   B. STRUCTURAL STEEL - ERECTION AND BOLTING (BC 1704.3.2, 1704.3.3)
   C. CONCRETE - CAST-IN-PLACE (BC 1704.4)
   D. CONCRETE - PRECAST (BC 1704.4)
   E. CONCRETE - PRESTRESSED (BC 1704.4)
   F. MASONRY (BC 1704.5)
   G. SOILS - SITE PREPARATION (BC 1704.7.1)
   H. SOILS - FILL PLACEMENT & IN-PLACE DENSITY (BC 1704.7.2, 1704.7.3)
   I. SOILS - INVESTIGATIONS (BORINGS/TEST PITS) (BC 1704.7.4)
   J. STRUCTURAL SAFETY - STRUCTURAL STABILITY (BC 1704.19)
   K. EXCAVATION - SHEETING, SHORING, AND BRACING (BC 1704.19, 3304.4.1)
   L. CONCRETE TEST CYLINDERS - TR-2 (BC 1905.6)
   M. CONCRETE DESIGN MIX - TR-3 (BC 1905.3)

THE TESTING AGENCY FOR THE INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE BUILDING DEPARTMENT.

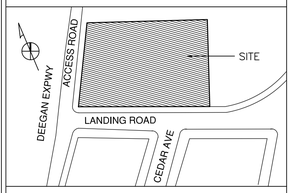
PROGRESS INSPECTIONS

1. INSPECTIONS REQUIRED BY THE LOCAL JURISDICTION SHALL BE PERFORMED BY A TESTING AGENCY PROVIDED BY THE OWNER FOR THE FOLLOWING ITEMS:
   A. FINAL (BC 109.5)

THE TESTING AGENCY FOR THE INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE BUILDING DEPARTMENT.

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

Landing Road

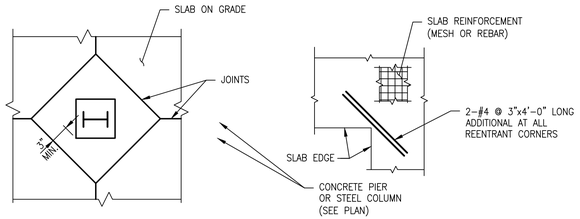
233 Landing Road
Bronx, New York 10468

TITLE:
GENERAL NOTES

SEAL:
STATE OF NEW YORK ★ JOSEPH F. TORTORELLA ★ No. 087015 ★ LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	14008.0
SCALE:	NO SCALE
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
S-200.00

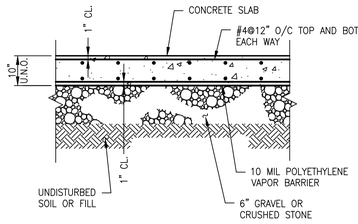


ISOLATION JOINT AT COLUMN

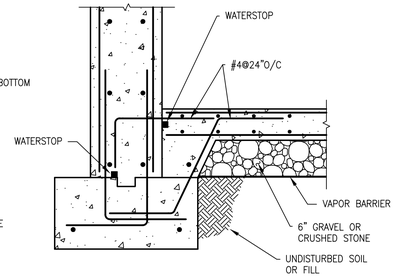
ADDITIONAL REINFORCEMENT AT ALL RE–ENTRANT CORNERS

NOTES:

1. GRAVEL OR CRUSHED STONE BASE SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

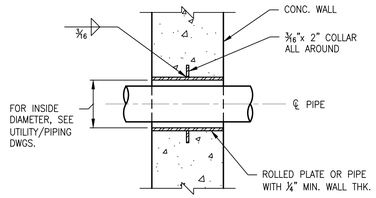


STRUCTURAL SLAB ON GRADE



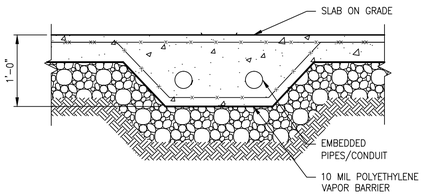
STRUCTURAL SLAB–ON–GRADE & WALL INTERFACE

TYPICAL DETAILS – STRUCTURAL SLAB ON GRADE



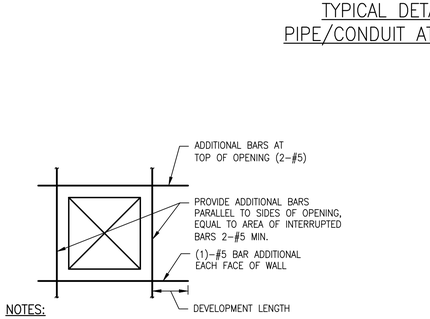
NOTE:
SPACE ADJACENT TO PIPE SLEEVES A MINIMUM DISTANCE APART. EQUAL TO WALL THICKNESS.

TYPICAL DETAIL
PIPE SLEEVE IN CONCRETE WALL



NOTE:
SEE TYPICAL SLAB ON GRADE DETAIL FOR ADDITIONAL INFORMATION

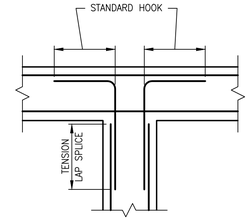
TYPICAL DETAIL EMBEDDED
PIPE/CONDUIT AT SLAB ON GRADE



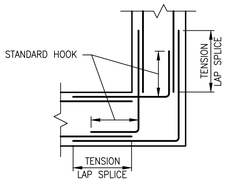
NOTES:

1. HOOK ALL BARS INTERRUPTED BY OPENING.
2. HORIZONTAL BARS TO EXTEND DEVELOPMENT LENGTH BEYOND OPNG., VERTICAL BARS TO BE FULL STORY HEIGHT.

TYPICAL DETAIL
OPENINGS IN CONCRETE WALLS



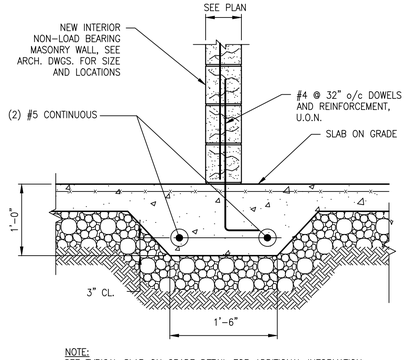
TEE–INTERSECTION



CORNER

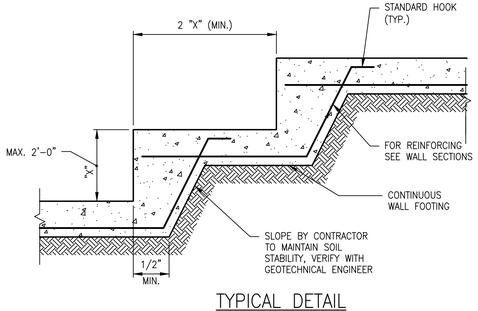
NOTE:
FOR TENSION LAP SPLICE LENGTH AND DEVELOPMENT LENGTH SEE TABLE.

TYPICAL DETAIL
HORIZONTAL REINFORCEMENT AT CORNERS AND JUNCTIONS OF WALLS AND BEAMS

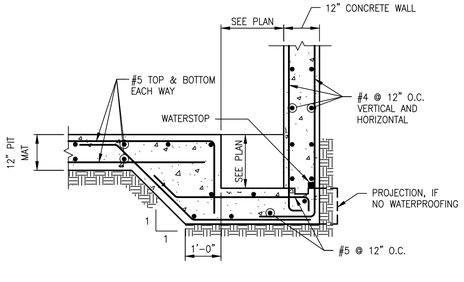


NOTE:
SEE TYPICAL SLAB ON GRADE DETAIL FOR ADDITIONAL INFORMATION

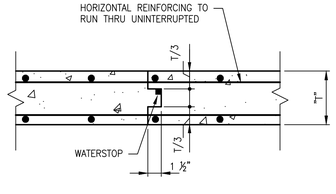
TYPICAL DETAIL SUPPORT FOR MASONRY
PARTITIONS AT SLAB ON GRADE



TYPICAL DETAIL
STEPPED WALL FOOTING

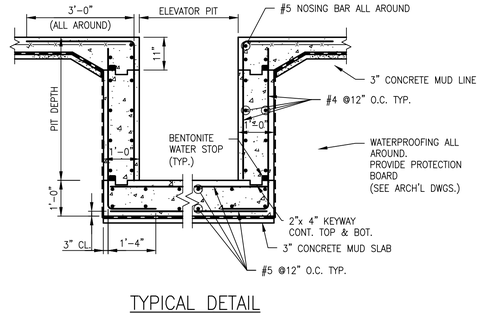


TYPICAL DETAIL
ELEVATOR SUMP PIT
SCALE: ½"=1'–0"



NOTE:
MAXIMUM POUR LENGTHS:
FOUNDATION WALL = 80'–0"

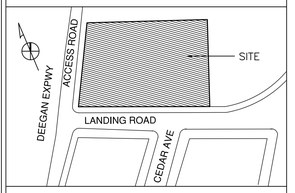
TYPICAL DETAIL
CONSTRUCTION JOINT CONCRETE WALL



TYPICAL DETAIL
ELEVATOR PIT

RSA #16188

KEY PLAN



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Bronx, New York 10468

TITLE:
TYPICAL DETAILS

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · LICENSED PROFESSIONAL ENGINEER · NO. 087018

PROJECT NO.:	14008.0
SCALE:	AS NOTED
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

DWG. NO.:
S-201.00

DEFORMED BAR TENSION DEVELOPMENT LENGTH
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS

BAR SIZE	3000 PSI CONCRETE		4000 PSI CONCRETE		5000 PSI CONCRETE		6000 PSI CONCRETE	
	CASE I	CASE II	CASE I	CASE II	CASE I	CASE II	CASE I	CASE II
#3	17	25	15	22	13	20	12	18
#4	22	33	19	29	17	26	16	24
#5	28	42	24	36	22	32	20	30
#6	33	50	29	43	26	39	24	35
#7	48	72	42	63	38	56	34	51
#8	55	83	48	72	43	64	39	59
#9	62	93	54	81	48	72	44	66
#10	70	105	61	91	54	81	50	74
#11	78	116	67	101	60	90	55	82

DEFORMED TENSION BAR NOTES:

1. FOR HORIZONTAL REINFORCEMENT WITH 12 INCH OR MORE FRESH CONCRETE CAST BELOW IT, TENSION DEVELOPMENT LENGTH/ TENSION LAP SPLICE LENGTH SHALL BE 1.3x THE VALUES GIVEN ABOVE.
2. FOR EPOXY-COATED BARS:
   a. WHERE CONCRETE COVER IS LESS THAN 3x BAR DIAMETER, OR CLEAR SPACING IS LESS THAN 6x BAR DIAMETER, TENSION DEVELOPMENT LENGTH/ TENSION LAP SPLICE LENGTH SHALL BE 1.5x THE VALUES GIVEN ABOVE.
   b. WHERE CONCRETE COVER IS EQUAL TO OR GREATER THAN 3x BAR DIAMETER AND CLEAR SPACING IS GREATER THAN 6x BAR DIAMETER, TENSION DEVELOPMENT LENGTH/ TENSION LAP SPLICE LENGTH SHALL BE 1.2x THE VALUES GIVEN ABOVE.

CASE I: CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN BAR DIAMETER, CLEAR COVER NOT LESS THAN BAR DIAMETER, AND STIRRUPS OR TIES THROUGHOUT DEVELOPMENT LENGTH NOT LESS THAN THE CODE MINIMUM OR CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2x BAR DIAMETER AND CLEAR COVER NOT LESS THAN BAR DIAMETER.

CASE II: OTHER CASES

DEFORMED BAR TENSION LAP SPLICE – CLASS B
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS

BAR SIZE	3000 PSI CONCRETE		4000 PSI CONCRETE		5000 PSI CONCRETE		6000 PSI CONCRETE	
	CASE I	CASE II	CASE I	CASE II	CASE I	CASE II	CASE I	CASE II
#3	22	33	19	28	17	25	16	23
#4	29	43	25	37	23	34	21	31
#5	36	54	31	47	28	42	26	38
#6	43	65	37	56	34	50	31	46
#7	63	94	54	81	49	73	45	67
#8	72	107	62	93	56	83	51	76
#9	81	121	70	105	63	94	57	86
#10	91	136	79	118	71	106	64	96
#11	101	151	87	131	78	117	71	107

DEFORMED BAR COMPRESSION DEVELOPMENT LENGTH
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS

BAR SIZE	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE
#3	9	8	8	8
#4	11	10	9	9
#5	14	12	12	12
#6	17	15	14	14
#7	20	17	16	16
#8	22	19	18	18
#9	25	22	21	21
#10	28	25	23	23
#11	31	27	26	26

DEFORMED BAR COMPRESSION LAP SPLICE
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS

BAR SIZE	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE
#3	12	12	12	12
#4	15	15	15	15
#5	19	19	19	19
#6	23	23	23	23
#7	27	27	27	27
#8	30	30	30	30
#9	34	34	34	34
#10	39	39	39	39
#11	43	43	43	43

DEFORMED BAR TENSION/ COMPRESSION DEVELOPMENT AND LAP SPLICE LENGTH (l_d) FOR UNCOATED BARS AS PER ACI 530-05/08

BAR SIZE	1500 PSI MASONRY	2000 PSI MASONRY	2500 PSI MASONRY	3000 PSI MASONRY
#3	16	14	12	12
#4	21	18	16	15
#5	26	22	20	18
#6	43	38	34	31
#7	60	52	47	42
#8	92	79	71	65
#9	119	103	92	84
#10	154	133	119	109
#11	194	168	150	137

DEFORMED BAR TENSION/ COMPRESSION DEVELOPMENT LENGTH (l_d) FOR UNCOATED BARS AS PER ACI 530-02

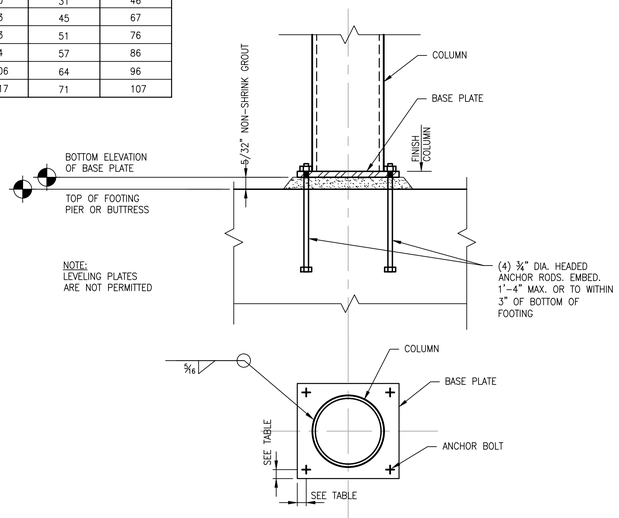
BAR SIZE	
#3	14
#4	18
#5	13
#6	27
#7	32
#8	36
#9	41
#10	46
#11	51

DEFORMED BAR TENSION/ COMPRESSION LAP SPLICE LENGTH (l_d) FOR UNCOATED BARS AS PER ACI 530-02

BAR SIZE	
#3	18
#4	24
#5	30
#6	36
#7	42
#8	48
#9	55
#10	61
#11	68

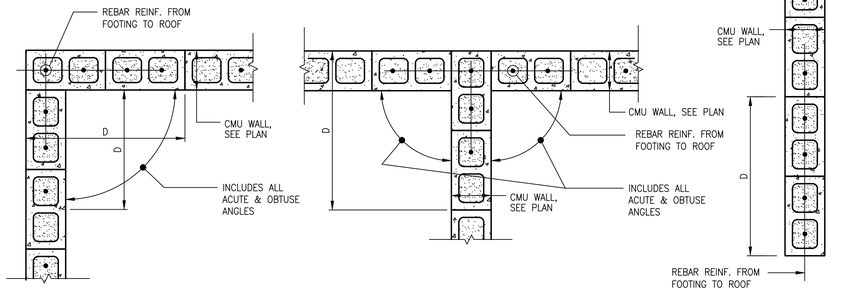
NOTES:

1. THE DEVELOPMENT LENGTH OF EPOXY COATED REBAR SHOULD BE TAKEN AS 1.5x THE VALUE OF GIVEN ABOVE.



ANCHOR BOLT SIZE	HOLE ø IN BASE PL	EDGE DISTANCE FROM ℄ OF BOLT HOLE
¾"ø	1 5/16"ø	2"
⅞"ø	1 9/16"ø	2"
1"ø	1 13/16"ø	2"
1 ¼"ø	2 ⅜"ø	2 ½"
1 ½"ø	2 ⅞"ø	2 ½"

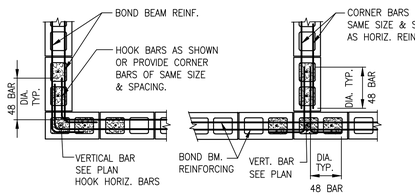
TYPICAL DETAIL COLUMN BASE PLATE PIPE OR TUBE COLUMN
SCALE: 1"=1'-0"



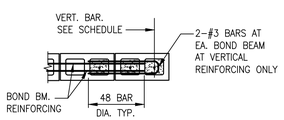
CORNER DETAIL | INTERSECTION DETAIL | STRAIGHT DETAIL

SHEARWALL REINFORCING DETAILS
SCALE: NOT TO SCALE

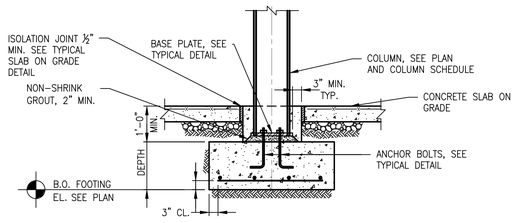
NOTES:
D = LENGTH OF WALL GROUTED SOLID PER REQUIRED NUMBER OF TIE-DOWNS & ASSUMES 1 BAR PER CELL, U.O.N. (SEE SHEAR WALL ELEVATIONS SERIES S-200)



CORNER | INTERSECTION



END AND JAMB VERTICAL BARS AND BOND BEAM DETAILS
SCALE: NOT TO SCALE



NOTES:

1. FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY AS SPECIFIED IN THE GENERAL NOTES.
2. FOR SIZE, DEPTH AND REINFORCING SEE FOOTING SCHEDULE.

TYPICAL DETAIL STEEL COLUMN ON CONCRETE FOOTING

COLUMN FOOTING SCHEDULE

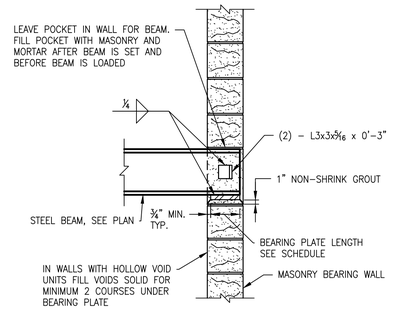
MARK	FOOTING SIZE		BOTTOM REINFORCING		DOWELS	REMARKS
	LENGTH X WIDTH	DEPTH	LONG BARS	SHORT BARS		
F3.0	3'-0" x 3-0"	1'-0"	3 - #4	3 - #4		
F4.0	4'-0" x 4'-0"	1'-0"	4 - #4	4 - #4		

HORIZONTAL REINFORCING DETAILS

NOTES:
CORNERS AND INTERSECTIONS
UNLESS OTHERWISE NOTED OR SPECIFIED, AT POINTS WHERE CONCRETE MASONRY WALLS MEET OR INTERSECT, PLACE UNITS IN RUNNING BOND WITH ALTERNATE UNITS BEARING NOT LESS THAN 8 INCHES ON THE UNIT BELOW

DOWELS
UNLESS OTHERWISE NOTED OR SPECIFIED, PROVIDE DOWELS FROM CONCRETE FOOTINGS OR WALLS BELOW, WITH SAME SIZE AND SPACING AS VERT. WALL REINF. LAP DOWELS WITH VERT. REINF. 48 BAR DIAMETERS MINIMUM U.N.O. (SEE ALSO LAP SPLICE SCHEDULE) GROUT SOLID CELLS WITH VERTICAL REINFORCING, FULL HIEGHT.

TYPICAL REINFORCING DETAILS MASONRY WALL CONSTRUCTION
SCALE: NOT TO SCALE



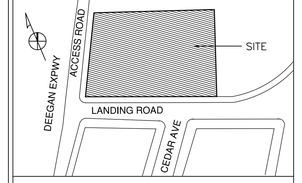
BEARING PL SCHEDULE

MARK	LENGTH (II TO BM.)	WIDTH (⊥ TO BM.)	THICKNESS
BP-1	18"	7"	½"
BP-2	6"	6"	⅜"

TYPICAL DETAIL BEAM BEARING ON NEW MASONRY WALL

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

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TITLE:
TYPICAL DETAILS

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · LICENSED PROFESSIONAL ENGINEER · No. 087016

PROJECT NO.:	14008.0
SCALE:	AS NOTED
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
PAGE:	of

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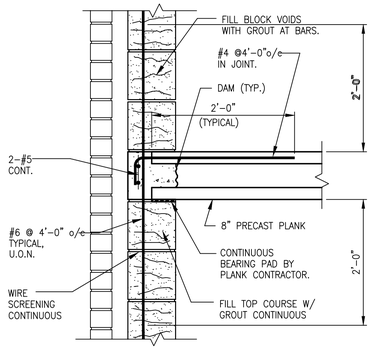
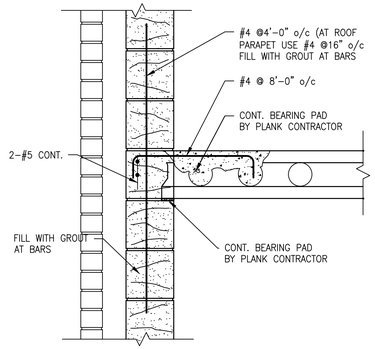
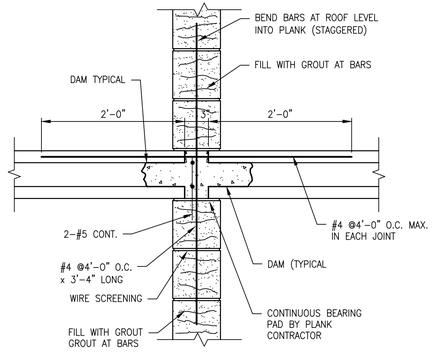


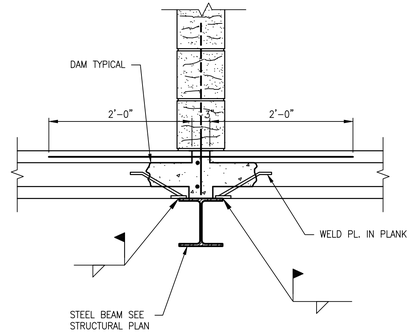
TYPICAL DETAIL
PLANK AT EXTERIOR BEARING WALL
SCALE: 1"=1'-0"



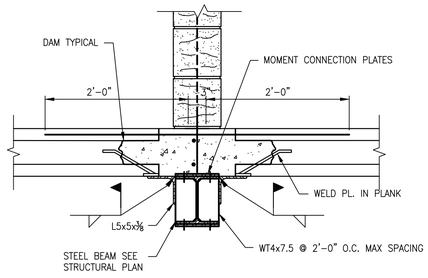
TYPICAL DETAIL
PLANK PARALLEL TO BEARING WALL
SCALE: 1"=1'-0"



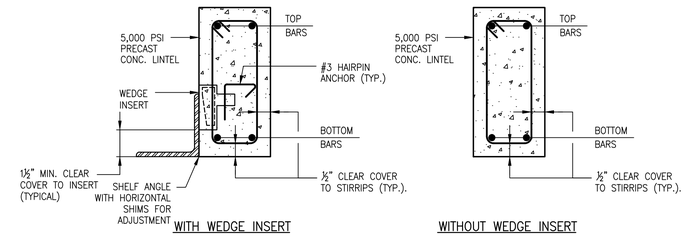
TYPICAL DETAIL
PLANK AT INTERIOR BEARING WALL
SCALE: 1"=1'-0"



TYPICAL DETAIL
PLANK AT INTERIOR STEEL SUPPORT
SCALE: 1"=1'-0"



TYPICAL DETAIL
PLANK AT STEEL BEAM MOMENT CONNECTION
SCALE: 1"=1'-0"



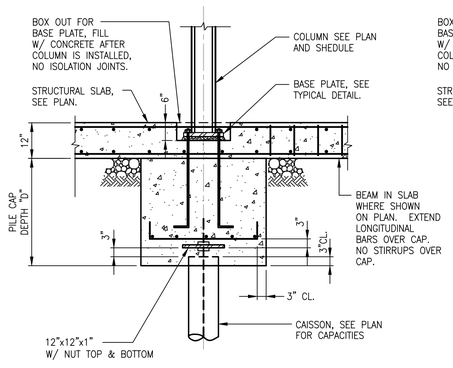
WITH WEDGE INSERT WITHOUT WEDGE INSERT

TYPICAL DETAIL
PRECAST CONCRETE LINTEL
SCALE: NOT TO SCALE

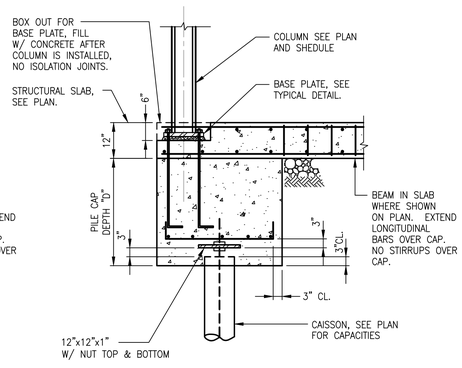
PRECAST LINTEL/BEAM SCHEDULE

PRECAST				STEEL	EXTERIOR	REMARKS
LINTEL ID	SIZE (b x h)	REINFORCING	STIRRUPS	SHELF ANGLE	SKIN/CLADDING	
L-1	7 5/8" x 7 5/8"	(2)-#7 T&B	#3 ▭ @ 3"o/c	L8x8x1/2 (NOTE 5)	BRICK FACE	SEE NOTE 6

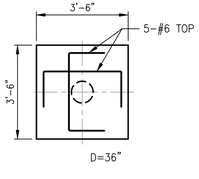
NOTES:
1. PROVIDE 7 5/8" END BEARING FOR ALL LINTELS.
2. FASTEN TO PRECAST WITH HW-340 WEDGE INSERTS @ 2'-0"o.c. MAX. (TYPICAL)
3. ALL SHELF ANGLE, BOLTS AND ACCESORIES SHALL BE HOT DIPPED GALVANIZED, TYPICAL.
4. ALL PRECAST CONCRETE LINTEL SHALL BE 5,000 PSI.
5. HORIZONTAL LEG OF SHELF ANGLE TO BE TRIMMED FROM 8" TO 7".
6. SEE PLAN AND ARCHITECTURAL DRAWINGS FOR EXTENTS OF BRICK SUPPORT.



TYPICAL DETAIL
STEEL COLUMN ON CAISSON PILE CAP
FOR SIZE, DEPTH, REINFORCING AND PILE ARRANGEMENTS SEE TYPICAL PILE CAP PLANS.



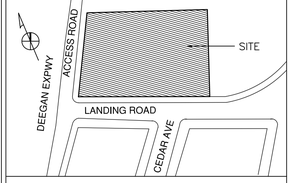
TYPICAL DETAIL
STEEL COLUMN ON CAISSON PILE CAP OFFSET CONDITION
FOR SIZE, DEPTH, REINFORCING AND PILE ARRANGEMENTS SEE TYPICAL PILE CAP PLANS.



PC 1

RSA #16188

KEY PLAN



DATE	ISSUES / REVISIONS
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

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Bronx, New York 10468

TITLE:
TYPICAL PLANK DETAILS AND LOADING SCHEDULE

SEAL: STATE OF NEW YORK · JOSEPH F. TORTORELLA · No. 087018 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	14008.0
SCALE:	AS NOTED
BY: KMH	CHECK: ES
DATE:	NOVEMBER 21, 2014
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DWG. NO.:
S-203.00

GENERAL SYMBOLS

	EXISTING TO REMAIN (DUCT/PIPE/EQUIPMENT)
	EXISTING TO BE REMOVED (DUCT/PIPE/EQUIPMENT)
	NEW WORK (DUCT/PIPE/EQUIPMENT)
	POINT OF CONNECTION TO EXISTING
	POINT OF DISCONNECT
	POINT OF PATCH. SEAL OPENING.

CONTROLS

	AUTOMATIC THREE-WAY CONTROL VALVE
	AUTOMATIC TWO-WAY CONTROL VALVE
M	MOTORIZED CONTROL VALVE
T	THERMOSTAT
T	THERMOSTAT (DUCT)
H	HUMIDISTAT
S	SWITCH
SD	DUCT MOUNTED SMOKE DETECTOR
M	MOTORIZED DAMPER

DUCTWORK

18x12	DUCT SIZE – FIRST SIZE INDICATES PLAN SIZE
	ACOUSTICAL LINING IN DUCT
	VOLUME DAMPER
	DUCT SECTION UNDER POSITIVE PRESSURE
	DUCT SECTION UNDER NEGATIVE PRESSURE
2	DUCT UP
2	DUCT DOWN
R	SLOPING RISE IN DUCT IN DIRECTION OF ARROW
D	SLOPING DROP IN DUCT IN DIRECTION OF ARROW
	DUCT FLEXIBLE CONNECTION
	SQUARE ELBOW WITH TURNING VANES
	SUPPLY AIR OUTLET, 4 WAY
	RETURN AIR REGISTER
	SUPPLY AIR OUTLET – 3, 2 & 1 WAY THROW
	FUSIBLE LINK FIRE DAMPER WITH DUCT ACCESS DOOR
	COMBINATION FIRE/SMOKE DAMPER WITH DUCT ACCESS DOOR
	RETURN OR RELIEF AIR FLOW DIRECTION
ø	DIAMETER, ROUND DUCT

ABBREVIATIONS

AC	AIR CONDITIONING
AD	ACCESS DOOR
AHU	AIR HANDLING UNIT
AL	ACOUSTICAL LINING
ATC	AUTOMATIC TEMPERATURE CONTROLS
AV	AUTOMATIC AIR VENT
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET OF AIR PER MINUTE
CG	CEILING GRILLE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CM	CONSTRUCTION MANAGER
COD	CABLE OPERATED DAMPER
CPD	CONDENSATE PUMP DISCHARGE
CR	CEILING REGISTER
CV	CONSTANT VOLUME
CW	COLD WATER, MUNICIPAL
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DRAIN
DL	DRUM LOUVER
E	EXISTING TO REMAIN
EAT	ENTERING AIR TEMPERATURE
EDH	ELECTRIC DUCT HEATER
ER	EXHAUST REGISTER
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FD/AD	FIRE DAMPER WITH DUCT ACCESS DOOR
FPB	FAN POWERED BOX
FSD	COMBINATION FIRE/SMOKE DAMPER
FSD/AD	COMBINATION FIRE/SMOKE DAMPER WITH DUCT ACCESS DOOR
FTR	FINNED TUBE RADIATION

ABBREVIATIONS (CONT.)

