FASHION INSTITUTE OF TECHNOLOGY
POMERANTZ CENTER NEW FIRE ALARM SYSTEM
INVITATION FOR BID NUMBER C1585

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SECTION I:
NOTICE TO BIDDERS

SECTION I: NOTICE TO BIDDERS

FASHION INSTITUTE OF TECHNOLOGY
POMERANTZ CENTER NEW FIRE ALARM SYSTEM
INVITATION FOR BID NUMBER C1585

For the purposes of this project (the "Project") the Fashion Institute of Technology and its auxiliary dormitory organization, the F.I.T. Student Housing Corporation, shall hereinafter be collectively referred to as "FIT" unless otherwise distinguished herein. Neither the Fashion Institute of Technology nor F.I.T. Student Housing Corporation will be responsible for receipt of any Bid which does not comply with the instructions as set forth further in this document.

FIT is **ONLY** accepting electronic scanned bids for the subject project. You must email your bid to purchasingbids@fitnyc.edu in PDF format and it should include all the requested documents (See Attachment A – Bid Checklist) including a scanned image of your bid security (Certified Check of 2 percent or Bid Bond of 10 percent of your total bid price), we'll also need you to mail us the original copy of the bid security to have on file. The bid security must either be mailed to 227 W 27th Street, New York, NY 10001 or dropped off at 333 7th Avenue (16th Floor), New York, NY 10001. Bids must be received by **May 2, 2025, on or before 12:00 P.M**. All bidders will be notified of the bid results by the end day of the bid due date. Bid results are not official until each package has been fully reviewed.

ATTACHMENT A - BID CHECKLIST

FASHION INSTITUTE OF TECHNOLOGY &
POMERANTZ CENTER NEW FIRE ALARM SYSTEM
INVITATION FOR BID NUMBER C1585

Bidder shall meet the following requirements and submit necessary information with the Bid. Failure to comply with these requirements shall be grounds for rejection of your Bid.

- ☐ Did you attend the **mandatory** site inspection?
- ☐ Did you include all required documentation? (As per Bidder Requirements – i.e., proof of being in business, permits, licenses, certifications, etc.)
- ☐ Did you include the Form of Bid? (See Section VIII.)
- ☐ Did you include the Non-Collusive Bidding Certification? (See Section IX.)
- ☐ Did you complete in full the Bid Analysis Form, (See Attachment C)
- ☐ Did you sign for each Addendum to this project, if any were published? (It is the contractor's responsibility to check FIT's "Current Bid Opportunities" webpage for addendums prior to submitting their bid.)
  http://www.fitnyc.edu/about/administration/finance/purchasing/current-bids.php
- ☐ Did you complete the Contractor Reference Sheet? **Do not list FIT as your projects of similar size and scope.** (See Attachment B)
- ☐ Can you provide the required levels of insurance coverage? See: General Conditions – Article 15
- ☐ Did you include the Bid Security?
- ☐ Can the bidder provide references to at least three (3) different prior contracts that have been completed within the past five (5) years that are similar in size and scope to the project indicated for this Contract?
- ☐ All contractors must comply with New York State Labor Law Section 220-I and submit their NYS DOL Certificate of Contractor Registration with their bid. Did you include the certificate with your bid?
- ☐ Did you provide proof of years in business/date of incorporation?
- ☐ Sub-contracting percentage shall **not exceed 50%** of the project cost.
- ☐ Did you include an audited or reviewed financial report for the last two (2) years with your bid?

ATTACHMENT B - CONTRACTOR REFERENCE SHEET
FASHION INSTITUTE OF TECHNOLOGY
POMERANTZ CENTER NEW FIRE ALARM SYSTEM
INVITATION FOR BID NUMBER C1585

FIT requests a minimum of three references for **completed** projects of similar size and scope. Please complete the following information for each reference: **(Do not list FIT as your projects of similar size and scope.)**

Contact Name/Title: _____
Company Name/Address: _____
Phone Number: _____
Project Name: _____
Project Cost: _____
Project Start/End Date: _____
For FIT Use Only – Reference Responses
Quality of Work: _____ Site Maintenance: _____
Scheduling: ___ Cooperation: ___ Safety Standards: _____
Permits: _____ Report Submittals: _____Payments: _____
Other Relevant Factors: _____
Overall Performance Rating: Excellent___ Satisfactory___ Marginal___ Unsatisfactory___

Contact Name/Title: _____
Company Name/Address: _____
Phone Number: _____
Project Name: _____
Project Cost: _____
Project Start/End Date: _____
For FIT Use Only – Reference Responses
Quality of Work: _____ Site Maintenance: _____
Scheduling: ___ Cooperation: ___ Safety Standards: _____
Permits: _____ Report Submittals: _____Payments: _____
Other Relevant Factors: _____
Overall Performance Rating: Excellent___ Satisfactory___ Marginal___ Unsatisfactory___

Contact Name/Title: _____
Company Name/Address: _____
Phone Number: _____
Project Name: _____
Project Cost: _____
Project Start/End Date: _____
For FIT Use Only – Reference Responses
Quality of Work: _____ Site Maintenance: _____
Scheduling: ___ Cooperation: ___ Safety Standards: _____
Permits: _____ Report Submittals: _____Payments: _____
Other Relevant Factors: _____
Overall Performance Rating: Excellent___ Satisfactory___ Marginal___ Unsatisfactory___

FIT
Interviewer: _____ Signature: _____Date: _____

SECTION II:
BID TERMS AND CONDITIONS

SECTION II. BID TERMS AND CONDITIONS

SPECIFICATIONS FOR
FASHION INSTITUTE OF TECHNOLOGY
POMERANTZ CENTER NEW FIRE ALARM SYSTEM
INVITATION FOR BID NUMBER C1585

I. INTRODUCTION

The Fashion Institute of Technology, a community college of art and design, business and technology of the State University of New York, currently has an enrollment of approximately 10,000 full and part-time students. Located in the Chelsea area of Manhattan, FIT's facilities are composed of a twelve-building complex containing administrative/academic offices, classrooms, computer labs, and studios. There are three (3) residence halls located on West 27th Street that currently house approximately 1,250 students and one (1) residence hall located at 406 West 31st Street that houses approximately 1,100 students. F.I.T. Student Housing Corporation is a separate, not-for-profit corporation that was established pursuant to the laws of the State of New York to own and operate these residence halls for the benefit of the College and its students. For purposes of this project all references to FIT shall be recognized to refer to the Fashion Institute of Technology (hereafter, "FIT" or the "College") and the F.I.T. Student Housing Corporation together, unless specifically designated otherwise. The successful responsive and responsible bidder (hereinafter "Contractor") shall be required to enter into a contract with FIT based on the Contract Documents, (including Notice to Bidders, Bid Terms and Conditions, Contract Terms and Conditions, General Requirements, General Conditions, Labor & Material Payment Bond, Performance Bond, Form of Bid, Non-Collusive Bidding Certification, Substitution Form Request, Contract, Affirmative Action Form, Change Order, Form, Contractor's Trade Payment Breakdown, Safety EHS Plan, Prevailing Wage Schedule, Specifications, and Drawings), attached hereto and incorporated herein.

II. SUMMARY OF SCOPE OF WORK

The Work of the Project is defined by the immediately following Project Description herein below and by the Contract Documents.

Project Description**:** Provide labor, materials, tests, tools and equipment to complete the Pomerantz Center New Fire Alarm System Project. Contractor may begin survey and procurement of materials immediately following award.

The installation of all equipment in accordance with the Manufacturer's Installation/Operation & Maintenance Manuals & Instructions shall be followed.

III. BIDDER REQUIREMENTS

Bidder shall meet the following requirements and submit necessary information with the Bid. Failure to comply with these requirements shall be grounds for rejection of your Bid. FIT reserves the right to reject bids with incomplete information or bid security, or contain conditions not specified in the Bid Terms and Condition herein, or which are presented on a different form other than that provided to bidders. FIT reserves the right to determine whether a Bidder has substantially met all the Bid requirements and to ask for additional information prior to making such a determination.

A. **Bidder shall have been primarily an electrical contractor in the Electrical and/or Fire Alarm business for a minimum of five (5) years as of the Bid Opening Date. Proof shall be submitted with the Bid.**

B. Bidder shall have satisfactorily performed work of the size, scope and nature to be performed under this Contract, as evidenced by **references from at least three (3) different successfully completed contracts in an installation similar to those indicated for this Contract in the past five (5) years.** Bidder shall include for each reference: project location, dollar value of contract; initiation and completion date, name, title, address and telephone number of contact person. References cannot be members of FIT staff or FIT consultants.

C. **Bidder shall attend the mandatory pre-bid meeting and site inspection. Failure to comply with this requirement shall be grounds for rejection of the Bid.**

D. Bidder is responsible for all necessary field measurements, all necessary data on the existing conditions and verification of all quantities and dimensions listed in the Project Specifications and Drawings, if applicable.

E. By submitting a Bid, Bidder agrees that s/he has examined the Contract Documents, visited the site, noted all conditions and limitations affecting the Work, and fully understands the nature of the Work. Bidder is required to inform FIT in writing immediately of any instance where changed conditions are encountered.

F. Bidder shall submit documentation of financial viability, including balance sheets and profit and loss statement for the prior two (2) years, with the Bid.

G. Bidder, upon request, shall submit copies of current licenses and certifications applicable to the work, including, but not limited to, licenses issued by the Commissioner of Buildings of the City of New York. Proof of the following certificates will also be required: 10 Hour OSHA Outreach Training Program; Asbestos Awareness Training, FDNY Certificate of Fitness, with the Bid.

IV. APPROVAL OF SUBCONTRACTORS

Subcontracting shall be permitted **not to exceed 50%** of the work of the Project as determined by FIT. The ratio of the contractors and subcontractors work must be included with your bid submission. All subcontractors are required to gain prior written approval by FIT's Facilities Director. The Mechanical Contractor will be the Prime Contractor (hereinafter "Contractor) and shall be permitted to Subcontract the following types of Services:

- Services to develop, amend and/or upgrade EHS Plan
- Demolition
- Fire Alarm
- HVAC
- Plumbing
- Sprinkler
- Metal Fabrication

The Contractor will require that the terms of this Contract apply to the sub-contractors and shall cause all sub-contractors to comply with the terms of this contract.

V. BID SECURITY

Failure to provide Bid Security in the prescribed manner shall result in the rejection of the Bid.

Bidder shall provide Bid Security in the form of either a bid deposit or a bid bond, at Bidders option. The bid deposit shall be in the form of a certified check made payable to "Fashion Institute of Technology" in an amount no less than two percent (2%) of the total bid price. The bid bond shall be in an amount no less than ten percent (10%) of the total bid price.

VI. PRE-BID SITE INSPECTION AND QUESTIONS

A **mandatory** Pre-Bid Site Inspection for prospective Bidders will be held on **April 15, 2025 at 11:00 A.M.** at the Fashion Institute of Technology, Feldman Building "C Building" Lobby, located at 27th Street (between 7th and 8th Avenues). **Failure to attend shall be grounds for rejection of your Bid. Please also bring a business card.**

Bidder shall examine the Bid documents carefully. Before bidding, Bidder shall make any requests for interpretation of Bid documents or clarification of any ambiguity therein that should have been detected by a reasonably prudent Bidder. Questions shall be submitted in writing to the attention of Purchasing Department via email: purchasingbids@fitnyc.edu, no later than **April 28, 2025 on or before 3:00 P.M**. Answers shall be provided in the form of and Addendum and be posted on the FIT purchasing department website. Reference Bid number **C1585.**

VII. BID DESIGNATION

A. FIT is **ONLY** accepting electronic scanned bids for the subject project. You must email your bid to purchasingbids@fitnyc.edu in PDF format and it should include all the requested documents (See Attachment A – Bid Checklist) including a scanned image of your bid security (Certified Check of 2 percent or Bid Bond of 10 percent of your total bid price), we'll also need you to mail us the original copy of the bid security to have on file. The bid security must either be mailed to 227 W 27th Street, New York, NY 10001 or dropped off at 333 7th Avenue (16th Floor), New York, NY 10001. Bids must be received by **May 2, 2025, on or before 12:00 P.M**. All bidders will be notified of the bid results by the end day of the bid due date. Bid results are not official until each package has been fully reviewed.

B. Bids received late will not be considered.

VIII. PREPARATION OF THE BIDS

A. Bids must be submitted on the forms supplied by FIT in the Bidder's full legal name or the Bidder's full legal name plus a registered assumed name. All blank spaces for bid prices must be filled in, using both words and figures, words to take precedence over figures. **Conditional bids shall not be accepted.** Bids shall not contain any recapitulation of the Work to be done. Bidder exclusions shall be grounds for bid rejection. Do not modify the bid forms supplied by FIT

B. Bids that are illegible or that contain omission, alterations, additions or items not called for in the bidding documents may be rejected as not responsive. Any bid which modifies, limits, or restricts all or any part of such bid, other than as expressly provided for in the Notice to Bidders, Bid Terms and Conditions, and Contract Terms and Conditions, may be rejected as not responsive.

C. FIT may reject any bid not prepared and submitted in accordance with the provisions of the Notice to Bidders, Bid Terms and Conditions, and Contract Terms and Conditions. Neither FIT nor the FIT Student Housing Corporation will be responsible for receipt of any Bid which does not comply with these instructions. Only those Bids emailed to the FIT Purchasing Dept. inbox (purchasingbids@fitnyc.edu) on or before **May 2, 2025, on or before 12:00 PM** will be considered.

D. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof and any bid received after such time and date shall not be considered.

E. No Bidder may withdraw a bid within ninety (90) days after the actual date of the opening thereof.

IX. AWARD OF CONTRACT

A. The award of the Contract shall be made to the Bidder submitting the lowest responsible bid if, in the opinion of FIT, the bid is responsive to the bid solicitation, and such Bidder is responsible and qualified to perform the work involved in the sole discretion of FIT. The lowest bidder will be considered the contractor with the lowest bid for the base bid. In case FIT will decide to include the 'alternate' in the scope of work, the lowest bidder will be considered the contractor with the lowest total of the base bid plus the alternate bid.

B. FIT reserves the right to reject any bid or all bids, to waive any informalities or irregularities or omissions in any bid received.

C. During the term of the Contract, the Contractor shall promptly notify FIT of any change in the ownership of the Contractor. Failure to notify FIT may result in termination of the Contract.

D. FIT reserves the right, exercisable in its sole discretion, to cancel and withdraw from the Project at any time in advance of the award.

E. Prior to the opening of the bids, Bidder shall promptly notify FIT of Change in ownership of the Bidder. Failure to notify with this bid shall be grounds for rejection of the Bid.

X. DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful Bidder, upon failure or refusal to execute and deliver the Contract and bond required within ten (10) days after such Bidder has received notice of the acceptance of such bid, shall forfeit to FIT as damages for such failure or refusal, the security deposited with the Bid or the sum of the difference between the total bid of the successful Bidder and the total bid of the Bidder submitting the next lowest bid, whichever sum shall be higher.

XI. PREVAILING WAGE

This contract is subject to New York State Labor Law 220, Article 8 Prevailing Wage Schedules. The Contractor shall submit with, each invoice, certified payrolls for all labor. Submission of a Certified Payroll with invoice in full compliance with labor laws is a condition of payment.

Contractor and its subcontractors shall pay at least the prevailing wage rate and pay or provided the prevailing supplements in accordance with the Labor Law.

A copy of the prevailing wage schedule, for New York County, can be found at the New York State Department of Labor website. (PRC# **2025003588)**

www.labor.ny.gov

Bidder must also comply with all applicable federal, state, and local laws rules, regulations, requirements, and codes, including but not limited to, the statues regulations, laws, rules and requirements specifically referenced in the documents annexed hereto.

XII. M/WBE AND SDVOB

FIT encourages minority and women business enterprise participation in this project by contractors, subcontractors and suppliers, and all bidders are expected to cooperate with that commitment. Also, bidders are encouraged to use Service-Disabled Veteran-Owned Businesses (SDVOB). A directory of New York State Certified Minority and Women's Business Enterprises is available from: Empire State Development Corporation, Minority and Women's Business Development Division at: http://www.esd.ny.gov/mwbe.html to assist potential bidders in locating sources of M/WBE subcontractors and reaching these goals. SDVOBs can be readily identified on the directory of certified businesses at: https://online.ogs.ny.gov/SDVOB/search."

XIII. MISCELLANEOUS

A. FIT reserves the right to request clarifications from bidders for purposes of assuring a full understanding of responsiveness and further reserves the right to permit revisions from all bidders who might be, in FIT's sole discretion determined to be viable bidders for contract award, prior to the award.

B. FIT reserves the right to reject separable portions of any offer, to negotiate terms and conditions consistent with the bid, and to make an award for any or all remaining portions.

C. FIT reserves the right to eliminate mandatory requirements unmet by all bidders.

D. Any additional vendor terms which are attached or referenced with a submission shall not be considered part of the bid or proposal, but shall be deemed included for informational purposes only.

E. Unless otherwise specifically stated in the Bid Terms and Conditions, all specifications and requirements constitute minimum requirements. All bids must meet or exceed stated specifications and requirements.

F. FIT reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the Bid and whose bid is considered to best serve FIT's interest. In determining the responsiveness and responsibility of the bidder, FIT may consider the following factors, including but not limited to: the ability, capacity, and skill of the bidder to perform as required; whether the bidder can perform promptly, or within the time specified without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the bidder; the quality of past performance by the bidder; the previous and existing compliance by the bidder with relevant laws and regulations; the sufficiency of the bidder's financial resources; the availability, quality, and adaptability of the bidder's equipment, supplies and/or services to the required use; and the ability of the bidder to provide future maintenance, service, and parts.

SECTION III:
CONTRACT TERMS AND CONDITIONS

SECTION III. CONTRACT TERMS AND CONDITIONS

I. COMPLIANCE REQUIREMENTS

All work hereunder, including but not limited to material and installations, shall be in compliance with the Contract Documents including both specifications and drawings, as well as all applicable state and local building codes (such as the New York City Building Code) and the rules, regulations of governmental agencies and utility companies having jurisdiction over the work.

The following additional notes shall be considered as part of the officially filed drawings:

NONE

THE WORK:

Unless modified by the Contract Documents, the work of each section of the specifications shall include all labor, materials, testing, tools and equipment necessary and reasonably incidental to **the Pomerantz Center New Fire Alarm System.**

WORKMANSHIP:

All work shall be performed by persons skilled in the work. Work shall be installed true to dimension, plumb and level with neat, accurate cutting and fitting of all materials in accordance with recognized standards of workmanship.

ON-SITE VERIFICATION:

The Contractor shall verify all dimensions and site conditions prior to commencing the work. Dimensions may not be scaled from drawings. Should there be a discrepancy, Contractor is to notify FIT Facilities Director and Architect immediately for clarification.

COORDINATION OF THE WORK:

The Contractor shall be responsible for the coordination of the work and the means and methods of construction and provide FIT with the resume of Contractor's project manager ("Project Manager"). FIT's Facilities Director shall approve the Project Manager and reserves the right to request a replacement Project Manager upon reasonable notice.

WORK HOURS:

Regular work hours are from **10:00 am to 6:00 pm** unless otherwise specified in the Contract Documents. Contractor will have reasonable access to the site in order to complete the work in the given time frame. Contractor shall comply with FIT's additional work rules related to such extended access. All labor costs required to meet this deadline are the sole responsibility of the Contractor and shall be included in the contract price. FIT reserves the right to put the work on hold for any reason as many as three (3) occasions during the course of construction for a total duration of not more than 20 workdays.

PERFORMANCE AND PAYMENT BONDS

In addition to the insurance and bond requirements specified in the General Conditions, Performance and Payment Bonds shall be required for the Work of this Contract.

A. Simultaneously with the delivery of the executed Contract, Contractor shall furnish to FIT and maintain, at its own cost and expense a Performance Bond in an amount at least equal to one hundred percent (100%) of the contract price as security for faithful performance of the Contract and also a Labor and Material Payment Bond in an amount at least equal to one hundred percent (100%) of the Contract price for the payment of all persons performing labor on the project under the contract or furnishing materials in connection with the Contract. The surety on such bonds shall be a surety company rated B+ or better by A.M. Best Company, shall be licensed to do business in the State of New York, and shall hold a certificate of authority as an acceptable surety on federal bonds or otherwise satisfactory to FIT.

B. Attorneys-in-fact who sign said bonds on behalf of a surety must affix to each bond a certified and effectively dated copy of their power of appointment.

CONFLICTS, ERRORS AND OMISSIONS:

1. The Contract Documents and typical details apply throughout the work unless noted otherwise.

2. In the event that certain features of the work are not fully shown on the drawings, Contractor must obtain clarification from the FIT Facilities Director and Architect through the use of an AIA Standard RFI form (copies can be obtained from the Architect) before proceeding with the work.

3. In the event of conflicts with the drawings and/or specifications, the Contractor must promptly notify the FIT Facilities Director and Architect. The Architect will determine which shall govern.

MANUFACTURER'S PRODUCTS AND FABRICATIONS:

1. All manufacturers and fabricators printed warnings for handling of their products must be strictly observed.

2. All products and materials must be provided and installed in strict accordance with the recommendations of the manufacturer. In the event of conflict between the drawings or the specifications and the manufacturer's recommendations, Contractor must notify FIT Facilities Director and Architect to obtain clarification before proceeding with the work.

3. Contractor must verify all materials and manufactured items to be in conformance with applicable codes and regulations.

DELIVERY AND STORAGE OF MATERIALS:

1. All materials shall be new and delivered to the site in original, unbroken containers.

2. All materials shall be inspected by the Contractor at time of delivery and Contractor shall reject material evidencing damage or other defects.

3. Contractor shall provide secure and environmentally compatible storage facilities for all materials in accordance with the recommendations of the manufacturer.

PROJECT SCHEDULE:

1. Contractor shall attend a Project Initiation Conference, prior to the commencement of work at the site. Attending this Conference on behalf of the Contractor shall be a representative of FIT and the Project Manager assigned to the project. Contractor shall submit at this Conference a detailed timeline indicating the important milestones of the project and establishing an estimated date of substantial completion in accordance with Contract Documents. He/she shall also present all submittals required by the Contract Documents, such as Insurance Certificates, product tear sheets (not at the initial conference), copy of the General Liability insurance policy (amended to reflect required additional insureds), etc. Project access, storage locations, required crew size and other relevant issues shall also be addressed at this Conference.

2. Time is of the essence. Contractor shall be required to commence work of **the Pomerantz Center New Fire Alarm System** within five (5) working days of receipt of a Notice to Proceed from FIT. The shop drawings process and ordering need to proceed first. **Work shall commence no later than June 16, 2025. The project shall be Substantially Completed no later than June 16, 2026.** FDNY inspection on or about July 6, 2026. Project sign off August 10, 2026. Unless otherwise specified, the work is to be performed solely between the hours of **10:00 A.M. to 6:00 P.M.,** Monday through Friday, legal and union holidays excluded. All labor costs encountered to meet this deadline are the sole responsibility of the Contractor and shall be included in the Bid Price. FIT reserves the right, at no financial liability associated with the same, to put the Project work on hold for any reason on as many as three (3) occasions during the course of the construction for a total duration of not more than 20 workdays.

3. On Monday of each week during the construction period, the Contractor shall email to FIT's Facility Director (or such other individual as FIT may designate at its sole discretion) a written report outlining the work completed during the preceding week and the work planned for the upcoming week. Included will be any unforeseen or anticipated problems regarding implementation of the work, in addition to Change Order requests, submission data, etc. Daily reports **MUST** be submitted to the CM and or the Facilities Department Designee.

4. Job meetings will be held at the site on dates to be determined by Architect and FIT. These meetings shall be attended by an officer of the Contractor, the Project Manager, FIT's representative, and the Architect. The purpose of these meetings will be to review the status of the project, discuss any potential changes to the project scope, and resolve

any problems relating to successful completion of the work.

5. Owner's meetings will be held weekly via zoom and in person when needed. The dates to be determined by the Architect and FIT. These meetings shall be attended by the Contractors Project Manager, FIT, and the Architect. The purpose of these meetings is to keep the Owners informed of the process and to discuss any issues relating to the successful completion of the work.

PAYMENT:

In accordance with, and in addition to, the payment requirements of the Contract Documents, the Contractor shall provide sufficient and appropriate documentation for all invoices to FIT including submittal of invoices for actual cost of materials, labor rates, and certified payrolls. Filing of such payrolls shall comply with the New York State Labor Law and is a condition precedent to payment. FIT reserves the right to request additional information and/or documentation at any time.

Contractor is required to submit Monthly Contractor's Compliance Form (as attached in Section XII. Affirmative Action Form) with each Payment Requisition.

Contractor is required to submit a Certificate of Monthly Payment/Lien Waiver signed by each Sub-contractor with each Payment Requisition.

Contractor is required to submit Waste Management Form with each Payment Requisition.

LABOR HARMONY:

A. Contractor is advised that he/she must maintain labor harmony throughout the duration of the Contract. All labor disputes, slowdowns, strikes and/or sympathy actions will be the sole responsibility of the Contractor to resolve in order to maintain harmony.

B. All costs, delays and scheduling impacts associated with any labor dispute that arises from such action or inaction will be borne by the Contractor.

C. Contractor will also be responsible for all costs, damages and scheduling impacts which affect and disrupt any other workers on site as well as FIT employees.

D. It will be the Contractor's responsibility to resolve all labor disputes immediately.

Contractor is further advised that FIT has a large union presence on the campus. All work performed by the Contractor must provide the required labor harmony to perform work without labor incident or dispute which can delay, obstruct or effect the work and project schedule, or interfere with FIT's ability to operate.

II. GENERAL NOTES

In accordance with, and in addition to, the requirements of the Contract Documents:

1. All work listed on the construction notes and shown or implied on all drawings shall be supplied and installed by the Contractor unless otherwise noted on drawings and/or in specifications.

2. Contractor to determine coordination of trades.

3. Contractor shall verify all dimensions and conditions shown on drawings and shall notify FIT Facilities Director and Architect of any discrepancies, omissions, and/or conflicts before proceeding with the work.

4. Contractor must comply with the rules and regulations of agencies having jurisdiction and shall conform to all construction and safety codes, statutes and ordinances. All fees, taxes, permits and applications to be obtained through governmental agencies shall be the responsibility of the Contractor.

5. Contractor shall comply with the rules and regulations of the building as to hours of availability of loading docks and elevators for the purposes of delivery, waste removal and other needs related to the work. Coordination with FIT Facilities Department is required for the handling materials, movement in and out of building, equipment and debris to avoid conflict and interference with normal building operations.

6. All drawings and construction notes are complementary and what is called for by any will be binding as if called for by all.

7. Contractor shall maintain a current and complete set of construction documents on the construction site during all phases of construction.

8. Do not scale drawings; dimensions shown govern. Larger scale drawings shall govern over smaller scale.

9. Contractor shall maintain a current and complete set of shop drawings on the construction site

10. Contractor shall maintain a current and complete RFI (Request for Information) log on the construction site.

11. Contractor shall submit for approval, prior to commencing work, a list of all sub-contractors to FIT's Facilities Director, with the name, address and phone number of the principal contact of each sub-contractor. In addition, he will file with the owner the emergency numbers available for 24-hour contact.

12. All work shall be performed by skilled and qualified workmen in accordance with the best practices of the trades involved and in compliance with building regulations and/or governmental laws, statutes or ordinances.

13. All materials shall be new, unused and of professional quality, unless otherwise noted, installed as per manufacturer's recommendations and instructions.

14. For purposes of the Specifications and Drawings sections in the Contract, the use of the words "Supplied By" or "Provided" in connection with any item specified is intended to mean that such item shall be furnished, installed and connected where so required.

15. All approvals of submittals shall be for design intent only. Contractor shall be responsible for quantities, dimensions and compliance with Contract Documents and for information pertaining to fabrication processes or techniques of first class construction and for coordination with other trades.

16. All work shall be erected and installed plumb, level, square, true and in proper alignment.

17. Contractor shall be responsible for cutting, patching and restoration required for this work.

18. If, during the course of construction, Contractor believes materials that might contain asbestos may be disturbed during performance of the work, Contractor shall immediately notify FIT of the area(s) of concern, and stop work if that area would be disturbed by the continuing work.

19. All correspondence to FIT shall be directed to the attention of the FIT Facilities Director with a copy of the same forwarded to the Architect.

20. Contractor shall at all times keep the premises free of accumulation of waste materials and rubbish; premises to be broom swept clean daily. At the completion of the work, Contractor shall leave the job site free of construction debris and materials, and "broom clean" including thorough cleaning of toilets, bathrooms, electrical closets, stairwells, and all areas of work or staging, etc.

21. Contractor shall provide all necessary protection against dirt and damage within the premises, as well as public areas, and shall be responsible for keeping these areas clean and free of materials at all times.

22. Contractor shall verify location of existing utilities and coordinate with location shown on drawings.

23. During construction, security and fire exit doors must remain unobstructed at all times.

24. Contractor shall take every precaution to properly protect all existing construction to remain. Contractor shall be responsible for all damaged areas to be returned to original condition.

25. Contractor shall schedule construction, in such a manner so as not to disturb areas outside of the area under construction during normal operating hours. The Contractor shall coordinate with FIT Facilities Director minimum of 24 hours prior to any disruption of services to those areas not under construction even if such a disruption occurs during or after normal operating hours.

26. Contractor shall staff the project with a Project Manager with at least 5 years' experience in this type of project scope, with similar complexity and schedule requirements.

27. The acceptance of shop drawings containing deviations not specifically brought to the attention of FIT, or containing errors or omissions of any sort, shall not relieve Contractor of the responsibility for executing the Work in accordance with the Contract Documents and Contract Terms and Condition.

III. DEMOLITION NOTES

In accordance with, and in addition to, the requirements of the Contract Documents. It shall be Contractor's responsibility to perform the following:

1. Prior to commencement of selective removals and demolition work, inspect the areas in which the work will be performed.

2. Any asbestos contaminated material will be removed by FIT's certified asbestos abatement contractor prior to the work of this contract.

3. Provide temporary barricades and other forms of protection required to protect all FIT personnel, inclusive of its faculty, staff and students as well as the general public from injury due to selective removals and demolition work.

4. Remove and dispose of exposed bolts, supports, brackets, cleats, grounds, and other items, that are no longer required for the purpose for which they were originally installed.

5. Where existing work is required to be removed and replaced but found to be defective in any way, it shall be reported to the FIT Facilities Director and Architect before it is disturbed.

6. All existing work damaged or lost as a result of performing the required new work, shall be patched, repaired or replaced with new, and finished to match the existing work, or as the individual case requires at the Contractor's expense.

7. Perform cutting, drilling and removals in a manner which will prevent damage to construction which is to remain.

8. Promptly repair any and all damages to all property and finishes caused by the removals and demolition work; to FIT's satisfaction and at no extra cost to FIT.

9. Cut, patch, paint and finish existing walls, ceiling and/or floor disturbed to match existing.

10. Perform patching around items penetrating existing construction in a manner that will maintain the water and fire resistive capability of existing construction. Should either of these be compromised, it is the responsibility of the Contractor to repair prior to completion.

11. Remove debris, rubbish and other materials resulting from the removals and demolitions from the building immediately; transport and legally dispose of materials off-site. Disposal method shall be in accordance with city, state and federal statues regulations, and ordinances.

12. Work of this section shall conform to all requirements of the New York City Building Code and all applicable regulations and guidelines of all governmental authorities having jurisdiction, including, but not limited to, Safety, Health and Anti-Pollution regulations.

13. Any existing lead-based paint areas of the building where the contractor and its subcontractors are required to work shall be mitigated prior to beginning work. Such mitigation may include FIT directing the contractor to take necessary precautions and wear protective gear to work in the vicinity of the lead paint. The contractor will not be responsible for delays caused by the mitigation activities or any associated cost.

14. Work is to conform to OSHA requirements.

IV. ADDITIONAL CONTRACTOR'S RESPONSIBILITIES

In accordance with, and in addition to, the requirements of the Contract Documents:

1. Contractor shall coordinate all work with FIT Facilities Department and Director.

2. Contractor to provide daily crew manpower log/count to FIT.

3. Contractor shall perform work in a neat workmanlike manner in accordance with accepted industry standards.

4. FIT Facilities Department shall notify Contractor before commencing work which floors are accessible by Contractor.

5. Contractor shall mask all signs, window frames, door frames, etc. when painting around them.

6. Contractor shall use Benjamin Moore, Regal Paint, or approved equal.

7. Employee Identification and Building Access: All Managers and their crew must wear at all times company identification. All Managers and their crew must sign in and out, upon entering and leaving the facility, at the FIT front security desk.

8. After Bid opening, FIT will evaluate and review submissions and notify the lowest Bidder, who is deemed most responsive and responsible. Within five (5) business days of such written notification, such Bidder shall submit the following information. Failure to comply with these requirements in whole or part shall constitute grounds for rejection of the Bid. FIT reserves the right to determine whether a Bidder has substantially met these requirements and to ask for additional information. Documentation of the following:

   a. Health and safety training program and procedures for employees and on-site EHS Coordinator.

   b. Copies of current licenses and certifications applicable to the Work, including but not limited to licenses issued by the Fire Department of New York, Department of Buildings of the City of New York, must be provided to FIT Facilities.

9. Contractor shall complete the attached Outline for Preparing Work-Specific Environment, Health and Safety Plan ("EHS Plan") which will be reviewed and approved by FIT's EHS Compliance Director prior to commencement of work. Contractor shall include the costs of completing the EHS Plan in the Bid price. Proof of the 10 Hour OSHA Outreach Training Program for Construction certificate will be required.

10. Contractor shall provide as described in the FIT Safety EHS Plan, legible copies of SDS sheets and estimates of anticipated amounts of chemicals Contractor intends to store on site to the FIT's Director of EHS Compliance for review and approval at least ten (10) days before Contractor allows on-site storage.

11. Contractor shall ensure that legible copies of all SDS are available at the location of chemical storage and available for review at all times. Contractor shall take all necessary precautions necessary to prevent vapors, fumes, or dust from leaving the work area. This includes but is not limited to the construction of negatively ventilated containments as controls.

12. Contractor shall provide as described in the FIT Safety EHS Plan a written statement of the types of project waste disposed, including the amounts and the name of the waste disposal facility for each type of waste disposed. Contractor shall provide the statement with each Payment Application. Contractor shall provide a separate copy of the statement to FIT's Director of EHS Compliance.

13. Contractor may not store Hazardous Waste on site at any time. Contractor may not generate or accumulate Hazardous Waste on site without the written approval of FIT's Director of EHS Compliance. Contractor shall obtain FIT's Director of EHS Compliance approval at least ten (10) days before the Contractor generates or accumulates Hazardous Waste on site beginning with demolition work.

14. Off-site shipments of Universal or Hazardous Waste. The Contractor may not allow the off-site removal of Universal or Hazardous Waste without the written approval of the FIT Director of EHS Compliance. Contractor will ensure that the FIT Director of EHS Compliance alone signs any shipping papers for the off-site removal of Universal or Hazardous Waste.

15. Contractor's personnel must report daily to the FIT Security area in the Lobby of Building "**C**" before entering FIT's site. All Contractor's personnel must obtain temporary FIT identification that shall be displayed at all times while on the FIT site. While on FIT property, all Contractor's personnel shall be subject to all FIT campus policies and procedures, including, but not limited to, prohibitions related to tobacco, drug, and alcohol use, and policies and procedures regarding appropriate and civil conduct. Contractor's personnel shall not fraternize with FIT students and employees beyond what is necessary to complete their work or any assigned Projects. FIT policies may be found at https://www.fitnyc.edu/policies/. FIT reserves the right, in its sole determination, to eject from the campus, any Contractor personnel violating such policies, in addition to any other rights and remedies.

V. PERMITS

Contractor shall be responsible for obtaining all required Permits and paying all costs and fees associated therewith. New York City Department of Buildings (DOB) Work Permit will be required for this project. Contractor will also be required to perform the following functions as it relates to this project:

A. Contractor shall submit to FIT and Engineer appropriate Workman's Compensation and New York State Disability insurance certificates for use in securing the required Work Permits to be posted at the site. The Contractor shall provide FIT's Facility Director with the appropriate insurance tracking numbers assigned to their firm by the NYC Department of Buildings.

B. The Contractor shall submit to FIT and Engineer a copy of all Licenses as issued by the NYC Department of Buildings.

C. Permits for the work shall be posted by the Contractor in a conspicuous location at the site at all times. No work shall begin until the necessary DOB work permits have been obtained by the Contractor.

D. The Contractor shall be responsible for obtaining any other governmental permits and approvals required to undertake the work, and shall pay any and all fees associated therewith**, including but not limited to fees to the MTA/DOT for setting up a crane, if applicable.**

VI. PROJECT MANAGER

1. The Contractor shall provide the services of an experienced Project Manager, who shall be in continual responsible charge of the work and shall have a valid Certificate of Fitness by the New York City Department of Buildings.

2. The Project Manager shall be on site at all times, shall speak fluent English, shall maintain on the site a complete set of these specifications (including any addenda and/or change orders, as well as all project drawings and all applicable manufacturers' instruction sheets), and shall have full authorization to make all field changes as directed by FIT's Facility Director and Architect.

3. The Project Manager shall be required to maintain a daily log at the site indicating the following:

   -the date

   -the number of workers at the site on said date

   -the specific portions and locations of the Work completed on said date

4. The Project Manager (or another authorized representative of the Contractor) shall telephone FIT's Facility Director at least once daily throughout the construction period, to report on the day's activities and the work planned for the following day.

5. The name of the Project Manager shall be submitted to FIT's Facility Director prior to initiation of the project. This Manager shall remain in charge of the project for its entire length, at FIT's discretion, unless said Manager no longer remains in the employ of the Contractor. In such case, a capable and experienced replacement shall be immediately assigned subject to approval by FIT's Facilities Director.

6. No telephone service is available at the site for use by the Contractor; therefore, the Contractor shall equip the Project Manager with a cellular telephone at the site for the duration of the Project. The Contractor shall provide FIT and Architect with the appropriate contact numbers at the initiation of the Project.

VII. SUBMISSIONS AND SUBSTITUTIONS

1. All submissions called for in the Contract Documents shall be submitted at least twenty (20) working days prior to proposed initiation of any related work.

2. FIT and FIT's Architect and Engineer will review and accept or take other appropriate action regarding Contractor submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for

conformance with information given and the design concept expressed in the Contract Documents. FIT's review of all shop drawings submitted by the Contractor shall be for concept only and does not remove the Contractor's responsibility for insuring that all specific details of the installation shall be performed in such a way so as to achieve satisfactory results. Acceptance by FIT, the Architect & Engineer of Contractor submittals does not relieve the Contractor from responsibility for errors which may exist in the submitted data.

3. Where the phrase "or approved equal" or "equal as approved by FIT" occurs in the Contract Documents, the Contractor may not assume that the materials, equipment, or methods will be approved as equal unless the item has been specifically approved by FIT and the Architect.

4. Any proposed substitute products or procedures are to be submitted to FIT's assigned Architect/Engineer for prior approval with any proposed price adjustments to the contract within fourteen (14) days of the signing of the agreement between FIT and the Contractor, so that FIT, the Architect and Engineer are permitted adequate time for review.

VIII. PROGRESS PAYMENTS

1. All submissions called for in the Contract Documents shall be submitted at least twenty (20) working days prior to proposed initiation of any related work.

2. Progress payments will be made to the Contractor based solely on actual work completed. Furthermore, payment will not be made for the purchase of materials, nor for their transfer onto the site, nor for any costs associated with mobilization.

3. Payment requests shall be submitted to FIT's Facilities Director on AIA Documents G702 and G703.

4. Payments will be authorized based upon FIT's field visits and review of work. All FIT's decisions regarding progress payments shall be final.

5. The values quoted on the bid form shall constitute the Schedule of Values for AIA Document G703. Additional breakdown of the bid form shall be provided on the Schedule of Values and will be used for progress payments.

6. No progress payments will be processed without submission by the Contractor of properly executed Affidavit of Payment and Release of Liens (AIA Documents G706 and G706A or equivalent forms as may be requested by FIT), up-to-date weekly written reports and timeline in bar chart form, and all submittals, certificates, permits, etc. required pursuant to the terms of the contract.

7. A 10% retainage shall be deducted from all progress payments made by FIT.

8. Payment requests shall be submitted to FIT not more than once per month.

9. Contractor shall provide sufficient and appropriate documentation for all invoices to FIT including submittal of invoices for actual cost of materials, labor rates and certified payrolls. Filing of such payrolls shall comply with the Labor Law and is a condition precedent to payment. FIT reserves the right to request additional information at any time. Contractor required to submit Monthly Contractor's Compliance Form with each Payment Requisition.

10. Contractor required to submit a Certificate of Monthly Payment signed by each Sub- contractor with each Payment Requisition.

11. Contractor shall be required to submit a detailed Trade Payment Breakdown.

IX. SITE VISITS BY ARCHITECT/ENGINEER

1. Failure by Architect/Engineer to detect and/or notify the Contractor of any aspect of the Contractor's actions or materials that are not in conformance with the Contract Documents shall not remove the Contractor's responsibility to adhere to the Contract Documents in all instances, including but not limited to the Contractor's responsibility to expeditiously correct and/or replace all defective work.

2. Architect/Engineer will be the final judge as to whether the work is satisfactorily performed and shall have the authority to order that any work deemed unacceptable or not in conformance with the Contract Documents be redone by the Contractor at no cost to FIT.

3. Architect/Engineer shall have no responsibility for the presence, discovery, identification, handling, removal or disposal of, or exposure of persons to hazardous materials in any form at the Project site.

X. CHANGE ORDERS

1. FIT may order changes in the work of any quantity and without invalidating the Agreement so long as the Contract Sum and/or Contract Time of Completion are adjusted accordingly. All such changes in the work shall be authorized by written Change Order. All Change Orders shall be reviewed by Architect and Engineer and authorized by a representative of FIT.

2. No work shall be performed by the Contractor unless it is specifically included in the Contract Scope of Work or authorized in advance by a bulletin issued by the Architect which will serve as the backup paperwork for a change order. The contractor needs to submit a Change Order. All work to

proceed prior to approval of change orders. Change Orders will be negotiated fairly in separate meetings. All written Change Orders are to be signed by all parties.

3. Any sums to be paid to Contractor as a result of any Change Order or any sums to be credited to FIT as a result of any Change Order shall be computed by one of the following methods:

   (1) As agreed upon between the parties to the contract in writing prior to commencement of the work required by the Change Order, or;

   (2) By Unit Prices detailed in the Contract Documents or subsequently agreed upon.

XI. GUARANTEES

1. All work on this project shall be guaranteed by the Contractor for a period of not less than one (1) year, or longer where covered by manufacturer warranty. Warranty to start on the day of the final signoff by FIT.

2. If within the guarantee period any of the work is found to be defective or not in conformance with the Contract Documents, the Contractor shall correct it promptly at his own expense after receipt of written notice from FIT.

XII. FINAL PAYMENT

1. Final payment (retainage) shall be released to the Contractor thirty (30) days after the project has been signed off by FIT and Architect/Engineer and the Contractor has satisfied all requirements of the Contract Documents.

2. In addition to any other requirements of the Contract Documents final payment shall not become due until the Contractor has delivered to FIT and Architect a fully executed 1-year guarantee for all work performed under this project, as well as a complete release of all liens arising out of this Contract, or receipts in full covering all labor, materials, equipment, applicable finance charges, and fines for which a lien could be filed. If such lien remains unsatisfied after payments are made, the Contractor shall refund to FIT all money that FIT may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

3. A Performance Bond and a Labor & Material Payment Bond, a copy of the "Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706)" and "Consent of Surety to Final Payment (AIA Document G707)" shall be submitted by the Contractor prior to the release of final payment.

4. One (1) set each of record drawings (measuring 24 inches by 36 inches) indicating the "As- Built" manner of installation of all work, shall be submitted to FIT and Engineer prior to the release of final payment.

5. Once the project has reached substantial completion, FIT and Architect will prepare a "Certificate of Substantial Completion". This certificate must be signed by all parties (Engineer, FIT and Contractor), to acknowledge the date the project has reached substantial completion, and confirm agreement on a final punch-list of work to be performed. The Contractor shall be responsible for completing all punch-list items prior to release of final payment.

XIII. SUPPLEMENTAL CONDITIONS

Project Schedule. Contractor shall complete all work as specified within the time period specified in the Contract Documents, inclusive of rain days, but excluding any shutdowns authorized by FIT.

XIV. PREVENTIVE MAINTENANCE SCHEDULE

Prior to final payment, the contractor shall provide a recommended maintenance schedule from the manufacturer for quarterly, semi-annual and yearly requirements, including part numbers where applicable, upon completion of the job.

BID ANALYSIS FORM FOLLOWS

ATTACHMENT C – BID ANALYSIS FORM

FASHION INSTITUTE OF TECHNOLOGY &
POMERANTZ CENETR NEW FIRE ALARM SYSTEM
INVITATION FOR BID NUMBER C1585
NYS PREVAILING WAGE SCHEDULE PRC # 2025003588

BID BREAKDOWN

Line	Description	Total Labor Cost	Total Materials, Tools & Equipment	Line Total
1	DEMOLITION	$	$	$
2	HVAC AUTOMATIC TEMPERATURE CONTROLS	$	$	$
3	HVAC INTEGRATION ON BMS	$	$	$
4	ELECTRICAL	$	$	$
5	GENERAL REQUIREMENTS	$	$	$
6	GENERAL CONDITIONS	$	$	$

TOTAL BID PRICE (1-6) **$_____**

As stated in Section IV of the front-end documents: Subcontracting shall be permitted **not to exceed 50%** of the work of the project. Please provide the ratio of the contractors and subcontractors work that will be used on this project.

Contractor _____%, Subcontractor(s) _____%

For Bidding Purposes: the following sections pricing should cover the following items:

General Requirements: permits & licenses; project meetings; administrative overhead for submissions and shop drawings; progress photos; temporary facilities & controls; storage & protection of materials; project closeout; and project record documents.

General Conditions: supervision of work; all testing; coordination drawings; safety programs; insurance and performance & payment bonds.

The undersigned, having carefully examined all Contract Documents, including Notice to Bidders, Bid Terms and Conditions, Contract Terms and Conditions, General Requirements, General Conditions, Labor & Material Payment Bond, Performance Bond, Form of Bid, Non-Collusive Bidding Certification, Substitution Form Request, Contract, Affirmative Action Form, Change Order, Form, Contractor's Trade Payment Breakdown, Safety EHS Plan, Prevailing Wage Schedule, Specifications, and Drawings and having examined the existing conditions by on-site visit(s), hereby submits this Bid Analysis, covering all labor, materials, equipment, tools, machinery, licensing, insurance, taxes, and fees required to perform the specified work at the above-referenced site, in accordance

with the Contract Documents. **No exclusions & no exceptions**.

Company Name and Address of Bidder:

_____

_____

_____

Signature of Bidder _____ Date_____

Printed Name and Title of Representative:_____

Telephone #:_____

Email Address: _____

EIN#:_____

IMPORTANT:
This bid analysis form is the **only** pricing format acceptable. Bidders **must** submit pricing using this form. **FIT will not accept bid responses on any other form.**

NOTE:
FIT will not sign any bidder generated contract, agreement or scope of work. FIT Bid and Terms and Conditions apply. Bidder requirement for FIT to sign any document will be grounds for rejection. Bidder inclusion of any conditions, clarifications, exceptions or changes which are not in compliance with FIT Bid and Terms and Conditions will be grounds for rejection.

SECTION IV.
GENERAL REQUIREMENTS

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01010 -- SUMMARY OF THE WORK

.01 - Work Under The Contract

The Work shall be as described in the Contract Documents.

.02 - Work by Others

Should any other contractor be engaged by the Owner to perform work on the Site or in areas adjoining or adjacent to the Site, the Contractor and such other contractor shall coordinate the work of the Contractor and such other contractor.

.03 - Items Not Included

The following items shown on the drawings are not included in the Work:

A. Items indicated "By Others".

B. Items indicated "N.I.C." (Not in Contract)

C. Existing construction not indicated or specified to be removed, replaced or altered.

.04 - Openings and Chases

A. The Contractor shall build openings, including but not limited to channels, chases and flues as required to complete the Work as set forth in the Contract and as directed by the Owner before any work is installed.

B. After the installation and completion of any work for which openings, including but not limited to, channels, chases and flues, have been provided for the Contractor, the Contractor shall build in, over, around and finish all such openings as required to complete the Work.

C. If a contractor fails to furnish drawings and information required in connection with such openings before the General Construction Contractor performs any Work affected thereby, said contractor who so fails to furnish such drawings and information shall bear the cost of all cutting and refinishing including that part of the General Construction Contractor's Work affected.

D. The Contractor shall Furnish and Install all sleeves, inserts, hangers and supports required for the execution of the Work.

E. Specific instructions shall be obtained from the Owner or the Owner's Representative before cutting beams or other structural members, arches or lintels.

F. The Contractor shall not endanger the Work and shall not cut or alter the Work unless prior approval and instructions are received from the Owner or the Owner's Representative.

.05 - Surveys and Layout

A. If, for any reason, stakes, batter boards or monuments are disturbed, it shall be the responsibility of the Contractor to reestablish them.

B. The Owner or the Owner's Representative may order construction work suspended at any time when location of monuments, stakes, bench marks and other layout markings established by the Contractor are not adequate to permit checking the Work.

C. The Contractor shall Provide and shall maintain axis lines on each floor and shall establish and shall maintain grade marks 4' 0" above the finished floor on each floor level.

D. The Contractor shall Furnish such stakes and other required equipment, tools and materials, and all labor as may be required in laying out any part of the Work.

.06 - Scheduling

A. The Contractor shall deliver to the Owner schedules and forms in accordance with the Contract.

B. The Owner or the Owner's Representative may require the Contractor to modify schedules which the Contractor has submitted either before or after such schedules are approved so that:

1. The Work shall not be delayed.

2. Changes in the Work are reflected in the schedules of the Contractor.

.07 - Contractor Use of Premises

While performing the Work, the Contractor shall take every precaution against injuries to persons and damage to property.

01080 -- PERMITS AND COMPLIANCE

.01 - Permits and Licenses

The Contractor shall obtain, maintain and pay for all permits and licenses necessary for the execution of the Work and for the use of such Work when completed.

Prior to final payment the Contractor shall deliver to the Owner’s Representative all permits and certificates of approval issued by any agency having jurisdiction.

.02 - Compliance

The Contractor shall give all notices, pay all fees and comply with all laws, rules and regulations applicable to the Work.

.03 - Additional Compliance

The Contractor, Subcontractors, and the employees of the Contractor and Subcontractors, shall comply with all regulations governing conduct, access to the premises, operation of equipment and systems and conduct while in or near the premises and shall perform the Work in such a manner as not to unreasonably interrupt or interfere with the conduct of business of the Institution.

.04 - Royalties and Patents

It is the sole responsibility of the Contractor to determine what, if any, patents are applicable to the Project. The Contractor shall pay all royalties and/or license fees. The Contractor shall defend all suits or claims for infringement of any patent rights and save the Owner, Architect, Engineer, Environmental Consultant and Construction Manager harmless from loss, including attorney's fees, on account thereof.

01200 -- PROJECT MEETINGS

.01 - Project meetings shall be held to accomplish the following:

A. Coordinate the Work.

B. Establish a sound working procedure and relationship between all contractors, the Owner and the Owner's Representative.

C. Review requisitions, proposals and change orders.

D. Review the progress of the Work, review quality of work in place and review approval required by the Work and review delivery of materials.

E. Expedite the Work to completion within the scheduled time limit.

F. Review progress payments.

.02 - Initial Job Meeting (Orientation Meeting)

The Owner or the Owner's Representative shall call an initial job meeting which the Contractor shall attend. This meeting shall be called prior to the start of construction.

.03 - Job Progress Meetings

A. Job progress meetings shall be scheduled by the Owner or the Owner's Representative during the course of construction. The Contractor or the Contractor's duly authorized representative and such Subcontractors as required by the Contractor or the Owner or the Owner's Representative shall be present at all job progress meetings. The Contractors and Subcontractors shall answer questions on progress, workmanship, approvals required, delivery of material and other subjects concerning the Work. The purpose of such meetings is to coordinate the efforts of all

concerned so that the Work proceeds without delay to completion as required by the Contract.

B. The Owner or the Owner's Representative may require any schedule to be modified so that changes in the Work, delays or acceleration of any segment of the Work shall be reflected in such schedule. The Contractor shall cooperate with the Owner or the Owner's Representative in providing data for such changes in or modifications of schedules.

01300 -- SUBMITTALS

.01 - Schedules & Records

A. Within the time set forth in the Contract, the Contractor is required to complete and submit to the Owner or the Owner's Representative the following forms:

1. Submit construction progress schedule to the Owner or the Owner's Representative no later than thirty (30) calendar days after receipt by the Contractor of notice to proceed.

2. Submit names and addresses of all Subcontractors to the Owner or the Owner's Representative within thirty (30) calendar days of approval of the construction progress schedule.

3. Submit to the Owner or the Owner's Representative the date on which the Contractor proposes to award each subcontract a minimum of ten (10) days prior to such proposed award.

4. Submit Shop Drawings and material sample schedule to the Owner or the Owner's Representative no later than thirty (30) days after approval of the construction progress schedule. Such schedule shall include the date of all Shop Drawings, samples and materials shall be submitted and the date approval is required.

5. Submit to the Owner or the Owner's Representative on a form approved by the Owner, a schedule of anticipated monthly requisition amounts. Such schedule shall be submitted from time to time as directed by the Owner, the first such submission being required to be made by the Contractor within ten (10) days of receipt by the Contractor of a written order to proceed issued by the Owner. The amounts employed in preparing such schedules in no way shall be binding upon the Owner.

B. Sample forms shall be provided by the Owner or the Owner's Representative for the above mentioned schedules and records.

01311 – PROJECT ANALYSIS

.01 - Project Control and Progress Meetings

A. The Contractor shall attend all scheduling meetings as directed by the Owner or the Owner's Representative.

B. In addition to the Owner or the Owner's Representative and the Contractor's Superintendent and Scheduling Coordinator, such meetings shall also be attended by representatives of such subcontractors as the Contractor, the Owner or the Owner's Representative may deem advisable. The agenda for such meetings shall include the progress and current status of the Work, proposed solutions for problem areas and a review of schedules for future Work in order to meet the Contractor's objectives and his obligations under the Contract. Consideration shall be given to establishing actual start dates, actual completion dates, planned starts and finishes, quantities installed, man hours worked, as well as other data relevant to the performance of the Contract.

C. At least one week before each meeting described in subsection .01A of this Division 01311, the Contractor shall furnish progress data in the form required by the Owner or the Owner's Representative as follows:

1. The status of all activities as of date determined by the Owner or the Owner's Representative.

2. A list of actual start and completion dates for all activities.

3. Projected durations of completion of those activities in progress.

4. Relevant data of submittals in progress including equipment releases and equipment in fabrication.

5. All other information which in the discretion of the Owner or its Representative, may be required to complete the Project Schedule Update.

.02 – Payment

The Contractor's Payment Breakdown and Monthly Requisition as called for by Section 17.01 of the General Conditions of the Contract shall be the basis by which the Contractor is to be paid.

.03 - Time of Completion

It is the sole responsibility of the Contractor to complete the Work within the time of completion required by the Contract.

01340 -- SHOP DRAWINGS AND SAMPLES

.01 - Contractor Submittal

A. The Contractor shall submit the Shop Drawings and samples required by the Architect and the Contractor shall adhere to all submittal and scheduling requirements for Shop Drawings and samples. After examination of such Shop Drawings and samples by the Architect and the return of such items by the Architect to the Contractor, the Contractor shall make corrections indicated and shall furnish to the Architect the required number of corrected copies of Shop Drawings or samples.

B. Shop Drawings shall be accompanied by a letter of transmittal to the Owner or the Owner's Representative requesting approval and date approval is desired.

C. Each Shop Drawings and letter of transmittal shall be identified with the following information:

1. Project title

2. Contract name

3. Date of the drawing, including dates of any revisions

4. Name of Contractor, name of Subcontractor, material supplier and manufacturer, as applicable

5. Name of person or firm preparing Shop Drawings

6. Contract drawing numbers and specifications, section division and paragraph numbers used as references in preparing Shop Drawings, and titles of items to which the Shop Drawing refers.

D. Shop Drawings shall show the design, dimensions, connections and other details necessary to insure that the Shop Drawings accurately interpret the Contract Documents and shall also show adjoining Work in such Detail as required to provide proper connections with said adjoining Work. Where adjoining connected Work requires Shop Drawings, such Shop Drawings shall be submitted to the Owner or the Owner's Representative for approval at the same time so that connections can be checked.

E. The Contractor shall verify all field measurements. Measurements available prior to submittal of Shop Drawings shall be shown and so noted on the Shop Drawings. Measurements not available prior to submission of Shop Drawings shall be noted on the Shop Drawings as not available and such measurements shall be obtained prior to fabrication.

F. The Contractor shall submit manufacturer's drawings and specifications when necessary to fully explain apparatus or equipment required by the Work. These manufacturer's drawings and specifications shall be treated as Shop Drawings. Manufacturer's catalog numbers alone are not acceptable as sufficient information for compliance with this requirement.

G. Samples shall be accompanied by a letter of transmittal to the Owner or the Owner's Representative requesting approval, and date approval is desired.

H. Each sample shall be labeled with the following information:

1. Project title

2. Contract name

3. Date of submission

4. Name and quality of the material

5. Name of Contractor, name of Subcontractor, material supplier and manufacturer, as applicable

6. Contract drawing numbers and specification section, division and paragraph numbers used as reference in preparing samples.

I. Samples shall be of sufficient size and number to show the quality, type, color, finish and texture of the material required to be furnished by the Contractor pursuant to the Contract.

.02 - Contractor Review

The Contractor shall review, verify and determine all field measurements, field construction criteria, materials, catalog numbers and similar data, shall coordinate each Shop Drawing and sample with the requirements of the Contract and shall determine whether or not such Shop Drawings are in conformity with the provisions of the Contract before submitting the Shop Drawings to the Architect for approval.

.03 - Contractor Responsibility

The Architect's approval of Shop Drawings and samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract. The Contractor shall be responsible for the accuracy of the Shop Drawings and samples and for the conformity of Shop Drawings and samples with the Contract unless the Contractor has notified the Architect of the deviation in writing at the time of submission and has received from the Architect written approval of the specified deviations. The Architect's approval shall not relieve the Contractor of responsibility for errors or omissions in the Shop Drawings or samples.

.04 - Commencement of Work

No portion of the Work shall be commenced until required Shop Drawings or samples are approved by the Architect.

01380 -- PROGRESS PHOTOGRAPHS

.01 - Contractor Submission

A. The Contractor shall furnish to the Owner, progress photographs of the Work as follows: three (3) 8" x 10" glossy prints of each of the following views:

1. Two (2) different views of the area in which the building or buildings are to be located, taken before excavation starts.

2. Two (2) different views for each building when footings are in place and forms completed.

3. Four (4) different views for each building when foundations are completed.

4. Four (4) different views for each building when exterior wall is fifty per cent (50%) completed.

5. Four (4) different views for each building when the structure is ready for roofing.

6. Four (4) different exterior views in color for each building at completion.

7. Six (6) interior views in color for each building as directed upon completion.

B. A title identifying the view shown by each photograph and date taken shall appear on the back of each print.

01500 -- TEMPORARY FACILITIES AND CONTROLS

.01 - Requirements

The Contractor shall Provide the temporary facilities and controls as hereinafter specified and as required by law.

.02 - Temporary Lighting and Electric Service

The Contractor shall Provide and maintain all temporary lighting and power required in connection with the Contractor's operations from the commencement of the Work until the completion of each structure or for such other time as

directed by the Owner or the Owner's Representative. When the use of such temporary lighting and power is no longer required, all temporary wiring and equipment shall be completely removed by the Contractor. The Contractor shall make the necessary application to the lighting company and pay for all charges, costs and expenses incidental to the installation and maintenance of temporary lighting and power as required in connection with the Contractor's operations, and the Contractor shall pay for all power used. The minimum temporary lighting to be provided is at the rate of one-quarter watt per square foot and is to be maintained in each room and changed as required when interior walls are being erected. The required temporary lighting must be maintained for twenty-four (24) hours a day and seven (7) days a week at all stair levels and in all corridors below ground; in all other spaces temporary lighting is to be maintained only during working hours. All temporary wiring and equipment shall be in conformity with the National Electric Code. Three-phase temporary power circuits shall be installed as required to operate construction equipment of the various trades and to Install and test equipment such as pumps and elevators. The Contractor shall Install and maintain temporary or permanent service for the permanently installed building equipment such as sump pumps, boilers, boiler controls, fans, pumps, so that such equipment may be operated when required and so ordered by the Owner or the Owner's Representative for drainage or for temporary heat.

.03 - Material Hoists

A. General

1. Material hoists shall be operated by diesel, gasoline or steam engines and shall be complete with all equipment necessary for operation. Such hoists shall run from grade to roof, shall be installed immediately following the structural framing, centering or form work, and centering or form work unless otherwise approved by the Owner or the Owner's Representative. Electrically operated hoists shall not be used except as otherwise allowed by the Contract.

2. Material hoists shall meet any and all requirements of law, rule or regulation.

3. Hoist cars shall be of required size and design for the hoisting of all normal size building materials.

B. The Contractor shall:

1. Furnish, install, maintain and operate at the Contractor's expense, all hoisting equipment required for the Work.

2. Furnish all labor required for the Work.

.04 - Temporary Use of Permanent Elevator as Equipment Material Hoist

A. The Contractor shall:

1. Use the temporary hoists until a building is completed, or until the Contractor may, with the Owner's permission, use the equipment of one (1) elevator in a building for temporary service after the permanent elevator equipment and the permanent electric service have been installed.

2. If the Contractor elects to use such permanent elevator equipment, the Contractor shall:

   a. Provide adequate protection for such equipment and shall operate such equipment within a capacity not to exceed that allowed by law, rule or regulation.

   b. Provide for the maintenance of the elevator equipment as approved by the Owner or the Owner's Representative.

   c. Leave such equipment in perfect condition.

B. The permanent elevator equipment shall be ready for use when required by the Work and shall permit any use approved by the Owner or the Owner's Representative.

.05- Temporary Enclosures

The Contractor shall:

A. Provide, install and maintain any temporary weather resistant enclosures for all openings in exterior walls and roof that are not enclosed.

B. After building is enclosed, maintain proper temperatures required by the Contract.

.06 - Temporary Fence Enclosures

The Contractor shall Provide, Install and maintain any temporary fence enclosures required by the Contract.

.07 - Maintenance of Permanent Roadways

The Contractor shall immediately remove dirt and debris which may collect on permanent roadways due to the Work.

.08 – Traffic Control

A. Routes to and from the location of the Work shall be as indicated in the Contract or as directed by the Owner or the Owner's Representative.

B. Parking areas for the use of those engaged in the Work shall be as indicated in the Contract or as directed by the Owner or the Owner's Representative.

.09 - Fire Prevention Control

The Contractor Shall:

A. Provide private unlisted telephone service reserved for fire calls at a location or locations approved by the Owner or the Owner's Representative. Such service shall be in addition to any other telephone service. The Contractor shall pay all costs thereof until completion and acceptance of the Work or as otherwise directed by the Owner or the Owner's Representative.

B. Comply with the safety provisions of the National Fire Protection Association's "National Fire Codes" pertaining to the Work and, particularly, in connection with any cutting or welding performed as part of the Work.

.10 - Pollution Control

The Contractor shall:

A. Comply with all laws, rules and regulations governing pollution control, including but not limited to those of the Department of Environmental Conservation of the State of New York.

B. Take all necessary precautions including, but not limited to digging and maintaining settling basins and dams; diverting streams, and taking all other actions that may be necessary to prevent silt, and waste of any kind from being deposited, silting and reduction of quality of streams below the construction area and downstream properties as a result of the Work.

C. Refrain from the disposal of volatile fluid wastes into storm or sanitary sewer systems, approved sewage disposal systems or any waterway.

D. Refrain from burning trash or waste materials.

.11 - Temporary Field Office

A. The Contractor may Provide a temporary office structure, for the Contractor's use during the course of the Work.

1. The Contractor must receive prior written approval from the Owner or the Owner's Representative for such temporary office structure in relation to location, type of structure, and included facilities.

2. All toilet and sink facilities in any such office structure shall be connected to an approved sewage disposal system.

3. The Contractor shall remove the temporary office structure from the Site and shall repair the Site and finish the area as directed by the Owner or the Owner's Representative.

B. The Contractor shall:

1. Provide a temporary office structure completely separate from any other office structures at a location approved by the Owner or the Owner's Representative until the Work is completed and is accepted.

2. Provide such office structure for the exclusive use of the Owner.

3. Bear all costs in relation to the furnishing, construction and removal of such office structure.

4. Repair and refinish the area as directed by the Owner or the Owner's Representative.

5. Construct such office structure and furnish such office structure as required by the Contract.

6. Maintain such office structure in a sanitary condition and in proper repair, properly heat the structure, furnish the fuel and furnish all utilities and pay all utility charges.

7. Install a telephone for the sole use of the Owner or the Owner's Representative and pay all service and local toll charges incurred as a result of the use of such telephone service.

C. With the prior written approval of the Owner or the Owner's Representative any other Contractor may erect a substantial office structure at the Site for the use of such Contractor in relation to the Work.

1. All toilet and sink facilities in any such office structure shall be connected to an approved sewage disposal system.

2. Such Contractor shall remove the temporary office structure from the Site and shall repair the Site and finish the area as directed by the Owner or the Owner's Representative.

D. When adequate space is available in a building, the Contractor may transfer such office to available space with the prior written permission of the Owner or the Owner's Representative.

E. Trailers providing comparable facilities may be accepted at the discretion of the Owner or the Owner's Representative.

.12 - Rubbish Removal

A. The Contractor shall:

1. Keep the Work free from rubbish at all times.

2. Clean all enclosed structures daily.

3. Remove rubbish from the Site at least once a week.

B. The Contractor shall conform with the following:

1. Burning of rubbish shall not be permitted.

2. All rubbish shall be lowered by way of chutes, taken down by hoists, or lowered in receptacles. Under no circumstances shall any rubbish be dropped or thrown from one (1) level to another inside or outside any building.

.13 - Discontinuance, Changes and Removal

The Contractor shall:

A. Discontinue all temporary services required by the Contract when so directed by the Owner or the Owner's Representative. The discontinuance of any such temporary service prior to the completion of the Work shall not render the Owner liable for any additional cost entailed thereby.

B. Remove and relocate such temporary facilities as directed by the Owner or the Owner's Representative without additional cost to the Owner, and shall restore the Site and the work to a condition satisfactory to the Owner.

.14 - Project Identification

A. No signs or advertisements shall be displayed on the site except as required by the Contract.

B. The Contractor shall Furnish, erect and maintain the Site, the exact location thereof to be designated by the Owner or the Owner's Representative, a construction sign, in the form provided by the Contract.

.15 - Moisture and Condensation Control

The Contractor shall provide for ventilation of all structures until Physical Completion and acceptance of the Work and shall control such ventilation to avoid excessive rates of drying of construction materials, including but not limited to concrete and to plaster, and to prevent condensation on sensitive surfaces.

.16 - Protective Services

The Contractor shall provide security services required by the Contract.

01600 -- MATERIAL AND EQUIPMENT

.01 - Storage and Protection

A. Materials stored on the Site shall be neatly piled and protected, and shall be stored in an orderly fashion in locations that shall not interfere with the progress of the Work or with the daily functioning of the Institution.

B. Should it become necessary during the course of the Work to move materials or equipment stored on the Site, the Contractor, at the direction of the Owner or the Owner's Representative, shall move such material or equipment.

01700 -- PROJECT CLOSE OUT

.01 - Final Cleanup

A. The Contractor shall leave the Work ready for use and occupancy without the need of further cleaning of any kind.

B. The Contractor shall remove all tools, appliances, projects signs, material and equipment from the premises as soon as possible upon completion of the Work.

C. The Work is to be turned over to the Owner in new condition, in proper repair and in perfect adjustment.

.02 - Required Close Out Documentation

A. Prior to final payment the Owner shall receive the following documents as required by the Contract:

1. The Contractor's general guarantee.

2. Specific guarantees, material, equipment and other items of work.

3. All certificates obtained in connection with the Work.

4. All final photographs of the Work.

B. The Owner shall also receive from the Contractor prior to final payment:

1. A complete listing of all Subcontractors, business addresses and items supplied by each such Subcontractor.

2. A listing of manufacturer's of major materials, equipment and systems installed in the Work.

3. A copy of all test data taken in connection with the Work.

4. Three (3) copies of all operation and maintenance manuals.

5. All keys, tools, screens, spare construction material, finishing material and equipment required to be furnish to the Owner as part of the Work.

.03 - Orientation Instruction

Prior to final payment appropriate maintenance personnel of the Owner shall be oriented and instructed by the Contractor in the operation of all systems and equipment as required by the Contract.

.04 - Project Close Out Inspections

A. When the Work has reached such a point of completion that the building or buildings, equipment or apparatus or any part thereof required by the Owner for occupancy or use can be so occupied and used for the purpose intended, the Owner or the Owner's Representative shall make a detailed inspection of the Work to insure that all requirements of the Contract have been met and that the Work is complete and is acceptable.

B. A copy of the report of the inspection shall be furnished to the Contractor as the inspection progresses so that the Contractor may proceed without delay with any part of the Work found to be incomplete or defective.

C. When the items appearing on the report of inspection have been completed or corrected, the Contractor shall so advise the Owner and the Owner's Representative. After receipt of the notification, the Owner or the Owner's Representative shall inform the Contractor of the date and time of final inspection. A copy of the report of the final inspection containing all

remaining contract exceptions, omissions and incompletions shall be furnished to the Contractor.

D. After receipt of notification of completion and all remaining contract exceptions, omissions and incompletions from the Contractor, the Owner and the Owner's Representative shall make an inspection to verify completion of the exception items appearing on the report of final inspection.

01720 -- PROJECT RECORD DOCUMENTS

.01 - Project Record Drawings

A. The purpose of the project drawings is to record the actual location of the Work in place including but not limited to underground lines, concealed piping within buildings, concealed valves and control equipment, and to record changes in the Work.

B. In addition to the sets of contract drawings that are required by the Contractor on the Site to perform the Work, the Contractor shall maintain, at the Site, one (1) copy of all drawings, specifications and addenda that are part of the Contract as awarded. Each of these documents should be clearly marked "Project Record Copy", maintained in a clean and neat condition available at all times for inspection by the Owner or the Owner's Representative, and shall not be used for any other purpose during the progress of the Work.

C. Project Record Requirements

1. The Contractor shall mark-up the "Project Record Copy" to show:

(a) Approved changes in the Work.

(b) Location of underground Work and concealed Work.

(c) Details not shown in the original Contract Documents.

(d) Any relocation of Work.

(e) All changed in dimensions.

(f) All access doors.

(g) Location of all plumbing, heating, ventilating, air conditioning or electrical assemblies.

2. Such information shall include, but shall not be limited to:

(a) Footing depth in relation to finished grade elevations.

(b) Any change in floor elevations.

(c) Any structural changes.

(d) Any substitutions.

(e) Elevations and locations of all underground utilities, services, or structures referenced to permanent above-ground structures or monuments.

(f) Designation of all utilities as to the size and use of such utilities.

(g) All invert elevations of manholes.

(h) The location of all utilities, services and appurtenances concealed in building structures that have been installed different from that required by the Contract.

(i) Any approved change order.

D. The Contractor shall keep the Project Record Documents up-to-date from day to day as the Work progresses. Appropriate documents are to be updated promptly and accurately; no Work is to be permanently concealed until all required information has been recorded.

E. The project record drawings are to be submitted by the Contractor to the Owner or the Owner's Representative when all the Work is completed and is approved by the Owner and the Owner's Representative before the Contractor may request final payment.

01740 -- WARRANTIES, GUARANTEES, AND BONDS

See the Contract Documents for details.

SECTION V.
GENERAL CONDITIONS

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General Conditions

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ARTICLE 1 -- DEFINITIONS

Section 1.01 - The following terms as used in the Contract Documents shall be defined as follows:

Beneficial Occupancy - The use, occupancy or operation by the Owner of the Work, or any part thereof, as evidenced by a notification of Beneficial Occupancy executed by the Owner.

Construction Completion - Acceptance by the Owner of the Work as evidenced by a Notification of Construction Completion executed by the Architect.

Construction Manager - A person, persons, firm, partnership or corporation, regularly engaged in the management of construction projects, and so designated by the Owner.

Consultant - A person, persons, firm, partnership or corporation providing Architectural, Engineering or other professional services, and so designated by the Owner.

Contract - The agreement between the Owner and the Contractor consisting of the Contract Documents including all amendments and supplements thereto.

Contract Documents - The Contract, Notice to Bidders, Bid Checklist, Bid Terms and Conditions, Contractor Reference Sheet, Contract Terms and Conditions, Bid Analysis Form, Affirmative Action Form, Change Order Form, Contractors Trade Payment Breakdown, Safety EHS Plan, Prevailing Wage Schedule, Information for Bidders, Form of Bid, General Conditions, General Requirements, Bonds, Drawings, Specifications, Addenda, Change Orders and any supplementary data together with all provisions of law deemed to be inserted in the Contract or incorporated by reference.

Contractor - A person, persons, firm, partnership or corporation with whom the Contract is entered into by the Owner to perform the Work.

Extra Work - Any work in addition to the Work initially required to be performed by the Contractor pursuant to the Contract.

Furnish - To deliver to the site ready for installation.

Install - To unload at the delivery point at the Site and perform every operation necessary to establish secure mounting and correct operation at the proper location.

Owner – The Fashion Institute of Technology and/or its auxiliary corporations, as applicable.

Owner's Representative - A person, persons, firm, partnership or corporation so designated by the Owner.

Project - Work at the Site(s) carried out pursuant to one or more sets of Contract Documents.

Provide - To Furnish and Install complete in place and ready for operation and use.

Shop Drawings - Diagrams, fabrication drawings, illustration, schedules, test data, performance charts, cuts brochures and other data which are submitted by the Contractor to the Architect and illustrate any portion of the Work. These drawings and data are reviewed and acted upon by the architect.

Site - The area within the Contract limit, as indicated by the Contract.

Subcontract - An agreement between the Contractor and Subcontractor for work on the Site.

Subcontractor - A person, persons, firm, partnership or corporation under contract with the Contractor, or under contract with any subcontractor, to provide labor and material at the Site.

Substantial Completion - Stage of construction at which the Architect determines there is a minimal amount of the Work to be completed, or Work to be corrected.

Work - The performance of all obligations imposed upon the Contractor by the Contract.

ARTICLE 2 -- CONTRACT DOCUMENTS

Section 2.01 - Captions

The table of contents, titles, captions, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect the interpretation of the provisions to which they refer.

Section 2.02 - Conflicting Conditions

Should any provision in any of the Contract Documents be in conflict or inconsistent with any of the General Conditions or Supplements thereto, the General Conditions or Supplements thereto shall govern.

Section 2.03 - Notice and Service Thereof

Any notice to the Contractor from the Owner relative to any part of the Contract shall be in writing and service considered complete when said notice is mailed to the Contractor at the last address given by the Contractor, or when delivered in person to said Contractor or the Contractor's authorized representative.

Section 2.04 - Nomenclature

Materials, equipment or other Work described in words which have a generally accepted technical or trade meaning shall be interpreted as having said meaning in connection with the Contract.

Section 2.05 - Invalid Provisions

If any term or provision of the Contract Documents or the application thereof to any person, firm or corporation or circumstance shall, to any extent, be determined to be invalid or unenforceable, the remainder of the Contract Documents, or the application of such terms or provisions to persons, firms or corporations or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term or provision of the Contract Documents shall be valid and be enforced to the fullest extent permitted by law.

ARTICLE 3 -- INTERPRETATION OF CONTRACT DOCUMENTS

Section 3.01 – Owner/Architect

A. The Owner's representative/Architect shall give all orders and directions contemplated under the Contract relative to the execution of the Work. The Architect shall determine the amount, quality, acceptability of the Work and shall decide all questions which may arise in relation to said Work. The Owner's estimates and decisions shall be final except as otherwise expressly provided. In the event that any question arises between the Owner and Contractor concerning the Contract, the decision of the Owner shall be a condition precedent to the right of the Contractor to receive any money or payment under the Contract.

B. Any differences or conflicts concerning performance which may arise between the Contractor and other contractors performing Work for the Owner shall be adjusted and determined by the Owner's representative.

C. The Owner may act through a representative designated by the Owner.

Section 3.02 - Meaning and Intent of Contract Documents

The meaning and intent of all Contract Documents shall be as interpreted by the Architect.

Section 3.03 - Order of Preference

A. Figured dimensions shall take precedence over scaled dimensions. Larger scale drawings shall take precedence over smaller scale drawings. Latest addenda shall take precedence over previous addenda and earlier dated drawings and specifications.

B. Should a conflict occur in or between or among any parts of the Contract Documents that are entitled to equal preference, the better quality or greater quantity of material, of the more specific compared to the general, shall govern, unless the Architect/Owner's representative directs otherwise.

C. Drawings and specifications are complementary. Anything shown on the drawings and not mentioned in the specifications, or mentioned in the specifications and not shown on the drawings, shall have the same effect as if shown or mentioned in both.

ARTICLE 4 -- MATERIALS AND LABOR

Section 4.01 - Contractor's Obligations

A. The Contractor shall, in a good workmanlike manner, perform all the Work required by the Contract Documents within the time specified in the Contract.

B. The Contractor shall Furnish, erect, maintain, and remove such construction plant and such temporary Work as may be required for the performance of its work. The Contractor shall be responsible for the safety, efficiency and adequacy of the Contractor's plant, appliances and methods, and for damage which may result from failure or improper construction, maintenance or operation of said plant, appliances and methods. The Contractor shall comply with all terms of the Contract, and shall, carry on and complete the entire Work to the satisfaction of the Owner.

C. Any labor, materials or means whose employment or utilization during the course of this Contract may tend to or in any way cause or result in strike, work stoppages, delays, suspension of Work or similar troubles by workmen employed by the Contractor, its subcontractors or material suppliers, or by any of the trades working in or about the buildings and premises where Work is being performed under this Contract, or by other contractors, their subcontractors or material suppliers pursuant to other contracts shall not be allowed. Any violation by the Contractor of this requirement may in the sole judgment of the Owner be considered as proper and sufficient cause for declaring the Contractor to be in default, and for the Owner to take action against the Contractor as set forth in the General Conditions Article entitled "Termination" or such other action as the Owner may deem proper.

Section 4.02 - Contractor's Title to Materials

A. No materials or supplies for the Work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by any other party. The Contractor warrants that the Contractor has full, good and clear title to all materials and supplies used by the Contractor in the Work, or resold to the Owner pursuant to the Contract free from all liens, claims or encumbrances.

B. All materials, equipment and articles which become the property of the Owner shall be new unless specifically stated otherwise.

Section 4.03 - "Or Equal" Clause

A. Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturers' or vendors' names, trade names, catalogue number or make, said identification is intended to establish a standard. Any material, article or equipment of other manufacturers and vendors which performs satisfactorily the duties imposed by the general design may be considered equally acceptable provided that, in the opinion of the Architect/Engineer, the material, article or equipment so proposed is of equal quality, substance and function and the Contractor shall not Provide, Furnish or Install any said proposed material, article or equipment without the prior written approval of the Architect/Engineer. The burden of proof and all costs related thereto concerning the "or equal" nature of the substitute item, whether approved or disapproved, shall be borne by the Contractor.

B. Where the Architect/Engineer, pursuant to the provisions of this Section, approves a product proposed by the Contractor and said proposed product requires a revision of the Work covered by this Contract, or the Work covered by other contracts, all changes to the Work of all contracts, revision or redesign, and all new drawings and details required therefore shall be provided by the Contractor at the cost of the Contractor and shall be subject to the approval of the Consultant.

C. No substitution will be permitted which may result in a delay to the Project.

Section 4.04 - Quality, Quantity and Labeling

A. The Contractor shall Furnish materials and equipment of the quality and quantity specified in the Contract.

B. When materials are specified to conform to any standard, the materials delivered to the Site shall bear manufacturer's labels stating that the materials meet said standards.

C. The above requirements shall not restrict or affect the Owner's right to test materials as provided in the Contract.

D. The Contractor shall develop and implement quality control plans to assure itself and the Owner that all Work performed by the Contractor and its Subcontractors complies fully with all Contract requirements, and shall submit the plans to the Owner as required by the Contract. See Submittals Section of the General Requirements. The Contractor's quality control plans shall be independent of any testing or inspection performed by or on behalf of the Owner.

ARTICLE 5 -- CONTRACTOR

Section 5.01 - Supervision by Contractor

A. The Contractor shall provide full-time competent supervision for the duration of the Contract; during the course of on-site work the Contractor shall provide a full-time on-site superintendent who shall have full authority to act for the Contractor at all times. The Superintendent shall be able to read, write and speak English fluently, as well as communicate with the workers.

B. If at any time the supervisory staff is not satisfactory to the Owner, the Contractor shall, if directed by the Owner, immediately replace such supervisory staff with other staff satisfactory to the Owner.

C. The Contractor shall remove from the Work any employee of the Contractor or of any Subcontractor when so directed by the Owner.

Section 5.02 - Representations of Contractor

The Contractor represents and warrants:

A. That it is financially solvent and is experienced in and competent to perform the Work, and has the staff, equipment, subcontractors and suppliers available to complete the Work within the time specified for the Contract price.

B. That it is familiar with all Federal, State or other laws, ordinances, orders, rules and regulations that may in any way affect the Work.

C. That any temporary and permanent Work required by the Contract can be satisfactorily constructed, and that said construction will not injure any person or damage any property.

D. That it has carefully examined the Contract and the Site of the Work and that, from the Contractor's own investigations and through the bid process and requirements is satisfied as to the nature and materials likely to be encountered, the character of equipment and other facilities needed

for the performance of the Work, the general and local conditions and all other materials or items which may affect the Work.

E. That it is satisfied that the Work can be performed and completed as required in the Contract, and warrants that it has not been influenced by any oral statement or promise of the Owner or the Consultant.

SECTION 5.03 – COPIES OF CONTRACT DOCUMENTS FOR CONTRACTORS

A. The Owner shall furnish to the Contractor, without charge, up to five (5) copies of Contract Documents.

B. Any sets in excess of the number mentioned above may be furnished to the Contractor at the cost of reproduction and mailing or delivery.

SECTION 5.04 - MEETINGS

The Contractor shall attend all meetings as directed by the Owner or the Owner's Representative.

SECTION 5.05 – RELATED WORK

To ascertain the relationship of its work to all Work required by the Contract Documents, the Contractor shall examine the Contract Documents for Work of its Contract and any related work of other contracts.

SECTION 5.06 – ERRORS OR DISCREPANCIES

The Contractor shall examine the Contract thoroughly before commencing the Work and report in writing any errors or discrepancies to the Owner or the Owner's Representative within five (5) days of discovery.

ARTICLE 6 -- SITE CONDITIONS

SECTION 6.01 – SUBSURFACE OR SITE CONDITIONS FOUND DIFFERENT

A. The Contractor acknowledges that the Contract amount set forth in its bid includes such provisions which the Contractor deems proper for all Site

conditions the Contractor could reasonably anticipate encountering as indicated in the Contract or from the Contractor's inspection and examination of the Site prior to submission of bids.

SECTION 6.02 – VERIFYING DIMENSIONS AND CONDITIONS

A. The Contractor shall take all measurements and verify all dimensions and conditions at the Site before proceeding with the Work. If said dimensions or conditions are found to be in conflict with the Contract, the Contractor immediately shall refer said conflict to the Architect in writing. The Contractor shall comply with any revised Contract Documents.

B. During the progress of Work, the Contractor shall verify all field measurements prior to fabrication of building components or equipment and proceed with the fabrication to meet field conditions.

C. The Contractor shall consult all Contract Documents to determine exact location of all Work and verify spatial relationships of all Work. Any question concerning said location or spatial relationships may be submitted in a manner approved by the Architect.

D. Special locations for equipment, pipelines, ductwork and other such items of Work, where not dimensioned on plans, shall be determined in consultation with other affected contractors.

E. The Contractor shall be responsible for the proper fitting of the Work in place.

SECTION 6.03 - SURVEYS

Unless otherwise expressly provided in the Contract, the Owner shall furnish the Contractor all surveys of the property necessary for the Work, but the Contractor shall lay out the Work.

ARTICLE 7 -- INSPECTION AND ACCEPTANCE

SECTION 7.01 – ACCESS TO THE WORK

The Owner, the Owner's Representative, and the architect shall at all times have access to the Work and the Contractor shall provide proper facilities for said access.

SECTION 7.02 – NOTICE FOR TESTING

If the Contract Documents, the Owner's instructions, laws, rules, ordinances or regulations require that any Work be inspected or tested, the Contractor shall give the Architect and/or Owner's representative a minimum of three (3) work days written notice of readiness of the Work for inspection or testing and the date fixed for said inspections or testing.

SECTION 7.03 – REEXAMINATION OF WORK

Reexamination of any part of the Work may be ordered by the Owner, and if so ordered, the Work must be uncovered by the Contractor. If said Work is found to be in accordance with the Contract, the Owner shall pay the cost of reexamination. If said Work is not found to be in accordance with the Contract, the Contractor shall pay the cost of reexamination and replacement.

SECTION 7.04 – INSPECTION OF WORK

All Work, all materials whether or not incorporated in the Work, all processes of manufacture and all methods of construction shall be, at all times and places, subject to the inspection of the Owner or the Owner's Representative or the architect, and the Architect shall be the final judge of the quality and suitability of the Work, materials, processes of manufacture and methods of construction for the purposes for which said Work, materials, processes of manufacture and methods of construction are used. Any Work not approved by the Architect shall be reconstructed, made good, replaced or corrected immediately by the Contractor including all Work of other contractors destroyed or damaged by said removal or replacement. Rejected material shall be removed immediately from the Site. Acceptance of material and workmanship by the Owner shall not relieve the Contractor from the Contractor's obligation to replace all Work which is not in compliance with the Contract.

SECTION 7.05 – DEFECTIVE OR DAMAGED WORK

If, in the opinion of the Owner, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the Work damaged or not performed in accordance with the Contract, the compensation to be paid to the Contractor shall be reduced by an amount which, in the judgment of the Owner, shall be deemed to be equitable.

SECTION 7.06 - TESTING

All materials and equipment used in the Work shall be subject to inspection and testing in accordance with accepted standards to establish conformance with specifications and suitability for uses intended, unless otherwise specified in the Contract. If any Work shall be covered or concealed without the approval or consent of the Architect, said Work shall, if required by the Architect, be uncovered for examination. Any inspection by the Architect or by a testing laboratory on behalf of the Owner does not relieve the Contractor of the responsibility to maintain quality control of materials, equipment and installation to conform to the requirements of the Contract. If any test results are below specified minimums, the Architect may order additional testing. The cost of said additional testing, any additional professional services required, and any other expenses incurred by the Owner as a result of said additional testing shall be at the Contractor's expense. The Owner may deduct such costs from moneys due the Contractor.

SECTION 7.07 - ACCEPTANCE

No previous inspection shall relieve the Contractor of the obligation to perform the Work in accordance with the Contract. No payment, either partial or full, by the Owner to the Contractor shall excuse any failure by the Contractor to comply fully with the Contract Documents. The Contractor shall remedy all defects and deficiencies, paying the cost of any damage to other Work resulting therefrom.

ARTICLE 8 -- CHANGES IN THE WORK

SECTION 8.01 - CHANGES

A. Without invalidating the Contract, the Owner/Architect may order Extra Work or make changes by altering, adding to, or deducting from the Work, the Contract consideration being adjusted accordingly. No claims for Extra Work shall be allowed unless such Extra Work is ordered in writing by the Owner/Architect. No changes in the Work shall be made unless such Work is ordered in writing by the Owner/Architect or Owner’s Representative. If the time for completion is affected by this change, the revised time for completion shall be included in the change order. The Owner may order the Contractor to perform the Extra Work and proceed under the Dispute Article.

B. The amount by which the Contract consideration is to be increased or decreased by any change order may be determined by the Owner by one or more of the following methods:

1. By applying the applicable unit price or prices contained in the Contract.

2. By estimating the fair and reasonable cost of the Extra Work:

   a. Labor, including all wages, required wage supplements and insurance required by law, paid to employees below the rank of superintendent directly employed at the Site. Wages are the prevailing rate of wages defined in the Contract Documents and supplemental updates.

   b. Premiums or taxes paid by the Contractor for worker's compensation insurance, unemployment insurance, FICA tax and other payroll taxes as required by law, net of actual and anticipated refunds and rebates.

   c. Materials

   d. Equipment, excluding hand tools, which in the judgment of the Owner, would have been or will be employed in the Work. It is the duty of the Contractor to utilize either rented or self-owned equipment that is of a nature and size appropriate for the Work to be performed. The Owner reserves the right to determine reasonable and appropriate equipment sizing, and at the Owner's discretion, to adjust the costs allowed to reflect a smaller or less elaborate piece of equipment more suitable for performance of the Extra Work.

3. By determining the actual cost of the Extra Work in the same manner as in Article 8, Section 8.01, Subsection B. 2. except that the actual costs of the Contractor shall be used in lieu of estimated costs.

C. The Owner shall have the option of determining by which method the Contractor shall proceed with said Extra Work. Wages are the prevailing rate of wages defined in the Contract Documents and supplemental updates. The Contractor shall submit a signed and notarized Labor Rate Worksheet(s) to the Owner to be used to determine hourly rates for various classifications of workers. The Contractor agrees to provide documentation verifying costs and calculations at the Owner's request.

D. Regardless of the method used by the Owner in determining the value of a change order, the Contractor shall, within the time-frame given by the Owner, submit to the Owner or Owner's Representative a detailed breakdown of the Contractor's estimate of the value of the omitted or Extra Work.

E. Unless otherwise specifically provided for in a change order, the compensation specified therein for Extra Work includes full payment for the Extra Work covered thereby, and the Contractor waives all rights to any other compensation for said Extra Work, damage or expense.

F. The Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner shall give the Owner access to all accounts and records relating thereto, including records of subcontractors and material suppliers.

G. Increased bonding costs for the Work which may result from Owner issued Changes in the Work will be addressed by the Owner at the completion of the Project Work upon submission of satisfactory proof of Contractor's increased cost.

H. Increased contractual liability insurance premium costs which may result from changes in the Work will be addressed by the Owner at the completion of the Work upon submission of satisfactory proof of Contractor's increased cost.

SECTION 8.02 – OVERHEAD AND PROFIT ALLOWANCE

A. See Example A for changes in the Work performed directly by the Contractor, whether a base cost is arrived at by estimated cost or actual cost method; add to base cost a sum equal to twenty percent. See Exceptions - Paragraphs "D" and "E".

Example A:

Contractor base cost	$1,000
20% overhead and profit	200
Total	$1,200

B. See Example B for changes in the Work performed by a Subcontractor under contract with the Contractor, where estimated or actual cost is Ten Thousand Dollars ($10,000.00) or less; add to the base cost a sum equal to twenty percent of cost, for the benefit of the Subcontractor. For the benefit of the Contractor; add an additional sum equal to ten percent of the Subcontractor's base cost.

Example B:

Subcontractor base cost	$1,000
20% Subcontractor overhead and profit	200
Subcontractor Total	$1,200
10% Contractor overhead and profit on base cost	100
Total	$1,300

C. See Example C for changes in the Work performed by a Subcontractor, under contract with the Contractor, which exceeds a base cost of Ten Thousand Dollars ($10,000) in estimated or actual cost; add to the base cost a sum equal to twenty percent of cost for the benefit of the Subcontractor. For the benefit of the Contractor; add an additional sum equal to ten percent of the first Ten Thousand Dollars ($10,000) of the Subcontractor's base cost, plus five percent of the next Ninety Thousand Dollars ($90,000) of the Subcontractor's base cost, plus three percent of any sum in excess of One Hundred Thousand Dollars ($100,000) of the Subcontractor's base cost.

Example C:

Subcontractor base cost	$200,000
20% Subcontractor overhead and profit	40,000
Subcontractor Total	$240,000
10% Contractor overhead and profit on first $10,000 base cost	1,000
5% on next $90,000 base cost	4,500
3% on base cost over $100,000	3,000
Total	$248,500

D. See Example D for overhead and profit on major equipment such as: switchgear, transformers, air handling units, boilers, etc. For extra equipment purchases by the Contractor or Subcontractors which exceeds a base cost of Ten Thousand dollars ($10,000) in estimated or actual cost; add to the base cost for the benefit of the Contractor a sum equal to ten percent of the first Ten Thousand dollars ($10,000) of the vendor's base cost plus five percent of the next Ninety Thousand dollars ($90,000) of the vendor's base cost, plus three percent of any sum in excess of One Hundred Thousand dollars ($100,000) of the vendor's base cost. If the equipment is supplied by the Subcontractor, the Contractor is entitled to a maximum of ten (10) percent of the first Ten Thousand dollars ($10,000) of the base cost.

Example D:

Vendor base cost	$200,000
10% Contractor or Subcontractor overhead and profit on first $10,000 base cost	1,000
5% on next $90,000 base cost	4,500
3% on base cost over $100,000	3,000
Contractor or Subcontractor Total	$208,500
10% Contractor overhead and profit on first $10,000 base cost when equipment is supplied by the Subcontractor, no other mark-up allowed	1,000
Total	$209,500

E. See Example E for overhead and profit on a material only Change Order. For increased material purchases by the Contractor or Subcontractors which exceed a base cost of Ten Thousand dollars ($10,000) in estimated or actual costs; add to the base cost for the benefit of the Contractor a sum equal to ten percent of the first Ten Thousand dollars ($10,000) of the supplier's cost plus five percent of the next Ninety Thousand dollars ($90,000) of the supplier's cost, plus three percent of any sum in excess of One Hundred Thousand dollars ($100,000) of the supplier's cost. If the material is supplied by the Subcontractor, the Contractor is entitled to a maximum of ten (10) percent of the first Ten Thousand dollars ($10,000) of the base cost.

Example E:

Material cost (net difference between original contract and revised)	$200,000
10% Contractor or Subcontractor overhead and profit on first $10,000 base cost	1,000
5% on next $90,000 base cost	4,500
3% on base cost over $100,000	3,000
Contractor or Subcontractor Total	$208,500
10% Contractor overhead and profit on first $10,000 base cost when material is supplied by the Subcontractor, no other mark-up allowed	1,000
Total	$209,500

F. Other than the overhead and profit described in General Conditions Section 7.02A, no further overhead and profit will be allowed for changes to the Work performed by a Subcontractor under Subcontract with the Contactor or for major equipment or material supplier determined to be an affiliate of or controlled by the Contractor. An affiliate is considered any firm or entity in which the Contractor or any individual listed on the Contractor's NYS Vendor Responsibility Questionnaire either owns 5% or more of the shares of, or is one of the five largest shareholders, a director, officer, member, partner or proprietor of said Subcontractor, major equipment or material supplier; a controlled firm is any firm or entity which, in the opinion of the Owner, is controlled by the Contractor or any individual listed on the Contractor's NYS Vendor Responsibility Questionnaire.

1. The Owner, in its sole and exclusive discretion, will determine if a firm or entity is an affiliate of or controlled by the Contractor.

G. No overhead and profit shall be paid for changes in the Work performed by a Subcontractor not under Subcontract with the Contractor. No overhead and profit shall be paid on the premium portion of overtime pay. Where the changes in the Work involve both an increase and a reduction in similar or related Work, the overhead and profit allowance shall be applied only to the cost of the increase that exceeds the cost of the reduction.

SECTION 8.02A – DEDUCT CHANGE ORDER

The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a decrease in the Contract amount shall be as determined by the Owner. The credit shall include the overhead and profit allocable to the deleted or changed Work unless the Owner, in its sole and exclusive discretion, determines otherwise.

SECTION 8.03 – FORM OF CHANGE ORDERS

All Change Orders shall be processed, executed and approved on AIA document G701, which is included herein and made part of the Contract Documents. No alteration to this form shall be acceptable to the Owner and no payment for Extra Work shall be due the Contractor unless it executes a Change Order on said form.

ARTICLE 9 -- TIME OF COMPLETION

SECTION 9.01 – TIME OF COMPLETION

A. The Work shall be commenced at the time stated in the Owner's written notice to proceed, and shall be completed no later than the time of completion specified in the Contract Documents. Notwithstanding anything to the contrary, a schedule submitted by the Contractor showing a time of completion earlier than that specified in the Contract shall not entitle the Contractor to any additional compensation in the event the earlier time of completion is not realized.

B. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the time for completion of the Work, as specified in the Contract Documents, is an essential and material condition of the Contract.

C. The Contractor agrees that the Work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as shall insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for completion of the Work described herein is a reasonable time for completion of the same.

D. If the Contractor shall neglect, fail or refuse to complete the Work within the time specified, or any proper extension thereof granted by the Owner, the Contractor agrees to pay to the Owner for loss of beneficial use of the structure an amount specified in the Contract, not as a penalty, but as liquidated damages, for each and every calendar day that the Contractor is in default. Default shall include abandonment of the Work by the Contractor.

E. Said amount of liquidated damages is agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages which the Owner would sustain for loss of beneficial use of the structure in the event of delay in completion, and said amount is agreed to be the amount of damages sustained by the Owner and said amount may be retained from time to time by the Owner.

F. It is further agreed that time is of the essence for each and every portion of the Work. In any instance in which additional time is allowed for the completion of any Work, the new time of completion established by said extension shall be of the essence. The Contractor shall not be charged with liquidated damages or any excess cost if the Owner determines that the Contractor is without fault and that the delay in completion of the Work is due:

1. to an unforeseeable cause beyond the control and without the fault of, or negligence of the Contractor, and approved by the Owner, including, but not limited to, acts of God or of public enemy, acts of the Owner, fires, epidemics, quarantine, restrictions, strikes, freight embargoes and unusually severe weather; and

2. to any delays of Subcontractors or suppliers occasioned by any of the causes specified in Subsections 1. of this paragraph.

The Contractor shall, within ten (10) days from the beginning of any such delay, notify the Owner, in writing, of the causes of the delay.

G. The time for completion can be extended only by Change Order approved by the Owner and may be extended for:

1. all of the Work, or

2. only that portion of the Work altered by the Change Order.

H. The foregoing liquidated damages are intended to compensate the Owner only for the loss of beneficial use of the structure. In addition, the Contractor shall be liable to the Owner for whatever actual damages (other than actual loss of beneficial use) the Owner may incur as a result of any actions or inactions of the Contractor or its Subcontractors including, without limitation, interest expense and carrying costs, liabilities to other Contractors working on the project or other third parties, job extension costs and other losses incurred by the Owner. The provisions of this paragraph are for the exclusive use of the Owner, and shall not accrue to other contractors or third parties.

ARTICLE 10 -- TERMINATION OR SUSPENSION

SECTION 10.01 – TERMINATION FOR CAUSE

In the event that any provision of the Contract is violated by the Contractor or by any Subcontractor, the Owner may serve written notice upon the Contractor and upon the Contractor's surety, if any, of the Owner's intention to terminate the Contract; such notice shall contain the reasons for the intention to terminate the Contract upon a date specified by the Owner. If the violation or delay shall not cease or arrangements satisfactory to the Owner shall not be made, the Contract shall terminate upon the date so specified by the Owner. In the event of any such termination, the Owner may take over the Work and prosecute same to completion by Contract or otherwise for the account and at the expense of the Contractor, and the Contractor and Contractor's surety shall be liable to the Owner for all costs occasioned the Owner thereby. In the event of such termination the Owner may take possession of and may utilize such materials, appliances and plant as may be on the Site and necessary or useful in completing the Work.

SECTION 10.02 – TERMINATION FOR CONVENIENCE OF OWNER

The Owner, at any time, may terminate the Contract in whole or in part. Any such termination shall be effected by delivering to the Contractor a notice of termination specifying the extent to which performance of Work under the Contract is terminated and the date upon which the termination becomes effective. Upon receipt of the notice of termination, the Contractor shall act promptly to minimize the expenses resulting from the termination. The Owner shall pay the Contractor for Work of the Contract performed by the Contractor and accepted by the Owner for the period extending from the date of the last approved Application for Payment up to the effective date of the termination, including retainage. In no event shall the Contractor be entitled to compensation in excess of the total consideration of the Contract. . In the event of such termination the Owner may take over the Work and prosecute the Contract to completion and may take possession of and may utilize such materials, appliances, and equipment as may be on the Site and necessary or useful in completing the Work.

SECTION 10.03 – OWNER’S RIGHT TO DO WORK

The Owner may, after notice to the Contractor, without terminating the Contract and without prejudice to any other right or remedy the Owner may have, perform or have performed by others all of the Work or any part thereof and may deduct the cost thereof from any moneys due or to become due the Contractor.

SECTION 10.04 – SUSPENSION OF WORK

A. The Owner may order the Contractor in writing to suspend, delay or interrupt performance of all or any part of the Work for a reasonable period of time as the Owner may determine. The order shall contain the reason or reasons for issuance which may include but shall not be limited to the following: latent field conditions, substantial program revisions, acquisition of rights of way or real property, financial crisis, labor disputes, civil unrest or acts of God.

B. Upon receipt of a suspension order, the Contractor shall, as soon as practicable, cease performance of the Work as ordered and take immediate affirmative measures to protect such Work from loss or damage.

C. The Contractor specifically agrees that such suspension, interruption or delay of the performance of the Work pursuant to this Article shall not increase the cost of performance of the Work of this Contract.

D. Time for completion of the Work may be extended to such time as the Owner determines shall compensate for the time lost by the suspension, interruption or delay, such determination to be set forth in writing.

ARTICLE 11 -- DISPUTES

SECTION 11.01 – CLAIMS FOR EXTRA WORK

A. If the Contractor claims that any Work which the Contractor has been ordered to perform will be Extra Work, or that any action or omission of the Owner is contrary to the terms and provisions of the Contract and will require the Contractor to perform Extra Work the Contractor shall:

1. Promptly comply with said order.

2. File with the Owner and the architect within fifteen (15) working days after being ordered to perform the Work claimed by the Contractor to be Extra Work or within fifteen (15) working days after commencing performance of the Work, whichever date shall be earlier, or within fifteen (15) working days after the said action or omission on the part of the Owner occurred, a written notice of the basis of the Contractor's claim, including estimated cost, and request for a determination thereof.

3. Proceed diligently, pending and subsequent to the determination of the Owner with respect to any said disputed matter, with the performance of the Work in accordance with all instructions of the Owner.

B. No claim for Extra Work shall be allowed unless the same was done pursuant to a written order of the Owner. The Contractor's failure to comply with any or all parts of this Article shall be deemed to be:

1. a conclusive and binding determination on the part of the Contractor that said order, Work, action or omission does not involve Extra Work and is not contrary to the terms and provisions of the Contract,

2. a waiver by the Contractor of all claims for additional compensation or damages as a result of said order, Work, action or omission.

C. The value of claims for Extra Work, if allowed, shall be determined by the methods described in the Contract.

SECTION 11.02 – CLAIMS FOR DELAY

No claims for increased costs, charges, expenses or damages of any kind shall be made by the Contractor against the Owner for any delays or hindrances from any cause whatsoever; provided that the Owner, in the Owner's discretion, may compensate the Contractor for any said delays by extending the time for completion of the Work as specified in the Contract.

SECTION 11.03 – FINALITY OF DECISIONS

A. Any decision or determination of the Architect, Owner or the Owner's Representative shall be final, binding and conclusive on the Contractor unless the Contractor shall, within ten (10) working days after said decision, make and deliver to the Owner a verified written statement of the Contractor's contention that said decision is contrary to a provision of the Contract. The Owner shall determine the validity of the Contractor's contention. Pending the decision of the Owner, the Contractor shall proceed in accordance with the original decision.

B. Wherever it is required in the Contract that an application must be made to the Owner or a determination made by the Owner, the decision of the Owner on said application or the determination of the Owner under the Contract shall be final, conclusive and binding upon the Contractor unless the Contractor, within ten (10) working days after receiving notice of the Owner's decision or determination, files a written statement with the Owner that the Contractor reserves the Contractor's rights in connection with the matters covered by said decision or determination.

ARTICLE 12 -- SUBCONTRACTS

SECTION 12.01 – SUBCONTRACTING

A. The Contractor may utilize the services of Subcontractors subject to the bid terms and conditions.

B. The Contractor shall submit to the Owner, in writing, the name of each proposed Subcontractor as required by the Contract or earlier when requested. The Owner reserves the right to disapprove any proposed Subcontractor. Such disapproval shall not result in additional cost to the Owner.

C. The Contractor shall be fully responsible for the Work, acts and omissions of Subcontractors, and of persons either directly or indirectly employed by Subcontractors.

D. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the work of Subcontractors.

E. The Contractor's use of Subcontractors shall not diminish the Contractor's obligation to complete the Work in accordance with the Contract Documents. The Contractor shall control and coordinate the work of Subcontractors.

F. Nothing contained in the Contract or any subcontract shall create any contractual relationship between Subcontractors and the Owner.

ARTICLE 13 -- CONTRACT COORDINATION AND COOPERATION

SECTION 13.01 – COOPERATION WITH OTHER CONTRACTORS

A. During the progress of the Work, other contractors may be engaged in performing work. The Contractor shall coordinate the Contractor's Work with the work of said other contractors in such a manner as the Owner may direct.

B. If the Owner shall determine that the Contractor is failing to coordinate the Work with the work of other contractors as the Owner has directed:

1. the Owner shall have the right to withhold any payments due under the Contract until the Owner's directions are complied with by the Contractor; and

2. the Contractor shall assume the defense and pay on behalf of the Owner any and all claims or judgments or damages and from any costs or damages to which the Owner may be subjected or which the Owner may suffer or incur by reason of the Contractor's failure to promptly comply with the Owner's directions.

C. If the Contractor notifies the Owner, in writing, that another contractor on the Site is failing to coordinate the work of said contractor with the Work, the Owner shall investigate the charge. If the Owner finds it to be true, the Owner shall promptly issue such directions to the other contractor with respect thereto as the situation may require. The Owner shall not be liable for any damages suffered by the Contractor by reason of the other contractor's failure to promptly comply with the directions so issued by the Owner, or by reason of another contractor's default in performance.

D. Should the Contractor sustain any damage through any act or omission of any other contractor having a contract with the Owner or through any act or omission of any Subcontractor of said other contractor, the Contractor shall have no claim against the Owner for said damage.

E. Should any other contractor having or which shall have a contract with the Owner sustain damage through any act or omission of the Contractor or through any act or omission of a Subcontractor, the Contractor shall reimburse said other contractor for all said damages and shall indemnify and hold the Owner harmless from all said claims.

F. The Owner cannot guarantee the responsibility, efficiency, unimpeded operations or performance of any Contractor. The Contractor acknowledges these conditions and shall bear the risk of all delays including, but not limited to, delays caused by the presence or operations of other contractors and delays attendant upon any construction schedule approved by the Owner and the Owner shall not incur any liability by reason of any delay.

SECTION 13.02 – SEPARATE CONTRACTS

A. The Owner may award other contracts, work under which may proceed simultaneously with the execution of the Work. The Contractor shall coordinate the Contractor's operations with those of other contractors as directed by the Owner. Cooperation shall be required in the arrangements for access, the storage of material and in the detailed execution of the Work.

B. The Contractor shall keep informed of the progress and workmanship of other contractors and any Subcontractors and shall notify the Owner in writing immediately of lack of progress or defective workmanship on the part of other contractors or subcontractors, where said delay or defective workmanship may interfere with the Contractor's operations.

C. Failure of a Contractor to keep so informed and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by the Contractor of said progress and workmanship as being satisfactory for proper coordination with the Work.

D. Where the Contractor shall perform Work in close proximity to work of other contractors or subcontractors, or where there is evidence that Work of the Contractor may interfere with work of other contractors or subcontractors, the Contractor shall assist in arranging space conditions to make satisfactory adjustment for the performance of said work and the Work. If the Contractor performs work in a manner which causes interference with the work of other contractors or subcontractors, the Contractor shall make changes necessary to correct the condition.

SECTION 13.03 – COORDINATED COMPOSITE DRAWINGS

The Contractor shall prepare coordinated composite scale reproducible drawings and sections, on reproducible paper, clearly showing how the Work of the Contractor is to be performed in relation to work of other contractors or subcontractors.

ARTICLE 14 -- PROTECTION OF RIGHTS, PERSONS AND PROPERTY

SECTION 14.01 – ACCIDENT PREVENTION

The Contractor shall, at all times, take every precaution against injuries to persons or damage to property and for the safety of persons on or about the Site or engaged in the performance of the Work.

SECTION 14.02 – SAFETY PROGRAMS

The Contractor shall be responsible for the initiation, maintenance and supervision of safety precautions and programs in connection with the Work.

SECTION 14.03 – PROTECTION OF WORK AND PROPERTY

A. The Contractor shall, at all times, guard the Owner's property from injury or loss in connection with the Work. The Contractor shall, at all times, guard and protect the Contractor's Work, and adjacent property. The Contractor shall replace or make good any said loss or injury unless said loss or injury is caused directly by the Owner.

B. The Contractor shall have full responsibility to protect and maintain all materials and supplies on and off site in proper condition and forthwith repair, replace and make good any damage thereto until construction completion. The Contractor shall maintain an inventory of all materials and supplies for the Project that are delivered to the Site or approved for off-site storage facilities.

C. The Contractor shall report any loss, theft, burglary, vandalism or damage of materials or installed work to the Owner by phone and fax as soon as it is discovered. If vandalism, theft, or burglary are suspected as the cause of the loss, the Contractor shall notify site security personnel and the municipal police. The Contractor shall also protect the place of the loss until released from protection by the Owner or the Owner's Representative. The Contractor shall insure that no potential evidence relating to the loss is removed from the place of the loss.

SECTION 14.04 – ADJOINING PROPERTY

The Contractor shall protect all adjoining property and shall repair or replace any said property damaged or destroyed during the progress of the Work.

SECTION 14.05 – RISKS ASSUMED BY THE CONTRACTOR

A. The Contractor solely assumes the following distinct and several risks whether said risks arise from acts or omissions, whether supervisory or otherwise, of the Owner, of any Subcontractor, of third persons or from any other cause, including unforeseen obstacles and difficulties which may be encountered in the execution of the Work, whether said risks are within or beyond the control of the Contractor and whether said risks involve any legal duty, primary or otherwise, imposed upon the Owner, excepting only risks which arise from faulty designs as shown by the plans and specifications or from the negligence of the Owner or the Owner's members, officers, representatives or employees that caused the loss, damage or injuries hereinafter set forth:

1. The risk of loss or damage, includes direct or indirect damage or loss, of whatever nature to the Work or to any plant, equipment, tools, materials or property furnished, used, installed or received by the Owner, the Construction Manager, the Contractor or any Subcontractor, material or workmen performing services or furnishing materials for the Work. The Contractor shall bear said risk of loss or damage until construction completion or until completion or removal of said plant, equipment, tools, materials or property from the Site and the vicinity thereof, whichever event occurs last. In the event of said loss or damage, the Contractor immediately shall repair, replace or make good any said loss or damage.

2. The risk of claims, just or unjust, by third persons against the Contractor or the Owner and the Construction Manager on account of wrongful death, bodily injuries and property damage, direct or consequential, loss or damage of any kind whatsoever arising or alleged to arise out of or as a result of or in connection with the performance by the Contractor of the Work, whether actually caused by or resulting from the performance of the Work, or out of or in connection with the Contractor's operations or presence at or in the vicinity of the Site. The Contractor shall bear the risk for all deaths, injuries, damages or losses sustained or alleged to have been sustained prior to the construction completion of the Work. The Contractor shall bear the risk for all deaths, injuries, damages or losses sustained or alleged to have been sustained resulting from the Contractor's negligence or alleged negligence which is discovered, appears or is manifested after acceptance by the Owner.

3. The Contractor assumes entire responsibility and liability for any and all damage or injury of any kind or nature whatsoever, including death resulting therefrom, to all persons, whether employees of the Contractor or otherwise, and to all property, caused by, resulting from, arising out of or occurring in connection with the execution of the Work. If any person shall make said claim for any damage or injury, including death resulting therefrom, or any alleged breach of any statutory duty or obligation on the part of the Owner, the Owner's Representative, Construction Manager, servants and employees, the Contractor shall assume the defense and pay on behalf of the Owner, the Owner's Representative, the Construction Manager, servants and employees, any and all loss, expense, damage or injury that the Owner, the Owner's Representative, Construction Manager, servants and employees, may sustain as the result of any claim, provided however, the Contractor shall not be obligated to indemnify the Owner, the Owner's Representative, Construction Manager, servants and employees for their own negligence, if any. The Contractor agrees to assume, and pay on behalf of the Owner and the Owner's Representative, Construction Manager, servants and employees, the defense of any action at law or equity which may be brought against the Owner and the Owner's Representative, Construction Manager, servants and employees. The assumption of defense and liability by the Contractor includes, but is not limited to the amount of any legal fees associated with defending, all costs of investigation, expert evaluation and any other costs including any judgment or interest or penalty that may be entered against the Owner and the Owner's Representative, Construction Manager, servants and employees, in any said action.

4. The Contractor is advised that the Work required under this Contract may impose certain obligations and requirements mandated by the U.S. Department of Labor Occupational Safety and Health Administration regulations, Title 29 CFR Part 1926.62 Lead Exposure in Construction, relative to the potential exposure to lead by its employees. The Contractor assumes entire responsibility and liability for complying fully in all respects with these regulations.

B. The Contractor's obligations under this Article shall not be deemed waived, limited or discharged by the enumeration or procurement of any insurance for liability for damages. The Contractor shall notify its insurance carrier within twenty four (24) hours after receiving a notice of loss or damage or claim from the Owner.

The Contractor shall make a claim on its insurer specifically under the provisions of the contractual liability coverages and any other coverages afforded the Owner including those of being an additional insured where applicable.

C. Neither Final Acceptance of the Work nor making any payment shall release the Contractor from the Contractor's obligations under this Article. The enumeration elsewhere in the Contract of particular risks assumed by the Contractor or of particular claims for which the Contractor is responsible shall not be deemed to limit the effect of the provisions of this Article or to imply that the Contractor assumes or is responsible for only risks or claims of the type enumerated; and neither the enumeration in this Article nor the enumeration elsewhere in the Contract of particular risks assumed by the Contractor of particular claims for which the Contractor is responsible shall be deemed to limit the risks which the Contractor would assume or the claims for which the Contractor would be responsible in the absence of said enumerations.

Upon the conclusion of any action, proceeding or lawsuit, should a final binding determination of responsibility be made which allocates responsibility to the Owner, or the Owner's members, officers, employees or representatives, the Owner agrees that the obligation to indemnify and hold harmless shall not be applicable to the portion of any uninsured money judgment for which the Owner is responsible, and the Owner agrees to pay the Contractor the percentage of uninsured defense costs which the Contractor incurred based upon an apportionment of the Owner's allocated responsibility.

The Contractor agrees that any claim or costs of the Owner and/or Construction Manager arising from obligations in this Article and/or Article 15 shall be set off or deducted from payments due the Contractor.

ARTICLE 15--INSURANCE AND CONTRACT SECURITY

SECTION 15.01 – INSURANCE PROVIDED BY CONTRACTOR

A. The Contractor shall procure and maintain all of the insurance required under this Article until all Work, including punch list items, is complete.

The Contractor shall provide insurance as follows:

1. Workers' Compensation and Employers Liability Insurance

   a. Statutory Workers' Compensation (including occupational disease)

b. Employers Liability (with a minimum limit of $1,000,000) New York Statutory Endorsement

2. Commercial General Liability (CGL) with a combined single limit for Bodily Injury, Personal Injury and Property Damage of at least $2,000,000 per occurrence & aggregate. The limit may be provided through a combination of primary and umbrella/excess liability policies.

   Coverage shall provide and encompass the following:

   a. Written on an occurrence form;

   b. Endorsement naming the following as additional insureds: The Fashion Institute of Technology, its auxiliary corporations, the State University of New York, the New York City Department of Education and the City and State of New York, the Construction Manager (if applicable) and other entities specified.

   c. Policy or policies must be endorsed to be primary as respects the coverage afforded the Additional Insureds and such policy shall be primary to any other insurance maintained by the Owner. Any other insurance maintained by the Owner shall be excess of and shall not contribute with the Contractor's or Subcontractor's insurance, regardless of the "other insurance" clause contained in the Owner's own policy of insurance.

3. Commercial Automobile Liability and Property Damage Insurance covering all owned, leased, hired and non-owned vehicles used in connection with the Work with a combined single limit for Bodily Injury and Property Damage of at least $1,000,000 per occurrence. The limit may be provided through a combination of primary and umbrella/excess liability policies.

4. Umbrella/excess liability insurance with limits of:

   $5,000,000 per occurrence
   $5,000,000 general aggregate

B. Before commencement of Work, the Contractor shall submit to the Owner for approval two (2) Certificates of Insurance, indicating the Project. Certificates shall provide thirty (30) days' written notice prior to the cancellation, non- renewal, or material modification of any policy. Upon request, the Contractor shall furnish the Owner and the Construction Manager with certified copies of each policy. In addition, where applicable, the Contractor shall provide copies of Certificates of Insurance to the Construction Manager.

Certificates shall be forwarded to Owner in care of: Purchasing

Sammy Li
Purchasing Deputy Director
FIT Purchasing
333 Seventh Avenue, 15th Floor
New York, NY 10001

Certificate(s) of Insurance, when submitted to the Owner, constitutes a warranty by the Contractor that the insurance coverage described is in effect for the policy term shown.

Should the Contractor engage a Subcontractor, the same conditions as are applicable to the Contractor under these insurance requirements shall apply to each Subcontractor of every tier. Proof thereof shall be supplied to the Owner at the address listed above.

C. All insurance required to be procured and maintained must be procured from insurance companies licensed to do business in the State of New York and rated at least B+ by A.M. Best and Company, or meet such other requirements as are acceptable to the Owner.

D. Should the Contractor fail to provide or maintain any insurance required by this Contract, the Owner may, after providing written notice to the Contractor, purchase insurance complying with the requirements of this Article and charge back such purchase to the Contractor.

E. At any time that the coverage provisions and limits on the policies required herein do not meet the provisions and limits set forth above, the Contractor shall immediately cease Work on the Project. The Contractor shall not resume Work on the Project until authorized to do so by the Owner. Any delay or time lost as a result of the Contractor not having insurance required by this Article shall not give rise to a delay claim or any other claim against the Owner or the Client.

F. Notwithstanding any other provision in this Article, the Owner may require the Contractor to provide, at the expense of the Owner, any other form or limit of insurance necessary to secure the interests of the Owner.

G. The Contractor shall secure, pay for, and maintain Property Insurance necessary for protection against the loss of owned, borrowed or rented capital equipment and tools, including any tools owned by employees, and any tools or equipment, staging towers, and forms owned, borrowed or rented by the Contractor. The requirement to secure and maintain such insurance is solely for the benefit of the Contractor. Failure of the Contractor to secure such insurance or to maintain adequate levels of coverage shall not render the Additional Insureds or their

agents and employees responsible for any losses; and the Additional Insureds, their agents and employees shall have no such liability.

H. Neither the procurement nor the maintenance of any type of insurance by the Owner, the Contractor or the Construction Manager shall in any way be construed or deemed to limit, discharge, waive or release the Contractor from any of the obligations or risks accepted by the Contractor or to be a limitation on the nature or extent of said obligations and risks.

SECTION 15.01A – OTHER INSURANCE PROVIDED BY CONTRACTOR

Railroad Protective Liability insurance: If any Work of the Contract is to be performed on or within fifty (50) feet of a railroad property or railroad right of way or will require entrance upon railroad property or right of way or will require assignment of a railroad employee, the Contractor shall provide and maintain a Railroad Protective Liability policy with the policy limits required by the owner(s) of the railroad, including the MTA. For purposes of this paragraph, a subway is a railroad. The policy form shall be ISO-RIMA or an equivalent form approved by the owner(s) of the railroad. The railroad owner(s) shall be the named insured on the policy and the definition of "physical damage to property" shall mean direct and accidental loss of or damage to all property of any named insured and all property in any named insured's care, custody, or control. If the Contractor shall provide a Railroad Protective Liability insurance policy, the Contractor and any Subcontractor performing on or within fifty (50) feet of railroad property or railroad right of way or entering railroad property or right of way or requiring assignment of a railroad employee shall have their CGL insurance policy endorsed to delete the exclusion of coverage for Work within fifty (50) feet of railroad property.

SECTION 15.02 – GENERAL CONFORMANCE

The Contractor and Subcontractors shall not violate, or be permitted to violate, any term or condition of their insurance policies, and shall at all times satisfy the safety requirements of the Owner and of the insurance companies issuing such policies.

SECTION 15.03 – CONTRACT SECURITY

The Contractor shall furnish a surety bond in an amount at least equal to one hundred (100%) of the Contract price as security for the faithful performance of the Contract and also labor and material bond in the form set forth in the Contract in an amount at least equal to one hundred (100%) of the Contract price for the payment of all persons performing labor or providing materials in connection with the Work. The surety on said bond shall be a surety company authorized to do business in the State of New York and shall be rated at least B+ by A.M. Best and Company, or meet such other requirements as are acceptable to the Owner.

SECTION 15.04 – ADDITIONAL OR SUBSTITUTE BOND

If at any time the Owner shall become dissatisfied with any surety or sureties upon the performance bond, or the labor and material payment bond, or if for any other reason said bonds shall cease to be adequate security to the Owner, the Contractor shall, within five (5) days after notice from the Owner to do so, substitute an acceptable bond or bonds in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on said bond or bonds shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond or bonds to the Owner.

SECTION 15.05 – FAILURE TO COMPLY WITH PROVISIONS OF ARTICLE 15

The Contract may, at the sole option of the Owner, be declared void and of no effect if the Contractor fails to comply with the provisions of Article 15.

ARTICLE 16 -- USE OR OCCUPANCY PRIOR TO ACCEPTANCE BY OWNER

SECTION 16.01 – OCCUPANCY PRIOR TO ACCEPTANCE

NOT APPLICABLE

ARTICLE 17 -- PAYMENT

SECTION 17.01 – PROVISION FOR PAYMENT

A. The Owner may make a partial payment to the Contractor on the basis of an approved estimate of the Work performed during each preceding business month. The Owner shall retain ten percent (10%) of the amount of each said estimate.

The Contractor shall submit a detailed Contract Payment Breakdown prior to the Contractor's first application for payment. The model contract payment breakdown included in the Contract Documents shall establish the minimum level of detail required for the Contractor's payment breakdown. It is understood and the Contractor acknowledges that this model is included as an administrative tool for

the purpose of illustrating a format and minimum level of detail required for the Contract Payment Breakdown and shall not be considered as delineating the Contractor's Scope of Work. The Owner may request further and more detailed Contract Payment Breakdown. Further, the Owner reserves the right to accept only those cost distributions which, in the Owner's opinion, are reasonable, equitably balanced and correspond to the estimated quantities in the Contract Documents.

No payment shall be made by the Owner until the Contract Payment Breakdown is approved by the Owner.

Each monthly partial payment requisition must include Affirmative Action Form AAP 7.0, Contractor's Compliance Report, properly executed, as a condition precedent to requisition payment by the Owner.

B. In preparing estimates for partial payment, material delivered to the Site and properly stored and secured at the Site, and Material approved to be stored off-site under such conditions as the Owner shall prescribe may be taken into consideration. All costs related to the storage of materials are the sole responsibility of the Contractor.

The Owner will provide an Agreement for Materials Stored Off-Site and specific forms which the Contractor must complete and submit with any request for approval of partial payment for such material. Required information includes but is not limited to: a general description of the material; a detailed list of the materials; a pre-approved storage area; segregation and identification of the material; insurance covering full value against all risks of loss or damage, with non-cancellation provision; immediate replacement agreement in event of loss or damage; agreement to pay the expense of all inspections of the material; ownership provisions; delivery guarantee; project completion statement; bill of sale, releases, and inventory.

C. Any partial payment made shall not be construed as a waiver of the right of the Owner to require the fulfillment of all the terms of the Contract.

D. After the Owner has determined Substantial Completion of the Work, the Contractor shall submit to the Owner, for the Owner's approval, a detailed estimate of the value of the known remaining items of Work as set forth by the Owner and a schedule of completion for said items of Work. The Owner shall review that estimate and make the final determination.

The Owner, when all the Work is substantially complete, shall pay to the Contractor the balance due the Contractor pursuant to the Contract, less:

1. two (2) times the value of any remaining items of Work to be completed or corrected; and

2. an amount necessary to satisfy any and all claims, liens or judgments against the Contractor.

As the remaining items of Work are completed and accepted by the Owner, the

Owner shall pay the appropriate amount pursuant to the duly completed and submitted monthly requisitions.

The list of remaining Work items may be expanded to include additional items of corrective or completion Work until final acceptance as certified by the Owner's execution of "Notification of Construction Completion". Appropriate payments may be withheld to cover the value of these items pursuant to this Section.

E. All Monthly Requisitions submitted by the Contractor shall be on AIA documents G702 and G703. The Contractor shall furnish such affidavits, vouchers and receipts as to delivery and payment for materials as required by the Owner to substantiate each and every payment requested. The Contractor and its Subcontractors will submit with all applications for payment copies of the certified payrolls and certification of payment of wage supplements in a form satisfactory to the Owner. The submission of Contractor and Subcontractor certified payrolls is required at least monthly. No progress payments will be processed without submission by the Contractor of properly executed Affidavit of Payment and Release of Liens (AIA Documents G706 and G706A)."

Section 17.02 - Acceptance of the First Payment Pursuant to Section 17.01 D. of the Contract Constitutes Release

The acceptance by the Contractor of the first payment pursuant to Section 17.01 D. shall be and shall operate as a release to the Owner of all claims by and all liability to the Contractor for all things in connection with the Work and for every act and neglect of the Owner and others relating to or arising out of the Work. No payment, final or otherwise, shall operate to release the Contractor or the Contractor's sureties from any obligations under this Contract or the performance or labor and material payment bonds.

SECTION 17.03 – RELEASE AND CONSENT OF SURETY

Notwithstanding any other provision of the Contract Documents to the contrary, the first payment pursuant to Section 17.01 D. shall not become due until the Contractor submits to the Owner a General Release and a Consent of Surety to said payment pursuant to Section 17.01 D., both in form and content acceptable to the Owner.

SECTION 17.04 - LIENS

Upon the Owner's receipt of a lien, a sum which shall be one and one-half (1 1/2) times the amount stated to be due in the notice of lien shall be deducted from the current payment due the Contractor. This sum shall be withheld until the lien is discharged.

SECTION 17.05 – WITHHOLDING OF PAYMENTS

A. The Owner may withhold from the Contractor any part of any payment as may, in the judgment of the Owner, be necessary:

1. to assure payment of just claims of any persons supplying labor or materials for the Work;

2. to protect the Owner from loss due to defective Work not remedied; or

3. to protect the Owner, Construction Manager or Consultant from loss due to failure to defend, loss due to injury to persons or damage to the Work or property of other contractors, Subcontractors or others caused by the act or neglect of the Contractor or Subcontractors.

4. to assure payment of fines and penalties which may be imposed on the Contractor pursuant to the provisions of this Contract.

B. The Owner shall have the right to apply any such amounts so withheld, in such manner as the Owner may deem proper to satisfy said claims, fines and penalties or to secure said protection. Said application of the money shall be deemed payments for the account of the Contractor.

C. The provisions of this Article 17 are solely for the benefit of the Owner, and any action or non-action hereunder by the Owner shall not give rise to any liability on the part of the Owner.

SECTION 17.06 – OWNER'S RIGHT TO AUDIT AND INSPECTION OF RECORDS

The Contractor shall maintain and keep, for a period of at least six (6) years after the date of final payment, all records and other data relating to the Work, including records of Subcontractors and material suppliers. The Owner or the Owner's Representative shall have the right to inspect and audit all records and other data of the Contractor, Subcontractors and material suppliers relating to the Work.

SECTION 17.07 – FALSE STATEMENTS/INFORMATION

A. False statements, information or data submitted on or with applications for payment may result in one or more of the following actions:

1. Termination of the Contract for cause;
2. Disapproval of future bids or contracts and sub-contracts;
3. Withholding of final payment on the Contract; and
4. Civil and/or criminal prosecution.

B. These provisions are solely for the benefit of the Owner, and any action or non-action hereunder by the Owner shall not give rise to any liability on the part of the Owner.

ARTICLE 18 -- TAX EXEMPTION

SECTION 18.01 – TAX EXEMPTION

A. The Owner is exempt from payment of Federal, State, local taxes and sales and compensating use taxes of the State of New York and of cities and counties on all materials and supplies incorporated into the completed Work. These taxes are not to be included in bids. This exception does not apply to tools, machinery, equipment or other property leased by or to the Contractor or a Subcontractor, or to supplies and materials which, even though they are consumed, are not incorporated into the completed Work, and the Contractor and Subcontractors shall be responsible for and pay any and all applicable taxes, including sales and compensating use taxes, on said leased tools, machinery, equipment or other property and upon all said unincorporated supplies and materials.

B. The Contractor and Subcontractors shall obtain any and all necessary certificates or other documentation from the appropriate governmental agency or agencies, and use said certificates or other documentation as required by law, rule or regulation.

ARTICLE 19 -- GUARANTEE

SECTION 19.01 - GUARANTEE

The Contractor shall in all respects guarantee the Work to the Owner and be responsible for all material, equipment and workmanship of the Work. The Contractor shall forthwith repair, replace or remedy in a manner approved by the Owner, any said material, equipment, workmanship, or other part of the Work found by the Owner to be defective or otherwise faulty and not acceptable to the Owner, which defect or fault appears during the minimum period of one (1) year, or such longer period as may be prescribed by the Contract, from the date of Construction Completion or any part thereof, by the Owner. The Contractor shall also pay for any damage to the Work resulting from said defect or fault.

ARTICLE 20 -- STANDARD PROVISIONS

SECTION 20.01 – PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted therein and the Contract shall read and shall be enforced as though so included therein.

SECTION 20.02 – COMPLIANCE WITH LAWS, RULES AND REGULATIONS

The Contractor shall comply fully with all applicable laws, rules and regulations.

SECTION 20.03 – LAW GOVERNING THE CONTRACT

The Contract shall be governed by the laws of the state of New York.

SECTION 20.04 - ASSIGNMENT

The Contractor shall not assign the Contract in whole or in part without prior written consent of the Owner. If the Contractor assigns all or part of any moneys due or to become due under the Contract, the instrument of assignment shall contain a clause substantially to the effect that the Contractor and assignee agree that the assignee's right in and to any moneys due or to become due to the Contractor shall be subject to all prior claims for services rendered or materials supplied in connection with the performance of the Work.

SECTION 20.05 – NO THIRD PARTY RIGHTS

Nothing in the Contract shall create or shall give to third parties any claim or right of action against the Owner, the Fashion Institute of Technology, the State University of New York, Board of Education of the City of New York, the City or State of New York and the Construction Manager beyond such as may legally exist irrespective of the Contract.

SECTION 20.06 – CONTRACT DEEMED EXECUTORY

The Contractor agrees that the Contract shall be deemed executory to the extent of moneys available and that no liability shall be incurred by the Owner beyond the moneys available therefore.

SECTION 20.07 – ANTI-RIOT PROVISIONS

A. The Contractor agrees that no part of the Contract funds shall be used to make payments, give assistance, or supply services, in any form, to any individual convicted in any Federal, State or local court of competent jurisdiction for inciting, promoting, or carrying on a riot or engaging in any group activity resulting in material damage to property or injury to persons found to be in violation of Federal, State or local laws designed to protect persons or property.

B. The Contractor and each Subcontractor shall notify their employees of all rules and

regulations adopted pursuant to Article 129-A of the Education Law of the State of New York. Notices containing the text of the aforementioned rules and regulations shall be posted by the Contractor at the Site.

SECTION 20.08 – DOMESTIC STEEL

The Contractor agrees, that if the value of this contract exceeds $100,000 all structural steel, reinforcing steel and other major steel items to be incorporated in the Work of this Contract shall be produced and made in whole or substantial part in the United States, its territories or possessions.

SECTION 20.09 – PROTECTION OF LIVES AND HEALTH

A. Each Contractor and Subcontractor shall comply with all applicable provisions of the laws of the State of New York, the United States of America and with all applicable rules and regulations adopted or promulgated by agencies or municipalities of the State of New York or the United States of America. The Contractor's and Subcontractor's attention is specifically called to the applicable rules and regulations, codes and bulletins of the New York State Department of Labor and to the standards imposed under the Federal Occupational Safety and Health Act of 1970, as amended.

B. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment of Work under the Contract, and shall immediately notify the Owner in writing of any injury which results in hospitalization or death. The Contractor shall provide to the Owner a copy of Form C-2, Employers Report of Injury/Illness within twenty- four (24) hours of any job related injury on the Owner's job site. Further, a copy of the OSHA Log of Injury and Illness shall also be provided to the Owner for any reporting period in which a job related injury or illness is recorded. The Contractor shall also provide a list of witnesses to the Owner. The list shall include at least the full name, home address, occupation and telephone number of each person who saw or has knowledge of the incident which caused the injury or illness.

C. The Contractor alone shall be responsible for the safety, efficiency and adequacy of the Contractor's Work, plant, appliances and methods, and for any damage which may result from the failure or the improper construction, maintenance or operation of such Work, plant, appliances and methods.

D. If, in the performance of the Work, a harmful hazard is created for which appliances or methods of elimination have been approved by regulatory authorities, the Contractor shall install, maintain and operate said appliances or methods.

E. The Owner may impose a payment penalty on the Contractor for any act of non-compliance with this section. The payment penalty shall not exceed one twentieth

(1/20) of the Contract price or a maximum of One Thousand Dollars ($1,000.00) for each time the Contractor fails to perform or to provide the information, reports or forms required in this section. This payment penalty is not exclusive, the Owner may avail itself of any other contractual remedy available.

F. The Owner, Owner's Representative, or Architect may inspect the Site at any time without notice to the Contractor. If the Owner or its representatives find that the Contractor is not complying with Section 20.10 A or any other provision of Section 20.10, the Owner may send written notice to the Contractor to correct any deficiency. Upon re-inspection, if the Owner finds the deficiencies have not been corrected, or in instances where a safety violation (s) must be corrected before Work continues and the Contractor is given three (3) hours to make correction (s) and they are not made, the Owner may let a separate contract to correct any deficiencies and back charge the cost of the separate contract to the Contractor at a premium rate. The Contractor cannot pass these additional charges on to the Owner. No action taken under this section shall be deemed as a basis for any delay claim or any other claim against the Owner by the Contractor.

G. The Contractor shall preserve and safeguard the scene of an accident involving a ladder, scaffold, mobile machinery, equipment, safety railing or uncovered floor opening or any other incident where the injured person required emergency medical treatment. The Contractor shall "tape off" the area, and not allow any material object or property to be altered, changed, moved or removed from the accident site. In addition to "taping off" the accident site, the Contractor shall telephone and send a facsimile or email to Owner immediately, and post a person at the accident site to protect it. Safeguarding and protecting the accident site shall only be abandoned by the Contractor upon release by the Owner or the Owner's Representative. Failure of the Contractor to comply with the provisions of this paragraph shall be deemed a breach of this Contract. In addition to any other contractual remedies available, the Owner may satisfy the breach by imposing the penalties set out in paragraph 20.10 E or void the entire Contract and retain any or all amounts due the Contractor under this Contract.

SECTION 20.10 – PROHIBITED INTERESTS / ETHICAL CONDUCT

A. No officer, employee, architect, attorney, engineer, inspector or consultant of or for the Owner authorized on behalf of the Owner to exercise any legislative, executive, administrative, supervisory or other similar functions in connection with the Contract or the Work, shall become personally interested, directly or indirectly, in the Contract, material supply contract, subcontract, insurance contract, or any other contract pertaining to the Work.

B. The Owner strongly discourages the Contractor from offering or giving anything of value to employees of the Owner under circumstances which may constitute, or even suggest, impropriety. Contractor, or its agents, shall not directly or indirectly offer or give any gift whether in the form of money, service, loan, travel, lodging, meals, refreshments, entertainment, discount, forbearance or promise, or in any other form, to an employee or any representatives of the Owner.

C. To promote a working relationship with the Owner based on ethical business practices, the Contractor shall:

- furnish all goods, materials and services to the Owner as contractually required and specified,
- submit complete and accurate reports to the Owner and its representatives as required,
- not seek, solicit, demand or accept any information, verbal or written, from the Owner or its representatives that provides an unfair advantage over a competitor,
- not engage in any activity or course of conduct that restricts open and fair competition on Owner-related projects and transactions,
- not engage in any course of conduct with Owner employees or its representatives that constitutes a conflict of interest, in fact or in appearance, and
- not offer or give any unlawful gifts or gratuities, or engage in bribery or other criminal activity.

D. The Owner encourages the Contractor to advance and support ethical business conduct and practices among its directors, officers and employees, through the adoption of corporate ethics awareness training programs and written codes of conduct.

E. Although the Contractor may employ relatives of Owner's employees, the Owner must be made aware of such circumstances as soon as possible, in writing, to ensure a conflict of interest situation does not arise. The Owner reserves the right to request that the Contractor modify the work assignment of a relative of an Owner's

employee or representative where a conflict of interest, or the appearance thereof, is deemed to exist.

F. The Contractor may hire former employees of the Owner. However, as a general rule, former employees of the Owner may neither appear nor practice before the Owner, nor receive compensation for services rendered on a matter before the Owner, for a period of *two (2) years* following their separation from service with the Owner. In addition, former employees of the Owner are subject to a *"lifetime bar"* from appearing before the Owner or receiving compensation for services regarding any transaction in which they personally participated or which was under their active consideration during their tenure with the Owner.

G. The Contractor agrees to notify Stephen Tuttle, Esq., the Owner's attorney, at (212) 217-4030 of any activity by an employee of the Owner that is inconsistent with the contents of this Section.

H. Any violation of these provisions shall justify termination of this Contract and may result in Owner's rejection of the Contractor's bids or proposals for future contracts.

SECTION 20.11 – STATE AND FEDERAL LABOR LAW PROVISIONS

A. Although the Work of this Contract is not public work, the Owner intends that all applicable provisions of the Labor Law of the State of New York shall be carried out in the performance of the Work.

B. The Contractor specifically agrees to comply with Labor Law, Sections 220 and 220-d as amended, that:

1. no laborer, workman or mechanic, in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or any part of the Work contemplated by the Contract shall be permitted or required to work more than eight (8) hours in any one (1) calendar day and more than five (5) days in any one week, except in the extraordinary emergencies set forth in the Labor Law;

2. the wages paid for a legal day's work shall be not less than the prevailing rate of wages as defined by law;

3. the minimum hourly rate of wage to be paid and supplement provided shall be not less than that stated in the Contract and as shall be designated by the Industrial Commissioner of the State of New York; and

4. the Contractor and every Subcontractor shall post in a prominent and accessible place on the Site, a legible statement of all minimum wage rates and supplements to be paid or provided for the various classes of laborers and mechanics to be engaged in the Work and all deductions, if any,

required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

C. The minimum wage rates, if any, herein specified for apprentices shall apply only to persons working with the tools of the trade which such persons are learning under the direct supervision of journeyman mechanics. Except as otherwise required by law, the number of apprentices in each trade or occupation employed by the Contractor or any Subcontractor shall not exceed the number permitted by the applicable standards of the New York State Department of Labor, or, in the absence of such standards, the number permitted under the usual practice prevailing between the unions and the employers' association of the respective trades or occupations.

D. All employees of the Contractor and each Subcontractor shall be paid in accordance with the provisions of the Labor Law. Certified payroll copies shall be provided to the Owner as specified in these General Conditions and otherwise upon request.

E. The Contractor agrees that, in case of underpayment of wages to any worker engaged in the Work by the Contractor or any Subcontractor, the Owner shall withhold from the Contractor out of payments due an amount sufficient to pay such worker the difference between the wages required to be paid under the Contract and the wages actually paid such worker for the total number of hours worked, and that the Owner may disburse such amount so withheld by the Owner for and on account of the Contractor to the employee to whom such amount is due. The Contractor further agrees that the amount to be withheld pursuant to this paragraph may be in addition to the percentages to be retained by the Owner pursuant to other provisions of the Contract.

F. Pursuant to subdivision 3 of section 220 and section 220-d of the Labor Law the Contract shall be forfeited and no sum paid for any Work done thereunder upon a Contractor's or Subcontractor's second conviction for willfully paying or providing less than:

1. the stipulated wage scale or supplement as established by the fiscal officer, or
2. less than the stipulated minimum hourly wage scale as designated by the Industrial Commissioner.

G. Pursuant Labor Law, Section 220-e, the Contractor specifically agrees:

1. That in the hiring of employees for the performance of Work under the Contract or any subcontract hereunder, or for the manufacture, sale or distribution of materials, equipment or supplies hereunder, but limited to operation performed within the territorial limits of the State of New York, no Contractor, Subcontractor, nor any person acting on behalf of such Contractor or Subcontractor, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the Work to which the employment relates;

2. That no Contractor, Subcontractor, nor any person on behalf of such Contractor or Subcontractor shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under the Contract on account of race, creed, color, disability, sex or national origin;

3. That there may be deducted from the amount payable to the Contractor, by the Owner under the Contract, a penalty of fifty dollars ($50.00) for each person for each calendar day during which such person was discriminated against or intimidated in violation of the terms of the Contract; and

4. That the Contract may be canceled or terminated by the Owner and all moneys due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this section of the Contract, or when one final determination involves the falsification of payroll records or the kickback of wages and/or supplements.

H. The Contractor specifically agrees:

1. That the Contractor shall certify its payrolls and keep these certified records on site and available, and provide copies to the Owner upon request.

2. That the Contractor shall provide each worker with a written notice informing the worker of the prevailing wage requirements for the job. The notice shall contain a simple statement or declaration for the worker's

SECTION 20.12 - NONDISCRIMINATION

During the performance of the Work, the Contractor agrees as follows:

A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion/creed, color, sex, sexual orientation, gender, gender identity/expression, national origin, age, disability, marital status, or any other protected category.

B. If directed to do so by the Commissioner of Human Rights, the Contractor will send to each labor union or representative of workers with which the Contractor has or is bound by a collective bargaining or other agreement or understanding, a notice, to be provided by the State Commissioner of Human Rights, advising such labor union or representative of the Contractor's agreement under clauses A through G (hereinafter called "non-discrimination clauses"). If the Contractor was directed to do so by the Owner as part of the bid or negotiation of this Contract, the Contractor shall request such labor union or representative to furnish a written statement that such labor union or representative will not discriminate because of race, creed, color, sex, national origin, age, disability or marital status, and that such labor union or representative will cooperate, within the limits of its legal and contractual authority, in the implementation of the policy and provisions of these nondiscrimination clauses and that it consents and agrees that recruitment, employment and the terms and conditions of employment under this Contract shall be in accordance with the purposes and provisions of these nondiscrimination clauses. If such labor union or representative fails or refuses to comply with such a request that it furnish such a statement, the Contractor shall promptly notify the State Commissioner of Human Rights of such failure or refusal.

C. If directed to do so by the Commissioner of Human Rights, the Contractor shall post and keep posted in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Commissioner of Human Rights setting forth the substance of the provisions of clauses A and B and such provisions of the State's laws against discrimination as the State Commissioner of Human Rights shall determine.

D. The Contractor shall state, in all solicitations or advertisement for employees placed by or on behalf of the Contractor, that all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, sex, national origin, age, disability or marital status.

E. The Contractor shall comply with the provisions of Section 290-299 of the Executive Law and with the Civil Rights Law, will furnish all information and reports deemed necessary by the State Commissioner of Human Rights under these nondiscriminatory clauses and such sections of the Executive Law, and will permit access to the Contractor's books, records and accounts by the State Commissioner for the purposes of investigation to ascertain compliance with these nondiscrimination clauses and such sections of the Executive Law and Civil Rights Law.

F. This Contract may be forthwith canceled, terminated or suspended, in whole or in part, by the Owner upon the basis of a finding made by the State Commissioner of Human Rights that the Contractor has not complied with these nondiscrimination clauses, and the Contractor may be declared ineligible for future contracts made by or on behalf of the State or a public authority or agency of the State, until the Contractor satisfies the State Commissioner of Human Rights that the Contractor has established and is carrying out a program in conformity with the provisions of these nondiscrimination clauses. Such finding shall be made by the State Commissioner of Human Rights after conciliation efforts by the Commissioner have failed to achieve compliance with these nondiscrimination clauses and after a verified complaint has been filed with the Commissioner, notice thereof has been given to the Contractor and an opportunity has been afforded the Contractor to be heard publicly in accordance with the Executive Law. Such sanctions may be imposed and remedies invoked independently of or in addition to sanctions and remedies otherwise provided by law.

G. The Contractor shall include the provisions of clauses A through F above in every subcontractor purchase order in such a manner that such provisions will be binding upon each Subcontractor or vendor as to operation to be performed within the State of New York. The Contractor shall take such action in enforcing such provisions of such Subcontract or purchase order as the State Commissioner of Human Rights or the Owner may direct, including sanctions or remedies for noncompliance. If the Contractor becomes involved in or is threatened with litigation with a Subcontractor or vendor as a result of such direction by the State Commissioner of Human Rights or the Owner, the Contractor shall promptly so notify the Attorney General, requesting the Attorney General to intervene and to protect the interests of the State of New York.

SECTION 20.13 – LIMITATION ON ACTIONS

No action or proceeding shall lie in favor of or shall be maintained by the Contractor against the Owner unless such action shall be commenced within six (6) months after receipt by the Owner of the Contractor's final requisition or, if the Contract is terminated by the Owner, unless such action is commenced within six (6) months after the date of such termination.

SECTION 20.14 – WAIVER OF REMEDIES

Inasmuch as the Contractor can be compensated adequately by money damages for any breach of the Contract which may be committed by the Owner, the Contractor agrees that no default, act or omission of the Owner shall constitute a material breach of Contract entitling the Contractor to cancel or rescind the same or to suspend or abandon performance thereof; and the Contractor hereby waives any and all rights and remedies to which the Contractor might otherwise be or become entitled to because of any wrongful act or omission of the Owner saving only the Contractor's right to money damages.

SECTION 20.15 – WAIVER OF CERTAIN CAUSES OF ACTION

No action or proceeding shall lie or shall be maintained by the Contractor, nor anyone claiming under or through the Contractor, against the Owner upon any claim arising out of or based upon the Contract, relating to the giving of notices or information.

SECTION 20.16 – CONTRACTOR RELATIONSHIP

The relationship created by the Contract between the Owner and the Contractor is one of an independent contractor and it is no way to be construed as creating an agency relationship between the Owner and the Contractor nor is it to be construed as, in any way or under any circumstances, creating or appointing the Contractor as an agent of the Owner for any purpose whatsoever.

SECTION 20.17 – FAILURE TO COMPLY WITH THIS ARTICLE

The Contract shall be void and of no effect unless the Contractor complies with the provisions of this Article 20.

SECTION 20.18 – YEAR 2000 WARRANTY

SECTION DELETED

SECTION 20.19 – FALSE RECORDS/KICKBACKS

The Contractor agrees that this Contract may be canceled or terminated for cause by the Owner and all moneys due or to become due hereunder may be forfeited upon the Owner's determination that the Contractor has submitted false records to the Owner and/or that the Contractor has participated in the kickback of wages. Said determination by the Owner must first allow the Contractor an opportunity to show why its Contract should not be canceled or terminated for cause for said actions.

ARTICLE 21- COOPERATION WITH INVESTIGATIONS

The Contractor agrees to cooperate fully and faithfully with any investigation, audit or inquiry conducted by the Owner or any other duly authorized representative of the Owner ("Representative").

The Contractor shall grant the Owner or the Representative the right to examine all books, records, files, accounts, computer records, documents and correspondence, including electronically-stored information, in the possession or control of the Contractor, its subsidiaries and affiliated companies and any other company directly or indirectly controlled by the Contractor, relating to the Contract. These shall include, but not be limited to: Subcontracts; bid files; payroll and personnel records; cancelled checks; correspondence; memoranda; reports; audits; vendor qualification records; original estimate files; change order/amendment estimate files; detailed worksheets; Subcontractor, consultant and supplier proposals for both successful and unsuccessful bids; back-charge logs; any records detailing cash, trade, or volume discounts earned; insurance proceeds, rebates or dividends received; payroll and personnel records; tax returns, and the supporting documentation for the aforesaid books and records.

At the Owner's or the Representative's request, said materials shall be provided in a computer readable format, where available. At the request of the Owner or the Representative, the Contractor shall execute such documents, if any, as are necessary to give the Owner or the Representative access to Contract-related books, documents or records which are, in whole or part, under control of the Contractor but not currently in the Contractor's physical possession. The Contractor shall not enter into any agreement with a Subcontractor, consultant or supplier, in connection with the Contract, that does not contain a right to audit clause in favor of the Owner. The Contractor shall assist the Owner or the Representative in obtaining access to past and present Subcontractor, consultant and supplier amendment/change order files (including detailed documentation covering negotiated settlements), accounts, computer records, documents, correspondence, and any other books and records in the possession of Subcontractors, consultants and suppliers pertaining to the Contract, and, if appropriate, enforce the right-to-audit provisions of such agreements.

The Contractor shall assist the Owner or the Representative in obtaining access to, interviews with, and information from all former and current persons employed and/or retained by the Contractor, for purposes of the Contract.

The Contractor shall require each Subcontractor to include in all agreements that the

Subcontractor may hereinafter enter into with any and all Subcontractors, consultants and suppliers, in connection with the Contract, a right-to-audit clause in favor of the Owner conferring rights and powers of the type outlined in this section. The Contractor shall not enter into any Subcontract with a Subcontractor in connection with the Contract that does not contain such a provision.

The Contractor shall not make any payments to a Subcontractor, consultant or supplier from whom the Contractor has failed to obtain and supply to the Owner or the Representative complete, accurate and truthful information in compliance with a request from the Owner or the Representative to the Contractor.

Any violation of the provisions of this Article shall justify termination of this Contract and may result in the Owner's rejection of the Contractor's bids or proposals for future contracts.

SECTION VI.
LABOR & MATERIAL PAYMENT BOND

LABOR & MATERIAL PAYMENT BOND

KNOW ALL BY THESE PRESENTS:

That_____
(Here insert the name and address or legal title of the Contractor)

_____

as Principal, hereinafter called Principal, and _____

_____
(Here insert the legal title of Surety)

_____
(Address)

as Surety, hereinafter called Surety, are held and firmly bound unto The Fashion Institute of Technology, as applicable, as Obligee, hereinafter called Owner, for the use and benefit of the claimants as hereinbelow defined, in the amount of _____

_____and /100 Dollars ($_____)

WHEREAS, Principal has by written agreement dated _____

entered into a Contract with Owner for _____

_____

in accordance with the Contract Documents and any changes thereto, which are made a part hereof, and are hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise such obligation shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct Contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full

before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

   a. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two (2) of the following: 1) the Principal, 2) the Owner, or 3) the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, or Surety, at any place where an office is regularly maintained by said Principal, Owner, or Surety for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer.

   b. After the expiration of one (1) year following the date on which Principal ceased work of said Contract, however, if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

   c. Other than in a State court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

4. The penal sum of this Bond is in addition to any other Bond furnished by the Contractor and in no way shall be impaired or affected by any other Bond.

5. The amount of this Bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of Mechanics' Liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this Bond.

Signed this_____day of_____20__.

IN THE PRESENCE OF:

_____	_____
(Principal)	(Surety)
_____	_____
(Signature)	(Signature)
_____	_____
(Print Name and Title)	(Print Name and Title)
_____	_____
(Address)	(Address)
_____	_____
(City, State, Zip)	(City, State, Zip)

Telephone (____)_____

Fax No. _____

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

STATE OF_____) ss:
COUNTY OF_____)

On the_____day of_____in the year 20__, before me personally came_____to me known, who, being by me duly sworn, did depose and say that (s)he resides at_____, that (s)he is the _____ of_____, the corporation described in and which executed the above instrument; and that (s)he signed her/his name thereto by order of the Board of Directors of said corporation.

_____
Notary Public

ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP

STATE OF_____)ss:

COUNTY OF_____)

On the_____ day of_____ in the year 20__, before me personally came

_____, to me known and known to me to be a member of the firm_____, described in and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same for and in behalf of said firm for the uses and purpose mentioned therein.

_____
Notary Public

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

STATE OF_____) ss:

COUNTY OF_____)

On the_____day of_____in the year 20__, before me personally came _____, to me known and known to me to be the person described in and who executed the foregoing instrument and (s)he duly acknowledged that (s)he executed the same.

_____
Notary Public

ACKNOWLEDGEMENT OF SURETY

STATE OF NEW YORK)

COUNTY OF_____) ss:

On the_____day of_____in the year 20__, before me personally came _____ to me known, who, being by me duly sworn, did depose and say that (s)he resides at _____ _____, that (s)he is the _____of_____, the corporation described in and which executed the above instrument; and that (s)he signed her/his name thereto by order of the Board of Directors of said corporation.

_____
Notary Public

SECTION VII.
PERFORMANCE BOND

PERFORMANCE BOND

KNOW ALL BY THESE PRESENTS:

That_____
(Here insert the name and address or legal title of the Contractor)

_____

as Principal, hereinafter called Principal, and _____

_____
(Here insert the legal title of Surety)

_____
(Address)

as Surety, hereinafter called Surety, are held and firmly bound unto The Fashion Institute of Technology, as applicable, as Obligee, hereinafter called Owner, in the amount of _____ _____and _____ /100 Dollars ($_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, CONTRACTOR has by written agreement dated _____

entered into a Contract with Owner for _____

_____

in accordance with the Contract Documents and any changes thereto, which are made a part hereof, and are hereinafter referred to as the Contract.

1. If the Contractor performs the Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 2.1.

2. If there is no Owner default, the Surety's obligation under this Bond shall arise after:

2.1 The Owner has notified the Contractor, the Surety at its address described in Paragraph 8. below that the Owner is considering declaring a Contractor in default.

2.2 The Owner has declared a Contractor in default and formally terminated the Contractor's right to complete the Contract.

2.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Contract or to a Contractor selected to perform the Contract in accordance with the terms of the Contract with the Owner.

3. When the Owner has satisfied the conditions of Paragraph 2 herein., the Surety shall, at the Owner's option, promptly and at the Surety's expense take on the following actions:

3.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Contract; or

3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the Owner and the Contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified Surety equivalent to the bonds issued on the Contract, and pay to the Owner the amount of damages as described in Paragraph 5. in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor default.

4. If the Surety does not proceed with reasonable promptness, the Surety shall be deemed to be in default on this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner.

5. After the Owner has terminated the Contractor's right to complete the Contract, and if the Surety elects to act under Subparagraph 3.1, 3.2, or 3.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

5.1 The responsibilities of the Contractor for correction of defective work and completion of the Contract;

5.2 Additional legal, design, professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 3.; and

5.3 Liquidated Damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the Contractor. 3

6. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.

7. The Surety hereby waives notice of any change, including changes of time, to the Contract

or to related subcontracts, purchase orders, and other obligations.

8. Notice of the Surety and the Contractor shall be mailed or delivered to the address shown on the signature page. Notice to the Owner shall be mailed or delivered to the address shown in the preamble.

9. Definitions:

9.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.

9.2 Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

9.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

9.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

The penal sum of this Bond is in addition to any other Bond furnished by the Contractor and in no way shall be impaired or affected by any other Bond.

Any suit under this Bond must be instituted before the expiration of two (2) years from the date on which Final Payment is made under this Contract.

Signed this_____day of_____20__.

IN THE PRESENCE OF:

_____	_____
(Principal)	(Surety)
_____	_____
(Signature)	(Signature)
_____	_____
(Print Name and Title)	(Print Name and Title)

_____ _____
(Address) (Address)

_____ _____
(City, State, Zip) (City, State, Zip)

Telephone (____)_____

Fax No. _____

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

STATE OF_____) ss:

COUNTY OF_____)

On the_____ day of_____ in the year 20__, before me personally came

_____ to me known, who, being by me duly sworn, did depose and say that (s)he resides at_____, that (s)he is the_____of _____, the corporation described in and which executed the above instrument; and that (s)he signed her/his name thereto by order of the Board of Directors of said corporation.

_____
Notary Public

ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP

STATE OF_____)ss:

COUNTY OF_____)

On the_____ day of_____ in the year 20_, before me personally came

_____, to me known and known to me to be a member of the firm _____, described in and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same for and in behalf of said firm for the uses and purpose mentioned therein.

_____
Notary Public

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

STATE OF_____) ss:

COUNTY OF_____)

On the _____ day of _____ in the year 20_, before me personally

came_____, to me known and known to me to be the person described in and who executed the foregoing instrument and (s)he duly acknowledged that (s)he executed the same.

_____
Notary Public

ACKNOWLEDGEMENT OF SURETY

STATE OF NEW YORK)

COUNTY OF_____) ss:

On the _____ day of_____ in the year 20_, before me personally came

_____ to me known, who, being by me duly sworn, did depose and say that (s)he resides at _____
_____, that (s)he is the_____
of_____, the corporation described in and which executed the above instrument; and that (s)he signed her/his name thereto by order of the Board of Directors of said corporation.

_____
Notary Public

SECTION VIII.
FORM OF BID

FORM OF BID

(Contract for Total of All Materials and Labor)

The Fashion Institute of Technology
(Owner)

For:

The Fashion Institute of Technology is requesting Bids for the Work described in Section II. Bid Terms and Conditions, II. Summary of Scope of Work and as shown and described on the drawings and specifications provided with this document at the Fashion Institute of Technology's "_____" located on 27th street campus. To be known from this point forward as the "_____"

Pursuant to and in compliance with the Owner's advertisement for bids dated_____, 201 and the Contract Documents relating hereto, the undersigned hereby offers to provide all plant, labor, materials, supplies, equipment, and other facilities and things necessary or proper for or incidental to, the General Contracting and Electrical Work as required by, and in strict accordance with, the applicable provisions of the Contract Documents, as defined in the General Conditions, including changes thereto, and all of the addenda issued by the Owner and sent to the undersigned by facsimile transmission or delivered to the bidder prior to the date of opening of bids, whether received by the undersigned or not, for the total sum of

_____Dollars

($_____).

The Bid may be withdrawn at any time prior to the scheduled time for the opening of bids or any authorized postponement thereof.

If written notice of the acceptance of the Bid is sent to the undersigned by certified or registered mail or by facsimile transmission or delivered to the undersigned within ninety (90) days after the date of opening of the bids, or any time thereafter before the Bid is withdrawn, the undersigned shall, within eight (8) days after the date of such mailing, facsimile transmission, or delivery of such notice, execute and deliver a Contract in the Form of Contract included in the Contract Documents.

The undersigned hereby designates as the undersigned's office to which such notice of acceptance may be mailed, transmitted, or delivered as _____
_____
_____

SECTION IX.

NON-COLLUSIVE BIDDING CERTIFICATION

Non-collusive Bidding Certification

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and, in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

1. The prices in the bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

2. Unless otherwise required by law, the prices which have been quoted in the bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and

3. No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.

Firm Name _____

Address _____

_____

By_____
(Signature and Title)

Dated: _____

Telephone (____)_____Fax No. (____)_____

_____

(Taxpayer ID or Social Security Number)

ACKNOWLEDGEMENT OF BIDDER, IF A CORPORATION

STATE OF NEW YORK)
COUNTY OF_____) ss:

On the_____day of_____, 20_, before me personally came _____ to me known, who, being by me duly sworn, did depose and say that (s)he resides at _____ _____, that (s)he is the_____of _____ _____, the corporation described in and which executed the above instrument; and that (s)he signed her/his name thereto by order of the Board of Directors of said corporation.

_____
Notary Public

ACKNOWLEDGEMENT OF BIDDER, IF A PARTNERSHIP

STATE OF NEW YORK)
COUNTY OF_____) ss:

On the_____day of_____, 20_, before me personally came _____ to me known and known to me to be a member of the firm _____ _____, described in and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same for and in behalf of said firm for the uses and purposes mentioned therein.

_____
Notary Public

ACKNOWLEDGEMENT OF BIDDER, IF AN INDIVIDUAL

STATE OF NEW YORK)
COUNTY OF_____) ss:

On the_____day of_____, 20_, before me personally came _____ to me known and known to me to be the person described in and who executed the foregoing instrument, and (s)he duly acknowledged that (s)he executed the same.

_____
Notary Public

SECTION X:

SUBSTITUTION FORM REQUEST

FASHION INSTITUTE OF TECHNOLOGY

SUBSTITUTION REQUEST FORM

1.1 CONDITIONS OF SUBSTITUTIONS

A. Substitution indicated on this Form is a proposed substitute to requirements indicated in the Contract Documents. Substitution listed has not been included in an Addendum. Submit one Form for each proposed substitution.
B. For each proposed Substitution, state difference in price or "No Change" where Substitution is offered.
C. Attach complete technical data, specifications, and description of substitutions.
D. Architect reserves the right to accept or reject any or all proposed substitutions.

1.2 SUBSTITUTION REQUEST

The following information is hereby submitted for a substitution to the specified item.

Specification Section and Title: _____

Paragraph_____ Page_____ Specified Item _____

Proposed Substitution: _____

Manufacturer:_____ Address:_____ Phone: _____

Trade Name:_____ Model No: _____

Price Difference:_____or No Change _____

The Undersigned certifies:
A. Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
B. Same warranty will be furnished for proposed substitution as for specified product.
C. Same maintenance service and source of replacement parts, as applicable is available.
D. Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
E. Proposed substitution does not affect dimensions and functional clearances.
F. Payment will be made for changes to the building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____ FAX: _____

ARCHITECT'S REVIEW AND ACTION

□ Substitution Approved – Make submittals in accordance with General Requirements
□ Substitution Approved As Noted – Make submittals in accordance with General Requirements.
□ Substitution Rejected – Use specified materials.
□ Substitution Request Received Too Late. Use specified materials.