Fz	FREEZESTAT
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HC	HEATING COIL
HGB	HOT GAS BYPASS
HV	HEATING AND VENTILATING UNIT
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
L	LOUVER DOOR
LAT	LEAVING AIR TEMPERATURE
LDR	LINEAR DIFFUSER RETURN
LDS	LINEAR DIFFUSER SUPPLY
LPR	LOW PRESSURE CONDENSATE RETURN
LPS	LOW PRESSURE STEAM
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU'S PER HOUR
MIN	MINIMUM
N	NEW
NIC	NOT IN THIS CONTRACT
NK	NECK (AS RELATED TO DUCT & DIFFUSER)
NTS	NOT TO SCALE
OA	OUTDOOR AIR
OAI	OUTSIDE AIR INTAKE
PHC	PRE-HEAT COIL
R	EXISTING TO BE RELOCATED
RA	RETURN AIR
RG	RETURN GRILLE
RHC	REHEAT COIL
RL	REFRIGERANT LIQUID LINE
RR	RETURN REGISTER
RS	REFRIGERANT SUCTION LINE
SA	SUPPLY AIR
SR	SUPPLY REGISTER
TR	TOP REGISTER
TRG	TRANSFER GRILLE
TRV	THERMOSTATIC RADIATOR VALVE
U	UNDERCUT DOOR
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME
WMS	WIRE MESH SCREEN
(XXX)	SUPPLY CFM OR GPM
[XXX]	RETURN OR EXHAUST CFM

PIPING

	PIPE UP		DIRT POCKET
	PIPE DOWN		STRAINER 'Y' TYPE WITH BLOWDOWN VALVE
	ISOLATION VALVE		STRAINER BASKET TYPE
	UNION		THERMOMETER
	CHECK VALVE		PLUG FOR PRESSURE GAUGE AND THERMOMETER CONNECTION
	LUBRICATED PLUG VALVE		AUTOMATIC AIR VENT
	BUTTERFLY VALVE		PRESSURE GAUGE; GAUGE COCK
	PRESSURE REDUCING VALVE		DRIP ASSEMBLY
	RELIEF VALVE		FLOAT & THERMOSTATIC STEAM TRAP WITH BLOWDOWN VALVE
	ECCENTRIC REDUCER		ARROW INDICATES DIRECTION OF PIPE PITCH
	CAPPED PIPE WITH SHUTOFF VALVE		ARROW INDICATES DIRECTION OF FLOW

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS ARE USED IN THE DRAWINGS.

BUILDING DEPARTMENT NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NEW YORK CITY CONSTRUCTION CODE (CC), BUILDING CODE (BC), FIRE CODE (FC) AND MECHANICAL CODE (MC). WORK SHALL BE EXECUTED IN FULL COMPLIANCE WITH THE APPLICABLE PROVISIONS OF ALL LOCAL LAWS, BY LAWS, STATUTES, ORDINANCES, CODES, RULES, REGULATIONS AND LAWFUL ORDERS OF PUBLIC AUTHORITIES BEARING ON THE PERFORMANCE AND EXECUTION OF THE WORK.
2. MATERIALS, OPERATIONS AND EQUIPMENT OF REQUIRED HVAC SYSTEM SHALL BE SUBJECT TO SPECIAL INSPECTION AS REQUIRED IN CC ADMINISTRATIVE PROVISION, ARTICLES 28-115, 28-116, 28-118, BC-109 AND NEW YORK CITY MECHANICAL CODES AS FOLLOWS:
   A. SPECIAL INSPECTIONS AND TESTS THAT ARE REQUIRED:
      1) MECHANICAL SYSTEMS AS REQUIRED IN SECTION MC-107 AND BC-109.
         a. AIR CONDITIONING AND VENTILATION SYSTEMS
   B. PROGRESS INSPECTIONS:
      1) ENERGY CODE COMPLIANCE INSPECTIONS BC 109.3.5
   C. FORM TR-1 SHALL BE FILED PRIOR TO INSTALLATION. FORM TR-1 SHALL AGAIN BE FILED UPON COMPLETION OF INSTALLATION.
   D. THEY SHALL HAVE BEEN ACCEPTABLE PRIOR TO THE EFFECTIVE DATE OF THE CODE BY THE BOARD OF STANDARDS AND APPEALS.
   E. THEY SHALL HAVE BEEN ACCEPTED FOR USE UNDER THE PRESCRIBED TEST METHODS BY THE COMMISSIONER. (OR).
   F. PREVIOUSLY APPROVED BY THE BOARD OF STANDARDS AND APPEALS (AS PER CC SECTION 28-113).
3. DUCTS SHALL BE SUBSTANTIALLY SUPPORTED ACCORDING TO CHAPTER 16 OF NEW YORK CITY BUILDING CODE, SEISMIC REQUIREMENTS.
4. DUCTS SHALL BE CONSTRUCTED OF APPROVED STANDARD AS SPECIFIED IN NEW YORK CITY MECHANICAL CODE MC-603.
5. WHERE DUCTS PASS THROUGH WALLS OR PARTITIONS, THE SPACE AROUND SHALL BE SEALED AS REQUIRED IN CHAPTER 7 OF THE NEW YORK CITY BUILDING CODE.
6. ALL WORK SHALL COMPLY WITH ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK CITY.
7. THE HEATING AND AIR CONDITIONING SYSTEMS HAVE BEEN DESIGNED TO MAINTAIN A MAXIMUM TEMPERATURE OF 78°F (SUMMER) AND A MINIMUM TEMPERATURE OF 70°F (WINTER).
8. ALL MATERIALS AND EQUIPMENT DELIVERED TO THE SITE SHALL BE RECOGNIZED BY THE OFFICE OF TECHNICAL CERTIFICATION AND RESEARCH (OTCR). PRODUCTS THAT ARE NOT CODE-PRESCRIBED OR APPROVED ALTERNATIVE SHALL BE REJECTED UNTIL SUCH CERTIFICATES ARE OBTAINED.
9. ALL EQUIPMENT USE PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AS REQUIRED IN NEW YORK CITY CONSTRUCTION CODES, ARTICLE 28-118.

SPECIAL INSPECTION ITEMS:

REQUIRED SPECIAL INSPECTIONS	CODE/SECTION
MECHANICAL SYSTEMS	BC 1704.15
REQUIRED PROGRESS INSPECTION ENERGY CODE COMPLIANCE INSPECTION	BC 109.3.5
REQUIRED FINAL INSPECTION FINAL INSPECTION	28-116.2.4.2, BC 109.5, DIRECTIVE 14 1975, AND RCNY §101-10

GENERAL NOTES

1. MECHANICAL WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE BUILDING CODE OF THE CITY OF NEW YORK AND THE BUILDING MANAGEMENT COMPANY'S STANDARDS FOR DESIGN, ALTERATION AND CONSTRUCTION.
2. BASE BUILDING SPECIFICATION SHALL APPLY EXCEPT WHERE SUPERCEDED ON THIS PROJECT.
3. CONTRACTOR SHALL SURVEY THE AREA OF THIS WORK BEFORE SUBMITTING HIS BID AND BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE WORK AS SHOWN ON DRAWINGS.
4. CONTRACTOR TO CHECK AND CORRECT ANY AND ALL DEFICIENCIES IN EXISTING DUCTS. ALL NEW DUCTWORK WILL COMPLY WITH THE LATEST SMACNA GUIDELINES AND CONFORM WITH REQUIREMENTS OF THE LATEST HANDBOOKS PUBLISHED BY ASHRAE.
5. DESIGN DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC. OFFSETS MAY BE REQUIRED TO AVOID EXISTING SERVICES, OTHER TRADES, ETC. COORDINATE WORK WITH ALL TRADES AND FIELD CONDITIONS.
6. LOCATIONS OF NEW UTILITIES, INCLUDING PIPE RISERS, ARE GENERALLY SCHEMATIC. CONTRACTOR SHALL COORDINATE ALL NEW UTILITIES, SERVICES, ETC. WITH EXISTING STRUCTURAL AND ARCHITECTURAL DRAWINGS AND PROVIDE ALL OFFSETS AS REQUIRED.
7. WHERE PENETRATIONS THROUGH FIRE RATED WALLS ARE NOT FIRE PROOFED THIS CONTRACTOR SHALL BE RESPONSIBLE TO SEAL SAME TO MAINTAIN THE RATED INTEGRITY.
8. COORDINATE SCHEDULE FOR HOOK-UPS TO EXISTING SYSTEMS AND EQUIPMENT, AND REMOVAL OR RELOCATIONS WITH THE OWNER AND PERFORM THIS WORK AT SUCH TIMES TO ENSURE THAT PERIODS OF SHUTDOWN WILL BE ACCEPTABLE TO THE OWNER. ALL SYSTEM SHUTDOWNS SHALL BE KEPT TO A MINIMUM.
9. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND RESTORING THE CONTINUITY OF ALL EXISTING SYSTEMS AFFECTED. INCLUDING BUT NOT LIMITED TO: INSULATION, VAPOR BARRIER, VALVES, CAPS, PUMPS, ETC.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF SAME WHICH MAY BE DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO OWNER.
11. PRIOR TO COMMENCEMENT OF ANY WORK, EXISTING WATER SIDE AND AIR SIDE SYSTEMS ASSOCIATED WITH THIS WORK SHALL BE TESTED IN THE PRESENCE OF BUILDING PERSONNEL. PRE-CONSTRUCTION/DEMOLITION BALANCING REPORTS SHALL BE SUBMITTED TO ENGINEER AND BUILDING MANAGEMENT FOR REVIEW.
12. DIFFUSERS, REGISTERS AND GRILLES SHALL HAVE HARD DUCT CONNECTIONS.
13. ALL NEW DUCTWORK AND PIPE SHALL BE PRESSURE TESTED PER BUILDING, SMACNA, AND ASHRAE STANDARDS.
14. ALL SYSTEMS AND SERVICES THAT SERVE ADJACENT SPACES SHALL BE MAINTAINED THROUGHOUT WORK.
15. SUBMIT SHOP DRAWINGS OF ALL WORK WHICH MUST BE APPROVED BY THE ARCHITECT AND ENGINEER BEFORE WORK COMMENCES OR ITEMS ORDERED.
16. COORDINATE ALL DUCT ELEVATIONS WITH ALL OTHER TRADES AND PROVIDE NECESSARY OFFSETS TO AVOID CONFLICTS.
17. COORDINATE ALL EQUIPMENT REQUIREMENTS WITH APPROPRIATE TRADES (IE-CONDENSATE PUMPS COORDINATED WITH ELECTRICAL, PLUMBING, ATC, ETC.)
18. VERIFY AND COORDINATE ALL EQUIPMENT ACCESS AND CLEARANCES WITH THE ARCHITECT, GENERAL CONTRACTOR AND/OR CONSTRUCTION MANAGER.
19. ALL DUCTWORK SHALL BE SUPPORTED FROM THE STRUCTURE.
20. PROVIDE 6" WIDE 45 DEGREE BRANCH TAKEOFF FOR ALL NEW DUCTS.
21. ALL DUCT BRANCHES, TAKE-OFFS, AND DIFFUSERS SHALL BE EQUIPPED WITH VOLUME DAMPERS.
22. LOCATE ALL DUCT VOLUME DAMPERS ABOVE ACCESSIBLE CEILINGS. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS WITH THE OPERATOR ACCESSIBLE VIA THE AIR OUTLET WHEN BRANCH DUCTWORK IS LOCATED WITHIN AN INACCESSIBLE CEILING.
23. ALL CONNECTIONS TO SUPPLY DUCTS AND CEILING DIFFUSERS SHALL BE AIR TIGHT AND SEALED WITH WATER BASED SEALANT.
24. ALL DUCT SIZES NOTED INDICATE THE CLEAR INSIDE DIMENSIONS OF DUCTWORK. SHEET METAL DIMENSIONS SHALL BE INCREASED WHERE DUCTWORK IS LINED INTERNALLY.
25. ALL EXPOSED DUCTWORK SHALL BE INTERNALLY LINED WITH 1" ACOUSTIC INSULATION. INSULATION SHALL HAVE A MINIMUM RATING OF R-5.
26. ALL DUCTWORK 15 FEET UPSTREAM OR DOWNSTREAM OF ANY FAN SHALL BE INTERNALLY LINED WITH 1" ACOUSTIC INSULATION. INSULATION SHALL HAVE A MINIMUM RATING OF R-5.
27. THE MECHANICAL CONTRACTOR SHALL PROVIDE CONTROL WIRING AND TRANSFORMERS FOR ALL THERMOSTATS, ACTUATORS AND CONTROLLERS. TRANSFORMERS SHALL BE ADEQUATELY SIZED TO SUPPORT THE EQUIPMENT SERVED. COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATIONS OF TRANSFORMERS. POWER WIRING TO THE TRANSFORMERS SHALL BE BY THE ELECTRICAL CONTRACTOR.
28. ALL DUCT OPENINGS THAT ARE ABOVE THE HUNG CEILING SHALL BE PROVIDED WITH WIRE MESH SCREENS.
29. ALL EXPOSED DUCTWORK SHALL BE MADE SUITABLE FOR A PAINTED FINISH WITH ALL STICKERS AND LABELS REMOVED.
30. ALL RETURN AIR GRILLES SHALL BE PROVIDED WITH LIGHT SHIELDS.
31. ALL THERMOSTATS SHALL BE PER THE BUILDING STANDARD.
32. ALL AIR FILTERS SHALL HAVE A MINIMUM RATING OF MERV 8.

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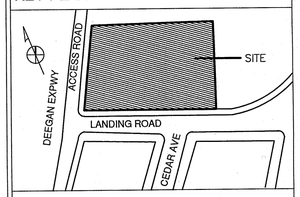
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

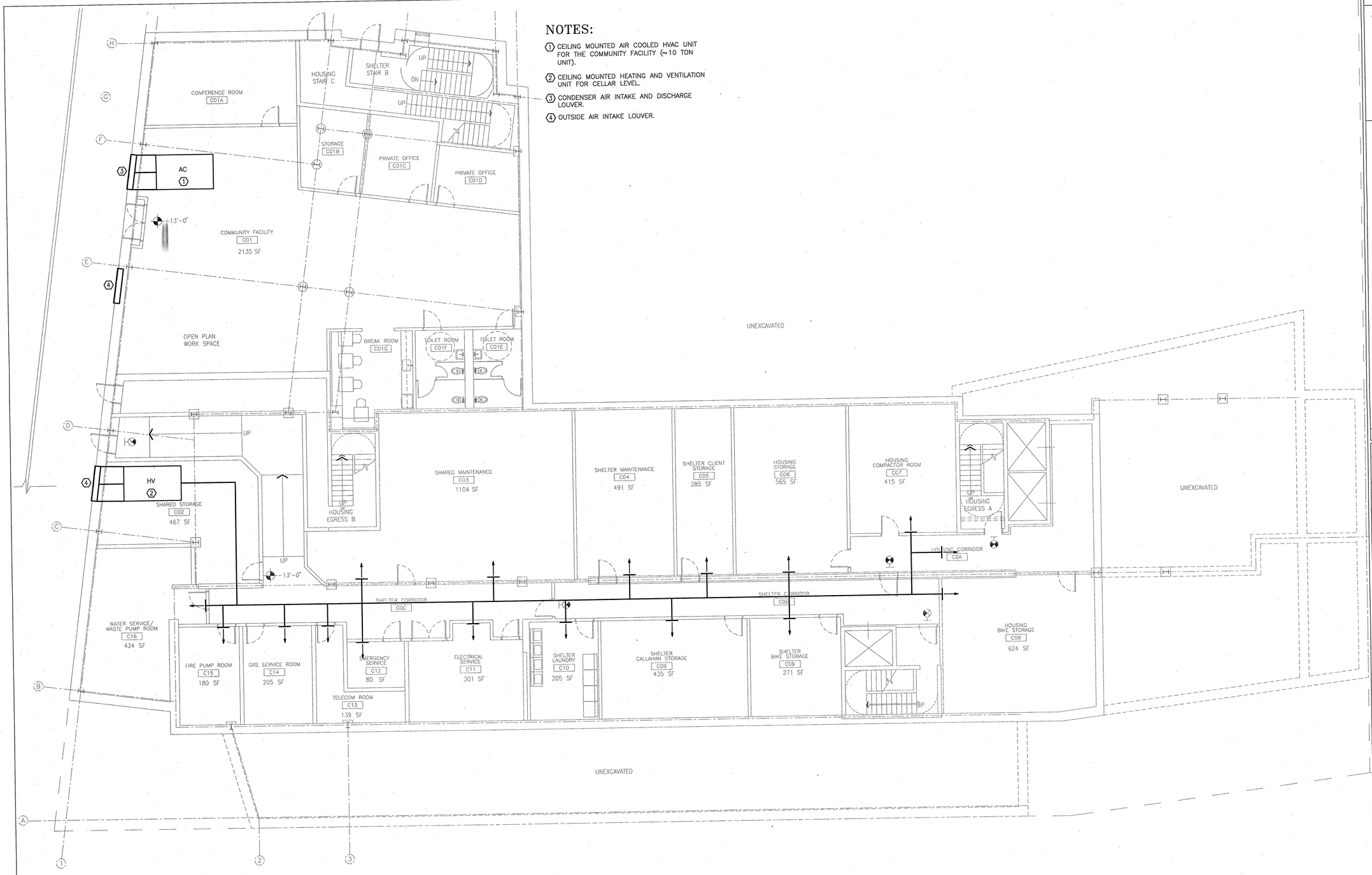
MECHANICAL SYMBOL LIST, ABBREVIATIONS AND NOTES

SEAL: STATE OF NEW YORK · CHARLES F. JOHNSON III · No. 080545 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO. :	9092.000
SCALE:	NONE
BY: CJ/KBP	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	1 of 12

DWG. NO. :

M001.00



NOTES:

1. CEILING MOUNTED AIR COOLED HVAC UNIT FOR THE COMMUNITY FACILITY (~10 TON UNIT).
2. CEILING MOUNTED HEATING AND VENTILATION UNIT FOR CELLAR LEVEL.
3. CONDENSER AIR INTAKE AND DISCHARGE LOUVER.
4. OUTSIDE AIR INTAKE LOUVER.

1/8"=1'-0"

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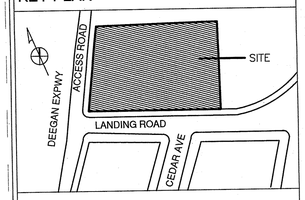

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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

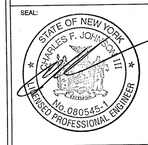
Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

CELLAR FLOOR MECHANICAL PLAN

SEAL:



PROJECT NO.:	9092.000
SCALE:	AS NOTED
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DATE:	DECEMBER 22, 2014
PAGE:	2 of 12

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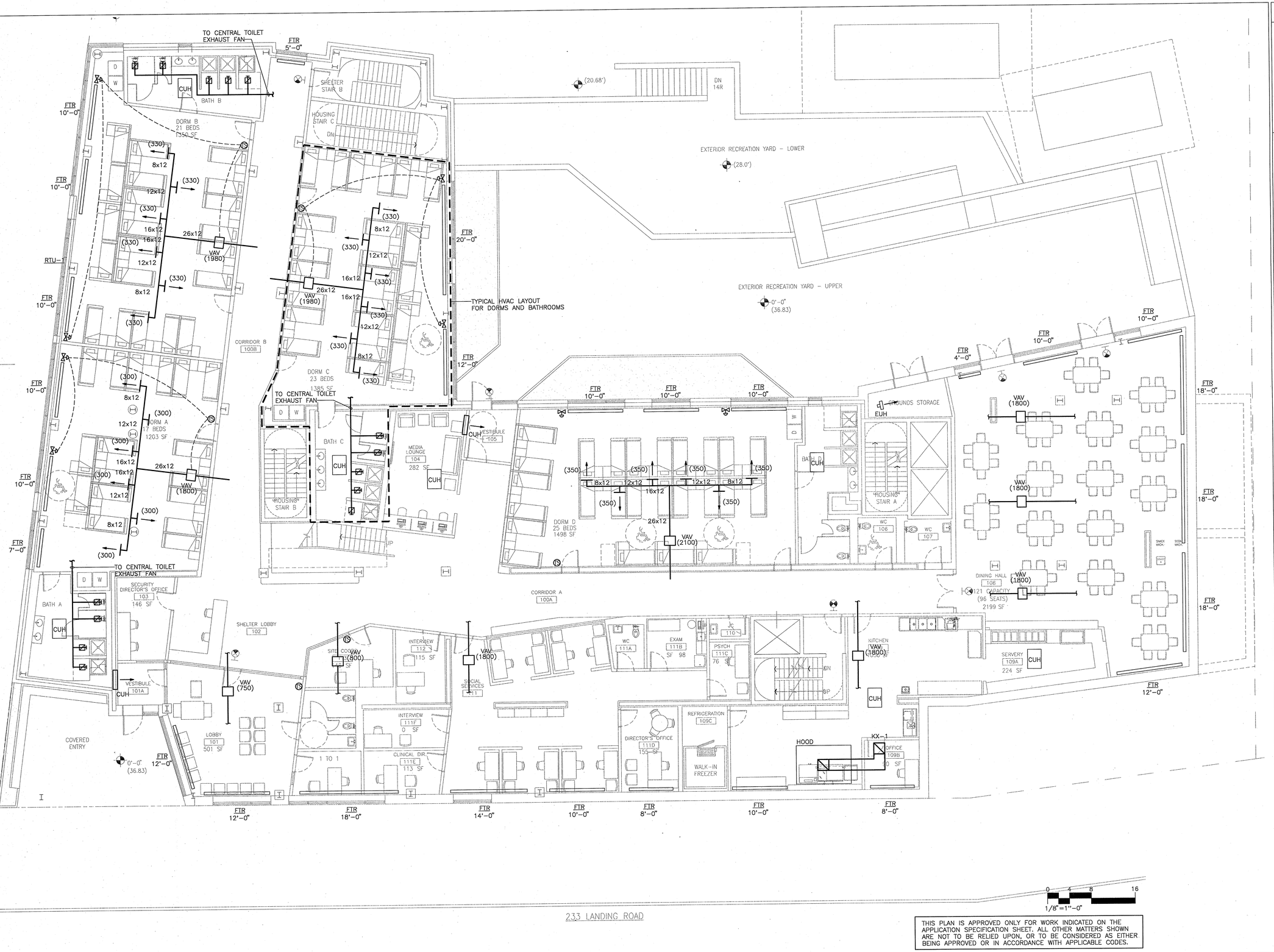

0 4 8 16
1/8"=1'-0"

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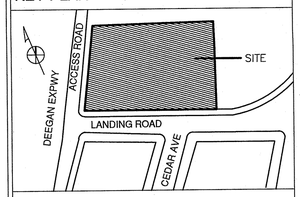

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

FIRST FLOOR MECHANICAL PLAN

SEAL: STATE OF NEW YORK · CHARLES F. JONES III · 080545-1 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CJ/KBP	CHECK: -
DATE:	DECEMBER 22, 2014
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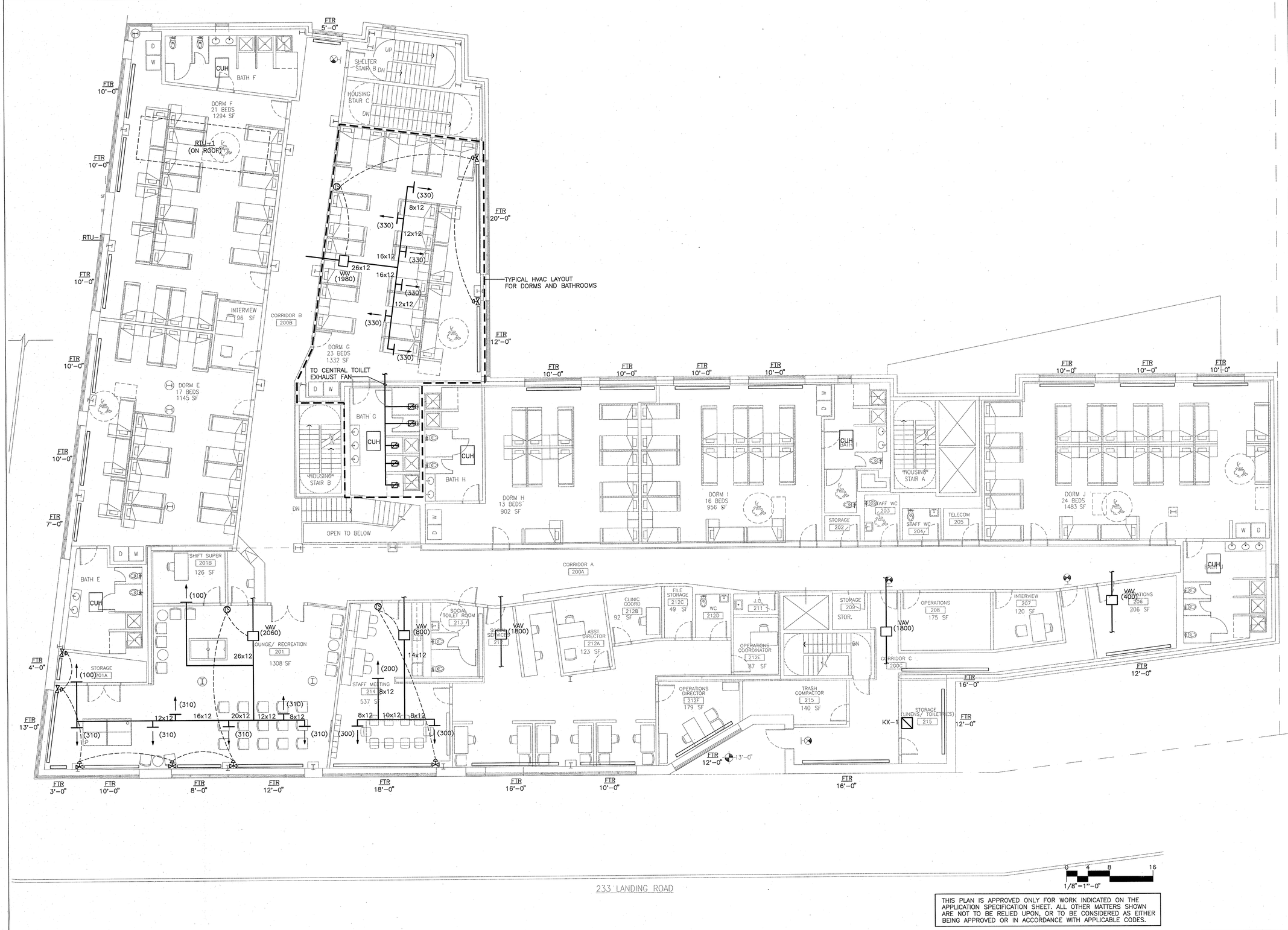

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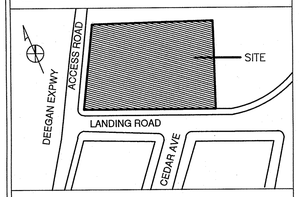

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

SECOND FLOOR MECHANICAL PLAN

SEAL:

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CJ	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	4 of 12

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M202.00

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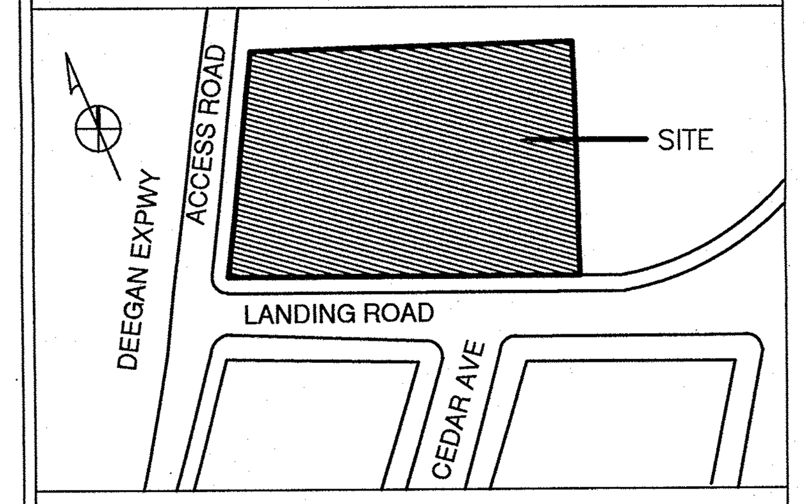

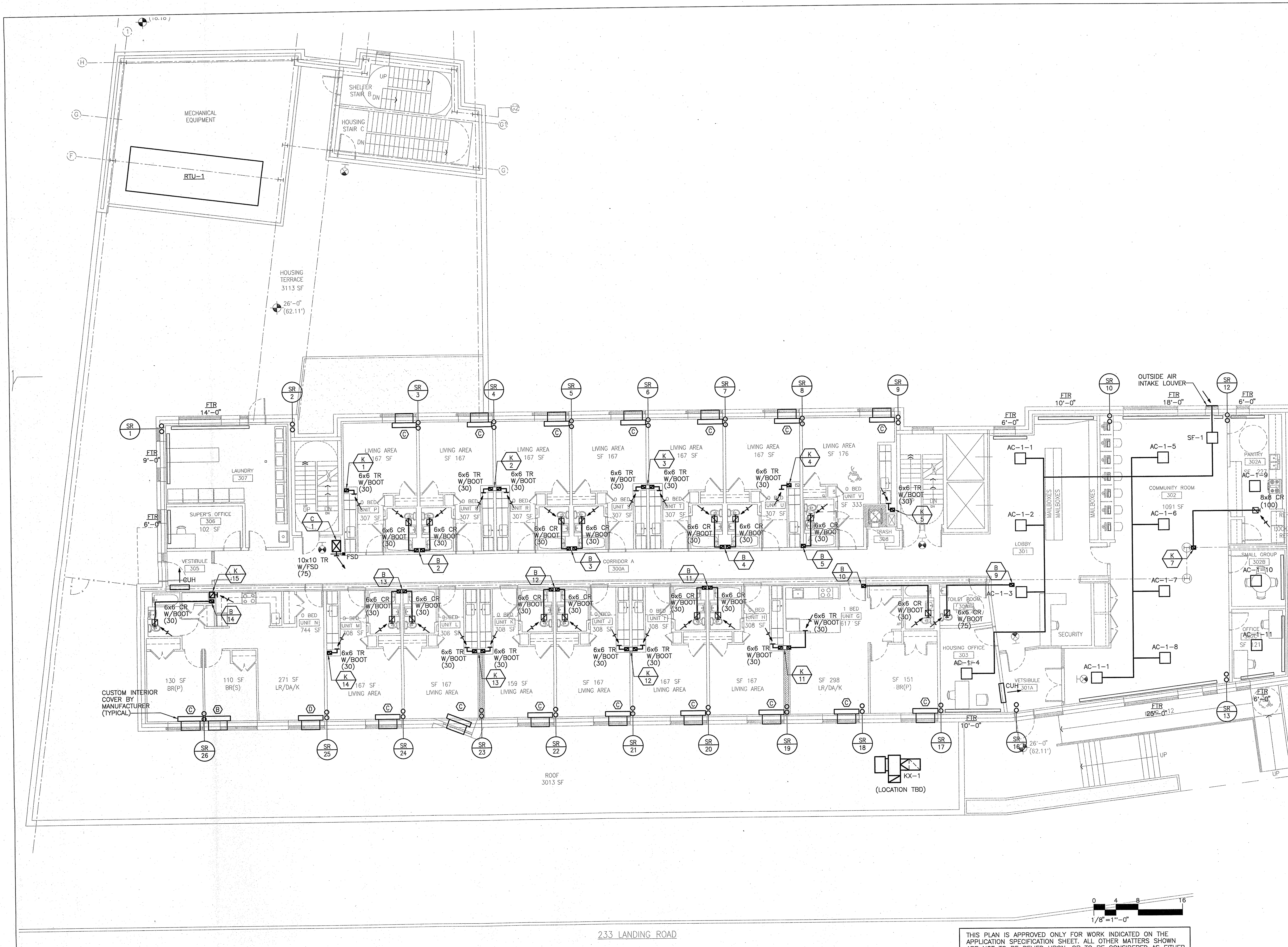

233 LANDING ROAD

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DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
THIRD FLOOR
MECHANICAL PLAN

SEAL: STATE OF NEW YORK · CHARLES F. JOHNSON III · No. 080545-1 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.: 9092.000
SCALE: AS NOTED
BY: CJ/KBP
CHECK: CJ
DATE: DECEMBER 22, 2014
PAGE: 5 of 12