Signed by: _____

Supporting Data Attached: □ Drawings □ Product Data □ Samples □ Tests
□ Reports □ Other_____

SECTION XI.
CONTRACT

TO BE SIGNED ONLY UPON AWARD

CONTRACT

This Agreement made as of the_____day of_____20_____, by and between the _____, hereinafter referred to as the "**OWNER**" and _____hereinafter referred to as the "Contractor", for Work at _____
_____

WITNESSETH: That the **OWNER** and the Contractor for the consideration named agree as follows:

1. The Contractor shall Provide and shall perform all Work of every kind or nature whatsoever required and all other things necessary to complete in a proper and workmanlike manner the _____
_____
_____in strict accordance with the Contract Documents as defined in the General Conditions (and of which a listing of specifications and drawings are attached hereto) and in strict accordance with such changes as are ordered and approved pursuant to the Contract, and shall perform all other obligations imposed on such Contractor by the Contract.

2. The Contractor agrees to perform all Work and labor required, necessary, proper for, or incidental to the Work, and to Furnish all supplies and materials required, necessary, proper for, or incidental to the Work for the total sum of_____ _____and 00/100 Dollars ($_____ _____.00), which sum shall be deemed to be in full consideration for the performance by the Contractor of all the duties and obligations of such Contractor under the Contract.

3. The Contractor shall commence Work on the Contract at a time to be specified in a written notice to proceed issued by the OWNER and complete the project no later than_____.

IN WITNESS WHEREOF, the parties hereto have executed this Contract the day and year first above written.

Fashion Institute of Technology

_____
Sherry Brabham, VP of Finance

_____
(Name of Contractor)

By_____
(Signature)

_____
(Print Name and Title)

ACKNOWLEDGEMENT OF CONTRACTOR, IF A CORPORATION

STATE OF_____)
COUNTY OF_____) ss:

On the_____day of_____in the year 20_____, before me personally came _____ to me known, who, being by me duly sworn, did depose and say that (s)he resides at_____, that (s)he is the_____of_____, the corporation described in and which executed the above instrument; and that (s)he signed her/his name thereto by order of the Board of Directors of said corporation.

_____
Notary Public

ACKNOWLEDGEMENT OF CONTRACTOR, IF A PARTNERSHIP

STATE OF_____)
COUNTY OF_____) ss:

On the_____day of_____in the year 20__, before me personally came _____to me known and known to me to be a member of the firm_____, described in and who executed the foregoing instrument, and (s)he duly acknowledged to me that (s)he executed the same for and in behalf of said firm for the uses and purpose mentioned therein.

_____
Notary Public

ACKNOWLEDGEMENT OF CONTRACTOR, IF AN INDIVIDUAL

STATE OF_____)
COUNTY OF_____) ss:

On the_____day of_____in the year 20__, before me personally came_____, to me known and known to me to be the person described in and who executed the foregoing instrument and (s)he duly acknowledged that (s)he executed the same.

_____
Notary Public

SECTION XII.
AFFIRMATIVE ACTION FORM

MONTHLY CONTRACTOR'S COMPLIANCE REPORT FORM AAP 7.0

INSTRUCTION SHEET

ALL PAYMENT REQUISITION, CONTRACTOR AND PROJECT INFORMATION ON THE TOP PORTION OF THE FORM MUST BE COMOPLETELY FILLED OUT. PLEASE NOTE:

False statements, information or data submitted on or with application for payment may result in one or more of the following actions: Termination of Contract for cause; Disapproval of future bids, or contracts or subcontracts; Withholding of final payments on the contract; and Civil and/or criminal prosecution.

PART B- PAYMENTS TO SUBCONTRACTORS AND SUPPLIERS

1) ALL FIRMS THAT YOU ARE UTILIZING ON THE JOB MUST BE LISTED EACH TIME **REGARDLESS** IF THEY ARE SCHEDULED TO RECEIVE PAYMENTS OUT OF THE PROCEEDS OF THE REQUISITION FOR PAYMENT.

2) All relevant information for each subcontractor and/or supplier must be filled in. This includes firm's complete name, address, phone number and Federal ID #. In addition, if the firm is a **NYS CERTIFIED MBEIWBE**, please indicate as such in the appropriate box.

   AS A REMINDER, ONLY THOSE FIRMS THAT HAVE NYS CERTIFICATION BY THE EMPIRE STATE DEVELOPMENT CORPORATION CAN BE COUNTED TOWARDS THE MBE/WBE GOAL ACHIEVEMENT FOR THE PROJECT.

3) The percentage of the job or purchases completed must be filled in and in addition, please indicate the number of change orders issued on any subcontract agreement or the number of purchase orders issued to date if purchasing supplies.

4) A description of the work being performed by a subcontractor or the type of supplies being purchased must be filled in.

DEFINITIONS

INTENDED PAYMENT: This is the amount of money that you intend to pay to each firm with the money that you will receive from the accompanying requisition. **This is not** the amount that you intend to pay over the life of the contract.

AMOUNT PAID TO DATE: This is the amount of money that has **ACTUALLY** been paid to date from previous requisitions submitted. It does not include the amount that you intend to pay from this requisition. THIS AMOUNT WILL BE VERIFIED BY OUR OFFICE PRIOR TO CLOSE OUT OF THE JOB BY THE RECEIPT OF COPIES OF CANCELED CHECKS OR PAID INVOICES.

CURRENT VALUE OF SUBCONTRACT: This is the total value to date of any subcontract agreement that has been issued to the firm by your company. It should be inclusive of any change orders issued to the original contract. **NOTE:** THIS LINE IS FOR SUBCONTRACTOR INFORMATION ONLY. IF THE FIRM LISTED IS A SUPPLIER THAT YOU ARE PURCHASING SUPPLIES OR MATERIAL FROM, LEAVE BLANK AND GO TO THE NEXT LINE.

TOTAL VALUE OF ALL PURCHASE ORDERS: This is the total amount of **all** purchase orders that will be issued to the firm for the entire job. The number of purchase orders issued to date should be reflected in the area indicated to the left. **NOTE:** THIS LINE IS FOR SUPPLIER INFORMATION ONLY. IF THE FIRM IS A SUBCONTRACTOR, LEAVE THIS AREA BLANK. A SUBCONTRACTOR AGREEMENT SHOULD BE ISSUED WHICH WOIULD BE REFLECTED ON THE PREVIOUS LINE.

The current form that you should be utilizing is form: AAP 7.0 Revised 1/9/08. This form must be included with each payment requisition submitted or the payment will not be processed.

If the form is not filled out according to the above instructions, your next payment requisition may be held until corrections are made. In addition, each report submitted must have an original signature and date.

MONTHLY CONTRACTOR'S COMPLIANCE REPORT

Payment Requisition Date _____
Payment Requisition Amount $._____
FIT Contract Number _____

CONTRACTOR INFORMATION

Name_____ Federal ID No. _____

Address_____

Contact Person_____Telephone Number _____

PROJECT INFORMATION

Institution_____City and Zip Code _____

Work Description _____

Part B – Payments to Subcontractors and Suppliers: Provide name, address and telephone number of **ALL** subcontractors to which you have awarded a subcontract or suppliers to which you have issued a purchase order. Place **X** in check box to indicate whether they are a New York State certified MBE or WBE or Other. In addition, for each firm listed below you must also include: the firms federal identification number; amount of intended payment to be made from proceeds of the accompanying requisition; percent complete, amount paid to date; the number of change orders or purchase orders; current value of subcontract (including change orders) or cumulative value of purchase orders; and a brief description of the work or service. All subcontractors or suppliers with whom you have an agreement should be listed below, even if they are not scheduled to receive a payment out of the proceeds of the attached requisition for payment. For further details, see Instruction Sheet

Firm_____ ☐ MBE ☐ WBE ☐ Other Fed. ID# _____

Address_____ Phone#_____Intended Payment$._____

Address _____ Percent Complete_____Amount Paid to Date$_____

No. of Change Orders._____ Current Value of Subcontract $_____

No. of Purchase Orders Issued _____ Total Value of Purchase Orders $ _____

Work Description _____

Firm_____ ☐ MBE ☐ WBE ☐ Other Fed. ID# _____

Address_____ Phone #_____Intended Payment$._____

Address _____ Percent Complete_____Amount Paid to Date$_____

No. of Change Orders._____ Current Value of Subcontract $_____

No. of Purchase Orders Issued _____ Total Value of Purchase Orders $ _____

Work Description _____

False statements, information or data submitted on or with application for payment may result in one or more of the following actions: Termination of Contract for cause; Disapproval of future bids, or contracts or subcontracts; Withholding of final payments on the contract; and Civil and/or criminal prosecution.

_____ _____
Name of Principal or Officer (Type or Print) Title of Principal or Officer {Type or Print)

_____ _____
Signature of Principal or Officer Date

SECTION XIII.
CHANGE ORDER FORM

CHANGE ORDER

TO:

Contractor:_____ Contract No. _____

Street: _____ Contract Date: _____

City, State, Zip:_____ Original Contract Amount: $ _____

Phone No. _____ Total Approved Change Orders: _____

Current Contract Amount: $_____

_____

You are hereby directed to perform all labor and to provide all materials necessary to carry out the Work described below:

Full consideration for this change order shall be on **INCREASE/DECREASE** of the original contract amount by:

_____Dollars.

Labor = _____

Materials = _____

INCREASE/DECREASE of the original schedule by days. In accepting and executing this change order, the Contractor, its heirs, executors, administrators, successors, and assigns hereby release and forever discharge the Owner, its successors, and assigns from any and all actions, causes of action, claims and demands whatsoever in law or in equity which the Contractor ever had, now has, or may have against the Owner in any way arising out of this change.

Recommended by:
CONSTRUCTION MANAGER OR ARCHITECT

Name: _____

_____

By: _____ Date: _____

Approved by:

Name:_____

By: _____Date:_____

Accepted by:
CONTRACTOR

Name:_____

By: _____ Date: _____

OWNER

Name:_____

By: _____ Date: _____

SECTION XIV.
CONTRACTOR'S
TRADE PAYMENT BREAKDOWN

TRADE PAYMENT BREAKDOWN

PROJECT:_____ **CONTRACT # C**

CONTRACTOR: _____

				CONTRACT AMOUNT		
ITEM no.	**DESCRIPTION**	**UNIT MEAS.**	**QUANTITY**	**LABOR**	**MATERIAL**	**TOTAL**
1	Mobilization	LS				
2	Bonds	LS				
3	Insurance	LS				
4	Safety Program	MTLY				
5	Supervision	MTLY				
6	Permits/Licenses	LS				
7	CPM Schedules	LS				
8	Samples - Submittals	LS				
9	Data Submittals	LS				
10	Field Coordination	MTLY				
11	Coordinate with HVAC, Electrical	MTLY				
12	Coordinate with Plumbing/Fire Prevention	MTLY				
13	Coordinate with Kitchen Equipment Contractor	MTLY				
14	Temporary Electric	LS				
15	Temporary Light	LS				
16	Temporary Facilities	MTLY				
17	Fire Prevention	LS				
18	Temporary Field Office	MTLY				
19	Material Hoisting	LS				
20	Hoisting Operations	LS				
21	Storage	LS				
22	Warranties, Etc.	LS				

EXHIBIT A: SAFETY EHS PLAN

EXHIBIT A. SAFTEY EHS PLAN

FASHION INSTITUTE OF TECHNOLOGY

OUTLINE FOR PREPARING WORK-SPECIFIC ENVIROMENT, HEALTH AND SAFETY (EHS) PLAN

Before commencing work on site at FIT, Contractor shall prepare a work-specific EHS Plan and submit the EHS Plan to both the Facilities Management and EHS Departments for review and approval. Such approval shall be given in a timely manner.

I) A work-specific EHS Plan is required in the following instances:

A) When proposed work will:

1) use regulated hazardous chemicals;

2) have the potential to generate fumes, vapors or dusts;

3) involve cutting torches or other spark-generating equipment ("hot" work);

4) generate any waste;

5) involve high-energy systems or

6) require any type of air monitoring.

B) When work involves the removal of less than 25 liner feet, or 10 square feet, of asbestos-containing material (that is greater than 1% asbestos). For work involving more than these amounts of asbestos, Contractor must consult with the EHS Department for additional guidelines.

C) When work involves the use of tools and equipment in areas where FIT employees or students are present.

D) When work involves construction, other than minor repairs or alterations to on-campus facilities.

E) When work involves dangerous environments, such as confined spaces, hazardous energy, use scaffolds greater than 10 feet high, or vehicle-mounted articulated booms.

II) Use the outline below to develop the work-specific EHS Plan. Contractor shall amend the work-specific EHS Plan as needed to accommodate work on-campus as it proceeds.

DESCRIPTION OF CONTENTS OF WORK-SPECIFIC EHS PLAN

III) GENERAL INFORMATION – PROJECT PLANNING

A) List primary information about Contractor's firm and that of sub-

contractors, if any, Project Name, FIT Bid Number and Contractor's safety-related performance measurements on Table 1.

B) Describe the scope of work and list a breakdown of its specific tasks.

C) Provide a project schedule that, at a minimum, shows the anticipated start date of the work, the duration of each phase of the work, the anticipated date of completion of each phase, and the project completion date.

D) List name of Contractor's on-site EHS Coordinator and the names of all OSHA- competent persons needed to carry out the scope of work on Table 2. The EHS Coordinator shall serve as the primary contact with FIT's Director of EHS Compliance during all work.

IV) WORK-SPECIFIC HAZARD ANALYSIS/RISK ASSESSMENT

A) Describe each task associated with the work of the project.

B) List the potential hazards, if any, associated with each task.

C) Provide copies of Contractor's EH&S program applicable to scope of work.

D) List the types of protective work practices or personal protective equipment (PPE) Contractor will employ to carry-out each task.

E) Describe the types of exposure assessments that are needed to address potential hazardous exposures related to the work of the project. These include:

1) Work practices and engineering controls Contractor will use to prevent exposure of Contractor's employees to hazardous chemicals or hazardous energy;

2) Work practices and engineering controls Contractor will use to prevent exposure of FIT students and staff to any detectable chemical exposure;

3) Contractor's use of respiratory protection and other protective equipment (PPE) and

4) Qualitative or quantitative monitoring protocols, personal and area monitoring equipment, and contaminant action levels.

F) Attach copies of certified documentation of "Hazard Assessment and Equipment Selection" required by 29 CFR 1910.132 (d)(2) that complies with 1910 Subpart I Appendix B for all tasks in the work-specific EHS Plan.

G) Attach a copy of Contractor's written Hazard Communication Program that OSHA requires for the work-specific EHS Plan.

V) WORK-SPECIFIC ENVIRONMENTAL, HEALTH AND SAFETY ELEMENTS

A) To address health and safety issues, the work-specific EHS Plan shall:

1) Describe criteria for upgrading or downgrading personal protective equipment (PPE) or modifying work practices to control hazardous exposures during the work;

2) Describe criteria Contractor will use to set up exclusion zones, including physical barriers and decontamination zones, as needed to prevent spread of debris and restrict access of unauthorized persons to work areas;

3) List equipment Contractor will use for routine and emergency on-site communication;

4) Describe utility clearance and marking procedures to prevent damage to buried utilities, or to lines, piping, or cables located inside of walls and ceilings, if applicable;

5) Describe decontamination and cleaning procedures for Contractor's employees and equipment to prevent the spread of debris. This includes procedures during work, at the end of each work day, and at the completion of the project before FIT's final inspection of the work area;

6) Identify measures to manage dangerous environments, such as confined spaces, scaffold work greater than 10 feet, or articulated booms;

7) List "Hot Work" procedures involved in the work of the project. This may include, but not be limited to, work such as welding, burning, open flames, tar melting or other type of melting pots, grinding that throws sparks. (See Appendix 1 - "Daily Safety Management Work Permit");

8) Identify the need for air monitoring or special testing to carry out the work. Include a listing of monitoring equipment or special tests and the Action Levels that Contractor will apply to project work;

9) Describe safety procedures for excavations more than four 4 feet deep and sloping or shoring procedures where excavations will exceed 5 feet deep;

10) Describe fire protection and explosive hazard review;

11) List the name and address of Contractor's on-contract Confined Space rescue team;

12) Describe spill control procedures for chemical products Contractor will have on-campus during work. Include a listing of spill control or containment supplies that Contractor will have on-hand in case of a spill;

13) Describe the need for site coordination with FIT employees, other contractors on-site and other adjacent work groups. This includes identification of hazardous energy Lock Out and Tag Out

requirements to make to work area safe and

14) Provide a listing of other safety equipment that Contractor will have on site during the work of the project.

B) To address oil, chemical and waste management issues, the work-specific EHS Plan shall:

1) Provide estimates of the types and amounts of waste (both hazardous and non-hazardous) that Contractor anticipates the work will generate. As applicable, provide a copy of a waste analysis plan that lists the types of analysis required, the USEPA SW-846 method number and the method detection limits;

2) Provide facility name, USEPA ID number, and a contact name for each facility that will transport and dispose of each of the waste streams identified above. Provide this information for any facility that will dispose of residuals from the treatment of project waste, as applicable;

3) On a copy of a drawing that will be provided by FIT, identify location where Contractor proposes to accumulate waste during work, to set-up exclusion zones and to provide employee decontamination areas;

4) Provide a statement that describes the methods that Contractor will use to minimize the amount of waste generated from the work of the project;

5) Provide a tabular listing, along with copies of Safety Data Sheets (SDS), for any chemical products that Contractor intends to store or use on-site during the work. The listing shall include the product name, manufacturer's name, type, amounts, intended storage location on FIT site, the specific use of the chemical and identification of any NYCDEP/USEPA regulated hazardous substances that Contractor intends to store or use on-site during the work. In all cases, Contractor must submit the listing before chemical products are delivered to the FIT campus;

6) On a copy of a drawing that will be provided by FIT, identify location where Contractor proposes to store chemical products on-site during work;

7) Identify the need, if any, to amend existing FIT emergency contingency planning documents. Such documents include, but are not limited to: Spill Prevention Control and Countermeasure Plan, Spill Prevention Report, Right-to-Know Survey and

8) List permits and Certificates of Fitness (NYCDEP, NYSDEC, USEPA, FDNY) needed to carry-out the scope of work and have copies on-site of permits and Certificates to carry-out project work.

VI) ON-SITE DOCUMENTATION

A) Contractor shall record initial and daily safety-related procedures on Table 3. These shall include:

1) Before start of the work, FIT's Project Manager will conduct a FIT Hazard Communication briefing for Contractor's employees;

2) Before start of the work, FIT's Project Manager and Contractor's on-site EHS Coordinator shall conduct a briefing for FIT employees in areas adjacent to work areas about proposed work;

3) Review of FIT Emergency Evacuation Procedures;

4) Listing of initial and ongoing project status meetings on-site with FIT Project Manager to address EHS concerns safety and health and

5) Scheduled and unscheduled employee safety briefings, toolbox talks.

B) Contractor shall provide a summary of the on-site EHS Coordinator's EHS-related training and experience relevant to the work of the project.

C) Contractor's employees shall sign-in daily with FIT Security in the A-Building Lobby.

D) For each work shift necessary to complete the project, Contractor's on-site EHS Coordinator shall open and fill out the "Daily Safety Management Work Permit" (See Appendix 1) at the start of each work shift and close the Permit at the end of each work shift.

VII) EMERGENCY RESPONSE PLANNING

Contractor shall review the summary of the Emergency Response Contact Names listed on Table 4 and provide the information as follows:

A) On a site map that will be provided by FIT, identify the primary and secondary routes for the evacuation of Contractor's employees, including the "rally point" where Contractor's employees will assemble and carry-out an accountability check in case of an evacuation;

B) List emergency response contacts with titles and telephone numbers. Contractor shall immediately call FIT Security and the FIT Project Manager in the event of a spill of oil, chemicals, waste water, or hazardous materials;

C) Identify the name, address and route to nearest hospital or Contractor's wellness center and

D) Provide a listing of emergency equipment for first aid, personal protection, spill response, fire protection and rescue.

TABLE 1

Project Name: _____Bid Number: _____

CONTACTOR ORGANIZATION CHART AND SAFETY DATA

COMPANY	:	Name: Address: Phone:
President	:	Name: Phone:
Vice President – Operations		Name: Phone:
Director of Environmental, Health, and Safety	:	Name: Phone:
Contractor EHS Program Development	:	Name: Phone:
OSHA Total Case Recordable Rate (TCRR)	:	
Days Away from work, or Restricted work or job Transfer (DART)	:	
Experience Modification Rate (EMR)	:	

Listing of On-site Subcontractors for project work, as applicable -

COMPANY NAME	ADDRESS	PHONE NUMBER	TASKS

TABLE 2

ON-SITE SUPERVISORY PERSONNEL

TITLE	:	**NAME(S) AND ON-SITE PHONE NUMBER**
On-site EHS Coordinator	:	
Contractor Project Managers	:	
FIT's Project Manager(s)	:	
<u>Contractor's Competent Persons</u>		List all that Apply – Indicate not applicable areas for department /project work as "NA" For subcontractor employees, place subcontractor firm name in parenthesis after the employee's name
• Confined Spaces	:	
• Excavations	:	
• Industrial Hygiene	:	
• Electrical--Lock Out/Tag Out	:	
• PPE, Respiratory Protection	:	
• Hazard Communication (Required for each department and project. Identify responsible employee for each subcontractor)	:	
• Fall Protection	:	
• Scaffolds	:	
• Cranes & Derricks	:	
• Blasting & Use of Explosives	:	

TABLE 2 (Cont'd)

ON-SITE SUPERVISORY PERSONNEL	Page 2 of 2
• Asbestos (Attach copies of Company license, supervisor and handler certificates for all employee that will perform work)	:
• Lead	
• Silica	
• Hot Work (Complete and submit permits daily - see Appendix 1)	
• FDNY Certificate of Fitness-Torch Operations	
• FDNY Certificate of Fitness-Fire Guard	
• FDNY Certificate of Fitness-Fire proofing	
• FDNY Certificate of Fitness-Powder Activated Tools	
• FDNY Certificate of Fitness-Air Compressors_____	
• FDNY Certificate of Fitness-Use of LPG and Use in Tar Kettles	
• FDNY REFRIGERATING SYSTEM OPERATING ENGINEER	
• FDNY Certificate of Fitness-Other_____	
• FDNY Certificate of Fitness-Other_____	
•	
•	

TABLE 3

LISTING OF REQUIRED EMPLOYEE/SUPERVISORY BRIEFINGS

DATE	TOPIC	Comments	TYPE (Monthly Supervisor/Bi-weekly Employee/Supervisor	Comments
	FIT Haz Com Briefing	At start of Work		
	Briefing for FIT Employees in work area(s)	FIT briefing for all FIT Department Supervisors in areas where work may potentially affect FIT employees or students at start of work. Record name of FIT employee(s) briefed	Complete Daily Safety Management Work Permit (See Appendix 1)	
	Review of FIT Emergency Evacuation Procedures	At start of Work		

TABLE 4

EMERGENCY CONTACT NAMES & TELEPHONE NUMBERS

TITLE	CONTACT NAME	EMERGENCY PHONE NUMBERS
Contractor: MAIN OFFICE		
Contractor President:		
On-site EHS Coordinator		
FIT Facilities Management	**Executive Director:** Allen King	Phone: 212-217-4424
FIT Environmental, Health and Safety Department	**Director:** Paul DeBiase paul_debiase@fitnyc.edu **Coordinator:** Kathy Caraballo kathy_caraballo@fitnyc.edu	Phone: 212-217-3752 Phone: 212-217-3754
Contractor Project Manager(s)		
FIT Public Safety	Central Control	212-217-7777, or Use Red Phone
Occupational Safety And Health Administration, – Area Director	Provide Zip Code for the location of Accident	800-321-6742
Location of nearest hospital and/or contractor's wellness center		
Rally Point and Accountability Check Location	In case of Building Evacuation Alarm	

Note: Call FIT Central Control at 212-217-7777 in case or any emergency such as fire, chemical spills, injury requiring medical treatment, or exposure of contractor or FIT personnel to fumes, vapors, or dusts.

EXHIBIT B: PREVAILING WAGE SCHEDULE

Kathy Hochul, Governor

Roberta Reardon, Commissioner

Fashion Institute of Technolog

Sam Li, Director of Procurement
227 W27th Street
New York NY 10001

Schedule Year	2024 through 2025
Date Requested	03/25/2025
PRC#	2025003588

Location	Fashion Institute of Technolog
Project ID#	C1585
Project Type	Provide labor, materials, tests, tools and equipment to complete the Pomerantz Center New Fire Alarm System Project.

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Rate Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2024 through June 2025. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.ny.gov. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: _____ Date Cancelled: _____

Name & Title of Representative: _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission: a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract MUST obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule MUST be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion online.

Hours

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project.

Wages and Supplements

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule form the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12226; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website www.labor.ny.gov.

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is REQUIRED to provide complete copies to all prime contractors who in turn MUST, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website www.labor.ny.gov.

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website www.labor.ny.gov.

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. As per Article 6 of the Labor law, contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemperaneous, true, and accurate payroll records. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid or provided, and Daily and weekly number of hours worked in each classification.

The filing of payrolls to the Department of Jurisdiction is a condition of payment.Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall collect, review for facial validity, and maintain such payrolls.

In addition, the Commissioner of Labor may require contractors to furnish, with ten (10) days of a request, payroll records sworn to as their validity and accuracy for public work and private work. Payroll records include, but are not limited to time cards, work description sheets, proof that supplements were provided, cancelled payroll checks and payrolls. Failure to provide the requested information within the allotted ten (10) days will result in the withholding of up to 25% of the contract, not to exceed $100,000.00. If the contractor or subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds $25,000.00, payroll records and certifications must be kept on the project worksite.

The prime contractor is responsible for any underpayments of prevailing wages or supplements by any subcontractor.

All contractors or their subcontractors shall provide to their subcontractors a copy of the Prevailing Rate Schedule specified in the public work contract as well as any subsequently issued schedules. A failure to provide these schedules by a contractor or subcontractor is a violation of Article 8, Section 220-a of the Labor Law.

All subcontractors engaged by a public work project contractor or its subcontractor, upon receipt of the original schedule and any subsequently issued schedules, shall provide to such contractor a verified statement attesting that the subcontractor has received the Prevailing Rate Schedule and will pay or provide the applicable rates of wages and supplements specified therein. (See NYS Labor Laws, Article 8 . Section 220-a).

Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

Summary of Notice Posting Requirements

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.

The "Public Work Project" notice must be posted at the beginning of the performance of every public work contract, on each job site.

Every employer providing workers. compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers. Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyworker's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12226 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

Interest and Penalties

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

Debarment

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

Criminal Sanctions

Willful violations of the Prevailing Wage Law (Article 8 of the Labor Law) may be a felony punishable by fine or imprisonment of up to 15 years, or both.

Discrimination

No employee or applicant for employment may be discriminated against on account of age, race, creed, color, national origin, sex, disability or marital status.

No contractor, subcontractor nor any person acting on its behalf, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates (NYS Labor Law, Article 8, Section 220-e(a)).

No contractor, subcontractor, nor any person acting on its behalf, shall in any manner, discriminate against or intimidate any employee on account of race, creed, color, disability, sex, or national origin (NYS Labor Law, Article 8, Section 220-e(b)).

The Human Rights Law also prohibits discrimination in employment because of age, marital status, or religion.

There may be deducted from the amount payable to the contractor under the contract a penalty of $50.00 for each calendar day during which such person was discriminated against or intimidated in violation of the provision of the contract (NYS Labor Law, Article 8, Section 220-e(c)).

The contract may be cancelled or terminated by the State or municipality. All monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of the anti-discrimination sections of the contract (NYS Labor Law, Article 8, Section 220-e(d)).

Every employer subject to the New York State Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers notices furnished by the State Division of Human Rights.

Workers' Compensation

In accordance with Section 142 of the State Finance Law, the contractor shall maintain coverage during the life of the contract for the benefit of such employees as required by the provisions of the New York State Workers' Compensation Law.

A contractor who is awarded a public work contract must provide proof of workers' compensation coverage prior to being allowed to begin work.

The insurance policy must be issued by a company authorized to provide workers' compensation coverage in New York State. Proof of coverage must be on form C-105.2 (Certificate of Workers' Compensation Insurance) and must name this agency as a certificate holder.

If New York State coverage is added to an existing out-of-state policy, it can only be added to a policy from a company authorized to write workers' compensation coverage in this state. The coverage must be listed under item 3A of the information page.

The contractor must maintain proof that subcontractors doing work covered under this contract secured and maintained a workers' compensation policy for all employees working in New York State.

Every employer providing worker's compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Unemployment Insurance

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the New York State Department of Labor.

Kathy Hochul, Governor

Roberta Reardon, Commissioner

Fashion Institute of Technolog

Sam Li, Director of Procurement
227 W27th Street
New York NY 10001

Schedule Year	2024 through 2025
Date Requested	03/25/2025
PRC#	2025003588

Location	Fashion Institute of Technolog
Project ID#	C1585
Project Type	Provide labor, materials, tests, tools and equipment to complete the Pomerantz Center New Fire Alarm System Project.

Notice of Contract Award

New York State Labor Law, Article 8, Section 220.3a requires that certain information regarding the awarding of public work contracts, be furnished to the Commissioner of Labor. One "Notice of Contract Award" (PW 16, which may be photocopied), **MUST** be completed for **EACH** prime contractor on the above referenced project.

Upon notifying the successful bidder(s) of this contract, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

Contractor Information

All information must be supplied

Federal Employer Identification Number: _____

Name: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Amount of Contract: $_____

Approximate Starting Date: ____/____/____

Approximate Completion Date: ____/____/____

Contract Type:

[ ] (01) General Construction
[ ] (02) Heating/Ventilation
[ ] (03) Electrical
[ ] (04) Plumbing
[ ] (05) Other : _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12226

Social Security Numbers on Certified Payrolls:

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concern regarding inclusion of this information on payrolls if another identifier will suffice.

For these reasons, the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor. This change does not affect the Department's ability to request and receive the entire social security number from employers during its public work/ prevailing wage investigations.

Construction Industry Fair Play Act: Required Posting for Labor Law Article 25-B § 861-d

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site. Failure to post the notice can result in penalties of up to $1,500 for a first offense and up to $5,000 for a second offense. The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, https://dol.ny.gov/public-work-and-prevailing-wage
If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: dol.misclassified@labor.ny.gov .

Worker Notification: (Labor Law §220, paragraph a of subdivision 3-a)

Effective June 23, 2020

This provision is an addition to the existing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage and supplement rate* for their particular job classification *on each pay stub**. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her job classification. The required notification will be provided with each wage schedule, may be downloaded from our website *www.labor.ny.gov* or be made available upon request by contacting the Bureau of Public Work at 518-457-5589. *In the event the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.

(12.20)

To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

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1. Purpose and Scope:

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

2. Background and Statutory References:

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.

To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor
Administrative Finance Bureau-PWEF Unit
Building 12, Room 464
State Office Campus
Albany, NY 12226

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.

Required Notice under Article 25-B of the Labor Law

Attention All Employees, Contractors and Subcontractors: You are Covered by the Construction Industry Fair Play Act

The law says that you are an employee unless:

- You are free from direction and control in performing your job, **and**
- You perform work that is not part of the usual work done by the business that hired you, **and**
- You have an independently established business.

Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

It is against the law for an employer to misclassify employees as independent contractors or pay employees off the books.

Employee Rights: If you are an employee, you are entitled to state and federal worker protections. These include:

- Unemployment Insurance benefits, if you are unemployed through no fault of your own, able to work, and otherwise qualified,
- Workers' compensation benefits for on-the-job injuries,
- Payment for wages earned, minimum wage, and overtime (under certain conditions),
- Prevailing wages on public work projects,
- The provisions of the National Labor Relations Act, and
- A safe work environment.

It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

Independent Contractors: If you are an independent contractor**, you must pay all taxes and Unemployment Insurance contributions required by New York State and Federal Law.**

Penalties for paying workers off the books or improperly treating employees as independent contractors:

- **Civil Penalty** — First offense: Up to $2,500 per employee

  Subsequent offense(s): Up to $5,000 per employee

- **Criminal Penalty** — First offense: Misdemeanor - up to 30 days in jail, up to a $25,000 fine and debarment from performing public work for up to one year.

  Subsequent offense(s): Misdemeanor - up to 60 days in jail or up to a $50,000 fine and debarment from performing public work for up to 5 years.

If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at (866) 435-1499 or send an email to dol.misclassified@labor.ny.gov. All complaints of fraud and violations are taken seriously. You can remain anonymous.

Employer Name:

WE ARE YOUR DOL

New York State Department of Labor
Bureau of Public Work

Attention Employees

THIS IS A:

PUBLIC WORK PROJECT

If you are employed on this project as a **worker, laborer, or mechanic** you are entitled to receive the **prevailing wage and supplements rate** for the classification at which you are working.

Your pay stub and wage notice received upon hire must clearly state your wage rate and supplement rate.

Chapter 629 of the Labor Laws of 2007:

These wages are set by law and must be posted at the work site. They can also be found at:
https://dol.ny.gov/bureau-public-work

If you feel that you have not received proper wages or benefits, please call our nearest office.*

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 932-2419	White Plains	(914) 997-9507
Newburgh	(845) 568-5287		

* For New York City government agency construction projects, please contact the Office of the NYC Comptroller at (212) 669-4443, or www.comptroller.nyc.gov – click on Bureau of Labor Law.

Contractor Name: _____

Project Location: _____

Requirements for OSHA 10 Compliance

Article 8 §220-h requires that when the advertised specifications, for every contract for public work, is $250,000.00 or more the contract must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training "prior to the performing any work on the project."

The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (*Note: Completion cards do not have an expiration date.)*
- Training roster, attendance record of other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

**A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-457-5589.

WICKS

Public work projects are subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work, when the total project's threshold is $3 million in Bronx, Kings, New York, Queens and, Richmond counties; $1.5 million in Nassau, Suffolk and Westchester counties; and $500,000 in all other counties.

For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or the use of a Project Labor Agreement (PLA), and must be open to public inspection.

Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.

The Commissioner of Labor shall have the power to enforce separate specification requirement s on projects, and may issue stop-bid orders against public owners for non-compliance.

Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

Contractors must pay subcontractors within a 7 days period.

(07.19)

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less that six (6) years, contemporaneous, true, and accurate payroll records.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.ny.gov) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12226

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

New York County General Construction

Asbestos Worker 03/01/2025

JOB DESCRIPTION Asbestos Worker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024
Asbestos Worker Removal & Abatement Only*	$ 47.25

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS

Per Hour:	
Asbestos Worker Removal & Abatement Only	$ 13.65

OVERTIME PAY
See (B, B2, *E, J) on OVERTIME PAGE
*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8) on HOLIDAY PAGE

REGISTERED APPRENTICES
Apprentice Removal & Abatement Only:
1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

SUPPLEMENTAL BENEFIT

Per Hour:	
Apprentice Removal & Abatement	$ 13.65

4-12a - Removal Only

Boilermaker 03/01/2025

JOB DESCRIPTION Boilermaker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025
Boilermaker	$ 67.38	$ 68.88
Repairs & Renovations	67.38	68.88

Repairs & Renovation: Includes Repairing, Renovating replacement of parts to an existing unit(s).

SUPPLEMENTAL BENEFITS
Per Hour:

Boilermaker Repair & Renovations	33.5% of hourly Wage Paid + $ 26.85	33.5% of Hourly Wage Paid + $26.85

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY
See (*B, O, **U) on OVERTIME PAGE
Note:* Includes 9th & 10th hours, double for 11th or more.
** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:
(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	33.5% of Hourly Wage Paid Plus Amount Below	33.5% of Hourly Wage Paid Plus Amount Below
1st Term	$ 20.36	$ 20.36
2nd Term	21.28	21.28
3rd Term	22.22	22.22
4th Term	23.12	23.12
5th Term	24.07	24.07
6th Term	25.00	25.00
7th Term	25.93	25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband 03/01/2025

JOB DESCRIPTION Broadband **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	06/29/2025
Field Tech Install/Repair	$ 52.40	$ 53.97

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

SUPPLEMENTAL BENEFITS
Per Hour:
$ 23.24

OVERTIME PAY
See (B, K, *R) on OVERTIME PAGE
Note: *Two and one half times the hourly rate after the 8th hour

HOLIDAY
Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist1

Carpenter 03/01/2025

JOB DESCRIPTION Carpenter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2024
Piledriver	$ 60.59 + 10.00*
Dockbuilder	$ 60.59 + 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker $ 45.79

OVERTIME PAY
See (B, E2, O) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.
Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wages per hour
(1)year terms:

1st	2nd	3rd	4th
$26.98	$32.58	$40.96	$49.35
+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: $ 32.34

8-1556 Db

Carpenter 03/01/2025

JOB DESCRIPTION Carpenter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2024

Carpet/Resilient
Floor Coverer $ 55.05
+ 8.25*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS
Per hour:
$ 39.45

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.
Apprentices See (5,6,11,13,16,18,19,25)
Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wage per hour - (1) year terms:

1st	2nd	3rd	4th
$ 25.20	$ 28.20	$ 32.45	$ 40.33
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 15.22	$ 16.22	$ 19.32	$ 20.32

8-2287

Carpenter 03/01/2025

JOB DESCRIPTION Carpenter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per Hour: 07/01/2024

Marine Construction:

Marine Diver	$ 75.46
	+ 10.00*
Marine Tender	$ 55.00
	+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyworker $ 45.65

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:
One (1) year terms.

1st year	$ 26.98
	+ 5.50*
2nd year	32.58
	+ 5.50*
3rd year	40.96
	+ 5.50*
4th year	49.35
	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits
Per Hour:

All terms $ 32.20

8-1456MC

Carpenter 03/01/2025

JOB DESCRIPTION Carpenter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per hour: 07/01/2024

Building
Millwright $ 59.35
+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Millwright $ 45.41

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19) on HOLIDAY PAGE
Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wages per hour:
One (1) year terms:

1st.	2nd.	3rd.	4th.
$ 32.16	$ 37.61	$ 43.06	$ 53.96
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:
One (1) year terms:

1st.	2nd.	3rd.	4th.
$ 30.56	$ 33.09	$ 36.27	$ 40.69

8-740.1

Carpenter 03/01/2025

JOB DESCRIPTION Carpenter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Per Hour:

	07/01/2024
Timberman	$ 55.59
	+ 10.26*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS
Per Hour:

	07/01/2024
	$ 44.96

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE
Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.
Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wages per hour:
One (1) year terms:

1st	2nd	3rd	4th
$24.96	$30.07	$37.72	$45.38
+ 5.55*	+ 5.55*	+ 5.55*	+ 5.55*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:
All terms $ 31.95

8-1556 Tm

Carpenter **03/01/2025**

JOB DESCRIPTION Carpenter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES
Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.
Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border.
Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

Per hour:	07/01/2024
Core Drilling:	
Driller	$ 46.25
	+ 3.25*
Driller Helper	$ 36.28
	+ 3.25*

Note: Hazardous Waste Pay Differential:
For Level C, an additional 15% above wage rate per hour
For Level B, an additional 15% above wage rate per hour
For Level A, an additional 15% above wage rate per hour
Note: When required to work on water: an additional $ 3.00 per hour.

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Driller and Helper	$ 30.24

OVERTIME PAY
See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

Carpenter **03/01/2025**

JOB DESCRIPTION Carpenter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES
Nassau: The portion of the county that lies west of Seaford Creek and south of the Southern State Parkway.

WAGES

Per hour:	07/01/2024
Show Exhibit	$ 55.75
	+ 9.80**
Bldg. Carpenter*	$57.05
	+ 8.39**

* Not applicable in Putnam County
**This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS
Per hour worked:

Show Exhibit	$ 45.20
Bldg. Carpenter	39.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (18, 19) on HOLIDAY PAGE
Paid: for 1st & 2nd yr. Apprentices	See (5,6,11,13,16,18,19,25)
Overtime:	See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour: Show Exhibit

(1) year terms:

1st.	2nd.	3rd.	4th.
$22.30	$27.88	$36.24	$44.60
+ 4.90*	+ 4.90*	+ 4.90*	+ 4.90*

*This portion is not subject to overtime premiums

Supplemental benefits per hour:
All terms $ 30.25

Wages per hour: Bldg. Carpenter
(1) year terms:

1st	2nd	3rd	4th
$ 22.20	$ 25.20	$ 29.45	$ 37.33
+ 2.14*	+ 2.59*	+ 3.09*	+ 4.09*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 15.37	$ 16.42	$ 19.52	$ 20.52

8-EXHIB

Carpenter - Heavy&Highway 03/01/2025

JOB DESCRIPTION Carpenter - Heavy&Highway **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES
Nassau: That portion of the county that lies West of Seaford Creek and South of the Southern State Parkway.

WAGES
Per hour:

	07/01/2024
Heavy & Highway Carpenter	$ 60.59 + 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS
Per hour worked:

Heavy & Highway
Carpenter $ 45.70

OVERTIME PAY
See (B, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 11, 13, 25) on HOLIDAY PAGE
Paid : for 1st & 2nd yr Apprentices	See (5, 6, 11, 13, 25)

REGISTERED APPRENTICES
Wage per hour:
One (1) year terms:

	1st	2nd	3rd	4th
Heavy & Highway	$ 26.98	$ 32.58	$ 40.96	$ 49.35

+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits:
Per Hour:

All terms
$ 32.25

8-NYC H/H

Electrician 03/01/2025

JOB DESCRIPTION Electrician **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
Tree Trimmer	$ 35.24
Ground Person	20.69

Applies to line clearance, tree work, and right-of-way preparation on all new or existing overhead, electrical, telephone, and CATV lines.

SUPPLEMENTAL BENEFITS
Per hour:

Tree Trimmer	$ 13.20
Ground Person	7.75

OVERTIME PAY
See (B, *H, Q) on OVERTIME PAGE
*Worked performed on Sundays & Holidays outside of 7.00am - 4.00pm shall be paid at double time, in addition to the holiday pay if applicable.

HOLIDAY
Paid: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
(An additional floating holiday after four years service)

9-3T

Electrician 03/01/2025

JOB DESCRIPTION Electrician **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
Electrician	$ 32.00
Telephone	32.00

Maintenance and Jobbing-Electrical and teledata work of limited duration and scope, consisting of repairs and/or replacement of electrical and teledata equipment.

- Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

SUPPLEMENTAL BENEFITS
Journeyworker:

07/01/2024
$ 27.20
29.23*

* Applies to overtime hours

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3m

Electrician 03/01/2025

JOB DESCRIPTION Electrician **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond, Westchester

WAGES

Per hour:	07/01/2024
Service Technician	$ 37.40

Service and Maintenance on Alarm and Security Systems.

Maintenance, repair and /or replacement of defective (or damaged) equipment on, but not limited to, Burglar - Fire - Security - CCTV - Card Access - Life Safety Systems and associated devices. (Whether by service contract of T&M by customer request.)

SUPPLEMENTAL BENEFITS
Per hour:
Journeyworker: $ 21.85

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

9-3H

Electrician 03/01/2025

JOB DESCRIPTION Electrician **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour:	07/01/2024
Electrician Audio/Sound and Temporary Light/ Power	$ 62.00

Solar-Photovoltaic Systems

Group 1 All tasks not listed in Group 2	62.00
Group 2	32.00

D.C portion and associated mechanical equipment related to solar systems,
(excluding battery storage and its associated equipment) including work related to
Weather Stations and Data Acquisitions/Monitoring Systems on solar photovoltaic systems.

Mounting of PV modules.
Mounting of DC optimizers to back of modules if the installation calls for this equipment.
Mounting of microinverters to back of modules and install trunk cabling on racking if called for.
Module to module connection of PV modules to adjacent modules. If racking manufacturer provides integrated inter-row cable management, install string jumper to complete the string in full in same sub-array.
If racking manufacturer does not provide integrated inter-row cable management, run conduit between rows, bond it and run string jumper to complete string in full in same sub-array.
Installation of weather stations and other weather station relevant sensors as specified.
Installation of data acquisition system (DAS) for PV system monitoring.

SHIFT WORK
Evening (Swing Shift):

Electrician

Audio/Sound and Temporary Light/ Power	$ 72.75
Night (Graveyard Shift):	
Electrician Audio/Sound and Temporary Light	$ 81.49

SUPPLEMENTAL BENEFITS
Per Hour:

Electrician	$ 66.09
	70.01*
Swing Shift:	75.07
	79.66*
Graveyard Shift:	82.66
	87.81*
Temporary Light/Power:	30.33
	33.64*
Group 1:	66.09
	70.01*
Group 2:	27.21
	29.23*

* Applies when premium (OT) wages are paid.

Temporary Light and Power benefit rate applies for three or less workers.

Reduce benefit rate by 6.2% for any employee who has accumulated wages of $168,600 for the same employer.

OVERTIME PAY
See (A, H) on OVERTIME PAGE
See (B) for Temporary Light and Power

HOLIDAY
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages Per Hour:

One (1) year terms	
First term:	07/01/2024
0-6 mos.	$ 18.00
7-12 mos.	18.50
Second term:	
0-6 mos.	19.50
7-12 mos.	20.50
Third term	
0-6 mos.	21.50
7-12 mos.	22.50
Fourth term:	
0-6 mos.	23.50
7-12 mos.	25.50
Fifth term/MIJ:	
0-12 mos.	27.50
13-18 mos.	32.00

Supplemental Benefits per hour:

One (1) year terms:

First Term:	Regular	Overtime
0-6 mos.	$ 17.18	$ 18.38
7-12 mos.	17.44	18.67

Second Term:		
0-6 mos.	17.97	19.26
7-12 mos.	18.49	19.85
Third Term:		
0-6 mos.	19.02	20.44
7-12 mos.	19.54	21.03
Fourth Term:		
0-6 mos.	20.06	21.62
7-12 mos.	21.11	22.80
Fifth Term/MIJ:		
1-12 mos.	24.79	26.52
13-18 mos.	27.21	29.23

9-3

Electrician - Highway and Street Lighting, Traffic Signals and Controls — 03/01/2025

JOB DESCRIPTION Electrician - Highway and Street Lighting, Traffic Signals and Controls **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

	07/01/2024
Electro Pole Electrician	$ 62.00
Electro Pole Foundation Installer	47.66
Electro Pole Maintainer	41.61

SUPPLEMENTAL BENEFITS
Per Hour:

	07/01/2024
Electro Pole Electrician	$ 68.20 72.12*
Electro Pole Foundation Installer	51.68 54.69*
Electro Pole Maintainer	47.03 49.66*

*Applies when premium wages are paid

Note: Reduce benefit rate by 6.2% for any employee who has accumulated wages in $168,600 for the same employer.

OVERTIME PAY
See (A, B, E4, F, K) on OVERTIME PAGE
B - Applies to Electro Pole Foundation Installer
E4 - Applies to Electro Pole Maintainer

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3J

Elevator Constructor — 03/01/2025

JOB DESCRIPTION Elevator Constructor **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES
Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES
Per hour:

	07/01/2024	03/17/2025
Elevator Constructor	$ 80.35	$ 83.37
Modernization & Service/Repair	63.16	65.54

SUPPLEMENTAL BENEFITS
Per Hour:

Elevator Constructor	$ 46.367	$ 47.654
Modernization & Service/Repairs	45.217	46.470

OVERTIME PAY
Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, F, S) on OVERTIME PAGE.

HOLIDAY
Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
WAGES PER HOUR:

6 MONTH TERMS:

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
50%	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on Average of the Constructor, the Modernization and the Service/Repair wage.
Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

SUPPLEMENTAL BENEFITS:

	07/01/2024	03/17/2025
Elevator Constructor		
1st Term	$ 0.00	$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40
Modernization & Service/Repair		
1st Term	$ 0.00	$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40

4-1

Glazier 03/01/2025

JOB DESCRIPTION Glazier **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES
Per hour:

	07/01/2024	05/01/2025 Additional
Glazier, Glass Tinting and Window Film	$ 63.28	$ 1.11***
Scaffolding, including swing scaffold	67.28	

*Mechanical Equipment	64.28
**Repair & Maintenance	30.76

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.
**Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under $193,000.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:	7/01/2024
Glazier, Glass Tinting Window Film, Scaffolding and Mechanical Equipment	$ 42.13
Repair & Maintenance	24.62

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE
For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY
Paid: See (5, 6, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE
For 'Repair & Maintenance'
Paid: See(5, 6, 16, 25)
Overtime: See(5, 6, 16, 25)

REGISTERED APPRENTICES
Wage per hour:
(1) year terms at the following wage rates:

	7/01/2024
1st term	$ 22.34
2nd term	30.64
3rd term	40.87
4th term	50.14

Supplemental Benefits:
(Per hour)

1st term	$ 19.27
2nd term	27.34
3rd term	32.85
4th term	36.01

8-1087 (DC9 NYC)

Insulator - Heat & Frost 03/01/2025

JOB DESCRIPTION Insulator - Heat & Frost **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024
Insulators Heat & Frost	$ 71.01

SUPPLEMENTAL BENEFITS

Per Hour:	
Insulators Heat & Frost	$ 36.76

OVERTIME PAY
See (B, E, *Q, V) on OVERTIME PAGE
* Triple time for Labor Day (If worked)

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages:
1 year terms.
Wages Per Hour:

1st	2nd	3rd	4th
$ 31.96	$ 39.06	$ 46.16	$ 53.26

Supplemental Benefits:

$ 16.56	$ 20.23	$ 23.91	$ 27.06

4-12

Ironworker **03/01/2025**

JOB DESCRIPTION Ironworker **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025 Additional
Stone Derrickmen Rigger	$ 75.40	$ 1.64*
Stone Handset Derrickman	72.55	1.11*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:

Stone Derrickmen Rigger	$ 45.52
Stone Handset Derrickman	44.76

OVERTIME PAY
See (B, D1, *E, Q, **V) on OVERTIME PAGE
*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.
** Benefits same premium as wages on Holidays only

HOLIDAY
Paid: See (18) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE
Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES
Wage per hour:

Stone Derrickmen Rigger:

	1st	2nd	3rd	4th
07/01/2024	$ 37.20	$ 53.28	$ 59.32	$ 65.36

Supplemental Benefits:
Per hour:

07/01/2024	23.27	34.39	34.39	34.39

Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2024	$ 35.78	$ 51.04	$ 56.79	$ 62.55

Supplemental Benefits:
Per hour:

07/01/2024	22.95	34.08	34.08	34.08

9-197D/R

Ironworker **03/01/2025**

JOB DESCRIPTION Ironworker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025
Ornamental	$ 47.65	$ 47.90
Chain Link Fence	47.65	47.90
Guide Rail	47.65	47.90

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker:	$ 66.29	$ 67.29

OVERTIME PAY
See (B, B1, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
1 year terms

1st Term	$ 25.98	$ 26.45
2nd Term	28.45	28.97
3rd Term	30.80	31.36
4th Term	34.39	35.02

Supplemental Benefits per hour:

1st Term	$ 16.29	$ 16.29
2nd Term	18.29	18.29
3rd Term	19.29	19.29
4th Term	20.29	20.29

4-580-Or

Ironworker **03/01/2025**

JOB DESCRIPTION Ironworker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
PER HOUR:

	07/01/2024	01/01/2025
Ironworker:		
Structural	$ 57.20	$ 58.45
Bridges		
Machinery		

SUPPLEMENTAL BENEFITS
PER HOUR PAID:

Journeyman	$ 89.85	$ 91.35

OVERTIME PAY
See (B, B1, Q, *V) on OVERTIME PAGE
*NOTE: Benefits are calculated for every hour paid.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 18, 19) on HOLIDAY PAGE

REGISTERED APPRENTICES
WAGES PER HOUR:

6 month terms at the following rate:

1st	$ 30.23	$ 30.36
2nd	30.83	30.96
3rd - 6th	31.44	31.57

Supplemental Benefits		
PER HOUR PAID:	62.47	63.48

4-40/361-Str

Ironworker 03/01/2025

JOB DESCRIPTION Ironworker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES

Per hour:	07/01/2024
Reinforcing & Metal Lathing	$ 56.95
"Base" Wage	55.20 plus $ 1.75

"Base" Wage is used to calculate overtime hours only.

SUPPLEMENTAL BENEFITS

Per hour:	
Reinforcing & Metal Lathing	$ 44.63

OVERTIME PAY
See (B, E, Q, *X) on OVERTIME PAGE
*Only $23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half	$ 51.13
Double Time	57.63

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 11, 13, *18, **19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(1) year terms at the following wage rates:

Prior to 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
$ 22.55	$ 28.38	$ 34.68	$ 37.18
"Base" Wage			
$21.00	$26.80	$33.10	$35.60
plus $1.55	plus $1.58	plus $1.58	plus $1.58

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS
Per Hour:

1st term	2nd term	3rd term	4th Term
$18.17	$21.34	$22.00	$22.50

After 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
$ 22.55	$ 23.60	$ 24.60	$ 25.65
"Base" Wage			
$21.00	$22.00	$23.00	$24.00
plus $1.55	plus $1.60	plus $1.60	plus $1.65

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS
Per Hour:

1st term	2nd term	3rd term	4th Term
$18.40	$17.40	$16.45	$15.45

4-46Reinf

Laborer 03/01/2025

JOB DESCRIPTION Laborer **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

Striper (Highway/streets):	07/01/2024	07/01/2025 Additional
Striping-Machine Operator	$ 41.00	$ 3.05**
Striping Thermoplastic	45.00	
Flagger - Traffic Safety*	39.00	

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using handheld devices. Excludes the Driver/Operator of equipment used in protection of traffic safety.

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyworker	$ 19.27

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 8, 13) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 13) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

1st Term (1-2000 hours)	$ 31.36
2nd Term (2001-4000 hours)	33.00

Supplemental Benefits per hour:

All Terms	19.27

9-1010-LS

Laborer 03/01/2025

JOB DESCRIPTION Laborer **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

	07/01/2024
Laborer/Excavation	
**Asbestos and Lead Abatement & Removal, Hazardous Waste Removal (including soil)	$ 45.00
Basic	45.00
Flagman	45.00
Pipelayer	45.00
*Tree Work, *Landscape	45.00

*Includes trimming, cutting, planting and/or removal of trees.
** Applies to Heavy & Highway projects

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker:	$ 54.03

Note: No payment of Supplemental Benefits is required on paid holidays, when employees do not work.

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid:	See (2, 20) on HOLIDAY PAGE
Overtime:	See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

1000 hour terms at the following hourly wage rate.

		07/01/2024
1st	0 - 1000	$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices	54.03

9-731Ex

Laborer **03/01/2025**

JOB DESCRIPTION Laborer **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

GROUP 14: Blasters.

GROUP 16: Tunnel workers - including Miners, Drill Runners, Iron Men, Maintenance Men, Conveyor Men, Safety Miners, Riggers, Block Layers, Cement Finishers, Rod Men, Caulkers, Powder Carriers, Miners' Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Derail Men, Form Men, Bottom Bell, Top Bell or Signal men, Form Workers, Movers, Concrete Workers, Shaft Men, Tunnel Laborers and Caulkers' Helpers.

GROUP 17: All others including: Powder Watchmen, Top Laborers and Changehouse Attendants.

Wages: (per hour)	07/01/2024
Laborer (Tunnel)-FREE AIR:	
Group 14	$ 77.13
Group 16	73.75
Group 17*	68.18
Small Bore Micro Tunnel Machines	80% of rates above
For Repairs on Existing Water Tunnels	90% of rates above
For Repairs of Sewer & Drainage Tunnels	85% of rates above
For Repair & Maintenance of all Subway & Vehicular Tunnels	80% of rates above

*An additional $3.00 per day when using an air spade, jack hammer or pavement breaker.

Note: Employer shall pay $10.00 per day for each half mile starting at a point 500 feet from the bottom of the shaft.

SUPPLEMENTAL BENEFITS
Per hour:

GROUP 14	$ 55.32
GROUP 16	53.06
GROUP 17	49.11
Small Bore Micro Tunnel Machines	80% of rates above
For Repairs on Existing Water Tunnels	90% of rates above
For Repairs of Sewer & Drainage Tunnels	85% of rates above
For Repair & Maintenance of all Subway& Vehicular Tunnels	80% of rates above

OVERTIME PAY
OVERTIME: For Laborer (Free Air) See (D, M, R*) on OVERTIME PAGE.
For Repair Categories & Micro Tunneling See (B, F, R*) on OVERTIME PAGE.
* Straight time first 8 hours, double time after 8 hours.

HOLIDAY
Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Free

Laborer - Building 03/01/2025

JOB DESCRIPTION Laborer - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

	07/01/2024	01/01/2025
Basic Laborer and Mason Tender	$ 44.70*	$ 45.25*
*Before calculating premium wage deduct	$ 3.25	$ 3.45

SUPPLEMENTAL BENEFITS
Per hour:

Basic Laborer and Mason Tender	$ 29.99	$ 30.69

OVERTIME PAY
See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

1000 hour terms at the following wage rate:

Term:	1st	2nd	3rd	4th
Basic Laborer and Mason Tender 07/01/2024	$ 22.05*	$ 23.80*	$ 25.30*	$ 27.80*

01/01/2025	$ 22.25*	$ 24.10*	$ 25.60*	$ 28.10*

*Before calculating premium wage deduct

	$ 0.50	$ 0.60

Supplemental Benefits per hour:

All Terms

	$ 10.77	$ 11.02

9-MTDC(79)

Laborer - Building 03/01/2025

JOB DESCRIPTION Laborer - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

	07/01/2024	07/01/2025 Additional
Skilled Interior Demolition Laborer:	$ 39.70*	$ 0.75***
General Interior Demolition Laborer:	28.89**	

* Before calculating overtime wages deduct $1.70

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per Hour:

Skilled Interior Demolition Laborer:	24.84
General Interior Demolition Laborer:	19.16

OVERTIME PAY
See (B, B2, I, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage Per Hour:

1000 hour terms at the following wage rate:

1st	2nd	3rd	4th
$ 21.80*	$ 23.55*	$ 25.05*	$ 27.55*

* Before calculating overtime wages deduct $0.50

Supplemental Benefits Per Hour:

All Terms: 10.47

9-MTDC (79-ID)

Laborer - Building 03/01/2025

JOB DESCRIPTION Laborer - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Laborer:
Laborer-Concrete

(including flag person) $ 42.53
+ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS

Per Hour

$ 20.20
+ 9.00**

** This portion subjected to overtime premiums only on codes (E,Q)

OVERTIME PAY

OVERTIME: See (A,E,Q) on OVERTIME PAGE attached.
See (B,E,Q,) for work below street level to top of foundation.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:
Terms based on hours listed:

1st	2nd	3rd
0-1334	1334-2668	2669-4000
$ 15.35 + 2.49*	$ 20.15 + 7.32*	$ 20.95 + 7.80*

* This portion is not subjected to overtime premiums.

Supplemental Benefits:
Per hour:

$ 12.70 + 2.65*	$ 16.70 + 3.45*	$ 16.70 + 4.25*

Journeyworker rate applies after 4000 hours
*This portion subjected to same premium as wages.

9-6A/18A/20-C

Laborer - Building 03/01/2025

JOB DESCRIPTION Laborer - Building **DISTRICT** 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025
Building:		
Plasterer Tender and Spray Fireproofing Tender	$ 44.70*	$ 45.25*

* Before calculating overtime wages deduct

	$ 3.25	$ 3.45

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	$ 29.99	$ 30.69

OVERTIME PAY

See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hours terms at the following wage.

	1st	2nd	3rd	4th
07/01/2024	$22.05*	$23.80*	$25.30*	$27.80*
01/01/2025	$22.35*	$24.10*	$25.60*	$28.10*

* Before calculating overtime wages deduct

	$ 0.50	$ 0.60

Supplemental Benefits per hour:

All Terms:

	$ 10.77	$ 11.02

9-30 (79)

Laborer - Building 03/01/2025

JOB DESCRIPTION Laborer - Building **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	01/06/2025
Asbestos, Lead and Hazardous Material Abatement Laborer	$ 40.55	$ 41.15

(Re-Roofing Removal See Roofer)
NOTE: Asbestos removed from Mechanical Systems not to be scrapped
See Asbestos Worker

SUPPLEMENTAL BENEFITS
Per Hour:

Laborer	$ 20.10	$ 21.00

OVERTIME PAY
See (B, B2, I) on OVERTIME PAGE
07/01/2024 - *Calculate at $39.00 per hour then add $1.55
01/06/2025 - *Calculate at $39.25 per hour then add $1.90

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED APPRENTICES
1000 hour terms at the following:
Per Hour:

1st Term	$ 21.00*	$ 21.48*
2nd Term	22.00**	22.48**
3rd Term	25.00***	25.48***
4th Term	27.00****	27.48****

SUPPLEMENTAL BENEFIT
Per Hour:

All Terms	$ 14.35	$ 15.07

OVERTIME PAY:
07/01/2024
*Calculate at $20.00 per hour then add $1.00
**Calculate at $21.00 per hour then add $1.00
***Calculate at $24.00 per hour then add $1.00
****Calculate at $26.00 per hour then add $1.00
01/06/2025
*Calculate at $21.20 per hour then add $1.28
**Calculate at $22.20 per hour then add $1.28
***Calculate at $24.20 per hour then add $1.28
****Calculate at $26.20 per hour then add $1.28

4-NYDC(78)

Laborer - Building 03/01/2025

JOB DESCRIPTION Laborer - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025
Skilled Demolition Laborer:	$ 42.48*	$ 42.66*
General Demolition Laborer:	31.06**	31.24**

*Before calculating overtime wages deduct

	3.00	3.05

**Before calculating overtime wages deduct

	2.35	2.40

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

NOTE: Total Demolition Only: Demolition shall be the complete demolition (wrecking) or dismantling of entire buildings or structures. Also may include the removal of all or any portion of a roof in which structural change is to occur. Structural change is defined as the removal of structural slabs, steel members, concrete members and penetration through the structural slab.

SUPPLEMENTAL BENEFITS
Per hour:
Journeyworker:

Skilled Demolition Laborer:	$ 28.92	$ 29.24
General Demolition Laborer:	21.98	22.30

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:
(1) year terms at the following wage.

	1st	2nd	3rd	4th
07/01/2024	$ 22.05*	$ 23.80*	$ 25.30*	$ 27.80*
01/01/2025	22.35*	24.10*	25.60*	28.10*

*Before calculating overtime wages deduct

	$ 0.50	$ 0.60

Supplemental Benefits per hour:

All Terms:

	10.77	11.02

9-79/95

Laborer - Concrete & Asphalt Paving 03/01/2025

JOB DESCRIPTION Laborer - Concrete & Asphalt Paving **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Group 1: Slurry Seal Coater, Maintenance Safety Surface, Small Power Tool Operator, Play Equipment Installer, Temporary Fence Installer & Repairs, Laborer.

Group 2: Production Paving Work: Shoveler, small equipment operator.

Per hour:	07/01/2024
Concrete Formsetter	$ 49.35 + $ 8.00*
Asphalt Screeperson/Micro Paver	49.95 + $ 8.00*
Asphalt Raker	49.35 + $ 8.00*
Group 1	45.48 + $ 8.00*
Group 2	45.48 + $ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker:	$ 45.55

Note: No payment of supplemental benefits is required on paid holidays, when employees do not work.

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
Note: Saturday premium rate applies from 7:00 am on Saturday to 6:59 am Sunday
Note: Sunday premium rate applies from Sunday 7:00 am to Monday 6:59 am.

HOLIDAY

Paid:	See (5, *11, 20) on HOLIDAY PAGE
HOLIDAY:	
Overtime:	See (21,22)** on HOLIDAY PAGE.

Note: See (5,20) Holiday pay -at the single time pay rate-shall be prorated based on 25% of a day's wages and benefits for each day worked during that calendar week.

**New Year's Day and Christmas Day: If an employee is performing work on these (2) days the employee will receive the single rate plus 25%.

* Columbus Day shall be an unpaid holiday. In the event work is performed on Columbus Day, wages shall be paid on a double time basis.

Note-When Independence day falls on Saturday, it will be observed on that Saturday, however, when it occurs on a Sunday, it will be observed on the Monday.

REGISTERED APPRENTICES
Wage per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
$ 31.36 + $ 8.00*	$ 33.00 + $ 8.00*

* This portion is not subjected to overtime premiums.

Supplemental Benefits per hour:
2000 hours term:

1st term	2nd term
1-1999	2000-4000
$ 18.67	$ 18.67

9-1010H/H

Laborer - Trac Drill 03/01/2025

JOB DESCRIPTION Laborer - Trac Drill **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Group 1:Chipper/Jackhammer, Powder Carrier, Hydraulic Chuck tender, Chuck Tender and Nipper, Magazine Keeper

Group 2: Hydraulic Trac Drill

Group 3: Air Trac, Wagon and Quarry bar

Group 4: Blaster

Per Hour:	07/01/2024
Group 1	$ 45.00
Group 2	52.35
Group 3	51.52
Group 4	58.21

SUPPLEMENTAL BENEFITS

Per Hour:

All Classifications: 54.03

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY
Paid: See (2, 20) on HOLIDAY PAGE
Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

1000 hour terms at the following hourly wage rate.

		07/01/2024
1st	0 - 1000	$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731/29

Laborer - Tunnel 03/01/2025

JOB DESCRIPTION Laborer - Tunnel **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
GROUP 5: Blasters and Mucking Machine Operators

GROUP 6: Tunnel Workers*(including Miners, Drill Runners, Iron Men, Maintenance Men, Inside Muck Lock Tender, Pumpmen, Electricians, Cement Finishers, Rod Men, Caulkers, Carpenters, Hydraulic Men, Shield Drivers, Monorail Operators, Motor Men, Conveyor Men, Safety Miners, Powder Carriers, Pan Men, Riggers, Miner's Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Form Workers, Concrete Workers, Tunnel Laborers, Caulker's Helpers), Hose Men, Grout Men, Gravel Men, Derail Men and Cable Men.

GROUP 7: Top Nipper

GROUP 8,9: Outside Man Lock Tender, Outside Muck Lock Tender, Shaft Men, Gauge Tender and Signal Men.

GROUP 10: Powder Watchmen, Top Laborers and Changehouse Attendants.

WAGES: (per hour)

	07/01/2024
Laborer (Compressed Air):	
GROUP 5	$ 80.82
GROUP 6	77.95
GROUP 7	76.65
GROUP 8,9	75.10
GROUP 10	66.18

Note: Employer shall pay $10.00 per day for each one half (1/2) mile or fraction starting from a point 500 feet from the shaft.

SUPPLEMENTAL BENEFITS
SUPPLEMENTAL BENEFITS:
per hour:

GROUP 5	$ 57.61
GROUP 6	55.81
GROUP 7	54.68
GROUP 8,9	53.84

GROUP 10 50.85

OVERTIME PAY
See (D, M, *R) on OVERTIME PAGE
NOTE: Time and one-half to be paid for all overtime repair-maintenance work on existing equipment and facilities.

* Straight time first 8 hours, double time after 8 hours.

HOLIDAY
Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Comp Air

Mason 03/01/2025

JOB DESCRIPTION Mason **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024
Brick/Block Layer	$ 67.14
Base Wage for OT Calculation	$ 55.93

SUPPLEMENTAL BENEFITS

Per Hour:	
Brick/Block Layer	$ 34.90

OVERTIME PAY
See (A, E, E2, Q) on OVERTIME PAGE
Note: OT Calculated on Base Wage plus $ 11.21/hr.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus $ 5.94/hr.:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices	$ 24.70

4-1Brk

Mason - Building 03/01/2025

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Building

Wages per hour:	07/01/2024	01/01/2025
Mosaic & Terrazzo Mechanic	$ 60.98	$ 61.33
Mosaic & Terrazzo Finisher	58.96	59.72

SUPPLEMENTAL BENEFITS

Per hour:		
Mosaic & Terrazzo Mechanic	$ 31.36* + $9.78	$ 31.46* + $10.39
Mosaic & Terrazzo Finisher	$ 31.36* + $9.77	$ 31.46* + $10.38

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY
See (A, E, Q) on OVERTIME PAGE
07/01/2024- Deduct $7.00 from hourly wages before calculating overtime.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
Easter Sunday is an observed holiday.Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

REGISTERED APPRENTICES
Wages Per hour:

	1st 0-1500	2nd 1501-3000	3rd 3001-3750	4th 3751-4500	5th 4501-5250	6th 5251-6000
07/01/2024	$ 25.19	$ 32.39	$ 38.18	$ 40.78	$ 49.00	$ 55.75
01/01/2025	25.36	32.60	39.95	41.09	49.37	56.15

Supplemental Benefits per hour:

07/01/2024	$7.12* + 3.43	$9.16* + 4.40	$17.22* + 5.87	$23.86* + 6.84	$24.86* + 7.83	$27.36* + 8.80
01/01/2025	$7.12* + 3.64	$9.16* + 4.67	$15.72* + 6.24	$23.86* + 7.27	$24.86* + 8.31	$27.36* + 9.35

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

Mason - Building 03/01/2025

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024
Tile Setters	$ 64.40	$ 64.62

SUPPLEMENTAL BENEFITS
Per Hour:

	$ 28.51* +8.52	$ 29.01* +8.52

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY
See (B, *E, Q, V) on OVERTIME PAGE
Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

750 hour terms at the following wage rate:

1st 1-750	2nd 751-1500	3rd 1501-2250	4th 2251-3000	5th 3001-3750	6th 3751-4500	7th 4501-5250	8th 5251-6000	9th 6001-6750	10th 6501-7000
07/01/2024									
$22.19	$27.21	$34.45	$39.46	$43.07	$46.58	$50.23	$55.24	$57.71	$62.00
12/02/2024									
$22.29	$27.35	$34.36	$39.41	$43.05	$46.60	$50.29	$55.33	$57.84	$62.20

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024									
$12.55*	$12.55*	$15.36*	$15.36*	$16.36*	$17.86*	$18.86*	$18.86*	$18.86*	$24.11*
+ $.76	+ $.81	+ $.91	+ $.96	+$1.43	+$1.48	+$1.91	+$1.97	+$4.57	+$5.18
12/02/2024									
$12.70*	$12.70*	$15.81*	$15.81*	$16.81*	$18.31*	$19.31*	$19.31*	$19.31*	$24.56*
+ $.76	+ $.81	+ $.91	+ $.96	+ $1.43	+ $1.48	+ $1.91	+ $1.97	+ $4.57	+ $5.18

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52

Mason - Building 03/01/2025

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Per hour:

	07/01/2024	01/06/2025
Building-Marble Restoration:		
Marble, Stone & Terrazzo Polisher	$ 47.72	$ 47.93

SUPPLEMENTAL BENEFITS
Per Hour:
Journeyworker:

Building-Marble Restoration:		
Marble, Stone & Polisher	$ 31.50	$ 31.86

OVERTIME PAY
See (B, *E, Q, V) on OVERTIME PAGE
* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
WAGES per hour:

900 hour term at the following wage:

	1st 1-900	2nd 901-1800	3rd 1801-2700	4th 2701
07/01/2024	$ 33.40	$ 38.18	$ 42.94	$ 47.72
01/06/2025	33.54	38.34	43.13	47.93
Supplemental Benefits Per Hour:				
07/01/2024	29.06	29.87	30.69	31.50
01/06/2025	29.59	30.34	31.11	31.86

9-7/24-MP

Mason - Building 03/01/2025

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES
Per Hour:

	07/01/2024	01/06/2025

Marble Cutters & Setters	$ 63.92	$ 64.21

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyworker	$ 40.05	$ 40.51

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage Per Hour:

750 hour terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th
0-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6751-7500	7500+
07/01/2024							
$ 27.01	$ 40.52	$ 43.88	$ 47.26	$ 50.64	$ 54.32	$ 60.71	$ 63.92
01/06/2025							
$ 27.24	$ 40.84	$ 44.25	$ 47.63	$ 51.05	$ 54.58	$ 60.99	$ 64.21

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th
07/01/2024							
$ 26.42	$ 29.76	$ 30.61	$ 31.44	$ 32.28	$ 37.55	$ 39.23	$ 40.05
01/06/2025							
$ 26.88	$ 30.14	$ 30.95	$ 31.78	$32.59	$38.07	$ 39.71	$ 40.51

9-7/4

Mason - Building 03/01/2025

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024
Tile Finisher	$ 49.46	$ 49.59

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per Hour:

	$ 25.36* + $8.33	$ 25.81* + $8.34

* This portion of benefits is subject to same premium rate as shown for overtime wages.

OVERTIME PAY
See (A, *E, Q) on OVERTIME PAGE
Double time rate after 10 hours on Saturdays

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88-tf

Mason - Building 03/01/2025

JOB DESCRIPTION Mason - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
Marble, Stone,		

Maintenance Finishers:	$ 27.72	$ 27.99

Note 1: An additional $2.00 per hour
for time spent grinding floor using
"60 grit" and below.
Note 2: Flaming equipment operator
shall be paid an additional $25.00 per day.

SUPPLEMENTAL BENEFITS
Per Hour:

Marble, Stone		
Maintenance Finishers:	$ 15.74	$ 15.88

OVERTIME PAY
See (B, *E, Q, V) on OVERTIME PAGE
*Double hourly rate after 8 hours on Saturday

HOLIDAY
Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES
WAGES per hour:

	07/01/2024	01/06/2025
0-750	$ 22.32	$ 22.91
751-1500	23.04	23.59
1501-2250	23.75	24.26
2251-3000	24.48	24.95
3001-3750	25.56	25.96
3751-4500	27.00	27.32
4501+	27.72	27.99

Supplemental Benefits:
Per hour:

0-750	12.69	12.43
751-1500	13.10	12.89
1501-2250	13.51	13.35
2251-3000	13.91	13.80
3001-3750	14.52	14.50
3751-4500	15.33	15.41
4501+	15.74	15.88

9-7/24M-MF

Mason - Building / Heavy&Highway 03/01/2025

JOB DESCRIPTION Mason - Building / Heavy&Highway **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
Marble-Finisher	$ 49.99	$ 50.22

SUPPLEMENTAL BENEFITS
Journeyworker:
Per hour

Marble- Finisher	$ 37.39	$ 37.69

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE
Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building / Heavy&Highway 03/01/2025

JOB DESCRIPTION Mason - Building / Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2024

Cement Mason	$ 57.72

SUPPLEMENTAL BENEFITS
Per Hour:

Cement Mason	$ 34.66
1.5 X overtime rate	$ 62.95
2 X overtime rate	$ 69.32

OVERTIME PAY
See (B1, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(1) year terms at the following wage:

1st Term	$ 23.39
2nd Term	$ 28.29
3rd Term	$ 33.69

Supplement Benefits per hour paid:

	ST	1.5X OT	2X OT
1st Term	$ 14.86	$ 22.30	$ 29.72
2nd Term	$ 15.16	$ 22.75	$ 30.32
3rd Term	$ 15.27	$ 22.91	$ 30.54

4-780

Mason - Building / Heavy&Highway 03/01/2025

JOB DESCRIPTION Mason - Building / Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2' or larger.
Per Hour:

	07/01/2024	05/01/2025 Additional
Stone Setter	$ 69.91	$ 3.42/Hr+
Base Rate	53.84*	
Stone Tender	$51.82	
Base Rate	44.54*	

(+)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS
Per Hour:

Stone Setter	$ 42.52
Stone Tender	23.15

OVERTIME PAY
See (*C, **E, Q) on OVERTIME PAGE
* Base Rates are used to Calculate Overtime Premiums then adding in: $15.81/Hr. for Stone Setter or $7.28/Hr. for Stone Tender.

** On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

*** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY
Paid: See (*18) on HOLIDAY PAGE
Overtime: See (5, 6, 10) on HOLIDAY PAGE
Paid: * Must work first 1/2 of day.

REGISTERED APPRENTICES
Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus $7.32:

1st	2nd	3rd	4th	5th	6th
50%	60%	70%	80%	90%	100%

Supplemental Benefits:
All Apprentices $ 25.85

4-1Stn

Mason - Heavy&Highway 03/01/2025

JOB DESCRIPTION Mason - Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2024

Pointer, Caulkers & Cleaners $ 63.69

SUPPLEMENTAL BENEFITS
Per Hour:

Pointer, Cleaners & Caulkers $ 31.90

OVERTIME PAY
See (B, E2, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

One (1) year terms at the following wage rates.

1st	2nd	3rd	4th
$ 32.76	$ 37.09	$ 42.97	$ 51.60

Apprentices Supplemental Benefits:
(per hour paid)

$ 15.40	$ 21.70	$ 24.45	$ 25.45

4-1PCC

Operating Engineer - Building 03/01/2025

JOB DESCRIPTION Operating Engineer - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Putnam, Queens, Richmond, Westchester

PARTIAL COUNTIES
Dutchess: that part of Dutchess County lying south of the North City Line of the City of Poughkeepsie.

WAGES
NOTE: Construction surveying
Party Chief--One who directs a survey party
Instrument Man--One who runs the instrument and assists Party Chief.
Rodman--One who holds the rod and assists the Survey Crew

Wages:(Per Hour) 07/01/2024

Building Construction:

Party Chief	$ 79.99
Instrument Man	60.36
Rodman	40.45

Steel Erection:

Party Chief	83.13
Instrument Man	64.21
Rodman	44.33

Heavy Construction-NYC counties only:
(Foundation, Excavation.)

Party Chief	88.06
Instrument man	65.66
Rodman	55.70

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2024
Building Construction	$ 28.63* +$ 7.65
Steel Erection	29.23* + 7.65
Heavy Construction	30.04* + 7.64

* This portion subject to SAME premium as wages

Non-Worked Holiday Supplemental Benefit:
21.83

OVERTIME PAY
See (A, B, E, Q) on OVERTIME PAGE
Code "A" applies to Building Construction and has double the rate after 7 hours on Saturdays.
Code "B" applies to Heavy Construction and Steel Erection and had double the rate after 8 hours on Saturdays.

HOLIDAY

Paid:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

9-15Db

Operating Engineer - Building, Maintenance, Steel Erection & Heavy Construction — 03/01/2025

JOB DESCRIPTION Operating Engineer - Building, Maintenance, Steel Erection & Heavy Construction **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
STEEL ERECTION:

Group 1: Derrick, travelers, tower, crawler tower & climbing cranes

Group 2: Oiler (Truck Crane)

Group 3: Oiler (Crawler Crane)

BUILDING CONSTRUCTION:

Group 1: Installing, repairing, maintaining, dismantling of all equipment including Steel cutting& bending machines, mechanical heaters, mine hoists, climbing cranes, tower cranes, Linden Peine, Lorain, Liebherr, Mannes and machines of a similar nature; Well Point system, Deep Well pumps, Concrete mixers with loading devices, Concrete plants, motor generators (When used for temporary power and lights(Driving maintenance trucks and mounted-welded machines)-All Pumps(excluding River Cofferdam Pumps and Well Point Pumps), Motorized Concrete Buggies(When three or more are on job site), Skid-Steer and similar machines

Group 2:Maintenance of: Pumps, Generators, Mixers, Heaters

Group 3: Oilers of all gasoline, electric, diesel or air operated Gradalls; Concrete Pumps, Overhead Cranes in Power Houses, Assist in oiling, greasing and repairing of all machines, including: Driving Truck Cranes, Driving and operating Fuel and Grease Trucks, Cherry Pickers(Hydraulic Cranes) over 70,000 GVW and machines of a similar nature

Group 4: Oiler on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors(3 or more in battery)

Group 5: Maintenance on Radiant Mechanical Heaters

HEAVY CONSTRUCTION (Excavation, Foundations, etc)

Group 1:Maintenance of: Generators, Light Towers

Group 2:Maintenance of: Pumps, Mixers including mudsucking

Group 3: Base Mounted Tower Cranes

Group 4: Installing, repairing, maintaining, dismantling(of all equipment including Steel cutting & Bending machines, Fusion Coupling Machines, Vermeer Trenching machines, on-site crushing plant, mechanical heaters(1 through 7),Mine hoists, Tower Cranes, Linden Peine, Lorrain, Lebherr, Mannes or machines of a similar nature, Wellpoints)-Driving maintenance trucks and truck mounted welding machines, burning, welding-operating of accumilator for shield-driven tunnels, in addition to the performance of other duties: Handling, installation, jointing, coupling of all permanent steel and plastic pipe. RIDE UPON MOLES-tunnel boring machines-MICRO TUNNELING SYSTEMS, All temporary pipefitting;When three or more motorized concrete buggies(Ride type)are utilized on the jobsite they shall be serviced, maintained and repaired by the maintenance engineer. The Operating Engineer on autogrades(C.M.I.)is to be assisted by the maintenance engineer who shall in addition perform other duties.

WAGES:	
Per hour:	07/01/2024
Steel Erection:	
Group 1	$ 81.43
Group 2	76.58
Group 3	58.22
Building Construction:	
Group 1	$ 72.41
Group 2	57.36
Group 3	69.09
Group 4	52.62
Group 5	46.07
Heavy Construction:	
Group 1	$ 57.43
Group 2	58.68
Group 3	108.95
Group 4	84.24

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2024
Building Construction	$ 30.52* + $7.40
Steel Erection & Heavy	31.02* + $7.40

* This portion of benefits is subject to same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:
21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages Per Hour:
(1) year terms at the following wage rates:

1st	2nd	3rd	4th.
$ 38.52	$ 45.23	$ 48.70	$ 52.17

Supplemental Benefits:
Per Hour:
All Terms $ 16.52* + 7.40

* This portion of benefits is subject to same OT premium as wages.

9-15Ab

Operating Engineer - Building / Heavy&Highway 03/01/2025

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
EQUIPMENT COVERED: Jet-Rodder/Vacuum Truck, Flusher, Sewer Rodder, Stetco Hoist and similar, Sewer Winch/Tugger Hoist and similar, Vacall/Vactor, Closed Circuit Television Inspection Equipment, Chemical Grouting Equipment and similar, John Beame, Meyers and similar.

Per Hour:	07/01/2024
Maintenance Engineer (Sewer Systems)	$ 84.24

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyman $ 31.02*
+ $ 7.40
*This portion of benefits subject to SAME premium as OT wages.

Non-Worked Holiday Supplemental Benefits:
$ 21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour:
(1) year terms at the following wage rates.

1st	2nd	3rd	4th
$38.52	$45.23	$48.70	$52.17

Supplemental Benefits:
Per Hour:

All Apprentices: $ 16.52* + $ 7.40

* This portion of benefits subject to the SAME premium as OT wages

9-15Sewer

Operating Engineer - Building / Heavy&Highway 03/01/2025

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	08/01/2024
Well Driller	$ 41.85	$ 43.11
Well Driller Helper	$ 36.26	$ 37.35

Hazardous Waste Differential

Added to Hourly Wage:

Level A	$ 3.00
Level B	$ 2.00
Level C	$ 1.00

Monitoring Well Work
Add to Hourly Wage:

Level A	$ 3.00
Level B	$ 2.00

SUPPLEMENTAL BENEFITS
Per Hour:

Well Driller & Helper	10% of straight time rate plus $ 13.50

Additional $ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY
See (B2, P, S) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES
Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	$ 28.00
2nd Term	$ 29.00
3rd Term	$ 30.00

SUPPLEMENTAL BENEFITS
Per Hour:

All Terms	10% of Wage + $ 13.50

Additional $4.25/Hr. for premium time hours worked.

4-138well

Operating Engineer - Building & Steel Erection 03/01/2025

JOB DESCRIPTION Operating Engineer - Building & Steel Erection **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour:	07/01/2024
STEEL ERECTION:	
Three Drum Derricks	$ 107.16
Cranes, Two Drum Derricks, Hydraulic Cranes & Fork Lifts, Boom Trucks	103.28
Compressors, Welding Machines	63.36
Compressors (not combined with welding machines)	60.71
BUILDING CONSTRUCTION:	
Cranes, Stone Derrick, Boom Trucks, Hydraulic Cranes,	103.62
Double Drum	98.28
4 Pole Hoists and Single Drum Hoists	87.78
Fork Lifts, Plaster(Platform Machine)Plaster Bucket, Concrete Pumps and all other equipment used for hoisting	80.54
*House Cars and Rack & Pinion	71.35
*House Cars (New Projects)	58.47

Erecting and dismantling Cranes 88.64

Compressors, Welding Machines(Cutting Concrete-Tank Work), Paint Spraying, Sand Blasting, Pumps(With the exclusion of concrete pumps), House Car (Settlement basis only), All Engines irrespective of power(Power-Vac)used to drive auxiliary equipment Air, Hydraulic, etc., Boilers, Jacking System 62.20

APPLICABLE TO BUILDING CATEGORY:
CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	$ 1.75/hr
150' to 249' "	$ 2.00/hr
250' to 349' "	$ 2.25/hr
350' to 450' "	$ 2.75/hr
Tower Crane	$ 2.00/hr

APPLICABLE TO STEEL CATEGORY:
CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	$ 2.25/hr
150' to 249' "	$ 2.50/hr
250' to 349' "	$ 2.75/hr
350' to 450' "	$ 3.25/hr
Tower Crane	$ 2.50/hr

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2024
All Operator Classes	$ 26.15* plus $ 6.30

* This portion of the benefits is subject to the same premium as shown for overtime wages.

OVERTIME PAY
See (*B, **C, ***D, O) on OVERTIME PAGE
*Applies to House Cars and Rack & Pinion after 8 hours worked in a day, Saturday, Sunday and Holidays
**Applies to Building Construction category
***Applies to Steel Erection

HOLIDAY
Paid: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE
Codes 8 and 12 apply ONLY to Steel Erection
Code 16 applies ONLY to Building Construction

REGISTERED APPRENTICES
Wage Per Hour:

Apprentices (1) year terms at the following rates:

	1st	2nd	3rd
07/01/2024	$ 44.92	$ 54.40	$ 63.88

Supplemental Benefits Per Hour:

	07/01/2024
Straight Time	$ 15.65* plus $ 6.30

* This portion of benefits subject to the same premium as shown for overtime wages.

9-14 B&S

Operating Engineer - Heavy Construction 1 — 03/01/2025

JOB DESCRIPTION Operating Engineer - Heavy Construction 1 **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
(For Groups 23 - 28, see Operating Engineer - Heavy Construction 2)

Group 1: Tower Crane/Climbing Crane
Group 2: Backhoes (Including all track and rubber tire backhoes over 37,000 lbs), Power Shovels, Steel Erection: Hydraulic Clam Shells, Moles and machines of a similar nature
Group 3: Mine Hoists, Cranes, etc, used as Mine Hoists
Group 4: Gradalls, Keystones, Cranes (With digging buckets), Bridge Cranes, Trenching Machines, Vermeer Cutter and machines of a similar nature
Group 5: Pile Drivers and Rigs (Employing Dock-Builders Foreman), Derrick Boats, Tunnel Shovels,
Group 6: All Drills and machines of a similar nature
Group 7: Back-Filling Machines and Cranes, Mucking Machines, Dual Drum Pavers
Group 8: Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power House (Low pressure units)
Group 9: Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoists, Power Houses (Other than above)
Group 10: Concrete Mixer
Group 11: Elevators
Group 12: Concrete Breaking Machines, Single Drum Hoists, Load Masters, Locomotives and Dinkies (Over 10 tons), Hydraulic Crane-Second Engineer
Group 13: On-Site Concrete Plant Engineers, On-Site Asphalt Plant Engineer and Vibratory Console
Group 14: Barrier Mover, Barrier Transport and machines of a similar nature
Group 15: Compressors (Portable, 3 or more), Truck Compressor (Engineer Driver), Tugger Machines, Well Point Pumps, Chum Drill
Group 16: Boilers(High pressure),Compressors, Pumps(River Cofferdam) and Welding Machines(except where arc is operated by another Operating Engineer) Push Button Machines, All Engines, irrespective of power(Power Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.
Group 17: Utility-Horizontal Boring Rig
Group 18: Utility Compressors
Group 19: Paving-Asphalt Spreader, Autograde (C.M.I.), Roto-Mill
Group 20: Paving-Asphalt Roller
Group 21 Paving-Asphalt Plant
Group 22: Roller (non paving, all sizes)

WAGES:(per hour)	07/01/2024
Group 1	$ 123.06
Group 2	102.98
Group 3	106.03
Group 4	103.66
Group 5	101.78
Group 6	98.05
Group 7	99.74
Group 8	97.10
Group 9	95.24
Group 10	91.40
Group 11	85.94
Group 12	87.66
Group 13	88.24
Group 14	80.02
Group 15	68.59
Group 16	64.34
Group 17	92.77
Group 18	63.97
Group 19	97.10
Group 20	94.83
Group 21	81.44
Group 22	94.83

Cranes: Crawler or Truck

100' to 149'	$0.50 per hour additional to above Crane Rates
150' to 249'	$0.75 per hour additional to above Crane Rates
250' to 349'	$1.00 per hour additional to above crane Rates
350' to 450'	$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:
Groups 1-22
Regular Time $ 26.15* plus $ 6.30

* This portion of benefits subject to the same premium as shown for wages.

Non-Worked Holiday Supplemental Benefits:

$ 20.80

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour:
(1) year terms at the following wage rates:

Groups 1-22	1st	2nd	3rd
	$ 44.92	$ 54.40	$ 63.88

Supplemental Benefits:

Groups 1-22
Regular Time $ 15.65*
plus $ 6.30

* This portion of benefits is subject to the SAME PREMIUM as shown for overtime wages

9-14 HC

Operating Engineer - Heavy Construction 2 — 03/01/2025

JOB DESCRIPTION Operating Engineer - Heavy Construction 2 **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
(For Groups 1 - 22, see Operating Engineer - Heavy Construction 1)

Group 23: Cherry Picker (Over 20 tons), Loader (Over 6 yards)

Group 24: Backhoes and Loaders (Up to 37,000lbs), Bulldozers, Scrapers, Turn-A-Pulls, Tugger Hoists, Tractors, Hysters, Roustabout Cranes, Conveyors, Ballast Regulators (Ride On), Track Removal Machine or similar, Motor Graders, Locomotives (10 tons and under),Curb & Gutter Pavers and machines of a similar nature

Group 25: Post Hole Digger, Ditch Winch, Road Finishing Machines, Rollers (5 tons and under, Dual Purpose Trucks, Forklifts, Dempsey Dumpsters, Fireman

Group 26: Service Engineer (Gradalls, Concrete Pumps, Cold Planers Grader)

Group 27: Service Mechanic (Shovels, Draglines, Crawler Cranes, Backhoes, Trenching Machines, Compressors (3 or more in battery)

Group 28: Steam Equipment Operator (Water rigs, steam shovels, power boilers, derrick boats)

WAGES:(per hour)	07/01/2024
Group 23	$ 87.05
Group 24	84.62
Group 25	80.57
Group 26	76.47
Group 27	54.57
Group 28	80.57

Cranes: Crawler or Truck

100' to 149'	$0.50 per hour additional to above Crane Rates
150' to 249'	$0.75 per hour additional to above Crane Rates
250' to 349'	$1.00 per hour additional to above crane Rates
350' to 450'	$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS
Per Hour:
Groups 23-28
Regular Time 31.02* + $7.40

* This portion of benefits subject to the same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:
21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour:
(1) year terms at the following wage rates:

	1st	2nd	3rd	4th
Groups 23-28	$38.52	$45.23	$48.70	$52.17

Supplemental Benefits:

Regular Time $ 16.52* + $ 7.40

* This portion of benefits subject to same OT premium as wages.

9-15 HC

Operating Engineer - Marine Dredging 03/01/2025

JOB DESCRIPTION Operating Engineer - Marine Dredging **DISTRICT** 4

ENTIRE COUNTIES
Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES
These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour:	07/01/2024
CLASS A1 Deck Captain, Leverman, Mechanical Dredge Operator, Licensed Tug Operator 1000HP or more.	$ 45.26
CLASS A2 Crane Operator (360 swing)	40.33
CLASS B Dozer, Front Loader Operator on Land	To conform to Operating Engineer Prevailing Wage in locality where work is being performed including benefits.
CLASS B1 Derrick Operator (180 swing) Spider/Spill Barge Operator Operator II, Fill Placer, Engineer Chief Mate, Electrician,Chief Welder, Maintenance Engineer,Licensed Boat, Crew Boat Operator	39.14
CLASS B2 Certified Welder	36.84
CLASS C1 Drag Barge Operator, Steward, Mate, Assistant Fill Placer	35.83
CLASS C2 Boat Operator	34.68
CLASS D Shoreman, Deckhand, Oiler, Rodman, Scowman, Cook,	28.81

Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS
Per Hour:
THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B	$ 12.00 plus 7% of straight time wage, Overtime hours add $ 0.63
All Class C & D	$ 11.75 plus 7% of straight time wage, Overtime hours add $ 0.50

OVERTIME PAY
See (B2, F, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer 03/01/2025

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Dutchess: That part in Duchess County lying South of the North City line of Poughkeepsie.

WAGES
Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour:	07/01/2024
Survey Classifications	
Party Chief	$ 49.39
Instrument Man	40.96
Rodman	35.63

SUPPLEMENTAL BENEFITS
Per Hour:

All Crew Members: $ 23.75

OVERTIME PAY
OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.
*Double-time paid on the 9th hour on Saturday.

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Painter 03/01/2025

JOB DESCRIPTION Painter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	05/01/2025 Additional
Brush	52.86*	$ 2.62**
Abatement/Removal of lead based or lead containing paint on materials to be repainted.	52.86*	

Spray & Scaffold	$ 55.86*
Fire Escape	55.86*
Decorator	55.86*
Paperhanger/Wall Coverer	55.09*

*Subtract $ 0.10 to calculate premium rate.

** To be allocated at a later date.

SHIFT WORK
Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, and Westchester; Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL BENEFITS
Per hour:

Paperhanger	$ 36.73
All others	34.31
Premium	38.28**

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY
See (A, E, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One (1) year terms at the following wage rate.

Per hour:	07/01/2024
Appr 1st term...	$ 20.22*
Appr 2nd term...	25.93*
Appr 3rd term...	31.61*
Appr 4th term...	42.40*

*Subtract $ 0.10 to calculate premium rate.

Supplemental benefits:
Per Hour:

Appr 1st term...	$ 16.89
Appr 2nd term...	20.95
Appr 3rd term...	24.10
Appr 4th term...	30.57

8-NYDC9-B/S

Painter 03/01/2025

JOB DESCRIPTION Painter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES
Nassau: Atlantic Beach, Ceaderhurst, East Rockaway,Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave, Rockville is the boundary line up to Lawson Blvd, turning right going west all the above territory. Starting at Union Turnpike &Lakeville Rd going north to northern Blvd. the west side of Lakeville Rd to Northern Blvd. At Northern Blvd doing east the district north of Northern blvd to Port Washington blvd. West of Port Washington blvd to St.Francis Hospital then north of first traffic light to Port Washington & Sands Point, Manor Haven, & Harbour Acres.

WAGES

Per hour:	07/01/2024
Drywall Taper	$ 57.44

SUPPLEMENTAL BENEFITS
Per Hour:
Journeyworker: $ 25.29

OVERTIME PAY
See (A, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6, 8, 11, 18, 19, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

1st term	$ 22.30
2nd term	28.99
3rd term	34.67
4th term	46.05

Supplemental Benefits per hour:

1st term	$ 14.35
2nd term	19.83
3rd term	20.93
4th term	23.12

8-NYC9-1974-DWT

Painter - Bridge & Structural Steel 03/01/2025

JOB DESCRIPTION Painter - Bridge & Structural Steel **DISTRICT** 8

ENTIRE COUNTIES
Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES
Per Hour:
STEEL:
Bridge Painting: 07/01/2024
$ 56.00
+ 10.35*

ADDITIONAL $7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK
When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS
Per Hour:
Journeyworker:
$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY
See (B, F, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage - Per hour:
Apprentices: (1) year terms.

1st year	$ 22.40

	+ 4.14
2nd year	$ 33.60
	+ 6.21
3rd year	$ 44.80
	+ 8.28

Supplemental Benefits - Per hour:

1st year	$ 1.16
	+ 12.62
2nd year	$ 7.46
	+ 18.93
3rd year	$ 9.94
	+ 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Metal Polisher 03/01/2025

JOB DESCRIPTION Painter - Metal Polisher **DISTRICT** 8

ENTIRE COUNTIES
Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation
** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2024
Journeyworker:	
All classification	$ 12.79

OVERTIME PAY
See (B, E, P, T) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:
One (1) year term at the following wage rates:

	07/01/2024
1st year	$ 19.67
2nd year	21.63
3rd year	23.60
1st year*	$ 22.06
2nd year*	22.07
3rd year*	24.14
1st year**	$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation
** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:
Per hour:

1st year	$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plasterer 03/01/2025

JOB DESCRIPTION Plasterer **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per hour:

	07/01/2024	08/01/2024
Building:		
Plasterer/Traditional & Spraying Fireproofing	$ 47.72 + $5.00*	$ 47.99 + $5.62*

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 25.35	$ 26.10

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
*This portion is not subjected to OT premiums.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages: (Per hour) 800 hours term:	07/01/2024	08/01/2024
1st term	$ 19.30 + 0.68*	$ 19.44+ 0.68*
2nd term	22.53 + 0.81*	22.69+ 0.81*
3rd term	25.79 + 0.95*	25.98+ 0.95*

*This portion is not subjected to OT premiums.

Supplemental Benefits:
(Per hour):
(800) hours term:

1st term	$ 11.59	$ 11.95
2nd term	12.02	12.44
3rd term	12.52	13.08

9-262

Plumber 03/01/2025

JOB DESCRIPTION Plumber **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

	07/01/2024
Plumber	$ 74.95
Temporary Service**	$ 60.04

** Temporary Service- Includes Maintenance of cooling & heating apparatus, maintenance work on pneumatic systems during the construction period, and work on temporary heat. All hours paid at straight time, including holidays.

**THERE ARE NO HELPERS UNDER THIS CLASSIFICATION.

On tower work, bridges, elevated highway, or buildings, where pipe is being installed, fifty (50) or more feet vertically in a free drop from its base, an additional $1.00 per hour.

SHIFT WORK
Shift work, when directly specified in public agency or authority contract documents, and continues for a period of not less than ten (10) consecutive work days. A shift shall consist of seven(7) hours with one-half (1/2) hour for lunch after the first four (4) hours of each shift.
A premium of thirty percent (30%) for wages and supplemental benefits on shift work performed Monday through Friday on the 4 P.M. and midnight shifts.
For shift work performed on weekends the shift premium shall be fifty percent (50%) of wages and supplemental benefits.
For shift work performed on holidays designated below, double time wages and supplemental benefits shall be paid. Also noted that the normal workday Monday through Friday 8:00 A.M. to 3:00 P.M. is not considered shift work, and therefore not subject to shift premium.

SUPPLEMENTAL BENEFITS
Per hour:

Plumber	$ 43.00
Temporary Service	$ 34.32

OVERTIME PAY
See (C, *D, O, V) on OVERTIME PAGE
*Where the plumbing contract price is one and one half million dollars ($1,500,000.00) or less, code D applies.

HOLIDAY
Plumber
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE.
Repairs & Maintenance
Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Wages per hour:

(1/2) year terms at the following wage:

1st	2nd	3rd&4th	5th&6th	7th&8th	9th	10th
$ 19.00	$ 21.00	$ 30.22	$ 32.32	$ 35.17	$ 36.57	$ 48.64

Supplemental Benefits:
(1/2) year term at the following dollar amount:

1st	2nd	3rd-10th
$ 5.43	$ 6.43	$ 22.73

9-1 Const

Plumber - Pump & Tank: Oil Trades Installation & Maintenance — 03/01/2025

JOB DESCRIPTION Plumber - Pump & Tank: Oil Trades Installation & Maintenance **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

	07/01/2024
Pump & Tank	$ 73.00

SUPPLEMENTAL BENEFITS
Per hour:

Plumber	$ 32.81

OVERTIME PAY
Pump & Tank See (B, F, H) on OVERTIME PAGE.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE.

9-1-P&T

Plumber - Repairs & Maintenance 03/01/2025

JOB DESCRIPTION Plumber - Repairs & Maintenance **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

	07/01/2024
Repairs & Maintenance	$ 48.20

*Repair & Maintenance work is any repair and/or replacement of present plumbing system that does not change existing roughing or water supply lines. Projects regardless of work type which have approved plans and specifications wherein the plumbing exceeds $725,000 are excluded.

SUPPLEMENTAL BENEFITS
Per hour:

Repair Maintenance	$ 21.36

OVERTIME PAY
Repairs & Maintenance See (B, H) on OVERTIME PAGE.

HOLIDAY
Repairs & Maintenance
Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES
Note: The Repairs & Maintenance Category has NO Apprentices.

9-1 R&M

Roofer 03/01/2025

JOB DESCRIPTION Roofer **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES
Per Hour:

	07/01/2024
Roofer/Waterproofer	$ 48.50 + $7.00*

* This portion is not subjected to overtime premiums.

Note: Abatement/Removal of Asbestos containing roofs and roofing material is classified as Roofer.

SUPPLEMENTAL BENEFITS
Per Hour: $ 31.87

OVERTIME PAY
See (B, H) on OVERTIME PAGE
Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
(1) year term apprentices indentured prior to 01/01/2023

1st	2nd	3rd	4th
$ 16.97	$ 24.25 + 3.50*	$ 29.10 + 4.20*	$ 36.37 + 5.26*

Supplements:

1st	2nd	3rd	4th
$ 4.10	$ 16.17	$ 19.31	$ 24.02

* This portion is not subjected to overtime premiums.

(1) year term apprentices indentured after 01/01/2023

1st	2nd	3rd	4th	5th
$ 18.43	$ 21.82	$ 24.25	$ 29.10	$ 36.37
	+ 3.16*	+ 3.50*	+ 4.20*	+ 5.26

Supplements:

1st	2nd	3rd	4th	5th
$ 7.73	$ 14.59	$ 16.17	$ 19.31	$ 24.02

* This portion is not subjected to overtime premiums.

9-8R

Sheetmetal Worker 03/01/2025

JOB DESCRIPTION Sheetmetal Worker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES
Per Hour:

	07/01/2024	08/01/2024
Sign Erector	$ 58.00	$ 60.00

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS
Per Hour:

	07/01/2024	08/01/2024
Sign Erector	$ 57.12	$ 58.31

OVERTIME PAY
See (B, F, S) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour:
6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

SUPPLEMENTAL BENEFITS
Per Hour:

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024	$ 18.27	$ 20.75	$ 25.22	$ 25.70	$ 34.66	$ 37.74	$ 41.65	$ 44.78	$ 47.93	$ 51.04
08/01/2024	$ 18.65	$ 21.16	$ 23.69	$ 26.22	$35.39	$ 38.52	$ 42.55	$ 45.75	$ 48.96	$ 52.15

4-137-SE

Sheetmetal Worker 03/01/2025

JOB DESCRIPTION Sheetmetal Worker **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour:

	07/01/2024	11/01/2024
Sheetmetal Worker	$ 61.09	$ 62.34
Maintenance of Fans Temporary Operation	48.87	51.42

SUPPLEMENTAL BENEFITS
Per Hour:

Sheetmetal Worker	$ 53.25	$ 55.00
Maintenance Worker	53.25	55.00

OVERTIME PAY
See (B, E, E2, Q, V) on OVERTIME PAGE
For Maintenance See Codes B,E, Q & V

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per Hour: Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	$ 21.26	$ 21.70
3rd & 4th Term	27.39	27.95
5th & 6th Term	33.52	34.21
7th & 8th Term	42.75	43.63
9th Term	48.55	49.85

Per Hour: Supplemental Benefits

1st & 2nd Term	$ 19.66	$ 19.72
3rd & 4th Term	26.73	26.97
5th & 6th Term	31.57	31.98
7th & 8th Term	38.78	39.45
9th Term	43.62	44.47

4-28

Steamfitter 03/01/2025

JOB DESCRIPTION Steamfitter **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	01/01/2025
AC Service/Heat Service & Refrigeration	$ 46.10	$ 46.60

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

SUPPLEMENTAL BENEFITS
Per Hour Worked:

AC Service/Heat Service & Refrigeration	$ 20.96	$ 22.71
Per hour Paid:	$ 17.65	$ 19.65

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES
1 year terms
Wages per hour:

1st Term	$ 22.31	$ 22.55
2nd Term	26.94	27.23
3rd Term	31.38	31.72

4th Term	37.90	38.31
Benefits per hour worked:		
1st Term	$ 14.44	$ 14.93
2nd Term	15.91	16.43
3rd Term	17.41	17.99
4th Term	19.44	20.10
Benefits per hour paid:		
1st Term	$ 11.38	$ 11.87
2nd Term	12.85	13.37
3rd Term	14.35	14.93
4th Term	16.38	17.04

4-638B-StmFtrRef

Steamfitter 03/01/2025

JOB DESCRIPTION Steamfitter **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	10/1/2024	03/31/2025
Sprinkler/Steam AC/Heat Fitter	$ 69.11	$ 69.86	Additional $0.75/Hr*
Temporary Heat & AC Fitter	52.54	53.11	Additional $0.75/Hr*

SHIFT WORK
Add 15% to Hourly Wage and Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS
Per Hour:

Sprinkler/Steam Fitter	$ 53.49
Temporary Heat & AC Fitter	43.67

OVERTIME PAY
Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays:

Per Hour:		
Wages	07/01/2024	10/01/2024
Sprinkler/Steam	$ 138.22	$ 139.72
Temp Heat/AC	105.08	106.22
Supplemental Benefits		
Sprinkler/Steam	105.99	106.84
Temp Heat/AC	85.35	87.34

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Per hour:
WAGES

1 year Terms	1st	2nd	3rd	4th	5th
07/01/2024	$ 27.98	$ 34.96	$ 41.94	$ 48.92	$ 55.90
Supplemental Benefits					
07/01/2024	21.80	27.05	32.28	37.53	42.76
10/01/2024	22.10	27.42	32.73	38.05	43.36

Premium Time Supplemental Benefits

07/01/2024	43.60	54.10	64.56	75.06	85.52
10/01/2024	43.36	53.94	64.52	77.01	85.68

4-638A-StmSpFtr

Teamster - Heavy Construction 03/01/2025

JOB DESCRIPTION Teamster - Heavy Construction **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per Hour:

Dump Trucks/Drivers (Debris Removal, Street Level and below)

	07/01/2024
Dump Trucks	$ 44.165
Tractor Trailers	47.315
Euclid/Turnapull	47.88

SUPPLEMENTAL BENEFITS
Per Hour:

Dump Trucks	$ 59.1525
All Others	56.9025

Up to 40 Hours Worked

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE
Note: Employees receive 2 hours of Holiday Pay for each day worked in holiday week (not to exceed 8 hours)
Note: Employees receive 5 1/3 hours of Holiday Pay for each day worked in Thanksgiving Holiday Week.

4-282

Welder 03/01/2025

JOB DESCRIPTION Welder **DISTRICT** 1

ENTIRE COUNTIES
Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES
Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

(AA)	Time and one half of the hourly rate after 7 and one half hours per day
(A)	Time and one half of the hourly rate after 7 hours per day
(B)	Time and one half of the hourly rate after 8 hours per day
(B1)	Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday. Double the hourly rate for all additional hours
(B2)	Time and one half of the hourly rate after 40 hours per week
(B3)	Time and one half of the hourly rate after 40 straight hours per week
(C)	Double the hourly rate after 7 hours per day
(C1)	Double the hourly rate after 7 and one half hours per day
(D)	Double the hourly rate after 8 hours per day
(D1)	Double the hourly rate after 9 hours per day
(E)	Time and one half of the hourly rate on Saturday
(E1)	Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
(E2)	Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
(E3)	Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
(E4)	Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
(E5)	Double time after 8 hours on Saturdays
(F)	Time and one half of the hourly rate on Saturday and Sunday
(G)	Time and one half of the hourly rate on Saturday and Holidays
(H)	Time and one half of the hourly rate on Saturday, Sunday, and Holidays
(I)	Time and one half of the hourly rate on Sunday
(J)	Time and one half of the hourly rate on Sunday and Holidays
(K)	Time and one half of the hourly rate on Holidays
(L)	Double the hourly rate on Saturday
(M)	Double the hourly rate on Saturday and Sunday
(N)	Double the hourly rate on Saturday and Holidays
(O)	Double the hourly rate on Saturday, Sunday, and Holidays
(P)	Double the hourly rate on Sunday
(Q)	Double the hourly rate on Sunday and Holidays
(R)	Double the hourly rate on Holidays

(S) Two and one half times the hourly rate for Holidays

(S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.

(T) Triple the hourly rate for Holidays

(U) Four times the hourly rate for Holidays

(V) Including benefits at SAME PREMIUM as shown for overtime

(W) Time and one half for benefits on all overtime hours.

(X) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

(1)	None
(2)	Labor Day
(3)	Memorial Day and Labor Day
(4)	Memorial Day and July 4th
(5)	Memorial Day, July 4th, and Labor Day
(6)	New Year's, Thanksgiving, and Christmas
(7)	Lincoln's Birthday, Washington's Birthday, and Veterans Day
(8)	Good Friday
(9)	Lincoln's Birthday
(10)	Washington's Birthday
(11)	Columbus Day
(12)	Election Day
(13)	Presidential Election Day
(14)	1/2 Day on Presidential Election Day
(15)	Veterans Day
(16)	Day after Thanksgiving
(17)	July 4th
(18)	1/2 Day before Christmas
(19)	1/2 Day before New Years
(20)	Thanksgiving
(21)	New Year's Day
(22)	Christmas
(23)	Day before Christmas
(24)	Day before New Year's
(25)	Presidents' Day
(26)	Martin Luther King, Jr. Day
(27)	Memorial Day
(28)	Easter Sunday

(29) Juneteenth

New York State Department of Labor - Bureau of Public Work
State Office Building Campus
Building 12 - Room 130
Albany, New York 12226

REQUEST FOR WAGE AND SUPPLEMENT INFORMATION

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

This Form Must Be Typed

Submitted By: (Check Only One) ☐ Contracting Agency ☐ Architect or Engineering Firm ☐ Public Work District Office Date:

A. Public Work Contract to be let by: (Enter Data Pertaining to Contracting/Public Agency)

1. Name and complete address ☐ (Check if new or change)

Telephone Fax

E-Mail:

2. NY State Units (see Item 5).

- ☐ 01 DOT
- ☐ 02 OGS
- ☐ 03 Dormitory Authority
- ☐ 04 State University Construction Fund
- ☐ 05 Mental Hygiene Facilities Corp.
- ☐ 06 OTHER N.Y. STATE UNIT
- ☐ 07 City
- ☐ 08 Local School District
- ☐ 09 Special Local District, i.e., Fire, Sewer, Water District
- ☐ 1O Village
- ☐ 11 Town
- ☐ 12 County
- ☐ 13 Other Non-N.Y. State (Describe)

3. SEND REPLY TO ☐ (check if new or change)
Name and complete address:

Telephone Fax

E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR THIS PROJECT :

OFFICE USE ONLY

B. PROJECT PARTICULARS

5. Project Title _____

Description of Work _____

Contract Identification Number _____

Note: For NYS units, the OSC Contract No. _____

6. Location of Project:
Location on Site _____

Route No/Street Address _____

Village or City _____

Town _____

County _____

7. Nature of Project - Check One:

- ☐ 1. New Building
- ☐ 2. Addition to Existing Structure
- ☐ 3. Heavy and Highway Construction (New and Repair)
- ☐ 4. New Sewer or Waterline
- ☐ 5. Other New Construction (Explain)
- ☐ 6. Other Reconstruction, Maintenance, Repair or Alteration
- ☐ 7. Demolition
- ☐ 8. Building Service Contract

8. OCCUPATION FOR PROJECT :

- ☐ Construction (Building, Heavy Highway/Sewer/Water)
- ☐ Tunnel
- ☐ Residential
- ☐ Landscape Maintenance
- ☐ Elevator maintenance
- ☐ Exterminators, Fumigators
- ☐ Fire Safety Director, NYC Only
- ☐ Fuel Delivery
- ☐ Guards, Watchmen
- ☐ Janitors, Porters, Cleaners, Elevator Operators
- ☐ Moving furniture and equipment
- ☐ Trash and refuse removal
- ☐ Window cleaners
- ☐ Other (Describe)

9. Does this project comply with the Wicks Law involving separate bidding? YES ☐ NO ☐

10. Name and Title of Requester

Signature

SEE PAGE TWO FOR LAWS RELATING TO PUBLIC WORK CONTRACTS

NEW YORK STATE DEPARTMENT OF LABOR
Bureau of Public Work - Debarment List

LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE AWARDED ANY PUBLIC WORK CONTRACT

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements;
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements.

The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = New York State Department of Labor; NYC = New York City Comptroller's Office; AG = New York State Attorney General's Office; DA = County District Attorney's Office.

Debarment Database: To search for contractors, sub-contractors and/or their successors debarred from bidding or being awarded any public work contract or subcontract under NYS Labor Law Articles 8 and 9, or under NYS Workers' Compensation Law Section 141-b, access the database at this link: https://apps.labor.ny.gov/EDList/searchPage.do

For inquiries please call 518-457-5589.

NYSDOL Bureau of Public Work Debarment List 03/21/2025

Article 8

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	DOL	*****5754	0369 CONTRACTORS, LLC		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL	*****5784	A.J.M. TRUCKING, INC.		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	DOL		AKHLAQ OULAKH		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	NYC		ALL COUNTY SEWER & DRAIN, INC.		7 GREENFIELD DR WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL	*****8387	AMERICAN PAVING & MASONRY, CORP.		8 FOREST AVE GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL	*****8654	AMERICAN PAVING, INC.		8 FORREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	NYC		AMJED PARVEZ		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		ANGELO GARCIA		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL		ANGELO STANCO		8 FOREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL		ANGELO TONDO		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL	*****4231	ANKER'S ELECTRIC SERVICE, INC.		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027
DOL	DOL		ANTHONY MONGELLI		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	NYC		ARADCO CONSTRUCTION CORP		115-46 132RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	NYC		AVM CONSTRUCTION CORP		117-72 123RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	NYC		AZIDABEGUM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****8421	B & B DRYWALL, INC		206 WARREN AVE APT 1WHITE PLAINS NY 10603	12/14/2021	12/14/2026
DOL	DOL		B&L RENOVATION CO.		618 OCEAN PARKWAY APT A6BROOKLYN NY 11230	09/17/2020	09/17/2025
DOL	NYC	*****2113	BHW CONTRACTING, INC.		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL	*****5078	BLACK RIVER TREE REMOVAL, LLC		29807 ANDREWS ROAD BLACK RIVER NY 13032	10/17/2023	10/17/2028
DOL	DOL		BRADLEY J SCHUKA		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****5161	CALADRI DEVELOPMENT CORP.		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****3391	CALI ENTERPRISES, INC.		1223 PARK STREET PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****4155	CASA BUILDERS, INC.	FRIEDLANDER CONSTRUCTI ON	64 N PUTT CONNERS ROAD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	AG	*****7247	CENTURY CONCRETE CORP		2375 RAYNOR ST RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****0026	CHANTICLEER CONSTRUCTION LLC		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	NYC	*****2117	CHARAN ELECTRICAL ENTERPRISES		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	DOL		CHRISTOPHER GRECO		26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****2281	CORRAO TRUCKING, INC.		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL		CRAIG JOHANSEN		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027
DOL	DOL	*****3228	CROSS-COUNTY LANDSCAPING AND TREE SERVICE, INC.	ROCKLAND TREE SERVICE	26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****7619	DANCO CONSTRUCTION UNLIMITED INC.		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL		DANIEL ROBERT MCNALLY		7 GREENFIELD DRIVE WARWICK NY 10990	03/25/2022	03/25/2027

DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		DARWIN PEGUESE		6400 BALTIMORE NATIONAL SUITE 602CANTONSVILLE NY 21228	10/24/2024	10/24/2029
DOL	DOL		DAVID FRIEDLANDER		64 NORTH PUTT CORNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	DOL		DINA TAYLOR		64 N PUTT CONNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	AG		EDWIN HUTZLER		23 NORTH HOWELLS RD BELLPORT NY 11713	08/04/2021	08/04/2026
DOL	DA		EDWIN HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL		EMIL KISZKO		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	*****3298	EMJACK CONSTRUCTION CORP.		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	*****3298	EMJACK CONSTRUCTION LLC		4192 SIR ANDREW CIRCLE DOYLESTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL		EUGENIUSZ "GINO" KUCHAR		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	DA		FREDERICK HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****2998	G.E.M. AMERICAN CONSTRUCTION CORP.		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	NYC		GAYATRI MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DA		GIOVANNA TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DA		GIOVANNI NAPOLITANO		2501 BAYVIEW AVENUE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DA	*****0213	GORILLA CONTRACTING GROUP, LLC		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DA	*****4760	GTX CONSTRUCTION ASSOCIATES, CORP		2501 BAYVIEW AVE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	*****2397	ISLAND BREEZE MARINE, INC.		6400 BALTIMORE NATIONAL CANTONSVILLE MD 21228	10/24/2024	10/24/2029
DOL	DOL	*****9211	J. WASE CONSTRUCTION CORP.		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		J.M.J CONSTRUCTION		151 OSTRANDER AVENUE SYRACUSE NY 13205	11/21/2022	11/21/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	12/12/2022	12/12/2027
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JAMES J. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026

DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****7993	JBS DIRT, INC.		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	*****2435	JEFFEL D. JOHNSON	JMJ7 AND SON	5553 CAIRNSTRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JEFFEL JOHNSON ELITE CARPENTER REMODEL AND CONSTRUCTION		C2 EVERGREEN CIRCLE LIVERPOOL NY 13090	11/21/2022	11/21/2027
DOL	DOL	*****2435	JEFFREY M. JOHNSON	JMJ7 AND SON	5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JIM PLAUGHER		17613 SANTE FE LINE ROAD WAYNEFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL		JMJ7 & SON CONSTRUCTION, LLC		5553 CAIRNS TRAIL LIVERPOOL NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 AND SONS CONTRACTORS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS		7014 13TH AVENUE BROOKLYN NY 11228	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS AND SONS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS, LLC		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JOHN MARKOVIC		47 MANDON TERRACE HAWTHORN NJ 07506	03/29/2021	03/29/2026
DOL	DOL		JOHN WASE		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		JORGE RAMOS		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	DOL		JOSEPH K. SALERNO		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL		JOSEPH K. SALERNO II		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		JRN CONSTRUCTION CO, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL		KARIN MANGIN		796 PHELPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	DOL		KATE E. CONNOR		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KEAN INDUSTRIES, LLC		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL	*****2959	KELC DEVELOPMENT, INC		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026

DOL	DOL		KEVIN FUNEZ URBINA A/K/A KEVIN FUNEZ		1009 LYNDALE AVE TRENTON NJ 08629	12/16/2024	12/16/2029
DOL	DOL		KIMBERLY F. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	*****8760	KJ&J CONSTRUCTION, LLC		1009 LYNDALE AVE TRENTON NJ 08629	12/16/2024	12/16/2029
DOL	DOL		KMA GROUP II, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL	*****1833	KMA GROUP INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KMA INSULATION, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KRIN HEINEMANN		2345 ROUTE 52, SUITE 2N HOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	NYC		KULWANT S. DEOL		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	DA	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL	*****3716	LIGHTNIN ELECTRIC INC.		3418 NORTHERN BLVD SUITE 5-27LONG ISLAND CITY NY 11101	12/13/2024	12/13/2029
DOL	AG	*****3291	LINTECH ELECTRIC, INC.		3006 TILDEN AVE BROOKLYN NY 11226	02/16/2022	02/16/2027
DOL	DOL		LOUIS A. CALICCHIA		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****2196	MAINSTREAM SPECIALTIES, INC.		11 OLD TOWN RD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DA		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	DA		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		MAQSOOD AHMAD		618 OCEAN PKWY BROOKLYN NY 11230	09/17/2020	09/17/2025
DOL	DOL	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	NYC		MUHAMMED A. HASHEM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****7790	NATIONAL BUILDING & RESTORATION CORP		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	*****1797	NATIONAL CONSTRUCTION SERVICES, INC		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	NYC		NAVIT SINGH		402 JERICHO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		NELCO CONTRACTING, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DA		NICHOLAS T. ANALITIS		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****7429	NICOLAE I. BARBIR	BESTUCCO CONSTRUCTI ON, INC.	444 SCHANTZ ROAD ALLENTOWN PA 18104	09/17/2020	09/17/2025
DOL	DOL		NIKOLA NTONI		3418 NORTHERN BLVD SUITE 5-27LONG ISLAND CITY NY 11101	12/13/2024	12/13/2029
DOL	NYC	*****5643	NYC LINE CONTRACTORS, INC.		402 JERICHO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028

DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL		PAULINE CHAHALES		935 S LAKE BLVD MAHOPAC NY 10541	03/02/2021	03/02/2026
DOL	DOL		PETER STEVENS		11 OLD TOWN ROAD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DOL		PETER STEVENS		8269 21ST ST BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	DOL	*****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL	*****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	NYC		RASHEL CONSTRUCTION CORP		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP.		3 PARK CIRCLE MIDDLETOWN NY 10940	07/11/2022	07/11/2027
DOL	DA	*****7559	REGAL CONTRACTING INC.		24 WOODBINE AVE NORTHPORT NY 11768	10/01/2020	10/01/2025
DOL	DOL		ROBBYE BISSESAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	07/11/2022	07/11/2027
DOL	DOL	*****7172	RZ & AL INC.		198 RIDGE AVENUE VALLEY STREAM NY 11581	06/06/2022	06/06/2027
DOL	DOL		SAL FRESINA MASONRY CONTRACTORS, INC.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL		SAL MASONRY CONTRACTORS, INC.		(SEE COMMENTS) SYRACUSE NY 13202	07/16/2021	07/16/2026
DOL	DOL	*****9874	SALFREE ENTERPRISES INC		P.O BOX 14 2821 GARDNER RDPOMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		SALVATORE A FRESINA A/K/A SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	DOL		SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	DA	*****0476	SAMCO ELECTRIC CORP.		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DA		SILVANO TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DOL	*****0440	SOLAR GUYS INC.		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	NYC		SOMATIE RAMSUNAHAI		115-46 132ND ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	NYC	*****3661	SPANIER BUILDING MAINTENANCE CORP		200 OAK DRIVE SYOSSET NY 11791	03/14/2022	03/14/2027
DOL	DOL		STANADOS KALOGELAS		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	DOL	*****9528	STEEL-IT, LLC.		17613 SANTE FE LINE ROAD WAYNESFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL	*****3800	SUBURBAN RESTORATION CO. INC.		5-10 BANTA PLACE FAIR LAWN PLACE NJ 07410	03/29/2021	03/29/2026
DOL	DOL	*****9150	SURGE INC.		8269 21ST STREET BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	DOL		SYED MUHAMMAD S. JAFRI A/K/A SHARRUKH JAFRI		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		SYED RAZA		198 RIDGE AVENUE NY 11581	06/06/2022	06/06/2027
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL	*****9733	TERSAL CONSTRUCTION SERVICES INC		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13208	07/16/2021	07/16/2026
DOL	DOL		TERSAL CONTRACTORS, INC.		221 GARDNER RD P.O BOX 14POMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		TERSAL DEVELOPMENT CORP.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026

NYSDOL Bureau of Public Work Debarment List 03/21/2025

Article 8

DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****2426	THE MATRUKH GROUP, INC.		4307 28TH AVE PO BOX 9082ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		TIMOTHY PERCY		29807 ANDREWS ROAD BLACK RIVER NY 13612	10/17/2023	10/17/2028
DOL	DA	*****1050	TRI STATE CONSTRUCTION OF NY CORP.		50-39 175TH PLACE FRESH MEADOWS NY 11365	03/28/2022	03/28/2027
DOL	DA	*****4106	TRIPLE H CONCRETE CORP		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****8210	UPSTATE CONCRETE & MASONRY CONTRACTING CO INC		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL	*****6418	VALHALLA CONSTRUCTION, LLC.		796 PHLEPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	NYC	*****2426	VICKRAM MANGRU	VICK CONSTRUCTI ON	21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	NYC		VICKRAM MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DOL		VINCENT CORRAO		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL	*****8266	WILLIAM CHRIS MCCLENDON	MCCLENDON ASPHALT PAVING	1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM CHRIS MCCLENDON		1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM G. PROERFRIEDT		85 SPRUCEWOOD ROAD WEST BABYLON NY 11704	01/19/2021	01/19/2026
DOL	DOL	*****5924	WILLIAM G. PROPHY, LLC	WGP CONTRACTIN G, INC.	54 PENTAQUIT AVE BAYSHORE NY 11706	01/19/2021	01/19/2026
DOL	DOL		WILLIAM SCRIVENS		4192 SIR ANDREW CIRCLE DOYELSTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL		XENOFON EFTHIMIADIS		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028

EXHIBIT C: SPECIFICATIONS

Pomerantz Center
300 7TH AVENUE
New Fire Alarm System
C1591

PROJECT MANUAL

Project #: 8969-74

March 21, 2025

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SUMMARY OF GENERAL CONSTRUCTION WORK

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. The work to be done under the Contract, in accordance with the Contract Documents, consists of performing, installing, furnishing and supplying all materials, equipment, labor and incidentals necessary or convenient for the construction of the above referenced project at the Fashion Institute of Technology and carrying out all of the duties and obligations imposed upon the Contractor by the Contract Documents. The work is to be performed in conjunction with the Fire Alarm work specified elsewhere.

B. The main features of the General Construction Work as indicated in contract drawings and specifications shall include, but not be limited to the following:

- Removal of areas of ceilings and walls for installation of new conduit, wiring and fire alarm devices, equipment, panels, cabinets etc.
- Patch, repair and painting of ceilings and walls after new systems are removed permanently and/or new or existing devices reinstalled in the same or different location.
- Note: Removal of existing fire alarm devices shall be performed after the new fire alarm system is installed, tested and approved by agencies having jurisdiction. Repair work and painting shall be performed in these areas.
- Reinstallation of various types of ceilings and walls, to match existing or as indicated on drawings.
- Construction of new walls, ceilings and soffits as indicated.
- Painting of exposed new and existing gypsum board, plaster, and concrete masonry units.
- Repair of fireproofing lost due to demolition activities.
- Core drilling of floors for fire alarm system conduits and wiring.
- Installation of fire stopping in compromised rated walls & floors.
- Notification to Architect if a fire rated wall does not go to the under slab.

1.2 RELATED SECTIONS

All sections within these Specifications

1.3 PHYSICAL COMPLETION DATE

A. See FIT Terms and Conditions of negotiated contract.

1.4 ITEMS NOT INCLUDED

A. The following items shown on the drawings are not included in this Contract:
   1. Items indicated “NIC” (Not in Contract).

   2. Existing construction, except where such construction is indicated to be removed, replaced, or altered.
   3. Field conditions above the ceiling where fire rated walls have been compromised or incomplete. Field conditions architect to be immediately notified.

1.5 EXAMINATION OF PREMISES

A. Verification of Existing Conditions after Award
   1. Various existing conditions at locations of the Work which cannot be determined until removals are under way cannot be indicated on the Drawings or described in the Specifications.

   2. Perform all such removals as required to verify all existing conditions before performing the work.

   3. Where applicable, before disturbing any structural work, make all possible preliminary investigations to verify, any existing conditions threat.

B. Discrepancies in Existing Conditions

   During the process of the Work, should conditions be encountered that materially differ from those shown on the Drawings or indicated in the Specifications, or conditions which could not reasonably have been anticipated, which conditions will materially affect the cost of the Work, such conditions shall immediately be called to the attention of the Architect / Engineer, before they are further disturbed. The Architect / Engineer will promptly investigate the conditions and if it is found that they do so materially differ, shall issue a clarification.

1.7 CONTRACTOR USE OF PREMISES

A. Comply with the Facilities Contractor Identification Policy.

B. Work hours shall be as established by the College Facilities Department.

C. Check in with the Facility Representative, as directed, at the beginning of each work day. Furnish information regarding name of employee, where employees will be working during the day.

D. Comply with applicable Federal and State of New York Right-to-Know Law provisions and supply copies of the appropriate Material Safety Data Sheets (MSDS) to the F.I.T. Facilities Right-to-Know Information Officer.

E. Do not diminish the level of life safety during performance of the Work.

F. Employees must sign in and sign out at the end of their work day with the construction managers or with an FIT facilities representative.

G. A daily log must be maintained.

1.8 REFERENCE SPECIFICATIONS AND STANDARDS

A. Comply with the requirements of the various specifications and standards referred to in these specifications, except where they conflict with the requirements of these specifications. Such reference specifications and standards shall be the date of latest revision in effect at the time of receiving bids, unless a new date is given.

1.9 LAY-OUT

A. Examine the Contract Documents thoroughly and promptly report any errors or discrepancies to the Architect / Engineer before commencing the Work.

B. Lay out the Work in accordance with the Contract Documents.

C. All work shall be coordinated with the Fire Alarm System Contract Documents.

1.10 CLEAN-UP

A. Clean-up and containerize the rubbish (refuse, debris, waste materials, and removed materials and equipment) resulting from the Work at the end of each work day and leave work areas broom swept clean. Locate containerized rubbish where directed.

B. Remove piled rubbish from property at least once a week or more often if the rubbish presents a hazard. Properly dispose of rubbish. Burning of rubbish will not be permitted.

1.11 SUSTAINABILITY REQUIREMENTS

A. The Contractor shall meet sustainability performance and documentation requirements to comply with New York City Local Law 86 of 2005, and to achieve the following objectives: sustainable site use, water use reduction, conservation of energy and resources and improvement of indoor environmental quality.

B. Sustainability performance requirements include, but are not limited to: water use reduction, energy conservation, construction waste management, and indoor air quality controls during construction and prior to occupancy.

C. Sustainability documentation requirements include, but are not limited to, Contractor's Certification Form, cost information, documentation of VOC content, urea-formaldehyde content and recycled and regional content.

1.12 NEW YORK CITY CODE OF 2008 IMPLEMENTATION

A. Beginning July 1, 2008, Chapters 17 and 33 of the New York City Construction Code went into affect. These two chapters supersede the Controlled Inspections requirements contained in the 1968 Building Code, and Chapter 19 of the 1968 Building Code that deals with protection of the public.

1. References to public protections and code sections included in Chapter 19 of the 1968 code referenced in the Contract Documents shall mean those equivalent Sections contained in Chapter 33 of the NYC Construction Code. The Contractor shall be responsible for complying with all provisions of Chapter 33 of the NYC Construction Code.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 31 46
SPECIAL REQUIREMENTS FOR MECHANICAL AND ELECTRICAL WORK

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PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to be coordinated with and complementary to the General Conditions, and all other sections of the specification, wherever applicable to Mechanical and Electrical Work.

B. Where items of the General Conditions are repeated in this Section of the Specifications, it is intended to qualify or to call particular attention to them; it is not intended that any other parts of the General Conditions shall be assumed to be omitted if not repeated herein.

C. This Section applies equally and specifically to all Contractors and Subcontractors supplying labor and/or equipment and/or materials as required under the Heating, Ventilating and Air Conditioning, Plumbing, Sprinkler and Electrical Sections of the Specifications.

1.02 DEFINITIONS

A. "The Contractor" or "Each Contractor" means specifically, the Contractor or Subcontractor working under his respective Section (Heating, Ventilating and Air Conditioning, Plumbing, Sprinkler or Electrical) of this Specification.

B. "Provide" means to supply, erect, install, and connect up in complete readiness for regular operation, the particular work referred to.

C. "Furnish" means to supply and deliver to the job.

D. "Piping" includes, in addition to pipe, all fittings, valves, hangers, and other accessories related to such piping.

E. "Concealed" means hidden from sight as in chases, furred spaces, shafts, hung ceilings, or embedded in construction.

F. "Exposed" means "not concealed" as defined above. Work in trenches, crawl spaces, and tunnels shall be considered "exposed" unless otherwise specifically noted. Work located in mechanical rooms, accessible attics, open storage rooms, janitor’s closets, on the roof or anywhere outdoors shall be considered “exposed”.

G. "Approved equal" means any equipment or material which, in the opinion of the Architect, is equal in quality, durability, appearance, strength, design, performance, physical dimensions, and arrangement to the equipment or material specified, and will function adequately in accordance with the general design.

H. "Governmental" means all municipal, state and federal governmental agencies.

I. Where any device or part of equipment is herein referred to in the singular number (such as "the pump"), such reference shall be deemed to apply to as many such devices as are required to complete the installation as shown on the Drawings.

J. "HVAC" means Heating, Ventilating and Air Conditioning.

K. "Plumbing Contractor" means the Contractor doing Plumbing and Fire Protection Work including Sprinkler Work.

1.03 CODES AND STANDARDS

A. NY State Building Code, Fire Code, Mechanical Code, Plumbing Code, Fuel Gas Code, Energy Conservation Construction Code

B. NFPA National Fire Protection Association

C. ASME American Society of Mechanical Engineers

D. ANSI American National Standards Institute

E. ASTM American Society for Testing Materials

F. AWWA American Water Works Association

G. IBR Institute of Boiler and Radiator Manufacturers

H. NEMA National Electrical Manufacturers Association

I. ASHRAE American Society of Heating, Refrigeration and Air Conditioning Engineers

J. SMACNA Sheet Metal and Air Conditioning Contractors National Association, Inc.

K. ARI Air Conditioning and Refrigeration Institute

L. UL Underwriters' Laboratories

M. AMCA Air Movement Control Association

N. AABC Associated Air Balance Council

O. Local Water Company Rules and Regulations

P. National Electric Code

1.04 INTENT

A. It is the intention of the Specifications and Drawings to call for finished work, tested, and ready for operation. All materials, equipment, and apparatus shall be new and of first-class quality.

B. Any apparatus, appliance, material, or work not shown on Drawings, but mentioned in the Specifications, or vice versa, or any incidental accessories, or minor details not shown but necessary to make the work complete and perfect in all respects and ready for operation, even if not particularly specified, shall be provided without additional expense to the Owner.

1.05 DRAWINGS

A. The Drawings are generally diagrammatic and are intended to convey the scope of work and indicate general arrangement of equipment, ducts, conduits, piping, and fixtures.

B. The locations of all items shown on the Drawings or called for in the Specifications that are not definitely fixed by dimensions are approximate only. The exact locations necessary to secure the best conditions and results must be determined at the project and shall have the approval of the Architect before being installed. Do not scale Drawings.

C. Follow Drawings in laying out work and check Drawings of other trades to verify spaces in which work will be installed. Maintain maximum headroom and space conditions at all points. Where headroom and space conditions appear inadequate, Architect shall be notified before proceeding with installation.

D. If directed by the Architect, without extra charge, make reasonable modifications in the layout as needed to prevent conflict with work of other trades or for proper execution of the work.

E. Piping or ductwork connected to equipment may require different size connection than indicated on the Drawings. The Contractor shall provide transition pieces as required at the equipment.

1.06 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

A. Any questions or disagreements arising as to the true intent of this Specification or the Drawings or the kind and quality of work required thereby shall be decided by the Architect, whose interpretations thereof shall be final, conclusive, and binding on all parties.

B. In case of disagreement between Drawings and Specifications, or within either document itself, the better quality, greater quantity or more costly work shall be included in the Bid Price and the matter referred to the Architect's attention for decision and/or adjustment prior to the Contractor's submission of their Bid. If such ambiguity is identified by the Contractor during construction (after bid period), then the Architect shall be consulted merely to decide on the proper technical approach; the more costly work's value shall be included.

C. Maintain an awareness to avoid space conflict with other trades.

D. Purchase the equipment and material required in accordance with field measurements taken at the proper time during the construction progress.

1.07 VISITING THE SITE

A. Before submitting the final proposal, examine the site of the proposed work to determine the existing conditions that may affect the work, as this Section will be held responsible for any assumptions in regard.

1.08 EQUIPMENT AND MATERIALS

A. The proposal and bid must cover all items on the Drawings and in the Specifications exactly as drawn and specified.

B. All pipe, fittings and valves shall be manufactured in the United States of America.

C. All proposed substitutions of equipment of other manufacturers than those specified shall be attached to the base bid in an itemized list. Directly opposite each item indicate the amount to be added to or deducted from the base bid if the proposal is accepted. Failure to furnish such an itemized list will be interpreted to mean that it is agreed to provide all items exactly as drawn and

specified. The information given in the above itemized list will in no way affect the determination of low bidder.

D. Within twenty (10) working days after the acceptance of the proposal, and prior to the submission of any shop drawings for review, a complete list of manufacturers shall be submitted to the Architect of all equipment and materials proposed for the work. No reviews will be rendered on shop drawings submitted before the complete list of manufacturers is reviewed.

E. If material or equipment is installed before the Contractor obtained "No Objections" comment from Architect, and/or in the opinion of the Architect the material or equipment does not meet the intent of the Drawings and Specifications, the removal and replacement shall be made at no extra cost to the Owner.

F. The materials, workmanship, design, and arrangement of all work installed under the Contract shall be subject to the approval of the Architect.

G. If material or equipment is installed before the Contractor obtained "No Objections" comment from the Architect, trade installing same shall be liable for the removal and replacement at no extra charge to the Owner if, in the opinion of the Architect, the material or equipment does not meet the intent of the Drawings and Specifications.

H. The words "or approved equal" are understood to follow:
1. The name of any manufacturer, vendor, equipment or materials.
2. Any trade name, plate number, or catalog number.
3. Any detailed description used to define equipment or material; except where otherwise indicated on the Drawings or in the Specifications.
4. It is the intent of these Specifications that wherever a manufacturer of a product is specified, and the terms "other approved" or "or approved equal" are used, the substituted item must conform in all respects to the specified item. Consideration will not be given to claim that the substituted item meets the performance requirements with lesser construction (such as lesser heat exchange surface, etc.) Performance as delineated in schedules and in the Specifications shall be interpreted as minimum performance.

I. All equipment and materials required for installation under these Specifications shall be new and without blemish or defect. All electrical equipment shall bear labels attesting to Underwriters' Laboratories approval. Where no specific indication as to the type or quality of the material or equipment is indicated, a first class standard article shall be furnished.

J. Where it is proposed to use an item of equipment other than that specified or detailed on the Drawings which requires any redesign of the structure, partitions, foundations, piping, wiring, or of any other part of the mechanical, electrical, or architectural layout, all such redesign, and all new drawings and detailing required therefore shall, with the review of the Architect and subsequent comments by the Architect "No Exception" or "Exception as Noted" on the shop drawings, be prepared at no additional cost to the Owner.

K. Where such deviation from contract documents requires a different quantity and arrangement of ductwork, piping, wiring, conduit, and equipment from that specified or indicated on the Drawings, furnish and install any such ductwork, piping, structural supports, insulation, controllers, motors, starters, electrical wiring, and conduit, and any other additional equipment required by the system, at no additional cost to the Owner.

L. All equipment of one type (such as fan, coils, etc.) shall be the product of the same manufacturer.

M. Note that the comments "No Exception" or "Exception as Noted" marked on the shop drawings or other information submitted in accordance with the requirements herein before specified does not assure that the Engineer, Architect, or any other Owner's representative attests to the dimensional accuracy or dimensional suitability of the material or equipment involved or the mechanical performance of equipment. Comments on the shop drawings does not invalidate the Plans and Specifications if the shop drawings are in conflict with the Plans and Specifications.

1.09 SHOP DRAWINGS AND SUBMITTALS

A. Prior to delivery to job site, but sufficiently in advance of requirements necessary to allow Architect ample time for review, submit copies (as stated in "General Conditions") of shop drawings of all equipment, materials, piping, sleeves, conduit, ductwork, and wiring diagrams, and further obtain written comments "No Exception" or "Exception as Noted" for same from the Architect, before installing any of these items.

B. All shop drawings shall be prepared using AutoCAD. Manually drafted shop drawings are prohibited. If a Contractor is incapable of developing CAD drawings in-house, then they shall engage the services of an external drafting service in order to do so. The cost for such service shall be borne by the Contractor and included as part of their bid. Shop drawing submittals shall be on paper as described herein. While shop drawings are being developed and revised throughout the construction process, the Contractor shall continually update the CAD files. As construction approaches completion, these shop drawing CAD files shall be developed by the Contractor(s) into “As-Built” drawings. As part of standard project close-out documents, in addition to providing conventional paper copies of As-Built Shop Drawings, the Contractor must also provide CD’s containing electronic AutoCAD versions of same.

C. Shop drawings shall consist of manufacturer's certified scale drawings, cuts, or catalogs, including descriptive literature and complete certified characteristics of equipment, showing dimensions, capacity, code requirements, motor and drive testing, as indicated on the Drawings or Specifications.

D. Certified performance curves for all pumping and fan equipment shall be submitted for review.

E. Shop drawings submitted with insufficient information shall be rejected without review.

F. All shop drawings and submittals shall be sent electronically in PDF format. Other electronic file formats will be rejected without review.

G. Samples of materials or equipment, when requested by the Architect, shall be submitted for review.

H. Provide a detailed Transmittal with all shop drawings, via email. Any Transmittal, Shop drawing, sample, specification, etc. which is not labeled with all of the following information shall be rejected without review:
   1. Project name
   2. Project location
   3. Contractor's name and address, Subcontractor's name and address
   4. Applicable section and article number of specifications
   5. Contractor's approval stamp and signature
   6. Submission number

7. Specific service for which material is to be used.

I. Catalogs, pamphlets, or other documents submitted to describe items on which review is being requested, shall be specific and shall include clear identification in such catalog, pamphlet, etc., of item submitted, with identification clearly made in ink and highlighted. Data of a general nature such as tabulated charts will not be accepted and will be rejected without review.

J. Shop drawings indicating an unsuitable manufacturer shall be rejected without review.

K. The HVAC Subcontractor shall prepare ductwork shop drawings at ⅜"=1'-0" scale and submit to the Architect for their approval to prepare the coordination drawings as called for in paragraph 1.14. Ductwork shop drawings shall be drawn with double line ductwork and shall indicate the elevation above finished floor of all ducts, location, and height of building structure (beams, etc.), lengths of fabrication pieces and fittings. Show new and existing work. Shop drawings submitted shall be ready for sheet metal fabrication.

L. The comments "No Exception" or "Exceptions as Noted" rendered on shop drawings shall not be considered as a guarantee of measurements or building conditions. Where drawings are reviewed, said review does not in any way relieve responsibility, or necessity, of furnishing material or performing work as required by the Contract Drawings and Specifications.

M. "EXCEPTIONS, AS NOTED" means, unless otherwise noted on the drawings to approved for construction, fabrication and/or manufacture subject the provision that the work shall be carried out in compliance with all annotations and/or corrections indicated on the shop drawings and in accordance with the requirements of the Contract Documents. If also marked "RESUBMIT", "EXCEPTIONS AS NOTED" is invalid and a corrected submittal of the drawing is required.

N. If a shop drawing is resubmitted and does not comply with all of the comments indicated on the previous submission(s), and does not reflect specific reasons for such non-compliance, it shall be rejected without review.

O. Label resubmitted shop drawings with a stamp indicating the submittal number, for example: SECOND SUBMISSION; THIRD SUBMISSION, etc. and send separate transmittals for each item being submitted so that one transmittal does not cover more than one specific item or group of items from one manufacturer.

P. Failure to submit shop drawings in ample time for checking shall not entitle an extension of Contract time, and no claim for extension by reason of such default will be allowed.

Q. Prior to submission of shop drawings, thoroughly check each shop drawing, reject those not conforming to the Specifications, and indicate (by signature) that the shop drawings submitted meet Contract requirements. Deviations and/or exceptions to the contract documents should be clearly noted as being deviations and/or exceptions. The Contractor will later be required to correct such deviation and/or exceptions at his own expense, if they have not been noted and approved on the shop drawing.

R. All shop drawings showing routing of ductwork, piping and conduit, shall be not less than ⅜" = 1'-0" scale.

S. Incorporate a numbering system to help keep track of shop drawing submittals as follows:
   1. H or M.....HVAC shop drawings
   2. P.....Plumbing shop drawings
   3. FP.....Sprinkler / Standpipe shop drawings

4. E .....Electrical and Fire Alarm shop drawings

T. Concurrent numbers shall follow the prefix letter. Example: H-1, H-2, etc. In addition, shop drawings requiring resubmission should bear the number of the original submission and bear a suffix as follows: H-1A (second submission), H-1B (third submission), etc.

U. Before request for acceptance and final payment for the work, write a letter to the Architect stating that all shop drawings are brought to a condition "No Exception" or "Exception as Noted". Any outstanding shop drawings must be cleared with the Engineer.

1.10 RECORD DRAWINGS

A. The Contractor shall furnish, coordinate, produce and distribute record drawings as stated within the General Conditions of the Contract.

B. During construction keep an accurate record of all deviations between the work as shown on the Drawings and that which is actually installed.

C. On certain projects where Record Drawings must be on Mylar, secure from the Architect, a complete set of Drawings and note thereon all changes. Make a complete record of all changes and revisions in the original design which exist in the complete work. Furnishing of these transparencies and preparing these Record Drawings shall be at no additional cost to the Owner. When all revisions showing the work as finally installed are made, the corrected Mylar transparencies shall be submitted for review by the Architect. After review of the Record Drawings by the Architect, provide the Owner with one set of black-line prints and Mylar transparencies, at no additional cost to the Owner.

D. Where record drawings are CAD type, provide CD’s containing AutoCAD files of these drawings to the Architect, the Engineer and the Owner.

1.11 LAWS, ORDINANCES, PERMITS AND FEES

A. Give all necessary notices, obtain all permits and pay all governmental taxes, fees, and other costs in connection with the work; file all necessary plans, prepare all documents, and obtain all necessary approvals of all governmental departments having jurisdiction; obtain all required Certificates of Inspection for the work and deliver to the Architect before request for acceptance and final payment for the work. File for and obtain all required equipment use permits, Special Inspections, submission of fire alarm as-built drawings, backflow prevention device (BFP) sign-offs, boiler and domestic hot water heater filings with DEP and all other required filings.

B. Include in the work, without extra cost to the Owner, any labor, materials, services, apparatus, drawings, (in addition to Contract Drawings and Documents) in order to comply with all applicable laws, ordinances, rules and regulations, whether or not shown on Drawings and/or specified.

C. All materials furnished and all work installed shall comply with the rules and recommendations of the National Fire Protection Association, with all requirements of local utility companies, with the recommendations of the fire insurance rating organization having jurisdiction, and with the requirements of all governmental departments having jurisdiction.

D. Include in the bid, without extra cost to the Owner, retaining the service of a licensed professional engineer to obtain equipment use permits, filing of sprinkler drawings with hydraulic calculations,

DEP BFP sign-off, all DEP chimney and boiler submissions, preparation of fire alarm as-built drawings, testing of all fire and fire smoke dampers, and approvals and all other required filings.

1.12 INDEMNIFICATION

A. Pay all royalties and defend all suits or claims for infringement of any patent rights and save the Owner harmless from loss on account thereof.

B. If process or article specified is an infringement of a patent, promptly notify the Architect in writing, and any necessary changes shall be as provided in the Contract for changes in the work. If the Contractor performs any work specified knowing it to be an infringement of patent, he shall bear all costs arising therefrom.

C. Take out all necessary insurance, free of extra charge, and agree to indemnify and save harmless the party contracting for services against loss or expense, by reason of the liability imposed by law upon such party for damages because of bodily injuries, including death at any time resulting therefrom, accidentally sustained by any person or persons or on account of damage to property arising out of or in consequence of the performance of this Contract, whether such injuries to persons or damage to property are due or claimed to be due to any negligence in the performance of the Contract, the party contracting for services, employees or agents, or any other person.

1.13 ORGANIZATION OF WORK

A. The work throughout shall be executed in the best and most thorough manner under the direction of and to the satisfaction of the Engineers, Owners and Architects, who will jointly interpret the meaning of the Drawings and Specifications, and shall have the power to reject any work and materials which, in their judgment, are not in full accordance therewith.

B. The work called for under this Contract shall be carried on simultaneously with the work of other trades in a manner such as not to delay the overall progress of the work. Furnish promptly to other trades involved at the project, all information and measurements relating to the work which they may require. Cooperate with them in order to secure the harmony necessary in the interest of the project as a whole.

C. Furnish and install all work as expeditiously as possible in order to meet all construction schedules.

D. Keep a competent superintendent in charge of the work at all times. Such superintendent shall be replaced if deemed unsatisfactory to the Owner.

E. Upon award of contract, consult with the Architect and negotiate with subcontractors and manufacturers, and within thirty (30) days submit a preliminary list of major equipment for approval, complete with name of manufacturer, dates of purchase orders, and delivery dates to the site. Also submit within thirty (30) days, a preliminary schedule of installation of the various systems. This list shall be revised monthly and resubmitted. The second submittal shall contain the names of manufacturers of scheduled equipment (with names, addresses, and telephone numbers of local representatives).

F. Maintain a complete file of shop drawings at all times available to the Owner's representative.

G. Every facility shall be provided to permit inspection of the work by the Owner's representative during the course of construction.

H. Where items of equipment and/or materials are indicated in the Specifications as being furnished by other trades for installation, assume responsibility for the unloading of such equipment and/or materials from the delivery trucks, and for providing safe storage for same as required pending installation.

I. Where the work is to be installed in close proximity to work of other trades, or where there is evidence that the work is to interfere with work of other trades, assist in working out space conditions to make a satisfactory adjustment.

J. If so directed by the Architect, prepare composite working drawings and sections at a suitable scale not less than ⅜" = 1'-0" clearly showing how the work is to be installed in relation to the work of other trades. If the installation is made before coordinating with other trades, make all necessary changes in the work without extra charge to the Owner.

K. Before submitting shop drawings for sleeves, piping and ductwork, the Heating, Ventilating and Air Conditioning Subcontractor shall prepare a combined ⅜" = 1'-0" scale shop drawing for piping and ductwork indicating location of piping and ductwork with dimensions for each floor and Mechanical Rooms. A digital version of these shop drawings shall be given to the Electrical Contractor. The Electrical Contractor shall indicate the location of all lighting fixtures and conduit runs on these shop drawings. The Electrical Contractor shall provide a digital version of the updated shop drawings, with lighting fixtures and conduit runs indicated to the Plumbing Contractor. The Plumbing and Sprinkler Contractor shall indicate his piping on these digital shop drawings.

L. The Heating, Ventilating and Air Conditioning Contractor shall arrange a Coordination Meeting for each floor and Mechanical Equipment Room with Plumbing and Electrical Contractors under the supervision of the General Contractor. After coordination, each Contractor shall digitally sign the copy. The Heating, Ventilating and Air Conditioning Contractor shall submit these drawings to the Architect for review and he shall call any conflicts that could not be resolved in the coordination meetings, and/or deviation from original design, to the Architect's attention. After receiving written review from the Architect, each Contractor shall prepare the shop drawings as required under the paragraph "Shop Drawings" in the Specifications.

1.14 PROTECTION OF WORK AND PROPERTY

A. Maintain and protect all equipment, materials and tools from loss or damage from all causes until final acceptance by the Owner.

B. Assume responsibility for the protection of any finished work or other trades from damage or defacement by the operations and remedy any such injury or damages.

1.15 ACCESS DOORS IN FINISHED CONSTRUCTION

A. Install all work so that all parts required are readily accessible for inspection, operation, maintenance and repair. Minor deviations from the Drawings may be made to accomplish this, but changes of magnitude shall not be made without prior written review from the Architect.

B. Wherever mechanisms requiring access for maintenance, reading of instruments, or for operation are concealed in the structure and wherever else indicated on the Drawings, supply access doors of sizes necessary to provide ready access to the concealed items. Group together valves, controls,

dampers, traps, expansion joints, cleanouts, gauges, switches, and other equipment requiring access in walls and furred spaces to reduce the number of access doors.

C. Access doors shall be Milcor Style A, B or K, L or M, as manufactured by Inland Steel Products Co. or approved equal. Minimum access door shall be 12" x 12". For installation in plastered wall or ceiling, provide Style "K" or "L" as required. For installation in masonry walls, provide Style "M". For installation in acoustical tile surfaces, provide Style "AT". For installation in acoustical plaster surfaces provide Style "AP". Fire resistive access doors for suspended dry wall ceiling shall be Style ATC's. Provide fire rated access doors at fire rated shafts, stairwells, corridors and at all other walls with Fire Rating.

D. Provide 24" x 24" access door for each duct or pipe shaft. Provide at least one (1) per floor, or as indicated on the drawings. Provide 18” x 24” access door in each outside air and exhaust air plenum.

E. Access doors shall be installed in building structure under a separate Section.

F. All plumbing, electric and heating and ventilating access doors etc., shall be provided with Corbin #2722-1/2 master keyed cylinder locks. These locks shall be supplied and installed by the respective Contractor. These cylinder locks shall be purchased through the General Contractor's subcontractor for hardware after submission and review of the panel schedule as hereinafter specified.

G. Prepare a schedule showing location of all panels, cabinets, etc. to receive the Corbin lock. This schedule shall designate, by building and room number, the panel or cabinet location and shall be submitted to the Architect. This schedule is required for use in preparation of keying information. Locks shall not be purchased prior to review of this schedule.

H. Access doors for fire and smoke dampers shall be permanently identified on the exterior by a label having letters not less than 0.5 inch in height and reading: **SMOKE DAMPER or FIRE DAMPER or FIRE/SMOKE DAMPER**. This shall include ceiling tiles which provide access to these dampers.

1.16 SCAFFOLDING, RIGGING, HOISTING

A. Provide all scaffolding, rigging, hoisting and services necessary for erection and delivery into the premises of all equipment and materials furnished under this Section of the Specifications, and remove same from premises when no longer required.

B. In the event that supplementary bracing of the basic building structure is required to assure a secure rigging procedure and a secure route for the equipment being handled, assume full responsibility for such supplementary bracing.

1.17 SLEEVES, PIPE AND CONDUIT INSERTS AND ANCHOR BOLTS

A. Provide and assume responsibility for the location and maintenance in proper position of all sleeves, inserts, and anchor bolts required for the work. In the event that failure to do so requires cutting and patching of finished work, it shall be done without additional cost to the Owner.

B. All pipes and conduits passing through all walls or partitions shall be provided with sleeves having an internal diameter larger than the outside diameter of the pipe or insulation enclosing the pipe or conduit. Sleeves through masonry walls and partitions shall be Schedule 40 black steel pipe. Sleeves through non-masonry partitions may be 22 gauge galvanized steel sheet metal, set flush with finished surfaces of partitions.

C. Sleeves through foundation walls shall be James B. Clow & Sons № F-1430 or F-1435 cast iron wall sleeve with intermediate integral flange. Sleeves shall be set with ends flush with each face of wall. The space between sleeve and pipe shall be packed with a mechanical rubber seal, such as "Link Seal" manufactured by Thunderline Corp., (VICO) and then with oakum to within 2" of each face of the wall. The remaining space shall be packed and made watertight with a waterproof compound.

D. Sleeves through concrete floors shall be Schedule 40 black steel pipe and extending 1" above finished floors. The open sleeve space shall be packed with non-combustible materials.

E. Inserts shall be preset concrete inserts with steel reinforced rods through the insert and both ends hooked over the reinforced mesh. Inserts shall be of individual type of malleable iron construction with accommodation for removable nuts and threaded rods up to ¾" diameter, permitting lateral adjustment, except as otherwise noted. Individual inserts shall be Grinnell Fig. 279 up to 5" pipe and conduit, Fig. 282, 6" and up to 8" pipe and conduit, Fig. 152 above 8" and up to 12" pipe and conduit. For figures 282 and 152, they shall come with an opening at the tip to allow reinforcing rods up to ½" diameter to be passed through the insert body. Rods shall extend a minimum of 4" on either side of the insert. Pipes larger than 12" shall be suspended from steel members only.

F. In general, all piping and conduit shall be supported from structural steel building members only or approved malleable steel inserts imbedded in concrete pours. Concentrated loads up to 200 lbs. may use inserts in concrete in buildings having poured concrete floors whose thickness is 6” or more. All other loads shall be supported from steel building members. Inserts shall not be located in any corrugated deck flute as ceiling tabs nor within 2 feet in any direction from ceiling tabs. Inserts shall not be spaced closer than 4 feet on center in all directions.

G. Where layout revisions are required, and are approved after concrete deck is poured, piping conduit 3" and smaller may be supported at Intermediate Points by Phillips' ¾" expansion bolts with lead shields, provided main supports are welded to structural steel and are not more than twenty feet on centers.

H. Piping and conduit 3" and smaller shall be supported from existing slab by "Phillips" ¾ expansion bolts with lead shields. Piping 4" and larger shall be supported by means of 4" x 4" x ⅜" clip knee angle with ¾" expansion bolt in shear and supporting rod at 90° from another bolt or using two expansion bolts per hanging post - pipes 8” and larger shall be supported from steel building members. In concrete buildings, add supplementary steel tied into the concrete structural members. Support such piping, conduits and ductwork from the supplementary steel.

I. Provide sleeves for pipes passing through roofs. Sleeves passing through roofs shall be as detailed on drawings extending min. 12" above finished roof. All pipes passing through roof shall be minimum of 10" from walls or other construction to permit proper flashing. Provide counter flashing.

J. Where sleeves pass through waterproofed floors, they shall be IPS brass pipe sleeves of the required diameter, brazed at the bottom to 18" x 18", 16-ounce copper flashing for bond with waterproofing. The tops of the sleeves shall extend 1" above finished floor.

K. No ductwork, piping, conduit or equipment shall be supported from corrugated decking construction. For this area provide supplementary steel to support ductwork, piping, conduit or equipment. Supplemental steel members shall be welded to building structural steel.

L. All hangers, rods and supports shall be installed prior to construction fireproofing.

M. The required fire resistance rating of floor or floor/ceiling assemblies and walls shall be maintained where a penetration is made for electrical, mechanical, plumbing pipes, conduits, ducts and systems. Fire stopping shall be provided at openings around vents, pipes, ducts, conduits at floor levels and walls with non-combustible materials. For openings around pipes and conduits and/or sleeves, 3M product Caulk CP 25 and Putty 303 or approved equal shall be provided.

N. Owner shall retain the services of a NYS Licensed Professional Engineer and under his direction shall inspect the existing spray or fire proofing of existing structural members exposed during the renovation. Provide a report of deficiencies.

1.18 ESCUTCHEONS

A. Provide escutcheons on pipes wherever they pass through ceilings, walls, or partitions.

B. Escutcheons or pipes passing through outside walls shall be Ritter Pattern and Casting Co., № 1, solid, cast brass, flat type secured to pipe with set screw.

C. Escutcheons for pipes passing through floors shall be Ritter Pattern and Casting Co., № 36A, split-hinged, cast brass type, designed to fit pipe on one end and cover sleeve projecting through floor on the other end.

D. Escutcheons for pipes passing through interior walls, partitions, and ceilings shall be Ritter Pattern and Casting Co., № 3A, split-hinged, cast brass chromium plated type.

1.19 MANUFACTURERS' IDENTIFICATION

A. Manufacturer's nameplate, name or trademark, shall be permanently affixed to all equipment and material furnished under this Specification. Where such equipment is in a finished occupied space, the nameplate shall be in a concealed but accessible location. The nameplate of a Subcontractor or Distributor will not be acceptable.

1.20 EQUIPMENT NAMEPLATES

A. Provide for each item of equipment, including panelboards, disconnects, breakers, starters, switches, and all control devices, pumps, fans, compressors, boilers, etc., a permanently attached nameplate made of black surface, white core laminated plastic with incised letters. Subcontractor furnishing equipment shall provide nameplate. Pneumatic, electric and mechanically actuated gauges shall have a brief, but complete description of their function. Stating the air pressure or voltage range alone is not acceptable. Nameplates shall be a minimum of 3" long by 1½" wide and shall bear the equipment name and item number (tag number) in ½" high white letters as designated in the equipment schedule. Nameplates shall be attached to their respective equipment by screws or rivets.

1.21 TAGS AND CHARTS

A. Furnish and attach to each valve as hereinafter specified, a 1½" diameter brass tag with ½" indented numerals filled with durable black compound. Tags shall be securely attached to stems of valves with chain and "S" hooks.

B. Valve charts shall consist of schematic drawings of piping layouts, showing and identifying each valve and describing the function. Upon completion of the work, one (1) copy of each chart, sealed to rigid backboard with clear lacquer placed under glass and framed, shall be hung in a conspicuous location in the main equipment room, unless otherwise directed by the Architect. Two (2) additional unmounted copies in 8½" x 11" leather ring binders shall be delivered to the Architect. Also furnish three (3) copies of schematic flow chart with corresponding valve numbers noted on chart.

C. Provide tags for the following valves:
1. Zone control, bypass, shut-off, check and balancing valves.
2. Building and area shut-off and balancing valves.
3. Control, by-pass, shut-off, balancing and drain valves for major pieces of equipment such as boilers, domestic hot water heaters, heat exchangers, refrigeration machines, pumps, heating, ventilating and air conditioning units, cooling towers, etc.
4. System drain valves, safety and relief valves. Vacuum breakers.

D. Tags on control valves shall bear the valve tag numbers shown on the ATC shop drawings. These shall be brass 1¼” diameter tags, with ½” indented numerals filled with durable black compound. Tags shall be securely attached to steams of valves with chain and “S” hooks.

1.22 IDENTIFICATION

A. Identification shall be in accordance with "Scheme for Identification of Piping System ANSI A13.1" and OSHA safety color regulation.

B. Markers shall be snap-on type as manufactured by Craftmark, Fort Worth, TX or Seton Nameplate Corp., New Haven, CT (Setmark System), or Bunting Stamp Co. Inc., Pittsburgh, PA or approved equal. Markers shall completely encircle the pipe with a substantial overlap. No adhesive shall be used. They shall be manufactured of U.L. approved, self-extinguishing plastic. When the pipe, including insulation (if any), is 4 inches diameter and larger, markers shall be strap-on type. For piping located outdoors, all markers shall be strap-on type for <u>all</u> pipe diameters, and straps shall be of stainless steel. Markers for medical gas piping shall be by means of metal tags, stenciling, stamping or with adhesive markers, in a manner which is not readily removable. *

C. Provide identification for piping, ductwork and electrical conduits.

D. All piping and ductwork shall be labeled, whether concealed above ceilings or exposed. Labels shall be installed at intervals no greater than 15 feet (unless noted otherwise) and shall be installed after every turn or elbow, and in every room. Where concealed above ceilings, a minimum of one (1) label shall occur above each room. Due to various above ceiling visual obstructions, the Engineer reserves the right to request additional labels in order to ensure visibility, at no additional cost to the Owner.

E. Pipe shall be lettered and valves tagged in accordance with the schedule below. Lettering shall be located near each valve and branch connection and at intervals of not over 20 feet (10 feet on fire lines, and at least once in each room and in each story traversed for medical gas piping*) on

straight runs of pipe. Provide flow arrows on all piping and ductwork labels. Adjacent to the legend, stencil the size of the pipe, conduit or ductwork. Letter Colors are as follows: Yellow with black letters, green with white letters, blue with white letters and red with white letters.