DWG. NO.: **M203.00**

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0 4 8 16
1/8"=1"-0"

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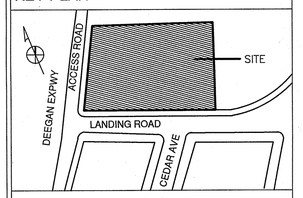
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

Landing Road

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Bronx, New York 10468

TITLE:

TYPICAL FLOOR (4-8) MECHANICAL PLAN

SEAL:

STATE OF NEW YORK · CHARLES F. JOHNSON III · No. 080543 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CJ	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	6 of 12

DWG. NO.:

M204.00

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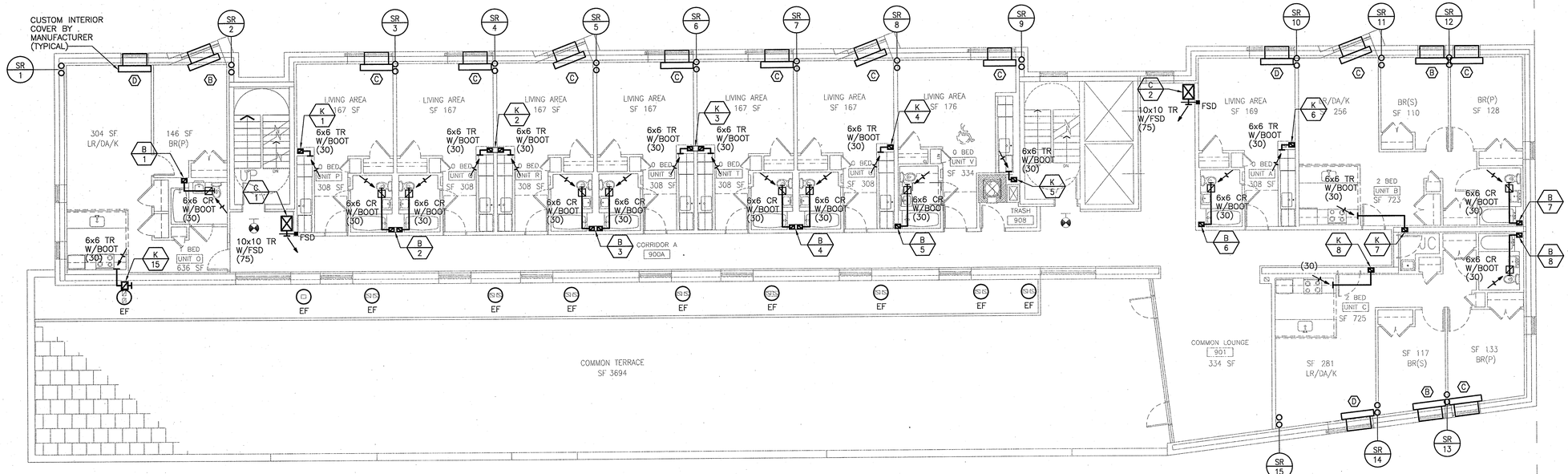

0 4 8 16

1/8"=1"-0"

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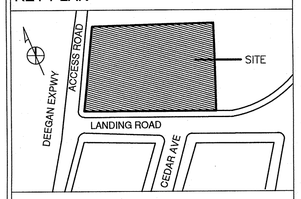

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
NINTH FLOOR
MECHANICAL PLAN

SEAL:

STATE OF NEW YORK * CHARLES F. JOHNSON * No. 085545 LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CJ	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	7 of 12

DWG. NO.:

M205.00

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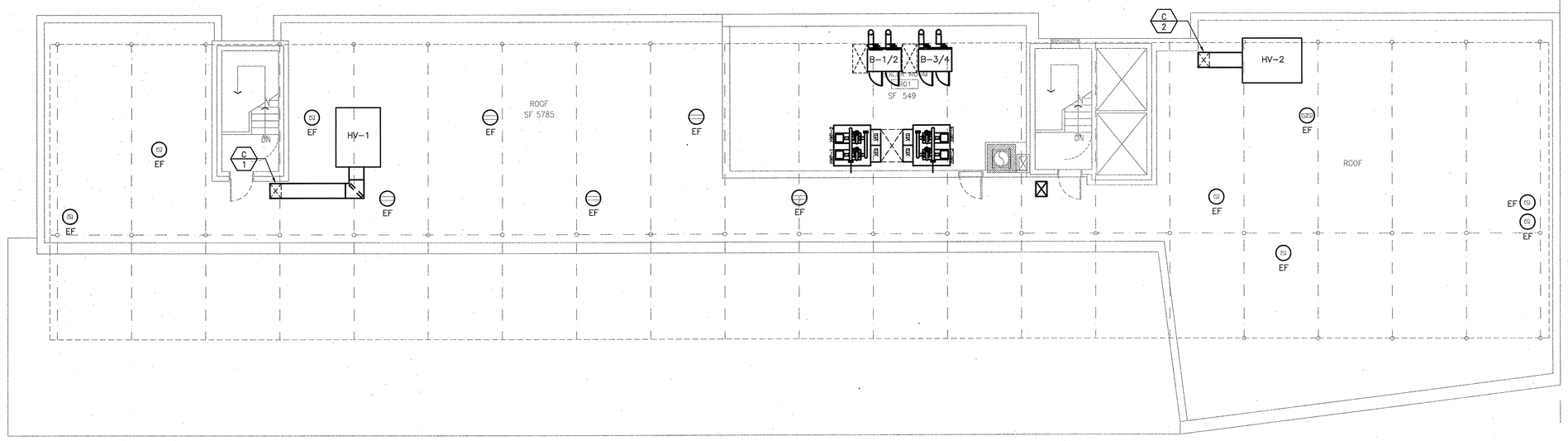

0 4 8 16
1/8" = 1'-0"

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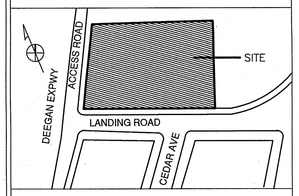

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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Owner / Sponsor:
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tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
ROOF AND BULKHEAD MECHANICAL PLAN

SEAL:
STATE OF NEW YORK · CHARLES F. JOHNSON III · LICENSED PROFESSIONAL ENGINEER · LICENSE NO. 080545

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CJ	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	8 of 12

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M206.00

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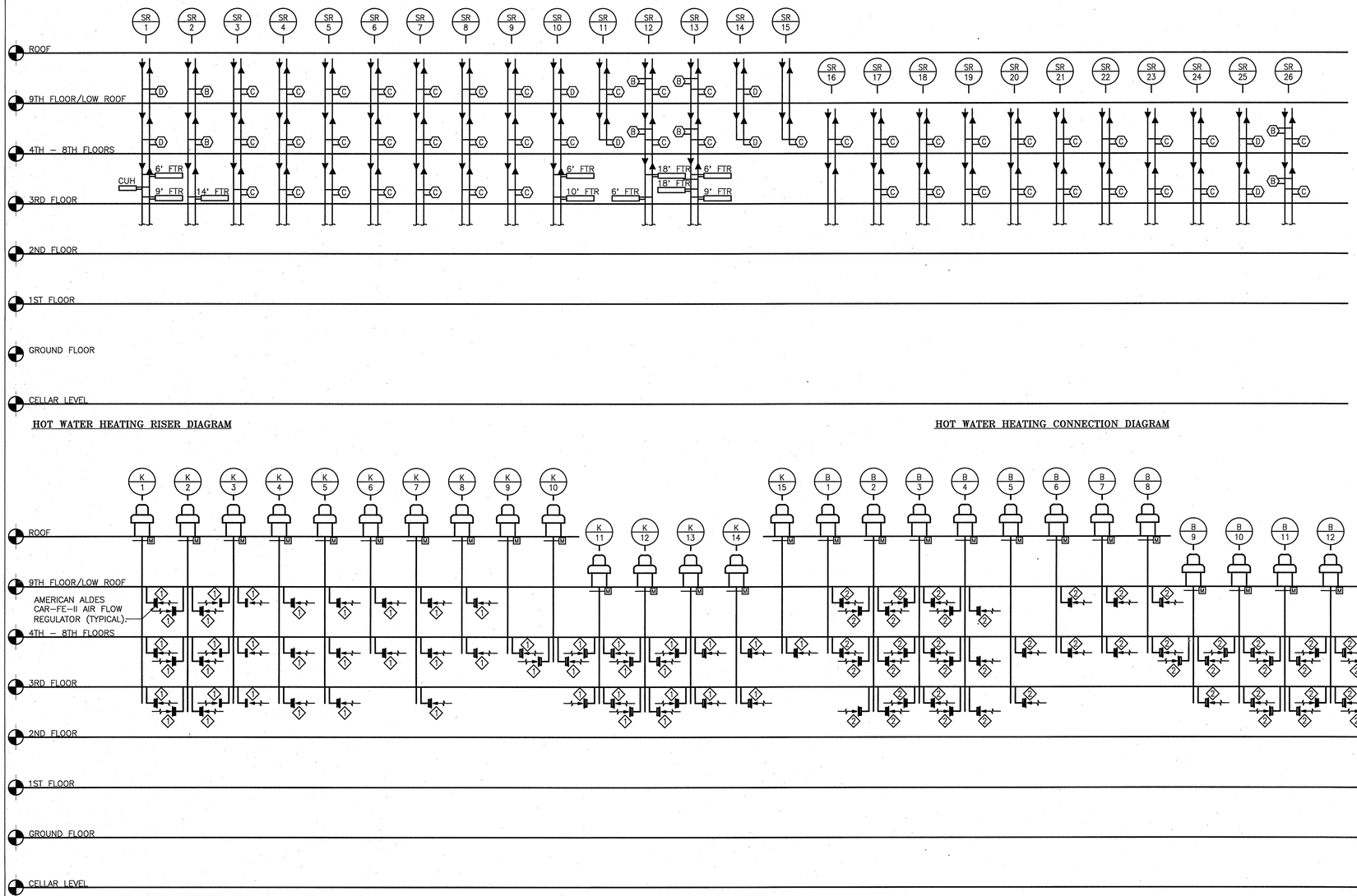

VENTILATION RISER DIAGRAM

1. 6x6 TR/W BOOT (30)
2. 6x6 CR/W BOOT (30)
3. 10x10 TR (75)

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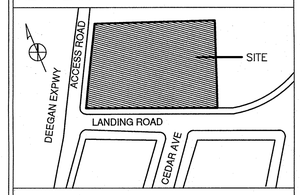
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
MECHANICAL - RISER DIAGRAMS

SEAL:
STATE OF NEW YORK
CHARLES F. JOHNSON III
No. 080145
LICENSED PROFESSIONAL ENGINEER

PROJECT NO. :	9092.000
SCALE:	NONE
BY: KBP	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	9 of 12

DWG. NO. :
M300.00

B — BOILER SCHEDULE

BASIS OF DESIGN: AERCO

BOILER NO.	BOILER MODEL NO.	LOCATION	SERVICE	HOT WATER DATA					FUEL-GAS BURNER DATA				COMB. INLET SIZE (IN.)	FLUE OUTLET SIZE (IN.)	PRESSURE RELIEF VALVE SETTING (PSI)	DIMENSIONS (LxWxH) (IN.)	OPER. WEIGHT (LBS)
				OUTPUT (MBH)	FLOW (GPM)	WATER PRESS. DROP (FT.WC)	TEMP. °F ENT.	TEMP. °F LVG.	GAS TYPE	GAS INPUT (MBH)	MINIMUM GAS INLET PRESSURE (IN.WG)	EFF. (%)					
B-1	AERCO BMK-3.0LN GWB	ROOF MER (HOUSING)	HW	2712	135	5	120	160	NATURAL	3000	7.5	90.4	8"	8"	??	64x28x79	2580
B-2	AERCO BMK-3.0LN GWB	ROOF MER (HOUSING)	HW	2712	135	5	120	160	NATURAL	3000	7.5	90.4	8"	8"	??	64x28x79	2580
B-3	AERCO BMK-1.0LN GWB	ROOF MER (SHELTER)	HW	904	???	5	120	160	NATURAL	1000	7.5	90.4	8"	8"	??	??x??x??	1500
B-4	AERCO BMK-1.0LN GWB	ROOF MER (SHELTER)	HW	904	???	5	120	160	NATURAL	1000	7.5	90.4	8"	8"	??	??x??x??	1500

NOTES:
1. PROVIDE BOILER CONTROL MODULES AS NECESSARY TO INTERFACE WITH BUILDING CONTROLS. REFER TO SPECIFICATIONS.
2. INSTALL BOILERS ON 6" THICK CONCRETE PAD.
3. BOILERS SHALL BE PROVIDED WITH LOW WATER CUTOFF CONTROLS.
4. BOILERS PRESSURE SETTING FOR RELIVE VALVE TO BE SET AT ?? PSI.

AC — PACKAGED TERMINAL AIR CONDITIONING UNITS

BASIS OF DESIGN: AS NOTED

DESIGNATION	MANUFACTURER	MEA #	MODEL #	COOLING BTUH	HEATING BTUH	EER	ELECTRICAL DATA	AMPERAGE	GPM	CFM	OUTSIDE CFM
(A)	ICE-AIR	250-93-E	5RSNU07	7700	16500	12	120V, 1ø, 60Hz	5.5	2.0	380	60
(B)	ICE-AIR	250-93-E	5RSNU09	9700	16500	12	120V, 1ø, 60Hz	7.1	2.0	380	60
(C)	ICE-AIR	250-93-E	5RSNU13	12800	16500	11.4	208V, 1ø, 60Hz	5.5	2.0	400	60
(D)	ICE-AIR	250-93-E	5RSNU15	14400	19400	10.5	208V, 1ø, 60Hz	6.5	2.0	450	60
(E)	ICE-AIR	250-93-E	5RSNU18	16400	19400	10.3	208V, 1ø, 60Hz	7.7	2.0	540	60

NOTES:
1. PROVIDE THERMAL BREAK SLEEVE TO G.C. FOR INSTALLATION. WITH MOTORIZED VALVE. SET TEMPERATURE LIMITS ON UNIT AT THE FACTORY – 68" – 74".
2. PROVIDE EXTRA OUTDOOR AIR KIT, 20 CFM.
3. PTAC CHASIS AND DUCTS TO BE COVERED DURING CONSTRUCTION.

RTU — SELF CONTAINED AIR CONDITIONING UNIT SCHEDULE (AIR COOLED)

BASIS OF DESIGN: _

UNIT NO.	LOCATION	AREA SERVED	SUPPLY FAN DATA					RETURN FAN DATA				EVAPORATOR COIL DATA						CONDENSER DATA			GAS FURNACE				ELECTRICAL DATA				MODEL NO. WEIGHT (LBS.)	EER
			TOTAL CFM	MIN. O.A. CFM	MIN. EXT. S.P. (IN.W.G.)	FAN RPM	MOTOR HP	TOTAL CFM	MIN. EXT. S.P. (IN.W.G.)	MOTOR HP	FAN RPM	ENT. DB (°F)	ENT. WB (°F)	LVG. DB (°F)	LVG. WB (°F)	MAX. FACE VEL. (FPM)	MIN. ROWS DEEP	OUT-DOOR DESIGN DB (°F)	COIL MIN. ROWS DEEP	MAX. COND. TEMP. (°F)	AIR DATA EAT DB (°F)	AIR DATA LAT DB (°F)	TOTAL CFH	MBH	VOLT/ PH	FULL LOAD AMPS	MINIMUM CIRCUIT AMPACITY	MAXIMUM OVERLOAD PROTECTION		
RTU-1	ROOF	SHELTER	24000	–	–	–	–	–	–	–	–	–	–	–	–	450	–	95	–	115	–	–	–	–	208/3	–	–	–	–	–

NOTES:
1. AIR FILTERS SHALL BE U.L. LISTED CLASS I.
2. PROVIDE FACTORY MOUNTED DISCONNECT SWITCHES FOR ALL AIR CONDITIONING UNITS.
3. ALL UNITS SHALL BE PROVIDED WITH FACTORY MOUNTED VARIABLE FREQUENCY DRIVES FOR SUPPLY, RETURN AND EXHAUST FANS.
4. FOR EACH UNIT THE MANUFACTURER IS REQUIRED TO PROVIDE SPECIAL ATTENUATION PACKAGES AS REQUIRED TO MEET THE MAXIMUM RADIATED SOUND POWER LEVELS SHOWN IN THE RESPECTIVE SPECIFICATION SECTIONS.
5. SEE STRUCTURAL DRAWINGS FOR MOUNTING DUNNAGE AND DIMENSIONS.
6. PROVIDE HOT GAS REHEAT COIL. HOT GAS REHEAT COIL SHALL BE SIZED FOR 70° LEAVING AIR TEMPERATURE FOR DEHUMIDIFICATION MODE OF OPERATION.
7. PROVIDE VARIABLE CAPACITY COMPRESSOR.

ET — EXPANSION TANK SCHEDULE

BASIS OF DESIGN: BELL AND GOSSET

TANK NO.	LOCATION	SYSTEM SERVED	TANK TYPE	TANK VOLUME (GAL.)	SIZE DIA. (IN.)	SIZE LENGTH (IN.)	OPER. TEMP. (°F)	INITIAL FILL PRESS. (PSIG)	MAX. OPER. PRESS. (PSIG)	A.S.M.E. WORK PRESS. (PSIG)	MODEL No.	MAX WEIGHT	REMARKS
ET-1	ROOF MER	HW SYSTEM (HOUSING)	CLOSED	–	–	–	–	–	–	–	–	–	VERTICAL
ET-2	ROOF MER	HW SYSTEM (SHELTER)	CLOSED	–	–	–	–	–	–	–	–	–	VERTICAL

CUH, UH — HOT WATER CABINET AND UNIT HEATER SCHEDULE

BASIS OF DESIGN: VULCAN

UNIT NO.	LOCATION	AREA SERVED	MBH	AIR DATA CFM (HI)	AIR DATA TEMP.°F ENT.	AIR DATA TEMP.°F LVG.	WATER DATA GPM	WATER DATA TEMP.°F ENT.	WATER DATA TEMP.°F LVG.	WATER DATA MAX. P.D. (FT.)	MOTOR DATA NO.	MOTOR DATA HP OR (WATTS)	MOTOR DATA RPM (HI)	MOTOR DATA NO. OF SPEEDS	MOTOR DATA VOLT/ PH/HZ	MODEL No.	ENCLOSURE DIMENSION (L x W x D)	WEIGHT (LBS)	TYPE CONFIG.	REMARKS
CUH-X	SEE PLANS	SEE PLANS																		

NOTES:
1. PROVIDE COLOR CHART. COLOR TO BE SELECTED BY ARCHITECT.
2. PROVIDE UNIT MOUNTED THERMOSTAT FOR ALL UNITS UON.
3. PROVIDE (1) EXTRA THROWAWAY FILTER FOR ALL CUH.
4. INVERTED FLOW SUPPLY AT FLOOR (ALL WALL-MOUNT UNITS).

KEF, BEF, CEF — FAN SCHEDULE

BASIS OF DESIGN: GREENHECK

FAN NO.	LOCATION	AREA OR SYSTEM SERVED	CFM	STATIC PRESS. (IN.WG.)	RPM	FAN BHP	FAN TYPE	MOTOR DATA HP OR WATTS	MOTOR DATA VOLT/PH	EMERG. POWER (YES OR NO)	OPERATING WEIGHT (POUNDS)	MODEL No.	FAN INTERLOCKED WITH
KEF-X	ROOF	KITCHEN GENERAL EXHAUST											–
BEF-X	ROOF	BATHROOM EXHAUST											–
CEF-X	ROOF	GAS MER/EDR											–

1. PROVIDE BMS POINTS AND CONTROL SEQUENCE AS NOTED IN SPECIFICATIONS.
2. REFER TO SPECIFICATION SECTION FOR ALL SPECIAL REQUIREMENTS (COATING, ETC.) ASSOCIATED WITH THE EXHAUST FANS SERVING THE KITCHEN HOOD.
3. FANS WITH AN AIR FLOW RATE LESS THAN 300 CFM SHALL HAVE A GRAVITY TYPE DAMPER. FANS WITH AN AIR FLOW RATE OF 300 CFM AND GREATER SHALL HAVE A MOTORIZED DAMPER AS PER NYCECC 503.2.4.4. MOTORIZED DAMPER SHALL RECEIVE POWER FROM ELECTRICAL FEED FOR RESPECTIVE FAN. (TYPICAL ALL FANS)
4. PROVIDE ALL ROOF EXHAUST FANS WITH CURB, BIRD SCREENS AND DISCONNECT.
5. PROVIDE ALL INLINE FANS WITH ISOLATORS, HOODS, HANGERS AND HOOD FOR MOTOR AND DRIVE.
6. ALL UTILITY FANS WITH MOTOR HOOD, ACCESS DOOR AND CAPPED DRAIN OUTLET.

P — PUMP SCHEDULE

BASIS OF DESIGN: BELL & GOSSETT

PUMP NO.	LOCATION	EQUIPMENT OR SYSTEM SERVED	PUMP TYPE	GPM	TOTAL HEAD (FT.)	NPSH REQ'D (FT.)	CASING DESIGN PRESS. (PSIG)	FLUID TEMP. (°F)	RATIO OF IMPELLER DIA. TO MAX. DIA.	EFF. @ OPER. POINT (%)	BHP	MOTOR DATA HP	MOTOR DATA VOLT/ PH	MOTOR DATA RPM	SEAL TYPE	WEIGHT LBS	REMARKS
HWP-1	ROOF MER (HOUSING)	BOILERS 1 AND 2	END SUCTION	270													
HWP-2	ROOF MER (HOUSING)	BOILERS 1 AND 2	END SUCTION	270													
HWP-3	ROOF MER (SHELTER)	BOILERS 1 AND 2	END SUCTION	???													
HWP-4	ROOF MER (SHELTER)	BOILERS 1 AND 2	END SUCTION	???													

VARIABLE AIR VOLUME (VAV) BOX SCHEDULE

BASIS OF DESIGN: TITUS

UNIT TAG	CFM RANGE MAX.	CFM RANGE MIN.	MIN. S.P. INLET AT MAX. CFM (IN. W.G.)	DESIGN CFM MAX.	DESIGN CFM MIN.	MAX. NC AT MAX. CFM AND 1.5" W.G. S.P. DISCHARGED	MAX. NC AT MAX. CFM AND 1.5" W.G. S.P. RADIATED	DIMENSIONS LENGTH (IN.)	DIMENSIONS WIDTH (IN.)	DIMENSIONS HEIGHT (IN.)	BOX INLET SIZE (IN.)	MODEL	REMARKS
VAV-X	–	–	0.01	–	–	–	–	15 1/2	20	17 1/2	–	DESV	SEE NOTES

NOTES:
1. ALL SUPPLY AIR TERMINALS SHALL BE PRESSURE INDEPENDENT TYPE AND CONSTRUCTED OF 22 GAUGE GALVANIZED STEEL WITH MECHANICALLY LOCKED AND GASKETED SEAMS AND SHALL MEET THE MECHANICAL STANDARDS OF AND BE IN COMPLIANCE WITH NFPA 90A, UL 181, AND ASTM C665. AIR TERMINAL CASING SHALL HAVE 1" THICK ALUMINUM FOIL-FACED DUAL DENSITY GLASS FIBER FIBRE-LOK INSULATION. THE EDGES OF THE INSULATION SHALL BE SEALED BY ZINC COATED STEEL THAT LOCKS THE ADJACENT EDGES OF THE INSULATION. AIR TERMINAL LEAKAGE SHALL BE LESS THAN 1% OF THE MAXIMUM RATED AIRFLOW AT 3" W.G. INLET STATIC PRESSURE AND SHALL BE CAPABLE OF TIGHT SHUT-OFF OF ROOM SUPPLY AIRFLOW. SUPPLY AIR TERMINALS SHALL BE PROVIDED WITH AN AVERAGING PITOT TUBE ARRAY TYPE AIRFLOW SENSOR.
2. PROVIDE CONTROLS ENCLOSURE FOR EACH BOX.
3. PROVIDE 1" ACOUSTICAL LINING 15" DOWNSTREAM OF BOX.
4. PROVIDE PRE-WIRED 120/24 VOLT CONTROL TRANSFORMER AT EACH BOX.
5. PROVIDE LEFT OR RIGHT SIDE CONTROLS FOR EACH BOX AS REQUIRED TO HAVE PROPER ACCESS FOR SERVICE BY CODE.
6. ALL TERMINAL BOXES SHALL BE MINIMUM AIR FLOW VALUES SHALL BE SET TO 30% OF THE AIR FLOW LISTED ON THE PLANS.
7. ALL ZONE SET POINT TEMPERATURES SHALL BE SET TO 75 DEGREES.

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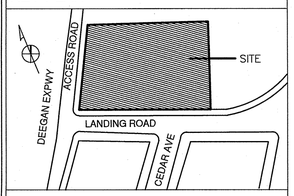

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Bowery Residents' Committee

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Bronx, New York 10468

TITLE:
MECHANICAL SCHEDULES

SEAL: STATE OF NEW YORK · CHARLES F. JOHNSON III · No. 080545 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	NONE
BY: CJ/KBP	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	10 of 12

DWG. NO.:
M301.00

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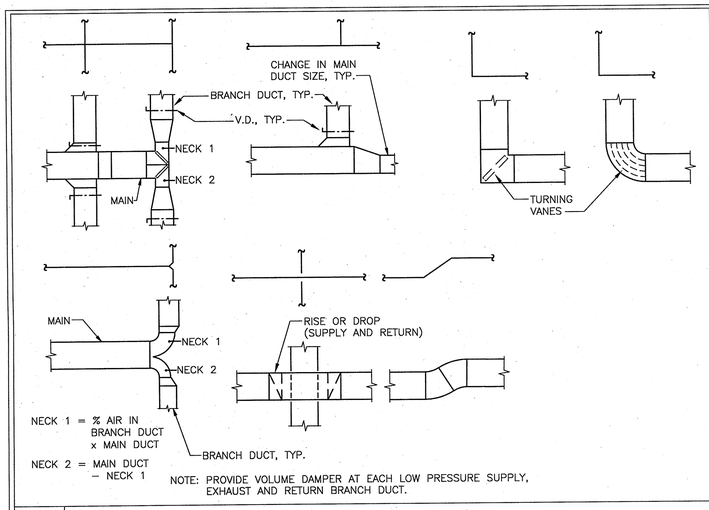
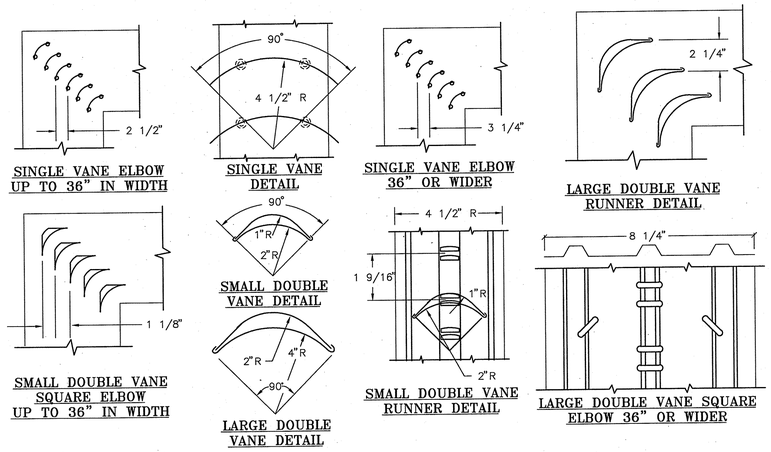


NOTE: PROVIDE VOLUME DAMPER AT EACH LOW PRESSURE SUPPLY, EXHAUST AND RETURN BRANCH DUCT.

① TYPICAL SINGLE LINE DUCT EQUIVALENTS

NOT TO SCALE



② LOW VELOCITY DUCTWORK ELBOWS

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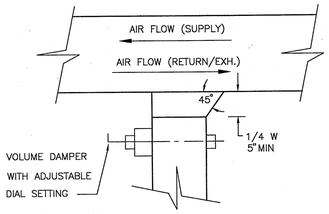

③ DUCT BRANCH TAKEOFF FOR LOW PRESSURE DUCTWORK

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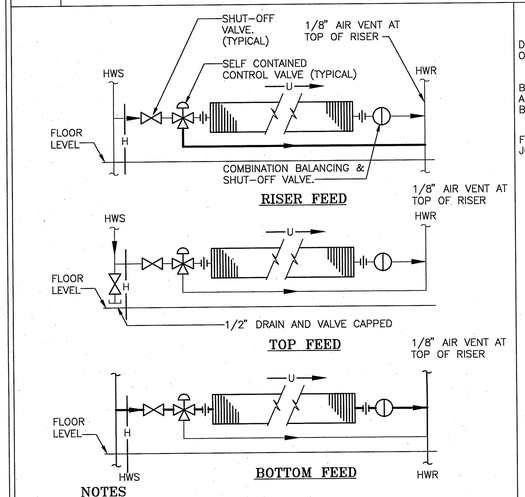
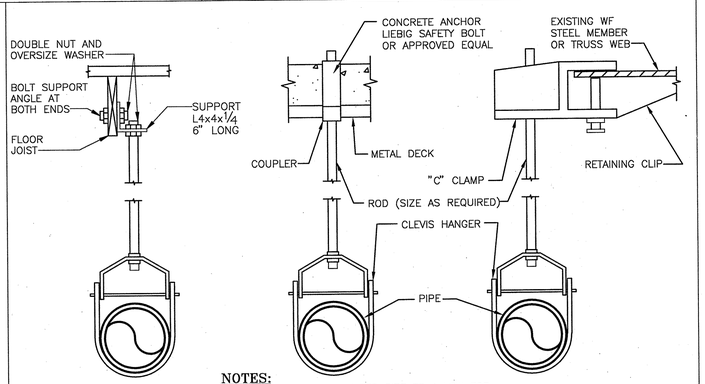


NOTES

1. HEIGHT "H" AS REQUIRED TO ACCOMMODATE ENCLOSURE.
2. SIMILAR PIPING FOR MULTIPLE ELEMENTS IN SERIES.
3. WHEN INSTALLING TWO ELEMENTS HIGH IN SERIES, CONNECT HWS TO BOTTOM ELEMENT AND PITCH UP TOWARD HWR.
4. THREE ELBOW CONNECTIONS SHALL BE USED AT SUPPLY & RETURN CONNECTIONS TO & FROM RISERS TO SUIT PROJECT.

④ HOT WATER FIN TUBE RADIATION

NOT TO SCALE



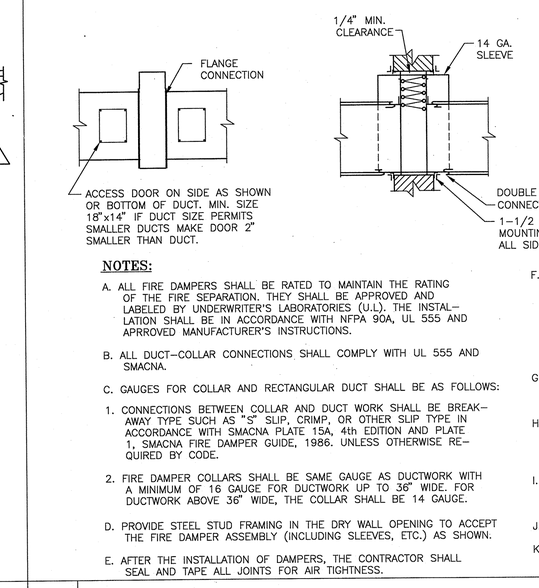
NOTES:

1. INCREASE CLEVIS HANGER SIZE TO ALLOW FOR INSULATION OF THOSE LINES REQUIRING INSULATION
2. FOR INSULATED LINES USE STEEL PIPE SHIELDS AT HANGER POINTS
3. THE ABOVE DETAIL SHALL BE USED ONLY FOR LINES UP TO AND INCLUDING 4" IN SIZE.
4. HANGING DETAILS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL.
5. HANGER SPACING SHALL BE AS FOLLOWS:

PIPE SIZE	MAX. HANGER SPACING	MIN. ROD SIZE
1/2" TO 1"	7' O.C.	3/8"
1–1/4" TO 2"	9' O.C.	1/2"
2–1/2" TO 4"	10' O.C.	1/2"

⑤ TYPICAL HANGER DETAILS

NOT TO SCALE



NOTES:

A. ALL FIRE DAMPERS SHALL BE RATED TO MAINTAIN THE RATING OF THE FIRE SEPARATION. THEY SHALL BE APPROVED AND LABELED BY UNDERWRITER'S LABORATORIES (U.L). THE INSTAL–LATION SHALL BE IN ACCORDANCE WITH NFPA 90A, UL 555 AND APRROVED MANUFACTURER'S INSTRUCTIONS.