LABEL AND VALVE TAG SCHEDULE			
Service	Label Designation	Color	Tag Designation
Chilled Water Supply	Chilled Water	Green	CHWS
Chilled Water Ret.	Chilled Water Return	Green	CHWR
Sanitary Sewer	San. Sewer	Green	----
Storm Sewer	Storm Sewer	Green	----
Combined Sewer	Comb. Sewer	Green	----
Storm Water Piping	St. W.	Green	----
Return Air	R.A.	Green	----

F. Tanks, pumps, fans and other equipment shall be labeled to show the number, if any, and service.

G. Exposed conduits for alarm and communication systems shall be banded at intervals of not over 10 feet. Bands shall be of the following colors:

1. Fire Alarm System.....Red
2. Mechanical & Electrical Supervisory System .....Green & Blue

H. HIGH VOLTAGE" in black letters two inches high, stenciled at 10-foot intervals over a continuous painted orange background.

I. Except where other means of identification are specified, electric cabinets, switchboards, motor control centers, transformers, system control boards, disconnecting switches, remote control switches, individual motor starters and motor control pushbutton stations shall be stenciled to show the service and number, if any, of the equipment controlled, as appropriate. Panelboards and other electrical equipment located in finished areas, such as offices, shall have the identification placed on the inside of the cabinet doors.

J. Cabinets housing 460Y/265 Volt panelboards shall have "460/265 volt" stenciled in 2-inch high yellow letters on the inside of the cabinet doors.

K. Cabinet housing emergency lighting panelboards shall have the word "EMERGENCY" stenciled in 2-inch high red letters on the outside of the cabinet, in addition to other lettering required above.

L. The bolted covers of housings for disconnecting switches or links in bus ducts between network transformers and switchboards shall be lettered to identify the equipment within.

M. Serial numbers shall be stenciled on the tanks and covers of transformers having their nameplates attached to the high voltage switch chamber covers.

N. Signs for Equipment Controlled through the BAS: For all fans, pumps and other motor driven equipment with start/stop control through the BAS provide a red surface, white core laminated plastic sign with incised letters, permanently mounted on the equipment indicating, "**Warning. This Equipment Is Started and Stopped Automatically from the Building Automation System**."

1.23 COORDINATION OF MECHANICAL AND ELECTRICAL EQUIPMENT LOCATIONS

A. The space equal to the width and depth plus 6" on either side of the electrical equipment and extending to a height of 6 feet above the equipment or the structural ceiling, whichever is lower, shall be dedicated to the electrical installation and shall not contain piping ducts or other equipment foreign to the electrical installation. Electrical equipment shall include switchboards, panelboards and motor control centers.

B. Examine the drawings, and in cooperation with the Electrical Work confirm the final location of all electrical equipment to be installed in the vicinity of piping and ductwork. Plan and arrange all overhead piping no closer than three feet, and ductwork no closer than one foot from a vertical line to electric switchboards, panelboards, motor control centers or similar equipment.

C. Where the installation of piping or ductwork does not comply with the requirements of foregoing paragraphs, where feasible, the piping and ductwork shall be relocated. Installation of a barrier between piping and ductwork and electrical equipment below will be considered if located more than six feet above the electrical equipment. Refer to NEC Article 110. If piping ductwork and foreign equipment cannot be located outside of the space dedicated to electrical installation, a drip pan as described below can be considered to protect the electrical equipment from condensation, leaks or breaks, but shall be approved by the Engineer after the Contractor has demonstrated that piping, ductwork and/or equipment cannot be installed to avoid this space.

D. Provide galvanized steel gutters as follows:
1. Provide a gutter of 18 gauge galvanized steel under every pipe and roof drain which is within 2'-0" (two feet) of being vertically over any motor, transformer, electrical controllers, switchboards, panelboards, generator or the like.
2. Also provide drip pans below any drain piping located above the ceiling in food preparation or storage areas. In such areas, if piping also runs vertical through the floor slab above, then fully enclose the vertical portion with an extension of said drip pan and fully seal this enclosure to the underside of the floor slab above.
3. Each gutter shall be made watertight, properly suspended; and carefully pitched to a convenient point for draining. Provide a ¾ inch drain, to nearest floor drain or slopsink.
4. In lieu of such separate gutters, a continuous protecting sheet of similar construction, adequately supported and braced, properly rimmed, pitched and drained, may be provided over any such motor, and extending 3'-0" in all directions beyond the motor, over which such piping has to run.

1.24 QUIET OPERATION

A. All equipment and material shall operate under all conditions of load without any sound or vibration which in the opinion of the Architect is objectionable. Where sound or vibration conditions arise which are considered objectionable by the Architect, eliminate same in a manner reviewed by the Architect.

1.25 CLEANING, PIPING, DUCTS AND EQUIPMENT

A. Clean all piping, ducts, and equipment of all foreign substances inside and out before being placed in operation.

B. If any part of a system should be stopped by foreign matter after being placed in operation, the system shall be disconnected, cleaned, and reconnected wherever necessary to locate and remove obstructions. Any work damaged in the course of removing obstructions shall be repaired when the system is reconnected at no additional cost to the Owner.

C. During construction, properly cap all pipes and equipment nozzles so as to prevent the entrance of sand, dirt, etc.

1.26 DELIVERY OF MATERIAL

A. Deliver the material and store same in spaces indicated by the Architect and assume full responsibility for damage to structure caused by any overloading of the material.

1.27 CUTTING AND PATCHING (IN EXISTING CONSTRUCTION)

A. All cutting and patching shall be done under another Section. Furnish the sizes and locations of all chases and openings required for the installation for his work before the walls, floors and partitions are built.

B. As a general rule, chases, shafts and wall openings as shown on the Drawings will be provided for most of the ducts and piping, but promptly arrange with the Construction Supervisor for additional openings should any be required for the work.

C. Provide the labor and materials for all work included under the Contract or Subcontract in ample time and sufficient quantities so that all of the work of the Contract or Subcontract may be installed in proper sequence to avoid unnecessary cutting of the floors and walls.

D. Any cutting and patching required due to the failure to comply with the above provisions, shall be done at no extra cost to Owner. Such cutting and patching shall be done under Division One, as approved by the Architect.

E. Where existing piping or ductwork insulation are damaged by the requirements of the work, replace all damaged insulation to match existing.

F. Refer to Paragraph: "Sleeves, Inserts and Anchor Bolts" for additional requirements.

G. Prior to performing any core drilling or cutting of existing floor or roof slabs, Contractor shall perform a scan of the slab using ground penetrating radar (GPR) to confirm that there are no existing conduits or pipes in area of core drill or cutting of slab.

1.28 ALTERATIONS

A. When new work and alterations render equipment, piping and ductwork useless, such equipment, piping and ductwork when exposed to view, shall be removed and connections thereof to lines or ducts remaining shall be properly capped or plugged and left in construction. If construction, such as hung ceiling, furred beam, chase, etc., is opened up and removed during the course of the construction, the useless pipe and ducts therein shall be treated as though exposed to view. When

required to accommodate new work, useless piping and ductwork concealed in construction shall be treated as though exposed to view.

B. When existing piping and duct systems, at points of connection to new work or in rerouting are found defective, such defective portions shall be removed and replaced with new materials without cost to the Owner.

C. Provide temporary supports where required.

D. Where alterations reveal piping, ductwork, conduit circuits, wiring, and accessories that must necessarily remain in service, same shall be rerouted, replaced or altered as required to make same completely concealed in the new work at no additional cost to the Owner.

E. Where existing piping or ductwork insulation is damaged by the requirements of the work, replace all damaged insulation to match existing.

F. Cutting in existing building shall be done by each Contractor as reviewed by the Architect. Rough patching shall be done by each Contractor. Finish patching, ceiling construction removal, new ceiling in existing building will be done under another Section.

1.29 PAINTING

A. All finished painting of MEP/FP work shall be provided as specified below.

B. Painting Schedule
1. No on-site painting is required on the following items unless specifically indicated otherwise:
   a. Stainless steel or aluminum sheet metal.
   b. Stainless steel piping.
   c. Piping or ductwork to be insulated.
   d. Insulation on piping or ductwork in unfinished spaces or concealed.
   e. Insulated piping covered with stainless steel, aluminum or all service jacketing, unless otherwise specified.
   f. Insulated piping in walk-in and non-walk-in tunnels.
   g. Mechanical equipment with a factory applied baked-on enamel finish, not specified to be insulated or provided with an enameled steel insulated jacket.
   h. Insulated equipment or smokestacks specified or noted on the Drawings to be covered with stainless steel or aluminum sheet metal jacketing.
   i. Factory fabricated multi-wall metal smoke flue piping.
   j. Concealed piping.
2. Paint the following:
   a. Uninsulated Black Steel Piping:
      1) Exposed in Finished Rooms or Finished Spaces: 1 coat of primer and 2 coats of latex semi-gloss enamel.
      2) Exposed in Unfinished Rooms, or Unfinished Spaces, or in Pipe Shafts: 1 coat of primer and 2 coats of finish.
      3) Exposed Exterior to a Building: 1 coat of primer and 2 coats of exterior acrylic latex gloss enamel.
   b. Uninsulated Galvanized, Cast Iron, Brass or Copper Piping:
      1) Exposed in Finished Rooms or Finished Spaces: 1 coat of primer and 2 coats of latex semi-gloss enamel.

2) Exposed Exterior to a Building: 1 coat of primer and 2 coats of exterior acrylic latex gloss enamel.
3) Exposed in Unfinished Rooms or Unfinished Spaces: 1 coat of primer and 2 coats of finish.

c. Piping in floor trenches after fabrication: primer and finish.

d. Uninsulated Mechanical Equipment:
1) Furnished with a Factory Applied Prime Coat Finish: 2 coats of acrylic latex semi-gloss enamel. No primer required.

e. Vessels, Tanks, and Like Equipment Specified to be Insulated: l coat of corrosion resistant paint, prior to the application of insulation.

f. Uninsulated Exposed Iron and Steel Surfaces of Boilers, Including the Steel Casing, Buck Stays, Boiler Fronts, Castings, Smoke Pipes, Breeching and the Exposed Surfaces of all Other Iron or Steel Installed in Conjunction with Boiler Work: 1 coat of primer and 2 coats of heat resistant enamel.

g. Insulated exposed piping in Mechanical Rooms, Boiler Plants, Chiller Plants and Generator Rooms (except on segments of pipe which are clad in aluminum).

h. Hangers, Supports and Accessories:
1) Exposed: Paint to match adjacent piping, pipe insulation or ductwork insulation.
2) All black steel or iron pipe hangers, rods, inserts, brackets and accessories for supporting piping systems and duct systems: 1 coat of primer and 2 coats of latex semi-gloss enamel. Paint black steel hanger rods, threaded on the job site, with a primer immediately after installation.
3) Metal Fabrications in Finished Spaces: Paint over shop coat with 2 coats of alkyd gloss enamel.

i. Sheet Metal Work:
1) Exposed Black Iron, Galvanized Iron, and Aluminum, including Hangers for Insulated and Uninsulated Ductwork, in Finished Rooms, Finished Spaces or Exterior to a Building: 1 coat of primer and 2 coats of latex semi-gloss enamel.
2) Jacketing on Exposed Insulated Ductwork in Finished Rooms and Finished Spaces: 2 coats of latex semi-gloss enamel. No primer required.

j. Uninsulated Exposed Valves, Flanges, Unions and Irregular Surfaces in Piping Systems Installed in Finished Rooms or Finished Spaces: 1 coat of primer and 1 coat of black heat resistant enamel.

k. Convector enclosures shall be painted at the factory as specified in Section 15835: Convectors.

C. Color Coding:
1. Apply finish paints of colors indicated opposite the various items listed below where such items are installed in Mechanical Equipment Rooms, Machine Rooms, Boiler Rooms, Penthouse Mechanical Equipment Rooms.
2. Ductwork: Grey.
3. Equipment - Bare and Insulated (Except Factory Painted): Grey.

D. The inside of all ductwork where visible through openings shall be painted with two prime coats of flat black paint.

E. Nameplates on all equipment shall be cleaned and left free of paint. Where equipment is to be painted, the Contractor shall carefully mask off all equipment nameplates and data tags prior to application of paint. Such masking shall be removed after paint has dried.

F. All flashing shall be painted with two coats of waterproof black asphaltum varnish.

1.30 TESTS

A. All piping, wiring, and equipment shall be tested as specified under the various sections of the work. Labor, materials, instruments and power required for testing shall be furnished under the particular Section of the Specifications.

B. Tests shall be performed satisfaction of the Architect. The Architect will be present at such test, when he deems necessary and such other parties as may have legal jurisdiction.

C. Pressure tests shall be applied to piping only before connection of equipment and installation of insulation. In no case shall piping, equipment, or accessories be subjected to pressure exceeding their rating.

D. All defective work shall be promptly repaired or replaced, and the tests shall be repeated until the particular system and component parts thereof receive the review of the Architect.

E. Any damages resulting from tests shall be repaired or replaced and the tests shall be repeated until the particular system and component parts thereof receive the approval of the Architect.

F. The duration of tests shall be as determined by all authorities having jurisdiction, but in no case less than the time prescribed in each Section of the Specifications.

G. Equipment and systems which normally operate during certain seasons of the year shall be tested during the appropriate season. Tests shall be performed on individual equipment, systems, and their controls. Whenever the equipment or system under test is interrelated with and depends upon the operation of other equipment, systems and controls for proper operation, functioning, and performance, the latter shall be operated simultaneously with the equipment or system being tested.

H. The electrical work shall include providing any assistance (such as removal of switchboard and panelboard trims and covers, pull and junction box covers, etc.) deemed necessary by the Architect to check compliance with the Drawings and Specifications.

1.31 OPERATING INSTRUCTIONS

A. Two months prior to the completion of all work and the final inspection of the installation by the Owner, five (5) copies of a complete Instruction Manual, bound in booklet form and suitably indexed, shall be submitted to the Architect for review. All written material contained in the manual shall be typewritten or printed.

B. The Manual shall contain the following items:

Table of Contents (Plumbing, HVAC and Electrical)

I. Introduction - Explanation of Manual and its use.

II. Description of Systems

1. Complete schematic drawings of all systems.
2. Functional and sequential description of all systems.
3. Relationship of system where applicable to the supervisory data system.

III. Systems Operation

1. Start-up procedures.
2. Shut-down procedures.
3. Reset and adjustment and balancing procedures.
4. Seasonal operation.
5. All posted instruction charts.

IV. Maintenance

1. Cleaning and replacement - lines, components, filters, strainers, ducts, fans, etc.
2. Lubrication.
3. Charging and filling.
4. Purging and draining.
5. Systems trouble shooting charts.
6. Instruments checking and calibration.
7. Procedures for checking out functions with remote (Supervisory Data Console) indication and control.
8. Recommended list of spare parts.

V. Listing of Manufacturers

VI. Manufacturer's Data (Where multiple model, type and size listings are included, clearly and conspicuously indicate those that are pertinent to this installation).

1. Description - Literature, drawings, illustrations, certified performance charts, technical data, etc.
2. Operation.
3. Maintenance - including complete trouble-shooting charts.
4. Parts List.
5. Names, addresses and telephone numbers of local recommended repair and service companies.
6. Guarantee data.
7. Model No. and Serial No. of all equipment.

1.32 INSTRUCTION OF OWNER'S PERSONNEL

A. Provide training on the operation and maintenance for equipment, as indicated within the equipment specification. If not indicated within the equipment specification section, provide the following training:
   1. Automatic Temperature Controls: Four (4) hours.

1.33 GUARANTEE

A. The Contractor guarantees by his acceptance of the Contract that all work installed will be free from any and all defects and that all apparatus will develop capacities and characteristics specified, and that if during a period of one year from date of completion and acceptance of work, one (1) entire heating and cooling season or eighteen (18) months from date of shipment, whichever is **later**, any such defects in workmanship, material or performance. He shall immediately replace, repair, or otherwise correct the defect or deficiency, including parts, labor and travel time, without cost to the Owner within a reasonable time. Notify the Architect in writing of the time required to do work. For heating systems, the guarantee period must include

one continuous heating season from November 1st to April 1st. For cooling systems, the guarantee period must include one continuous cooling season from May 1st to October 1st.

B. Replace or repair to the satisfaction of the Owner any and all damage done to the building or its contents or to the work of other trades in consequence of work performed in fulfilling guarantee.

C. This Article is general in nature and will not waive stipulations of other claims which specify guarantee periods in excess of one (1) year.

D. In the event default on this Guarantee, the Owner may have such work done as required and charge the cost to the Contractor.

E. The date of acceptance shall be the date of final payment by the Owner or notice of acceptance by the Owner, whichever is later.

1.34 OPERATION PRIOR TO COMPLETION

A. The Owner may require operation of parts or all of the installation for the beneficial occupancy prior to final completion and acceptance of the building.

B. The operation shall not be construed to mean acceptance of the work by the Engineer for the Owner. The Owner will furnish supervisory personnel to direct operation of the entire system and the Contractor shall continue to assume this responsibility until final acceptance.

1.35 SEMI-FINAL AND FINAL SITE VISITS FOR OBSERVATION

A. As the project approaches completion, the Engineer and Architect, at their discretion shall determine a period of time in which they shall perform a Semi-Final Site Visit to observe the Mechanical and Electrical installation. At the conclusion of this Semi-Final Site Visit, a Semi-Final Punchlist shall be issued to the appropriate Contractor for the deficiencies in the work of his trade. Complete all work and perform all corrective measures as required by the Semi-Final Punchlist. After this corrective and completion work has been accomplished, in writing, advise the Architect and the Engineer that every item on the Semi-Final Punchlist has been completed. After the Architect and Engineer make a Final Site Visit to observe the Mechanical and Electrical installation and make a Punchlist, a similar letter of Compliance shall be forwarded through the appropriate channels.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.01 INSTALLATION OF EQUIPMENT

A. The Contractor shall be responsible for the installation of all equipment in accordance with the Manufacturer's Installation/Operation & Maintenance Manuals and instructions. If other requirements of this Specification contradict what is stated in the Manufacturer's instructions, the matter shall be brought to the attention of the Architect and Engineer for clarification. Any and all of the Manufacturer's requirements for utilities (electrical power and control wiring, piped water, drain, gas, fuel oil, steam, condensate, etc.), ducted supply or exhaust air, mounting and

support shall be provided by the Contractor, regardless of how, or whether or not stated elsewhere in the Contract/Bid Documents.

END OF SECTION 01 31 46

SECTION 01 33 00
SUBMITTALS

PART 1 - GENERAL

1.1 DEFENITIONS

A. Deviation: Changes in products, materials, equipment and methods of construction from those required by the Contract Documents and proposed by the Contractor.

1.2 DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS

A. Deviations from the requirements of the Contract Documents will not be allowed unless a request for deviation is made in writing prior to or at the time of submission and the specific deviation is approved by the Owner, Architect or Engineer. The submission of a deviation shall be written and done in a timely manner according to the schedule of submittals to allow the Architect / Engineer sufficient time for review.

1.3 “OR EQUAL” TO BRAND NAME PRODUCTS

A. Whenever a product is specified by brand name, a comparable brand, equal to that named, may be submitted for approval subject to:
   1. The contractor shall bear the burden of proving that the proposed product is equal to the specified product. The submission of an “or equal” shall be done in a timely manner to allow sufficient time to review the proposed product by the Architect / Engineer.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Identify all submittals by project title and number. Include Contractor’s name, date, and revision date. On shop drawings, product data and samples, also include the name of the supplier and subcontractor (if any), and applicable specification section number. Stamp each submittal and initial or sign the stamp to certify review and approval of submittal.

B. Assemble submittals in accordance with the requirements in the individual sections of the Specifications and as required by that section. It is the Contractor's responsibility to review and verify that all information required for each submittal is included in the submittal package. Errors or omissions found by the Contractor are to be corrected prior to the submission of the submittal package for approval. Incomplete submittal packages that have been submitted for review and approval will be returned for resubmission.
   1. It is the Contractor's responsibility to verify that portions of the submittal package to be provided by a subcontractor (or supplier) are complete, as well as portions of the submittal package being provided directly by the Contractor.
   2. Do not combine the submittals of more than one specification section with submittals required by other specification sections unless specifically stated in the contract specifications.

C. If a submittal is based on, or the result of, a change order or field condition to the Contract documents, include copies of the applicable change order or field condition with the submittal.

1.5 COORDINATION DRAWINGS

A. Provide coordination drawings showing scope of all work. Coordination drawings to indicate any conflicts between both new and existing work as indicated on the Contract Drawings or otherwise specified.

1.6 SHOP DRAWINGS

A. Provide shop drawings in the format required by the specifications. The Architect / Engineer will not provide CAD drawings to the contractor to be used as shop drawings. Show the information, dimensions, connections and other details necessary to insure that the shop drawings accurately interpret the Contract Documents. Show adjoining construction in such detail as required indicating proper connections. Where adjoining connected construction requires shop drawings or product data, submit such information for approval at the same time so that connections can be accurately checked.
   1. Submit 4 copies of each shop drawing required by the Specifications., or one (1) electronic copy via email.

B. Shop drawings shall be neatly drawn and clearly legible. Machine duplicated copies of Contract Drawings will not be accepted as shop drawings.
   1. Where shop drawings are indicated to be drawn to scale:
      a. Use scale normally found on an Architect or Engineer scale.
      b. Written Scale: Clearly label scales being used on each drawing and/or on each detail on the drawing.
         1) Examples: 1/8” = 1’- 0” 1” = 40’- 0”.
      c. Graphic Scale: Adjacent to each Written Scale, provide a graphic scale delineating the scale being used. Graphic scale shall be divided into measuring units relating to the accuracy required for the drawing or details.
      d. Clearly dimension key elements of the drawing or detail.
   2. When the drawing sheet is printed full size, the minimum text size shall be 1/8" (3.2 mm) for hand drafting and 3/32" (2.5 mm) for CADD drawings.

C. The shop drawings will be reviewed and 1 stamped copy returned electronically. If returned copies are stamped “DISAPPROVED” or “REVISE AND RESUBMIT”, promptly resubmit the shop drawing meeting Contract requirements.

1.7 PRODUCT DATA

A. Provide product data in the format required by the specifications. Modify product data by deleting information that is not applicable to the project or by marking the product data to identify pertinent products. Supplement standard information, if necessary, to provide additional information applicable to project.
   1. Submit 1 copy of product data electronically as required by the Specifications.

B. The product data will be reviewed and 1 stamped copy returned electronically. If returned copies are stamped “DISAPPROVED” or “REVISE AND RESUBMIT”, promptly resubmit 1 copy electronically of product data meeting Contract requirements.

1.8 QUALITY ASSURANCE

A. Provide quality assurance information in the format required by the specifications, including supporting documentation as required.
   1. Submit 1 copy electronically of quality assurance information as required by the Specifications.

B. The quality assurance information will be reviewed and 1 stamped copy electronically returned. If returned copies are stamped "DISAPPROVED" or "REVISE AND RESUBMIT", promptly resubmit 1 copy electronically of quality assurance information meeting Contract requirements.

1.9 SAMPLES

A. Submit 2 (unless a different number is specified) of each sample required by the Specifications.
B. Samples will become the property of the Owner when submitted and will not be incorporated in the Work unless specifically stated otherwise.

1.10 REVIEW OF SUBMITTALS

A. Items submitted for review will be reviewed for compliance with the contract documents, based upon the information submitted. The items will be acted upon with the following dispositions:

1. Approved (or No Exception Noted): Where the submittal is marked "Approved", the work covered by the submittal may proceed provided it complies with the contract documents. Final acceptance will depend upon that compliance.
2. Approved as Noted (or Make Corrections Noted): Where the submittal is marked "Approved as Noted", the work covered by the submittal may proceed provided it complies with the review comments noted on the submittal and the contract documents. Final acceptance will depend on that compliance.
3. Disapproved (or Rejected): Where the submittal is marked "Disapproved", do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery or other activity for the item submitted. Prepare a new submittal according to the review comments noted on the submittal and meeting the contract documents.
4. Returned for Correction (or Revise and Resubmit): Where the submittal is marked "Revise and Resubmit", do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery or other activity for the item submitted. Revise and prepare a new submittal according to the review comments noted on the submittal and meeting the contract documents.
5. No Action: Where the submittal is marked "No Action" or "No Action Taken", no review was made of this item, see comments noted on submittal and take appropriate action.

1.11 SCHEDULES AND RECORDS

A. Submit the following Schedules and Records information not later than 7 days after approval of the Contract unless an earlier submission is required to properly schedule or progress the Work.
1. SCHEDULE OF SUBMITTALS: On the Schedule of Submittals forms, indicate in the spaces following each item, the date the item will be submitted, the date approval is required, and the date delivery of the material or equipment is necessary for timely completion of the Work in accordance with the Project Schedule. The date entered for submittal of each item is the last day a deviation will be considered. Deliver the SCHEDULE OF SUBMITTALS to the Director's Representative at the site.

B. Warrantees: Unless specified elsewhere contractor shall warrantee all work for (1) one year.

END OF SECTION 01 33 00

SECTION 01 73 29
CUTTING AND PATCHING

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

A. Work under this section shall be governed by the Contract Documents. Provide materials, labor, equipment and services necessary to furnish, deliver and install all work of this section as shown on the drawings, as specified herein, and/or as specified by job conditions.

1.2 DESCRIPTION OF WORK

A. Provide materials, labor, equipment and services to complete cutting and patching as specified herein and as indicated on the Drawings.

1.3 RELATED SECTIONS

A. See individual Specification Sections for work required.

1.4 QUALITY ASSURANCES

A. Codes and Regulations

1. Work specified herein shall conform to all applicable City, State and Local codes and regulations having jurisdiction.
2. Where fire resistant ratings are required for work of this section, the required assemblies shall be installed in strict accordance with the Underwriters Laboratory requirements.
3. All UL labels must be clear and come with the manufactured item.

1.5 SUBMITTALS

A. Product Literature

1. Submit manufacturers' products literature, catalog cuts and data sheets for all products used in patching.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the site, ready for use in the manufacturer's original and unopened containers and packaging, bearing labels as to type of material, brand name and manufacturer's name. Delivered materials shall be identical to approved samples and production information.

B. Store materials under cover in a dry and clean location, off the ground. Remove materials which are damaged or otherwise not suitable for installation from the job site and replace with acceptable materials.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Match the appearance and performance of existing corresponding materials as closely as practicable, unless otherwise indicated.

PART 3 – EXECUTION

3.1 CUTTING AND REMOVALS

A. Do not disturb any existing construction unless required by the Contract.

B. Cut and alter existing materials as required to perform the Work. Limit cutting to the smallest amount necessary. Core drill round holes and saw-cut other openings where possible.

C. Remove existing construction as required to install and connect the Fire Alarm Work.

D. Provide temporary supports necessary to prevent settlement or other damage to existing construction which is to remain.

E. Perform the cutting, drilling, and removals in a manner which will prevent damage to adjoining construction which is to remain.

F. Prior to any cutting, drilling, or removal, investigate both sides of the surface involved.

G. Do not cut, drill, or remove structural members such as joists, beams, or columns supporting construction unless expressly required by the Work. If unforeseen obstructions are encountered, take all precautions necessary to prevent damage and obtain instructions from the Architect/Engineer before proceeding with the Work.

H. If existing remaining items are within the damaged area, these items shall be removed and carefully stored until they can be reinstalled.

3.2 PATCHING

A. Patch existing construction and finishes defaced, damaged, or left incomplete due to alterations and removals. Patching, except as otherwise indicated, shall be limited to the areas which have been cut or altered.

B. Prepare existing surfaces properly to receive and, where required, bond with the Work.

C. Unless otherwise indicated, provide new materials to match the appearance and performance of existing corresponding materials as closely as practicable.

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3.3 REINSTALLATION

A. Where reinstallation of existing, remaining items removed during cutting is required, reinstall them to a condition equal to or better than their condition before removal.

END OF SECTION 01 73 29

SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes requirements for Construction Waste Management (CWM), with criteria for recycling and/or salvaging demolition and construction waste generated during the project. A Construction Waste Management Plan shall be developed for approval by the Facilities Representative. The Plan shall be implemented throughout the duration of the project, and shall be documented in accordance with the SUBMITTALS Article below.

B. Each contract shall supply the means for recycling job site waste. Locations for removal bins or dumpsters shall be coordinated with Facilities Representative. Following contract award, the Contractors may elect a single entity to act as the construction waste manager.

1.2 PERFORMANCE REQUIREMENTS

A. The General Contractor shall prepare and submit a Construction Waste Management Plan (CWM) to the Facilities Representative for approval. The CWM Plan shall outline the provisions to be implemented to recycle and salvage demolition and construction waste generated during the project.

B. Upon approval of the CWM Plan by the Facilites Representative, it shall be implemented throughout the duration of the project, and documented in accordance with the SUBMITTALS Article below.

C. The Construction Waste Management Plan shall include, but not be limited to, the following components:

1. Listing of Targeted Materials: Develop a list of the waste materials from the Project that will be targeted for reuse, salvage, or recycling. The following materials shall be accounted for (materials that will not be recycled shall be indicated as such):

    a. Cardboard, paper, packaging
    b. Clean dimensional wood, palette wood
    c. Beverage containers
    d. Metals from banding, stud trim, ductwork, piping, rebar, windows, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze
    e. Gypsum board
    f. Paint
    g. Glass/Mirrors
    h. Plastics
    i. Woods
    j. Tile

2. Information: Provide the name of the landfill(s) where trash will be disposed of and the applicable landfill tipping fee(s).
3. Sorting Method: Provide a description of the proposed means of sorting and transporting the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site for off-site sorting).

4. Packaging Waste: Provide an estimate of packaging materials generated, and note whether suppliers will eliminate or take back packaging.
5. Field Conditions: Include provisions in the Construction Waste Management Plan for addressing conditions in the field that do not adhere to the CWM Plan, including provisions to implement a stop work order, or to rectify non-compliant conditions.
6. Recycling facilities: Provide the name of the recycling facilities(s) where materials will be sent for recycling, how it will be recycled, and the applicable fee(s).
7. Additional Information: Include any additional information deemed relevant to describe the scope and intent of the CWM Plan to the Facilities Representative.
8. Re-Used materials/Equipment: Materials or equipment to be removed from the site or turned over to the College which are classified as recycled materials shall be documented. Documentation shall include the materials turned over, weight or quantity of materials/equipment and a letter on company letterhead indicating the intended use of items.
9. Subcontractor Requirements: Construction Waste Management and recycling requirements shall be incorporated into all Subcontractor's contracts.

1.3 SUBMITTALS

A. Submittal Requirements:
1. A copy of the Construction Waste Management Plan, as defined in the PERFORMANCE REQUIREMENTS Article above.
2. In conjunction with payment applications, contractors shall submit a monthly Waste Management submission. This submission shall include waste receipts for the payment period and a completed Waste Management Form for the same payment period.
3. Calculations and supporting documentation to demonstrate end-of–project recycling rates meeting the requirements of the Construction Waste Management Plan. The process for recording and assembling documentation shall be as follows:
   a. Record and document the total weight (in tons) of all demolition and construction waste materials sent to the landfill. Monthly Waste Management Reporting Forms (sample included at the end of this Section identified as Exhibit "A") shall be used as the basis for determining the total amount of waste landfilled for the project. The monthly reporting forms shall specify:
      1) The number of dumpsters or other containers sent to the landfill for that month.
      2) The volume (in cubic yards) of each dumpster or container sent to the landfill for that month.
      3) The type of waste contained in each dumpster or container.
      4) The weight of the waste in each dumpster or container. If the weight of the waste is not directly measured for each dumpster or container, the following Solid Waste Conversion Factors shall be used to convert the volume of waste to weight:

Solid Weight Conversion Factors	
Mixed Waste	350 lbs/cubic yard
Wood	300 lbs/cubic yard
Cardboard	100 lbs/cubic yard
Gypsum Board	500 lbs/cubic yard
Rubble	1,400 lbs/cubic yard

Steel	1,000 lbs/cubic yard

5) Identification of the landfill. In addition, provide the name of the landfill that will be accepting the materials. Receipts or other proof of facility reception of materials is required.

b. Record and document the total weight (in tons) of all demolition and construction waste materials recycled or salvaged. Monthly Waste Management Reporting Forms shall be used as the basis for determining the total amount of waste recycled or salvaged for the project. The monthly reporting forms shall specify:

1) The number of dumpsters or other containers of recycled or salvaged materials for that month.
2) The volume (in cubic yards) of each dumpster or container of recycled or salvaged materials for that month.
3) The type of recycled or salvaged material contained in each dumpster or container.
4) The weight of the recycled or salvaged material in each dumpster or container. If the weight of the material is not directly measured for each dumpster or container, the Solid Waste Conversion Factors listed for landfill waste above shall be used, where applicable, to convert the volume of material to weight. For materials not contained in the Solid Waste Conversion Factors above propose a conversion factor for review by the Director's Representative.
5) In addition, provide the name of the receiving facilities/companies that will be purchasing or accepting the recycled or salvaged materials. Receipts or other proof of facility reception of materials is required.
6) For materials separated for recycling off-site, establish a method for tracking the weight of the recycled material. The method shall be included in the CWM Plan for the Director's Representative review and approval.

c. Calculate the end-of-project recycling rate percentage by dividing the recycled and salvaged waste (in tons) by the total waste generated (recycled, salvaged, and landfilled waste – also in tons), and multiplying by 100.

d. For materials turned over to others for reuse, provide documentation on company letterhead indicating the material(s), the quantity (either by weight or units), the date and the intended reuse of the product.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 IMPLEMENTATION

A. The General Contractor shall be responsible for the provision of containers and the removal of all waste, non-returned surplus materials, and rubbish from the site in accordance with the Waste Management Plan. The General Contractor shall oversee and document the results of the Plan. The Sub-Contractors shall be responsible for collecting, sorting, and depositing in designated areas, their waste, non-returned surplus materials, and rubbish, as per the Waste Management Plan.

B. Instruction. The General Contractor shall provide on-site instruction of appropriate separation, handling and recycling, salvage, reuse and return methods to be used by all parties in appropriate stages of the Project.

C. Separation Facilities: The General Contractor shall lay out a specific area(s) to facilitate separation of materials for potential recycling, salvage, reuse and return. Each potential material shall be collected and stored to avoid being mixed with other materials. Recycling and waste bin areas are to be kept neat and clean, and clearly marked.

3.2 MEETINGS

A. Conduct Construction Waste Management meetings. Meetings shall include Subcontractors affected by the CWM Plan. At a minimum, waste management goals and issues shall be discussed at the following meetings:
   1. Pre-bid meeting.
   2. Pre-construction meeting.
   3. Regular job-site meetings.

3.3 MONTHLY WASTE MANAGEMENT REPORTING FORMS

A. Monthly Waste Management Reporting Forms, as required in the SUBMITTALS Article above, shall be submitted to the Facilities Representative and Architect for review throughout the duration of the project.

END OF SECTION 01 74 19

(Project Name) (Exhibit "A")
CONTRACTOR C&D WASTE MANAGEMENT FORM
For Waste Generated On-Site

Company: _____

Contact: _____

Phone: _____

Material Description (Include packaging waste if applicable)	Total Weight	% Reused on-site	% Recycled off-site	% Sent to landfill	Material Recipient

Recycled Material: Material that would otherwise be destined for landfill but is diverted from the waste stream, reintroduced as material feedstock and reprocessed into new end products.
Reused Material: Materials that can be reused in their original form without any reprocessing.

SECTION 02 41 13
SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

A. Cutting and Patching 01 73 29

B. Construction Waste Management 01 74 19

C. Appendix: Asbestos Survey

1.2 SUMMARY

A. Work Included: Perform selective demolition in accordance with the Contract Documents. The Work of this Section shall include but not be limited to the following:

1. See drawings for scope of demolition work.
2. Removal of interior finishes and other items, to accommodate new construction.
3. Protection of existing items to remain.
4. Removal of existing items to be reinstalled to be protected or turned over to College.
5. The maintenance of the College's operations during selective demolition operations.
6. Protection of the cables and utilities serving other areas at the College Campus during the demolition and construction activities. The above services shall be maintained in operation without any interruption at all times unless otherwise scheduled and authorized by the Campus.
7. Coordinate demolition work with sequencing

1.3 DEFINITIONS

A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the College's property.

B. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in new locations as indicated.

D. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Architect / Engineer, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

1.4 SUBMITTALS

A. Proposed schedule of operations including coordination for shutoff, capping, fire alarm, bells, gongs and continuation of utility services as required.

1. Provide a detailed sequence of selective demolition and removal work to ensure uninterrupted utilities and safety of the College's on-site operations.

2. Coordinate with the College's continuing occupation of portions of existing building.
3. Include proposed methods for dust and noise control measures.
4. Contractor to submit intermediate life safety plan demonstrating how required government regulations will be maintained for occupied portions of the building.
5. Decommissioning of any fire alarm in an occupied building must be in accordance with the NYC FDNY regulations.

1.5 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed selective demolition Work similar to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction. Fluorescent tubes shall be considered hazardous waste and shall be disposed of according to the regulations of the New York State EPA.

1. All demolition work shall comply with requirements of the College's operational requirements and authorities having jurisdiction.

a. Coordinate with the College's Facilities department.

C. Contractor shall verify all conditions at site prior to the start of Work.

D. Notify the Facilities Director, Architect and Engineer of any hazardous materials unearthed at the site. Do not proceed with removal of said substances until so instructed.

E. Contractor to provide fire watches as needed if the Fire Alarm is disabled.

1.6 JOB CONDITIONS

A. Condition of Structures: The College assumes no responsibility for actual condition of structures to be demolished.

1. Conditions existing at time of inspection for bidding purpose will be maintained by the College insofar as practicable.

B. Explosives: Use of explosives will not be permitted. Explosives will not be permitted for any Work of the project.

C. Traffic: Conduct selective demolition operations and removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities, including on-going construction on other parts of the campus.

1. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from the College and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing authorities or regulations.

D. Protections: Ensure safe passage of persons around area of demolition. Conduct operations to prevent damage to adjacent buildings, structures, and other facilities and injury to persons.

1. Provide interior shoring, bracing, or support to prevent movement, settlement.

E. Damages: Promptly repair damages caused to adjacent areas and facilities by demolition operations.

F. Flame Cutting: Do not use cutting torches for removal of material to be salvaged. Do not use cutting torches for demolition or removal until work area is cleared of flammable materials. Maintain portable fire suppression devices during flame-cutting operations.

G. Utility Services: Maintain existing utilities indicated to stay in service and protect against damage during demolition operations.

1. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities and/or the College.

H. Utility Services: Do not start demolition work until utility disconnections have been completed, inspected by the colleges CM or Engineer and verified in writing.

I. Environmental Controls: Use temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.

1. Do not use water when it may create hazardous or objectionable conditions such as damage to finishes, flooding, and pollution.

1.7 SCHEDULING

A. Arrange selective demolition schedule so as not to interfere with the College's on-site operations.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

A. Use repair materials identical to existing materials.
1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible. Approval by Architect is required prior to proceding.
2. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. General: Prior to commencement of selective demolition operations, verify that existing utilities have been located, identified, disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect / Engineer.

E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.

F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

A. Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by the Architect / Engineer or Facilities Director. Provide temporary services during interruptions to existing utilities, as acceptable to the Architect / Engineer and to the Facilities Director.

a. Provide not less than 72 hours notice to the College if shutdown of service is required during changeover.

B. Utility Requirements: Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

A. Erect and maintain dust-proof partitions and enclosures as required, to prevent spread of dust or fumes, to occupied portions of the building.

a. Where selective demolition occurs immediately adjacent to active portions of the building, construct dust-proof partitions of minimum 3 5/8-inch studs at 16 inches on center, 5/8-inch drywall (joints taped) on occupied side, ½-inch fire-retardant plywood on demolition side. Fill partition cavity with sound-deadening insulation. Create dust-tight joints at edges and penetrations of dust-proof partitions.
b. Provide weatherproof closures for exterior openings resulting from demolition work (if required).

B. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.

a. Provide bypass connections as necessary to maintain continuity of service to designated areas of building. Provide minimum of 72 hours advance notice to the College if shutdown of service is necessary during changeover.

C. Pollution Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air. Comply with governing regulations pertaining to environmental protection.

1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

D. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing prior to start of work.

E. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to the Architect / Engineer in written, accurate detail. Pending receipt of directive from the Architect / Engineer, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

F. Provide HEPA air filters to keep the air quality CIEA.

G. Demolition, General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations continuously.
4. Maintain adequate ventilation when using cutting torches.
5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
6. Locate selective demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
7. Dispose of demolished items and materials promptly. On-site storage or sale of removed items is prohibited.
8. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

A. General: As a minimum, remove weekly from site accumulated debris, rubbish, and other materials resulting from demolition operations. However, more frequent off site removal of accumulated debris is required as soon as the dumpster is full.

1. If hazardous materials are encountered or suspected during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution. Notify College personnel immediately.

B. Removal: Transport materials removed from demolished structures and legally dispose off site.

3.5 CLEAN-UP AND REPAIR

A. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site.

1. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start of operations. Repair adjacent construction or surfaces soiled or damaged by demolition work.
2. Clean adjacent areas, of all dust, dirt, and debris caused by selective demolition, cutting, and patching operations. Daily and final clean up shall be to the satisfaction of the Architect / Engineer.

END OF SECTION 02 41 13

SECTION 03 54 00
SELF-LEVELING UNDERLAYMENT CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Work of this section includes leveling over existing floors to receive new floor covering materials.

1.2 SECTION INCLUDES PRODUCTS BY ARDEX

A. ARDEX K 15™ Self-Leveling Underlayment Concrete
B. ARDEX P 51™ Primer
C. ARDEX P 82™ Ultra Prime
D. ARDEX E 25™ Resilient Emulsion
E. ARDEX MC™ Moisture Control Systems
F. Approved Equal

1.3 QUALITY ASSURANCE

A. Installation of self leveling material must be by a factory-trained applicator, such as an ARDEX levelMaster Elite Installer, using mixing equipment and tools approved by the manufacturer.
B. Manufacturers Representative shall review existing conditions prior to the Work. Contractor shall provide written approval from the Manufacturer that the substrate is acceptable to be installed with the Self Leveling Underlayment Concrete.
C. Underlayment shall be able to be installed at 1/8” typical for 85% of the area to be covered and 1” plus or minus for the remaining 15%.
D. Underlayment compressive strength shall be 4100 psi after 28 days per ASTM C109/mod (air cure only).
E. Underlayment shall be walkable after 2 hours and allow floor covering to be installed after 16 hours at 70 degrees Fahrenheit.
F. Manufacturer’s certification that the product is cement-based having an inorganic binder content which is 100% cement, to include Portland cement per ASTM C150: Standard specification for Portland Cement and other specialty hydraulic cements.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in their unopened packages and protect from extreme temperatures and moisture. Protect liquids from freezing.

1.5 SITE CONDITIONS

A. ARDEX K 15 is a cementitious material. Observe the basic rules of concrete work. Do not install below 50°F surface temperature. Install quickly if floor is warm and follow hot weather precautions available from the ARDEX Technical Service Department. Never mix with cement or additives other than ARDEX-approved products.

1.6 SUMBITTALS

A. Manufacturer's technical information for all material and installation.
B. MSDS Sheets

PART 2 - PRODUCTS

2.1 MATERIALS

A. The cement-based self-leveling underlayment shall be ARDEX K 15 Self-Leveling Underlayment Concrete.
B. Primer for non-porous subfloors such as burnished concrete, terrazzo, quarry and ceramic tile shall be ARDEX P 82 ULTRA PRIME.
C. Aggregate shall be well graded, washed gravel (1/8" to ¼" or larger) for use when underlayment is installed over 1 ½" thick.(if required)
D. Water shall be clean, potable, and sufficiently cool (not warmer than 70 degrees Fahrenheit).

2.2 MIX DESIGNS

A. Standard mixing ratio: ARDEX K 15 is mixed in 2-bag batches at one time. Mix each bag of ARDEX K 15 (55 lb.) with 7 quarts of water. Product shall be mixed in an ARDEX T-10 Mixing Drum using an ARDEX T-1 Mixing Paddle and a 1/2" heavy-duty drill (min. 650 rpm). Mix thoroughly for approximately 2-3 minutes to obtain a lump-free mixture. Follow written instructions per the ARDEX K 15 bag label.
B. Resilient mix for applications over cutback and non-water soluble adhesive residues, wood and metal: Use 6 qt. of water and 2 qt. of ARDEX E 25 Resilient Emulsion for each bag of ARDEX K 15.
C. For pump installations, ARDEX K 15 shall be mixed using the ARDEX Levelcraft Automatic Mixing Pump. Start the pump at 210 gallons of water per hour, and then adjust to the minimum water reading that still allows self-leveling properties. DO NOT OVERWATER! Check the consistency of the product on the floor to ensure a uniform distribution of the sand aggregate at both the top surface and bottom of the pour. If settling is occurring, reduce the water amount and recheck. Conditions during the installation, such as variations in water, powder, substrate, and ambient temperature, require that the water setting be monitored and adjusted carefully to avoid overwatering.

PART 3 - EXECUTION

3.1 PREPARATION

A. All subfloors must be sound, solid, cleaned, and primed:
   1. All concrete subfloors must be of adequate strength, clean, and free of all oil, grease, dirt, curing compounds and any substance that might act as a bondbreaker before priming. Mechanically clean if necessary using shot blasting or other. Acid etching and the use of sweeping compounds and solvents are not acceptable.
   2. Non-porous subfloors such as ceramic and quarry tile as well as terrazzo should be clean and free of all waxes and sealers. If necessary, have the surface professionally cleaned.

3. All cracks in the subfloor shall be repaired to minimize telegraphing through the underlayment.
4. Substrates shall be inspected and corrected for moisture or any other conditions that could affect the performance of the underlayment or the finished floor covering.

B. Joint Preparation
1. Moving Joints – honor all expansion and isolation joints up through the underlayment.
2. Saw Cuts and Control Joints – fill all non-moving joints with ARDEX FEATHER FINISH or ARDEX SD-P if required.

C. Priming
1. Primer for standard absorbent concrete subfloors: Mix ARDEX P 51, 1:1 with water and apply evenly with a soft push broom. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry to a clear, thin film (min. 3 hours, max. 24 hours). Underlayment shall not be applied until the primer is dry. Primer coverage is approximately 400 to 600 sq. ft. per gallon.
2. Primer for non-porous subfloors, or cutback and other nonwater soluble adhesive residues over concrete: Prime with ARDEX P 82. Mix Part A (red) with Part B (white) and apply with a short-nap or sponge paint roller, leaving a thin coat of primer no heavier than a thin coat of paint. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry to a clear, slightly tack film (minimum 3 hours, maximum 24 hours). Underlayment shall not be installed until primer is dry. Primer coverage is approximately 200 to 400 square feet per gallon.
3. Minimum drying time for ARDEX P 82 over cutback adhesive is 18 hours.

3.2 APPLICATION OF UNDERLAYMENT

A. Installation
1. Pour or pump the liquid ARDEX K 15 and spread in place with the ARDEX t-4 Spreader. Use the ARDEX t-5 Smoother for featheredge and touch-up. Wear baseball shoes with non metallic cleats to avoid leaving marks in the liquid ARDEX K 15. Underlayment can be walked on in 2-3 hours at 70 degrees Fahrenheit.

3.3 PREPERATION FOR FLOORING INSTALLATION

A. Underlayment can accept finish floor covering materials after 16 hours at 70 degrees Fahrenheit and 50% relative humidity.
B. Due to the wide range of adhesives that are used to install floor coverings, some adhesives may dry more quickly over ADREX underlayments then over other substrates. If this condition occurs, priming the surface of the underlayment with ARDEX P 51 Primer diluted 1:3 with water will ever out the drying of the adhesive. Allow the primer to dry 1-3 hours before proceeding with the adhesive installation.

3.4 FIELD QUALITY CONTROL

A. Where specified, field sampling of the ARDEX underlayment is to be done by taking an entire unopened bag of the product being installed to an independent testing facility to perform compressive strength testing in accordance with ASTM C 109/modified: air-cure only. There are no in situ test procedures for the evaluation of compressive strength.

3.5 PROTECTION

A. Prior to installation of the finish flooring, the surface of the underlayment should be protected from abuse by other trades by the use of plywood, Masonite or other suitable protection course.

END OF SECTION 03 54 00

SECTION 04 01 21
MASONRY RESTORATION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Mortar and Masonry Grout: Section 040513.

B. Joint Sealers: Section 079200.

C. Limestone Coating: Section 099113.

1.02 SUBMITTALS

A. Product Data:
1. Portland Cement: Brand and manufacturer's name.
2. Lime: Brand and manufacturer's name.
3. Mortar Pigments: Brand and manufacturer's name.
4. Packaged Products: Manufacturer's specifications and application instructions for products specified.
5. Sand: Location of pit, name of owner, and previous test data.

B. Samples: Deliver to the Site for comparison with existing masonry.
1. Mortar for Exposed Joints and Cracks: Each required type, minimum 12 inches long by full thickness, showing finish and color.
2. Masonry Units: Each required type, full size, showing finish and full color range.

1.03 QUALITY ASSURANCE

A. Field Examples: Prior to performing the Work of this Section, prepare a sample panel of not less than 12 sq. ft. for each type of masonry restoration Work required. Do not proceed further with the Work until the sample panel has been approved by the Director's Representative. Approved samples will be used as quality standards for the Work. Maintain approved samples at the Site until the Work is completed.
1. Sample panels may be a portion of existing masonry which is to be restored, at a location directed by the Director's Representative.

B. Material Container Labels: Material containers shall bear the manufacturer's label indicating manufacturer's name, trade name of product, lot number, shelf life of product, and mix ratio (if applicable).

1.04 DELIVERY, STORAGE, AND HANDLING

A. Packaged Products:
1. Deliver materials to the site in manufacturer's original, sealed containers. Do not deliver materials which have exceeded shelf life limitation set forth by the manufacturer.

2. Comply with manufacturer's printed instructions for storing and protecting materials.

B. Bulk Aggregate: Store in a manner which will keep aggregate clean and protected from the weather elements.

1.05 PROJECT CONDITIONS

A. Environmental Requirements:
1. For factory packaged products, comply with the manufacturer's printed limitations and instructions.
2. At temperatures below 40 degrees F, maintain mortar temperature between 40 degrees F and 120 degrees F unless otherwise recommended by the material manufacturer. If necessary, heat mixing water and sand to produce the required results.
3. At temperatures between 32 degrees F and 20 degrees F, provide wind breaks and cover the restored masonry to prevent wetting and freezing. Maintain restored masonry above freezing for not less than 16 hours using auxiliary heat or insulating blankets.
4. At temperatures below 20 degrees F, provide heated enclosures for performing the Work. At the end of the workday, maintain the enclosures and keep the Work from freezing for not less than 24 hours.
5. Do not lower freezing point of mortar by use of antifreeze, calcium chloride, or other additives.
6. Do not use frozen materials or materials coated with ice or frost.

PART 2 PRODUCTS

2.01 MATERIALS

A. Mortar Types:
1. Type N Mortar: ASTM C 270, Type N.
2. Modified Type N Pointing Mortar: ASTM C 270, Type N, modified with an acrylic additive in accordance with the additive manufacturer's printed instructions for the intended usage.
3. Type C-1 Patching Mortar: "Thorite" by Thoro System Products; "Sonopatch" by Sonneborn Building Products; "Deco-Rez TPM 722" or "Deco-Rez TPM 723" by General Polymers Corp.; "SikaTop 122" or "SikaTop 123" by Sika Corp.; "Emaco R300 CI" or "Emaco R320 CI" or "Emaco R350 CI" or "Emaco S88 CI" by Master Builders, Inc.

B. Mortar Color: For exposed Type N mortar and Modified Type N pointing mortar, select materials (complying with the requirements) and proportion pigments with other ingredients as necessary to match the color of existing corresponding materials.

C. Mortar Pigments: High purity, finely ground, chemically inert, unfading, lime proof mineral oxides specially prepared for use in mortar.

D. Acrylic Additive: "Acryl 60" by Thoro System Products; "Sonocrete" by Sonneborn Building Products; "Anchor - IT" by Anti-Hydro Waterproofing Co.

E. Masonry Units: Match existing units in type, grade, size, appearance, and texture unless otherwise indicated.

PART 3 EXECUTION

3.01 PREPARATION

A. Protection: Protect adjacent surfaces not being restored. Protect sills, ledges, and projections from material droppings.

B. Surface Preparation:
1. Prepare surfaces to be restored in compliance with product manufacturer's printed instructions and as specified.
2. Remove dirt, dust, and foreign material from surfaces to be restored.
3. Clean areas to be restored with compressed air or water flushing, except as otherwise recommended by the mortar manufacturer.

C. Materials Preparation:
1. Dry concrete masonry units and stone that have become wet. Do not wet these masonry units.
2. Wet bricks that have a high absorption rate. Wet bricks until water runs off. Install bricks when surface is slightly damp.
3. Prepare exposed Type N mortar and Modified Type N pointing mortar to match the color and appearance of existing adjoining mortar.

3.02 REPOINTING JOINTS

A. Rake or cut out joints to a minimum depth of 5/8 inch and until sound surface is reached. Where cutting is required to remove existing mortar and joint filler, use a rotary power masonry saw wherever possible without damaging masonry. Cut the mortar and joint filler cleanly from the sides of the joints, leaving square corners. Flush joints clean with water or compressed air.

B. Dampen joints slightly before application of mortar, making sure there is no free water. Backpack joints tightly out to a depth of 5/8 inch from the face of masonry with Modified Type N pointing mortar. After backpacking mortar has attained initial set, redampen remaining 5/8 inch depth of joints, fill with Modified Type N pointing mortar, and finish joints to match existing adjoining joints.
2. Where joint sealant is required, cut out the joints or backpack the joints (as required by existing conditions) to the depth shown on the Drawings.

3.03 REPLACING MASONRY UNITS

A. Provide temporary shoring or other supports as required to prevent displacement of existing masonry which is to remain. Perform the removal Work with such care as may be required to prevent damage to adjoining masonry which is to remain.

B. Remove the deteriorated and damaged masonry units to their full depth, including the surrounding joint mortar. Wherever possible without damaging masonry, use a rotary

power masonry saw for cutting Work. Leave square corners at adjoining masonry which is to remain. Clean joints and cavities by flushing with water or compressed air.

C. Dampen contact surfaces slightly before application of mortar, making sure there is no free water. Install matching masonry units with Type N mortar. Install units to match and align with existing masonry. Maintain bonding and coursing pattern of existing masonry. Use presoaked wood wedges where necessary to properly set the units and maintain uniform matching joints. Backpack and fill joints full of mortar. Finish joints to match existing adjoining joints.

3.04 FILLING JOINTS

A. Rake out loose mortar until sound surface is reached. Flush joints clean with water or compressed air.

B. Dampen joints slightly before application of mortar, making sure there is no free water. Fill joints with Modified Type N pointing mortar flush with adjoining masonry.

3.05 FILLING CRACKS

A. Non-Moving Cracks: Clean cracks with water flushing or compressed air. Dampen contact surfaces. Fill cracks with Modified Type N pointing mortar flush with adjoining masonry.
   1. Enlarge cracks 1/8 inch or less in width to 1/4 inch wide by minimum 3/8 inch deep prior to cleaning and filling. Use masonry saw or power chisel.

B. Moving Cracks: Cut out cracks more than 1/8 inch in width (for sealant) as required to provide joint configuration shown on the Drawings. Use masonry saw or power chisel. Clean and dry the contact surfaces.

3.06 PATCHING MASONRY SURFACES

A. Remove all loose and deteriorated material. Prepare substrate surface. Remove paint, oil, grease, and salt deposits from surface to be restored. Use cleaning agent, recommended by manufacturer of patching mortar, where required. Fill the depressed area or void with Type C-1 patching mortar. Provide a uniform wood float finish, flush and even with the adjacent existing surfaces. If necessary, apply the patching mortar in layers to fill the depression. Comply with manufacturer's printed instructions.

3.07 CLEANING

A. As the Work proceeds and after completion of Work, remove excess mortar, droppings, smears, stains, and other soiling substances resulting from the Work of this Section. Remove misplaced materials from surfaces immediately.

END OF SECTION 04 01 21

SECTION 04 01 42
UNIT MASONRY

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. This Section includes, but is not limited to the following:
1. Replacement of CMU where damaged or removed by the Work including, glazed block, ground faced block, painted block, and unpainted block.
2. Furnish and install new CMU required to complete rated wall assemblies where missing if uncovered during the Work.

1.2 DESIGN REQUIREMENTS

A. Mortar types to be used at the following locations, unless otherwise stated:
1. Concrete masonry units – type N unless otherwise stated.

1.3 REFERENCES

References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

A. American Society of Testing and Materials (ASTM) standards, latest editions.
- A706 Standard Specifications for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement.
- C33 Standard Specification for Concrete Aggregates.
- C90 Standard Specification for Hollow, Load-Bearing Concrete Masonry Units.
- C129 Standard Specification for Non-Load-Bearing Concrete Masonry Units.
- C140 Standard Methods of Sampling and Testing Concrete Masonry Units.
- C144 Standard Specifications for Aggregate for Masonry Mortar.
- C150 Standard Specification for Portland Cement.
- C207 Standard Specification for Hydrated Lime for Masonry Purposes.
- C270 Standard Specification for Mortar for Unit Masonry.
- C331 Standard Specification for Lightweight Aggregates for Concrete Masonry Units.
- C595 Standard Specifications for Blended Hydraulic Cements.

B. Industry Standards.
1. "Standard for Concrete Masonry Units" - UL 618- Underwriters Laboratory.

1.4 SUBMITTALS

A. Product Data: Submit Product Data to show compliance with specified requirements.
1. Submit complete data for masonry units. Laboratory test reports for brick shall be no more than two years old. Submit a list indicating the maximum dry weight of each type and size of CMU to be used in the project.
2. Submit complete data for reinforcement and ties, of each type.
3. Portland Cement: Brand and manufacturer's name.
4. Lime: Brand and manufacturer's name.
5. Packaged Products: Manufacturer's specifications and application instructions.
6. Sand: Location of pit, name of owner, and previous test data.

7. Masonry reinforcement, anchors
8. Masonry cleaner, including specific masonry manufacturer's recommended cleaning procedure for the product selected.

B. Samples:
1. 2 samples of each type of wall tie and truss tie.
2. 2 samples of each masonry unit

C. Sustainable Submittals:
1. Submit Contractor's Sustainable Materials Form with complete information on recycled and regional content for materials. Include cost of all materials, distance in miles to point of materials extraction and manufacture and percentage, by weight, of materials that have post-consumer or pre-consumer recycled content for the following:
   a. Concrete masonry units.
2. Submit documentation of recycled and regional content in brick and concrete masonry unit materials – product data, mix design information, or manufacturer's statement.

1.5 QUALITY ASSURANCE

A. Qualifications: Company specializing in the Work of this Section shall have a minimum of three years experience and at least two projects using similar quantity of materials and of the same or greater construction value.

B. Regulatory Requirements
1. Building Code: Work of this Section shall conform to all requirements of the NYC Building Code and all applicable regulations of governmental authorities having jurisdiction, including safety, health, noise, and anti-pollution regulations. Where more severe requirements than those contained in the Building Code are given in this Section, the requirements of this Section shall govern.
2. Controlled Inspection and Certification (If Required)
   Reinforced and unreinforced masonry shall conform to the material acceptance, certification and inspection requirements of Article 7, Chapter 1 - Subchapter 1 and Tables 10-1 and 10-2 of the Building Code (Title 27).

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to project site in undamaged condition per ASTM guidelines. Store in an enclosed location or off the ground with waterproof covering as needed to protect all materials from moisture, contaminants, corrosion, deleterious temperature changes, and other harmful conditions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Aggregate for Concrete Masonry Units (CMU)
1. Northeast Solite Corporation, Mt. Marion, N.Y.
2. Norlite Corporation, Cohoes, N.Y.
3. Or equal.

B. Reinforcement and Ties
1. Hohmann & Barnard, Inc., Hauppage, N.Y.
2. Dur-O-Wall, Arlington Heights, IL.
3. Or equal.

C. Mortar Additives
1. ACM Chemistries, Norcross, GA 30010
2. Master Builders, Inc., Cleveland, OH 44122
3. Sika Corp., Lyndhurst, NJ 07071

2.2 MATERIALS

A. Base Materials
1. Portland Cement
Type I ASTM C150
2. Sand for Mortar Mix ASTM C144
Sand shall be washed natural sand with 100% passing the No. 8 sieve. Mix shall not contain chlorides.
3. Aggregate for CMU - 100% light ASTM C331
weight aggregate, expanded clay shale or slate (rotary kiln process). To meet recycled content, lightweight recycled aggregate of up to 20% of total material that will maintain the same fire resistance equivalent thickness of 100% expanded shale, clay, or slate without a decrease in block strength may be used.
4. Hydrated Lime ASTM C207
Type "S"
5. Water - Clean, potable New York City water free of injurious materials.

B. Concrete Masonry Units (CMU)
1. Types: Hollow Load-Bearing: ASTM C90, Type I. Aggregate shall conform to ASTM C331.
2. Size
a. Nominal face dimension 8" x 16" or 8"x18", except as noted otherwise.
b. Unit weight: Unit weight of concrete for CMU not to exceed 90 pcf when tested in accordance with ASTM C140 (105 pcf for the high strength CMU).
3. Concrete masonry units shall be manufactured with a minimum of 3% pre-consumer content materials. A maximum ratio of 40% slag to Portland cement is permitted for cementitious materials and 20% recycled lightweight material (such as fly ash) to expanded clay shale, or slate for aggregate, as long as the required strength to meet ASTM C90 is met, the weights are the same, and the equivalent thickness to meet fire-resistance ratings is the same as block with 100% expanded clay, shale, or slate.

C. Joint Reinforcement and Ties
1. Material
a. Reinforcement and Ties for Interior Walls: ASTM A951, hot-dip galvanized (after fabrication), ASTM A153.
b. Width of truss and mesh reinforcement to place edge of reinforcement 1” from each face of masonry.
2. Manufactured Units. Units are listed by Hohmann & Barnard model number in order to establish a standard for comparison. Deliver all units with manufacturer’s printed installation instructions.
a. Interior Concrete Masonry Unit Walls: LOX-ALL #120 Truss-Mesh, 9 gage, of proper width for wall thickness.
b. Interior Concrete Masonry Unit Walls
1. For Wall Carried up Separately: #344 steel straps, 1/4" x 11/2" x 8” with 2 bent ends (90 degrees).

D. Masonry Cleaner: Masonry cleaner capable of cleaning masonry without degrading the masonry material or mortar. Cleaner must be approved by the masonry manufacturer.

2.3 MIXES

A. Mortar (basic)
Shall conform to ASTM C270 and BIA M1-88. Provide Type I Portland cement. Masonry cement shall not be used as a substitute. Preconstruction testing with the proportions carefully monitored is to be used to establish the upper end of the strength range, which should generally be near the minimum strength of the next higher strength mortar.
1. Type N: 1 part gray cement, 1 part lime, 6 parts dry sand. Minimum compressive strength shall be 750 psi at 28 days.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine all adjoining Work on which this Work is in anyway dependent for proper installation and workmanship. Report to the Architect / Engineer any conditions that prevent the performance of this Work.

3.2 MIXING PROCEDURES FOR MORTAR

A. Measure material by volume or equivalent weight. In measuring by volume, measure ingredients by container. Do not measure by shovel.
B. Mix ingredients in a clean mechanical mixer for a minimum of 3 minutes, maximum of 5, with the minimum amount of water to produce a workable consistency.
C. Mortar that has stiffened because of evaporation of water from the mortar may be retempered only once, and only during the first hour of placement to restore the required consistency. Mortar shall be used within $2^1/_2$ hours after initial mixing. Limit amount of mortar batched at one time to maintain these requirements.

3.3 LAYING - GENERAL

A. Lay units true to dimensions, plumb and level, square; exterior and interior bond work in bond indicated on the Drawings or specified by Architecture if an unusual site condition. Lay courses level with joints uniform; vertical joints spaced properly for plumb alignment.
B. Fill bed joints and cross joints solid with mortar. Furrowed bed and spotted cross joints not permitted. For hollow block units, apply mortar full length on all bearing surfaces.
C. "Tooth" openings in exposed masonry walls, to maintain proper bond when closed.
D. Tool joints in exposed masonry with a concave jointer to provide a neat, smooth, compacted surface.
E. Rough cut joints in masonry that are to receive plaster, to provide good plaster bond.
F. Remove excess mortar, leaving masonry surface clean.
G. Cut concrete masonry units with circular masonry wet saw.

3.4 CONCRETE MASONRY UNITS (CMU)

A. General
1. Lay blocks with cells vertical. Provide running bond unless shown otherwise on the Drawings or as indicated, bonded at corner angles. Fill cores containing vertical reinforcement with masonry grout for full height, as the wall is erected.

2. Where interior partitions intersect other partitions or walls, bond together with metal wall ties spaced 2'-0" o.c. min., vertically.

B. Horizontal and Vertical Face Joints
1. Make joints uniform and 3/8" thick, unless otherwise indicated.
2. Shove vertical joints tight.
3. Tool joints with a concave smooth, non-staining tool, when thumb print hard, at surfaces to be painted or exposed.
4. Point joints tight with a trowel, in unparged masonry below grade.
5. Strike mortar joints flush in surfaces to be plastered, stuccoed, covered with other masonry, or which are otherwise concealed from view.

C. Exposed and Painted Surfaces
1. Smooth, even texture, free of chips, cracks, or other imperfections and free from any material that will stain paint.

3.5 GENERAL - CUTTING, FITTING AND LAYING

A. Cut units for exposed Work with motor-driven carborundum wet saw; provide smooth, straight edges.
B. Provide necessary cuts to fit tightly in and around mechanical installations.
C. Where split block units are used to conceal piping or other installations, provide reinforcement for bonding the split units together.
D. Remove mortar protrusions that extend into cells or cavities which are to be reinforced and filled.
E. Set block up with special care for plane, jointing, pattern, and cutting.
F. Keep faces of units clean; clean off mortar droppings on block face immediately.
G. Extend interior partitions to underside of slabs and beams. Leave sufficient space between partition and slab/beam to install firestopping materials where required. Install sealant to top of wall and at bottom of wall.

3.6 REINFORCEMENT

A. General
1. Interior Concrete Masonry Units
2. Provide continuous mesh at every third block course.
3. Provide ties at 24" o.c. vertical spacing. Embed in masonry 4" minimum each wall.

B. Provide galvanized steel bent straps secured to slab, to brace tops of interior masonry partitions.
1. Cells of hollow masonry units containing reinforcing bars are to be filled completely with masonry grout.

3.7 CLEANING

A. Concrete Masonry Units
1. Clean wall surfaces to be painted; rub with carborundum stone: remove mortar from surfaces; remove rough edges from joints.
2. Point up holes and joints. Brush with stiff bristle brush. Leave surface in condition to receive paint.
3. Do not use wire brush.

END OF SECTION 04 01 42

SECTION 04 05 13
MORTAR AND MASONRY GROUT

PART 1 GENERAL

1.01 REFERENCES

A. Standards:
1. Mortar: ASTM C 270, except as otherwise specified.
2. Grout: ASTM C 476.

1.02 SUBMITTALS

A. Product Data:
1. Portland Cement: Brand and manufacturer's name.
2. Masonry Cement: Brand and manufacturer's name.
3. Lime: Brand and manufacturer's name.
4. Sand(s): Location of pit, name of owner, and previous test data.
5. Color Pigments: Brand and manufacturer's name.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials in a manner which will insure the preservation of their quality and fitness for the Work.

B. Store cement and lime on raised platforms under waterproof, well ventilated cover.

PART 2 PRODUCTS

2.01 MATERIALS

A. Cement: One of the following complying with the indicated requirements:

1. Portland Cement: ASTM C 150, Type 1, of natural color or white as required to produce the desired color.
   a. Fly Ash: Comply with ASTM C593.
      1) Recycled Content: Minimum 15 percent pre-consumer recycled content at contractor's option.
         a) Type 1: 81 g, 15 percent.
2. Masonry Cement: ASTM C 91, of natural color or custom color as required to produce the desired color.
   a. Fly Ash: Comply with ASTM C593.
      1.) Recycled Content: Minimum 5 percent post-consumer recycled content, or minimum 20 percent pre-consumer recycled content at contractor's option.
         a) Type M: 27 g, 5 percent; 108 g 20 percent.
         b) Type S: 26 g, 5 percent; 102 g, 20 percent.
         c) Type N: 24 g, 5 percent; 96 g 20 percent.

B. Hydrated Lime: ASTM C 207, Type S.

C. Mortar Sand: ASTM C 144, except that for joints less than 1/4 inch thick use sand graded with 100 percent passing the No. 16 sieve.
   1. Sand for White Mortar: Natural white sand or ground white stone.
   2. Sand for Colored Mortar: Ground marble, granite, or other sound stone, as required to match approved sample.

D. Grout Sand: ASTM C 404.

E. Color Pigments: High purity, finely ground, chemically inert, unfading, lime proof mineral oxides specially prepared for use in mortar.

F. Water: Clean and free of deleterious amounts of acids, alkalis, and organic materials.

2.02 MIXES

A. Mortar for Unit Masonry: Comply with ASTM C 270, proportion specifications, except limit materials to those specified.
   1. Colored Mortar: Proportion color pigments with other ingredients as necessary to match required color, except limit pigments other than carbon black to a maximum of 10 percent of cement content by weight and limit carbon black to a maximum of 3 percent of cement content by weight.

B. Grout: Comply with ASTM C 476. If grout types are not indicated on Drawings, furnish type (fine or coarse) most suitable for the particular job conditions to completely fill cavities and embed reinforcement and other built-in items.

PART 3 EXECUTION

3.01 INSTALLATION

A. Refer to sections of Specifications which require mortar and masonry grout.

3.02 MORTAR SCHEDULE

A. Where mortar types are not indicated on Drawings or specified, use types as follows:
   1. Type M for unit masonry below grade in contact with fill materials.
   2. Type S for concrete masonry units.
   3. Type N for brick masonry units.
      a. Proportion Portland cement, lime, and sand in a 1:1:6 ratio.

END OF SECTION 04 05 13

SECTION 04 05 19
STONE SUPPORT SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Stone anchorage for placement of limestone panels.

1.2 RELATED REQUIREMENTS

A. 04 42 00- Limestone Cladding

1.3 REFERENCE STANDARDS

A. ASTM A276 – Standard Specification for Stainless Steel Bars and Shapes.

1.4 COORDINATION

A. Coordinate the Work with installation of anchor assembly onto structural supporting components.

1.5 PREINSTALLATION MEETINGS

A. Convene preinstallation meeting 2 weeks before start of work of this section.

B. Require attendance of parties directly affecting work of this section, including Contractor, Architect, Engineer, installer, and manufacturer's representative.

C. Review materials, preparation, installation, tolerances, protection, and coordination with other work.

1.6 SUBMITTALS

A. Comply with Section 01 33 00 – Submittal Procedures.

B. Product Data: Submit manufacturer's product data, including installation instructions.

C. Engineered Shop Drawings: Submit manufacturer's shop drawings, indicating component profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories with an engineer stamp.

D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.

E. Test Reports: Submit manufacturer's substantiating engineering data, test results of previous test by independent laboratory which meet performance criteria, and other supportive data.

F. Warranty Documentation: Submit manufacturer's standard warranty.

1.7 QUALITY ASSURANCE

A. Manufacturer's Qualifications:
1. Capable of providing field service representation during installation.
2. Minimum of 5 years experience in manufacture of anchoring components.
3. Experience in projects of similar scope.
4. Manufacture in accordance with established quality assurance program.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:
1. Store and handle materials in accordance with manufacturer's instructions.
2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
3. Store materials in clean, dry area indoors.
4. Protect materials and finish during storage, handling, and installation to prevent damage.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A.

Halfen USA Inc., 8521 FM 1976, P.O. Box 547, Converse, TX 78109. Toll Free 800-423-9140.

Fax 888-277-1695. www.halfenusa.com. info@halfenusa.com.

2.2 DESIGN CRITERIA

A. Anchor Assembly: Anchor plates and attachment to resist loads as follows each without damage or permanent set under load:

1. Dead Load: Based on panel size.
2. Wind Load: 45 lbs.

2.3 MATERIALS

A. Body Anchors: HALFEN "Type BA".
1. Material: Stainless steel, ASTM A276, Type 316.
2. Wall Brackets: Stainless steel.
3. Anchors to Substrate: Bolted type.
4. Stone Anchors: Stainless steel.
a. Type 1: Two-way pin or Type 2: One-way pin.
b. Adjustable flat-faced bolt, horizontal face to support stone panel.
c. Adjustable nut.

B. Any panel 4003 and higher a dead load support
   1. BA1308
   2. BA1312

C. Body Anchors: HALFEN "Type DH".
   1. Material: Stainless steel, ASTM A276, Type 316.
   2. Wall Brackets: Stainless steel.
   3. Anchors to Substrate: Bolted type.
   4. Stone Anchors: Stainless steel.
      a. Type 1: Two-way pin or Type 2: One-way pin.
      b. Bolts: Adjustable flat-faced bolt, horizontal face to support stone panel.
      c. Nuts: Adjustable.
   5. DH1714 3" Stone with max 4" gap
   6. DH1712 2" stone with max 4" gap

2.4 FABRICATION
A. Shop assemble items for delivery to site in variety of sizes required.
B. Package anchor sets.

PART 3 - EXECUTION

3.1 EXAMINATION
A. Examine areas and supports to receive stone support system.
B. Verify dimensions, tolerances, and method of attachment with other work.
C. Notify Architect of conditions that would adversely affect installation.

D. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

A. Install stone support system in accordance with manufacturer's instructions at locations indicated on the Drawings.

B. Establish setting templates in correct positions before drilling mount holes for expansion anchors.

C. Install items plumb and level, accurately fitted, free from distortion or defects.

D. Obtain approval from Architect and manufacturer before site cutting or making adjustments not scheduled.

3.3 TOLERANCES

A. Wall Bracket Maximum Variation from plumb: 1/8 inch (3 mm).

3.4 PROTECTION

A. Protect installed stone support system from damage during construction.

END OF SECTION 04 05 19

SECTION 04 42 00
LIMESTONE CLADDING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Limestone dimension stone cladding to match existing.

B. Refer to notes of drawings for removal and reuse of existing limestone panels.

1.2 RELATED SECTIONS

A. Section 04 05 13 - Mortar and Masonry Grout.

B. Section 04 05 19 - Stone Support System.

C. Section 07 92 00 - Joint Sealants: Rod and sealant between stone and other building components.

1.3 REFERENCES

A. ASTM C97: Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.

B. ASTM C99: Standard Test Method for Modulus of Rupture of Dimension Stone.

C. ASTM C170: Standard Test Method for Compressive Strength of Dimension Stone.

D. ASTM C241: Standard Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic.

E. ASTM C880: Standard Test Method for Flexural Strength of Dimension Stone.

F. ASTM C568: Standard Specification for Limestone Dimension Stone.

G. ASTM C1242: Standard Guide for Design, Selection, and Installation of Exterior Dimension Stone Anchors and Anchoring Systems.

H. ACI 530.1/ASCE 6/TMS 602: Specifications for Masonry Structures.

1.4 DESIGN REQUIREMENTS

A. General: Design, fabricate and install stone cladding to withstand normal loads from wind, gravity, movement of building structure, and thermally induced movement, as well as to resist deterioration under conditions of normal use including exposure to weather, without failure.

B. Retain the services of a cladding engineer, as described below, to design the cladding support and retention system. Cladding engineer will prepare engineering calculations for the justification of all principal stonework, units, fasteners, and anchorage components for compliance with the

performance criteria established herein.

C. Engineering Calculations: base calculations on design loads, material properties, and applicable safety factors. Include the following information as part of the calculations:
   1. Stone loads and allowable loads.
   2. Stone thicknesses.
   3. Support and anchorage loads, stresses, safety factors, design loads, and allowable loads.
   4. Support and anchorage sizes.

D. Design connections and attachments for limestone to carry the design loads with safety factors and allowable stresses in accordance with the American Institute of Steel Construction (AISC), except that steel supports carrying gravity loads shall be stressed not more than 50 percent of the yield stress in bending.

E. Design, detail and fabricate connections to provide allowance for fabrication tolerances, erection tolerances and structural deflections. Refer to ASTM C1242.

F. Control of Corrosion: Prevent galvanic and other forms of corrosion by insulating metals and other materials from direct contact with non-compatible materials, or by suitable coating such as galvanization.

1.5 SHOP DRAWINGS

A. Submit shop drawings and setting diagrams.

B. Indicate sizes and sections of stone, arrangements of joints and bonding, anchoring, dowelling and cramping.

C. Each stone indicated on shop drawings must bear corresponding number marked on its back or bed or on the package labeling.

1.6 TESTS

A. Submit analysis and testing of dimension stone.

B. Testing: conduct tests on dimension stone for compressive strength and modulus of rupture.

C. Test samples in accordance with indicated standards.

D. Provide test results to Architect.

1.7 SAMPLES

A. Submit 4 samples of limestone dimension stone to illustrate color and pattern range, and finish texture.

1.8 QUALITY ASSURANCE

A. Fabricator: Company having sufficient capacity to quarry, cut, and deliver the stonework on schedule.

B. Installer: Company or person specializing in commercial stonework with 10 years documented experience. Employ skilled stone fitters at the site to do necessary field cutting as stones are set.

C. Obtain stone from a single quarry source with resources to provide materials of specified consistent quality.

1.9 MOCKUPS

A. Construct typical mockup panel 48" x 48" to illustrate stone, coursing or bond pattern, joints between units, and movement control joints.

1.10 DELIVERY, STORAGE AND HANDLING

A. Deliver and store stone in a manner designed to prevent damage and staining of units. Prevent damage to units.

B. Lift skids with proper and sufficiently long slings or forks with protection to prevent damage to units. Protect edges and corners.

C. Stack units on timbers or platforms at least 3" above grade.

D. Place polyethylene or other non-staining plastic film between wood and other finished surfaces of units when stored for extended periods of time.

E. Cover stored units with non-staining, weather-proof protective enclosure if exposed to weather.

F. Do not use salt or calcium-chloride to remove ice from stone surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers of dolomitic limestone having products considered acceptable for use:
1. Arriscraft International Inc.; Adair®® Limestone.

2.2 MATERIALS

A. Dolomitic Limestone: to ASTM C568, Category III - High Density; special shapes as indicated; having the following typical average properties when tested to the identified standard:
1. Compressive Strength: 22,900 psi, to ASTM C170.
2. Absorption: 0.75 percent, to ASTM C97.
3. Density: 167 lbs/ft^3, to ASTM C97.
4. Modulus of Rupture: 2,250 psi, to ASTM C99.
5. Flexural Strength: 1,600 psi to ASTM C880.
6. Abrasion Resistance: 18.0 to ASTM C241.

2.3 FABRICATED UNITS

A. Stone Panels: dolomitic limestone panels, as described below:
   1. Bed Thickness: thickness to match existing limestone.
   2. Panel Sizes: modular sizes as indicated on Drawings;
   3. Finish: to match existing limestone.
   4. Color and Pattern: match existing limestone, and to match approved sample range.

B. Sills and Trim: dolomitic limestone units, sizes and profiles as indicated on Drawings.

2.4 ACCESSORIES

A. Anchors, Cramps, Dowels: to ASTM C1242, stainless steel, Type 304; as specified in Section 04 05 19.

B. Setting Buttons: lead type; non-staining; sized to suit joint thicknesses and bed depths without intruding into required depths of joint sealants or causing third-side adhesion between sealant and setting button.

C. Seismic Clips: purpose made clips designed to secure bed joint reinforcement to the structural substrate's joint reinforcement system as a composite element and allow in-plane vertical and horizontal movement while restraining lateral movement.

D. Mortar: as specified in Section 04 05 13.

E. Sealant and Backer Rod: as specified in Section 07 92 00.

2.5 FABRICATION

A. Cut stone to shape and dimensions and full to square with joints as indicated.

B. Dress exposed faces true.

C. Cut stone to lay on its natural quarry bed.

D. Cut-in reglets for flashings where indicated.

E. Execute profiled work from full size details and templates.

F. Make exposed arises in true alignment and ease slightly to prevent snipping.

G. Back-check stone contacting structural members as indicated. Allow minimum 1" clearance between back of stone and steel and concrete structural members. Shape beds of stone resting on structural work to fit supports.

H. Cut stones for anchors, cramps, dowels and support systems. Provide lewis pin and clamp holes in pieces which cannot be manually lifted. Do not cut holes in exposed surfaces.

I. Finish exposed faces and edges of stones to comply with requirements indicated for finish and to match approved samples and field-constructed mock-up.

2.6 FABRICATION TOLERANCES

A. Except where dimension is formed by a split or rocked finish, fabricate limestone dimension stone to the following tolerances:
   1. Unit Length: plus or minus 1/8".
   2. Unit Height: plus or minus 1/8".
   3. Deviation From Square: plus or minus 1/8", with measurement taken using the longest edge as the base.
   4. Bed Depth: plus or minus 1/8".

PART 3 - EXECUTION

3.1 PREPARATION

A. Apply asphalt emulsion to concrete surfaces, shelf angles, structural steel supports against which stone is to be applied.

B. Waterproof exterior slabs on back prior to setting.

C. Clean stone surfaces by washing with stiff fiber brush and water.

3.2 SETTING STONE - GENERAL

A. Set stones plumb, true, and level, to requirements indicated on drawings and approved shop drawings.

B. Align stone edges and faces according to established relationships and indicated tolerances.

C. Provide movement joints of widths and at locations indicated on drawings. Do not fill movement joints with mortar.

3.3 SETTING STONE WITH MORTAR

A. Set stones in full bed of mortar with vertical joints buttered and placed full, except where otherwise specified. Completely fill anchor, dowel and lifting holes.

B. Lay stone panel cladding to patterns indicated on Drawings. Install anchors, dowels and cramps. Shim and adjust supports to set stones accurately in locations indicated with uniform joints of widths indicated.

C. Make joints 1/4" thick.

D. Embed only ends of lugged sills and steps in mortar. Leave balance of joint open for final pointing.

E. Place setting buttons under stones to maintain joint thickness. Set heavy stones and projecting courses after mortar in courses below has hardened sufficiently to support weight.

F. Brace and anchor projecting stones until wall above is set.

G. Use soaked softwood wedges to support stone in proper alignment until mortar has set. Remove

wedges when dry and without breaking them off, fill voids with pointing mortar.

H. Install through-wall flashing membranes at continuous shelf angles, steel lintels, ledges and similar obstructions to the downward flow of water.

I. Install weep vents at 24" OC horizontally above shelf angles, and at bottom of walls.

J. Install cavity vents at top of cavity space at same spacing.

K. Tool joints after initial set has occurred.

L. Rake out joints to depth and make ready for pointing with pointing mortar. Sponge stone face along joints and remove droppings and splashed mortar immediately.

M. Grouting:
1. Pack ends of exposed joints with plastic foam joint filler and after wetting ends of stone, fill joint with grouting mortar to within 3/4" of top.
2. After grout has set, remove packing for pointing.

N. Pointing:
1. Remove dirt and loose mortar from joints by using pressurized air stream.
2. Wet joints for mortar pointing. Dry joints for sealant pointing.
3. Point joints with pointing mortar in two stages. Rub smooth with appropriate tool to slightly concave joint.

3.4 SETTING STONE WITH SEALANT JOINTS

A. Attach anchors, dowels and cramps securely to stone and back-up surfaces.

B. Shim and adjust supports to set stones accurately in locations indicated with uniform joints of widths indicated.

C. Completely fill anchor, dowel and lifting holes with sealant. Where dowel holes occur at movement joints, install compressive material above and below dowels.

D. Make joints thickness to match existing joints.

E. Place setting buttons under stones to maintain joint thickness. Locate buttons back from face of stone to provide space for sealant application as described in Section 07 92 00.

F. Brace and anchor projecting stones until wall above is set.

G. Install through-wall flashing membranes at continuous shelf angles, steel lintels, ledges and similar obstructions to the downward flow of water.

H. Install weep vents at 24" OC horizontally above shelf angles, and at bottom of walls.

I. Install cavity vents at top of cavity space at same spacing.

J. Seal joints with backer rods and joint sealant as specified in Section 07 92 00.

3.5 SITE TOLERANCES

A. Variation from Plumb: plus or minus 1/4" per 10 feet maximum.

B. Variation from Level: plus or minus 1/2" per 20 feet maximum.

C. Variation from Linear Building Line: plus or minus 1/2" per 20 feet maximum.

D. Variation in Cross-Sectional Dimensions: plus 1/2" or minus 1/4".

3.6 FIELD QUALITY CONTROL

A. Perform inspection and testing.

B. Consultant Inspection: Consultant will inspect installed dimension stone and reject stone that is chipped, cracked, or blemished (streaked, stained or otherwise damaged), as described below.
1. Stone will be inspected to be free of spalls, cracks, open seams, pits or other defects that are likely to impair its structural integrity in its intended use.
2. Units shall exhibit a texture approximately equal to the approved sample when viewed under diffused daylight illumination at a 20 foot distance.
3. Minor chipping resulting from shipment and delivery shall not be grounds for rejection. Minor chips shall not be obvious under diffused daylight illumination from a 20 foot distance.
4. Dry seams and natural vugs will not be cause for rejection.

C. Make Good rejected masonry as directed by Consultant.

3.7 ADJUSTING AND CLEANING

A. Repair chips with patch kits furnished by manufacturer.

B. Clean stone as work progresses.

C. Allow mortar droppings on stone to partially dry then remove by means of brushing with a stiff fiber brush.

D. Post-Construction: Clean a 100 sq. ft. area of wall designated by Consultant as directed below and leave for one week. If no harmful effects appear and after mortar has set and cured, clean masonry as follows:
1. Protect windows, sills, doors, trim and other work from damage.
2. Remove large particles with stiff fiber brushes without damaging surface.
3. Saturate stone with clean water and flush off loose mortar and dirt.
4. Dilute cleaning agent with clean water in controlled proportions.
5. Apply solution to pre-soaked wall surface using soft-bristled brush.
6. Thoroughly rinse cleaning solution and residue from wall surface.

E. Use alternative cleaning solutions and methods for difficult to clean stone only after consultation with stone manufacturer.

3.8 PROTECTION

A. Protect stone from damage resulting from subsequent construction operations.

B. Use protection materials and methods which will not stain or damage stone.

C. Remove protection materials upon Substantial Completion, or when risk of damage is no longer present.

END OF SECTION 04 42 00

SECTION 05 71 00

MISCELLANEOUS METALS

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

1. Installation accessories.
2. Channels, metal pans and plates.
3. Aluminum grilles and frames.
4. Fry Reglet Reveals and Moldings.
5. Schluter Strips

1.2 REFERENCE STANDARDS

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

1. American Society for Testing and Materials (ASTM).

   A501 Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
   A568 Standard Specification for Steel, Sheet, Carbon, and High Strength Low Alloy, Hot Rolled and Cold Rolled
   A325 Standard Specification for Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength Structural Bolts
   A563 Standard Specification for Carbon and Alloy Steel Nuts
   E70 Standard Test Method for PH of Aqueous Solutions with the Glass Electrode
   E985 Standard Specification for Permanent Metal

2. ANSI/BHMA (A156.9-2003) American National Standard for Cabinet Hardware

3. American Welding Society (AWS).

   D1.1 “Structural Welding Code – Steel”
   D1.2 “Structural Welding Code – Sheet Steel”

1.3 SUBMITTALS

A. Shop Drawings

1. Submit Shop Drawings for all grilles, control joints and trims. Installation to be coordinated with field conditions, adjacent materials installation. Sizes will vary.

B. Manufacturer’s Data

Submit manufacturers catalog data for:

1. Fry Reglet Reveals and Moldings
2. Paint Grade Products
3. Aluminum Grilles

4. Schluter Strips

1.4 PERFORMANCE CRITERIA

A. Assume all responsibility for the correctness and accuracy of installation, and take and verify all measurements at the Building. The Contractor shall assume full responsibility for the correctness of dimensions and fit.

1.5 QUALITY ASSURANCE

A. Fabricators: Five (5) years minimum experience in steel fabrications of similar Work.

B. Welding – Shop & Field: Certify that each welder has satisfactorily passed qualification tests for welding processes involved and, if pertinent, has undergone recertification.

C. Comply with requirements specified herein of the New York City Building Code.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Grilles:
1. Dayus Register & Grille
5290 Pulleyblank Street, RR #1
Windsor, Ontario, Canada
Phone: 519-737-1199
www.dayus.com
2. Or approved equal.

B. Fry Reglet Reveals and Moldings:
1. Fry Reglet Corporation
1377 Stonefield Court
Alpharetta, GA 30004
Phone: 800-237-9773
Fax: 800-200-4397

Fry Reglet Corporation
12342 Hawkins Street
Santa Fe Springs, CA 90670
Phone: 800-237-9773
Fax: 800-200-4397

2. Or approved equal.

C. Schluter Strips:
1. Schluter Systems LP
194 Pleasant Ridge Road
Plattsburgh, NY 12901-5841
Phone: 1-800-472-4588
www.schluter.com
2. Or approved equal.

2.2 MATERIALS

A. Steel plate, angles, channels, beams, bars and other hot-rolled Sections: ASTM A36.

B. Bolts: ASTM A325: a563 nuts.

C. Grilles: Aluminum; shop painted, adjustable blades.

D. Fry Reglet Reveals and Moldings:
   1. Reveal: Reveal Channel Screed DCS-625-50
      a. Reveal Finish: Anodized Aluminum
   2. Molding: L Trim Molding DRML-625
      a. Molding Finish: Paint to match adjacent wall, as per the Design Documents.

2.3 PAINTING

A. Remove oil, grease and similar contaminants in accordance with SSPC SP-1 “Solvent Cleaning”, prior to any additional surface preparation specified.

B. Immediately after surface preparation, paint as per Painting Section.

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordinate and furnish anchorages, shop drawings, diagrams, instructions, and directions for installation of anchorages, such as inserts, sleeves, anchor bolts and miscellaneous items having integral anchors.

3.2 INSTALLATION

A. Fastening to Construction: See details on drawings.

3.3 CONNECTIONS

A. Other connections: Fillet welds; grind smooth, where exposed.

B. Field Welding: Comply with AWS for procedures of welding, appearance and quality of welds made, and methods used in correcting welding work.

C. Coordination: Coordinate and schedule this work with the work of other trades. Provide soffit clips on stringers required for securing other work, so as to achieve the proper fire rating.

END OF SECTION 05 71 00

SECTION 06 10 00
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions shall apply to the Work of this section.

1.2 DESCRIPTION OF WORK

A. Provide rough carpentry Work as indicated on the Drawings, or as required for the completed Work of this Contract, regarding field conditions but not limited to, the following:

1. Wood Grounds, nailing strips, blocking, furring, nailers, and framing.
2. Rough hardware, including nails, screws, anchors, brackets, braces, bolts, nuts, fittings, and other devices required for the proper fitting, connecting, and erecting of the Work.
3. Fire-retardant treatment for wood.
4. Miscellaneous Lumber and plywood.

1.3 REFERENCES

A. U.S. Department of Commerce.
B. American Plywood Association (APA).
C. Western Wood Product Association (WWPA).
D. Southern Pine Inspection Bureau (SPIB).
E. Redwood Inspection Service (RIS).
F. American Wood Preservers' Association (AWPA).
G. American Society for Testing and Materials (ASTM).
H. Underwriters Laboratories, Inc. (UL).
I. Federal Specifications (FS).
J. American Lumber Standards Committee (ALSC).
K. West Coast Lumber Inspection Bureau (WCLIB).
L. American Wood Preservers Bureau (AWPB).
M. National Fire Protection Association (NFPA).

1.4 SUBMITTALS

A. Quality Control Submittals
1. Certificates: Certification for the following wood treatments:
   a. Dip Treatment: Certification by treating plant stating chemical solutions used, submersion period, and conformance with applicable standards.
   b. Pressure Treatment: Certification by treating plant stating chemicals and process used, net amount of chemical preservative retained, and conformance with specified standards.
   c. Waterborne Preservatives: Certified written statement that moisture content of treated materials was reduced to a maximum of 19 percent prior to shipment to Project site.

d. Fire-Retardant Treatment: Certification by treating plant stating treated material complies with specified standards and treatment will not bleed through specified finishes.

1.5 QUALITY ASSURANCE

A. Mill and Producers Mark
Each piece of lumber and plywood shall be gradestamped indicating type, grade, mill, and grading agency certified by the Board of Review of the American Lumber Standards Committee. Mark shall appear on unfinished surface, or ends of pieces with finished surfaces.
1. Fire-Retardant Treated Material: Accredited testing agency mark on each piece of wood indicating compliance with the fire hazard classification.

B. Standards
Comply with the following unless otherwise specified or indicated on the Drawings:
1. Lumber: American Softwood Lumber Standard PS 20 by the U.S. Department of Commerce. Comply with applicable provisions by each indicated use.
2. Plywood: Product Standard PS 1 for Softwood Plywood, Construction and Industrial by the U.S. Department of Commerce.
3. Plywood Installation: APA Design/Construction Guide, by the American Plywood Association (APA), except as indicated otherwise.
4. Grading Rules:
   a. Douglas Fir, Hem-Fir, Idaho White Pine, and other Western Woods: Western Wood Products Association (WWPA) or West Coast Lumber Inspection Bureau (WCLIB).
   b. Southern Pine: Southern Pine Inspection Bureau (SPIB).
   c. Redwood: Redwood Inspection Service (RIS).
5. Fire-Retardant Treatment: American Wood Preservers' Association (AWPA) Standards.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Keep materials dry during delivery. Store materials 6" minimum above ground surface. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation between stacks.

B. Cover stored materials until ready for use for protection from moisture. Place and anchor covering in a manner which will assure good ventilation under the covering.

1.7 PROJECT CONDITIONS

A. Correlate location of supporting members to allow proper attachment of other Work.

PART 2 - PRODUCTS

2.1 LUMBER

A. General:

Furnish seasoned dimensional lumber dressed to nominal sizes indicated with 19 percent maximum moisture content at time of dressing, marked "S-DRY". Comply with dry size requirements of PS 20.

1. Dress: Surfaced 4 sides (S4S) unless otherwise indicated.

B. Miscellaneous Lumber:
Standard grade, No. 3 grade, or better grade of the following species unless otherwise indicated:

1. Nailers and Blocking: Douglas Fir, Hem-Fir, Idaho White Pine or Southern Pine.
2. Furring: Douglas Fir or Southern Pine.

2.2 MISCELLANEOUS MATERIALS

A. Adhesive:
APA Specification AFG-01.

2.3 FIRE-RETARDANT TREATMENT

A. All lumber is to be fire-retardant treated, provide "FR-S" lumber, complying with AWPA Standards for pressure impregnation with fire-retardant chemicals to achieve a flamespread rating of 25 or less, when tested in accordance with UL Test 723, ASTM E84 or NFPA Test 255.

1. Provide UL label or identifying mark on each piece of fire-retardant lumber.
2. Redry treated items to a maximum moisture content of 19 percent after treatment.

B. Fire-retardant Treated Plywood:
Comply with APA requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions:
Examine substrate and supporting structure on which rough carpentry is to be installed for defects that will adversely affect the execution and quality of the Work. Do not proceed with installation until unsatisfactory conditions are corrected.

3.2 INSTALLATION - GENERAL

A. Do not use units of material with defects which impair the quality of the Work and units which are too small to fabricate the Work with minimum joints or with optimum joint arrangement.

B. Install Work accurately to required lines and levels with members plumb and true, accurately cut and fitted and securely fastened. Closely fit rough carpentry to other associated construction.

C. Securely attach carpentry Work to substrates by anchoring and fastening as indicated, or, if not indicated, as required by the referenced standards. Select fasteners of size that will not penetrate through members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required. Set nail heads in exposed Work which is to be painted or stained and fill resulting holes.

D. Fire-retardant Wood

Do not rip or mill; only end cuts, drilling holes and joining cuts shall be permitted.

3.3 WOOD NAILERS, BLOCKING, AND GROUNDS

A. Install required items where indicated and where required for support, attachment or screeding of other Work. Form to shapes indicated or required. Coordinate locations and cut and shim as required to provide items at true and level planes to receive Work to be attached. Install closure strips to nailers at all edges.
   1. Attach to substrates as indicated; if not indicated, size and space fasteners as required to support applied loading. Maximum spacing of fasteners shall not exceed 16".

3.4 PLYWOOD APPLICATIONS

A. Comply with printed installation requirements of the APA Design Construction Guide for plywood application unless otherwise noted.

3.5 ROUGH HARDWARE

A. Furnish all rough hardware, such as nails, bolts, clips, and all other rough hardware required to secure the carpentry work in place, unless otherwise specified.

END OF SECTION 06 10 00

SECTION 06 10 53
WOOD NAILERS AND BLOCKING

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Non-Loading Bearing Framing and Furring: Section 09 22 13

1.02 QUALITY ASSURANCE

A. Mill and Producer's Stamp: Each piece of lumber shall bear a stamp indicating type, grade, mill, and grading agency.

1. Pressure treated wood shall bear a stamp or tag indicating the name of the treating company, year treated, preservative used, the level of treatment, intended use (appropriate AWPA Standard), and logo of inspecting company.

1.03 STORAGE

A. Store lumber a minimum of 6 inches off the ground, in a dry, well-ventilated place, protected from the weather.

PART 2 PRODUCTS

2.01 MATERIALS

A. Lumber: "Standard" Grade Douglas Fir, Hem-Fir, White Pine, Southern Pine, or Spruce-Pine-Fir pressure preservative treated in accordance with the American Wood Preservers Association (AWPA) Standard U1, Commodity Specification A for the requirements listed under Use Category UC2 and kiln dried to 19 percent moisture content after treatment.

1. Use Category UCFA and UCFB: Wood nailers and blocking intended for fire protection and is used in either interior weather protected (UCFA) or exterior construction, exposed to weather (UCFB).

B. Nails, Screws, and Bolts: ASTM A653 Class G185 hot dipped galvanized, zinc or cadmium plated, or silicon bronze.

1. Screws and Bolts for fastening to Aluminum: Stainless steel, Type 304 or 316.

C. Expansion Anchors: G185 Hot dipped galvanized steel wedge anchors, FS FF-S-325, Group II, Type 4, Class 1.

D. Toggle Bolts: Cadmium or zinc plated tumble - wing type; FS FF-B-588.

E. Self Threading Masonry Screws: Zinc Plated; "Tapcon" by Elco Industries, Inc., 1111 Samuelson Rd., PO Box 7009, Rockford, IL 61125-7009, (815) 397-5151.

F. Separation Membrane For Aluminum Metals: Self adhering, self sealing, rubberized asphalt sheet membrane.
   1. Physical Properties:
      a. Thickness: 40 mils minimum ASTM D 3767 Method A.
      b. Tensil strength: 250 psi ASTM D 412.
      c. Elongation (ultimate failure of the rubberized asphalt) 250% ASTM D 412 Die C Modified).
      d. Permeance: 0.05 Perms max.) ASTM E 96.
   2. "Ice And Water Shield" by W.R. Grace Co., 62 Whittemore Ave., Cambridge, MA 02140, (800) 354-5414; "Deck Guard" by Polyguard Products Inc., P.O. Box 755, Ennis, TX 75120, (800) 541-4994; "MetalSeal" by NEI Advanced Composite Technology, 50 Pine Road, Brentwood, NH, (800) 998-4634.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install nailers and blocking true to line and plane within a tolerance of 1/8 inch in 10 feet.

B. Fit joints neatly with no more than 1/16 inch space between abutting members.

C. Do not install nailers or blocking across bonding expansion joints.

D. Attach nailers and blocking securely as required to properly support the items that will be attached to them.

E. Space fasteners equally at not more than 16 inches on center and 4 inches from each end of each member, unless noted otherwise. Secure the nailers and blocking with the following types of fasteners:
   1. To Cast-In-Place Concrete, Solid Concrete Masonry Units, and Brick: Use expansion anchors or self-threading masonry screws.
   2. To Faces of Hollow Concrete Masonry Units: Use toggle bolts.
   3. To Tops of Hollow Concrete Masonry Units: Use anchor bolts extending to course below, embedded in 3000 psi concrete filled cores.
   4. To Wood: Use nails or screws.
   5. To Metal: Use bolts or self-tapping screws.

F. Countersink fasteners if they interfere with the proper installation of items to be attached to the nailers and blocking.

END OF SECTION 06 10 53

SECTION 07 20 12
MISCELLANEOUS BUILDING INSULATION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Provide all insulation not explicitly specified in other Sections and drawings.

1.2 SUSTAINABILITY REQUIREMENTS

A. The Contractor shall implement practices and procedures to meet the Project's sustainable requirements. The Contractor shall ensure that the requirements related to these goals, as defined in Specification Section 01 74 19 Construction Waste Management, and in this Section, are implemented to the fullest extent. Substitutions or other changes to the work shall not be proposed by the Contractor or their sub-contractors if such changes compromise the stated Sustainable Design Performance Criteria.

B. Sustainability requirements included in the Section are as follows:
   1. Meet established minimum post and pre-consumer % recycled content for specified insulation.
   2. Documentation of Recycled materials.

1.3 REFERENCES

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

B. American Society for Testing and Materials (ASTM)

C. New York City Board of Standards and Appeals (BSA) approvals, or New York City Materials Equipment Acceptance (MEA) approvals.

1.4 SUBMITTALS

A. Samples
   1. Submit 12" x 12" sample of each type of insulation.
   2. Sample shall clearly indicate manufacturer's label and material designation.

B. Manufacturer's Catalog Information
   Provide current manufacturers' catalog information and data sheets on each type of insulation furnished.

C. Sustainable Submittals:

1. Submit Contractor's Sustainable Materials Form with complete information on recycled content for materials provided under the work of this section in accordance with Section S01352, Sustainability Requirements. Include cost of materials and percentage, by weight, of materials that have post-consumer or pre-consumer recycled content for the following:
   a. Mineral fiber blanket and batt.
2. Submit documentation of recycled content in extruded foam and fiber insulation materials – product data, mix design information, or manufacturer's statement.
3. Submit Contractor's Sustainable Materials Form with complete information on regional content for each mineral fiber insulation provided under the work of this section in accordance with Section S01352, Sustainability Requirements. Include cost of all insulation materials and distance in miles to point of materials extraction and manufacture.
4. Submit documentation of regional materials – product data, mix design information, or manufacturer's statement.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be properly identified with manufacturer's name.
B. Store materials on the site in a dry area protected from the weather.
C. Do not leave exposed in areas where traffic might cause mechanical damage to product.

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Dow Chemical U.S.A
B. UC Industries, Inc.
C. Thermafiber Corporation
D. Owens – Corning
E. CertainTeed
F. Roxul, Inc.

2.2 MATERIALS

A. Mineral Fiber Blanket or Batt (ASTM C665)
   1. Foil-backed insulation: Type III, Class A. Density: 3 lbs./cubic foot minimum.
   2. Blanket and batt insulation units shall be manufactured with a minimum of 20% of pre-consumer content materials.
   3. Fungi Resistance: Insulation and facing shall be fungi resistant when tested in accordance with ASTM C1338-00

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are free of defects or protrusions and ready to receive insulation. Do not begin installation until defects are remedied.

3.2 INSTALLATION

A. Install insulation as shown on Drawings and in accordance with manufacturer's instructions.
B. Butt units tightly.
C. Shape insulation around obstructions by means of saw, knife, or other sharp tool.

END OF SECTION 07 20 12

SECTION 07 25 00

SPRAYED-ON FIREPROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Patch existing fireproofing

1.2 DESCRIPTION OF THE WORK.

A. Repair to existing structural member fireproofing disturbed by the work or addition of fireproffing missing, uncovered as a field condition.

1.3 SUBMITTALS

A. Evidence of Acceptable Testing: Submit for each fire-resistance rated assembly to be constructed. Listing of the assembly to be used in the current edition of the Underwriters Laboratories Inc. "Fire Resistance Directory" will be considered evidence of acceptable testing. In lieu of such a directory listing, official printed notification from Underwriters Laboratories Inc., stating that the assembly in question has been tested and approved, will also be considered evidence of acceptable testing.

B. Product Data: Submit complete product and system description, including installation instructions and limitations on use.

C. Certificate of Acceptability of Substrates: Submit fireproofing manufacturer's certification that substrates to receive fireproofing are acceptable to fireproofing manufacturer. Where fireproofing manufacturer recommends use of a bonding agent to ensure adequate bond for fireproofing, follow manufacturer's instructions.

D. Materials Certificate: Submit fireproofing manufacturer's certification that products to be supplied conform to requirements of the contract documents and are recommended by the manufacturer for application indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in dry, protected area in manufacturer's original shipping containers bearing labels which include UL fire resistance ratings, manufacturer's name, product name, date of manufacture, and shelf life instructions where required.

B. Do not use products beyond manufacturer's indicated shelf life.

1.6 PROJECT CONDITIONS

A. Environmental Requirements:

1. Minimum ambient and substrate temperatures for 24 hours immediately preceding, during, and for 24 hours after fireproofing installation: 40 degrees F.

2. Provide adequate air circulation to ensure proper curing of fireproofing materials.

1.7 SEQUENCING AND SCHEDULING

A. Coordinate work of this section with other work as required to ensure that installed materials are not damaged during construction period and that fire resistance ratings are not compromised by work of other trades.

B. Schedule fireproofing installation sufficiently in advance of other work to permit field quality control testing and any required corrective procedures to be completed before construction which might interfere with these operations is started.

1.8 GUARANTEE

A. Submit a guarantee, executed by the Contractor and co-signed by the installer, agreeing to repair/ replace fireproofing work performed under this Contract which has cracked, flaked, dusted excessively, peeled, or has fallen from the substrate due to defective workmanship for a period of two (2) years from the date of acceptance of the building.

PART 2 - PRODUCTS

2.1 MATERIALS

A. For all of each distinct fireproofing product indicated, provide materials produced by one manufacturer, factory-mixed, suitable for sprayed application, and requiring addition at the site of no other materials other than water.

B. Fireproofing: Provide products as specified for the UL (Underwriters Laboratories Inc.) designs indicated, or provide acceptable substitutes listed by UL, having equivalent fire resistance ratings, and approved by the Architect and by authorities having jurisdiction.

C. Prohibited Products:

1. Mineral fiber fireproofing, i.e, spray fireproofing assemblies classified in the "800 Series" in the UL Fire Resistance Directory, will not be considered for substitution.

2.2 ACCESSORIES

A. Provide products which strictly comply with UL requirements for fire resistance rated designs indicated, including the following items where required:

1. Bonding agent/substrate primer.
2. Topcoat/sealer: Provide where needed to comply with performance requirements indicated or where recommended by fireproofing manufacturer for application.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that substrates are in satisfactory condition to receive fireproofing.

B. Verify that items required to penetrate fireproofing are in place and properly fastened.

C. Perform fireproofing manufacturer's recommended test procedures wherever substances which might affect adhesion of fireproofing are suspected on substrates.

D. Notify the Architect in writing of any substrate conditions requiring correction by other than normal cleaning methods, prior to installation of fireproofing.

E. Do not begin work until unsatisfactory conditions have been corrected; commencement of fireproofing installation indicates acceptance of conditions.

3.2 PREPARATION

A. Provide drop cloths, masking, or other suitable coverings for materials not to receive fireproofing.

B. Take necessary precautions to protect workmen, the public, and the environment during installation.

C. Prepare substrates as required to result in permanent bonding of fireproofing material. Strictly follow fireproofing manufacturer's instructions for cleaning and preparation of substrates.

D. Primed Steel: Where required by fireproofing manufacturer for proper bond, apply fireproofing manufacturer's recommended bonding agent/substrate primer.

3.3 INSTALLATION

A. Install in strict accordance with UL (Underwriters Laboratories Inc.) "Fire Resistance Directory" instructions for designs indicated and with fireproofing manufacturer's instructions.

B. Install fireproofing in a manner which will maximize adhesion between fireproofing and substrate and continuity of fire-resistive protection; use a single course of fireproofing unless otherwise recommended by fireproofing manufacturer.

C. Spray material on substrate wherever conditions permit.

3.4 PATCH EXISTING FIREPROOFING

A. Patch existing fireproofing material where existing fireproofing has been damaged due to demolition or construction operations.

3.5 FIELD QUALITY CONTROL

A. Measure thickness and density in accordance with ASTM E 605 procedures for rating required.

3.6 CLEANING

A. Completely remove fireproofing from surfaces not designated to receive fireproofing while material is still wet and before it has begun to set.

3.7 PROTECTION

A. Follow instructions of fireproofing manufacturer to prevent damage to fireproofing.

END OF SECTION 07 25 00

SECTION 07 84 00
FIRESTOPPING/SMOKE SEALS

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

A. Provide firestopping at all penetrations and juncture joints of fire-rated walls, floors and ceilings in accordance with the requirements of the NYC Building Code.

1.2 REFERENCES

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.
1. American Society for Testing and Materials (ASTM)
2. Underwriters Laboratories, Inc. (UL)
3. National Fire Protection Association (NFPA)
4. Warnock Hersey

1.3 DESIGN REQUIREMENTS

A. Technical Requirements
1. Firestopping materials shall be UL Classified as "Fill, Void or Cavity Material" for use in Through-Penetration Firestop Systems.
2. Firestop Systems shall provide a fire resistance rating at least equal to the hourly resistance rating of the fire-rated barrier and resist passage of smoke and other gases.

1.4 SUBMITTALS

A. Product Data: Submit manufacturer's product information for each type of firestopping/smoke seal and assembly installed, including application instructions and specifications.

B. Quality Control Submittals
1. Certificates
   a. Furnish manufacturer's certification that materials meet or exceed specification requirements for each of the performance tests specified in Part 2. Provide testing certification.
   b. Furnish applicator's certification that material has been completed as specified to meet fire resistance ratings, thickness requirements, and application requirements of the applicable assembly.
   c. Furnish UL, BSA, MEA, or OTCR approval of material.
   d. Furnish certificate stating each material is 100% asbestos free.
2. Contractor Qualifications
   a. Provide proof of Manufacturer and Applicator qualifications specified under “Quality Assurance”.

C. Guarantee
1. Contractor and installer's installation guarantee.

1.5 QUALITY ASSURANCE

A. Qualifications
1. Manufacturer
Company specializing in the manufacture of firestopping/smoke seal materials to be used in this Contract shall have a minimum of five years experience.
2. Installer: All firestopping Work shall be performed by the general contractor or Subcontractor who will be acceptable to the firestopping manufacturer in the application of its products and systems and have a minimum of three years experience and shall have worked on at least two projects with similar quantities of materials used.

B. Regulatory Requirements
1. Building Code: Material and application shall meet the requirements for firestopping materials in accordance with the NYC Building Code.
2. Material must have UL or NYC BSA, MEA or OTCR approval for each assembly utilized. Comply with the following for firestopping that is required to be in compliance with BC 712 of the 2008 NYC Building Code:
a. ASTM E84 - Surface Burning Characteristics of Building Materials.
b. ASTM E814 - Fire Tests of Through Penetration Firestops.
c. U.L. 1479 - Fire Tests of Through-penetration `Firestops.
d. U.L. - Fire Resistance Directory; Through-Penetration Firestop Systems (XHEZ), and Fill, Void or Cavity Materials (XHHW).
e. U.L. 723 - Standard Test Method for Surface Burning Characteristics of Building Materials.

C. Manufacturer's Certification
1. Manufacturer shall provide written certification stipulating that its products and systems used in this Project, if installed in accordance with the manufacturer's recommendations, shall provide the firestopping specified in this Section, as indicated by its UL rating for that specific installation.
2. The certification shall not include either or both of the following statements, or variations thereof:
"Owner or User shall determine suitability of the product or system for its intended use and assume all risks and liabilities connected therewith" and, "Owner or User shall test application of product or system for its specific use".

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original, unopened packages bearing name of manufacturer, product identification, and the proper UL labels for fire hazard and fire-resistance classification.
B. Store materials off ground, under cover, and away from damp surfaces, keep dry.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Maintain air and substrate temperature at a minimum temperature of 50°F for 24 hours before, during, and for 24 hours after application of the material or as required by the product literature, which ever is more stringent. Contractor shall provide enclosures with heat to maintain temperatures.

1.8 GUARANTEE

A. Submit a guarantee, executed by the Contractor and co-signed by the installer, agreeing to repair/replace firestopping work performed under this Contract which has cracked, flaked, dusted excessively, peeled, or has separated or fallen from the substrate due to defective workmanship for a period of two (2) years from the date of substantial completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Hilti Construction Chemicals, Inc., Tulsa, OK.
B. The Carborundum Company, Niagara Falls, NY.
C. 3M Fire Protection Products, St. Paul, MN.
D. Bio Fireshield, Inc., Concord, MA
E. Tremco Sealant Division, Tremco LTD, Toronto, Ontario, Canada.
F. Specified Technologies, Inc., Somerville, NJ
G. W. R. Grace & Co., Macungie, PA
H. RectorSeal Corp., Houston, TX

2.2 MATERIALS

A. Grout and sealant systems, as well as integral firestopping sleeves and membranes, shall meet or exceed requirements as specified in Part 1 of this Section and shall be acceptable to the Architect.
B. Firestopping systems shall meet the requirements of ASTM E814, which include, but are not limited to, the following:

1. Prevent flame pass-through.
2. Restrict temperature to not exceed 325°F over ambient on side of assembly opposite flames.
3. Provide a positive smoke seal.
4. Withstand hose stream test with a minimum positive pressure differential of 0.01 inch (2.49 pa.)
5. Provide an F rating of not less than the required fire rating of the wall penetrated.

C. Firestopping materials shall be asbestos-free, emit no toxic or combustible fumes and be capable of maintaining an effective barrier against flame, smoke, gas, and water in compliance with requirements of this Section.

D. Firestopping materials/systems shall be flexible to allow for normal movement of building structure and penetrating items(s) without affecting the adhesion or integrity of the system.
E. Firestopping materials shall not require hazardous waste disposal of used containers/packages.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine and confirm the compatibility of surfaces to receive firestopping materials. Verify that surfaces are sound, clean and dry and are ready to receive the firestopping.
B. Verify that penetration elements are properly located and securely fixed, with the proper space between the penetration element and surfaces of the opening.

3.2 PREPARATION

A. Protect adjacent surfaces and equipment from damage.
B. Clean surfaces of opening.

3.3 INSTALLATION

A. Install firestopping system in strict accordance with the manufacturer's instructions to obtain the fire-rating required at the specific location
B. Provide escutcheons for piping at each side of penetration.

3.4 FIELD QUALITY CONTROL

A. Contractors Responsibility for Quality Control
1. Inspect all installations to ensure that all work meets the requirements specified as the Work progresses.
2. Do not cover firestopping work until it is accepted and approved by the independent inspector provided by the College.

3.5 CLEANING

A. Remove excess materials, droppings, and debris; remove excess materials from adjacent surfaces.

3.6 PROTECTION

A. Protect firestopping installations from damage until completion of all Project Work.

END OF SECTION 07 84 00

SECTION 07 92 00
JOINT SEALANTS

PART 1: GENERAL

1.1 WORK OF THIS SECTION INCLUDES:

Sealant at new Fire Alarm Devices, Cabinets, Panels and where required at other locations.

1.2 SUBMITTALS

A. Product Data: Catalog sheets, specifications, and installation instructions for each product specified except miscellaneous materials.

B. Samples:

1. Sealants: One pint or standard tube.
2. Joint Fillers: 12 inch long section
3. Joint Primer/Sealer/Conditioners: One pint.
4. Bond Breaker Tape: 12 inch long section.

1.3 QUALITY ASSURANCE

A. Container Labels: Include manufacturer's name, trade name of product, kind of material, federal specification number (if applicable), expiration date packaging date or batch number and expiration date.

1.4 PROJECT CONDITIONS

A. Environmental Requirements:

1. Temperature: Unless otherwise approved or recommended in writing by the sealant manufacturer, do not install sealants at temperatures below 40 degrees F or above 85 degrees F for non silicone sealants.
2. Humidity and Moisture: Do not install the Work of this section under conditions that are detrimental to the application, curing, and performance of the materials.
3. Ventilation: Provide sufficient ventilation wherever sealants, primers, and other similar materials are installed in enclosed spaces. Follow manufacturer's recommendations.

B. Protection:

1. Protect all surfaces adjacent to sealants with non-staining removable tape or other approved covering to prevent soiling or staining.
2. Protect all other surfaces in the Work area with tarps, plastic sheets, or other approved coverings to prevent defacement from droppings.

PART 2: PRODUCTS

2.1 SEALANTS

A. One-part acrylic or elastomeric sealant for sealing small joints; PTI 200 or Tremco Small Joint Sealant, Pecora AC-20.

B. Sealant Colors: For exposed materials provide color as indicated or, if not indicated, submit to the Architect from manufacturer's standard colors for their selection. For concealed materials, provide the natural color which has the best overall performance characteristics.

2.2 MISCELLANEOUS MATERIALS

A. Joint Primer/Sealer/Conditioner: As recommended by the sealant manufacturer for the particular joint surface materials and conditions.

B. Bond Breaker Tape: Polyethylene or other plastic tape as recommended by the sealant manufacturer; non-bonding to sealant; self adhesive where applicable.

C. Cleaning Solvents: Oil free solvents as recommended by the sealant manufacturer. Do not use re-claimed solvents.

D. Masking Tape: Removable paper or fiber tape, self-adhesive, non-staining.

PART 3: EXECUTION

3.1 EXAMINATION

A. Examine all joint surfaces for conditions that may be detrimental to the performance of the completed Work. Do not proceed until satisfactory corrections have been made.

3.2 PREPARATION

A. Clean joint surfaces immediately before installation of sealant and other materials specified in this Section.

1. Remove all loose materials, dirt, dust, rust, oils and other foreign matter that will impair the performance of materials installed under this Section.

3.3 SEALANT INSTALLATION

A. Except as shown or specified otherwise, install sealants in accordance with the manufacturer's printed instructions.

B. Install sealants with ratchet hand gun or other approved mechanical gun. Where gun application is impractical, install sealant by knife or by pouring as applicable.

C. If low temperature makes application difficult, preheat sealants using manufacturer's recommended heating equipment.

D. Finishing: Tool all vertical, non-sag sealants so as to compress the sealant, eliminating all air voids and providing a neat smoothly finished joint. Provide slightly concave joint surface, unless otherwise indicated or recommended by the manufacturer.

1. Use tool wetting agents as recommended by the sealant manufacturer.

3.4 CLEANING

A. Immediately remove misapplied sealant and droppings from metal surfaces with solvents and wiping cloths. On other materials, remove misapplied sealant and droppings by methods and materials recommended in writing by the manufacturer of the sealant material.

B. After sealants are applied and before skin begins to form on sealant, remove all masking and other protection and clean up remaining defacement caused by the Work.

END OF SECTION 07 92 00

SECTION 08 06 71
DOOR HARDWARE SETS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including general and supplementary conditions and division 1 specification sections, apply to this section.

1.02 SUMMARY

A. This Section references specification sections relating to commercial door hardware for the following:

1. Swinging doors.
2. Sliding Doors.
3. Other doors to the extent indicated.

B. Commercial door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Electromechanical and access control door hardware.
3. Electromechanical and access control door hardware power supplies, back-ups and surge protection.
4. Automatic operators.
5. Cylinders specified for doors in other sections.

C. Related Sections:

1. Division 08 Section “Hollow Metal Doors and Frames”.
2. Division 08 Section “Door Hardware”.
3. Division 08 Section “Automatic Door Operators”.

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. State Building Codes, Local Amendments.

E. Standards: Reference Related Sections for requirements regarding compliance with applicable industry standards.

1.03 SUBMITTAL

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.

3. Content: Include the following information:

a. Type, style, function, size, label, hand, and finish of each door hardware item.
b. Manufacturer of each item.
c. Fastenings and other pertinent information.
d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
e. Explanation of abbreviations, symbols, and codes contained in schedule.
f. Mounting locations for door hardware.
g. Door and frame sizes and materials.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: Prepared under the supervision of the Owner, separate schedule detailing final keying instructions for locksets and cylinders in writing. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner to approve submitted keying schedule prior to the ordering of permanent cylinders.

D. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and contact information of the manufacturers providing the hardware and their nearest service representatives. The final copies delivered after completion of the installation test to include "as built" modifications made during installation, checkout, and acceptance.

F. Warranties and Maintenance: Special warranties and maintenance agreements specified in the Related Sections.

1.04 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum [5] years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Installer Qualifications: Installers, trained by the primary product manufacturers, with a minimum [3] years documented experience installing both standard and electrified builders hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum [5] years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor in good standing by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

D. Source Limitations: Obtain each type and variety of Door Hardware specified in the Related Sections from a single source, qualified supplier unless otherwise indicated.

E. Regulatory Requirements: Comply with NFPA 70, NFPA 80, NFPA 101 and ANSI A117.1 requirements and guidelines as directed in the applicable model building code.

F. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1.05 DILIVERY, STORAGE AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.06 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check

Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Division 08 Sections (Steel, Aluminum and Wood) doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.07 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

1.08 MAINTENACNE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. Refer to “PART 3 – EXECUTION” for required specification sections.

PART 3 - EXECUTION

3.1 DOOR HARDWARE SETS

A. The door hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

B. The supplier is responsible for handing and sizing all products as listed in the door hardware sets. Quantities listed are for each pair of doors, or for each single door.

C. Products listed in the Door Hardware Sets must meet the requirements described in the specification sections noted.

1. Section 08 06 71 – Door Hardware.

D. Manufacturer's Abbreviations:

1. MK - McKinney
2. 00 - Other
3. RF - Rixson
4. RO - Rockwood
5. SA - Sargent
6. VD - Von Duprin
7. HS - HES
8. SG - Sargent & Greenleaf Inc
9. NO - Norton Rixson
10. LC - LCN Closers
11. PE - Pemko
12. CO - Corbin Russwin

Hardware Schedule

Set: 1.0
Doors: 1, 2, 3

3 Hinges, Full Mortise	TA2714 [NRP]	US26D	MK
1 Entrance Lock	CL3157 NZD CT6R	626	CO
1 Concealed Overhead Stop	1-336	689	NO
1 Surface Closer	DC6210 A13	689	CO
1 Wall Stop	409	US26D	RO
1 Gasketing	S88BL	C	PE

Set: 2.0
Doors: 4, 5

6 Hinges	T4A3786 6x6		MK
2 Exit Devices	ED4800MA x A810 M94 M110 M51	630	CO
2 Auto Operators	ED250-BP x Top Jamb Pull Side	689	DM
2 Wall Switches	RCI 910TC (Touchless Actuator)	630	DM

2 ElectroLynx Harness	QC-C1500P (Frame)	MK
2 ElectroLynx Harness	QC-300 (Dsoor)	MK
2 Electric Power Transfer	MCK-EL-EPT	MK
1 Controller	RCI IL06	DM
6 Door Silencer	SR64 X	IV

END OF SECTION 08 06 71

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Standard and custom hollow metal doors and frames.
2. Louvers installed in hollow metal doors.

B. Related Sections:

1. Division 04 Section "Unit Masonry" for embedding anchors for hollow metal work into masonry construction.
2. Division 09 Section "Interior Painting" for field painting hollow metal doors and frames.
3. Division 09 Section “Gypsum Board Assemblies”.

C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
9. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.
10. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
11. ASTM E 413 - Classification for Rating Sound Insulation.

12. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
13. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
14. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
15. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
16. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.
17. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
18. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, hardware reinforcements, profiles, anchors, fire-resistance rating, and finishes.

B. Door hardware supplier is to furnish templates, template reference number and/or physical hardware to the steel door and frame supplier in order to prepare the doors and frames to receive the finish hardware items. All hardware to be found on hardware schedule on the construction drawings.

C. Shop Drawings: Include the following:

1. Elevations of each door design.
2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of anchorages, joints, field splices, and connections.
6. Details of accessories.
7. Details of moldings, removable stops.
8. Details of conduit and preparations for power, signal, and control systems.

D. Samples for Verification:

1. Samples are only required by request of the Architect and for manufacturers that are not current members of the Steel Door Institute.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible.

B. Quality Standard: In addition to requirements specified, comply with ANSI/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames".

C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 (neutral pressure at 40” above sill) or UL 10C.

D. Pre-Submittal Conference: Conduct conference with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrified or access control hardware.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.

1. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.7 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

B. Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. CECO Door Products.
2. Curries Company.

3. Steelcraft.

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

2.3 STANDARD HOLLOW METAL DOORS

A. General: Provide 1-3/4” and 2 1/4" doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8.

B. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard kraft-paper honeycomb, or one-piece polystyrene core, securely bonded to both faces.

    a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.

3. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
4. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
5. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
6. Manufacturers Basis of Design:
    1. CECO Door Products Legion Series.
    2. Curries Company 707 Series.

2.4 STANDARD HOLLOW METAL FRAMES

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

B. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.
1. Fabricate frames with mitered or coped corners

2. Fabricate frames, with the exception of slip-on drywall types, with "closed and tight" miter seams continuously welded on face, finished smooth with no visible seam unless otherwise indicated.
3. Frames for Steel Doors: Minimum 16 gauge (0.053-inch -1.3-mm) thick steel sheet.
4. Frames for openings up to 48 inches in width: Minimum 16 gauge (0.053-inch -1.3-mm) thick steel sheet.]
5. Frames for openings 48 inches and wider in width: Minimum 14 gauge (0.067-inch -1.7-mm) thick steel sheet.]
6. Manufacturers Basis of Design:

    b. CECO Door Products BQ/BU/DQ/DU/BR/DR Series (Drywall Profile).
    c. CECO Door Products SQ/SU/SR Series (Masonry Profile).
    d. Curries Company C/CM/CG Series (Drywall Profile).
    e. Curries Company M/G Series (Masonry Profile).

C. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.

D. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
2. Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
3. Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.
4. Windstorm Opening Anchors: Types as tested and required for indicated wall types to meet specified wind load design criteria.
5. FEMA 361 Storm Shelter Anchors: Masonry T-shaped, wire masonry type, or existing opening type anchors.
6. No plastic or lead anchors are allowed to be used.

B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.

C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.6 LOUVERS

A. Metal Louvers: Door manufacturer's standard metal louvers unless otherwise indicated.

1. Blade Type: Vision proof inverted V or inverted Y.

B. Louvers for Fire Rated Doors: Metal louvers with fusible link and closing device, listed and labeled for use in doors with fire protection rating of 1-1/2 hours and less.

1. Manufacturers: Subject to compliance with requirements, provide door manufacturers standard louver to meet rating indicated.
2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.

2.7 ACCESSORIES

A. Grout Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.8 FABRICATION

A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.

B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.

C. Hollow Metal Doors:

1. Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.
2. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.

D. Hollow Metal Frames:

1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.

   a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.

3. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.
4. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.

5. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
6. Jamb Anchors: Provide number and spacing of anchors as follows:

    a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:

        1) Two anchors per jamb up to 60 inches high.
        2) Three anchors per jamb from 60 to 90 inches high.
        3) Four anchors per jamb from 90 to 120 inches high.

    b. Stud Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:

        1) Three anchors per jamb up to 60 inches high.
        2) Four anchors per jamb from 60 to 90 inches high.
        3) Five anchors per jamb from 90 to 96 inches high.
        4) Two anchors per head for frames above 42 inches wide and mounted in metal stud partitions.
7. Door Silencers: Except on gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware".

E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.
3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.9 STEEL FINISHES

A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.

8. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness.

C. Tolerances shall comply with SDI-117 "Manufacturing Tolerances Standard Steel Doors and Frames."

D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.

B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.

1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.

2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar.
4. Grout Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members.

C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Standard Steel Doors:

    a. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
    b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
    c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
    d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.

2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow metal work immediately after installation.

C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

END OF SECTION 08 11 13

SECTION 08 31 13
ACCESS DOORS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to work of this section.

1.2 DESCRIPTION OF WORK

A. Provide glass reinforced gypsum (GRG) access door in gypsum drywall ceilings, complete with accessories, as specified herein.
B. Provide metal access doors in plaster ceiling, complete with accessories as specified herein.
C. Install access panels as required for operation, maintenance and/or inspection of fire alarm devices concealed in non removable ceilings.

1.3 RELATED SECTIONS

1. Gypsum Board Assemblies 09 29 00
2. Painting 09 91 00
3. Plaster Repair 09 22 10

1.4 REFERENCES

A. Underwriters Laboratories, Inc. (UL)

B. National Fire Protection Association (NFPA)

C. Warnock Hersey (WHI)

1.5 SUBMITTALS

A. Product Data: Submit manufacturer's technical data and installation instruction for each type of access door assembly, including setting drawings, templates, instructions and direction for installation of anchorage devices.

B. Verification: Obtain specific locations and sizes for required access doors from trades requiring access to concealed equipment, and indicate on submittal schedule.

C. Size shall be determined in the field.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store, and handle access doors and frames as recommended by the Manufacturer, to protect the units from damage.

1.7 QUALITY ASSURANCE

A. Coordination: Furnish inserts and anchoring devices which must be built into other work for installation of access doors. Coordinate delivery with other work to avoid delay.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Hollow Metal Access Doors, For Walls (if required)
1. Karp Associates, Inc. Maspeth, NY 11378
2. Nystrom Building Products, Minneapolis, MI 55413
3. Acudor Products Inc., Cedar Grove, NJ 07009

B. Glass Reinforced Gypsum (GRG) Access Doors, For GWB Ceiling
1. Chicago Metallic Company

C. Acudor Products Inc. Metal Door Series PS5030 for plaster ceilings.

2.2 ACCESS DOORS: WALL (if required)

A. Frames
Minimum 16 gauge steel.
1. Gypsum Board Applications: Trim shall be galvanized drywall bead.

B. Flush Type Door Panel
Minimum 14 gauge steel.
1. Hinges: Concealed spring type set to open to approximately 175 degrees; sufficient number to support the door size, or continuous piano type hinge.
2. Finish: Factory-applied rust inhibitive baked enamel primer over phosphate treated steel.

C. Cam Locks
Flush Screwdriver or key operated; sufficient number to hold in door panel in flush, smooth plane when closed.
1. One lock on each door panel shall be key operated, pin tumbler type. The remaining locks, if any, shall be screwdriver operated type.

2.3 ACCESS DOOR: DRYWALL CEILING

A. General: Furnish each access door assembly manufactured as an integral unit, complete with all parts and ready for installation.

B. The access door panel is made from glass reinforced gypsum and installs and finishes in the same manner as drywall. The Access Door comes in 2 pieces – the frame is attached with drywall screws, then taped and finished using conventional drywall finishing techniques.

2.4 FABRICATION AND MANUFACTURE

A. Manufacture access door assemblies as integral units complete with all parts and ready for installation. Fabricate units of continuous welded steel construction unless otherwise indicated or specified. Grind welds smooth and flush with adjacent surfaces where applicable. Attachment devices shall be of size and type suitable to secure access doors to types of walls and ceilings being installed into.
   1. Access doors or panels shall be as required for the device being serviced by the access door/panel.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Install the access doors in accordance with the manufacturer's printed installation instructions, except as shown or specified otherwise.

B. Coordinate access door installation with installation of supporting construction.

C. Set units accurately in position and securely attach to support with face panel plumb or level in relation to adjoining finish surface.

3.2 ADJUSTMENT

A. Adjust hardware and doors for proper operation.

B. Remove and replace panels and/or frames which are warped, bowed or otherwise damaged.

END OF SECTION 08 31 13

SECTION 09 22 10
PLASTER REPAIR / REPLACEMENT

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Repair to plaster ceilings and plaster of walls where devices have been removed from plaster walls and ceilings and where new devices are to be installed. See drawings.
B. Provide materials, labor, equipment and services necessary to complete all plaster work required.

1.2 REFERENCES

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.
B. American Society for Testing and Materials (ASTM), latest editions.
   C 28 Gypsum Plasters
   C 35 Sand
   C 150 Portland Cement
   C 206 Finishing Hydrated Line
   C 631 Bonding Compounds for Interior Plastering
   C 842 Application of Interior Gypsum Plaster
   C 897 Specification for Aggregate for Job Mixed Portland-Cement Based Plasters
   C 926 Application of Portland Cement-Based Plaster
C. American National Specifications Institute (ANSI), latest edition.
   A 42.1 Portland Cement Lime Plastering Exterior and Interior
D. Gypsum Construction Handbook, USG Corporation, latest edition.

1.3 RELATED WORK SHOWN ELSEWHERE

A. Unit Masonry 04 01 42
B. Painting 09 91 00

1.4 SUBMITTALS

A. Product Data
   Provide manufacturers' specifications and application instructions for each type of material specified, including the following:
   1. Plaster
   2. Bonding Compound
   3. Plaster Accessories such as lathe
   4. Hydrated Lime
   5. Aggregates for Base Coat Plaster

B. Quality Control Submittals

1. Certificates: Provide material certificates from Manufacturers, Material supplier, and Contractor certifying that each material complies with, or exceeds the specified requirements.

C. Quality Assurance Submittals
1. Installers affidavit certifying a minimum of five years experience installing items specified and three projects of similar scope.

1.5 QUALITY ASSURANCE

A. Qualifications
Company specializing in plaster installation having more than five years experience with the application of specified materials and experience on at least three projects of similar scope to project specified.

B. Regulatory Requirements
1. Building Code: Work of this Section to conform to all requirements of the New York City Building Code and all applicable regulations of other governmental authorities.

C. Single Source Responsibility
Obtain materials from a single source for each type of material required to assure consistency in quality of performance and appearance.

D. Plaster Mock-up Samples.
1. Provide sample patching of plaster over existing block and lath. Sample shall be 2’ x 2’ which when approved by the architect shall be the standard for the Project.
2. All subsequent plastering work to conform in workmanship and appearance to that of the sample approved by the Architect.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver manufactured materials in original sealed container, with manufacturer's label intact and legible.
B. Store all cement, gypsum and lime off ground, under cover and in a dry area.
C. Protect contiguous Work from soiling, spattering, moisture, deterioration and other harmful effects which might result from plastering.

1.7 PROJECT CONDITIONS

A. Environmental Requirements
1. Do not apply plaster when ambient temperature is less than 50°F,
2. Maintain required temperatures for a minimum of 24 hours prior to application, during application and until plaster has cured.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Gypsum Plaster
Subject to compliance with requirements, provide products from one of the following manufacturers, conforming to ASTM C28:
1. Gold Bond Building Products Div., National Gypsum Co., Charlotte, NC.
   a. Gypsum Neat Plaster: "Two-Way Hardwall Plaster".
   b. Gypsum Gauging Plaster: "Super-White Gauging Plaster".
   c. Gypsum Ready-Mixed Base Coat Plasters. "Gypsolite".
2. United State Gypsum Co.; Architectural Products Division, Chicago, IL.
   a. Gypsum Neat Plaster / Basecoat Plaster:
      "Red-Top Gypsum Plaster".
      "Red-Top Two-Purpose Plaster".
      "Structo-Base", where high strength gypsum neat plaster is shown.
   b. Gypsum Gauging Plaster:
      "Champion White Gauging Plaster"
      "Red-Top Gypsum Plaster"
      "Star White Gauging Plaster"
      "Red Top - Keene's Cement"
      "Structo - Gauging Plaster"

B. Portland Cement Plaster
Subject to compliance with requirements, provide products conforming to ASTM C926
1. Base Coat Cements: ASTM C926
   a. Portland Cement ASTM C150, Type I or III.
2. Finish Coat Cements
   a. Portland Cement, ASTM C150, Type I, white.

C. Finishing Hydrated Lime
Subject to compliance with requirements, provide products conforming to ASTM C206, Type S or Type N.
1. United States Gypsum Co.
   a. "Ivory Finish Lime" - Type S
   b. "Red Top Finish Lime" - Type N

2.2 MATERIALS

A. Aggregates for Base Coat Plaster; ASTM C35. Type as listed below:
1. Sand aggregate, conforming to ASTM C897

B. Water
Potable, free of substances capable of affecting plaster set or of damaging plaster, lath or accessories.

C. Bonding Agent
Comply with ASTM C631; and requirements listed below:
1. Material for Bonding agent: a resinous water-emulsion that will bond new plaster base or finish coats to CMU surfaces.
2. Material Viscosity: equal to that of ordinary paint and suitable for application by brushing or spraying.
3. Inert to oxygen and perfectly stable when water has dried out.
4. Vermin-proof, non-toxic, non-deteriorating and incapable of supporting flame.
5. Temperature range of from minus 35°F to plus 300°F. without failure of bond.

6. Minimum tensile strengths varying from 50 to 600 lbs. per sq. inch, depending upon materials being bonded together, and a minimum shear strength of 175 lbs. per sq. inch when properly cured and dried samples are tested.
7. Bonding agent shall be job-approved for at least five years without any failures.
8. Wire Lath shall match existing wire lath. .

2.3 MIXES

A. Gypsum Plaster Base Coat Compositions
Comply with ASTM C842 and manufacturer's directions for gypsum plaster base coat proportions which correspond to application methods and plaster bases indicated below:
1. Three-Coat Work Over Metal Lath:
   a. Scratch Coat: 1 part Gypsum neat plaster with 2 parts sand.
   b. Brown Coat: 1 part Gypsum neat plaster with 3 parts sand.
   c. Finish Coat: as in B below.
2. Two-Coat Work Over Unit Masonry:
   a. Base coats of 1 part Gypsum neat plaster with 2 parts sand or Gypsum Ready-mix plaster with mill mixed perlite.
   b. Finish coat: as in B below.

B. Gypsum Troweled Finish Coat
Comply with ASTM C842 and manufacturer's directions and proportion materials in parts by dry weight for finish coat as follows:
1. Gypsum Gauging Plaster: 1 part plaster to 2 parts lime.
   a. Over lightweight aggregate base coats, if any, add 1/2 cu. ft. of perlite finish or 50 lbs. of No. 1 white silica sand per 100 lbs. of plaster.
   b. Where float finish is shown, add 8 parts of sand.
   c. Mechanically mix aggregate materials for plaster to comply with referenced application standard and with recommendations of plaster manufacturer.

C. Portland Cement Base Coat Compositions
Comply with ASTM C926 and manufacturer's directions for Portland cement base coat proportions that correspond to application methods and plaster bases indicated below:
1. Base coat over concrete or unit masonry: 1 part Portland cement to 3 parts sand with 10% hydrated lime added.
2. First coat must dry out and be thoroughly wet down before applying second or finishing coat.

D. Portland Cement Finishing Coat over Concrete or Unit Masonry:
Comply with ASTM C926 and manufacturer's directions for Portland cement finishing coat proportions.
1. 1 part Portland cement to 2 parts sand with 10% hydrated lime added.

2.4 MECHANICAL MIXING

A. Mechanically mix cementitious and aggregate materials for plasters to comply with applicable reference standard and with recommendations of plaster manufacturers.

PART 3 - EXECUTION

3.1 EXAMINATION OF SURFACES

A. Examine substrate surfaces to receive Work of this Section, preparatory Work performed by other trades, and conditions at the building. Report any defects or unsatisfactory conditions for correction to the Architect.

3.2 PREPARATION

A. Protection
   1. Provide protection for all items not to be plastered.
   2. Protect the Work of other trades from soiling or spattering using cover cloths or other approved means of protection. Should soiling or spattering occur, it can be removed by cleaning with wet sponges or brushes before the plaster or mortar sets, in a manner to avoid scratching, staining or other damage.

3.3 PLASTER APPLICATION, GENERAL

A. Apply gypsum plaster materials, composition, mixes and finishes indicated to comply with ASTM C 842.
B. Apply portland cement plaster materials, compositions, and mixes to comply with ASTM C 926.
C. Allow each coat of gypsum mortar, excepting where bond plaster is required, to dry out in accordance with the manufacturer's directions prior to application of the following coat. After coat has dried out, thoroughly dampen surface prior to application of the following coat.
D. Bring first coat of plaster to a plane by screeding horizontally or other approved method. Float to an even, straight and true surface. Trowel finish coat to a compact, hard, very smooth, polished surface. Soft, porous or unpolished surfaces and surfaces that show brush marks will not be accepted and such rejected white finish plastering will have to be removed down to the brown coat and properly re-plastered.
E. Do all patching required to complete the general construction Work of this Contract, leaving the Work clean and perfect in every particular at completion of the building.
F. Sand smooth-troweled finishes lightly to remove travel marks and arises.

3.4 PATCHING AND PROTECTING

A. Repair, point up and patch plaster surfaces after work of other trades is in place at such time as directed by the Architect.
B. Point up around fixtures, outlet boxes, switches, plates, fittings, piping, conduit, frames and other items abutting or extending through the plaster.
C. Just before painting is started, thoroughly examine all plaster surfaces. Cut out and repair all imperfect portions, cracks and other defects and leave all plaster in a sound, unblemished, clean and satisfactory condition.
D. Protect finished plaster surfaces against damages, soiling and defacement.
E. Protect plaster work against freezing and premature drying.

3.5 CLEANING

A. Remove temporary protection and enclosure of other Work. Promptly remove plaster from door frames, windows, and other surfaces which have been stained, marred or otherwise damaged during plastering. When plastering is completed, remove unused materials, containers and equipment and clean floors of plaster debris.
B. Provide final protection and maintain conditions in a manner suitable to the Architect which ensures plaster work being without damage or deterioration at time of approval.

END OF SECTION 09 22 10

SECTION 09 22 13
NON-LOAD BEARING FRAMING AND FURRING

PART 1 GENERAL

1.01 SUBMITTALS

A. Product Data: Catalog sheets, specifications, and installation instructions for the following:
   1. Studs, Tracks, and Furring.
   2. Fasteners.

B. Samples:
   1. Steel Framing and Furring: 12 inches long, each component.
   2. Fasteners: 10 each type.

1.02 QUALITY ASSURANCE

A. Fire Resistance Rated Applications: Provide UL listed or ASTM E 119 tested materials, accessories, and application procedures to comply with the rating indicated.

PART 2 PRODUCTS

2.01 MATERIALS

A. Studs, Tracks, and Furring: ASTM C 645; 20 gage galvanized steel, with additional framing members, reinforcing, accessories, and anchors necessary for the complete framing system.

B. Fasteners: Except where shown or specified, select fasteners of type, size, style, grade, and class required for secure installation of framing and furring. Galvanize all fasteners and accessories.
   1. Standard Bolts and Nuts: ASTM A 307, Grade A, regular hexagon head.
   2. Lag Bolts: FS FF-B-561, square head.
   3. Machine Bolts: FS FF-B-584 head; FS FF-N-836 nuts.
   4. Machine Screws: FS FF-S-92, cadmium plated steel.
   5. Plain Washers: FS FF-W-92, round, general assembly grade, carbon steel.
   6. Lock Washers: FS FF-W-84, helical spring type, carbon steel.
   7. Toggle Bolts: Tumble-wing type; FSS FF-B-588, type, class and style as required to sustain load.
   8. Self-Drilling Fasteners: No. 12-14 x 3/4 inch, hex washer head, self-drilling fastener with pilot point.

C. Anchors: Steel framing manufacturer's recommended types and sizes for substrates involved.

PART 3 EXECUTION

3.01 STEEL FRAMING AND FURRING INSTALLATION

A. Install steel framing, furring and accessories in accordance with manufacturer's printed instructions, unless otherwise shown or specified.

B. Framing Installation:
   1. Align tracks accurately at floor and ceiling. Secure tracks as recommended by the framing manufacturer for the upper and lower construction involved, except do not exceed 24 inches oc spacing for nail or powder-driven fasteners, or 16 inches oc for other types of attachment. Provide fasteners approximately 2 inches from corners and ends of tracks.
   2. Position studs vertically and engage both upper and lower tracks. Space studs 16 inches on center, unless otherwise indicated on the Drawings. Fasten studs to track flanges with screws or by crimping.
      a. Use full length studs between tracks wherever possible. If necessary, splice studs with a minimum 8 inch nested lap and fasten with two screws per stud flange.
   3. Install additional studs to support inside corners at intersections and corners, and to support outside corners, terminations of partitions, and both sides of control joints (if any).
   4. Terminate partitions at finish ceiling line unless otherwise indicated on the Drawings.
   5. Brace chase wall framing horizontally to opposite studs with 12 inch wide gypsum board gussets or metal framing braces, spaced vertically not more than 4 feet on center.
      a. Attach gypsum board gussets with a minimum 3 screws per stud flange.
      b. Attach metal framing braces with a minimum 2 screws per stud flange.

C. Steel Furring Installation: Install steel furring at 16 inches oc maximum spacing and provide additional furring at openings, cutouts, and corners. Securely anchor with fasteners spaced 24 inches oc maximum and stagger on opposite flanges of hat-shaped channels.

D. Tolerances: Do not exceed 1/8 inch in 8 feet variation from plumb or level in any exposed line or surface, except at joints between boards do not exceed 1/16 inch variation between planes or abutting edges or ends. Shim as required to comply with specified tolerances.

END OF SECTION 09 22 13

SECTION 09 29 00
GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Work under this section shall be governed by the Contract Documents. Provide materials, labor, equipment and services necessary to furnish, deliver and install all work of this section as shown on the drawings, as specified herein, and/or as specified by job conditions.

1.2 DESCRIPTION OF WORK

A. Work includes removal of GWB at walls and ceilings to install wiring, conduits and fire alarm devises as shown on Fire Alarm drawings and repair of walls and ceilings after installation of wiring, conduits and fire alarm devices.
B. Work includes repair to walls and ceilings where fire alarm devices are removed.

1.3 RELATED SECTIONS

A. Painting09 91 00

1.4 QUALITY ASSURANCES

A. Codes and Regulations
1. Work specified herein shall conform to all applicable State and Local codes and regulations having jurisdiction.
2. Where fire resistant ratings are required for work of this section, the gypsum drywall assemblies shall be installed in strict accordance with the Underwriters Laboratory requirements.

B. Environmental Criteria for gypsum wallboard:
1. Recycled Content:
Gypsum wallboard shall contain recycled content material as follows:
a. Paper facings: a minimum of 100% post-consumer recycled paper content.
b. Gypsum cores: Where feasible, a minimum of 75% post-industrial recycled gypsum content (also called “synthetic” gypsum – from coal-fired power plants).

The percentage of recycled content is based on the weight of the component materials.

1.5 SUBMITTALS

A. Product Literature
1. Submit manufacturers' products literature, catalog cuts and data sheets for all products.
B. Gypsum wallboard:

1. Manufacturer's certification of recycled content per paragraph 1.04.
2. Material Safety Data Sheets.
3. Manufacturer's maintenance instructions.
4. Manufacturer's policy statement on gypsum wallboard recycling programs.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the site, ready for use in the manufacturer's original and unopened containers and packaging, bearing labels as to type of material, brand name and manufacturer's name. Delivered materials shall be identical to approved samples.
B. Store materials under cover in a dry and clean location, off the ground. Remove materials which are damaged or otherwise not suitable for installation from the job site and replace with acceptable materials.
C. Gypsum wallboard to be stored per manufacturer's recommendations for allowable temperature and humidity range. Panels shall not be allowed to become damp.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering gypsum board systems which may be incorporated in the Work include but are not limited to the following:
   1. Steel Framing and Furring:
      a. Bostwick Steel Framing Co.
      b. Gold Bond Building Products Division
      c. Marino Industries Corp.
      d. United States Gypsum Co.
   2. Gypsum Boards and Related Products:
      a. Georgia-Pacific Corp.
      b. National Gypsum Company
      c. United States Gypsum Co.

2.2 GYPSUM BOARD

A. Fire rated Gypsum Wallboard: ASTM C 36 and C 1396
   1. Thickness: 5/8 in.
   2. Edges: Tapered.
B. Standard Gypsum Board for ceilings only: ASTM C 1396;

2.3 STUD WALL FRAMING MEMBERS

A. Additional metal studs to secure new GWB in openings created for installation of Fire Alarm Devices.

2.4 CEILING SUPPORTS

A. Additional framing members to install new Gypsum Wall Board to comply with

Building Code and with ASTM C 754.

2.5 JOINT TREATMENT

A. General: Provide products by manufacturer of gypsum boards. Comply with ASTM C 475 and with manufacturer's recommendations for specific project conditions.

B. Joint Tape: Manufacturer's standard paper reinforcing tape.

C. Drying Type Joint Compound: Vinyl-based ready-mixed type for interior use, and as follows:
1. All-purpose type, for both embedding tape and as topping.

D. Joint Compound: At joints and fasteners in water-resistant gypsum backing board intended for tile surfacing, provide compound specifically recommended or permitted by manufacturer of gypsum board.

2.6. MISCELLANEOUS ACCESSORIES

A. Metal accessories shall consist of corner beads, stops, edge trim, casing beads and control joints and other accessories as required, conforming to proper profiles and sizes to accommodate drywall partition components encountered. Accessories: formed of 26 galvanized or cadmium plated steel after manufacture. Hot dip galvanized as per ASTM A-525.

B. Screws for securing drywall and accessories in place: self-drilling, self-tapping, Phillips head steel screws as recommended by the manufacturer of the partition system and by conditions encountered in the field. The use of nails for application will not be permitted. Screws shall conform to ASTM C-646.

PART 3 - EXECUTION

3.1 INSPECTION

A. Study the contract drawings and specifications with regard to the work as shown and required under this section so as to insure its completeness.

B. Examine the surfaces and conditions to which this work is to be attached or applied, and notify the Architect if conditions or surfaces exist which are detrimental to the proper and expeditious installation of the work. Starting on the work shall imply acceptance of the surfaces and conditions to perform corrective measures before the start of installation.

C. Verify dimension taken at the job site, affecting the work. Bring field dimensions which are at variance to the attention of the Architect. Obtain decision regarding corrective measures before the start of installation.

3.2 WORKMANSHIP

A. Install materials and partition systems specified in strict accordance with the printed directions and/or specifications of the approved manufacturer to attain fire ratings required.

1. Repair to cracks and holes smaller than 1” in diameter:
With finishing knife, cover the crack or hole with a uniform layer of joint compound. Cut tape larger than hole, center tape over the crack or hold and press tape into the joint compound with the finishing knife, Remove excess compound with knife, leaving a sufficient amount under the tape to allow adhesion to wall board. Cover with layer of joint compound. Let dry. Sand the compound with a damp sponge to level the surface.

2. Repair to cracks and holes larger than 1” and less than 2 ½” in diameter:
Cover crack or hole with a uniform layer of Joint Compound. Cut paper tape to horizontally bridge the hole or crack. Center tape over hole and press tape into joint compound with the finishing knife. Remove excess compound, leaving sufficient amount under the tape to allow adhesion to GWB. Apply joint compound over the first piece of tape. Place second piece of tape vertically over the first in criss cross pattern. Remove excess joint compound. Cover with an additional layer of compound. Let dry. Apply final coat of compound if tape is still visible. Sand with a damp sponge to blend with the existing surface.

3. Large repairs:
Cut back to nearest studs or frame. Embed tape into joint. Let material dry.

3.3 WASTE MANAGEMENT

A. Identify manufacturer’s policy for collection or return of construction scrap, unused material, demolition scrap, and/or packaging material. Where feasible, institute demolition and construction waste separation and recycling to take advantage of manufacturer’s programs.

3.4 FRAMING FOR PARTITIONS AND FURRING (if required)

A. Floor and ceiling runners: accurately locate and align and install continuously at locations noted, and securely attached to adjacent construction using power driven anchors spaced 16" o.c. Anchor floor runners not over one (1) inch from runner ends.

B. Two continuous beads of sealant, one along either edge shall be placed at the bottom of floor runner channels prior to anchoring to floor.

3.5 GYPSUM BOARD CEILING

A. Secure GWB to existing framing and repair similar to large openings for walls.

3.6 PREPARATION FOR FINISHES

A. All exposed surfaces of GWB which have depressions, gouges, cuts and dimples shall be spackled and sanded to present a smooth level surface acceptable for painting.

3.7 CLEANING

A. At the completion of installation, remove all rubbish, excess material, scaffolding, tools, and other equipment from the building and job site and leave surfaces clean and whole.

END OF SECTION 09 29 00

SECTION 09 30 13
CERAMIC TILE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Work Included: The Work of this Section shall include, but not be limited to the following:

1. Wall tile in the 2 restrooms.
2. Porcelain floor tile in the Lobby and on the Lobby ramp and on the ramp leading to the restrooms.
3. Membrane-type waterproofing.
4. Trim tiles matching wall and floor tiles.
5. Marble threshold saddles at the 2 restrooms and the Catering Kitchenette.
6. Setting and grouting materials and other installation accessories.
7. Crack isolation membrane at Lobby, Ramps and Corridors.

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's technical data for each type of product specified.

B. Shop Drawings: Submit shop drawings indicating tile patterns and locations and widths of control joints in tile surfaces.

C. Samples for Initial Selection: Submit actual tiles showing full range of colors, textures, and patterns available. Include samples of grout.

D. Samples for Verification: Submit the following:

1 Samples for each type of tile and for each color and texture required, at least 12 inches square, mounted and grouted.
2 Full-size units of each type of trim and accessory material for each color required.
3 Stone threshold saddles in 6-inch lengths.

E. Certificates: Submit master grade certificates for each shipment and type of tile, signed by tile manufacturer and Installer.

F. Reports: Submit material test reports from qualified independent testing laboratory to show compliance of tile and tile setting and grouting products with requirements indicated.

G. Field-Constructed Mock-Up: Before installing tile work, erect mock-ups for each form of construction and finish required to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution. Build mock-ups to comply with the following requirements, using materials indicated for final unit of Work.

1. Locate mock-ups on site in location and size indicated or, if not indicated, as directed.
2. Erect mock-ups in presence of Owner's Representative.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain acceptance of mock-ups before start of final unit of work.
5. Retain and maintain mock-ups during construction in undisturbed condition as a standard for judging completed unit of Work.

    a. When directed, demolish and remove mock-ups from Project site.

1.04 QUALITY ASSURANCE

A. Source of Materials: Obtain each kind of material from a single source, for tile, setting materials and grout.

B. Installer Qualifications: Engage an experienced Installer who has successfully completed tile installations similar in material, design, and extent to that indicated for Project, for at least 5 years.

C. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:

1. Level Surfaces and Ramps: Minimum 0.6.
2. Step Treads: Minimum 0.6.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirement of ANSI A137.1 for labeling sealed tile packages.

B. Prevent damage or contamination to materials by water, freezing, foreign matter, and other causes.

1.06 PROJECT CONDITIONS

A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.

B. Vent temporary heaters to exterior to prevent damage to tile work from carbon dioxide buildup.

C. Maintain temperatures at 50 deg F or more in ceramic tiled areas during installation and for 7 days after completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the Work include but are not limited to the following:

1 Tiles:

a. Selected Products and Manufacturers: Refer to Finish Schedule on the Drawings for all products and manufacturers.

2. Setting and Grouting Materials:

a. Boiardi Products Corp.
b. Bostik.
c. C-Cure Corporation.
d. Laticrete International, Inc.
e. Mapei Corporation.

2.02 PRODUCTS, GENERAL

A. ANSI Standard for Ceramic Tile: Comply with ANSI A137.1 “American National Standard Specifications for Ceramic Tile” for “Standard Grade” requirements unless otherwise indicated.

B. ANSI Standard for Tile Installation Materials: Comply with ANSI standard referenced with materials for setting and grouting.

C. Colors, Textures, and Patterns: Provide tile, grout, and other products of colors, surface textures and other appearance characteristics as selected by the Architect from manufacturer’s standard range.

D. Mounting: Where factory-mounted tile is required, provide face-, back- or edge-mounted tile assemblies as standard with manufacturer and as recommended by the manufacturer for installation in wet areas.

2.03 TILE PRODUCTS

A. Tile: Provide flat tile complying with the following requirements:

1. Composition: Porcelain floor tile, as scheduled. Ceramic
2. Nominal Facial Dimensions: As scheduled.
3. Nominal Thickness: As scheduled.
4. Edges: As scheduled.
5. Patterns: As Indicated.
6. Products: As scheduled sizes, patterns and colors.

B. Stair Treads: One-piece tile tread assembly with rounded nosing edge.

1. Color, Pattern, and Finish: As selected by Architect from manufacturer's full range.
2. Selected Product: As scheduled

C. Trim Units: Provide trim units to match adjoining flat tile, coordinated with sizes and coursing of adjoining flat tile where applicable, and of standard shapes to suit conditions of installation. Provide coved units at junction of floor and wall and bullnose tile where indicated.

2.04 MARBLE THRESHOLDS

A. General: Provide stone that is uniform in color and finish, fabricated to sizes and profiles indicated for marble tiles or required to provide transition between tile surfaces and adjoining

finished floor.

B. Marble Thresholds: Unless otherwise noted to the contrary, provide white Carrera marble thresholds with honed finish complying with ASTM C 503 requirements for exterior use and for abrasion resistance.

2.05 WATERPROOFING FOR THINSET TILE

A. Latex Rubber Waterproofing: Manufacturer's standard factory- prepackaged, job-mixed, proprietary two-part formulation consisting of liquid latex rubber and powder for trowel application and glass fiber fabric reinforcing.

1. Products: Subject to compliance with requirements, provide Laticrete 9235 Waterproof Membrane by Laticrete International Inc., and PRP 315 Anti-Fracture and Waterproof Membrane by Mapei Corporation.

2.06 CRACK-SUPPRESSION MEMBRANE

A. General: Manufacturer's standard product that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

1. Chlorinated Polyethylene Sheet: Non-plasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch nominal thickness.

a. Products: "Nobleseal TS" as manufactured by The Noble Company, or Architect approved equal.

2.07 SETTING MATERIALS

A. Latex/Polymer Modified Portland Cement Mortar Installation Materials: Provide materials complying with ANSI A108.5 and as specified below.

B. Latex Additive: Laticrete 4237 by Laticrete International, Inc. for use with job-mixed portland cement and aggregate mortar bed.

C. Latex-Portland Cement Mortar: ANSI A118.4, with Laticrete 3701 by Laticrete International, Inc. combined at job site with prepackaged dry mortar mix supplied or specified by latex additive manufacturer.

2.08 GROUTING MATERIALS

A. Latex-Portland Cement Grout: ANSI A118.6 for materials described in Section H-2.4, composed as follows:

1 Mixture of Dry-Grout Mix and Latex Additive: Mixture of factory-prepared, dry-grout mix and latex additive complying with the following requirements:

a. Unsanded Dry-Grout Mix: Dry-set grout complying with ANSI A118.6 for materials described in Section H-2.3, for joints 1/8 inch and narrower.

b. Sanded Dry-Grout Mix: Commercial portland cement grout complying with ANSI A118.6 for materials described in Section H-2.1, for joints 1/8 inch and wider.
c. Latex Additive: Styrene butadiene rubber.

2. Products:

a. Unsanded Grout: Provide Laticrete 600 Series unsanded grout modified with 1776 grout admixture; as manufactured by Laticrete International.
b. Sanded Grout: Provide Laticrete 500 Series sanded grout modified with 1776 grout admixture; as manufactured by Laticrete International.

3. Colors and Types: Refer to Finish Schedule for grout colors and types, or, if not scheduled, as selected by the Architect.

2.09 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland-cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

B. Ceramic Tile Cleaner: Product specifically acceptable to tile and grout manufacturer, as recommended by National Tile Promotion Federation, 112 North Alfred St., Alexandria, VA 22134 or Ceramic Tile Institute, 700 N. Virgil Ave., Los Angeles, CA 90029.

C. Sealer: As recommended by Manufacturer.

2.10 MORTAR AND GROUT MIXTURES

A. Mix mortars and grouts to comply with requirements of referenced standards and manufacturers for accurate proportioning of materials and mixing procedures needed to produce mortars and grouts of uniform quality with optimum performance characteristics.
1. Provide grout colors as scheduled and selected by Architect.

PART 3 -EXECUTION

3.01 EXAMINATION

A. Examine substrates and areas where tile will be installed, for compliance with requirements for proper installation. Proceed with installation after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Blending: For tile with color variations, verify that tile has been blended in factory and packaged accordingly. If not factory blended, return to manufacturer.

B. Prior to installation of tiles, check tiles for flatness. If any tiles are found to be warped, tiles shall be rejected and provided with new tiles.

3.03 INSTALLATION, GENERAL

A. ANSI Tile Installation Standard: Comply with applicable parts of ANSI A108 series of standards included under "American National Standard Specifications for the Installation of Ceramic Tile."

B. TCA Installation Guidelines: TCA "Handbook for Ceramic Tile Installation"; comply with TCA installation methods indicated.

C. Extent: Extend tile into recesses and under or behind equipment and fixtures to form a complete covering without interruptions except as otherwise shown. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

D. Fitting: Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind exposed cut edges of tile for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so that plates, collars, or covers overlap tile.

1. Refer to Architectural Drawings for starting points. Prior to commencement of work review all installation conditions with Architect.

E. Jointing Pattern: Unless otherwise shown, lay tile in grid pattern. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths unless otherwise shown.

1 Make joints between mounted tile sheets same width as joints within tile sheets so that extent of each sheet is not apparent.

F. Expansion Joints: Locate expansion joints and other sealant-filled joints where indicated. Do not saw cut joints.

1. Locate joints in tile surfaces directly above joints in concrete substrates.

G. Grout tile to comply with the requirements of the following tile installation standards:

1. For ceramic tile grouts (sand-portland cement, dry-set, commercial portland cement, and latex-portland cement grouts), comply with ANSI A108.10.

3.04 WATERPROOFING INSTALLATION

A. Install waterproofing in compliance with waterproofing manufacturer's instructions to produce a waterproof membrane of uniform thickness bonded securely to substrate.

B. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.05 CRACK ISOLATION MEMBRANE INSTALLATION

A. Install crack-suppression membrane to comply with manufacturer's written instructions to produce membrane of uniform thickness bonded securely to substrate.

1. Install crack isolation membrane in Lobby and Corridors.

B. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.06 FLOOR INSTALLATION METHODS

A. General: Install tile to comply with requirements referencing TCA installation methods and ANSI A108 series of tile installation standards.

1. Latex-Portland Cement Mortar: ANSI A108.5; for tile floors unless otherwise indicated.

a. Concrete Subfloors, Waterproof Membrane, Interior: TCA F122A; thin-set with waterproof membrane.
d. Tile Treads: As recommended by Manufacturer.
e. Grout: Sanded and unsanded, latex-portland cement grout, as specified.

2. Metal Edge Strips: Install metal edge strips at locations indicated; set according to manufacturer's recommendations.

B. Marble Thresholds: Install thresholds at locations indicated; set in same type of setting bed as abutting field tile.

1. Set thresholds in latex-portland cement mortar where mortar bed would otherwise be exposed above adjacent non-tile floor finish.

3.07 WALL TILE INSTALLATION METHODS

A. Install types of wall tile designated to comply with requirements indicated below for setting-bed methods, and TCA installation methods related to subsurface and grout.

B. Latex-Portland cement Mortar: ANSI A108.5.

1 Gypsum Board, Latex Portland cement Mortar, Interior: TCA W243.
2 Cementitious Backer Units, Interior: TCA W244.
3 Grout: Sanded and unsanded Latex-Portland cement grout, ANSI A108.10, as specified.
4. Cement Backer Board/ wet areas, Interior TCA W412 at stud and cement backer board locations as directed by the Architect.

3.08 CLEANING AND PROTECTION

A. Cleaning: Upon completion of placement and grouting, clean all tile surfaces so they are free of foreign matter.

1 Remove latex-Portland cement grout residue from tile as soon as possible.
2 Unglazed tile may be cleaned with acid solutions only when permitted by tile and grout manufacturer's printed instructions, but no sooner than 14 days after installation. Protect metal, wood and plumbing fixtures from effects of acid cleaning. Flush surface with clean water before and after cleaning.

B. Finished Tile Work: Leave finished installation clean and free of cracked, chipped, broken,

unbonded, and otherwise defective tile.

C. Provide final protection and maintain conditions in a manner acceptable to manufacturer and installer that ensure that tile is without damage or deterioration at time of Substantial Completion.

1. When recommended by tile manufacturer, apply a protective coat of neutral cleaner to completed tile walls and floors. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.

2. Prohibit foot and wheel traffic from tiled floors for at least 7 days after grouting is completed.

D. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

END OF SECTION 09 30 13

SECTION 09 41 00
REPAIR AND RESTORATION OF TERRAZZO FLOOR

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. This section is limited to the repair and restoration of the existing terrazzo floor.

1.2 DESIGN REQUIREMENTS

A. Existing terrazzo floor to have sealer removed over the damaged area and clean with pH-neutral cleanser to remove any stripper residue.

B. Repair damaged area.

C. Grind the patches even with the surrounding terrazzo.

D. Cover the patched area with a brushed-on sealer to protect from wear and tear.

1.3 REFERENCES

References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

A. American Society of Testing and Materials (ASTM) standards, latest editions.

1. ASTM e – 1745 Class A – Moisture Barrier. Consult with NTMA for thinner applications

2. Cured test specimens for epoxy resin without aggregate shall meet or exceed the following requirements:

a. Hardness: 60 to 85 per ASTM D 2240, Shore D

b. Minimum Tensile Strength: 3000 psi per ASTM D 638 for a 2-inch specimen made using a “C” die per ASTM D 412.

c. Minimum compressive strength: 10,000 psi per ASTM D 695, Specimen B cylinder

d. Chemical resistance: No deleterious effects by contaminants listed below after seven-day immersion at room temperature per ASTM D 1308.

1) Distilled Water

2) Mineral Water

3) Isopropanol

4) Ethanol

5) Soap solution at 1 percent

6) Sodium hydroxide at 10 percent solution

7) Hydrochloric acid at 10 percent solution

8) Hydrochloric acid at 30 percent solution

9) Detergent solution at 0.025

10) Acetic Acid at 5 percent solution

3. Cured epoxy terrazzo specimens with aggregate shall nominally meet the following requirements:

   a. Flammability: Self-extinguishing, extent of burning ¼" maximum according to ASTM D 635.

   b. Coefficient of Linear Thermal Expansion: 0.0025 inch/inch per deg F for temperature range of minus 12 to plus 140 deg F per ASTM D 696.

4. Setting materials for Precast Terrazzo: One of the following acceptable to the manufacturer of precast terrazzo units.

   a. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4

   b. Surface Friction: Not less than [0.5(OSHA)] [0.6 (ADA)] according to ASTM D 2047.

   c. Water based Sealer Properties: With pH factor between 7 and 10

   d. Solvent Based Sealer Properties: Flashpoint at 80 deg F or above according to ASTM D 56.

1.4 SUBMITTALS

A. Product Data: Submit Product Data to show compliance with specified requirements.

B. Samples:

1. Submit 6-by 6-inch samples for each color and type of terrazzo. Sample to match adjacent existing floor and base.

C. Contract Closeout Submittals:

1. Manufacturer's cleaning and maintenance instructions

1.5 QUALITY ASSURANCE

A. Qualifications:

1. Installer shall have not less than 5 years of experience installing terrazzo of the type specified.

1.6 DELIVERY, STORAGE AND HANDLING

A. Store materials in a clean, dry, protected location.

1.7 PROJECT CONDITIONS

A. Environmental Requirements: Maintain ambient and substrate temperature between 50 and 95 degrees F. Placement of cementitious materials outside of these limits will be permitted only if the Contractor demonstrates strict conformance with recommendations of ACI 305R and 306R and obtains prior approval.

PART 2 - PRODUCTS

2.1 TERRAZZO MATERIALS

A. Portland Cement:

1. Comply with ASTM C 150, Type I and the following:

a. Compressive strength (ASTM C 109); 2800 psi, minimum, at 3 days and 4000 psi, minimum, at 7 days.
b. Color (for topping): White.

B. Sand: ASTM C 33, fine aggregates.

C. Water: Potable.

D. Terrazzo Aggregates:

1. Marble chips.
2. Abrasive hardness value (ASTM C 241): 10.
3. Absorption after 24 hours' immersion in water: 0.75 percent, maximum.
4. Free of deleterious and foreign matter.
5. Dust content: Less than 1 percent by weight.
6. Packaged in bags identified with type and size of aggregate.

E. Matrix Pigments: Pure mineral or synthetic pigments formulated for cementitious terrazzo; nonfading, alkali-resistant.

2.2 ACCESSORY MATERIALS

A. Admixtures - General: Calcium chloride thiocyanates or admixtures which result in more than 0.1 percent of soluble chloride ions by weight of cement are not permitted.

B. Water-Reducing Admixture: ASTM C 494, Type A.

C. Bonding Agent:

Acceptable Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Acrylic bonding admixture. Provide one of the following:

a. "Everbond"; L & M Construction Chemicals, Inc.
b. "Flex-Con"; The Euclid Chemical Company.

D. Isolation Membrane:

1. Polyethylene sheeting, ASTM D 2103, Type 13300, 4 mils.
2. Asphalt-saturated organic felt, unperforated, ASTM D 226, Type I.

E. Underbed Reinforcement: Welded wire fabric, galvanized, WWF 2 x 2 - 16 x 16, ASTM A 185.

F. Curing Materials:

1. Sheet materials: ASTM C 171.
2. Continuously wet absorptive mats or fabric.

G. Cleaner: Non-ionic neutral detergent; biodegradable; phosphate free; pH between 7 and 10; recommended by sealer manufacturer.

H. Sealer for Polished Terrazzo: pH between 7 and 10; nonyellowing, noncoloring; penetrating type formulated for polished terrazzo. Flash point (ASTM D 56): 80 degrees F, minimum.

2.3 MIXES

A. Acrylic-Modified Portland Cement Grout: Proportion and mix portland cement, fine aggregate, acrylic bonding admixture, and water in accordance with admixture manufacturer's recommendations. Pigment to match topping color where used to bond pigmented topping.

B. Neat Portland Cement Paste: Pigment to match topping color where used to bond pigmented topping.

C. Flooring Underbed: One part portland cement, 4 to 5 parts sand, and water as necessary to provide workability at lowest practicable slump.

D. Terrazzo Mixture:

1. Individual aggregate colors, proportions of each aggregate in mixture, aggregate gradation, and matrix pigmentation (if any) shall match existing terrazzo flooring at the project site.
2. Quantity of pigment shall not exceed 2 pounds per bag of cement.
3. Proportion and mix in accordance with NTMA recommendations.
4. Color and pattern shall match existing adjacent terrazzo flooring.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify condition of substrates.

1. Surfaces to receive sand cushion:

a. Flatness tolerance: 1/4 inch maximum depression between high spots when measured with a 10-foot straightedge.

2. Surfaces to receive terrazzo topping:

a. Flatness tolerance: 1/8 inch maximum depression between high spots when measured with a 10-foot straightedge.

B. Report unsatisfactory conditions, including but not limited to those listed.

C. Correct deficiencies before beginning installation.

3.2 SURFACE PREPARATION

A. Remove any sealer over the damaged terrazzo, using a commercial floor-sealant remover. Spread the remover over the damaged area with a squeegee, and then wait for the manufacturer-recommended length of time for the remover to dissolve the finish. Remove the stripper with a damp mop, then rinse the floor with clean water to remove any stripper residue.

B. Mop the damaged floor with a pH-neutral cleanser to remove any dirt or debris. Rinse with clean water, and pat the floor dry with a clean cloth.

C. Square off the damaged area, using a cold chisel and hammer. Chip along the sides and bottom of the crack or hole to create near-vertical walls that slope, so that you slightly undercut the bottom of the damaged section from the top. This provides a ledge for the patch, to prevent it from popping out. Clean out the area with a nylon brush to remove residue.

D. Mix a batch of epoxy resin with a color-matching agent to match the color of the existing terrazzo flooring.

E. Fill the damaged area with marble chips matching those used in the surrounding terrazzo.

F. Pour the resin over the chips, using the putty knife to pack the crack or hole full. Level the patch with the surface of the floor, using the putty knife edge. Wait for the resin to cure.

3.3 CURING

A. Apply curing materials as soon as practicable without marring surface.

B. Sheet Materials: Lap edges and ends 6 inches and seal with tape, mastic, or weights. Secure against displacement by wind or other forces.

C. Moist Curing Materials: Maintain continuously wet on a 24-hour basis during curing period @ 70 degrees F. Do not permit partial drying of any part of surface.

3.4 FINISHING OF POLISHED TERRAZZO

A. Grind terrazzo only under well-lighted conditions. Provide adequate temporary lighting if necessary.

B. Rough Grinding: Grind with stones of 24 grit or finer, or with comparable diamond plates. Follow with stones of 80 grit or finer, all in the presence of water.

C. Grouting:

1. Remove grinding residue from surface with clean water, and rinse thoroughly.
2. Remove excess rinse water, and grout surface using identical Portland cement and pigments (if any) used in topping mixture; fill all voids. Color to match the matrix of the existing terrazzo floor.
3. Install curing material and maintain at least 72 hours.

D. Fine Grinding:

1. Schedule fine grinding to occur after completion of construction operations that might mar or contaminate completed surface.
2. Grind with 120 grit stones, removing all grout from surface.
3. When completed, aggregate shall comprise not less than 70 percent of the surface.

E. Cleaning:

1. Wash surface with a neutral cleaner.
2. Clean with a fine abrasive where necessary to remove any stains or cement smears.
3. Thoroughly rinse with clean water any adjacent surfaces affected by the refinishing process.

F. Sealing: Apply sealer to the clean, dry surface in accordance with manufacturer's instructions.

3.5 PROTECTION

A. Cover terrazzo surface, and protect from soiling, staining, marring, scratching, and other damage.

B. Construction traffic, including foot traffic, is strictly prohibited on completed surface.

D. Maintain protection until final completion unless terrazzo is put into service at time of substantial completion.

END OF SECTION 09 41 00

SECTION 09 50 00

ACOUSTICAL CEILING PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.2 DESCRIPTION OF WORK

A. Provide acoustical ceiling Work as indicated on Drawings and as specified herein, including the following:

1. Acoustical Mineral Fiber Tile and Panel Ceilings.

   a. Lay-in panel installation

1.3 SUSTAINABILITY REQUIREMENTS

A. The Contractor shall implement practices and procedures to meet the Project's sustainable requirements. The Contractor shall ensure that the Sustainability Requirements and, as specified in this Section, are implemented to the fullest extent. Substitutions or other changes to the work shall not be proposed by the Contractor or their sub-contractors if such changes compromise the stated Sustainable Design Performance Criteria.

B. Sustainability requirements included in the Section are as follows:

1. Meet established minimum post and pre-consumer percent content for specified mineral based acoustical tiles and panels.

2. Documentation of Recycled materials.

1.4 REFERENCES

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

B. American Society for Testing and Materials (ASTM), latest edition.

1. C423 Test Method for Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method.

2. C635 Metal Suspension System for Acoustical Tile and Lay-In Panel Ceilings.

3. C636 Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.

4. E84 Surface Burning Characteristics of Building Materials.

5. E90 Standard Test Method for Laboratory Sound Transmission Class

6. E119 Method for Fire Tests of Building Construction and Materials.

7. E413 Determination of Sound Transmission Class

8. E1264 Standard Classification for Acoustical Ceiling Products.

C. Underwriters Laboratories Inc. (UL) Fire Resistance Directory American Society for Testing and Materials (ASTM):

1. ASTM A 1008 Standard Specification for Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.

2. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.

3. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.

4. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.

5. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

6. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.

7. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.

8. ASTM E 1414 Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.

9. ASTM E 1111 Standard Test Method for Measuring the Interzone Attenuation of Ceilings Systems.

10. ASTM E 1264 Classification for Acoustical Ceiling Products.

11. ASTM E 1477 Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.

12. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.

13. ASTM E 119 Standard Test Methods for Fire Tests of Building Construction and Material.

D. New York City Board of Standards and Appeals (BSA) approvals, or New York City Materials Equipment Acceptance (MEA) approvals.

1.4 DEFINITIONS

A. Indirect Suspension System: Installed as part of the Work of this Section, as furnished by ceiling system manufacturer to be attached to direct suspension system.

1.5 SUBMITTALS

A. Product Data: Submit manufacturer's product specifications and installation instructions for ceiling materials, indicating compliance with applicable requirements. Include information pertaining to fire performance, flame spread, and smoke development.

B. Shop Drawings: Submit shop drawing details indicating the relationship to mechanical and electrical Work and other items penetrating or connected to the ceiling. Indicate framing and support details for the ceiling Work.

   a. Submit ceiling plans for coordination with mechanical trades.

C. Samples: Submit samples of the following material, prior to installation;

   a. Acoustical panels: 6”x6” samples of each type, pattern, and color.

   b. Exposed runners and moldings: 8” long samples of each color and system type required.

   c. Concealed suspension members: 1 set of each assembly specified.

D. Quality Assurance Submittals:

   1. Affidavit certifying experience of installation company.

   2. New York City MEA or BSA approval reports, as applicable.

E. Project Closeout Submittals:

   1. Guarantee

   2. Extra Materials (Attic Stock) 10%

F. Sustainable Submittals:

   1. Submit Contractor’s Sustainable Materials Form with complete information on recycled content for ceiling tile materials provided under the work of this section. Include cost of materials and percentage, by weight, of materials that have post-consumer or pre-consumer recycled content for the following:

      a. Mineral based tiles.

      b. Mineral based panels.

   2. Submit documentation of recycled content in ceiling tile materials- product data, mix design information, or manufacturer’s statement.

G. Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry an approved independent laboratory classification of NRC, CAC, and AC.

H. If the material supplied by the acoustical subcontractor does not have an Underwriter's Laboratory classification of acoustical performance on every carton, subcontractor shall be required to send material from every production run appearing on the job to an independent or

NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer for new ceiling.

B. Qualifications:

Installer is to be a firm with not less than five years of successful experience in the installation of specified materials.

C. Regulatory Requirements

1. Building Code: Work of this Section shall conform to all requirements of the N.Y.C. Building Code and all applicable regulations of other governmental authorities.
2. New York City Board of Standards and Appeals (BSA) approvals, or New York City Materials Equipment Acceptance (MEA) approvals when applicable.
3. Acoustical and Insulating Materials Association

C. Fire Performance Characteristics:

Provide ceiling components that are identical to those tested for the following fire performance characteristics, according to ASTM test method, by UL or other testing and inspecting agency acceptable to authorities having jurisdiction. Identify ceiling components with appropriate marking of applicable testing and inspecting agency.

1. Surface Burning Characteristics: Tested per ASTM E84. Tested surfaces shall be the surfaces facing the occupied space.
   a. Flame Spread: 25 or less.
   b. Smoke Developed: 25 or less.
2. All materials exposed to the airflow in ceiling cavity plenums used for supply, return, or exhaust air shall be non-combustible or limited- combustible and have a maximum smoke developed index/rating of 50, as defined by and in accordance with NYC Building Code Reference Standard RS13-1. Flame spread index shall not exceed 25. Tested surfaces shall be the surfaces facing the plenum.

D. Coordination of Work:

Coordinate layout and installation of ceiling units and suspension system components with other work above, supported by, or penetrating through ceilings, including light fixtures, HVAC equipment, fire-suppression systems and partitions. Resolve all discrepancies and conflicts prior to start of Work.

E. Pre-installation Meeting:

Prior to start of Work, installer of ceiling system and representatives of trades involved are to have a conference at the job site, in the presence of the Architect and Owner's representative, to discuss coordination of ceiling system installation and resolve all discrepancies.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Storage:

1. Store materials where they will be protected against damage from moisture, direct sunlight, surface contamination or other causes.

2. Store tile containers in space where they will be installed for at least 24 hours prior to installation to stabilize moisture content and temperature.

C. Handle ceiling units carefully to avoid chipping edges or damaging units in any way.

1.8 PROJECT CONDITIONS

A. Space Enclosure:

All ceiling products and suspension systems must be installed and maintained in accordance with manufacturers written installation instructions for that product in effect at the time of installation and best industry practice. Prior to installation, the ceiling product must be kept clean and dry, in an environment that is between 32°F (0°C) and 120°F (49°C) and not subject to Abnormal Conditions.
Abnormal conditions include exposure to chemical fumes, vibrations, moisture from conditions such as building leaks or condensation, excessive humidity, or excessive dirt or dust buildup.

Tile system shall be installed after all wet work is complete and space is properly ventilated.

1.9 GUARANTEE

A. Work showing defects in workmanship or materials within one year guarantee period specified in the contract shall be corrected as directed by the Architect. Defects include but are not limited to:

1. Tiles or suspension system loose or improperly secured.
2. Tiles or suspension members showing discoloration or cracking.
3. Tiles or suspension members warping, sagging, or deforming.

B. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 MANUFACTURERS, MODELS

A. 1x1 Concealed Spline

1. To match panels removed or damaged during the work.
2. Replacement of 1 x 1 concealed spline: Armstrong Fine Fissured Tile #746 include supplemental hanger attachments of tiles where required.

B. Acoustical Panels
1. Mineral Composition Panels (24" x 24 x 1")
a. Armstrong World Industries
Product name: Calla Square Lay-in-Tegular Tile
b. approved equal

C. Indirect Metal Suspension Systems
1. Chicago Metallic Corporation
2. Donn Corporation / USG Interiors, Inc.
3. Armstrong World Industries, Inc.
4. Suspension members shall be by the manufacturer of the ceiling panels or by a company recommended by the panel manufacturer.

D. Other

1. Coordinate with Facilities and Architect regarding Specification.

2.2 MATERIALS – ACOUSTICAL TILES AND PANELS

A. Mineral Fiber Tile and Panels

1. Provide units per ASTM E1264; of designation, style, finish, color, acoustical range, edge detail and size as indicated below:

a. Suspended (Exposed grid, lay-in) Installation

Style: Item No. 61001Hrc

Size: 24”x24”x1”

Edge Profile: Reveal Tegular

Weight: 1.30-1.55lbs./sq.ft.

NRC: Min. .70

CAC: Min. 35

Light Reflectance: Min. .84 Average

Color: Blizzard White

Finish: Hot Dipped Galvanized

2. Mineral products shall be manufactured with a minimum of 60% of post and pre-consumer content materials.

2.3 MATERIALS – METAL SUSPENSION SYSTEMS – INDIRECT HUNG

A. Exposed Grid Suspension System:

Interlude XL 9/16” Dimensional Tee Suspension System.

1. Structural Classification: Regular-duty system in accordance with ASTM C 635.
2. Face width: 9/16" face

3. Main runners: Connect to direct suspension system. Conform to ASTM C 635 for regular-duty classification.

4. Provide runners suitable for attachment of hold-down clips and impact clips as applicable.

2.4 MISCELLANEOUS MATERIALS

A. Edge Moldings and Trim Pieces:
Provide manufacturer's standard molding for edges and penetrations of ceiling units which fit with type of edge detail and suspension system indicated.

B. Tile Fasteners:
Cadmium plated, type recommended by tile manufacturer, but for not less than 1/2" penetration of substrate.

C. Drop Clips:
18 gage galvanized steel with keyhole slot, or other configuration approved by New York City Dept. of Buildings for connection of ceiling suspension members to carrying channels. Drop clips shall be of length required for indicated ceiling height, and to provide clearances for lighting fixtures, mechanical equipment, and other items above the ceiling. Where necessary because of limited clearance, provide clips that connect runners tight to the bottom of carrying channels.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions before beginning Work to determine it is in proper condition to receive acoustical materials and suspension system. Area shall be broom cleaned and uninterrupted for free movement of rolling scaffold. Do not proceed until satisfactory conditions prevail.

B. Verify that direct suspension system has been installed properly, that main runners are spaced evenly and have been leveled to a tolerance of 1/8" in 12' measured both lengthwise on each runner and transversely between parallel runners so that indirect suspension system installation may proceed accurately.

C. Start of Work constitutes acceptance of existing conditions, therefore, contractor is advised to bring any discrepancies to the attention of the Architect prior to start of Work.

3.2 PREPARATION

A. Coordination:

1. Provide and coordinate the locations of inserts, clips, or other supports for support of acoustical ceilings.
2. Determine the length of drop clips required to maintain indicated ceiling height and to provide necessary clearance for electrical, mechanical, and other equipment. Where necessary for clearance, clips that connect runners tight to the bottom of carrying channels shall be used.

B. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at

borders and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.

3.3 INSTALLATION - GENERAL

A. Install materials in accordance with manufacturer's printed instructions and in compliance with ASTM C636, governing regulations, fire resistance rating requirements, as indicated.

1. Coordinate requirements for Work of other trades to be built into ceiling system. Provide supplementary framing as required.

B. Arrange directionally patterned units (if any) in manner shown by reflected ceiling plans, or as approved by the Project Architect. Install in patterns indicated, (balanced borders all sided) symmetrical or centered about center line of corridors, panels, fixtures, beam haunches, rooms, spaces.

C. Cut as required for installation of electric fixtures, air diffusers, grilles, sprinkler heads, security devices, access doors, etc., provided under other contracts. Verify sizes and locations with other trades.

D. On completion, the acoustic ceilings shall present a uniform horizontal plane surface, unless otherwise indicated, free from blemishes and imperfections.

E. Install edge moldings of type indicated at perimeter of acoustical ceiling area and at locations where necessary to conceal edges of acoustical units.

1. Sealant Bed: Apply continuous ribbon of acoustical sealant, concealed on back of vertical leg before installing moldings.

2. Screw-attach moldings to substrate at intervals not over 16” o.c. and not more than 3” from ends, leveling with ceiling suspension system to tolerance of 1/8” in 12’-0”. Miter corners accurately and connect securely.

F. Install panels in coordination with suspension system with suspension members concealed by support of tile units. Scribe and cut panels to fit accurately at borders and penetrations.

3.4 ADJUSTING AND CLEANING

A. Clean exposed surfaces of ceilings, including trim, edge moldings, and suspension members; comply with manufacturer's instructions for cleaning and touch-up of minor finish damage.

B. Remove and replace Work which cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

C. Remove and replace Work that is damaged or soiled by other trades as directed by Authority's Representative.

3.5 ATTIC STOCK

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.

1. Acoustical Ceiling Units: Furnish quality of full-size units equal to 10 percent of amount installed.
2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 2.0 percent of amount installed.
3. 10 feet of exposed metal tees

END OF SECTION 09 50 00

SECTION 09 51 33

ACOUSTICAL METAL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Section Includes

B. Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.2 SUMMARY

A. Section Includes

1. Acoustical metal ceiling panels
2. Exposed grid suspension system
3. Wire hangers, fasteners, main runners, cross tees, and wall angle moldings
4. Perimeter Trim

B. Related Sections:

1. Section 09 51 33 - Acoustical Snap In Metal Pan Ceiling
2. Divisions 23 - HVAC Air Distribution
3. Division 26 - Electrical

C. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by the Addenda. If included in a Bid are substitute products that have not been approved by Addenda, the specified products shall be provided without additional compensation.

2. Submittals that do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Underwriters' Laboratories Classified Acoustical performance; Panel design, size, composition, color, and finish; Suspension system component profiles and sizes; Compliance with the referenced standards.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM A 1008 Standard Specification for Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability
2. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire

3. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process

4. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

5. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings

6. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels

7. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

8. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials

9. ASTM E 580 Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint

10. ASTM E 1111 Standard Test Method for Measuring the Interzone Attenuation of Ceilings Systems

11. ASTM E 1414 Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum

12. ASTM E 1264 Classification for Acoustical Ceiling Products

B. International Building Code

C. ASHRAE Standard 62 1 2004 Ventilation for Acceptable Indoor Air Quality

D. NFPA 70 National Electrical Code

E. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures

F. International Code Council-Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components

G. International Code Council-Evaluation Services Report - Seismic Engineer Report

1. ESR 1308 - Armstrong Suspension Systems

H. International Association of Plumbing and Mechanical Officials - Seismic Engineer Report

1. 0244 - Armstrong Single Span Suspension System

I. California Department of Public Health CDPH/EHLB Emission Standard Method Version 1.1 2010

J. LEED - Leadership in Energy and Environmental Design is a set of rating systems for the design, construction, operation, and maintenance of green buildings.

1.4 SYSTEM DESCRIPTION

Discontinuous/Open Plenum

1.5 SUBMITTALS

A. Product Data: Submit manufacturer's technical data for each type of acoustical ceiling unit and suspension system required.

B. Samples: Minimum 6-inch x 6-inch samples of specified acoustical panel; 8-inch-long samples of exposed wall molding and suspension system, including main runner and 4 foot cross tees.

C. Shop Drawings: Layout and details of acoustical ceilings show locations of items that are to be coordinated with or supported by the ceilings.

D. Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry an approved independent laboratory classification of NRC, CAC, and AC.

E. If the material supplied by the acoustical subcontractor does not have an Underwriter's Laboratory classification of acoustical performance on every carton, subcontractor shall be required to send material from every production run appearing on the job to an independent or NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.

B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.

a. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 Classification.

C. Acoustic Panels: As with other architectural features located at the ceiling, may obstruct, or skew the planned fire sprinkler water distribution pattern through possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13, or their local codes for guidance where automatic fire detection and suppression systems are present.

D. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.

C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.8 PROJECT CONDITIONS

A. Space Enclosure:

Standard Ceilings: Do not install interior ceilings until space is enclosed and weatherproof; wet work in place is completed and nominally dry; work above ceilings is complete; and ambient conditions of temperature and humidity are continuously maintained at values near those

intended for final occupancy. Building areas to receive ceilings shall be free of construction dust and debris.

1.9 LEED

A. Armstrong Metal Ceilings qualify for the following credits:

a. Category - Material & Resources

i. MR Credit 2.1, 2.2 - Construction Waste Management Divert 50% or 75% from disposal

ii. MR Credit 4.1, 4.2 - Recycled Content

iii. MR Credit 5.1, 5.2 - Regional Materials (dependent on location)

1. LEED NC - 10% Extracted, Processed & Manufactured Regionally LEED CI - 20% Manufactured Regionally

b. Category - Indoor Environmental Quality

i. EQ Credit 4.1 to 4.6 - Low-Emitting Materials

c. Category - Innovation and Design Process

i. ID Credit - Acoustic Performance

1.10 WARRANTY

A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:

1. Acoustical Panels: Sagging and warping

2. Grid System: Rusting and manufacturer's defects

B. Warranty Period:

1. Acoustical Metal panels: One (1) year from date of substantial completion

2. Grid: One (1) year from date of substantial completion

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.11 MAINTENANCE

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.

1. Acoustical Metal Ceiling Units: Furnish quality of full-size units equal to 5.0 percent of amount installed.

2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 2.0 percent of amount installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Metal Ceiling Panels:
1. Armstrong World Industries, Inc.

B. Suspension Systems:
1. Armstrong World Industries, Inc.

C. Aluminum Custom Trims:
1. Armstrong World Industries, Inc.

2.2.1 ACOUSTICAL CEILING UNITS

A. Acoustical Panels Type AMP
1. Acoustical Panels Type AMP-1:
a. Surface Texture: Smooth
b. Composition: Metal
c. Color: Whitelume
d. Size: 4IN x 95IN
e. Edge Profile: None / Not Applicable 15/16IN for interface with Prelude XL 360 Painted grid.
f. Perforation Option: Round - Diagonal
g. Noise Reduction Coefficient(NRC):
h. Ceiling Attenuation Class (CAC) :
i. Sabin: 2.5
j. Articulation Class (AC):
k. Flame Spread: ASTM E 1264; Class A (HPVA)
l. Light Reflectance White Panel: ASTM E 1477; 0.77
m. Dimensional Stability: Standard
n. Recycle Content: Post-Consumer - 20% Pre-Consumer Waste - 0%
o. Acceptable Product: MetalWorks Blades - Classics, 7201M15 as manufactured by Armstrong World Industries
2. Infill Metal Panel Accessories:
1. 7204 - MetalWorks Blades Attachment Clip
2. 7205 - MetalWorks Blades Alignment Device

2.2.2 ACOUSTICAL CEILING UNITS

A. Acoustical Panels Type AMP
1. Acoustical Panels Type AMP-1:
a. Surface Texture: Smooth
b. Composition: Metal
c. Color: Silver Grey
d. Size: 24IN x 24IN
e. Edge Profile: Square Tegular 15/16IN for interface with Prelude XL 15/16" Exposed Tee grid.
f. Perforation Option: Round - Diagonal M2

g. Noise Reduction Coefficient(NRC): ASTM C 423; Classified with UL label on product carton 0.70
h. Ceiling Attenuation Class (CAC) : ASTM C 1414; Classified with UL label on product carton 38
i. Sabin: N/A
j. Articulation Class (AC):
k. Flame Spread: ASTM E 1264; Class A (FM)
l. Light Reflectance White Panel: ASTM E 1477; 0.61
m. Dimensional Stability: Standard
n. Recycle Content: Post-Consumer - 0% Pre-Consumer Waste - 25%
o. Acceptable Product: MetalWorks Tegular, 6462M2 as manufactured by Armstrong World Industries

2. Infill Metal Panel Accessories:

2.3.1 METAL SUSPENSION SYSTEMS

A. Components

Main beams and cross tees, base metal and end detail, fabricated from commercial quality hot dipped galvanized steel complying with ASTM A 653. Main beams and cross tees are double-web steel construction with exposed flange design. Exposed surfaces chemically cleansed, capping prefinished galvanized steel in baked polyester paint. Main beams and cross tees shall have rotary stitching.

a. Structural Classification: ASTM C 635 Heavy Duty
b. Color: Tech Black and match the actual color of the selected ceiling tile, unless noted otherwise.
c. Recycle Content: Post-Consumer - 23% Pre-Consumer - 7%
d. Acceptable Product: Prelude XL 360 Painted as manufactured by Armstrong World Industries

B. Attachment Devices:

Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.

C. Wire for Hangers and Ties:

ASTM A 641, Class 1 zinc coating, soft annealed, with a yield stress load of at least time three design load, but not less than 12 gauge.

D. Edge Moldings and Trim:

7800 - 12ft Wall Molding

2.3.2 METAL SUSPENSION SYSTEMS

A. Components

Main beams and cross tees, base metal and end detail, fabricated from commercial quality hot dipped galvanized steel complying with ASTM A 653. Main beams and cross tees are double-web steel construction with exposed flange design. Exposed surfaces chemically cleansed, capping prefinished galvanized steel in baked polyester paint. Main beams and cross tees shall have rotary stitching.

a. Structural Classification: ASTM C 635 Heavy Duty
b. Color: Silver Grey and match the actual color of the selected ceiling tile, unless noted otherwise.
c. Recycle Content: Post-Consumer - 23% Pre-Consumer - 7%

d. Acceptable Product: Prelude XL 15/16" Exposed Tee as manufactured by Armstrong World Industries

B. Attachment Devices:
Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.

C. Wire for Hangers and Ties:
ASTM A 641, Class 1 zinc coating, soft annealed, with a yield stress load of at least time three design load, but not less than 12 gauge.

D. Edge Moldings and Trim:
7800 - 12ft Wall Molding

2.4.1 ALUMINUM CUSTOM TRIM - EXTRUDED

Product/Manufacturer: Axiom Trim Channel: 6in Axiom Classic Straight Armstrong World Industries, Incorporated

A. Commercial quality extruded aluminum alloy 6063 trim channel, factory finished in baked polyester paint. Commercial quality galvanized steel unfinished T-bar connection clips; galvanized steel splice plates.

1. Color: Silver Grey
2. Size: 120IN x 6IN
3. Recycle Content: Post-Consumer - 50% Pre-Consumer - 0%
4. Acceptable Product: 6in Axiom Classic Straight, AX6STR as manufactured by Armstrong World Industries

B. Axiom Trim Channel:
6in Axiom Classic Straight

C. Axiom Outside Corner Posts (Straight Only):
6in Axiom Classic Outside Corner Post

D. Axiom Inside Corners (Straight Only):

E. Axiom Accessories:

1. AX4SPLICE - Splice Plate with Setscrews
2. AXSPLICE - Splice Plate

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations. (Exception: HumiGuard Max Ceilings)

3.2 PREPARATION

A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.

3.3 INSTALLATION

A. Follow manufacturer installation instructions

B. Install suspension system and panels in accordance with the manufacturer's instructions, and in compliance with ASTM C 636 and with the authorities having jurisdiction.

C. Install wall moldings at intersection of suspended ceiling and vertical surfaces. Miter corners where wall moldings intersect or install corner caps.

D. For reveal edge panels: Cut and reveal or rabbet edges of ceiling panels at border areas and vertical surfaces.

E. Install acoustical panels in coordination with suspended system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings.

F. Install acoustical panels in coordination with suspended system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings.

3.4 ADJUSTING AND CLEANING

A. Replace damaged and broken panels.

B. Clean exposed surfaces of ceilings panels, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 09 51 33

SECTION 09 65 19
RESILIENT FLOORING AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION OF WORK

A. Provide all materials, labor, tools and equipment required to install vinyl tile, vinyl base, reducer strips at doorways.
B. Contractor shall coordinate with the underlayment concrete installer and review the installation prior to installing the new floor tile. Contractor shall provide written acceptance for the underlayment prior to installing the floor tile.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Self Leveling Underlayment Concrete – Section 03 54 00

1.4 REFERENCES

A. American Society for Testing and Materials (ASTM), latest editions.
   1. E 84 Test Method for Surface Burning Characteristics of Building Materials.
   2. E 648 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
   3. E 662 Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
B. Federal Specifications (FS)
   1. SS-W040 Wall Base: Vinyl Plastic.
C. National Fire Protection Association (NFPA)
   1. Standard 253 Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.

1.5 SUBMITTALS

A. Product data for all material including MSDS sheets
B. Floor Plan showing layout of each type of floor tile.
C. Samples:

   1. For Verification, prior to installation, submit 2 samples of each of the specified materials including floor tile, reduce strips base.

1.6 QUALITY ASSURANCE

A. Qualifications

Manufacturer: Provide each type of resilient flooring and accessories as produced by a single manufacturer, including recommended primers, adhesives, sealants, and leveling compounds.
Installer: A firm with not less than 5 years of successful experience in the installation of specified materials.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Storage
Store materials (flooring, base and adhesives) in location having a minimum temperature of 68 degrees F. for at least 24 hours prior to start of laying of flooring.

1.8 PROJECT CONDITIONS

A. Environmental Requirements
Continuously heat spaces to receive base to a temperature of 68 degrees F. for at least 48 hours prior to flooring installation, and for 48 hours after installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Vinyl Wall Base and Reducer Strips:
Johnsonite
Armstrong World Industries, Inc.
Azrock Industries Inc.
B. VCT tile
Parterre Flooring Systems
C. SelecTile ESD
Static Stop

2.2 MATERIALS

A. Floor tile
1. Parterre Flooring Systems
Astronomie Collection
Soliel PSOLE 12” x 12” x 0.098”
Color Dione 881003
2. SelecTile ESD
23.75” x 23.75”
Color: Black, Flat Top with edge strip where required.
B. Adhesive
1. Enviro STIX adhesive system for Parterre Flooring system.
C. Vinyl Base
1. Fed. Spec. SS-W-40, Type II of standard solid colors as selected, as follows:
a. 4" high, 1/8" thick (tolerance + .005"), compression type.
b. Provide pre-molded corners.
c. Colors as indicated on Drawings.

d. Install cove base.

D. Metal Base
1. Decometal by Formica or approved equal. Adhered with manufacturer's approved adhesive
2. Brushed aluminum straight base manufactured by Diamondlife or approved equal

E. Adhesives: Type recommended by manufacturer of resilient products for specific substrate conditions.

F. Resilient reducer strips at doorways shall be color as selected by Architect. (see details on drawing)

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspect subfloor surfaces to determine that they are smooth and free from cracks, holes, ridges, coatings preventing adhesive bond, and other defects impairing performance or appearance.

3.2 PREPARATION

A. Apply primer, if recommended by flooring manufacturer, in compliance with manufacturer's directions.

3.3 INSTALLATION OF FLOOR TILE

A. Parterre
1. Install floor tile with manufacturers approved adhesive over all areas to be covered.

2. Lay out tile so that the tile is centered in each room, or as layout shown on drawings.

B. SelecTile ESD
1. Lay the tile as recommended by manufacturer.
2. Grounding: Electrician shall predrill and insert a brass screw into the top of the surface of the tile. Take a copper wire and run to ground to an electrical outlet.
3. Inspect floor surface for defects.
4. Follow manufacturer's recommendation for installation, or as detailed.
5. Cut tiles at walls.
6. Leave a 3/8" gap at walls.

3.4 INSTALLATION OF RESILIENT BASE

A. Apply base securely in locations indicated, using maximum lengths available to minimize joints. Adhere to substrate with full spread of adhesive, assuring continuous contact with vertical and horizontal surfaces. Site-fabricate corners, coping or mitering inside corners and heat-forming outside corners using manufacturer-approved device.
1. At irregular vertical surfaces where top edge of resilient base does not make continuous contact, fill voids with manufacturer's recommended adhesive

compound.

3.5 INSTALLATION OF MISCELLANEOUS ACCESSORIES

A. Reducer Strips:
   1. Adhesive: Johnsonite 945
   2. Application: Brush or roller
B. Vinyl floor base as approved by manufacturer.
C. Decometal floor base as approved by manufacturer.

3.6 CLEANING

A. Initial Cleaning: Remove excess and waste materials promptly.
B. Final Cleaning: Remove scuff marks, excess adhesive, and other foreign substances, using only cleaning products and techniques recommended by manufacturer of resilient products.

3. 7 PROTECTION

A. Construction Period: Cover traffic routes across completed resilient flooring with plywood, hardboard, or other durable material to protect against damage from loaded dollies and other construction traffic.

B. Final Protection: Cover resilient floor surface with nonstaining building paper until substantial completion in each area.

3. 8 ATTIC STOCK

A. Each type of tile.

1.	Parterre	6 tiles
2.	ESD	4 tiles
3.	Base	10’ vinyl
		5’ of Decometal by Formica

END OF SECTION 09 65 19

SECTION 09 70 00
ACOUSTICAL AND DECORATIVE METAL WALL PANELS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Metal Wall Panels.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA):
1. AAMA 605.2 - Specification for High Performance Finishes.

B. ASTM International (ASTM):
1. ASTM A366/A366M Standard Specification for Commercial Steel (CS) Sheet, Carbon (0.15 Maximum Percent) Cold-Rolled; 1997.
2. ASTM A666 Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2000.
3. ASTM B36/B 36M Standard Specification for Brass Plate, Sheet, Strip, and Rolled Bar; 2006.
4. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2004
5. ASTM E84 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 – Submittals.

B. Product Data:
1. Manufacturer's data sheets on each product to be used.
2. Preparation instructions and recommendations.
3. Storage and handling requirements and recommendations.
4. Typical installation methods.

C. Shop Drawings:
1. Shop drawings shall show dimensions, sizes, thickness, alloys, tempers, finishes, joints, attachments and the relationship of adjoining work.

D. Verification Samples: Two representative units of each type, size, pattern and color.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

F. Certification:
1. Submit certificates from Wall Panel manufacturer attesting that products comply with specified requirements, including finish as specified.
2. Submit list of projects completed. Projects listed shall be of similar type, scope and size, and shall have all necessary contact information for verification by the owner or Architect of Record.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Single manufacturer with a minimum of ten (10) projects of similar size and scope in the past five (5) years shall manufacture, fabricate and deliver Wall Panels and all primary products specified in this section.

B. Installer / Fabricator Qualifications: Fabricator shall have a minimum of five (5) years experience installing systems of similar type and scope as those specified in this section.
   1. Fabricator must own and operate facilities capable of creating and finishing all metal components.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect all materials during fabrication, shipment, site storage and erection to prevent damage to the finished work from other trades.

B. Store Wall Panels inside a well-ventilated area, away from uncured concrete and masonry and protected from weather, moisture, soiling, abrasion, extreme temperatures and humidity.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.7 WARRANTY

A. Upon project close-out, provide Owner with a copy of the manufacturers standard one (1) year limited warranty against manufacturing defect on the Metal Panels.

B. Warranty on Metal Panel Finishes may be extended to a maximum of twenty-five (25) years following date of substantial completion, depending on the specified finish.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Manufacturer: Nelson Industrial Inc., which is located at: 1155 Squires Beach Rd.; Pickering, ON, Canada L1W 3T9; Toll Free Tel: 800-277-6897; Tel: 905-428-2240; Fax: 905-428-2392; Email: request info (architectural@nelsonindust.com); Web: http://www.nelsonii.com

B. Substitutions: Or equal.

2.2 MATERIALS

A. Metal Panels shall be Nelson Industrial Inc. NuvoWall System. All secondary posts, anchors, clips and fasteners are to be provided as a complete package of this work.

   1. Panel System Type: Screw on wall.
      a. Panel Edge: Reveals.
   2. No exposed fasteners for metal closures shall be allowed.

B. Galvanized Steel Electroplated per ASTM A 366/366/M:
   1. Thickness: Minimum 16 gauge; 0.062 inch (1.57 mm).

2.3 NUVOWALL FABRICATION

A. Wall Panels: Fabricated as one-piece unit.
   1. Fabricated Panel Size: As detailed on the Drawings.

B. Joints Between Wall Panels:
   1. Feature reveal joints.
   2. As shown on the architectural drawings.

C. Fabricate all other details including base, if any, and other termination points in accordance with architectural drawings.

D. Manufactured true to geometry as shown on plan view of architectural drawings with a tolerance of plus or minus 1/16 inch (1.5 mm).

E. Fabricate with Return Flanges for Structural Strength: Minimum 1-1/2 inch (38 mm).

F. Feature concealed "tab and slot" engagements from panel to panel along all horizontal panel joint lines.

G. Provisions for screw attachment of panels to a suitable substructure.
   1. Pre-punched holes spaced at a maximum distance of 24 inches (610 mm).

2.4 FINISHES

2.5 General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.

2.6 Material options:

A. Galvanized Steel Sheets:
   1. Factory applied gray polyester primer for field painting.
   2. Factory applied, baked polyester powder.
      a. Color: Match existing limestone. Contractor to match in field and provide color sample to Architect for approval.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install metal panels in accordance with manufacturer's written installation instructions and shop drawings.
   1. Install and remove panels in a progressive fashion, with installation starting from the lowest point.

B. In no case shall fasteners be exposed. Exposed fasteners will be considered defective work and will be rejected by the Architect.

C. Wall panels shall be erected plumb, level, square, true to line, securely anchored, and in proper alignment and relationship to work of other trades. Exterior joints shall be sealed by installer with backer rods and sealant.

D. Wall panels shall be inspected before installation to be free from dents, scratches and other

defects.

3.2 CLEANING

A. Removal of protective covering shall occur immediately after installation to prevent adhesive transfer.

B. Clean all surfaces following installation.

C. Maintenance per manufacturer's finish maintenance instructions.

3.3 PROTECTION

A. Protection of Wall Panels from damage by other trades after installation to be provided by general contractor.

END OF SECTION 09 70 00

SECTION 09 84 11
ACOUSTICAL CEILING MATERIAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This Section includes bonded acoustical cotton used as ceiling panels with adhesive.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product data and installation instructions.
B. Samples: Submit 2 samples of 6" x 6", showing full range of exposed texture to be executed in adhesive work.
C. Adhesive.
D. Test Reports: Submit certified test reports from recognized test laboratories.
E. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Installer shall review existing ceiling conditions prior to installation and accept the ceiling conditions in writing prior to installation.
B. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

1.5 DELIVERY, STORAGE & HANDLING

A. Delivery: Deliver material in the manufacturer's original, unopened, undamaged containers with identification labels intact.
B. Provide labels indicating brand name, source of procurement, style, size and thickness.
C. Storage and protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

1.6 MAINTENANCE

A. Extra Materials: Provide 5% for use by owner in building maintenance and repair.
B. Provide new unopened cartons of extra materials, packaged with protective covering for storage and identified with appropriate labels.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Bonded Acoustical Cotton:
   1. Echo Eliminator by Acoustical Surfaces Inc. (Basis of Design)
      123 Columbia Court North, Suite 210
      Chaska, MN 55318
      Tel.: (800) 448-0121
      Website: www.AcousticalSurfaces.com
   2. Or approved equal.

2.2 BONDED ACOUSTICAL COTTON

A. Material: Manufactured from recycled cotton fiber, which shall be capable of being recycled upon completion of its useful life.
B. Acoustical panels shall be impact resistant.
C. Thickness: 2” Thick panels, 3lb density.
D. Color: White
E. Edge, Square.
F. Sizes: Nominal (As indicated on Drawings)
G. Density: 3 pounds/cubic foot.
H. Provide manufacturer recommended adhesives for complete single source installation.
I. Accessories: Adhesives as recommended by manufacturer, AGS 12 – Spray applied, PSA29 - Brush applied.
J. Flammability:
   1. ASTM E84, Class A. Flame Spread 5.
   2. Smoke Developed: 35.
K. Noise Reduction Coefficient (NRC) Rating:
   1. For Direct adhesive NCR 1.05

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions:
   1. Examine surfaces scheduled to receive directly attached acoustical units for unevenness, irregularities and dampness that would affect quality and execution of work.
   2. Do not proceed with installation of acoustical panels until unacceptable conditions are corrected.

3.2 INSTALLATION

A. General: Do not begin installation until materials sufficient to complete an entire room are received and are ready for installation.
   1. Field cut acoustical panels as required, in accordance with manufacturers recommended procedure and equipment.
   2. Acoustical wall panels shall be adhesively mounted in accordance with manufacturer’s recommendations and/or as detailed on the drawings.
   3. Review spacing to match spacing as shown on drawings. Evenly space panels.
B. Manufacturer’s Instructions:

1. Comply with the instructions and recommendations of the acoustical panel manufacturer.
2. Install materials in accordance with governing regulations, fire resistance rating requirements and industry standards applicable to work.

3.3 CLEANING

A. Clean exposed surfaces of acoustical panel to comply with manufacturer's instructions for cleaning.
B. Remove and replace tiles, which cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

3.4 PROTECTION

A. Protect installed work from damage due to subsequent construction activity. Including temperature and humidity limitations and dust control, so that the work will be without damage and deterioration at the time of acceptance by the owner.

3.5 ATTIC STOCK

A. 10 % additional wrapped and labeled.

END OF SECTION 09 84 11

SECTION 09 84 12
BONDED ACOUSTICAL COTTON CEILING MATERIAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This Section includes bonded acoustical cotton used as ceiling panels with adhesive. During installation of FA, coring or drilling the existing cotton may be disturbed and it is incumbent upon the contractor to replace any which is disturbed

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product data and installation instructions.
B. Samples: Submit 2 samples of 6" x 6", showing full range of exposed texture to be execute in adhesive work.
C. Adhesive.
D. Test Reports: Submit certified test reports from recognized test laboratories.
E. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Installer shall review existing ceiling conditions prior to installation and accept the ceiling conditions in writing prior to installation.
B. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

1.5 DELIVERY, STORAGE & HANDLING

A. Delivery: Deliver material in the manufacturer's original, unopened, undamaged containers with identification labels intact.
B. Provide labels indicating brand name, source of procurement, style, size and thickness.
C. Storage and protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

1.6 MAINTENANCE

A. Extra Materials: Provide 5% for use by owner in building maintenance and repair.
B. Provide new unopened cartons of extra materials, packaged with protective covering for storage and identified with appropriate labels.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Bonded Acoustical Cotton:
1. Echo Eliminator by Acoustical Surfaces Inc. (Basis of Design)
   123 Columbia Court North, Suite 210
   Chaska, MN 55318
   Tel.: (800) 448-0121
   Website: www.AcousticalSurfaces.com
2. Or approved equal.

2.2 BONDED ACOUSTICAL COTTON

A. Material: Manufactured from recycled cotton fiber, which shall be capable of being recycled upon completion of its useful life.
B. Acoustical panels shall be impact resistant.
C. Thickness: 2” Thick panels, 3lb density.
D. Color: White
E. Edge, Square.
F. Sizes: (As indicated on Drawings)
G. Density: 3 pounds/cubic foot.
H. Provide manufacturer recommended adhesives for complete single source installation.
I. Accessories: Adhesives as recommended by manufacturer, AGS 12 – Spray applied, PSA29 - Brush applied.
J. Flammability:
1. ASTM E84, Class A. Flame Spread 5.
2. Smoke Developed: 35.
K. Noise Reduction Coefficient (NRC) Rating:
1. For Direct adhesive NCR 1.0

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions:
1. Examine surfaces scheduled to receive directly attached acoustical units for unevenness, irregularities and dampness that would affect quality and execution of work.
2. Do not proceed with installation of acoustical panels until unacceptable conditions are corrected.

3.2 INSTALLATION

A. General: Do not begin installation until materials sufficient to complete an entire room are received and are ready for installation.
1. Field cut acoustical panels as required, in accordance with manufacturers recommended procedure and equipment.

2. Acoustical wall panels shall be adhesively mounted in accordance with manufacturer's recommendations and/or as detailed on the drawings.
3. Review spacing to match spacing as shown on drawings. Evenly space panels.

B. Manufacturer's Instructions:
1. Comply with the instructions and recommendations of the acoustical panel manufacturer.
2. Install materials in accordance with governing regulations, fire resistance rating requirements and industry standards applicable to work.

3.3 CLEANING

A. Clean exposed surfaces of acoustical panel to comply with manufacturer's instructions for cleaning.
B. Remove and replace tiles, which cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

3.4 PROTECTION

A. Protect installed work from damage due to subsequent construction activity. Including temperature and humidity limitations and dust control, so that the work will be without damage and deterioration at the time of acceptance by the owner.

3.5 ATTIC STOCK

A. 10 % additional wrapped and labeled.

END OF SECTION 09 84 12

SECTION 09 91 00
PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. This Section includes surface preparation and field painting of the following:

1. Painting of all new and patched gypsum board walls and ceilings, plaster walls and ceilings.

2. Painting of all new and patched exposed concrete masonry units to the extent indicated on the drawings.

3. Painting of all new exposed conduits to match adjacent surfaces.

1. 2 RELATED WORK SPECIFIED ELSEWHERE

A. Gypsum Board Assemblies 09 29 00
B. Plaster Repair 09 22 10
C. Concrete Masonry Units 04 01 42
D. Limestone Coating 09 91 00

1.3 REFERENCES

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

1. Federal Specifications (FS)
2. American Society of Testing and Materials (ASTM)
3. N.Y.S. Department of Environmental Conservation
4. U.S. Department of Labor
5. Occupational Safety and Health Administration (OSHA)
6. Steel Structures Painting Council (SSPC)
7. Department of Defense (DOD)

1.4 DEFINITIONS

A. The term "Painting" also includes preparation of surfaces for such applications, and the clean-up as hereinafter specified.

B. Finishes:

1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.

2. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.

3. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.

4. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

1.5 SUBMITTALS

A. Product Data

Provide manufacturers' product literature for all materials specified and material manufacturer's printed directions and recommendations for environmental conditions, surface preparation, priming, mixing, reduction, spreading rate, application, storage and VOC content, as applicable for each of the materials specified.

B. Samples

1. Contractor will match existing colors and provide samples to Architect for approval all finishes to match existing.

2. Verification prior to installation

   a. Contractor shall furnish color chips for surfaces to be painted.
   b. Provide sample of painting as follows:
      1. 1’ x 1’ sample on plaster wall and ceiling
      2. 1’ x 1’ sample on gypsum wall board
      3. 1’ x 1’ on Concrete Masonry Unit
      4. Upon approval this work will be considered quality of work throughout.

3. All samples shall be labeled; and include the following information:

   a. Manufacturer's name
   b. Type of paint/stain/hardener
   c. Manufacturer's stock number
   d. Color: name and number
   e. Federal Specification number, as specified
   f. Federal regulations for amount of lead in paint.
   g. VOC content

C. Quality Assurance

1. Certification that materials for each system are obtained from a single manufacturer.
2. Certification that Work shall be performed by personnel with a minimum of three years experience who meet the qualifications set forth in OSHA, 29 CFR 1926.62 (Lead In Construction Standard).

3. Certification that material meets or exceeds the performance requirements of Federal Specifications.
4. Certification that materials comply with N.Y.C. and N.Y.S. regulations for Volatile Organic Compounds.
5. Certification that interior paint systems conform to ASTM D3273-00(2005), Standard Test Method for Resistance to Growth of mold on the Surface of Interior Coatings in an Environmental Chamber.

D. Low Emitting Materials Compliance Submittals:

1. Provide documentation for each coating to be used on the building interior indicating that the coatings comply with low V.O.C. requirements.

1.6 QUALITY ASSURANCE

A. General

1. All painting materials shall arrive at the job ready-mixed.
2. Remove all rejected materials from the premises immediately.
3. All thinning and tinting materials shall be as recommended by the manufacturer. Generally, all paints shall not require additional thinning.
4. Verify that the specified shop prime paint for each applicable item in this Project is compatible with the total coating system, prior to application.
5. Materials selected for each system type shall be products of a single manufacturer.

B. Qualifications

1. Work of this Section shall be performed by personnel with a minimum of three years experience in performing this type of Work.
2. The Contractor shall ensure that all employees meet the qualifications set forth in OSHA, 29 CFR 1926.62 (Lead In Construction Standard).

C. Regulatory Requirements

1. N.Y.C. Building Code, latest edition
2. N.Y.S. Department of Environmental Conservation -Part 205 on "Architectural Surface Coatings" - for (VOC) Volatile Organic Compounds.
3. Steel Structures Painting Council (SSPC).
4. U.S. Department of Labor, Occupational Safety and Health Administration, Construction Industry Standards (29 CFR 1926/1910) Revised 10/1/79, Washington, D.C.
5. Occupational Safety and Health Administration (OSHA) 29 CFR 1926.62 (Lead In Construction Standard).
6. New York State Department of Environmental Conservation regulations, 6 NYCRR part 364.
7. New York City Department of Environmental Protection Waste water disposal permitting requirements.

D. Certifications

Federal Specifications: When materials are specified to comply with Federal Specifications, products will be accepted which meet or exceed the performance requirements of such Federal Specifications and comply with all regulations currently in effect.

1. Indicate that material complies with Federal Specifications by including the Federal Specifications number on the container label or on the product literature, or submit a statement with the Product Data stating that material meets or exceeds the performance requirements of the Federal Specifications.

E. Field Samples

1. Provide samples of each color and finish, under natural lighting conditions, in a location where each finish is to be applied.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery

Deliver materials to the site in original, unopened containers bearing manufacturers name and label containing the following information:

1. Product name or title of material
2. Manufacturer's stock number, batch number, VOC content in grams per liter and date of manufacture.
3. Manufacturer's name
4. Federal Specification number, if applicable.
5. Federal regulations for amount of lead in paint (less the 0.06% lead in non-volatile ingredients)
6. Contents by volume for major pigment and vehicle constitutions
7. Thinning instructions
8. Application instructions
9. Color name and number

B. Storage

1. Owner will designate space on premises for storage of materials. Contractor shall restrict storage in this area to paint materials and related equipment, and provide the following:
2. Maintain storage area in clean condition, store materials not in use in tightly covered containers. Remove oily rags, waste and empty containers from site each night.

1.8 PROJECT CONDITIONS

A. Environmental Requirements

1. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating systems can be applied.
2. Do not apply finish in areas where dust is being generated or will be generated while the material is drying.

3. Provide paint and coating products to comply with applicable environmental regulations, VOC requirements and local authorities.
4. In all areas, spaces and rooms being painted, the Contractor shall ensure that there is adequate ventilation to ensure proper paint drying, along with minimizing paint odors.
5. The Contractor shall ensure that all requirements of OSHA 29 CFR 1926.62 (Lead in Construction Standard) are adhered to during the project. In addition, the Contractor shall ensure that proper work area protection and clean-up procedures (as described in this Section) are strictly adhered to during all phases on the project.

1.9 GUARANTEES

A. Adherence of workmanship and materials to Specifications requirements shall be maintained for the one year Contract guarantee period. These requirements shall include the following:

1. There shall be no evidence of blistering, peeling, crazing, alligatoring, streaking, staining, or chalking.
2. Dirt shall be removed without blemishing the finish by washing with mild soap and water.
3. Colors of surfaces shall remain free from serious fading; the variation, if any, shall be uniform.

B. Correct all defects, appearing within the guarantee period, by removal of the defective work and replacement as directed.

C. All corrective measures shall be the Contractor's responsibility, and shall be made at no extra cost to the Owner. The requirements set forth in Part 3 of these Specifications shall be strictly adhered to.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with specified requirements, provide "First Line" or "Top Quality" products of one of the following manufacturers:

1. Benjamin Moore and Co.
2. Approved equal.

2.2 MATERIALS

A. Provide products which meet all N.Y.S. Part 205-VOC requirements for applications outlined herein and comply with low V.O.C. requirements.

B. Provide products which meet all Federal regulations for amount of lead in paint (less than 0.06% lead in non-volatile ingredients).

C. Provide best quality grade of various types of coatings as regularly manufactured by the paint materials manufacturers. Materials not displaying manufacturers' identification as a standard, best-grade product will not be acceptable.

D. Use only thinners approved by paint manufacturers for applications intended and use only within recommended limits.

E. Interior paint systems shall not support mold growth when tested in accordance with ASTM D3273.

2.3 REFERENCE STANDARDS

A. Paint materials shall meet or exceed the requirements of the following standards:

Federal Specifications

1. Primers, Sealers, Undercoats
   a. Acrylic Primer TT-P-650-C

2. Finish Paints
   a. Flat Vinyl Acrylic Latex
      Interior:TT-P-29J
   b. Eggshell
   c. Semi Gloss Vinyl Acrylic Latex
      Enamel.TT-P-1511B

B. Miscellaneous Standards and Requirements

1. Cleaning Solvents: Low toxicity; flash point in excess of 100°F.
2. Spackling Compound: ASTM C475.

2.4 COLORS

A. Selection

1. Paint colors to match adjacent surfaces. Coordinate with Owwen and Architect.

2.5 PAINTING SCHEDULE

A. Interior Finish Schedule

1. All surfaces to be painted shall receive one (1) prime coat and two (2) finish coats unless otherwise specified.

2.6 INTERIOR PAINT SYSTEMS

A. Gypsum Drywall & Plaster:

1. Flat Finish (ceilings only):

1st Coat - Vinyl Acrylic Latex

Primer Sealer (Flat) 1.0 Mils DFT

2nd & 3rd Coats
Flat Vinyl Acrylic Latex 1.3 Mils DFT each coat

2. Eggshell (walls)
1st Coat – Latex Primer Sealer 1.0 Mils DFT
2nd & 3rd Coat- Eggshell Latex Enamel 1.3 Mils DFT each coat

3. Semi gloss (Concrete Masonry Units)
1st Coat – Alkyd Modified latex Primer 1.0 Mils DFT

Or

1st Coat Alkyd Modified Rust Preventative Latex 1.6 Primer
2nd & 3rd Coat – Semi-Gloss Latex Enamel 1.3 Mils DFT each coat

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions

1. The application of painter's finish to any surface shall be taken to indicate that the Contractor considers such surfaces suitable for a first-class finish.
2. Do not apply painter's finish in any locations until the Work of other Contractors that might damage the new finish is completed.
3. Notify the Authority in writing regarding Work by others that does not provide a suitable surface for the new finish.
4. In case of dispute regarding the suitability of any surface, the Authority's decision shall be final and conclusive upon all concerned.

3.2 PREPARATION AND APPLICATION

A. Protection
1. In each area to be painted, cover and protect furniture, equipment and floors from damage with clean cloths, heavy building paper or clean plastic covering secured in place. All protection is to be carefully removed, cleaned or discarded after painting is complete.

B. Surface Preparation
1. Perform preparation and cleaning procedures in accordance with the paint manufacturer’s instructions and as specified.
   i. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease with clean cloths and cleaning solvents prior to other cleaning procedures. Program the cleaning and painting so that dust and other contaminants from the cleaning process will not fall wet, newly painted surfaces.
2. Gypsum Board: Fill cracks and other blemishes with spackling or patching

compound and sand smooth.
a. Latex-fill minor defects.
b. Spot- prime defects after repair.

3. Plaster:
   a. Fill hairline cracks, small holes, and imperfections with latex patching plaster.
   b. Make smooth and flush with adjacent surfaces.
   c. Wash and neutralize high-alkali surfaces.
4. Mildew:
   a. Remove mildew by scrubbing with solution of trisodium phosphate and bleach.
   b. Rinse with clean water and allow surface to dry.

3.3 APPLICATION

A. General

1. No Work shall be performed where cement or plaster is being applied or is in the process of drying.
2. No Work shall be performed in spaces that are not broom clean and free of dust and waste.
3. Apply paint materials to produce smooth finished surfaces, free of brush or roller marks, drops, runs, or sags.
4. Paint materials shall be kept at a proper and uniform consistency.
5. Thin only when necessary to achieve best results.
6. Thinners shall be material recommended by manufacturer of paint, and in quantity as recommended.
7. Excessive use of thinner as indicated by variation in absorption, lack of "hide", thickness of dry film, mottled or streaky coat, shall be cause for rejection. Correct as directed.
8. Apply all coats with brush or roller, varying slightly the color of succeeding coats.

3.4 CLEANING

A. General

Contractor shall clean-up behind each paint crew such that painting and clean-up will be a continuous uninterrupted operation. The practice of one general clean-up after completion of all painting will be strictly prohibited. This clean-up will include, but not be limited to the following:

1. Remove spots or defacement resulting from Work of this Section.
2. Retouch all damaged surfaces to leave Work in perfect finished condition.
3. If spots or defacement cannot be satisfactorily removed and retouched, re-finish the surfaces as directed.
4. The contractor shall ensure that the objects and surfaces under protective covering are free of any dust or debris created during painting activities. If necessary, these objects and surfaces shall be wet cleaned and HEPA vacuumed.
5. The contractor shall conduct any cleaning deemed necessary by the independent environmental consultant.
6. Remove from premises all surplus paint materials, debris and any other rubbish resulting from the Work.

3.6 PROTECTION/ REMOVAL

A. Provide caution tape and/or locked entryways during paint removal activities in existing buildings to prevent access to the work area from unauthorized personnel.

B. Provide "Wet Paint" signs to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their Work after completion of painting operations.

C. At the completion of Work of other trades, touch-up and restore all damaged or defaced painted surfaces as directed by the Authority.

C. Dispose of all debris legally off site.

END OF SECTION 09 91 00

SECTION 09 91 13
LIMESTONE COATING

PART 1 - GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment, and supervision necessary to complete the application of repair mortar to vertical and overhead surfaces.

1. 2 SYSTEM DESCRIPTION

A. The products shall meet or exceed the following performance requirements:

Physical State & Appearance		Thick liquid emulsion, natural
Base		Aqueous
pH		11.2
Percent solids by weight		31 percent
Viscosity	ASTM D562	65 to 69 KU – paint paddle
Density of liquid coatings	ASTM D1475	9.4 pounds per gallon
Drying time		1 hour at 65 degrees F – dry to touch
Fungus resistance	Fed. Spec. TT-P-19D	Pass – no growth
Water vapor transmission – B	ASTME96	75 Perms
Water Vapor transmission	ASTM D6490	96% WVT
Accelerated weathering – QUV	ASTM G154	2000 hours – UV-B cycled with condensation-no effect
Water penetration and leakage	ASTM E514	100 percent reduction
Heat stability	ASTM C932	Pass – 2 weeks at 120 degrees F

1.3 SUBMITTALS

A. Manufacturer's current product data bulletin.
B. The trained applicator shall prepare a test area on the structure as a submittal for approval of proper application and adhesion.
C. The trained applicator shall submit to the specifier a list of five projects that he has completed within the last five years, exhibiting the applicator's skills. The list shall include project name, location, and description of work and completion date.

1.4 QUALITY ASSURANCE

A. Products shall be installed by a trained applicator with a minimum of five years' experience and meet the requirements of the specifier.

1.5 DELIVERY, STORAGE & HANDLING

A. Deliver all products and all accessories in original labeled, sealed, and undamaged containers or bundles.
B. Store all products in accordance with manufacturer's printed instructions.
C. Handle products in accordance with manufacturer's printed instructions.

1.6 PROJECT/SITE CONDITIONS

A. All products shall be applied at substrate and ambient temperatures of 45 degrees F or above. A minimum temperature of 45 degrees F shall be maintained 24 hours after completion of work. Protect products from weather and other damage for a period of 24 hours after installation. Do not apply products to frozen surfaces.

1.7 SCHEDULING

A. The work requires close coordination with related sections and trades.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The following manufacturers are approved for the project:

1. Conproco

2.2 MATERIALS

A. M3P is a completely inorganic mineral silicate opaque finish that provides long-term protection
and enhanced aesthetics to structures

B. In most cases M3P will be applied without dilution. However, the opacity of M3P can be altered to meet the aesthetic requirements of the project by adding M3P-X. Dilute M3P with M3P-X at predetermined addition rates to create semi-transparent stain if desired.

C. Color to be selected by Architect

PART 3 - EXECUTION

3.1 EXAMINATION

A. Installation shall be performed strictly in accordance with manufacturer's current product data bulletin.

B. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.

C. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas and landscaping from contact due to mixing, handling, and application of materials.

3.2 SURFACE PREPARATION

A. Prior to application of products, inspect the substrate for proper cleaning and treatment of structural cracks, texture differences, damage, etc. Work shall not proceed until unsatisfactory conditions are corrected.

B. All substrates must be sound and free from loose debris, oils, paints, sealers, form treatments or any substances that would interfere with proper penetration.

C. Typical preparation method is high pressure water blasting. Chemical cleaners may be used to remove stains and surface contaminants. If chemical cleaners are used, the surface must be neutralized prior to application of M3P.

D. Allow surface to dry completely. New concrete must be cured 7 days before application. A dry surface is necessary to allow maximum penetration.

E. Adjacent surfaces should be protected from spatter or over spray (use masking tape and polyethylene film).

F. Do not apply M3P to horizontal surfaces.

3.3 APPLICATION

A. Priming

1. M3P is a self-priming two coat system.

B. Mixing

1. Mix until homogeneous. Do not use high-speed mixers or over mix as this will entrain excess air.

C. Application

1. Apply M3P with roller, brush or spray. Spray applications must be back rolled while wet.

2. Do not cut in. Work to pre-determined break points in the structure.

3. Maintain a wet edge while working to each architectural break point.
4. The second coat of M3P can be applied as soon as the first application is dry to touch.
5. A test application is strongly recommended to determine coverage and final appearance.
6. Protect all surfaces against wet or damp weather conditions for at least 24 hours after application.
7. In most cases M3P will be applied without dilution. However, the opacity of M3P can be altered to meet the aesthetic requirements of the project by adding M3P-X.

D. Curing

1. Protect from moisture for 24 hours.

3.4 CLEANING

A. Material left over at the job site by the approved applicator shall be removed.

B. Clean tools, equipment and adjacent areas with soap and water before material dries. M3P and M3P-X are highly alkaline.

C. Clean all metal and glass surfaces immediately to prevent permanent discoloration.

D. Any foreign material resulting from the work of the approved applicator shall be removed.

END OF SECTION 09 91 13

SECTION 23 05 12

GENERAL PROVISIONS FOR HVAC WORK

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. This Section is coordinated with and complementary to the General Conditions and Supplementary General Conditions of the Work, wherever applicable to Mechanical Work.

B. Section 01 31 46 - Special Requirements for Mechanical and Electrical Work shall apply.

1.02 DESCRIPTION OF WORK INCLUDED

A. Work Included:
1. The work includes providing all labor, materials, equipment, accessories, services and tests necessary to complete and make ready for operation by the Owner, all Heating, Ventilating and Air Conditioning Work as shown on the Drawings and hereinafter specified, including, but not limited to the following:
   a. Sheet metal ductwork and accessories such as dampers, access doors, etc.
   b. Registers, grilles and diffusers.
   c. Fire dampers and smoke dampers.
   d. Installation of smoke detectors in ductwork.
   e. Acoustical duct lining.
   f. Pipe, duct and equipment insulation.
   g. Temperature Control: A complete system of temperature control shall be installed in connection with the HVAC systems, including all thermostats, control valves, damper motors and dampers for the outdoor air intakes and fan discharges. All control wiring for automatic temperature controls, including interlocking wiring for fans, chillers, pumps, etc. by this Contractor.
   h. Excavation and backfill as specified under "Special Requirements for Mechanical and Electrical Work".
   i. Painting and pipe, duct and equipment identification for all work by this Contractor is previously specified under "Special Requirements for Mechanical and Electrical Work"..
   j. Test and balancing.
   k. Identification, name plates, tags and charts.
   l. Cutting and rough patching.
   m. All demolition work associated with HVAC systems.
   n. Installation of fire and smoke dampers in the existing ductwork and fan systems.

1.03 WORK INCLUDED UNDER OTHER SECTIONS OF THE SPECIFICATIONS

A. The following work is included under other Sections of the Specifications:
1. Outside air inlets, exhaust outlets, louvers and screens through walls, and elsewhere as noted on the Drawings. Motorized dampers furnished and installed under this Contract.
2. Setting of access doors furnished by this Contractor.
3. Undercutting of doors or louvers in doors.
4. Finish painting.

5. Access doors in ceiling and walls.
6. Finish patching.

1.04 QUALITY ASSURANCE

A. Perform work in accordance with quality established in Section 01 31 46 "Special Requirements for Mechanical and Electrical Work", and hereinafter specified. All work performed shall comply with local codes.

1.05 SUBMITTALS

A. Submit shop drawings covering the following items:
1. Coordination drawings.
2. Sleeve and ductwork penetration drawings.
3. Identification schedule and samples.
4. Air diffusers, registers and grilles.
5. Schedule of ductwork, joints, gauges, supports, flexible connections, fire dampers, access doors, etc.
6. Sheet metal fabrication drawings.
7. Schedule of pipe and ductwork supports, including inserts, escutcheons, etc.
8. Schedule of insulation types and samples of each type.
9. Acoustic material.
10. Building Automation System.
11. Automatic Temperature Control System.

B. All shop drawings being submitted that include electrical work shall be submitted with all internal and external wiring diagrams.

C. The previously listed items are major equipment and do not limit this Division's responsibility to submit shop drawings for all equipment and accessories which are to be provided under this Division of the Specifications.

PART 2 - PRODUCTS

2.01 LIST OF MANUFACTURERS

A. The manufacturer's name appearing first on this list is the manufacturer the project design was based upon. However, the additional manufacturers listed herein are also acceptable with the provision that they meet the requirements of these Specifications, ratings, and/or space allocations listed in the Specifications or shown on the Drawings.
1. Louvers & Dampers
   a. Arlan Damper Corp. (631-589-7431)
   b. Ruskin
   c. Titus
   d. or approved equal
2. Diffusers, Registers & Grilles
   a. Titus
   b. Price
   c. Anemostat
   d. Acutherm

e. Nailor
3. Insulation and Acoustic Lining
   a. Owens-Corning Fiberglass Corp.
   b. CSG Snap-on
   c. Johns Manville
   d. or approved equal
4. Vibration Isolation
   a. VMC East
   b. Mason Industries
   c. Korfund Corp
   d. or approved equal
5. Automatic Temperature Controls
   a. Distech
   b. Or approved equal

PART 3 - EXECUTION

END OF SECTION 23 05 12

SECTION 23 05 93

TESTING AND BALANCING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. This Section is coordinate with and complementary to the General Conditions and Supplementary General Conditions of the Work, wherever applicable to Mechanical Work.

B. Section 01 31 46 - Special Requirements for Mechanical and Electrical Work shall apply.

1.02 DESCRIPTION OF WORK

A. All piping and equipment shall be tested. Labor including standby electrician, materials, instruments and power required for testing shall be furnished unless otherwise indicated under the particular Section of the Specification.

B. Tests shall be performed in the presence of and to the satisfaction of the Architect and such other parties as may have legal jurisdiction.

C. In no case shall piping, equipment, or accessories be subjected to pressure exceeding their ratings.

D. All defective work shall be promptly repaired or replaced and the tests shall be repeated until the particular system and component parts thereof receive the approval of the Architects.

E. Any damage resulting from tests to any and all trades shall be repaired and damaged materials replaced, all to the satisfaction of the Architect.

F. The duration of tests shall be as determined by all authorities having jurisdiction, but in no case less than the time prescribed below.

G. Equipment and systems which normally operate during certain seasons of the year shall be tested during the appropriate season. Tests shall be performed on individual equipment, systems, and their controls. Whenever the equipment or system under test is interrelated and depends upon the operation of other equipment, systems and controls for proper operation, functioning and performance, the latter shall be operated simultaneously with the equipment or system being tested.

H. All fans and duct systems shall be completely balanced by the adjustment of sheaves, dampers, registers and other volume and diverting control devices, to obtain the air quantities indicated on the design drawings. Replace sheaves if required to meet design conditions.

I. All pumps and piping systems shall be completely balanced by the adjustment of plug cocks, globe valves or other control devices, to obtain flow quantities indicated on the design drawings.

J. Tests shall be performed in presence and to satisfaction of Architect, and such other parties as may have legal jurisdiction. Submit completed reports for approval. If air and water balancing

cannot be verified in two, four hour tests (total of eight hours) the Contractor shall pay the Architect or his representative for any additional time spent to balance the system.

K. Upon completion of the work, a test shall be conducted in the presence and under the direction of a NYS Licensed Professional Engineer, retained by the Contractor, and qualified to conduct such tests. The tests shall show compliance with the code requirements for ventilation and the proper functioning of operating devices, before the system is approved. Tests shall also be conducted under the direction of the same Licensed Professional Engineer to demonstrate that all installed fire and fire smoke dampers operate properly. The Contractor shall submit a letter signed and sealed by the Licensed Professional Engineer indicating that such testing has been successfully conducted and shall make all associated controlled Special Inspections and other submissions to the Authority Having Jurisdiction (AHJ).

1.03 QUALITY ASSURANCE

A. Prior to installation of the mechanical systems, engage the services of an independent air and water balancing firm that shall be subject to the approval of the Architect. The firm shall have no affiliation with a mechanical contracting or sheetmetal company. Balancing and testing company shall be a member of the Associated Air Balance Council (AABC), National Environmental Balance Bureau (NEBB) or Testing, Adjusting and Balancing Bureau (TABB). The balancing firm shall have at least one member of its full time staff who is a licensed professional engineer who shall supervise the balancing work. Prior to balancing, a list of instruments to be used shall be submitted to the Architect. All instruments shall be calibrated within six months before tests.

B. Prior to installation of the mechanical systems, the licensed Professional Engineer for the Balancing and Testing Company shall review the contract documents to confirm that all balancing devices are provided to allow for complete balancing of the air and water systems for the project. The Balancing and Testing Company shall submit a letter confirming that they have performed this review and identifying any issues.

After the mechanical systems are installed and before the systems are enclosed behind walls and ceilings, the PE for the Balancing and Testing Company shall perform a review of the installation to verify that the required balancing devices have been installed and that the systems are ready for balancing. The Balancing and Testing Company shall submit a letter confirming that the inspection has been performed and that the system is ready for balancing.

Both letters shall be signed and sealed by the Balancing and Testing Company’s Professional Engineer.

C. When all specified testing and balancing procedures have been completed, a written report shall be submitted to the Architect for review. The report shall be tabulated in standard AABC/TABB format. As part of the Architect's review process, the accuracy of the balancing report shall be field spot checked on a random basis, with the assistance of the balancing firm's project supervisor. The HVAC Contractor shall reimburse the Architect for all time spent in excess of eight working hours, to demonstrate the accuracy of the balancing report.

1.04 SUBMITTALS

A. Refer to Section 01 31 46 "Special Requirements for Mechanical and Electrical Work". Submit all test and balancing reports as described hereinafter.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 FIRE DAMPER AND FIRE SMOKE DAMPER TEST (REQUIRED FOR NYC PROJECTS)

A. Under this section test each and every fire damper by removing the fusible link to demonstrate that the damper properly closed.

B. Under this section test each and every fire smoke damper by removing the fusible link or alternately applying heat to the heat detector for dampers utilizing het detectors) to demonstrate full closure. Also demonstrate that the damper opens and closes properly under automatic control through the operator.

C. After the successful completion of such tests reinstall fusible links and reset heat detectors.

D. All such tests shall be conducted under direction of a NYS Professional Engineer retain by the Contractor.

3.02 TEST PREPARATION AND PROCEDURE

A. On initial startup, prior to any tests, check the rotation and running amperage of all fan and pump motors to prevent damage to equipment by overload.

B. Final balancing must be done with all systems completely installed and operating, and after the automatic temperature controls have had their final adjustment.

C. New, clean filters must be installed in all supply systems prior to balancing.

D. All water systems shall be completely filled and vented, and all strainers cleaned prior to balancing. Inspect expansion tanks for proper water level and operating of makeup water valves.

E. All main supply air ducts shall be traversed, using a pitot tube and manometer. The manometer shall be calibrated to read two significant figures in all velocity pressure ranges. Duct traverses shall be conducted using the log-Tchebycheff method. The equal area method is not acceptable.

F. A main duct is defined as either of the following:
   1. A duct serving five or more outlets.
   2. A duct serving two or more branch ducts.
   3. A duct serving a reheat coil.
   4. A zone duct from a multi-zone unit.
   5. A duct emanating from a fan discharge or plenum and terminating at one or more outlets.

G. The intent of this operation is to measure by traverse the total air quantity supplied by the fan and to verify the distribution of air to zones.

H. Submit data in support of all supply fan deliveries by the following four methods:
   1. By summation of the air quantity readings at all outlets.
   2. By duct traverse of main supply ducts and directly at the air handler or fan discharge.
   3. By a rotating vane traverse across a filter or coil bank.

4. By plotting RPM and static pressure readings on the fan curve. Air density corrections must be indicated.

I. For return air and exhaust fans, the rotating vane traverse is not required.

J. Inspect all fan scrolls and remove objects or debris. Inspect all coils and remove debris or obstructions. Verify that all fire dampers are open.

K. The supply air systems shall be completely balanced prior to the final balancing of the water systems.

L. Upon completion of all air and water balancing, all duct dampers, plug valves and other throttling devices shall be permanently marked in the final adjusted position.

3.03 AIR BALANCE

A. Record the following design requirements for all fans and fan motors from the approved shop drawings.
1. Air quantities - CFM
2. Approximate fan speed - RPM
3. Fan static pressure (total or external) - inches of water.
4. Maximum tip speed - FPM
5. Outlet velocity - FPM
6. Fan brake horsepower
7. Motor horsepower
8. Volts, phases, cycles and amps at design conditions.

B. Record the following data from all fans and fan motors installed at the project:
1. Manufacturer, model and size
2. Motor horsepower, service factor and RPM
3. Volts, phases, cycles and full load amps
4. Motor starter and heaters size
5. Equipment location

C. All fans and duct systems shall be completely balanced by the adjustment of sheaves, dampers, registers and other volume and diverting control devices, to obtain the air quantities indicated on the Drawings. Outside air and return air modulating dampers shall be adjusted to admit the specified quantities of air under all cycles of operation. All final adjusted air quantities shall be within 10% of the design requirements while adhering to positive or negative pressure roof design conditions. Replace sheaves if required to meet design conditions.

D. Record the following test data for all fans and motors installed at the Project at final balanced conditions:
1. Fan speed RPM.
2. Fan static pressure (external and total) inches of water.
3. Static pressure drop across all filters, dampers, coils and other items in the supply fan casings.
4. Motor operating amps. (Measure, record and report all motor amps at minimum outside air volume and at maximum outside air volume.) This requirement applies to both constant volume and variable air volume systems where economizers are present.
5. Actual voltage

6. Fan CFM
7. Calculated brake horsepower.

E. Submit single line diagrams of all duct systems indicating all terminal outlets identified by number. Data sheets shall list all such outlets denoted by the same numbers, including the outlet's size, "K" factor, location, CFM and jet velocity.

F. Submit this data for all supply, return and exhaust air systems.

G. Adjust the outside air, relief air and return air dampers to admit the required amounts of outside air. Record and submit outside air flow measurement and the outside, return and mixed air temperatures for both cycles after final adjustments.

H. Air balancing shall be performed with filters partially blocked to simulate a pressure drop across the filters equal to that midway between the clean and the dirty condition.

END OF SECTION 23 05 93

SECTION 23 07 00
INSULATION FOR HVAC WORK

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. This Section is coordinate with and complementary to the General Conditions and Supplementary General Conditions of the Work, wherever applicable to Mechanical Work.

B. Section 01 31 46 - Special Requirements for Mechanical and Electrical Work shall apply.

1.02 DESCRIPTION OF WORK

A. The work includes furnishing and installing all labor, materials, equipment, accessories and services necessary to provide Piping, Ductwork and Equipment Insulation installation, which is complete in every respect and of the composition and quality as shown on the Drawings and hereinafter specified.

1.03 DUCTWORK INSULATION

A. Insulate all ductwork except the following portions of ductwork:
1. Ducts provided with sound absorptive lining (except where humidifier is installed and except where located outdoors) may have external insulation thickness decreased provided overall insulation R-value internal plus external complies with R-value specified herein.
2. All exhaust ductwork, except where otherwise noted.
3. Return air ductwork passing through air conditioned space and/or hung ceiling of air conditioned space, except in single story buildings and ducts in ceiling of uppermost floor or in attic space, where all return air ducts must be insulated.
4. Return air ductwork for heating and ventilating systems, where return air ducts pass through heated areas.
5. **Supply ducts above hung ceilings where space above hung ceilings is used for return air plenum, except below roof.
6. Exposed supply and return air ducts in air conditioned spaces if same supply air duct serves that area only.
7. Exposed supply air duct in ventilated spaces, if same duct serves that area only.

1.04 QUALITY ASSURANCE

A. "Installer": A firm with at least ten 10 years successful installation experience on projects with piping and ductwork insulation similar to that required for this project.

B. All insulation shall have composite (including insulation jacket or facing and adhesive) fire and smoke hazard ratings as tested by procedure ASTM E-84, NFPA 255 and UL 723 not exceeding:
1. Flame Spread 25
2. Smoke Developed 50
3. Fuel Contributed 50

C. Accessories such as adhesives, mastics, cements, tapes and cloths for fittings shall have component ratings as listed above. All products shall bear UL labels indicating the above are not exceeded.

D. Provide certifications or other data as necessary to show compliance with these Specifications and governing regulations. Include proof of compliance for test of products for fire rating, corrosiveness, and compressive strength.

E. Provide products produced by the manufacturers which are listed in Section 23 05 12, "Approved Manufacturers List"

F. Insulation Materials: Insulating materials manufacturing facilities must be certified and registered with an approved registrar for conformance with ISO9000 quality standard.

1.05 SUBMITTALS

A. Refer to Section 01 31 46 - "Special Requirements for Mechanical and Electrical Work", and submit shop drawings and samples.

1.06 GUARANTEE

A. Refer to Section 01 31 46 - "Special Requirements for Mechanical and Electrical Work".

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protect insulation against dirt, water, chemical and mechanical damage. Do not install damaged insulation; remove from project site.

B. Deliver insulation, coverings, cements, adhesives and coatings to the site in factory-fabricated containers with the manufacturer's stamp, or label, affixed showing fire hazard ratings of the products.

C. Store insulation in original wrappings and protect from weather and construction traffic.

PART 2 - PRODUCTS

2.01 FIRE STOPPING

A. Packing of openings, where ducts and pipes penetrate fire barriers, shall be done with Rockwool insulation as made by United States Gypsum, Co.

B. Insulation shall comply with Fed. Spec. HH-1-558, Form A, Class 4, K=0.24, melting point 2000 degrees F.

C. An acceptable alternative to rockwool insulation shall be 3M Product Caulk CP25 or approved equal.

2.02 DUCTWORK INSULATION

A. Insulation for Concealed Duct
   1. Except where otherwise noted, all concealed rectangular and round ductwork shall be covered with flexible duct insulation with or without vapor barrier complying with ASTM C553, Types I and II and of the thickness and densities indicated below.

Service	R Value	With
Cold and Hot Air Supply Ducts	6	Vapor Barrier
Return Air Ducts (only where required)	6	Vapor Barrier
Hot Supply Ducts	6	---
*Flexible connections to Mixing Boxes, Induction Units, Lighting Troffers	6	Vapor Barrier
Outside Air Duct	6	Vapor Barrier
Sound traps	6	Vapor Barrier
Within 5'-0" downstream and upstream of Humidifier in ducts	6	Vapor Barrier

B. Flexible duct insulation with vapor barrier shall be 1 lb. per cu. ft. density glass fiber with a maximum K factor of 0.29 at 75 deg. F. mean temperature, with reinforced foil-faced, flame resistant kraft vapor barrier (facing to comply with ASTM C1136, Type II).

C. Insulation with vapor barrier shall be duct wrap insulation FRK-25, type 100 as made by Owens-Corning or Johns Manville Microlite Type 100 with FSK vapor barrier facing or standard 1 lb./cf duct insulation as made by CGG with FSK facing.

D. Flexible duct insulation without vapor barrier shall be 1 lb. per cu. ft. density glass fiber with a maximum K factor of 0.29 at 75 deg. F. mean temperature and shall be Owens Corning Fiberglass Type 75P, Johns Manville Microlite Type 100 or approved equal.

E. Adhere insulation to duct with Foster fire resistant adhesive 85-60 or Childers CP-127 or approved equal, applied in 4 inch wide transverse strips at 8 inch intervals. Insulation shall be butted with facing overlapping all joints at least 2 inches and sealed with Foster fire resistant adhesive 85-60 or Childers CP-127 or equal. For insulation with vapor barrier use Foster fire resistant vapor barrier adhesive or approved equal and joints without tabs shall be firmly sealed with aluminum foil tape adhered with same adhesive. Secure insulation with 18 gauge corrosion resistant wire spaced not more than 18 inches on center. Coat all duct taped seams, punctures and breaks with Foster 30-65 or Childers CP-34 vapor barrier coating.

F. Additionally, secure insulation to bottom of rectangular ducts over 24" wide with welded pins or stick clips on 18" centers. Cut off excess pins and seal as above.

G. Insulation for Exposed Rectangular Duct
   1. Except where otherwise noted, all exposed rectangular ductwork and plenums shall be covered with rigid duct insulation complying with ASTM C612 Types IA and IB and of the thickness and densities indicated below.

Service	R Value	With
Cold and Hot Air Supply Ducts in Mechanical Equipment Rooms	6	Vapor Barrier
Return Air Ducts in Mechanical Equipment Room	6	Vapor Barrier

Cold and Hot Air Supply Ducts Except where otherwise noted	6	Vapor Barrier
Cold and Hot Air Return Air Ducts Except where otherwise noted	6	_____
Outside Air Intake Ducts & plenums	6	Vapor Barrier
Sound Traps	6	Vapor Barrier
Combustion Air Ducts & plenums	6	Vapor Barrier
Within 5'-0" downstream and upstream of Humidifier in Ducts	6	Vapor Barrier
Outside and Return Mixed Air Duct	6	Vapor Barrier
Hot Supply Duct	6	
Exhaust Air Plenum or Duct Behind Louver up to Automatic damper	6	Vapor Barrier
Exhaust Ducts connected to penthouse louvers or goosenecks up to damper	6	Vapor Barrier
Unused portion of Louvers	6	in 20 gauge sheetmetal sandwich.
Supply and Return ducts located outdoors	8	

2. Rigid duct insulation with vapor barrier shall be 6 lbs. per cu. ft. density glass fiber with maximum K factor of 0.22 at 75 deg. F mean temperature with fire retardant vapor barrier facing all service jacket complying with ASTM C1136 Type I (white finish).
3. Rigid duct insulation with vapor barrier shall be Fiberglass Type 705 by Owens-Corning or Johns Manville, No. 817 spin-glass w/ASJ or approved equal.
4. Rigid duct insulation without vapor barrier shall be 6 lbs. per. cu. ft. density glass fiber with maximum K factor of 0.22 at 75 deg. F mean temperature with fire retardant facing foil reinforced draft. (all service jacket).
5. Rigid duct insulation without vapor barrier shall be Fiberglass type 705 by Owens-Corning, Johns Manville, No. 817 spin glass w/ASJ or approved equal.
6. Insulation shall be fastened to duct with 12 gauge welded pins and washers, or equivalent as approved. Fasteners shall be spaced 12 to 18 inches on center, a minimum of two rows per side of duct. Secure insulation in place with washers firmly embedded in insulation,

or push a self-locking cap over pin after coating with fitting mastic type C by Owens-Corning or approved equal.

7. Seal all joints, breaks and impressions with Foster fire resistant vapor barrier coating Foster 30-65 or Childers CP-34, or equal, and apply 5" wide joint sealing tape to all joints. All surface must be clean and dry before applying tape.

H. As an alternative to fiberglass insulation on ducts, elastomeric closed-cell insulation may be used.

1. Insulation material shall be a flexible, closed-cell or conformable elastomeric insulation in sheet form: AP Armaflex, and AP Armaflex SA. These products meet the requirements as defined in ASTM C 534, “Specification for preformed elastomeric cellular thermal insulation in sheet and tubular form.”
2. Insulation material shall be manufactured without the use of CFC’s, HFC’s or HCFC’s. It is also formaldehyde free, low VOC’s, fiber free, dust free and resists mold and mildew.
3. The insulation material shall contain MICOBAN Antimicrobial additive to aid in the prevention of mold and mildew.
4. Materials shall have a flame spread index of less than 25 and a smoke-developed index of less than 50 when tested in accordance with ASTM E 84, latest revision. In addition, the product, when tested, shall not melt or drip flaming particles, the flame shall not be progressive and all materials shall pass simulated end-use fire tests.
5. Materials shall have a maximum thermal conductivity of 0.25 Btu-in./h-ft2- °F at a 75°F mean temperature when tested in accordance with ASTM C 177 or ASTM C 518, latest revisions.
6. Materials shall have a maximum water vapor transmission of 0.05 perm-inches when tested in accordance with ASTM E 96, Procedure A, latest revision. (other than conformable elastomeric)
7. The material shall be manufactured under an independent third party supervision testing program covering the properties of fire performance, thermal conductivity and water vapor transmission.
8. Adhesives and Finishes
   a. Adhesive shall be the insulation manufacturer's recommended contact adhesive: Armaflex 520, Armaflex 520 BLV, Armaflex 520 Black, Low VOC Spray Adhesive or Armaflex HT 625 Adhesive.
   b. Insulation finish shall be the insulation manufacturer's recommended finish: Armaflex WB Finish.
   c. Accessories such as adhesives, mastics and cements shall have the same properties as listed above and shall not detract from any of the system ratings as specified above.

I. Insulation for Exposed Round Duct

1. Insulation for exposed round ductwork shall be of material as specified for concealed ductwork and shall be covered with glass cloth or all service jacket smoothly adhered with Foster 85-60/85-20 or Childers CP-82 (5 gallons cans only) adhesive. Seal joints with 5" wide tape.

Service	R Value
Cold and Hot Air Supply Ducts in Mechanical Equipment Rooms	6 with vapor barrier
Air Conditioning Return Air Ducts in Mechanical Equipment	

	Rooms	6 with vapor barrier
	Cold and Hot Air Supply Ducts Except where otherwise noted	6 with vapor barrier
	Hot Supply Duct	6
**	Flexible Duct Connection to Mixing Boxes, Induction Units, Lighting Troffers	6 with vapor barrier
	Return Air Fan for Air Conditioning Units.	6 with vapor barrier

2. The Contractor shall have the option to use the following material: Insulation for round ducts shall be of thickness noted above and shall be fiberglass pipe and tank insulation having a factory applied ASJ vapor barrier jacket secured with stables and ASJ pressure sensitive tape. Pipe and tank insulation is a 3.00 p.c.f. board cut into strips, fibers oriented perpendicularly to the facing it is adhered to and it must have a UL label.
3. *Transition ductwork at sound traps shall be insulated with fibrous glass board with reinforced aluminum vapor barrier, Owens-Corning #705, Johns Manville 817 spin glass, or approved equal. Fasten insulation in place with welded pins and washers or equivalent mechanical fastening method, as approved. Seal all joints with vapor barrier coating to provide continuous vapor barrier. All edges, corners and joints, reinforced with 4" wide tape. Tape, of type, and applied in strict conformance with manufacturer's recommendations. Over the insulation apply a flood coat of Foster 30-65 or Childers CP-34 or equal vapor barrier coating. Provide fiberglass fitting tape or glass cloth smoothly adhered with Foster 85-60/85-20 or Childers CP-82 (5 gallon cans only) adhesive.
4. **Transition piece at stack and ductwork for high temperature hot water generators shall be insulated with 2" thickness calcium silicate block insulation, applied over a 1" "V" ribbed lath to provide a 1" air space under insulation. Firmly attach "V" ribbed lath to surfaces to be insulated by tack welding clip angles to breeching, ductwork and transition piece at a spacing of not greater than 12" centers vertically and horizontally. Lath shall be tack welded or wired to clip angles. Insulation shall be covered with 1" galvanized hexagonal wire mesh, #18 gage minimum and two 3 inch thick coats of Portland asbestos cement plaster. First coat to be rough or scratch coat. The second coat shall be trowelled to a smooth and even finish. Access doors and expansion joints shall be not covered. Access door shall be double wall construction with 2" insulation.

J. Weatherproofing Finishes for Outdoor Duct Insulation
1. Outdoor duct shall be finished with 0.016 Aluminum Jacketing with factory applied moisture barrier as manufactured by the Pabco-Childers Metals, smooth finish with PSMR, or approved.
2. Heavy duty 0.016 inch thick aluminum with poly-moisture barrier shall be used. All metal jacketing laps shall be sealed with 1/8” bead of Foster 95-44 or Childers CP-76 metal jacketing sealant.
3. Jacketing shall be applied with minimum 2-inch overlaps facing down from the weather and the jacketing shall be secured with aluminum bands ½ inch by 0.020 inches and aluminum wing seals applied on 12 inch centers, with bands applied directly over butt overlaps or with Pli-Grip Rivets. Where jacketing is cut out or abuts an uninsulated

surfaces, the joint shall be sealed with Foster 95-44, Childers CP-76 or Insul-Coustic Sure-Joint 405 (gallon cans only; no tubes).

4. Fittings, valves and other irregular surfaces shall be protected with two coats of Foster 30-65, Childers CP-34, Marathon Vi-AC Mastic, I-C 551, with Foster Mast-a-Fab, Childers Chil Glas #10 orVi-AC open weave glass cloth membrane between the coats. The total thickness of the coats shall be .32 mils when dry.
5. Outdoor rectangular ductwork aluminum cladding shall be formed with a high point located along the top longitudinal centerline in order to ensure rain water runoff and so that no water accumulation will occur.

PART 3 - EXECUTION

3.01 INSPECTION

A. Contractor shall examine location where this insulation is to be installed and determine space conditions and notify Architect in writing of conditions detrimental to proper and timely completion of the work.

B. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install insulation in accordance with manufacturer's written instructions, and with recognized industry practices, to ensure that insulation complies with requirements and serves intended purposes.

B. Coordinate with other work as necessary to interface installation of insulation with other components of systems.

C. All insulating materials shall be applied only by experienced workmen, in accordance with the best covering practice. All piping, duct or equipment shall be blown out, cleaned, tested and painted prior to the application of any covering. Adhesives, sealers and mastics shall not be applied, when the ambient temperature is below 40°F, or surfaces that are wet.

D. Insulation for factory-fabricated air handling units, furnished as part of units.

E. At all openings in insulation and acoustical duct lining, insulate edges neatly and protect with sheet metal nosing. Use sealant as well.

F. All items described in general indicate the type of covering required, however, all piping, ductwork or equipment that transmits heat or will form condensation shall be insulated.

G. Finish for Concealed Pipe Insulation:
   1. Factory ASJ (All service jacket) secured in place with Bostich staples 4" o.c. or ASJ with self sealing lap as made by Johns Manville, Owens-Corning or approved equal. All fittings shall be covered with Zeston PVC covers.

H. All piping and ductwork insulation shall be continuous through non-fire rated ceiling openings and sleeves passing through non-fire rated walls or floors. Sleeves shall be packed with mineral wool or thermofiber. Discontinue insulation as it passes through fire-rated wall or floor and use

mineral wool or thermofiber packing instead. Specific mastics, adhesives and coating shall be applied in strict accordance with Manufacturer's instruction, including recommended coverages.

I. Where packaged type units are called for in the Specifications, or as scheduled on the Drawings, the insulation shall be as herein specified for the specific system.

J. All valved and capped outlets left for future work shall be insulated as herein specified for the specific systems with a removable section of insulation over caps.

K. Where insulation on existing piping, equipment, etc., has been cut, removed or damaged, this Contractor shall reinsulate as herein specified.

L. All insulation of access doors shall be set in sheet metal double-pan construction.

M. All ductwork shall be insulated in the field, following complete installation of the ductwork. Installation of insulation on the ductwork in the shop (prior to delivery and installation of the ductwork) is prohibited.

N. For installation of elastomeric closed-cell insulation:
1. Piping:
   a. Install pipe insulation by slitting tubular sections and applying onto piping or tubing. Alternately, whenever possible, slide unslit sections over the open ends of piping or tubing. All seams and butt joints shall be adhered and sealed using Armaflex 520, 520 BLV or 520 Black Adhesive. When using AP Armaflex SS, only the butt joints shall be adhered using Armaflex 520, 520 BLV or 520 Black Adhesive. Armaflex HT 625 Adhesive shall be used with UT Solaflex.
   b. Insulation shall be pushed onto the pipe, never pulled. Stretching of insulation may result in open seams and joints.
   c. Tape the ends of the copper tubing before slipping the Armaflex insulation over the new pipes to prevent dust from entering the pipe.
   d. All edges shall be clean cut. Rough or jagged edges of the insulation shall not be permitted. Proper tools such as sharp non-serrated knives must be used.
   e. On cold piping, insulation shall be adhered directly to the piping at the high end of the run and every 18 feet, using a two-inch strip of Armaflex 520, 520 BLV or 520 Black Adhesive on the ID of the insulation and on the pipe. All exposed end cuts of the insulation shall be coated with Armaflex 520, 520 BLV, or 520 Black Adhesive. All penetrations through the insulation and termination points must be adhered to the substrate to prevent condensation migration.
   f. Sheet insulation shall be used on all pipes larger than 8” IPS. Insulation shall not be stretched around the pipe. On pipes larger than 12” IPS, adhere insulation directly to the pipe on the lower 1/3 of the pipe. On pipes greater than 24” IPS, complete adhesion is recommended.
   g. Seams shall be staggered when applying multiple layers of insulation.
2. Hangers:
   a. Support piping system using high density inserts with sufficient compressive strength. The pipe support insulation shall be elastomeric foam with the same or greater thickness than the pipe insulation. All joints shall be sealed with Armaflex 520, 520 BLV or 520 Black adhesive.
   b. Standard and split hangers -- Piping supported by ring hangers shall have hangers insulated with the same insulation thickness as the adjacent pipe. All seams and butt joints shall be sealed with Armaflex 520, 520 BLV or 520 Black Adhesive. Armaflex

HT 625 Adhesive shall be used with UT Solaflex. Ring hangers may be sleeved using oversized tubular insulation. On cold piping, insulation shall extend up the hanger rod a distance equal to four times the insulation thickness. Insulation tape may be used to a thickness equal to the adjacent insulation thickness.

c. Clevis hangers or other pipe support systems -- Saddles shall be installed under all insulated lines at unistrut clamps, clevis hangers, or locations where the insulation may be compressed due to the weight of the pipe. All piping shall have wooden dowels or blocks of a thickness equal to the insulation inserted and adhered to the insulation between the pipe and the saddle.
It is highly recommended for continuous insulation protection to use hanger sizes equal to the outer diameter of the pipe plus insulation thickness.

d. Armafix IPH or Armafix NPH can be used to prevent compression of insulation at standard split, clevis hangers or other pipe support systems. To minimize the movement of Armafix, it is recommended that a pair of non-skid pads be adhered to the clamps. In addition, to prevent loosening of the clamps, use of an anti-vibratory fastener, such as a nylon-locking nut, is also recommended.

3. Square and Rectangular Ductwork:
   a. The top of the ductwork must be sloped to prevent “ponding” of water. The recommendation is at least a 2° angle to the outer side.
   b. Armaflex Sheet Insulation shall be adhered directly to clean, oil-free surfaces with a full coverage of Armaflex 520, 520 Black or Low VOC Spray Adhesive. Armaflex HT 625 Adhesive shall be used with UT Solaflex. AP Armaflex SA shall be adhered directly to clean, oil-free surfaces.
   c. The duct insulation shall be constructed from the bottom up, with the top insulation sized to extend over the side insulation. This will form a watershed.
   d. Butt-edge seams shall be adhered using Armaflex 520, 520 Black, or HT 625 Adhesive by the compression fit method to allow for expansion/contraction. Leave a 1/2”-wide uncoated border at the butt-edge seams on the duct surface and the insulation surface. Overlap the insulation 1/4” at the butt-edges and compress the edges into place. Apply Armaflex 520, 520 Black or HT 625 Adhesive to the butt-edges of the insulation.
   e. Standing metal duct seams shall be insulated with the same insulation thickness as installed on the duct surface. Seams may be covered using strips of Armaflex Sheet Insulation or half sections of tubular pipe insulation with miter-cut ends. Standing seams shall be adhered using Armaflex 520, 520 Black or HT 625 Adhesive.
   f. Insulation seams shall be staggered when applying multiple layers of insulation.
4. Round Ductwork:
   a. AP Armaflex Sheet and Roll Insulation, UT Solaflex Roll Insulation, or NH Armaflex Sheet and Roll Insulation shall be used on all round ductwork. Insulation shall be wrapped not stretched around the duct. On ductwork larger than 12” in diameter, the insulation shall be adhered to the duct surface on the lower one third. On ductwork greater than 24” in diameter, the insulation shall be completely adhered to the duct surface. Longitudinal seams shall be located on the lower half of any round ductwork.
   b. Butt-edge seams shall be adhered using Armaflex 520, 520 Black or HT 625 Adhesive by the compression fit method to allow for expansion/contraction. Leave a 1/2” wide uncoated border at the butt-edge seams on the duct surface and the insulation surface. Overlap the insulation 1/4” at the butt-edges and compress the edges into place. Apply Armaflex 520, 520 Black, or HT 625 Adhesive to the butt-edges of the insulation.
   c. Insulation seams shall be staggered when applying multiple layers of insulation.

5. Exposed Outdoor Duct:
   a. All outdoor exposed ductwork shall be finished using one of the following applications: For all the application methods described below it is very important that the exterior horizontal surfaces shall be sloped to prevent ponding on the top surface of the coated insulation. If the substrate is not sloped make the necessary adjustments to provide for a slope. DO NOT compromise the Armaflex insulation thickness to achieve the necessary slope.
6. Armaflex WB Finish
   a. All outdoor ductwork shall be finished with a minimum requirement of two coats of Armaflex WB Finish.
      1) Rectangular ductwork
         a) The surface of the insulation must be clean and dry.
         b) Apply first coat of Armaflex WB Finish at a rate of 400 square feet per gallon.
         c) Allow to dry at least four hours.
         d) Apply second coat at a rate of 400 square feet per gallon.

O. Finish for Exposed Insulation:
1. The term “exposed” is hereby defined as any place outdoors, as well as any place indoors in Mechanical Rooms, Storage Rooms, Janitor’s Closets, etc., where located within 7 feet of floor or access platforms.
2. All exposed pipe, valve and fittings insulation shall have 0.016 inch thick corrugated aluminum jacket banded with ½” s.s. bands spaced 12” o.c. Piping, fittings and valves exposed in building, <u>within seven feet of the floor or access platform</u>, shall have 0.016" thick aluminum jacket banded with ½” aluminum bands spaced 12" o.c. or two bands per section. Joints and jacket shall provide complete weatherproof protection either by mechanical contact or by use of Foster 95-44 or Childers CP-76 metal jacketing sealant (gallon cans only; no tubes).
3. All calcium silicate pipe insulation, all insulated condenser water piping exposed to weather and all other insulated pipe exposed to weather shall have 0.016 inch thick aluminum jacket banded with ½” s.s. bands spaced 12" o.c. This shall include pipe, fittings and valves.
4. As an alternative to the use of 0.016” aluminum cladding on outdoor duct insulation, if AP Armaflex insulation is used, the ArmaTuff laminated sheet and roll insulation may be used. ArmaTuff laminated Armaflex sheet and roll insulations may be used for insulating exterior applications such as duct, tanks, vessels and large pipes. Refer to section 3.06 for further installation details. ArmaTuff is a laminate of white polymeric material on Armaflex insulations, which offers durability and resistance to weathering, ultraviolet, acid rain and chemicals. The laminate is 0.013 inches (13 mils) thick. The seams must be installed in compression and sealed with Armaflex 520, or 520 Black contact adhesive. Cover the seams using ArmaTuff 6” Seal Tape.

3.03 PROTECTION

A. The installer of the insulation shall advise the Contractor of required protection for the insulation work during the remainder of the construction period, to avoid damage and deterioration.

END OF SECTION 23 07 00

SECTION 23 09 93
CONTROLS AND INSTRUMENTATION

PART 1 - GENERAL

1.01 WORK INCLUDED

A. The Control Contractor shall furnish and install a complete Building Automation System including all equipment, accessories, wiring and instrument piping, air compressors, control devices and components required for a complete and functioning system.

B. All materials and equipment used shall be standard components, regularly manufactured for this and/or other systems and shall not be custom designed especially for this project. All components shall have been thoroughly tested and proven in actual use.

C. The building control system shall possess a fully modular architecture, permitting expansion through the addition of more stand-alone control units, sensors, actuators, and/or operator terminals.

D. The equipment, components, and accessories used should be suitable for environment as well as operating condition.

E. The manufacturer's wiring diagram shall identify and color code all internal and external wires.

F. Control equipment, valves, panels, and dampers shall bear the manufacturer's name plate.

1.02 RELATED WORK

A. Work of this section shall comply with the requirements of the Contract Conditions (General and Supplementary), with sections of Division 1 - General Requirements, with the drawings, and all other Contract Documents.

B. Section 01 31 46 - Special Requirements for Mechanical and Electrical Work.

C. Section 23 31 13 – Sheet Metal Work

1.03 REFERENCES

A. NFPA 70, NFPA 90A - National Fire Protection Association

B. SMACNA - Low Pressure Duct Work

C. ASHRAE 15

D. ANSI B31.1; ANSI B31.5; ANSI B31.9; ANSI C12

1.04 SUBMITTALS

The Contractor shall submit the following to the Architect/Engineers for approval:

A. Submittals/Drawings

1. The Control Contractor shall submit prior to installation a set of installation drawings and control strategies for review by the consultant and/or owner's representative. These drawings shall include the physical location of building control system equipment and system architecture. The complete sequence of operation of the control system shall be provided.
2. Upon completion of the installation and final system adjustment, the Control Contractor shall provide a full set of as-built drawings of the installation and the control strategies.

B. Manufacturer's Data
1. Dampers, valves, and operators
2. Controllers, including complete wiring and connection diagrams
3. Temperature sensors, including complete wiring and connection diagrams
4. Temperature and pressure indicators
5. Switches, relays, transducers, including complete wiring and connection diagrams
6. Control Panels

1.05 QUALITY ASSURANCE

A. The Control System Contractor shall provide a list of no less than ten similar projects which have building control systems as specified. These projects must be on-line and functional such that the Owner's representative would observe a direct digital control system in full operation.

B. The control system shall be installed complete in all respects by competent mechanics, regularly employed by the manufacturer of the control system.

C. Bids by Wholesalers, Contractors, Franchised Dealers or any firm whose principal business is not that of manufacturing and installing automatic temperature control systems shall not be acceptable.

D. Single source responsibility of supplier shall be the complete installation and proper operation of the BAS and control system, and shall include debugging and calibration of each component in the entire system.

E. All electronic equipment shall conform to the requirements of FCC regulation Part 15, Section 15, governing radio frequency electromagnetic interference and be so labeled.

F. All system components are to be designed, built, and installed to be fault tolerant as follows:
1. Satisfactory operation without damage at 110% above and 85% below rated voltage and at $\pm$3 hertz variation in line frequency.
2. Static, transient, and short circuit protection on all inputs and outputs.
3. Communications lines protected against incorrect wiring, static transients, and induced magnetic interference.
4. All real time clocks and data file RAM shall be battery backed for a minimum of 72 hours in the host, and 8 hours in the SAC panels.
5. Bus connected devices to be AC coupled or equivalent so that any single device failure will not disrupt or halt bus communication.

G. All pressure piping, valves, and accessories should be hydraulically/pneumatically tested to 1.5 times the operating pressure.

H. Performance test should be carried out for all instruments, control equipment, and accessories as required.

I. Factory performance test results should be submitted with the equipment drawings.

1.06 SYSTEM TURN-OVER AND SERVICE

A. Upon completion of the installation, the Control System Contractor shall start up the system and perform all necessary testing and run diagnostics to ensure proper operation. An acceptance test in the presence of the Owner's representative, the Architect, and the Engineer shall be performed. When the system performance is deemed satisfactory in whole or in part by these observers, the system parts will be accepted for beneficial use and placed under warranty.

B. The acceptance test shall consist of verifying the ability of the SAC panels to communicate with each other, communicate with the central system (located in the power plant), verifying calibration of each sensor and/or transmitter, verifying the operation of each control point and verifying the operation of the control algorithms. The contractor shall provide all equipment and support to demonstrate these items.

1.07 TRAINING/OWNER'S INSTRUCTION

A. The Control System Contractor shall provide two copies of an operator's manual describing all operating and routine maintenance service procedures to be used with the system. The Control Contractor shall instruct the Owner's designated representatives in these procedures during the start-up and test period. The duration of the instruction period shall be no less than 40 hours. These instructions are to be conducted during normal working hours. The instructions shall consist of both hands-on and classroom training at the job site.

1.08 WARRANTY

A. The building control system, including all hardware, software components and end devices shall be warranted for a period of one (1) year following the date of beneficial use. Any manufacturing defects arising during this period shall be corrected without cost to the owner.

1.09 APPROVED MANUFACTURERS

A. Distech Controls

Approval of the manufacturer does not necessarily constitute approval of his products as equal to those specified.

PART 2 - PRODUCTS

2.01 PNEUMATIC COMPONENTS

A. Air Compressor and Accessories
1. Duplex tank mounted 70-90 psi electrically driven packaged air compressors complete with all necessary safety equipment, belt guards, starters, etc. Each compressor sized for a running time with ASME receiver of sufficient size to prevent excess of 10 starts per hour. Compressor to operate at a maximum of 550 rpm to prevent oil carry over into the system.

Provide means to automatically drain compressor tank. Pipe to nearest drain. Select energy efficient motors for voltage and phase as determined by electrical design.

2. Automatic alternator to alternate the operation of each compressor, and so arranged that the standby compressor will cut in if lead compressor cannot handle the load.
3. Provide intake silencers, vibration isolators and flexible piping connections to prevent transmission of sound and vibration. Refer to vibration isolation Section 15242 for isolation requirements.
4. Provide electric type refrigerated air dryer with automatic drain trap, capable of drying proper amount of air to -10°F dewpoint, hermetically sealed compressor, 1/5 h.p. motor for 115 volts, 60 Hz., single phase. Locate in high pressure air main in the discharge side of the storage tanks with oil filter installed ahead of same. Capacity shall be 20 SCFM.
5. Equip system with air pressure reducing stations and bypass valve. Air pressure reducing valve shall be relieving type. Provide with necessary safety valve and air gauge. Provide separate air station for each control air pressure (occupied and unoccupied). Refer to control diagrams on drawings.

B. Air Piping

1. Exposed: Hard copper tubing, single tube polyethylene in a metal enclosure, or multitude polyethylene equal to DeKaron "FR-Polycore." Multitude bundles shall be terminated to panels or junction boxes. Final termination to control devices may be made with a short run of single "FR" tube polyethylene.
2. Concealed: Copper tubing, single or multitude polyethylene.
3. Fire/Smoke Control Systems: Copper tubing.
4. Panel and Unit Enclosures: Polyethylene tubing.
5. Fitting connections for low pressure polyethylene tubing (25 psi or less) may be made with barbed push-on fittings. For high pressure polyethylene tubing (more than 25 psi), the connections shall be made with compression fittings.

C. Automatic Temperature Control Valves

1. Except as noted otherwise, provide minimum ANSI Class 125, cast iron (for steel piping systems) valves installed with stems horizontal or above. Valves for MTHW service shall be ANSI class 300 cast steel valves suitable for operation at 350 F. Valves shall have flanged end connections, except valves smaller than 2.5 inches may be threaded end connections with a union on all but one side of the valve. Cast iron components shall conform to ASTM A 126, Class B or C.
2. All valves shall be caged, guided and provided with equal percentage modulating plugs, stainless steel trim for MTHW and renewable composition disc especially compounded for hot, or cold water service to assure tight seating and operators equipped with molded rubber diaphragm. Three-way valves shall be equipped with modulating type plug assemblies, and shall have one seat machined integral with the body and the other three-way valve end. Pilot positioners shall be furnished as designed for all valves to obtain sequence of operation. Unless otherwise noted, valves shall be sized as required to guarantee sufficient size to meet the heating or cooling requirements with specified pressure drops. Water valves shall be sized for 5 psi pressure drop or as noted.

D. Automatic Dampers, Smoke Dampers, And Combination Smoke/Fire Dampers

1. Automatic dampers, smoke control dampers and combination smoke/fire dampers shall be furnished by the control manufacturer and shall be set in place by the contractor for Heating, Ventilating and Air Conditioning Work under the supervision of the control manufacturer. HVAC contractor shall supply damper dimensions to the control manufacturer and shall be responsible for the damper sizing. Is shall be this contractor's

responsibility to provide installation instructions for combination fire/smoke dampers to ensure compliance with U.L. 555 and NFPA 90A. All sleeves for combination fire/smoke dampers by sheet-metal contractor. This contractor to co-ordinate actuator mounting and location to accommodate sleeves.

2. Temperature control dampers shall have 16 gauge galvanized frames of not less than 5" in width and blades of 16 gauge, or double 22 gauge, galvanized steel, and shall be adequately braced to form a rigid assembly where required in galvanized ductwork. Dampers shall have blades not more than 6" wide. Linkage and hardware shall be zinc plated steel concealed in the frame. Damper blades and rods shall be installed in horizontal position.
3. In copper, aluminum and stainless steel ductwork, damper material shall match the ductwork, with blades of 48 oz. copper, 16 gauge aluminum, or 16 gauge stainless steel.
4. All dampers shall be of the proportioning or opposed blade type and shall be motor operated. Dampers shall have continuous elastomer or stainless steel stops to avoid leakage. Bearings shall be stainless steel sleeve type. All dampers shall be provided with continuous silicone rubber gasketing at interlocking blade edges to form an airtight seal. Provide flexible metal, compression type stainless steel jamb seals.
5. Round dampers shall be of the butterfly type consisting of a circular blade mounted to a shaft. Inside frame surface shall be clean and smooth with no blade stops or similar inward projections.
6. Frames shall include rolled stiffener beads to allow easy sealing of spiral ductwork joints. Dampers shall include a firm, closed-cell neoprene seal sandwiched between two blades. Leakage through the damper in the closed position shall not exceed .15 SCFM per inch of blade circumference at a pressure differential of 4" w.g. Leakage through the bearings shall be less than 3" cfm at 4" static pressure. Damper frame and blade shall be fabricated from galvanized steel. All parts not protected shall be given one coat of aluminum paint.
7. All rectangular dampers shall be constructed to provide a maximum leakage of 5.8 cfm/sq. ft. with an approach velocity of 1,500 fpm flow when closed against 4 inches of water, based upon 24" wide damper. Submit leakage and flow characteristic data for all dampers, and indicate that dampers are AMCA certified.
8. All outside air dampers shall automatically return to closed position in the event of loss of electricity or air.
9. All smoke dampers shall be U.L. labeled under latest edition U.L. 555S requirements low leakage rated at 450° F., 10 CFM/Ft.^{2} at 1" W.C. after test. The damper shall further meet all the requirements for smoke dampers per the 1989 edition of NFPA 90A. Combination smoke/fire dampers shall also meet latest edition U.L. 555 Classification and labeling as an 1-1/2 hour re-openable fire damper. Provide these dampers with a 212° F. fusible link component which melts in fire conditions and permits the damper to close and latch. All combination dampers must be approved for installation in NYC and have B.S. and A. approval.

E. Automatic, Smoke And Combination Smoke/Fire Damper Operators

1. Damper operators shall be of the piston type, with reinforced synthetic rubber diaphragm, and with bracket arrangement for location outside the airstream wherever possible. All damper operators shall be of sufficient size and number to operate their respective dampers smoothly against friction and air flow. Damper operators shall have external adjustable stops to limit the stroke in either direction if required for proper operation. Smoke damper at unit, outside air, return air and relief air dampers for systems in excess of 2,000 CFM shall close, when fan is off. Smoke damper shall have 30 second delay in closing and 20 second rapid start. All smoke and combination fire/smoke damper operators shall be U.L. listed, (rated at 350° F.) as part of the smoke/fire damper assembly.

F. Freeze Protection Ductstats
1. An electric freeze protection ductstat with 20 feet low temperature sensing capillary and with manual reset shall be located across the entering face of each cooling coil or bank of coils in the air conditioning units or in the discharge of each heating coil in the heating and ventilating units, which shall, on a fall in temperature below 35°F., shut down its respective supply fan and close the outdoor air damper. Case of instrument shall be located outside of supply unit, within 10 feet of supply fan motor. Provide alarm indication at the SAC panel.
2. For systems with return air fans, on fan shut down, the return fan shall continue running or shall start, if not running.

G. Fire Protection Ductstats
1. A manual reset fire protection ductstat shall be provided in the air discharge to each exhaust air fan, 2,000 CFM or larger and at the fan discharge of supply units 2000 cfm or lower within 10 feet of fan motor to stop the fan and its respective supply fan (where appropriate) whenever the temperature exceeds 125°F. Provide alarm indication at SAC panel.

H. Switches
1. Positioning switches shall deliver air gradually to air operated equipment. They shall be relay instruments. An exhaust vent shall be provided to prevent trapping air in the line between switch and instrument when branch pressure is reduced. Operation of the switch shall be manual on the local panel, and a pointer shall indicate switch position.
2. Pressure-electric switches shall have a minimum differential setting of 1 psi when activated by a proportioning signal.

I. Air Gauges
1. Air pressure indicating gauges of at least two inches in diameter shall be furnished and installed to indicate the variable control air pressure from each control device.

J. Pressure and Flow Transmitter/Indicator/Recorder and Temperature Sensors, Transducers
1. These instruments shall be furnished per specification to meet rated capacity.
2. These shall be piped up/wired as applicable with mounting frames and clips required for installation.

K. Wiring
1. Provide complete electric wiring for smoke control operation and temperature control apparatus, including wiring to transformer primaries. Circuits operating at 100 volts or less shall be defined as low voltage and shall be run in flexible conduit, or wireways. Provide switches and fuses for the protection and convenient operation of the system. Protect exposed wiring from abuse and damage in an approved manner. Cable shall not be tapped at intermediate points. Wires, whether individual or in cables, shall be color coded or numbered for identification. Cables terminating in screw type terminal strips shall have pressure type connectors. Wire in physical contact with compression screw will not be acceptable.
2. The entire building control system shall be installed by skilled electricians and mechanics, all of whom are properly trained and qualified for this work.
3. Supervision and checkout of the system shall be by local branch engineers and technicians directly employed by the control contractor.
4. All sensor and control wiring to SAC panels shall be twisted shielded No. 18 gauge. All other control wiring shall be minimum No. 14 gauge copper with 600 volt insulation.

5. All electrical work shall comply with the NYC Electrical Code and shall be installed by licensed journeymen electricians. Wiring shall be installed in NYC approved conduit.
6. Provide all conduit and wiring between SAC panels and telephone closet SAC panel.
7. All wiring of EP and PE switches, relays, thermostats and other control items shall be under this contract.
8. Provide all conduit and wiring between SAC panels and fan coil shunt trip breaker panels in electric closets.
9. Provide all conduit and wiring for ceiling mounted fan coil units and fan speed switches, return air thermostats, etc.

2.02 BUILDING CONTROL SYSTEM

A. The building control system specified herein shall be a direct digital distributed control system which can, without additional equipment, perform all of the automatic temperature control and energy management functions as required in this Specification. Direct Digital Control shall be defined as a control technique through which the process variable is continuously monitored by a digital computer which accomplishes loop control by calculating a control solution for output to a control device.

B. The system, as specified, shall independently control the building's HVAC equipment to maintain a comfortable environment in an energy efficient manner. The building operator shall communicate with the system and control the sequence of operation within the building.

C. System Architecture
1. The building control system shall consist of a network of independent, stand-alone control (SAC) units. Each stand-alone control unit shall be capable of performing all specified control functions in a completely independent manner. Host based systems shall not be acceptable. Control units shall be capable of being networked for single point programming and for the sharing of point information and control instructions between panels. All operator communication with the system shall be via operator terminal provided as specified hereafter. It shall be possible for each control unit to have a dedicated local display or for a collection of control units to share a single operator terminal.

D. Building Engineers Operators Console
1. The building engineers operator console located in the power plant, shall consist of the following:
   a. 1 Monochromatic CRT Operators Terminal
   b. 1 Alarm/Report Printer
   c. 1 Phone Line Modem
2. CRT Operator's Terminal with Keyboard: The primary man-machine interface for the system shall be a monochromatic Cathode Ray Tube (CRT) terminal operating under software control. All data access, command outputs, alarm annunciation, log request, and system file generation shall be accomplished via the CRT. The terminal shall be a factory assembled unit, complete with 15 inch diagonal screen, a full alpha/numeric keyboard, and a dedicated function key pad. Display capability shall be 24 lines and 80 characters per line with both upper and lower case capability.
3. Printer: A high speed (180 character-per second minimum) wide carriage (132 characters) printer shall be provided for <u>change-of-state</u> and <u>alarm</u> printout. The printer shall be provided with black print and power on/off control via the computer (automatically) or operator (manually). The computer shall automatically turn off the printer within 30

seconds after it has completed the printout. The operator shall be able to override the power-off feature when making a request.

4. If an operator begins a request but fails to complete it, the computer shall abort the communication channels between it and the printer within one minute and turn printer power off. Under no conditions will an input device be allowed to stay connected to a communication channel for longer than one minute when neither input nor output occurs.
5. The ATC contractor shall provide a modem as required for communication with the power plant. The purpose is to provide interconnection with the Building Automation System located in the various buildings of this contract.
   a. The interconnection, and all required software, interface panels, isolation devices, lightning protection, etc. shall be part of this contract.

E. Stand-Alone Control (SAC) Unit:
1. Each control unit shall be capable of full operation either as a completely independent unit or as a part of the building-wide control system. All units shall contain the necessary equipment for direct interface to the sensors and actuators connected to it. Provide phone line modem in SAC panel located in main communications closet of each building.
2. Control strategies shall be owner-definable at each control unit, and for all control units in the system from any one operator terminal. Each control unit shall provide the ability to support its own operator terminal if so desired.
3. Each stand-alone control unit shall include its own microcomputer controller, power supply, input-output modules, modem (as needed) termination modules, and battery. The battery shall be self-charging and be capable of supporting all memory within the control unit if the commercial power to the unit is interrupted or lost for a minimum of eight (8) hours.
4. The stand-alone control unit shall be listed by Underwriters Laboratories (UL) against fire and shock hazard as a signal system appliance unit.

F. Sensors/Input Signals
1. Each stand-alone control unit shall be capable of direct interface to sensors and input devices.
2. It shall be possible for each stand-alone control unit to monitor the following types of inputs:
   a. analog inputs
      - 4-20 mA
      - o-10 vDC
      - thermistors
      - RTD's
      - 3-15 psi
   b. digital inputs
      - dry contact closure
      - pulse accumulator

G. Actuators/Output Signals
1. The stand-alone control unit shall directly control pneumatic and electronic actuators and control devices. Each control unit shall be capable of providing the following control outputs:
   a. digital outputs (contact closure)
      - motor starters, sizes 1 to 4
      - shunt trip panels
   b. analog outputs

- 3-15 PSI
- 4-20 mA
- 0-16 vDC

H. Building Control Functions

1. Each Stand-Alone Control Unit within the Building Control System shall perform both temperature control functions, smoke control functions, and energy management routines as defined by these Specifications.
2. All temperature control functions shall be executed within the stand-alone control unit. Loop control shall be executed via direct digital control algorithms. The user shall be able to customize control strategies and sequences of control, and shall be able to define appropriate control loop algorithms and choose the optimum loop parameters for loop control. Control loops shall support any of the following control modes:
   a. Two-position (on-off, slow-fast, etc.)
   b. Proportional (P)
   c. Proportional, plus integral (PI)
   d. Proportional, integral, plus derivative (PID)
3. It shall be possible to fully create, modify or remove control algorithms within a specific stand-alone control unit while it is operating and performing other control functions. Input for these changes may be made directly into the stand-alone control unit or via the network from any other control unit. Each control loop shall be fully user definable in terms of:
   a. sensors/actuators that are part of the control strategy
   b. control mode
   c. gain
   d. control action
   e. sampling time
4. In order to minimize wiring and sensor costs, provide stand-alone control units that are able to share point information such that control sequences or control loops executed at one control unit may receive input signals from sensors connected to other stand-alone control units within the network. If the network communication link fails or the other stand-alone control unit malfunctions, the control loop shall continue to function using the last value received from the stand-alone control units. Provide protocol necessary to allow the panel needing the point information to have a local buffer updated periodically. The need to wait on the network shall be avoided. The buffer to be updated by change of value and on time interval, as required.
5. Each stand-alone control unit shall be capable of performing the following energy management routines as a minimum:
   a. time of day scheduling
   b. start/stop time optimization
   c. peak demand limiting
   d. supply air reset
   e. event initiated programs
6. In addition, the owner shall be able to create customized control strategies based upon arithmetic, Boolean or time delay logic. The arithmetic functions shall permit simple relationships between variables (i.e. +, -, -, x) as well as more complex relationships (i.e. square root, exponential).
7. Each stand-alone control unit shall be capable of performing the following control functions as a minimum:
   a. discharge air control
   b. heating and chilled water coil control
   c. humidity control

d. equipment start/stop
e. mechanical equipment control
f. smoke control functions (as defined in these specifications)
g. hot water systems control
h. chilled water systems control

8. The system shall permit the generation of job-specific control strategies that can be activated in any of the following ways:
   a. continuously
   b. at a particular time-of-day
   c. on a predefined date
   d. when a specific measured or controlled variable reads a selected value or state
   e. when a piece of equipment has run for a certain period of time
9. Upon a loss of commercial power to any stand-alone control unit, the other units within the network shall not be affected, and the loss of operation of that unit shall be reported at the designated operator's terminal. All control strategies and energy management routines defined for the stand-alone control unit shall be retained during a power failure via the battery with the unit for a minimum of eight (8) hours. Upon resumption of commercial power, the control unit shall resume full operation without operator intervention. The unit shall also automatically reset its clock such that proper operation of timed sequences is possible without the need for manual reset of the clock.
10. Should a loss of power exceed memory back-up, the building operator shall be able to manually restore all system programs off of memory storage in the Building Engineers Operators Console.

I. Operator Interface
1. The building control system shall permit full operator communication including: obtaining information about the performance of his system; allowing the operator to change the system operation; diagnosing the system malfunctions and programming of the system. Operator communication shall be through the black and white CRT, hand-held terminal or printer. Any one of these devices shall allow operator communications.
2. The building control system shall permit complete operation of any stand-alone control unit within the network, from any operator terminal within the system.
3. The network shall be addressable as a whole and shall not require referencing a particular control unit for the commanding or monitoring of points on the network.

J. User Programmability
1. All temperature control strategies and energy management routines shall be definable by the operator through the operator's terminal. It shall be possible for the operator to program and modify system functions independently after receiving the training from the control contractor as previously specified. The system shall be provided complete with all equipment and documentation necessary to allow a trained operator to independently perform the functions listed below:
   a. read the value of a measured variable (i.e. temperature)
   b. start or stop equipment
   c. monitor the status of equipment being controlled
   d. read the set point of a control loop
   e. determine the control strategies that have been defined for a specific piece of equipment
   f. generate displays of control strategies
   g. add/delete control loops to the system
   h. add/delete points to the system

i. create, modify or delete control strategies
j. assign sensors and/or actuators to a control strategy
k. tune control loops through the adjustment of control loop parameters
l. enable or disable control strategies
m. generate hard copy records of control strategies on a printer
n. select points to be alarmable and define the alarm state(s)

K. Self-Diagnostic and Alarm Reporting
1. Each stand-alone control unit shall contain self-diagnostics that continuously monitor the proper operations of the unit. A malfunction of the unit will be reported, and will inform the operator of the nature of the malfunction, and the control unit affected. It shall be possible to annunciate malfunctions as well as other control unit alarms at a selected central operator's terminal.
2. The system shall also allow on-line diagnosis via telephone modem from a remote location.

L. Transmission Network
1. The control system shall include a multi-drop digital transmission network that provides the communication link between all the stand-alone control units, and main campus operators console via modem.
2. The transmission shall be asynchronous and utilize a polled-response method. The system shall utilize a cyclic redundancy check or dual transmission with parity check to ensure signal reliability.
3. The transmission network shall utilize a twisted shielded pair. The transmission speed shall be minimum of 4800 baud and operate in a half-duplex mode.
4. The system shall support multi-drop trunks. Each multi-drop trunk shall support a minimum of 32 Remote Units.
5. Each multi-drop trunk shall have an allowable line length of at least 20,000 feet without signal degradation. All multi-drop trunks shall be interfaced to the system via standard EIA interfaces.
6. Transmission techniques shall allow trunk cable to be installed in conduit with other system signals as well as switched to 120 VAC or 240 VAC.
7. Surge protection shall be provided where the transmission cable enters or leaves a building. Electrical noise suppression shall be provided on all control devices (i.e. relays, transducers, etc.)

M. Sensors
1. All analog sensors shall utilize industry standard 4-20 milli-amp signals to facilitate Owner expansion. Sensors based on proprietary equipment shall not be acceptable.
2. All analog signals shall be converted for digital transmission to the CPU at the function card.
3. All sensoring wiring, whether it be analog or digital, input or output, shall be capable of sharing single conduit runs without affecting signal performance. All signal wiring shall also be capable of sharing single conduit runs with switched AC or 120 VAC or 240 VAC.
4. Sensors shall meet the following minimum specifications:
a. Room Temperature (RTD Type):
Temperature Monitoring Range..... +20°/+120°F
Accuracy:
RTD Element ..... ∀0.5°F
Sensor..... ∀0.7°F
b. RTD Duct Sensor (Fan Discharge, and Return Air):
Temperature Monitor Range..... +20°/120°F

Accuracy:
RTD Element ..... ∀0.5°F
Sensor..... ∀0.7°F

c. RTD Averaging Type Duct Sensor (Mixed Air, Heating, and Cooling Coil):
Temperature Monitoring Range..... +20°/+120°F
Sensor..... ∀1.1°F

d. RTD Immersion Sensor (hot water, chilled water and glycol heating):
Temperature Monitoring Range
(LTHW)..... +20°/+220°F
(MTHW)..... +100°/+400°F
Accuracy:
RTD Element ..... ∀0.5°F
Sensor..... ∀0.9°F

e. Outside Air Temperature (RTD):
Temperature Monitor Range..... -30°/+120°F
Accuracy:
RTD Element ..... ∀0.5°F
Sensor..... ∀1°F

f. Room/Duct/Outside Air Dew Point sensor (High Accuracy) (For Enthalpy Control):
Dew Point Monitoring Range ..... -40°/+115°FDP
Accuracy:
Dew Point Element.....∀1.1°FDP
Sensor.....∀1.5°FDP
RH% Range 12%-99%

g. Room Relative Humidity Sensor (High Accuracy):

h. Humidity Range 0-100%

i. Accuracy:
(Over Full Range of Instrument)..... ∀2%

j. Sensing Element Crystallite Fibre Strain Gage Beam

k. Companion Transmitter:
RFI Susceptibility..... ∀3% of Scale

2.03 SOFTWARE

A. The Control System Subcontractor shall provide all software required for efficient operation of all the control system functions required for this Specification. Software shall be modular in design for flexibility in expansion or revision of the system. Software shall be loaded into the system via a compact "floppy" disk from the operator's terminal. The operator's terminal shall also be capable of copying the system software on a "floppy" disk for archival purposes.

PART 3 - EXECUTION

3.01 INSPECTION

A. Examine location where controls and equipment are to be installed and determine space conditions and notify Architect in writing of conditions detrimental to proper and timely completion of the work.

B. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install in accordance with manufacturer's written instructions and with recognized practices, to ensure that equipment complies with requirements and serves intended purposes.

B. Coordinate with other work as necessary to interface installation of equipment with other components of systems.

C. All pneumatic piping is to be run concealed in occupied spaces and in other spaces, wherever possible. Where exposed, piping is to be securely fastened at regular intervals, and run in a neat workmanlike manner. Tests on piping are to be made from time to time during the progress of installation to ensure against leaks. No air lines shall be hidden within duct insulation or supported with wire or tape.

3.03 SMOKE CONTROL OPERATION

A. Division 16 Electrical Contractor will furnish and install a complete building fire alarm system, annunciator system and emergency fan shut down wiring.

B. ATC Contractor to furnish and install one or more multi-pole relays for <u>each</u> fan motor starter, to interface with fire alarm emergency fan shut down wiring. The intent of these relays is to provide dry type contacts to activate the various sequences of operation described herein. ATC Contractor shall be responsible for all <u>logic</u> devices, wiring, relays etc. required to accomplish the sequences of operation as noted below.
   1. <u>All</u> HVAC fans shall be shut down automatically through the emergency fan shut down system. Typically a building area smoke detector, or zoned water flow detector switch shall activate the fan shut down. Individual unit mounted duct smoke detectors however, shall only cause its own fan system to stop (supply, return and exhaust) and close the related system main smoke dampers.
   2. <u>All</u> main fan systems smoke dampers and <u>all</u> duct mounted smoke dampers shall automatically close when fans are stopped through the fire alarm system.

3.04 MANUAL SMOKE CONTROL PANEL

A. The ATC Contractor shall furnish and install, adjacent to the main fire annunciator panel in the Main 1st floor lobby, a smoke control panel for the manual operation of the HVAC system by the Fire Department.

B. This panel to consist of an approved NYC fire department key type locking front cover, which shall house the concealed switches (off-normal) for each supply and exhaust fan, floor purge switches (off-purge), positive status indicating pilot lights, relays, air valves and wiring devices necessary to accomplish the sequences of operation both described herein and elsewhere in this section. The ATC Contractor shall provide descriptive name tags for each switch noting operation, system and area served. Further, the ATC Contractor shall provide half size drawings of the architectural floor backgrounds, showing the areas served by each air handing/return fan or exhaust fan system keyed back to the switches in the panel. Each drawing to be laminated with heavy plastic and mounted in the panel.

C. Except for the emergency fan shut down system all wiring, logic devices, E-P or P-E devices, air tubing, motorized smoke dampers, actuators etc. required to accomplish the sequences of

operation both described herein and elsewhere in this section shall be furnished and installed by the A.T.C. contractor.

D. The intent of this panel is to allow the Fire Department to manually stop the fans of the HVAC system and to provide floor by floor smoke purging by switches noted below.
   1. In general, the A.T.C. contractor shall supply the equipment described herein to allow the following sequences. Provide 1 switch per floor on the smoke control panel. The switch will operate all the return smoke dampers, exhaust air valves and exhaust fans on the entire floor in unison. During normal operation, all supply and return smoke dampers and air valves will be open if any of the AHU's and exhaust fans are operating.

E. In general, when the manual smoke control panel is used to purge a floor, all high limit controls, automatic shut down, manual shutdown, and local smoke detector shut down shall be overridden.

F. Two position pneumatically controlled air valves are provided in the exhaust ductwork system. The intent of these valves is to open the flow of exhaust air to predetermined maximum exhaust flows under manual smoke exhaust operation. In normal operation, these air valves shall be in a low flow position. The ATC Contractor shall provide all pneumatic tubing, relays, switches, etc. required to operate these dampers in both manual and emergency operation.

3.05 LOCATION AND CONTROL OF COMBINATION FIRE/SMOKE DAMPERS

A. Provide a normally closed combination fire/smoke damper in each duct crossing a fire or smoke barrier, as indicated on the Drawings, at the point where the duct crosses the barriers and at supply fan discharge. Whenever supply fan stops, smoke damper at the fan discharge shall close. Provide end switch at main after intake and smoke damper and 30 second (adjustable) time delay to prevent supply and exhaust fan start-up until combination dampers have opened, and 20 second time delay to prevent combination dampers from closing until fan stopped. All combination fire/smoke dampers on each floor, shall be connected to EP switches on that floor, which shall close the dampers when the respective air handling system is shut down by Div. 16 fire alarm emergency fan shut-down system. EP switches shall be 3", 3-way air valve, connected to the damper air piping system. EP switch shall be furnished and installed under this Section of the Specifications.

3.06 FIELD QUALITY CONTROL

A. Upon completion of installation of the automatic temperature control system and after motors have been energized with normal power source, test system to demonstrate compliance with requirements.

B. When possible, field correct malfunctioning controls, then retest to demonstrate compliance. Replace controls which cannot be satisfactorily corrected. Refer to Section "Testing and Balancing".

C. Checkout of the installation shall be conducted by the Contractor with a representative of the Owner and Architect. The checkout shall consist of verifying the ability of the S.A.C. panels to communicate with the operator's console, verifying calibration of each sensor and/or transmitter, and verifying the operation of each control point.

D. All software processes shall be thoroughly demonstrated to the Owner's representative and Architect. Alarm conditions shall be simulated for conformance. Analog control points shall

be exercised through their entire range. All control interlocks and sequences shall be completely verified. The checkout shall be a thorough and exhaustive review of the installation to assure proper operation of the total system.

3.07 SERVICE

A. After completion of the control system installation, the control manufacturer shall regulate and adjust all thermostats, control valves, damper motors, etc., and place in complete operating condition, subject to the approval of the Architect.

B. The Control System contractor shall provide two copies of an operator's manual describing all operating and routine maintenance service procedures to be used with the system. The Control System contractor shall instruct the Owner's designated representatives in these procedures during the start-up and test period. The duration of the instruction period shall be no less than eighty hours. These instructions are to be conducted during normal working hours. The instructions shall consist of both hands-on and classroom training at the job site.

END OF SECTION 23 09 93

SECTION 23 31 13
SHEET METAL DUCTWORK

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. This Section is coordinate with and complementary to the General Conditions and Supplementary General Conditions of the work, wherever applicable to Mechanical Work.

B. Section 01 31 46 - Special Requirements for Mechanical and Electrical work shall apply.

1.02 DESCRIPTION OF WORK

A. The work includes the providing of all labor, materials, equipment, accessories, services and tests necessary to complete and make ready for operation by the Owner, all Sheet Metal Ductwork as shown on the drawings and hereinafter specified.

1.03 QUALITY ASSURANCE

A. Fabrication and installation shall be by a single firm specializing and experience in metal ductwork for not less than 10 years.

B. Comply with SMACNA's (Sheet Metal and Air Conditioning Contractors National Association) 2005 HVAC Duct Construction Standards, Metal and Flexible, Third Edition recommendations for fabrication, construction and details and installation procedures, except as otherwise indicated.

C. Comply with ASHRAE (American Society of Heating Refrigeration and Air Conditioning Engineers) recommendations, except as otherwise indicated.

D. Compliance to SMACNA and ASHRAE is a minimum requirement. In case of disagreement between sheet metal work described in this Section and SMACNA or ASHRAE, the specification shall govern.

1.04 SUBMITTALS

A. Refer to Section 01 31 46 - Special Requirements for Mechanical and Electrical work and submit shop drawings and coordinate drawings.

B. Before submitting any sheet metal drawings, submit a complete set of shop standards for review and approval. Sheet metal shop drawings may be submitted only after approval of the shop standards.

1.05 COORDINATION

A. Refer to Section 01 31 46 - Special Requirements for Mechanical and Electrical work.

1.06 GUARANTEE

A. Refer to Section 01 31 46 - Special Requirements for Mechanical and Electrical work.

B. Contractor will guarantee all work for one year from the date of acceptance against all defect in material, equipment and workmanship. This guarantee shall include repair of damage to any part of the premises resulting from leaks or other defects in material, equipment or workmanship.

1.07 PRODUCT HANDLING

A. Protect shop fabricated ductwork, accessories and purchased products from damage during shipping, storage and handling. Protect ends of ductwork and prevent dirt and moisture from entering ducts and fittings.

B. Where possible, store ductwork inside and protect from weather. Where necessary to store outside, store above grade and enclosed with waterproof wrapping.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS FOR DUCTWORK

A. Furnish and install the size, connections and run of ducts as indicated on the drawings.

B. While the Drawings shall be adhered to as closely as possible, the Architect's right is reserved to vary the run and size of ducts during the progress of the work if required to meet structural conditions.

C. Install all ductwork in strict adherence to the ceiling height schedule indicated on the Architect's Drawings. Consult with the Plumbing, Fire Protection and Electrical Contractors and, in conjunction with the above Contractors, establish the necessary space requirements for each trade.

D. The sheet metal ductwork shall, whether indicated or not, rise and/or drop and/or change in shape to clear any and all conduits, lighting fixtures, piping and equipment to maintain the desired ceiling heights and to provide adequate maintenance room and headroom in mechanical equipment rooms.

E. The ductwork shall be continuous, with airtight joints and seams presenting a smooth surface on the inside and neatly finished on the outside. Ducts shall be constructed with curves and bends so as to affect an easy flow of air. Unless otherwise shown on the Drawings, the inside radius of all curves and bends shall be not less than width of ducts in plane of bend.

F. All rectangular ductwork, unless otherwise noted, shall be built from galvanized sheet steel and thoroughly braced and stiffened.

G. Provide 18" x 18" access doors for every 30'-0" run of supply and return air duct for cleaning purposes. For ducts whose height or width is less than 20", provide access doors which are 18" wide by a height calculated as 2" less than the height of the duct (thereby providing 1" of clearance between the bottom of the access door and the bottom of the duct, and similar for the top).

2.02 DUCT PENETRATION THRU FLOOR

A. Provide 4" high and 4" wide concrete curb all around opening at duct penetration thru floors. Fill in space between duct and floor construction with mineral wool.

2.03 INSTALLATION OF HVAC DEVICES

A. Installation of Duct Smoke Detectors: Duct smoke detectors shall be furnished by the Electrical Contractor and shall be installed in the ductwork under this Section. Provide an access door to each smoke detector.

B. Installation of Dampers: Refer to Drawings and temperature control specification for smoke dampers and other automatic dampers and install them in ductwork.

2.04 DUCT FABRICATION

A. Ducts shall be neatly finished on the outside with all sharp edges removed.

B. Inside surfaces shall be smooth with no projections into the air stream except where otherwise indicated.

C. Longitudinal joints shall be Pittsburgh lock at corners or Acme lock on flat surfaces double seams hammered tight and shall be located above the horizontal axis of the duct. A snap lock seam shall not be permitted as a substitute for the Pittsburgh lock at corners of ducts.

D. Transverse joints shall be made airtight with all laps in the directions of air flow.

E. All fasteners and attachments shall be made of the same material as the ducts.

F. Furnish test wells 12" on the center horizontally and vertically in the suction and discharge duct of each fan. Test wells shall consist of a 1" x ¾", 125 lb., bronze, screwed hex bushing, secured to the duct with a bronze hex locknut on the inside of the duct. A ¾" x 2" long standard weight bronze, screwed nipple and cap shall be fitted to the housing on the outside of the duct. Test wells shall be No. 699 as made by Ventlok or approved equal.

G. All turns in ductwork shall be accomplished using radius elbows rather than square elbows. Square elbows will only be permitted in instances where the Contractor, through depiction on their sheet metal shop drawings, proves that only a square elbow may be installed due to such limited space availability. All radius elbows shall have a minimum centerline radius of 12 times the width of the duct.

H. All square elbows shall have factory-designed and built single thick turning vanes. Shop fabricated vanes will not be approved. Where turning vanes are in conflict with the access doors to fire dampers, they shall be made movable so that fire dampers shall be accessible.

I. Dissimilar metals shall be connected with flanged joints made up with fiber or neoprene gaskets to prevent contact between dissimilar metals. Flanges shall be fastened with bolts protected by ferrules and washers made of the same materials as the gaskets. Where an aluminum duct is to be connected to a galvanized steel duct, the end of the galvanized steel duct shall be coated with heavy black asphaltum paint before connecting it to the aluminum duct.

J. Changes in shape and dimension shall conform to the following: Except where otherwise noted, for increases in cross-sectional area, the shape of the transformation shall not exceed 1" in 7". Except where otherwise noted, for reductions in area, the slope shall not be less than 1" in 4" but 1" in 7" preferred.

K. Wherever it may be necessary to make provisions for vertical hangers of the ceiling construction passing through ducts, provide streamlined shaped sleeves around such ceiling construction hangers as to fully protect the duct from being penetrated with holes for the passage of such hangers. Any such streamlined sleeves shall be made air tight at top and bottom of ducts. In no case shall there be more than two rods in any 9 sq. ft. area. No rods shall pierce ducts smaller than 12" in horizontal area.

L. Ductwork shall be constructed in accordance with the latest version of the SMACNA Duct Construction Standards for both rectangular and round duct. The duct Pressure Class for each duct system shall be determined from the maximum possible (shut-off) static pressure achievable by the supply, return or exhaust fans, and in no instance shall the minimum pressure class be lower than 1" WC. The Sheet Metal Subcontractor shall obtain the associated fan curves from the Mechanical Contractor in order to confirm the maximum static (shutoff) pressure of the fan(s). This pressure class shall extend from the air handlers to the first automatic damper (including fire dampers, smoke dampers and combination fire/smoke dampers). For VAV systems, the pressure class of the ductwork between the first automatic damper and the VAV or CV boxes shall be equal to the external static pressure (ESP) rating of the fan.

M. Seal Class: All ductwork shall be sealed to SMACNA Seal Class A, with no exceptions.

N. Ductwork Testing:
1. The intent is to test all ductwork and all ducted systems. All ductwork shall be tested in accordance with SMACNA Procedures, including SMACNA Duct Performance Test Standard m DPTS-1995 and the latest editions of the SMACNA HVAC Duct Construction Standards and the SMACNA HVAC Air Duct Leakage Test Manual.
2. Additional requirements for all ductwork:
   a. The testing of all joints for air leakage after erection and the repair of any leaks are positive requirements. Leakage must be kept to a specified minimum. The test for air leakage is divided into two phases; namely, testing of individual vertical risers and testing of all branches. Provide all required instruments.
   b. All risers, branches and runouts shall be tested after installation before insulation is applied and before the air mixing units are installed. The total allowable leakage for the entire system shall be tested, measured and proven to be in accordance with Table 4-1, Applicable Leakage Classes, of the SMACNA HVAC Air Duct Leakage Test Manual; joints, seams and all wall penetrations shall meet Leakage Class 6 for rectangular ducts and Leakage Class 3 for round ducts.
   c. Equipment necessary for performing this test shall include a rotary hand blower calibrated orifice section and a “U” tube gauge board complete with cocks and rubber tubing. The test hookup, as well as details for the fabrication of the orifice section shall be in accordance with the recommendation of the “High Velocity Duct Manual” of Sheetmetal and Air Conditioning Contractors National Association, Inc.

O. The construction for low pressure rectangular sheet metal ducts shall be made in accordance with recommendations of ASHRAE Guide, Latest Edition, or as per SMACNA Manual but not less than the following weights and construction:

LOW PRESSURE - RECTANGULAR DUCTWORK				
Dimension Longest Side Inches	Sheet Metal Gauge All Four Sides			Transverse Reinforcing at Joints and Between Joints
	Steel Gauge	Aluminum Thickness In.	Copper Oz. Per Sq. Ft.	
Up thru 12	26	0.020	16	1" pocket lock 24 gauge, standing seam joint 24 gauge, 1" standing S slip 24 gauge. Joint max. on 8 ft. centers.
13 thru 18	24	0.025	24	Same as for up thru 12.
19 thru 30	24	0.025	24	1" pocket lock 22 gauge. Joints max, on 8 ft. centers with 1 x 1 x c in. angles 4 feet from joint.
31 thru 42	22	0.032	32	Same as for 19 thru 30.
43 thru 54	22	0.032	32	1" standing S slip 22 gauge with 1½" x 1½" x ⅛ in. angles, 1½" standing seam joint, 1½" pocket lock 22 gauge. Joints on 8 ft. centers with 1½" x 1½" x ⅛ in. angles max. 4 feet from joint.
55 thru 60	20	0.040	36	Same as for 43 thru 54.
61 thru 84	20	0.040	36	1" standing S slip gauge with 1½" x 1½" x ⅛ in. angles, 1½ standing seam joint, with 1½" x 1½" x ⅛ in. angels, 1½" in. pocket lock 22 gauge with 1½" x 1½" x ⅛ in. angels. Joints max. on 8 ft. centers with 1½" x 1½" x ⅛ in. angels max on 2 ft. centers.
85 thru 96	18	0.050	48	Same as for 61 thru 84 except all angles shall be 1½" x 1½" x 3/16 in.
over 96	18	0.050	48	Same as for 61 thru 84 except all angles shall be 2 x 2 x ¼ in.

1. Flat areas of duct over 18 in. wide shall be stiffened by cross breaking of beading.
2. All joints to have corner closures.
3. All joints (longitudinal and transverse) shall be sealed with Foster 32-19, Childers CP-146 or 3M EC-800 mastic or equal UL181A approved mastic, to provide sealing equivalent to SMACNA Seal Class A.

P. The construction for low pressure round sheet metal ducts and fittings shall be as follows:

Girth Reinforcing			
Duct Diameter Inches	Steel-Galv Sheet Gage	Minimum Reinforcing Angle Size & Maximum Longitudinal Spacing	Girth Joints (Continuously Welded or as Below)
Up thru 8	26	None required	Crimped and beaded joint
9 thru 13	26	None required	Crimped and beaded joint
14 thru 22	24	None required	Crimped and beaded joint
23 thru 36	22	None required	--

Girth Reinforcing			
Duct Diameter Inches	Steel-Galv Sheet Gage	Minimum Reinforcing Angle Size & Maximum Longitudinal Spacing	Girth Joints (Continuously Welded or as Below)
37 thru 50	20	1¼ x 1¼ x ⅛ @ 72 in.	--
51 thru 60	18	1¼ x 1¼ x ⅛ @ 72 in.	--
61 thru 84	16	1½x 1½ x ⅛ @ 72 in.	--

NOTE: Flanged joints may be considered as girth reinforcing.

1. Ductwork up to 36 in. diameter shall be spiral lockseam construction and it shall be assembled with prefabricated fittings made up of 20 gauge galvanized iron.
2. All joints (longitudinal and transverse) shall be sealed tight with EC-800 to provide sealing equivalent to SMACNA Seal Class A. Joints shall, in addition, be fastened with self-tapping screws.

2.05 FLEXIBLE RUN-OUTS

A. The run-outs from the (medium) (high) pressure duct to (terminal units such as Variable air Volume or constant air volume boxes) (induction units) (air mixing boxes) shall be flexible duct.
   1. Flexible metal duct shall be all-metal, bendable, self-supporting and mechanically interlocked to be totally leak proof under operating conditions without manufacturing use of adhesives.
   2. Flexible ducts shall be type AL006 uninsulated or Type AL006-150 insulated as made by United Sheet Metal or approved equal. The flexible run-outs shall take all bends without kinking. The run-outs shall be flame resistant, shall have a low friction loss, and shall have working pressure minimum of 10 inch W.G. Flexible run-outs shall be no longer than 3'-0" and shall comply with Local Union Requirements. Any additional lengths necessary to connect the flexible duct to the high or medium pressure ductwork shall be made with spiral lockseam sheet metal duct of the same size as the flexible ductwork.
   3. Clevaform type S and Type SFV as made by Clevaflex is approved equal.

B. The flexible run-out duct shall meet all requirements of the National Fire Protection Association 90A - Latest Edition.
   1. Flame spread not over 25, smoke developed not over 50.

C. Each flexible run-out shall be sealed to its male outlets on both ends with Foster 32-19, Childers CP-146 or 3M EC-800 sealer, or sealing compound as recommended by the flexible air duct manufacturer. The flexible air duct shall be sealed and covered to a minimum depth of 2 inches of its mating metal coupling, branch take-off lap or duct at each of its ends.

D. Flexible ducts shall be terminated with stainless steel band clamps at duct takeoff, terminal box or diffuser. Plastic strap locks and Nylon “ZIP-TIES” are not acceptable.

E. Complete installation shall be airtight.

F. Flexible ducts shall be rated and labeled to the requirements of UL 181 for Class 0 or Class 1 flexible air ducts and shall be so identified.

2.06 DAMPERS

A. At each main branch take-off and in such other locations where required to properly balance the system, provide volume dampers of the opposed blade, multi-louvered type, which shall be operated by indicating locable quadrants and set screws, for adjusting the system.

B. Volume dampers shall be constructed as follows: Damper blades shall not be wider than 12", shall be complete with heavy angle iron frames, connecting and operating links, brass trunnions, and bronze bearings. Dampers, unless otherwise noted, shall be fabricated with not less than No. 16 gauge sheet steel. Blades shall overlap and shall be provided with continuous stops on all four sides of dampers to prevent leakage. Blades shall be galvanized. Blades of dampers shall be set into a flat steel frame with frame securely bolted to the duct. All dampers shall be fitted with a hexagonal brass spindle which shall extend through the exterior of duct and be fitted with an indicating self-locking regulator. Regulator shall be similar to Ventlok 641 or approved equal. All hardware shall be Ventlok or approved equal. For insulated ductwork provide No. 644 self-locking regulator as made by Ventlok or approved equal.

C. All automatic dampers shall be furnished as a part of the automatic temperature control system by the automatic temperature control manufacturer. Install dampers and provide safing in ductwork for automatic dampers smaller than duct size.

D. For stainless steel and aluminum ductwork, provide dampers of same material as ductwork.

E. All dampers shall be made accessible from building construction. Access doors in building structure shall be furnished or provided as herein before specified.

2.07 SMOKE DAMPERS

A. Smoke dampers shall be classified and labeled in accordance with UL 555S, "Standard for Leakage Rated Dampers for Use in Smoke Control System." Smoke dampers shall be of UL 555 S leakage class I, 4 CFM/Ft^2 at 1" w.g.; 8 CFM/Ft^2 at 4" w.g.

B. Smoke dampers installed at smoke barriers shall be installed no more than 2 ft. from the barrier and between any branch takeoff or duct inlet and outlets and the smoke barrier.

C. Smoke dampers shall be automatically return to closed position in the event of loss of electricity. All wiring required to interconnect the dampers with fire detection, fire alarm and fire alarm supervisory control systems shall be provided under the Division 26 of the Specification. Pneumatic control system for damper actuators shall be provided under Section 23 09 00, as specified hereinafter. All combination fire/smoke dampers and smoke dampers shall be provided with 120 VAC actuators. Power wiring for all combination fire/smoke dampers and all smoke dampers shall be through the fire alarm system control relay and through a BAS relay and control module. The Electrical Contractor shall provide all such wiring; the ATC Sub-Contractor shall provide a BAS relay which must be installed for each combination fire/smoke damper and each smoke damper. If the air handling system is shut down, all associated combination fire/smoke dampers and all smoke dampers shall close. The fire alarm relay shall, if necessary, override the BAS relay. Each damper shall be individually powered and controlled.

D. Smoke dampers shall be constructed as described above for dampers.

E. Damper actuators shall be as specified in Section 23 09 00.

F. For fire/smoke dampers, provide two (2) damper end switches that are blade actuated to signal the fire alarm system when dampers are in the open and closed position. For smoke and fire/smoke dampers which can isolate a fan from its distribution ductwork or as otherwise required by the Sequence of Operation, provide an additional end switch which shall be wired to the fan starter (VFD) control wiring to prevent the fan from operating unless the damper is open.

G. Apply a bead of sealant between damper and sleeve and between dampers for multiple damper assemblies, as defined below for combination smoke and fire dampers.

2.08 FIRE DAMPERS

A. Fire dampers and sleeve installation shall be in accordance with NFPA-90A recommendations and shall bear U.L. Label in compliance with U.L. 555.

B. Clearly indicate fire damper location on shop drawings. Provide access doors in the ducts and supply access doors or panels at building construction at each damper of sufficient size and type to permit inspection and replacement of linkage. Assume responsibility to coordinate all locations of duct access doors with the other Contractors to conform with whatever architectural access openings may be necessary and supply access doors or panels in building construction. Provide shop drawings indicating location of access panels or doors for Architect's approval.

C. It is the intention of these plans and specifications to be complete. However, it is the responsibility of the Contractor, as being completely cognizant of local regulations, to determine where fire dampers are required and to advise the Architect prior to construction as to any discrepancies or questions in the plans or specifications.

D. Fire dampers shall be enclosed in sleeve of fourteen gage metal. Sleeve shall be secured at both sides of fire partitions with 1½ x 1½ x 14 ga. mounting angles secured to sleeves only: retaining angles must lap structural opening 1" minimum and cover corners of opening. Provide duct breakaway connections, see detail on drawings. Breakaway connections shall be located within 6 inches of the fire wall on both sides of the fire wall.

E. Dampers shall be steel plate, mounted to turn freely, in steel plate frame inserted in duct. Dampers shall be proportioned and weighted to close at once, if released from link with spring catches to hold closed, until manually reset. Dampers and frames to have suitable standard fusible-links, normally holding them open, but releasing upon contact with fire. Damper blades shall be mounted on corrosion resisting bearings. Damper shall close by gravity, moving with the air stream to full closed position against one-eighth (⅛) inch angle stop. Steel spring catch shall hold damper closed. Radius arm on shaft shall show position of damper. Submit details for approval.

F. Fire dampers shall be as made by Ruskin, Lau, Arlan Damper Corp. (631-589-7431) or approved equal, U.L. labeled.

G. Damper shall be fully out of the air stream (type B) U.O.I.

H. In stainless steel and aluminum ductwork, provide stainless steel construction fire dampers.

2.09 COMBINATION SMOKE AND FIRE DAMPERS

A. In lieu installing separate fire and smoke dampers in fire walls with a rating of two hours or less, a combination fire/smoke damper can be installed. Fire walls with a rating exceeding two hours must use separate fire and smoke dampers.

B. Combination fire/smoke dampers shall be model FSD36 as manufactured by Ruskin, Lau, Arlan Damper Corp. (631-589-7431) or approved equal.

C. Combination fire/smoke dampers shall be installed in sleeves in accordance with NFPA-90A, UL555 and manufacturer's installation instructions. Dampers shall be UL rated, UL555S, leakage class II, 4 CFM/Ft^2 at 1-inch w.g.; 8 CFM/Ft^2 at 4" w.g., and UL555 1½ hour fire rated. Each damper shall bear a UL label attesting to these qualifications, in accordance with established UL labeling procedure.

D. Damper manufacturer shall have tested and qualified with UL, a complete range of damper sizes covering all combination smoke and fire dampers required for this project.

E. Damper actuators shall be pneumatic or electric as specified in Section 23 09 00. Damper actuators shall be installed by the damper manufacturer at the time of damper fabrication; damper and actuator shall be supplied as a single entity which meets all applicable UL555S qualifications for both dampers and operators. Damper and actuator shall be qualified under UL555S and UL555 to an elevated temperature of 250 deg. F.

F. Each combination fire/smoke damper shall be equipped with a fusible link which shall melt at 165° F causing the damper to close and lock in the closed position.

G. Dampers shall automatically return to closed position in the event of loss of control air or electric power.

H. Each combination fire/smoke damper shall have a factory installed sleeve of length and gauge required for satisfactory installation and with the damper actuator factory installed on the exterior of the sleeve and properly linked to the damper operating shaft. Contractor shall coordinate space requirements where dampers are located, providing required service clearance for actuators.

I. All wiring required to interconnect the dampers with fire detection, fire alarm and fire alarm supervisory control systems shall be provided under the Division 26 of the Specification. Pneumatic control system for damper actuators shall be provided under Section 23 09 00, as specified hereinafter. All combination fire/smoke dampers and all smoke dampers shall be provided with 120 VAC actuators. Power wiring for all combination fire/smoke dampers and all smoke dampers shall be through the fire alarm system control relay and through a BAS relay and control module. The Electrical Contractor shall provide all such wiring; the ATC Sub-Contractor shall provide a BAS relay which must be installed for each combination fire/smoke damper and each smoke damper. If the air handling system is shut down, all associated combination fire/smoke dampers and all smoke dampers shall close. The fire alarm relay shall, if necessary, override the BAS relay. Each damper shall be individually powered and controlled.

J. For fire/smoke dampers, provide two (2) damper end switches that are blade actuated to signal the fire alarm system when dampers are in the open and closed position. For smoke and fire/smoke dampers which can isolate a fan from its distribution ductwork or as otherwise required by the Sequence of Operation, provide an additional end switch which shall be wired to the fan starter (VFD) control wiring to prevent the fan from operating unless the damper is open.

K. Clearly indicate fire damper location on shop drawings. Provide access doors in the duct and supply access doors for installation at building construction, at each damper, of sufficient type to permit inspection and replacement of damper actuators and linkage. Assume responsibility to coordinate all locations of access doors with other contractors. Provide shop drawings indicating locations of access doors, both duct and building construction, for Architect's approval.

L. It is the intention of these plans and specifications to be complete. However, it is the responsibility of the Contractor, as being completely cognizant of local regulations, to determine where combination fire/smoke dampers are required and to advise the Architect prior to construction as to any discrepancies or questions in the plans or specifications.

M. Combination fire/smoke dampers shall be enclosed in a sleeve of fourteen gauge metal set and grouted into the fire partition. The sleeve shall be secured on both sides of the fire partition with 1½ x 1½ x 14 gauge mounting angles secured to the sleeves only. Retaining angles must lap structural opening 1 inch minimum and cover corners of the opening.