B. ALL DUCT–COLLAR CONNECTIONS SHALL COMPLY WITH UL 555 AND SMACNA.

C. GAUGES FOR COLLAR AND RECTANGULAR DUCT SHALL BE AS FOLLOWS:

1. CONNECTIONS BETWEEN COLLAR AND DUCT WORK SHALL BE BREAK–AWAY TYPE SUCH AS "S" SLIP, CRIMP, OR OTHER SLIP TYPE IN ACCORDANCE WITH SMACNA PLATE 15A, 4th EDITION AND PLATE 1, SMACNA FIRE DAMPER GUIDE, 1986. UNLESS OTHERWISE RE–QUIRED BY CODE.
2. FIRE DAMPER COLLARS SHALL BE SAME GAUGE AS DUCTWORK WITH A MINIMUM OF 16 GAUGE FOR DUCTWORK UP TO 36" WIDE. FOR DUCTWORK ABOVE 36" WIDE, THE COLLAR SHALL BE 14 GAUGE.

D. PROVIDE STEEL STUD FRAMING IN THE DRY WALL OPENING TO ACCEPT THE FIRE DAMPER ASSEMBLY (INCLUDING SLEEVES, ETC.) AS SHOWN.

E. AFTER THE INSTALLATION OF DAMPERS, THE CONTRACTOR SHALL SEAL AND TAPE ALL JOINTS FOR AIR TIGHTNESS.

F. TO ALLOW FOR EXPANSION, DAMPERS SHALL HAVE A CLEAR–ANCE EQUIVALENT TO 1/8" FOR EACH FOOT OF DAMPER HEIGHT. THE SIDE CLEARANCE SHALL BE 1/8" FOR EACH FOOT OF DAMPER WIDTH DIVIDED EQUALLY TO THE RIGHT AND TO THE LEFT OF THE COLLAR. THE MAXIMUM CLEARANCE FOR THE TOP AND THE TOTAL OF BOTH SIDES SHALL BE 1/2" EACH. THE RETAINING ANGLES SHALL BE 1–1/2 x 1–1/2 x 1/8 SO THAT THERE WILL BE A MINIMUM OF 1" OVERLAP ON THE FIRE SEPARATION.

G. DAMPER SHALL BE SECURED TO COLLAR WITH EITHER 1/2" TACK WELDS, NO. 10 SHEETMETAL SCREWS, 1/4" DIA., NUTS AND BOLTS, OR 3/16" STEEL POP RIVETS, ALL 6" ON CENTER.

H. RETAINING ANGLES SHALL BE SECURED TO COLLAR, SLEEVE OR PLATE WITH EITHER 1/2" TACKWELDS, NO. 10 SHEETMETEL SCREWS, 1/4" DIA., NUTS AND BOLTS, OR 3/16" STEEL POP RIVETS, ALL 6" ON CENTER.

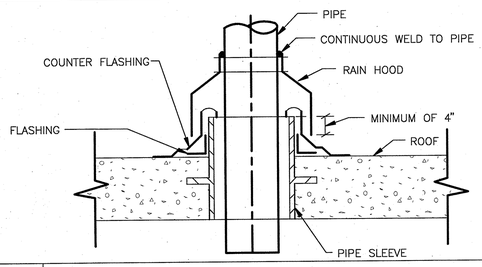
I. WHERE HUNG CEILING DOES NOT HAVE REMOVABLE TILES, AN ACCESS DOOR (FIRE RATED WHERE REQUIRED) SHALL BE IN–STALLED IN CEILING NEAR LOCATION OF FIRE DAMPER.

J. ALL RETAINING ANGLES SHALL BE GALVANIZED STEEL.

K. INSTALL FIRE DAMPER IN THIS FASHION SO THE LOCKING DEVICE CAN BE ACCESSED WHEN THE DAMPER IS CLOSED.

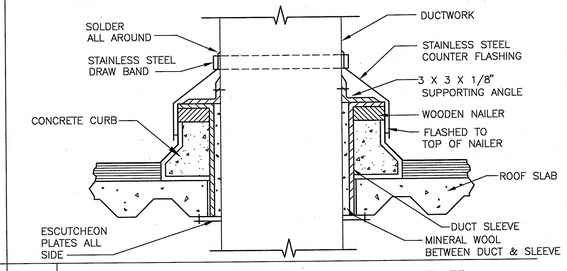
⑥ FIRE DAMPER DUCT DETAIL

NOT TO SCALE



⑦ PIPE PIERCING ROOF

NOT TO SCALE



⑧ DUCT PENETRATION DETAIL THROUGH ROOF

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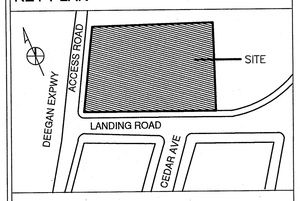

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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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TITLE:

MECHANICAL - DETAILS
SHEET NO.1

SEAL: STATE OF NEW YORK · CHARLES F. JOHNSON II · No. 080548-1 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	NONE
BY: CJ/KBP	CHECK: CJ
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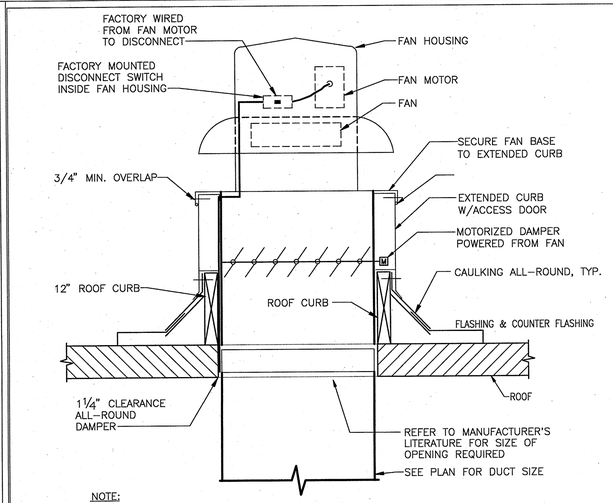
PAGE:	11 of 12

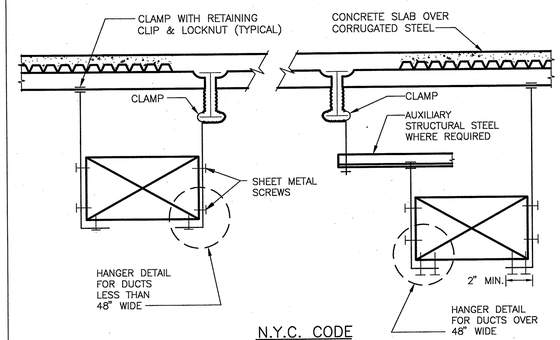
DWG. NO.:

M302.00



NOTE:
1. ALL ROOF MOUNTED FANS SHALL BE PROVIDED WITH INTERNAL VIBRATION ISOLATION.
2. NOT APPLICABLE TO SMOKE EXHAUST.

① ROOF-TOP CENTRIFUGAL EXHAUST FAN
NOT TO SCALE

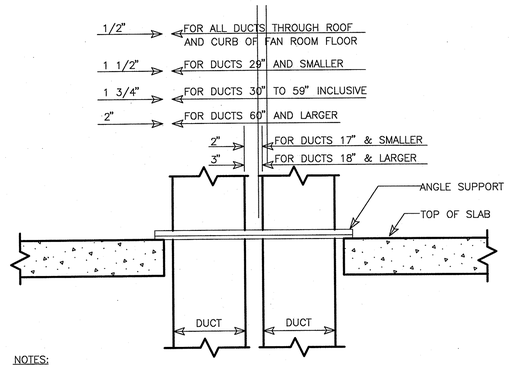


N.Y.C. CODE

DUCT SIZE	HANGER SIZE
< 2 SQ. FT.	1"X1/16"
> 2 SQ. FT.	1"X1/8"

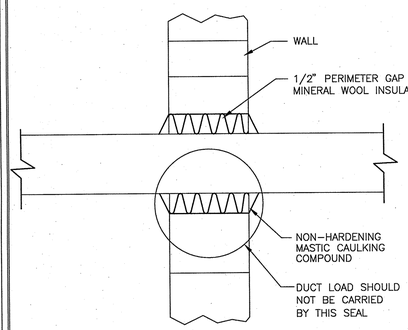
DUCT SIZE	MAX. SPACING
UPTO 4 SQ. FT.	8'-0"
UPTO 10 SQ. FT.	6'-0"
OVER 10 SQ. FT.	4'-0"

② DUCT SUPPORT DETAIL
NOT TO SCALE

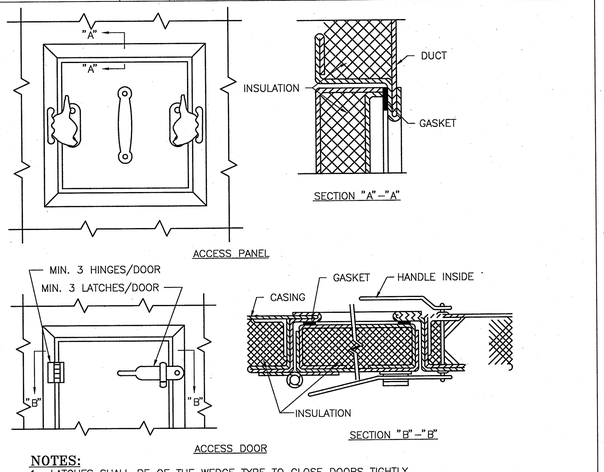


NOTES:
1. FOR RECTANGULAR DUCTS LARGER DIMENSION WILL GOVERN CLEARANCES.
2. REFER TO SMACNA HVAC DUCT CONSTUCTION STANDARDS, THIRD EDITION, 2005, FIGURE 5-8.

③ SUPPORT DETAIL FOR VERTICAL DUCT PENETRATION
PENETRATION CLEARANCES AT FLOOR & ROOF OPENINGS
NOT TO SCALE

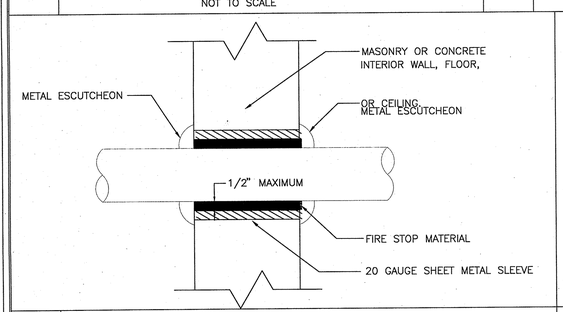


④ DETAILS FOR ACOUSTICAL SEALING
OF DUCT/PIPE PENETRATING WALLS
NOT TO SCALE

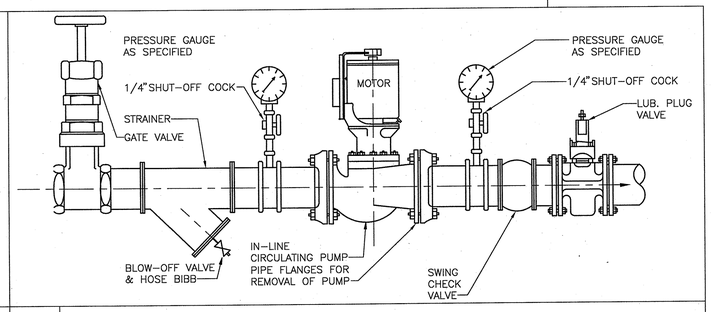


NOTES:
1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE PINS.
3. PROVIDE ACCESS DOORS ON AIR HANDLING UNITS AND DUCT WORK INSTALLED IN EQUIPMENT ROOMS. PROVIDE ACCESS PANELS ON ALL EQUIPMENT AND DUCTWORK INSTALLED ABOVE FINISHED CEILINGS WHERE SPACE LIMITATIONS DO NOT ALLOW HINGED DOORS TO OPEN.

⑥ ACCESS DOOR & PANEL DETAILS
NOT TO SCALE



⑦ PIPE PENETRATION IN INTERIOR
WALL/FLOOR/CEILING
NOT TO SCALE



⑤ IN-LINE PUMP HOOK-UP
NOT TO SCALE

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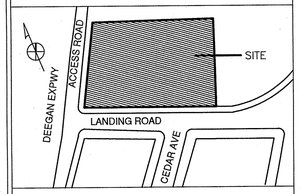
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Owner/Operator:
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tel: 212-803-5700
fax: 212-533-1893

Bowery Residents' Committee

Landing Road
233 Landing Road
Bronx, New York 10468

TITLE:
MECHANICAL - DETAILS
SHEET NO.2

SEAL:
STATE OF NEW YORK · CHARLES P. JOHNSON III · No. 080545-1 · REGISTERED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	NONE
BY: CJ/KBP	CHECK: CJ
DATE:	DECEMBER 22, 2014
PAGE:	12 of 12

DWG. NO.:
M303.00

GENERAL NOTES:

1. ALL GAS METER PIPING, INCLUDING VALVES, GAS METER AND REGULATORS SHALL MEET ALL UTILITY REQUIREMENTS.
2. ALL GAS, HOT WATER CIRCULATION, HOT AND COLD WATER PIPING ARE AT CEILING OR IN HUNG CEILING, EXCEPT IN PIPE SPACES OR OTHERWISE NOTED.
3. ACCESS DOORS SHALL BE PROVIDED FOR ALL CLEANOUTS, VALVES, FLUSH VALVES, AND ANY OTHER EQUIPMENT OR ACCESSORIES THAT MAY REQUIRE ACCESS FOR MAINTENANCE, OR OPERATION WHICH ARE LOCATED BEHIND WALLS AND PARTITIONS OR CONCEALED IN HUNG CEILING.
4. CONTRACTOR SHALL CHECK AND VERIFY THE EXACT LOCATION OF ALL PIPE PENETRATIONS AND MAKE CERTAIN THERE NO OBSTRUCTIONS AND INTERFERENCES.
5. CONTRACTOR SHALL REFER TO AND COORDINATE WITH ARCHITECTURAL DRAWINGS AND WORK FOR EXACT LOCATION OF ALL PLUMBING FIXTURES.
6. CONTRACTOR SHALL REFER TO AND COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS, INCLUDING WORK FOR ALL CONCRETE PADS, PUMP PITS, GREASE TRAP PITS, UNDERGROUND PIPE SUPPORT AND OTHER RELEVANT DETAILS.
7. CONTRACTOR SHALL COORDINATE ALL UNDER SLAB PIPE LAYOUT WITH FOUNDATION PLAN.
8. CONTRACTOR SHALL FURNISH AND MOUNT ALL MOTORS, STARTERS AND CONTROL DEVICES FOR ALL EQUIPMENT SUPPLIED. REFER TO ELECTRICAL SPECIFICATIONS FOR MOTORS AND CONTROL EQUIPMENT.
9. CONTRACTOR SHALL REFER TO AND COORDINATE WITH ELECTRICAL DRAWING AND WORK ENSURING NO PIPE IS RUN DIRECTLY ABOVE NOR WITHIN THREE FEET OF ELECTRICAL PANELS.
10. UNDERGROUND PIPING REQUIREMENTS FOR PROTECTING THE PIPES, BACK FILLING AND UNIFORM SOIL BEARING ALONG THE LENGTH OF THE PIPE SHALL BE AS PER PC306.3 REFER TO PLUMBING DETAILS & STRUCTURAL DRAWINGS FOR PIPE SUPPORT AND ENCASEMENT DETAILS.
11. ALL PIPES PENETRATED THROUGH WALLS, FLOORS, AND UNDERGROUND FOUNDATION WALLS SHALL BE PROVIDED WITH REQUIRED OPENINGS, SLEEVES, SEALS AND PACKINGS.
12. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE PADS AND SUMP PITS.
13. PLUMBING AND FIRE PROTECTION SYSTEM SHALL BE DESIGNED FOR SEISMIC REQUIREMENTS FOR NYC.
14. FOR ALL ITEMS THAT ARE REQUIRED TO HAVE SEISMIC SUPPORTS OR RESTRAINTS, SEISMIC PLANS AND SEISMIC RESTRAINT CALCULATIONS SHALL BE PREPARED, SEALED, SIGNED, AND SUBMITTED BY A PROFESSIONAL MECHANICAL ENGINEER LICENSED IN THE STATE OF NEW YORK ENGAGED BY THE CONTRACTOR. THE ENGINEER SHALL PROVIDE INSTALLATION SUPERVISION OF ALL SEISMIC SUPPORTS AND RESTRAINTS. THE CONTRACTOR'S REGISTERED PROFESSIONAL ENGINEER SHALL SUBMIT SIGNED AND SEALED AFFIDAVIT STATING THAT THE INSTALLATION IS IN FULL COMPLIANCE WITH THE SIGNED/SEALED SHOP DRAWINGS.
15. MATERIALS

    A.PIPING SHALL BE AS SPECIFIED AND SHALL ALSO COMPLY WITH THE FOLLOWING:

    1. DUCTILE IRON MECHANICAL JOINT PIPE SHALL BE USED ON WATER SERVICE PIPING. PIPE SHALL BE CLASS 52 FOR 3" AND 4"PIPE SIZES AND CLASS 56 FOR PIPE SIZES 6" AND LARGER.

    2. TYPE "L" COPPER TUBING (HARD DRAWN) SHALL BE FOR USE ON WATER DISTRIBUTION PIPING, EXCLUDING SHORT BRANCH SUPPLIES TO FIXTURES, ABOVE GROUND.

    3. COPPER TUBING TYPE "K" SHALL BE HARD DRAWN FOR USE ON WATER DISTRIBUTION PIPING BELOW GROUND ONLY.

    4. CAST-IRON PIPE:

    A. EVENLY COATED, CYLINDRICAL, SMOOTH, FREE FROM ALL DEFECTS, OF UNIFORM THICKNESS AND OF THE WEIGHTS REQUIRED BY THE NEW YORK CITY RULES GOVERNING PLUMBING AND DRAINAGE, AND SHALL BE OF THE GRADE KNOWN IN COMMERCE AS "SERVICE WEIGHT". EACH LENGTH OF PIPE AND EACH FITTING SHALL BE PLAINLY MARKED WITH THE MANUFACTURER'S NAME OR REGISTERED TRADEMARK AND WITH THE LETTERS "SV" TO INDICATE "SERVICE WEIGHT". THE MARKING MAY BE CAST, STENCILED, OR OTHERWISE APPLIED ON THE PIPE SO AS TO BE CLEAR AND LEGIBLE AT THE TIME OF INSTALLATION. THE MARKING SHALL BE CAST ON FITTINGS AND SHALL BE LOCATED AWAY FROM THE SPIGOT END SO AS NOT TO INTERFERE WITH PROPER JOINING UPON INSTALLATION. CAST-IRON SOIL PIPE AND FITTINGS SHALL COMPLY WITH ASTM A74, LATEST EDITION.

    B. NO-HUB CAST IRON PIPE SHALL BE EVENLY COATED, CYLINDRICAL, SMOOTH, FREE FROM ALL DEFECTS, OF UNIFORM THICKNESS AND OF THE WEIGHTS REQUIRED BY THE NEW YORK CITY RULES GOVERNING PLUMBING AND DRAINAGE. EACH LENGTH OF PIPE AND EACH FITTING SHALL BE PLAINLY MARKED WITH THE MANUFACTURER'S NAME OR REGISTERED TRADEMARK. THE MARKING MAY BE CAST, STENCILED, OR OTHERWISE APPLIED ON THE PIPE, AND CAST ON FITTINGS SO AS TO BE CLEAR AND LEGIBLE AT THE TIME OF INSTALLATION. CAST-IRON SOIL PIPE AND FITTINGS FOR HUBLESS CAST IRON SANITARY SYSTEM SHALL COMPLY WITH CISPI STANDARD 301, AND ASTM A888, LATEST EDITION.

    5. STEEL PIPE:

    A. BLACK STEEL PIPE AND GALVANIZED STEEL PIPE SHALL BE GRADE A, SEAMLESS, ELECTRIC RESISTANCE WELDED PIPE, OR TYPE F FURNACE BUTT-WELDED, AND SHALL BE MADE IN ACCORDANCE WITH THE CURRENT EDITION OF THE ASTM A53 SPECIFICATION. PIPE SHALL BE FREE FROM SCALE, AND RUST, INJURIOUS SAND MARKS, BLISTERS, SCALE PITS, LAMINATIONS, IMPERFECT WELDS, OR OTHER DEFECTS THAT MIGHT AFFECT ITS STRENGTH, APPEARANCE OR ABILITY TO RESIST CORROSION. THE MAKER'S NAME SHALL BE ROLLED OR STAMPED IN THE METAL AT INTERVALS OF EACH LENGTH OF PIPE 2" AND LARGER, AND STAMPED ON A METAL TAG SECURED TO EACH BUNDLE OF PIPE 1-1/2" AND SMALLER.

    B. UNLESS OTHERWISE SPECIFIED OR INDICATED ON DRAWINGS, BLACK STEEL PIPE SHALL BE STANDARD WEIGHT AND GALVANIZED STEEL PIPE SHALL BE SCHEDULE 40 GALV. PIPE.
16. THE UNDERGROUND WATER SUPPLIES LINES AND SEWER LINES SHALL BE SEPERATED BY 5'-0" OF UNDISTURBED OR COMPACTED EARTH AS PER PC603.2.
17. PROVIDE WATER HAMMER ARRESTORS ON ALL WATER LINES SUPPLYING QUICK CLOSING FIXTURES IN ACCORDANCE WITH PC604.9.
18. COLD WATER PIPES SECTIONS RUNNING LESS THAN 4'-0" BELOW GRADE SHALL BE INSULATED AND OR HEAT TRACED AS PER PC 305.6.
19. SIAMESE CONNECTIONS NON COMPLYING SHOULD BE PLACED AT OUTSIDE OF FENCE FOR IMMEDIATE ACCESS BY FIRE DEPARTMENT OR PROVIDE GATE. PROVIDE GATE.
20. THE HOT WATER DISTRIBUTION SYSTEM AND THE RETURN CIRCULATION SYSTEM SHALL BE INSTALLED AND COMPLY AS PER PC501 THROUGH PC505

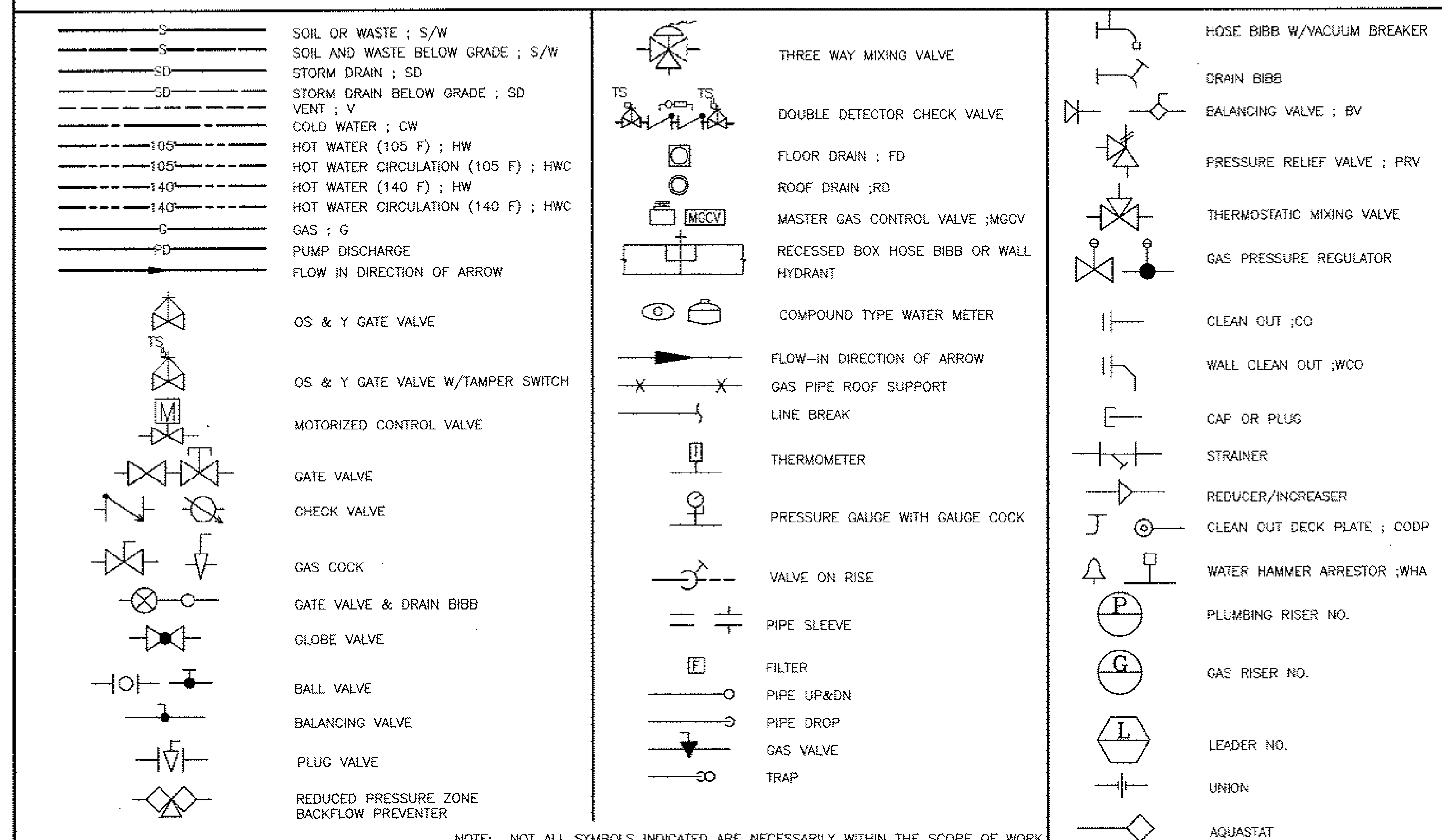
BUILDING DEPARTMENT PLUMBING NOTES

1. THE PLUMBING SYSTEMS (SANITARY, WASTE, VENT, WATER DISTRIBUTION GAS ETC.) AND ALL ASSOCIATED EQUIPMENT SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE 2008 NEW YORK CITY BUILDING, PLUMBING AND GAS CODES AND CURRENT REVISIONS.
2. ALL PLUMBING WORK SHALL BE DONE BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED NYC MASTER PLUMBER AS PER SECTION 28-408 OF THE 2008 NYC BUILDING CODE.
3. ALL PLUMBING WORK SHALL COMPLY WITH CHAPTER 4 OF THE 2008 NEW YORK CITY BUILDING CODE AND CHAPTERS 1 THROUGH 13 AND APPENDICES A THROUGH G OF THE NEW YORK CITY PLUMBING CODE.
4. THE SANITARY SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH THE GENERAL PROVISIONS PC305.
5. THE MATERIALS USED IN THE PLUMBING SYSTEMS WILL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC303.
6. THE INSTALLATION OF PLUMBING FIXTURES, FAUCETS AND FIXTURE FITTINGS SHALL BE IN ACCORDANCE WITH PC401 THROUGH PC427.
7. VERTICAL AND HORIZONTAL PIPING WILL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND WITH THE FULL COMPLIANCE WITH SECTION PC308.
8. CLEANOUTS SHALL BE INSTALLED AS PER SECTION PC708.
9. TRAPS FOR FIXTURES SHALL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC1002.
10. THE WATER SUPPLY SHALL BE INSTALLED AND MAINTAINED IN FULL COMPLIANCE WITH PC601 THROUGH PC613.
11. VALVES SHALL BE PROVIDED AS PER SECTION PC606.
12. THE SANITARY DRAINAGE SYSTEM WILL BE SIZED AND INSTALLED IN FULL COMPLIANCE WITH SECTIONS PC701 THROUGH PC715.
13. THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM OF THE SUBJECT BUILDING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC901 THROUGH PC919. VENT STACKS TO TERMINATE AT LEAST 24" ABOVE THE ROOF.
14. SANITARY TEES AND QUARTER BENDS MAY BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
15. SHORT SWEEPS WILL BE PERMITTED IN DRAINAGE PIPING 3 INCH DIAMETER OR LARGER FOR ANY OFFSETS EITHER HORIZONTAL OR VERTICAL.
16. SPECIAL AND STORAGE SYSTEMS PIPING SHALL BE DIRECTED IN SECTION PC1201 THROUGH PC1204.
17. STORM DRAINAGE PIPING SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF PC1101 THROUGH PC1113.
18. BACKFLOW PROTECTION OF THE POTABLE WATER SUPPLY SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 608.13 THROUGH 608.16 AND 301.4.
19. WATER HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH PC501 THROUGH PC 505. PROVIDE A COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVE AND CUT-OF DEVICES PER SECTION PC504.5. THE PRESSURE RELIEF ELEMENT OF THE COMBINED TEMPERATURE AND PRESSURE RELIEF VALVE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ASME BOILER AND PRESSURE VESSEL CODE, 1962, SECTION IV. VALVE CAPACITY SHALL BE AT LEAST EQUAL TO THE RATED CAPACITY OF THE CONNECTED HEATER. THE ORIGINAL PRESSURE OF THE PRESSURE RELIEF VALVE SHALL BE AT LEAST 25 LBS. ABOVE THE NORMAL WORKING PRESSURE IN THE SYSTEM. THE TEMPERATURE RELIEF VALVE SHALL HAVE A RELIEF RATING EQUAL TO THAT OF THE EQUIPMENT SERVED. THE PERFORMANCE RATING OF THE EMERGENCY ENERGY CUT-OFF DEVICE SHALL BE EQUAL TO OR GREATER THAN THE PERFORMANCE RATING FOR THE EQUIPMENT SERVED.
20. APPROVAL OF KITCHEN AND LOCKER ROOM MUST BE OBTAINED FROM THE HEALTH DEPARTMENT.
21. SECURE PERMIT FROM DOT FOR STREET TRENCHING AND UTILITIES CONNECTION.
22. NEW UTILITIES CONNECTIONS, SANITARY, STORM AND WATER MUST BE APPROVED BY DEP.
23. UNDERGROUND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH PC306 FOR TRENCHING, EXCAVATION AND BACKFILL.
24. HOT WATER SUPPLY SYSTEM AND ALL RELATED APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH PC607.
25. THE WATER SUPPLY AND DISTRIBUTION PIPING NOTES MUST BE IN COMPLIANCE WITH THE MINIMUM PRESSURES LISTED IN PC TABLE 604.3.
26. FUEL GAS SYSTEMS PIPING AND ALL RELATED APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH FGC401 THROUGH FGC415 AND IN ACCORDANCE WITH NFPA#54 2006.
27. SPECIAL PROVISIONS APPLY TO GAS PIPING AT PRESSURES OVER 1/2PSIG, INCLUDING WELDING OF PIPE 4" OR LARGER, PIPE MARKINGS AND INSPECTIONS. ADDITIONAL REQUIREMENTS APPLY AT PRESSURES ABOVE 3PSIG.
28. TESTING AND PURGING OF GAS PIPING PRIOR TO OPERATIONS SHALL CONFORM TO FGC 406.
29. GAS FIRED WATER HEATER SHALL BE DESIGNED AND INSTALLED AS PER SECTION PC 502.
30. GAS PIPING INSTALLATION, MATERIAL AND SIZES SHALL ADHERE TO SECTION FGC 401 THROUGH FGC 404.
31. PIPING JOINTS FOR GAS DISTRIBUTION PIPING SHALL BE DONE AS SPECIFIED. ALL WELDED GAS PIPES SHALL BE RADIOGRAPHED. THE RADIOGRAPHY AND ACCEPTANCE SHALL ADHERE TO FGC 107.

PUMP SCHEDULE

NO.	EQUIPMENT	NO REQ'D	GPM	FT TDH	MOTOR DATA HP	RPM	PHASE	VOLTS	REMARKS
BP-1&2	TRIPLEX DOMESTIC WATER BOOSTER SYSTEM WITH 120 GALLON STORAGE/ PRESSURE TANK	3	100	95	5	3,500	3	208	FEDERAL PUMP CORPORATION TRIPLEX DOMESTIC WATER BOOSTER SYSTEM
CR-1	HOT WATER CIRCULATOR (105°F BUILDING HW-RESIDENCE)	1	20	45	1/2	–	3	208	IN-LINE CIRC PUMP WITH AQUASTAT CONTROL SIMILAR TO AS MANUFACTURED BY ITT
CR-2	HOT WATER CIRCULATOR (105°F BUILDING HW-SHELTER)	1	20	45	1/2	–	3	208	IN-LINE CIRC PUMP WITH AQUASTAT CONTROL SIMILAR TO AS MANUFACTURED BY ITT
CR-3	HOT WATER CIRCULATOR (105°F BUILDING HW-KITCHEN)	1	20	45	1/2	–	3	208	IN-LINE CIRC PUMP WITH AQUASTAT CONTROL SIMILAR TO AS MANUFACTURED BY ITT
SP-1	ELEVATOR SUMP PUMP (TRACTION TYPE)	1	20	25	1/2	–	1	115	STANCOR OIL MINDER ELEVATOR SUMP PUMP MODEL SE-50
SP-2	ELEVATOR SUMP PUMP (HYDRAULIC TYPE)	1	20	25	1/2	–	1	115	IN-LINE CIRC PUMP WITH AQUASTAT CONTROL SIMILAR TO AS MANUFACTURED BY ITT

PLUMBING SYMBOLS



NOTE: NOT ALL SYMBOLS INDICATED ARE NECESSARILY WITHIN THE SCOPE OF WORK

PLUMBING PIPE SCHEDULE

PIPING SYSTEM	LOCATION	REQUIREMENT
STORM PIPING	INTERIOR (ABOVE GROUND)	SERVICE WEIGHT CAST IRON (SVCI) NO-HUB WITH MECHANICAL STAINLESS STEEL COUPLINGS. GALVANIZED STEEL PIPE SCHEDULE 40, WITH THREADED DRAINAGE FITTINGS ALLOWED FOR 3" DIA AND SMALLER.
	INTERIOR (UNDER GROUND)	SERVICE WEIGHT CAST IRON BELL AND SPIGOT WITH LEAD AND OAKUM JOINTS.
	EXTERIOR (YARD DRAINAGE)	1. SERVICE WEIGHT CAST IRON (SVCI) BELL AND SPIGOT WITH LEAD AND OAKUM JOINTS. 2. DUCTILE IRON (DI) CLASS 51 FOR ALL SIZES WITH PUSH-ON JOINTS. 3. PRECAST REINFORCED CONCRETE PIPE WITH RUBBER GASKET WATERTIGHT JOINT. 4. HIGH DENSITY POLYETHYLENE (HDPE) PIPING, BELL AND SPIGOT, WATERTIGHT JOINTS.
	EXTERIOR (HOUSE DRAIN & HOUSE SEWER)	SERVICE WEIGHT CAST IRON (SVCI) BELL AND SPIGOT WITH LEAD AND OAKUM JOINTS. DUCTILE IRON (DI) CLASS 51 FOR ALL SIZES WITH PUSH-ON JOINTS.
SANITARY PIPING (WASTE AND VENT)	INTERIOR (ABOVE GROUND AND HOUSE DRAIN LINES)	SERVICE WEIGHT CAST IRON (SVCI) NO-HUB WITH MECHANICAL STAINLESS STEEL COUPLINGS. GALVANIZED STEEL PIPE SCHEDULE 40, WITH THREADED DRAINAGE FITTINGS ALLOWED FOR 3" DIA AND SMALLER.
	INTERIOR (PUMP DISCHARGE)	GALVANIZED STEEL PIPE SCHEDULE 40, WITH THREADED DRAINAGE FITTINGS, VICTAULIC FITTING IN CONJUNCTION WITH GROOVE PIPE, 2" AND LARGER PERMITTED.
	INTERIOR (UNDER GROUND)	SERVICE WEIGHT CAST IRON BELL AND SPIGOT WITH LEAD AND OAKUM JOINTS.
	EXTERIOR (HOUSE SEWER / UNDERGROUND)	DUCTILE IRON (DI) CLASS 56 WITH PUSH-ON JOINTS.
DOMESTIC WATER (HOT&COLD)	INTERIOR (ABOVE GROUND)	COPPER TUBING, TYPE L (BLUE COLOR BAR) WITH WROUGHT COPPER SOLDER JOINT FITTINGS SUITABLE FOR SOFT SOLDERING. BRASS, SEAMLESS DRAWN PIPE, REGULAR WEIGHT WITH CAST BRONZE FITTING. CHROME PLATING FOR EXPOSED PIPING OR TRAPS IN KITCHEN AREA. GROOVE COPPER PIPE WITH VICTAULIC FITTING IS ALLOWED FOR 2" AND LARGER DIAMETER PIPING. COPPER TUBING FOR SHORT BRANCH CONNECTION TO PLUMBING FIXTURE.
	INTERIOR (UNDER GROUND)	COPPER TUBING, TYPE K (GREEN COLOR BAR) WITH CAST BRONZE SOLDER JOINT FITTINGS (150PSI) SUITABLE FOR LEAD FREE SOLDERING.
	EXTERIOR (SERVICE UNDERGROUND)	DUCTILE IRON, CLASS 52 FOR 3" & 4" PIPE DIAMETER AND CLASS 56 FOR 6" & LARGER PIPE SIZES. FITTED WITH MECHANICAL JOINTS. THE USE OF BRASS, SEAMLESS DRAWN PIPE THREADED FITTINGS AND TYPE K COPPER TUBING IS ALLOWED FOR SERVICES UP TO 3" IN SIZE.
GAS PIPING	INTERIOR (ABOVE GROUND)	STANDARD WEIGHT, SCHEDULE 40, BLACK STEEL PIPE WITH SCREWED FITTING FOR 4" DIAMETER PIPE AND SMALLER OR WELDED JOINT FOR LARGER THAN 4" DIAMETER. OPTION FOR WELDING OR SCREWED JOINT APPLIES ONLY TO GAS SUPPLIED AT PRESSURE RANGING FROM 1/2 PSIG AND UP TO 3 PSIG. ABOVE 3 PSIG ALL JOINT MUST BE WELDED. ALL WELDING REQUIRES CONTROL INSPECTION AS TESTING AND RADIOGRAPHING.

PLUMBING FIXTURE SCHEDULE

LEGEND	PLUMBING FIXTURE	CONNECTION SIZE – INCHES: SOIL/ WASTE (S/W)	VENT (V)	COLD WATER (CW)	COLD WATER FLUSH VALVE (CWFV)	HOT WATER (HW)
WC	WATER CLOSET	4"	2"	–	1"	–
LAV	LAVATORY	1 1/2"	1 1/2"	1/2"	–	1/2"
LAV-BF	LAVATORY – BARRIER FREE	1 1/2"	1 1/2"	1/2"	–	1/2"
SH	SHOWER INDIVIDUAL	2"	1 1/2"	1/2"	–	1/2"
SH-BF	SHOWER INDIVIDUAL – BARRIER FREE	2"	1 1/2"	1/2"	–	1/2"
BT	BATHTUB	2"	1 1/2"	1/2"	–	1/2"
KS	KITCHEN SINK	2"	1 1/2"	1/2"	–	1/2"
PS	PANTRY SINK	2"	1 1/2"	1/2"	–	1/2"
MS	MOP SINK	3"	1 1/2"	3/4"	–	3/4"

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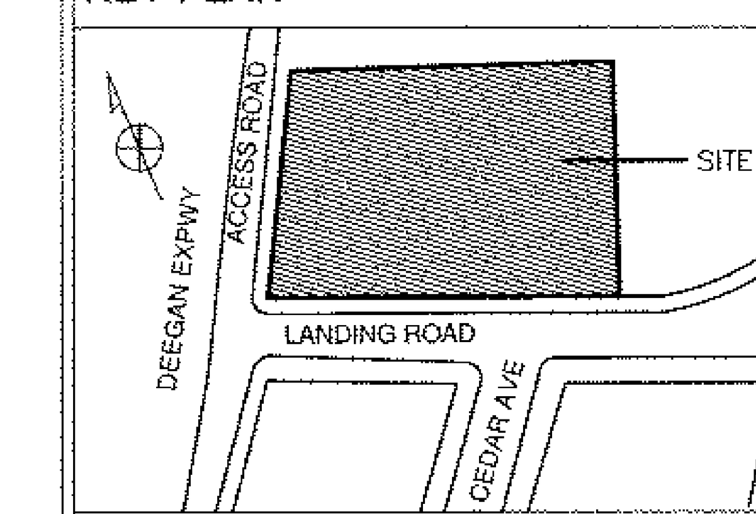
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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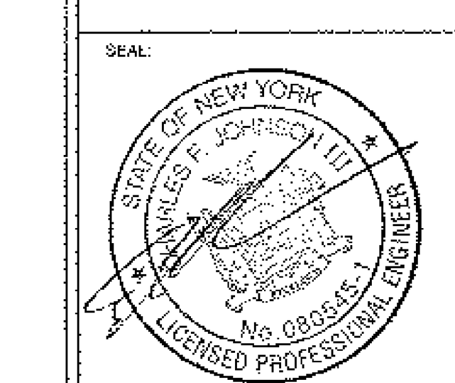
Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

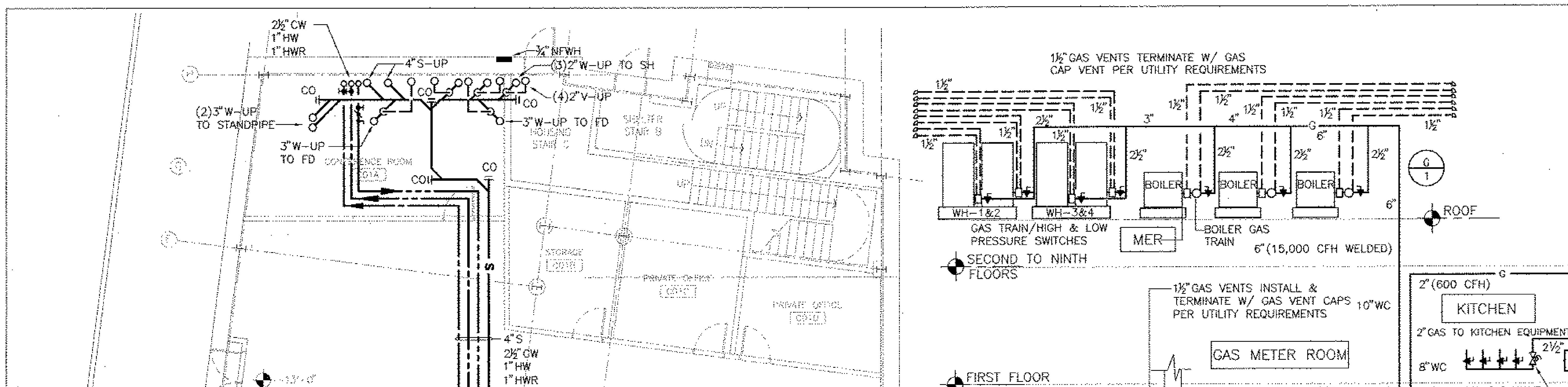
TITLE:
PLUMBING SITE PLAN, SYMBOLS, GENERAL NOTES & SCHEDULS

SEAL:



PROJECT NO.: 9092.000
SCALE: AS NOTED
BY: CH
CHECK: MH
DATE: DECEMBER 22, 2014
PAGE: 1 of 13

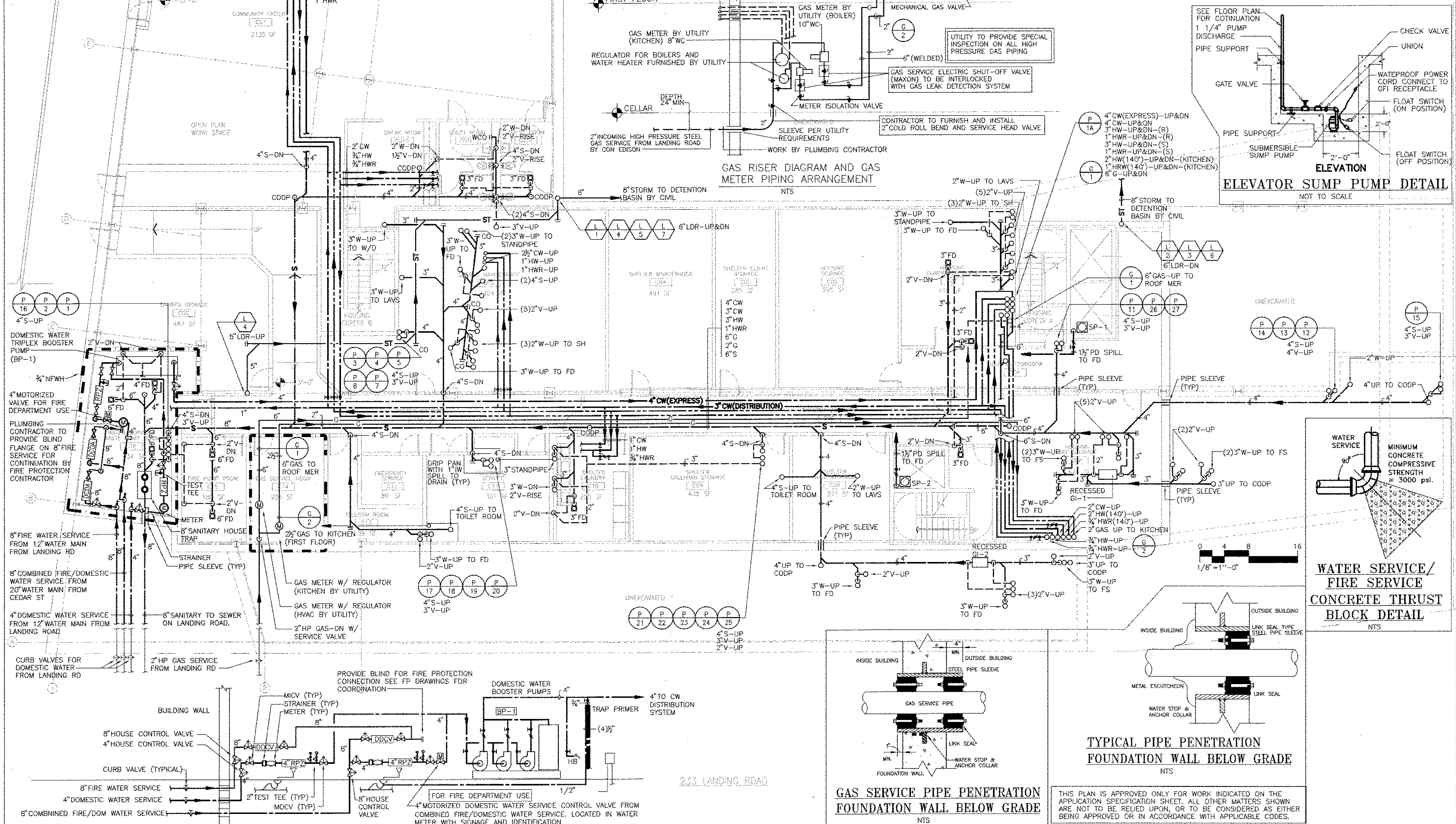
DWG. NO.: **P001.00**



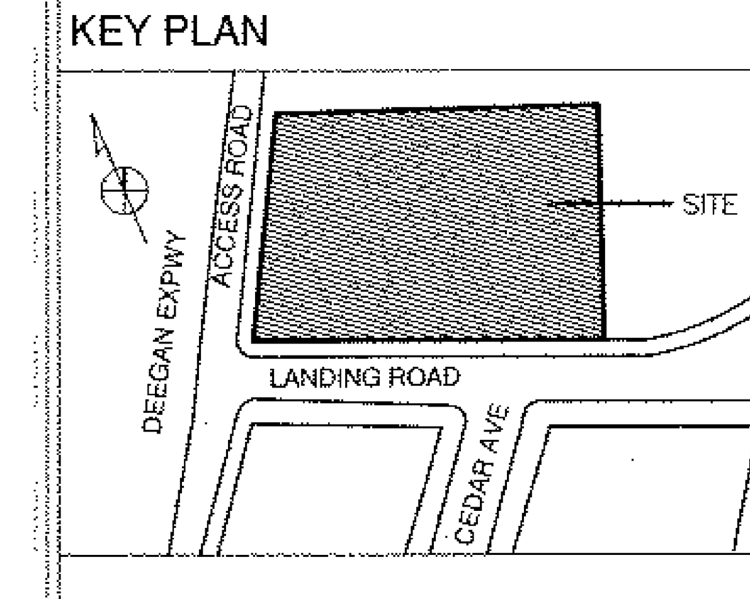
GAS PIPING SYSTEM TESTING:

A. UPON COMPLETION OF THE INSTALLATION OF A SECTION OF A GAS SYSTEM OR OF THE ENTIRE GAS SYSTEM, AND BEFORE APPLIANCES ARE CONNECTED THERETO, THE ENTIRE GAS SYSTEM SHALL BE VERIFIED AS TO MATERIALS, AND TESTED AND PROVEN TIGHT BY THIS CONTRACTOR, AS FOLLOWS:

1. GAS DISTRIBUTION PIPING TESTING:
   A. TESTING OF DISTRIBUTION PIPING FOR PRESSURES UP TO 1/2 PSIG PER NYC FUEL GAS CODE 406.4 SHALL BE TESTED AT 3 PSIG FOR MINIMUM OF 30 MINUTES.
2. GAS PIPING SUPPORTS:
   A. GAS PIPING SHALL BE SUPPORTED PER NYC FUEL GAS CODE TABLE 415.1
3. GAS CONTROL, VENT AND RELIEF PIPING
   A. METER PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SERVING UTILITY.
   B. NOTWITHSTANDING THE ABOVE, ALL COATED OR WRAPPED PIPE SHALL BE PRESSURE TESTED AT A MINIMUM OF 90
   C. PURGE ALL PIPING AFTER PRESSURE TEST.
   D. PURGE ALL EQUIPMENT AFTER PIPING HAS BEEN PURGED.
   E. RADIOGRAPHY SHALL BE PERFORMED ON ALL BUTT WELDS IN GAS METER AND GAS DISTRIBUTION PIPING
   F. THE AUTHORITY MAY INSTRUCT THE CONTRACTOR THAT CERTAIN WELDING WORK MAY REQUIRE RADIOGRAPHIC INSPECTIONS. THE AUTHORITY SHALL SELECT THE TESTING LABORATORY. THE INSPECTOR SHALL HAVE A MINIMUM RADIOGRAPHY QUALIFICATION OF LEVEL II.
   G. GAS TESTS SHALL BE MADE IN THE PRESENCE OF THE REPRESENTATIVES OF THE AUTHORITY, THE DEPARTMENT OF BUILDINGS AND THE GAS COMPANY; AND THE PIPING SHALL BE PROVEN TIGHT TO THEIR ENTIRE SATISFACTION. NOTIFICATION SHALL BE SENT TO THESE VARIOUS BUREAUS 72 HOURS IN ADVANCE OF THE TIME SET FOR THE OFFICIAL TEST.
   K. GAS CONSUMED BEFORE THE BUILDING HAS BEEN ACCEPTED BY THE AUTHORITY WILL NOT BE PAID FOR UNLESS SPECIAL PERMISSION TO USE GAS HAS BEEN GRANTED BY THE AUTHORITY.



KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

PLUMBING -
CELLAR PLAN

SEAL: STATE OF NEW YORK · CHARLES F. JOHNSON III · LICENSED PROFESSIONAL ENGINEER · No. 080546-1

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	2 of 13

DWG. NO.:

P200.00

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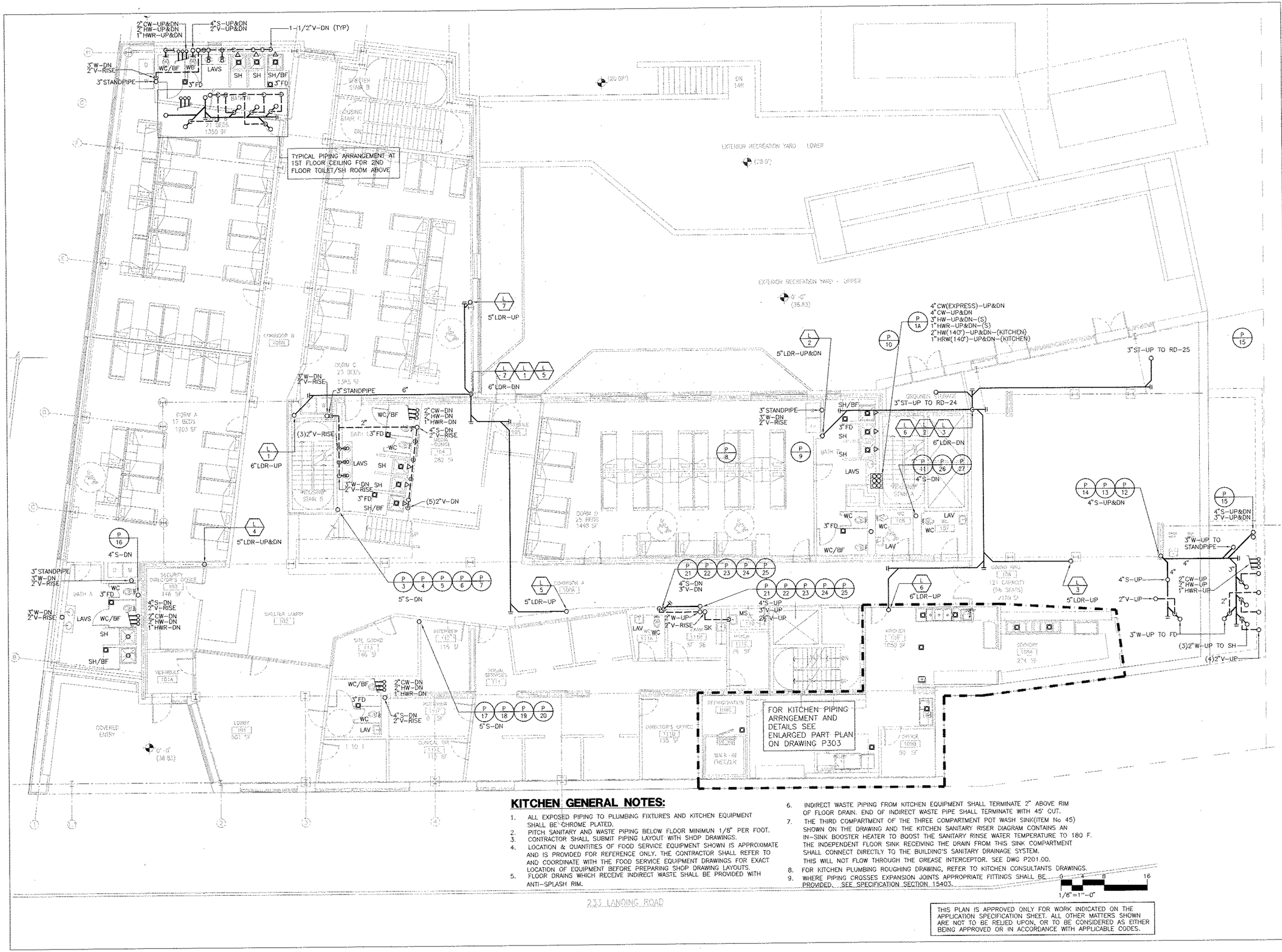

KITCHEN GENERAL NOTES:

1. ALL EXPOSED PIPING TO PLUMBING FIXTURES AND KITCHEN EQUIPMENT SHALL BE CHROME PLATED.
2. PITCH SANITARY AND WASTE PIPING BELOW FLOOR MINIMUN 1/8" PER FOOT.
3. CONTRACTOR SHALL SUBMIT PIPING LAYOUT WITH SHOP DRAWINGS.
4. LOCATION & QUANTITIES OF FOOD SERVICE EQUIPMENT SHOWN IS APPROXIMATE AND IS PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR SHALL REFER TO AND COORDINATE WITH THE FOOD SERVICE EQUIPMENT DRAWINGS FOR EXACT LOCATION OF EQUIPMENT BEFORE PREPARING SHOP DRAWING LAYOUTS.
5. FLOOR DRAINS WHICH RECEIVE INDIRECT WASTE SHALL BE PROVIDED WITH ANTI–SPLASH RIM.
6. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT SHALL TERMINATE 2" ABOVE RIM OF FLOOR DRAIN. END OF INDIRECT WASTE PIPE SHALL TERMINATE WITH 45° CUT.
7. THE THIRD COMPARTMENT OF THE THREE COMPARTMENT POT WASH SINK(ITEM No 45) SHOWN ON THE DRAWING AND THE KITCHEN SANITARY RISER DIAGRAM CONTAINS AN IN–SINK BOOSTER HEATER TO BOOST THE SANITARY RINSE WATER TEMPERATURE TO 180 F. THE INDEPENDENT FLOOR SINK RECEIVING THE DRAIN FROM THIS SINK COMPARTMENT SHALL CONNECT DIRECTLY TO THE BUILDING'S SANITARY DRAINAGE SYSTEM. THIS WILL NOT FLOW THROUGH THE GREASE INTERCEPTOR. SEE DWG P201.00.
8. FOR KITCHEN PLUMBING ROUGHING DRAWING, REFER TO KITCHEN CONSULTANTS DRAWINGS.
9. WHERE PIPING CROSSES EXPANSION JOINTS APPROPRIATE FITTINGS SHALL BE PROVIDED. SEE SPECIFICATION SECTION 15403.

1/8"=1"–0"

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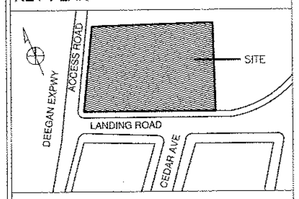
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

PLUMBING -
FIRST FLOOR PLAN

SEAL: STATE OF NEW YORK — CHARLES F. JOHNSON — 100 090545 — LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	3 of 13

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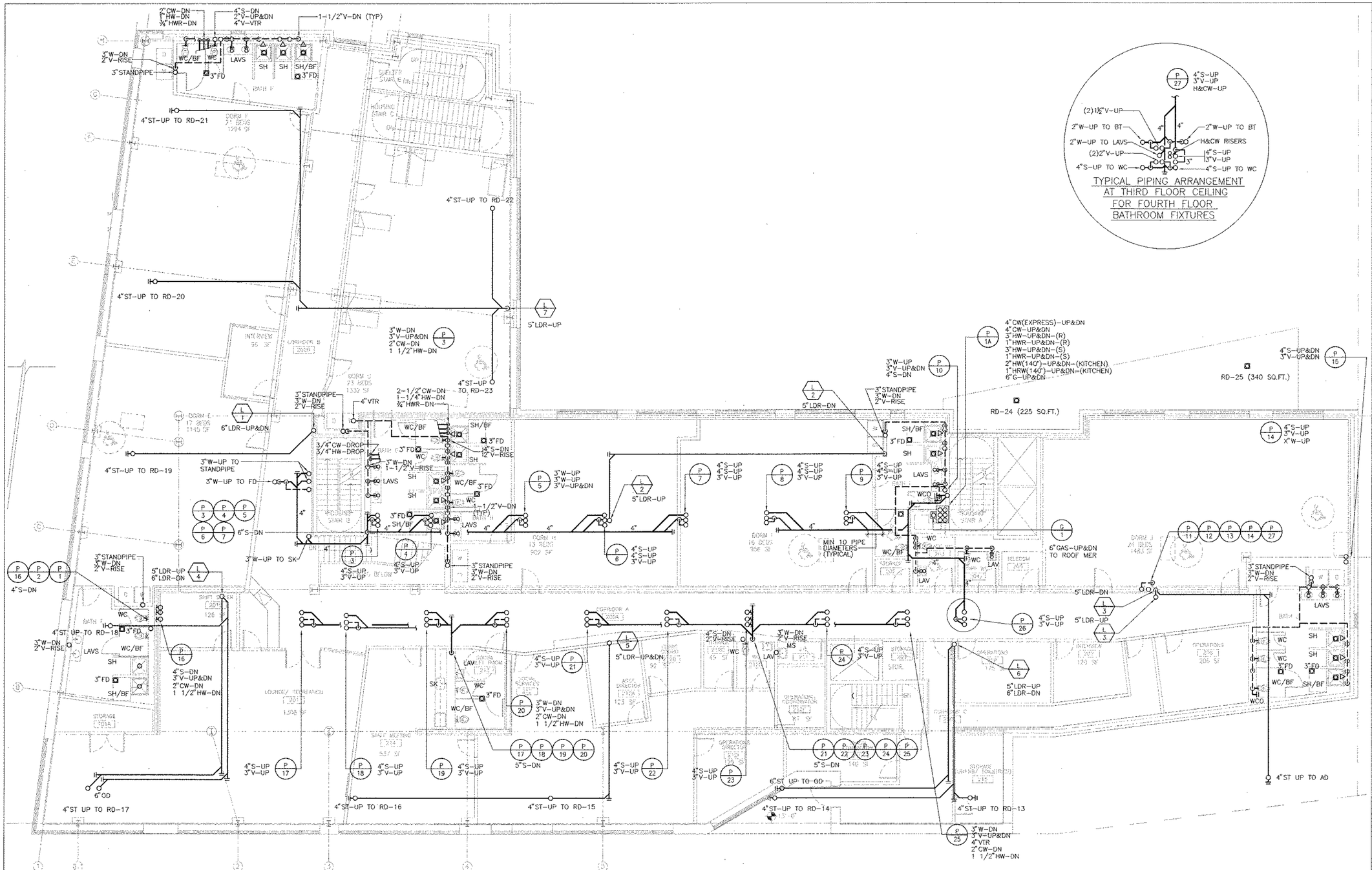

TYPICAL PIPING ARRANGEMENT AT THIRD FLOOR CEILING FOR FOURTH FLOOR BATHROOM FIXTURES

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

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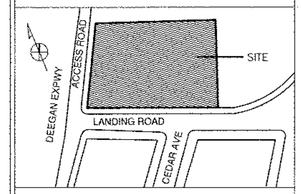

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12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

PLUMBING - SECOND FLOOR PLAN

SEAL:

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	4 of 13

DWG. NO.:

P202.00

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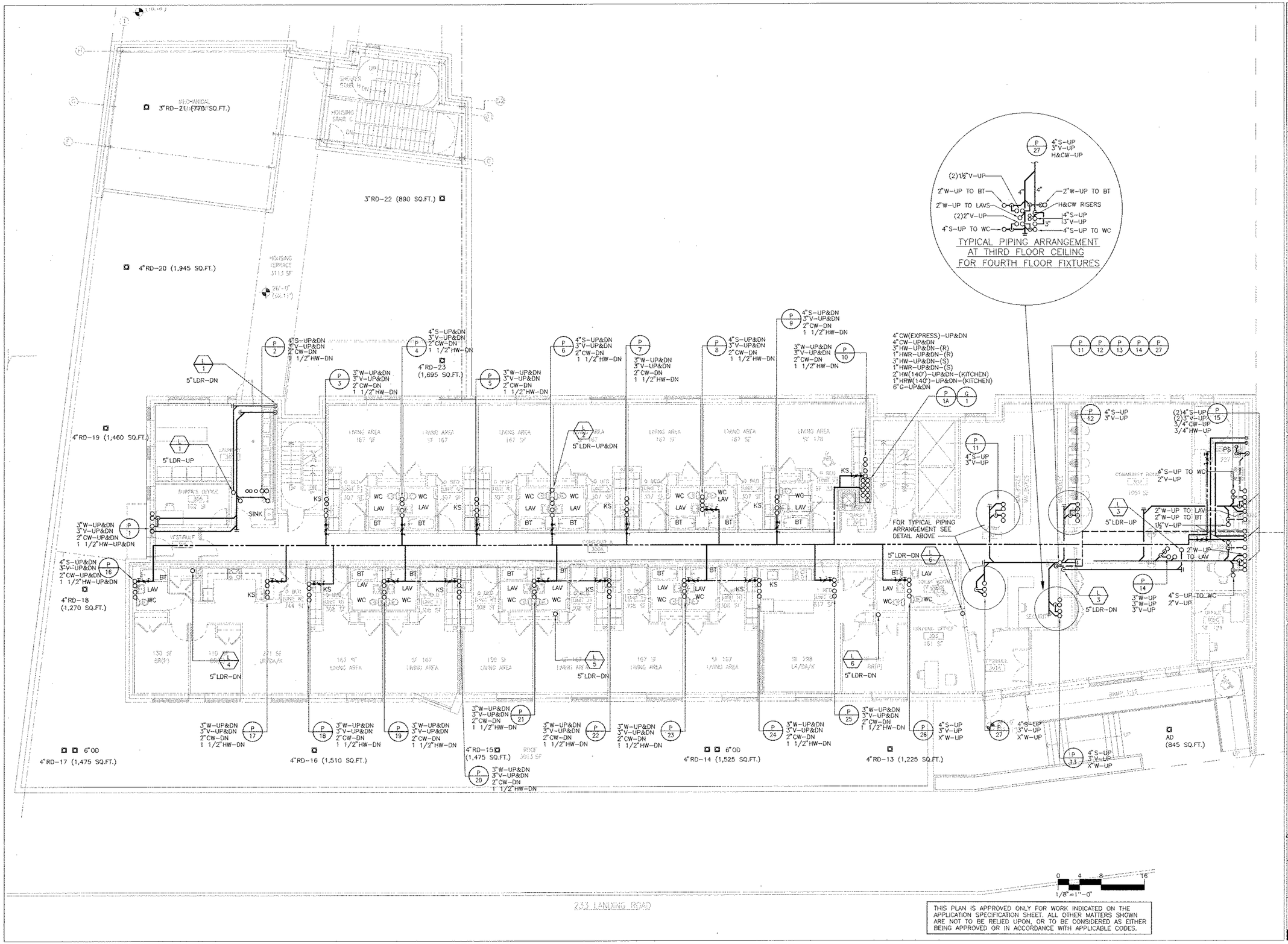

TYPICAL PIPING ARRANGEMENT AT THIRD FLOOR CEILING FOR FOURTH FLOOR FIXTURES

0 4 8 16
1/8" = 1'-0"

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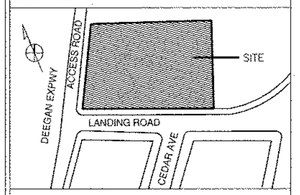

DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:
PLUMBING -
THIRD FLOOR PLAN

SEAL: STATE OF NEW YORK — CHARLES F. JOHNSON — LICENSED PROFESSIONAL ENGINEER — No. 080545

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	5 of 13
DWG. NO.:	P203.00

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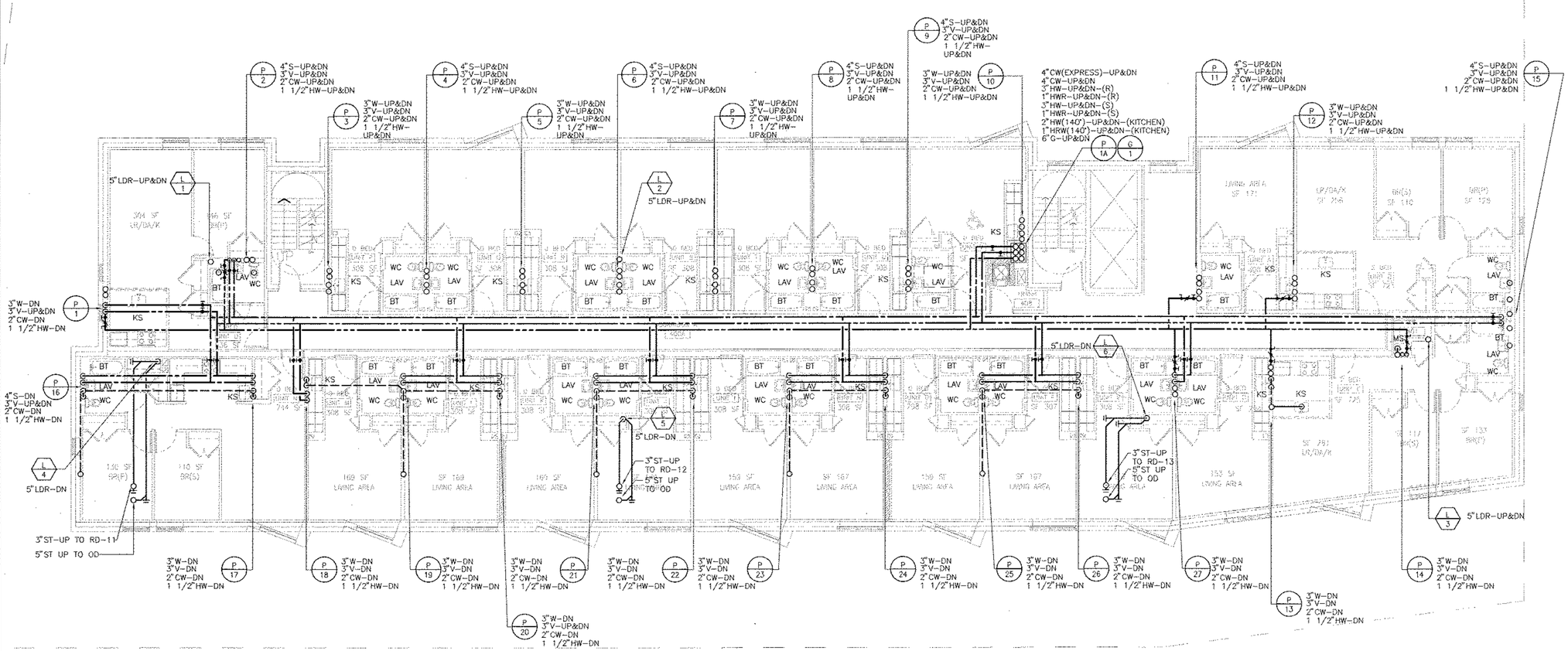

0 4 8 16
1/8" = 1'-0"

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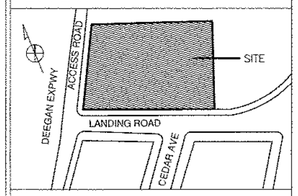

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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bronx, New York 10468

TITLE:

PLUMBING -
TYPICAL FLOOR PLAN (4-8)

SEAL:

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	6 of 13

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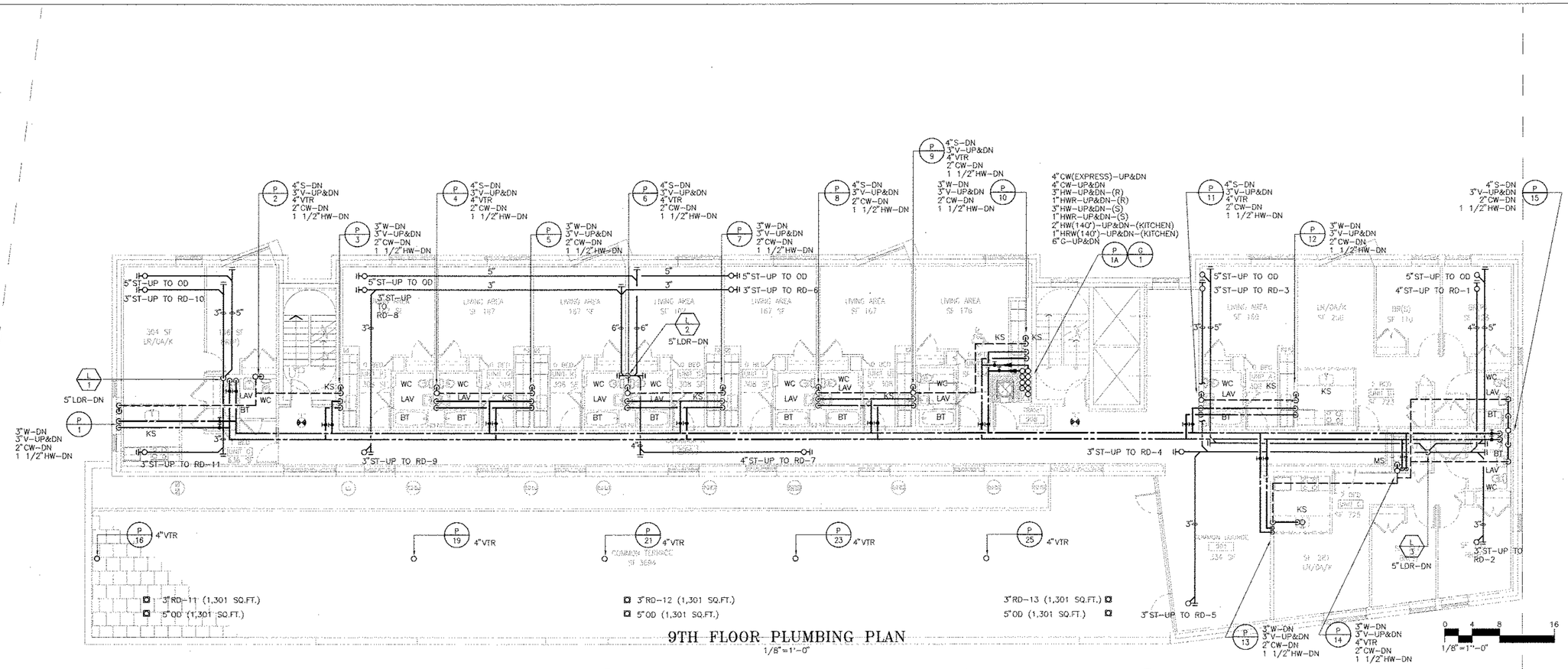
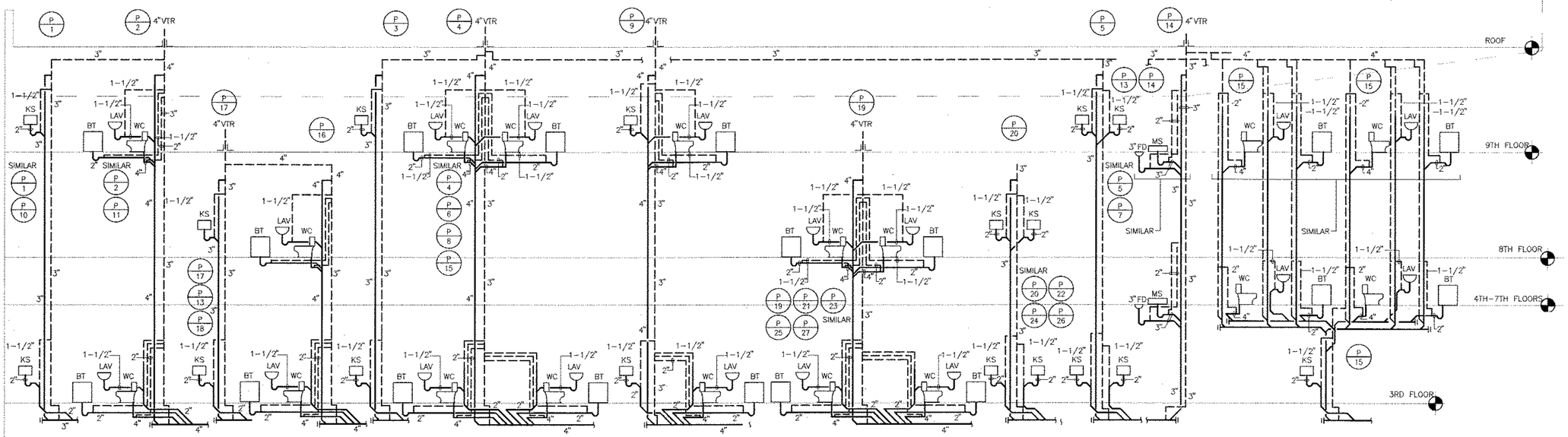


9TH FLOOR PLUMBING PLAN

1/8"=1'–0"



TYPICAL BATHROOM PARTIAL RISER DIAGRAM

NTS

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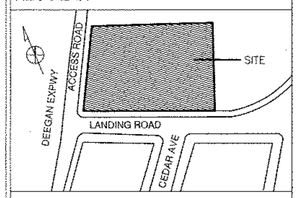
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

PLUMBING -
NINTH FLOOR PLAN WITH
PARTIAL RISER

SEAL:

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	7 of 13

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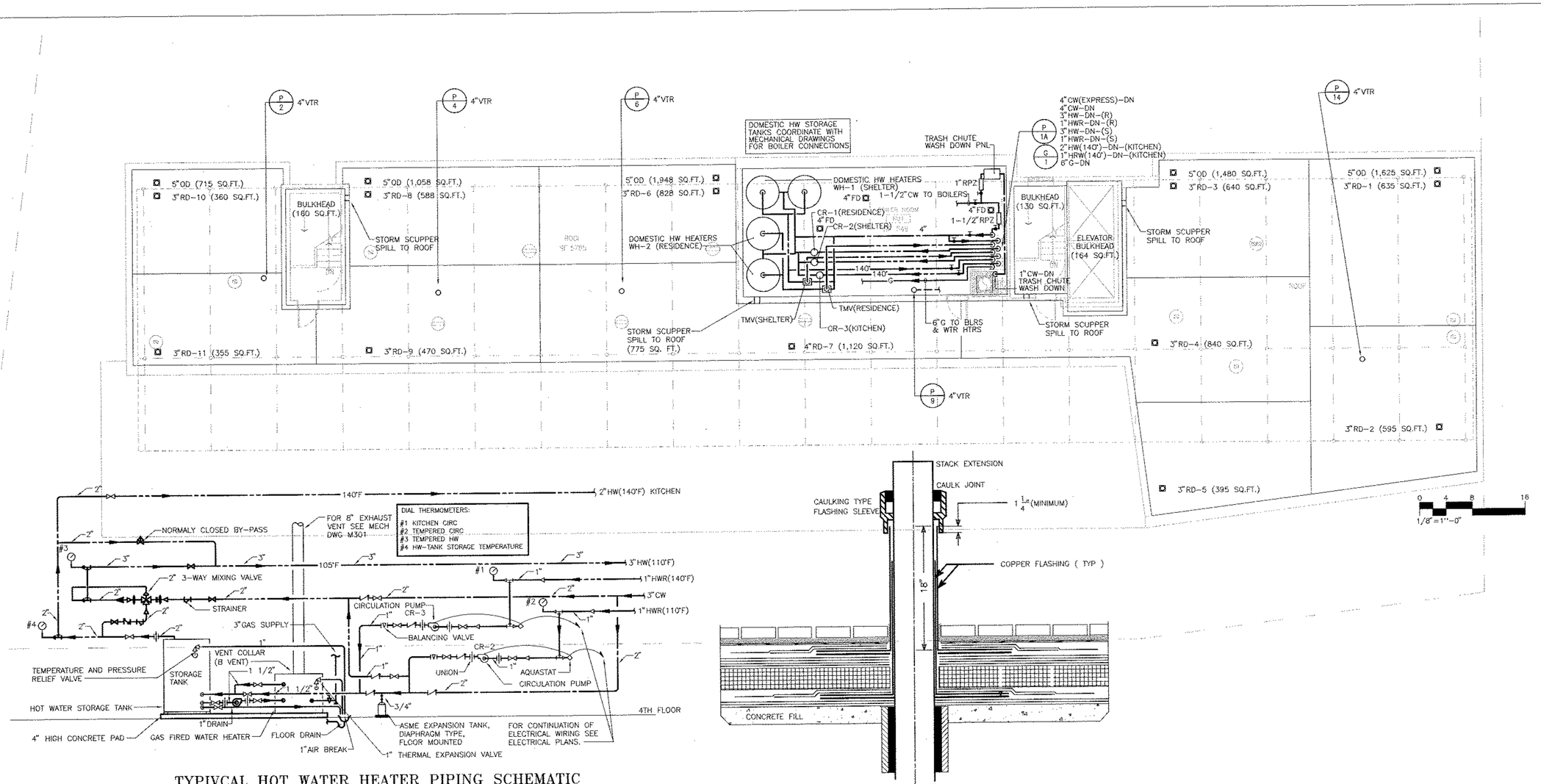


TYPIVCAL HOT WATER HEATER PIPING SCHEMATIC

NTS

(SHELTER PIPING ARRANGEMENT SHOWN INCLUDING KITCHEN – RESIDENCE HW PIPING ARRANGEMENT FOR 110° F SIMILAR)

TYPICAL VENT STACK DETAIL

NTS

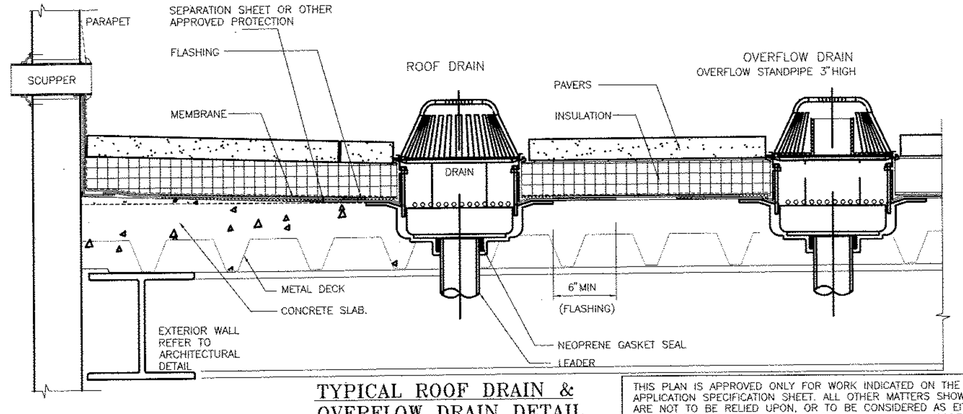
WATER HEATER SCHEDULE

WATER HEATER	LOCATION	RECOVERY RATE(GPH) 40–140 F	BTU/HR INPUT	GALLONS STORAGE	EFFICIENCY %	MOTOR DATA AMPS	PHASE	CYCLE	VOLTS	APPROX WEIGHT LBS (FULL)	GAS FLUE SIZE	DIMENSIONS	REMARKS
WH–1 SHELTER	MER	397	399,999	400	80	---	1	60	120	3,672	10"	45"x22"x30"HIGH	"LOCHINVAR" MODEL# CWN399PM
WH–2 RESIDENCE	MER	397	399,999	400	80	---	1	60	120	3,672	10"	45"x22"x30"HIGH	"LOCHINVAR" MODEL# CWN399PM

- WATER HEATER SHALL BE PROVIDED WITH PRESSURE AND TEMPERATURE RELIEF VALVES AND ENERGY CUT OFF DEVICE AS REQUIRED BY CODE.
- WATER HEATER TO HAVE "HLW" STAMP AND INCLUDE THE "F9" OPTION FOR ELECTRONIC IGNITION.
- WATER HEATER EQUIPMENT AND HOT WATER STORAGE TANKS MUST MEET THE REQUIREMENTS OF TABLE 504.2 HOT WATER HEATER PERFORMANCE OF THE NYSECC 504.2.
- HOT WATER PIPE INSULATION MUST BE PER NYSECC 504.5.
- HOT WATER SYSTEM CONTROLS MUST BE PER NYSECC 504.6.
- HOT WATER HEATER SHALL BE PROVIDED WITH LOW WATER CUT OFF CONTROLS.

MISCELLANEOUS EQUIPMENT SCHEDULE

NO.	EQUIPMENT	NO.	LOCATION	CAPACITIES	MANUFACTURER MODEL NO.	REMARKS
ET–1 SHELTER ET–2 RESIDENCE	THERMAL EXPANSION TANK	2	ROOF MER	16 GAL. VOLUME	SIMILAR TO AMTROL "THERM–X–TROL" MODEL NO. ST–42V	SET BLADDER PRESSURE TO MATCH DOMESTIC WATER LINE PRESSURE
MTV–1 SHELTER MTV–2 RESIDENCE	MASTER TEMPERING VALVE	2	ROOF MER	42 GPM MAXIMUM 0.5 GPM MINIMUM 10 PSIG DROP	SIMILAR TO POWERS MODEL NO. MM433HL	LEAD FREE



TYPICAL ROOF DRAIN & OVERFLOW DRAIN DETAIL

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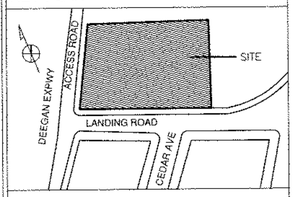
KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

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Owner / Sponsor:
BOWERY RESIDENTS' COMMITTEE
131 W. 25th Street, 12th Floor, New York, NY 10001
tel: 212-803-5700
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Bowery Residents' Committee

Landing Road

233 Landing Road
Bronx, New York 10468

TITLE:

PLUMBING -
ROOF AND BULKHEAD PLAN

SEAL: STATE OF NEW YORK · CHARLES F. JOHNSON II · No. 080545 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.: 9092.009
SCALE: AS NOTED
BY: CH CHECK: MH
DATE: DECEMBER 22, 2014
PAGE: 8 of 13

DWG. NO.:

P206.00

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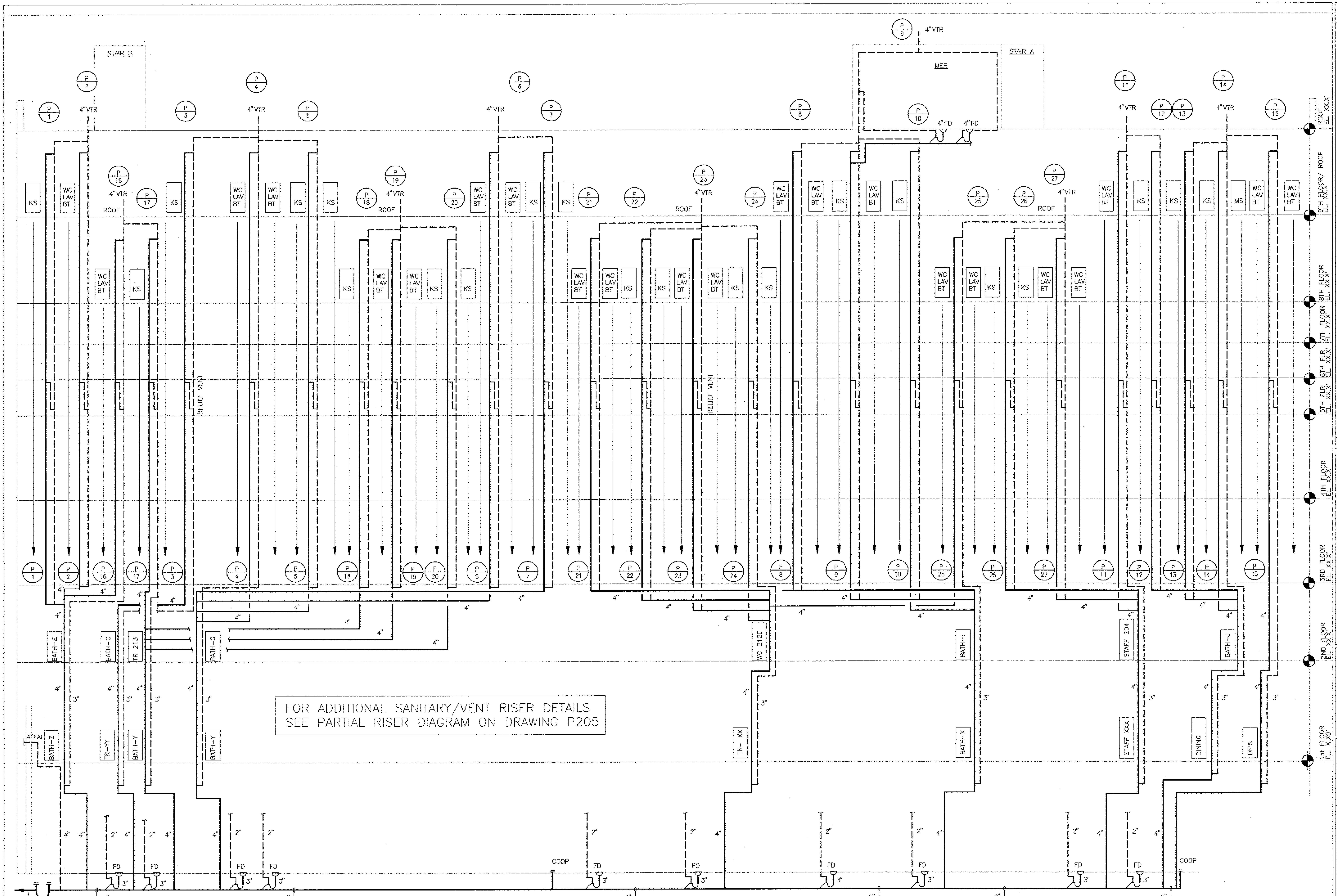
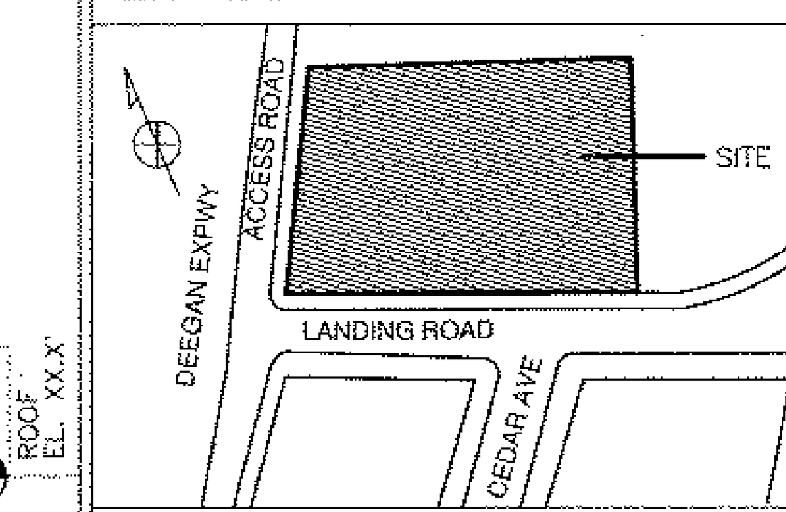


SANITARY RISER DIAGRAM

NTS

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

KEY PLAN



DATE	ISSUES / REVISIONS
12.22.14	DEPARTMENT OF BUILDINGS SUBMISSION
11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
EDELMAN SULTAN KNOX WOOD / ARCHITECTS LLP
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Landing Road

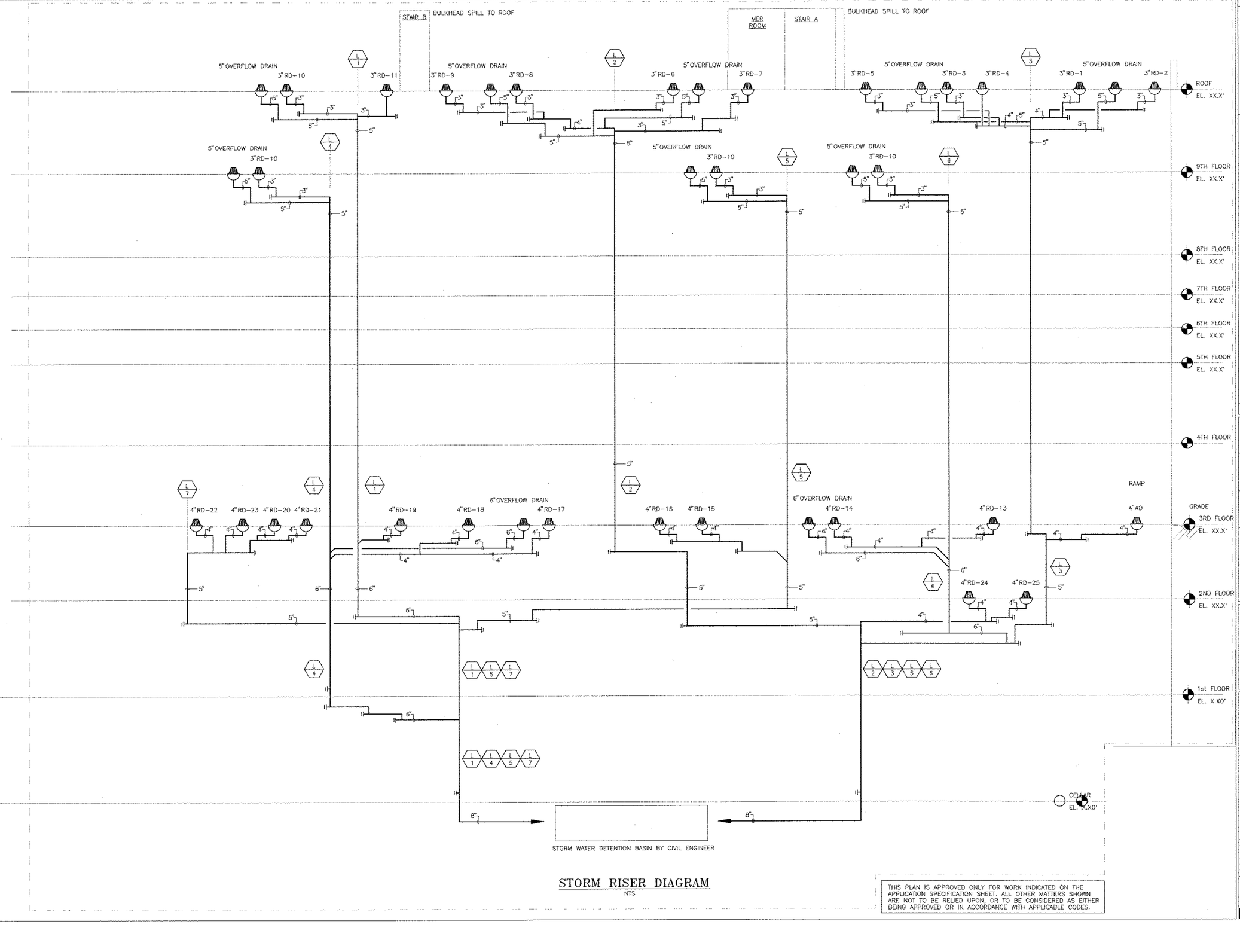
233 Landing Road
Bronx, New York 10468

TITLE:
PLUMBING -
SANITARY RISER DIAGRAM

SEAL: STATE OF NEW YORK · CHARLES F. JOHNSON III · NO. 080545-1 · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	9 of 13