N. Multiple damper assemblies shall be installed and fastened together per manufacturers instructions. Unless the manufacturer's instructions indicate otherwise multiple damper assemblies shall be fastened together with ¼"-20 bolts, No. 10 screws or ½" long welds staggered intermittently on both sides. Fasteners shall be spaced 6" on center and a maximum of 2" from the ends of the joining sections or from the corner. A continuous ⅛" bead of Dow-Corning 100% silicon rubber, Dow-Corning Selastic 732 or GE RTV 108 sealant shall be applied on the mullion joint. Press the surface of the sealant in place to dispel any air.

O. A bead of sealant, as described above, shall be applied between the damper and the sleeve.

P. Fire/smoke dampers shall be provided with end switches (Ruskin SP100 or equal) for status indication.

Q. In stainless steel and aluminum ductwork, provide stainless steel construction combination fire/smoke dampers.

2.10 ACCESS DOORS IN SHEET METAL WORK

A. Wherever necessary in ductwork, casings or sheet metal partitions, provide suitable access doors and frames to permit inspections, operation and maintenance of all valves, coils, humidifiers, controls, smoke dampers, smoke detectors, fire dampers, filters, bearings, traps, or other apparatus concealed behind the sheet metal work. All such doors shall be of double construction of not less than No. 20 gauge sheet metal and shall have sponge rubber gaskets around their entire perimeter. Doors in insulated ducts of insulated casings shall have rigid insulation between the metal panels.

B. All access doors in sheet metal ducts shall be hung on heavy flat hinges and shall be secured in the closed position by means of cast zinc clinching type latches. Where space conditions preclude hinges, use four heavy window type latches. Doors into ducts shall in general not be smaller than 24" x 24" except for access door to fire dampers which will depend on size of fire damper.

C. In no case shall access to any items of equipment requiring inspection, adjustment, or servicing require the removal of nuts, bolts, screws, wing nuts, wedges, or any other screwed or loose device.

D. Each sheet metal chamber or plenum shall have access doors for access to all parts of the system (outside air intake, exhaust and return air). Doors shall be fitted with cast zinc door latches, two per door. Latches shall be operable from both sides of casing. Hinges shall be extra heavy, zinc plated hinges, minimum of two per door. The doors shall be felted or provided with rubber gaskets so as to make them airtight. The doors shall be made with inner and outer shells 2 inches apart so that they may be properly insulated and properly operated. Doors shall be a minimum size of 20" x 48".

E. Hinges shall be Ventlok No. 150 or 260 with or without screw holes or approved equal. Latch for walk-in access doors shall be No. 260 as made by Ventlok Co. or approved equal. Latch for access door in ductwork shall be Ventlok No. 100 or approved equal.

F. Where reheat coils are installed in ductwork, provide two (2) access doors; one on the upstream side of the coil and one on the downstream side of the coil, both within 2'-0" of the coil.

G. Access doors at humidifier locations shall be provided on both sides of duct.

H. Provide access doors of adequate size to allow easy access to the equipment that will require maintenance. Provide insulated or acoustically lined doors to prevent condensation where applicable.

I. Manufacturer to provide an installed neoprene gasket around perimeter of access door for airtight seal.

J. Systems 3” w.g. or less shall utilize a hinged, cam, or hinged & cam square-framed access door.

K. Systems 4” w.g. and above shall utilize a sandwich-type access door. Construct doors in accordance with Figure 7-3 of the 2005 SMACNA Manual, HVAC Duct Construction Standards, Metal & Flexible Third Edition.
   1. Approved Manufacturer: Ductmate Industries Sandwich style door or approved equal.

L. Grease exhaust duct doors shall be grease and air tight, UL 1978 listed, meet NFPA 96 standards and all mechanical codes. Grease duct access doors can be sandwich type or with a weld on frame, with/without hinge.
   1. Approved Manufacturer: Ductmate Industries Ultimate style door or approved equal.

M. All grease duct access doors used must be accompanied by independent testing in conjunction with each manufacturer’s respective wrap system for high temperature applications.

2.11 FLEXIBLE CONNECTIONS

A. All fan and air supply unit connections, both at inlet and discharge shall be made with material as hereinafter specified, so as to prohibit the transfer of vibration from fans to ductwork connecting thereto.

B. The flexible connections shall be a minimum of 6" long including bands using extra wide fabric as specified and held in place with heavy metal bands, securely attached, to prevent any leakage at the connection points.

C. Flexible connections shall be fabricated from the following materials unless otherwise required by Local Authorities.
   1. Range Hood Exhaust - DDFDC-995 by Duro Dyne or equal (rated for 500EF).
   2. Low Pressure Systems - neoprene coated glass fabric - 30 ounce/sq. yd.
   3. Medium & High Pressure Systems - neoprene coated glass fabric - 30 ounce/sq. yd.

D. Flexible connections shall not be painted.

E. Flexible air connectors shall be listed and labeled to the requirements of UL 181 for class 0 or class 1 flexible air connectors and shall be so identified.

2.12 GRILLES, REGISTERS AND DIFFUSERS

A. Furnish and install where shown on the drawings all metal diffusers, grilles and registers of the sizes and capacities indicated.

B. Ceiling diffusers shall be selected to diffuse the air uniformly throughout the occupied space. The air shall be introduced at a temperature differential of 20 deg. F and shall be diffused at the five (5) foot level to a velocity of not greater than 50 FPM and a temperature differential of not greater than 2 deg. F when compared with mean room temperature. The sound power level of air distribution equipment devices shall not exceed ratings as shown by Anemostat Corp. data.

C. Equipment manufacturer shall submit engineering data in a manner to facilitate convenient review of the following factors:
   1. Aspiration ability, including temperature and velocity traverses, throw and drop of each unit, noise criteria ratings for each unit, sizes, free area and quality of construction.

D. All air distribution equipment shall be as manufactured by Anemostat Corp., or approved, as scheduled on plans.

E. All ceiling diffusers shall be furnished with an equalizing grid.

F. Location of ceiling diffusers and registers shown on the drawings are approximate. Coordinate with the acoustic tile ceiling Sub-Contractor for exact locations of ceiling diffusers and registers. They shall be in accordance with approved ceiling layout shop drawings.

G. Return grilles shall match return registers Anemostat Corp. Type SS-3HD or approved equal.

H. Transfer "A" shall be a combination return register and return grille.
   1. Transfer "B" shall be two (2) return grilles.

I. All registers, grilles and diffusers shall be coated with baked aluminum enamel, baked flat white (W-1), or baked gloss white (W-4) as supplied by Anemostat Corp. unless otherwise indicated. All supply registers and grilles shall have a ¼" sponge rubber gasket around the grille frame.

J. All grilles, registers and diffusers shall be provided without an integral shut-off damper.

K. Exceptions to foregoing types of grilles, registers and diffusers shall be as indicated on the plans.

L. Each air supply outlet shall have the required capacity and shall be guaranteed to give the required draft with draftless diffusion. Where manufacturer's recommendations require duct sizes differing from those on the drawings, the same shall be provided at no additional cost to the Owner.

M. All registers and grilles located at face of partitions or plaster line of ceilings or soffits, etc. shall have plaster frames, Anemostat R C or approved equal.

N. Relocations of ceiling diffusers or registers in order to match the ceiling tile layout shall be made at no additional cost to Owner.

O. Exhaust registers serving shower and hydrotherapy areas shall be all aluminum construction.

2.13 SOUND REDUCTION

A. Furnish and install all soundproofing material specified, indicated or necessary to that all systems will comply with requirement of quiet operation. In general, noise level in any part of building (except in machinery rooms), due to air conditioning or ventilating equipment, ducts, and outlets, shall not exceed 40 decibels at 1200-2400 cycles per second, except as otherwise hereinafter specified.

B. Furnish and install sound-absorptive lining in ductwork for locations and lengths as indicated and/or hereinafter specified. All soundproofing material, installation and arrangement, shall be as approved. Where ducts are acoustically lined and insulation is required per 15850 (23 07 00), external insulation may be omitted provided a minimum R value 6 is maintained for indoor ducts. Dimensions noted for lined ducts are inside clear dimensions. Duct sizes shall be increased for liner.

C. Sound Absorbent Duct Lining for Low Pressure Ductwork - Furnish and install as herein specified and/or shown on the drawings (except where otherwise noted) 2" thick, meeting ASTM C1071 Type I flexible with a NRC of .70 tested per ASTM C423 using a type "A" mounting, fibrous glass duct lining meeting the requirements of NFPA 90A with a FHC of 25/50, limited combustible and ASTM C411 at 250 deg. F.

D. Liner shall be adhered to all interior sides of duct with minimum 90% coverage of fire-retardant adhesive similar to Foster 85-60 or Childers CP-127 and with weld pins and washers or equivalent mechanical fastening starting 3" from edges and sides, 12" on center all sides. Minimum one row per side for duct size of 12" of less. Mechanical fasteners shall cause quilting of surface. Acrylic coated surface shall be toward air stream. Before installing liner, seal all butting edges and final edges with heavy coat of adhesive to seal off air between lining and duct unless the material has factory applied edge coating. All exposed edges of lining shall be installed with sheet metal nosing 12" wide, two gauges heavier than duct at fan discharge and at any section preceded by an unlined section. Installation shall be suitable for duct velocities up to 3,000 fpm. Low pressure duct lining shall be provided where specified and/or where shown and noted on the drawings.

E. Duct sizes indicated on drawings are clear inside dimensions. Increase sheet metal sizes as required to install acoustic lining.

F. Do not install lining within 5'-0" (downstream and upstream) of humidifier in ductwork. This portion of ductwork shall be externally insulated.

G. The following ductwork shall be acoustically lined whether or not shown on Drawings.
   1. Ductwork downstream of (mixing box) (terminal) units a minimum distance of 10 feet.
   2. All ductwork downstream of (mixing box) (terminal) units.
   3. Single wall built-up casing walls and ceiling except that lining shall be 2" thick 4 lb. density, and inner liner of perforated galvanized sheet metal (7/64" dia. holes on 3/16" staggered centers) shall be used for all systems.
   4. All conditioned air rectangular supply/return ductwork within mechanical equipment rooms, and not less than 20 ft. from fan towards occupied space for supply, exhaust and return fans.
   5. Return air fan and toilet exhaust plenum walls and ceiling, except that the lining shall be 2 inch thick 4 lb. density, and inner liner of perforated galvanized sheet metal (7/64" dia. holes on 3/16" staggered centers) shall be used.

H. Sound Absorbent Duct Lining for Medium and High Pressure Ductwork.

1. Furnish and install 1" thick meeting ASTM C1071 Type II (board) with a NRC of .80 tested according to ASTM 423 using a Type "A" mounting, acoustical lining and meeting requirements of NFPA 90A with a FHC of 25/50, limited combustible and ASTM C411 at 250 deg. F, as herein specified and/or as shown on the drawings.
2. Liner shall be adhered to all interior sides of duct and plenums with minimum 90% coverage of fire-retardant adhesive similar to Foster 85-60 or Childers CP-127 and with weld pins and washers or equivalent mechanical fastening on not more than 16" centers on all sides, top and bottom of duct. Acrylic coating surface shall be toward air stream. Before installing liner, caulk all butting edges and final edges with heavy coat of adhesive to seal off air between lining and duct unless material has factory applied edge coating. Coat cap of fasteners with brush coat of fire retardant Foster Eclipse 40-11 insulation coating. Use metal corners and nosing to protect leading edges of liner insulation at fan discharge or after and any section preceded by an unlined section and at any section with an air velocity in excess of 4000 fpm. Apply light brush coat (150 sq. ft. per gallon) of fire retardant Foster Eclipse 40-11 insulation coating over all interior insulation surfaces. Installation shall be suitable for duct velocities up to 5,000 fpm.
3. The Contractor has the option to use elastomeric closed-cell insulation for lining medium and high pressure ducts. Refer to the low pressure duct lining section covering elastomeric closed-cell lining for requirements.
4. When indicated in the drawings, the sound absorption material in mechanical and high pressure ducts shall be faced with a galvanized perforated metal facing having the same dimensions as the unlined ductwork connecting to the lined section of the ductwork. The perforated metal shall be 26 gauge and have one of the following perforation patterns or approved equal.

	Open Area
7/64" round holes on 3/16" staggered centers	29%
⅛" round holes on 7/32" staggered centers	29%
⅛" round holes on ¼" staggered centers	23%
.085" round holes on 5/32" staggered centers	29%
1/16" round holes on ⅛" staggered centers	22.5%

5. Duct sizes indicated on drawings are clear inside dimensions. Increase sheet metal sizes as required to install acoustic lining.

2.14 ACOUSTICAL PERFORMANCE SPECIFICATIONS - GENERAL

A. It is the intent of this Specification that noise levels due to air conditioning and/or ventilating equipment, ducts, grilles and registers, diffusers and air light fixtures, will permit attaining sound pressure levels in occupied spaces conforming to the following NC curves as explained in the ASHRAE Guide and Data Book.

Room Type	**NC Level**
Offices and Conference Rooms	NC 25-35
Corridors and Public Spaces	NC 35-45

B. Grilles, Registers, Diffusers
1. The maximum permissible sound power levels of air terminal devices when installed and operating per plans and specifications shall be as follows:

Maximum PWL re 10-12 Watts			
Octave Band	NC-30	NC-35	NC-40
1	62	64	66
2	52	56	60
3	44	49	54
4	41	46	51
5	38	43	48
6	37	42	47
7	36	41	46
8	37	42	47

C. Sound Power Levels for air outlets and inlets shall be tested in accordance with ASHRAE Standard 70.

2.15 ACOUSTICAL PERFORMANCE WITHIN EQUIPMENT SPACES

A. Equipment room noise levels and noise transmission to adjacent buildings shall comply with all Federal, State, and City Noise Ordinances.

B. Motor Acoustical Performance:
1. Motor drives for pumps and refrigeration machine when installed per plans and specifications shall operate with noise levels not to exceed 80 dbA.
2. Noise levels shall be determined in accordance with IEEE Standard #85 test "procedure for Air-Borne Noise Measurements on Rotating Electric Equipment".

PART 3 - EXECUTION

3.01 INSPECTION

A. Contractor shall examine location where ductwork is to be installed and determine space conditions and notify Architect in writing of conditions detrimental to proper and timely completion of the work.

B. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION OF DUCTWORK

A. Install ductwork in accordance with recognized industry practices, to ensure that ductwork complies with requirements and serve intended purposes.

B. Coordinate with other work as necessary to interface installation or ductwork with other components of systems.

C. Duct sizes shown on the drawings at connection to fans or other equipment may vary in actual installation. Contractor shall provide transition pieces as required.

D. Ducts, casings and hangers shall be installed straight and level and shall be free of vibration and noise when fans are operating.

E. Ducts at ceilings shall be suspended from inserts in concrete slabs except where otherwise indicated. Inserts shall be Grinnell Fig. 279, 282, or 152 as required. Ducts at floor shall be supported by steel angles suitably anchored to floor construction. Each duct shall be independently supported and shall not be hung from or supported by another duct, pipe, conduit or equipment of any trade.

F. Supports shall be placed at each joint and change in direction up to a maximum spacing of 8 feet on centers. Prevent buckling of ductwork.

G. All fastenings to building structure shall be adequate to insure permanent stability of sheet metal work and shall be capable of resisting all applied forces.

H. Vertical ducts in shafts or passing through floors shall be supported by steel angles or channels, welded, riveted, screwed or bolted to ducts and fastened to building structural members at each floor level. Provide safing to close all floor openings around ductwork - pack annular space with rockwool and 18 gauge sheet metal safing. Floor openings in plenums shall have ½ inch diameter steel bars.

I. Rigid connections between ductwork and non-rotating equipment shall be made with flanged joints, sealed with fireproof material (Fiber or Neoprene gaskets).

J. It is the intent to obtain low pressure ductwork construction with minimum leakage. The construction noted in Specifications can produce low or high leakage rates, depending upon the workmanship, particularly with regard to the connection at the top of the ducts. Guarantee that total diffuser volume, measured by means of velometer, shall be at least 95% of actual fan supply (measured by means of a duct traverse taken with a Pitot tube and water manometer). Seal the ductwork at all joints (longitudinal & transverse and duct wall penetrations) with suitable sealers Foster 32-19, Childers CP-146 or 3M EC-800 and tape equivalent to SMACNA Seal Class A. Use of "HARDCAST" or any other material is subject to Architect's approval.

3.03 DUCT HANGERS

A. Low pressure ducts up to 24" on a side or up to 20" diameter shall be suspended with 16 gauge, galvanized strap hangers, 1" wide.

B. Low pressure ducts 25" to 40" on a side or 21" to 42" diameter shall be suspended with galvanized strap hangers 1" wide by ⅛" thick.

C. Strap hangers shall be bent 90°, extended down sides of ducts and turned under bottom of ducts a minimum of 2". Strap hangers shall be fastened at ceiling with nuts, bolts and lock washers and to sides and bottom of ducts with sheet metal screws.

D. All ductwork 43” and larger on a side or diameter and all roof-mounted ducts (regardless of size) shall be suspended with steel angle type hangers with rod and angle steel trapeze. The use of strut for support of any HVAC work (ducts, piping or equipment) is prohibited.

E. No screws shall penetrate medium and high pressure ductwork.

F. For any ducts which require seismic bracing, provide trapeze and rod type hangers regardless of duct size.

G. Trapeze type hangers shall have steel rods threaded at both ends and bottom bracing angles on ducts, with nuts and lock washers. Threaded rod diameter shall be as scheduled on the drawings based on the size of the duct supported.

H. Angle type hangers shall be extensions of side bracing angles on ducts, bent 90 at ceiling and fastened with nuts, bolts and lock washers.

I. The minimum spacing intervals for all duct supports shall be as scheduled on the drawings based on the size of the duct supported.

J. Hangers for vertical ducts shall be as per SMACNA Duct Manual.

K. Stainless steel ductwork shall be supported with rod or angle type hangers, so that there will be no penetration of the stainless steel ducts.

L. Any steel and hardware used for support of aluminum ductwork or any supports for ductwork located outdoors shall be constructed of hot-dipped galvanized or stainless steel. Carbon steel, painted steel or zinc-coated steel is unacceptable.

3.04 CLEANING AND PROTECTION

A. Clean ductwork internally, unit by unit as it is installed of dust and debris. Clean external surfaces of foreign substances, which might cause corrosion, deterioration of metal or interfere with painting.

B. At end of ducts which are not connected to equipment or air distribution devices at the time of ductwork installation, provide temporary closure of polyethylene film or other covering.

C. Cleaning of new and existing supply ductwork: After completion of ductwork installation clean ductwork as follows.
   1. Use supply fan or install temporary fan to provide air to the system for four (4) hours.
   2. Remove temporary filter mesh.

END OF SECTION 23 31 13

SECTION 26 05 00

GENERAL PROVISIONS FOR ELECTRICAL WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Comply with the latest version of the NEC as adopted by New York State in addition to special requirements adopted by the Ney York City Electrical Code

D. "The General Conditions of the Contract for Construction," is hereby made a part of the specifications for the Electrical, Fire Signal, Security, information technology to the same extent as if written out in full. Where any article of the General Conditions is supplemented by the specifications, the provisions of such articles shall remain in effect and all the supplemental provisions shall be considered as added thereto. When any such article is amended, voided or superseded by the specifications the provisions not specifically amended, voided or superseded shall remain in effect.

E. Apply provisions of this division equally and specifically to Sections supplying labor and/or equipment and/or materials as required under Electrical Sections of Specifications.

F. Drawings are diagrammatic and are a graphic representation of contract requirements to the best available standards at the scale required.

G. Light and power and miscellaneous systems riser diagrams, as well as schematic diagrams, generally indicate connections to be used for various systems and equipment. Systems conduit and wiring shall be as required for the actual systems installed on this Project. Provide all work shown on diagrams whether or not it is duplicated on the plans.

1.02 SCOPE OF WORK

A. The Specifications and the accompanying drawings are intended to secure the provisions of all material, labor, equipment, and services necessary to install complete, tested, and ready for operation the Electrical Systems in accordance with the Specifications and Drawings. All systems shall be complete with all necessary appurtenances and minor auxiliaries, including pull boxes, offsets to clear interferences, and supports which are not shown but are needed to make each system complete in every respect. All work described in the Specifications and not shown on the Drawings, or vice versa, shall be furnished in complete working order. If mention has been omitted of any item of work or material, necessary for completion of the system, then such items must be and are hereby included.

1. Power and light distribution system (system characteristics, equipment).

2. Transformers (indoor dry type).
3. Panelboards lighting, power and distribution.
4. Fuses and/or circuit breakers.
5. Control devices, only where specifically called for.
6. Safety and disconnect switches, unless furnished with starters or on equipment.
7. Motor power wiring.
8. Raceways and installation components.
9. Wire and Cable.
10. Grounding system in conformance with applicable codes.
11. Wiring devices.
12. Automatic transfer switch(es).
13. Furnishing of access doors.
14. Furnishing and setting of all sleeves through the floors, roof and wall, where required including waterproofing and fireproof sealing and cap flashing.
15. The Contractor shall be responsible for maintaining the fire resistance rating of any rated wall, ceiling or floor for which his work partially or fully penetrates. Work which could potentially penetrate or breach a rated wall, ceiling or floor include, but are not limited to flush-mounted recessed panel boards, conduit and pipe, ducts, equipment, supports or reinforcements. For any such situation, the Contractor shall provide the necessary fire stopping material, insulation or system in order to maintain the fire rating of the wall, ceiling or floor. The Contractor is responsible for reviewing the building construction drawings, including those of the architectural and structural trades, in order to determine the fire resistance ratings for the walls, floors and ceilings for which their work will partially or fully penetrate.
16. Hardware, such as inserts, bolts, etc., associated with concrete pads.
17. Cutting and core drilling associated with electrical work.
18. Prime painting, where required for electrical equipment and installation.
19. Removal of existing electrical work in accordance with Architectural Demolition Scheme or as directed and required. Restoration of electrical service in affected adjoining areas which are to continue to function.
20. Interconnections and interfacing with pertinent existing systems shall be as required to achieve fully integrated operation of systems, as described in these Specifications and/or shown on Drawings.
21. Provision for temporary light and power.
22. Paying all fees as required by governing agency and performing all testing as required by governing agency and adjusting and furnishing all certificates of approval, and those of Underwriters.
23. Overcurrent Protective Device Short Circuit Study.
24. Overcurrent Protective Device Coordination Study.
25. Arc Flash Hazard Analysis

1.03 QUALITY ASSURANCE AND STANDARDS

A. The complete installation shall be in accordance with the applicable requirements and standards of National Electrical Manufacturers Association (NEMA), National Fire Protection Association (NFPA), New York City Electrical Code (NYCEC), National Electrical Code (NEC), Institute of Electrical and Electronic Engineers (IEEE), American National Standard Institute (ANSI), Occupational Safety and Health Administration (OSHA), National Electrical Safety Code, Insulated Cable Engineers Association (ICEA), Underwriters' Laboratories (UL), Factory Mutual (FM), Factory Insurance Association (FIA), National Electrical Contractors

Association (NECA) "Standard of Installation", Local Inspection Agency, Local Power Company, Local Telephone Company, along with state and local municipal codes and all applicable codes and authorities having jurisdiction. Any items or requirements noted in the Specifications or on Drawings, which conflict with these shall be referred to the Owner's Representative for decision. All work necessary to comply with these requirements shall be performed by the Contractor at no extra cost to the Owner.

B. Where reference is made to the National Electrical Code only, without mention of the New York City Electrical Code, the requirements of the latter, where they differ from the former, shall take precedence, where applicable.

C. All electrical equipment, materials and appliances shall have the listing of the Underwriters' Laboratories, Inc., and shall bear labels attesting to UL listing, and types approved by Municipal Departments having jurisdiction.

1.04 REMOVAL AND RELOCATION OF EXISTING WORK

A. Disconnect, remove and/or relocate electrical material, equipment, devices, components, and other work noted and required by demolition or alterations in existing construction.

B. Provide new material and equipment required for relocated equipment.

C. Remove conductors from existing raceways to be rewired. Clean raceways as required prior to rewiring.

D. Tape both ends of abandoned conductors, and cap outlets and abandoned raceways.

E. Cut and cap abandoned floor raceways flush with concrete floor or behind walls and ceilings.

F. Dispose of removed raceways and wiring.

G. Dispose of removed electrical equipment as directed.

H. All electrical work in adjoining areas which is indicated on the Drawings to continue to function but is affected by demolition work shall be reconnected and restored to present function as part of the electrical system of the buildings.

I. Connect new work to existing work in a neat and acceptable manner, with minimum interference to existing facilities.

J. Maintain continuous operation of existing facilities affected by the work.

K. Alarm and emergency systems are to be interrupted only with the written consent of the Owner.

L. Temporary shutdowns when required, to be made only with written consent of Owner at times not to interfere with normal operations.

M. Where indicated on the Drawings or required by the alteration scheme, the Contractor shall remove all electrical outlets, switches, and other devices, complete with associated wiring, conduit, etc., from partitions, walls, and floors that are to be removed. When the removal of

these makes dead electrical wiring that is to remain, Contractor shall install junction boxes or other devices necessary to make the circuits affected continuous and ready for operation. Otherwise, wiring shall be removed back to the nearest electrical outlet box that is to remain, or to the panelboard.

N. All raceways which become exposed beyond finished surfaces because of the alteration work shall be removed and rerouted behind finished surfaces.

O. Wiring that is to be removed as a result of demolition work, but is required to continue to function, shall be interrupted at convenient locations, rerouted (new wiring and conduits) and reconnected for continuation of their original function. New wiring extensions shall match existing ones in all respects, conductor ampacity, conduit size, etc.

1.05 ALLOWANCE FOR BYPASS CONNECTIONS

A. The Contractor shall include all costs for removals and relocations in the Contract. These costs shall include work described in the Specifications and shown on the Drawings with allowances for normal unforeseen difficulties when concealed work has been opened. A minimum of (25) bypass connections shall be included (under the allowance). Each bypass connection shall include 50 feet of :3/4” inch conduit with 4 #12 AWG conductors and 2 junction boxes and all associated connections. Each bypass connections shall require verification by the Architect's Representative in order to be included under the bypass connections allowance.

1.06 SUBMITTALS

A. Product Data and installation requirements: see Section 01 31 46.

1.07 COORDINATION

A. Coordinate arrangement, mounting, and support of electrical equipment:

1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
3. To allow right of way for piping and conduit installed at required slope.
4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

C. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed. Access doors and panels are specified in Division 08 Section "Access Doors and Frames."

D. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 07.

1.08 ROUGH-IN

A. Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.

B. Ceiling Markers:
   1. Provide color-coded ceiling markers indicating the location of all electrical equipment located above hung ceilings. Markers shall be provided for, but not limited to the following:
   2. All pull or junction boxes, (excluding branch circuits), smoke detectors and other alarm or signal initiating devices, disconnected switches and starters where not identified by other trades.

1.09 CHANGES IN CONDUITS AND EQUIPMENT

A. Wherever field conditions are such that for proper execution of the work reasonable changes in location of conduits and equipment are necessary and required, the Contractor shall make such changes as directed and approved, without extra cost.

1.10 INSPECTION AND TESTS

A. Prior to commencing the testing procedure, the contractor shall submit the following information:
   1. Describe methods utilized.
   2. Submit information for each electrical system to be tested.
   3. Advise Owner and Owner's Represenative of schedule.
   4. PRELIMINARY FIELD TEST - Furnish labor and materials for, and make, preliminary field tests of equipment to ascertain compliance with requirements of Contract. In the event preliminary field test disclose non-compliance, make necessary changes prior to acceptance test.

B. At the time of the final inspection and tests, all connections at the panels and all splices, etc., must have been completed. All fuses must be in place and the circuits continuous from service switches to all receptacles, outlets, motors, etc. Each entire wiring system must test free from short circuits and grounds. When wiring systems are "megger" tested, the insulation resistance between conductors and between conductors and grounds, based on maximum load, shall not be less than that required by National Electrical Code and local authorities having jurisdiction. A written record of all test data shall be supplied to the Owner's Representative (five copies). The tests shall cover but not be limited to the following:
   1. Emergency distribution system
   2. Power installations and motor controls.
   3. Any part of the work called for in the Specifications, or Drawings and as designated by the Owner's Representative.
   4. Test equipment for rated output as indicated on drawings. Adjust as required.

C. Provide all necessary testing equipment, instruments, and skilled personnel for the tests. If in the opinion of the Owner's Representative, the results of such tests show that the work has not complied with the requirements of the Specifications or Drawings, the Contractor shall make all additions or changes necessary to put the system in proper working condition and shall pay for

all the expenses and for all subsequent tests which are necessary to determine whether the work is satisfactory. Any additional work or subsequent tests shall be carried out at the convenience of the Owner, prior to final payment.

D. Upon completion of the testing procedures contractor to submit a report for all systems tested and include all testing data.

1.11 TEMPORARY LIGHT AND POWER

A. Electric services for temporary light and power shall be obtained from the nearest existing switchboard or existing circuitry in the area of demolition and construction and extended as required. Consult the Owner prior to making any connections to existing services.

B. The Electrical Contractor shall furnish, install and maintain the temporary lighting and power system for all Contractors. The use of electricity shall be kept to a minimum.

C. The Owner or Owner's Representative will pay for all energy required by the temporary lighting and power system.

D. Provide all wiring, supports, lamp sockets, receptacle sockets and any other materials, supplies or equipment necessary for temporary light and power system.

E. Ground fault protection required by OSHA for temporary receptacle circuits shall be accomplished by providing branch circuit panels containing ground fault protection branch circuit breakers.

F. Provide a grounding conductor connection to each receptacle grounding terminal. Minimum size branch circuit and grounding conductors shall be No. 12 AWG.

G. Provide sufficient supplementary temporary lighting to permit proper execution of the work. This supplementary lighting shall consist of but not be limited to the following:
   1. Interior rooms not covered with general construction area lighting.

H. Keep the temporary lighting and power system operational commencing fifteen (15) minutes before the established starting time of that trade which starts work earliest in the morning and ending fifteen (15) minutes after the established quitting time of that trade which stops work latest in the evening. This applies to all weekdays, Monday through Friday inclusive, which are established as regular working days for any trade engaged in the work and shall continue until Final Acceptance of the work or until these services are ordered terminated by the Owner or the Owner's Representative.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

A. Comply with NECA1.

B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.

C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
   1. Do not install electrical distribution, control or overcurrent equipment under mechanical piping, ductwork and systems. Maintain Dedicated Electrical space requirements as required by Art. 110.26 of the (NYCEC).

D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

E. Right of Way: Give to piping systems installed at a required slope.

END OF SECTION 26 05 00

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply

1.02 DESCRIPTION OF WORK

A. The requirements of this Section apply to wire and cable work specified elsewhere in these Specifications.

B. The work includes providing wire and cable complete with all accessories in accordance with Drawings and Specifications and as required for a complete system. Wiring size referenced in this Section shall be AWG, except as noted. For special wiring for individual systems refer to respective Sections of these Specifications.

1.03 SUMMARY

A. Section Includes:

1. Copper building wire rated 600V or less.
2. Armored cable, Type AC, rated 600V or less.
3. Mineral-insulated cable, TypeMI, rated 600V or less.
4. UL 2-hour listed fire-rated wiring systems, rated 600V and less.
5. Connectors, splices, and terminations rated 600V and less.

B. Related Requirements:
1. Section 262413 “Switchboards” for switchboard operating at 600V or lower.

1.04 DEFINITIONS

A. VFC(S): Variable-frequency controller. (System)

B. NYCEC: New York City Electrical Code

1.05 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.06 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency or manufacturer's authorized service representative.

B. Field quality-control reports.

1.07 QUALITY ASSURANCE

A. "Manufacturers" - Firms regularly engaged in the manufacture of wire and cable of specified types and ratings, whose products have been in satisfactory use in similar service for not less than 5 years. Refer to PART 4 of this Section for "APPROVED MANUFACTURERS".

B. Provide wire and cable which has been listed and labeled by Underwriters' Laboratories, and comply with applicable portions of National Electrical Manufacturers Association Standards.

C. Testing Agency's Field Supervisor:

D. Testing Agency Qualifications: Member company of NETA.
   1. An independent agency, with the experience and capability to conduct the testing indicated, or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
   2. Testing Agency's Field Supervisor: Person currently certified by NETA to supervise on-site testing. specified in Part 3.

E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NYCEC, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

F. Comply with NYCEC.

PART 2 - PRODUCTS

2.01 GENERAL

A. Minimum insulation shall be UL rated for 90°C. Types THWN, USE, RH, RHW.

B. Insulation rated 90°C may be used in lieu of the above. Types FEP, MI, PFA, THHN, XHHW.

C. Conductor ampacity rating shall be based on 75°C insulation.

D. Wire Sizes
   1. For General Use:
      a. No. 12 minimum copper wire shall be used for lighting and power.

b. No. 10 minimum copper wire shall be used for 15 Ampere circuits, at 120 Volts, over 90 ft. in length, and for 20 Ampere circuit, at 120 Volts, over 60 ft. in length.
c. Increase raceway sizes for larger wire sizes in conformance with NYCEC requirements.

2.02 COLOR CODING

A. Phase wires shall be color-coded as follows:
1. 120/208 Volt system:
   a. Black - A phase
   b. Red B phase
   c. Blue - C phase
2. Neutral conductors shall be white for 120/208 Volts.
3. Equipment ground wire shall have a green outer covering throughout.
4. Where color-coded cable is not available, certify in writing and request permission for overlap color taping conductors (minimum length 6 in.) in accessible locations.

2.03 COPPER BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Alpha Wire Company
2. American Bare Conductor
3. Belden Inc
4. Cerro Wire LLC
5. Encore Wire Corporation
6. Okonite Company
7. Service wire Co
8. Southwire Company
9. Wesco

C. Standards:

1. Listed and labeled as defined in NFPA70, by a qualified testing agency, and marked for intended location and use.
2. RoHS compliant.
3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B496 for stranded conductors.

E. Conductor Insulation:

1. Type NM: Comply with UL83 and UL719.
2. Type RHH and Type RHW-2: Comply with UL44.

3. Type TC-ER: Comply with NEMAWC 0/ICEA S-95-658 and UL 1277.
4. Type THHN and Type THWN-2: Comply with UL 83.
5. Type THW and Type THW-2: Comply with NEMA WC-70/ICEA S-95-658 and UL 83.
6. Type XHHW-2: Comply with UL 44.

F. Shield:

1. Type TC-ER: Cable designed for use with VFCs, with oversized crosslinked polyethylene insulation, dual spirally wrapped copper tape shields and three bare symmetrically applied ground wires, and sunlight- and oil-resistant outer PVC jacket.

2.04 ARMORED CABLE, TYPE AC

A. Description: A factory assembly of insulated current-carrying conductors with or without an equipment grounding conductor in an overall metallic sheath.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Alpha Wire Company
2. American Bare Conductor
3. Belden Inc
4. Cerro Wire LLC
5. Encore Wire Corporation
6. Okonite Company
7. Service wire Co
8. Southwire Company
9. Wesco

C. Standards:

1. Listed and labeled as defined in NYCEC, by a qualified testing agency, and marked for intended location and use.
2. RoHS compliant.
3. Comply with UL4.
4. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

D. Circuits:

1. Single circuit and multicircuit with color-coded conductors.
2. Power-Limited Fire-Alarm Circuits: Comply with UL 1424.

E. Conductors:
1. Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.

F. Ground Conductor: Insulated.

G. Conductor Insulation:

1. Type TFN/THHN/THWN-2: Comply with UL 83.
2. Type XHHW-2: Comply with UL 44.

H. Conductor Insulation: Type THHN/THWN-2. Comply with UL 83.

I. Armor Steel, interlocked.

2.05 MINERAL-INSULATED CABLE, TYPE MI

A. Description: Solid copper conductors encased in compressed metal oxide with an outer metallic sheath, rated 600V or less.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. KME America, Inc
2. Pentair

C. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
2. UL 2196 for fire resistance.
3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

D. Conductors:
1. Copper, complying with ASTM B3 for bare annealed copper.

E. Insulation: Compressed magnesium oxide

F. Sheath: Copper.

2.06 FIRE RATED WIRING CABLE

A. Description: ANSI/NYCEC, Type MC cable with silicone insulation, overjacket and continuously corrugated welded copper sheath.

B. Manufacturers: VITALink MC or approved equal cabling system listed in the UL Fire Resistance Directory.
1. Conductor: solid high conductivity copper
2. Insulation Voltage Rating: 600 volts
3. Cable Temperature Rating: 90 degrees C
4. Termination Temperature Rating: 90 degrees C

C. Fire Rating: complete cable system shall have a 2-hour fire rating as listed and classified by Underwriters Laboratories, Inc.

D. Overjacket: an optional overjacket must be available.

E. Polymer Insulated cable, boxes and connectors shall be UL Listed/CSA Certified

2.07 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. 3M Electrical Products
   2. AFC Cable systems
   3. Gardnes Bender
   4. Hubblee Power systems
   5. ILSCO
   6. O-Z/Gedney
   7. Service wire Co.
   8. TE Connectivity
   9. Thomas & Betts Corp.

B. Jacketed Cable Connectors: For steel and aluminum jacketed cables, zinc die-cast with set screws, designed to connect conductors specified in this Section.

C. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.

   1. Material: Aluminum
   2. Type: One hole with long barrels.
   3. Termination: Compression.

PART 3 - EXECUTION

3.01 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

C. VFC Output Circuits Cable: Extra-flexible stranded for all sizes.

D. Power-Limited Fire Alarm and Control: Solid for No. 12 AWG and smaller.

3.02 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Exposed Feeders: Type THHN/THWN-2, single conductors in raceway.

B. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN/THWN-2, single conductors in raceway,
   1. Type THHN/THWN-2, single conductors in raceway
   2. Mineral-insulated, metal-sheathed cable, Type MI

C. Life Safety and Critical branch Feeders:
   1. Mineral-insulated, metal-sheathed cable, Type MI
      a. Feeder ampacity indicated on drawings is based on Fire Rated Cable as indicated below. Contractor to adjust feeder ampacity if MI cable is selected by contractor as feeder material and submit riser indicating any changes in feeder sizing to Owner's Representative for approval.
   2. Fire Rated Wiring Cable.
   3. Type THHN/THWN-2, single conductors in raceway encased in UL listed 2-hour rated assembly.
      a. Conduits for feeders on drawings are indicated where the contractor elects to use UL listed 2-hour fire rated assembly. Contractor to provide engineering drawings for such an assembly and associated special inspections required by DOB or local AHJ.

D. Exposed Branch Circuits, Including in Crawlspaces:
   1. Type THHN/THWN-2, single conductors in raceway
   2. Mineral-insulated, metal-sheathed cable, Type MI

E. Branch Circuits Concealed in Ceilings, Walls, and Partitions:
   1. Type THHN/THWN-2, single conductors in raceway
   2. Armored cable, Type AC, (For inaccessible locations only)
   3. Mineral-insulated, metal-sheathed cable, Type MI

F. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN/THWN-2, single conductors in raceway.

G. Branch Circuits Installed below Raised Flooring:
   1. Type THHN/THWN-2, single conductors in raceway
   2. Mineral-insulated, metal-sheathed cable, Type MI

H. VFC Output Circuits:
   1. Type TC-ER cable with dual tape shield.

3.03 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

F. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

G. Not more than 3 lighting or convenience receptacle circuits shall be installed in one (1) conduit, unless otherwise indicated on Drawings. Provide dedicated neutral for each branch circuit.

H. Separate raceways shall be provided for conductors of 120/208 Volt and 277/480 Volt systems, except for 480 Volt motor branch circuit wiring and related 120 Volt control wiring which may be installed in common raceway.

I. The Contractor installed service cables containing four (4) or more parallel conductors per phase shall have cable limiters at both ends of each conductor. Limiters shall be rated 600 Volts, 200,000 Amperes RMS interrupting capacity and shall have waterproof sleeves. The requirements for cable limiters shall be coordinated with the Utility Company prior to installation.

J. Type AC armored cable (BX) shall be installed in accordance with specific NYCEC requirements, Article 320. Supports and hangers shall be provided every four (4) feet of cable run. 4½ ft. unless cable is fished.

K. Provide individual raceways for two pole circuits.

L. In certain systems, equipment furnished by an approved manufacturer may require a different number and arrangement of conductors from those indicated on the Drawings. In such cases, the Contractor for the work under this Division shall comply with such requirements at no additional cost to the Owner.

M. In the event the Contractor for the work under this Division or Section chooses to furnish and install a system or item of equipment of different arrangement from that shown or specified, he shall furnish and install any additional wiring and conduit required by the system at no additional cost to the Owner.

N. In wireways and large pull boxes, lace and tie off conductors in groups of 3 phases and neutral (if used) to limit conductor unbalanced loading. Conductor group shall be as installed in conduit.

O. Tag all feeders and risers in all pull boxes and in all gutter spaces through which they pass. Tags shall be engraved white core nameplates identifying feeders as shown on the Drawings or the circuit protective device from which they originate.

3.04 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

C. Splices and joints shall be insulated with materials approved for the particular use, location, voltage, and temperature. Insulation shall be not less than that of the conductors being joined.

D. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.05 IDENTIFICATION

A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."

B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.06 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.07 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly according to Section 078400 "Firestopping/Smoke Seals"

3.08 FIELD QUALITY CONTROL

A. Perform tests and inspections with the assistance of a factory-authorized service representative.

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.
2. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors and conductors feeding the following critical equipment and services for compliance with requirements:

    a. Substation transformers

    b. Main Distribution Switchboards, if separate from the Service equipment

    c. Fire Pumps

    d. Elevator Banks

    e. ATS(s)

    f. Life Safety Panels

    g. Fire Alarm Control and associated panels

3. Perform each of the following visual and electrical tests:

   a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
   b. Test bolted connections for high resistance using one of the following:

      1) A low-resistance ohmmeter.
      2) Calibrated torque wrench.
      3) Thermographic survey.

   c. Inspect compression-applied connectors for correct cable match and indentation.
   d. Inspect for correct identification.
   e. Inspect cable jacket and condition.
   f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500-Vdc for 300-V rated cable and 1000-Vdc for 600-V rated cable for a one-minute duration.
   g. Continuity test on each conductor and cable.
   h. Uniform resistance of parallel conductors.

4. Initial Infrared Scanning: After Substantial Completion, but before Final Acceptance, perform an infrared scan of each splice in conductors No. 3 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner. Correct deficiencies determined during the scan.

   a. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
   b. Record of Infrared Scanning: Prepare a certified report that identifies switches checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

5. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switch 11 months after date of Substantial Completion.

B. Cables will be considered defective if they do not pass tests and inspections.

C. Prepare test and inspection reports to record the following:

   1. Procedures used.
   2. Results that comply with requirements.
   3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION 26 05 19

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply.

1.02 SUMMARY

A. Section includes grounding and bonding for systems and equipment.

1.03 DESCRIPTION OF WORK

A. The work includes the providing of all labor, materials, equipment, accessories, services and tests necessary to complete and make ready for operation by the Owner, all grounding in accordance with Drawings and Specifications and as required for a complete system.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1.05 INFORMATIONAL SUBMITTALS

A. Refer to Section 01 31 46 – Special Requirements for Mechanical and Electrical Work and Section 26 05 00 – General Provisions for Electrical Work and submit shop drawings. Shop drawings shall include manufacturer's catalog cuts of splice kits, ground rods and ground wire, etc.

B. Qualification Data: For testing agency and testing agency's field supervisor.

C. Field quality-control reports.

1.06 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For grounding to include in emergency, operation, and maintenance manuals.

1.07 QUALITY ASSURANCE

A. Testing Agency Qualifications: Certified by NETA.

B. "Manufacturers" - Firms regularly engaged in manufacture of the type of equipment required for the application, whose products have been in satisfactory use in similar service for not less than 10 years. Refer to Approved Manufacturers in this Section.

C. Provide equipment whose performance under specified conditions is certified by the manufacturer and comply with applicable publications of NFPA and UL.

D. Grounding shall comply with New York City Electrical Code (NYCEC) for construction and installation.

E. For patient care area electrical power systems, grounding shall conform to Article 517 of the latest NYS adopted version of the NEC.

PART 2 - PRODUCTS

2.01 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NYCEC, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.02 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. ERICO International Corporation
   2. O-Z/Gedney
   3. Thomas and Betts Corporation
   4. Burndy
   5. Galvan Industries

2.03 CONDUCTORS

A. Insulated Conductors: Copper or tinned-copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
   1. Grounding conductors shall be UL and NEC approved types, copper, with insulation color identified green, except where otherwise shown on the Drawings, or specified.

B. Bare Copper Conductors:

1. Use – for bonding jumpers only
   a. Solid Conductors: ASTM B 3.
   b. Stranded Conductors: ASTM B 8.
   c. Tinned Conductors: ASTM B 33.
2. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
3. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
4. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.
5. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

C. Grounding Bus: Predrilled rectangular bars of annealed copper, 1/4 by 24 inches (6.3 by 100 mm) in cross section, with 9/32-inch (7.14-mm) holes spaced 1-1/8 inches (28 mm) apart. Stand-off insulators for mounting shall comply with UL 891 for use in switchboards, 600 V and shall be Lexan or PVC, impulse tested at 5000 V.

2.04 CONNECTORS

A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

B. Ground clamps shall be bronze, solderless type with bronze screws suitable for receiving required or specified conductors.

C. Bus-Bar Connectors: Mechanical type, cast silicon bronze, solderless compression wire terminals, and long-barrel, two-bolt connection to ground bus bar.

D. Beam Clamps: Mechanical type, terminal, ground wire access from four directions, with dual, tin-plated or silicon bronze bolts.

E. Cable-to-Cable Connectors: Compression type, copper or copper alloy.

F. Conduit Hubs: Mechanical type, terminal with threaded hub.

G. Straps: Solid copper, copper lugs. Rated for 600 A.

H. U-Bolt Clamps: Mechanical type, copper or copper alloy, terminal listed for direct burial.

PART 3 - EXECUTION

3.01 INITIAL INSPECTION

A. Contractor shall examine locations where grounding is to be installed and notify Owner's Representative in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected

3.02 APPLICATIONS

A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

B. Grounding Bus: Install in electrical equipment rooms, in rooms housing service equipment, and elsewhere as indicated.

1. Install bus horizontally, on insulated spacers 2 inches (50 mm) minimum from wall, 6 inches (150 mm) above finished floor unless otherwise indicated.

C. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Connections to Structural Steel: Welded connectors.

3.03 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits as a secondary path to ground.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:

1. Feeders and branch circuits.
2. Lighting circuits.
3. Receptacle circuits.
4. Single-phase motor and appliance branch circuits.
5. Three-phase motor and appliance branch circuits.
6. Flexible raceway runs.
7. Armored and metal-clad cable runs.

3.04 INSTALLATION

A. Parts of the electrical installation to be grounded shall include, but not be limited to, the following: raceway system for normal and emergency light and power distribution systems, switchgear housings, cabinets, housings and neutrals of transformers, motor frames, housings of ALL communications, alarm, and control panels and associated devices and conduits, lighting fixtures, busway enclosures, motor control centers, convenience power receptacles, wall lighting switches, and other non-current carrying metal parts of electrical equipment. For specific and additional requirements of the details of the installation see paragraphs below.
1. Ground interrupted metallic raceways with ground conductors connected to metallic raceway at each end.
2. For hospitals and Health Care Facilities, provide all grounding in accordance with Article 517 of National Electrical Code (NFPA 70) and as further described in other Sections of these Specifications.

B. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

C. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

D. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.

1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
2. Make connections with clean, bare metal at points of contact.
3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

3.05 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, at ground test wells, and at individual ground rods. Make tests at ground rods before any conductors are connected.

a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
b. Perform tests by fall-of-potential method according to IEEE 81.

C. Grounding system will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

E. Report measured ground resistances that exceed the following values:

1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 ohms.
2. Power and Lighting Equipment or System with Capacity of 500 to 1000 kVA: 5 ohms.
3. Power and Lighting Equipment or System with Capacity More Than 1000 kVA: 3 ohms.

F. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Owner's Representative promptly and include recommendations to reduce ground resistance.

END OF SECTION 26 05 26

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply.

1.02 SUMMARY

A. Section Includes:

1. Steel slotted support systems.
2. Conduit and cable support devices.
3. Support for conductors in vertical conduit.
4. Structural steel for fabricated supports and restraints.
5. Mounting, anchoring, and attachment components, including powder-actuated fasteners, mechanical expansion anchors, concrete inserts, clamps, through bolts, toggle bolts, and hanger rods.
6. Fabricated metal equipment support assemblies.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:

   a. Slotted support systems, hardware, and accessories.
   b. Clamps.
   c. Hangers.
   d. Sockets.
   e. Eye nuts.
   f. Fasteners.
   g. Anchors.
   h. Saddles.
   i. Brackets.

2. Include rated capacities and furnished specialties and accessories.

1.04 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Suspended ceiling components.
2. Ductwork, piping, fittings, and support.
3. Structural members to which hangers and supports will be attached.
4. Size and location of initial access modules for acoustical tile.
5. Items penetrating finished ceiling, including the following:

a. Luminaires.
b. Air outlets and inlets.
c. Speakers.
d. Sprinklers.
e. Access panels.
f. Projectors.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Engage a qualified professional engineer, as defined in "Quality Requirements," to design hanger and support system.
1. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
2. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

B. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame Rating: Class 1.
2. Self-extinguishing according to ASTM D 635.

2.02 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Conduit Supports – for specific requirements see slotted support systems specified elsewhere in this section.
1. Individual conduit hangers, shall be designed for the purpose, have pre-assembled closure bolt and nut, and provisions for receiving hanger rod.
2. Multiple conduit (trapeze) hangers shall be not less than 12" by 12", 12-gauge steel, cold formed, lipped channels. Hanger rods shall be not less than d" diameter steel.
3. Solid masonry and concrete anchors shall be a type approved for the purpose.

B. Fasteners:

1. Furnish all fasteners and hardware compatible with the materials and methods required for attachment of supporting devices.
   a. Slotted-Type Concrete Inserts: Galvanized pressured steel plate complying with ASTM A 283; box-typed welded construction with slot designed to receive steel nut and with knockout cover; hot-dipped galvanized in compliance with ASTM A 386.
   b. Masonry Anchorage Devices: Expansion shields complying with Federal Specification FF-S-325, as follows:
      1) Furnish lead expansion shields for machine screws and bolts 3" and smaller; head-out embedded nut type, single unit class, Group I, Type 1, Class 1.
      2) Furnish lead expansion shields for machine screws and bolts larger than 3" in size; head-out embedded nut type, multiple unit class, Group I, Type 1, Class 2.
      3) Furnish bolt anchor expansion shields for lag bolts, zinc alloy, long-shield anchors class, Group II, Type 1, Class 1.
      4) Furnish bolt anchor expansion shields for bolts, closed-end bottom bearing class, Group II, Type 2, Class I.
   c. Toggle Bolts:
      1) Tumble-wing type, complying with Federal Specification FF-B-588, type, class and style as required.
   d. Nuts, Bolts, Screws, Washers:
      1) General: Furnish zinc-coated fasteners, with galvanized complying with ASTM A 153 for exterior use or where built into exterior walls. Furnish fasteners for the type, grade and class required for the particular installation.
      2) Standard Nuts and Bolts: Regular hexagon head type, complying with ASTM A 307, Grade A.
      3) Lag Bolts: Square head type, complying with Federal Specification FF-B-561.
      4) Machine Screws: Cadmium plated steel, complying with Federal Specification FF-S-92.
      5) Wood Screws: Flat head carbon steel, complying with Federal Specification FF-W-92.
      6) Plain Washers: Round, general assembly grade carbon steel, complying with Federal Specification FF-W-92.
      7) Lock Washers: Helical spring type carbon steel, complying with Federal Specification FF-W-84.

C. Steel Slotted Support Systems: Preformed steel channels and angles with minimum 13/32-inch-(10-mm-) diameter holes at a maximum of 8 inches (200 mm) o.c. in at least one surface.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Allied Tube & Conduit.
      b. Cooper B-Line, Inc.; a division of Cooper Industries.
      c. ERICO International Corporation.
      d. GS Metals Corp.
      e. Thomas & Betts Corporation.
      f. Unistrut; Tyco International, Ltd.
      g. Wesanco, Inc.
   2. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
   3. Material for Channel, Fittings, and Accessories: **Galvanized steel**.
   4. Channel Width: 13/16 inches (20.64 mm)

5. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
6. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
7. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
8. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

D. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

E. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for nonarmored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be made of malleable iron.

F. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M steel plates, shapes, and bars; black and galvanized.

G. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
   a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      1) Hilti, Inc
      2) ITW Ramset/Red Head
      3) MKT Fastening, LLC
      4) Simpson Strong-Tie Co.

2. Mechanical-Expansion Anchors: Insert-wedge-type, **zinc-coated** steel, for use in hardened portland cement concrete, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
   a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      1) B-line
      2) Hilti, Inc
      3) ITW Ramset/Red Head
      4) MKT Fastening, LLC

3. Concrete Inserts: Steel or malleable-iron, slotted support system units are similar to MSS Type 18 units and comply with MFMA-4 or MSS SP-58.
4. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.
5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
6. Toggle Bolts: Stainless-steel springhead type.
7. Hanger Rods: Threaded steel.

PART 3 - EXECUTION

3.01 APPLICATION

A. Comply with the following standards for application and installation requirements of hangers and supports, except where requirements on Drawings or in this Section are stricter:

1. NECA 1.
2. NECA 101

B. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping materials and installation for penetrations through fire-rated walls, ceilings, and assemblies.

C. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

D. EMT, IMC, and RMC as scheduled in NECA 1, where its Table 1 lists maximum spacings that are less than those stated in NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.

E. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.

1. Secure raceways and cables to these supports with single-bolt conduit clamps using spring friction action for retention in support channel.

3.02 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.

B. Raceway Support Methods: In addition to methods described in NECA 1, EMT IMC and RMC may be supported by openings through structure members, according to NFPA 70.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).

D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Wood: Fasten with lag screws or through bolts.
2. To New Concrete: Bolt to concrete inserts.
3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
4. To Existing Concrete: Expansion anchor fasteners.
5. To Steel: Beam clamps complying with MSS SP-69.
6. To Light Steel: Sheet metal screws.

7. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

3.03 CONCRETE BASES

A. Construct concrete bases of dimensions indicated, but not less than 4 inches (100 mm) larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.

B. Use 3000-psi (20.7-MPa], 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in "Cast-in-Place Concrete" and "Miscellaneous Cast-in-Place Concrete" portions of the specifications.

C. Anchor equipment to concrete base as follows:

1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor bolts to elevations required for proper attachment to supported equipment.
3. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

3.04 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05 mm).

B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 26 05 29

SECTION 26 05 33

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply.

1.02 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

B. Related Sections include the following:
1. Section 26 05 44 – Sleeves and Sleeve Seals for Electrical Raceways and Cabling

C. The requirements of this section apply to raceway work required for the protection of electrical conductors. Raceways are required for all wiring unless otherwise specified.

D. The work includes the furnishing and installation of completely coordinated, effectively grounded raceway systems complete with boxes, fittings, flexible connections to vibrating equipment and other accessories, as required. Conduit or tubing sizes referred to in the Specifications and on the Drawings are nominal trade sizes.

1.03 DEFINITIONS

A. EMT: Electrical metallic tubing.

B. EPDM: Ethylene-propylene-diene terpolymer rubber.

C. FMC: Flexible metal conduit.

D. LFMC: Liquidtight flexible metal conduit.

E. LFNC: Liquidtight flexible nonmetallic conduit.

F. NBR: Acrylonitrile-butadiene rubber.

1.04 SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:

1. Structural members in the paths of conduit groups with common supports.
2. HVAC and plumbing items and architectural features in the paths of conduit groups with common supports.

1.05 QUALITY ASSURANCE

A. Comply with NFPA 70 for Life Safety and Critical components of the electrical system.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article by a testing agency acceptable to authorities having jurisdiction and marked for intended use.

C. Comply with New York City electrical Code (NYCEC).

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in, NYCEC Article 100 by a testing agency acceptable to authorities having jurisdiction and marked for intended use.

PART 2 - PRODUCTS

2.01 METAL CONDUIT AND TUBING

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. AFC Cable Systems, Inc.
2. Alflex Inc.
3. Allied Tube & Conduit; a Tyco International Ltd. Co.
4. Anamet Electrical, Inc.; Anaconda Metal Hose.
5. Electri-Flex Co.
6. Manhattan/CDT/Cole-Flex.
7. Maverick Tube Corporation.
8. O-Z Gedney; a unit of General Signal.
9. Wheatland Tube Company.

B. Rigid Steel Conduit: ANSI C80.1.

C. EMT: ANSI C80.3.

D. Fittings for Conduit (Including all Types and Flexible), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.

1. Fittings for EMT: Steel, compression type.
2. Conduit Fittings Installation and Use:
   a. Thread compounds shall be UL approved conductive type to ensure low resistance ground continuity through conduit.
   b. Metallic conduit fittings shall be corrosion resistant.
   c. Bushings shall be of the metallic insulated type.
   d. For weatherproof and dustight installations provide liquid-tight fittings with sealing rings and insulated throat.
   e. Rigid steel conduit fittings:
      1) Fittings shall be standard threaded couplings, locknuts, bushings, and elbows.
      2) Sealing fittings shall be of the threaded cast iron type. Sealing fittings used to prevent passage of water vapor shall be of the continuous drain type. In concealed work, each fitting shall be installed in a flush steel box with blank coverplate having the same finish as that of other electrical plates in the room.
   f. Electrical metallic tubing fittings:
      1) Couplings and connectors shall be steel body-malleable iron nut, "concrete tight". They shall be compression type, afford raintight integrity, and provide positive ground. Connectors shall have insulated throats.
   g. Flexible steel conduit (Greenfield) fittings:
      1) Shall be pressure clamp type with insulated throat and UL approved for ground continuity.
   h. Expansion and deflection couplings:
      1) Shall accommodate 0.75 inch deflection, expansion, or contraction in any direction and allow 30 degree angular deflections. Couplings shall comply with UL 467 and 514 and shall qualify seismically.
      2) Shall include internal flexible metal braid sized to guarantee conduit ground continuity and fault currents in accordance with UL 467, and the NEC tables for ground conductors.

E. Joint Compound for Rigid Steel Conduit: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

2.02 METAL WIREWAYS AND AUXILIARY GUTTERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cooper B-Line, Inc.
2. Hoffman.
3. Square D; Schneider Electric.
4. Legrand Wiremold

B. Description: Sheet metal sized and shaped as indicated, NEMA 250, Type 1, 4, 12, or 3R, unless otherwise indicated and sized according to NFPA 70

1. Metal wireways installed outdoors shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

D. Wireway Covers: Hinged type.

E. Finish: Manufacturer's standard enamel finish.

2.03 BOXES, ENCLOSURES, AND CABINETS

A. Listing and Labeling: boxes shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
2. EGS/Appleton Electric.
3. Erickson Electrical Equipment Company.
4. Hoffman.
5. Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
6. O-Z/Gedney; a unit of General Signal.
7. RACO; a Hubbell Company.
8. Robroy Industries, Inc.; Enclosure Division.
9. Scott Fetzer Co.; Adalet Division.
10. Spring City Electrical Manufacturing Company.
11. Thomas & Betts Corporation.
12. Legrand Walker Systems, Inc.
13. Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.

C. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

D. Sheet Metal Outlet and Device Boxes: NEMA OS 1.

E. Cast-Metal Outlet and Device Boxes: NEMA FB 1, aluminum, Type FD, with gasketed cover.

F. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

G. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50 lb (23 kg). Outlet boxes designed for attachment of luminaires weighing more than 50 lb (23 kg) shall be listed and marked for the maximum allowable weight.

A. Box extensions used to accommodate building finishes shall be of same material as recessed box.

B. Device Box Dimensions: 4 inches square by 2-1/8 inches deep (100 mm square by 60 mm deep) for quad and telecommunication installations, and 4 inches by 2-1/8 inches by 2-1/8 inches deep (100 mm by 60 mm by 60 mm deep) for single device installations.

C. Gangable boxes are prohibited.

D. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1 and UL 1773, galvanized, cast iron, or cast aluminum for high frequency applications, with gasketed cover.

E. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch for general use, or NEMA 250, Type 12, for dusty environments.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
2. Nonmetallic Enclosures: Plastic, finished inside with radio-frequency-resistant paint.

F. Cabinets:

1. NEMA 250, Type 1, or NEMA 250, Type 12as required, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
2. Hinged door in front cover with flush latch and concealed hinge.
3. Key latch to match panelboards.
4. Metal barriers to separate wiring of different systems and voltage.
5. Accessory feet where required for freestanding equipment.

PART 3 - EXECUTION

3.01 RACEWAY APPLICATION

A. Install raceways in accordance with applicable requirements of (NYCEC) and National Electrical Contractors Association's "Standard of Installation", and in accordance with recognized industry practices.

B. Support raceways as specified in Section 260529 – Hangers and Supports for Electrical Systems.

C. Make bends in raceway using large-radius preformed ells. Field bending shall be according to NFPA70 minimum radii requirements. Use only equipment specifically designed for material and size involved.

D. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.

E. The routing and location of conduit runs are generally not dimensional on the drawings but shall be determined in the field to suit the locations of equipment, to conform to structural features and to avoid interferences. Where exposed conduits are dimensional on drawings, they shall be installed to a tolerance of 2". Coordinate with equipment configuration and exact location prior to connection.

1. Comply with NECA1 and NECA101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NFPA70 limitations for types of raceways allowed in specific occupancies and number of floors.
2. Do not install raceways or electrical items on any "explosion-relief" walls or rotating equipment.
3. Allow a 6 in. minimum separation between raceways and steam and hot water pipes. Provide approved thermal insulation for electric lines where this separation cannot be maintained.

4. Keep raceways clear of motor foundations and from underside of boilers. Install raceway so that they will not obstruct headroom, doorways, or walkways.
5. For outlets located in hung ceilings, run raceways in hung ceilings and connect to main ceiling support channels.
6. Run raceways concealed, except as noted. Exposed raceways shall be run parallel with or at right angles to walls. In walls, run raceways vertically only.
7. Mechanically join all metal raceways, enclosures and junction boxes to form a continuous electrical conductor. Connect all electrical boxes, fittings and cabinets so as to provide effective electrical continuity and firm mechanical assembly. Maintain grounding continuity of interrupted metallic raceways with ground conductor, sized in accordance with the (NYCEC).
8. Provide long radius bends for empty raceway system where required to satisfy the system cabling requirements.
9. Install complete conduit runs before pulling in wire or cable. Install raceways so that required conductors may be drawn in without injury or excessive strain to raceway or cable. Where raceway size is not indicated, follow applicable code.
10. Do not cross pipe shafts or ventilation duct openings. Route raceway to avoid present or future openings in floor, wall or ceiling construction, when so indicated on the drawings.
11. Keep end of raceways plugged or capped during construction.
12. For empty raceways over 10 ft. long, provide fish or pull wire. Pull wire shall consist of nylon or polypropylene cord.
13. Damaged or deformed raceway shall be removed and replaced.
14. Branch circuit conduits shall not be supported by lighting fixtures, piping, or air conditioning ducts.
15. Work with extreme care near existing ducts, conduits, cables and other utilities to avoid damaging them.

F. Permitted Uses
1. Comply with the following indoor applications, unless otherwise indicated:
   a. Exposed, Not Subject to Physical Damage: EMT
   b. Exposed and Subject to Severe Physical Damage: Rigid steel conduit. Includes raceways in the following locations:
      1) Mechanical Equipment Rooms.
      2) Storage Rooms.
      3) Kitchen Area.
   c. Concealed in Ceilings and Interior Walls and Partitions: EMT
   d. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC.
   e. Damp or Wet Locations: Rigid steel conduit.
   f. Boxes and Enclosures: NEMA 250, Type 1, except use
      1) NEMA 250, Type 4, stainless steel in corrosive locations, or
      2) NEMA 250, Type 4, nonmetallic in damp or wet locations.
2. Minimum Raceway Size: 3/4-inch (21-mm) trade size.
3. Raceway Fittings: Compatible with raceways and suitable for use and location.
   a. Rigid Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
4. Electrical Metallic tubing (EMT)
   a. EMT shall be used for branch circuit wiring only, installed in dry locations (hung ceilings, hollow block walls and furred spaces).
5. Flexible steel conduit "Greenfield",

a. Flexible steel conduit "Greenfield" shall be used for the following applications only: for short connections where rigid conduit or tubing is impracticable, from outlet box to recessed lighting fixture with minimum length of 4 ft. and a maximum length of 6 ft., and for final connections to vibrating equipment other than motors and transformers in dry locations only.

b. Flexible steel conduit "Greenfield" shell be used for final connections to motor terminal boxes, transformers and other vibrating equipment, the flexible steel conduit shall have polyvinyl sheathing "Sealtite" and a ground conductor. The minimum length of the flexible conduit shall be 18 in. with slack. Connect the ground conductor to the enclosure or raceway at each end.

3.02 INSTALLATION

A. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

B. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch (35mm) trade size and insulated throat metal bushings on 1-1/2-inch (41-mm) trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

C. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

D. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.

E. Cut conduit perpendicular to the length. For conduits 2-inch (53-mm) trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.

F. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire.

A. Flexible Conduit Connections: Comply with NEMA RV3. Use a maximum of 36 inches (915 mm) of flexible conduit for recessed and semirecessed luminaires, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

B. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.

C. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box.

D. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

E. Locate boxes so that cover or plate will not span different building finishes.

F. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

G. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.03 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.04 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07 Section "Penetration Firestopping."
   1. Fire-Stops:
      a. Where wiring, conduits, cable trays, wireways, and other electrical raceways pass through fire partitions, fire walls, or floors, install an approved fire-stop that provides an effective barrier against the spread of fire, smoke and gases. Firestop material (Heat activated putty and a high temperature fiber material) shall be packed tight and shall completely fill clearances between raceways and openings. It shall be applied concurrently with the installation of the wiring. The fire stop fittings shall have a U.L. classified hourly rating equal to the fire rating of the floor or wall.
      b. Floor, exterior wall, and roof seals shall also be made watertight. Mineral wood, oakum, grout or duct seal stuffed into or around penetrations shall not be used.

3.05 PROTECTION

A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

   1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
   2. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 26 05 33

SECTION 26 05 44

SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply.

1.02 SUMMARY

A. Section Includes:

1. Sleeves for raceway and cable penetration of non-fire-rated construction walls and floors.
2. Sleeve-seal systems.
3. Sleeve-seal fittings.
4. Grout.
5. Silicone sealants.

B. Related Requirements:

1. Penetration Firestopping for penetration firestopping installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers, with and without penetrating items.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.01 SLEEVES

A. Wall Sleeves:

1. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, plain ends.
2. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop unless otherwise indicated.

B. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies: Galvanized-steel sheet; 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint, with tabs for screw-fastening the sleeve to the board.

C. Sleeves for Rectangular Openings:

1. Material: Galvanized sheet steel.
2. Minimum Metal Thickness:

a. For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and with no side larger than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
b. For sleeve cross-section rectangle perimeter 50 inches (1270 mm) or more and one or more sides larger than 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

2.02 SLEEVE-SEAL SYSTEMS

A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Advance Products & systems
b. CALPICO, Inc
c. Metraflex Company
d. Pipeline Seal and Insulator
e. Proco Products
2. Sealing Elements: Nitrile (Buna N) rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
3. Pressure Plates: Stainless steel.
4. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements.

2.03 SLEEVE-SEAL FITTINGS

A. Description: Manufactured plastic, sleeve-type, waterstop assembly made for embedding in concrete slab or wall. Unit shall have plastic or rubber waterstop collar with center opening to match piping OD.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. HOLDRITE
b. Presealed Systems

2.04 GROUT

A. Description: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.

B. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.

C. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.

D. Packaging: Premixed and factory packaged.

2.05 SILICONE SEALANTS

A. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below.

1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.

B. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

PART 3 - EXECUTION

3.01 SLEEVE INSTALLATION FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

A. Comply with NECA 1.

B. Comply with NEMA VE 2 for cable tray and cable penetrations.

C. Sleeves for Conduits Penetrating Above-Grade Non-Fire-Rated Concrete and Masonry-Unit Floors and Walls:

1. Interior Penetrations of Non-Fire-Rated Walls and Floors:

a. Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 079200 "Joint Sealants."
b. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect material while curing.

2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
3. Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and raceway or cable unless sleeve seal is to be installed.
4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.
5. Install sleeves for floor penetrations. Extend sleeves installed in floors 2 inches (50 mm) above finished floor level. Install sleeves during erection of floors.

D. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies:

1. Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening.
2. Seal space outside of sleeves with approved joint compound for gypsum board assemblies.

E. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.

F. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.

END OF SECTION 26 05 44

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply.

1.02 SUMMARY

A. Section Includes:

1. Color and legend requirements for raceways, conductors, and warning labels and signs.
2. Labels.
3. Bands and tubes.
4. Tags.
5. Signs.
6. Cable ties.
7. Paint for identification.
8. Fasteners for labels and signs.
9. Identification for raceways.
10. Identification of power and control cables.
11. Identification for conductors.
12. Instruction signs.
13. Equipment identification labels.
14. Miscellaneous identification products.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for electrical identification products.

B. Samples: For each type of label and sign to illustrate composition, size, colors, lettering style, mounting provisions, and graphic features of identification products.

C. Identification Schedule: For each piece of electrical equipment and electrical system components to be an index of nomenclature for electrical equipment and system components used in identification signs and labels. Use same designations indicated on Drawings.

D. Submittal: Design of labeling for arc-flash hazard study.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Comply with NFPA 70.

B. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

C. Comply with ANSI Z535.4 for safety signs and labels.

D. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces

2.02 COLOR AND LEGEND REQUIREMENTS

A. Raceways and Cables Carrying Circuits at 600 V or Less:

1. Black letters on a white field.
2. Legend: Indicate voltage and system or service type.

B. Color-Coding for Phase- and Voltage-Level Identification, 600 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors.

1. Color shall be factory applied.
2. Colors for 208/120-V Circuits:

a. Phase A: Black.
b. Phase B: Red.
c. Phase C: Blue.
d. Neutral: White.
a. Color for Equipment Grounds: Green.
b. Colors for Isolated Grounds: Green with white stripe.

C. Warning Label Colors:

1. Identify system voltage with black letters on an orange background.

D. Warning labels and signs shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."

2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES (915 MM)."

E. Equipment Identification Labels:

1. Black letters on a white field.

2.03 LABELS

A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Brady corporation
b. Champion America
c. Emedco
d. Grafoplast Wire Markers
e. LEM Products
f. Marking Services, Inc.
g. Hellermann Tyton
h. Panduit Corp.
i. Seton Edentification Products

B. Snap-around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeves, with diameters sized to suit diameters and that stay in place by gripping action.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Brady corporation
b. Champion America
c. Marking Services, Inc.
d. Hellermann Tyton
e. Panduit Corp.
f. Seton Edentification Products

C. Self-Adhesive Wraparound Labels: Write-on, 3-mil- (0.08-mm-) thick, vinyl flexible label with acrylic pressure-sensitive adhesive.
1. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over the legend. Labels sized such that the clear shield overlaps the entire printed legend.
2. Marker for Labels: Permanent, waterproof, black ink marker recommended by tag manufacturer.

D. Self-Adhesive Labels: Vinyl, thermal, transfer-printed, 3-mil- (0.08-mm-) thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Brady corporation
b. Emedco

c. Grafoplast Wire Markers
d. LEM Products
e. Marking Services, Inc.
f. Hellermann Tyton
g. Panduit Corp.
h. Seton Edentification Products

2. Minimum Nominal Size:

a. 1-1/2 by 6 inches (37 by 150 mm) for raceway and conductors.
b. 3-1/2 by 5 inches (76 by 127 mm) for equipment.
c. As required by authorities having jurisdiction.

2.04 TAGS

A. Write-on Tags:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Carlton Industries, LP
b. LEM Products
c. Seton Edentification Products
2. Polyester Tags: 0.015 inch (0.38 mm) thick, with corrosion-resistant grommet and cable tie for attachment.
3. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
4. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.05 SIGNS

A. Baked-Enamel Signs:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Carlton Industries, LP
b. Emedco
c. Marking Services, Inc.
2. Preprinted aluminum signs, high-intensity reflective, punched or drilled for fasteners, with colors, legend, and size required for application.
3. 1/4-inch (6.4-mm) grommets in corners for mounting.
4. Nominal Size: 7 by 10 inches (180 by 250 mm).

B. Laminated Acrylic or Melamine Plastic Signs:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Brady corporation
b. Emedco
c. Marking Services, Inc.
2. Engraved legend.
3. Thickness:

a. For signs up to 20 sq. in. (129 sq. cm), minimum 1/16 inch (1.6 mm) thick.

b. For signs larger than 20 sq. in. (129 sq. cm), 1/8 inch (3.2 mm) thick.
c. Engraved legend with **black letters on white face**
d. Punched or drilled for mechanical fasteners with 1/4-inch (6.4-mm grommets in corners for mounting or Self-adhesive as required by project conditions.
e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.06 CABLE TIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Marking Services, Inc.
2. Hellermann Tyton
3. Panduit Corp.

B. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 12,000 psi (82.7 MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black, except where used for color-coding.

C. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 12,000 psi (82.7 MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black.

D. Plenum-Rated Cable Ties: Self-extinguishing, UV stabilized, one piece, and self-locking.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 Deg F (23 Deg C) according to ASTM D 638: 7000 psi (48.2 MPa).
3. UL 94 Flame Rating: 94V-0.
4. Temperature Range: Minus 50 to plus 284 deg F (Minus 46 to plus 140 deg C).
5. Color: Black.

2.07 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Retain paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.01 PREPARATION

A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.02 INSTALLATION

A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.

B. Install identifying devices before installing acoustical ceilings and similar concealment.

C. Verify identity of each item before installing identification products.

D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.

E. Apply identification devices to surfaces that require finish after completing finish work.

F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.

G. System Identification for Raceways and Cables under 600 V: Identification shall completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.

1. Secure tight to surface of conductor, cable, or raceway.

H. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

I. Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-inch- (10-mm-) high letters for emergency instructions at equipment used for power transfer.

J. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.

K. Accessible Fittings for Raceways: Identify the covers of each junction and pull box of the following systems with the wiring system legend, circuit number and system voltage. System legends shall be as follows:

1. "EMERGENCY POWER."
2. “EMERGENCY POWER LIFE SAFETY”
3. “EMERGENCY POWER CRITICAL”
4. “EMERGENCY POWER EQUIPMENT
5. "POWER."

L. Vinyl Wraparound Labels:

1. Secure tight to surface of raceway or cable at a location with high visibility and accessibility.
2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.

M. Snap-around Labels: Secure tight to surface at a location with high visibility and accessibility.

N. Self-Adhesive Wraparound Labels: Secure tight to surface at a location with high visibility and accessibility.

O. Self-Adhesive Labels:

1. On each item, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high label; where two lines of text are required, use labels 2 inches (50 mm) high.

P. Self-Adhesive Vinyl Tape: Secure tight to surface at a location with high visibility and accessibility.

1. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches (150 mm) where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding.

Q. Write-on Tags:

1. Place in a location with high visibility and accessibility.
2. Secure using UV-stabilized and plenum-rated cable ties as applicable.

R. Baked-Enamel Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on minimum 1-1/2-inch- (38-mm-) high sign; where two lines of text are required, use signs minimum 2 inches (50 mm) high.

S. Laminated Acrylic or Melamine Plastic Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high sign; where two lines of text are required, use labels 2 inches (50 mm) high.

T. Cable Ties: General purpose, for attaching tags, except as listed below:
1. In Spaces Handling Environmental Air: Plenum rated.

3.03 IDENTIFICATION SCHEDULE

A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.

B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.

C. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Feeder and Branch Circuits, More Than 30 A and 120 V to Ground: Identify with self-adhesive vinyl tape applied in bands.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.

D. Accessible Fittings for Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive labels containing the wiring system legend, circuit numbers and system voltage. System legends shall be as follows:

1. "EMERGENCY POWER."
2. “EMERGENCY POWER LIFE SAFETY”
3. “EMERGENCY POWER CRITICAL”
4. “EMERGENCY POWER EQUIPMENT
5. "POWER."
6. "UPS."

E. Power-Circuit Conductor Identification, 600 V or Less: For conductors in pull and junction boxes, snap-around labels to identify the phase.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.

F. Conductors to Be Extended in the Future: Attach write-on tags to conductors and list source.

G. Auxiliary Electrical Systems Conductor Identification: Self-adhesive vinyl tape that is uniform and consistent with system used by manufacturer for factory-installed connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.

H. Locations of Underground Lines: Underground-line warning tape for power, lighting, communication, and control wiring and optical-fiber cable.

I. Instructional Signs: Self-adhesive labels, including the color code for grounded and ungrounded conductors.

J. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Baked-enamel warning signs.

1. Apply to exterior of door, cover, or other access.
2. For equipment with multiple power or control sources, apply to door or cover of equipment, including, but not limited to, the following:

    a. Power-transfer switches.
    b. Controls with external control power connections.
    c. Motor Control Centers

K. Arc Flash Warning Labeling: Self-adhesive labels.

L. Operating Instruction Signs: Laminated acrylic or melamine plastic signs.

M. Emergency Operating Instruction Signs: Laminated acrylic or melamine plastic signs with white legend on a red background with minimum 3/8-inch- (10-mm-) high letters for emergency instructions at equipment used for power transfer.

N. Equipment Identification Labels:

1. Indoor Equipment**:** Laminated acrylic or melamine plastic sign.
2. Equipment to Be Labeled:

    a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be in the form of a engraved**,** laminated acrylic or melamine label.
    b. Enclosures and electrical cabinets.
    c. Access doors and panels for concealed electrical items.
    d. Switchboards.
    e. Transformers: Label that includes tag designation indicated on Drawings for the transformer, feeder, and panelboards or equipment supplied by the secondary.
    f. Emergency system boxes and enclosures.
    g. Enclosed switches.
    h. Enclosed circuit breakers.
    i. Enclosed controllers.
    j. Power-transfer equipment.
    k. Contactors.

END OF SECTION 26 05 53

SECTION 262726

WIRING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Tamper-resistant receptacles.
3. Weather-resistant receptacles.
4. Snap switches and wall-box dimmers.
5. Solid-state fan speed controls.
6. Wall-switch and exterior occupancy sensors.
7. Communications outlets.

1.3 DEFINITIONS

A. EMI: Electromagnetic interference.

B. GFCI: Ground-fault circuit interrupter.

C. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

D. RFI: Radio-frequency interference.

E. UTP: Unshielded twisted pair.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Receptacles for Owner-Furnished Equipment: Match plug configurations.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.

C. Approvals: All submittals shall be approved by the Engineer and Architect. Architect shall approve wiring devices and wall plates for style and finish.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing-label warnings and instruction manuals that include labeling conditions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles, subject to approval by architect:

1. Cooper Wiring Devices; Division of Cooper Industries, Inc. (Cooper).
2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
3. Leviton Mfg. Company Inc. (Leviton).
4. Pass & Seymour/Legrand (Pass & Seymour).

B. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

C. Provide wiring devices as specified in this section unless otherwise noted by the Architect and /or Interior designer. Listed manufacturers are subject to approval by the Architect and /or Interior designer.

2.2 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

C. Comply with the current New York City Electrical Code.

D. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:

1. Connectors shall comply with UL 2459 and shall be made with stranding building wire.
2. Devices shall comply with the requirements in this Section.

2.3 STRAIGHT-BLADE RECEPTACLES

A. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, and FS W-C-596.

1. Products: Subject to compliance with requirements, provide one of the following:

   a. Cooper; 5351 (single), CR5362 (duplex).
   b. Hubbell; HBL5351 (single), HBL5352 (duplex).
   c. Leviton; 5891 (single), 5352 (duplex).
   d. Pass & Seymour; 5361 (single), 5362 (duplex).

B. Tamper-Resistant Convenience Receptacles, 125 V, 15 A and 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498 Supplement sd, and FS W-C-596.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

   a. Cooper; TR8300.
   b. Hubbell; HBL8300SGA.
   c. Leviton; 8300-SGG.
   d. Pass & Seymour; TR63H; 885TR.

2.4 GFCI RECEPTACLES

A. General Description:

1. Straight blade, feed-through type.
2. Comply with NEMA WD 1, NEMA WD 6, UL 498, UL 943 Class A, and FS W-C-596.
3. Include indicator light that shows when the GFCI has malfunctioned and no longer provides proper GFCI protection.

B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

   a. Cooper; VGF20.
   b. Hubbell; GFR5352L.
   c. Pass & Seymour; 2095.
   d. Leviton; 7590.

C. Tamper-Resistant GFCI Convenience Receptacles, 125 V, 15 A and 20 A:

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

   a. Hubbell; GFTR20.
   b. Pass & Seymour; 2095TR.

2.5 TOGGLE SWITCHES

A. Comply with NEMA WD 1, UL 20, and FS W-S-896.

B. Switches, 120/277 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

1) <u>Single Pole:</u>

2) Cooper; AH1221.
3) Hubbell; HBL1221.
4) Leviton; 1221-2.
5) Pass & Seymour; CSB20AC1.

6) <u>Two Pole:</u>

7) Cooper; AH1222.
8) Hubbell; HBL1222.
9) Leviton; 1222-2.
10) Pass & Seymour; CSB20AC2.

11) <u>Three Way:</u>

12) Cooper; AH1223.
13) Hubbell; HBL1223.
14) Leviton; 1223-2.
15) Pass & Seymour; CSB20AC3.

16) <u>Four Way:</u>

17) Cooper; AH1224.
18) Hubbell; HBL1224.
19) Leviton; 1224-2.
20) Pass & Seymour; CSB20AC4.

C. Pilot-Light Switches, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; AH1221PL for 120 and 277 V.
b. Hubbell; HBL1201PL for 120 and 277 V.
c. Leviton; 1221-LH1.
d. Pass & Seymour; PS20AC1RPL for 120 V, PS20AC1RPL7 for 277 V.

2. Description: Single pole, with neon-lighted handle, illuminated when switch is "off."

D. Single-Pole, Double-Throw, Momentary-Contact, Center-off Switches: 120/277 V, 20 A; for use with mechanically held lighting contactors.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; 1995.
b. Hubbell; HBL1557.
c. Leviton; 1257.
d. Pass & Seymour; 1251.

2.6 DECORATOR-STYLE DEVICES

A. Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; 6252.
b. Hubbell; DR15.
c. Leviton; 16252.
d. Pass & Seymour; 26252.

B. Tamper-Resistant Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; TR6252.
b. Hubbell; DR15TR.
c. Pass & Seymour; TR26252.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.

C. Tamper-Resistant and Weather-Resistant Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; TWRBR15.
b. Hubbell; DR15TR.
c. LevitonTRW15.
d. Pass & Seymour; TRW26252.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section, when installed in wet and damp locations.

D. GFCI, Feed-Through Type, Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, UL 498, and UL 943 Class A.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; VGF15.
b. Hubbell; GF15LA.
c. Leviton; 8599.
d. Pass & Seymour; 1594.

E. GFCI, Tamper-Resistant and Weather-Resistant Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, UL 498, and UL 943 Class A.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; TWRVGF15.
b. Hubbell; GFTR15.
c. Pass & Seymour; 1594TRWR.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.

F. Toggle Switches, Square Face, 120/277 V, 15 A: Comply with NEMA WD 1, UL 20, and FS W-S-896.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; 7621 (single pole), 7623 (three way).
b. Hubbell; DS115 (single pole), DS315 (three way).
c. Leviton; 5621-2 (single pole), 5623-2 (three way).
d. Pass & Seymour; 2621 (single pole), 2623 (three way).

G. Lighted Toggle Switches, Square Face, 120 V, 15 A: Comply with NEMA WD 1 and UL 20.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; 7631 (single pole), 7633 (three way).
b. Hubbell; DS120IL (single pole), DS320 (three way).
c. Leviton; 5631-2 (single pole), 5633-2 (three way).
d. Pass & Seymour; 2625 (single pole), 2626 (three way).

2. Description: With neon-lighted handle, illuminated when switch is "off."

2.7 RESIDENTIAL DEVICES

A. Residential-Grade, Tamper-Resistant Convenience Receptacles, 125 V, 15 A and 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; TR270.
b. Hubbell; RR155TR.
c. Leviton; T5320.
d. Pass & Seymour; TR62.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.

B. Weather-Resistant and Tamper-Resistant Convenience Receptacles, 125 V, 15 A and 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; TWR270.
b. Hubbell; RR155WRTR.
c. Leviton; TWR15.
d. Pass & Seymour; 3232TRWR.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section, when installed in wet and damp locations.

C. Telephone Outlet:

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; 3560-6.
b. Leviton; 40649.

2. Description: Single RJ-45 jack for terminating 100-ohm, balanced, four-pair UTP; TIA/EIA-568-B.1; complying with Category 5e. Comply with UL 1863.

D. Combination TV and Telephone Outlet:

1. Products: Subject to compliance with requirements, provide one of the following or comparable product approved equal:

a. Cooper; 3562.
b. Leviton; 40159.

2. Description: Single RJ-45 jack for 100-ohm, balanced, four-pair UTP; TIA/EIA-568-B.1; complying with Category 5e. Comply with UL 1863.

2.8 WALL PLATES

A. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: Smooth, high-impact thermoplastic.
3. Material for Unfinished Spaces: Galvanized steel.
4. Material for Damp Locations: Thermoplastic with spring-loaded lift cover and listed and labeled for use in wet and damp locations.

B. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with Type 3R, weather-resistant, die-cast aluminum with lockable cover.

2.9 MULTIOUTLET ASSEMBLIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

B. Basis-of-Design Product: Subject to compliance with requirements, provide comparable product by one of the following or comparable product approved equal:

1. Hubbell Incorporated; Wiring Device-Kellems.
2. Wiremold/Legrand.

C. Description:

1. Two-piece surface metal raceway, with factory-wired multioutlet harness.
2. Components shall be products from single manufacturer designed for use as a complete, matching assembly of raceways and receptacles.

D. Raceway Material: Metal, with manufacturer's standard finish.

2.10 FINISHES

A. Color: Wiring device catalog numbers in Section Text do not designate device color.

1. Wiring Devices Connected to Normal Power System: As selected by Architect unless otherwise indicated or required by NFPA 70 or device listing.
2. Wiring Devices Connected to Emergency Power System: Red.

B. Wall Plate Color: For plastic covers, match device color.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Coordination with Other Trades:

1. Take steps to ensure that devices and their boxes are protected... Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
4. Existing Conductors:

   a. Cut back and pigtail or replace all damaged conductors.
   b. Straighten conductors that remain and remove corrosion and foreign matter.
   c. Pigtailing existing conductors is permitted, provided the outlet box is large enough.

D. Device Installation:

1. Replace devices that have been in temporary use during construction and that were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections. No. 10 AWG may be directly wired to devices listed for 10 AWG using side-wire clamping terminals.
8. Tighten all unused terminal screws on the device.

9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down and on horizontally mounted receptacles to the right, unless otherwise indicated.
2. Install hospital-grade receptacles in patient-care areas with the ground pin or neutral blade at the top.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

G. Dimmers:

1. Install dimmers within terms of their listing.
2. Verify that dimmers used for fan speed control are listed for that application.
3. Install unshared neutral conductors online and load side of dimmers according to manufacturers' device listing conditions in the written instructions.

H. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on bottom. Group adjacent switches under single, multigang wall plates.

I. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

3.2 GFCI RECEPTACLES

A. Install non-feed-through-type GFCI receptacles where protection of downstream receptacles is not required.

3.3 IDENTIFICATION

A. Comply with Section 260553 "Identification for Electrical Systems."

B. Identify each receptacle with panelboard identification and circuit number. Use hot, stamped, or engraved machine printing with black filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Test Instruments: Use instruments that comply with UL 1436.
2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

B. Tests for Convenience Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.
2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Using the test plug, verify that the device and its outlet box are securely mounted.
6. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

C. Wiring device will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports, upon request.

END OF SECTION 26 27 26

SECTION 262813

FUSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Cartridge fuses rated 600-V ac and less for use in, control circuits, pullout, enclosed switches, panelboards, switchboards, etc.
2. Spare-fuse cabinets.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include material, dimensions, descriptions of individual components, and finishes for spare-fuse cabinets. Include the following for each fuse type indicated:

1. Dimensions and manufacturer's technical data on features, performance, electrical characteristics, and ratings.
2. Current-limitation curves for fuses with current-limiting characteristics.
3. Time-current coordination curves (average melt) and current-limitation curves (instantaneous peak let-through current) for each type and rating of fuse.
4. Coordination charts and tables and related data.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than 3 of each size and type.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain fuses, for use within a specific product or circuit, from single source from single manufacturer.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Comply with NEMA FU 1 for cartridge fuses.

D. Comply with NFPA 70.

E. Comply with UL 248-11 for plug fuses.

1.6 PROJECT CONDITIONS

A. Where ambient temperature to which fuses are directly exposed is less than 40 deg F (5 deg C) or more than 100 deg F (38 deg C), apply manufacturer's ambient temperature adjustment factors to fuse ratings.

1.7 COORDINATION

A. Coordinate fuse ratings with utilization equipment nameplate limitations of maximum fuse size and with system short-circuit current levels.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or compatible products approved equal:

1. Cooper Bussmann, Inc.
2. Edison Fuse, Inc.
3. Mersen, USA (Ferraz Shawmut, Inc.)
4. Littelfuse, Inc.

2.2 CARTRIDGE FUSES

A. Characteristics: NEMA FU 1, nonrenewable cartridge fuses with voltage ratings consistent with circuit voltages.

2.3 PLUG FUSES

A. Characteristics: UL 248-11, nonrenewable plug fuses; 125-V ac.

2.4 PLUG-FUSE ADAPTERS

A. Characteristics: Adapters for using Type S, rejection-base plug fuses in Edison-base fuseholders or sockets; ampere ratings matching fuse ratings; irremovable once installed.

2.5 SPARE-FUSE CABINET

A. Characteristics: Wall-mounted steel unit with full-length, recessed piano-hinged door and key-coded cam lock and pull.

1. Size: Adequate for storage of spare fuses specified with 15 percent spare capacity minimum.
2. Finish: Gray, baked enamel.
3. Identification: "SPARE FUSES" in 1-1/2-inch- (38-mm-) high letters on exterior of door.
4. Fuse Pullers: For each size of fuse, where applicable and available, from fuse manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine fuses before installation. Reject fuses that are moisture damaged or physically damaged.

B. Examine holders to receive fuses for compliance with installation tolerances and other conditions affecting performance, such as rejection features.

C. Examine utilization equipment nameplates and installation instructions. Install fuses of sizes and with characteristics appropriate for each piece of equipment.

D. Evaluate ambient temperatures to determine if fuse rating adjustment factors must be applied to fuse ratings.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FUSE APPLICATIONS

A. Cartridge Fuses:

1. Service Entrance: Class L, fast acting Class L, time delay, Class RK1, fast acting Class RK1, time delay Class J, fast acting Class J, time delay.
2. Feeders: Class L, fast acting Class L, time delay Class RK1, fast acting Class RK1, time delay Class RK5, fast acting Class RK5, time delay Class J, fast acting Class J, time delay.
3. Motor Branch Circuits: Class RK1 Class RK5, time delay.
4. Other Branch Circuits: Class RK1, time delay Class RK5, time delay Class J, fast acting Class J, time delay.
5. Control Circuits: Class CC, time delay.
6. Or as indicated on drawings.

3.3 INSTALLATION

A. Install fuses in fusible devices. Arrange fuses so rating information is readable from the front of the equipment, or with partially opened cabinet door, without removing fuse.

B. Furnish & install spare-fuse cabinet(s). Provide at least one spare fuse cabinet in main electric service room, and at least one additional cabinet in each elevator machine room; and additional cabinets as indicated on drawings.

3.4 IDENTIFICATION

A. Install labels complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems" and indicating fuse replacement information on inside door of each fused switch and adjacent to each fuse block, socket, and holder.

END OF SECTION 26 28 13

SECTION 26 28 16

ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply.

1.02 SUMMARY

A. The work includes provision of all labor, materials, equipment, accessories, services and tests necessary to complete and make ready for operation by the Owner, equipment specified herein in accordance with Drawings and Specifications

B. Section Includes:

1. Fusible switches.

1.03 DEFINITIONS

A. NC: Normally closed.

B. NO: Normally open.

C. SPDT: Single pole, double throw.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include nameplate ratings, dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

1. Enclosure types and details for types other than NEMA 250, Type 1.
2. Current and voltage ratings.
3. Short-circuit current ratings (interrupting and withstand, as appropriate).
4. Include evidence of a nationally recognized testing laboratory (NRTL) listing for series rating of installed devices.

5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.
6. Include time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Provide in PDF and electronic format.

B. Shop Drawings: For enclosed switches and circuit breakers.

1. Include plans, elevations, sections, details, and attachments to other work.
2. Include wiring diagrams for power, signal, and control wiring.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified testing agency.

B. Field quality-control reports.

1.06 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For enclosed switches and circuit breakers to include in emergency, operation, and maintenance manuals.

1. In addition to items specified in Section 013300 "Submittals" include the following:

a. Manufacturer's written instructions for testing and adjusting enclosed switches and circuit breakers.
b. Time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Provide in PDF and electronic format.

1.07 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
2. Fuse Pullers: Two for each size and type.

1.08 QUALITY ASSURANCE

A. Testing Agency Qualifications: Accredited by NETA.

1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.

B. "Manufacturers" - Firms regularly engaged in manufacture of the type of equipment required for the application, whose products have been in satisfactory use in similar service for not less than 5 years.

C. The equipment specified in this section shall comply with applicable standards of NEMA and shall be listed and labeled by Underwriters' Laboratories, Inc. The equipment shall be approved for service where required, and approved for use in New York City in accordance with NYCEC.

D. Comply with NEC NFPA 70 for construction and installation of equipment.

E. Provide equipment produced by a manufacturer listed as an Approved Manufacturer in this Section.

F. Provide equipment whose performance under specified conditions is certified by the Manufacturer.

1.09 FIELD CONDITIONS

A. Environmental Limitations: Rate equipment for continuous operation under the following conditions unless otherwise indicated:

1. Ambient Temperature: Not less than minus 22 deg F (minus 30 deg C) and not exceeding 104 deg F (40 deg C).
2. Altitude: Not exceeding 6600 feet (2010 m).

1.10 WARRANTY

A. Manufacturer's Warranty: Manufacturer and Installer agree to repair or replace components that fail in materials or workmanship within specified warranty period.

1. Warranty Period: One year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

2.02 GENERAL REQUIREMENTS

A. Source Limitations: Obtain enclosed switches, overcurrent protective devices, components, and accessories, within same product category, from single manufacturer.

B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches and circuit breakers, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by an NRTL, and marked for intended location and application.

D. Comply with NFPA 70.

A. Comply with New York City electrical Code (NYCEC).

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in, NYCEC Article 100 by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

2.03 FUSIBLE SWITCHES

A. All switches shall have switch blades which are fully visible in the OFF position when the door is open. Switches shall have removable arc suppressors, where necessary to permit easy access to line-side lugs. Lugs shall be UL listed for aluminum and/or copper cables and front removable. All current carrying parts shall be plated. 30A thru 100A switches shall have provisions for field installed fuse pullers. Switches shall include solid neutral where required.

B. Switches shall have a quick-make and quick-break operating handle and mechanism which shall be an integral part of the box, not the cover. Switches shall have a defeatable dual cover interlock to prevent inadvertent opening of the switch door in the ON position or closing of the switch mechanism with the door open. Handle position shall indicate if switch is ON or OFF.

C. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ABB Inc.
2. Eaton
3. General Electric Company
4. Siemens Industry, Inc
5. Square D, by Schneider electric

D. Type HD, Heavy Duty:

1. Single throw.
2. Three pole.
3. 240-V ac.
4. 1200 A and smaller.
5. UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate specified and indicated fuses.
6. Lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

E. Accessories:
1. neutral conductors.
2. Class R Fuse Kit: Provides rejection of other fuse types when Class R fuses are specified.
3. Hookstick Handle: Allows use of a hookstick to operate the handle – where mounted with operating handle above 6’7” AFF.
4. Lugs: Mechanical type, suitable for number, size, and conductor material.
5. Service-Rated Switches: Labeled for use as service equipment.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine elements and surfaces to receive enclosed switches for compliance with installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Commencement of work shall indicate Installer's acceptance of the areas and conditions as satisfactory.

3.02 PREPARATION

A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Owner no fewer than fourteen (14) days in advance of proposed interruption of electric service.
2. Indicate method of providing temporary electric service.
3. Do not proceed with interruption of electric service without Owner's written permission.
4. Comply with NFPA 70E.

3.03 ENCLOSURE ENVIRONMENTAL RATING APPLICATIONS

A. Enclosed Switches: Provide enclosures at installed locations with the following environmental ratings.

1. Indoor, Dry and Clean Locations: NEMA 250, Type 1.
2. Outdoor Locations: NEMA 250, Type 3R.

3.04 INSTALLATION

A. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

B. Install individual wall-mounted switches with tops at uniform height unless otherwise indicated.

C. Comply with mounting and anchoring requirements specified.

D. Temporary Lifting Provisions: Remove temporary lifting of eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.

E. Install fuses in fusible devices.

F. Comply with NFPA 70 and NECA 1.

3.05 IDENTIFICATION

A. Comply with requirements in Section 260553 "Identification for Electrical Systems."

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.06 FIELD QUALITY CONTROL

A. Perform tests and inspections with the assistance of a factory-authorized service representative.

B. Tests and Inspections for Switches:

1. Visual and Mechanical Inspection:

a. Inspect physical and mechanical condition.
b. Inspect anchorage, alignment, grounding, and clearances.
c. Verify that the unit is clean.
d. Verify blade alignment, blade penetration, travel stops, and mechanical operation.
e. Verify that fuse sizes and types match the Specifications and Drawings.
f. Verify that each fuse has adequate mechanical support and contact integrity.
g. Inspect bolted electrical connections for high resistance using one of the two following methods:

1) Use a low-resistance ohmmeter.

a) Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of the lowest value.

2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 100.12.

a) Bolt-torque levels shall be in accordance with manufacturer's published data. In the absence of manufacturer's published data, use NETA ATS Table 100.12.

h. Verify that operation and sequencing of interlocking systems is as described in the Specifications and shown on the Drawings.
i. Verify correct phase barrier installation.
j. Verify lubrication of moving current-carrying parts and moving and sliding surfaces.

2. Electrical Tests:

a. Perform resistance measurements through bolted connections with a low-resistance ohmmeter. Compare bolted connection resistance values to values of similar

connections. Investigate values that deviate from adjacent poles or similar switches by more than 50 percent of the lowest value.

b. Measure contact resistance across each switchblade fuseholder. Drop values shall not exceed the high level of the manufacturer's published data. If manufacturer's published data are not available, investigate values that deviate from adjacent poles or similar switches by more than 50 percent of the lowest value.

c. Perform insulation-resistance tests for one minute on each pole, phase-to-phase and phase-to-ground with switch closed, and across each open pole. Apply voltage in accordance with manufacturer's published data. In the absence of manufacturer's published data, use Table 100.1 from the NETA ATS. Investigate values of insulation resistance less than those published in Table 100.1 or as recommended in manufacturer's published data.

d. Measure fuse resistance. Investigate fuse-resistance values that deviate from each other by more than 15 percent.

e. Perform ground fault test according to NETA ATS 7.14 "Ground Fault Protection Systems, Low-Voltage."

C. Enclosed switches will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

1. Test procedures used.
2. Include identification of each enclosed switch and circuit breaker tested and describe test results.
3. List deficiencies detected, remedial action taken, and observations after remedial action.

3.07 ADJUSTING

A. Adjust moving parts and operable components to function smoothly and lubricate as recommended by manufacturer.

END OF SECTION 26 28 16

SECTION 26 36 00

TRANSFER SWITCHES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, and Division 01 Specification Sections wherever applicable to Project Work.

B. Section 01 31 46 – Special Requirements for Project Work shall apply.

C. Section 26 05 00 – General Provisions for Electrical Work shall apply.

1.02 SUMMARY

A. Section includes automatic transfer switches rated 600 V and less, including the following:

1. Bypass/isolation switches.
2. Remote annunciator system.
3. Remote annunciator and control system.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for transfer switches.
2. Include rated capacities, operating characteristics, electrical characteristics, and accessories.

B. Shop Drawings:

1. Include plans, elevations, sections, details showing minimum clearances, conductor entry provisions, gutter space, and installed features and devices.
2. Include material lists for each switch specified.
3. Single-Line Diagram: Show connections between transfer switch, bypass/isolation switch, power sources, and load; and show interlocking provisions for each combined transfer switch and bypass/isolation switch.
4. Riser Diagram: Show interconnection wiring between transfer switches, bypass/isolation switches, annunciators, and control panels.

1.04 INFORMATIONAL SUBMITTALS

A. Seismic Qualification Data: Certificates, for transfer switches, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

B. Field quality-control reports.

1.05 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals.

1. In addition to items specified provided for "Operation and Maintenance Data," include the following:

a. Features and operating sequences, both automatic and manual.
b. List of all factory settings of relays; provide relay-setting and calibration instructions, including software, where applicable.

1.06 QUALITY ASSURANCE

A. Testing Agency Qualifications:

1. Member company of NETA.

a. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

1.07 FIELD CONDITIONS

A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electrical service:

1. Notify Owner no fewer than 28 days in advance of proposed interruption of electrical service.
2. Do not proceed with interruption of electrical service without Owner's written permission.

1.08 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of transfer switch or transfer switch components that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NEMA ICS 1.

C. Comply with NFPA 99.

D. Comply with NFPA 110.

E. Comply with UL 1008 unless requirements of these Specifications are stricter.

F. Indicated Current Ratings: Apply as defined in UL 1008 for continuous loading and total system transfer, including tungsten filament lamp loads not exceeding 30 percent of switch ampere rating, unless otherwise indicated.

G. Tested Fault-Current Closing and Short-Circuit Ratings: Adequate for duty imposed by protective devices at installation locations in Project under the fault conditions indicated, based on testing according to UL 1008.

1. Where transfer switch includes internal fault-current protection, rating of switch and trip unit combination shall exceed indicated fault-current value at installation location.
2. Short-time withstand capability for 30 cycles.

H. Repetitive Accuracy of Solid-State Controls: All settings shall be plus or minus 2 percent or better over an operating temperature range of minus 20 to plus 70 deg C.

I. Resistance to Damage by Voltage Transients: Components shall meet or exceed voltage-surge withstand capability requirements when tested according to IEEE C62.62. Components shall meet or exceed voltage-impulse withstand test of NEMA ICS 1.

J. Electrical Operation: Accomplish by a nonfused, momentarily energized solenoid or electric-motor-operated mechanism. Switches for emergency or standby purposes shall be mechanically and electrically interlocked in both directions to prevent simultaneous connection to both power sources unless closed transition.

K. Neutral Switching: Where four-pole switches are indicated, provide neutral pole switched simultaneously with phase poles.

L. Annunciation, Control, and Programming Interface Components: Devices at transfer switches for communicating with remote programming devices, annunciators, or annunciator and control panels shall have communication capability matched with remote device.

M. Factory Wiring: Train and bundle factory wiring and label, consistent with Shop Drawings, by color-code or by numbered or lettered wire and cable shrinkable sleeve markers at terminations. Color-coding and wire and cable markers are specified in Section 260553 "Identification for Electrical Systems."

1. Designated Terminals: Pressure type, suitable for types and sizes of field wiring indicated.
2. Power-Terminal Arrangement and Field-Wiring Space: Suitable for top, side, or bottom entrance of feeder conductors as indicated.
3. Control Wiring: Equipped with lugs suitable for connection to terminal strips.
4. Accessible via front access.

N. Enclosures: General-purpose NEMA 250, Type 1, complying with NEMA ICS 6 and UL 508, unless otherwise indicated. ATS is to be designed as front access only with no rear or side access required. ATS cable connections are to be from the front of the ATS.

2.02 CONTACTOR-TYPE AUTOMATIC TRANSFER SWITCHES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ASCO Power Technologies – Basis of Design
2. Russelectric
3. E Zenith

B. Comply with Level 1 equipment according to NFPA 110.

C. Switch Characteristics: Designed for continuous-duty repetitive transfer of full-rated current between active power sources.

1. Limitation: Switches using molded-case switches or circuit breakers or insulated-case circuit-breaker components are unacceptable.
2. Switch Action: Double throw; mechanically held in both directions.
3. Contacts: Silver composition or silver alloy for load-current switching. Contactor-style automatic transfer-switch units, rated 600 A and higher, shall have separate arcing contacts.
4. Conductor Connectors: Suitable for use with conductor material and sizes.
5. Material: Hard-drawn copper, 98 percent conductivity.
6. Main and Neutral Lugs: Mechanical type.
7. Ground Lugs and Bus-Configured Terminators: Mechanical type.
8. Ground bar.
9. Connectors shall be marked for conductor size and type according to UL 1008.

D. Automatic Open-Transition Transfer Switches: Interlocked to prevent the load from being closed on both sources at the same time.

1. Sources shall be mechanically and electrically interlocked to prevent closing both sources on the load at the same time.

E. Manual Switch Operation: Under load, with door closed and with either or both sources energized. Transfer time is same as for electrical operation. Control circuit automatically disconnects from electrical operator during manual operation.

F. Manual Switch Operation: Unloaded. Control circuit automatically disconnects from electrical operator during manual operation.

G. Signal-Before-Transfer Contacts: A set of normally open/normally closed dry contacts operates in advance of retransfer to normal source. Interval shall be adjustable from 1 to 30 seconds. Provide for elevator and similar equipment transfer.

H. Digital Communication Interface: Matched to capability of remote annunciator or annunciator and control panel.

I. Automatic Transfer-Switch Controller Features:

1. Controller operates through a period of loss of control power.
2. Voltage/Frequency Lockout Relay: Prevent premature transfer to generator. Pickup voltage shall be adjustable from 85 to 100 percent of nominal. Factory set for pickup at 90 percent. Pickup frequency shall be adjustable from 90 to 100 percent of nominal. Factory set for pickup at 95 percent.
3. Time Delay for Retransfer to Normal Source: Adjustable from zero to 30 minutes, and factory set for 10 minutes. Override shall automatically defeat delay on loss of voltage or sustained undervoltage of emergency source, provided normal supply has been restored.
4. Test Switch: Simulate normal-source failure.
5. Switch-Position Pilot Lights: Indicate source to which load is connected.
6. Source-Available Indicating Lights: Supervise sources via transfer-switch normal- and emergency-source sensing circuits.

    a. Normal Power Supervision: Green light with nameplate engraved "Normal Source Available."
    b. Emergency Power Supervision: Red light with nameplate engraved "Emergency Source Available."

7. Unassigned Auxiliary Contacts: Two normally open, single-pole, double-throw contacts for each switch position, rated 10 A at 240-V ac.
8. Engine Starting Contacts: One isolated and normally closed, and one isolated and normally open; rated 10 A at 32-V dc minimum.
9. Engine Shutdown Contacts: Instantaneous; shall initiate shutdown sequence at remote engine-generator controls after retransfer of load to normal source.
10. Engine Shutdown Contacts: Time delay adjustable from zero to five minutes, and factory set for five minutes. Contacts shall initiate shutdown at remote engine-generator controls after retransfer of load to normal source.
11. Engine-Generator Exerciser: Solid-state, programmable-time switch starts engine generator and transfers load to it from normal source for a preset time, then retransfers and shuts down engine after a preset cool-down period. Initiates exercise cycle at preset intervals adjustable from 7 to 30 days. Running periods shall be adjustable from 10 to 30

minutes. Factory settings shall be for 7-day exercise cycle, 20-minute running period, and 5-minute cool-down period. Exerciser features include the following:

a. Exerciser Transfer Selector Switch: Permits selection of exercise with and without load transfer.
b. Push-button programming control with digital display of settings.
c. Integral battery operation of time switch when normal control power is unavailable.

2.03 TRANSFER SWITCH ACESSORIES

A. Bypass/Isolation Switches:

1. Source Limitations: Same manufacturer as transfer switch in which installed.
2. Comply with requirements for Level 1 equipment according to NFPA 110.
3. Description: Manual type, arranged to select and connect either source of power directly to load, isolating transfer switch from load and from both power sources. Include the following features for each combined automatic transfer switch and bypass/isolation switch:

a. Means to lock bypass/isolation switch in the position that isolates transfer switch with an arrangement that permits complete electrical testing of transfer switch while isolated. Interlocks shall prevent transfer-switch operation, except for testing or maintenance, while automatic transfer switch is isolated.
b. Provide means to make power available to transfer-switch control circuit for testing and maintenance purposes.
c. Drawout Arrangement for Transfer Switch: Provide physical separation from live parts and accessibility for testing and maintenance operations. Transfer switch and bypass/isolation switch shall be in isolated compartments.
d. Transition: Provide closed-transition operation when transferring from main transfer switch to bypass/isolation switch on the same power source.
e. Transition: Provide **open** transition operation when transferring between power sources.
f. Bypass/Isolation Switch Current, Voltage, Closing, and Short-Circuit Withstand Ratings: Equal to or greater than those of associated automatic transfer switch, and with same phase arrangement and number of poles.
g. Contact temperatures of bypass/isolation switches shall not exceed those of automatic transfer-switch contacts when they are carrying rated load.
h. Manual Control: Constructed so load bypass and transfer-switch isolation can be performed by one person in no more than two operations in 15 seconds or less. Operating handles shall be externally operated.
i. Automatic and Nonautomatic Control: Automatic transfer-switch controller shall also control the bypass/isolation switch.
j. Legend: Manufacturer's standard legend for control labels and instruction signs shall describe operating instructions.
k. Maintainability: Fabricate to allow convenient removal of major components from front without removing other parts or main power conductors.

4. Interconnection of Bypass/Isolation Switches with Automatic Transfer Switches: Factory-installed copper bus bars; plated at connection points and braced for the indicated available short-circuit current.

B. Remote Annunciator System:

1. Source Limitations: Same manufacturer as transfer switch in which installed.
2. Functional Description: Remote annunciator panel shall annunciate conditions for indicated transfer switches.
3. Annunciation panel display shall include the following indicators:

   a. Sources available, as defined by actual pickup and dropout settings of transfer-switch controls.
   b. Switch position.
   c. Switch in test mode.
   d. Failure of communication link.

4. Annunciator Panel: LED-lamp type with audible signal and silencing switch.

   a. Indicating Lights: Grouped for each transfer switch monitored.
   b. Label each group, indicating transfer switch it monitors, location of switch, and identity of load it serves.
   c. Mounting: Flush, modular, steel cabinet unless otherwise indicated.
   d. Lamp Test: Push-to-test or lamp-test switch on front panel.

5. The main system panel to be installed in the Boiler Plant Engineering office

2.04 SOURCE QUALITY CONTROL

A. Factory Tests: Test and inspect components, assembled switches, and associated equipment according to UL 1008. Ensure proper operation. Check transfer time and voltage, frequency, and time-delay settings for compliance with specified requirements. Perform dielectric strength test complying with NEMA ICS 1.

B. Prepare test and inspection reports.

1. For each of the tests required by UL 1008, performed on representative devices, for emergency systems. Include results of test for the following conditions:

   a. Overvoltage.
   b. Undervoltage.
   c. Loss of supply voltage.
   d. Reduction of supply voltage.
   e. Alternative supply voltage or frequency is at minimum acceptable values.
   f. Temperature rise.
   g. Dielectric voltage-withstand; before and after short-circuit test.
   h. Overload.
   i. Contact opening.
   j. Endurance.
   k. Short circuit.

l. Short-time current capability.
m. Receptacle withstand capability.
n. Insulating base and supports damage.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Floor-Mounting Switch: Anchor to floor by bolting.

1. Install transfer switches on cast-in-place concrete equipment base(s). Comply with requirements for equipment bases and foundations specified elsewhere.
2. Comply with requirements for seismic control devices
3. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases.
4. Provide workspace and clearances required by NFPA 70.

B. Annunciator and Control Panel Mounting: Flush in wall unless otherwise indicated.

C. Identify components according to Section 260553 "Identification for Electrical Systems."

D. Set field-adjustable intervals and delays, relays, and engine exerciser clock.

E. Comply with NECA 1.

3.02 CONNECTIONS

A. Wiring to Remote Components: Match type and number of cables and conductors to generator setscontrol, and communication requirements of transfer switches as recommended by manufacturer. Increase raceway sizes at no additional cost to Owner if necessary to accommodate required wiring.

B. Wiring Method: Install cables in raceways and cable trays except within electrical enclosures. Conceal raceway and cables except in unfinished spaces.

1. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

C. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.

D. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

E. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

F. Route and brace conductors according to manufacturer's written instructions and Section 260529 "Hangers and Supports for Electrical Systems." Do not obscure manufacturer's markings and labels.

G. Final connections to equipment shall be made with liquidtight, flexible metallic conduit no more than 18 inches (457 mm) in length.

3.03 FIELD QUALITY CONTROL

A. Perform the following tests and inspections with the assistance of a factory-authorized service representative:

1. After installing equipment, test for compliance with requirements according to NETA ATS.
2. Visual and Mechanical Inspection:

   a. Compare equipment nameplate data with Drawings and Specifications.
   b. Inspect physical and mechanical condition.
   c. Inspect anchorage, alignment, grounding, and required clearances.
   d. Verify that the unit is clean.
   e. Verify appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
   f. Verify that manual transfer warnings are attached and visible.
   g. Verify tightness of all control connections.
   h. Inspect bolted electrical connections for high resistance using one of the following methods, or both:

      1) Use of low-resistance ohmmeter.
      2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method according to manufacturer's published data.

   i. Perform manual transfer operation.
   j. Verify positive mechanical interlocking between normal and alternate sources.
   k. Perform visual and mechanical inspection of surge arresters.
   l. Inspect control power transformers.

      1) Inspect for physical damage, cracked insulation, broken leads, tightness of connections, defective wiring, and overall general condition.
      2) Verify that primary and secondary fuse or circuit-breaker ratings match Drawings.
      3) Verify correct functioning of drawout disconnecting contacts, grounding contacts, and interlocks.

3. Electrical Tests:

   a. Perform insulation-resistance tests on all control wiring with respect to ground.
   b. Perform a contact/pole-resistance test. Compare measured values with manufacturer's acceptable values.
   c. Verify settings and operation of control devices.
   d. Calibrate and set all relays and timers.
   e. Verify phase rotation, phasing, and synchronized operation.
   f. Perform automatic transfer tests.
   g. Verify correct operation and timing of the following functions:

1) Normal source voltage-sensing and frequency-sensing relays.
2) Engine start sequence.
3) Time delay on transfer.
4) Alternative source voltage-sensing and frequency-sensing relays.
5) Automatic transfer operation.
6) Interlocks and limit switch function.
7) Time delay and retransfer on normal power restoration.
8) Engine cool-down and shutdown feature.

4. Measure insulation resistance phase-to-phase and phase-to-ground with insulation-resistance tester. Include external annunciation and control circuits. Use test voltages and procedure recommended by manufacturer. Comply with manufacturer's specified minimum resistance.

   a. Check for electrical continuity of circuits and for short circuits.
   b. Inspect for physical damage, proper installation and connection, and integrity of barriers, covers, and safety features.
   c. Verify that manual transfer warnings are properly placed.
   d. Perform manual transfer operation.

5. After energizing circuits, perform each electrical test for transfer switches stated in NETA ATS and demonstrate interlocking sequence and operational function for each switch at least three times.

   a. Simulate power failures of normal source to automatic transfer switches and retransfer from emergency source with normal source available.
   b. Simulate loss of phase-to-ground voltage for each phase of normal source.
   c. Verify time-delay settings.
   d. Verify pickup and dropout voltages by data readout or inspection of control settings.
   e. Test bypass/isolation unit functional modes and related automatic transfer-switch operations.
   f. Perform contact-resistance test across main contacts and correct values exceeding 500 microhms and values for one pole deviating by more than 50 percent from other poles.
   g. Verify proper sequence and correct timing of automatic engine starting, transfer time delay, retransfer time delay on restoration of normal power, and engine cool-down and shutdown.

B. Coordinate tests with tests of generator and run them concurrently.

C. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation and contact resistances and time delays. Attach a label or tag to each tested component indicating satisfactory completion of tests.

D. Transfer switches will be considered defective if they do not pass tests and inspections.

E. Remove and replace malfunctioning units and retest as specified above.

F. Prepare test and inspection reports.

G. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each switch. Remove all access panels so joints and connections are accessible to portable scanner.

1. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
2. Record of Infrared Scanning: Prepare a certified report that identifies switches checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.
3. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switch 11 months after date of Substantial Completion.

3.04 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain transfer switches and related equipment.

B. Training shall include testing ground-fault protective devices and instructions to determine when the ground-fault system shall be retested. Include instructions on where ground-fault sensors are located and how to avoid negating the ground-fault protection scheme during testing and circuit modifications.

END OF SECTION 26 36 00

SECTION 265100

LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior lighting fixtures, lamps and drivers.
2. Emergency lighting units.
3. Lighting fixture supports.

B. Related Sections:

1. Section 260500 “Common Work”

2. Section 262726 "Wiring Devices"

1.3 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color-rendering index.

C. IP: International Protection Marking or Ingress Protection Marking

D. LED: Light-emitting diode

E. LER: Luminaire efficacy rating.

F. Lumen: Measured output of lamp and luminaire, or both.

G. Luminaire: Complete lighting fixture, including lamp, reflector, housing and driver/power supply.

H. RCR: Room cavity ratio

1.4 ACTION SUBMITTALS

A. Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, accessories, finishes, and the following:
   1. Physical description of lighting fixture including dimensions and verification of specified options
   2. Photometry Performance Data including lumen candlepower distribution diagram and chart, zonal lumen summary chart, lumen output (delivered for LEDs), and total luminaire wattage.
   3. Emergency lighting units including battery and charger, where specified. Submittal must indicate the initial emergency power delivered lumen output rating of all fixtures with local emergency power battery packs.
   4. Driver.
   5. Life, output (lumens, CCT, and CRI), and energy-efficiency data.
   6. Where indicated in fixture schedule, provide photometric data for the luminaire, including optical performance and adjustment factors based on laboratory tests, complying with IES Lighting Measurements Testing & Calculation Guides, of each lighting fixture type. The adjustment factors shall be for lamps, and accessories identical to those indicated for the lighting fixture as applied in this Project.

      a. Independent Testing Agency Certified Data: For indicated luminaires, photometric data to be certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.
      b. Manufacturer Certified Data: Photometric data shall be certified by a manufacturer's laboratory.
      c. For all exterior area luminaires, provide isocandela charts, coefficients of utilization and BUG ratings.

B. Shop Drawings: For nonstandard or custom lighting fixtures. Include plans, elevations, sections, details, and attachments to other work.

   1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
   2. Wiring Diagrams: For power, signal, and control wiring.

C. Samples: For each lighting fixture indicated in the Lighting Fixture Schedule. Each Sample shall include the following:

   1. Lamps and drivers installed.
   2. 6’ power cords with plugs.
   3. Pendant support system.

D. Installation instructions.

1.5 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Luminaires.
2. Suspended ceiling components.
3. Partitions and millwork that penetrate the ceiling or extends to within 12 inches (305 mm) of the plane of the luminaires.
4. Structural members to which suspension systems for lighting fixtures will be attached.
5. Other items in finished ceiling including the following:

    a. Air outlets and inlets.
    b. Speakers.
    c. Sprinklers.
    d. Smoke and fire detectors.
    e. Occupancy/vacancy sensors.
    f. Access panels.
    g. Ceiling-mounted projectors
6. Moldings.

B. Product Certificates: For testing laboratory providing photometric data for luminaires.

C. Warranty: Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For to include in operation and maintenance manuals.

1.7 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Lamps: 10 for every 100 of each type and rating installed. Furnish at least one of each type.
2. LED Modules and Boards: 10 for every 100 of each type and rating installed with same production line of installed product. Furnish at least one for each module/board type.
3. Plastic Diffusers and Lenses: One for every 100 of each type and rating installed. Furnish at least one of each type.
4. Drivers: One for every 100 of each type and rating installed. Furnish at least one of each type.
5. Globes and Guards: One for every 20 of each type and rating installed. Furnish at least one of each type.

1.8 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

C. Comply with New York City Electrical Code.

1.9 COORDINATION

A. Coordinate layout and installation of luminaires and suspension system with other construction that penetrates ceilings or is supported by them, including HVAC equipment, fire-suppression system, and partition assemblies.

1.10 UNIT PRICING

A. Provide unit pricing for each fixture type.

1.11 WARRANTY

A. All lamps and LED chips/boards shall carry a warranty of their rated life.

B. All drivers and power supplies shall carry a minimum five-year warranty.

C. All light fixtures shall carry a minimum one-year warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide product indicated on Drawings and specifications.

B. Substitutions: All substitutions must be identified in the base bid as a deduct alternate and be accompanied by a letter of equivalency certifying the product's equivalency in all performance and physical characteristics to the products listed herein. The proposed substitutions shall be inclusive of all cost and physical implications throughout the project. Should the substitution be approved, neither the project specifications nor the Contract documents will be revised to reflect the substitution.

2.2 GENERAL REQUIREMENTS FOR LUMINAIRES AND COMPONENTS

A. Recessed Fixtures: Comply with NEMA LE 4 for ceiling compatibility for recessed fixtures.

B. Luminaires: Comply with UL 1598.

C. LED Fixtures: Comply with ANSI/UL 8750.

D. Metal Parts: Free of burrs and sharp corners and edges. Metal work shall be free of tool marks and dents and shall have accurate angles bent as sharply as compatible with the gauges of required metal. Intersections and joints shall be formed true and of adequate strength and rigidity to prevent any distortion after assembly. All miters shall be in accurate alignment with abutting intersection members.

E. Sheet Metal Components: Steel unless otherwise indicated. Form and support to prevent warping and sagging.

F. Doors, frames and other internal access: Smooth operating, free of light leakage under operating conditions. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidently during relamping and when secured in operation position.

G. Reflecting surfaces shall have a minimum reflectance as follows, unless otherwise indicated:

1. White Surfaces: 85 percent
2. Specular Surfaces: 83 percent
3. Diffusing Specular Surfaces: 75 percent
4. Laminated Silver Metallized Film: 90 percent

H. Plastic Diffusers, Covers, and Globes:

1. Acrylic Lighting Diffusers: 100 percent virgin acrylic plastic. High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
   a. Lens Thickness: At least 0.125 inch minimum unless different thickness is indicated.
   b. UV stabilized.
   c. Glass: Annealed crystal, unless otherwise indicated.

I. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp characteristics:

   a. "USE ONLY" and include specific lamp type.
   b. Lamp type, wattage, bulb type (ED17, BD56, etc.).
   c. CCT and CRI for all luminaires.

2.3 LED DRIVERS

A. General Requirements

1. Comply with UL 8750 and ANSI C82.11
2. Class A sound rating.
3. Designed and tested to withstand Category A surges of 1,000 V according to IEEE C62.41 without impairment to performance.
4. Meet NEMA 410 inrush requirements.
5. No visible change in light output with a variation of plus/minus 10 percent line voltage input.
6. Dim to 10% unless otherwise noted.
7. Continuous flicker free from 100% to 10% unless otherwise noted.
8. Comply with FCC 47 CFR Part 15.
9. Total Harmonic Distortion: Less than 20 percent.
10. Power Factor: 0.9 or higher.

2.4 EMERGENCY BATTERY PACKS FOR LUMINAIRES

A. Internal Type: Provide self-contained, modular, battery-inverter unit, factory mounted within luminaire body and compatible with the driver. Comply with UL 924.
1. Indicator light: Visible without opening luminaire or entering ceiling space. LED indicates normal power on.
2. Battery: Sealed, maintenance-free, nickel cadmium type, sized for ninety (90) minutes of operation.
3. Charger: Fully automatic, solid state, constant-current type with sealed power transfer relay
4. Light Output:
a. LED: 10 watt drivers with a minimum of 1100 delivered lumens.

2.5 LED Module

1. LED modules to be provided by the luminaire manufacturer.
2. Minimum Rated Life: 50,000 hours and maintain 70% of lumen maintenance per IES L70.

2.6 Each LED light engine shall binned within a two-step MacADam Ellipse per fixture type.LIGHTING FIXTURE SUPPORT COMPONENTS

A. Comply with Section 260529 "Hangers and Supports for Electrical Systems" for channel- and angle-iron supports and nonmetallic channel and angle supports.

B. Single-Stem Hangers: 1/2-inch (13-mm) steel tubing with swivel ball fittings and ceiling canopy. Finish same as fixture.

C. Twin-Stem Hangers: Two, 1/2-inch (13-mm) steel tubes with single canopy designed to mount a single fixture. Finish same as fixture.

D. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated steel, 12 gage (2.68 mm).

E. Rod Hangers: 3/16-inch (5-mm) minimum diameter, cadmium-plated, threaded steel rod.

F. Hook Hangers: Integrated assembly matched to fixture and line voltage and equipped with threaded attachment, cord, and locking-type plug.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Lighting fixtures:

1. Set level, plumb, and square with ceilings and walls unless otherwise indicated.
2. Install lamps in each luminaire.

B. Temporary Lighting: If it is necessary, and approved by Architect, to use permanent luminaires for temporary lighting, install and energize the minimum number of luminaires necessary. When construction is sufficiently complete, remove the temporary luminaires, disassemble, clean thoroughly, install new lamps, and reinstall.

C. Lay-in Ceiling Lighting Fixtures Supports: Use grid as a support element.

1. Install ceiling support system rods or wires, independent of the ceiling suspension devices, for each fixture. Locate not more than 6 inches (150 mm) from lighting fixture corners.
2. Support Clips: Fasten to lighting fixtures and to ceiling grid members at or near each fixture corner with clips that are UL listed for the application.
3. Fixtures of Sizes Less Than Ceiling Grid: Install as indicated on reflected ceiling plans or center in acoustical panel, and support fixtures independently with at least two 3/4-inch (20-mm) metal channels spanning and secured to ceiling tees.
4. Install at least one independent support rod or wire from structure to a tab on lighting fixture. Wire or rod shall have breaking strength of the weight of fixture at a safety factor of 3.

D. Suspended Lighting Fixture Support:

1. Pendants and Rods: Where longer than 48 inches (1200 mm), brace to limit swinging. Rigidly align continuous rows of luminaires for true aligned appearance.
2. Stem-Mounted, Single-Unit Fixtures: Suspend with twin-stem hangers.
3. Continuous Rows: Use tubing or stem for wiring at one point and tubing or rod for suspension for each unit length of fixture chassis, including one at each end.
4. Do not use grid as support for pendant luminaires. Connect support wires or rods to building structure.
5. Support all lighting fixtures independently of ductwork or piping.

E. Air-Handling Lighting Fixtures: Install with dampers closed and ready for adjustment.

F. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

G. Coves:

1. Where indicated, all coves shall be installed so as to produce a continuous and unbroken band of light free of visual imperfections, shadows, light gaps, etc., from end to end of cove.

3.2 IDENTIFICATION

A. Install labels with panel and circuit numbers on concealed junction and outlet boxes. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.3 FIELD QUALITY CONTROL

A. Inspect each installed fixture for damage. Replace damaged fixtures and components.

B. Verify normal operation of each fixture after installation.

C. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery and retransfer to normal.

D. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

PART 4 - LUMINAIRE SCHEDULE AND CUT SHEETS

4.1 Luminaire schedule and cut sheets attached at end of this section.

END OF SECTION 26 51 00

SECTION 28 31 13

FIRE ALARM AND SMOKE DETECTION SYSTEM

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. This Section is to coordinate with and be complementary to the General Conditions and Supplementary General Conditions of the work, wherever applicable to Mechanical and Electrical Work.

B. Section 01 31 46 - Special Requirements for Mechanical and Electrical Work shall apply.

C. Section 26 05 00 - General Provisions for Electrical Work shall apply.

D. Drawings are diagrammatic and are a graphic representation of contract requirements to best available standards at the scale required.

1.02 DESCRIPTION OF WORK

A. This project is an upgrade of an existing Edwards/EST Model EST3 system. All new systems shall connect to the existing fire alarm RS485 network (a data connection). All new points shall also report to the existing FireWorks PC graphics computer. As part of this project, all programming of the existing system and/or graphics workstations shall be included as part of this contract.

B. Prior to installation of the new system the contractor is to study and record all pertinent information regarding the operation of the existing fans and location and state of existing fire smoke dampers during normal and alarm conditions, in order to preserve and maintain such operation under the new Fire Alarm system.

C. This specification intends to describe a Protected Premises integrated "Class E" Fire Detection and Evacuation system. It shall provide evacuation alarm tone signaling using sounding devices to sound the alarm evacuation and/or alert signals, and strobe lights as visual notification devices, with two way firefighters communications capabilities and firemen's HVAC override control panel. The system shall be intelligent device addressable, analog detecting, low voltage and modular, with digital communication techniques, in full compliance with all applicable codes and standards. Generic terms such as “sub system”, “the system”, “a system”, “the fire alarm system”, etc. shall be deemed to apply to the complete intelligent analog addressable fire alarm system, unless specifically noted elsewhere.

D. The features and capacities described in this specification are a requirement for this project and shall be furnished by the successful Contractor. The system as described shall be installed, programmed, tested, and delivered to the Owner in fully operational condition. The system shall include all required hardware, software, raceways and interconnecting wiring to accomplish the requirements of this specification and the contract drawings, whether or not specifically itemized herein. The system shall consist of, but not be limited to, the following:
   1. Fire Command Station and related remote data gathering panels.
   2. Remote Annunciators with semi flush backbox.

3. Addressable manual fire alarm stations.
4. Addressable analog area smoke detectors.
5. Addressable analog duct smoke detectors.
6. Addressable analog heat detectors.
7. Audible notification appliances - speakers.
8. Visual notification appliances - strobes.
9. Central station alarm connection control.
10. Air handling systems shutdown control.
11. Sprinkler supervisory switches and tamper switch supervision.
12. Battery standby.
13. Kitchen Ansul System Monitoring
14. ALL NYC Fire Alarm peripherals (listed as such but as required by the FDNY to meet the 2008 NYC code), placards, riser diagram, necessary switches, LED's, manual central office trip, Fuse Cutout, FDNY approved locks, with enclosed Purge switches shall be included in the system price. Data gathering panels shall be connected to a power riser with a fused disconnect. A common ground shall be included in the power riser.

E. Non-addressable alarm initiating, supervisory and status monitored devices shall be integrated into the fire alarm system, as applicable, via the addressable interface module:
1. Sprinkler water flow alarm (alarm initiating)
2. Sprinkler standpipe water flow (alarm initiating)
3. Sprinkler valve tamper switch (supervisory)
4. HVAC systems Purge On-Auto-Off with status monitoring and fire/smoke dampers closure with status monitoring, (provide positive feedback confirmation).

F. Audible / visual signaling devices and communicating devices to be controlled by the FCS and/or RSP transponder panels:
1. Speakers
2. Strobe Lights
3. Combination Speaker-Strobe
4. Telephone Stations

G. Devices to be controlled by the FCS and/or RSP's panel programmable relays, duct smoke detector programmable relays, remote system programmable addressable relays and/or intelligent addressable interface module relays:
1. Connections to the appropriate Central Monitoring Point or as directed by the Owner for manual station alarm, sprinkler alarm, smoke alarm, interfaced suppression system alarm, supervisory and system trouble conditions.
2. Air handling fan systems alarm shut down operations.
3. Air handling system return fans or exhaust fans used for smoke purge.
4. Fire/smoke dampers operations.
5. Stairwell smoke hatches/vents.
6. Elevator controls for elevator recall.
7. Elevator shaft smoke hatch/vent release control.

1.03 RELATED DOCUMENTS / WORK AND EXISTING CONDITIONS

A. RELATED DOCUMENTS
1. Prior to the commencement of work, the Contractor shall obtain all permits necessary for installation of the work. All permit costs and inspections fees shall be included as part of the required work.

2. Local requirements shall be adhered to with regard to submitting specifications, wiring diagrams, shop drawings and plans. Responsibility for furnishing the quantities of copies on cloth and/or paper, as directed by such requirements, shall be included as part of the work of this Section.
3. Prior to commencement and after completion of work, the Contractor shall notify all authorities having jurisdiction.
4. The Contractor shall submit a letter of approval of the installation, from the local code authority, before requesting final acceptance of the system.

B. RELATED WORK
1. The Contractor shall coordinate work in this Section with all related trades. Work and/or equipment provided in other Sections and related to the fire alarm system shall include, but not be limited to:
2. Duct smoke sensors to be installed, wired and connected to the fire alarm system by the Contractor.
3. Air handling system and smoke damper control circuits and fan status contacts are existing. They shall be wired and connected to the fire alarm system by the Contractor.
4. Sprinkler water flow alarm and valve tamper switches are existing. They shall be wired and connected to the fire alarm system by the Contractor.
5. Elevator communications circuit wiring (trail cables) and installation of alarm notification devices to be provided by the Elevator Vendor. Contractor to coordinate and reimburse Vendor.
6. Elevator recall control circuits to be provided by the elevator equipment Vendor. They shall be wired and connected to the fire alarm system by the Contractor. Contractor to coordinate and reimburse Vendor.
7. Coordinate and furnish labor and assistance of other trades for the mounting of and/or interfacing with any and all other fire alarm system related devices.

1.04 REFERENCES - APPLICABLE LISTINGS, CODES, STANDARDS, DOCUMENTS

A. STANDARDS AND CODES
1. All equipment shall be installed and complied with the current adopted provisions of the following codes and standards.
2. All equipment shall be U.L. listed for its intended use, as a minimum, the following standards shall apply:
   a. U.L. 228 - Door Holders for Fire Protective Signaling Systems.
   b. U.L. 268 and 268A - Smoke Detectors for Fire Protective Signaling Systems. - Detectors Duct Application.
   c. U.L. 346 - Waterflow Indicators for Fire Protective Signaling Systems.
   d. U.L. 464 - Audible Signaling Appliances.
   e. U.L. 864 - Control Units for Fire Protective Signaling Systems.
   f. U.L. 1480 - Speakers for Fire Protective Signaling Systems.
   g. U.L. 1481 - Power Supplies for Fire Protective Signaling Systems.
   h. U.L. 1971 - Signaling Devices for the Hearing Impaired.
3. National Fire Protection Association Standards.
   a. NFPA No. 13 - 2002 Edition - Sprinkler Alarm and Supervision.
   b. New York City Electrical Code.
   c. NFPA No. 72 - 2002 Edition - National Fire Alarm Code.
   d. NFPA No. 72, 4-5 Remote Supervising Station Fire Alarm Systems (If Required)
   e. NFPA No. 72, 4-7 Auxiliary Fire Alarm Systems.
   f. NFPA No. 72, 3-12 Emergency Voice/Alarm Communications.

g. NFPA No. 101 - 2000 Edition - Life Safety Code

4. All raceways and wiring shall be installed in compliance with NFPA Standard 70 (New York City Electrical Code - Article 760). Codes shall be implicitly followed, in particular with regard to material type and quality, circuitry extensions from and connections to outlet and junction boxes, panel boards and similar appurtenances.
5. The fire alarm system and its installation shall comply with all applicable requirements of The Americans With Disabilities Act.
6. The fire alarm system and its installation shall comply with all other local codes and authorities having jurisdiction, including but not limited to, owner's engineering design guidelines.

1.05 DEFINITIONS

A. Initiating Device: A system component that originates transmission of a change of state condition, such as a smoke detector, manual fire alarm box, supervisory switch, etc.

B. Initiating Device Circuit: A circuit to which automatic or manual initiating devices are connected where the signal received does not identify the individual device operated. Typically known as a "Zone" for conventionally wired systems or circuits.

C. Notification Appliance: A fire alarm system component such as a bell, horn, speaker, strobe, printer, etc., that provides an audible or visual output or both.

D. Notification Appliance Circuit: A circuit or path directly connected to a notification appliance.

E. Signaling Line Circuit: A circuit or path between any combination of circuit interfaces, control units, or transmitters over which multiple system input or output signals or both are carried. (When used with addressable analog initiating devices, these SLC circuits are also known as "Addressable Loops")

F. Note: Both Signaling Line Circuits and Initiating Line Circuits operate initiating devices, however, they provide different communication capabilities. Code requirements differ greatly for performance and capacities. Refer to NFPA 72, Tables 3-5.1 & 3-6.1.

1.06 SYSTEM DESCRIPTION

A. The system shall operate as an integrated multiplexed protected premises fire alarm/emergency communication monitoring and control system.
1. Changes in the status of monitored points shall be detected by the microprocessor based fire command station utilizing distributed processing, peer-to-peer networking with remote system panel's located throughout the facility if required.
2. Sensor "dirty" and "excessively dirty" trouble conditions shall report automatically.
3. Devices shall be listed by U.L. for sensitivity testing by means of the portable programmer/tester or by readout from the control panel. Each addressable device address shall be set electronically, devices requiring dip switch settings, rotary switch settings, staples or jumper settings are not acceptable.
4. As a minimum, RSP's shall consist of an enclosure, power supply, digital communications circuitry, mother boards, batteries and hardware, modules, audio hardware, and circuitry described for inclusion in the fire alarm control panel as required to function as specified. System control panels shall function in stand alone fail safe mode upon loss of the FCS processing, communications or communications wiring.

5. Smoke detectors shall alarm at their programmed sensitivity settings and shall not revert to a common default setting when their operating system segment is in the default mode.
6. System individually identifies each addressable initiating device and other addressable monitor functions using multiplexing interfacing techniques.
7. System is capable of individually operating each alarm indicating appliance, and other control functions, using multiplexing techniques.
8. The FCS shall be listed and capable for the release FM200, Deluge and Pre-action systems.

B. Life safety alarm function programs shall perform automatically upon system alarm actuation. In addition, control points may be operated manually at any time by the attendant through appropriate keyboard commands. The system FCS shall also provide integral programmable function control switches to allow personnel to manually operate specific preprogrammed control output functions, as required.

1.07 QUALITY ASSURANCE

A. It is the intent of these Specifications to provide a complete fire alarm system that complies in all respects with the requirements of all applicable codes and standards. Equipment, materials, software, installation practices, etc. that do not meet these requirements or do not meet the performance standards herein specified shall not be acceptable.

B. Fire alarm system equipment furnished under this Specification shall be UL listed, under the appropriate category, as a product of a single manufacture. All central control equipment shall be listed under UL category UOJZ as a single control unit. The manufacture shall have been engaged in the production of this type of equipment for at least ten (10) years.

C. The equipment furnished under this Specification shall be that of the specified manufacturer. Before commencing work the Contractor shall submit data showing that the manufacturer has successfully installed fire alarm systems of the same scope, type and design as specified. The Contractor shall also include the names and locations of at least three installations where such systems have performed satisfactorily for the preceding 18 months.
1. The Contractor shall submit three copies of all required Licenses and Bonds as required in the State or Province having jurisdiction.
2. The installing Contractor shall employ on staff a minimum of one NICET level 2 technician or a professional Engineer, registered in the State of the installation.
3. The installing Contractor shall be qualified by Underwriter's Laboratories certifying the complete system meets UL upon completion of the installation. Ongoing maintenance and testing shall be provided to the Owner under a maintenance contract to maintain the certification.
4. Installation contractors unable to comply with the provisions of 1.06 shall present proof of engaging the services of a subcontractor qualified to furnish the required services.

D. Provide the services of a representative or technician from the manufacturer of the system. The representative or technician is to be certified and experienced in the installation and operation of the type of system provided. The representative shall be licensed in the State, if required by law. The fire alarm Contractor shall supervise installation, software programming, software documentation, adjustments, preliminary testing, final testing and certification of the system. The fire alarm Contractor shall also be required to provide operational instruction to the Owner's personnel. Instruction shall include system operation, maintenance, programming and arm/disarm procedures.

E. Acceptance of substitutions: Substitutions will not be permitted.

F. Should conflicts arise between project drawings and/or these Specifications, regarding design, quantities of devices or circuits, the higher quantity or cost shall be considered as correct, unless directed by the Engineer to provide other appropriate measures.

G. It is the Contractor's responsibility to submit acceptable equipment for review by the Engineer. The Contractor shall bear all liability for damages arising from his failure to submit equipment that meets these Specifications, including, but not limited to, any penalties for failure to meet construction deadline.

H. Final determination of compliance with these Specifications shall rest with the Engineers, who, at their discretion, may require proof of performance at the cost of the Contractor. Required proof may include, but shall not be limited to, expense paid visits by representatives of the Owner and Engineer to sites where identical equipment is installed and providing beneficial use.

1.08 SUBMITTALS

A. Prior to the start of work, the Contractor shall provide a complete and comprehensive submittal for review by the Engineer. These are to describe the proposed system and its equipment. Failure to provide a complete submittal shall be grounds for summary rejection of any incomplete submittal documentation. Contractor’s who provide Resubmittal’s, due to prior rejection, shall be subject to a review fee, should the Engineer elect to do so. The complete submittal shall include, but not be limited to, all of the following material:

1. Power Calculations
   a. Battery capacity calculations. Battery size shall be a minimum of 125% of the calculated requirement.
   b. Supervisory power requirements for all equipment.
   c. Alarm power requirements for all equipment.
   d. Power supply rating justification showing power requirements for each of the system power supplies. Power supplies shall be sized to furnish the total connected load in a worst case condition plus 25% spare capacity.
   e. Voltage drop calculations for wiring runs demonstrating a worst case condition.
2. Complete manufacturer's catalog data including supervisory power usage, alarm power usage, physical dimensions, finish and mounting requirements.
3. Complete drawings covering the following shall be submitted by the Contractor for the proposed system. Floor plans in a CAD compatible format showing all equipment and raceways, marked for size, conductor count with type and size, showing the percentage of allowable National Electric Code fill used.
4. A complete proposed system database including a description of all logic strings, control by event programming and point identification labels on a 3.5" high density floppy disk and in a formatted printed form, as required for offsite editing, shall be submitted for evaluation by the Owner.
   a. The program shall include all required interactive control functions between the local network systems and the methods for implementing these actions.
5. Provide the address, telephone number, and contact person(s) of the manufacturer's local service facility for normal and off hour warranty issues.
6. If the fire alarm system and its equipment is supplied by a manufacturer's distributor, as part of the submittal documentation, the manufacturer shall provide, on its corporate letterhead, a "letter of support". Said "letter of support" shall state that, when in the opinion of the Engineer, the distributor's efforts require backup and/or assistance, the

manufacturer shall provide, at no cost to the Owner, all required technical support and manpower, in a timely manner, during the installation period and for a one (1) year guarantee period starting on the date of final acceptance by the Owner and the Authority Having Jurisdiction. If said "letter of support" is not submitted, the manufacturer's equipment will be deemed unacceptable and shall be grounds for summary rejection.

7. Provide a fire alarm system function matrix. Matrix shall illustrate alarm output events in association with initiating devices input events. Matrix shall represent a summary of the installed system alarm, supervisory and trouble functions. Include any and all departures, exceptions, variances or substitutions from these Specifications and/or drawings at the time of bid. Failure to provide this requirement shall be cause for summary rejection of submittal documents where additional departures are discovered. (See Appendix-A "this document" for minimum matrix requirements and NFPA Appendix A-7-5.2.2(i) 1996).
8. For each system control panel and/or transponder panel, provide panel ampere loading during both normal and alarm mode's, with time calculations to substantiate compliance with battery backup power requirements (battery Ampere-Hour capacity), described elsewhere in these Specifications.
9. For each system control panel and/or transponder panel, provide written schedule of active and spare addresses provided on each addressable circuit to substantiate compliance with circuit usage/spare requirements, described elsewhere in these specifications.
10. For each system control panel and system transponder notification appliance circuit provide a written schedule of spare capability in amperes and/or wattage available for future possible use.
11. Provide manufacture's printed product data, catalog pages and descriptions of any special installation requirements and/or procedures. Drawings depicting any special physical installation requirements shall show physical plans, elevations, all dimensions, conduit entry, minimum access clearances and any other details required.
12. Provide a signed letter and notarized statement on the manufacture's letterhead, stating that each analog addressable data communications circuit shall support one hundred (100%) of the circuits and addressable devices in alarm or operated at the same time, during both primary (AC) and secondary (battery) power conditions.
13. Provide shop drawings as follows:
    a. Coversheet with project name, address and drawing index.
    b. General notes drawing with peripheral device backbox size information, part numbers, device mounting height information, and the names, addresses, point of contact, and telephone numbers of all contract project team members.
    c. Device riser diagram that individually depicts all control panels, annunciators, addressable devices, and notification appliances. Shall include a specific, proposed point descriptor above each addressable device. Shall include a specific, discrete point address that shall correspond to addresses depicted on the device layout floor plans. Drawing shall provide wire specifications, and wire tags shown on all conductors depicted on the riser diagram. All circuits shall have designations that shall correspond with those require on the control panel and floor plan drawings. End-of-line resistors (and values) shall be depicted.
    d. Control panel termination drawing(s). Shall depict internal component placement and all internal and field termination points. Drawing shall provide a detail indicating where conduit penetrations shall be made, so as to avoid conflicts with internally mounted batteries. For each additional data gathering panel, a separate control panel drawing shall be provided, which clearly indicated the designation, service and location of the control enclosure. End-of-line resistors (and values) shall be depicted.

e. See section 3.4 DOCUMENTATION AND TRAINING for other documents relating to this section.

f. Device typical wiring diagram drawing(s) shall be provided which depict all system components, and their respective field wiring termination points. Wire type, gauge, and jacket shall also be indicated. When an addressable module is used in multiple configurations for monitoring or controlling various types of equipment, different device typical diagrams shall be provided. End-of-line resistors (and values) shall be depicted.

g. Device layout floor plans shall be created for every area served by the fire alarm system. CAD Files (AutoCAD – latest edition) shall be requested from the consulting engineer for the fire alarm system equipment vendor in the preparation of the floor plans. Floor plans shall indicate accurate locations for all control and peripheral devices. Vendor drawings shall be NO LESS THAN 1/8 INCH SCALE. All addressable devices shall be depicted with a discrete address that corresponds with that indicated on the Riser Diagram. All notification appliances shall also be provided with a circuit address that corresponds to that depicted on the Riser Diagram. If individual floors need to be segmented to accommodate the 1/8" scale requirements, KEY PLANS and BREAK-LINES shall be provided on the plans in an orderly and professional manner. End-of-line resistors (and values) shall be depicted.

h. Contained in the title block of each drawing shall be symbol legends with device counts, wire tag legends, circuit schedules for all addressable and notification appliance circuits, the project name/address, and a drawing description which corresponds to that indicated in the drawing index on the coversheet drawing. A section of each drawing title block shall be reserved for revision numbers and notes. The initial submission shall be Revision 0, with Revision A, B, or C as project modifications require.

14. Battery calculations shall be provided on a per power supply/charger basis based on 24 hours of supervision and 45 minutes of alarm. These calculations shall clearly indicate the quantity of devices, the device part numbers, the supervisory current draw, the alarm current draw, totals for all categories, and the calculated battery requirements. Battery calculations shall also reflect all control panel component, remote annunciator, and auxiliary relay current draws. Failure to provide these calculations shall be grounds for the complete rejection of the submittal package.

15. Table of contents, product data sheets, sequences of operation, battery calculations, installation instructions, licenses, NICET certifications and B-Size (blackline) reduced shop drawings shall be provided by the fire alarm vendor as part of a single, spiral bound submittal book. The submittal book shall have laminated covers indicating the project address, project number, system type, and contractor. The book shall consist of labeled dividers, and shall not exceed 9 ½" in width, and 11 ½" in height. No less than three (3) sets of submittal booklets shall be provided to the consulting engineer for review and comment. Additional copies may be required at no additional cost to the project.

16. Scale drawing sets shall be submitted along with the submittal booklets. These drawings may be either D-Size or E-Size Blueline drawings and of a sufficient resolution to be completely read. Sets shall be bound and folded so as to not take up more than 100 square inches of space. No less than three (3) sets of scale drawing sets shall be provided to the consulting engineer for review and comment. Additional copies may be required at no additional cost to the project.

17. The fire alarm Contractor shall provide copies of certification for service technicians formal training by the system manufacture. As a minimum, certification documents

shall indicate training dates, systems qualified, name of individual certified and current status.

1.09 SYSTEM OPERATION

A. Description

INITIATION	OPERATION
1. Operation of manual fire alarm stations	Sound evacuation tone signal through loudspeaker stations, and flash visual fire warning signals, on alarm floor and floor below. Sound an "alert" tone signal on all other loudspeakers. Recorded announcements shall follow tone signals. Sound audible signal and display "manual station" and zone identification at fire command station and outlying annunciators. Operate relay at fire command station to accommodate transmission of a "manual" signal through telephone company wires to central station location.
2. Operation of manual fire alarm station	Sound evacuation tone signal through loudspeaker stations and flash visual fire warning signals on alarm from floor and all other floors. Operate relay at fire command station to accommodate transmission of a "manual" signal through telephone company wires to central station location.
3. Triggering of duct smoke detector; or of area smoke or heat detector.	Initiate an automatic alarm zone verification sequence. Upon verification, sound evacuation and alert tone signals and recorded announcements through loudspeaker stations, and flash visual fire warning signals as noted for manual stations. (Omit alarm verification sequence for heat detectors.) Sound audible signal and display "duct smoke" "area smoke" "elevator lobby smoke" or “area heat” detector and zone identification at fire command station and outlying annunciators. Operate relay at fire command station to accommodate transmission of an "automatic" signal through telephone company wires to a central station location. Operate outlying addressable modules to accommodate transmission of signals to dampers, fans, elevators, and other equipment, as scheduled and/or as specified hereinafter. Display status of affected equipment at Fire Command Station. Release electrically locked doors in the ingress and egress path. Actuation of any Fireman’s service key switch shall unlock fire stairway re-entry doors and other doors permitted in egress path and shall release smoke doors. Initiate live voice communications from the FCC.

INITIATION	OPERATION
4. Triggering of elevator lobby smoke detector.	Same as pars. 2 and recall elevators serving alarm floor to the designated level. Also, no door release, fans over 2000 cfm shutdown is required and live voice messages are required.
5. Triggering of top of elevator shaft and elevator machine room heat detector	Same as para. 2 above and trip elevator power supply circuit breaker..
6. Triggering of waterflow switch in sprinkler system	Sound audible signal and display "waterflow" and zone identification at fire command station and outlying annunciators. Sound evacuation and alert tone signals, followed by recorded announcement, through loudspeakers, and flash visual fire warning signals, as noted above for manual stations. Operate relay at fire command station to accommodate transmission of a "waterflow" signal through telephone company wires to a central station location. Operate outlying addressable modules to accommodate transmission of signals to elevators, fans, dampers and other equipment, as scheduled elsewhere or as described hereinafter. Display status of affected equipment at Fire Command Station.
7. Operation of tamper switch on manual valve of sprinkler or fire standpipe system	Sound audible signal and display "manual valve tamper" and location identification at fire command station. Operate relay at fire command station to accommodate transmission of a "supervisory" signal through telephone company wires to a central station.
8. Operation of "master alarm" switch at Fire Command Station	Sound evacuation tone on all speakers in building and flash all strobes.
10. Operation of individual motorized equipment "override start or stop" control switch at the fire command station.	Initiate start or stop operation and display status of fans over 2,000 command report status of all fire/smoke dampers at the fire command station.
11. Operation of "outside assistance" key switch at the fire command station	Operate relay at fire command station to accommodate transmission of signal to central station location.
12. Operation of "fire drill" key switch at the fire command station	Void operation of "central station" relays.
13. Operation of individual smoke exhaust damper system “purge” switch.	Initiate operation and display status of selected damper system to permit smoke purge of selected area.

INITIATION	OPERATION
14. Operation of individual smoke exhaust damper system "override" purge switch.	Reinitiate operation and display status of selected damper system after damper heat sensor has operated.

B. Fire Smoke Damper Control Sequence of Operations
   1. Under normal operation, fire smoke dampers shall be held open.
   2. Under a fire alarm condition, fire alarm system control relays shall close dampers.
   3. For smoke purge of a specific floor, as initiated at the fire alarm system smoke purge panel, the fire alarm system shall open dampers through control relays for dampers indicated for smoke purge on the floor to be purged.
   4. When the fire alarm condition is cleared and the fire alarm system fan reset is activated, the fire alarm control relays at the fire smoke dampers shall close.

C. Smoke purge control sequence of operation
   1. Existing smoke purge sequence of operation for "David Dubinsky Student Center" building on floors 4, 5 and 6 shall be duplicated in the new Fire Command Station from the existing Fire alarm Control Panel located in the West-Lobby. All programming, equipment, modules and controls for the floors currently purged shall be transferred from FACP to FCS. Provide adequate spare capacity for future smoke purge of the remaining floors.
   2. Emergency smoke purge shall be initiated from a smoke control panel provided as part of the fire alarm system and located adjacent to the FCS. The panel shall be activated by a fireman's key and shall contain switches to allow for actuation of smoke purge for each floor, one floor at a time.
   3. Actuation of smoke purge for a specific floor shall cause the designated fans to start in smoke purge mode and to open fire smoke dampers in the fire rated partitions on the floor designated for purge associated with these fans. The fire alarm system shall close a relay in the motor control wiring for each fan.
   4. The fire alarm system shall allow only one floor at a time to be smoke purged.
   5. Actuation and deactivation of the smoke purge panel shall be through a separate fireman's key independent of the fire alarm panel.
   6. Maintain existing line voltage and control wiring allowing smoke evacuation of the "David Dubinsky Student Center" building floors sub-cellar, cellar, 1st, 2nd, 3rd, 7th and 8th and all floors of the "Business and Liberal Arts Building".
      a. Provide interface to electric/pneumatic (E/E) switches in located at the existing main Fire alarm panel of "Business and Liberal Arts Building" in order to maintain their operation. The switches are to be activated during the Fire Alarm condition.
      b. The Post Fire Smoke Evacuation System operation is activated at the "Fire Brigade" station control board located in the Engineering office of Building D (Arts Building). Provide hardware and programming logic required to maintain the following existing sequence of actions. Upon clearing the Fire Alarm condition;
         1) Manually operate HOA switch for a particular return fan at Building D "Fire Brigade" control panel to "ON" position.
         2) Manually operate "Smoke" switch for a particular return fan at Building D "Smoke Evacuation Control" panel to "Smoke" position.
         3) Upon conclusion of smoke evacuation re-enable the normal ATC operation and disable smoke evacuation operation. Turn the "Smoke" switches for the return fans in the "Smoke Evacuation Control" panel to

"Off" position, and turn the HOA switches located at the "Fire Brigade" control board for supply and return fans of each AHU to "Auto" position.

4) Manually reset relays for fans and associated dampers at FACP in Building B allowing AHU fan operation and opening the FSDs.

D. Reset of all alarm initiating device circuits, alarm notification circuits, and equipment control relays shall be accomplished from the fire command station. Manual fire alarm stations shall require local reset before central reset from the fire command station is possible. In no case shall the above alarm reset procedure cause the resetting of equipment control relays (for fans, dampers, etc.). Such devices shall require separate reset from the fire command station.

E. It shall be possible to disconnect any floor, or any device or combination of devices on any floor, from the system to allow for maintenance, repairs, or the addition of system devices and wiring without disabling any other floor. Such disconnection shall cause a visual "disabled" annunciation at the fire command station identifying the floor and/or devices.

F. System operation shall be such as to provide automatic and/or manual shutdown of fans larger than 2,000 CFM, and of dampers and other equipment in response to alarm initiation, as well as central status reporting. Laboratory fume hoods and other fan designated on drawing as such shall continue to run if in operation. Any fans over 2,000 CFM shall be provided with manual control (and status reporting) from FCS. Controls shall be provided as described hereinafter. Include provisions at the FCS in outlying system equipment control cabinets, and in outlying addressable module boxes (or cabinets) - each located within 3'-0" of the associated motor starter, smoke purge damper control device or other equipment control device, control circuitry extensions (i.e., final connections) from the addressable module boxes to the controlled equipment and connections, all as required to achieve this control.

G. Combination smoke and fire dampers in the ductwork and duct-mounted smoke dampers shall be controlled by the fire alarm system. Smoke dampers and combination smoke and fire dampers shall be open under normal operation and shall close under a fire alarm condition. Smoke damper and combination smoke and fire damper control shall be on a floor-by-floor basis, in order to allow for smoke purge on a floor-by-floor basis.

H. System Configuration

1. Each manual station, smoke or heat detector, sprinkler/standpipe alarm or supervisory actuating device, and alarm or supervisory initiating device shall constitute a separate zone for reporting to the fire command station. For display at the fire command station (FCS), each reporting zone (i.e., device) shall be individually identified, except that multiple smoke detectors (or multiple heat detectors) located within a single space may be identified by a common display. It shall be possible to separately identify and display the address of the individual detector(s) in alarm within any such space by means of an appropriate command at the FCS keyboard or keypad.
2. The system shall provide for intercom and fire evacuation public address features as follows:-
   a. The system shall be of a dual channel type, capable of automatically broadcasting evacuation tones followed by recorded "evacuation" announcements repetitively to the alarm floor and other contiguous floor(s) as noted hereinbefore, and simultaneously broadcasting alert tones followed by recorded "alert" announcements repetitively to all other floors. No tone signals shall be broadcast in stairwells.

b. Manual "on-off" control from the fire command station of evacuation tone signals, recorded announcements and flashing of strobes through loudspeaker stations on any or all floors.
c. Initiation of voice announcements from the fire command station through loudspeaker stations on any or all floors, and separately through loudspeaker stations in stairwells.
d. Intercom use shall not interfere with simultaneous broadcasting of evacuation signals, alert tones or voice announcements over system loudspeakers.

3. The fire evacuation public address equipment in the system shall include the following features and functions:
   a. Amplifiers shall be sized to accommodate a quantity of speakers equal to that shown on the drawings, plus an additional bulk quantity of 20 speakers intended for installation at locations as directed throughout the building. Sizing shall be based on an average requirement of 2.0 watts per speaker.
   b. Amplifiers shall have a frequency response range of ±1.5 dB from 30 to 10,000 hertz and at rated output, less than 2% distortion over the frequency range of 60 to 15,000 hertz.
   c. Failure of a power amplifier shall shut down the amplifier and indicate a trouble condition as described in Appendix A. Amplifiers shall be arranged in such manner, either by pairing or automatic switchover, to provide redundancy.
   d. Tone oscillators, microphone circuits and ancillary equipment shall be paired in a similar fashion to the amplifiers and be provided with either automatic or manual switchover to the redundant system.
   e. Where the audio path consists of twisted pair "riser cables," it shall include double the number of required pairs (as determined by the total number of speakers called for). Connections at the amplifiers shall be arranged to readily allow their "transfer" to future amplifiers as necessary.
4. When distributed amplification is provided, such equipment shall conform to the redundancy requirements described hereinbefore, and the outlying equipment must derive its power from the central power distribution equipment.
5. Each floor telephone station shall be painted Fire Department red and shall be clearly identifiable as to its function. It shall contain detailed operating instructions on a plate or label which shall be clearly visible when the station is opened. The body of the station shall contain: a telephone handset, call-in pushbutton or alternate call initiation method, indicator lamp, circuit electronics, and terminal strips. The handsets shall be red molded thermoplastic with stainless steel armored cord, and shall utilize commercial type transistor components. Coordinate with the FIT IT Department and provide central intercom connection for all elevators under this project at the FCS. Include all wiring transfers and programming.
6. Reporting of all required alarms and supervisory signals to the Fire Command Station (FCS) from initiating devices of the non-addressable type, including (but not limited to) sprinkler and standpipe waterflow and supervisory devices, manual fire alarm stations, sub-system (e.g., halon, pre-action sprinkler, etc.) alarm and supervisory contacts, and the like shall be accomplished in conjunction with addressable monitoring modules of the initiating device type (i.e., AMM/ID). AMM/ID's shall be of a type intended for connection of NFPA 72, Style 6 "branch" signalling line circuits (SLC) as described hereinbefore and shall be connected to the appropriate SLC on the floor on which they are located. Except where incorporated as part of manual fire alarm stations (or in the outlet boxes on which they are mounted), AMM/ID's shall be mounted adjacent to the associated initiating devices in outlying addressable monitor module boxes and shall be complete with engraved red nameplate. Each AMM/ID shall be interconnected to its

associated initiating device by means of an initiating device circuit (IDC) as described hereinbefore. Provide an end-of-line resistor at each initiating device so as to permit supervision of the interconnecting circuitry. Terminals shall be incorporated in each addressable module box for the accommodation of all entering conductors.

7. Control (automatic and/or manual) and status reporting (monitoring) of equipment via the fire protective alarm system as specified hereinafter shall be accomplished by means of addressable control modules (ACM's) and addressable monitoring modules of the status reporting type (AMM/S's) located within 3'-0" of the controlled equipment in outlying addressable monitor boxes similar to those specified above for the AMM/ID's. Addressable modules (ACM's and AMM/S's) shall be provided in accordance with the following:
    a. ACM's and AMM/S's shall be of a type intended for connection to NFPA 72, Style 6 "branch signalling circuits (SLC's) as described hereinbefore, and shall be connected to the appropriate SLC serving the floor on which they are located.
    b. Each ACM shall provide (2) SPDT contacts suitable for use at voltages up to 250 VAC and capable of interrupting 10 amperes inductive, and shall derive its operating and supervisory current at 24VDC from the SLC. If necessary, these contact ratings shall be accommodated by means of auxiliary control relays mounted within or adjacent to the same addressable monitor boxes as the ACM's, and deriving their operating power from the associated ACM's, or directly from the associated ECC via separate supervised power supply conductors.
    c. Each AMM/S shall function so as to provide a readily identifiable status indication at the FCS in response to a 120 or 208 VAC signal from the associated controlled equipment. Incorporate an auxiliary status (monitoring) relay for each AMM/S to convert a 120 or 208 VAC AC signal to a "dry" contact if the AMM/S requires a "dry" contact for proper status signal initiation. Auxiliary status relays, if required, shall be mounted in the same outlying addressable module boxes as their associated AMM/S's.
    d. At locations where multiple equipment controllers are installed, the addressable modules (and any associated auxiliary relays) may be grouped in common addressable module boxes.
8. Outlying addressable module boxes, each complete as indicated, shall be provided for equipment requiring automatic or manual control by the FPA system on the basis of the following:
    a. One box including two ACM's ("stop", start") and one AMM/S ("RUNNING") for each fan over 2,000 CFM including fans in self-contained air conditioning units. Include one (1) additional ACM for each fan override in smoke purge mode.
    b. One box including two ACM's ("PURGE", "OVERRIDE PURGE") and two AMM/S's ("OPEN"/"CLOSED") for each smoke purge system damper.
    c. One addressable module box for each damper requiring purge override control function. Include one ACM ("CLOSED") and one ACM (“OPEN”), and two (2) AMM’s for monitoring of same.
    d. One addressable ACM/AMM module box for each smoke and fire/smoke damper.
    e. One addressable module box, including two ACM's ("recall", "recall to alternate floor") and one AMM/S ("elevators recalled") for each bank of elevators. Provide two additional ACM's to "de-energize/re-energize each elevator.
    f. Additional addressable module boxes as necessary to comply with the scheduled control of equipment in response to system alarm actuating devices.
9. Priority of Signals:
    a. Accomplish automatic response functions by the first zone initiated. Alarm functions resulting from initiation by the first zone are not altered by subsequent

alarms. The highest priority is an alarm signal. Supervisory and trouble signals have second- and third-level priority. Higher-priority signals take precedence over signals of lower priority, even though the lower-priority condition occurred first. Annunciate all alarm signals regardless of priority or order received.

b. Noninterfering: Zone, power, wire, and supervise the system so a signal on one zone does not prevent the receipt of signals from any other zone. All zones are manually resettable from the FACP after the initiating device or devices are restored to normal. Systems that require batteries or battery backup for the programming function are unacceptable.

c. Fire Alarm Control Panel (FACP) Response: The manual or automatic operation of an alarm-initiating or supervisory-operating device causes the FACP to transmit an appropriate signal including the following:
   1) General alarm.
   2) Smoke or heat detector alarm.
   3) Valve tamper supervisory.
   4) Elevator recall.
   5) Elevator shutdown.
   6) System trouble.
   7) Fan shutdown.
   8) Smoke-control initiation.

d. Transmission to Remote Central Station: Automatically route alarm, supervisory, and trouble signals to a remote central station in Engineer's office to Building "D" MER.

e. Silencing at the FCS: Switches provide capability for acknowledgment of alarm, supervisory, trouble, and other specified signals at the FACP; and capability to silence the local audible signal and light a light-emitting diode (LED). Subsequent zone alarms cause the audible signal to sound again until silenced by switch operation. Restoring alarm, supervisory, and trouble conditions to normal extinguishes the associated LED and causes the audible signal to sound again until restoration is acknowledged by switch operation.

10. Smoke detectors indicated in mechanical equipment rooms shall be of the combination photocell plus fixed temperature/rate-of-rise type.

11. Smoke detection devices shall have integrally mounted pilot lamps giving a "triggered" indication.

12. Smoke detection devices which are mounted in ducts shall be supplied with remote "triggered" indication pilot wired in parallel, in an approved manner, with the similar pilots included integrally with detection units. The pilots for duct detectors shall each be flush or surface mounted within 15 feet circuiting distance of its associated detector. Mounting and location to be as indicated on Plans.

13. Recording of Events:

a. Print a record all alarm, supervisory, and trouble events on the system printer. Printouts are by zone, device, and function. When the FACP receives a signal, the alarm, supervisory, and trouble conditions are printed. The printout includes the type of signal (alarm, supervisory, or trouble) the zone identification, date, and the time of the occurrence. The printout differentiates alarm signals from all other printed indications. When the system is reset, this event is also printed, including the same information for device, location, date, and time. A command initiates the printout of a list of existing alarm, supervisory, and trouble conditions in the system.

1) Permissible Signal Time Elapse: The maximum permissible elapsed time between the actuation of any fire alarm or fire-detection system alarm-initiating device and its indication at the FACP is 2 seconds.
2) Independent System Monitoring: Supervise each independent smoke- or heat-detection system, duct detector, and elevator smoke-detection system for both normal operation and trouble.
3) Circuit Supervision: Indicate circuit faults by both a zone and a trouble signal at the FACP. Provide a distinctive indicating audible tone and LED-indicating light. The maximum permissible elapsed time between the occurrence of the trouble condition and its indication at the FACP is 200 seconds.

I. System Supervisory Functions
1. Activation of any supervisory circuit, (i.e.; supervised fire sprinkler valve closure, fire suppression system air pressure abnormal, low temperature, fire pump trouble, emergency fuel tank level alarm), shall cause the following actions and indications:
   a. Activate “Supervisory Alarm” notification to the FCS computer terminal display indicating device address, device type, device location, time and date.
   b. Activate “Supervisory Alarm” notification to the on-site location as specified herein.
   c. Annunciate alarm notification on system remote alphanumeric annunciators.
   d. Audible signals shall be silenceable from the control panel by an acknowledge switch.
   e. Record within system history, the occurrence of the event, the time of occurrence and the device initiating the event.
   f. Record all events at the system alarm printer.

J. System Trouble Functions
1. Receipt of a system trouble alarm, shall cause the following actions and indications:
   a. Activate “Trouble Alarm” notification to the FCS computer terminal display indicating device address, device type, device location, time and date.
   b. Activate “Trouble Alarm” notification on site location as shown on the drawings.
   c. Audible signals shall be silenceable from the control panel by an acknowledge switch.
   d. Record within system history, the occurrence of the event, the time of occurrence and the device initiating the event.
   e. Record all events at the system alarm printer.
2. The fire alarm system wiring (except control wiring to fans, dampers, etc.) shall be electrically supervised to automatically detect and report trouble conditions to the FCS.
3. Any opens or grounds on Interface Addressable Module alarm initiating or supervisory circuit wiring and any opens, grounds or shorts across the addressable data communications, remote annunciator data communications, alarm speaker, or alarm strobe light circuit wiring shall initiate a system trouble condition.
4. System addressable devices shall be supervised for placement and normal operation. Removal of an addressable device or the failure of its internal electronic circuitry shall initiate a system trouble condition.
5. The following FCS and/or remote transponder control panels shall initiate a system trouble condition when the following occurs:
   a. Primary 120/220 VAC power loss.
   b. Battery disconnect.
   c. Battery low voltage.

d. FCS remote transponder or graphic LCD annunciator panel power loss.
e. FCS primary alarm log printer power loss.

6. Operating a central station agency alarm disconnect switch (if equipped), or any manual control commands that alter the system from its normal programmed standby configuration shall initiate a trouble condition.
7. Trouble conditions shall automatically activate an audible signal and flash the general system trouble LED indicator at the FCS. Pressing the trouble acknowledge key on the FCS shall silence the audible signal and continuously light the LED indicator, until the trouble condition is repaired. Subsequent trouble conditions shall resound the audible signal and again flash the LED. Each trouble condition must be individually acknowledged.
8. Removal of or failure of internal electronic circuitry of any addressable device shall initiate a system trouble condition.
9. The system shall provide status indicators and control switches for all of the following functions:
   a. Purge fan units by floor and/or fire area.
   b. Fire and/or smoke dampers.

K. HVAC supply-exhaust units, purge units, fire and smoke dampers shall be provided with a hand off-on-auto switch module with LED indicators. LED indication shall be red for “off”, green for “on” and amber for monitoring circuit integrity. In addition, visual indication shall be provided for positive feedback confirmation of field devices. LED status annunciation shall be real time and actual, derived from a monitored auxiliary contact on the fan contactor, sail switch or atmospheric pressure switch installed downstream from the fan.

PART 2 - SYSTEM OPERATION

2.01 BASIC SYSTEM EQUIPMENT, CIRCUITING, ADDRESSING AND OPERATING CAPABILITIES

A. The catalog numbers used are those of Edwards EST by UTC Fire and Security. No equals.

B. All products used shall be of a single manufacturer. Submission of notification appliances, auxiliary relays, or documentation from other than a single manufacturer shall not be acceptable and will be grounds for immediate disapproval without comment.

C. The Fire Alarm / Life Safety System supplied under this specification shall be a microprocessor-based Peer to Peer Token Ring network. All Control Panel Assemblies and connected Field Appliances shall be both designed and manufactured by the same company, and shall be tested and cross-listed as compatible to ensure that a fully functioning Life Safety System is designed and installed. The Network shall include a main FCS in the lobby area providing 3-channel audio through a wire Token Ring wire network for total system annunciation, by point, and reporting control purposes. The three audio channels shall allow the Fire Floor, Floor above and floor below to receive an evacuation messages, remaining floors of the building to receive standby message, and paging to a given area without affecting the messages being delivered during alarm. All amplifiers used in the DGP will be required to have built in standby tone generators in case the primary means of digital voice evacuation is impaired. Each DGP shall be designed with the highest level of survivability in mind, including an amplifier for each speaker circuit and one backup amplifier for each DGP.

D. Circuiting Guidelines
1. Each Signaling Line Circuit (SLC) shall be circuited so device loading is not to exceed 80% of loop capacity in order to leave for space for future devices. The loop shall have Class B operation. Each DGP shall include an SLC loop on a per floor basis. T-Tapping a selected loop to cover an alternate floor shall not be accepted.
2. NAC Circuits shall have Class B operation. Each of the following types of alarm notification appliances shall be circuited as shown on the drawings but shall be typically as follows:
   a. Audible Signals: Provide sufficient spare capacity to assure that the addition of five (5) audible devices can be supported without the need for addition control components (power supplies, signal circuit modules, amplifiers, batteries, etc.)
   b. Visual Signals Provide sufficient spare capacity to assure that the addition of three (3) visual devices can be supported without the need for addition control components (power supplies, signal circuit modules, batteries, etc.)
3. The network riser shall be wired NFPA Style 7 (Class A with isolation).
4. Where it is necessary to interface conventional initiating devices provide intelligent input modules to supervise Class B zone wiring.
5. Each of the following types of devices or equipment shall be provided with supervised circuits as shown on the drawings but shall be typically as follows:
   a. Sprinkler Valve Supervisory Switches: Provide one (1) supervisory module circuit for each sprinkler valve supervisory switch.
   b. When waterflow and tamper switches exist at the same location, provide one (1) dual input addressable module. When odd numbers of devices exist at a single location, provide additional single input addressable modules.
6. Each of the following types of remote equipment associated with the fire alarm system shall be provided with a form ‘C’ control relay contact as shown on the drawings, but shall be typically as follows:
   a. HVAC Fan Systems: Provide one (1) shutdown control relay contact for each HVAC fan system.
   b. HVAC Supply Fans: Provide one (1) shutdown control relay contact for each HVAC supply fan.
   c. HVAC Return Fans: Provide one (1) shutdown control relay contact for each HVAC return fan.
7. Provide a dedicated 24VDC circuit to feed all auxiliary relays required for inductive loads. Circuits shall be supervised via an end-of-line relay and addressable input module. Auxiliary relays shall not derive their power from the starter or load being controlled.
8. Each control or data gathering panel shall have a dedicated minimum 20Amp-120VAC feed. An appropriate fuse cut out shall be included, wired as indicated in the Electrical Code for the City of NY.
9. In no case shall any fire alarm circuit be sized beyond 80% of circuit capacity.

E. System power supplies, including necessary transformers rectifiers, regulators, filters and surge protection required for system operation, with the capacity to power the system in a worst case condition with all devices in alarm and all local indicating appliances active without exceeding the listed ratings. All system devices shall display normal and alarm conditions consistently whether operating from normal power or reserve (standby) power.
1. <u>System primary power</u>: Primary power for the FCS and the secondary power battery chargers shall be obtained from a dedicated emergency power circuits. Circuit breakers shall be fitted with a suitable guard, requiring removal of a screw to open, and used only for fire alarm. Each circuit used for fire alarm purposes shall be permanently labeled for function.

2. Secondary power supply: Provide sealed gelled electrolyte batteries as the secondary power supply for all fire alarm functions. The battery supply shall be calculated to operate loads in a supervisory mode for twenty four (24) hours for proprietary and central station systems, sixty (60) hours for municipal or remote supervisory systems, with no primary power applied, and after that time, operate in alarm mode for fifteen (15) minutes. Batteries shall be sized at 125% of the calculated size to compensate for deterioration and aging during the battery life cycle. Battery calculations shall be submitted to justify the battery size.
3. Provide battery charging circuitry for each standby battery bank in the system. The charger shall be automatic in design, adjusting the charge rate to the condition of the batteries. All system battery charge rates and terminal voltages shall be read using the fire alarm control panel LCD display in the service mode, indicating directly in volts and amps. Meters reading in percentage are not acceptable.
4. System core processor, with internal operating system to process incoming alarm signals and issue output commands required as a result of the alarm reception, by system programming or by manual commands. Total system response time shall not exceed 2.5 seconds on a system configured to maximum capacity. All system processors shall be supervised by individual watchdog circuitry furnishing automatic restart after loss of activity. Systems with single watchdog circuits for all processors shall not be acceptable unless supplied with a "hot" standby CPU. Digital communication capabilities required for the control panel to communicate with remote annunciators, input/output drivers and displays shall be provided.
5. Manual addressable fire pull stations shall be dual action and listed by Underwriters' Laboratories, Inc. The intelligent manual fire station shall operate on any addressable detection circuit. It shall be red in color with a diagonal white stripe one inch wide from the upper left hand corner to the lower right hand corner shall be painted or applied. The stripe shall not render any lettering illegible or cover any station number. Manual fire stations shall be individually annunciated on the control panel. Manual fire station address shall be set by electronic means only. Mounting height shall be 48" inches to the manual station actuation handle from the finished floor.
6. The intelligent/analog photoelectric smoke sensor shall be Underwriters' Laboratories, Inc. listed. The smoke sensor shall contain a long life light emitting diode (LED) as its light source, and photo diode as a light receiver. An automatic gain control circuit shall be compensating for detector aging and dirt accumulation. The smoke sensor shall be a plug-in twist/lock unit which allows for easy connection to its mounting base. Each smoke sensor, when activated, shall have a flashing LED indicator which shall be by the control panel. Application Specific Detection environmental settings shall be programmed as directed by the Engineer.
7. It shall be possible to adjust and/or electronically measure the sensitivity of each individual intelligent analog smoke sensor from the control panel. Relative sensitivity or manual test methods which check the smoke sensor at the maximum allowable obscuration will not be considered as being equivalent.
8. Duct smoke sensors shall be now flow type, addressable, photoelectric. Each smoke sensor and air duct housing shall be self-compensating for the effects of air velocity (from 300 to 4,000 CFM), temperature, humidity and atmospheric pressure. It shall not be necessary to field adjust the sensitivity to compensate for the above effects. Each smoke sensor shall utilize solid state components and be equipped with an alarm indicating LED which shall flash when the smoke sensor is activated. The smoke sensors address shall be set by electronic means only, no mechanical means such as dipswitches, rotary dials or by inserting programmable pins shall be used. The smoke sensor mounting base shall be of the twist/lock type. Each duct smoke detector shall be

provided with remote status panel with LED mounted flush on single gang plate with Legend "Alarm" and system identification name plate.

9. Heat detectors shall be a 135° F. rate compensation/fixed temperature element heat detector. Unit shall be U.L. for a maximum coverage area of 2,500 sq. ft.. Rate-of-rise alarm threshold rate shall be 15° F. per minute. Activation of the this rate-of-rise heat detector shall be self restoring. All detectors shall be addressable and have a white finish. The thermal detectors shall be individually annunciated on the control panel. Thermal detectors shall contain an integral alarm lamp. The detector's address shall be set by electronic means only, no mechanical means such as programming pins, dipswitches or rotary dials shall be used.
10. The intelligent interface module shall be listed by Underwriters' Laboratories, Inc. The unit shall incorporate a custom microprocessor based integrated circuit which shall provide communication with main fire control panel. The interface module shall supervise and monitor normally open or normally closed dry contacts. The interface module shall report the contact's status to the control panel. The intelligent interface module shall be dynamically supervised and uniquely identifiable by the control panel. The intelligent interface module's address shall be set by electronic means only, no mechanical means such as dipswitches, rotary dials or by inserting programmable pins shall be used. The intelligent interface module shall be used to uniquely identify field devices such as water flow switches, tamper switches, OS&Y valves or as directed by these specifications and project drawings.
11. The intelligent interface module shall be used when remote relay functions are required for system functional requirements, such as but not limited to, fan shut downs. Relay dry contacts shall be rated at 2 amp. 120 VAC resistive or 30 VDC resistive and shall be Form "C".
12. The FCS addressable data communications circuits shall support one hundred percent (100%) of the addressable devices in alarm or operated at the same time, during both primary (AC) and secondary (battery) power conditions. Systems which cannot support one hundred percent (100%) of the system address capacity in alarm or operated simultaneously cannot assure appropriate system alarm responses and shall not be acceptable.
13. Sounding Devices:
    a. Sounding devices shall be of sufficient number so that an alarm shall be clearly audible to all occupants of the building and/or fire area, as required by these Specifications.
    b. Audible alarm signals shall produce a sound level at least 15 dBA above the average ambient sound level or 5 dBA above the maximum sound level having a duration of a least 60 seconds (whichever is greater) measured 5 feet above the floor in each occupiable area. The average ambient sound level is the root mean square. A-weighed sound pressure measured over a 24-hour period.
    c. Bells: The bells shall be vibrating Motor Bells UL Listed for Fire Protective Service. Shells shall be aluminum, except as indicated. Bells shall have a permanent magnet motor and suppression to minimize RFI. Sound output at 10 feet shall be 92 dBA. Bells are weatherproof where indicated. Bells shall be Wheelock Model MB-G10-24-R.
14. Audible notification appliances shall be powered by dedicated notification circuits. Visual notification appliances shall be powered by dedicated notification circuits. Audible appliances and visual appliances shall not be powered by the same notification circuit. Combination audible/visual devices may be used, but shall be wired as per this Specification.

15. Visual signals shall be installed as shown on the drawings in accordance with the requirements of the U.L.1971 standard and NFPA 72. Where multiple visual signals are visible from any location, circuitry shall be incorporated for the synchronization of flash rate.
    a. UL 1971 Listed for Emergency Devices for the Hearing Impaired in all public mode installations.
    b. Strobes shall meet UL 1971 and produce a flash rate of one (1) flash per second minimum over the Listed input voltage (20VDC - 31VDC) range.
    c. All visual signals shall incorporate a Xenon flashtube enclosed in a rugged Lexan lens or equivalent with solid state circuitry.
    d. The strobe intensity shall have a minimum of 4 field selectable strobe settings for 15,30,75 or 110 candela (wall mount). The switch for setting the candela shall be mounted in the rear of the unit, to prevent tampering. Use Wheelock Model RSS-24 MCW-FR.
    e. The strobes shall be available for semi-flush or surface mounting and in combination with audible signals at locations shown on drawings.
16. Speakers and Speaker Strobes.
    a. The speaker shall be UL Listed under Standard 1480 for Fire Protective Service: speaker appliances equipped with strobes shall additionally be listed under UL Standard 1971, Signaling Devices for the Hearing Impaired.
    b. All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps of from ⅛ watt to 2 watts. All models shall have a listed sound output of 88.8 dB at 10 feet and a listed frequency response of 400 to 4000 Hz. The speaker shall incorporate sealed back construction. All input terminals shall accept #12 to #18 AWG wire size and be supervised.
    c. All UL 1971 Listed strobes shall be certified to meet FCC Part 15,Class B and shall incorporate low temperature compensation to insure the lowest possible current consumption. If synchronized, the strobes shall not have any drift. The speakers and speaker strobes shall be designed for indoor surface mounting. They shall mount to standard electrical back boxes requiring no additional trimplate.
    d. The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the voltage range of 16 to 33VDC for 24 VDC models. They shall incorporate a Xenon flashtube in a rugged Lexan lens. The strobe shall draw low current with zero inrush. The strobe intensity shall have a minimum of four (4) field selectable settings: 15,30,75 or 110 candela. The switch for selecting the intensity shall be mounted in the rear, to prevent tampering by unauthorized persons.
    e. Speakers and speaker strobes shall be installed to meet NFPA 72 (1999) and ADA requirements.
    f. The speakers and speaker strobes shall be Wheelock Series E70 Multi Candela.
17. The system shall provide status indicators and control switches for all of the following functions:
    a. HVAC supply and exhaust fans.
    b. Audible and visual evacuation alarm circuit zone control.
    c. Status indicators for sprinkling system water flow and valve supervisory devices.
    d. Any additional status or control functions as indicated on the drawings, including but not limited to, emergency generator functions, fire pump functions, door unlocking and security with bypass capabilities.
    e. Fire and/or smoke dampers.
    f. Telephone stations..

18. Manual control and annunciation of system audio status shall be provided by a set of modular switch units. Each module shall include eight discreet, momentary push button switched devices. Membrane type switches for this purpose shall not be acceptable.
19. Each switch shall include space for labeling switch function. The label shall be protected behind a clear protective membrane cover. In addition, each switch shall have two LED's associated with it. One of the LED's shall be amber in color and shall indicate a fault condition on a zone or zone's associated with that switch. The second LED shall be dual color red/green, and be capable through software configuration, to clearly indicate zone status including which audio source is active (i.e. Evacuation, Alert, Page, etc.)
20. Status only annunciation shall be provided by a set of modular visual Led indicators. Each module shall be capable, through system software mapping to include, but not limited to alarms and troubles. Each module shall include eight individual status indicators each containing one dual color LED for red and green status, and one amber color LED for zone integrity monitoring.
21. HVAC supply-exhaust units, fire and smoke dampers shall be provided with a hand off-on-auto switch module with LED indicators. LED indication shall be red for "off", green for "on" and amber for monitoring circuit integrity. In addition, visual indication shall be provided for positive feedback confirmation of field devices. LED status annunciation shall be real time and actual, derived from a monitored auxiliary contact on the fan contactor, sail switch or atmospheric pressure switch installed downstream from the fan.
22. Devices shall be listed by U.L. for sensitivity testing by means of the portable programmer/tester or by readout from the control panel. Device address and sensitivity assignments shall be predetermined electronically, devices requiring dip switch settings, rotary switch settings, staples or jumper settings are not acceptable.
23. Smoke detectors shall alarm at their programmed sensitivity settings and shall not revert to a common default setting when their operating system segment is in the default mode.
24. Software and Firmware Control:
    a. All software and firmware provided with a fire alarm system shall be listed for use with the fire alarm control unit.
    b. A record of installed software and firmware version numbers shall be maintained at the location of the fire alarm control unit.
    c. All software and firmware shall be protected from unauthorized changes through the use of "access levels."

F. One-way Tone/Voice Communication
1. The evacuation alarm and alert signals shall be capable of being initiated automatically from the FCS and transmitted to any speaker circuit, selected speaker circuits or all speaker circuits.
2. The alarm signal, alert signal and live voice announcements shall be capable of manual transmission from the FCS to any speaker circuit, selected speaker circuits or all speaker circuits by manual selection of the associated speaker circuit control switches.
3. Live voice announcements, via the hand-held microphone, by use of speaker control switches, shall take priority over all previously activated alarm inputs. In addition to NFPA 72 requirements, the system shall be capable of priority live voice announcements over subsequent alarm conditions. In no case shall subsequent alarms disrupt emergency live voice announcements.
4. Alarm speaker amplification equipment shall be sized, as a minimum, to provide the following wattage levels for each location type of alarm speaker:
    a. Each floor alarm speaker: Provide one (1) watt of input power.
    b. Each toilet alarm speaker: Provide one-half (½) watt of input power.

c. Each mechanical room alarm speaker: Provide two (2) watts of input power.
d. Each stairwell alarm speaker: Provide one-half (½) watt of input power.
e. Each elevator cab alarm speaker: Provide one-quarter (¼) watt of input power.

5. As a minimum, alarm speaker amplification equipment shall be sized to provide the above indicated wattage of input power to each location type of alarm speaker shown on the Drawings, plus twenty-five percent (25%) spare capacity to permit the addition of future alarm speakers.
6. Alarm speaker amplifiers shall be paired to provide 100% redundancy. One (1) backup alarm speaker amplifier shall be provided for each primary alarm speaker amplifier. If any primary alarm speaker amplifier fails, its function shall be taken over by its backup amplifier.
7. Alarm tone and alert tone oscillators and pre-amplifiers shall be paired to provide 100% redundancy.
8. As a minimum, each stairwell shall be provided with a dedicated notification appliance circuit.
9. As a minimum, the system shall be configured as a two (2) channel voice system.

G. Two-Way Telephone Communication

1. Picking up a telephone handset shall automatically:
   a. Sound an audible signal at the Fire Command Station (FCS).
   b. Flash the individual telephone "calling-in/connected" LED for the calling-in circuit at the FCS.
2. Connecting the call, by operating the appropriate telephone line "connect" switch, at the FCS shall automatically:
   a. Silence the audible call-in signal.
   b. Continuously light the individual telephone "calling-in/connected" LED indicator for the calling-in circuit at the FCS.
3. Operating additional telephone line "connect" switches, at the FCS shall automatically:
   a. Permit telephones to talk to other telephone locations via a patch in the telephone network, controlled at the FCS. Up to five (5) telephones may be operated simultaneously.
4. Telephones shall be capable of making announcements over alarm speaker circuits via a "patch" circuit and speaker circuit control switches, controlled at the FCS.
5. The telephone handset shall be red, equipped with armor covering over wiring at hand set to its housing.
6. Conductors
   a. Each conductor shall be identified as shown on the drawings at each with wire markers at terminal points. Attach permanent wire markers within 2 inches of the wire termination. Marker legends shall be visible.
   b. All wiring shall be supplied and installed in compliance with the requirements of the NYC Electric Code, and that of the manufacturer wiring guides.
   c. Wiring for analog loop circuits, conventional detection circuits, speaker circuits and telephone circuits shall based on the fire alarm manufactures wiring guidelines, but shall not be smaller then #16 AWG.
   d. Plenum rated cable, shall be rated for 150° degrees Celsius with an insulation of Teflon or its equivalent.
   e. Splices shall be made with UL listed mechanical connectors or shall be soldered and taped to assure reliable service.
   f. Crimp-on type spade lugs shall be used for termination's of stranded conductors to binder screw or stud type terminals. Spade lugs shall have upset legs and insulation sleeves sized for the conductors.

g. Wire nuts or other solderless splicing devices shall not be used.
h. Permanently label or mark each conductor at both ends with permanent alphanumeric wire markers.
i. A consistent color code for fire alarm system conductors throughout the installation shall be provided. The installation Contractor shall submit for approval prior to installation of wire, a proposed color code for system conductors to allow rapid identification of circuit types.
j. All nominal voltage branch circuit power feeds (120/220 Vac) shall be identified "labeled" at both ends of the circuit to indicate it's source and purpose.
k. Wiring within system control panels shall be arranged and routed to allow accessibility to equipment for adjustment and maintenance and to isolate nominal voltage wiring from system low voltage wiring.
l. Splices in electrical conductors in vertical risers are prohibited except when the length of conductors exceeds 150 feet in vertical risers, an approved terminal cabinet shall be used.

2.02 UL LISTED AND APPROVED EQUIPMENT

A. Fire Command Station/ Fire Alarm Control Panel Requirements: The fire alarm control panel or panels and all system devices including speaker-strobes, strobes, pull stations, smoke and heat detectors, etc. shall be Edwards's type EST4 series. All under one label "**UL listed and approved**" for the use of fire alarm systems in this area of the United States of America. The operating controls shall be located behind locked door with viewing window. All modules shall be labeled, and all zone locations shall be identified.

B. Main Central Processor, model 4-CPU: The main controller 4-CPU shall be supervised, site programmable, and of modular design supporting up to 125 detectors and 125 remote modules per addressable Signaling line Circuit (SLC). The CPU shall support up to 10 SLC's per network node for a total system capacity of 2500 Intelligent Addressable points. The system shall be designed with peer-to-peer IPV6 networking capability for enhanced survivability, with support for up to 40 nodes, each with up to 2500 points and an overall capacity of 100,000 points. The system shall include 8 Giga bytes of onboard memory which is used to store all system functionality and job specific data. All site specific and operating data shall survive a complete power failure intact. Passwords shall protect any changes to system operations. The system shall include a hot backup file, containing the entire systems database programming, for use in the unlikely event that the systems programs becomes corrupt. The system shall support a single standalone node or multiple nodes communicating on a TCP/IP, IPv6 network that supports mesh configuration. The network shall support physical media connections via fiber, twisted pair or CAT 5 in any combination. The Network shall support data transmission of panel-to-panel data, voice audio and firefighter telephone data on a single twisted pair or single fiber optic cable. The Network shall be configured as Class A or Class B or Class X configuration per the project plans. Networks restricted to Class N wiring shall not be permitted. Network shall support a back-to-back pass-through mode that shall maintain network connectivity on power down or catastrophic failure of a single panel. The network shall support twisted pair links to 5,000 ft., CAT 5 links to 3,280 ft., and fiber links to 130,994 ft. The network shall support hard copy report printing to a system printer connected to any panel in the network, systems that require reports be run from the panel that has a printer connection shall not be considered equal. The systems LCD display shall provide color graphics display of maintenance and sensitivity reports. The system shall support multiple languages/dialects and Unicode character set. The Control panel and network shall not use easily removable devices, such as SD cards or external storage devices for storage of system critical information including programming and project files. Communications outside the life safety network shall meet the requirements of FIPS Publication 197. Security-relevant

information, such as: failed login attempts, failed unauthorized accesses, and user modification shall be logged to panel history. Unsuccessful authentication attempts shall not leak information regarding the presence of the system or users. Credentials shall only be transmitted that are encrypted. The system shall provide for multiple users, roles shall be provided for users to ensure proper access by user for the role they perform on the system. All passwords shall use a cypher algorithm for security purposes to protect any sensitive information. No passwords shall be visible as plain text within the database or entire system. Sensitive information shall not be logged to history or displayed on service tools (e.g. passwords, PINs etc.). The system shall support configuration of multiple IP connections to external services including, central stations, email servers, web interfaces, reports, and third-party integration. Email messages shall support multiple languages in native characters that match the languages supported in the panel. Email messages shall support symbolic and color alarm event highlighting. The system shall support logging of up to 20,000 chronological events using FIFO. Is shall be possible to freeze or store the most recent 10,000 events separately from the FIFO log. It shall be supported to download all applications and firmware from the configuration computer at a single location on the fire network. The system shall support upload of a project file from any location on the fire network.

C. Main Graphic Touch Screen Display, model 4-LCDLE: The system shall provide a user interface that displays system events on a color touch screen display in a text format. The display must be capable of supporting a minimum of two languages including but not limited to English, Spanish, Portuguese or French. The display design shall be simplified for emergency users so that main common controls are provided as switches/buttons that provide positive feedback of operation, common control buttons shall not be part of the touch screen display area. The Common Control Switches and LEDs provided through tactile buttons with indicators shall be; Reset switch and LED, Alarm Silence switch and LED, Panel Silence switch and LED, Acknowledge switch and LED. In addition, the following LEDs shall be provided as discrete indicators, Alarm Indicator, CPU Fail Indicator, Trouble Indicator and Power Indicator. It must be possible to add additional common controls as required through the use of modular display units. The user interface must provide a color touchscreen LCD display with minimum resolution of VGA 640 x 480. The display shall provide a minimum of seven events displayed concurrently and support >200,000 colors. Hands free operations shall be provided for viewing the first eight highest priority events. Events of different priorities shall be automatically placed in easy to access queues. It shall be possible to view specific event types separately. Having to scroll through a mixed list of event types is not acceptable. The total number of active events by type must be displayed. Visual indication must be provided of any event type which has not been acknowledged or viewed. It must be possible to customize the designation of all user interface LEDs and Switches for local language requirements. The color LCD display must support scripts & ideograph style font types. It shall be possible to have a custom message for each device in addition to zone messages. Custom device messages must support a minimum of 42 characters each.

D. Control Display Module(s), model 4-24L Series: The Life Safety system shall support up to 576 tactile switches and 576 indicators incorporating annunciation of Alarm, Supervisory, Trouble and Monitor operations. Annunciation must be through the use of LED display strips, complete with a means to custom label each LED/Switch position as to its function. The labels must support the ability to allow visual custom grouping of LEDs and switches. Where applicable, control of remote smoke control devices must be made available at the control center. Switches with LEDs must provide positive feedback to the operator of remote equipment status. All individual indicator LEDs shall be configurable for color including Red, Yellow, Blue, Green or White to facilitate identification from a distance and maximize display location usage. Where voice audio is required, a means of paging individual zones must be available. The status of each paging zone must be annunciated. It must be possible to selectively page into specific zones. It

shall be possible to manipulate the evacuation of the building from the main control center. It must be possible for the emergency operator to put specific zones into evacuation manually. When being serviced or when it is necessary to disable switches, the system shall not 'remember' if a disabled switch is pressed. Switches' must be rubber to provide tactile feedback as well as a visual indication when a switch is activated.

E. Common Relay Module, model 4-COMREL: The system shall support dedicated common alarm, trouble and supervisory relays.

F. Network Controller, model 4-NET: The system shall support communicating on a TCP/IP, IPv6 network that supports multiple network topologies including any mix of ring, bus, star and mesh. The network shall support physical media connections via fiber, twisted pair or CAT5 in any combination. The Network shall support data transmission of panel-to-panel data, voice audio and firefighters' telephone data on a single twisted pair or single optical fiber. The Network shall be configured as Class A, Class B, or Class X (see project plans). Networks restricted to Class N wiring shall not be acceptable. Network shall support a back-to-back pass through mode that maintains network connectivity on power down for servicing or catastrophic failure of a single panel. For retrofit of existing installations the system shall support reuse of existing network wiring that meets the minimum wiring specification of the specified SFP controller, is electrically sound and is acceptable to the Authority Having Jurisdiction.

G. Network Controller Adder, model 4-NET-AD: Network Adder, model 4-NET-AD: The panel network shall communicate on a TCP/IP based, multicast IPv6 network that supports mesh configuration. The network shall support physical media connections via fiber, twisted pair or CAT5 in any combination. The network shall support data transmission of panel-to-panel data, voice audio, and fire fighter telephone data on a single twisted pair or single fiber optic cable. The Network shall be configured as Class A or Class B or Class X configuration. Networks restricted to Class N wiring shall not be acceptable. The network shall support a back-to-back pass-through degraded- mode for any media type to any media type that shall maintain network connectivity on power down or catastrophic failure of a single panel. Communications outside the life safety network shall meet the requirements of FIPS publication 197. Security relevant information, such as failed login attempts, failed unauthorized accesses, and user modification shall be logged to panel history. Unsuccessful authentication attempts shall not leak information regarding the presence of the system or users. Credentials shall only be transmitted that are encrypted. The system shall provide for multiple users, roles shall be provided for users to ensure proper access by user for the role they perform on the system. All passwords shall use a Cypher Algorithm. Passwords must use a hash. No password or authentication shall be exposed in any format in the system database viewable as plain text. Sensitive information shall not be logged to history or displayed on service tools (e.g. passwords, PINs etc.).

H. Ground Isolated USB Connections, model 4-USBHUB: The system shall provide USB connections for external peripheral devices including printers. Where a system printer is required the printer shall communicate to the system via USB, be supervised and support ground isolation. The event and status printer shall be a nine-pin, impact, dot matrix printer with a minimum print speed of 232 characters per second. Print parameters shall be set up with a menu drive program in the printer. The printer shall be capable of serial or USB communications protocol. The communications speed for RS-232 communications protocol shall be adjustable from 300 to 9600 Baud. The connection to the printer from the panel shall be supervised. The printer shall list the time, date, type and user defined message for each event printed. Alarm messages shall have a special character printed at the beginning of the message to allow easier location of alarm events

on the printout. Where required, Audible notification appliances shall be coded using a microprocessor based Positive, Successive, Non-Interfering (PSNI) coder module. The coder shall have a capacity for 1,000,000 unique codes and be capable of storing pending codes without a loss of an active code or interference from a new code. The coder shall output four rounds of two, three, or four-digit code sequences. The coder shall provide both 1 KHz audio tone output as well as a dry relay contact output. The coder shall output a continuous, temporal, or 60/90 BPM March time output as required at the end of the PSNI code sequence. In the event of a failure of the microprocessor, the coder shall automatically output a temporal code.

I. Signaling Line Circuit (SLC) Controller Module, Model 3-SSDC1/3-SDDC1: Up to 125 detectors and 125 modules; 250 addressable devices in total, shall be supported over a single pair of wires by each Signaling Line Circuit (SLC) Controller circuit. Loop distances of 11,000 feet (3300m) shall be possible. Class B, Class A and Class X wiring shall be supported and selected based on the contract drawings. The SLC Controller Module shall use an advanced communication format that provide exceptional response using a “BROADCAST POLL” where the loop controller checks the entire device circuit for any changes of state. Should one or more devices report a change the SLC Controller shall use “DIRECT ADDRESS SEARCH” to find reporting device(s). Devices that have entered the alarm state or become active shall be located nearly instantaneously. The unique use of “BROADCAST POLLING” combined with “DIRECT ADDRESS SEARCH” ensures that only new information is transmitted allowing a reduced baud rate with fast response time. To enhance survivability of the system the SLC Controller shall support a standalone mode for Addressable devices. Two catastrophic failure modes are supported. If the main panel CPU fails, the loop controller will continue to poll its devices. If an alarm is detected it will be sent on the local rail communication bus and received by other local rail modules. A common alarm condition throughout the panel will result. If the SLC controller fails, and a device (smoke or module) detects an alarm, specialized circuitry will make the node aware of the alarm condition. The panel’s main CPU will communicate the alarm condition to the rest of the network. Every time the SLC Controller Module communicates with a detector a green LED on the detector shall flash. Normal green LED activity is not disturbing to building occupants but can be quickly spotted by a maintenance technician. A red LED on the detector turns on only in the alarm condition. The Controller shall also supervise the device wiring, physical location of each device and the programmed device characteristics. This characteristic is accomplished by “MAPPING” the SLC circuit and committing the map to memory. Upon power up the loop controller will scan device serial numbers and map their physical location sequence on the loop, including “T” taps. After mapping is complete the controller automatically addresses each detector and module through downloading over the loop. There shall be no switches or dials to set. Each device is assigned a unique soft address generated by the site-specific program. The controller then compares the “Actual” physical device data to the “Expected” site specific program data. If any correlations are different, the loop controller issues a trouble to the CPU identifying the devices which do not match and posting a map fault. A graphical map of the loop can be uploaded depicting each device’s location on the loop, including branches (T-Taps) and all of the physical attributes associated with the device. The SLC controller shall have the ability to locate ground faults by specific module, speeding up the troubleshooting process. The SLC controller shall include electronic addressing and mapping eliminating duplicate addresses, which are very difficult to locate. During maintenance, should groups of detector heads be removed for service and returned into the wrong smoke detector base (location), the SLC Controller Module will automatically detect the problem. If the attributes of the switched devices are the same, the system will automatically download the correct soft addresses and algorithms to the devices (maintaining location supervision). If the attributes are not the same the systems will send a map fault indication to the system’s main CPU and post a trouble indicating the specific devices in fault. The SLC Loop controller shall also monitor the addressable devices for maintenance and

trouble conditions. Each smoke detector contains intelligence to adjust with environmental changes. This expands the amount of time required between cleaning while maintaining a constant alarm threshold. As the detector begins to exhaust the environmental compensation, and reaches the 80% level, the controller shall indicate a maintenance alert or dirty condition to the system's main CPU and indicate the specific device requiring cleaning. If cleaning is not performed the detector will continue to operate until all of its environmental compensation is utilized. At this point a dirty trouble indication shall be sent to the panels main CPU and post a trouble condition. If maintenance is still not performed the detector will automatically remove itself from service once the programmed threshold window has been breached (preventing a false alarm). When a detector includes carbon monoxide (CO) detection, the detector monitors its CO life remaining for the CO sensor element and provides this information automatically to the panel display. A unique CO maintenance signal is automatically generated by the panel when there is 8% (several months) of CO life remaining. Should the CO sensor not be replaced after the maintenance signal is reported, an "End of Life" trouble automatically posts on the panel when the CO sensor detection capability is exhausted. Remote test capability permits devices to be put in alarm, pre-alarm, supervisory, monitor, or security alarm, or trouble from the panel menu or controls. This facilitates testing of smoke and heat detectors as well as monitor and security devices. Fast test is also provided for CO detectors allowing these devices to be tested quickly in the field. The system shall have a UL Listed Detector Sensitivity test feature, which will be a function of the smoke detectors and performed automatically every 4 hours. The system shall support 100% of all remote devices in alarm and provide support for a 100% compliment of detector isolator bases. All panel modules shall be supervised for placement and return trouble if damaged or removed.

J. Modular Digital Alarm Communicator Transmitter, model 3-MODCOM: The panel shall have an interface module for remote site monitoring. The control panel shall include built-in (part of the fire alarm control panel) Digital Alarm Communicator Transmitter (DACT)) module to transmit smoke, supervisory, waterflow, trouble, CO Alarm (if included), pump running, and pump trouble events to a Central monitoring Station (CMS) company. The DACT shall support dual telephones lines, Contact I.D. communications, and configured for dual tone multi-frequency (DTMF) or pulse modes. It shall be possible to delay AC power failure reports, auto test call, and be site programmable. The DACT shall be capable of transmitting every individual condition to the central station via Contact I.D. format. Selection of Contact I.D. format SHALL be of the discretion of the engineer and building owner but shall be an available option. Contractors who choose a separate dialer must meet all of the above options and are responsible for all necessary added connections such as power (with FCO/FDS), conduit, wire, addressable interface modules etc.

K. Optional, IP with Cellular Interface Model DMP Model DUALCOMNF-L*: The DUALCOMNF-L*(LV for Verizon Cat M1 LTE or LA for AT&T Cat M1 LTE) is used in conjunction with the 3-MODCOM for applications where Plain Old Telephone (POTs) lines are not available or where Managed Facility Voice Network (MFVN) analog lines do not provide a stable interface. The DUALCOMNF shall capture the contact ID string from the 3-MODCOM and transmit the signal over IP to a UL-Listed central station. This connection captures Contact ID messages from the panel that are based on the SIA communication standard DC-05-1999.09-DCS. Messages are then formatted into a Serial 3 message and sent to an SCS-1R Receiver or SCS-VR Receiver. It shall include a red housing and be powered by regulated 24Vdc from the control panel. The Communicator shall be capable of supporting Network communication using existing Ethernet data networks, satellite communication, fiber optic networks, local area networks, wide area networks. The communicator shall also support LTE cellular communication using retail data networks. The communicator shall be configured as a

dual path system with primary network communication, a single path system with network communication or a single path system with cellular communication based on local Authority Having Jurisdiction (AHJ) and NFPA 72. Note: Dual Path is required in NYC.

L. Network alphanumeric annunciators, Model 4-ANN Series: The Life Safety system shall incorporate annunciation of Alarm, Supervisory, Trouble and Monitor operations. Annunciation must be using both LED display strips complete with a means to custom label each LED as to its function. LED color shall be selectable at configuration time. Where applicable control switches must be provided. Switches with LEDs must provide positive feedback to the operator of remote equipment status. A color touchscreen LCD display with basic common control LEDs and switches shall be provided. Optionally a second color touchscreen display may be added to support audio and telephone operations. The Common Control Switches and LEDs provided as minimum will be: Reset switch and LED, Alarm Silence switch and LED, Panel Silence switch and LED, Drill switch and LED. It must be possible to add additional common controls as required using modular display / control units. The LCD must provide the emergency user, hands free viewing of the first highest priority event. System events must automatically be placed in queues. It shall be possible to view specific event types separately. The total number of active events by type must be displayed. It must be possible to customize the designations of all user interface LEDs and switches for local language requirements. It must be possible to route system event messages to specific annunciator locations. It must be possible for the annunciator to contain a paging microphone and fire fighter telephone.

M. Lobby Mount Cabinet Enclosure (4-CAB Series): The cabinets shall be 14 gauge rolled steel and available in varies sizes based on the configuration and available in a Bronze or Red finish. Wallboxes have a black baked enamel finish. Lobby enclosure doors feature a modern contoured door design and integral viewing windows. They come with bronze or red baked enamel finishes. The door designs and colors ensure that there is a match to system annunciators and battery cabinets for a consistent look throughout the facility. Doors may be mounted as remote annunciators without the need to have large CAB enclosures behind. This allows larger equipment to be mounted remotely, minimizing wall penetrations in lobbies and public spaces, and removing the need to home-run all field wiring. The EST4 lobby enclosures backboxes, doors and chassis units are ordered and shipped separately for easy staging on project sites. With a variety of sizes available, customized installations offer the flexibility to support up to two color LCD touch screens, and LED and switch modules offering configurations of 576 5 color LED indicators, as well as 576 control switches along with microphone and firefighters' telephone options.

N. Audio Amplifiers, model ZA series: Provide emergency audio as part of the main fire alarm control panel. The emergency audio shall contain a paging microphone and zoned amplifiers capable of delivering multi-channel audio messages. The system shall support a minimum of 100 audio channels. Transmission of live paging audio shall be over the same data network wiring as the fire panel data. The network data transmission shall be over a dedicated single copper pair, dual multi-mode fibers, dual Single mode fibers, one single mode fiber as directed on the contract drawings to remote parts of the facility. Prerecorded messages shall be stored locally at each node. Transmission of prerecorded audio across the network during alarm events is not acceptable. For systems requiring multiple locations for paging, the ability to Request/Grant/Deny page privileges shall be supported. Priorities shall be configured in software covering the operational priorities between Autonomous Control Units (ACU), Central Control Station (CCS) and Local Operators Consoles (LOCs). As a minimum the system shall consist of: Local Page, Emergency Communication, Multiple Evacuation, Alert, Auxiliary, and General Signaling. Channels shall support hierarchical operation and be controllable from system

programming. The audio system shall also provide elevator, Stairwell and auxiliary signaling. Systems that cause signaling devices to go silent while performing any signaling functions will not be accepted. The system shall support repeat counts of audio messages, as well as stacking of audio messages in a FIFO configuration. The audio system zoned amplifiers must be able to operate 25 VRMS or 70 VRMS speakers. The amplifier output must be power limited and wired in a Class A or Class B configuration. The amplifiers shall source prerecorded messages locally and shall not have to rely on network communications to receive prerecorded messaging. Should local audio be unavailable the amplifiers shall provide an integral backup 1000 KHz temporal tone generator which shall operate in the event primary audio signals are lost and the amplifier is instructed to broadcast alarm information. It shall be possible to backup multiple zoned amplifiers with a common backup amplifier. Standby Audio amplifiers shall automatically sense the failure of a primary amplifier, and automatically program themselves to select and de-multiplex the same audio information channel of the failed primary amplifier, and fully replace the function of the failed amplifier.

O. Power Supplies: The power supply shall be a high efficiency switch mode type with line monitoring to automatically switch to batteries for power failure or brown out conditions. The automatic battery charger shall have low battery discharge protection. The power supply shall provide internal power and 24 Vdc at 7.0A continuous for notification appliance circuits. The power supply shall be capable of providing 7A to output circuits for a maximum period of 100 ms. All outputs shall be power limited.

P. Auxiliary power supplies shall be a high efficiency switch mode type with line monitoring to automatically switch to batteries for power failure or brown out conditions. The automatic battery charger shall have low battery discharge protection. The power supply shall provide internal power and 24 Vdc at 7.0A continuous for notification appliance circuits. The power supply shall be capable of providing 7A to output circuits for a maximum period of 100 ms.

Q. Firefighters Smoke Control System – FSCS: The FSCS shall be utilized for control of both Smoke Control and Post Fire Smoke Purge. Smoke control shall include Atrium, Stair, and Elevator Shaft Smoke Control as well as zoned smoke control per the project plans. Post Fire Smoke Purge shall include post fire smoke evacuation and control. The FSCS shall be integral to the Fire Command Station or Fire Alarm Control Panel. It shall include switch/LED modules that provide three position (on/off/auto and open/closed/auto) switches and 4 LED's (normal, on, off, fault or normal, open, closed, fault) per each smoke control system. The FSCS shall be UL864 and UUKL listed and designed per the Building Code Chapter 9. The FSCS shall include 3 position switches for each smoke control system. Each switch shall include On/Off/Auto positions for control of smoke control fan systems and Open/Closed/Auto positions for Smoke Control Dampers systems. The FSCS shall include the following indicators for each smoke control system as required per section 909 of the NYC Building Code: Fans, Dampers, or other operating equipment in their normal status – White Indicator. Fans, Dampers, or other operating equipment in their off or closed position – Red Indicator. Fans, Dampers, or other operating equipment in their on or open Status – Green Indicator. Fans, Dampers, or other operating equipment in Fault - Yellow Indicator. Smoke Control switch and LED modules shall include a printable portion next to each switch and LED set for a custom descriptor of each smoke control system. The printable portion shall include text and graphical icons indicating the function of the smoke control system. Verification All Dampers that are part of the smoke control system shall include verification per section 909 of the Building code and NFPA 92A. Verification shall mean end switches (true open and true closed) for each smoke control damper. All fans used for smoke control shall include verification per section 909 of the Building code and NFPA 92A.

Verification shall mean duct pressure, airflow, or equivalent sensors. The white normal indicator shall give the FSCS operator a clear indication that the smoke control equipment is operating properly. Dampers that are not open or not closed (mid point) shall extinguish the white indicator. When a smoke control fan is indexed to start manually or from the fire alarm system all dampers shall open. When fan is indexed to stop, all dampers shall close unless indicated differently on the project plans. Fire detection systems providing control input or output signals to mechanical smoke control systems or elements thereof shall comply with the requirements of Chapter 9 and NFPA 72.

R. Fire Service Access Elevator (FSAE) panel: Buildings over 120 feet to the lowest level of fire department vehicle access shall include a FSAE graphic annunciator panel. The FSAE shall be a graphical LED or PC type interface panel and include the following switches and indicators: 4 LEDS per floor with RED for a smoke condition, Red for a 135-degree unsafe heat condition, yellow for a cautionary 90–134-degree condition, and green indicating the floor is normal. These LEDs shall be arranged horizontally for each floor and labeled with the floor number and for each elevator machine room. A three position shall also be included for hoistway lights. Activating the hoistway switch to the on or off position shall send a supervisory condition to the main fire alarm control panel. Indicator lights shall also be included on the FSAE for elevator power normal, elevator emergency power fault, elevator hoistway ventilation power fault, Power on, Systems Trouble and the FSAE shall also include a lamp test switch.

S. Firefighters Post Fire Smoke Purge System (FPFSPS) – Where indicated on the contract plans include a Firefighters Post Fire Smoke Purge System either in a separate enclosure, in the main FCS/FACP, or as part of the FSCS (see contract plans for location and style). Controls for smoke purge shall only be available after activation of a built in FDNY/NYC approved 2642 key. A 2-position On/Off switch shall be included by floor or area for manual evacuation of smoke. Each 2-position switch shall include a green indicator that displays when the purge fan is on. The green LED indicator shall flash while the damper is turned on and turn steady green once the damper in confirmed open (true open from an end switch). The Purge Fan shall be interlocked with the Purge Dampers and shall not start until there is confirmation that the damper is open (true open). A graphic diagram indicating the portions of the building served by each Post Fire Smoke Purge System shall be included.

1. All Purge Dampers shall be monitored for open status (true status – i.e. end switch with Fire Alarm Monitor Module). LEDs shall be provided in the FSCS/FPFSPS for each purge damper zone to indicate that a damper is open.
2. All Purge fans shall be monitored for true on (true status of fan running). A separate 2 position switch and status LED shall be included for this function.
3. All Fans will not be affected upon system reset. Restarting the fans may be accomplished by turning them back on in an individual sequential fashion or through individual manual switches at the FSCS controls to eliminate the possibility of all fans turning on simultaneously.
4. Under normal circumstances, smoke exhaust fans, respective fire-smoke dampers, motorized dampers shall be closed unless noted otherwise on the project plans.

2.03 COMPONENTS

A. Intelligent Devices — General: Each remote device shall have a microprocessor with non-volatile memory to support its functionality and serviceability. Each device shall store as required for its functionality the following data: device serial number, device address, device

type, personality code, date of manufacture, hours in use, time and date of last alarm, amount of environmental compensation left/used, last maintenance date, job/project number, current detector sensitivity values, diagnostic information (trouble codes) and algorithms required to process sensor data and perform communications with the loop controller. Each device shall be capable of electronic addressing, either automatically or application programmed assigned, to support physical/electrical mapping and supervision by location. Setting a device's address by physical means shall not be necessary.

B. Intelligent Detectors — General: The System Intelligent Detectors shall be capable of full digital communications using both broadcast and polling protocol. Each detector shall be capable of performing independent fire detection algorithms. The fire detection algorithm shall measure sensor signal dimensions, time patterns and combine different fire parameters to increase reliability and distinguish real fire conditions from unwanted deceptive nuisance alarms. Signal patterns that are not typical of fires shall be eliminated by digital filters. Devices not capable of combining different fire parameters or employing digital filters shall not be acceptable. Each detector shall have an integral microprocessor capable of making alarm decisions based on fire parameter information stored in the detector head. Distributed intelligence shall improve response time by decreasing the data flow between detector and analog loop controller. Detectors not capable of making independent alarm decisions shall not be acceptable. Maximum total analog loop response time for detectors changing state shall be 0.5 seconds. Each detector shall have a separate means of displaying communication and alarm status. A green LED shall flash to confirm communication with the analog loop controller. A red LED shall flash to display alarm status. The detector shall be capable of identifying up to 32 diagnostic codes. This information shall be available for system maintenance. The diagnostic code shall be stored at the detector. Each smoke detector shall be capable of transmitting pre-alarm and alarm signals in addition to the normal, trouble and need cleaning information. It shall be possible to program control panel activity to each level. Each smoke detector may be individually programmed to operate at any one of five (5) sensitivity settings. Each detector microprocessor shall contain an environmental compensation algorithm that identifies and sets ambient "Environmental Thresholds" approximately six times an hour. The microprocessor shall continually monitor the environmental impact of temperature, humidity, other contaminates as well as detector aging. The process shall employ digital compensation to adapt the detector to both 24-hour long term and 4-hour short-term environmental changes. The microprocessor shall monitor the environmental compensation value and alert the system operator when the detector approaches 80% and 100% of the allowable environmental compensation value. Differential sensing algorithms shall maintain a constant differential between selected detector sensitivity and the "learned" base line sensitivity. The base line sensitivity information shall be updated and permanently stored at the detector approximately once every hour. The intelligent analog detectors shall be suitable for mounting on any Signature Series detector mounting base.

C. Photoelectric Smoke Detector, SIGA2-PS: Provide intelligent photoelectric smoke detectors SIGA2-PS. The analog photoelectric detector shall utilize a light scattering type photoelectric smoke sensor to sense changes in air samples from its surroundings. The integral microprocessor shall dynamically examine values from the sensor and initiate an alarm based on the analysis of data. Systems using central intelligence for alarm decisions shall not be acceptable. The detector shall continually monitor any changes in sensitivity due to the environmental affects of dirt, smoke, temperature, aging and humidity. The information shall be stored in the integral processor and transferred to the analog loop controller for retrieval using a laptop PC or the SIGA-PRO Signature Program/Service Tool. The photo detector shall be rated for ceiling installation at a minimum of 30 ft (9.1m) centers and be suitable for wall

mount applications. The photoelectric smoke detector shall be suitable for direct insertion into air ducts up to 3 ft (0.91m) high and 3 ft (0.91m) wide with air velocities up to 5,000 ft/min. (0-25.39 m/sec) without requiring specific duct detector housings or supply tubes. The percent smoke obscuration per foot alarm set point shall be field selectable to any of five sensitivity settings ranging from 1.0% to 3.5%. The photo detector shall be suitable for operation in the following environment: Temperature: 32°F to 120°F (0°C to 49°C), Humidity: 0-93% RH, non-condensing, Elevation: no limit.

D. Standard Detector Mounting Bases, SIGA-SB / SIGA-SB4: Provide standard detector mounting bases SIGA-SB suitable for mounting on North American 1-gang, 3½" or 4" octagon box and 4" square box. The base shall, contain no electronics, support all Signature Series detector types and have the following minimum requirements: Removal of the respective detector shall not affect communications with other detectors, Terminal connections shall be made on the room side of the base, bases that must be removed to gain access to the terminals shall not be acceptable. The base shall be capable of supporting one (1) Signature Series SIGA-LED Remote Alarm LED Indicator. Provide remote LED alarm indicators where shown on the plans.

E. Audible Detector Mounting Base, SIGA-AB4GT. Where shown on the project plans include detector audible/sounder base model SIGA-AB4GT. The sounder base shall be capable of two tones, Temporal 3 for a fire condition and Temporal 4 for a Carbon monoxide condition. The tones shall be fully programmable and also synchronize the sound with other sounder bases. The system shall be UL2017 listed for dual signaling for this purpose.

F. Duct Detector Housing, SIGA-SD: Provide model SIGA-SD Low profile intelligent addressable DUCT smoke detector as indicated on the project plans. Provide for variations in duct air velocity between 100 and 4,000 feet per minute and include a wide sensitivity range of .79 to 2.46%/ft. Obscuration. Include one Form-C shut down relay rated 2.0 amps @ 30 Vdc and also include slave high contact relays if required. Provide an air exhaust tube and an air sampling inlet tube that extends into the duct air stream up to ten feet. The addressable DUCT housing shall be suitable for extreme environments, including a temperature range of –20 to 158 degrees F (-29 to 70 degrees Celsius) and offer a harsh environment gasket option. Provide Remote Alarm LED Indicators SIGA-LED and/or remote test station model SD-TRK as indicated on the project plans.

G. Intelligent Modules — General: It shall be possible to address each Intelligent Signature Series module without the use of DIP or rotary switches. Devices using DIP switches for addressing shall not be acceptable. The personality of multifunction modules shall be programmable at site to suit conditions and may be changed at any time using a personality code downloaded from the Analog Loop Controller. Modules requiring EPROM, PROM, ROM changes or DIP switch and/or jumper changes shall not be acceptable. The modules shall have a minimum of 2 diagnostic LEDs mounted behind a finished cover plate. A green LED shall flash to confirm communication with the loop controller. A red LED shall flash to display alarm status. The module shall be capable of storing up to 24 diagnostic codes which can be retrieved for troubleshooting assistance. Input and output circuit wiring shall be supervised for open and ground faults. The module shall be suitable for operation in the following environment: Temperature: 32°F to 120°F (0°C to 49°C), Humidity: 0-93% RH, non-condensing.

H. Single Input Module, SIGA-CT1 (Waterflow Detectors, Tamper Switches etc.): Provide intelligent single input modules SIGA-CT1. The Single Input Module shall provide one (1)

supervised Class B input circuit capable of a minimum of 4 personalities, each with a distinct operation. The module shall be suitable for mounting on North American 2 ½" (64mm) deep 1-gang boxes and 1 ½" (38mm) deep 4" square boxes with 1-gang covers. The single input module shall support the following circuit types: Normally-Open Alarm Latching (Manual Stations, Heat Detectors, etc.), Normally-Open Alarm Delayed Latching (Waterflow Switches), Normally-Open Active Non-Latching (Monitor, Fans, Dampers, Doors, etc.), Normally-Open Active Latching (Supervisory, Tamper Switches).

I. Dual Input Module, SIGA-CT2: Provide intelligent dual input modules SIGA-CT2. The Dual Input Module shall provide two (2) supervised Class B input circuits each capable of a minimum of 4 personalities, each with a distinct operation. The module shall be suitable for mounting on North American 2 ½" deep 1-gang boxes and 1 ½" (38mm) deep 4" square boxes with 1-gang covers. The dual input module shall support the following circuit types: Normally-Open Alarm Latching (Manual Stations, Heat Detectors, etc.), Normally-Open Alarm Delayed Latching (Waterflow Switches), Normally-Open Active Non-Latching (Monitor, Fans, Dampers, Doors, etc.), Normally-Open Active Latching (Supervisory, Tamper Switches).

J. Single Input Signal Module, SIGA-CC1: Provide intelligent single input signal modules SIGA-CC1. The Single Input (Single Riser Select) Signal Module shall provide one (1) supervised Class B output circuit capable of a minimum of 2 personalities, each with a distinct operation. When selected as a telephone power selector, the module shall be capable of generating its own "ring tone". The module shall be suitable for mounting on North American 2 ½" (64mm) deep 2-gang boxes and 1 ½" (38mm) deep 4" square boxes with 2-gang covers, or European 100mm square boxes. The single input signal module shall support the following operations: Audible/Visible Signal Power Selector (Polarized 24 Vdc @ 2A).

K. Control Relay Module, SIGA-CR: Provide intelligent control relay modules SIGA-CR. The Control Relay Module shall provide one form "R" dry relay contact rated at 2 amps @ 24 Vdc to control external appliances or equipment shutdown. The control relay shall be rated for pilot duty and releasing systems. The position of the relay contact shall be confirmed by the system firmware. The control relay module shall be suitable for mounting on North American 2 ½" (64mm) deep 1-gang boxes and 1 ½" deep 4" square boxes with 1-gang covers.

L. Manual Pull Station, SIGA-270: Provide intelligent single action fire alarm pull stations as indicated on the project plans. The fire alarm station shall be of metal construction with an internal toggle switch. Finish the station in red with silver "PULL IN CASE OF FIRE" English lettering. The manual station shall be suitable for mounting on North American 2 ½" (64mm) deep 1-gang boxes and 1 ½" (38mm) deep 4" square boxes with 1-gang covers. It shall be possible to address each Signature Series fire alarm pull station without the use of DIP or rotary switches. Devices using DIP switches for addressing shall not be acceptable. The manual stations shall have a minimum of 2 diagnostic LEDs mounted on their integral, factory assembled single or two stage input module. A green LED shall flash to confirm communication with the loop controller. A red LED shall flash to display alarm status. The station shall be capable of storing up to 24 diagnostic codes that can be retrieved for troubleshooting assistance. Input circuit wiring shall be supervised for open and ground faults.

Fire alarm pull stations shall be suitable for temperatures 32°F to 120°F (0°C to 49°C), Humidity: 0-93% RH, non-condensing.

M. Weatherproof Pull Station, MPSR1-S45W-GE: Provide conventional single action weatherproof manual pull stations as shown on the project plans. The weatherproof fire alarm station shall be of metal construction with an internal toggle switch and weather rated gasket.

Finish of the station shall be red with silver “FIRE ALARM PULL DOWN” English lettering. The station shall include a weather rated single gang mounting box. Weatherproof fire alarm manual pull stations shall be suitable for temperatures -30 °F to 150 °F (-35 °C to 66 °C) and 0 to 85% RH, non-condensing. Each station shall be monitored by an addressable monitor module which shall be located in an interior (heated and conditioned) space.

N. Notification Appliances – General: All appliances shall be UL Listed for Fire Protective Service. All strobe appliances or combination appliances with strobes shall be UL 1971 and ULC S526 Listed. All appliances shall be of the same manufacturer as the Fire Alarm Control Panel specified to insure absolute compatibility between the appliances and the control panels, and to insure that the application of the appliances are done in accordance with the single manufacturers’ instructions. Any appliances that do not meet the above requirements, and are submitted for use must show written proof of their compatibility for the purpose intended. Such proof shall be in the form of documentation from EST clearly stating that the control equipment (as submitted) is 100% compatible with the submitted Notification Appliances.

O. Strobes, G1RF-VM Series: Provide EST Series G1RF-VM series low profile wall mounted strobes at the locations shown on the drawings. Strobes shall provide synchronized flash outputs. Strobe output shall be field selectable as indicated on the drawings in one of the following intensity levels; 15cd, 30cd, 75cd or 110cd. Low profile strobes shall mount in a North American 1-gang box or surface mounted on a matching back box provided by the manufacturer, as directed in the field

P. Provide speaker/strobes with a 4” cone as manufactured by EST, Cat. No. G4-S7 Series. The rear of the speaker shall be completely sealed protecting the cone during and after installation and screw terminals shall be provided for wiring. Speaker/strobe housings shall be red and include "FIRE" labeling. Speakers shall be provided for use with 70V systems and shall provide power taps at 1/4w, 1/2w, 1w, and 2w. Speaker/strobes shall provide UL confirmed 90 dBA sound output at 2w. Strobes shall provide 15, 30, 75 cd 110 candela synchronized flash outputs. The strobe shall have lens markings oriented for wall mounting. Ceiling mounted Speaker/Strobes shall have lens markings with correctly oriented lettering. Speaker/strobes shall mount in a North American 4” electrical box with extension ring using the 2 screws provided with ring.

Q. Weather Rated Strobes, Speakers and Speaker Strobes: Provide EST model WG4 series weather rated Notification Appliance Circuit (NAC) devices as indicated on the project plans. Weatherproof NAC devices shall be suitable for temperatures -35 °F to 151°F and 0 to 95% RH, non-condensing. Weather rated NAC devices shall include a weather resistant color matched mounting box and trim skirt. Speakers shall include multiple taps – ¼, ½, 1, and 2 watts for up to 89 dBA at 10 ft.

R. Multi-Voltage Control Relays, MR-200 Series: Provide remote control relays connected to supervised ancillary circuits for control of fans, dampers, door releases, etc. Relay contact ratings shall be DPDT and rated for 10 amperes at 115 Vac. A single relay may be energized from a voltage source of 24 Vdc, 24 Vac, 115 Vac, or 230 Vac. A red LED shall indicate the relay is energized. A metal enclosure shall be provided.

S. STI Stopper II Lexan Guards: Manual pull stations that are provided with STI Stopper II lexan guards shall include non-audible alarms as required on the plans. They shall be surface or flush mounting, as required for each individual device. Stopper Covers shall only be included on devices shown on the plans to include them.

T. Fire alarm equipment shall be powered through an approved Fuse Disconnect Switch (FDS) connected ahead of the main service switch. The FDS shall be heavy duty (200,000 rms short circuit amps) safety switch, painted red, include a ground and Neutral kit with grounding screw (to bond neutral), include a padlock with Y1 cylinder keyed to a NYC/FDNY 2642 key (use ABUS re-keyable 83-45 or equivalent lock). All wiring shall be #10 minimum THHN or equivalent run in ¾ inch EMT/RGS and in accordance with NYC requirements. The ground to the FDS shall be made using a NYC accepted method (see NYC electrical code), and the ground wire to the FDS shall be #8 minimum (larger if necessary to meet feed size). The equipment ground leaving from the FDS connecting to the fire alarm equipment shall include a #10 green ground. The FDS panel shall bear an engraved white-core phenolic or bakelite identification nameplate stating in minimum one-quarter inch (1/4") high white letters on a red background "FIRE ALARM FUSED DISCONNECT".

U. Where additional circuits are required by the fire alarm system, a Fused Cutout, properly sized shall be included, wired after the FDS. The size of the fuses shall be sized appropriately but be twenty (20) amperes minimum. The fused cut-out panel shall bear an engraved white-core phenolic or bakelite identification nameplate stating in minimum one-quarter inch (1/4") high white letters on a red background "FIRE ALARM FUSED CUT-OUT". The neutral shall not be bonded in the Fused cutout".

V. All control panels shall have integrated or exterior mounted tamper switches for the detection (monitoring) of open panel doors.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. Install system according to NFPA standards referenced in Parts 1 and 2 of this Section.

B. Fire Alarm Power Supply Disconnect: Paint red and label "FIRE ALARM." Provide with lockable handle or cover.

3.02 EQUIPMENT INSTALLATION

A. Manual Pull Stations: Mount semi-flush in recessed back boxes with operating handles 48 inches (1220 mm) above the finished floor or lower as indicated.

B. Waterflow Detectors and Valve Supervisory Switches: Connect for each sprinkler valve station required to be supervised.

C. Smoke Detectors: Install ceiling-mounted detectors not less than 4 inches (100 mm) from a side wall to the near edge. Install detectors located on the wall at least 4 inches (100 mm), but not more than 12 inches (300 mm), below the ceiling. For exposed solid-joist construction, mount detectors on the bottom of the joists. On smooth ceilings, install detectors not over 30 feet (9 m) apart in any direction. Install detectors no closer than 60 inches (1520 mm) from air registers.

D. Audible Alarm-Indicating Devices: Install not less than 90 inches (2280 mm) above the finished floor nor less than 6 inches (150 mm) below the ceiling. Combine audible and visual alarms at the same location into a single unit.

E. Visual Alarm-Indicating Devices: Install adjacent to each audible alarm device and not more than 80 inches (2030 mm) above the finished floor and at least 6 inches (150 mm) below the ceiling.

F. Device Location-Indicating Lights: Locate in public space near the device they monitor.

G. FCS: Surface mount with top of cabinets not more than 72 inches (1830 mm) above the finished floor.

H. Graphic Annunciator: Arrange as indicated, with the top of the panel no more than 72 inches (1830 mm) above the finished floor.

I. Addressable Modules: For individual dampers - in control boxes at each damper; for other controlled and/or monitored equipment - in dedicated control box within 3'-0" of the equipment.
   1. Outlying addressable module boxes, each complete as indicated, shall be provided for equipment requiring automatic or manual control by the FPA system on the basis of the following:
   2. One box including two ACM's ("purge", "override purge") and two AMM/S's ("open"/"closed") for each smoke purge damper system. Refer to HVAC floor plans and risers for quantity of smoke purge damper systems (i.e., one system for each penetration of any multi-floor duct which will be used for smoke purge, and for each fan system which includes direct outside exhaust provisions).

3.03 WIRING INSTALLATION

A. Wiring Method: For exposed runs install wiring in metal raceway according to Section 26 05 33 "Raceways and Boxes for Electrical Systems."

B. No raceways are required for fire alarm cables installation in hollow partitions and hung ceilings.

C. Wiring within Enclosures: Install conductors parallel with or at right angles to the sides and back of the enclosure. Bundle, lace, and train the conductors to terminal points with no excess. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with the fire alarm system to terminal blocks. Mark each terminal according to the system's wiring diagrams. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.

D. Cable Taps: Use numbered terminal strips in 3unction, pull or outlet boxes, cabinets, or equipment enclosures where circuit connections are made.

E. Color Coding: Color-code fire alarm conductors differently from the normal building power wiring. Use one color code for alarm circuit wiring and a different color code for supervisory circuits. Color-code audible alarm-indicating circuits differently from alarm-initiating circuits. Use different colors for visual alarm-indicating devices. Paint fire alarm system junction boxes and covers red.

F. Risers: Install at least 2 vertical cable risers to serve the fire alarm system. Separate risers in close proximity to each other with a minimum one-hour-rated wall, so the loss of one riser does not prevent the receipt or transmission of signal from other floors or zones.

G. Minimum temperature rating of the cables shall be 150 Deg. Celsius.

3.04 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals according to Division 26 Section "Basic Electrical Materials and Methods."

3.05 GROUNDING

A. Ground cable shields and equipment according to system manufacturer's instructions to eliminate shock hazard and to minimize, to the greatest extent possible, ground loops, common mode returns, noise pickup, cross talk, and other impairments.

B. Signal Ground Terminal: Locate at main equipment rack or cabinet. Isolate from power system and equipment grounding.

C. Install grounding equipment conductor and terminate it at water main. Refer to Section 26 05 26 for detailed requirements.

D. Ground equipment and conductor and cable shields. For audio circuits, minimize, to the greatest extent possible, ground loops, common mode returns, noise pickup, cross talk, and other impairments. Provide 5-ohm ground at main equipment location. Measure, record, and report ground resistance.

3.06 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Provide services of a factory-authorized service representative to supervise the field assembly and connection of components and the pretesting, testing, and adjustment of the system.

B. Pretesting: After installation, align, adjust, and balance the system and perform complete pretesting. Determine, through pretesting, the conformance of the system to the requirements of the Drawings and Specifications. Correct deficiencies observed in pretesting. Replace malfunctioning or damaged items with new ones and retest until satisfactory performance and conditions are achieved. Prepare forms for systematic recording of acceptance test results.

C. Report of Pretesting: After pretesting is complete, provide a letter certifying the installation is complete and fully operable, including the names and titles of the witnesses to the preliminary tests.

D. Final Test Notice: Provide a 10-day minimum notice in writing when the system is ready for final acceptance testing.

E. Minimum System Tests: Test the system according to the procedures outlined in NFPA 72. Minimum required tests are as follows:
   1. Verify the absence of unwanted voltages between circuit conductors and ground.
   2. Test all conductors for short circuits using an insulation-testing device.
   3. With each circuit pair, short circuit at the far end of the circuit and measure the circuit resistance with an ohmmeter. Record the circuit resistance of each circuit on the record drawings.

4. Verify that the control unit is in the normal condition as detailed in the manufacturer's operation and maintenance manual.
5. Test initiating and indicating circuits for proper signal transmission under open circuit conditions. one connection each should be opened at not less than 10 percent of the initiating and indicating devices. Observe proper signal transmission according to class of wiring used.
6. Test each initiating and indicating device for alarm operation and proper response at the control unit. Test smoke detectors with actual products of combustion.
7. Test the system for all specified functions according to the approved operation and maintenance manual. Systematically initiate specified functional performance items at each station, including making all possible alarm and monitoring initiations and using all communications options. For each item, observe related performance at all devices required to be affected by the item under all system sequences. Observe indicating lights, displays, signal tones, and annunciator indications. Observe all voice audio for routing, clarity, quality, freedom from noise and distortion, and proper volume level.
8. Test Both Primary and Secondary Power: Verify by test that the secondary power system is capable of operating the system for the period and in the manner specified.

F. Retesting: Correct deficiencies indicated by tests and completely retest work affected by such deficiencies. Verify by the system test that the total system meets the Specifications and complies with applicable standards.

G. Report of Tests and Inspections: Provide a written record of inspections, tests, and detailed test results in the form of a test log. Submit log upon the satisfactory completion of tests.

H. Tag all equipment, stations, and other components at which tests have been satisfactorily completed.

3.07 CLEANING AND ADJUSTING

A. Cleaning: Remove paint splatters and other spots, dirt, and debris. Touch up scratches and marred finish to match original finish. Clean unit internally using methods and materials recommended by manufacturer.

3.08 DEMONSTRATION

A. Startup Services: Engage a factory-authorized service representative to provide startup service and to demonstrate and train owner's maintenance personnel as specified below.
1. Train Owner's maintenance personnel on procedures and schedules related to startup and shutdown, troubleshooting, servicing, adjusting, and preventive maintenance. Provide a minimum of 8 hours' training.
2. Training Aid: Use the approved final version of the operation and maintenance manual as a training aid.
3. Schedule training with Owner with at least 7 days' advance notice.

3.09 ON-SITE ASSISTANCE

A. Occupancy Adjustments: When requested within one year of date of Substantial Completion, provide on-site assistance in adjusting sound levels, controls, and sensitivities to suit actual occupied conditions. Provide up to 3 requested adjustment visits to the site for this purpose.

END OF SECTION 28 31 13

Environmental Planning & Management, Inc.
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March 11, 2025

Mr. Allen King, Associate Executive Director
Facilities Department – Room AC11
Fashion Institute of Technology
340 Eighth Avenue
New York, New York 10001

Re: **Limited Asbestos Inspection Report**
FIT Pomerantz Building – Fire Alarm Project
Fashion Institute of Technology
300 Seventh Avenue, New York, New York 10001
EPM Project # 19071-180

Dear Mr. King:

Environmental Planning & Management (EPM) performed a limited inspection for the presence of asbestos containing materials in the **Pomerantz Building for the new fire alarm project** located at 300 Seventh Avenue, New York, New York. EPM employees and New York State Department of Labor (NYS DOL) certified asbestos inspectors Thomas Zabransky and Brandon Stark conducted the inspection. The inspection was performed by EPM on October 25 and November 1, 2023 and March 4, 2025 at the request of the FIT Facilities Department. Previous surveys of areas were performed on August 28, 2020 and January 18 and February 8, 2018. Personnel certifications and EPM company license are included as Attachment D.

Construction Scope of Work

The proposed scope of work is the **installation of a new fire alarm system and the removal of the old fire alarm components**.

Inspection Scope of Work

The scope of work for this investigation was limited to the characterization; through inspection and/or sampling and laboratory analysis; of the visible and accessible suspect asbestos containing materials that are anticipated to be impacted by the scope of work for the **installation of a new fire alarm system and the removal of the old fire alarm components.**

Bulk Sampling of Building Materials

Bulk samples were collected on October 25 and November 1, 2023 and March 4, 2025 of the following suspect building materials.

- White 12”x12” spline ceiling tiles
- Brown adhesive on ductwork fiberglass insulation
- Cementitious pipe elbow insulation
- White top coat wall plaster
- Brown base coat wall plaster
- Gypsum board
- Joint compound on gypsum board
- Mortar for block walls
- Ceiling insulation in the Great Hall Conference Room
- White gypsum board
- Mortar for stone tile flooring
- White top coat ceiling plaster
- Brown base coat ceiling plaster

Bulk samples were collected on August 28, 2020 of the following suspect building materials.

- **Off-white 12”x12” floor tiles with brown streaks**
- **Black mastic for off-white floor tiles**

Bulk samples were collected on January 18 and February 8, 2018 of the following suspect building materials.

- Grey mudded joint packing pipe elbow insulation
- Grey mudded joint packing valve insulation
- **Black and tan duct seam sealant in ductwork flanges**
- Tan caulk around exterior side of louvers
- Gasket material in pipe flanges
- White insulation on heat exchanger in Sub-Cellar DX01
- **White vibration damper cloth on Fan Unit HV-1D**
- Black vibration damper cloth on AC Units
- **Outer jacket layer over fiberglass insulation on AC Unit AC-1D**

Laboratory analysis has confirmed that the following materials are asbestos containing:

- **Off-white 12”x12” floor tile and associated black mastic on the floors of the Pomerantz Building**
- **Tan and black seam sealant in ductwork seams in Mechanical Room D701/D702**
- **Outer jacket layer over fiberglass insulation on Unit AC-1D in Mechanical Room DX01**
- **White vibration damper cloth on Fan Unit HV-1D in Mechanical Room DX01**

The floor tile and black mastic on the floors of the building will not be impacted as part of the fire alarm project. The new conduit risers are to be installed in areas where no floor tile and black mastic exists. The tan and black seam sealant in the metal ductwork seams within Mechanical Room D701/D702 will not be impacted by the installation of new fire alarm components on the walls and ceiling of the roof mechanical room. The outer jacket layer on the AC Unit AC-1D and white vibration damper cloth on Fan Unit HV-1D will not be impacted by the installation of new fire alarm components on the walls and ceiling of the sub-cellar Mechanical Room DX01. **All pipe insulation within the subcellar Mechanical Room DX01 that is not observed to be fiberglass insulation must be presumed to be asbestos containing and must not be impacted by the scope of work. Any presumed asbestos pipe insulation shall be avoided during the installation of the new fire alarm conduits**.

Laboratory analysis has also confirmed the brown base coat wall plaster on the 6th Floor contains a trace asbestos content.

Laboratory Certifications

The suspect asbestos containing material samples were delivered under chain of custody documentation to Alpha Labs located in Long Island City, New York for asbestos analysis. The laboratory was instructed to analyze the asbestos bulk samples in accordance with New York State Department of Health (NYS DOH) Environmental Laboratory Approval Program (ELAP) Methods for Asbestos Analysis. Friable samples were analyzed by Polarized Light Microscopy (PLM) via ELAP Method 198.1. Non-friable organically bound materials (NOBs) were analyzed by PLM NOB via ELAP Method 198.6. NOBs with an asbestos concentration less than or equal to one percent were reanalyzed by Transmission Electron Microscopy (TEM) with gravimetric preparation via ELAP Method 198.4. Materials containing vermiculite were analyzed by ELAP Method 198.8.

Alpha Labs is certified under the New York State Department of Health Environmental Laboratory Approval Program (ELAP certification #11833) and the United States Department of Commerce National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NVLAP certification #200691-0). Laboratory accreditation documentation is included as Attachment E.

Asbestos Results of Sampled Materials

Laboratory analysis has confirmed that the following materials are asbestos containing:

- **Off-white 12”x12” floor tile and associated black mastic on the floors of the Pomerantz Building**
- **Tan and black seam sealant in ductwork seams in Mechanical Room D701/D702**
- **Outer jacket layer over fiberglass insulation on Unit AC-1D in Mechanical Room DX01**

- **White vibration damper cloth on Fan Unit HV-1D in Mechanical Room DX01**

The brown base coat wall plaster on the 6th Floor contains a trace asbestos content. Materials that contain less than 1% asbestos are not considered an asbestos containing material by NYC and NYS law, and do not require special removal and handling procedures. However, workers are to be informed of the material content and are required as per OSHA regulations to take proper safety precautions when working with the material.

Bulk sample laboratory analytical data and chain of custody documentation is included as Attachment B. Attachment C contains previous survey sample results from Mechanical Room D701/D702, Mechanical Room DX01, and the floor tile in the Pomerantz Building. Survey photographs are included as Attachment A.

Inspection Observations

Homogeneous building materials that may be impacted by the installation of new fire alarm components were sampled throughout the Pomerantz Building to determine the asbestos content within the building materials.

The asbestos floor tile and associated asbestos black mastic on the floors will not be impacted as part of the fire alarm project. Fire alarm conduit risers will be run vertically through electrical closets and other areas which do not contain asbestos floor tile. The ceiling decking throughout the stairwells, electrical closets, and designated areas is clean concrete.

The outer jacket layer on AC Unit AC-3D and vibration damper cloth on the Fan Unit within Mechanical Room D701/D702 was abated in May 2024 under ACP-7 # 0954MN24. The vibration damper cloth on Unit RE-2D within Mechanical Room DX01 was abated in June 2024 under ACP-7 # 1380MN24.

The asbestos tan and black seam sealant in metal ductwork seams within Mechanical Room D701/D702 will not be impacted by the installation of new fire alarm components on the walls and ceiling of the roof mechanical room.

The outer jacket layer on the AC Unit AC-1D and white vibration damper cloth on Fan Unit HV-1D will not be impacted by the installation of new fire alarm components on the walls and ceiling of the sub-cellar mechanical room.

One bulk sample of brown base coat wall plaster on the 6th Floor contained a trace asbestos content. The white top coat wall plaster throughout the building does **not** contain asbestos. The brown base coat wall plaster on the remaining floors does **not** contain asbestos.

Gypsum board and associated joint compound throughout the building do **not** contain asbestos. Cementitious pipe elbow insulation was sampled throughout

the floors within the fire alarm scope of work and all samples do **not** contain asbestos. Pipe lagging insulation was fiberglass insulation. Presumed asbestos pipe insulation within the roof mechanical room and sub-cellar mechanical room will not be impacted by the installation of fire alarm components on the concrete walls and concrete ceiling in the mechanical rooms.

White 12”x12” spline ceiling tiles throughout the building were sampled and do **not** contain asbestos. Brown adhesive on the fiberglass insulation on the ductwork does **not** contain asbestos. The ceiling decking is clean concrete and all wire insulation was observed to be vinyl wire insulation. The wall and ceiling plaster in the Katie Murphy Theatre does **not** contain asbestos.

Conclusions and Recommendations

Asbestos

Confirmed asbestos containing materials will not be impacted by the installation of the new fire alarm components.

Should it be determined that asbestos containing materials will be impacted as part of this project, then the asbestos materials must be removed by a licensed asbestos contractor in compliance with Federal, State, and City asbestos regulations.

The brown base coat wall plaster on the 6th Floor contains a trace asbestos content. Materials that contain less than 1% asbestos are not considered an asbestos containing material by NYC and NYS law, and do not require special removal and handling procedures. However, workers are to be informed of the material content and are required as per OSHA regulations to take proper safety precautions when working with the material.

Limitations

This investigation was limited to characterization of visible and accessible materials that are anticipated to be impacted by the proposed scope of work. Additional suspect asbestos containing materials may be present within inaccessible areas not characterized by this investigation. If design development or field scope modifications necessitate impact to any suspect asbestos containing materials other than those described herein, these materials must be protected from impact and the FIT project manager should be notified immediately to arrange for further inspection and sampling as necessary to determine if specialized handling and disposal are required.

Tables

Table 1 – Pomerantz Building Survey Sample Results
Table 2 – Pomerantz Mechanical Room D701/D702 and DX01 Sample Results
Table 3 – Pomerantz 5th Floor Corridor Floor Tile Sample Results
Table 4 – Summary of Identified Asbestos Containing Materials

Schematics
ASB-01 – Pomerantz Sub-Cellar Sample Locations
ASB-02 – Pomerantz Cellar Sample Locations
ASB-03 – Pomerantz 1st Floor Sample Locations
ASB-04 – Pomerantz 2nd Floor Sample Locations
ASB-05 – Pomerantz 3rd Floor Sample Locations
ASB-06 – Pomerantz 4th Floor Sample Locations
ASB-07 – Pomerantz 5th Floor Sample Locations
ASB-08 – Pomerantz 6th Floor Sample Locations
ASB-09 – Pomerantz Sub-Cellar MER DX01
ASB-10 – Pomerantz Roof MER D701/D702
ASB-11 – Pomerantz 5th Floor, Floor Tile Sample Locations

Attachments
Attachment A – Survey Photographs
Attachment B – Survey Bulk Sample Laboratory Analytical Results
Attachment C – Historical Data from Previous Surveys
Attachment D – EPM Company License and Personnel Certifications
Attachment E – Laboratory Accreditation Documentation

If you require any additional information, please contact me at your earliest convenience.

Respectfully,

Thomas Zabransky, CIEC
Asbestos Investigator, New York City Department of Environmental Protection
Asbestos Inspector, New York State Department of Labor

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME3-01A 23-10-150-01	Elevator Lobby 3rd Floor	White 12"x12" Spline Ceiling Tile (fair condition - friable)	No Asbestos Detected, Inconclusive	No Asbestos Detected
POME3-01B 23-10-150-02	Bridge Corridor 3rd Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME3-01C 23-10-150-03	Courtyard Corridor 3rd Floor		No Asbestos Detected, Inconclusive	Not Analyzed
POMEC-01D 23-10-150-69	Cellar Corridor West		No Asbestos Detected, Inconclusive	No Asbestos Detected
POMEC-01E 23-10-150-70	Elevator Lobby Cellar		No Asbestos Detected, Inconclusive	No Asbestos Detected
POMEC-01F 23-10-150-71	Cellar Corridor		No Asbestos Detected, Inconclusive	Not Analyzed
POME6-01G 23-11-022-01	Lockers Corridor 6th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME6-01H 23-11-022-02	Bridge Corridor 6rd Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME6-01I 23-11-022-03	Corridor 6th Floor		No Asbestos Detected, Inconclusive	Not Analyzed
POME5-01J 23-11-022-20	Bridge Corridor 5th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME5-01K 23-11-022-21	Elevator Lobby 5th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME5-01L 23-11-022-22	Lockers Corridor 5th Floor		No Asbestos Detected, Inconclusive	Not Analyzed
POME4-01M 23-11-022-38	Elevator Lobby 4th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME4-01N 23-11-022-39	Lockers Corridor 4th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME4-01O 23-11-022-40	Corridor 4th Floor		No Asbestos Detected, Inconclusive	Not Analyzed
POME3-02A 23-10-150-04	Elevator Lobby 3rd Floor	Brown Adhesive on ductwork wrap (fair condition - non-friable)	No Asbestos Detected, Inconclusive	No Asbestos Detected
POME3-02B 23-10-150-05	Bridge Corridor 3rd Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME3-02C 23-10-150-06	Courtyard Corridor 3rd Floor		No Asbestos Detected, Inconclusive	Not Analyzed
POME6-02D 23-11-022-04	Lockers Corridor 6th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME6-02E 23-11-022-05	Corridor by Room D636		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME6-02F 23-11-022-05	Bridge Corridor 6th Floor		No Asbestos Detected, Inconclusive	Not Analyzed
POME5-02G 23-11-022-23	Elevator Lobby 5th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME5-02H 23-11-022-24	Lockers Corridor 5th Floor		No Asbestos Detected, Inconclusive	No Asbestos Detected
POME5-02I 23-11-022-25	Lockers Corridor 5th Floor		No Asbestos Detected, Inconclusive	Not Analyzed
POME3-03A 23-10-150-07	Elevator Lobby 3rd Floor	Cementitious Pipe Elbow Insulation (fair conditon - friable)	No Asbestos Detected	
POME3-03B 23-10-150-08	Bridge Corridor 3rd Floor		No Asbestos Detected	
POME3-03C 23-10-150-09	Corridor 3rd Floor by Stairs O		No Asbestos Detected	
POME2-03D 23-10-150-28	Elevator Lobby 2nd Floor		No Asbestos Detected	
POME2-03E 23-10-150-29	Elevator Lobby 2nd Floor		No Asbestos Detected	
POME2-03F 23-10-150-30	Elevator Lobby 2nd Floor		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME3-04A 23-10-150-10	Elevator Lobby 3rd Floor	White Top Coat Wall Plaster (fair condition - friable)	No Asbestos Detected	
POME3-04B 23-10-150-11	Bridge Corridor 3rd Floor		No Asbestos Detected	
POME3-04C 23-10-150-12	Courtyard Corridor 3rd Floor		No Asbestos Detected	
POME2-04D 23-10-150-19	Elevator Lobby 2nd Floor		No Asbestos Detected	
POME2-04E 23-10-150-20	Corridor 2nd Floor by Stairs O		No Asbestos Detected	
POME2-04F 23-10-150-21	Corridor by Room D242		No Asbestos Detected	
POME1-04G 23-10-150-41	Elevator Lobby 1st Floor		No Asbestos Detected	
POME1-04H 23-10-150-42	Elevator Lobby 1st Floor		No Asbestos Detected	
POME1-04I 23-10-150-43	Elevator Lobby 1st Floor		No Asbestos Detected	
POMEC-04J 23-10-150-59	Cellar Corridor		No Asbestos Detected	
POMEC-04K 23-10-150-60	Cellar Corridor West		No Asbestos Detected	
POMEC-04L 23-10-150-61	Elevator Lobby Cellar		No Asbestos Detected	
POME6-04M 23-11-022-07	Lockers Corridor 6th Floor		No Asbestos Detected	
POME6-04N 23-11-022-08	Corridor by Room D636		No Asbestos Detected	
POME6-04O 23-11-022-09	Bridge Corridor 6th Floor		No Asbestos Detected	
POME5-04P 23-11-022-26	Elevator Lobby 5th Floor		No Asbestos Detected	
POME5-04Q 23-11-022-27	Bridge Corridor 5th Floor		No Asbestos Detected	
POME5-04R 23-11-022-28	Lockers Corridor 5th Floor		No Asbestos Detected	
POME4-04S 23-11-022-41	Lockers Corridor 4th Floor		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME4-04T 23-11-022-42	Corridor 4th Floor		No Asbestos Detected	
POME4-04V 23-11-022-43	Corridor 4th Floor		No Asbestos Detected	
POME3-05A 23-10-150-13	Elevator Lobby 3rd Floor	Brown Base Coat Wall Plaster (fair condition - friable)	No Asbestos Detected	
POME3-05B 23-10-150-14	Bridge Corridor 3rd Floor		No Asbestos Detected	
POME3-05C 23-10-150-15	Courtyard Corridor 3rd Floor		No Asbestos Detected	
POME2-05D 23-10-150-22	Elevator Lobby 2nd Floor		No Asbestos Detected	
POME2-05E 23-10-150-23	Corridor 2nd Floor by Stairs O		No Asbestos Detected	
POME2-05F 23-10-150-24	Corridor by Room D242		No Asbestos Detected	
POME1-05G 23-10-150-44	Elevator Lobby 1st Floor		No Asbestos Detected	
POME1-05H 23-10-150-45	Elevator Lobby 1st Floor		No Asbestos Detected	
POME1-05I 23-10-150-46	Elevator Lobby 1st Floor		No Asbestos Detected	
POMEC-05J 23-10-150-62	Cellar Corridor		No Asbestos Detected	
POMEC-05K 23-10-150-63	Cellar Corridor West		No Asbestos Detected	
POMEC-05L 23-10-150-64	Elevator Lobby Cellar		No Asbestos Detected	
POME6-05M 23-11-022-10	Lockers Corridor 6th Floor		Requires ELAP 198.8	
POME6-05N 23-11-022-11	Corridor by Room D636		No Asbestos Detected	
POME6-05O 23-11-022-12	Bridge Corridor 6th Floor		No Asbestos Detected	
POME5-05P 23-11-022-29	Elevator Lobby 5th Floor		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME5-05Q 23-11-022-30	Bridge Corridor 5th Floor		No Asbestos Detected	
POME5-05R 23-11-022-31	Lockers Corridor 5th Floor		Requires ELAP 198.8	
POME4-05S 23-11-022-44	Lockers Corridor 4th Floor		No Asbestos Detected	
POME4-05T 23-11-022-45	Corridor 4th Floor		No Asbestos Detected	
POME4-05V 23-11-022-46	Corridor 4th Floor		No Asbestos Detected	
POME3-06A 23-10-150-16	Corridor 3rd Floor by Stairs O	Gypsum Board (fair condition - friable)	No Asbestos Detected	
POME3-06B 23-10-150-17	Corridor 3rd Floor by Stairs O		No Asbestos Detected	
POME3-06C 23-10-150-18	Corridor 3rd Floor by Stairs O		No Asbestos Detected	
POME2-06D 23-10-150-25	Elevator Lobby 2nd Floor		No Asbestos Detected	
POME2-06E 23-10-150-26	Corridor 2nd Floor by Stairs O		No Asbestos Detected	
POME2-06F 23-10-150-27	Corridor by Room D242		No Asbestos Detected	
POME1-06G 23-10-150-38	Elevator Lobby 1st Floor		No Asbestos Detected	
POME1-06H 23-10-150-39	Lobby by Stairs P		No Asbestos Detected	
POME1-06I 23-10-150-40	Lobby by Ramp		No Asbestos Detected	
POMEC-06J 23-10-150-56	Cellar Corridor		No Asbestos Detected	
POMEC-06K 23-10-150-57	Cellar Corridor West		No Asbestos Detected	
POMEC-06L 23-10-150-58	Cellar Corridor West by Stairs		No Asbestos Detected	
POME6-06M 23-11-022-13	Corridor by Room D636		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME6-06N 23-11-022-14	Elevator Lobby 6th Floor		No Asbestos Detected	
POME6-06O 23-11-022-15	Elevator Lobby 6th Floor		No Asbestos Detected	
POME4-06P 23-11-022-47	Elevator Lobby 4th Floor		No Asbestos Detected	
POME4-06Q 23-11-022-48	Elevator Lobby 4th Floor		No Asbestos Detected	
POME4-06R 23-11-022-49	Elevator Lobby 4th Floor		No Asbestos Detected	
POME5-06S 23-11-022-32	Lockers Corridor 5th Floor		No Asbestos Detected	
POME5-06T 23-11-022-33	Lockers Corridor 5th Floor		No Asbestos Detected	
POME5-06V 23-11-022-34	Lockers Corridor 5th Floor		No Asbestos Detected	
POME2-07A 23-10-150-31	Elevator Lobby 2nd Floor	Joint Compound on gypsum board (fair condition - friable)	No Asbestos Detected	
POME2-07B 23-10-150-32	Corridor 2nd Floor by Stairs O		No Asbestos Detected	
POME2-07C 23-10-150-33	Corridor by Room D240		No Asbestos Detected	
POME2-07D 23-10-150-34	Corridor by Room D240		No Asbestos Detected	
POME1-07E 23-10-150-47	Elevator Lobby by Stairs P		No Asbestos Detected	
POME1-07F 23-10-150-48	Elevator Lobby by Ramp		No Asbestos Detected	
POME1-07G 23-10-150-49	Elevator Lobby by Ramp		No Asbestos Detected	
POMEC-07H 23-10-150-65	Cellar Corridor West		No Asbestos Detected	
POMEC-07I 23-10-150-66	Cellar Corridor		No Asbestos Detected	
POMEC-07J 23-10-150-67	Elevator Lobby Cellar		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POMEC-07K 23-10-150-68	Cellar Corridor West by Stairs		No Asbestos Detected	
POME4-07L 23-11-022-50	Elevator Lobby 4th Floor		No Asbestos Detected	
POME4-07M 23-11-022-51	Elevator Lobby 4th Floor		No Asbestos Detected	
POME4-07N 23-11-022-52	Elevator Lobby 4th Floor		No Asbestos Detected	
POME3-08A 23-10-150-50	Great Hall Conference Hall 1st Floor	Ceiling Insulation (fair condition - friable)	No Asbestos Detected	
POME3-08B 23-10-150-51	Great Hall Conference Hall 1st Floor		No Asbestos Detected	
POME3-08C 23-10-150-52	Great Hall Conference Hall 1st Floor		No Asbestos Detected	
POME2-09A 23-10-150-35	Backstage 2nd Floor	Mortar for block walls (fair condition - friable)	No Asbestos Detected	
POME2-09B 23-10-150-36	Backstage 2nd Floor		No Asbestos Detected	
POME2-09C 23-10-150-37	Backstage 2nd Floor		No Asbestos Detected	
POMESC-09D 23-10-150-72	SubCellar MER		No Asbestos Detected	
POMESC-09E 23-10-150-73	SubCellar MER		No Asbestos Detected	
POMESC-09F 23-10-150-74	SubCellar MER		No Asbestos Detected	
POME5-09G 23-11-022-35	Corridor 5th Floor		No Asbestos Detected	
POME5-09H 23-11-022-36	Corridor 5th Floor		No Asbestos Detected	
POME5-09I 23-11-022-37	Corrifor 5th Floor		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME1-10A 23-10-150-53	First Floor Entrance by 28th Street	White Gypsum Board (fair condition - friable)	No Asbestos Detected	
POME1-10B 23-10-150-54	First Floor Entrance by 28th Street		No Asbestos Detected	
POME1-10C 23-10-150-55	First Floor Entrance by 28th Street		No Asbestos Detected	
POME6-11A 23-11-022-16	Corridor by Room D636	Cementitious Pipe Elbow Insulation (fair condition - friable)	No Asbestos Detected	
POME6-11B 23-11-022-17	Elevator Lobby 6th Floor		No Asbestos Detected	
POME6-11C 23-11-022-18	Corridor by Room D636		No Asbestos Detected	
POME6-11D 23-11-022-19	Corridor by Room D636		No Asbestos Detected	
POME4-12A 23-11-022-53	Elevator Lobby 4th Floor	Cementitious Pipe Elbow Insulation (fair condition - friable)	No Asbestos Detected	
POME4-12B 23-11-022-54	Elevator Lobby 4th Floor		No Asbestos Detected	
POME4-12C 23-11-022-55	Elevator Lobby 4th Floor		No Asbestos Detected	
POME1-13A 25-03-015-01	Pantry Room D125	Mortar for stone tile flooring (good condition - friable)	No Asbestos Detected	
POME1-13B 25-03-015-02	Pantry Room D125		No Asbestos Detected	
POME1-13C 25-03-015-03	Pantry Room D125		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME6-14C 25-03-015-04	Stairwell P 6th Floor	Mortar for stone tile flooring (good condition - friable)	No Asbestos Detected	
POME3-14C 25-03-015-05	Stairwell P 3rd Floor		No Asbestos Detected	
POME2-14C 25-03-015-06	Stairwell P 2nd Floor		No Asbestos Detected	
POME1-15A 25-03-015-07	Katie Murphy Theatre 1st Floor	White Top Coat Ceiling Plaster (good condition - friable)	No Asbestos Detected	
POME1-15B 25-03-015-08	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-15C 25-03-015-09	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-15D 25-03-015-10	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POMEC-15E 25-03-015-11	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-15F 25-03-015-12	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-15G 25-03-015-13	Katie Murphy Theatre Cellar		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME1-16A 25-03-015-14	Katie Murphy Theatre 1st Floor	Brown Base Coat Ceiling Plaster (good condition - friable)	No Asbestos Detected	
POME1-16B 25-03-015-15	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-16C 25-03-015-16	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-16D 25-03-015-17	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POMEC-16E 25-03-015-18	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-16F 25-03-015-19	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-16G 25-03-015-20	Katie Murphy Theatre Cellar		No Asbestos Detected	
POME1-17A 25-03-015-21	Katie Murphy Theatre 1st Floor	White Top Coat Wall Plaster (good condition - friable)	No Asbestos Detected	
POME1-17B 25-03-015-22	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-17C 25-03-015-23	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-17D 25-03-015-24	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POMEC-17E 25-03-015-25	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-17F 25-03-015-26	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-17G 25-03-015-27	Katie Murphy Theatre Cellar		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POME1-18A 25-03-015-28	Katie Murphy Theatre 1st Floor	Brown Base Coat Wall Plaster (good condition - friable)	No Asbestos Detected	
POME1-18B 25-03-015-29	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-18C 25-03-015-30	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POME1-18D 25-03-015-31	Katie Murphy Theatre 1st Floor		No Asbestos Detected	
POMEC-18E 25-03-015-32	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-18F 25-03-015-33	Katie Murphy Theatre Cellar		No Asbestos Detected	
POMEC-18G 25-03-015-34	Katie Murphy Theatre Cellar		No Asbestos Detected	

Table 1
Summary of Bulk Sample Laboratory Analytical Results
FIT Pomerantz Building - Fire Alarm Project
Fashion Institute of Technology

EPM Sample I.D. / Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content ELAP 198.8 Analysis
POME6-05M 23-11-022-10	Lockers Corridor 6th Floor	Brown Base Coat Wall Plaster (fair condition - friable)	0.1398% Amphibole Asbestos (is less than 1% asbestos and is not considered an asbestos containing material by NYC and NYS law)
POME5-05R 23-11-022-31	Lockers Corridor 5th Floor		No Asbestos Detected

Table 2
Summary of Asbestos Bulk Sample Laboratory Analytical Results
Pomerantz Building D - Roof Mechanical Room D701/D702 and Sub-Cellar Mechanical Room DX01
Fashion Institute of Technology

EPM Sample I.D./ Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
D702-01A 18-01-90-01	Roof Level Mechanical Room D702, Unit AC-3D	Gray MJP pipe elbow insulation associated with AC-3D (yellow) (fair condition - friable)	No Asbestos Detected	
D702-01B 18-01-90-02		Gray MJP pipe elbow insulation associated with AC-3D (blue) (fair condition - friable)	No Asbestos Detected	
D702-01C 18-01-90-03		Gray MJP pipe elbow insulation associated with AC-3D (orange) (fair condition - friable)	No Asbestos Detected	
D702-01D 18-01-90-04		Gray MJP pipe elbow insulation associated with AC-3D (green) (fair condition - friable)	No Asbestos Detected	
D702-02A 18-01-90-05	Roof Level Mechanical Room D702 , Unit AC-3D	Gray MJP insulation on large valve above AC-3D, Valve 1 (fair condition - friable)	No Asbestos Detected	
D702-02B 18-01-90-06		Gray MJP insulation on large valve above AC-3D, Valve 2 (fair condition - friable)	No Asbestos Detected	
D702-02C 18-01-90-07		Gray MJP insulation on large valve above AC-3D, Valve 3 (fair condition - friable)	No Asbestos Detected	
D702-03A 18-01-90-08	**Roof Level Mechanical Room D702**	**Black and tan duct seam sealant in duct flanges (fair condition - non-friable)**	**1.6% Chrysotile Asbestos**	
D702-03B 18-01-90-09			**Not Analyzed, Positive Stop**	
D702-03C 18-01-90-10			**Not Analyzed, Positive Stop**	
D702-04A 18-01-90-11	Pomerantz Roof Level Outside Mechanical Room D702	Tan caulk around exterior side of louver (fair condition - non-friable)	No Asbestos Detected Inconclusive	No Asbestos Detected
D702-04B 18-01-090-12			No Asbestos Detected Inconclusive	No Asbestos Detected
D702-04C 18-01-090-13			No Asbestos Detected Inconclusive	Not Analyzed

Table 2
Summary of Asbestos Bulk Sample Laboratory Analytical Results
Pomerantz Building D - Roof Mechanical Room D701/D702 and Sub-Cellar Mechanical Room DX01
Fashion Institute of Technology

EPM Sample I.D./ Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
D702-05A 18-01-090-14	Roof Level Mechanical Room D702, Unit AC-3D	Cloth wrap on fiberglass insulation on exterior side of AC-3D (fair condition - friable)	No Asbestos Detected Inconclusive	No Asbestos Detected
D702-05B 18-01-090-15			No Asbestos Detected Inconclusive	No Asbestos Detected
D702-05C 18-01-090-16			No Asbestos Detected Inconclusive	Not Analyzed
D701-06A 18-02-053-01	**Pomerantz Roof Level, Mechanical Room D702, Unit AC-3D**	**Outer jacket layer over fiberglass insulation on air handling unit (fair condition - friable)**	**3.4% Chrysotile Asbestos**	
D701-06B 18-02-053-02			**Not Analyzed, Positive Stop**	
D701-06C 18-02-053-03			**Not Analyzed, Positive Stop**	
D701-07A 18-02-053-04	**Pomerantz Roof Level, Mechanical Room D702, Fan Unit**	**Outer jacket layer over fiberglass insulation on air handling unit (fair condition - friable)**	**3.2% Chrysotile Asbestos**	
D701-07B 18-02-053-05			**Not Analyzed, Positive Stop**	
D701-07C 18-02-053-06			**Not Analyzed, Positive Stop**	
DX01-01A 18-01-088-01	Pomerantz Sub-Cellar Mechanical Room DX01, Unit AC-1D	Grey mudded joint packing pipe elbow insulation (blue pipe) (fair condition - friable)	No Asbestos Detected	
DX01-01B 18-01-088-02		Grey mudded joint packing pipe elbow insulation (orange pipe) (fair condition - friable)	No Asbestos Detected	
DX01-01C 18-01-088-03		Grey mudded joint packing pipe elbow insulation (yellow pipe) (fair condition - friable)	No Asbestos Detected	

Table 2
Summary of Asbestos Bulk Sample Laboratory Analytical Results
Pomerantz Building D - Roof Mechanical Room D701/D702 and Sub-Cellar Mechanical Room DX01
Fashion Institute of Technology

EPM Sample I.D./ Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
DX01-02A 18-01-088-04	Pomerantz Sub-Cellar Mechanical Room DX01, Pump P-7D	Grey mudded joint packing insulation on valve for Pump P-7D (fair condition - friable)	No Asbestos Detected	
DX01-02B 18-01-088-05	Pomerantz Sub-Cellar Mechanical Room DX01, Pump P-9D	Grey mudded joint packing insulation on valve for Pump P-9D (fair condition - friable)	No Asbestos Detected	
DX01-02C 18-01-088-06	Pomerantz Sub-Cellar Mechanical Room DX01, Pump P-10D	Grey mudded joint packing insulation on valve for Pump P-10D (fair condition - friable)	No Asbestos Detected	
DX01-03A 18-01-088-07	Pomerantz Sub-Cellar Mechanical Room DX01	Grey mudded joint packing insulation on valve above Pump P-35D (fair condition - friable)	No Asbestos Detected	
DX01-03B 18-01-088-08		Grey mudded joint packing insulation on isolation Valve E (fair condition - friable)	No Asbestos Detected	
DX01-03C 18-01-088-09		Grey mudded joint packing insulation on bypass Valve D (fair condition - friable)	No Asbestos Detected	
DX01-04A 18-01-088-10	Pomerantz Sub-Cellar Mechanical Room DX01, Pump P-13D	Grey mudded joint packing insulation on Pump P-13D (mustard yellow) (fair condition - friable)	No Asbestos Detected	
DX01-04B 18-01-088-11	Pomerantz Sub-Cellar Mechanical Room DX01, Pump P-14D	Grey mudded joint packing insulation on Pump P-14D (mustard yellow) (fair condition - friable)	No Asbestos Detected	
DX01-04C 18-01-088-12	Pomerantz Sub-Cellar Mechanical Room DX01, Pump P-14D	Grey mudded joint packing insulation on Pump P-14D (mustard yellow) (fair condition - friable)	No Asbestos Detected	
DX01-05A 18-01-088-13	Pomerantz Sub-Cellar Mechanical Room DX01	Gasket in flange at valve for Pump P-12D (fair condition - non-friable)	No Asbestos Detected Inconclusive	No Asbestos Detected
DX01-05B 18-01-088-14			No Asbestos Detected Inconclusive	No Asbestos Detected
DX01-05C 18-01-088-15			No Asbestos Detected Inconclusive	Not Analyzed

Table 2
Summary of Asbestos Bulk Sample Laboratory Analytical Results
Pomerantz Building D - Roof Mechanical Room D701/D702 and Sub-Cellar Mechanical Room DX01
Fashion Institute of Technology

EPM Sample I.D./ Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
DX01-06A 18-01-088-16	Pomerantz Sub-Cellar Mechanical Room DX01	White insulation on heat exchanger by Pump P-11D (fair condition - friable)	No Asbestos Detected	
DX01-06B 18-01-088-17			No Asbestos Detected	
DX01-06C 18-01-088-18			No Asbestos Detected	
DX01-07A 18-01-088-19	**Pomerantz Sub-Cellar Mechanical Room DX01, Fan HV-1D**	**White vibration damper cloth on Fan HV-1D (fair condition - friable)**	**50% Chrysotile Asbestos**	
DX01-07B 18-01-088-20			**Not Analyzed, Positive Stop**	
DX01-07C 18-01-088-21			**Not Analyzed, Positive Stop**	
DX01-08A 18-01-088-22	Pomerantz Sub-Cellar Mechanical Room DX01, Fan HV-1D	Grey mudded joint packing insulation on pipe elbows for Fan HV-1D (fair condition - friable)	No Asbestos Detected	
DX01-08B 18-01-088-23			No Asbestos Detected	
DX01-08C 18-01-088-24			No Asbestos Detected	
DX01-09A 18-01-088-25	Pomerantz Sub-Cellar Mechanical Room DX01, Unit AC-2D	Black vibration damper cloth on Unit AC-2D (fair condition - non-friable)	No Asbestos Detected Inconclusive	No Asbestos Detected
DX01-09B 18-01-088-26			No Asbestos Detected Inconclusive	No Asbestos Detected
DX01-09C 18-01-088-27			No Asbestos Detected Inconclusive	Not Analyzed
DX01-10A 18-01-088-28	Pomerantz Sub-Cellar Mechanical Room DX01, Unit AC-2D	Grey mudded joint packing insulation on pipe elbows for Unit AC-2D (fair condition - friable)	No Asbestos Detected	
DX01-10B 18-01-088-29			No Asbestos Detected	
DX01-10C 18-01-088-30			No Asbestos Detected	

Table 2
Summary of Asbestos Bulk Sample Laboratory Analytical Results
Pomerantz Building D - Roof Mechanical Room D701/D702 and Sub-Cellar Mechanical Room DX01
Fashion Institute of Technology

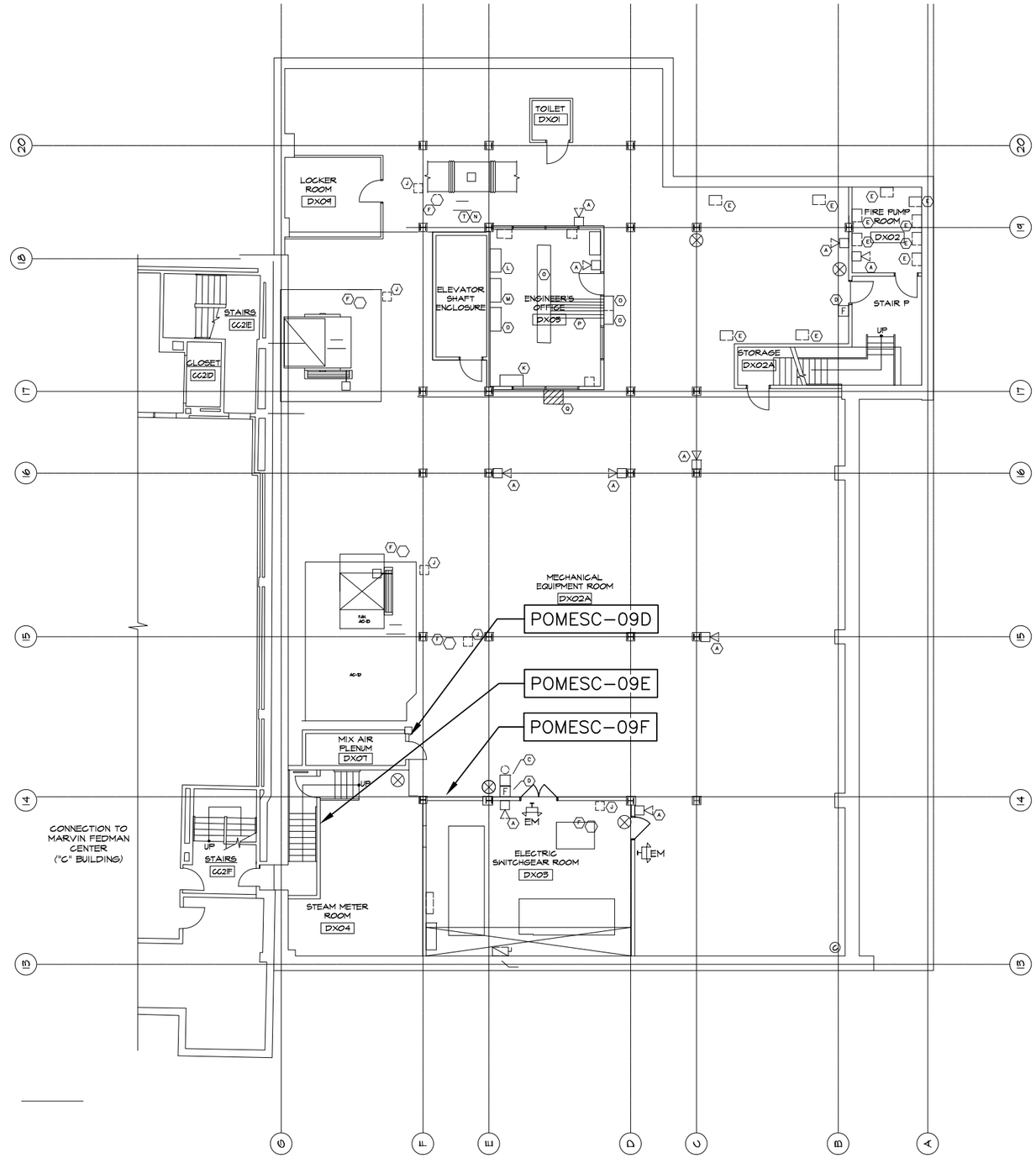
EPM Sample I.D./ Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
DX01-11A 18-02-054-01	Pomerantz Sub-Cellar Mechanical Room DX01, Unit AC-1D	Outer jacket layer over fiberglass insulation on air handling unit (fair condition - friable)	3.0% Chrysotile Asbestos	
DX01-11B 18-02-054-02			Not Analyzed, Positive Stop	
DX01-11C 18-02-054-03			Not Analyzed, Positive Stop	

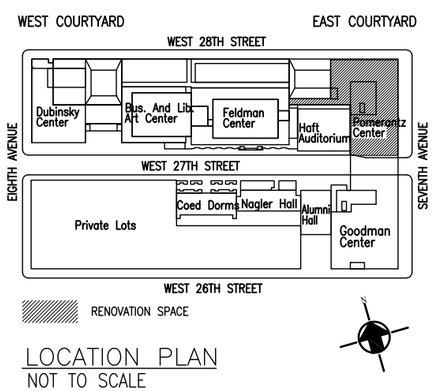
Table 3
Summary of Asbestos Bulk Sample Laboratory Analytical Results
Pomerantz Building D - 5th Floor Corridor
Fashion Institute of Technology

EPM Sample I.D./ Lab Sample I.D.	Sampling Location	Sample Description	Asbestos Content	
			Polarized Light Microscopy	Transmission Electron Microscopy
POM5CORR-01A 20-08-133-01	Pomerantz 5th Floor Corridor	Off-white 12"x12" Floor Tile with brown streaks (fair condition - non-friable)	1.3% Chrysotile Asbestos	
POM5CORR-01B 20-08-133-02			Not Analyzed, Positive Stop	
POM5CORR-01C 20-08-133-03			Not Analyzed, Positive Stop	
POM5CORR-02A 20-08-133-04	Pomerantz 5th Floor Corridor	Black Mastic for floor tiles (fair condition - non-friable)	3.0% Chrysotile Asbestos	
POM5CORR-02B 20-08-133-05			Not Analyzed, Positive Stop	
POM5CORR-02C 20-08-133-06			Not Analyzed, Positive Stop	

Table 4
Summary of Identified Asbestos Containing Materials
Pomerantz Building - Fire Alarm Project
Fashion Institute of Technology

Material Description	Material Locations	Asbestos Quantity	Friability	Condition
Off-White 12"x12" Floor Tile with Brown Streaks	1st, 2nd, 3rd, 4th, 5th, and 6th Floors	122,000 Square Feet Total	Non-Friable	Fair
Black Mastic for Floor Tiles	1st, 2nd, 3rd, 4th, 5th, and 6th Floors	122,000 Square Feet Total	Non-Friable	Good
Off-White 12"x12" Floor Tile with Brown Streaks	Cellar	9,000 Square Feet	Non-Friable	Fair
Black Mastic for Floor Tiles	Cellar	9,000 Square Feet	Non-Friable	Good
Cloth Wrap Outer Jacket Layer on AC-1D	Sub-Cellar Mechanical Room DX01	384 Square Feet	Friable	Good
Ductwork Vibration Damper Cloth on Fan HV-1D	Sub-Cellar Mechanical Room DX01	30 Square Feet	Friable	Fair
(Presumed) Pipe Insulation	Sub-Cellar Mechanical Room DX01	100 Linear Feet	Friable	Fair
Black and Tan Duct Seam Sealant in Ductwork Flanges (70 Linear Feet)	Roof Mechanical Room D701/D702	3 Square Feet	Non-Friable	Good
Total Quantity of Asbestos Materials		**262,417 Square Feet and 100 Linear Feet**		





LOCATION PLAN
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03-06-2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY, 340 8TH AVENUE, NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071-180	FIGURE TITLE: SUB-CELLAR PLAN ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: POMERANTZ BUILDING 300 7TH AVENUE, NEW YORK, NY
	PATH: FIT\19071 – FIT\19071-180 Pomerantz Fire Alarm		FIGURE NO: ASB-01 SHEET 01 OF 11

X:\FIT\19071 - FIT AS-Needed Contract\19071-180 Pomerantz Fire Alarm\19071-180 EPM Dwgs\19071-133_ASB SCHEM.dwg
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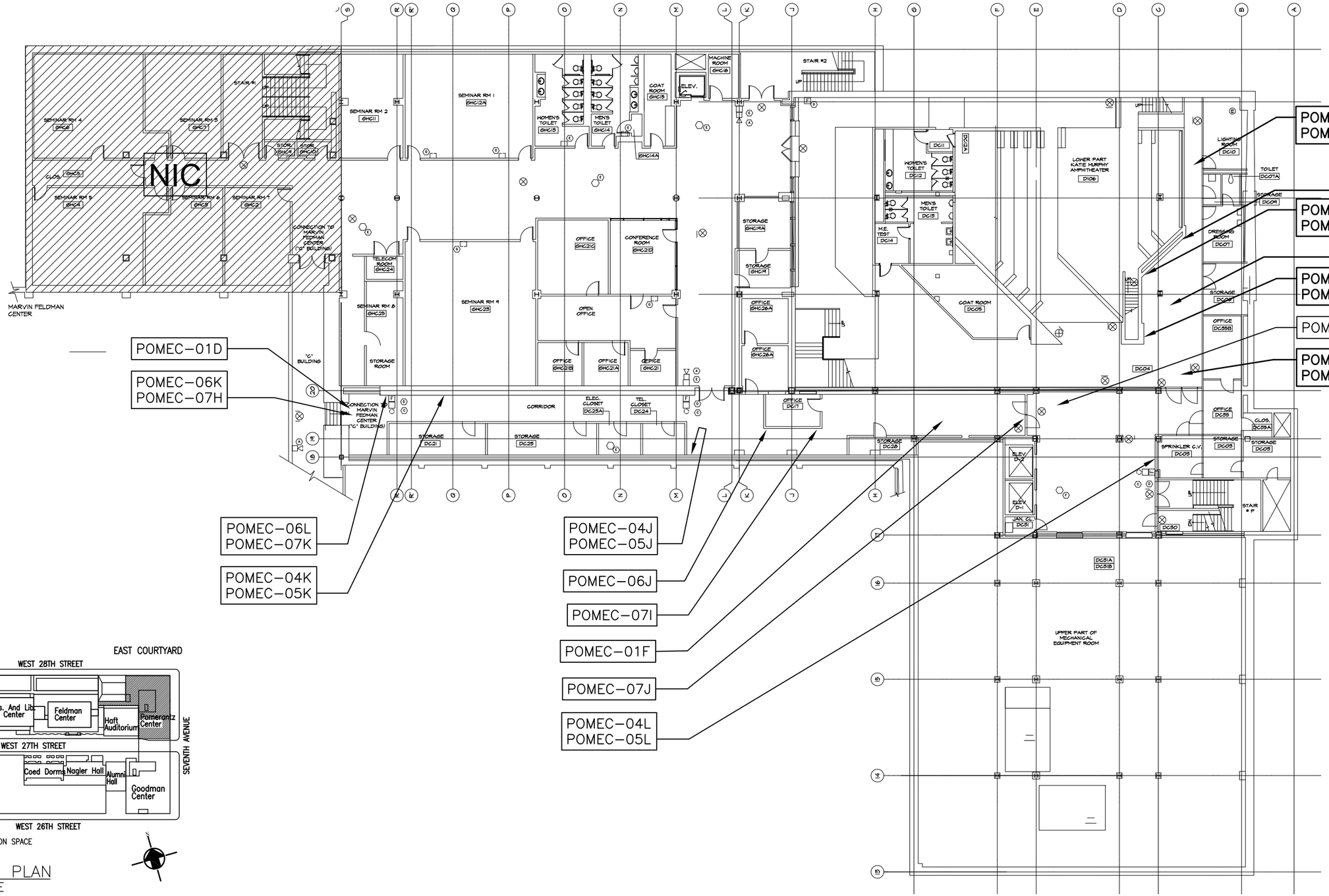

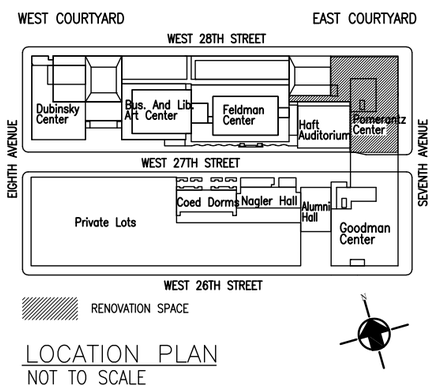

LOCATION PLAN
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03-06-2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY, 340 8TH AVENUE, NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071-180	FIGURE TITLE: CELLAR PLAN ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
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	PATH: FIT\19071 – FIT\19071-180 Pomerantz Fire Alarm		FIGURE NO: ASB-02 SHEET 02 OF 11

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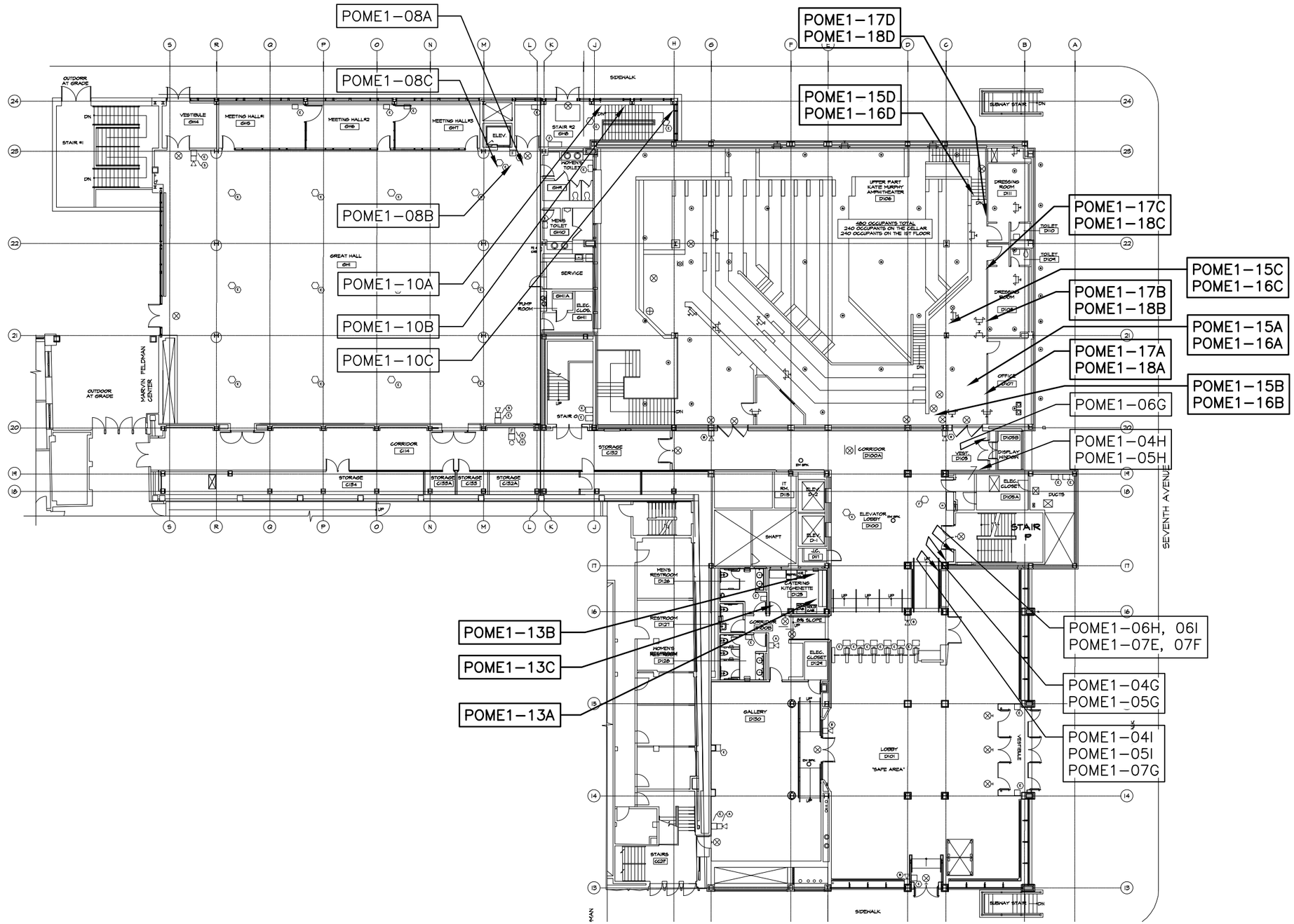

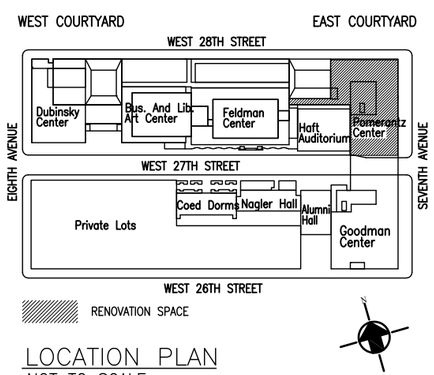

LOCATION PLAN
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03–06–2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY 340 8TH AVENUE NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071–180	FIGURE TITLE: FIRST FLOOR PLAN ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: POMERANTZ BUILDING 300 7TH AVENUE, NEW YORK, NY
	PATH: FIT\19071 – FIT\19071–180 Pomerantz Fire Alarm		FIGURE NO: **ASB-03** SHEET 03 OF 11

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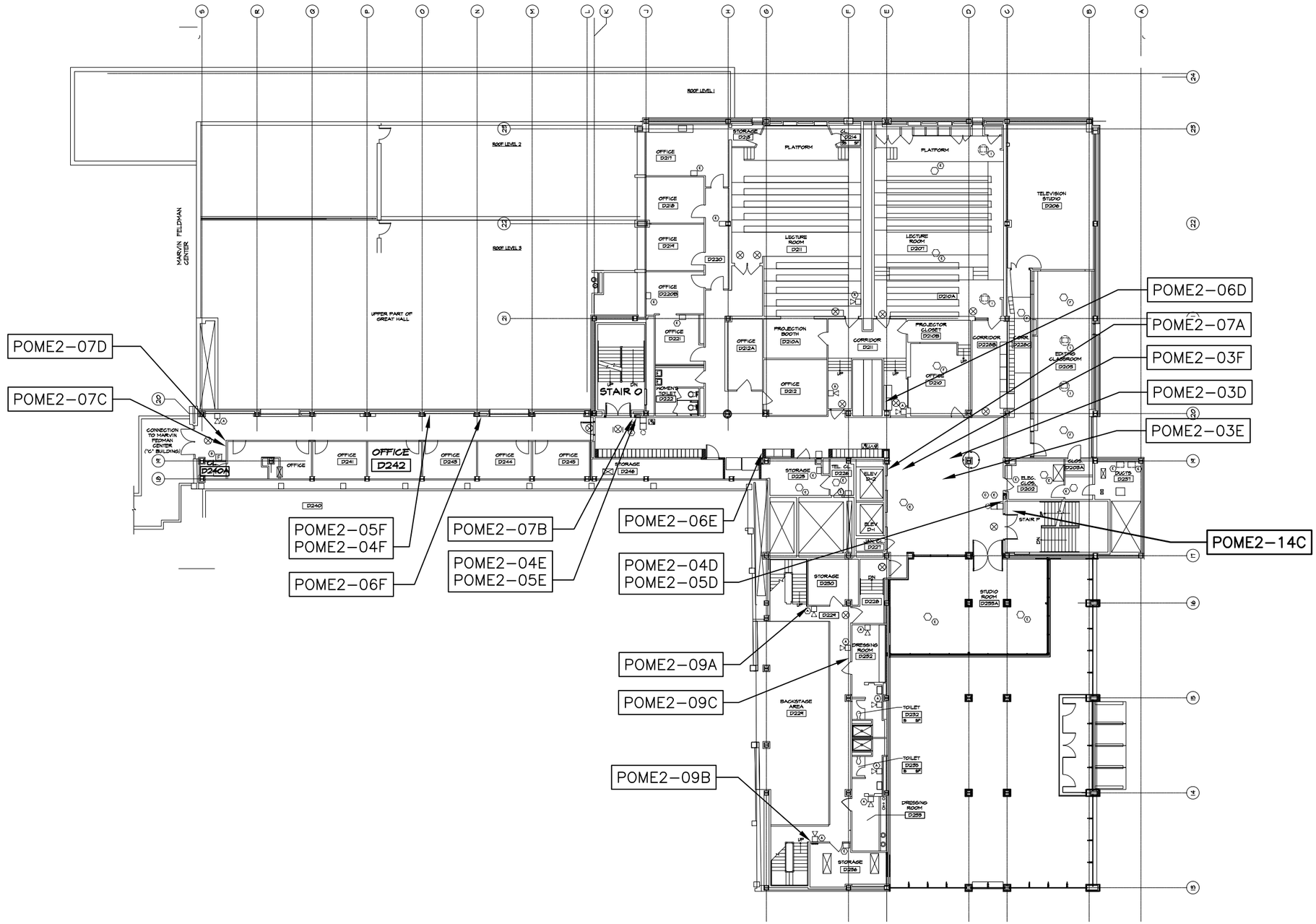

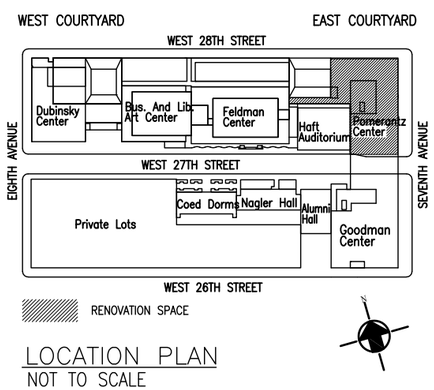

LOCATION PLAN
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03–06–2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY, 340 8TH AVENUE, NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071–180	FIGURE TITLE: SECOND FLOOR PLAN ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: POMERANTZ BUILDING 300 7TH AVENUE, NEW YORK, NY
	PATH: FIT\19071 – FIT\19071–180 Pomerantz Fire Alarm		FIGURE NO: ASB-04 SHEET 04 OF 11

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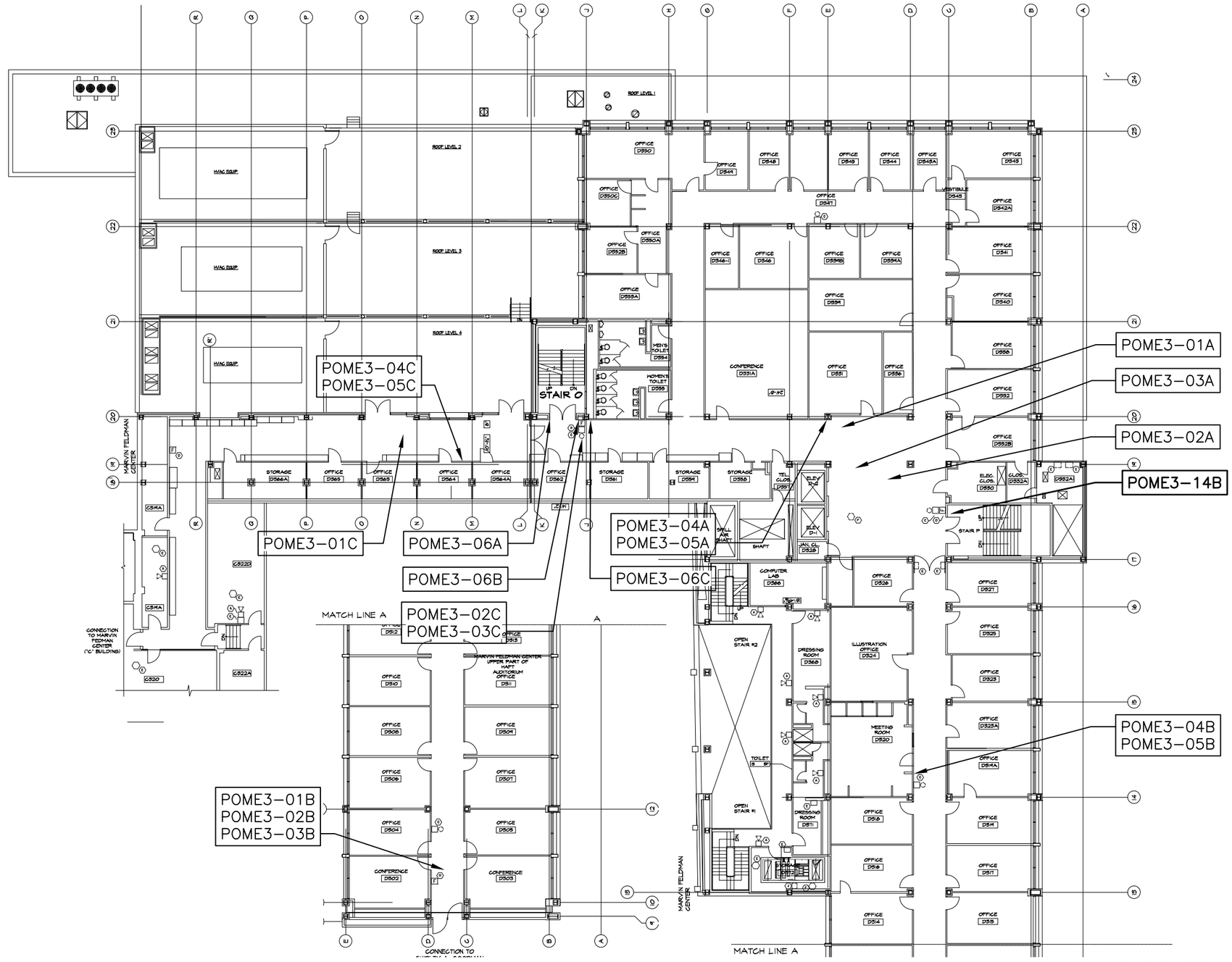

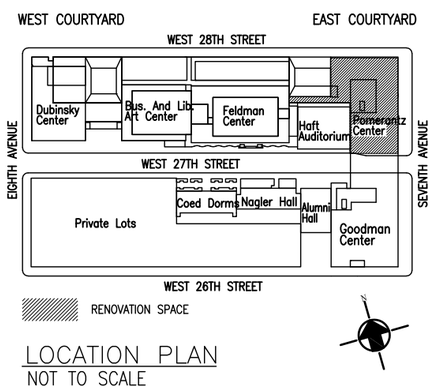

LOCATION PLAN
NOT TO SCALE

EPM
Environmental Planning & Management, Inc.
www.epmco.com

DRAWN BY: MH/AR	DATE: 03–06–2025
CHECKED BY: TZ	FILENAME: 19071–180
APPR'VD BY: AS	SCALE: NOT TO SCALE
PATH: FIT\19071 – FIT\19071–180 Pomerantz Fire Alarm	

CLIENT:
FASHION INSTITUTE OF TECHNOLOGY
340 8TH AVENUE
NEW YORK, NY 10001

FIGURE TITLE: THIRD FLOOR PLAN
ASBESTOS BULK SAMPLE LOCATION SCHEMATIC

PROJECT LOCATION: POMERANTZ BUILDING
300 7TH AVENUE, NEW YORK, NY

FIGURE NO: **ASB-05**

SHEET 05 OF 11

X:\FIT\19071 - FIT AS-Needed Contract\19071-180 Pomerantz Fire Alarm\19071-180 EPM Dwgs\19071-133_ASB SCHEM.dwg
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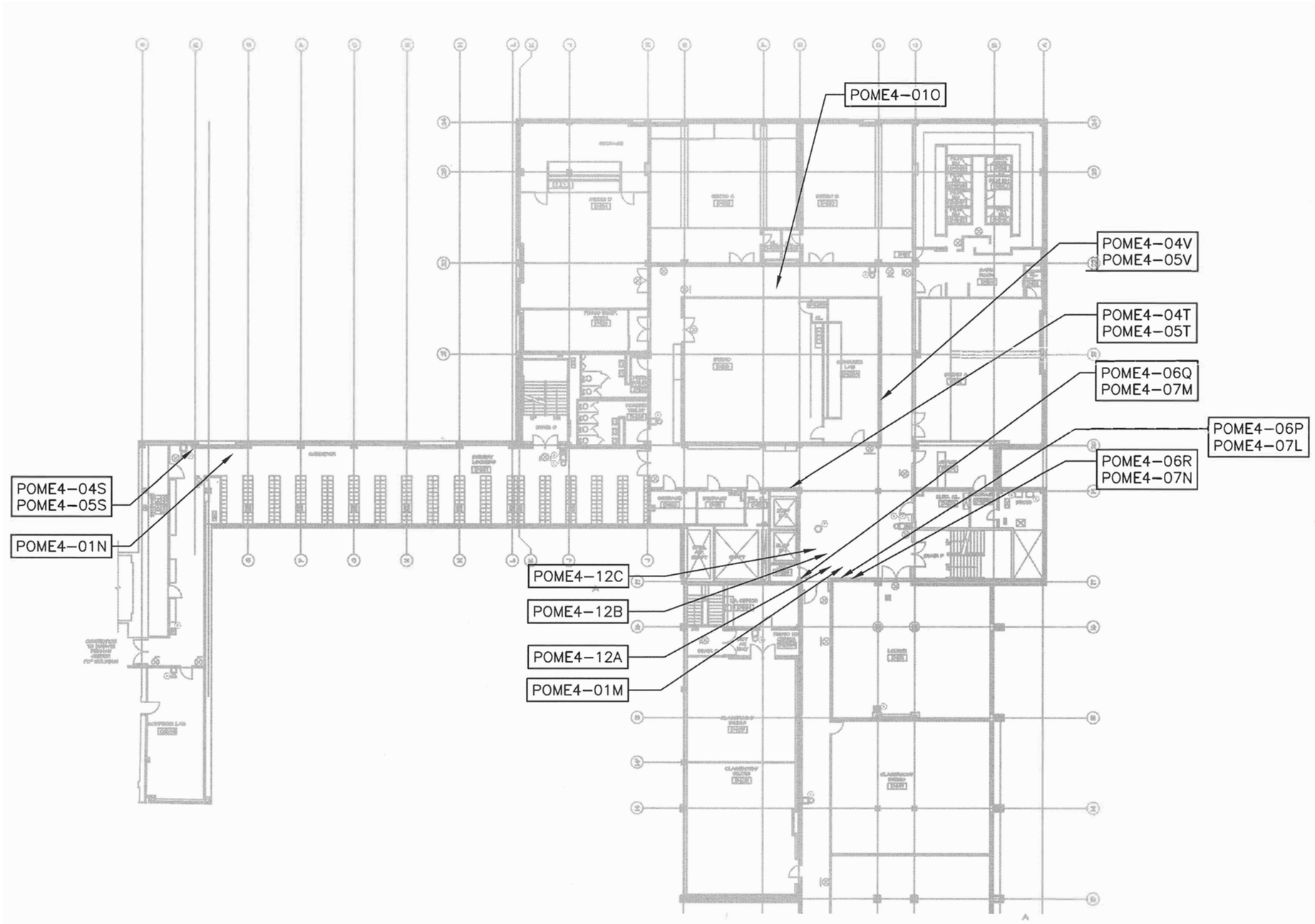

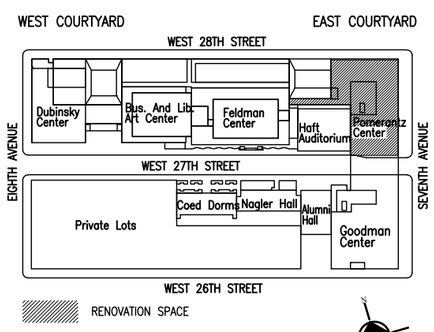

LOCATION PLAN
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03-06-2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY, 340 8TH AVENUE, NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071-180	FIGURE TITLE: FOURTH FLOOR PLAN ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: POMERANTZ BUILDING 300 7TH AVENUE, NEW YORK, NY
	PATH: FIT\19071 – FIT\19071-180 Pomerantz Fire Alarm		FIGURE NO: **ASB-06** SHEET 06 OF 11

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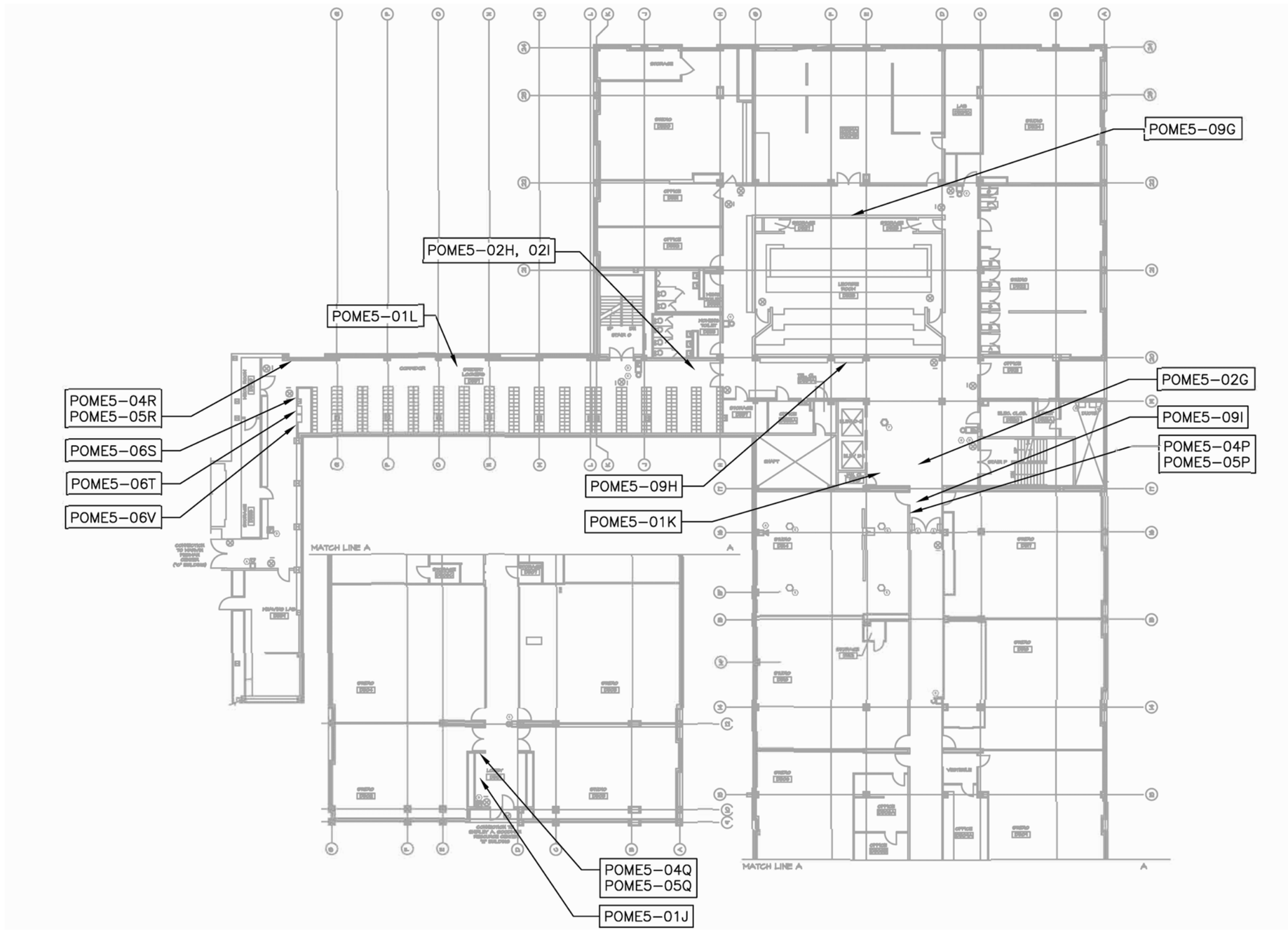

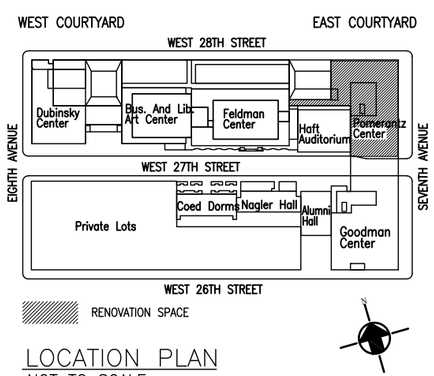

LOCATION PLAN
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03–06–2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY 340 8TH AVENUE NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071–180	FIGURE TITLE: FIFTH FLOOR PLAN ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
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	PATH: FIT\19071 – FIT\19071–180 Pomerantz Fire Alarm		FIGURE NO: **ASB-07** SHEET 07 OF 11

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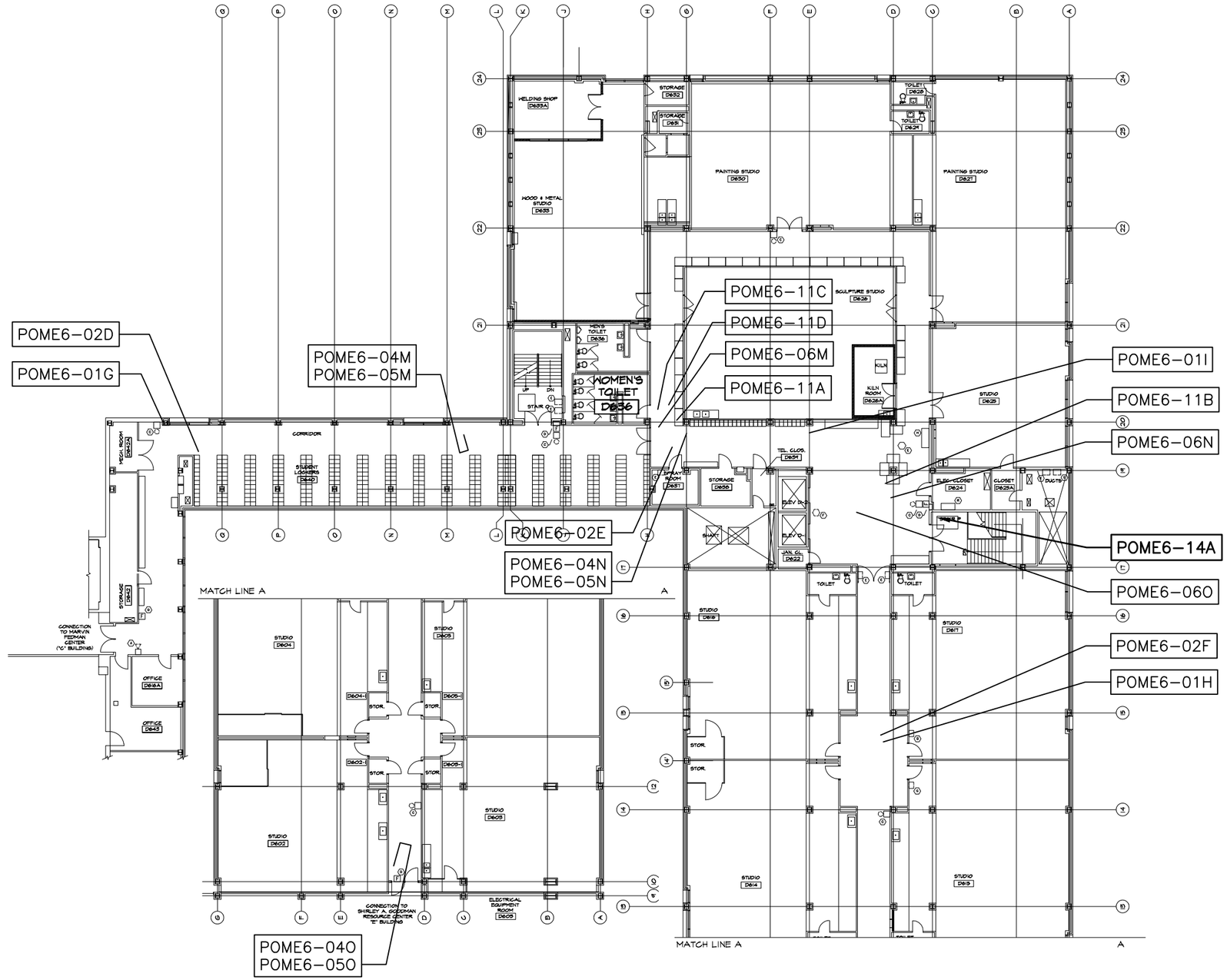

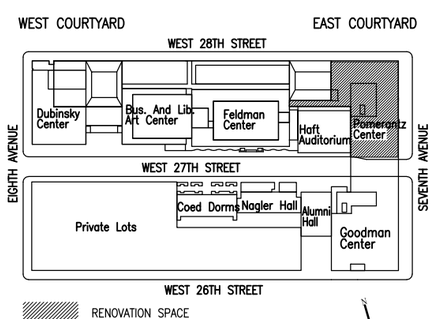

LOCATION PLAN
NOT TO SCALE

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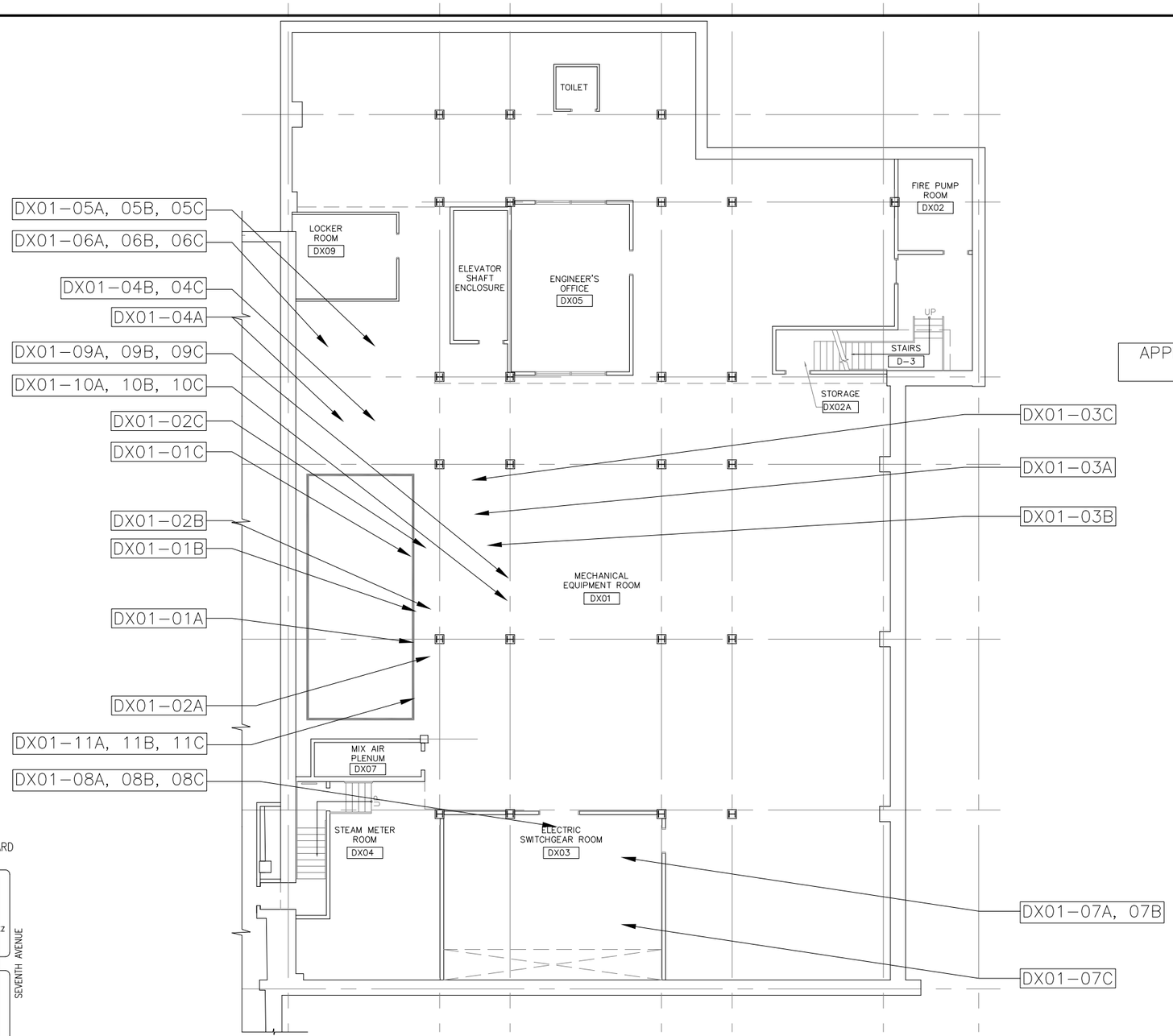
2025/03/06 10:55 AM By: Mikenia Horton

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03–06–2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY, 340 8TH AVENUE, NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071–180	FIGURE TITLE: SIXTH FLOOR PLAN ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: POMERANTZ BUILDING 300 7TH AVENUE, NEW YORK, NY
	PATH: FIT\19071 – FIT\19071–180 Pomerantz Fire Alarm		FIGURE NO: **ASB-08** SHEET 08 OF 11



1 ASB09 PARTIAL SUB CELLAR FLOOR PLAN
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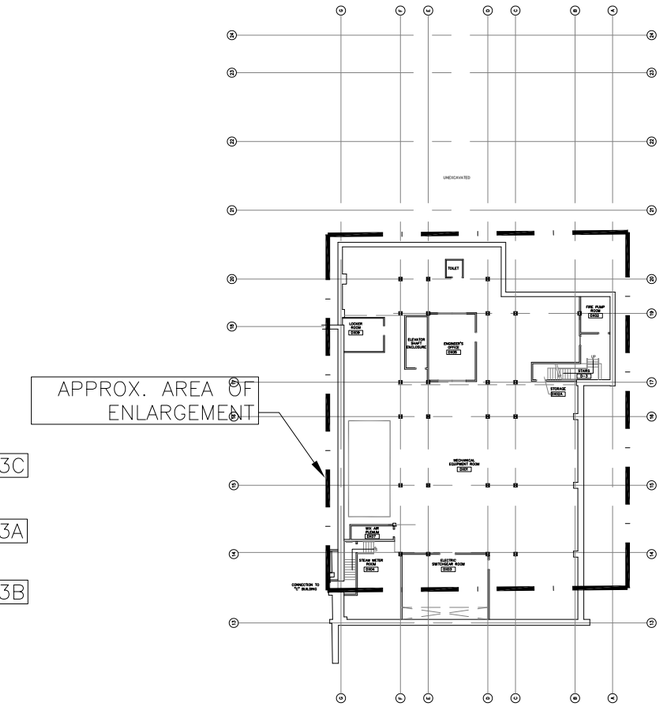

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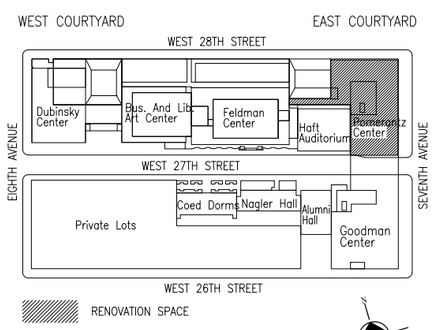

LOCATION PLAN
NOT TO SCALE

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DRAWN BY: MH/AR	DATE: 03-06-2025
CHECKED BY: TZ	FILENAME: 19071-180
APPR'VD BY: AS	SCALE: NOT TO SCALE
PATH: FIT\19071 - FIT\19071-180 Pomerantz Fire Alarm	

CLIENT:
FASHION INSTITUTE OF TECHNOLOGY
340 8TH AVENUE
NEW YORK, NY 10001

FIGURE TITLE: PARTIAL SUB-CELLAR FLOOR PLAN - MER DX01
ASBESTOS BULK SAMPLE LOCATION SCHEMATIC

PROJECT LOCATION: POMERANTZ BUILDING
300 7TH AVENUE, NEW YORK, NY

FIGURE NO: **ASB-09**

SHEET 09 OF 11

X:\FIT\19071 - FIT AS-Needed Contract\19071-133 Pomerantz Fire Alarm\EPM Dwgs\19071-133_ASB Loc Schem\19071-133_ASB09 SubCellar Flr - Bldg D.dwg
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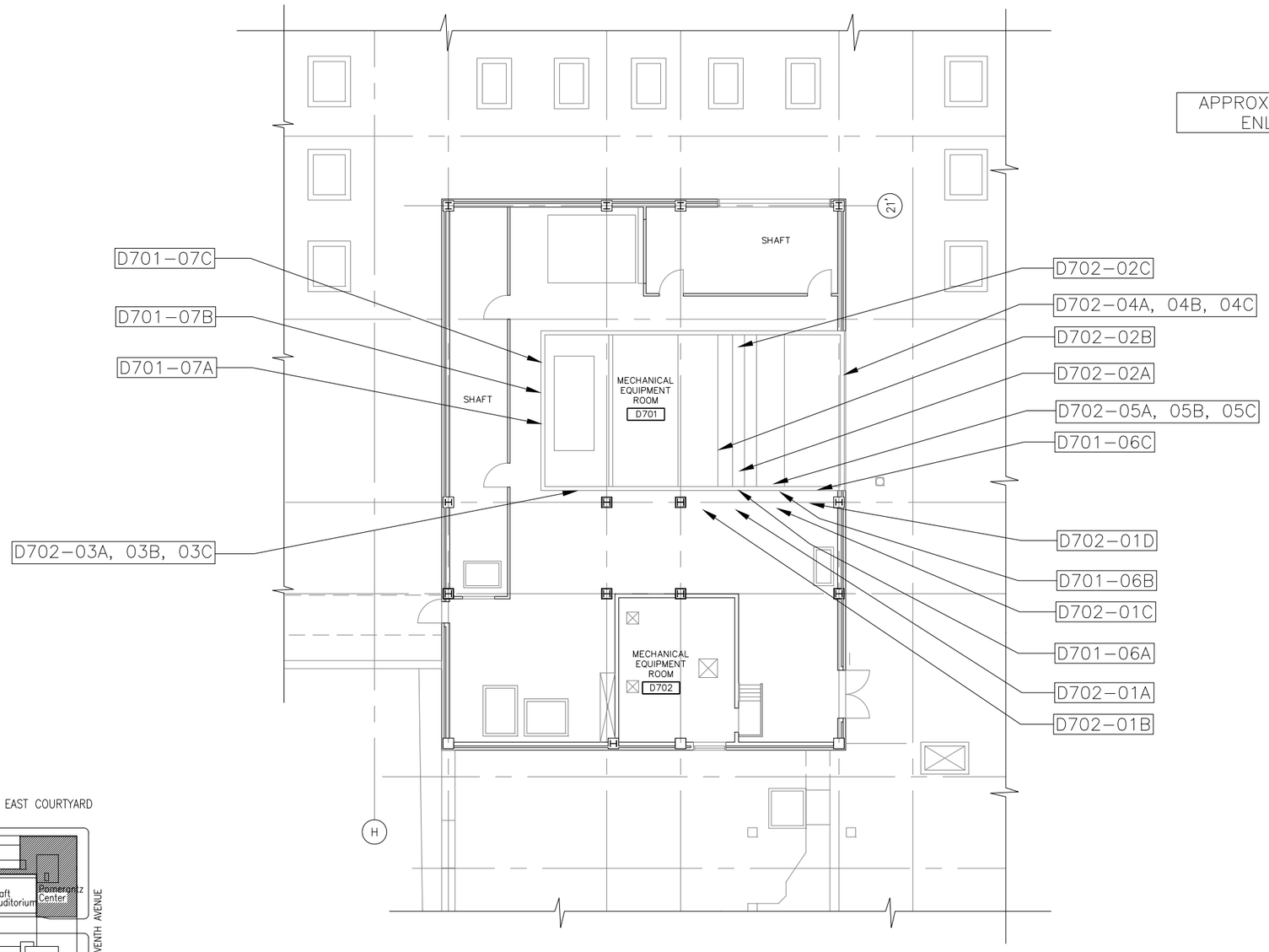

1 ASB10 PARTIAL 7TH/ROOF FLOOR MEP
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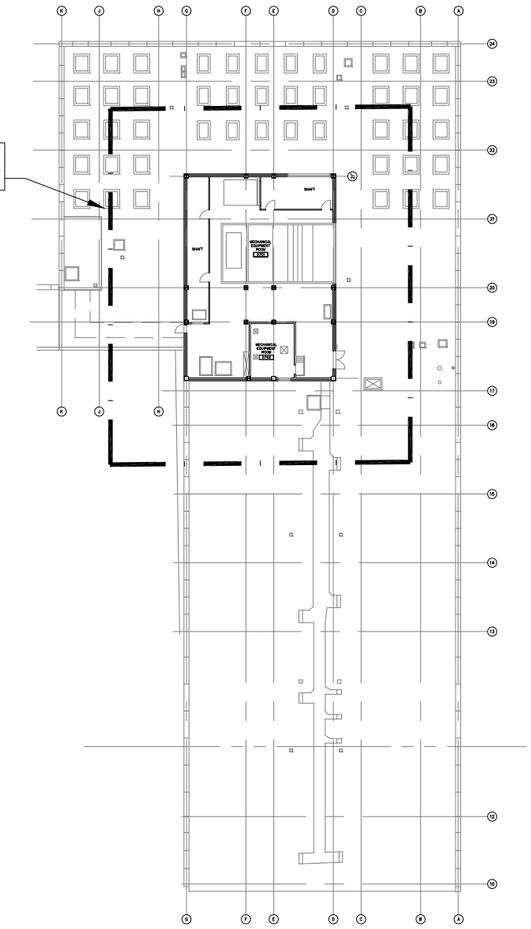

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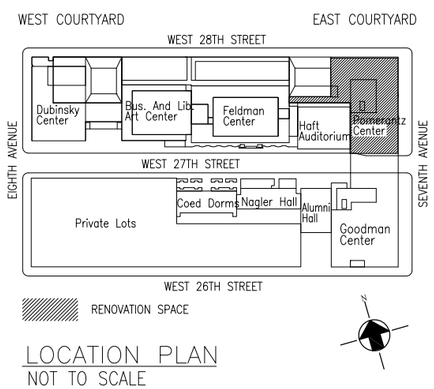
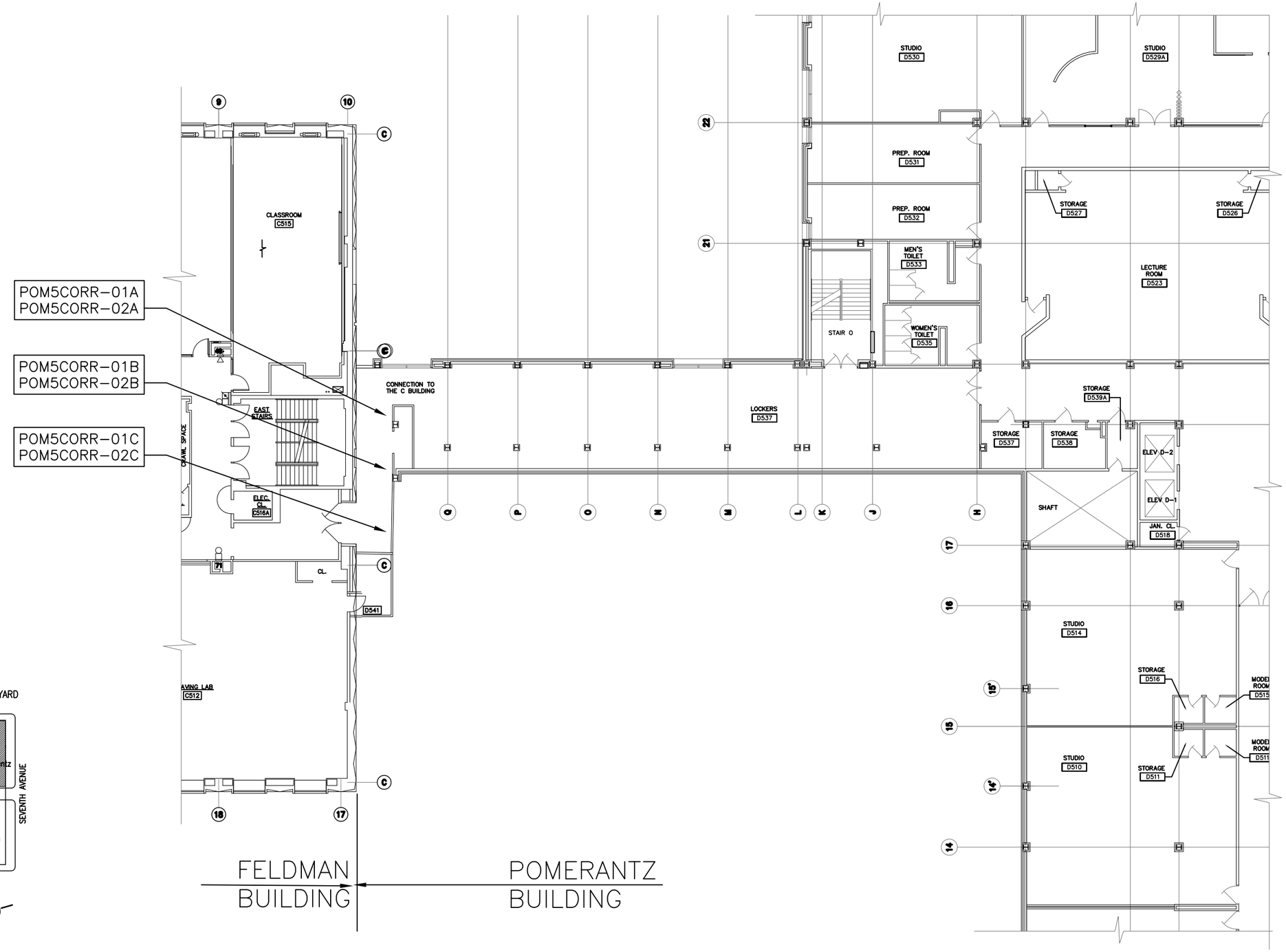
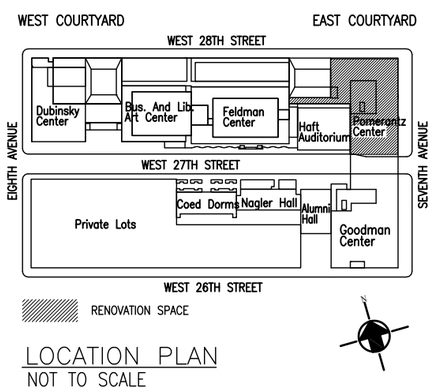


LOCATION PLAN
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: 03–06–2025	CLIENT: FASHION INSTITUTE OF TECHNOLOGY, 340 8TH AVENUE, NEW YORK, NY 10001
	CHECKED BY: TZ	FILENAME: 19071–180	FIGURE TITLE: PARTIAL SEVENTH FLOOR/ROOF FLOOR MER - D701/D702 ASBESTOS BULK SAMPLE LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: POMERANTZ BUILDING, 300 7TH AVENUE, NEW YORK, NY
	PATH: FIT\19071 – FIT\19071–180 Pomerantz Fire Alarm		FIGURE NO: ASB-10 SHEET 10 OF 11

X:\FIT\19071 - FIT AS-Needed Contract\19071-180 Pomerantz Fire Alarm\19071-180 EPM Dwgs\19071-133_ASB10 Roof Flr - Bldg D.dwg
2025/03/06 11:05 AM By: Mikenia Horton





LOCATION PLAN
NOT TO SCALE

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DRAWN BY: MH/AR	DATE: 03–06–2025
CHECKED BY: TZ	FILENAME: 19071–180
APPR'VD BY: AS	SCALE: NOT TO SCALE
PATH: FIT\19071 – FIT\19071–180 Pomerantz Fire Alarm	

CLIENT:
FASHION INSTITUTE OF TECHNOLOGY
340 8TH AVENUE
NEW YORK, NY 10001

FIGURE TITLE: FIFTH FLOOR PLAN - FELDMAN & POMERANTZ CONNECTION
ASBESTOS BULK SAMPLE LOCATION SCHEMATIC

PROJECT LOCATION:
POMERANTZ BUILDING
300 7TH AVENUE, NEW YORK, NY

FIGURE NO:
ASB-11
SHEET 11 OF 11

X:\FIT\19071 - FIT AS-Needed Contract\19071-180 Pomerantz Fire Alarm\19071-180 EPM Dwgs\19071-133_ASB SCHEM.dwg
2025/03/06 11:07 AM By: Mikenia Horton

Attachment A

Survey Photographs

Environmental Planning & Management, Inc. www.epmco.com **Survey Report - Photos**		**LOCATION:** FIT - Fashion Institute of Technology FIT Pomerantz Building **DATE:** October 25, 2023	
	Photo No. 1		**Photo No. 2**
Location: Pomerantz Building **Description**: White top coat and brown base coat wall plaster do **not** contain asbestos.		**Location**: Pomerantz Building **Description**: White top coat and brown base coat wall plaster do **not** contain asbestos.	