DWG. NO.: **P300.00**



STORM RISER DIAGRAM
NTS

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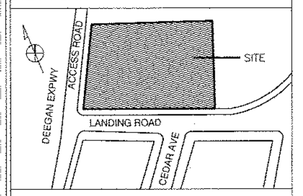

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11.21.14	DESIGN DEVELOPMENT SUBMISSION

Architect:
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Bowery Residents' Committee

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Bronx, New York 10468

TITLE:
PLUMBING
STORM RISERS DIAGRAM

SEAL: CHARLES F. JOHNSON II, LICENSED PROFESSIONAL ENGINEER, STATE OF NEW YORK, No. 080946

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	10 of 13

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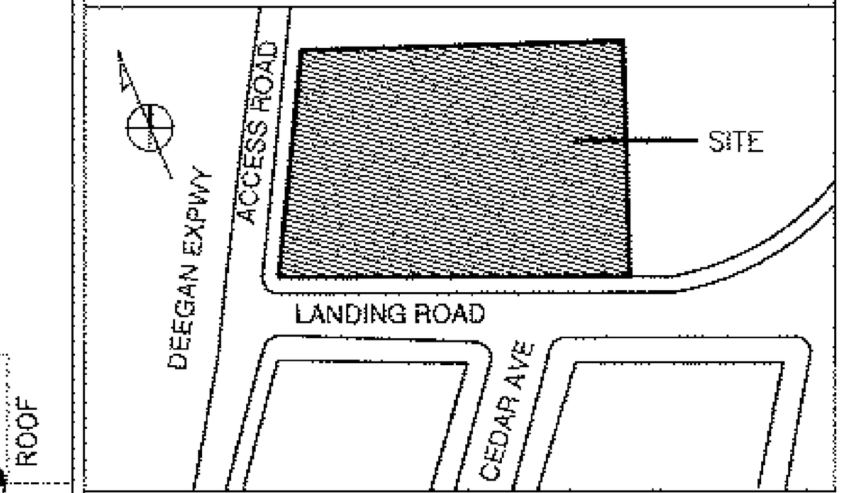
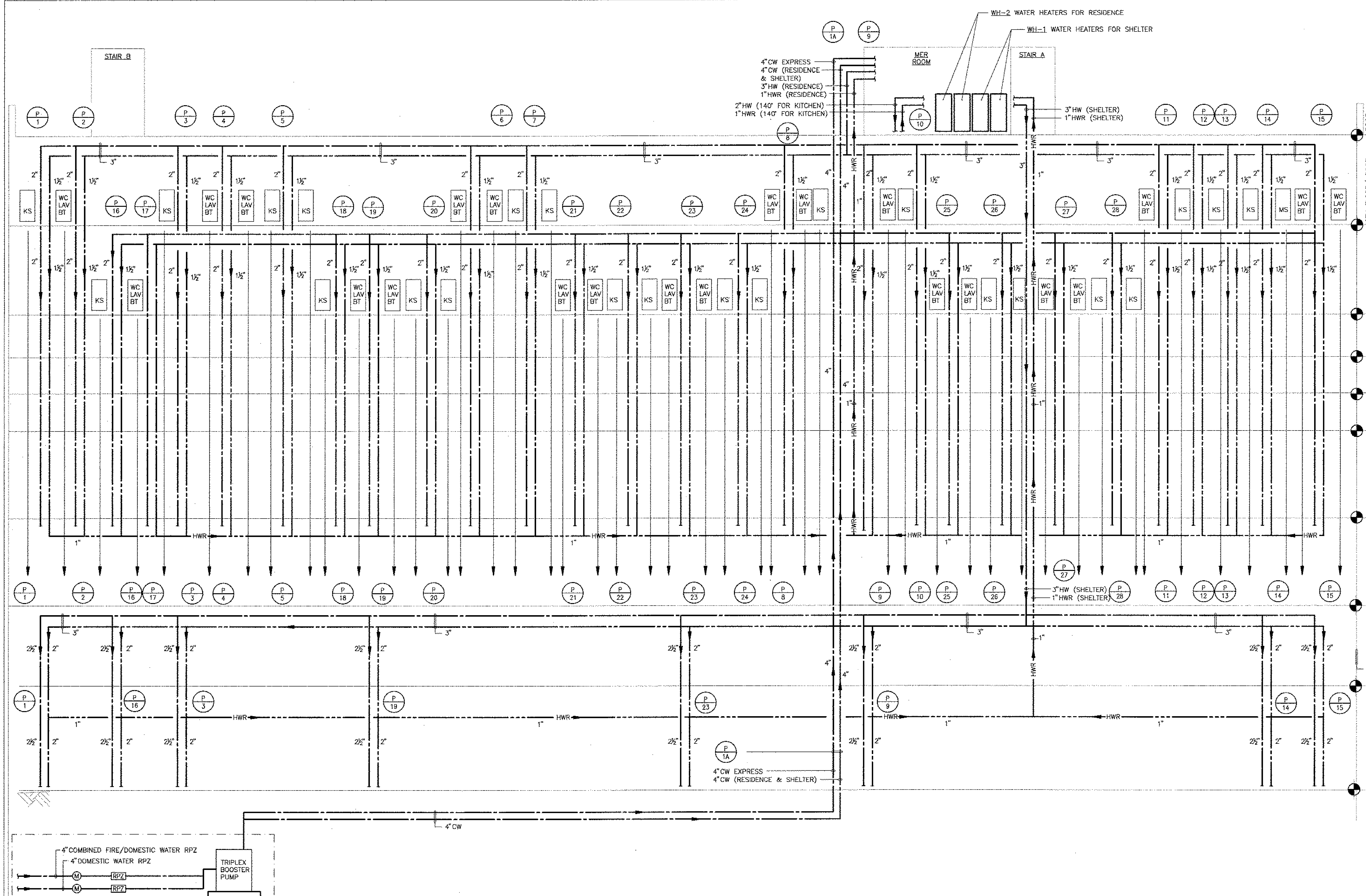
KEY PLAN





FOR PIPING ARRANGEMENT & DETAILS SEE DWG. P200

FOR DOMESTIC WATER RISER DETAILS SEE PARTIAL RISER DIAGRAM ON DRAWING P20

DOMESTIC WATER RISER DIAGRAM

NTS

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Bowery Residents' Committee

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233 Landing Road
Bronx, New York 10468

TITLE:
PLUMBING DOMESTIC WATER RISER DIAGRAM

SEAL: STATE OF NEW YORK · LICENSED PROFESSIONAL ENGINEER

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	11 of 13

DWG. NO.: P302.00

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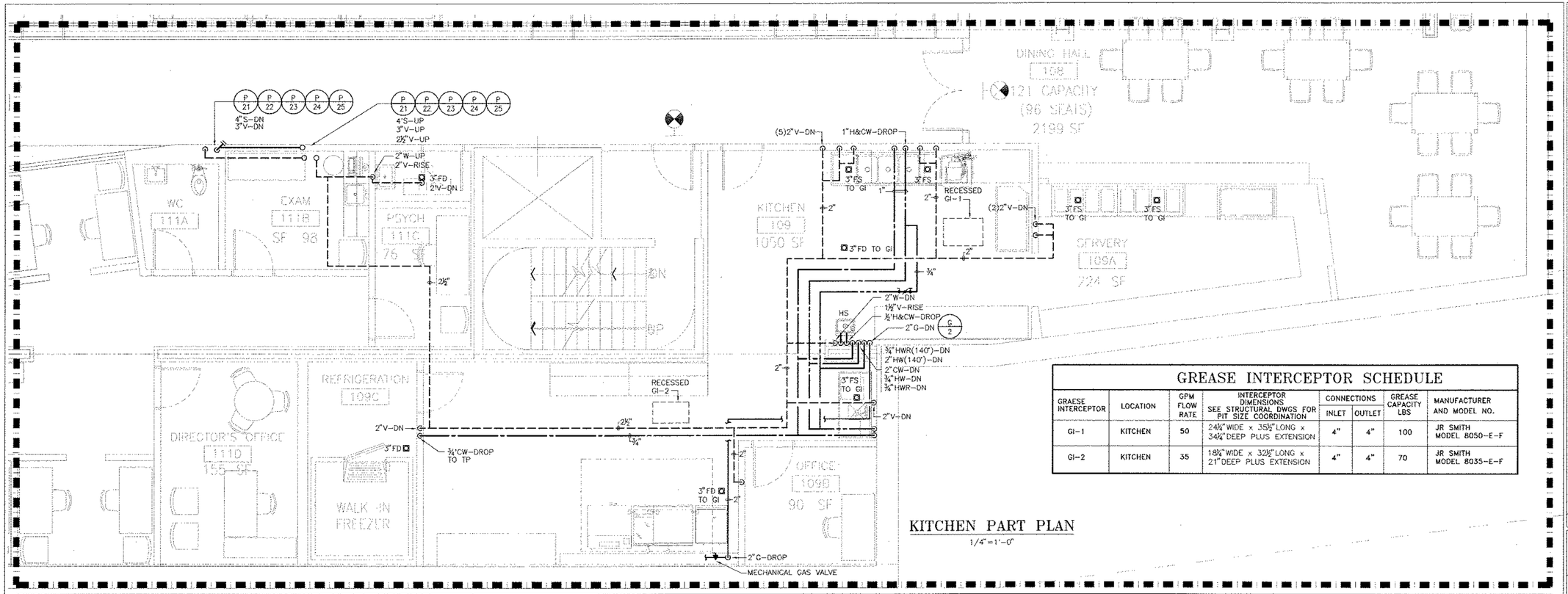
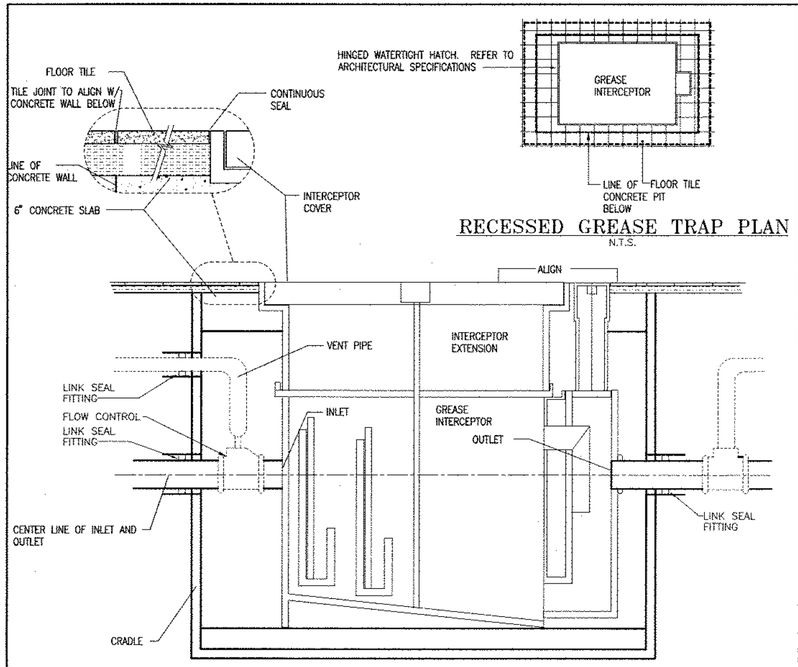


KITCHEN PART PLAN

1/4" = 1'-0"

GREASE INTERCEPTOR SCHEDULE

GRAESE INTERCEPTOR	LOCATION	GPM FLOW RATE	INTERCEPTOR DIMENSIONS SEE STRUCTURAL DWGS FOR PIT SIZE COORDINATION	CONNECTIONS		GREASE CAPACITY LBS	MANUFACTURER AND MODEL NO.
				INLET	OUTLET		
GI-1	KITCHEN	50	24¾" WIDE x 35½" LONG x 34¾" DEEP PLUS EXTENSION	4"	4"	100	JR SMITH MODEL 8050-E-F
GI-2	KITCHEN	35	18¾" WIDE x 32½" LONG x 21" DEEP PLUS EXTENSION	4"	4"	70	JR SMITH MODEL 8035-E-F

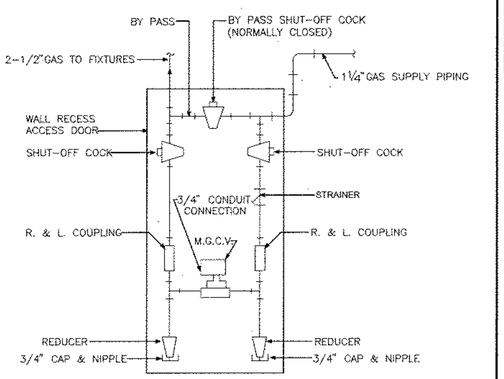


RECESSED GREASE TRAP PLAN

N.T.S.

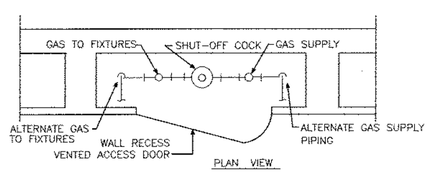
RECESSED GREASE TRAP ELEVATION DETAIL

NOT TO SCALE



FRONT ELEVATION

KITCHEN - 3"MGCV CABINET
SCIENCE LABS - 1"MGCV CABINETS



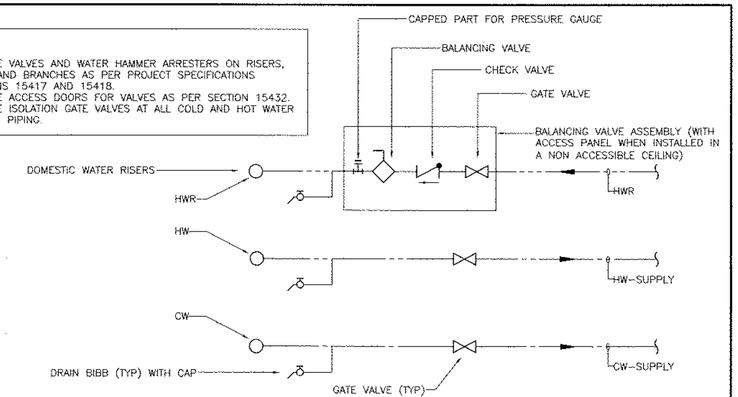
PLAN VIEW

MASTER GAS CONTROL VALVE ASSEMBLY WALL RECESS BELOW CEILING

NOT TO SCALE

NOTE:

PROVIDE VALVES AND WATER HAMMER ARRESTERS ON RISERS, MAINS AND BRANCHES AS PER PROJECT SPECIFICATIONS SECTIONS 15417 AND 15418.
PROVIDE ACCESS DOORS FOR VALVES AS PER SECTION 15432.
PROVIDE ISOLATION GATE VALVES AT ALL COLD AND HOT WATER BRANCH PIPING.



TYPICAL DOMESTIC WATER FLOOR CONTROL VALVE RISER DETAIL

NOT TO SCALE

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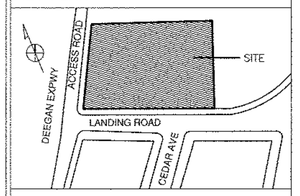
KEY PLAN



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11.21.14	DESIGN DEVELOPMENT SUBMISSION

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TITLE:

PLUMBING KITCHEN RISER DIAGRAM AND PLAN

SEAL:

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	12 of 13

DWG. NO.:

P303.00

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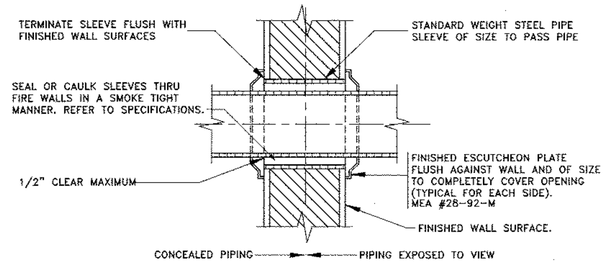


SLEEVE AND ESCUTCHEONS:

A. SLEEVES FOR PIPING THROUGH MASONRY WALL SHALL BE SCHEDULE 40, STANDARD GALVANIZED STEEL PIPE; IN FRAMED PARTITIONS SHALL BE 20 GAUGE SHEET METAL. THE SPACE BETWEEN THE PIPE AND ITS SLEEVE SHALL NOT EXCEED 1/2". THE SLEEVE SHALL HAVE A SUFFICIENT LENGTH TO BE FLUSH WITH THE FINISHED WALL SURFACES.

B. EXPOSED PIPING PASSING THROUGH WALLS, FLOORS, OR CEILINGS SHALL BE FITTED WITH CHROMIUM-PLATED CAST BRASS ESCUTCHEONS WITH FASTENING SET SCREWS.

CUTTING AND PATCHING:

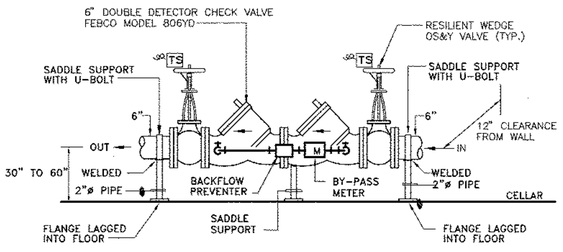
A. PIPING PASSING THROUGH WALLS SHALL HAVE A TRIM OPENING CUT NO GREATER THAN NECESSARY FOR THE INSTALLATION OF A SLEEVE SECURED THEREIN.

B. PIPING PASSING THROUGH CONCRETE FLOORS SHALL HAVE AN OPENING CORE DRILLED SO THAT THE SPACE BETWEEN THE OPENING AND THE PIPE SHALL NOT EXCEED 1/2".

C. ANNULAR SPACES BETWEEN PIPING AND SLEEVES OR CORE DRILLED FLOOR OPENINGS SHALL BE PACKED WITH MINERAL WOOL AND SEALED, TO RETAIN THE FIRE INTEGRITY OF THE WALLS AND FLOORS, WITH NON-HARDENING COMPOUND SIMILAR OR EQUAL TO DUXSEAL AS MANUFACTURED BY THE J.M. CLIPPER CORP.

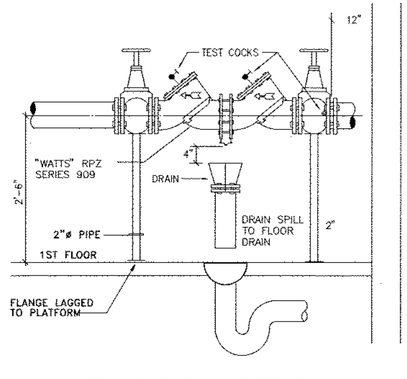
DETAIL OF PIPE PENETRATION THRU RATED WALL SHOWN (SLAB PENETRATION SIMILAR)

NOT TO SCALE



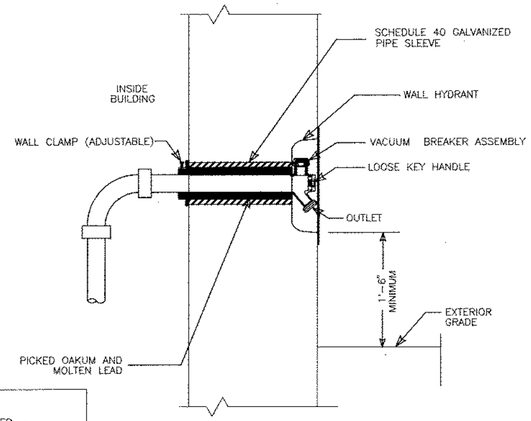
TYPICAL DOUBLE DETECTOR CHECK VALVE ASSEMBLY DETAIL

NOT TO SCALE



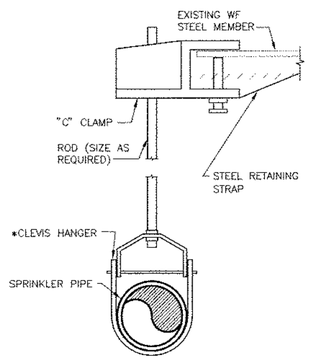
TYPICAL RPZ DETAIL

NOT TO SCALE



WALL HYDRANT

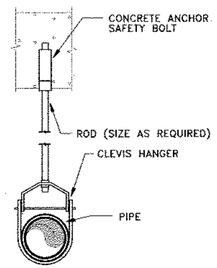
NOT TO SCALE



* CLEVIS HANGER REQUIRED ON PIPING LARGER THAN 1". GENERAL PURPOSE HANGERS MAY BE USED ON 1" SPRINKLER PIPING ONLY.

TYPICAL HANGER DETAIL

NOT TO SCALE

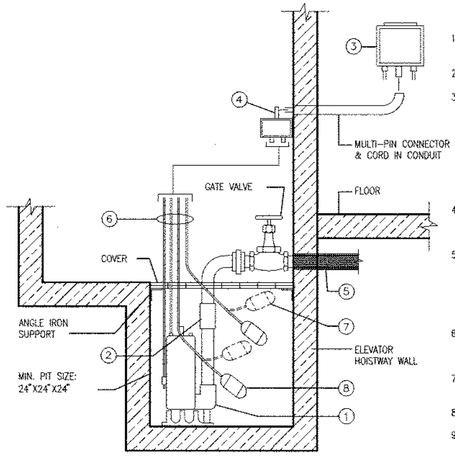


NOTES:

* CLEVIS HANGER REQUIRED ON PIPING LARGER THAN 1". GENERAL PURPOSE HANGERS MAY BE USED ON 1" PIPING ONLY.

TYPICAL HANGER DETAIL

NOT TO SCALE

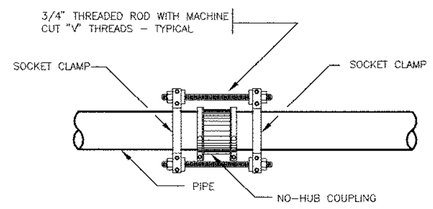


KEY NOTES:

1. SUBMERSIBLE EFFLUENT PUMP 1/2 HP, 230 VOLT, 3600 RPM, 2" DISCHARGE CONNECTION
2. CHECK VALVE
3. 230V, THREE PHASE (3ø) CONTROL SYSTEM WITH BUILT-IN AUDIBLE AND VISUAL ALARM FOR WHEN PUMP DOES NOT RUN DUE TO OIL IN PIT OR HIGH LIQUID ALARM. PROVIDE SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACT FOR A REMOTE ALARM LOCATION. LIGHTS FOR OIL SPILL, POWER, HIGH LIQUID LEVEL, OVERLOAD, & PUMP RUN.
4. JUNCTION BOX SHALL BE PROVIDED WITH MULTI-PIN CONNECTOR AND CORD OF REQUIRED LENGTHS TO REACH PANEL.
5. ALL BURIED PUMP PRESSURE DISCHARGE PIPING SHALL BE PROTECTED WITH TAPECOAT CORROSION PROTECTION TAPE. IN ADDITION, DISCHARGE PIPING SHALL CONNECT TO THE BUILDING DRAINAGE SYSTEM VIA AN AIR GAP OR AN AIR BREAK.
6. CABLES: POWER CABLE, PROBE CABLE, HIGH-LIQUID ALARM CABLE AND PUMP-ON FLOAT CABLE.
7. HIGH-LIQUID ALARM FLOAT WITH CLAMP DEVICE TO MOUNT TO PUMP DISCHARGE PIPING.
8. PUMP-ON FLOAT
9. PROVIDE A MINIMUM FIVE FEET EXTRA OF EACH CABLE (SLACK) ROLLED CLAMPED TO THE DISCHARGE PIPE TO ALLOW FOR THE REMOVAL OF THE PUMP FROM THE PIT.

HYDRAULIC ELEVATOR SUMP PUMP DETAIL

NOT TO SCALE



NO-HUB PIPE BRACING FOR HORIZONTAL PIPING (6" AND LARGER)

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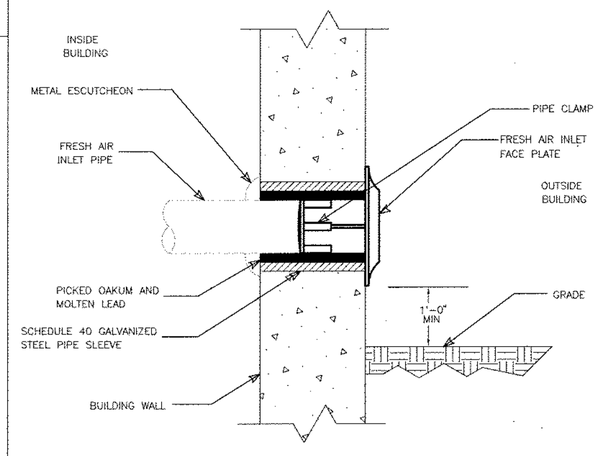
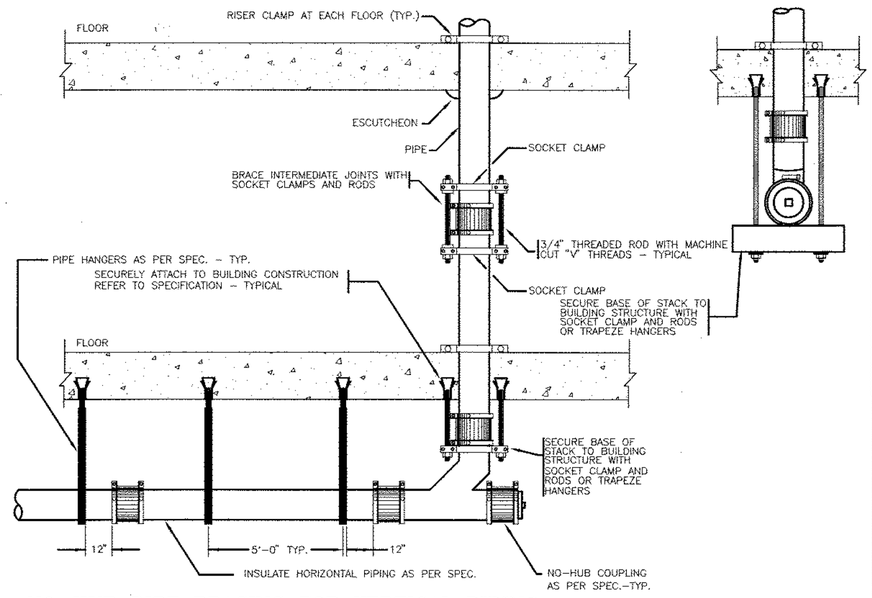


FRESH AIR INLET

NOT TO SCALE



NO-HUB PIPE BRACING FOR VERTICAL PIPING

NOT TO SCALE

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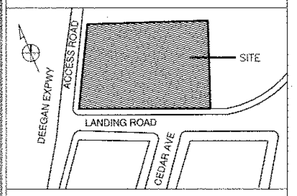

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Bowery Residents' Committee

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233 Landing Road
Bronx, New York 10468

TITLE:

PLUMBING DETAILS

SEAL: STATE OF NEW YORK * CHARLES F. JOHNSON * LICENSED PROFESSIONAL ENGINEER NO. 080545

PROJECT NO.:	9092.000
SCALE:	AS NOTED
BY: CH	CHECK: MH
DATE:	DECEMBER 22, 2014
PAGE:	13 of 13

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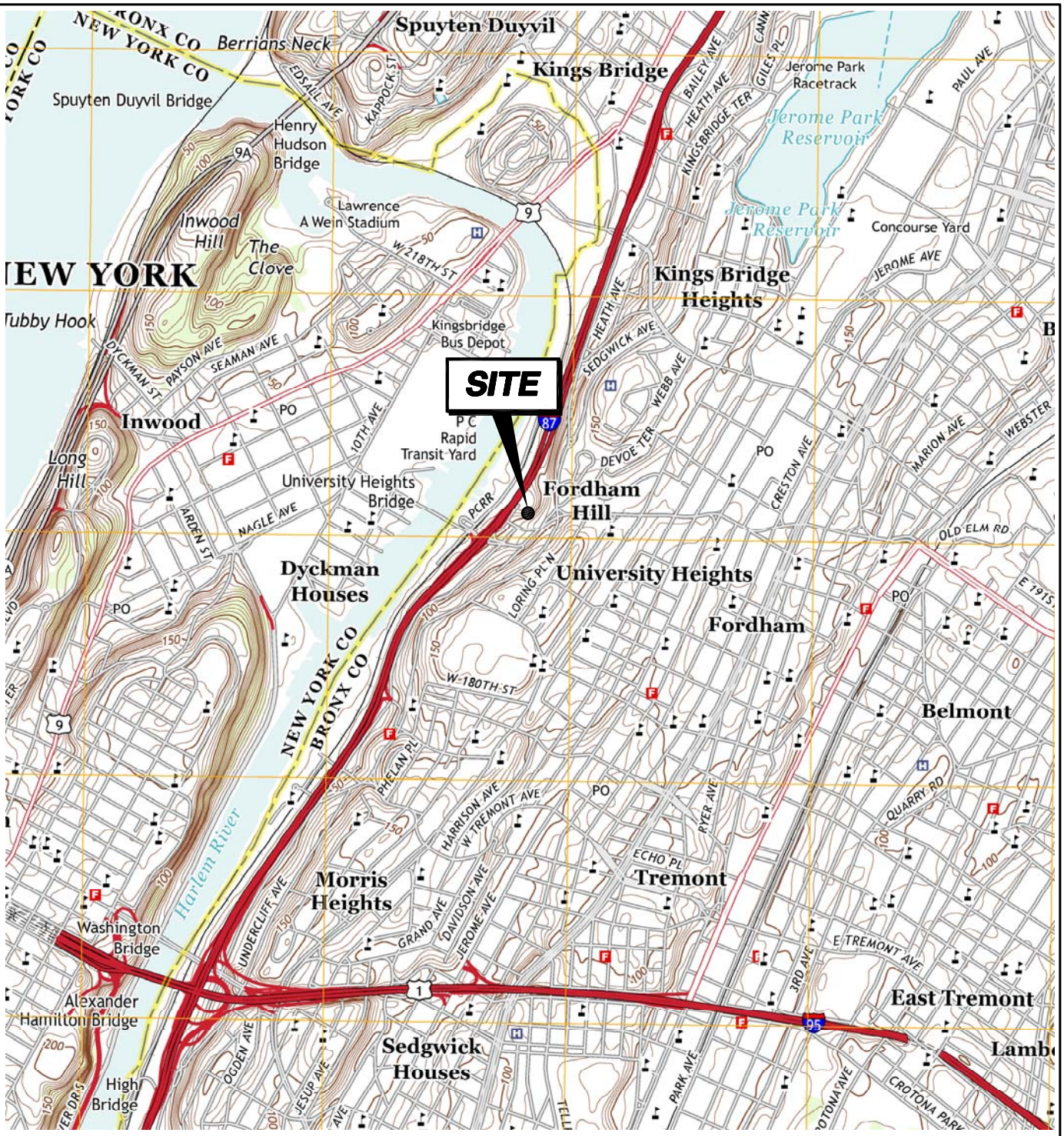
FIGURES



NEW YORK

QUADRANGLE LOCATION

SOURCE:
USGS TOPOGRAPHIC MAPS: CENTRAL PARK, NY-NJ (2011) & YONKERS, NY-NJ (2013). CONTOUR INTERVAL 10 FT., NAVD-1988, ORIGINAL SCALE 1:24,000 (1"=2,000 FT.).