Environmental Planning & Management, Inc. www.epmco.com **Survey Report - Photos**		**LOCATION:** FIT - Fashion Institute of Technology FIT Pomerantz Building **DATE:** October 25, 2023	
	Photo No. 3		**Photo No. 4**
Location: Pomerantz Building **Description**: White top coat and brown base coat wall plaster do **not** contain asbestos.		**Location**: Pomerantz Building **Description**: Joint compound on gypsum board does **not** contain asbestos.	

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Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: October 25, 2023

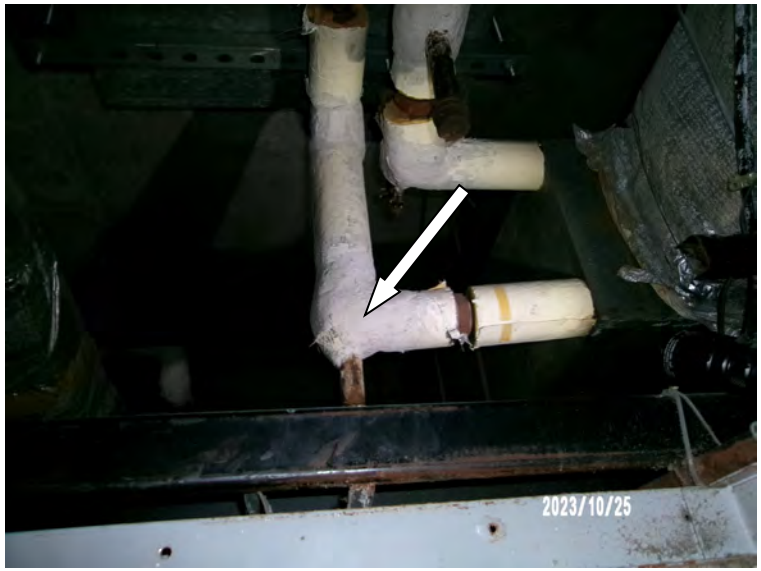

Photo No. 5

Location: Pomerantz Building

Description: Brown adhesive on ductwork fiberglass insulation does **not** contain asbestos.

Photo No. 6

Location: Pomerantz Building

Description: Pipe elbow insulation does **not** contain asbestos. Pipe lagging insulation is fiberglass.

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Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: November 1, 2023

Photo No. 7

Photo No. 8

Location: Pomerantz Building

Description: White top coat and brown base coat wall plaster do **not** contain asbestos.

Location: Pomerantz Building

Description: Brown adhesive on ductwork fiberglass insulation does **not** contain asbestos.

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Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: October 25, 2023

Photo No. 9

Photo No. 10

Location: Pomerantz Building

Description: Pipe elbow insulation does **not** contain asbestos. Pipe lagging insulation is fiberglass.

Location: Pomerantz Building

Description: Pipe elbow insulation does **not** contain asbestos. Pipe lagging insulation is fiberglass.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: October 25, 2023

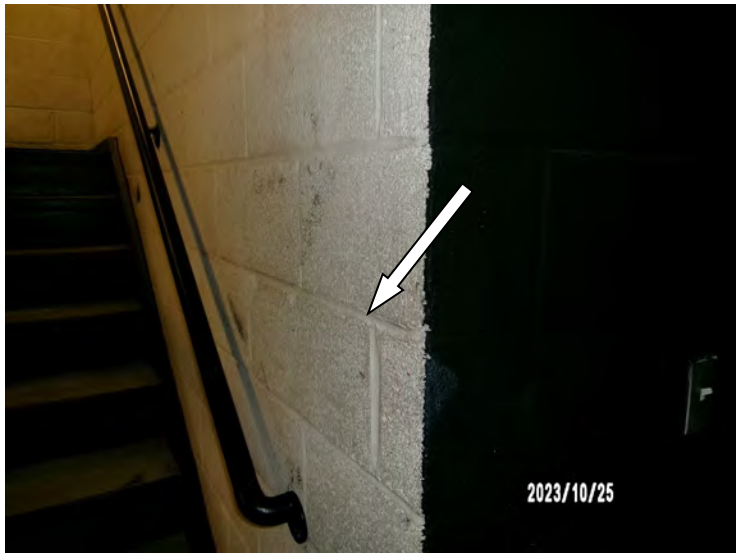

Photo No. 11

Location: Pomerantz Building Great Hall Conference Room

Description: Ceiling insulation does **not** contain asbestos.

Photo No.12

Location: Pomerantz Building

Description: Mortar for block walls does **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: November 1, 2023

Photo No. 13

Location: Pomerantz Building

Description: Ceiling decking is clean concrete.

Photo No.14

Location: Pomerantz Building

Description: Wiring is insulated with vinyl wire insulation.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: November 1, 2023

	Photo No. 15		**Photo No.16**
Location: Pomerantz Building **Description**: Pipe lagging insulation is fiberglass.		**Location**: Pomerantz Building **Description**: Pipe elbow insulation does **not** contain asbestos. Pipe lagging insulation is fiberglass.	

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Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: November 1, 2023

Photo No. 17

Photo No.18

Location: Pomerantz Building

Description: Gypsum board does **not** contain asbestos.

Location: Pomerantz Building

Description: White 12”x12” spline ceiling tiles do **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: November 1, 2023

Photo No. 19

Location: Pomerantz Building

Description: Pipe elbow insulation does **not** contain asbestos. Pipe lagging insulation is fiberglass.

Photo No.20

Location: Pomerantz Building

Description: Piping is insulated with fiberglass lagging insulation.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: November 1, 2023

Photo No. 21

Location: Pomerantz Building

Description: Pipe elbow insulation does **not** contain asbestos. Pipe lagging insulation is fiberglass.

Photo No.22

Location: Pomerantz Building

Description: White 12”x12” spline ceiling tiles do **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: November 1, 2023

Photo No. 23

Location: Pomerantz Building

Description: Gypsum board and joint compound both do **not** contain asbestos.

Photo No.24

Location: Pomerantz Building

Description: Gypsum board and joint compound both do **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

FIT Pomerantz Building

DATE: March 4, 2025

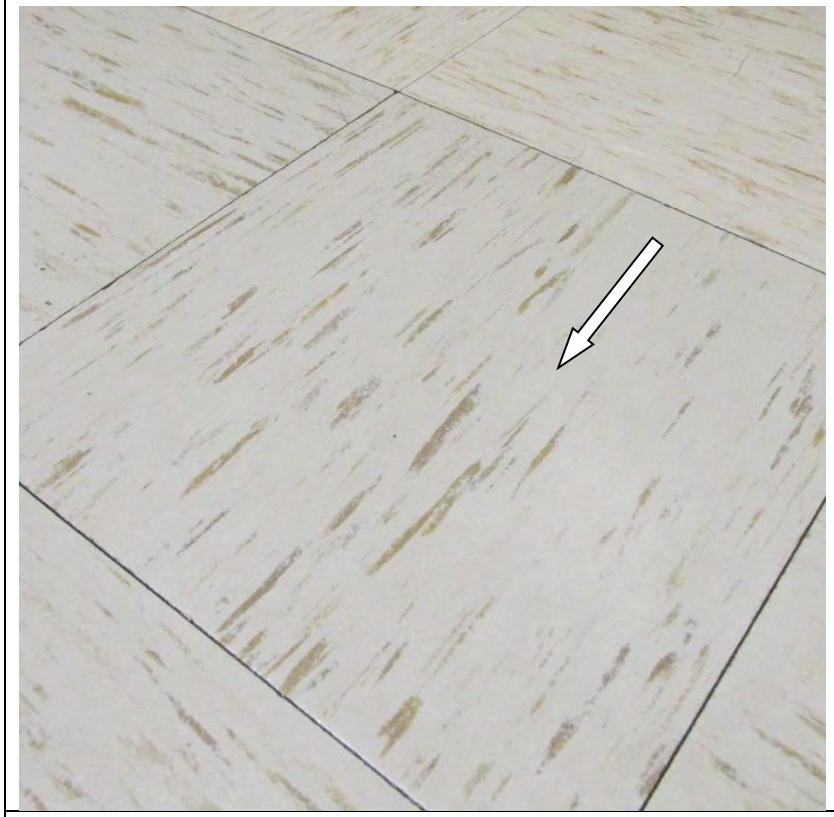

Photo No. 25

Location: Pomerantz Building

Description: **Off-white 12”x12” floor tile with brown streaks and associated black mastic both contain asbestos**.

Photo No. 26

Location: Pomerantz Building Pantry D125

Description: Mortar for stone tile flooring does **not** contain asbestos.

Environmental Planning & Management, Inc. www.epmco.com **Survey Report - Photos**		**LOCATION:** FIT - Fashion Institute of Technology FIT Pomerantz Building **DATE:** March 4, 2025	
	Photo No. 27		**Photo No. 28**
Location: Pomerantz Building Stairwell P **Description**: Mortar for stone tile flooring does **not** contain asbestos.		**Location**: Pomerantz Building Katie Murphy Theatre **Description**: White top coat ceiling plaster and brown base coat ceiling plaster both do **not** contain asbestos.	

Environmental Planning & Management, Inc. www.epmco.com **Survey Report - Photos**		**LOCATION:** FIT - Fashion Institute of Technology FIT Pomerantz Building **DATE:** March 4, 2025	
	Photo No. 29		**Photo No. 30**
Location: Pomerantz Building Katie Murphy Theatre **Description**: White top coat wall plaster and brown base coat wall plaster both do **not** contain asbestos.		**Location**: Pomerantz Building **Description**: Pomerantz Bridge contains a clean concrete ceiling decking.	

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

Pomerantz MER DX01

DATE: January 18, 2018

Photo No. 31

Location: Pomerantz MER DX01

Description: Ductwork vibration damper cloth on Fan HV-1D contains asbestos.

Photo No. 32

Location: Pomerantz MER DX01

Description: Cementitious pipe elbow insulation on Unit AC-1D does **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

Pomerantz MER DX01

DATE: January 18, 2018

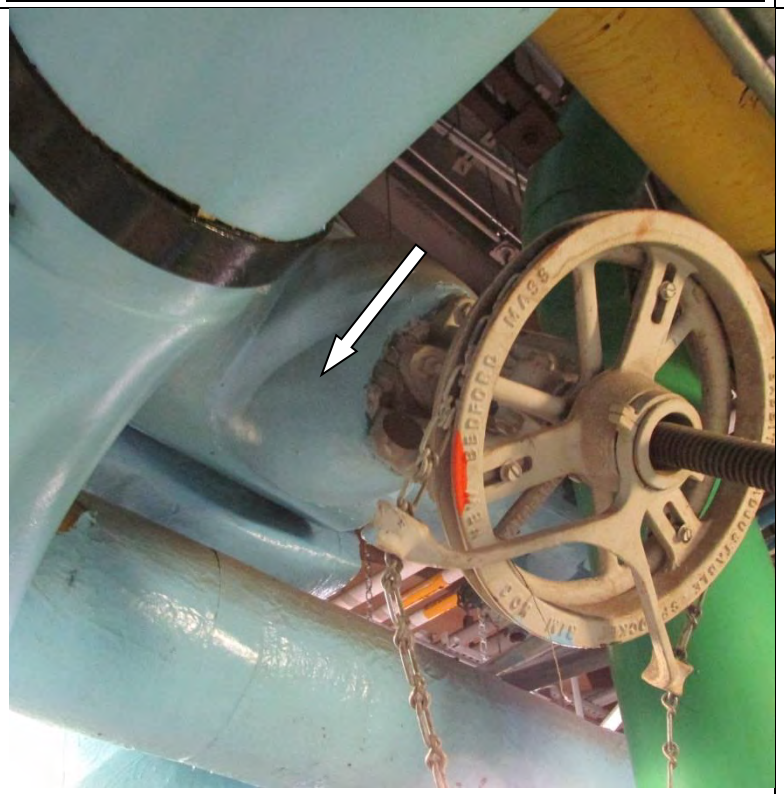

Photo No. 33

Location: Pomerantz MER DX01

Description: Cementitious pipe elbow insulation on Unit AC-1D does **not** contain asbestos.

Photo No. 34

Location: Pomerantz MER DX01

Description: Cementitious pipe elbow insulation on valves does **not** contain asbestos.

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Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

Pomerantz MER DX01

DATE: January 18, 2018

Photo No. 35

Location: Pomerantz MER DX01

Description: Cementitious valve insulation on pump units does **not** contain asbestos.

Photo No. 36

Location: Pomerantz MER DX01

Description: White insulation on heat exchanger does **not** contain asbestos.

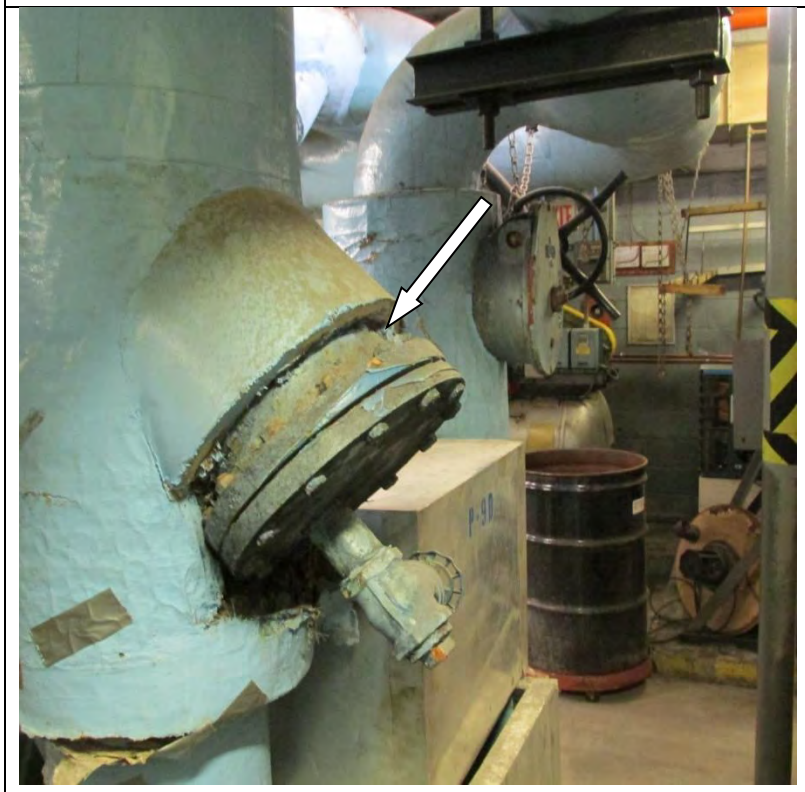
Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

Pomerantz MER DX01

DATE: January 18, 2018



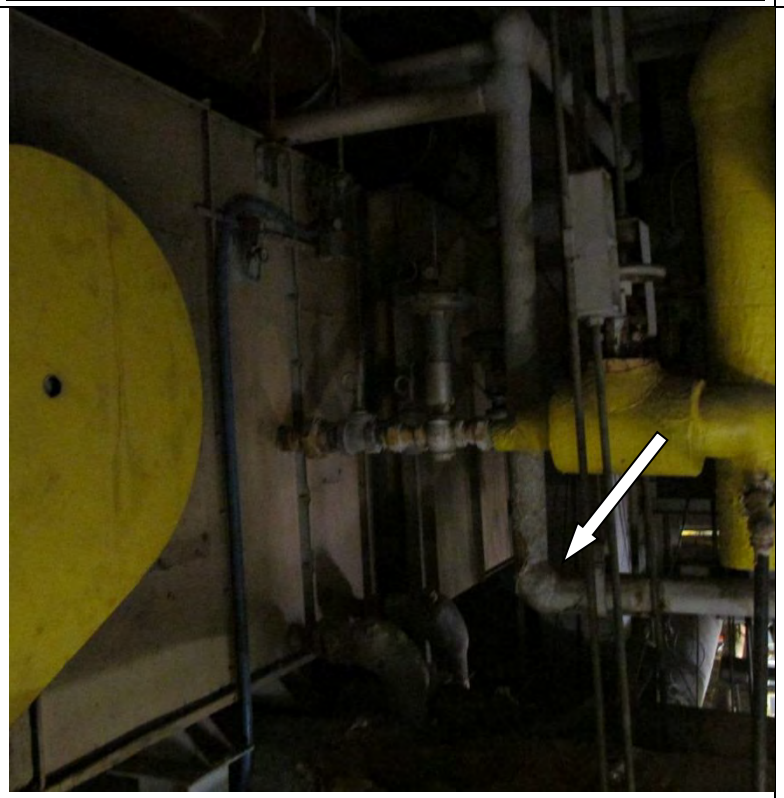


Photo No. 37

Location: Pomerantz MER DX01

Description: Cementitious valve insulation on pump units does **not** contain asbestos.

Photo No. 38

Location: Pomerantz MER DX01

Description: Cementitious pipe elbow insulation on piping for Unit AC-2D does **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

Pomerantz MER DX01

DATE: February 8, 2018

Photo No. 39

Location: Pomerantz MER DX01

Description: Cementitious outer jacket layer on AC-1D contains asbestos.

Photo No. 40

Location: Pomerantz MER DX01

Description: Gasket in valve flange of Pump-12D does **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

Pomerantz MER D701

DATE: January 18, 2018

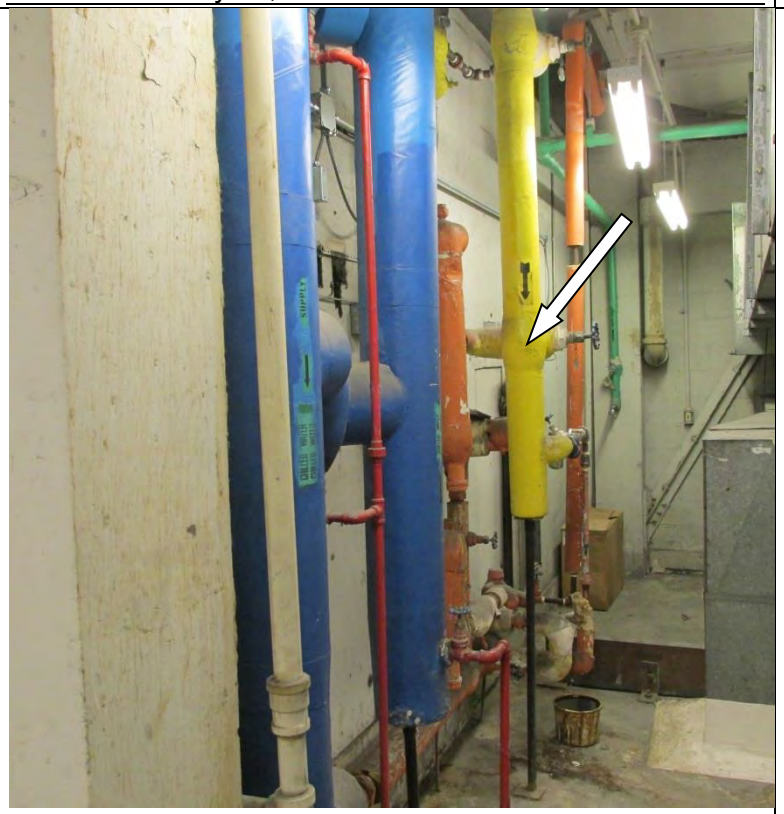


Photo No. 41

Location: Pomerantz MER D701

Description: Black and tan duct seam sealant in ductwork flanges contains asbestos.

Photo No. 42

Location: Pomerantz MER D701

Description: Cementitious pipe elbow insulation on all piping associated with Unit AC-3D does **not** contain asbestos.

Environmental Planning & Management, Inc.
www.epmco.com

Survey Report - Photos

LOCATION: FIT - Fashion Institute of Technology

Pomerantz MER D701

DATE: January 18, 2018

Photo No. 43

Location: Pomerantz MER D701

Description: Cementitious valve insulation on valves on top of Unit AC-3D does **not** contain asbestos.

Photo No. 44

Location: Pomerantz MER D701

Description: Tan caulking around exterior perimeter of louvers does **not** contain asbestos.

Attachment B

Bulk Sample Laboratory Analytical Data
and Chain of Custody Documentation
Lab Work Order: 25-03-015, 23-10-150, 23-11-022

14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology - Pomerantz Building, 300 Seventh Avenue, NYC 10001
PROJECT: 19071 - 180

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME1-13A 25-03-015-01	Mortar for stone tile flooring	Pantry D125	Black Homogeneous Friable	Not Applicable			1% CELL	99%	NAD	
POME1- 13B 25-03-015-02	Mortar for stone tile flooring	Pantry D125	Black Homogeneous Friable	Not Applicable			1% CELL	99%	NAD	
POME1-13C 25-03-015-03	Mortar for stone tile flooring	Pantry D125	Black Homogeneous Friable	Not Applicable			1% CELL	99%	NAD	
POME6- 14A 25-03-015-04	Mortar for stone tile flooring	Stairwell P 6th Floor	Black Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME6- 14B 25-03-015-05	Mortar for stone tile flooring	Stairwell P 3rd Floor	Black Homogeneous Friable	Not Applicable			2% SYNTH	98%	NAD	
POME6- 14C 25-03-015-06	Mortar for stone tile flooring	Stairwell P 2nd Floor	Black Homogeneous Friable	Not Applicable			1% CELL	99%	NAD	
POME1-15A 25-03-015-07	White Topcoat Ceiling Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-15B 25-03-015-08	White Topcoat Ceiling Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-15C 25-03-015-09	White Topcoat Ceiling Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 15D 25-03-015-10	White Topcoat Ceiling Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 15E 25-03-015-11	White Topcoat Ceiling Plaster	Katie Murphy Theare Cellar	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 15F 25-03-015-12	White Topcoat Ceiling Plaster	Katie Murphy Theare Cellar	White Homogeneous Friable	Not Applicable			0%	100%	NAD	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology - Pomerantz Building, 300 Seventh Avenue, NYC 10001
PROJECT: 19071 - 180

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POMEC-15G 25-03-015-13	White Topcoat Ceiling Plaster	Katie Murphy Theare Cellar	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-16A 25-03-015-14	Brown Base Coat Ceiling Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-16B 25-03-015-15	Brown Base Coat Ceiling Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-16C 25-03-015-16	Brown Base Coat Ceiling Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-16D 25-03-015-17	Brown Base Coat Ceiling Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 16E 25-03-015-18	Brown Base Coat Ceiling Plaster	Katie Murphy Theare Cellar	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 16F 25-03-015-19	Brown Base Coat Ceiling Plaster	Katie Murphy Theare Cellar	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 16G 25-03-015-20	Brown Base Coat Ceiling Plaster	Katie Murphy Theare Cellar	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 17A 25-03-015-21	White Topcoat Wall Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 17B 25-03-015-22	White Topcoat Wall Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 17C 25-03-015-23	White Topcoat Wall Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 17D 25-03-015-24	White Topcoat Wall Plaster	Katie Murphy Theatre 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	

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Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology - Pomerantz Building, 300 Seventh Avenue, NYC 10001
PROJECT: 19071 - 180

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POMEC- 17E 25-03-015-25	White Topcoat Wall Plaster	Katie Murphy Theare Cellar	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 17F 25-03-015-26	White Topcoat Wall Plaster	Katie Murphy Theare Cellar	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 17G 25-03-015-27	White Topcoat Wall Plaster	Katie Murphy Theare Cellar	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 18A 25-03-015-28	Brown Base Coat Wall Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 18B 25-03-015-29	Brown Base Coat Wall Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 18C 25-03-015-30	Brown Base Coat Wall Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1- 18D 25-03-015-31	Brown Base Coat Wall Plaster	Katie Murphy Theatre 1st Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 18E 25-03-015-32	Brown Base Coat Wall Plaster	Katie Murphy Theare Cellar	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 18F 25-03-015-33	Brown Base Coat Wall Plaster	Katie Murphy Theare Cellar	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC- 18G 25-03-015-34	Brown Base Coat Wall Plaster	Katie Murphy Theare Cellar	Brown Homogeneous Friable	Not Applicable			0%	100%	NAD	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology - Pomerantz Building, 300 Seventh Avenue, NYC 10001
PROJECT: 19071 - 180

Date Received: 3/5/25
Date of PLM Analysis: 3/6/25
Date of Report: 3/7/25

PLM Analyst: D. Kogan

QC Review: D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 0.25%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. **Analytical equipment**: Stereo Binocular Microscopes: Motic SMZ140-N2LED (SN#: 03210037461 / 03210037462 / 03210023903 / 03210023905); Polarized Light Microscopes: Motic Panthera TEC-POL (SN#: 19017119 / 19021954 / 21006248), Olympus BH-2 (Ser #: 207130). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(June 28, 2022)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

25-03-015 112

BULK SAMPLE FORM

PAGE 1 OF 2

EPM
Environmental Planning & Management, Inc.
www.epmco.com

1983 Marcus Avenue, Suite 109 | Lake Success | New York 11040
P. 516.328.1194 | F. 516.328.1381

2125 Center Avenue, Suite 404 | Fort Lee | New Jersey 07024
P. 201.363.1983 | F. 201.363.0800

RESULTS NEEDED: **48 Hour Turn Around Time**
SEND ALL RESULTS BY EMAIL TO : TZABRANSKY@epmco.com; TGOGOS@epmco.com; CRODRIGUEZ@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-180 DATE : 3/4/2025
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME1- 13A	3/4/2025	Pantry D125	Mortar for stone tile flooring
POME1- 13B		Pantry D125	
POME1- 13C		Pantry D125	
POME6- 14A	3/4/2025	Stairwell P 6th Floor	Mortar for stone tile flooring
POME3- 14B		Stairwell P 3th Floor	
POME2- 14C		Stairwell P 2nd Floor	
POME1- 15A	3/4/2025	Katie Murphy Theatre 1st Floor	White Top Coat Ceiling Plaster
POME1- 15B		Katie Murphy Theatre 1st Floor	
POME1- 15C		Katie Murphy Theatre 1st Floor	
POME1- 15D		Katie Murphy Theatre 1st Floor	
POMEC- 15E		Katie Murphy Theatre Cellar	
POMEC- 15F		Katie Murphy Theatre Cellar	
POMEC- 15G		Katie Murphy Theatre Cellar	
POME1- 16A	3/4/2025	Katie Murphy Theatre 1st Floor	Brown Base Coat Ceiling Plaster
POME1- 16B		Katie Murphy Theatre 1st Floor	
POME1- 16C		Katie Murphy Theatre 1st Floor	
POME1- 16D		Katie Murphy Theatre 1st Floor	
POMEC- 16E		Katie Murphy Theatre Cellar	
POMEC- 16F		Katie Murphy Theatre Cellar	
POMEC- 16G		Katie Murphy Theatre Cellar	

Sampler's Relinquishment Signature / Date / Time:

TZABRANSKY 3/4/25

Lab Receipt Signature / Date / Time:

3/5/25 10:15

25-03-015 2/2 22

BULK SAMPLE FORM

PAGE__ OF__

EPM
Environmental Planning & Management, Inc.
www.epmco.com

1983 Marcus Avenue, Suite 109 I Lake Success I New York 11040
P. 516.328.1194 I F. 516.328.1381

2125 Center Avenue, Suite 404 I Fort Lee I New Jersey 07024
P. 201.363.1983 I F. 201.363.0800

RESULTS NEEDED: **48 Hour Turn Around Time**
SEND ALL RESULTS BY EMAIL TO : TZABRANSKY@epmco.com; TGOGOS@epmco.com; CRODRIGUEZ@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-180 DATE : 3/4/2025
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME1- 17A	3/4/2025	Katie Murphy Theatre 1st Floor	White Top Coat Wall Plaster
POME1- 17B		Katie Murphy Theatre 1st Floor	
POME1- 17C		Katie Murphy Theatre 1st Floor	
POME1- 17D		Katie Murphy Theatre 1st Floor	
POMEC- 17E		Katie Murphy Theatre Cellar	
POMEC- 17F		Katie Murphy Theatre Cellar	
POMEC- 17G		Katie Murphy Theatre Cellar	
POME1- 18A	3/4/2025	Katie Murphy Theatre 1st Floor	Brown Base Coat Wall Plaster
POME1- 18B		Katie Murphy Theatre 1st Floor	
POME1- 18C		Katie Murphy Theatre 1st Floor	
POME1- 18D		Katie Murphy Theatre 1st Floor	
POMEC- 18E		Katie Murphy Theatre Cellar	
POMEC- 18F		Katie Murphy Theatre Cellar	
POMEC- 18G		Katie Murphy Theatre Cellar	

Sampler's Relinquishment Signature / Date / Time:
T. ZABRANSKY 3/4/25

Lab Receipt Signature / Date / Time:
DM 3/5/25 10:15

14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME3-01A 23-10-150-01	White 12"x12" Spline Ceiling Tiles	Elevator Lobby 3rd Floor	White/Gray Homogeneous Friable	10.8	21.5	67.8	40% CELL 20% FBGL	40%	**NAD** inconclusive	**NAD**
POME3-01B 23-10-150-02	White 12"x12" Spline Ceiling Tiles	Bridge Corridor 3rd Floor	White/Gray Homogeneous Friable	12.4	15.4	72.2	40% CELL 20% FBGL	40%	**NAD** inconclusive	**NAD**
POME3-01C 23-10-150-03	White 12"x12" Spline Ceiling Tiles	Courtyard Corridor 3rd Floor	White/Gray Homogeneous Friable	13.0	12.1	74.9	40% CELL 20% FBGL	40%	**NAD** inconclusive	Analysis not requested by client
POME3-02A 23-10-150-04	Brown Adhesive on ductwork wrap	Elevator Lobby 3rd Floor	Brown Homogeneous NOB	52.9	6.1	41.0	0%	100%	**NAD** inconclusive	**NAD**
POME3-02B 23-10-150-05	Brown Adhesive on ductwork wrap	Bridge Corridor 3rd Floor	Brown Homogeneous NOB	65.8	12.3	21.9	0%	100%	**NAD** inconclusive	**NAD**
POME3-02C 23-10-150-06	Brown Adhesive on ductwork wrap	Corridor 3rd Floor by Stairs O	Brown Homogeneous NOB	64.4	9.0	26.6	0%	100%	**NAD** inconclusive	Analysis not requested by client
POME3-03A 23-10-150-07	Cementitious Pipe Elbow Insulation	Elevator Lobby 3rd Floor	Gray Homogeneous Friable	Not Applicable			3% FBGL	97%	**NAD**	
POME3-03B 23-10-150-08	Cementitious Pipe Elbow Insulation	Bridge Corridor 3rd Floor	Gray Homogeneous Friable	Not Applicable			3% FBGL	97%	**NAD**	
POME3-03C 23-10-150-09	Cementitious Pipe Elbow Insulation	Corridor 3rd Floor by Stairs O	Gray Homogeneous Friable	Not Applicable			4% FBGL	96%	**NAD**	
POME3-04A 23-10-150-10	White Top Coat Wall Plaster	Elevator Lobby 3rd Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME3-04B 23-10-150-11	White Top Coat Wall Plaster	Bridge Corridor 3rd Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME3-04C 23-10-150-12	White Top Coat Wall Plaster	Courtyard Corridor 3rd Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	

14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME3-05A 23-10-150-13	Brown Base Coat Wall Plaster	Elevator Lobby 3rd Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME3-05B 23-10-150-14	Brown Base Coat Wall Plaster	Bridge Corridor 3rd Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME3-05C 23-10-150-15	Brown Base Coat Wall Plaster	Courtyard Corridor 3rd Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME3-06A 23-10-150-16	Gypsum board	Corridor 3rd Floor by Stairs O	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL	98%	NAD	
POME3-06B 23-10-150-17	Gypsum board	Corridor 3rd Floor by Stairs O	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL	98%	NAD	
POME3-06C 23-10-150-18	Gypsum board	Corridor 3rd Floor by Stairs O	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL	98%	NAD	
POME2-04D 23-10-150-19	White Top Coat Wall Plaster	Elevator Lobby 2nd Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-04E 23-10-150-20	White Top Coat Wall Plaster	Corridor 2nd Floor by Stairs O	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-04F 23-10-150-21	White Top Coat Wall Plaster	Corridor by Room D242	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-05D 23-10-150-22	Brown Base Coat Wall Plaster	Elevator Lobby 2nd Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-05E 23-10-150-23	Brown Base Coat Wall Plaster	Corridor 2nd Floor by Stairs O	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-05F 23-10-150-24	Brown Base Coat Wall Plaster	Corridor by Room D242	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME2-06D 23-10-150-25	Gypsum Board	Elevator Lobby 2nd Floor	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	NAD	
POME2-06E 23-10-150-26	Gypsum Board	Corridor 2nd Floor by Stairs O	Gray Homogeneous Friable	Not Applicable			1% CELL 1% FBGL	98%	NAD	
POME2-06F 23-10-150-27	Gypsum Board	Corridor by Room D242	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	NAD	
POME2-03D 23-10-150-28	Cementitious Pipe Elbow Insulation	Elevator Lobby 2nd Floor	Gray Homogeneous Friable	Not Applicable			4% FBGL	96%	NAD	
POME2-03E 23-10-150-29	Cementitious Pipe Elbow Insulation	Elevator Lobby 2nd Floor	Gray Homogeneous Friable	Not Applicable			4% FBGL	96%	NAD	
POME2-03F 23-10-150-30	Cementitious Pipe Elbow Insulation	Elevator Lobby 2nd Floor	Gray Homogeneous Friable	Not Applicable			3% FBGL	97%	NAD	
POME2-07A 23-10-150-31	Joint compound on gypsum board	Elevator Lobby 2nd Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-07B 23-10-150-32	Joint compound on gypsum board	Corridor by Stairs O	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-07C 23-10-150-33	Joint compound on gypsum board	Corridor by Room D240	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-07D 23-10-150-34	Joint compound on gypsum board	Corridor by Room D240	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-09A 23-10-150-35	Mortar for block walls	Backstage 2nd Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-09B 23-10-150-36	Mortar for block walls	Backstage 2nd Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME2-09C 23-10-150-37	Mortar for block walls	Backstage 2nd Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	

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BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME1-06G 23-10-150-38	Gypsum board	Elevator Lobby 1st Floor	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	NAD	
POME1-06H 23-10-150-39	Gypsum board	Elevator Lobby by Stairs P	Gray Homogeneous Friable	Not Applicable			1% CELL 1% FBGL	98%	NAD	
POME1-06I 23-10-150-40	Gypsum board	Elevator Lobby by Ramp	Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	NAD	
POME1-04G 23-10-150-41	White Top Coat Wall Plaster	Elevator Lobby 1st Floor	Yellow/White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-04H 23-10-150-42	White Top Coat Wall Plaster	Elevator Lobby 1st Floor	White/Gray Homogeneous Friable	Not Applicable			2% CELL	98%	NAD	
POME1-04I 23-10-150-43	White Top Coat Wall Plaster	Elevator Lobby 1st Floor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-05G 23-10-150-44	Brown Base Coat Wall Plaster	Elevator Lobby 1st Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-05H 23-10-150-45	Brown Base Coat Wall Plaster	Elevator Lobby 1st Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-05I 23-10-150-46	Brown Base Coat Wall Plaster	Elevator Lobby 1st Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-07E 23-10-150-47	Joint compound on gypsum board	Elevator Lobby by Stairs P	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-07F 23-10-150-48	Joint compound on gypsum board	Elevator Lobby by Ramp	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POME1-07G 23-10-150-49	Joint compound on gypsum board	Elevator Lobby by Ramp	White Homogeneous Friable	Not Applicable			0%	100%	NAD	

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BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME1-08A 23-10-150-50	Ceiling Insulation	Great Hall Conference Hall 1st Floor	White Homogeneous Friable	Not Applicable			100% CELL	0%	**NAD**	
POME1-08B 23-10-150-51	Ceiling Insulation	Great Hall Conference Hall 1st Floor	White Homogeneous Friable	Not Applicable			100% CELL	0%	**NAD**	
POME1-08C 23-10-150-52	Ceiling Insulation	Great Hall Conference Hall 1st Floor	White Homogeneous Friable	Not Applicable			100% CELL	0%	**NAD**	
POME1-10A 23-10-150-53	White Gypsum Board	Entrance on 28th Street	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	**NAD**	
POME1-10B 23-10-150-54	White Gypsum Board	Entrance on 28th Street	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	**NAD**	
POME1-10C 23-10-150-55	White Gypsum Board	Entrance on 28th Street	Gray Homogeneous Friable	Not Applicable			1% CELL 1% FBGL	98%	**NAD**	
POMEC-06J 23-10-150-56	Gypsum Board	Cellar Corridor	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	**NAD**	
POMEC-06K 23-10-150-57	Gypsum Board	Cellar Corridor West	Gray Homogeneous Friable	Not Applicable			1% FBGL	99%	**NAD**	
POMEC-06L 23-10-150-58	Gypsum Board	Cellar Corridor West by Stairs	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	**NAD**	
POMEC-04J 23-10-150-59	White Top Coat Wall Plaster	Cellar Corridor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POMEC-04K 23-10-150-60	White Top Coat Wall Plaster	Cellar Corridor West	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POMEC-04L 23-10-150-61	White Top Coat Wall Plaster	Elevator Lobby Cellar	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	

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BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POMEC-05J 23-10-150-62	Brown Base Coat Wall Plaster	Cellar Corridor	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC-05K 23-10-150-63	Brown Base Coat Wall Plaster	Cellar Corridor West	Lt. Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC-05L 23-10-150-64	Brown Base Coat Wall Plaster	Elevator Lobby Cellar	Lt. Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC-07H 23-10-150-65	Joint compound on gypsum board	Cellar Corridor West	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC-07I 23-10-150-66	Joint compound on gypsum board	Cellar Corridor	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC-07J 23-10-150-67	Joint compound on gypsum board	Elevator Lobby Cellar	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC-07K 23-10-150-68	Joint compound on gypsum board	Cellar Corridor West by Stairs	White Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMEC-01D 23-10-150-69	White 12"x12" Spline Ceiling Tiles	Cellar Corridor West	White/Gray Homogeneous Friable	12.6	24.7	62.6	40% CELL 40% FBGL	20%	NAD inconclusive	NAD
POMEC-01E 23-10-150-70	White 12"x12" Spline Ceiling Tiles	Elevator Lobby Cellar	White/Gray Homogeneous Friable	16.3	6.4	77.3	40% CELL 40% FBGL	20%	NAD inconclusive	NAD
POMEC-01F 23-10-150-71	White 12"x12" Spline Ceiling Tiles	Cellar Corridor	White/Gray Homogeneous Friable	16.4	11.2	72.3	40% CELL 40% FBGL	20%	NAD inconclusive	Analysis not requested by client
POMESC-09D 23-10-150-72	Mortar for block walls	Sub-Cellar MER	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMESC-09E 23-10-150-73	Mortar for block walls	Sub-Cellar MER	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	
POMESC-09F 23-10-150-74	Mortar for block walls	Sub-Cellar MER	Gray Homogeneous Friable	Not Applicable			0%	100%	NAD	

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BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Date Received: 10/27/23
Date of PLM Analysis: 10/30/23
Date of TEM Analysis: 10/30/23
Date of Report: 10/31/23

PLM Analyst: D. Kogan
TEM Analyst: A. Ansari

QC Review: D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 0.25%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. **Analytical equipment**: Stereo Binocular Microscopes: Motic SMZ140-N2LED (SN#: 03210037461 / 03210037462 / 03210023903 / 03210023905); Polarized Light Microscopes: Motic Panthera TEC-POL (SN#: 19017119 / 19021954 / 21006248), Olympus BH-2 (Ser #: 207130). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(June 28, 2022)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

BULK SAMPLE FORM 23·10·150 1/4

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2125 Center Avenue, Suite 404 | Fort Lee | New Jersey 07024
P. 201.363.1983 | F. 201.363.0800

RESULTS NEEDED: **48 Hour Turn Around Time**
SEND ALL RESULTS BY EMAIL TO : TZABRANSKY@epmco.com; TGOGOS@epmco.com; CRODRIGUEZ@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-133 DATE : 10/26/2023
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME3- 01A	10/25/2023	Elevator Lobby 3rd Floor	White 12"x12" Spline Ceiling Tiles
POME3- 01B		Bridge Corridor 3rd Floor	
POME3- 01C		Courtyard Corridor 3rd Floor	
POME3- 02A	10/25/2023	Elevator Lobby 3rd Floor	Brown Adhesive on ductwork wrap
POME3- 02B		Bridge Corridor 3rd Floor	
POME3- 02C		Corridor 3rd Floor by Stairs O	
POME3- 03A	10/25/2023	Elevator Lobby 3rd Floor	Cementitious Pipe Elbow Insulation
POME3- 03B		Bridge Corridor 3rd Floor	
POME3- 03C		Corridor 3rd Floor by Stairs O	
POME3- 04A	10/25/2023	Elevator Lobby 3rd Floor	White Top Coat Wall Plaster
POME3- 04B		Bridge Corridor 3rd Floor	
POME3- 04C		Courtyard Corridor 3rd Floor	
POME3- 05A	10/25/2023	Elevator Lobby 3rd Floor	Brown Base Coat Wall Plaster
POME3- 05B		Bridge Corridor 3rd Floor	
POME3- 05C		Courtyard Corridor 3rd Floor	
POME3- 06A	10/25/2023	Corridor 3rd Floor by Stairs O	Gypsum Board
POME3- 06B		Corridor 3rd Floor by Stairs O	
POME3- 06C		Corridor 3rd Floor by Stairs O	

Sampler's Relinquishment Signature / Date / Time:

TZABRANSKY 10/26/23

Lab Receipt Signature / Date / Time:

Nicky 10/27/23

BULK SAMPLE FORM 23·10·150 2/4 PAGE 2 OF 4

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LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME2- 04D	10/25/2023	Elevator Lobby 2nd Floor	White Top Coat Wall Plaster
POME2- 04E		Corridor 2nd Floor by Stairs O	
POME2- 04F		Corridor by Room D242	
POME2- 05D	10/25/2023	Elevator Lobby 2nd Floor	Brown Base Coat Wall Plaster
POME2- 05E		Corridor 2nd Floor by Stairs O	
POME2- 05F		Corridor by Room D242	
POME2- 06D	10/25/2023	Elevator Lobby 2nd Floor	Gypsum Board
POME2- 06E		Corridor 2nd Floor by Stairs O	
POME2- 06F		Corridor by Room D242	
POME2- 03D	10/25/2023	Elevator Lobby 2nd Floor	Cementitious Pipe Elbow Insulation
POME2- 03E		Elevator Lobby 2nd Floor	
POME2- 03F		Elevator Lobby 2nd Floor	
POME2- 07A	10/25/2023	Elevator Lobby 2nd Floor	Joint Compound on gypsum board
POME2- 07B		Corridor by Stairs O	
POME2- 07C		Corridor by Room D240	
POME2- 07D		Corridor by Room D240	
POME2- 09A	10/25/2023	Backstage 2nd Floor	Mortar for block walls
POME2- 09B		Backstage 2nd Floor	
POME2- 09C		Backstage 2nd Floor	

Sampler's Relinquishment Signature / Date / Time:
T. ZABRANSKY 10/26/23

Lab Receipt Signature / Date / Time:
10/27/23

BULK SAMPLE FORM 23·10·150 3/4 PAGE 3 OF 4

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PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-133 DATE : 10/26/2023
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME1- 06G	10/25/2023	Elevator Lobby 1st Floor	Gypsum Board
POME1- 06H		Lobby by Stairs P	
POME1- 06I		Lobby by Ramp	
POME1- 04G	10/25/2023	Elevator Lobby 1st Floor	White Top Coat Wall Plaster
POME1- 04H		Elevator Lobby 1st Floor	
POME1- 04I		Elevator Lobby 1st Floor	
POME1- 05G	10/25/2023	Elevator Lobby 1st Floor	Brown Base Coat Wall Plaster
POME1- 05H		Elevator Lobby 1st Floor	
POME1- 05I		Elevator Lobby 1st Floor	
POME1- 07E	10/25/2023	Elevator Lobby by Stairs P	Joint Compound on gypsum board
POME1- 07F		Elevator Lobby by Ramp	
POME1- 07G		Elevator Lobby by Ramp	
POME1- 08A	10/25/2023	Great Hall Conference Hall 1st Floor	Ceiling Insulation
POME1- 08B		Great Hall Conference Hall 1st Floor	
POME1- 08C		Great Hall Conference Hall 1st Floor	
POME1- 10A	10/25/2023	Entrance on 28th Street	White Gypsum Board
POME1- 10B		Entrance on 28th Street	
POME1- 10C		Entrance on 28th Street	

Sampler's Relinquishment Signature / Date / Time:
T. ZABRANSKY 10/26/23

Lab Receipt Signature / Date / Time:
Nicky 10/27/23

BULK SAMPLE FORM 23·10·150 4/4 PAGE 4 OF 4

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PROJECT INFORMATION

CLIENT :	Fashion Institute of Technology
EPM # :	19071-133 DATE : 10/26/2023
Project:	FIT Pomerantz Building
Project Location:	300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POMEC- 06J	10/25/2023	Cellar Corridor	Gypsum Board
POMEC- 06K		Cellar Corridor West	
POMEC- 06L		Cellar Corridor West by Stairs	
POMEC- 04J	10/25/2023	Cellar Corridor	White Top Coat Wall Plaster
POMEC- 04K		Cellar Corridor West	
POMEC- 04L		Elevator Lobby Cellar	
POMEC- 05J	10/25/2023	Cellar Corridor	Brown Base Coat Wall Plaster
POMEC- 05K		Cellar Corridor West	
POMEC- 05L		Elevator Lobby Cellar	
POMEC- 07H	10/25/2023	Cellar Corridor West	Joint Compound on gypsum board
POMEC- 07I		Cellar Corridor	
POMEC- 07J		Elevator Lobby Cellar	
POMEC- 07K		Cellar Corridor West by Stairs	
POMEC- 01D	10/25/2023	Cellar Corridor West	White 12"x12" Spline Ceiling Tiles
POMEC- 01E		Elevator Lobby Cellar	
POMEC- 01F		Cellar Corridor	
POMESC- 09D	10/25/2023	SubCellar MER	Mortar for block walls
POMESC- 09E		SubCellar MER	
POMESC- 09F		SubCellar MER	

Sampler's Relinquishment Signature / Date / Time:
T. ZABRANSKY 10/26/23

Lab Receipt Signature / Date / Time:
Nicky 10/27/23

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME6-01G 23-11-022-01	White 12"x12" Spline Ceiling Tiles	Locker's Corridor 6th Floor	White/Gray Homogeneous Friable	9.4	6.1	84.5	40% CELL 50% FBGL	10%	**NAD** inconclusive	**NAD**
POME6-01H 23-11-022-02	White 12"x12" Spline Ceiling Tiles	Bridge Corridor 6th Floor	White/Gray Homogeneous Friable	12.8	12.8	74.4	40% CELL 40% FBGL	20%	**NAD** inconclusive	**NAD**
POME6-01I 23-11-022-03	White 12"x12" Spline Ceiling Tiles	Corridor 6th Floor	White/Gray Homogeneous Friable	10.0	10.6	79.4	30% CELL 60% FBGL	10%	**NAD** inconclusive	Analysis not requested by client
POME6-02D 23-11-022-04	Brown Adhesive on Ductwork wrap	Locker's Corridor 6th Floor	Brown Homogeneous NOB	66.9	11.6	21.5	0%	100%	**NAD** inconclusive	**NAD**
POME6-02E 23-11-022-05	Brown Adhesive on Ductwork wrap	Corridor by Room D636	Yellow Homogeneous NOB	67.9	9.9	22.3	0%	100%	**NAD** inconclusive	**NAD**
POME6-02F 23-11-022-06	Brown Adhesive on Ductwork wrap	Bridge Corridor 6th Floor	Yellow Homogeneous NOB	64.5	29.3	6.3	0%	100%	**NAD** inconclusive	Analysis not requested by client
POME6-04M 23-11-022-07	White Top Coat Wall Plaster	Locker's Corridor 6th Floor	Lt. Gray/White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME6-04N 23-11-022-08	White Top Coat Wall Plaster	Corridor by Room D636	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME6-04O 23-11-022-09	White Top Coat Wall Plaster	Bridge Corridor 6th Floor	Yellow/White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME6-05M 23-11-022-10	Brown Base Coat Wall Plaster	Locker's Corridor 6th Floor	Gray Homogeneous Friable	Not Applicable			*Vermiculite is present. Analysis by Method ELAP 198.8 is required*			
POME6-05N 23-11-022-11	Brown Base Coat Wall Plaster	Corridor by Room D636	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME6-05O 23-11-022-12	Brown Base Coat Wall Plaster	Bridge Corridor 6th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME6-06M 23-11-022-13	Gypsum board	Corridor by Room D636	Brown/Lt. Gray Homogeneous Friable	Not Applicable			2% CELL	98%	**NAD**	
POME6-06N 23-11-022-14	Gypsum board	Elevator Lobby 6th Floor	Brown/Lt. Gray Homogeneous Friable	Not Applicable			2% CELL	98%	**NAD**	
POME6-06O 23-11-022-15	Gypsum board	Elevator Lobby 6th Floor	Brown/Lt. Gray Homogeneous Friable	Not Applicable			2% CELL	98%	**NAD**	
POME6-11A 23-11-022-16	Cementitious Pipe Elbow Insulation	Corridor by Room D636	Gray Homogeneous Friable	Not Applicable			5% FBGL	95%	**NAD**	
POME6-11B 23-11-022-17	Cementitious Pipe Elbow Insulation	Elevator Lobby 6th Floor	Gray Homogeneous Friable	Not Applicable			4% FBGL	96%	**NAD**	
POME6-11C 23-11-022-18	Cementitious Pipe Elbow Insulation	Corridor by Room D636	Gray Homogeneous Friable	Not Applicable			4% FBGL	96%	**NAD**	
POME6-11D 23-11-022-19	Cementitious Pipe Elbow Insulation	Corridor by Room D636	Gray Homogeneous Friable	Not Applicable			3% FBGL	97%	**NAD**	
POME5-01J 23-11-022-20	White 12"x12" Spline Ceiling Tiles	Bridge Corridor 5th Floor	White/Dk. Gray Homogeneous Friable	11.3	37.1	51.7	40% CELL 30% FBGL	30%	**NAD** inconclusive	**NAD**
POME5-01K 23-11-022-21	White 12"x12" Spline Ceiling Tiles	Elevator Lobby 5th Floor	White/Lt. Gray Homogeneous Friable	12.6	38.7	48.7	40% CELL 40% FBGL	20%	**NAD** inconclusive	**NAD**
POME5-01L 23-11-022-22	White 12"x12" Spline Ceiling Tiles	Lockers Corridor 5th Floor	White/Lt. Gray Homogeneous Friable	12.5	10.0	77.5	40% CELL 40% FBGL	20%	**NAD** inconclusive	Analysis not requested by client
POME5-02G 23-11-022-23	Brown Adhesive on ductwork wrap	Elevator Lobby 5th Floor	Brown Homogeneous NOB	72.9	12.3	14.8	0%	100%	**NAD** inconclusive	**NAD**
POME5-02H 23-11-022-24	Brown Adhesive on ductwork wrap	Lockers Corridor 5th Floor	Brown Homogeneous NOB	73.9	15.1	11.0	0%	100%	**NAD** inconclusive	**NAD**
POME5-02I 23-11-022-25	Brown Adhesive on ductwork wrap	Lockers Corridor 5th Floor	Brown Homogeneous NOB	74.2	8.4	17.4	0%	100%	**NAD** inconclusive	Analysis not requested by client

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME5-04P 23-11-022-26	White Top Coat Wall Plaster	Elevator Lobby 5th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME5-04Q 23-11-022-27	White Top Coat Wall Plaster	Bridge Corridor 5th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME5-04R 23-11-022-28	White Top Coat Wall Plaster	Lockers Corridor 5th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME5-05P 23-11-022-29	Brown Base Coat Wall Plaster	Elevator Lobby 5th Floor	Brown Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME5-05Q 23-11-022-30	Brown Base Coat Wall Plaster	Bridge Corridor 5th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME5-05R 23-11-022-31	Brown Base Coat Wall Plaster	Lockers Corridor 5th Floor	Gray Homogeneous Friable	Not Applicable			*Vermiculite is present. Analysis by Method ELAP 198.8 is required*			
POME5-06S 23-11-022-32	Gypsum Board	Locker's Corridor 5th Floor	White Homogeneous Friable	Not Applicable			1% CELL 1% FBGL	98%	**NAD**	
POME5-06T 23-11-022-33	Gypsum Board	Locker's Corridor 5th Floor	White Homogeneous Friable	Not Applicable			1% CELL 1% FBGL	98%	**NAD**	
POME5-06V 23-11-022-34	Gypsum Board	Locker's Corridor 5th Floor	Brown/White Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	**NAD**	
POME5-09G 23-11-022-35	Mortar for block walls	Corridor 5th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME5-09H 23-11-022-36	Mortar for block walls	Corridor 5th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME5-09I 23-11-022-37	Mortar for block walls	Corridor 5th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME4-01M 23-11-022-38	White 12"x12" Spline Ceiling Tiles	Elevator Lobby 4th Floor	White/Lt. Gray Homogeneous Friable	11.1	12.7	76.1	60% CELL 30% FBGL	10%	**NAD** inconclusive	**NAD**
POME4-01N 23-11-022-39	White 12"x12" Spline Ceiling Tiles	Lockers Corridor 4th Floor	White/Lt. Gray Homogeneous Friable	11.7	6.0	82.2	50% CELL 40% FBGL	10%	**NAD** inconclusive	**NAD**
POME4-01O 23-11-022-40	White 12"x12" Spline Ceiling Tiles	Corridor 4th Floor	White/Lt. Gray Homogeneous Friable	11.1	6.2	82.7	50% CELL 40% FBGL	10%	**NAD** inconclusive	Analysis not requested by client
POME4-04S 23-11-022-41	White Top Coat Wall Plaster	Lockers Corridor 4th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-04T 23-11-022-42	White Top Coat Wall Plaster	Corridor 4th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-04V 23-11-022-43	White Top Coat Wall Plaster	Corridor 4th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-05S 23-11-022-44	Brown Base Coat Wall Plaster	Lockers Corridor 4th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-05T 23-11-022-45	Brown Base Coat Wall Plaster	Corridor 4th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-05V 23-11-022-46	Brown Base Coat Wall Plaster	Corridor 4th Floor	Gray Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-06P 23-11-022-47	Gypsum Board	Elevator Lobby 4th Floor	Brown/Gray Homogeneous Friable	Not Applicable			1% CELL 1% FBGL	98%	**NAD**	
POME4-06Q 23-11-022-48	Gypsum Board	Elevator Lobby 4th Floor	Brown/Gray Homogeneous Friable	Not Applicable			2% CELL 1% FBGL	97%	**NAD**	
POME4-06R 23-11-022-49	Gypsum Board	Elevator Lobby 4th Floor	Brown/Gray Homogeneous Friable	Not Applicable			1% CELL 1% FBGL	98%	**NAD**	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POME4-07L 23-11-022-50	Joint compound on gypsum board	Elevator Lobby 4th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-07M 23-11-022-51	Joint compound on gypsum board	Elevator Lobby 4th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-07N 23-11-022-52	Joint compound on gypsum board	Elevator Lobby 4th Floor	White Homogeneous Friable	Not Applicable			0%	100%	**NAD**	
POME4-12A 23-11-022-53	Cementitious Pipe Elbow Insulation	Elevator Lobby 4th Floor	Gray Homogeneous Friable	Not Applicable			5% FBGL	95%	**NAD**	
POME4-12B 23-11-022-54	Cementitious Pipe Elbow Insulation	Elevator Lobby 4th Floor	Gray Homogeneous Friable	Not Applicable			4% FBGL	96%	**NAD**	
POME4-12C 23-11-022-55	Cementitious Pipe Elbow Insulation	Elevator Lobby 4th Floor	Gray Homogeneous Friable	Not Applicable			4% FBGL	96%	**NAD**	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Date Received: 11/3/23
Date of PLM Analysis: 11/6/23
Date of TEM Analysis: 11/6/23
Date of Report: 11/7/23

PLM Analyst: D. Kogan
TEM Analyst: A. Ansari

QC Review: D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 0.25%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. **Analytical equipment**: Stereo Binocular Microscopes: Motic SMZ140-N2LED (SN#: 03210037461 / 03210037462 / 03210023903 / 03210023905); Polarized Light Microscopes: Motic Panthera TEC-POL (SN#: 19017119 / 19021954 / 21006248), Olympus BH-2 (Ser #: 207130). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(June 28, 2022)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

23-11-022 1/3

BULK SAMPLE FORM

EPM
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1983 Marcus Avenue, Suite 109 | Lake Success | New York 11040
P. 516.328.1194 | F. 516.328.1381

2125 Center Avenue, Suite 404 | Fort Lee | New Jersey 07024
P. 201.363.1983 | F. 201.363.0800

RESULTS NEEDED: **48 Hour Turn Around Time**
SEND ALL RESULTS BY EMAIL TO : TZABRANSKY@epmco.com; TGOGOS@epmco.com; CRODRIGUEZ@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT :	Fashion Institute of Technology
EPM # :	19071-133 DATE : 11/2/2023
Project:	FIT Pomerantz Building
Project Location:	300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME6- 01G	11/1/2023	Lockers Corridor 6th Floor	White 12"x12" Spline Ceiling Tiles
POME6- 01H		Bridge Corridor 6th Floor	
POME6- 01I		Corridor 6th Floor	
POME6- 02D	11/1/2023	Lockers Corridor 6th Floor	Brown Adhesive on ductwork wrap
POME6- 02E		Corridor by Room D636	
POME6- 02F		Bridge Corridor 6th Floor	
POME6- 04M	11/1/2023	Lockers Corridor 6th Floor	White Top Coat Wall Plaster
POME6- 04N		Corridor by Room D636	
POME6- 04O		Bridge Corridor 6th Floor	
POME6- 05M	11/1/2023	Lockers Corridor 6th Floor	Brown Base Coat Wall Plaster
POME6- 05N		Corridor by Room D636	
POME6- 05O		Bridge Corridor 6th Floor	
POME6- 06M	11/1/2023	Corridor by Room D636	Gypsum Board
POME6- 06N		Elevator Lobby 6th Floor	
POME6- 06O		Elevator Lobby 6th Floor	
POME6- 11A	11/1/2023	Corridor by Room D636	Cementitious Pipe Elbow Insulation
POME6- 11B		Elevator Lobby 6th Floor	
POME6- 11C		Corridor by Room D636	
POME6- 11D		Corridor by Room D636	

Sampler's Relinquishment Signature / Date / Time:

T. ZABRANSKY 11/2/23

Lab Receipt Signature / Date / Time:

KD 11/03/23

23-11-022 2/3

BULK SAMPLE FORM

PAGE 2 OF 3

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P. 201.363.1983 | F. 201.363.0800

RESULTS NEEDED: **48 Hour Turn Around Time**
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FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-133 DATE : 11/2/2023
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME5- 01J	11/1/2023	Bridge Corridor 5th Floor	White 12"x12" Spline Ceiling Tiles
POME5- 01K		Elevator Lobby 5th Floor	
POME5- 01L		Lockers Corridor 5th Floor	
POME5- 02G	11/1/2023	Elevator Lobby 5th Floor	Brown Adhesive on ductwork wrap
POME5- 02H		Lockers Corridor 5th Floor	
POME5- 02I		Lockers Corridor 5th Floor	
POME5- 04P	11/1/2023	Elevator Lobby 5th Floor	White Top Coat Wall Plaster
POME5- 04Q		Bridge Corridor 5th Floor	
POME5- 04R		Lockers Corridor 5th Floor	
POME5- 05P	11/1/2023	Elevator Lobby 5th Floor	Brown Base Coat Wall Plaster
POME5- 05Q		Bridge Corridor 5th Floor	
POME5- 05R		Lockers Corridor 5th Floor	
POME5- 06S	11/1/2023	Lockers Corridor 5th Floor	Gypsum Board
POME5- 06T		Lockers Corridor 5th Floor	
POME5- 06V		Lockers Corridor 5th Floor	
POME5- 09G	11/1/2023	Corridor 5th Floor	Mortar for block walls
POME5- 09H		Corridor 5th Floor	
POME5- 09I		Corridor 5th Floor	

Sampler's Relinquishment Signature / Date / Time:

T. ZABRANSKY 11/2/23

Lab Receipt Signature / Date / Time:

KD 11/03/23

23-11-022 3/3

BULK SAMPLE FORM

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RESULTS NEEDED: **48 Hour Turn Around Time**
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FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-133 DATE : 11/2/2023
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME4- 01M	11/1/2023	Elevator Lobby 4th Floor	White 12"x12" Spline Ceiling Tiles
POME4- 01N		Lockers Corridor 4th Floor	
POME4- 01O		Corridor 4th Floor	
POME4- 04S	11/1/2023	Lockers Corridor 4th Floor	White Top Coat Wall Plaster
POME4- 04T		Corridor 4th Floor	
POME4- 04V		Corridor 4th Floor	
POME4- 05S	11/1/2023	Lockers Corridor 4th Floor	Brown Base Coat Wall Plaster
POME4- 05T		Corridor 4th Floor	
POME4- 05V		Corridor 4th Floor	
POME4- 06P	11/1/2023	Elevator Lobby 4th Floor	Gypsum Board
POME4- 06Q		Elevator Lobby 4th Floor	
POME4- 06R		Elevator Lobby 4th Floor	
POME4- 07L	11/1/2023	Elevator Lobby 4th Floor	Joint Compound on gypsum board
POME4- 07M		Elevator Lobby 4th Floor	
POME4- 07N		Elevator Lobby 4th Floor	
POME4- 12A	11/1/2023	Elevator Lobby 4th Floor	Cementitious Pipe Elbow Insulation
POME4- 12B		Elevator Lobby 4th Floor	
POME4- 12C		Elevator Lobby 4th Floor	

Sampler's Relinquishment Signature / Date / Time:

T. ZABRANSKY 11/2/23

Lab Receipt Signature / Date / Time:

KD 11/03/23

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Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE PLM ANALYSIS REPORT FOR ASBESTOS IN SURFACING MATERIAL CONTAINING VERMICULITE (SM-V)

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology, Pomerantz Building - 300 Seventh Avenue, NYC 10001
PROJECT: 19071-133

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION				MISCROSCOPY RESULTS				
				% Ashed Organic + Water Component	% Floats Component	% Residue	% Centrifugate	% Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material (including Vermiculite)	Chrysotile Percentage	Amphibole Percentage	Total Asbestos Percentage
POME6-05M 23-11-022-10	Brown Base Coat Wall Plaster	Locker's Corridor - 6th Floor	Light Gray Homogeneous Friable	7.13%	0.02%	55.79%	17.18%	0%	1.5% VERM 98.5% OTHER	NAD	0.1398% AMPH	**0.1398%**
POME5-05R 23-11-022-31	Brown Base Coat Wall Plaster	Elevator Lobby - 5th Floor	Light Gray Homogeneous Friable	4.61%	0.02%	68.55%	17.06%	0%	1.5% VERM 98.5%OTHER	NAD	NAD	**NAD**

Date Received: 11/3/23
Date of Stereo-binocular Analysis: 11/9/23
Date of PLM Analysis (for Chrysotile): 11/13/23
Date of PLM Analysis (for Amphiboles): 11/14/23
Date of Report: 11/15/23

Final report 23-11-022 includes an attachment of 4 lab bench sheets

Analyst: D. Kogan

QC Review: _____
D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 1%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, AMPH = amphiboles asbestos, FBGL = Fiberglass, CELL = Cellulose, VERM=Vermiculite. Samples are analyzed by Polarized Light Microscopy (PLM) by ELAP Analysis Protocol 198.8 (surfacing material containing vermiculite bulk samples). **Analytical equipment**: Stereo Binocular Microscopes: Motic SMZ140-N2LED (SN#: 03210037461 / 03210037462 / 03210023903 / 03210023905); Polarized Light Microscopes: Motic Panthera TEC-POL (SN#: 19017119 / 19021954 / 21006248), Olympus BH-2 (Ser #: 207130). Samples will be stored for ninety (90) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim endorsement by NVLAP, NIST or any agency of the US Government. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. Copies of the lab's bench-sheets are attached as part of this final report. **(July 15, 2022)**

NYS-DOH ELAP # 11833

23-11-022 1/3

BULK SAMPLE FORM

PAGE 1 OF 3

EPM
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2125 Center Avenue, Suite 404 I Fort Lee I New Jersey 07024
P. 201.363.1983 I F. 201.363.0800

RESULTS NEEDED: 48 Hour Turn Around Time
SEND ALL RESULTS BY EMAIL TO : TZABRANSKY@epmco.com; TGOGOS@epmco.com; CRODRIGUEZ@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-133 DATE : 11/2/2023
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME6- 01G	11/1/2023	Lockers Corridor 6th Floor	White 12"x12" Spline Ceiling Tiles
POME6- 01H		Bridge Corridor 6th Floor	
POME6- 01I		Corridor 6th Floor	
POME6- 02D	11/1/2023	Lockers Corridor 6th Floor	Brown Adhesive on ductwork wrap
POME6- 02E		Corridor by Room D636	
POME6- 02F		Bridge Corridor 6th Floor	
POME6- 04M	11/1/2023	Lockers Corridor 6th Floor	White Top Coat Wall Plaster
POME6- 04N		Corridor by Room D636	
POME6- 04O		Bridge Corridor 6th Floor	
POME6- 05M	11/1/2023	Lockers Corridor 6th Floor	Brown Base Coat Wall Plaster
POME6- 05N		Corridor by Room D636	
POME6- 05O		Bridge Corridor 6th Floor	
POME6- 06M	11/1/2023	Corridor by Room D636	Gypsum Board
POME6- 06N		Elevator Lobby 6th Floor	
POME6- 06O		Elevator Lobby 6th Floor	
POME6- 11A	11/1/2023	Corridor by Room D636	Cementitious Pipe Elbow Insulation
POME6- 11B		Elevator Lobby 6th Floor	
POME6- 11C		Corridor by Room D636	
POME6- 11D		Corridor by Room D636	

Sampler's Relinquishment Signature / Date / Time:

T. ZABRANSKY 11/2/23

Lab Receipt Signature / Date / Time:

KD 11/03/23

23-11-022 2/3

BULK SAMPLE FORM

PAGE__ OF__ 23

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2125 Center Avenue, Suite 404 I Fort Lee I New Jersey 07024
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FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM
SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 19071-133 DATE : 11/2/2023
Project: FIT Pomerantz Building
Project Location: 300 Seventh Avenue NYC 10001

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If negative by PLM and NOB, analyze only first 2 samples by TEM with positve stop

SAMPLE NUMBER	DATE	SAMPLE LOCATION	MATERIAL DESCRIPTION
POME5- 01J	11/1/2023	Bridge Corridor 5th Floor	White 12"x12" Spline Ceiling Tiles
POME5- 01K		Elevator Lobby 5th Floor	
POME5- 01L		Lockers Corridor 5th Floor	
POME5- 02G	11/1/2023	Elevator Lobby 5th Floor	Brown Adhesive on ductwork wrap
POME5- 02H		Lockers Corridor 5th Floor	
POME5- 02I		Lockers Corridor 5th Floor	
POME5- 04P	11/1/2023	Elevator Lobby 5th Floor	White Top Coat Wall Plaster
POME5- 04Q		Bridge Corridor 5th Floor	
POME5- 04R		Lockers Corridor 5th Floor	
POME5- 05P	11/1/2023	Elevator Lobby 5th Floor	Brown Base Coat Wall Plaster
POME5- 05Q		Bridge Corridor 5th Floor	
POME5- 05R		Lockers Corridor 5th Floor	
POME5- 06S	11/1/2023	Lockers Corridor 5th Floor	Gypsum Board
POME5- 06T		Lockers Corridor 5th Floor	
POME5- 06V		Lockers Corridor 5th Floor	
POME5- 09G	11/1/2023	Corridor 5th Floor	Mortar for block walls
POME5- 09H		Corridor 5th Floor	
POME5- 09I		Corridor 5th Floor	

Sampler's Relinquishment Signature / Date / Time:

T. ZABRANSKY 11/2/23

Lab Receipt Signature / Date / Time:

KD 11/03/23

Attachment C

Historical Data from Previous Surveys

14-26 28th Avenue Long Island City, NY 11102
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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology - **Pomerantz, 5th Floor Corridor**, 300 Seventh Avenue, NYC
PROJECT: 19071-18

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
POM5CORR-01A 20-08-133-01	Off White 12x12 Floor Tile with brown streaks	Pomerantz 5th Floor Corridor	Lt. Grey Homogeneous NOB	17.1	66.1	16.8	0%	98.7%	**1.3% CH**	
POM5CORR-01B 20-08-133-02	Off White 12x12 Floor Tile with brown streaks	Pomerantz 5th Floor Corridor	Lt. Grey Homogeneous NOB	18.1	65.7	16.2			NA/PS	
POM5CORR-01C 20-08-133-03	Off White 12x12 Floor Tile with brown streaks	Pomerantz 5th Floor Corridor	Lt. Grey Homogeneous NOB	16.3	65.1	18.6			NA/PS	
POM5CORR-02A 20-08-133-04	Black Mastic for off white Floor Tile	Pomerantz 5th Floor Corridor	Black Homogeneous NOB	54.6	30.6	14.8	0%	97%	**3.0% CH**	
POM5CORR-02B 20-08-133-05	Black Mastic for off white Floor Tile	Pomerantz 5th Floor Corridor	Black Homogeneous NOB	35.6	38.6	25.8			NA/PS	
POM5CORR-02C 20-08-133-06	Black Mastic for off white Floor Tile	Pomerantz 5th Floor Corridor	Black Homogeneous NOB	56.2	31.2	12.6			NA/PS	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Fashion Institute of Technology - **Pomerantz, 5th Floor Corridor**, 300 Seventh Avenue, NYC
PROJECT: 19071-18

Date Received: 8/28/20
Date of PLM Analysis: 8/31/20
Date of Report: 8/31/20

PLM Analyst: D. Kogan

Analyst: D. Kogan

QC Review / Date: D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 0.25%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. Analytical equipment: Stereobinocular microscopes: Professional Bin (PM #1), Accuscope (Ser#:120405), Carlsan (Ser#: 011418), Olympus VMZ (Ser#: 983350); Polarized Light Microscopes: Olympus BH-2 (Ser #: 214335), Olympus BH-2 (Ser #: 236532), Olympus BH-2 (Ser#: 227128), Meiji ML 9000 (Ser#: 902028). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(May 1, 2019)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

20-08-133

BULK SAMPLE FORM

PAGE 1 OF 1

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RESULTS NEEDED: 24 Hour Turn Around Time

SEND ALL RESULTS BY EMAIL, ATTENTION OF:
tzabransky@epmco.com tgogos@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

PROJECT INFORMATION

CLIENT: FASHION INSTITUTE TECHNOLOGY
EPM #: 19071-18 DATE: 8-28-20
Location: POMERANTZ 5TH FLOOR CORRIDOR 300 SEVENTH AVENUE NYC

SHIPPED BY:

LABORATORY NOTE: Analyze samples by layer via PLM with positive stop. If all samples negative by PLM and an NOB, analyze all samples via TEM with positive stop.

SAMPLE NUMBER	DATE	Bldg.	SAMPLE LOCATION	MATERIAL DESCRIPTION
POM5CORR-01A	8/28/20		POMERANTZ 5TH FLOOR CORRIDOR	OFF-WHITE 12X12 FLOOR TILE WITH BROWN STREAKS
POM5CORR-01B			POMERANTZ 5TH FLOOR CORRIDOR	
POM5CORR-01C			POMERANTZ 5TH FLOOR CORRIDOR	
POM5CORR-02A	8/28/20		POMERANTZ 5TH FLOOR CORRIDOR	BLACK MASTIC FOR OFFWHITE FLOOR TILE
POM5CORR-02B			POMERANTZ 5TH FLOOR CORRIDOR	
POM5CORR-02C			POMERANTZ 5TH FLOOR CORRIDOR	

Sampler's Relinquishment Signature / Date / Time:
8/28/20
T. ZABRANSKY

Lab Receipt Signature / Date / Time:
C. McBean 08/28/2020 6:37 AM

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – Pomerantz, Building D, Sub Cellar, 227 West 27th Street, NYC
PROJECT: 18005-03

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
DX01-01A 18-01-088-01	Gray MJP pipe elbow insulation assoc. w/ AC-1D (blue)	Pomerantz Sub Cellar Mechanical Room, AC-1D	Gray Homogeneous Friable	Not Applicable			10% FBGL	90%	**NAD**	
DX01-01B 18-01-088-02	Gray MJP pipe elbow insulation assoc. w/ AC-1D (orange)	Pomerantz Sub Cellar Mechanical Room, AC-1D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
DX01-01C 18-01-088-03	Gray MJP pipe elbow insulation assoc. w/ AC-1D (yellow)	Pomerantz Sub Cellar Mechanical Room, AC-1D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
DX01-02A 18-01-088-04	Gray MJP insulation on valve assoc. w/ P-7D (blue)	Pomerantz Sub Cellar Mechanical Room, P-7D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
DX01-02B 18-01-088-05	Gray MJP insulation on valve assoc. w/ P-9D (blue)	Pomerantz Sub Cellar Mechanical Room, P-9D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	
DX01-02C 18-01-088-06	Gray MJP insulation on valve assoc. w/ P-10D (blue)	Pomerantz Sub Cellar Mechanical Room, P-10D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
DX01-03A 18-01-088-07	Gray MJP insulation on valve , above P-35D (blue)	Pomerantz Sub Cellar Mechanical Room	Gray Homogeneous Friable	Not Applicable			10% FBGL	90%	**NAD**	
DX01-03B 18-01-088-08	Gray MJP insulation on valve isolation valve 'E' (blue)	Pomerantz Sub Cellar Mechanical Room	Gray Homogeneous Friable	Not Applicable			10% FBGL	90%	**NAD**	
DX01-03C 18-01-088-09	Gray MJP insulation on valve, bypass valve 'D' (blue)	Pomerantz Sub Cellar Mechanical Room	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
DX01-04A 18-01-088-10	Gray MJP insulation on valve assoc. w/ P-13D (mustard yellow)	Pomerantz Sub Cellar Mechanical Room, P-13D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	
DX01-04B 18-01-088-11	Gray MJP insulation on valve assoc. w/ P-14D (mustard yellow)	Pomerantz Sub Cellar Mechanical Room, P-14D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
DX01-04C 18-01-088-12	Gray MJP insulation on valve assoc. w/ P-14D (mustard yellow)	Pomerantz Sub Cellar Mechanical Room, P-14D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – Pomerantz, Building D, Sub Cellar, 227 West 27th Street, NYC
PROJECT: 18005-03

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
DX01-05A 18-01-088-13	Gasket in flange at valve assoc. w/ P-12D	Pomerantz Sub Cellar Mechanical Room, P-12D	Brown Homogeneous NOB	94.1	1.3	4.5	0%	100%	**NAD** Inconclusive	**NAD**
DX01-05B 18-01-088-14	Gasket in flange at valve assoc. w/ P-12D	Pomerantz Sub Cellar Mechanical Room, P-12D	Brown Homogeneous NOB	78.9	4.3	16.8	0%	100%	**NAD** Inconclusive	**NAD**
DX01-05C 18-01-088-15	Gasket in flange at valve assoc. w/ P-12D	Pomerantz Sub Cellar Mechanical Room, P-12D	Brown Homogeneous NOB	84.8	1.2	14.0	0%	100%	**NAD** Inconclusive	Analysis not requested by the client
DX01-06A 18-01-088-16	White insulation on heat exchanger by P-11D	Pomerantz Sub Cellar Mechanical Room, P-11D	White Homogeneous Friable	Not Applicable			10% CELL 10%SYNTH	80%	**NAD**	
DX01-06B 18-01-088-17	White insulation on heat exchanger by P-11D	Pomerantz Sub Cellar Mechanical Room, P-11D	White Homogeneous Friable	Not Applicable			10% CELL 15%SYNTH	75%	**NAD**	
DX01-06C 18-01-088-18	White insulation on heat exchanger by P-11D	Pomerantz Sub Cellar Mechanical Room, P-11D	White Homogeneous Friable	Not Applicable			10% CELL 10%SYNTH	80%	**NAD**	
DX01-07A 18-01-088-19	White vibration dampening cloth assoc. w/ fan HV-1D	Pomerantz Sub Cellar Mechanical Room, HV-1D	Gray/White Homogeneous Friable	Not Applicable			30% SYNTH	20%	**50% CH**	
DX01-07B 18-01-088-20	White vibration dampening cloth assoc. w/ fan HV-1D	Pomerantz Sub Cellar Mechanical Room, HV-1D	Gray/White Homogeneous Friable	Not Applicable					NA/PS	
DX01-07C 18-01-088-21	White vibration dampening cloth assoc. w/ fan HV-1D	Pomerantz Sub Cellar Mechanical Room, HV-1D	Gray/White Homogeneous Friable	Not Applicable					NA/PS	
DX01-08A 18-01-088-22	Gray MJP insulation on pipe elbow assoc. w/ fan HV-1D (white)	Pomerantz Sub Cellar Mechanical Room, HV-1D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
DX01-08B 18-01-088-23	Gray MJP insulation on pipe elbow assoc. w/ fan HV-1D (white)	Pomerantz Sub Cellar Mechanical Room, HV-1D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	
DX01-08C 18-01-088-24	Gray MJP insulation on pipe elbow assoc. w/ fan HV-1D (white)	Pomerantz Sub Cellar Mechanical Room, HV-1D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – Pomerantz, Building D, Sub Cellar, 227 West 27th Street, NYC
PROJECT: 18005-03

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
DX01-09A 18-01-088-25	Black vibration dampening cloth assoc. w/ AC-2D	Pomerantz Sub Cellar Mechanical Room, AC-2D	Black/Blue Homogeneous NOB	35.7	22.1	42.2	80% FBGL	20%	**NAD** Inconclusive	**NAD**
DX01-09B 18-01-088-26	Black vibration dampening cloth assoc. w/ AC-2D	Pomerantz Sub Cellar Mechanical Room, AC-2D	Black/Blue Homogeneous NOB	28.5	23.7	47.8	80% FBGL	20%	**NAD** Inconclusive	**NAD**
DX01-09C 18-01-088-27	Black vibration dampening cloth assoc. w/ AC-2D	Pomerantz Sub Cellar Mechanical Room, AC-2D	Black/Blue Homogeneous NOB	35.2	28.6	36.2	80% FBGL	20%	**NAD** Inconclusive	Analysis not requested by the client
DX01-10A 18-01-088-28	Gray MJP insulation on pipe elbow assoc. w/ AC-2D	Pomerantz Sub Cellar Mechanical Room, AC-2D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	
DX01-10B 18-01-088-29	Gray MJP insulation on pipe elbow assoc. w/ AC-2D	Pomerantz Sub Cellar Mechanical Room, AC-2D	Gray Homogeneous Friable	Not Applicable			25% FBGL	75%	**NAD**	
DX01-10C 18-01-088-30	Gray MJP insulation on pipe elbow assoc. w/ AC-2D	Pomerantz Sub Cellar Mechanical Room, AC-2D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – Pomerantz, Building D, Sub Cellar, 227 West 27th Street, NYC
PROJECT: 18005-03

Date Received: 01/19/18
Date of PLM Analysis: 01/22/18
Date of TEM Analysis: 01/23/18
Date of Report: 01/23/18

PLM Analyst: L. Tchorzewski
TEM Analyst: A. Ansari

Analyst: L. Tchorzewski

QC Review / Date: D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 1%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. Analytical equipments: Stereobinocular microscopes: Professional Bin (PM #1), Accuscope (Ser# 1200608), Carlsan (Ser# 011418); Polarized Light Microscopes: Olympus BH-2 (Ser #: 214335), Olympus BH-2 (Ser #: 236532). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(November 1, 2016)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

18-01-088 ½

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RESULTS NEEDED: 48 hour TAT

SEND ALL RESULTS BY EMAIL, ATTENTION OF:
tzabransky@epmco.com and tgogos@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology

EPM # : 18005-03 DATE : 1/18/2018

Location: FIT Pomerantz, Building D - Sub Cellar
227 West 27th Street, New York NY

SHIPPED BY:

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If all samples negative by PLM and an NOB, analyze 1st two samples only via TEM with positive stop.

SAMPLE NUMBER	DATE	Bldg.	SAMPLE LOCATION	MATERIAL DESCRIPTION
DX01-01 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Gray MJP pipe elbow insulation assoc. w/ AC-1D (blue)
DX01-01 B		D	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Gray MJP pipe elbow insulation assoc. w/ AC-1D (orange)
DX01-01 C		D	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Gray MJP pipe elbow insulation assoc. w/ AC-1D (yellow)
DX01-02 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, P-7D	Gray MJP insulation on valve assoc. w/ P-7D (blue)
DX01-02 B		D	Pomerantz Sub Cellar, Mechanical Room, P-9D	Gray MJP insulation on valve assoc. w/ P-9D (blue)
DX01-02 C		D	Pomerantz Sub Cellar, Mechanical Room, P-10D	Gray MJP insulation on valve assoc. w/ P-10D (blue)
DX01-03 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room	Gray MJP insulation on valve, above P-35D (blue)
DX01-03 B		D	Pomerantz Sub Cellar, Mechanical Room	Gray MJP insulation on valve, isolation valve 'E' (blue)
DX01-03 C		D	Pomerantz Sub Cellar, Mechanical Room	Gray MJP insulation on valve, bypass valve 'D' (blue)
DX01-04 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, P-13D	Gray MJP insulation on valve assoc. w/ P-13D (mustard yellow)
DX01-04 B		D	Pomerantz Sub Cellar, Mechanical Room, P-14D	Gray MJP insulation on valve assoc. w/ P-14D (mustard yellow)
DX01-04 C		D	Pomerantz Sub Cellar, Mechanical Room, P-14D	Gray MJP insulation on valve assoc. w/ P-14D (mustard yellow)
DX01-05 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, P-12D	Gasket in flange at vavle assoc. w/ P-12D
DX01-05 B		D	Pomerantz Sub Cellar, Mechanical Room, P-12D	
DX01-05 C		D	Pomerantz Sub Cellar, Mechanical Room, P-12D	
DX01-06 A	1/18/18	D	Pomerantz Sub Cellar Mechanical Room, P-11D	White insulation on heat exchanger by P-11D
DX01-06 B		D	Pomerantz Sub Cellar Mechanical Room, P-11D	
DX01-06 C		D	Pomerantz Sub Cellar Mechanical Room, P-11D	

Sampler's Relinquishment Signature / Date / Time:
David R. Sunden / 1-18-2018 / 17:00

Lab Receipt Signature / Date / Time:
1/19/18

BULK SAMPLE FORM 18-01-088 PAGE 2 OF 2

EPM
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1983 Marcus Avenue, Suite 109
Lake Success, New York 11042
(516) 328- 1194 Fax (516) 328-1381

RESULTS NEEDED: 48 hour TAT

SEND ALL RESULTS BY EMAIL, ATTENTION OF:
tzabransky@epmco.com and tgogos@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 18005-03 DATE : 1/18/2018
Location: FIT Pomerantz, Building D - Sub Cellar
227 West 27th Street, New York NY

SHIPPED BY:

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If all samples negative by PLM and an NOB, analyze 1st two samples only via TEM with positive stop.

SAMPLE NUMBER	DATE	Bldg.	SAMPLE LOCATION	MATERIAL DESCRIPTION
DX01-07 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, HV-1D	White vibration dampening cloth assoc. w/ fan HV-1D
DX01-07 B		D	Pomerantz Sub Cellar, Mechanical Room, HV-1D	
DX01-07 C		D	Pomerantz Sub Cellar, Mechanical Room, HV-1D	
DX01-08 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, HV-1D	Gray MJP insulation on pipe elbow assoc. w/ fan HV-1D (white)
DX01-08 B		D	Pomerantz Sub Cellar, Mechanical Room, HV-1D	
DX01-08 C		D	Pomerantz Sub Cellar, Mechanical Room, HV-1D	
DX01-09 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, AC-2D	Black vibration dampening cloth assoc. w/ AC-2D
DX01-09 B		D	Pomerantz Sub Cellar, Mechanical Room, AC-2D	
DX01-09 C		D	Pomerantz Sub Cellar, Mechanical Room, AC-2D	
DX01-10 A	1/18/18	D	Pomerantz Sub Cellar, Mechanical Room, AC-2D	Gray MJP insulation on pipe elbow assoc. w/ AC-2D
DX01-10 B		D	Pomerantz Sub Cellar, Mechanical Room, AC-2D	
DX01-10 C		D	Pomerantz Sub Cellar, Mechanical Room, AC-2D	

Sampler's Relinquishment Signature / Date / Time:
David R. Sundell / 1-18-2018 / 17:00

Lab Receipt Signature / Date / Time:
1/19/18

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14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – **Pomerantz Building D - Sub Cellar DX01**, 300 Seventh Avenue, NYC, NY
PROJECT: 18005-03

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
DX01-11A 18-02-054-01	Outer Jacket layer over fiberglass insulation on air handling unit	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Gr/Silv/ Brown Homogeneous Friable	37.5	20.3	42.1	10% CELL 65% FBGL	22%	**3.0% CH**	
DX01-11B 18-02-054-02	Outer Jacket layer over fiberglass insulation on air handling unit	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Gr/Silv/ Brown Homogeneous Friable	33.6	22.4	44.0			NA/PS	
DX01-11C 18-02-054-03	Outer Jacket layer over fiberglass insulation on air handling unit	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Gr/Silv/ Brown Homogeneous Friable	32.0	19.1	48.9			NA/PS	

Date Received: 02/09/18
Date of PLM Analysis: 02/12/18
Date of Report: 02/13/18

PLM Analyst: D. Molohides

Analyst: _____
D. Molohides

QC Review / Date: _____
D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 1%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. Analytical equipments: Stereobinocular microscopes: Professional Bin (PM #1), Accuscope (Ser# 1200608), Carlsan (Ser# 011418); Polarized Light Microscopes: Olympus BH-2 (Ser #: 214335), Olympus BH-2 (Ser #: 236532). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(November 1, 2016)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

BULK SAMPLE FORM 18-02-054 PAGE 1 OF 1

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Lake Success, New York 11042
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RESULTS NEEDED: 48 hour TAT

SEND ALL RESULTS BY EMAIL, ATTENTION OF:
tzabransky@epmco.com and tgogos@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

SHIPPED BY:

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 18005-03 DATE : 1/18/2018
Location: FIT Pomerantz, Building D - Sub Cellar DX01
300 Seventh Avenue - NYC

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If all samples negative by PLM and an NOB, analyze 1st two samples only via TEM with positive stop.

SAMPLE NUMBER	DATE	Bldg.	SAMPLE LOCATION	MATERIAL DESCRIPTION
DX01-11 A	2/8/18	D	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Outer jacket layer over fiberglass insulation on air handling unit
DX01-11 B		D	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Outer jacket layer over fiberglass insulation on air handling unit
DX01-11 C		D	Pomerantz Sub Cellar, Mechanical Room, AC-1D	Outer jacket layer over fiberglass insulation on air handling unit

Sampler's Relinquishment Signature / Date / Time:
2/8/18
TZABRANSKY 1510

Lab Receipt Signature / Date / Time:
2/9/18

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Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – Pomerantz, Building D, Roof Level, 227 West 27th Street, NYC
PROJECT: 18005-03

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
D702-01A 18-01-090-01	Gray MJP pipe elbow insulation assoc. w/ AC-3D (yellow)	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
D702-01B 18-01-090-02	Gray MJP pipe elbow insulation assoc. w/ AC-3D (blue)	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	
D702-01C 18-01-090-03	Gray MJP pipe elbow insulation assoc. w/ AC-3D (orange)	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	
D702-01D 18-01-090-04	Gray MJP pipe elbow insulation assoc. w/ AC-3D (green)	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray Homogeneous Friable	Not Applicable			15% FBGL	85%	**NAD**	
D702-02A 18-01-090-05	Gray MJP insulation on large valve above AC-3D, valve 1	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray Homogeneous Friable	Not Applicable			25% FBGL	75%	**NAD**	
D702-02B 18-01-090-06	Gray MJP insulation on large valve above AC-3D, valve 2	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray Homogeneous Friable	Not Applicable			20% FBGL	80%	**NAD**	
D702-02C 18-01-090-07	Gray MJP insulation on large valve above AC-3D, valve 3	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray Homogeneous Friable	Not Applicable			25% FBGL	75%	**NAD**	
D702-03A 18-01-090-08	Black and tan duct seam sealant in duct flanges	Pomerantz Roof Level, Mechanical Room	Black/Tan Homogeneous NOB	85.1	5.9	9.0	0%	98.4%	**1.6% CH**	
D702-03B 18-01-090-09	Black and tan duct seam sealant in duct flanges	Pomerantz Roof Level, Mechanical Room	Black/Tan Homogeneous NOB	84.0	6.4	9.6			NA/PS	
D702-03C 18-01-090-10	Black and tan duct seam sealant in duct flanges	Pomerantz Roof Level, Mechanical Room	Black/Tan Homogeneous NOB	84.5	7.6	7.9			NA/PS	
D702-04A 18-01-090-11	Tan caulk around exterior side of louver	Pomerantz Roof Level, Outside Mechanical Room	Tan Homogeneous NOB	64.4	27.8	7.8	0%	100%	**NAD** Inconclusive	**NAD**
D702-04B 18-01-090-12	Tan caulk around exterior side of louver	Pomerantz Roof Level, Outside Mechanical Room	Tan Homogeneous NOB	64.4	28.3	7.3	0%	100%	**NAD** Inconclusive	**NAD**
D702-04C 18-01-090-13	Tan caulk around exterior side of louver	Pomerantz Roof Level, Outside Mechanical Room	Tan Homogeneous NOB	59.6	30.4	10.0	0%	100%	**NAD** Inconclusive	Analysis not requested by the client

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BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – Pomerantz, Building D, Roof Level, 227 West 27th Street, NYC
PROJECT: 18005-03

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
D702-05A 18-01-090-14	Cloth wrap on fiberglass insulation on exterior side of AC-3D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray/Black Homogeneous NOB	38.7	16.3	45.0	0%	100%	**NAD** Inconclusive	**NAD**
D702-05B 18-01-090-15	Cloth wrap on fiberglass insulation on exterior side of AC-3D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray/Black Homogeneous NOB	37.4	14.4	48.1	0%	100%	**NAD** Inconclusive	**NAD**
D702-05C 18-01-090-16	Cloth wrap on fiberglass insulation on exterior side of AC-3D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray/Black Homogeneous NOB	38.5	25.8	35.7	0%	100%	**NAD** Inconclusive	Analysis not requested by the client

Date Received: 01/19/18
Date of PLM Analysis: 01/22/18
Date of TEM Analysis: 01/23/18
Date of Report: 01/23/18

PLM Analyst: L. Tchorzewski
TEM Analyst: A. Ansari

Analyst: L. Tchorzewski

QC Review / Date: _____
D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 1%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. Analytical equipments: Stereobinocular microscopes: Professional Bin (PM #1), Accuscope (Ser# 1200608), Carlsan (Ser# 011418); Polarized Light Microscopes: Olympus BH-2 (Ser #: 214335), Olympus BH-2 (Ser #: 236532). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(November 1, 2016)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

BULK SAMPLE FORM 18-01-090 PAGE 1 OF 1

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RESULTS NEEDED: 48 hour TAT

SEND ALL RESULTS BY EMAIL, ATTENTION OF:
tzabransky@epmco.com and tgogos@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology

EPM # : 18005-03 DATE : 1/18/2018

Location: FIT Pomerantz, Building D - Roof Level
227 West 27th Street, New York NY

SHIPPED BY:

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If all samples negative by PLM and an NOB, analyze 1st two samples only via TEM with positive stop.

SAMPLE NUMBER	DATE	Bldg.	SAMPLE LOCATION	MATERIAL DESCRIPTION
D702-01 A	1/18/18	D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray MJP pipe elbow insulation assoc. w/ AC-3D (yellow)
D702-01 B		D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray MJP pipe elbow insulation assoc. w/ AC-3D (blue)
D702-01 C		D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray MJP pipe elbow insulation assoc. w/ AC-3D (orange)
D702-01 D		D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray MJP pipe elbow insulation assoc. w/ AC-3D (green)
D702-02 A	1/18/18	D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray MJP insulation on large valve above AC-3D, valve 1
D702-02 B		D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray MJP insulation on large valve above AC-3D, valve 2
D702-02 C		D	Pomerantz Roof Level, Mechanical Room, AC-3D	Gray MJP insulation on large valve above AC-3D, valve 3
D702-03 A	1/18/18	D	Pomerantz Roof Level, Mechanical Room	Black and tan duct seam sealant in duct flanges
D702-03 B		D	Pomerantz Roof Level, Mechanical Room	
D702-03 C		D	Pomerantz Roof Level, Mechanical Room	
D702-04 A	1/18/18	D	Pomerantz Roof, Outside Mechanical Room	Tan caulk around exterior side of louver
D702-04 B		D	Pomerantz Roof, Outside Mechanical Room	
D702-04 C		D	Pomerantz Roof, Outside Mechanical Room	
D702-05 A	1/18/18	D	Pomerantz Roof Level, Mechanical Room, AC-3D	Cloth wrap on fiberglass insulation on exterior side of AC-3D
D702-05 B		D	Pomerantz Roof Level, Mechanical Room, AC-3D	
D702-05 C		D	Pomerantz Roof Level, Mechanical Room, AC-3D	

Sampler's Relinquishment Signature / Date / Time:
David R. Sundell / 1-18-2018 / 17:00

Lab Receipt Signature / Date / Time:
1/19/18

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Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – **Pomerantz Building D - Roof Level**, 300 Seventh Avenue, NYC, NY
PROJECT: 18005-03

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
D701-06A 18-02-053-01	Outer Jacket layer over fiberglass insulation on air handling unit	Pomerantz Roof Level, Mechanical Room, AC-3D	Wh/Gr/ Yellow Homogeneous Friable	40.4	17.1	42.5	5% CELL 55% FBGL	36.6%	**3.4% CH**	
D701-06B 18-02-053-02	Outer Jacket layer over fiberglass insulation on air handling unit	Pomerantz Roof Level, Mechanical Room, AC-3D	Wh/Gr/ Yellow Homogeneous Friable	47.1	32.7	20.2			NA/PS	
D701-06C 18-02-053-03	Outer Jacket layer over fiberglass insulation on air handling unit	Pomerantz Roof Level, Mechanical Room, AC-3D	Wh/Gr/ Yellow Homogeneous Friable	38.0	12.9	49.1			NA/PS	
D701-07A 18-02-053-04	Outer jacket layer over fiberglass insulation on fan unit	Pomerantz Roof Level, Mechanical Room, Fan Unit	Wh/Gr/ Yellow Homogeneous Friable	36.9	20.4	42.7	8% CELL 60% FBGL	28.8%	**3.2% CH**	
D701-07B 18-02-053-05	Outer jacket layer over fiberglass insulation on fan unit	Pomerantz Roof Level, Mechanical Room, Fan Unit	Wh/Gr/ Yellow Homogeneous Friable	35.6	32.7	31.7			NA/PS	
D701-07C 18-02-053-06	Outer jacket layer over fiberglass insulation on fan unit	Pomerantz Roof Level, Mechanical Room, Fan Unit	Wh/Gr/ Yellow Homogeneous Friable	36.9	35.0	28.1			NA/PS	

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Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: FIT – **Pomerantz Building D - Roof Level**, 300 Seventh Avenue, NYC, NY
PROJECT: 18005-03

Date Received: 02/09/18
Date of PLM Analysis: 02/12/18
Date of Report: 02/13/18

PLM Analyst: D. Molohides

Analyst: _____
D. Molohides

QC Review / Date: _____
D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 1%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. Analytical equipments: Stereobinocular microscopes: Professional Bin (PM #1), Accuscope (Ser# 1200608), Carlsan (Ser# 011418); Polarized Light Microscopes: Olympus BH-2 (Ser #: 214335), Olympus BH-2 (Ser #: 236532). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(November 1, 2016)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

BULK SAMPLE FORM 18-02-053 PAGE 1 OF 1

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Lake Success, New York 11042
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RESULTS NEEDED: 48 hour TAT

SEND ALL RESULTS BY EMAIL, ATTENTION OF:
tzabransky@epmco.com and tgogos@epmco.com

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

PROJECT INFORMATION

CLIENT : Fashion Institute of Technology
EPM # : 18005-03 DATE : 2/8/2018
Location: FIT Pomerantz, Building D - Roof Level
300 Seventh Avenue NYC

SHIPPED BY:

LABORATORY NOTE : Analyze by layer via PLM with positive stop.
If all samples negative by PLM and an NOB, analyze 1st two samples only via TEM with positive stop.

SAMPLE NUMBER	DATE	Bldg.	SAMPLE LOCATION	MATERIAL DESCRIPTION
D701-06 A	2/8/18	D	Pomerantz Roof Level, Mechanical Room, AC-3D	Outer jacket layer over fiberglass insulation on air handling unit
D701-06 B		D	Pomerantz Roof Level, Mechanical Room, AC-3D	Outer jacket layer over fiberglass insulation on air handling unit
D701-06 D		D	Pomerantz Roof Level, Mechanical Room, AC-3D	Outer jacket layer over fiberglass insulation on air handling unit
D701-07 A	2/8/18	D	Pomerantz Roof Level, Mechanical Room, Fan Unit	Outer jacket layer over fiberglass insulation on fan unit
D701-07 B		D	Pomerantz Roof Level, Mechanical Room, Fan Unit	Outer jacket layer over fiberglass insulation on fan unit
D701-07 C		D	Pomerantz Roof Level, Mechanical Room, Fan Unit	Outer jacket layer over fiberglass insulation on fan unit

Sampler's Relinquishment Signature / Date / Time: 1506
T. ZABRANSKY 2/8/18

Lab Receipt Signature / Date / Time: 2/9/18

Attachment D

EPM Company License and EPM Personnel Certifications

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DIVISION OF SAFETY & HEALTH LICENSE AND CERTIFICATE UNIT, STATE OFFICE CAMPUS, BLDG. 12, ALBANY, NY 12226

ASBESTOS HANDLING LICENSE

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1983 Marcus Avenue, Suite 109, Lake Success, NY, 11042

License Number: 28623
License Class: RESTRICTED
Date of Issue: 11/07/2024
Expiration Date: 11/30/2025
Duly Authorized Representative: Aphrodite Socrates

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Amy Phillips, Director
For the Commissioner of Labor

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NEW YORK STATE | Department of Labor

DIVISION OF SAFETY & HEALTH LICENSE AND CERTIFICATE UNIT, STATE OFFICE CAMPUS, BLDG. 12, ALBANY, NY 12226

ASBESTOS HANDLING LICENSE

Environmental Planning & Management, Inc.
1983 Marcus Avenue, Suite 109, Lake Success, NY, 11042

License Number: 28623
License Class: RESTRICTED
Date of Issue: 10/20/2023
Expiration Date: 11/30/2024
Duly Authorized Representative: Aphrodite Socrates

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Amy Phillips, Director
For the Commissioner of Labor

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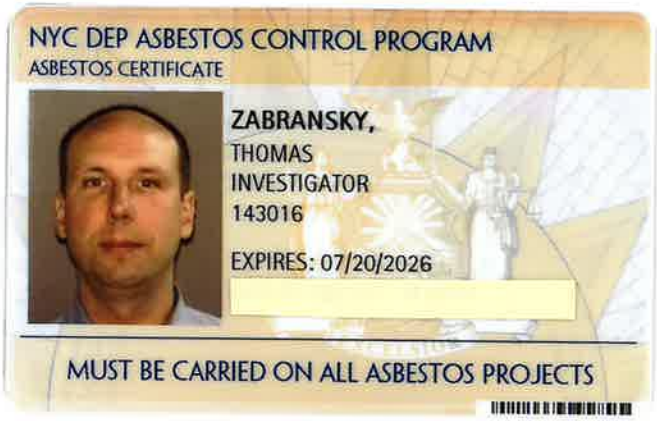
Environmental Planning & Management, Inc.
www.epmco.com

THOMAS ZABRANSKY



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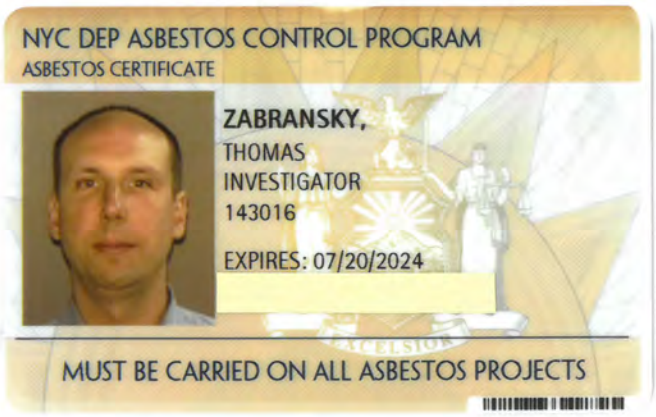

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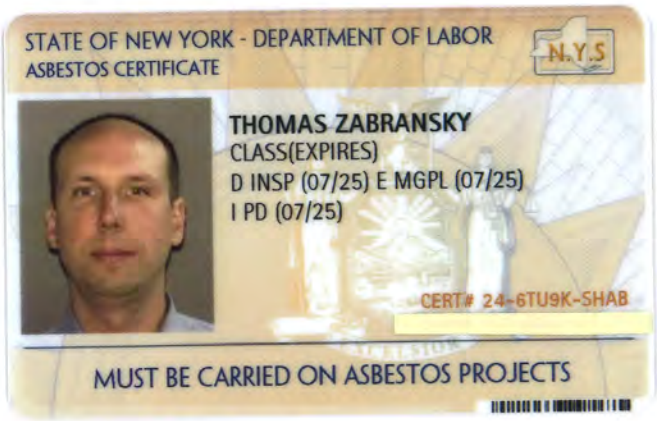

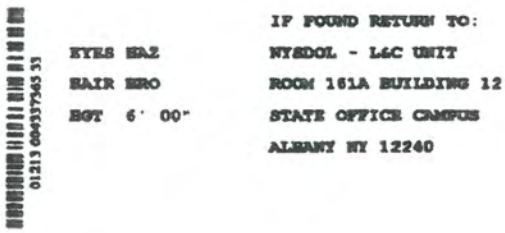

A – Asbestos Handling

B – Restricted Handler – Allied Trades

C – Air Sampling Technician

D – Inspector

E- Management Planner

F – Operations and Maintenance

G – Supervisor

H – Project Monitor

I – Project Designer

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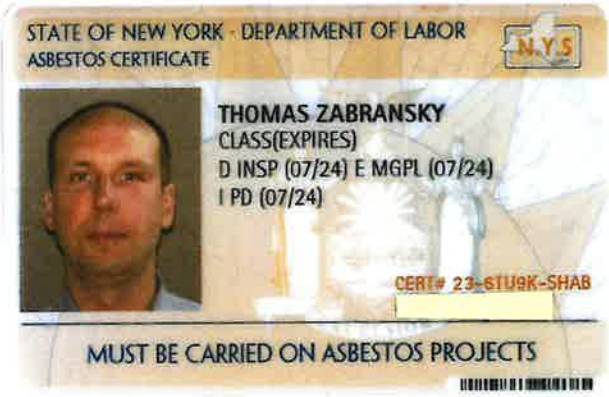

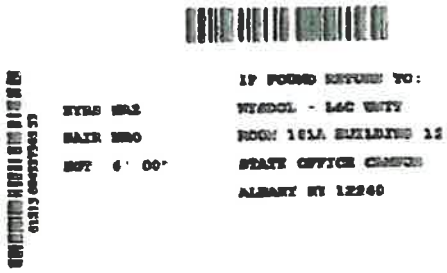

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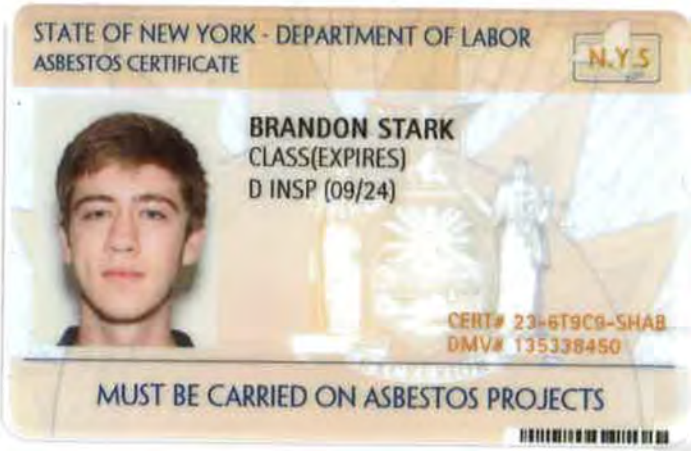
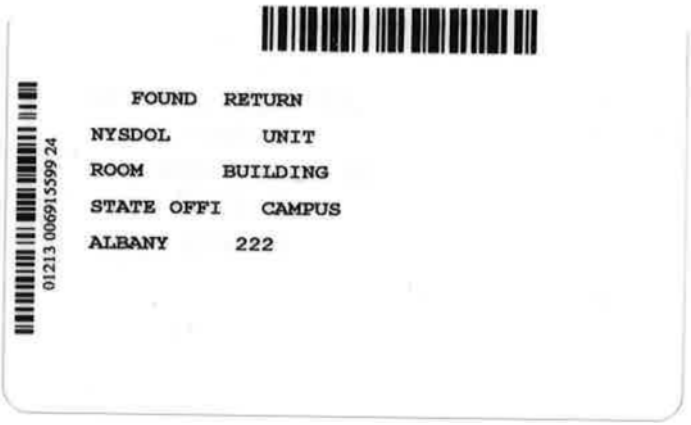
BRANDON STARK





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Attachment E

Laboratory Accreditation Documentation

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2025
Issued April 01, 2024

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DIMITRIOS MOLOHIDES
ALPHA LABS LLC
14-26 28TH AVENUE
LONG ISLAND CITY, NY 11102

NY Lab Id No: 11833

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual
	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Asbestos-Vermiculite-Containing Mate	Item 198.8 of Manual
Lead in Dust Wipes	EPA 7000B
Lead in Paint	EPA 7000B
	ASTM D3335-85A

Sample Preparation Methods

	EPA 3051A
	ASTM D3335-85A
	ASTM E-1644-17

Serial No.: 68966

Property of the New York State Department of Health. Certificates are valid only at the address shown and must be conspicuously posted by the laboratory. Continued accreditation depends on the laboratory's successful ongoing participation in the Program. Consumers may verify a laboratory's accreditation status online at https://apps.health.ny.gov/pubdoh/applinks/wc/elappublicweb/, by phone (518) 485-5570 or by email to elap@health.ny.gov.

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WADSWORTH CENTER

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SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Alpha Labs LLC
14-26 28 Avenue
Long Island City, NY 11102
Mr. Dimitrios Molohides
Phone: 718-482-7525 Fax: 718-482-7524
Email: dmolohides@alphalabsllc.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 200691-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

United States Department of Commerce
National Institute of Standards and Technology

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2025-01-01 through 2025-12-31

Effective Dates

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2024-01-01 through 2024-12-31

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National Voluntary Laboratory Accreditation Program

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For the National Voluntary Laboratory Accreditation Program

EXHIBIT D: DRAWINGS

Graphic Symbols

SECTION LETTER
A2
BUILDING SECTION REFERENCE
DWG. NO.

DETAIL NO.
T
A3
WALL SECTION OR DETAIL REFERENCE
DWG. NO.

DETAIL NUMBER
5
A4
DETAIL REFERENCE
DWG. NO.

ELEVATION NUMBER
A-201
WALL ELEVATION REFERENCE
DWG. NO.

NORTH INDICATOR

REVISION NO.
3

DOOR TYPE NO.
4

WINDOW NO.
A

215 ROOM/SPACE NO.

CENTERLINE

PARTITION TYPE INDICATOR
3

LEVEL LINE

ALIGN
A

APPLIANCE AND PLUMBING FIXTURE DESIGNATION
1

FLOORING DESIGNATION
BASE DESIGNATION
C
B1

WALL MATERIAL DESIGNATION
P2

HIDDEN LINES OR REMOVALS

EXISTING WORK TO REMAIN

EXISTING WORK TO BE REMOVED

NEW PARTITIONS

EXISTING DOOR & FRAME TO REMAIN

NEW DOOR & FRAME W/ DOOR NUMBER
5

EXISTING DOOR & FRAME TO BE REMOVED

FIRE ALARM DEVICE (SEE FA-SERIES DRAWINGS)

NEW ACCESS PANEL

NEW SPRINKLER

Abbreviations

AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ANOD	ANODIZED
ARCH	ARCHITECT(URAL)
AOR	ARCHITECT OF RECORD
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
CAB	CABINET
CL	CLOSET
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONSTR	CONSTRUCTION
COOR	CORDINATE
COORD	CORDINATE
COV	COVER
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DN	DOWN
DWGS	DRAWINGS
E/R	EXISTING DEVICE TO BE RELOCATED
ELEC	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EXISTING DEVICE TO REMAIN
ETC	ETCETERA
EXIST	EXISTING
EXT	EXTERIOR
EOR	ENGINEER OF RECORD
FA	FIRE ALARM
FAB	FABRICATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FR	FIRE RAT(ING)/(ED)
GA	GAUGE
GC	GENERAL CONTRACTOR
GL	GLASS
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HM	HOLLOW METAL
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
INFO	INFORMATION
MFD	MANUFACTURED
MFR	MANUFACTURER
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MLWK	MILLWORK
MTD	MOUNTED
MTL	METAL
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OS	OWNER SUPPLIED
PLYWD	PLYWOOD
R	RELOCATED DEVICE
RCP	REFLECTED CEILING PLAN
RFI	REQUEST FOR INFORMATION
RM	ROOM
RO	ROUGH OPENING
SF	SQUARE FEET
SIM	SIMILAR
SMC	SURFACE MOUNTED CONDUIT
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
SUSP	SUSPENDED
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WD	WOOD
WT	WEIGHT

Material Designations

GLASS
GYPSUM DRYWALL/ CEMENT FILL
INSULATION (LOOSE OR BATT)
INSULATION (RIGID)
METAL (SMALL SCALE)
PLYWOOD
STEEL (LARGE SCALE)
TILE - CERAMIC, ACOUSTIC, VCT
WOOD, FINISHED
WOOD, ROUGH

Site Safety and Protection Notes

1. SUBMIT TO THE CAMPUS FAGILITIES DEPT. FOR REVIEW A SITE SAFETY PLAN(S) PREPARED AND SIGNED BY A NEW YORK CITY LICENSED SITE SAFETY MANAGER. THE PLAN(S) SHALL BE COMPLETE, REFLECTING THE ENTIRE SITE AND SHALL SHOW ANY PHASED PROTECTION. SEE SPECIFICATIONS.
2. THE SITE SAFETY PLAN(S) SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, NOTES, FENCES, EGRESS, SCAFFOLDING, FIRE PROTECTION ETC. THEY SHOULD ADDRESS ANY POTENTIAL INTERACTION BETWEEN THE BUILDING OCCUPANTS AND GENERAL PUBLIC AND EXPOSURE TO THE CONSTRUCTION PROCESS.
3. NO WORK IS TO PROCEED UNTIL SITE SAFETY PLANS ARE APPROVED.

Demolition Notes

NOTES:

1. FOR ALL EXISTING DEVICES TO REMAIN, CONTRACTOR TO PROVIDE ALL CUTTING, PATCHING, REPAIR & PAINTING AS REQUIRED TO MAINTAIN THE SYSTEM'S FUNCTIONALITY & TO PERFORM ALL WORK AS INDICATED IN THE FIRE ALARM SCOPE OF WORK.
2. RCP REFLECTS PARTIAL EXISTING CONDITIONS AS RELEVANT. PRIOR TO STARTING ANY WORK, CONTRACTOR RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS & SUBMIT A COORDINATION SHOP DRAWING FOR APPROVAL.
3. COORDINATE WITH F.A. SERIES DRAWINGS FOR SPECIFICS OF POST-DEMOLITION INSTALLATION OF DEVICES, PANELS, CONDUITS, & EQUIPMENT.
4. ALL DEMOLITION TO BE COORDINATED WITH F.A. SERIES DRAWINGS. NO DEMOLITION IS TO OCCUR UNTIL F.A. LAYOUT & WIRING ROUTING IS APPROVED BY THE DESIGN TEAM.
5. CONTRACTOR TO INCLUDE IN THE BID THE DEMOLITION OF AN ADDITIONAL 10% OF ALL MATERIALS & SURFACES.
6. IN ALL AREAS INDICATING THE REMOVAL OF EXISTING CEILING TILES, DIMENSIONS SHOULD BE CONSIDERED APPROXIMATE AND ROUNDED TO INCLUDE THE ENTIRETY OF ANY TILE INCLUDED IN AREA OF DEMOLITION/ CONSTRUCTION.
7. ALL WORK TO BE COMPLETED BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
8. FOR ALL WALL/CEILING AREAS NOTED TO BE REMOVED, OPENED, TREPANNED, AND PATCHED & REPAIRED AS REQUIRED", GENERAL CONTRACTOR RESPONSIBLE FOR DISTURBING THE MINIMUM AMOUNT OF WALL/CEILING TO PERFORM THE JOB ADEQUATELY.
9. CONTRACTOR TO REMOVE EXISTING LIGHT FIXTURES AS REQUIRED AND REINSTALL AS REQUIRED.
10. COORDINATE SIZE OF ALL CORE DRILLS & PENETRATIONS WITH THE REQUIRED CONDUIT SIZE & QUANTITY IN /FA DRAWINGS.
11. SEE FA DRAWINGS FOR FIRE ALARM SCOPE OF REMOVAL AND FA-001 FOR DEVICE SYMBOL LEGEND.
12. LOCATIONS OF CORE DRILLS FOR CONDUIT RISERS ARE SHOWN AS SCHEMATIC. EXACT SIZE AND LOCATION OF CORE DRILLS TO BE DETERMINED IN FIELD.
13. PRIOR TO CORE DRILLING EXISTING SLAB, GENERAL CONTRACTOR TO SCAN PROPOSED AREA OF THE FLOOR SLAB TO CONFIRM IF ANY EXISTING CONDUITS ARE BURIED IN THE SLAB WHICH WOULD BE DISTURBED BY THE CORE DRILL.
14. CONTRACTOR RESPONSIBLE FOR PARTIAL REMOVAL OF EXISTING SOFFITS, WALLS, & CEILINGS AS REQUIRED FOR ROUTING OF NEW FA WIRING & CONDUIT. COORDINATE WITH CONSTRUCTION PLANS.

Construction Notes

NOTES:

1. ALL NEW EXPOSED CONDUITS TO BE PAINTED TO MATCH ADJACENT SURFACES.
2. CONTRACTOR RESPONSIBLE FOR ROUTING OF NEW WIRING/CONDUITS AND PARTIAL REMOVAL/REPLACEMENT OF EXISTING SOFFITS, WALLS, & CEILINGS AS REQUIRED.
3. NEW DEVICES AND CONDUITS TO BE RECESSED IN WALLS AND ABOVE CEILINGS AT ALL LOCATIONS WHERE TRENCHING, OPENING, PATCHING, AND REMOVE & REPLACE IS INDICATED, UNLESS OTHERWISE NOTED.
4. PATCH, REPAIR, & PAINT ALL WALL AND CEILING SURFACES ALTERED BY WORK CORNER TO CORNER (BOTH WAYS). PAINT, FINISH, & COLOR TO MATCH EXISTING.
5. COORDINATE WITH F.A. SERIES DRAWINGS FOR INSTALLATION OF DEVICES, PANELS, WIRING, & EQUIPMENT.
6. CONTRACTOR TO INCLUDE IN BID AN ADDITIONAL 10% OF PATCH, REPAIR & PAINT OF ALL MATERIALS.
7. ROUTING FOR F.A. WIRING & CONDUITS ARE SHOWN AS SCHEMATIC. CONTRACTOR TO COORDINATE EXACT SIZES, QUANTITIES, & LOCATIONS WITH "FA" SERIES DRAWINGS.
8. VARIATIONS TO THE SCHEMATIC ROUTING SHOWN MAY BE NECESSARY DUE TO EXISTING CONDITIONS OR FIRE ALARM SCOPE OF WORK. ANY DEVIATIONS MUST BE SUBMITTED AS A COORDINATED SHOP DWG.
9. ALL EXISTING DEVICES, LOCATED IN ABATEMENT AREAS, SHALL REMAIN OR BE REINSTALLED DURING PATCHING AND REPAIR SO THAT THE FIRE ALARM SYSTEM IS APPROVABLE BY THE FDNY.
10. CONTRACTOR TO ASSUME THE SUPPLY AND INSTALLATION OF 10 18"X18" CHICAGO METALLIC ACCESS PANELS IN ADDITION TO THOSE SHOWN OR REQUIRED BY THE FIRE ALARM SCOPE OF WORK.
11. SEE FA DRAWINGS FOR FIRE ALARM SCOPE OF WORK AND NEW DEVICES TO BE INSTALLED.
12. LOCATIONS OF CONDUIT RISERS ARE SHOWN AS SCHEMATIC. EXACT LOCATIONS TO BE DETERMINED IN FIELD. CONTRACTOR TO COORDINATE WITH FA SERIES DRAWINGS FOR EXACT SIZES.
13. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR EXACT LOCATIONS OF LIGHT FIXTURES AND OTHER APPLICABLE DEVICES ON FINISHED SURFACES.
14. CONTRACTOR TO PATCH & REPAIR ANY AND ALL SURFACES DISTURBED BY INSTALLATION OF NEW FIRE ALARM DEVICES AT STAIRS.

Special Inspections

SPECIAL INSPECTIONS REQUIRED IN ACCORDANCE WITH CHAPTER 17 AND THE APPLICABLE SECTIONS OF THE NYC CONSTRUCTION CODE ARE LISTED IN THE FOLLOWING TABLES:

THE CONTRACTOR MUST NOTIFY THE ARCHITECT OR ENGINEER FOR SPECIAL INSPECTIONS AT LEAST 72 HOURS BEFORE THE SPECIFIC WORK COMMENCES.

THE OWNER SHALL BE RESPONSIBLE FOR THE FOLLOWING SPECIAL INSPECTIONS:

SPRAYED FIRE-RESISTANT MATERIALS	BC 1704.11
FIRE-RESISTANT PENETRATIONS AND JOINTS	BC 1704.27
INSPECTION OF EXISTING SFRM MATERIALS	BC 1705.14.7

THE CONTRACTOR MUST NOTIFY THE ARCHITECT OR ENGINEER FOR PROGRESS INSPECTIONS AT LEAST 72 HOURS BEFORE THE SPECIFIC WORK COMMENCES.

THE OWNER SHALL BE RESPONSIBLE FOR THE FOLLOWING PROGRESS INSPECTIONS.

ENERGY CODE COMPLIANCE	BC 1103.5
FIRE RESISTANCE RATED CONSTRUCTION	BC 1103.4
FINAL INSPECTION	28-116.2.4.2 AND BC1110.5, DIRECTIVE 14 OF 1975 AND 1 RCNY 101-10

NOTE:
FOR ADDITIONAL REQUIRED SPECIAL INSPECTIONS REFER TO SPRINKLER MECHANICAL, ELECTRICAL, & FIRE ALARM DRAWINGS.

Building Dept. Notes

THE FOLLOWING NOTES SHALL APPLY THROUGHOUT: (CHUTES, PLACES OF ASSEMBLY, STANDPIPE SYSTEMS, ELEVATORS, FIRE PROTECTION, PLAN CONSTRUCTION FENCES, EMERGENCY GENERATOR SIDEWALK SHEDS)

1. WORK SHALL BE EXECUTED IN FULL COMPLIANCE WITH THE APPLICABLE PROVISIONS OF ALL LAWS, BY-LAWS, STATUTES, ORDINANCES, CODES, RULES, REGULATIONS AND LAWFUL ORDERS OF PUBLIC AUTHORITIES BEARING ON THE PERFORMANCE AND EXECUTION OF THE WORK.

   THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY PORTIONS OF THE WORK, IN THE CONTRACT DOCUMENTS THAT ARE AT VARIANCE WITH THE ABOVE.

2. ALL MATERIALS, ASSEMBLIES, FORMS, METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL MEET THE FOLLOWING REQUIREMENTS:

   a). THEY SHALL HAVE BEEN ACCEPTABLE PRIOR TO THE EFFECTIVE DATE OF THE CODE BY THE BOARD OF STANDARDS AND APPEALS.

   b). THEY SHALL HAVE BEEN ACCEPTED FOR THE USE UNDER THE PRESCRIBED TEST METHODS BY THE COMMISSIONER (OR)

   c). APPROVED BY THE OFFICE OF TECHNICAL CERTIFICATION AND RESEARCH (OTCR)

3. MATERIALS OR ASSEMBLIES REQUIRED TO HAVE A FIRE RESISTANCE RATING SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E119, STANDARD METHODS OF FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS AND ACCEPTED BY THE COMMISSIONER

4. THESE DRAWINGS HAVE BEEN PREPARED BY OR AT THE DIRECTION OF THE UNDERSIGNED AND TO THE BEST OF THE UNDERSIGNED'S KNOWLEDGE, INFORMATION AND BELIEF MEET THE REQUIREMENTS OF THE BUILDING CODE.

5. ALL WORK SHALL COMPLY WITH ANSI 117.1 AND LOCAL LAW 58.

6. ALL NEW WORK SHALL COMPLY WITH NEW YORK STATE ENERGY CODE.

7. ALL NEW INTERIOR FINISHES SHALL BE CONSTRUCTED OF MATERIALS MEETING SECTION 27-524 FOR FLAME SPREAD RATINGS.

8. THE CONTRACTOR IS RESPONSIBLE FOR FILING APPLICATIONS AND OBTAINING PERMITS FOR ANY CONSTRUCTION EQUIPMENT OR PUBLIC PROTECTIVES REQUIRED TO ENSURE SAFETY OF OPERATION AND THE PUBLIC AS PER NYC CONSTRUCTION CODE, CHAPTER 33, SECTION BC3307. THE CONTRACTOR IS ALSO RESPONSIBLE FOR OBTAINING CONSTRUCTION PERMITS.

9. EMERGENCY POWER, IF REQUIRED, UNDER THIS CONTRACT SHALL BE INSTALLED AS PER SECTION 27-346.04

10. FOLLOW CHAPTER 33 OF THE 2022 NYC CONSTRUCTION CODE (NYCCC) SAFEGUARDS DURING CONSTRUCTION OR DEMOLITION. ALL REFERENCES IN THE SPECIFICATIONS AND THE DRAWINGS REGARDING PROTECTION SHALL BE CONSIDERED TO BE REFERENTIAL OF CHAPTER 33 OF THE NYCCC.

11. ALL AISLES LEADING TO EXITS SHALL BE CONSTRUCTED WITH A MINIMUM UNOBSTRUCTED WIDTH OF 3'-0" UNDER THIS CONTRACT.

12. LIST OF VIOLATIONS BEING ADDRESSED AS PART OF THIS APPLICATION.
    NONE

Summary of General Construction Work

THE GENERAL CONSTRUCTION SCOPE SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING. REFER TO THE FA SERIES DRAWINGS FOR THE SCOPE OF FIRE ALARM WORK.

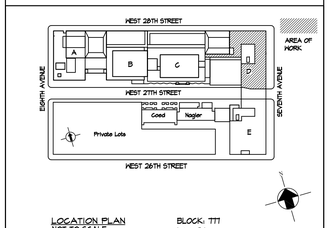
1. REMOVE EXISTING CEILINGS AND SECTIONS OF WALLS AS INDICATED FOR THE INSTALLATION OF THE NEW FIRE ALARM CONDUITS, WIRING AND DEVICES.
2. RESTORE EXISTING CEILINGS AND SECTIONS OF WALLS TO MATCH EXISTING AS INDICATED AND AS REQUIRED AFTER THE INSTALLATION OF THE NEW FIRE ALARM CONDUITS, WIRING AND DEVICES. NEW SURFACE MOUNTED CONDUITS TO BE PAINTED TO MATCH ADJACENT SURFACES WHERE APPLICABLE.
3. CORE DRILL FLOOR SLABS & PENETRATE WALLS AS REQUIRED FOR THE INSTALLATION OF THE FIRE ALARM CONDUITS & WIRING.
4. FIRESTOP ALL CONDUIT & WIRING PENETRATIONS THROUGH FIRE-RATED WALLS & SLABS. ADDITIONAL FIRESTOPPING REQUIRED AT SELECT EXISTING PENETRATIONS IN FIRE-RATED AREAS WHERE INDICATED.
5. PATCH WALLS, PARTITIONS & CEILINGS WHERE EXISTING FIRE ALARM DEVICES ARE INDICATED FOR REMOVAL. RESTORE WALL & CEILING FINISHES AS INDICATED.
6. DEMOLISH EXISTING AREAS AS INDICATED IN THE CELLAR, 1ST, & 3RD FLOORS AND CONSTRUCT NEW CORRIDOR AND FIRE-RATED PARTITIONS/ ENCLOSURES FOR THE NEW FIRE ALARM EQUIPMENT AS INDICATED. NEW FIRE-RATED DOORS & FRAMES AND KITCHEN EQUIPMENT TO ALSO BE PROVIDED AT SELECT AREAS.
7. COORDINATE GENERAL CONSTRUCTION WORK WITH THE FIRE ALARM WORK.
8. UPON FDNY APPROVAL OF THE NEW FIRE ALARM SYSTEM, REMOVE EXISTING CEILINGS AND SECTIONS OF WALLS AS INDICATED TO ACCOMMODATE REMOVAL OF EXISTING FIRE ALARM SYSTEM.
9. PROVIDE PROTECTION AT EXISTING FURNITURE, BUILT-INS, SPECIALIZED WALL PANELS/FINISHES, EQUIPMENT, AND OTHER ITEMS AS APPLICABLE THROUGHOUT CONSTRUCTION.
10. INSTALL NEW LIGHT FIXTURES, SWITCHES, AND ELECTRICAL OUTLETS AT SELECT AREAS. REFER TO E-SERIES DRAWINGS FOR ELECTRICAL SCOPE OF WORK.
11. PROVIDE CONNECTION TO THE EXISTING NAB GENERATOR AS PER ELECTRICAL AND FA-SERIES DRAWINGS. PENETRATION IS REQUIRED AT EXISTING ROOFING SYSTEM TO ACCOMMODATE GENERATOR CONNECTION. GENERAL CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE EXISTING ROOF WARRANTY.

Drawing List

ARCHITECTURAL

G-001.00	GENERAL NOTES, SYMBOLS, ABBREVIATIONS, SPECIAL INSPECTIONS, DRAWING LIST, & SCOPE OF WORK
G-002.00	GENERAL NOTES
DM-400.00	SUBCELLAR DEMOLITION RCP
DM-401.00	CELLAR DEMOLITION RCP
DM-402.00	1ST FLOOR DEMOLITION RCP
DM-403.00	2ND FLOOR DEMOLITION RCP
DM-404.00	3RD FLOOR DEMOLITION RCP NORTH
DM-405.00	3RD FLOOR DEMOLITION RCP SOUTH
DM-406.00	4TH FLOOR DEMOLITION RCP NORTH
DM-407.00	4TH FLOOR DEMOLITION RCP SOUTH
DM-408.00	5TH FLOOR DEMOLITION RCP NORTH
DM-409.00	5TH FLOOR DEMOLITION RCP SOUTH
DM-410.00	6TH FLOOR DEMOLITION RCP NORTH
DM-411.00	6TH FLOOR DEMOLITION RCP SOUTH
DM-412.00	ROOF PARTIAL DEMOLITION RCP
DM-413.00	NAB GENERATOR ROUTING - CELLAR, 1ST & 2ND FLOOR DEMOLITION RCP
DM-414.00	NAB GENERATOR ROUTING - 10TH FLOOR & ROOF DEMOLITION RCP
A-400.00	SUBCELLAR CONSTRUCTION RCP
A-401.00	CELLAR CONSTRUCTION RCP
A-402.00	1ST FLOOR CONSTRUCTION RCP
A-403.00	2ND FLOOR CONSTRUCTION RCP
A-404.00	3RD FLOOR CONSTRUCTION RCP NORTH
A-405.00	3RD FLOOR CONSTRUCTION RCP SOUTH
A-406.00	4TH FLOOR CONSTRUCTION RCP NORTH
A-407.00	4TH FLOOR CONSTRUCTION RCP SOUTH
A-408.00	5TH FLOOR CONSTRUCTION RCP NORTH
A-409.00	5TH FLOOR CONSTRUCTION RCP SOUTH
A-410.00	6TH FLOOR CONSTRUCTION RCP NORTH
A-411.00	6TH FLOOR CONSTRUCTION RCP SOUTH
A-412.00	ROOF PARTIAL CONSTRUCTION RCP
A-413.00	NAB GENERATOR ROUTING - CELLAR, 1ST & 2ND FLOOR CONSTRUCTION RCP
A-414.00	NAB GENERATOR ROUTING - 10TH FLOOR & ROOF CONSTRUCTION RCP
A-415.00	CEILING DETAILS, ROOF PENETRATION DETAIL &LIGHTING SCHEDULE
A-700.00	DOOR & PARTITION SCHEDULES AND DETAILS
A-701.00	ATS ROOM & CORRIDOR EXTENSION - DEMOLITION PLANS
A-702.00	ATS ROOM & CORRIDOR EXTENSION - CONSTRUCTION PLANS
A-703.00	FIRE COMMAND CENTER PLANS & ELEVATIONS
A-704.00	FIRE COMMAND CENTER SECTIONS & DETAILS
A-705.00	CELLAR - BUILDING TRANSITION DOORS DEMOLITION PLAN & RCP
A-706.00	CELLAR - BUILDING TRANSITION DOORS CONSTRUCTION PLAN & RCP
A-707.00	3RD FLOOR - BUILDING TRANSITION DOORS DEMOLITION PLAN & RCP
A-708.00	3RD FLOOR - BUILDING TRANSITION DOORS CONSTRUCTION PLAN & RCP
A-709.00	FIRESTOPPING DETAILS
A-710.00	FIRESTOPPING DETAILS

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
GENERAL NOTES, SYMBOLS, ABBREVIATIONS, SPECIAL INSPECTIONS, DRAWING LIST, & SCOPE OF WORK
DOB NOW JOB#

SEAL & SIGNATURE:
REGISTERED ARCHITECT
CLARE ELIZABETH KARIGAN
035589
STATE OF NEW YORK

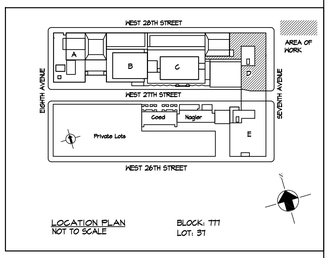
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	NOT TO SCALE
DWG No:	G-001.00
CADD FILE:	DOB page: 1 OF 44

General Notes

THE FOLLOWING NOTES SHALL APPLY THROUGHOUT. EXCEPTIONS ARE SPECIFICALLY NOTED ON EACH DRAWING.

1. ALL WORK OF THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NEW YORK CITY BUILDING CODE AND REGULATIONS OF OTHER AGENCIES HAVING JURISDICTION ON THE WORK OF THIS CONTRACT.
2. DO NOT SCALE DRAWINGS; DIMENSIONS SHOWN GOVERN. LARGER SCALE DRAWINGS SHALL GOVERN OVER SMALLER SCALE. USE DIMENSIONS ONLY. ALL DIMENSIONS AND CONDITIONS SHOWN AND ASSUMED ON THE DRAWINGS MUST BE VERIFIED AT THE SITE BY THE CONTRACTOR BEFORE ORDERING ANY MATERIAL OR DOING ANY WORK. ANY DISCREPANCIES IN THE DRAWINGS AND SPECIFICATIONS SHALL BE REPORTED TO THE ARCHITECT. NO CHANGE IN DRAWINGS OR SPECIFICATIONS IS PERMISSIBLE WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT/ENGINEER. NO WORK SHALL PROCEED UNTIL SUCH DISCREPANCY HAS BEEN RECTIFIED.
3. ALL WORK ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK WHETHER STATED OR NOT EXCEPT WHERE SPECIFICALLY NOTED AS "EXISTING TO REMAIN".
4. COORDINATION OF ALL WORK UNDER THIS CONTRACT SHALL BE MAINTAINED TO ENSURE THE QUALITY AND TIMELY COMPLETION OF THE WORK/PROJECT. SEE CONTRACT FOR COMPLETION DATE.
5. THE CONTRACTOR SHALL DISCONNECT AND/OR REMOVE ANY EXISTING PLUMBING, ELECTRICAL FIXTURES, WIRE CONDUITS, OR OTHER WORK WHICH MIGHT INTERFERE WITH THE WORK OF THIS CONTRACT. AFTER NEW WORK IS COMPLETED, THE DISCONNECTED OR REMOVED ITEMS SHALL BE REINSTALLED BY THE CONTRACTOR AT THE SAME LOCATION OR AT NEW LOCATION AS DIRECTED. CONTRACTOR TO FURNISH ALL NECESSARY NEW MATERIALS/HARDWARE FOR COMPLETION OF THE WORK.
6. THE CONTRACTOR SHALL PATCH, REPAIR OR REPLACE ALL DAMAGED OR EXPOSED SURFACES DUE TO CONTRACT WORK. ALL NEWLY INSTALLED, PATCHED WORK AND ALL AFFECTED AREAS SHALL BE PAINTED OR FINISHED AS INDICATED OR TO MATCH EXISTING. ALL WORK SHALL BE PERFORMED TO COVER THE ENTIRE HORIZONTAL OR VERTICAL SURFACE TO THE CLOSEST CORNER IN ALL FOUR DIRECTIONS TO MATCH EXISTING CONDITIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS AND OFF ALIGNMENTS ACCORDING TO CODES AND STANDARDS OF GOOD PRACTICE.
8. THE CONTRACTOR SHALL INCLUDE ALL PREPARATORY AND ASSOCIATED SUPPLEMENTARY WORK TO PROVIDE A COMPLETE AND FINISHED INSTALLATION.
9. WHERE MANUFACTURER'S NAMES AND PRODUCT NUMBERS ARE INDICATED ON DRAWINGS, IT SHALL BE CONSTRUED TO MEAN THE ESTABLISHMENT OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL PRODUCTS MUST BE SUBMITTED TO THE ARCHITECT FOR APPROVAL BEFORE THEY SHALL BE DEEMED EQUAL.
10. FIRESTOPPING SHALL BE INSTALLED AT ALL PENETRATIONS OF FIRE RATED CONSTRUCTION AS PER SPECIFICATIONS.
11. SIZE OF MASONRY UNITS AND WOOD MEMBERS ON PLANS, BUILDING ELEVATIONS AND SECTIONS ARE SHOWN AS NOMINAL SIZE, UNLESS OTHERWISE NOTED.
12. DIMENSIONS ON PLANS ARE INDICATED FROM SURFACE TO SURFACE BETWEEN WALLS, PARTITIONS AND OTHER ITEMS EXCLUSIVE OF FINISHES.
13. PROVIDE GUARDS, RAILS, BARRICADES, FENCES, NIGHT LIGHTING, ETC., AS REQUIRED BY THE NEW YORK CITY BUILDING CODE, SECTION 19015 AND AS REQUIRED TO PROVIDE ADEQUATE PROTECTION.
14. ADDITIONAL NOTES WHICH ARE APPLICABLE TO THIS PROJECT MAY BE FOUND THROUGHOUT THE CONTRACT DOCUMENTS.
15. ALL WORK LISTED ON THE CONSTRUCTION NOTES AND SHOWN OR IMPLIED ON ALL DRAWINGS SHALL BE SUPPLIED AND INSTALLED BY THE TRADE CONTRACTOR UNLESS OTHERWISE NOTED ON DRAWINGS AND/OR IN SPECIFICATIONS.
16. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
17. CONTRACTOR MUST COMPLY WITH THE RULES AND REGULATIONS OF AGENCIES HAVING JURISDICTION AND SHALL CONFORM TO ALL CONSTRUCTION AND SAFETY CODES, STATUTES AND ORDINANCES.
18. ALL FEES, TAXES, PERMITS AND APPLICATIONS ASSOCIATED WITH OBTAINING WORK PERMITS FROM ANY REQUIRED GOVERNMENTAL AGENCIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO PROVIDE ANY & ALL INSURANCE AS REQUIRED BY ANY GOVERNMENT AGENCY IN ORDER TO OBTAIN PERMITS.
19. CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE BUILDING AS TO HOURS OF AVAILABILITY OF LOADING DOCKS AND ELEVATORS FOR THE PURPOSES OF DELIVERY AND ALSO AS TO THE MANNER OF HANDLING AND STORAGE & STAGING OF MATERIALS, EQUIPMENT AND DEBRIS TO AVOID CONFLICT AND INTERFERENCE WITH NORMAL BUILDING OPERATIONS.
20. ALL DRAWINGS, NOTES, AND SPECIFICATIONS ARE COMPLEMENTARY AND WHAT IS CALLED FOR BY ANY WILL BE BINDING AS IF CALLED FOR BY ALL. IF THERE ARE ANY DISCREPANCIES, CONTRACTOR TO NOTIFY ARCHITECT PRIOR TO PROCEEDING.
21. THE CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DOCUMENTS AND APPROVED SUBMITTALS ON THE CONSTRUCTION SITE DURING ALL PHASES OF CONSTRUCTION.
22. THE CONTRACTOR SHALL SUPPLY, PRIOR TO COMMENCING WORK, A LIST OF ALL SUBCONTRACTORS TO THE ARCHITECT AND THE OWNER, WITH THE NAME, ADDRESS AND PHONE NUMBER OF THE PRINCIPAL CONTACT OF EACH SUB-CONTRACTOR. IN ADDITION, HE WILL FILE WITH THE OWNER THE EMERGENCY NUMBERS AVAILABLE FOR 24-HR. CONTACT.
23. ALL WORK SHALL BE PERFORMED BY SKILLED AND QUALIFIED WORKMEN IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADES INVOLVED AND IN COMPLIANCE WITH BUILDING REGULATIONS AND/OR GOVERNMENTAL LAWS, STATUTES OR ORDINANCES.
24. ALL MATERIALS SHALL BE NEW, UNUSED AND OF THE HIGHEST QUALITY, UNLESS OTHERWISE NOTED. MANUFACTURED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
25. ALL APPROVALS OF SUBMITTALS SHALL BE FOR DESIGN INTENT ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR QUANTITIES, DIMENSIONS AND COMPLIANCE WITH CONTRACT DOCUMENTS AND FOR INFORMATION PERTAINING TO FABRICATION PROCESSES OR TECHNIQUES OF FIRST CLASS CONSTRUCTION AND FOR COORDINATION WITH OTHER TRADES.
26. ALL WORK SHALL BE ERECTED AND INSTALLED PLUMB, LEVEL, SQUARE, TRUE AND IN PROPER ALIGNMENT.
27. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND RESTORATION REQUIRED FOR THIS WORK.
28. ALL CORRESPONDENCE TO THE ARCHITECT/ ENGINEER OR TO THE OWNER SHALL BE FORWARDED IN COPY TO THE OTHER PARTY.
29. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE OF ACCUMULATION OF WASTE MATERIALS AND RUBBISH. PREMISES TO BE SWEPT CLEAN DAILY. AT THE COMPLETION OF THE WORK, EACH CONTRACTOR SHALL LEAVE THE JOB SITE FREE OF CONSTRUCTION DEBRIS AND MATERIALS, AND "BROOM CLEAN" INCLUDING THOROUGH CLEANING OF TOILETS, BATHROOMS, ELECTRICAL CLOSETS, STAIRWELLS, AND ALL AREAS OF WORK OR STAGING, ETC.
30. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION AGAINST DIRT AND DAMAGE WITHIN THE PREMISES, AS WELL AS PUBLIC AREAS, AND SHALL BE RESPONSIBLE FOR KEEPING THESE AREAS CLEAN AND FREE OF MATERIALS AT ALL TIMES.
31. THE CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES AND COORDINATE WITH LOCATION SHOWN ON DRAWINGS.
32. THE CONTRACTOR SHALL CHECK FOR ALL BROKEN OR CRACKED WINDOW GLAZING PRIOR TO START OF CONSTRUCTION AND SHALL REPORT SUCH CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WINDOW GLAZING LATER FOUND TO BE DAMAGED OR MISSING.
33. DURING CONSTRUCTION, EGRESS DOORS & PATHWAYS MUST REMAIN UNOBSTRUCTED AT ALL TIMES.
34. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PROPERLY PROTECT ALL EXISTING CONSTRUCTION TO REMAIN. CONSTRUCTOR SHALL BE RESPONSIBLE FOR ALL DAMAGED AREAS TO BE RETURNED TO ORIGINAL CONDITION, AT NO EXTRA COST TO THE OWNER.
35. ANY DEVIATION FROM THE PROPOSED ROUTING OF THE FIRE ALARM WIRING SHALL BE SUBMITTED IN SHOP DRAWING FORM FOR REVIEW BY THE DESIGN TEAM PRIOR TO THE CONTRACTOR COMMENCING WITH THE WORK.
36. RCP REFLECTS PARTIAL EXISTING CONDITIONS AS RELEVANT. PRIOR TO STARTING ANY WORK, CONTRACTOR RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS & SUBMIT A COORDINATION SHOP DRAWING FOR APPROVAL.
37. PATCH, REPAIR, & PAINT ALL SURFACES AS REQUIRED TO COMPLETE WORK.
38. COORDINATE WITH F.A. SERIES DRAWINGS FOR SPECIFICS OF POST-DEMOLITION INSTALLATION OF DEVICES, PANELS, CONDUITS, & EQUIPMENT.
39. IN ALL AREAS INDICATING THE REMOVAL OF EXISTING CEILING TILES, DIMENSIONS SHOULD BE CONSIDERED APPROXIMATE AND ROUNDED TO INCLUDE THE ENTIRETY OF ANY TILE INCLUDED IN AREA OF DEMOLITION/CONSTRUCTION.
40. ALL WORK TO BE COMPLETED BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
41. FOR ALL WALL/CEILING AREAS NOTED TO BE REMOVED, OPENED, TRENCHED, AND PATCHED & REPAIRED AS REQUIRED", GENERAL CONTRACTOR RESPONSIBLE FOR DISTURBING THE MINIMUM AMOUNT OF WALL/CEILING TO PERFORM THE JOB ADEQUATELY.
42. CONTRACTOR TO REMOVE EXISTING LIGHT FIXTURES AS REQUIRED AND REINSTALL AS REQUIRED.
43. GENERAL CONTRACTOR IS REQUIRED TO ENGAGE THE SERVICES OF A CONCRETE SCANNING LOCATION SERVICE. THIS GPR (GROUND PENETRATING RADAR) IS REQUIRED PRIOR TO ANY CORES THROUGH THE SLAB SO THAT UTILITIES MAY BE ACCURATELY LOCATED AND REMAIN UNDISTURBED DURING CONSTRUCTION. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY AND ALL DAMAGE AND RECONNECTION OF UTILITY IMPACTED BACK TO ITS PREVIOUS FUNCTION.

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

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1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
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New York, NY, 10001

Environmental Consultants
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1983 Marcus Ave. Suite 109
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Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

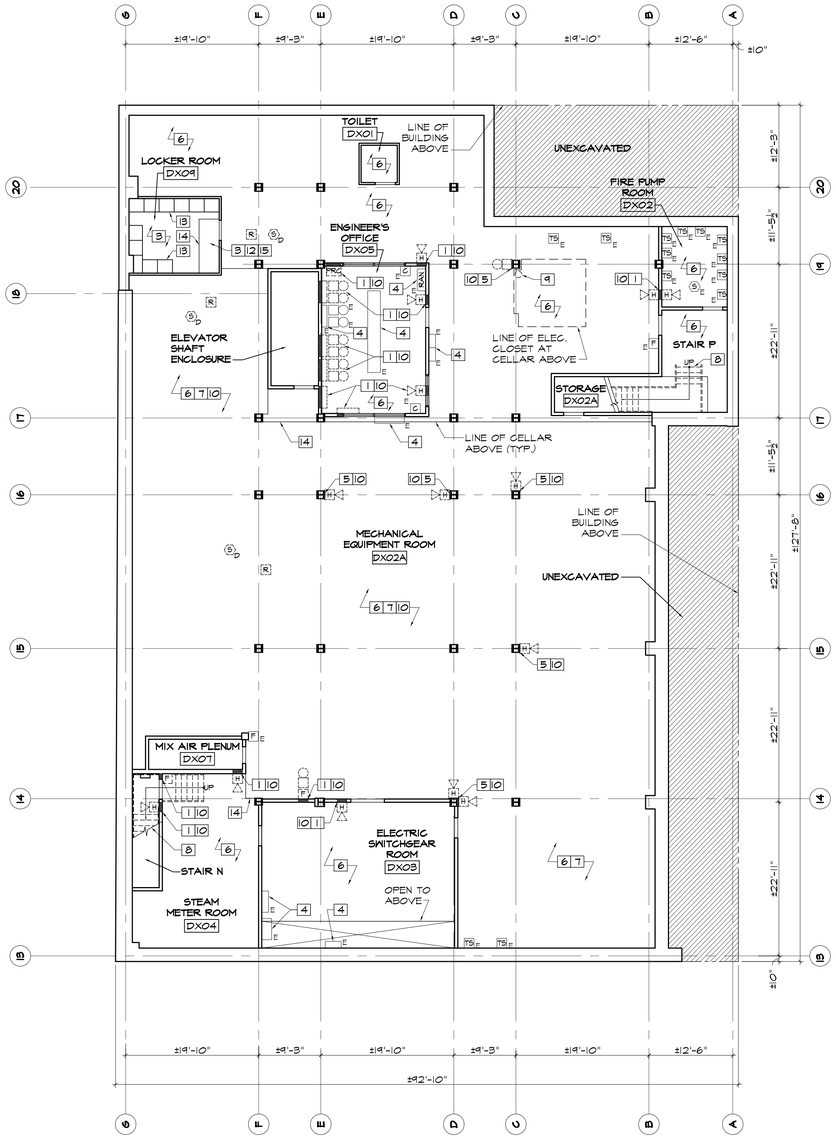
GENERAL NOTES

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT
CLARE ELIZABETH MORGAN
035589
STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	NOT TO SCALE
DWG No:	G-002.00
CADD FILE:	DOB page: 2 OF 44



1 DM-400 SUBCELLAR DEMOLITION RCP
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

1. EXISTING CMU WALL
2. EXISTING CONCRETE WALL
3. EXISTING GWB CEILING
4. EXISTING ELECTRICAL EQUIPMENT TO REMAIN
5. EXISTING CONCRETE COLUMN
6. EXPOSED CONCRETE SLAB/CEILING
7. DOUBLE HEIGHT MECHANICAL SPACE. REFER TO CELLAR PLAN FOR ADDITIONAL INFORMATION.
8. LINE OF EXISTING STAIRS TO FLOOR ABOVE.
9. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.
10. REMOVE EXIST. FIRE ALARM DEVICE(S) / ELECTRICAL EQUIPMENT AS INDICATED
11. NOT USED
12. OPEN EXISTING CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
13. EXISTING WOOD LOCKERS & MILLWORK TO REMAIN UNDISTURBED.
14. LINE OF EXISTING SOFFIT AT CEILING.
15. NEW FA CONDUIT ROUTING TO ENTER ROOM IN PLENUM ABOVE CEILING. VISIBLE PORTION OF WALL BELOW TO REMAIN UNDISTURBED. COORDINATE WITH CONSTRUCTION DRAWINGS.

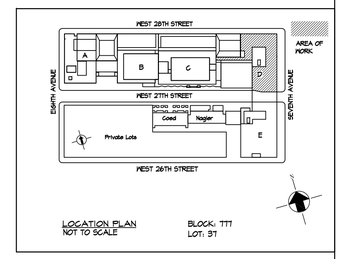
GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE

E EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.