N
W E
S

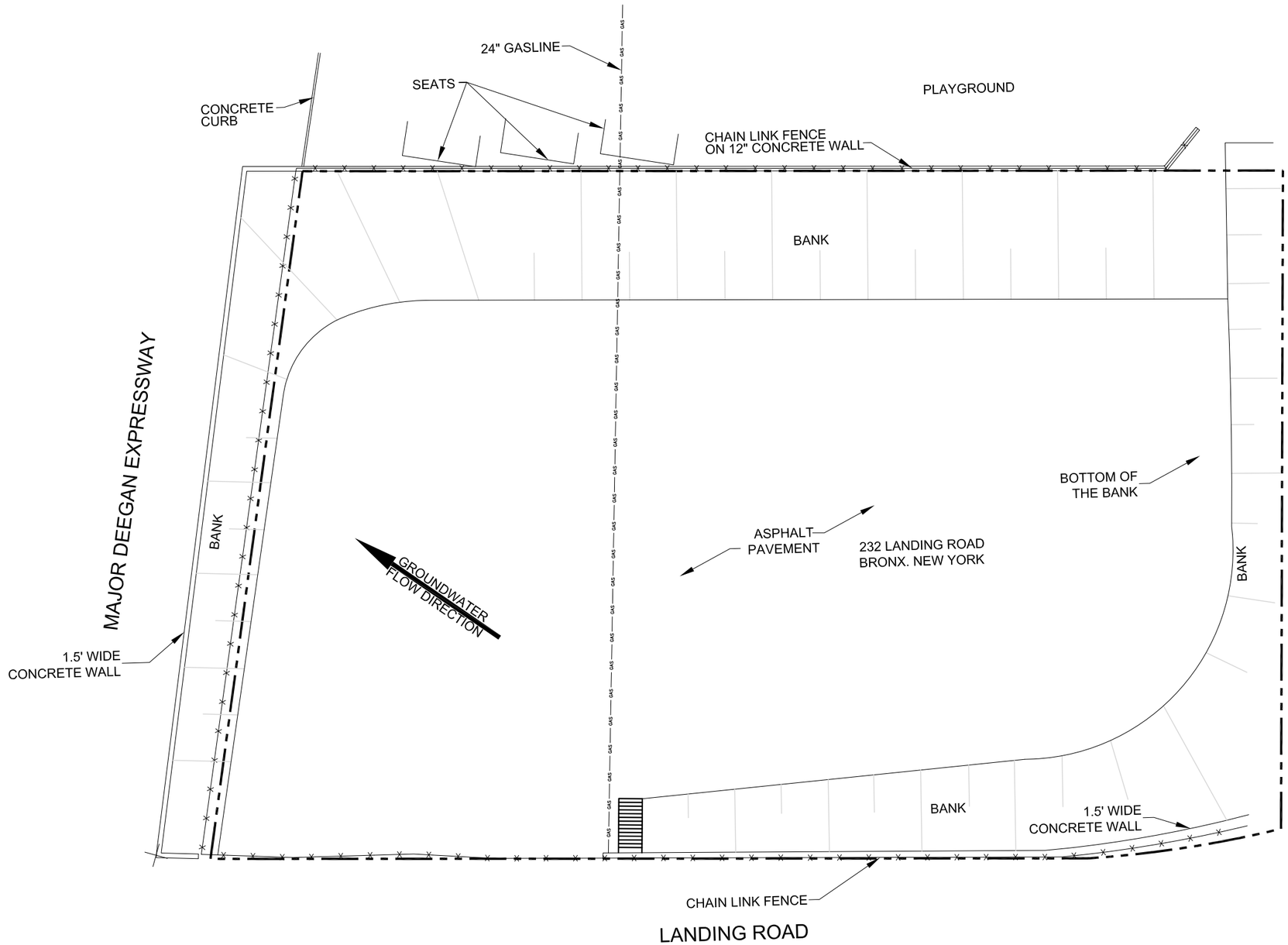
233 LANDING ROAD
BRONX, NEW YORK

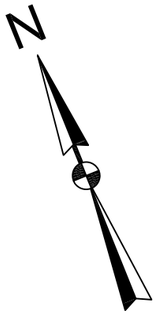
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
BOWERY RESIDENTS' COMMITTEE

SITE LOCATION MAP

PROJ MGR: BA	REVIEWED BY: MM	CHECKED BY: MM	FIGURE 1
DESIGNED BY: MM	DRAWN BY: EM	SCALE: 1"=2000'	
DATE: MAY 2014	PROJECT NO. 12-0076232.00	REVISION NO.	SHEET NO.





0 12.5' 25' 50'

APPROXIMATE SCALE

LEGEND:

- APPROXIMATE SITE BOUNDARY
- CHAIN LINK FENCE
- 24" GAS LINE

NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY PRECISION SURVEYS, ENTITLED "SURVEY OF 233 LANDING ROAD," DATED MARCH 27, 2003, ORIGINAL SCALE 1"=30'.

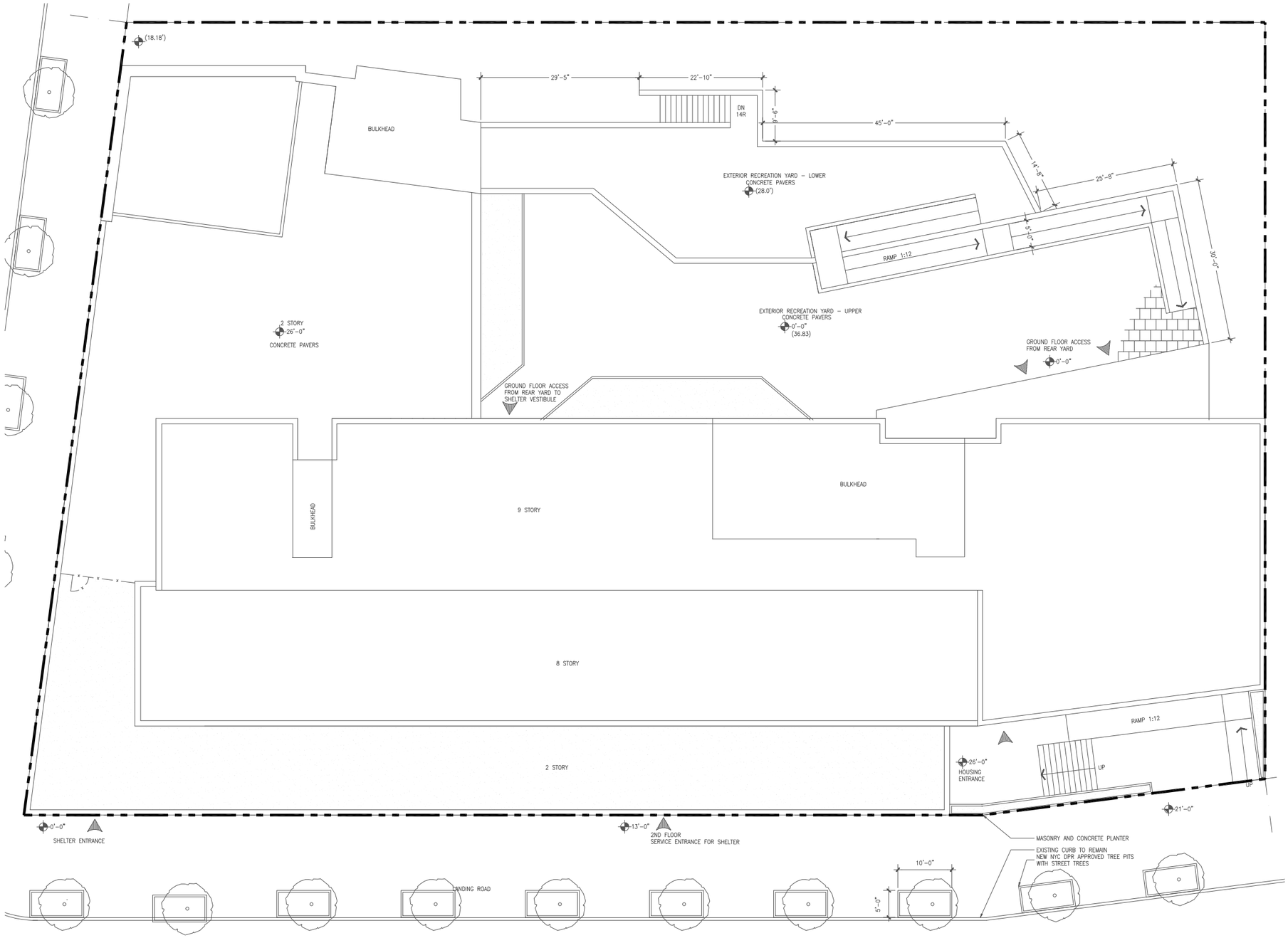
2) GROUNDWATER FLOW DIRECTION INFERRED FROM WATER LEVEL READINGS MADE IN WELLS AT THE TIMES AND CONDITIONS STATED IN THE REPORT.

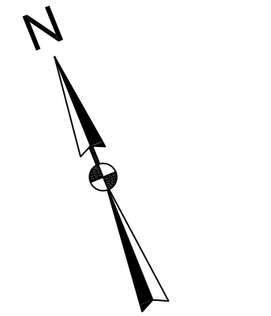
NO.	ISSUE/DESCRIPTION	BY	DATE

233 LANDING ROAD
BRONX, NEW YORK

SITE PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: BOWERY RESIDENTS' COMMITTEE	
PROJ MGR: BA	REVIEWED BY: MM	CHECKED BY: MM	FIGURE 2
DESIGNED BY: MM	DRAWN BY: EM	SCALE: 1" = 25'	
DATE: APRIL 2015	PROJECT NO. 12.0076232.20	REVISION NO.	SHEET NO.





0 10' 20' 40'

APPROXIMATE SCALE

LEGEND:

SITE BOUNDARY

NOTES:

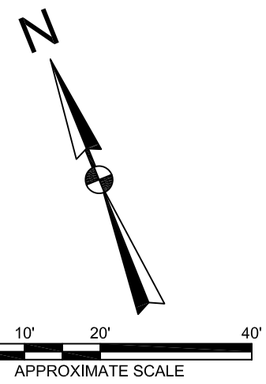
1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY EDELMAN SULTAN KNOX WOOD ARCHITECTS LLP, ENTITLED "SITE PLAN," DATED 12/22/14, ORIGINAL SCALE 1/8"=1', DRAWING No. A-100.00.

NO.	ISSUE/DESCRIPTION	BY	DATE

233 LANDING ROAD
BRONX, NEW YORK

REDEVELOPMENT PLAN

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		BOWERY RESIDENTS' COMMITTEE	
PROJ MGR: BA	REVIEWED BY: SH	CHECKED BY: BA	FIGURE 3
DESIGNED BY: SH	DRAWN BY: MT	SCALE: 1" = 20'	
DATE: APRIL 2015	PROJECT NO. 12.0076232.20	REVISION NO.	SHEET NO.



LEGEND:

- SITE BOUNDARY
- PROPOSED BUILDING
- GAS — GAS — 24-INCH GAS LINE
- EXCAVATION OF SOIL TO APPROXIMATELY 13-FEET BELOW GROUND SURFACE
- EXCAVATION OF SOIL TO 2-FEET AND/OR CONCRETE COVER

NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY EDELMAN SULTAN KNOX WOOD ARCHITECTS LLP, ENTITLED "CELLAR FLOOR PLAN," DATED 12/22/14, ORIGINAL SCALE 1/8"=1', DRAWING No. A-200.00.

NO.	ISSUE/DESCRIPTION	BY	DATE

233 LANDING ROAD
BRONX, NEW YORK

EXCAVATION PLAN

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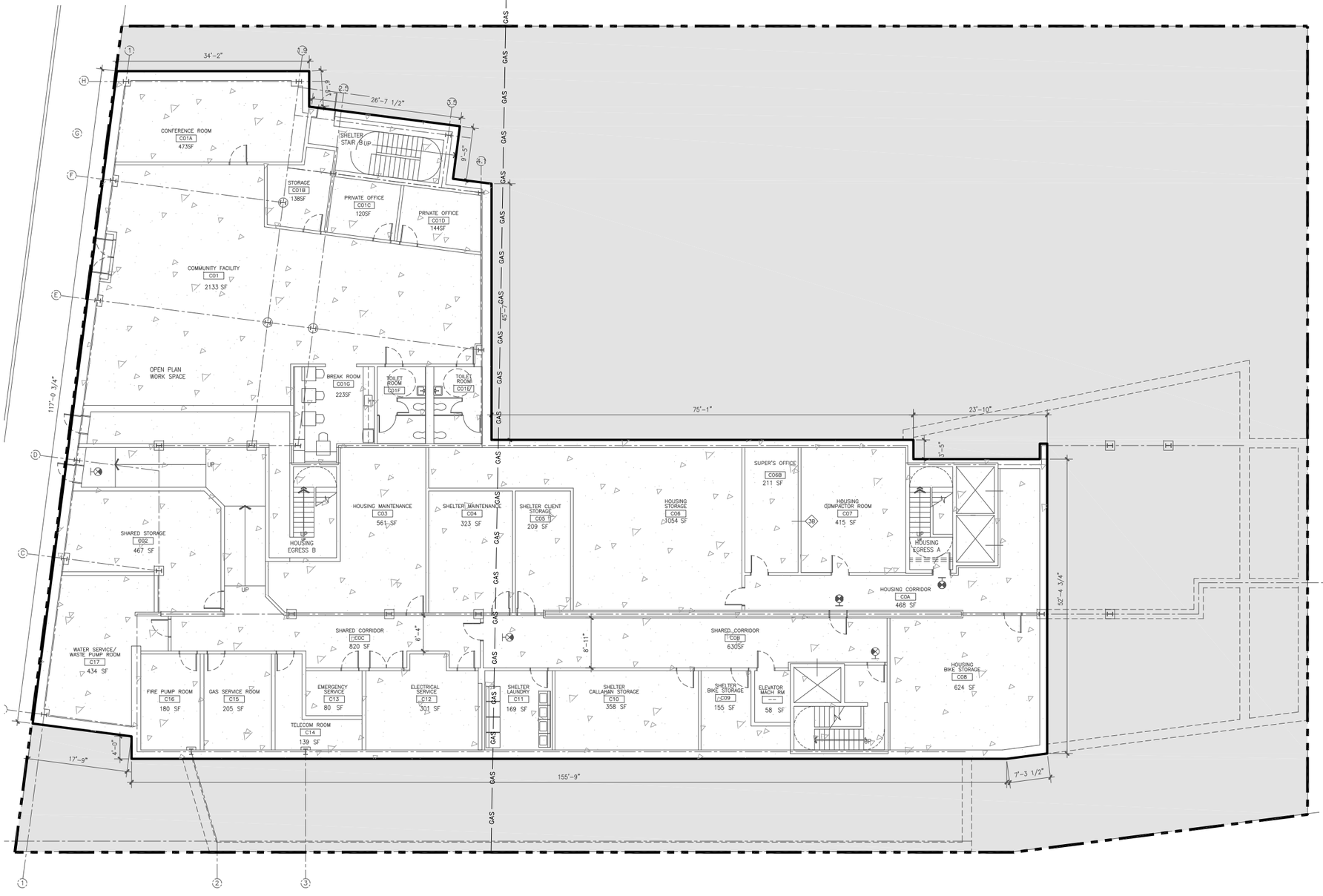
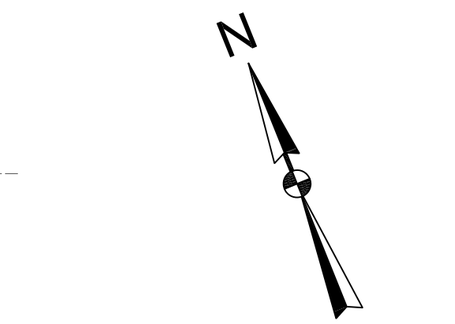
PREPARED FOR:
BOWERY RESIDENTS' COMMITTEE

PROJ MGR: BA	REVIEWED BY: SH	CHECKED BY: BA	FIGURE 4
DESIGNED BY: SH	DRAWN BY: MT	SCALE: 1" = 20'	
DATE: APRIL 2015	PROJECT NO. 12.0076232.20	REVISION NO.	SHEET NO.





LEGEND:

- SITE BOUNDARY
- PROPOSED BUILDING
- 10-INCH CONCRETE SLAB
- MINIMUM 2-FEET CLEAN FILL AND/OR CONCRETE

NOTES:

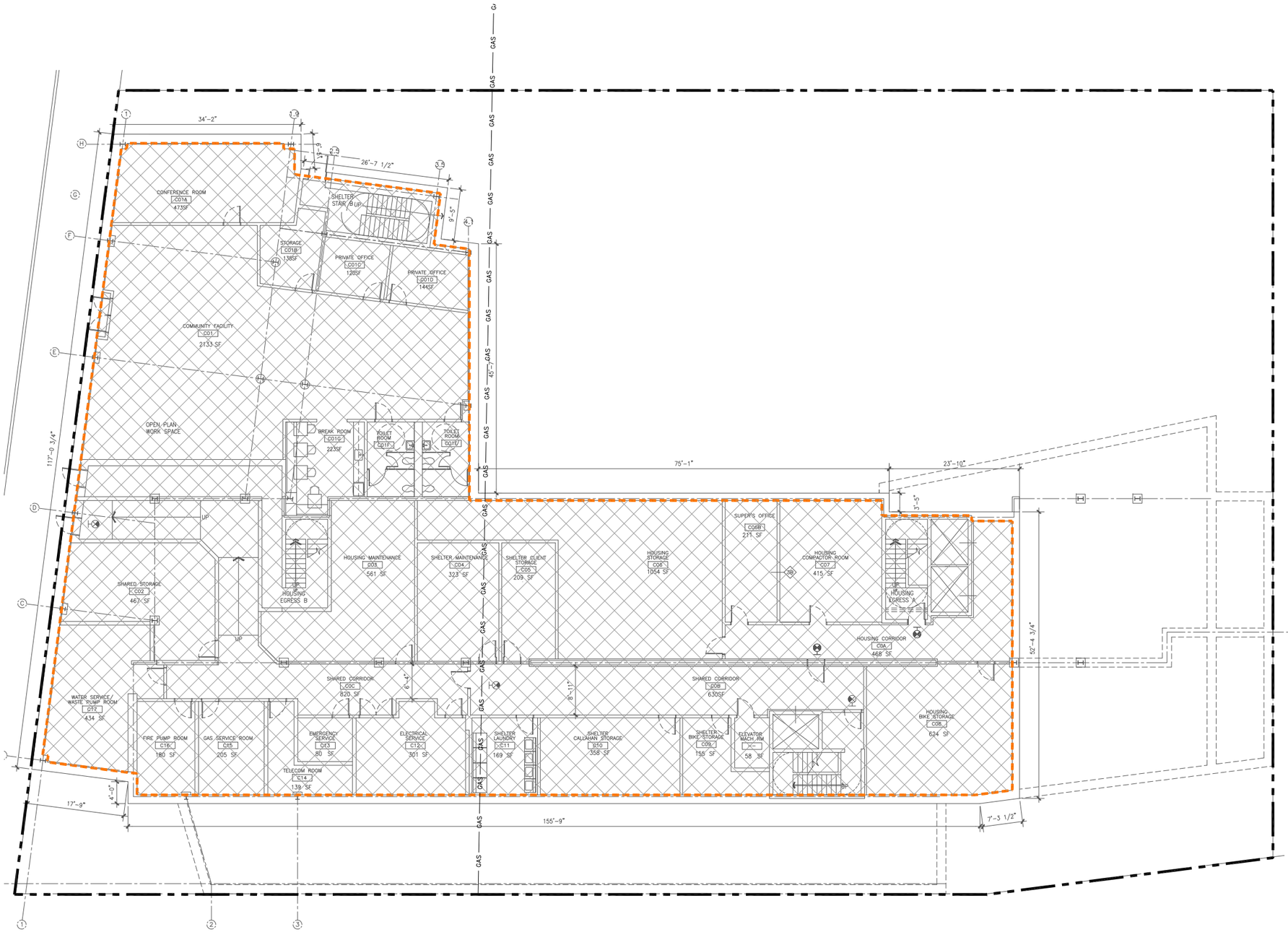
1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY EDELMAN SULTAN KNOX WOOD ARCHITECTS LLP, ENTITLED "CELLAR FLOOR PLAN," DATED 12/22/14, ORIGINAL SCALE 1/8"=1', DRAWING No. A-200.00.

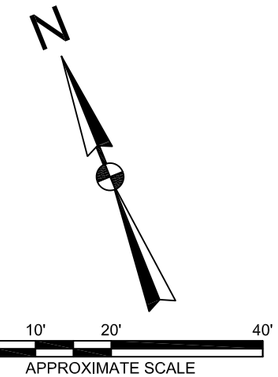
NO.	ISSUE/DESCRIPTION	BY	DATE

233 LANDING ROAD
BRONX, NEW YORK

COMPOSITE COVER SYSTEM PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: BOWERY RESIDENTS' COMMITTEE	
PROJ MGR: BA	REVIEWED BY: SH	CHECKED BY: BA	FIGURE 5
DESIGNED BY: SH	DRAWN BY: MT	SCALE: 1" = 20'	
DATE: APRIL 2015	PROJECT NO. 12.0076232.20	REVISION NO.	SHEET NO.





LEGEND:

- SITE BOUNDARY
- 20 MIL. VAPOR BARRIER ALONG FOUNDATION WALLS
- 20 MIL. VAPOR BARRIER BENEATH 10-INCH CONCRETE SLAB

NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY EDELMAN SULTAN KNOX WOOD ARCHITECTS LLP, ENTITLED "CELLAR FLOOR PLAN," DATED 12/22/14, ORIGINAL SCALE 1/8"=1', DRAWING No. A-200.00.

NO.	ISSUE/DESCRIPTION	BY	DATE

233 LANDING ROAD
BRONX, NEW YORK

VAPOR BARRIER PLAN

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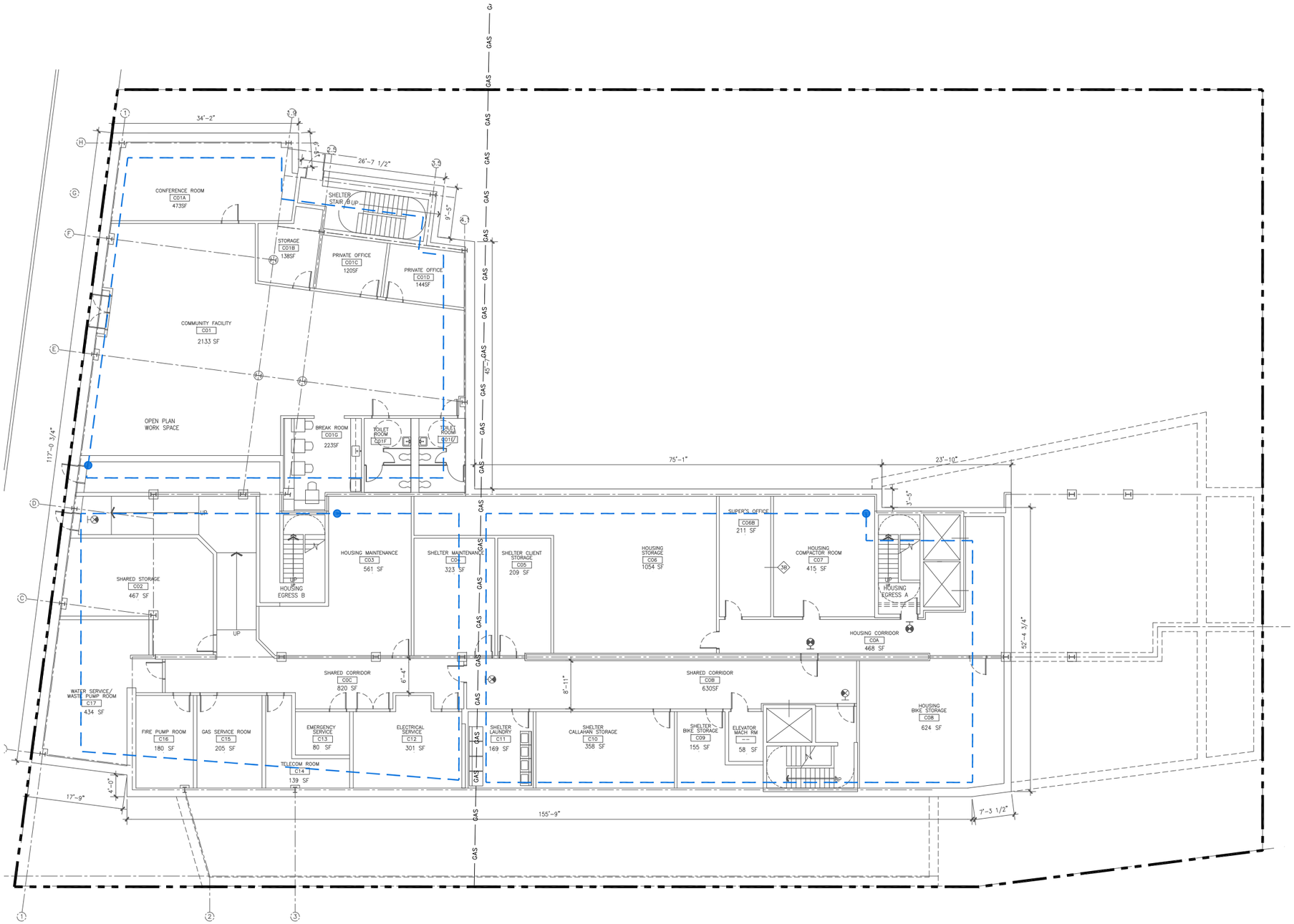
PREPARED FOR:
BOWERY RESIDENTS' COMMITTEE

PROJ MGR: BA	REVIEWED BY: SH	CHECKED BY: BA	FIGURE 6
DESIGNED BY: SH	DRAWN BY: MT	SCALE: 1" = 20'	
DATE: APRIL 2015	PROJECT NO. 12.0076232.20	REVISION NO.	SHEET NO.



LEGEND:

- SITE BOUNDARY
- APPROXIMATE LOCATION OF SUB-SLAB DEPRESSURIZATION SYSTEM PIPING
- PROPOSED VERTICAL RISER PIPE TO ROOF WITH FAN

NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY EDELMAN SULTAN KNOX WOOD ARCHITECTS LLP, ENTITLED "CELLAR FLOOR PLAN," DATED 12/22/14, ORIGINAL SCALE 1/8"=1', DRAWING No. A-200.00.

NO.	ISSUE/DESCRIPTION	BY	DATE

233 LANDING ROAD
BRONX, NEW YORK

SUB-SLAB DEPRESSURIZATION DESIGN

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BOWERY RESIDENTS' COMMITTEE

PROJ MGR: BA	REVIEWED BY: SH	CHECKED BY: BA	FIGURE 7
DESIGNED BY: SH	DRAWN BY: MT	SCALE: 1" = 20'	
DATE: APRIL 2015	PROJECT NO. 12.0076232.20	REVISION NO.	SHEET NO.

TABLES

Table 1: New York State Part 375
Soil Cleanup Objectives

Contaminant	NYS Part 375 Unrestricted Residential SCOs	NYS Part 375 Restricted Residential SCOs
All soil cleanup objectives (SCOs) are in parts per million (ppm); approximately equivalent to mg/kg.		
Metals		
Arsenic	13 [m]	17 [f]
Barium	350 [m]	400
Beryllium	7.2	72
Cadmium	2.5 [m]	4.3
Chromium, hexavalent [h]	1 [l]	110
Chromium, trivalent [h]	30 [m]	180
Copper	50	270
Total Cyanide [h]	27	27
Lead	63 [m]	400
Manganese	1600 [m]	2,000 [f]
Total Mercury	0.18 [m]	0.81 [j]
Nickel	30	310
Selenium	3.9 [m]	180
Silver	2	180
Zinc	109 [m]	10,000 [d]
PCBs/Pesticides		
2,4,5-TP Acid (Silvex)	3.8	100 [a]
4,4'-DDE	0.0033 [l]	8.9
4,4'-DDT	0.0033 [l]	7.9
4,4'-DDD	0.0033 [l]	13
Aldrin	0.005 [m]	0.097
alpha-BHC	0.02	0.48
beta-BHC	0.036	0.36
Chlordane (alpha)	0.094	4.2
delta-BHC	0.04	100 [a]
Dibenzofuran	7	59
Dieldrin	0.005 [m]	0.2
Endosulfan I	2.4	24 [i]
Endosulfan II	2.4	24 [i]
Endosulfan sulfate	2.4	24 [i]
Endrin	0.014	11
Heptachlor	0.042	2.1
Lindane	0.1	1.3
Polychlorinated biphenyls	0.1	1
Semivolatiles		
Acenaphthene	20	100 [a]
Acenapthylene	100 [k]	100 [a]
Anthracene	100 [k]	100 [a]
Benz(a)anthracene	1 [m]	1 [f]
Benzo(a)pyrene	1 [m]	1 [f]
Benzo(b)fluoranthene	1 [m]	1 [f]
Benzo(g,h,i)perylene	100	100 [a]
Benzo(k)fluoranthene	0.8 [m]	3.9
Chrysene	1 [m]	3.9
Dibenz(a,h)anthracene	0.33 [l]	0.33 [e]
Fluoranthene	100 [k]	100 [a]
Fluorene	30	100 [a]
Indeno(1,2,3-cd)pyrene	0.5 [m]	0.5 [f]
m-Cresol	0.33 [l]	100 [a]
Naphthalene	12	100 [a]
o-Cresol	0.33 [l]	100 [a]
p-Cresol	0.33 [l]	100 [a]
Pentachlorophenol	0.8 [l]	6.7
Phenanthrene	100	100 [a]
Phenol	0.33 [l]	100 [a]
Pyrene	100	100 [a]

Table 1: New York State Part 375
Soil Cleanup Objectives

Contaminant	NYS Part 375 Unrestricted Residential SCOs	NYS Part 375 Restricted Residential SCOs
All soil cleanup objectives (SCOs) are in parts per million (ppm); approximately equivalent to mg/kg.		
Volatiles		
1,1,1-Trichloroethane	0.68	100 [a]
1,1-Dichloroethane	0.27	26
1,1-Dichloroethene	0.33	100 [a]
1,2-Dichlorobenzene	1.1	100 [a]
1,2-Dichloroethane	0.02 [m]	3.1
cis-1,2-Dichloroethene	0.25	100 [a]
trans-1,2-Dichloroethene	0.19	100 [a]
1,3-Dichlorobenzene	2.4	49
1,4-Dichlorobenzene	1.8	13
1,4-Dioxane	0.1 [l]	13
Acetone	0.05	100 [b]
Benzene	0.06	4.8
Butylbenzene	12	100 [a]
Carbon tetrachloride	0.76	2.4
Chlorobenzene	1.1	100 [a]
Chloroform	0.37	49
Ethylbenzene	1	41
Hexachlorobenzene	0.33 [l]	1.2
Methyl ethyl ketone	0.12	100 [a]
Methyl tert-butyl ether	0.93	100 [a]
Methylene chloride	0.05	100 [a]
n-Propylbenzene	3.9	100 [a]
sec-Butylbenzene	11	100 [a]
tert-Butylbenzene	5.9	100 [a]
Tetrachloroethene	1.3	19
Toluene	0.7	100 [a]
Trichloroethene	0.47	21
1,2,4-Trimethylbenzene	3.6	52
1,3,5- Trimethylbenzene	8.4	52
Vinyl chloride	0.02	0.9
Xylene (mixed)	0.26	100 [a]

Notes:
[a] The SCOs for residential, restricted-residential and ecological
[b] The SCOs for commercial use were capped at a maximum value of
[c] The SCOs for industrial use and the protection of groundwater were
[d] The SCOs for metals were capped at a maximum value of 10,000
[e] For constituents where the calculated SCO was lower than the
[f] For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and
[g] This SCO is derived from data on mixed isomers of BHC.
[h] The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this
[i] This SCO is for the sum of endosulfan I, endosulfan II, and
[j] This SCO is the lower of the values for mercury (elemental) or
[k] The SCOs for unrestricted use were capped at a maximum value of
[l] For constituents where the calculated SCO was lower than the
[m] For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and
[n] Protection of ecological resources SCOs were not developed for contaminants identified in Table 375-6.8(b) with "NS". Where such