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300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
SUBCELLAR
DEMOLITION RCP

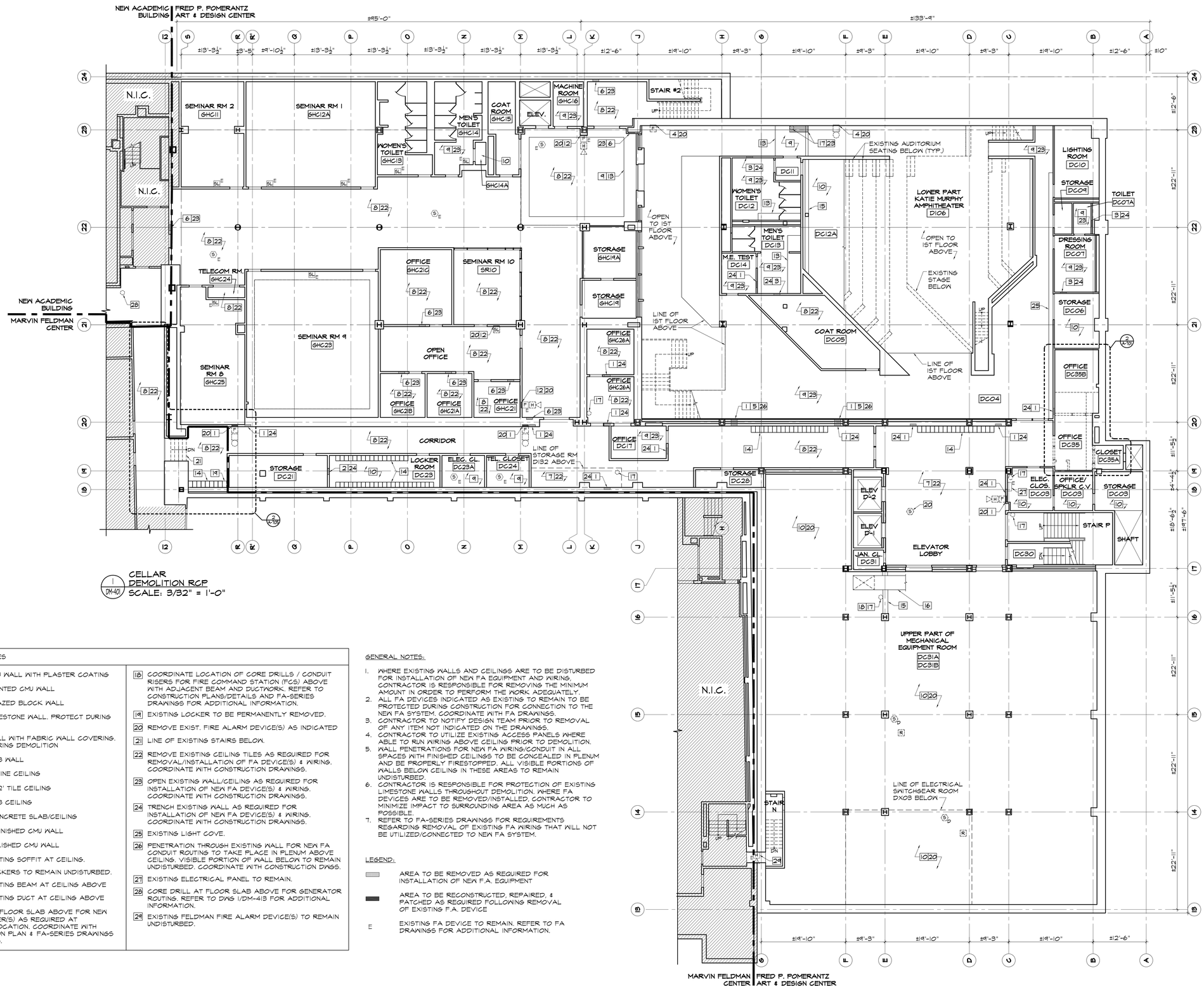
DOB NOW JOB#

SEAL & SIGNATURE:

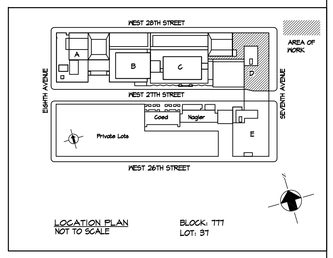
REGISTERED ARCHITECT
CLARE ELIZABETH KORRIGAN
035589
STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-400.00
CADD FILE:	DOB page: 3 OF 44

NOT FOR CONSTRUCTION



CELLAR DEMOLITION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING GLAZED BLOCK WALL
4. EXISTING LIMESTONE WALL. PROTECT DURING DEMOLITION.
5. EXISTING WALL WITH FABRIC WALL COVERING. PROTECT DURING DEMOLITION
6. EXISTING GWB WALL
7. EXISTING SPLINE CEILING
8. EXISTING 2'X2' TILE CEILING
9. EXISTING GWB CEILING
10. EXPOSED CONCRETE SLAB/CEILING
11. EXISTING UNFINISHED CMU WALL
12. EXISTING POLISHED CMU WALL
13. LINE OF EXISTING SOFFIT AT CEILING.
14. EXISTING LOCKERS TO REMAIN UNDISTURBED.
15. LINE OF EXISTING BEAM AT CEILING ABOVE
16. LINE OF EXISTING DUCT AT CEILING ABOVE
17. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.
18. COORDINATE LOCATION OF CORE DRILLS / CONDUIT RISERS FOR FIRE COMMAND STATION (FCS) ABOVE WITH ADJACENT BEAM AND DUCTWORK. REFER TO CONSTRUCTION PLANS/DETAILS AND FA-SERIES DRAWINGS FOR ADDITIONAL INFORMATION.
19. EXISTING LOCKER TO BE PERMANENTLY REMOVED.
20. REMOVE EXIST. FIRE ALARM DEVICE(S) AS INDICATED
21. LINE OF EXISTING STAIRS BELOW.
22. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
23. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
24. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
25. EXISTING LIGHT COVE.
26. PENETRATION THROUGH EXISTING WALL FOR NEW FA CONDUIT ROUTING TO TAKE PLACE IN PLENUM ABOVE CEILING. VISIBLE PORTION OF WALL BELOW TO REMAIN UNDISTURBED. COORDINATE WITH CONSTRUCTION DWGS.
27. EXISTING ELECTRICAL PANEL TO REMAIN.
28. CORE DRILL AT FLOOR SLAB ABOVE FOR GENERATOR ROUTING. REFER TO DWG 1/DM-413 FOR ADDITIONAL INFORMATION.
29. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN WIRING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING LIMESTONE WALLS THROUGHOUT DEMOLITION. WHERE FA DEVICES ARE TO BE REMOVED/INSTALLED, CONTRACTOR TO MINIMIZE IMPACT TO SURROUNDING AREA AS MUCH AS POSSIBLE.
7. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

- AREA TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW F.A. EQUIPMENT
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

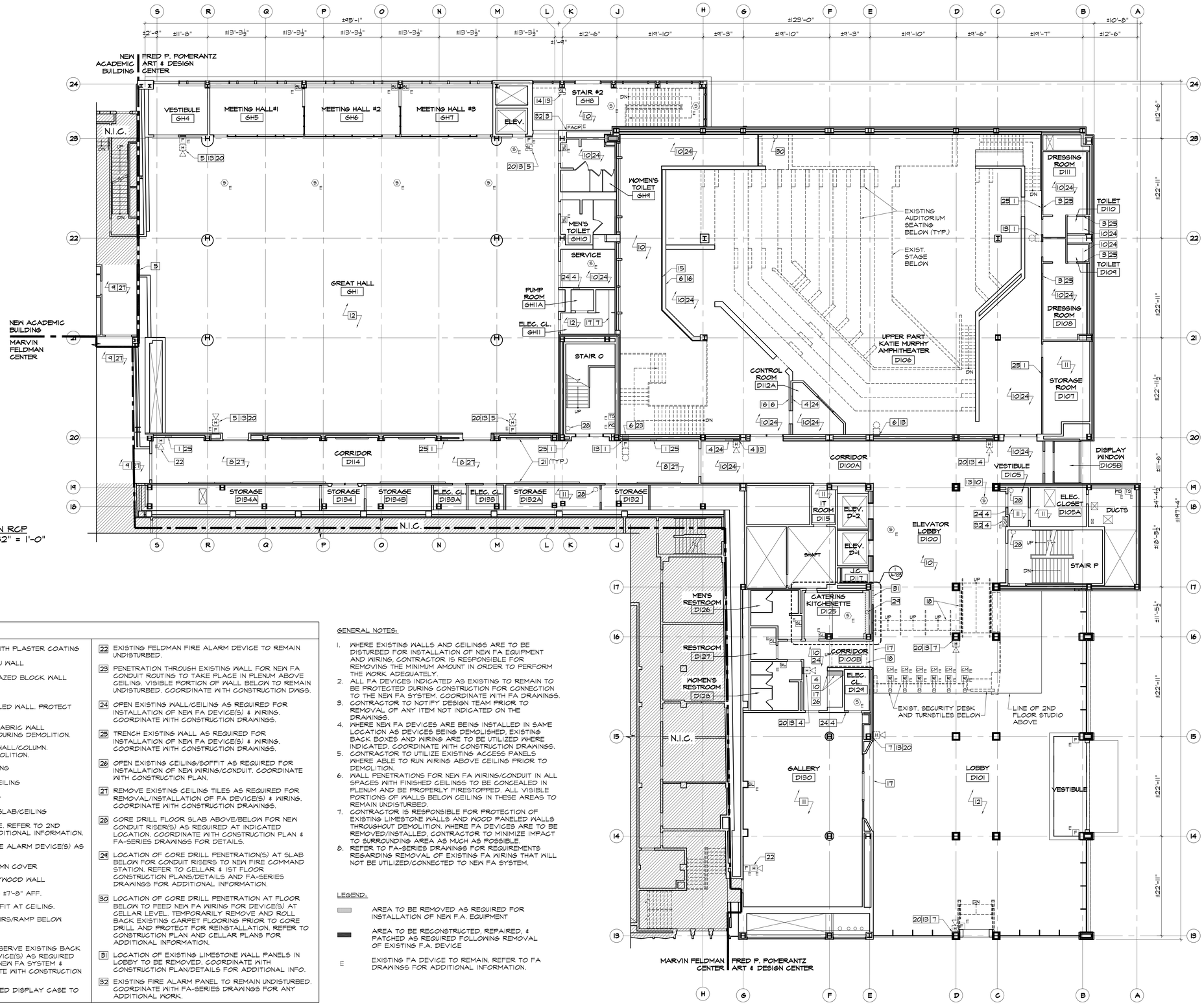
DRAWING TITLE:
CELLAR DEMOLITION RCP

DOB NOW JOB#

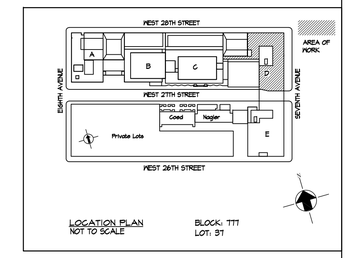
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KORNICKI 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-401.00
CADD FILE:	DOB page: 4 OF 44



1 DM-402 1ST FLOOR DEMOLITION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING PAINTED GLAZED BLOCK WALL
4. EXISTING GNB WALL
5. EXISTING WOOD PANELED WALL. PROTECT DURING DEMOLITION.
6. EXISTING WALL WITH FABRIC WALL COVERING. PROTECT DURING DEMOLITION.
7. EXISTING LIMESTONE WALL/COLUMN. PROTECT DURING DEMOLITION.
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GNB CEILING
11. EXPOSED CONCRETE SLAB/CEILING
12. DOUBLE HEIGHT SPACE. REFER TO 2ND FLOOR PLAN FOR ADDITIONAL INFORMATION.
13. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED.
14. EXISTING METAL COLUMN COVER
15. EXISTING PAINTED PLYWOOD WALL
16. EXISTING LOW WALL @ ±7'-8" AFF.
17. LINE OF EXISTING SOFFIT AT CEILING.
18. LINE OF EXISTING STAIRS/RAMP BELOW
19. NOT USED.
20. CONTRACTOR TO PRESERVE EXISTING BACK BOX AT DEMO FA DEVICE(S) AS REQUIRED FOR CONNECTION TO NEW FA SYSTEM & DEVICE(S). COORDINATE WITH CONSTRUCTION DRAWINGS.
21. EXISTING WALL-MOUNTED DISPLAY CASE TO REMAIN UNDISTURBED.
22. EXISTING FELDMAN FIRE ALARM DEVICE TO REMAIN UNDISTURBED.
23. PENETRATION THROUGH EXISTING WALL FOR NEW FA CONDUIT ROUTING TO TAKE PLACE IN PLENUM ABOVE CEILING. VISIBLE PORTION OF WALL BELOW TO REMAIN UNDISTURBED. COORDINATE WITH CONSTRUCTION DWGS.
24. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
25. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
26. OPEN EXISTING CEILING/SOFFIT AS REQUIRED FOR INSTALLATION OF NEW WIRING/CONDUIT. COORDINATE WITH CONSTRUCTION PLAN.
27. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
28. CORE DRILL FLOOR SLAB ABOVE/BELOW FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.
29. LOCATION OF CORE DRILL PENETRATION(S) AT SLAB BELOW FOR CONDUIT RISERS TO NEW FIRE COMMAND STATION. REFER TO CELLAR & 1ST FLOOR CONSTRUCTION PLANS/DETAILS AND FA-SERIES DRAWINGS FOR ADDITIONAL INFORMATION.
30. LOCATION OF CORE DRILL PENETRATION AT FLOOR BELOW TO FEED NEW FA WIRING FOR DEVICE(S) AT CELLAR LEVEL. TEMPORARILY REMOVE AND ROLL BACK EXISTING CARPET FLOORING PRIOR TO CORE DRILL AND PROTECT FOR REINSTALLATION. REFER TO CONSTRUCTION PLAN AND CELLAR PLANS FOR ADDITIONAL INFORMATION.
31. LOCATION OF EXISTING LIMESTONE WALL PANELS IN LOBBY TO BE REMOVED. COORDINATE WITH CONSTRUCTION PLAN/DETAILS FOR ADDITIONAL INFO.
32. EXISTING FIRE ALARM PANEL TO REMAIN UNDISTURBED. COORDINATE WITH FA-SERIES DRAWINGS FOR ANY ADDITIONAL WORK.

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. WHERE NEW FA DEVICES ARE BEING INSTALLED IN SAME LOCATION AS DEVICES BEING DEMOLISHED, EXISTING BACK BOXES AND WIRING ARE TO BE UTILIZED WHERE INDICATED. COORDINATE WITH CONSTRUCTION DRAWINGS.
5. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN WIRING ABOVE CEILING PRIOR TO DEMOLITION.
6. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
7. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING LIMESTONE WALLS AND WOOD PANELED WALLS THROUGHOUT DEMOLITION. WHERE FA DEVICES ARE TO BE REMOVED/INSTALLED, CONTRACTOR TO MINIMIZE IMPACT TO SURROUNDING AREA AS MUCH AS POSSIBLE.
8. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

- AREA TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW F.A. EQUIPMENT
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

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New York, NY 10001

David Smotrich & Partners LLP
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443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

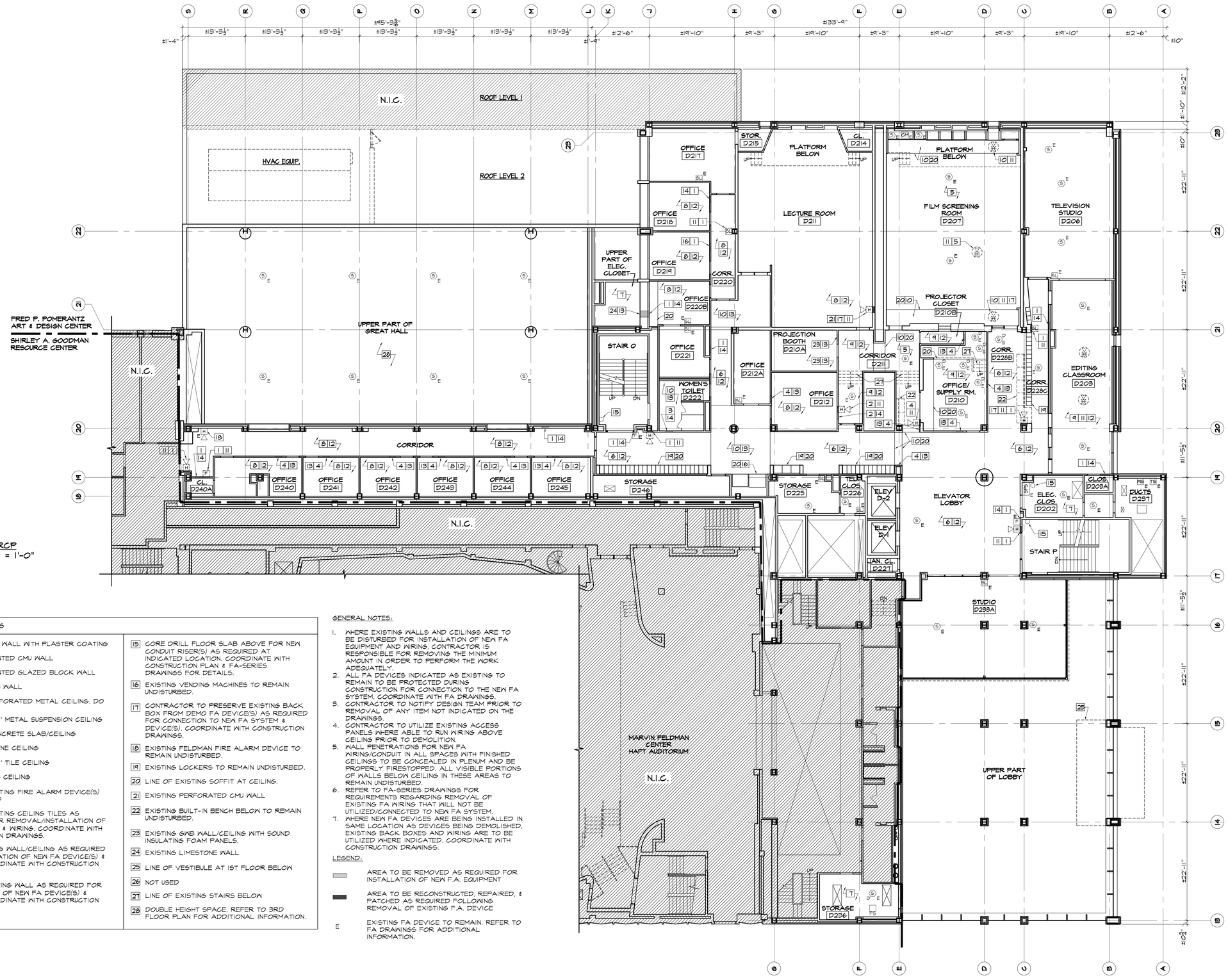
DRAWING TITLE:
1ST FLOOR DEMOLITION RCP

DOB NOW JOB#

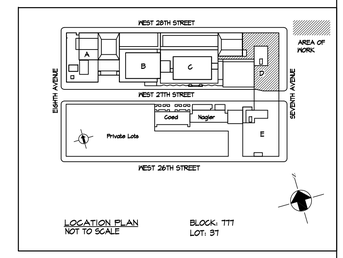
SEAL & SIGNATURE:

REGISTERED ARCHITECT — CLARE ELIZABETH MORGAN — 035589 — STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-402.00
CADD FILE:	DOB page: 5 OF 44



2ND FLOOR DEMOLITION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
2ND FLOOR DEMOLITION RCP

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KARPOWICH 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-403.00
CADD FILE:	DOB page: 6 OF 44

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING PAINTED GLAZED BLOCK WALL
4. EXISTING GWB WALL
5. EXISTING PERFORATED METAL CEILING. DO NOT DISTURB.
6. EXISTING 2'X2' METAL SUSPENSION CEILING
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED
12. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
13. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
14. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
15. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.
16. EXISTING VENDING MACHINES TO REMAIN UNDISTURBED.
17. CONTRACTOR TO PRESERVE EXISTING BACK BOX FROM DEMO FA DEVICE(S) AS REQUIRED FOR CONNECTION TO NEW FA SYSTEM & DEVICE(S). COORDINATE WITH CONSTRUCTION DRAWINGS.
18. EXISTING FELDMAN FIRE ALARM DEVICE TO REMAIN UNDISTURBED.
19. EXISTING LOCKERS TO REMAIN UNDISTURBED.
20. LINE OF EXISTING SOFFIT AT CEILING.
21. EXISTING PERFORATED CMU WALL
22. EXISTING BUILT-IN BENCH BELOW TO REMAIN UNDISTURBED.
23. EXISTING GWB WALL/CEILING WITH SOUND INSULATING FOAM PANELS.
24. EXISTING LIMESTONE WALL
25. LINE OF VESTIBULE AT 1ST FLOOR BELOW
26. NOT USED
27. LINE OF EXISTING STAIRS BELOW
28. DOUBLE HEIGHT SPACE. REFER TO 3RD FLOOR PLAN FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN WIRING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.
7. WHERE NEW FA DEVICES ARE BEING INSTALLED IN SAME LOCATION AS DEVICES BEING DEMOLISHED, EXISTING BACK BOXES AND WIRING ARE TO BE UTILIZED WHERE INDICATED. COORDINATE WITH CONSTRUCTION DRAWINGS.

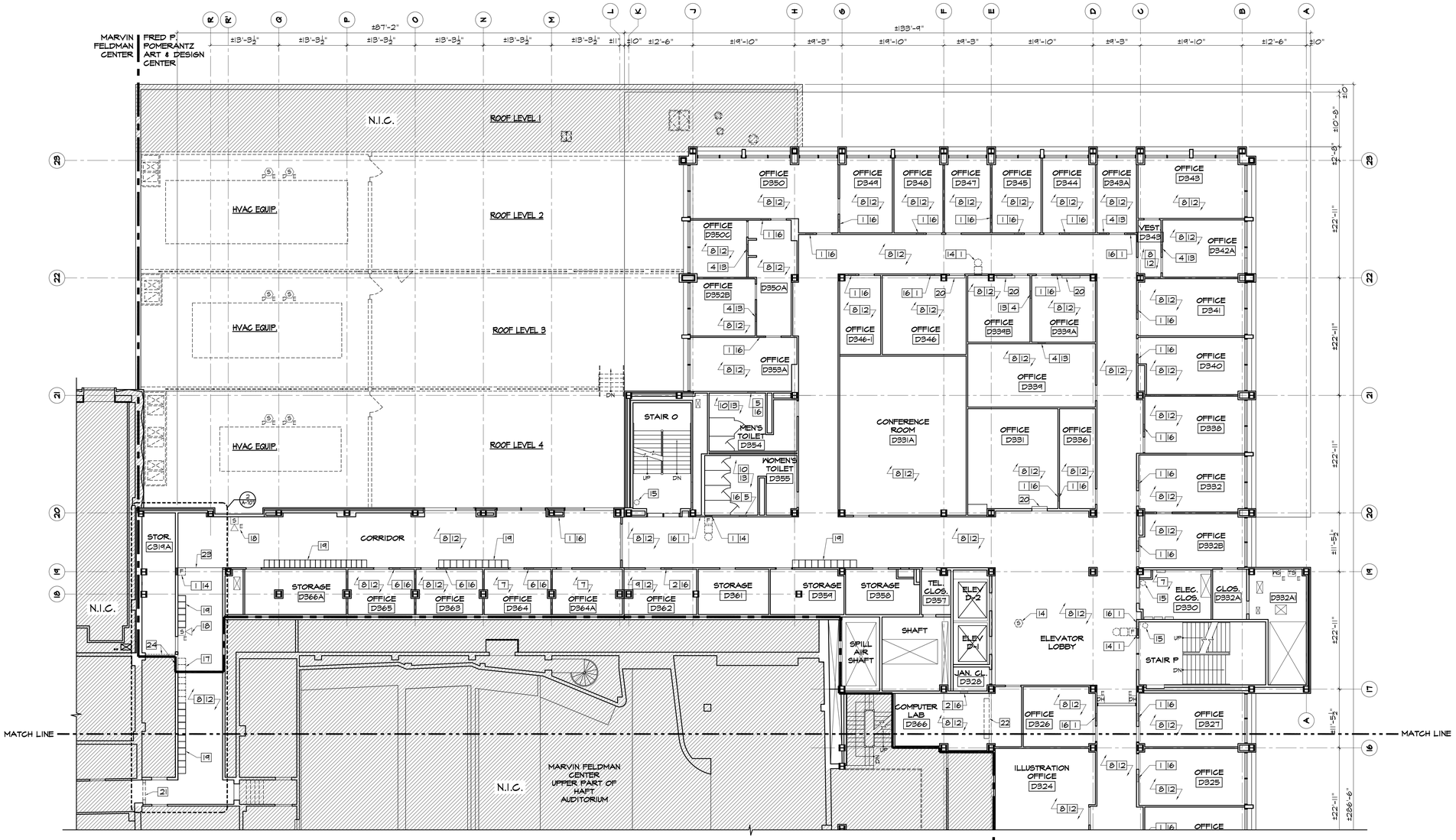
LEGEND:

AREA TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW F.A. EQUIPMENT

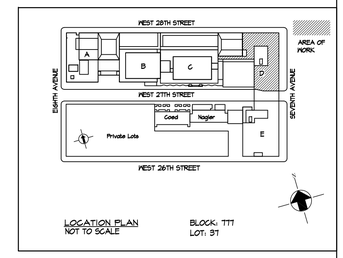
AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE

E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION



1 DM-404 3RD FLOOR DEMOLITION RCP NORTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
3RD FLOOR DEMOLITION RCP NORTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT ELIZABETH CLARE AMERICAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-404.00
CADD FILE:	DOB page: 7 OF 44

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. NOT USED.
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. EXISTING CMU WALL WITH GWB FURRING
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. EXISTING GWB SOFFIT
12. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
13. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
14. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED.
15. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.
16. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
17. EXISTING LOCKERS TO BE TEMPORARILY REMOVED. PROTECT AND STORE FOR REINSTALLATION. REFER TO DRAWINGS A-701 & A-708 FOR ADDITIONAL INFORMATION
18. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
19. EXISTING LOCKERS TO REMAIN UNDISTURBED
20. EXISTING VENT TO REMAIN UNDISTURBED
21. EXISTING HM DOOR & FRAME AND ASSOCIATED WALL TO BE REMOVED. REFER TO DRAWING A-701 FOR DETAILS.
22. LINE OF STAIRS BELOW
23. LINE OF EXISTING SOFFIT AT CEILING
23. LINE OF EXISTING SOFFIT AT CEILING
24. EXISTING WALL TO BE REMOVED. REFER TO DRAWING A-701 FOR DETAILS.

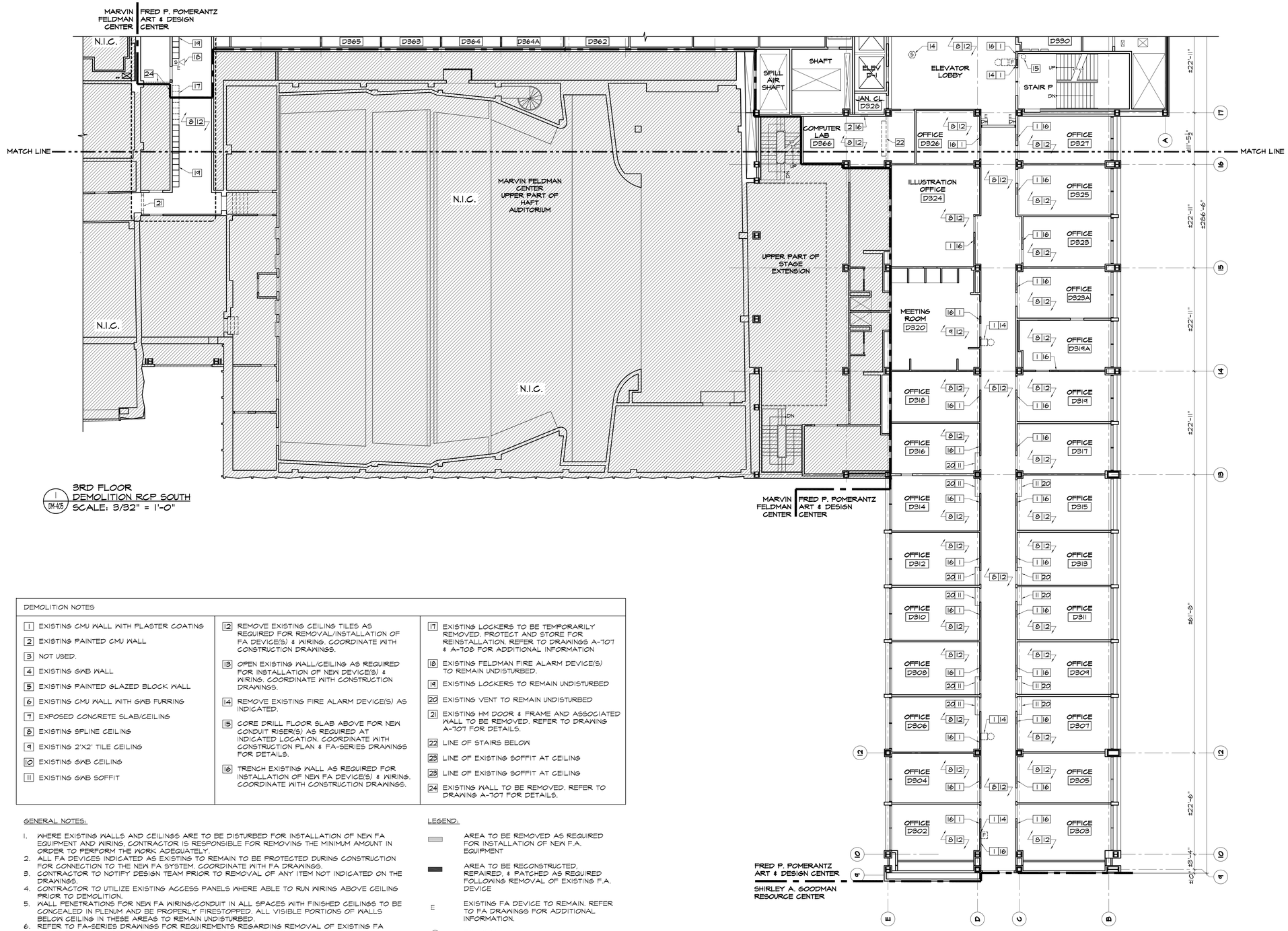
GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN WIRING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

- AREA TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW F.A. EQUIPMENT
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.
- EXIT SIGN

NOT FOR CONSTRUCTION



1 / DM-405 3RD FLOOR DEMOLITION RCP SOUTH
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES		
1 EXISTING CMU WALL WITH PLASTER COATING	12 REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.	17 EXISTING LOCKERS TO BE TEMPORARILY REMOVED. PROTECT AND STORE FOR REINSTALLATION. REFER TO DRAWINGS A-701 & A-708 FOR ADDITIONAL INFORMATION
2 EXISTING PAINTED CMU WALL	13 OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.	18 EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
3 NOT USED.	14 REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED.	19 EXISTING LOCKERS TO REMAIN UNDISTURBED
4 EXISTING GWB WALL	15 CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.	20 EXISTING VENT TO REMAIN UNDISTURBED
5 EXISTING PAINTED GLAZED BLOCK WALL	16 TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.	21 EXISTING HM DOOR & FRAME AND ASSOCIATED WALL TO BE REMOVED. REFER TO DRAWING A-701 FOR DETAILS.
6 EXISTING CMU WALL WITH GWB FURRING		22 LINE OF STAIRS BELOW
7 EXPOSED CONCRETE SLAB/CEILING		23 LINE OF EXISTING SOFFIT AT CEILING
8 EXISTING SPLINE CEILING		23 LINE OF EXISTING SOFFIT AT CEILING
9 EXISTING 2'X2' TILE CEILING		24 EXISTING WALL TO BE REMOVED. REFER TO DRAWING A-701 FOR DETAILS.
10 EXISTING GWB CEILING		
11 EXISTING GWB SOFFIT		

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
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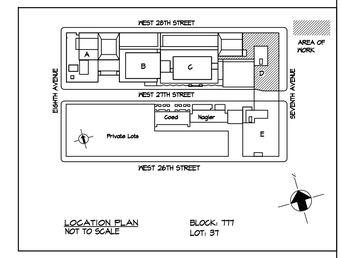
4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN WIRING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

- AREA TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW F.A. EQUIPMENT
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.
- EXIT SIGN

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

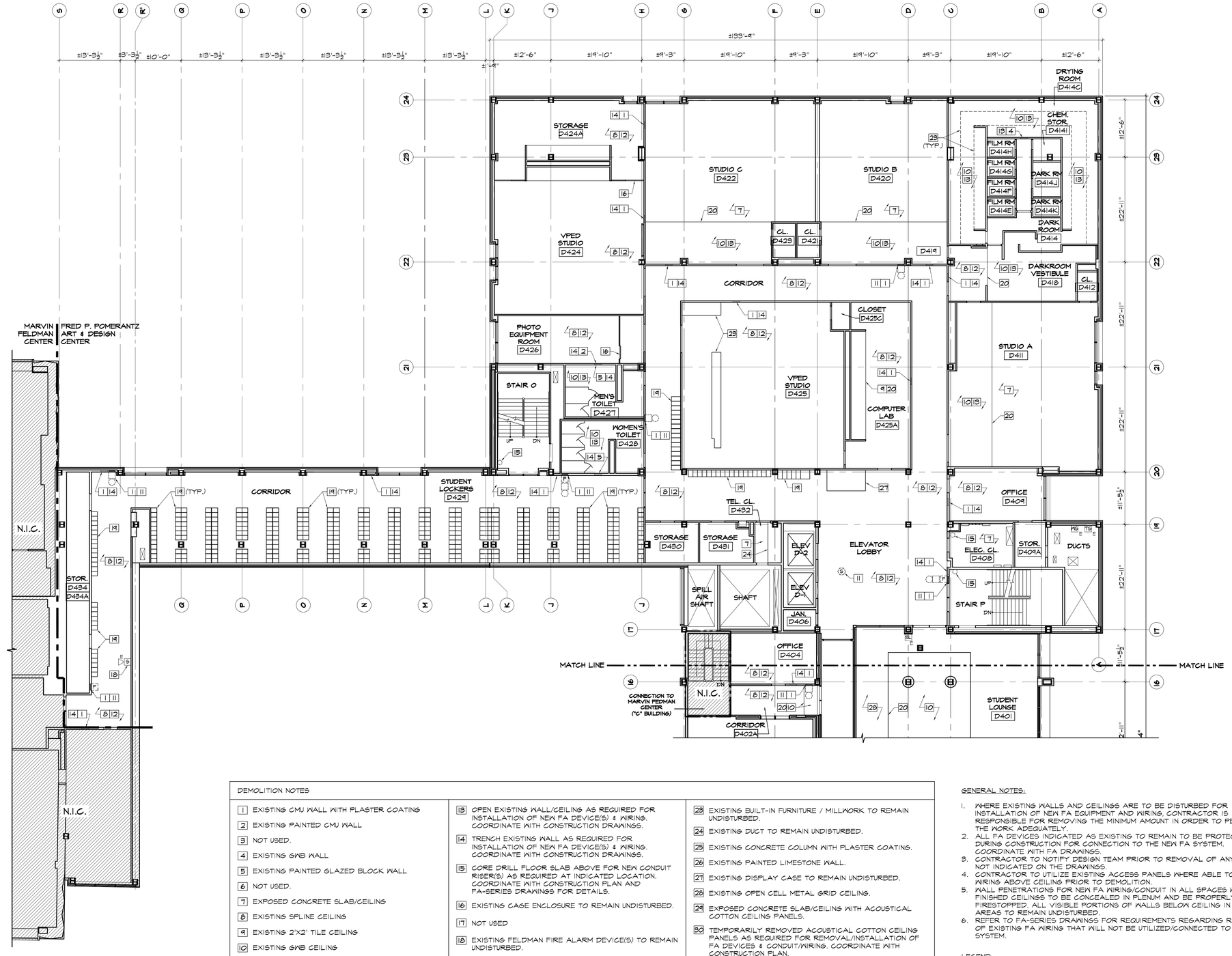
DRAWING TITLE:
3RD FLOOR DEMOLITION RCP SOUTH

DOB NOW JOB#

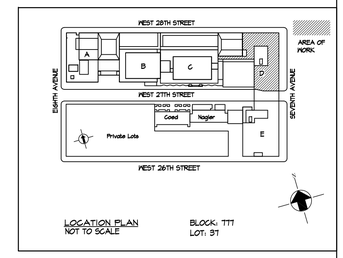
SEAL & SIGNATURE:

REGISTERED ARCHITECT — CLARE ELIZABETH KARIGAN — 035589 — STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-405.00
CADD FILE:	DOB page: 8 OF 44



4TH FLOOR DEMOLITION RCP NORTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

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DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. NOT USED.
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. NOT USED.
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED
12. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
13. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
14. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
15. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN AND FA-SERIES DRAWINGS FOR DETAILS.
16. EXISTING CAGE ENCLOSURE TO REMAIN UNDISTURBED.
17. NOT USED
18. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
19. EXISTING LOCKERS TO REMAIN UNDISTURBED.
20. LINE OF EXISTING SOFFIT AT CEILING.
21. NOT USED.
22. NOT USED.
23. EXISTING BUILT-IN FURNITURE / MILLWORK TO REMAIN UNDISTURBED.
24. EXISTING DUCT TO REMAIN UNDISTURBED.
25. EXISTING CONCRETE COLUMN WITH PLASTER COATING.
26. EXISTING PAINTED LIMESTONE WALL.
27. EXISTING DISPLAY CASE TO REMAIN UNDISTURBED.
28. EXISTING OPEN CELL METAL GRID CEILING.
29. EXPOSED CONCRETE SLAB/CEILING WITH ACOUSTICAL COTTON CEILING PANELS.
30. TEMPORARILY REMOVED ACOUSTICAL COTTON CEILING PANELS AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICES & CONDUIT/WIRING. COORDINATE WITH CONSTRUCTION PLAN.
31. ACOUSTICAL COTTON CEILING PANELS TO REMAIN UNDISTURBED.
32. EXISTING WALL-MOUNTED TV MONITOR TO REMAIN UNDISTURBED. PROTECT DURING CONSTRUCTION.

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
4TH FLOOR DEMOLITION RCP NORTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KAMPION 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
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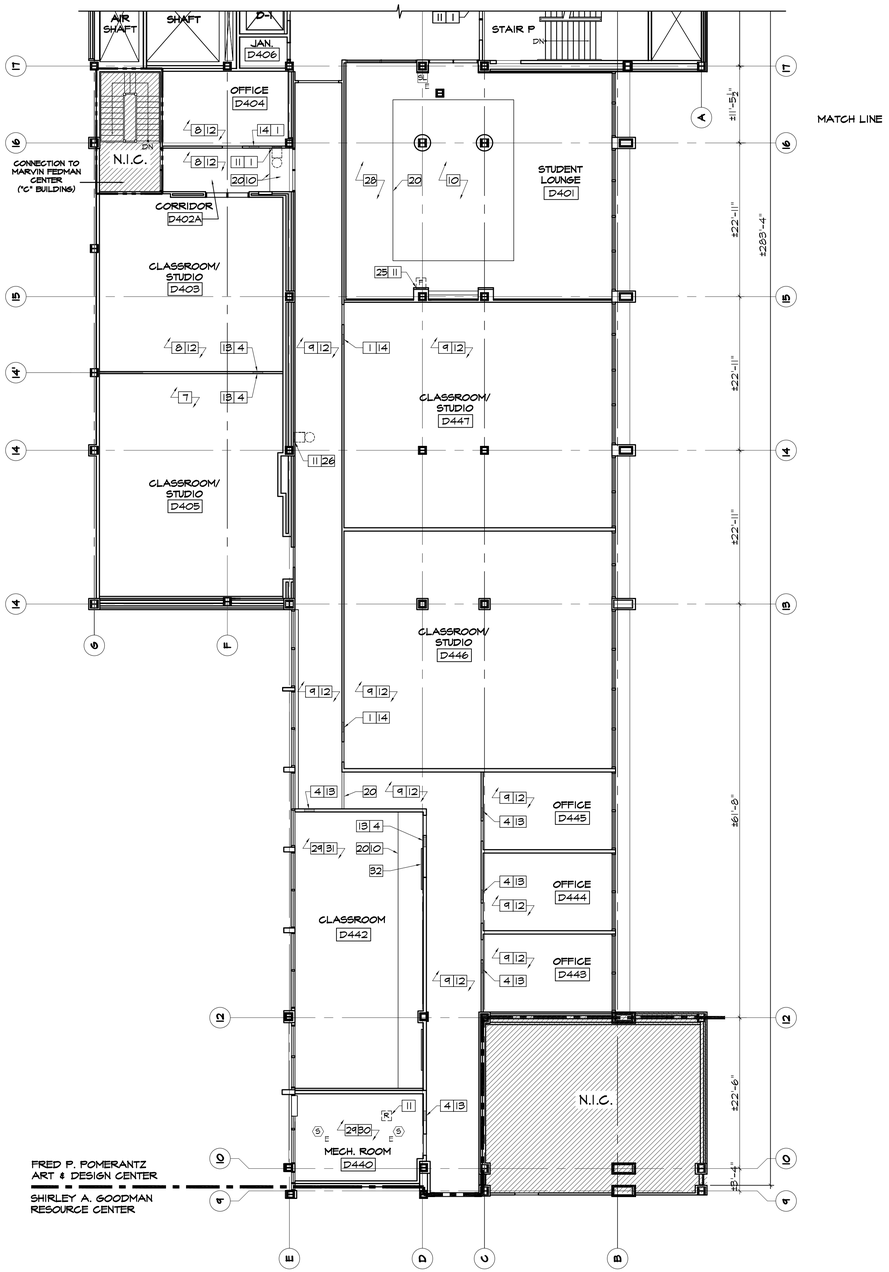
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-406.00
CADD FILE:	DOB page: 9 OF 44



1 DM-407 4TH FLOOR DEMOLITION RCP SOUTH
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. NOT USED.
4. EXISTING GNB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. NOT USED.
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GNB CEILING
11. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED
12. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
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14. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
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16. EXISTING CAGE ENCLOSURE TO REMAIN UNDISTURBED.
17. NOT USED
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19. EXISTING LOCKERS TO REMAIN UNDISTURBED.
20. LINE OF EXISTING SOFFIT AT CEILING.
21. NOT USED.
22. NOT USED.
23. EXISTING BUILT-IN FURNITURE / MILLWORK TO REMAIN UNDISTURBED.
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25. EXISTING CONCRETE COLUMN WITH PLASTER COATING.
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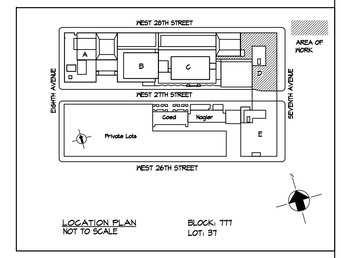

LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

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227 West 27th Street
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David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
4TH FLOOR DEMOLITION RCP SOUTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT — CLARE ELIZABETH KARIGAN — 035589 — STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-407.00
CADD FILE:	DOB page: 10 OF 44

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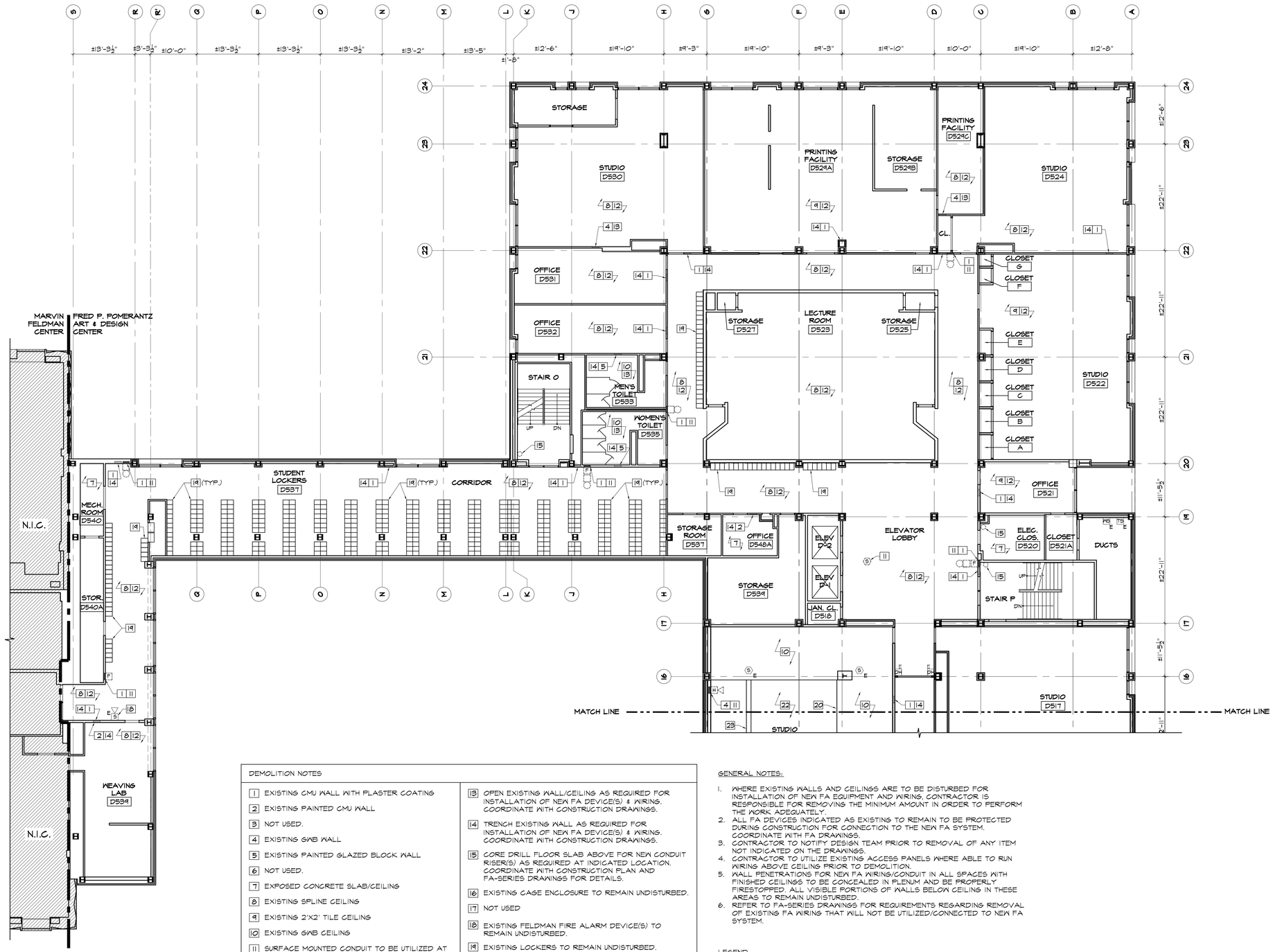

5TH FLOOR
DEMOLITION RCP NORTH
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. NOT USED.
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. NOT USED.
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. SURFACE MOUNTED CONDUIT TO BE UTILIZED AT EXISTING WALL/CEILING TO FEED WIRING FOR NEW FA DEVICE(S). PAINT CONDUIT AND ASSOCATED KINDORF SUPPORTS AS REQUIRED TO MATCH ADJACENT SURFACE.
12. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
13. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
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19. EXISTING LOCKERS TO REMAIN UNDISTURBED.
20. LINE OF EXISTING SOFFIT AT CEILING.
21. NOT USED.
22. EXPOSED CONCRETE SLAB/CEILING WITH ACOUSTICAL PANELS
23. LINE OF EXISTING BEAM AT CEILING ABOVE

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
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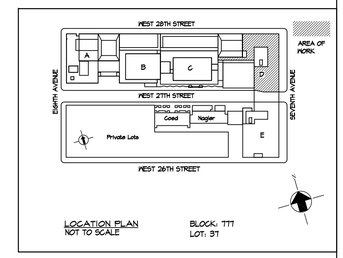

LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
5TH FLOOR DEMOLITION RCP NORTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLAIRE ELIZABETH TRAPICINO 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
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SCALE:	AS NOTED
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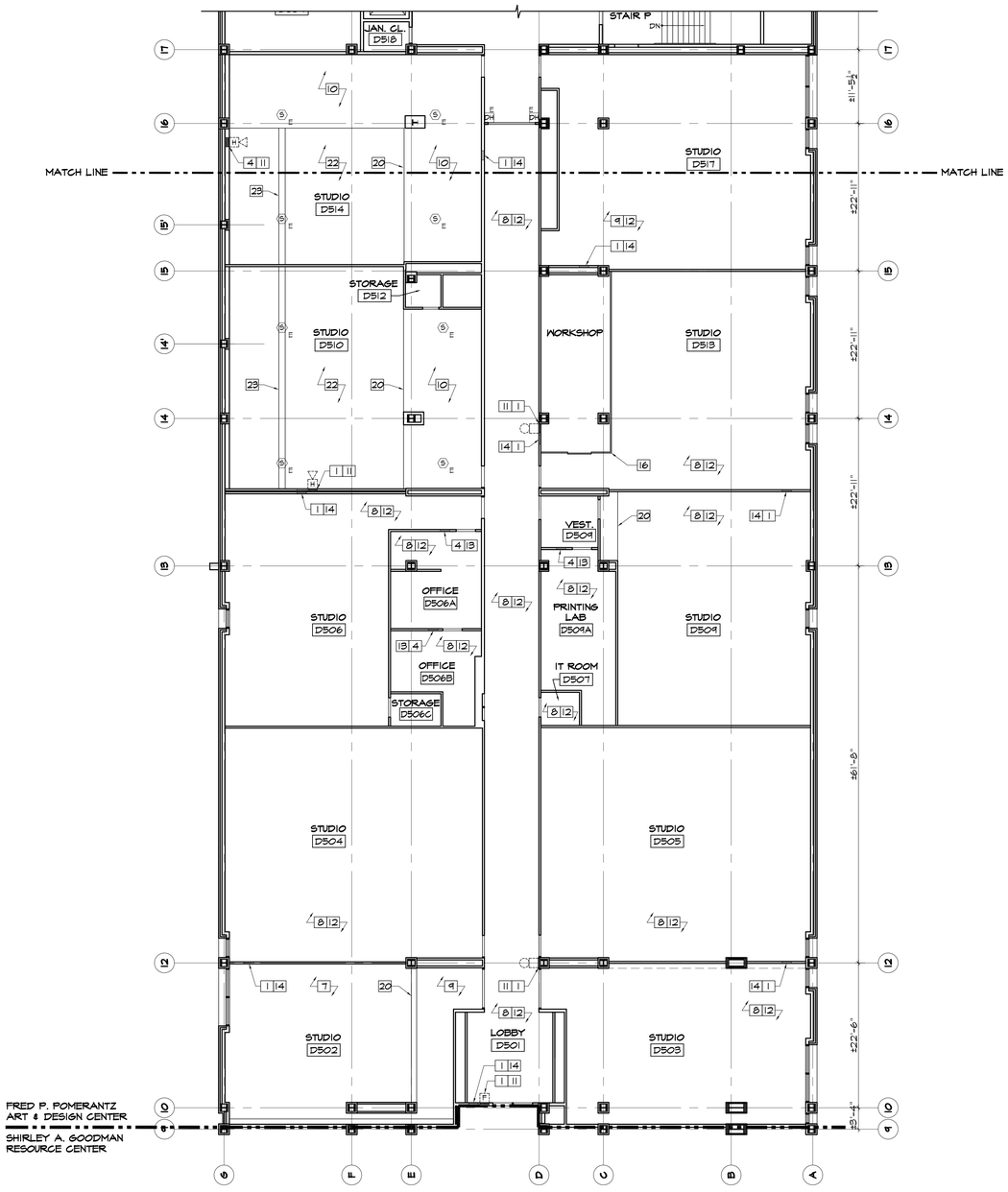
CADD FILE:	DOB page: 11 OF 44



5TH FLOOR
DEMOLITION RCP SOUTH
SCALE: 3/32" = 1'-0"

DM-409

DEMOLITION NOTES

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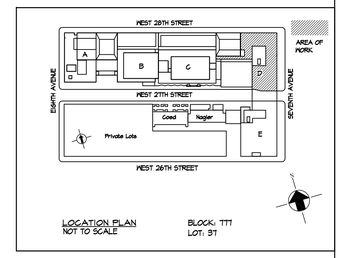

LOCATION PLAN
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DRAWING TITLE:
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DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT
CLARE ELIZABETH KOBRIN
035589
STATE OF NEW YORK

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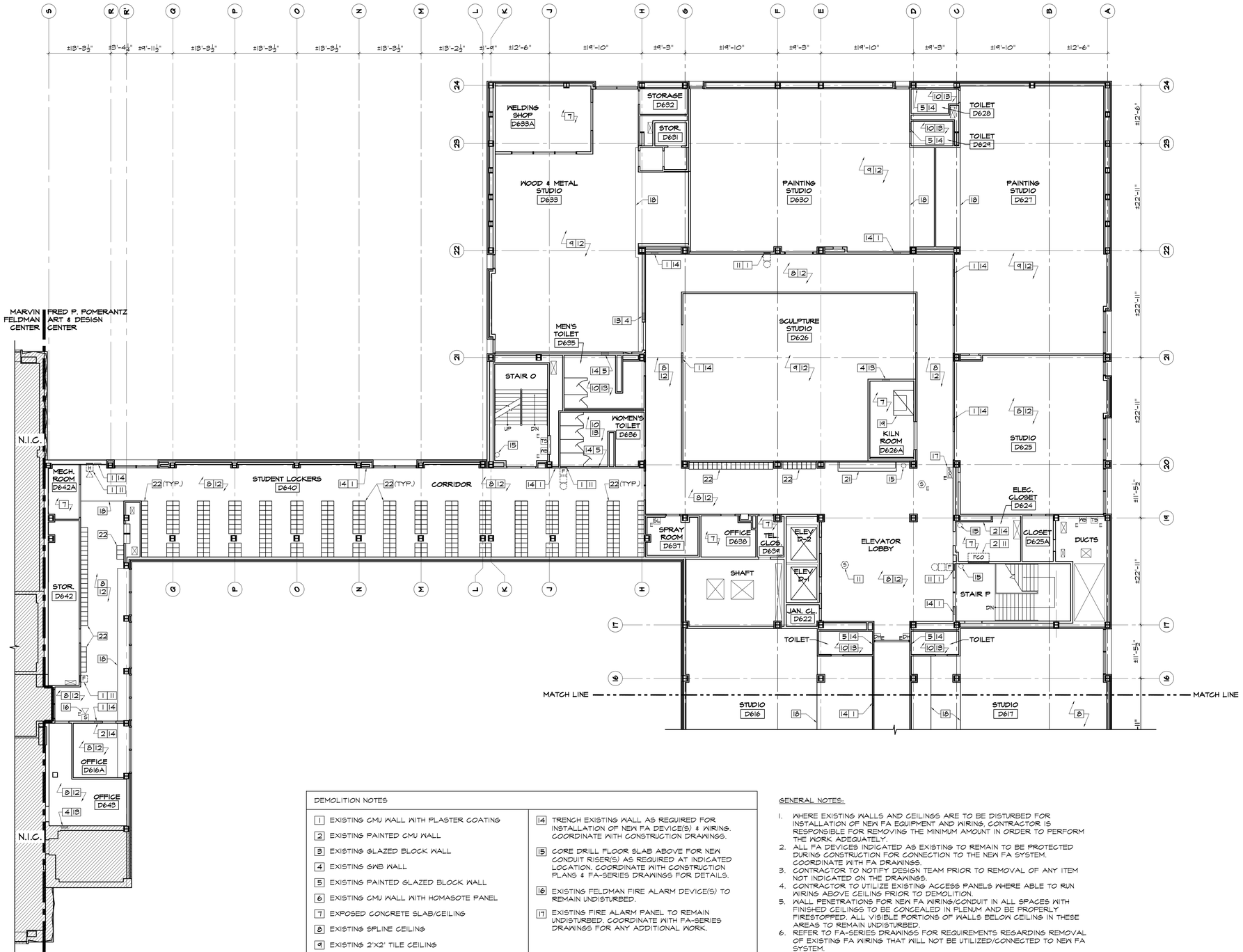
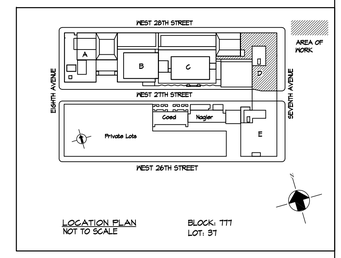


1 DM-410 6TH FLOOR DEMOLITION RCP NORTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING GLAZED BLOCK WALL
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. EXISTING CMU WALL WITH HOMASOTE PANEL
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED
12. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
13. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
14. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
15. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLANS & FA-SERIES DRAWINGS FOR DETAILS.
16. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
17. EXISTING FIRE ALARM PANEL TO REMAIN UNDISTURBED. COORDINATE WITH FA-SERIES DRAWINGS FOR ANY ADDITIONAL WORK.
18. LINE OF EXISTING SOFFIT AT CEILING.
19. EXISTING KILN AND HOOD TO REMAIN UNDISTURBED.
20. EXISTING CAGE ENCLOSURE TO REMAIN UNDISTURBED.
21. EXISTING DISPLAY CASE TO REMAIN UNDISTURBED.
22. EXISTING LOCKERS TO REMAIN UNDISTURBED.

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN WIRING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

- AREA TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW F.A. EQUIPMENT
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

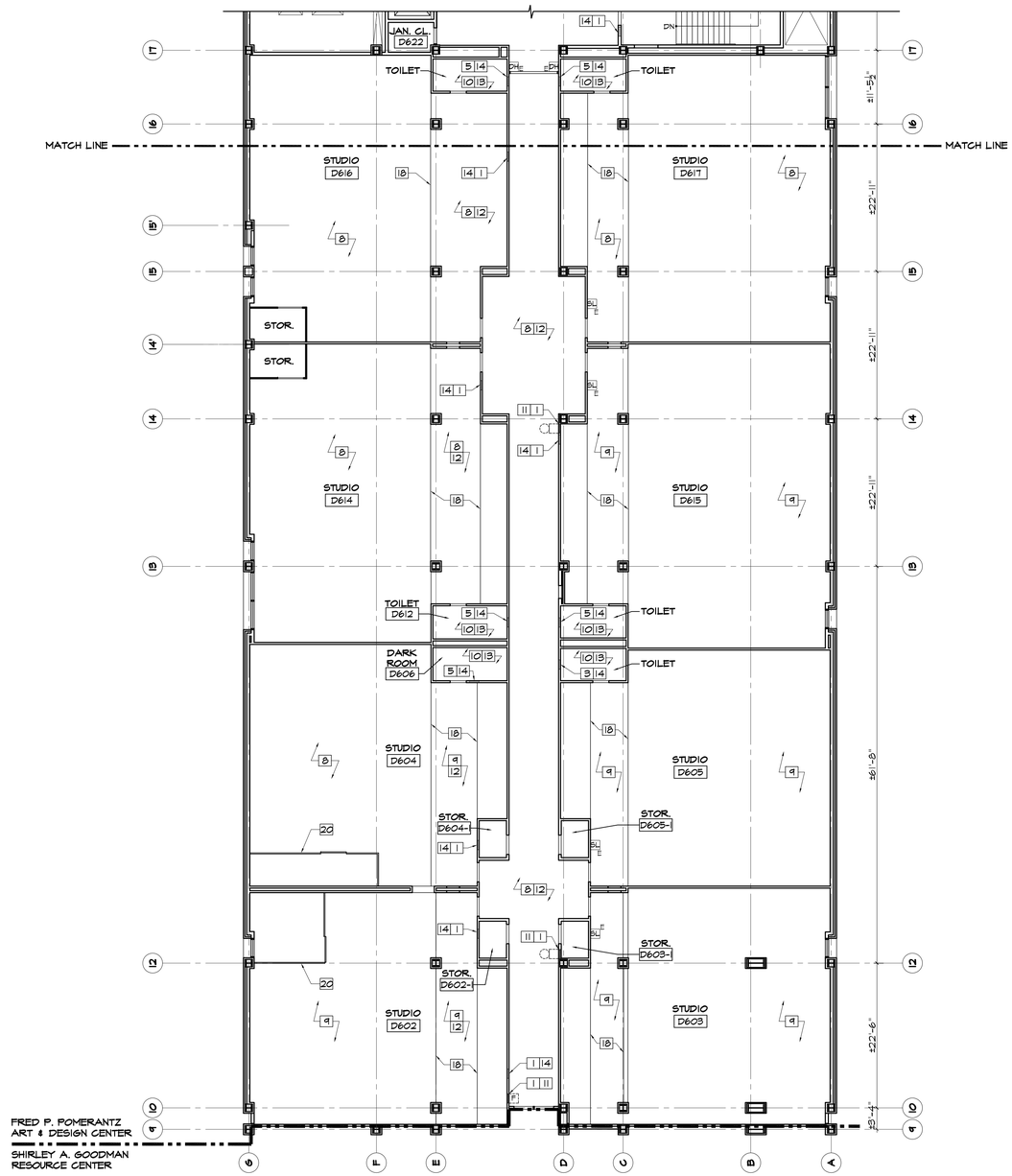
DRAWING TITLE:
6TH FLOOR DEMOLITION RCP NORTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT — CLARE ELIZABETH TURRIGIANO — 035589 — STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-410.00
CADD FILE:	DOB page: 13 OF 44



1 DM-411 6TH FLOOR DEMOLITION RCP SOUTH
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING GLAZED BLOCK WALL
4. EXISTING G/WB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. EXISTING CMU WALL WITH HOMASOTE PANEL
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING G/WB CEILING
11. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED
12. REMOVE EXISTING CEILING TILES AS REQUIRED FOR REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
13. OPEN EXISTING WALL/CEILING AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
14. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW FA DEVICE(S) & WIRING. COORDINATE WITH CONSTRUCTION DRAWINGS.
15. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLANS & FA-SERIES DRAWINGS FOR DETAILS.
16. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
17. EXISTING FIRE ALARM PANEL TO REMAIN UNDISTURBED. COORDINATE WITH FA-SERIES DRAWINGS FOR ANY ADDITIONAL WORK.
18. LINE OF EXISTING SOFFIT AT CEILING.
19. EXISTING KILN AND HOOD TO REMAIN UNDISTURBED.
20. EXISTING CAGE ENCLOSURE TO REMAIN UNDISTURBED.
21. EXISTING DISPLAY CASE TO REMAIN UNDISTURBED.
22. EXISTING LOCKERS TO REMAIN UNDISTURBED.

GENERAL NOTES:

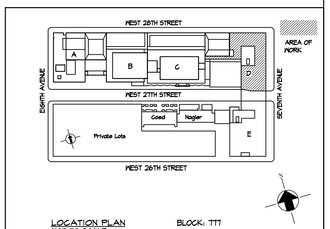
1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN WIRING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

AREA TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW F.A. EQUIPMENT

AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE

E EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
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Environmental Consultants
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443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
6TH FLOOR DEMOLITION RCP SOUTH

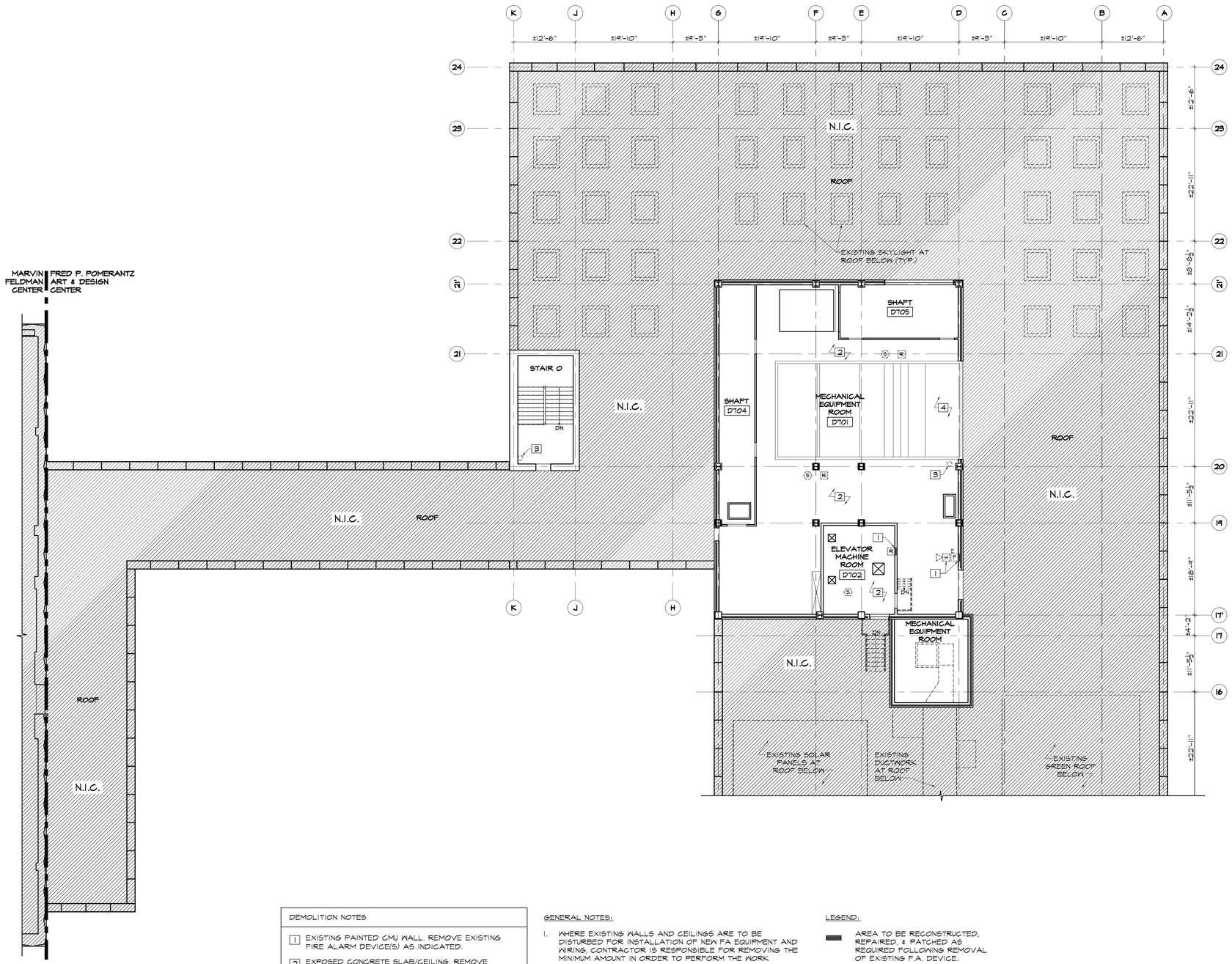
DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLAIRE ELIZABETH KIRKPATRICK 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-411.00
CADD FILE:	DOB page: 14 OF 44

NOT FOR CONSTRUCTION



1 DM-412 ROOF PARTIAL DEMOLITION RCP
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

1. EXISTING PAINTED CMU WALL. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED.
2. EXPOSED CONCRETE SLAB/CEILING. REMOVE EXISTING FIRE ALARM DEVICE(S) AS INDICATED.
3. LOCATION OF CORE DRILL PENETRATION AT SLAB BELOW FOR NEW CONDUIT RISER(S). COORDINATE WITH FA DRAWINGS FOR SIZING REQUIREMENTS.
4. EXISTING MECHANICAL EQUIPMENT TO REMAIN UNDISTURBED.

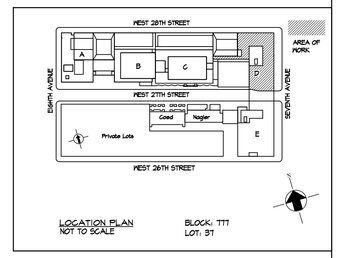
GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW FA EQUIPMENT AND WIRING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. REFER TO FA-SERIES DRAWINGS FOR REQUIREMENTS REGARDING REMOVAL OF ANY EXISTING FA WIRING THAT WILL NOT BE UTILIZED/CONNECTED TO NEW FA SYSTEM.

LEGEND:

- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE.
- E EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE
BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

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David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

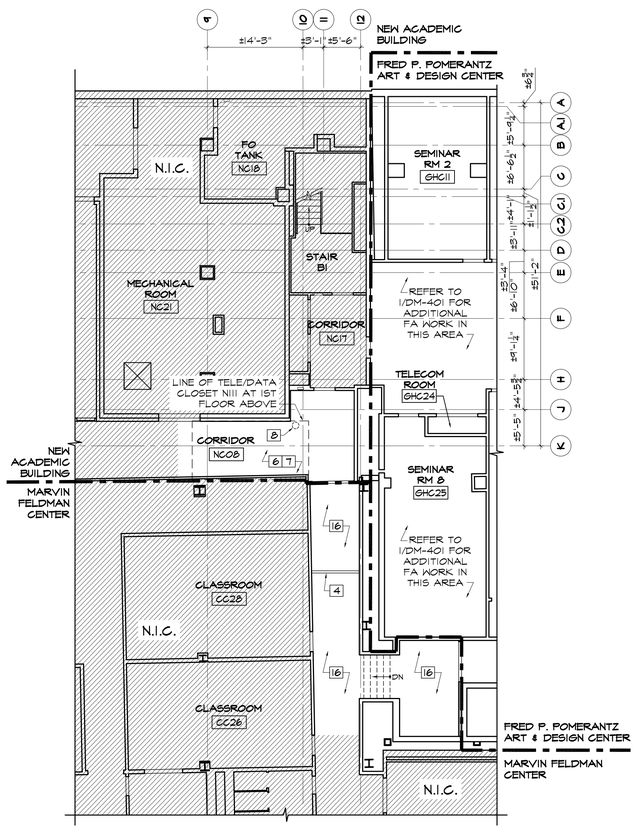
DRAWING TITLE:
ROOF
PARTIAL DEMOLITION RCP

DOB NOW JOB#

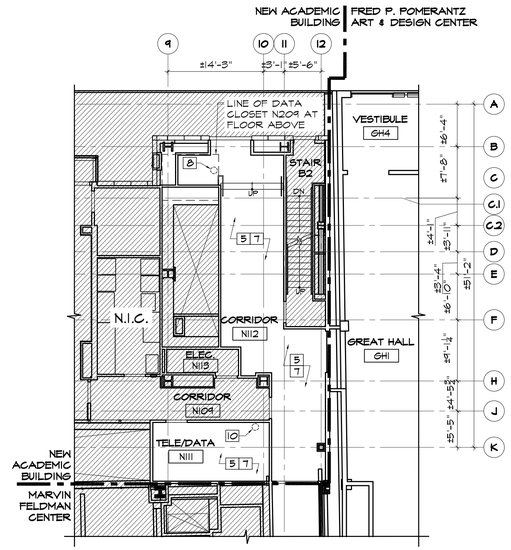
SEAL & SIGNATURE:

REGISTERED ARCHITECT
CLARE ELIZABETH KORRIGAN
035589
STATE OF NEW YORK

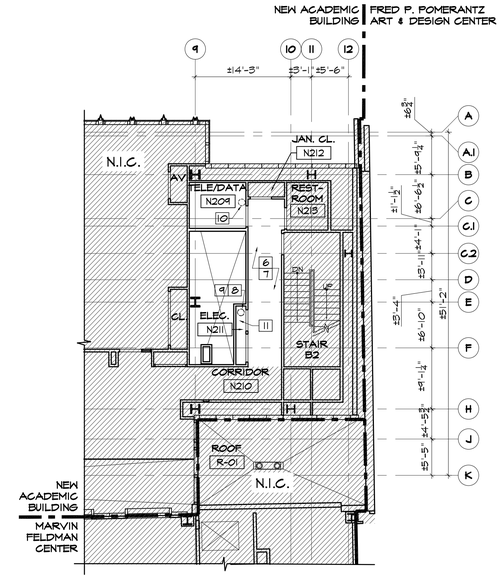
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-412.00
CADD FILE:	DOB page: 15 OF 44



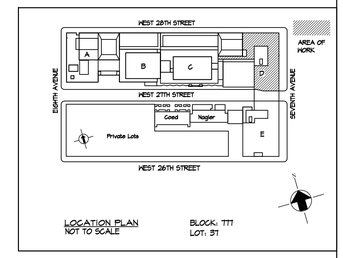
1 DM-413 CELLAR PARTIAL DEMOLITION RCP
SCALE: 3/32" = 1'-0"



2 DM-413 1ST FLOOR PARTIAL DEMOLITION RCP
SCALE: 3/32" = 1'-0"



3 DM-413 2ND FLOOR PARTIAL DEMOLITION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. NOT USED
2. NOT USED
3. NOT USED
4. LINE OF EXISTING SOFFIT AT CEILING.
5. EXISTING 2'X2' TILE CEILING. ARMSTRONG OPTIMA TEGULAR 5/8" SQUARE LAY-IN MOLD RESISTANT MINERAL FIBER PANEL, FINE TEXTURE IN WHITE. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
6. EXISTING 2'X4' METAL SUSPENSION CEILING. ARMSTRONG RH200 METAL CEILING ALUMINUM INTERIOR PANELS IN WHITE WITH RD6350 PERFORATION PATTERN. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
7. REMOVE & REPLACE EXISTING CEILING TILES AS REQUIRED FOR INSTALLATION OF GENERATOR WIRING & CONDUIT. COORDINATE WITH CONSTRUCTION DRAWINGS.
8. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. EXACT LOCATION TO BE VERIFIED IN FIELD. COORDINATE WITH CONSTRUCTION PLAN & ELECTRICAL DRAWINGS FOR DETAILS.
9. SLAB PENETRATION AT THIS LOCATION IS TYPICAL AT STACKED ELECTRICAL CLOSETS FROM 3RD THROUGH 10TH FLOORS ABOVE. REFER TO 3/A-413 FOR ADDITIONAL INFORMATION.
10. CORE DRILL FLOOR SLAB BELOW FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.
11. EXPOSED CONCRETE SLAB/CEILING
12. OPEN GENERATOR ENCLOSURE AS REQUIRED TO RUN NEW CABLING. REFER TO CONSTRUCTION PLAN & ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
13. EXISTING ROOF. PROTECT DURING CONSTRUCTION AS REQUIRED.
14. LOCATION OF CORE DRILL PENETRATION(S) AT EXISTING ROOF FOR NEW GENERATOR ROUTING DOWN TO 10TH FLOOR BELOW. EXACT LOCATION OF PENETRATION(S) TO BE VERIFIED IN FIELD. COORDINATE WITH ROOFING NOTES & PENETRATION DETAIL ON DRAWING A-415 AS REQUIRED TO ENSURE EXISTING ROOF WARRANTY IS MAINTAINED. COORDINATE WITH ELECTRICAL DRAWINGS AS REQUIRED FOR SIZING REQUIREMENTS AND ADDITIONAL INFORMATION.
15. CORE DRILL FLOOR SLAB BELOW FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. RISER(S) TO RUN THROUGH STACKED ELECTRICAL CLOSETS DOWN TO 2ND FLOOR. REFER TO CONSTRUCTION PLAN AND DRAWING DM-413 FOR ADDITIONAL INFORMATION. COORDINATE WITH ELECTRICAL DRAWINGS FOR DETAILS AS REQUIRED.
16. EXISTING 2'X2' TILE CEILING. REMOVE EXISTING CEILING TILES AS REQUIRED FOR INSTALLATION OF NEW GENERATOR WIRING & CONDUIT. COORDINATE WITH CONSTRUCTION DRAWINGS.

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW GENERATOR CABLING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
2. COORDINATE WITH CONSTRUCTION DRAWINGS AS REQUIRED.
3. CONTRACTOR TO NOTIFY DESIGN TEAM PRIOR TO REMOVAL OF ANY ITEM NOT INDICATED ON THE DRAWINGS.
4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN THE NEW GENERATOR CABLING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING WALLS THROUGHOUT DEMOLITION. WHERE NEW CABLING ID=S TO BE INSTALLED, CONTRACTOR TO MINIMIZE IMPACT TO SURROUNDING AREA AS MUCH AS POSSIBLE.
7. REFER TO FA-SERIES DRAWINGS FOR ADDITIONAL REQUIREMENTS.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
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227 West 27th Street
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David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

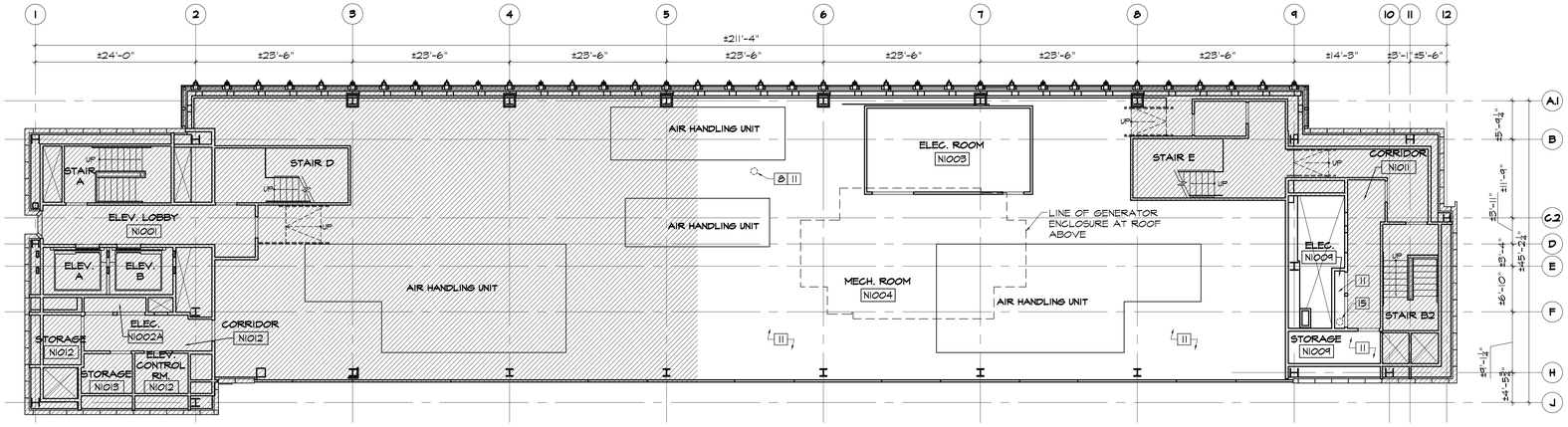
DRAWING TITLE:
NAB GENERATOR ROUTING CELLAR, 1ST & 2ND FLOOR DEMOLITION RCP

DOB NOW JOB#

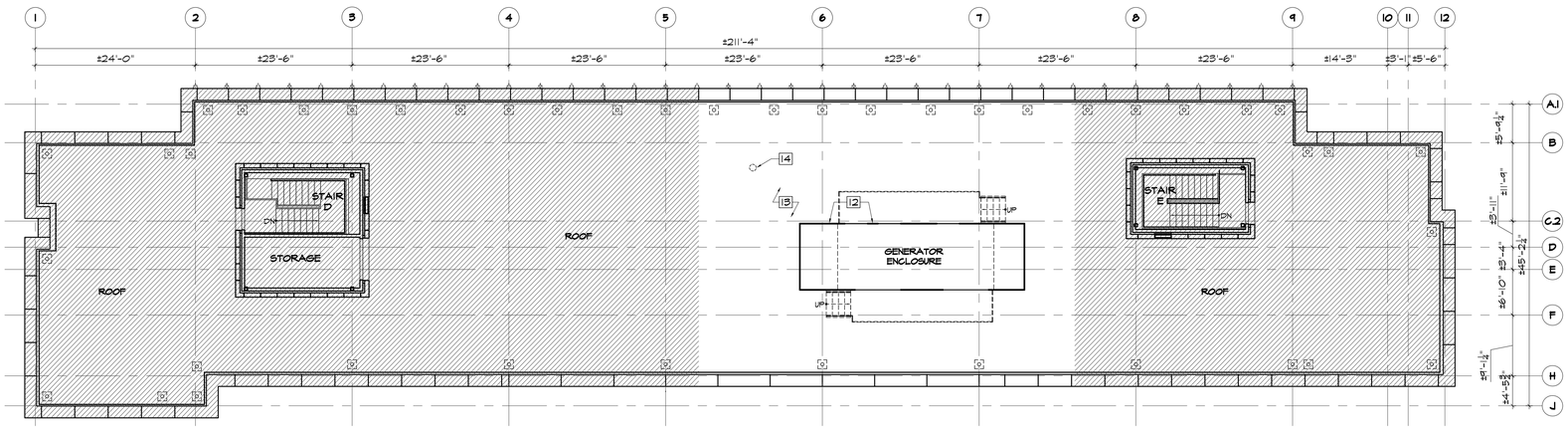
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KARRIGAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-413.00
CADD FILE:	DOB page: 16 OF 44



1 / DM-414 10TH FLOOR DEMOLITION RCP
SCALE: 3/32" = 1'-0"



2 / DM-414 ROOF DEMOLITION RCP
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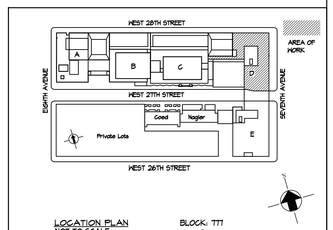

LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. NOT USED
2. NOT USED
3. NOT USED
4. LINE OF EXISTING SOFFIT AT CEILING.
5. EXISTING 2'X2' TILE CEILING. ARMSTRONG OPTIMA TEGULAR $\frac{3}{4}$" SQUARE LAY-IN MOLD RESISTANT MINERAL FIBER PANEL, FINE TEXTURE IN WHITE. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
6. EXISTING 2'X4' METAL SUSPENSION CEILING. ARMSTRONG RH200 METAL CEILING ALUMINUM INTERIOR PANELS IN WHITE WITH RD6550 PERFORATION PATTERN. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
7. REMOVE & REPLACE EXISTING CEILING TILES AS REQUIRED FOR INSTALLATION OF GENERATOR WIRING & CONDUIT. COORDINATE WITH CONSTRUCTION DRAWINGS.
8. CORE DRILL FLOOR SLAB ABOVE FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. EXACT LOCATION TO BE VERIFIED IN FIELD. COORDINATE WITH CONSTRUCTION PLAN & ELECTRICAL DRAWINGS FOR DETAILS.
9. SLAB PENETRATION AT THIS LOCATION IS TYPICAL AT STACKED ELECTRICAL CLOSETS FROM 3RD THROUGH 10TH FLOORS ABOVE. REFER TO 3/A-413 FOR ADDITIONAL INFORMATION.
10. CORE DRILL FLOOR SLAB BELOW FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. COORDINATE WITH CONSTRUCTION PLAN & FA-SERIES DRAWINGS FOR DETAILS.
11. EXPOSED CONCRETE SLAB/CEILING
12. OPEN GENERATOR ENCLOSURE AS REQUIRED TO RUN NEW CABLING. REFER TO CONSTRUCTION PLAN & ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
13. EXISTING ROOF. PROTECT DURING CONSTRUCTION AS REQUIRED.
14. LOCATION OF CORE DRILL PENETRATION(S) AT EXISTING ROOF FOR NEW GENERATOR ROUTING DOWN TO 10TH FLOOR BELOW. EXACT LOCATION OF PENETRATION(S) TO BE VERIFIED IN FIELD. COORDINATE WITH ROOFING NOTES & PENETRATION DETAIL ON DRAWING A-415 AS REQUIRED TO ENSURE EXISTING ROOF WARRANTY IS MAINTAINED. COORDINATE WITH ELECTRICAL DRAWINGS AS REQUIRED FOR SIZING REQUIREMENTS AND ADDITIONAL INFORMATION.
15. CORE DRILL FLOOR SLAB BELOW FOR NEW CONDUIT RISER(S) AS REQUIRED AT INDICATED LOCATION. RISER(S) TO RUN THROUGH STACKED ELECTRICAL CLOSETS DOWN TO 2ND FLOOR. REFER TO CONSTRUCTION PLAN AND DRAWING DM-413 FOR ADDITIONAL INFORMATION. COORDINATE WITH ELECTRICAL DRAWINGS FOR DETAILS AS REQUIRED.
16. EXISTING 2'X2' TILE CEILING. REMOVE EXISTING CEILING TILES AS REQUIRED FOR INSTALLATION OF NEW GENERATOR WIRING & CONDUIT. COORDINATE WITH CONSTRUCTION DRAWINGS.

GENERAL NOTES:

1. WHERE EXISTING WALLS AND CEILINGS ARE TO BE DISTURBED FOR INSTALLATION OF NEW GENERATOR CABLING, CONTRACTOR IS RESPONSIBLE FOR REMOVING THE MINIMUM AMOUNT IN ORDER TO PERFORM THE WORK ADEQUATELY.
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4. CONTRACTOR TO UTILIZE EXISTING ACCESS PANELS WHERE ABLE TO RUN THE NEW GENERATOR CABLING ABOVE CEILING PRIOR TO DEMOLITION.
5. WALL PENETRATIONS FOR NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM AND BE PROPERLY FIRESTOPPED. ALL VISIBLE PORTIONS OF WALLS BELOW CEILING IN THESE AREAS TO REMAIN UNDISTURBED.
6. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING WALLS THROUGHOUT DEMOLITION. WHERE NEW CABLING ID+S TO BE INSTALLED, CONTRACTOR TO MINIMIZE IMPACT TO SURROUNDING AREA AS MUCH AS POSSIBLE.
7. REFER TO FA-SERIES DRAWINGS FOR ADDITIONAL REQUIREMENTS.

ROOFING NOTES:

1. EXISTING ROOF IS A KEMPER SYSTEM AMERICA INC. KEMPEROL 2K-FR COLOR SYSTEM, UNDER KEMPER WARRANTY. THE KEMPER SYSTEM PROJECT NUMBER IS: KSA #23078.
2. IF ANY MODIFICATIONS ARE TO BE MADE TO THE EXISTING ROOF, KEMPER IS TO BE NOTIFIED IN ADVANCE AND AND A KEMPER APPROVED DETAIL AND CONSTRUCTION METHOD IS TO BE UTILIZED.
3. A KEMPER SYSTEM AMERICA INC. CERTIFIED INSTALLER MUST BE UTILIZED TO PERFORM ANY WORK ON THIS ROOF.
4. PRIOR TO ANY WORK BEING DONE, THE CONTRACTOR IS TO COORDINATE WITH KEMPER TO ENSURE EXISTING WARRANTY IS NOT VOIDED IN ANY WAY.
5. AFTER WORK IS COMPLETE CONTRACTOR TO OBTAIN UPDATED WARRANTY FOR THE WORK PERFORMED.
6. PREPARE ALL SUBSTRATE SURFACES IN ACCORDANCE WITH KEMPER APPLICATION REQUIREMENTS.
7. APPLY KEMPERTEC EPS PRIMER OVER CONCRETE SURFACE WITH BROADCAST OF .5 SILICA SAND INTO THE WT PRIMER 50LBS/ 1000SQ FT. AND ALLOW TO CURE
8. INSTALL NEW KEMPEROL WATERPROOFING MEMBRANE/ FLASHING SYSTEM OVER PREPARED SURFACE IN ACCORDANCE WITH CURRENT INSTALLATION DETAILS. KEMPEROL MEMBRANE TO INCLUDE KEMPEROL 2KPUR RESIN WITH 165 FLEECE.
9. INSTALL OVERBURDEN ASSEMBLY TO INCLUDE DRAINAGE MAT, EXTRUDED POLYSTYRENE INSULATION, FILTER FABRIC, AND PAVERS ON PEDESTAL.
10. REFER TO PENETRATION DETAIL DRAWING 7/A-415 FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
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Environmental Consultants
EPM, Inc.
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Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

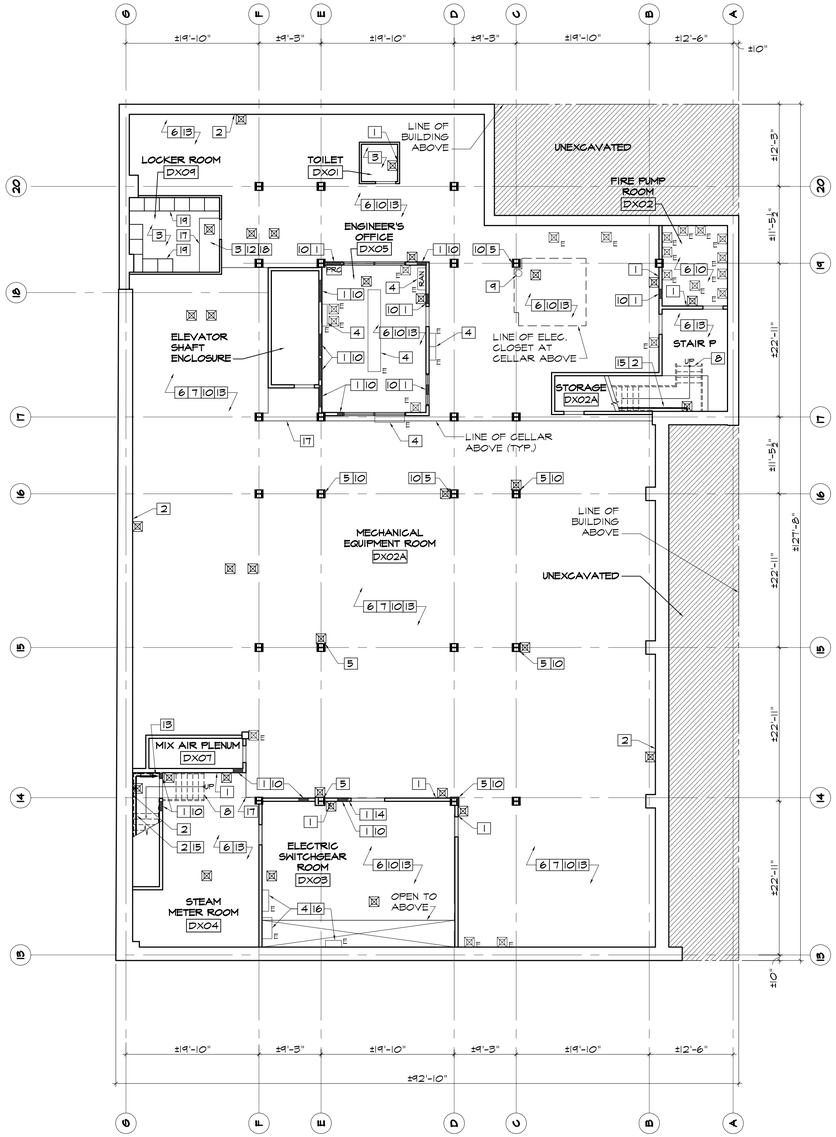
DRAWING TITLE:
NAB GENERATOR ROUTING 10TH FLOOR & ROOF DEMOLITION RCP

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLAIRE ELIZABETH MORGAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	DM-414.00
CADD FILE:	DOB page: 17 OF 44



SUBCELLAR CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. EXISTING CMU WALL
2. EXISTING CONCRETE WALL
3. EXISTING GWB CEILING
4. EXISTING ELECTRICAL EQUIPMENT TO REMAIN
5. EXISTING CONCRETE COLUMN
6. EXPOSED CONCRETE SLAB/CEILING
7. DOUBLE HEIGHT MECHANICAL SPACE. REFER TO CELLAR PLAN FOR ADDITIONAL INFORMATION.
8. LINE OF EXISTING STAIRS TO FLOOR ABOVE
9. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S). COORDINATE WITH CELLAR CONSTRUCTION PLAN AND FA DRAWINGS.
10. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S) AND EQUIPMENT. COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
11. NOT USED
12. NEW FA WIRING TO BE CONCEALED IN CEILING TO FEED DEVICE(S).
13. SURFACE MOUNTED CONDUIT TO BE UTILIZED THROUGHOUT SUBCELLAR LEVEL WHERE ABLE TO RUN NEW FA WIRING UNLESS OTHERWISE NOTED. COORDINATE WITH FA DRAWINGS FOR WIRING/ROUTING REQUIREMENTS.
14. EXISTING PENETRATION(S) AT WALL/CEILING TO BE FIRESTOPPED.
15. SURFACE MOUNTED CONDUIT ROUTING TO CONTINUE AT FLOOR ABOVE. REFER TO CELLAR CONSTRUCTION PLAN.
16. COORDINATE CONNECTION TO FIRE COMMAND CENTER & ATS ROOM AND ASSOCIATED CONDUIT ROUTING WITH CELLAR CONSTRUCTION PLAN AND FA-SERIES DRAWINGS.
17. LINE OF EXISTING SOFFIT AT CEILING.
18. PATCH & REPAIR EXISTING CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
19. EXISTING WOOD LOCKERS & MILLWORK TO REMAIN UNDISTURBED.

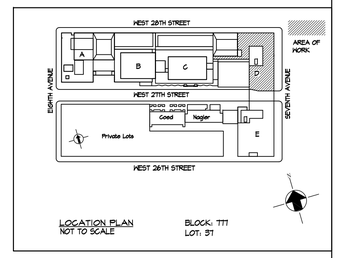
GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. ALL PENETRATIONS THROUGH EXISTING WALLS FOR NEW FA WIRING/CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN FIRE-RATING OF WALLS. REFER TO FIRESTOPPING DETAILS.
3. ALL NEW FA DEVICES AT SUBCELLAR LEVEL ARE TO BE SURFACE MOUNTED AT LOCATIONS INDICATED IN PLAN EXCEPT AT LOCKER ROOM DX09. NEW FA WIRING/CONDUIT TO ALSO RUN EXPOSED THROUGHOUT FLOOR EXCEPT AT DX09. COORDINATE WITH FA DRAWINGS FOR WIRING/ROUTING REQUIREMENTS.
4. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
5. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.

LEGEND:

- F.A. DEVICE (REFER TO F.A. DWG SET)
- PROPOSED ROUTING FOR F.A. WIRING
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
- E — EXISTING FA EQUIPMENT/DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
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David Smotrich & Partners LLP
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443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

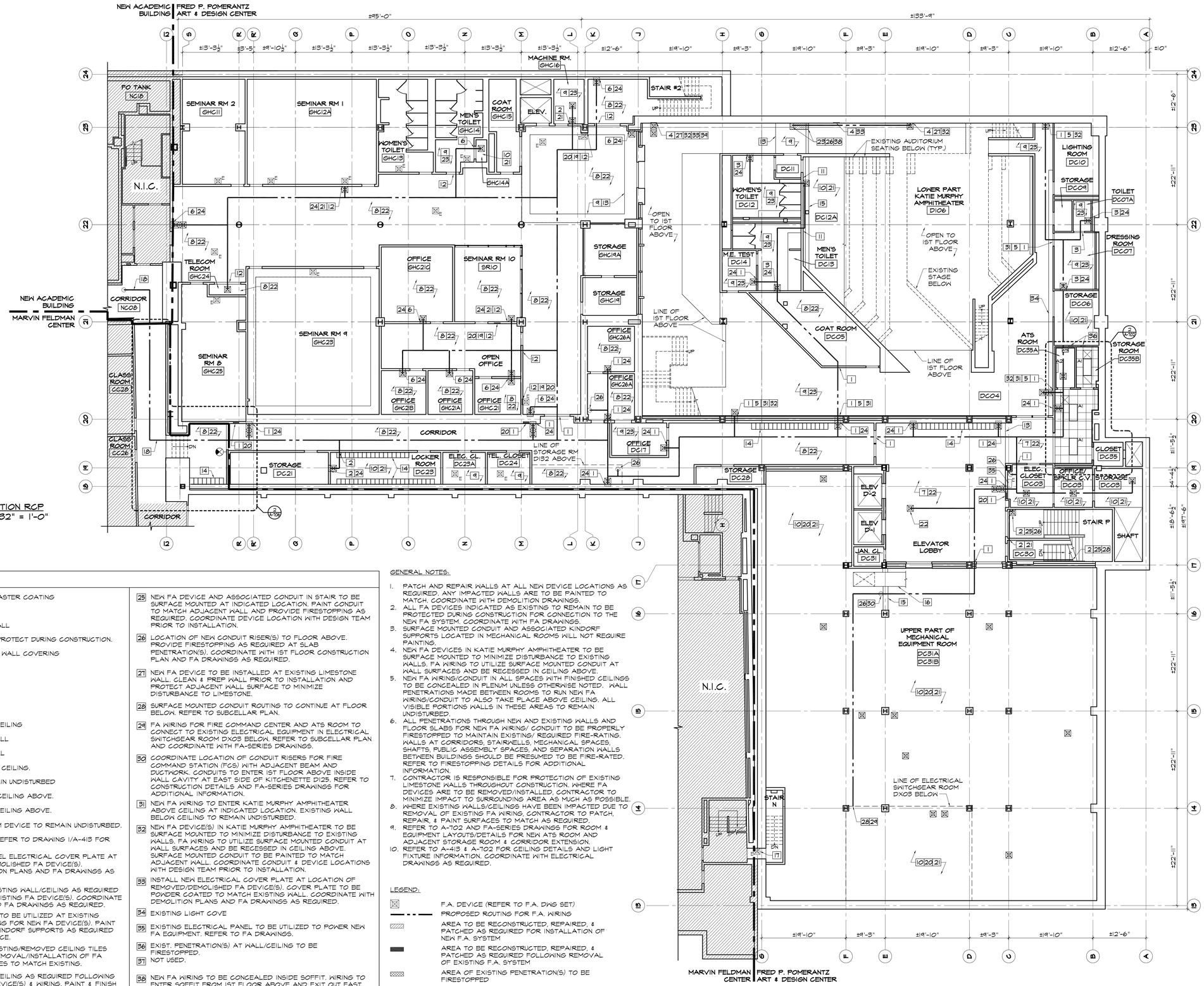
DRAWING TITLE:
SUBCELLAR CONSTRUCTION RCP

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT
CLARE ELIZABETH KRIGMAN
035589
STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-400.00
CADD FILE:	DOB page: 18 OF 44



1 / A-401 CELLAR CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING GLAZED BLOCK WALL
4. EXISTING LIMESTONE WALL. PROTECT DURING CONSTRUCTION.
5. EXISTING WALL WITH FABRIC WALL COVERING
6. EXISTING GWB WALL
7. EXISTING SPLINE CEILING
8. EXISTING 2'X2' TILE CEILING
9. EXISTING GWB CEILING
10. EXPOSED CONCRETE SLAB/CEILING
11. EXISTING UNFINISHED CMU WALL
12. EXISTING POLISHED CMU WALL
13. LINE OF EXISTING SOFFIT AT CEILING.
14. EXISTING LOCKERS TO REMAIN UNDISTURBED
15. LINE OF EXISTING BEAM AT CEILING ABOVE.
16. LINE OF EXISTING DUCT AT CEILING ABOVE.
17. EXIST. FELDMAN FIRE ALARM DEVICE TO REMAIN UNDISTURBED.
18. NAB GENERATOR ROUTING. REFER TO DRAWING 1/A-413 FOR ADDITIONAL INFORMATION.
19. INSTALL NEW STAINLESS STEEL ELECTRICAL COVER PLATE AT LOCATION OF REMOVED/DEMOLISHED FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
20. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
21. SURFACE MOUNTED CONDUIT TO BE UTILIZED AT EXISTING WALL/CEILING TO FEED WIRING FOR NEW FA DEVICE(S). PAINT CONDUIT AND ASSOCATED KINDORF SUPPORTS AS REQUIRED TO MATCH ADJACENT SURFACE.
22. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW TILES TO MATCH EXISTING.
23. PATCH & REPAIR EXISTING CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
24. PATCH & REPAIR EXISTING WALL AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
25. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION. PAINT CONDUIT TO MATCH ADJACENT WALL AND PROVIDE FIRESTOPPING AS REQUIRED. COORDINATE DEVICE LOCATION WITH DESIGN TEAM PRIOR TO INSTALLATION.
26. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S). COORDINATE WITH 1ST FLOOR CONSTRUCTION PLAN AND FA DRAWINGS AS REQUIRED.
27. NEW FA DEVICE TO BE INSTALLED AT EXISTING LIMESTONE WALL. CLEAN & PREP WALL PRIOR TO INSTALLATION AND PROTECT ADJACENT WALL SURFACE TO MINIMIZE DISTURBANCE TO LIMESTONE.
28. SURFACE MOUNTED CONDUIT ROUTING TO CONTINUE AT FLOOR BELOW. REFER TO SUBCELLAR PLAN.
29. FA WIRING FOR FIRE COMMAND CENTER AND ATS ROOM TO CONNECT TO EXISTING ELECTRICAL EQUIPMENT IN ELECTRICAL SWITCHGEAR ROOM DX03 BELOW. REFER TO SUBCELLAR PLAN AND COORDINATE WITH FA-SERIES DRAWINGS.
30. COORDINATE LOCATION OF CONDUIT RISERS FOR FIRE COMMAND STATION (FCS) WITH ADJACENT BEAM AND DUCTWORK. CONDUITS TO ENTER 1ST FLOOR ABOVE INSIDE WALL CAVITY AT EAST SIDE OF KITCHENETTE DI25. REFER TO CONSTRUCTION DETAILS AND FA-SERIES DRAWINGS FOR ADDITIONAL INFORMATION.
31. NEW FA WIRING TO ENTER KATIE MURPHY AMPHITHEATER ABOVE CEILING AT INDICATED LOCATION. EXISTING WALL BELOW CEILING TO REMAIN UNDISTURBED.
32. NEW FA DEVICE(S) IN KATIE MURPHY AMPHITHEATER TO BE SURFACE MOUNTED TO MINIMIZE DISTURBANCE TO EXISTING WALLS. FA WIRING TO UTILIZE SURFACE MOUNTED CONDUIT AT WALL SURFACES AND BE RECESSED IN CEILING ABOVE. SURFACE MOUNTED CONDUIT TO BE PAINTED TO MATCH ADJACENT WALL. COORDINATE CONDUIT & DEVICE LOCATIONS WITH DESIGN TEAM PRIOR TO INSTALLATION.
33. INSTALL NEW ELECTRICAL COVER PLATE AT LOCATION OF REMOVED/DEMOLISHED FA DEVICE(S). COVER PLATE TO BE POWDER COATED TO MATCH EXISTING WALL. COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
34. EXISTING LIGHT COVE
35. EXISTING ELECTRICAL PANEL TO BE UTILIZED TO POWER NEW FA EQUIPMENT. REFER TO FA DRAWINGS.
36. EXIST. PENETRATION(S) AT WALL/CEILING TO BE FIRESTOPPED.
37. NOT USED.
38. NEW FA WIRING TO BE CONCEALED INSIDE SOFFIT. WIRING TO ENTER SOFFIT FROM 1ST FLOOR ABOVE AND EXIT OUT EAST SIDE TO FEED DEVICE AS INDICATED.
39. NEW FA WIRING/CONDUIT TO BE FED FROM FLOOR ABOVE. REFER TO 1ST FLOOR CONSTRUCTION PLAN.

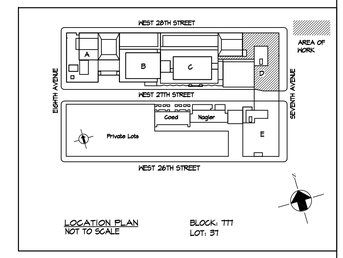
GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.
4. NEW FA DEVICES IN KATIE MURPHY AMPHITHEATER TO BE SURFACE MOUNTED TO MINIMIZE DISTURBANCE TO EXISTING WALLS. FA WIRING TO UTILIZE SURFACE MOUNTED CONDUIT AT WALL SURFACES AND BE RECESSED IN CEILING ABOVE.
5. NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW FA WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
6. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING LIMESTONE WALLS THROUGHOUT CONSTRUCTION. WHERE FA DEVICES ARE TO BE REMOVED/INSTALLED, CONTRACTOR TO MINIMIZE IMPACT TO SURROUNDING AREA AS MUCH AS POSSIBLE.
8. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
9. REFER TO A-702 AND FA-SERIES DRAWINGS FOR ROOM & EQUIPMENT LAYOUTS/DETAILS FOR NEW ATS ROOM AND ADJACENT STORAGE ROOM & CORRIDOR EXTENSION.
10. REFER TO A-413 & A-702 FOR CEILING DETAILS AND LIGHT FIXTURE INFORMATION. COORDINATE WITH ELECTRICAL DRAWINGS AS REQUIRED.

LEGEND:

- F.A. DEVICE (REFER TO F.A. DWG SET)
- PROPOSED ROUTING FOR F.A. WIRING
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOR INSTALLATION OF NEW F.A. SYSTEM
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. SYSTEM
- AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
- E — EXISTING FA DEVICE TO REMAIN, REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION
- WALL-MOUNTED EXIT SIGN

NOT FOR CONSTRUCTION



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443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
CELLAR CONSTRUCTION RCP

DOB NOW JOB#

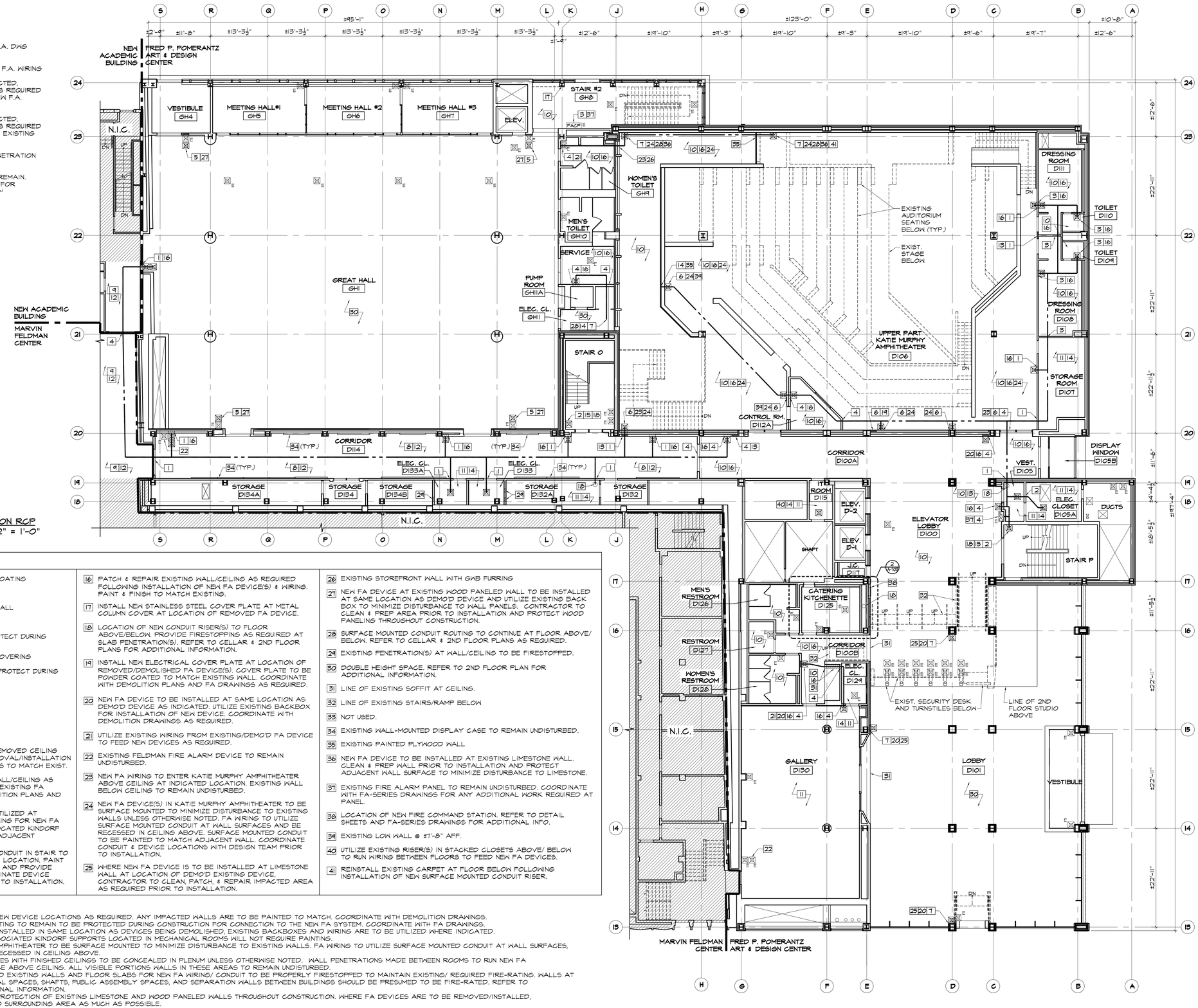
SEAL & SIGNATURE:

REGISTERED ARCHITECT ELIZABETH A. MARGIAN 035589 STATE OF NEW YORK

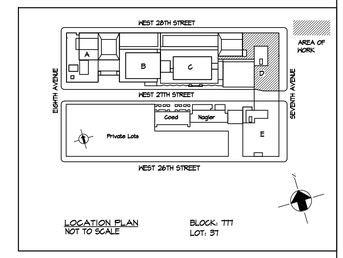
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-401.00
CADD FILE:	DOB page: 19 OF 44

LEGEND:

- F.A. DEVICE (REFER TO F.A. DWG SET)
- PROPOSED ROUTING FOR F.A. WIRING
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOR INSTALLATION OF NEW F.A. SYSTEM
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- AREA(S) OF EXISTING PENETRATION TO BE FIRESTOPPED
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION



1 / A-402 1ST FLOOR CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING PAINTED GLAZED BLOCK WALL
4. EXISTING GWB WALL
5. EXISTING WOOD PANELED WALL. PROTECT DURING CONSTRUCTION.
6. EXISTING WALL WITH FABRIC WALL COVERING
7. EXISTING LIMESTONE WALL/COLUMN. PROTECT DURING CONSTRUCTION.
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. EXPOSED CONCRETE SLAB/CEILING
12. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW TILES TO MATCH EXIST.
13. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
14. SURFACE MOUNTED CONDUIT TO BE UTILIZED AT EXISTING WALL/CEILING TO FEED WIRING FOR NEW FA DEVICE(S). PAINT CONDUIT AND ASSOCATED KINDORF SUPPORTS AS REQUIRED TO MATCH ADJACENT SURFACE.
15. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION. PAINT CONDUIT TO MATCH ADJACENT WALL AND PROVIDE FIRESTOPPING AS REQUIRED. COORDINATE DEVICE LOCATION WITH DESIGN TEAM PRIOR TO INSTALLATION.
16. PATCH & REPAIR EXISTING WALL/CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
17. INSTALL NEW STAINLESS STEEL COVER PLATE AT METAL COLUMN COVER AT LOCATION OF REMOVED FA DEVICE.
18. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE/BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S). REFER TO CELLAR & 2ND FLOOR PLANS FOR ADDITIONAL INFORMATION.
19. INSTALL NEW ELECTRICAL COVER PLATE AT LOCATION OF REMOVED/DEMOLISHED FA DEVICE(S). COVER PLATE TO BE POWDER COATED TO MATCH EXISTING WALL. COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
20. NEW FA DEVICE TO BE INSTALLED AT SAME LOCATION AS DEMO'D DEVICE AS INDICATED. UTILIZE EXISTING BACKBOX FOR INSTALLATION OF NEW DEVICE. COORDINATE WITH DEMOLITION DRAWINGS AS REQUIRED.
21. UTILIZE EXISTING WIRING FROM EXISTING/DEMO'D FA DEVICE TO FEED NEW DEVICES AS REQUIRED.
22. EXISTING FELDMAN FIRE ALARM DEVICE TO REMAIN UNDISTURBED.
23. NEW FA WIRING TO ENTER KATIE MURPHY AMPHITHEATER ABOVE CEILING AT INDICATED LOCATION. EXISTING WALL BELOW CEILING TO REMAIN UNDISTURBED.
24. NEW FA DEVICE(S) IN KATIE MURPHY AMPHITHEATER TO BE SURFACE MOUNTED TO MINIMIZE DISTURBANCE TO EXISTING WALLS UNLESS OTHERWISE NOTED. FA WIRING TO UTILIZE SURFACE MOUNTED CONDUIT AT WALL SURFACES AND BE RECESSED IN CEILING ABOVE. SURFACE MOUNTED CONDUIT TO BE PAINTED TO MATCH ADJACENT WALL. COORDINATE CONDUIT & DEVICE LOCATIONS WITH DESIGN TEAM PRIOR TO INSTALLATION.
25. WHERE NEW FA DEVICE IS TO BE INSTALLED AT LIMESTONE WALL AT LOCATION OF DEMO'D EXISTING DEVICE, CONTRACTOR TO CLEAN, PATCH, & REPAIR IMPACTED AREA AS REQUIRED PRIOR TO INSTALLATION.
26. EXISTING STOREFRONT WALL WITH GWB FURRING
27. NEW FA DEVICE AT EXISTING WOOD PANELED WALL TO BE INSTALLED AT SAME LOCATION AS DEMO'D DEVICE AND UTILIZE EXISTING BACK BOX TO MINIMIZE DISTURBANCE TO WALL PANELS. CONTRACTOR TO CLEAN & PREP AREA PRIOR TO INSTALLATION AND PROTECT WOOD PANELING THROUGHOUT CONSTRUCTION.
28. SURFACE MOUNTED CONDUIT ROUTING TO CONTINUE AT FLOOR ABOVE/ BELOW. REFER TO CELLAR & 2ND FLOOR PLANS AS REQUIRED.
29. EXISTING PENETRATION(S) AT WALL/CEILING TO BE FIRESTOPPED.
30. DOUBLE HEIGHT SPACE. REFER TO 2ND FLOOR PLAN FOR ADDITIONAL INFORMATION.
31. LINE OF EXISTING SOFFIT AT CEILING.
32. LINE OF EXISTING STAIRS/RAMP BELOW
33. NOT USED.
34. EXISTING WALL-MOUNTED DISPLAY CASE TO REMAIN UNDISTURBED.
35. EXISTING PAINTED PLYWOOD WALL
36. NEW FA DEVICE TO BE INSTALLED AT EXISTING LIMESTONE WALL. CLEAN & PREP WALL PRIOR TO INSTALLATION AND PROTECT ADJACENT WALL SURFACE TO MINIMIZE DISTURBANCE TO LIMESTONE.
37. EXISTING FIRE ALARM PANEL TO REMAIN UNDISTURBED. COORDINATE WITH FA-SERIES DRAWINGS FOR ANY ADDITIONAL WORK REQUIRED AT PANEL.
38. LOCATION OF NEW FIRE COMMAND STATION. REFER TO DETAIL SHEETS AND FA-SERIES DRAWINGS FOR ADDITIONAL INFO.
39. EXISTING LOW WALL @ ±1'-8" AFF.
40. UTILIZE EXISTING RISER(S) IN STACKED CLOSETS ABOVE/ BELOW TO RUN WIRING BETWEEN FLOORS TO FEED NEW FA DEVICES.
41. REINSTALL EXISTING CARPET AT FLOOR BELOW FOLLOWING INSTALLATION OF NEW SURFACE MOUNTED CONDUIT RISER.

GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. WHERE NEW FA DEVICES ARE BEING INSTALLED IN SAME LOCATION AS DEVICES BEING DEMOLISHED, EXISTING BACKBOXES AND WIRING ARE TO BE UTILIZED WHERE INDICATED.
4. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.
5. NEW FA DEVICES IN KATIE MURPHY AMPHITHEATER TO BE SURFACE MOUNTED TO MINIMIZE DISTURBANCE TO EXISTING WALLS. FA WIRING TO UTILIZE SURFACE MOUNTED CONDUIT AT WALL SURFACES, UNLESS OTHERWISE NOTED, AND BE RECESSED IN CEILING ABOVE.
6. NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW FA WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
7. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING LIMESTONE AND WOOD PANELED WALLS THROUGHOUT CONSTRUCTION. WHERE FA DEVICES ARE TO BE REMOVED/INSTALLED, CONTRACTOR TO MINIMIZE IMPACT TO SURROUNDING AREA AS MUCH AS POSSIBLE.
8. CONTRACTOR TO COORDINATE WITH DESIGN TEAM REGARDING LOCATION OF NEW EMERGENCY SPEAKERS IN GREAT HALL & KATIE MURPHEY AMPHITHEATER PRIOR TO INSTALLATION.
9. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
10. REFER TO A-703, A-704, AND FA-SERIES DRAWINGS FOR ROOM/EQUIPMENT LAYOUTS & DETAILS FOR NEW FIRE COMMAND STATION AND ADJACENT IMPACTED KITCHENTTE AREA.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
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1983 Marcus Ave, Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

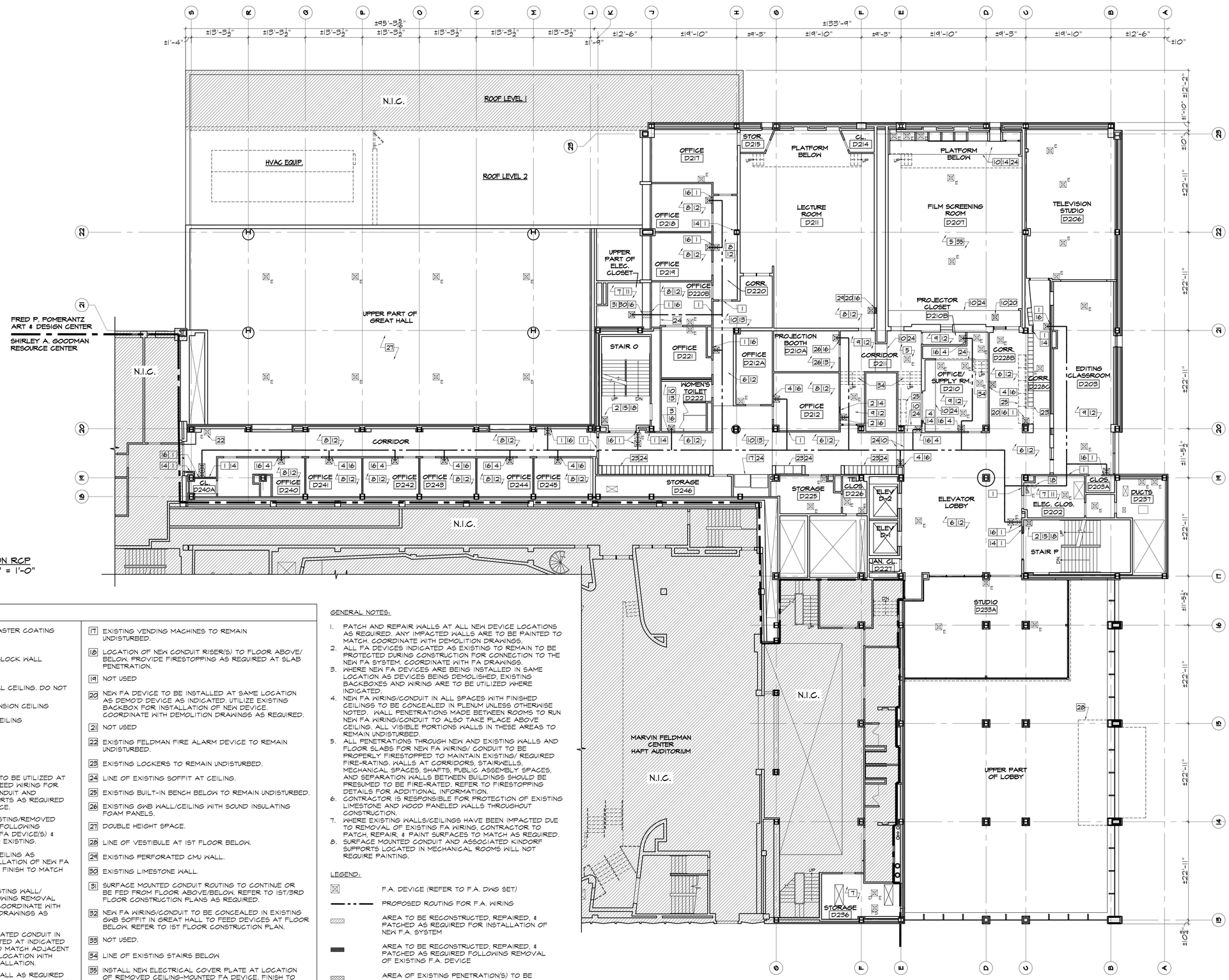
DRAWING TITLE:
1ST FLOOR CONSTRUCTION RCP

DOB NOW JOB#

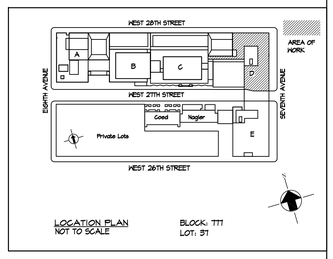
SEAL & SIGNATURE:

REGISTERED ARCHITECT — CLARE ELIZABETH TURRIGIANO — 035589 — STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-402.00
CADD FILE:	DOB page: 20 OF 44



2ND FLOOR CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING PAINTED GLAZED BLOCK WALL
4. EXISTING GWB WALL
5. EXISTING PERFORATED METAL CEILING. DO NOT DISTURB.
6. EXISTING 2'X2' METAL SUSPENSION CEILING
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. SURFACE MOUNTED CONDUIT TO BE UTILIZED AT EXISTING WALL/CEILING TO FEED WIRING FOR NEW FA DEVICE(S). PAINT CONDUIT AND ASSOCATED KINDORF SUPPORTS AS REQUIRED TO MATCH ADJACENT SURFACE.
12. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW TILES TO MATCH EXISTING.
13. PATCH & REPAIR EXISTING CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
14. PATCH, REPAIR, & PAINT EXISTING WALL/ CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
15. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION. PAINT CONDUIT TO MATCH ADJACENT WALL. COORDINATE DEVICE LOCATION WITH DESIGN TEAM PRIOR TO INSTALLATION.
16. PATCH & REPAIR EXISTING WALL AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
17. EXISTING VENDING MACHINES TO REMAIN UNDISTURBED.
18. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE/ BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION.
19. NOT USED
20. NEW FA DEVICE TO BE INSTALLED AT SAME LOCATION AS DEMOD DEVICE AS INDICATED. UTILIZE EXISTING BACKBOX FOR INSTALLATION OF NEW DEVICE. COORDINATE WITH DEMOLITION DRAWINGS AS REQUIRED.
21. NOT USED
22. EXISTING FELDMAN FIRE ALARM DEVICE TO REMAIN UNDISTURBED.
23. EXISTING LOCKERS TO REMAIN UNDISTURBED.
24. LINE OF EXISTING SOFFIT AT CEILING.
25. EXISTING BUILT-IN BENCH BELOW TO REMAIN UNDISTURBED.
26. EXISTING GWB WALL/CEILING WITH SOUND INSULATING FOAM PANELS.
27. DOUBLE HEIGHT SPACE.
28. LINE OF VESTIBULE AT 1ST FLOOR BELOW.
29. EXISTING PERFORATED CMU WALL.
30. EXISTING LIMESTONE WALL.
31. SURFACE MOUNTED CONDUIT ROUTING TO CONTINUE OR BE FED FROM FLOOR ABOVE/BELOW. REFER TO 1ST/3RD FLOOR CONSTRUCTION PLANS AS REQUIRED.
32. NEW FA WIRING/CONDUIT TO BE CONCEALED IN EXISTING GWB SOFFIT IN GREAT HALL TO FEED DEVICES AT FLOOR BELOW. REFER TO 1ST FLOOR CONSTRUCTION PLAN.
33. NOT USED.
34. LINE OF EXISTING STAIRS BELOW
35. INSTALL NEW ELECTRICAL COVER PLATE AT LOCATION OF REMOVED CEILING-MOUNTED FA DEVICE. FINISH TO MATCH ADJACENT METAL CEILING PANELS.

GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. WHERE NEW FA DEVICES ARE BEING INSTALLED IN SAME LOCATION AS DEVICES BEING DEMOLISHED, EXISTING BACKBOXES AND WIRING ARE TO BE UTILIZED WHERE INDICATED.
4. NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW FA WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
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6. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING LIMESTONE AND WOOD PANELED WALLS THROUGHOUT CONSTRUCTION.
7. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
8. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.

LEGEND:

- F.A. DEVICE (REFER TO F.A. DWG SET)
- PROPOSED ROUTING FOR F.A. WIRING
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOR INSTALLATION OF NEW F.A. SYSTEM
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
2ND FLOOR CONSTRUCTION RCP

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLAIRE ELIZABETH KRIEGER 035589 STATE OF NEW YORK

DATE:	03.21.2025
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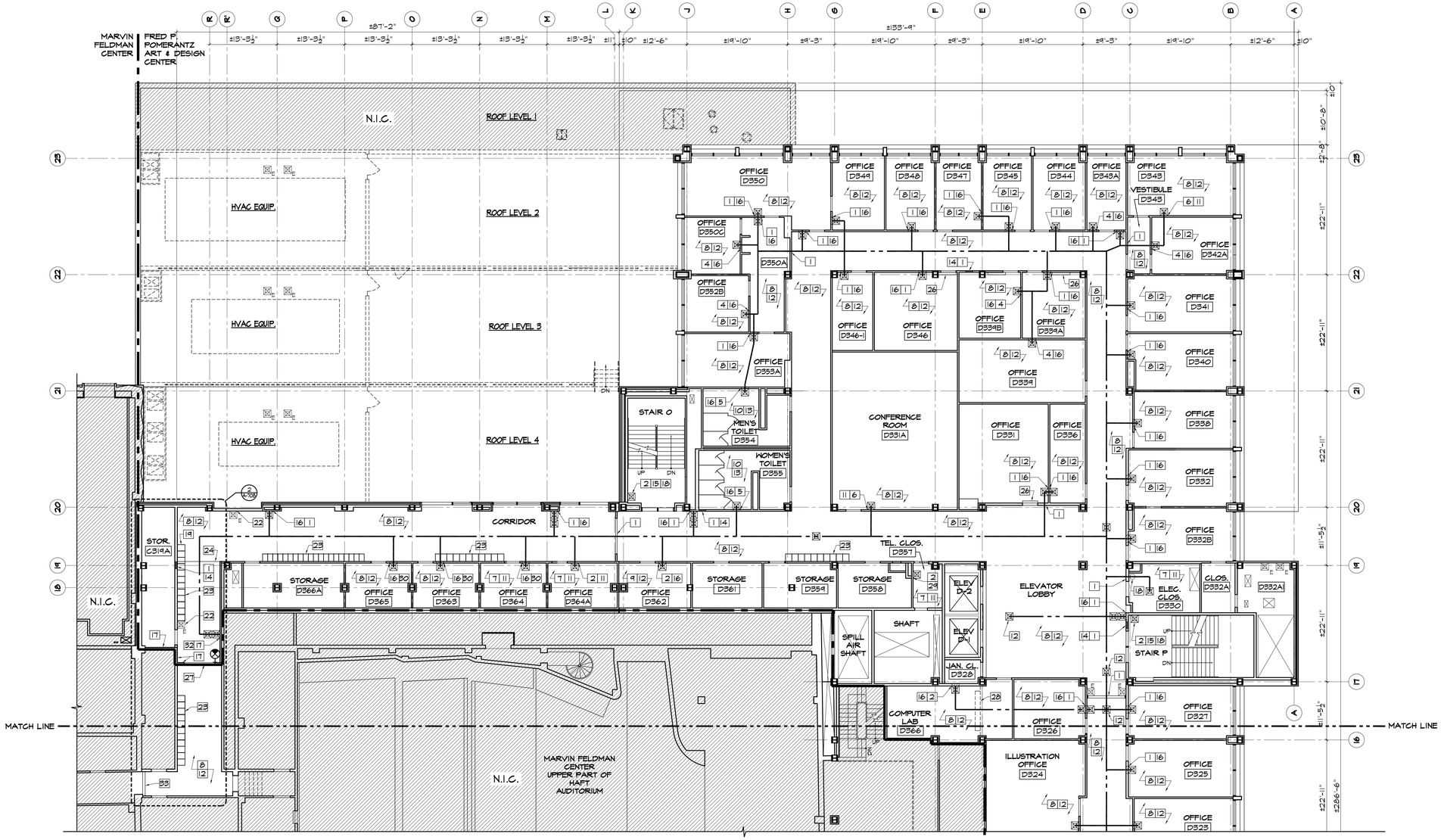
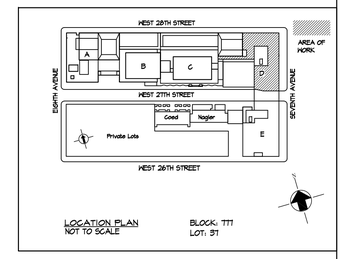
SCALE:	AS NOTED
DWG No:	A-403.00
CADD FILE:	DOB page: 21 OF 44



1 / A-404 3RD FLOOR CONSTRUCTION RCP NORTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. NOT USED.
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. EXISTING CMU WALL WITH HOMASOTE PANEL
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. SURFACE MOUNTED CONDUIT TO BE UTILIZED AT EXISTING WALL/CEILING TO FEED WIRING FOR NEW FA DEVICE(S). PAINT CONDUIT AND ASSOCIATED KINDORF SUPPORTS AS REQUIRED TO MATCH ADJACENT SURFACE.
12. REINSTALL OR REPLACE EXISTING/ REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW TILES TO MATCH EXISTING.
13. PATCH & REPAIR EXISTING CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
14. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
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16. PATCH & REPAIR EXISTING WALL AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
17. NEW FIRE-RATED GWB WALL. REFER TO DRAWING A-708 FOR DETAILS.
18. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE/BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S).
19. EXISTING/RELOCATED LOCKERS. REFER TO DRAWING A-708 FOR DETAILS.
20. NOT USED
21. NOT USED
22. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
23. EXISTING LOCKERS TO REMAIN UNDISTURBED.
24. LINE OF EXISTING SOFFIT AT CEILING.
25. EXISTING GWB SOFFIT
26. EXISTING VENT TO REMAIN UNDISTURBED
27. NEW FIRE RATED DOORS AND FRAME. REFER TO DRAWING A-708 FOR DETAILS.
28. LINE OF STAIRS BELOW
29. UTILIZE EXISTING RISER(S) IN STACKED CLOSETS ABOVE/ BELOW TO RUN WIRING BETWEEN FLOORS TO FEED NEW FA DEVICES.
30. EXISTING CMU WALL WITH GWB FURRING
31. NOT USED.
32. PATCH & REPAIR NEW FIRE RATED GWB WALL AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING. FIRESTOP AS REQUIRED.
33. NEW GWB SOFFIT. REFER TO DRAWING A-708 FOR DETAILS.

GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW FA WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
4. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
5. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
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LEGEND:

- F.A. DEVICE (REFER TO F.A. DWG SET)
- PROPOSED ROUTING FOR F.A. WIRING
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOR INSTALLATION OF NEW F.A. SYSTEM
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
- EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.
- EXIT SIGN

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
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212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

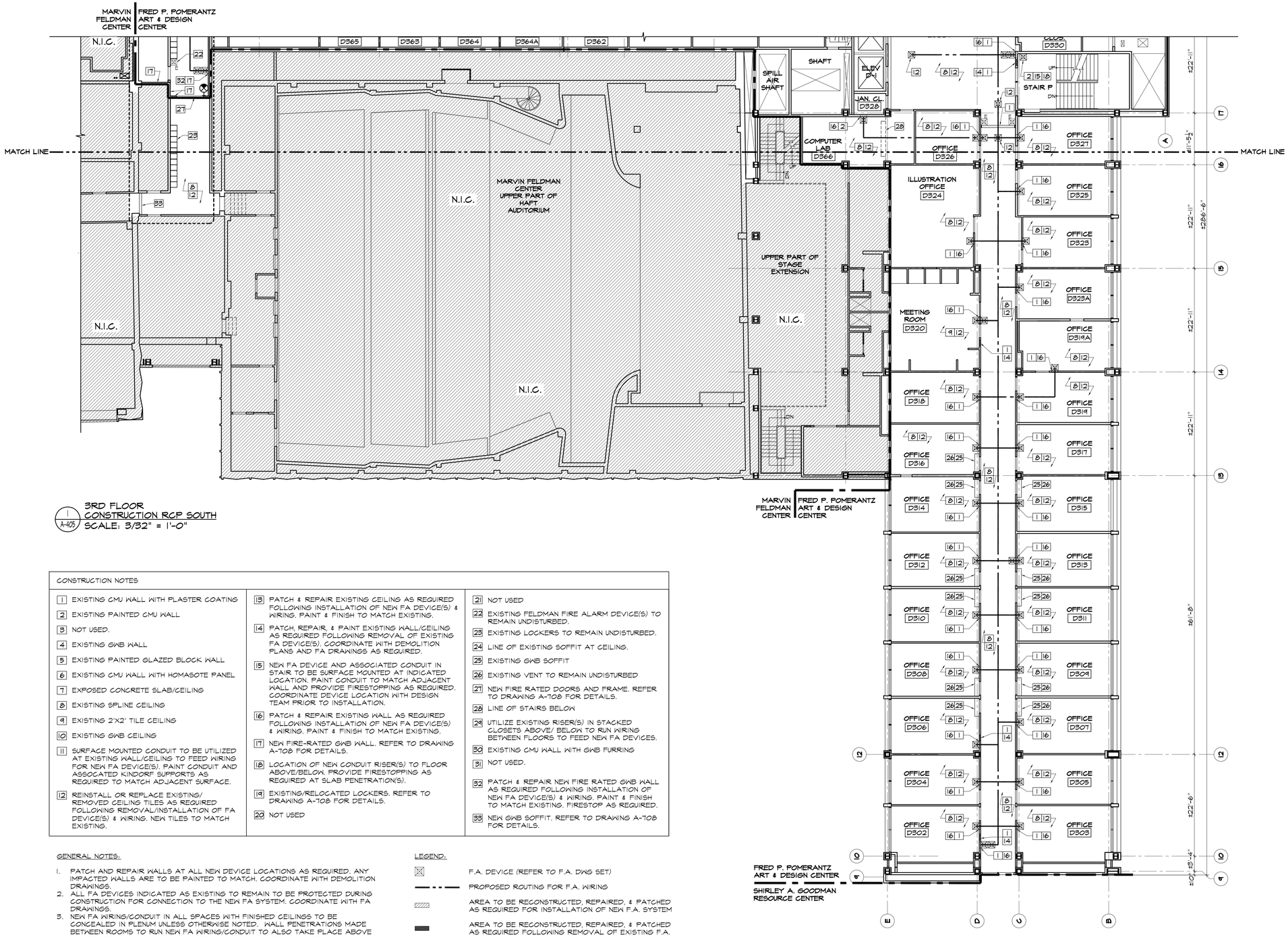
DRAWING TITLE:
3RD FLOOR CONSTRUCTION RCP NORTH

DOB NOW JOB#

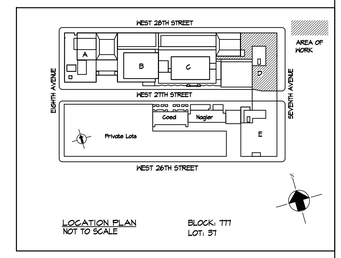
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH CARROLL SMITH 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-404.00
CADD FILE:	DOB page: 22 OF 44



1 A-405 3RD FLOOR CONSTRUCTION RCP SOUTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. NOT USED.
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
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12. REINSTALL OR REPLACE EXISTING/ REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW TILES TO MATCH EXISTING.
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14. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
15. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION. PAINT CONDUIT TO MATCH ADJACENT WALL AND PROVIDE FIRESTOPPING AS REQUIRED. COORDINATE DEVICE LOCATION WITH DESIGN TEAM PRIOR TO INSTALLATION.
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17. NEW FIRE-RATED GWB WALL. REFER TO DRAWING A-708 FOR DETAILS.
18. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE/BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S).
19. EXISTING/RELOCATED LOCKERS. REFER TO DRAWING A-708 FOR DETAILS.
20. NOT USED
21. NOT USED
22. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
23. EXISTING LOCKERS TO REMAIN UNDISTURBED.
24. LINE OF EXISTING SOFFIT AT CEILING.
25. EXISTING GWB SOFFIT
26. EXISTING VENT TO REMAIN UNDISTURBED
27. NEW FIRE RATED DOORS AND FRAME. REFER TO DRAWING A-708 FOR DETAILS.
28. LINE OF STAIRS BELOW
29. UTILIZE EXISTING RISER(S) IN STACKED CLOSETS ABOVE/ BELOW TO RUN WIRING BETWEEN FLOORS TO FEED NEW FA DEVICES.
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GENERAL NOTES:

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- AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.
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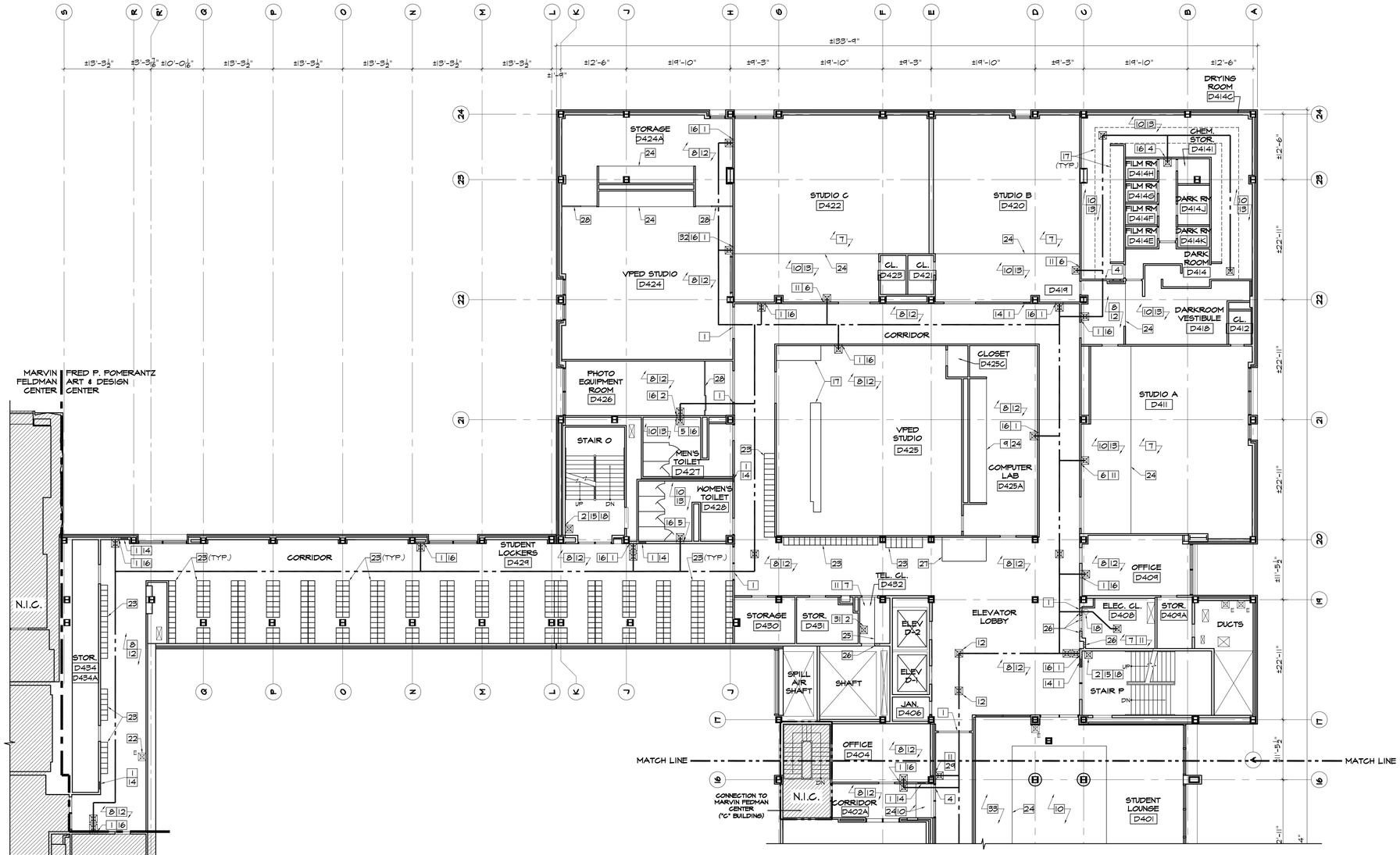
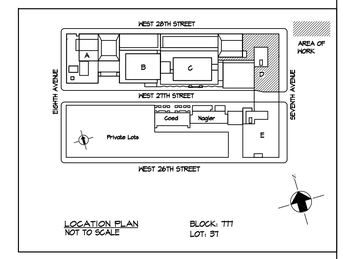
DWG No:	A-405.00
CADD FILE:	DOB page: 23 OF 44



4TH FLOOR CONSTRUCTION RCP NORTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. NOT USED.
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. EXISTING GWB WALL WITH HOMASOTE PANEL
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. SURFACE MOUNTED CONDUIT TO BE UTILIZED AT EXISTING WALL/CEILING TO FEED WIRING FOR NEW FA DEVICE(S). PAINT CONDUIT AND ASSOCATED KINDORF SUPPORTS AS REQUIRED TO MATCH ADJACENT SURFACE.
12. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW TILES TO MATCH EXISTING.
13. PATCH & REPAIR EXISTING CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
14. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
15. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION. PAINT CONDUIT TO MATCH ADJACENT WALL AND PROVIDE FIRESTOPPING AS REQUIRED. COORDINATE DEVICE LOCATION WITH DESIGN TEAM PRIOR TO INSTALLATION.
16. PATCH & REPAIR EXISTING WALL AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
17. EXISTING BUILT-IN FURNITURE / MILLWORK TO REMAIN UNDISTURBED.
18. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE/BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S).
19. NOT USED
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22. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
23. EXISTING LOCKERS TO REMAIN UNDISTURBED.
24. LINE OF EXISTING SOFFIT AT CEILING.
25. EXISTING DUCT TO REMAIN UNDISTURBED.
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29. EXISTING PAINTED LIMESTONE WALL.
30. EXISTING CONCRETE COLUMN WITH PLASTER COATING.
31. UTILIZE EXISTING RISER(S) IN STACKED CLOSETS ABOVE/ BELOW TO RUN WIRING BETWEEN FLOORS TO FEED NEW FA DEVICES.
32. NEW FA DEVICE TO BE MOUNTED ABOVE EXISTING CHALKBOARD AT INDICATED LOCATION. MAXIMUM MOUNTING HEIGHT AT 96" AFF. COORDINATE WITH FA DRAWINGS FOR ADDITIONAL INFORMATION.
33. EXISTING OPEN CELL METAL GRID CEILING.
34. EXPOSED CONCRETE SLAB/CEILING WITH ACOUSTICAL COTTON CEILING PANELS.
35. REINSTALL OR REPLACE EXISTING/REMOVED ACOUSTICAL COTTON PANELS AT CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICES & CONDUIT TO MATCH EXISITING.
36. ACOUSTICAL COTTON CEILING PANELS TO REMAIN UNDISTURBED.
37. EXISTING WALL-MOUNTED TV MONITOR TO REMAIN UNDISTURBED. PROTECT DURING CONSTRUCTION.

GENERAL NOTES:

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5. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
6. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.

LEGEND:

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- AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

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212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

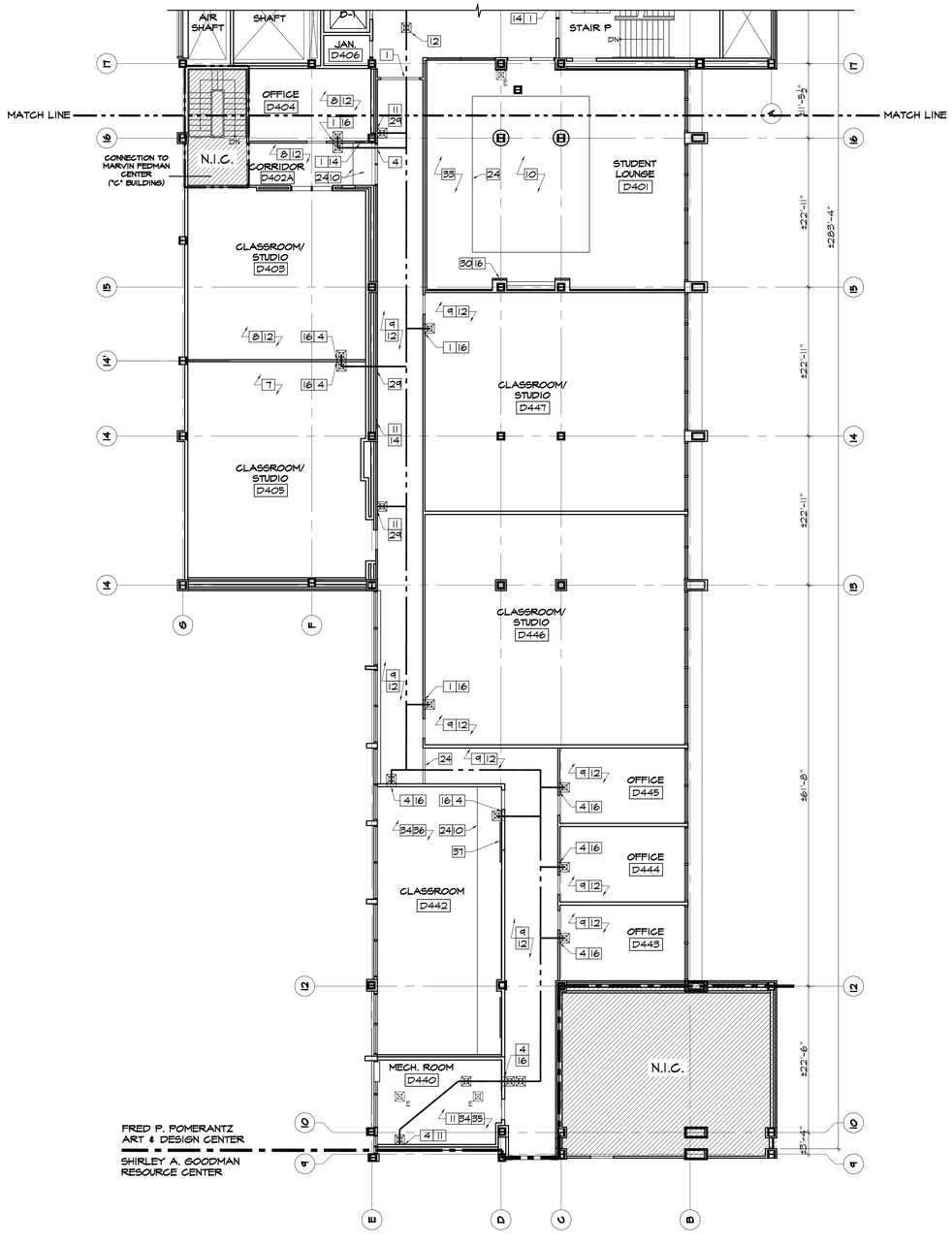
DRAWING TITLE:
4TH FLOOR CONSTRUCTION RCP NORTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH GRIFFIN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-406.00
CADD FILE:	DOB page: 24 OF 44



1 A-407 4TH FLOOR CONSTRUCTION RCP SOUTH
SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

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10. EXISTING GWB CEILING
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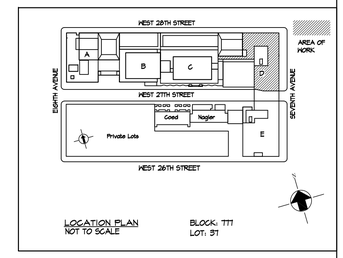

LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

LEGEND:

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212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
4TH FLOOR CONSTRUCTION RCP SOUTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT ELIZABETH CLARE AMERIGAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
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CHK BY:	CK
SCALE:	AS NOTED
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CADD FILE:	DOB page: 25 OF 44

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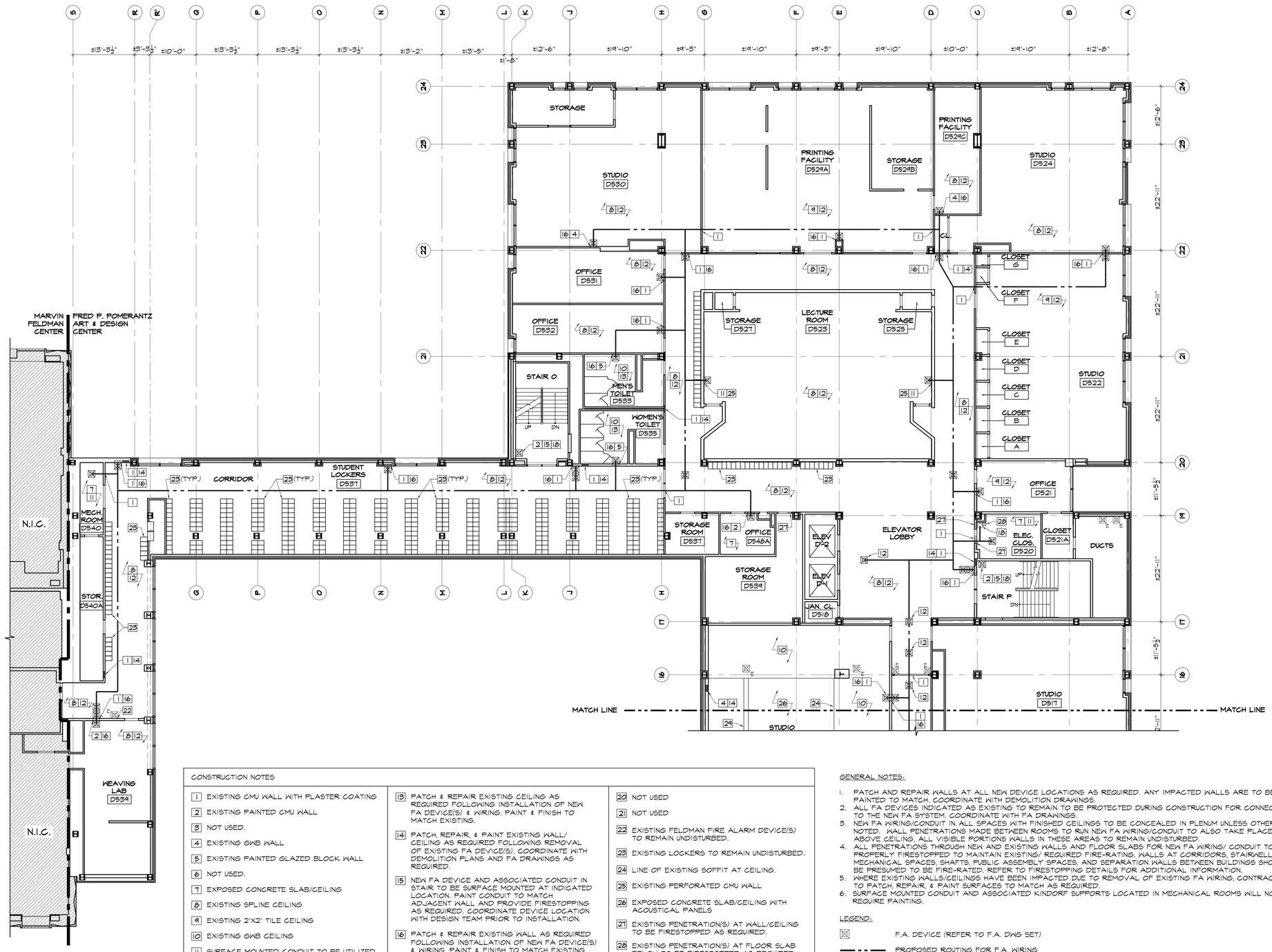
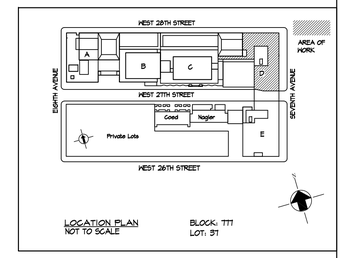


5TH FLOOR CONSTRUCTION RCP NORTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
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BLOCK: 777
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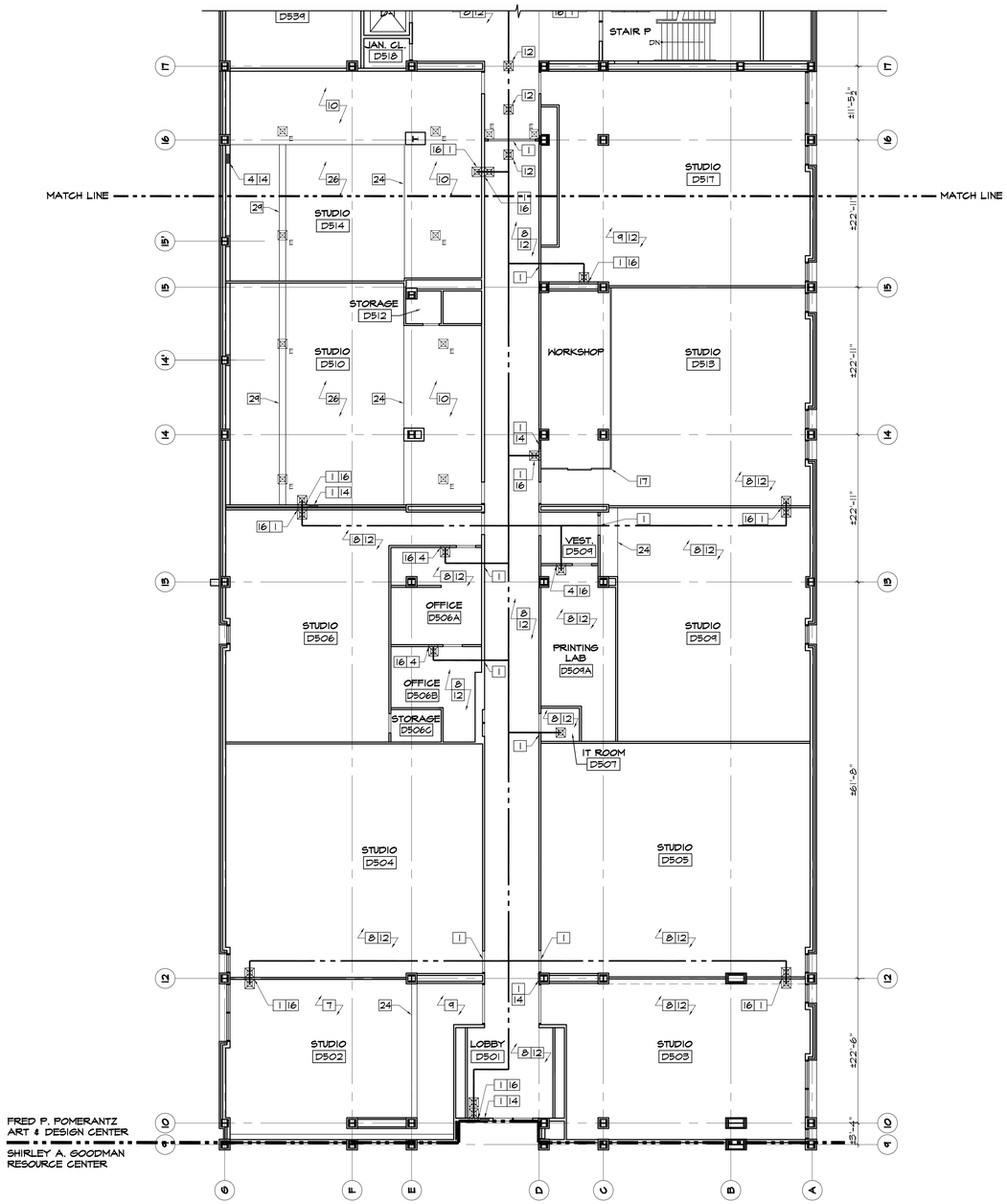

5TH FLOOR
CONSTRUCTION RCP SOUTH
SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

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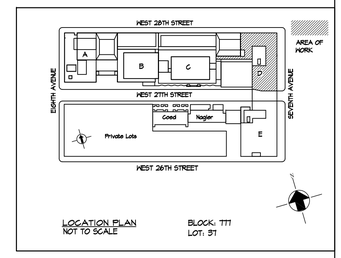
4. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
5. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
6. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.

LEGEND:

⊠	F.A. DEVICE (REFER TO F.A. DWG SET)
— · —	PROPOSED ROUTING FOR F.A. WIRING
▨	AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOR INSTALLATION OF NEW F.A. SYSTEM
▬	AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
▩	AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
E	EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
5TH FLOOR CONSTRUCTION RCP SOUTH

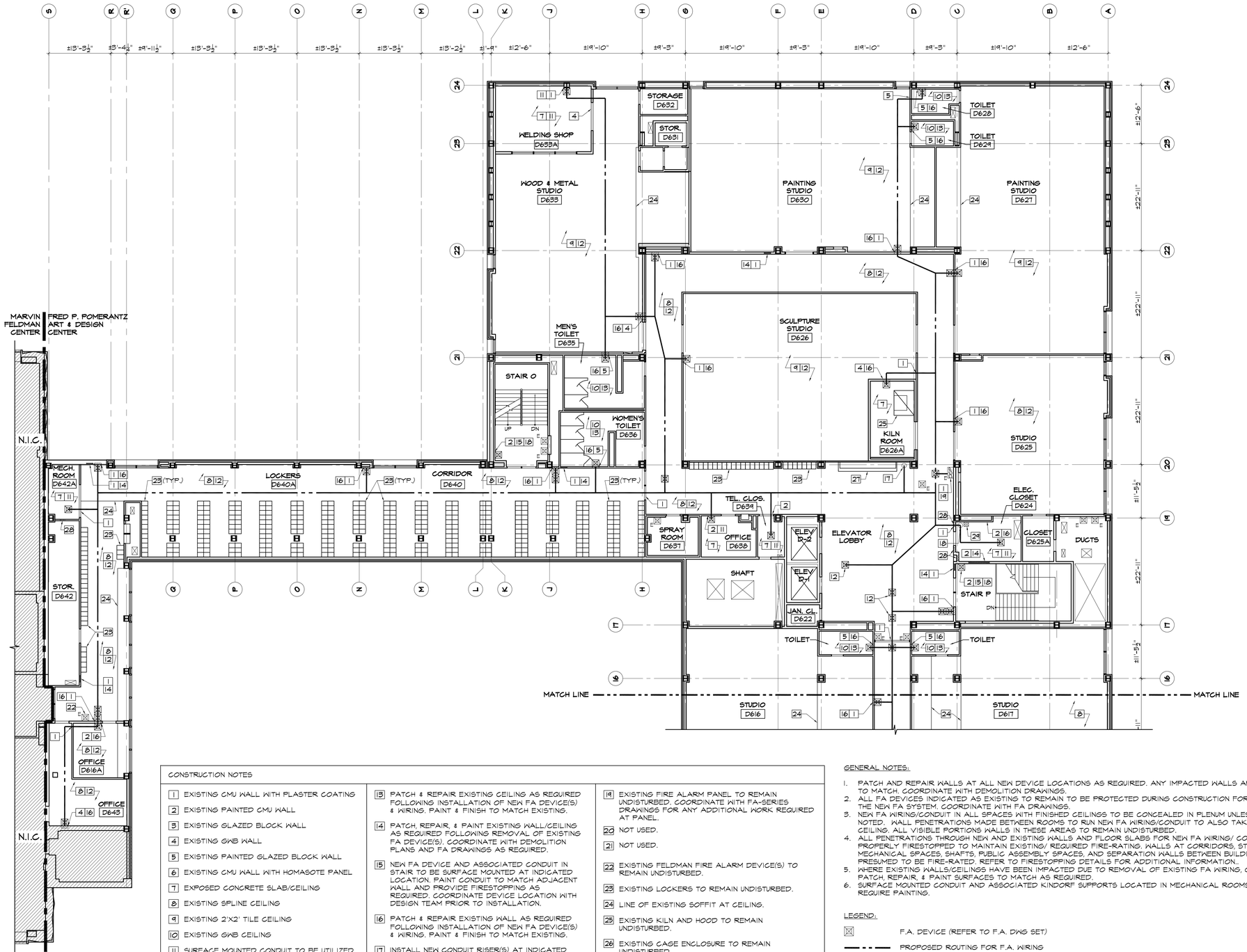
DOB NOW JOB#

SEAL & SIGNATURE:

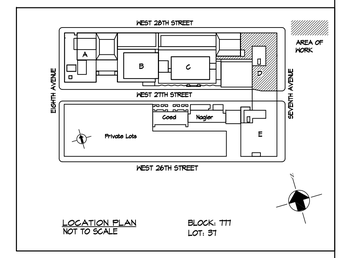
REGISTERED ARCHITECT
CLARE ELIZABETH ASHBURN GOODMAN
035589
STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-409.00
CADD FILE:	DOB page: 27 OF 44

NOT FOR CONSTRUCTION



6TH FLOOR CONSTRUCTION RCP NORTH
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING GLAZED BLOCK WALL
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. EXISTING CMU WALL WITH HOMASOTE PANEL
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
10. EXISTING GWB CEILING
11. SURFACE MOUNTED CONDUIT TO BE UTILIZED AT EXISTING WALL/CEILING TO FEED WIRING FOR NEW FA DEVICE(S). PAINT CONDUIT AND ASSOCATED KINDORF SUPPORTS AS REQUIRED TO MATCH ADJACENT SURFACE.
12. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW CEILING TILES TO MATCH EXIST.
13. PATCH & REPAIR EXISTING CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
14. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
15. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION. PAINT CONDUIT TO MATCH ADJACENT WALL AND PROVIDE FIRESTOPPING AS REQUIRED. COORDINATE DEVICE LOCATION WITH DESIGN TEAM PRIOR TO INSTALLATION.
16. PATCH & REPAIR EXISTING WALL AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
17. INSTALL NEW CONDUIT RISER(S) AT INDICATED LOCATION TO FEED FA WIRING FOR ROOF LEVEL ABOVE. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION.
18. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE/BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S).
19. EXISTING FIRE ALARM PANEL TO REMAIN UNDISTURBED. COORDINATE WITH FA-SERIES DRAWINGS FOR ANY ADDITIONAL WORK REQUIRED AT PANEL.
20. NOT USED.
21. NOT USED.
22. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
23. EXISTING LOCKERS TO REMAIN UNDISTURBED.
24. LINE OF EXISTING SOFFIT AT CEILING.
25. EXISTING KILN AND HOOD TO REMAIN UNDISTURBED.
26. EXISTING CAGE ENCLOSURE TO REMAIN UNDISTURBED.
27. EXISTING DISPLAY CASE TO REMAIN UNDISTURBED.
28. EXISTING PENETRATION(S) AT WALL/CEILING TO BE FIRESTOPPED AS REQUIRED.
29. EXISTING PENETRATION AT FLOOR SLAB BELOW TO BE FIRESTOPPED AS REQUIRED.

GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW FA WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
4. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION..
5. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
6. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.

LEGEND:

- F.A. DEVICE (REFER TO F.A. DWG SET)
- PROPOSED ROUTING FOR F.A. WIRING
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOR INSTALLATION OF NEW F.A. SYSTEM
- AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
- AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
- E — EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

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1983 Marcus Ave. Suite 109
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David Smotrich & Partners LLP
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443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

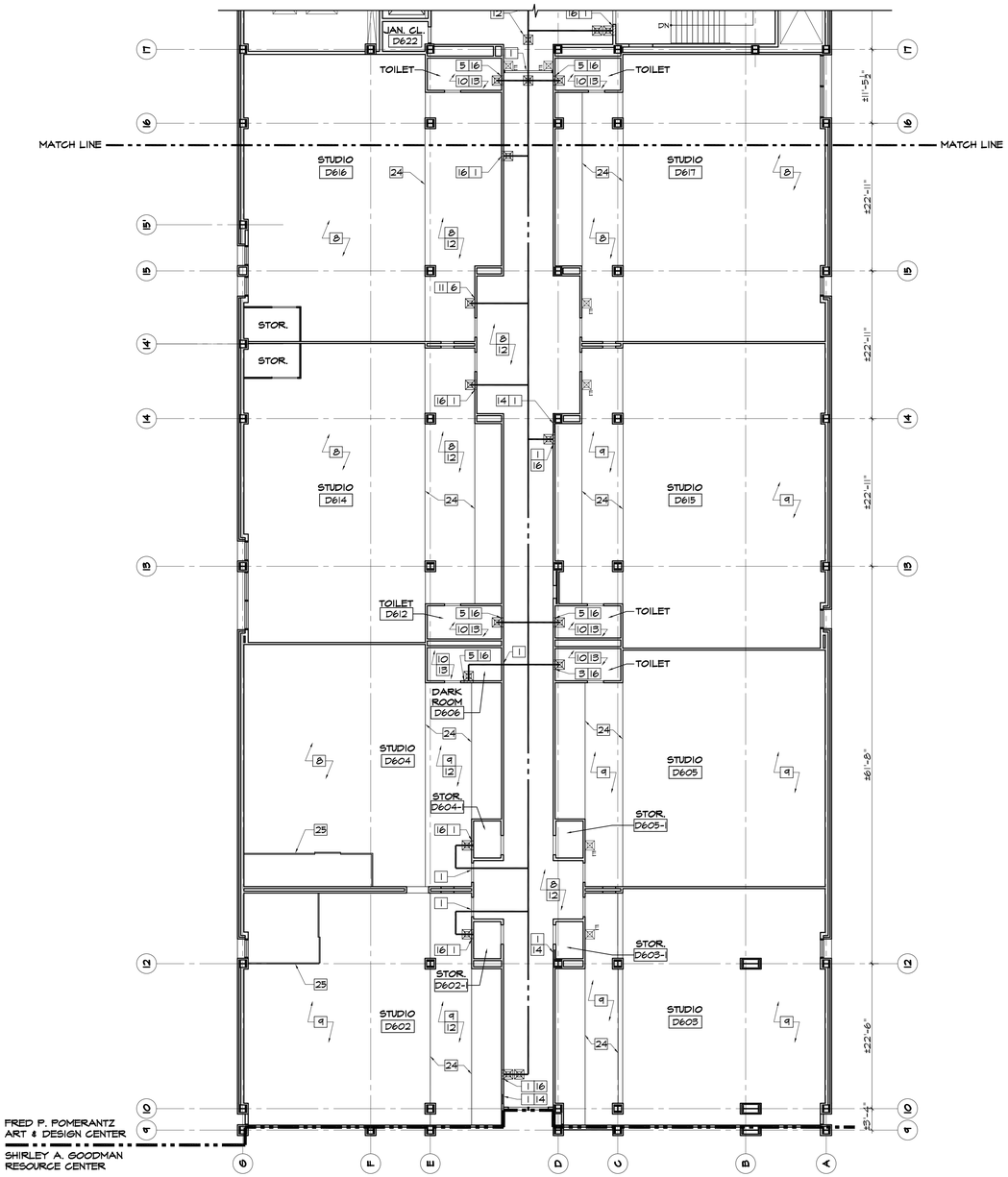
DRAWING TITLE:
6TH FLOOR CONSTRUCTION RCP NORTH

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH TARRIGAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-410.00
CADD FILE:	DOB page: 28 OF 44



1 / A-411 6TH FLOOR CONSTRUCTION RCP SOUTH
SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. EXISTING CMU WALL WITH PLASTER COATING
2. EXISTING PAINTED CMU WALL
3. EXISTING GLAZED BLOCK WALL
4. EXISTING GWB WALL
5. EXISTING PAINTED GLAZED BLOCK WALL
6. EXISTING CMU WALL WITH HOMASOTE PANEL
7. EXPOSED CONCRETE SLAB/CEILING
8. EXISTING SPLINE CEILING
9. EXISTING 2'X2' TILE CEILING
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12. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING REMOVAL/INSTALLATION OF FA DEVICE(S) & WIRING. NEW TILES TO MATCH EXISTING.
13. PATCH & REPAIR EXISTING CEILING AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
14. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
15. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION. PAINT CONDUIT TO MATCH ADJACENT WALL AND PROVIDE FIRESTOPPING AS REQUIRED. COORDINATE DEVICE LOCATION WITH DESIGN TEAM PRIOR TO INSTALLATION.
16. PATCH & REPAIR EXISTING WALL AS REQUIRED FOLLOWING INSTALLATION OF NEW FA DEVICE(S) & WIRING. PAINT & FINISH TO MATCH EXISTING.
17. INSTALL NEW CONDUIT RISER(S) AT INDICATED LOCATION TO FEED FA WIRING FOR ROOF LEVEL ABOVE. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION.
18. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR ABOVE/BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S).
19. EXISTING FIRE ALARM PANEL TO REMAIN UNDISTURBED. COORDINATE WITH FA-SERIES DRAWINGS FOR ANY ADDITIONAL WORK REQUIRED AT PANEL.
20. NOT USED.
21. NOT USED.
22. EXISTING FELDMAN FIRE ALARM DEVICE(S) TO REMAIN UNDISTURBED.
23. EXISTING LOCKERS TO REMAIN UNDISTURBED.
24. LINE OF EXISTING SOFFIT AT CEILING.
25. EXISTING KILN AND HOOD TO REMAIN UNDISTURBED.
26. EXISTING CAGE ENCLOSURE TO REMAIN UNDISTURBED.
27. EXISTING DISPLAY CASE TO REMAIN UNDISTURBED.
28. EXISTING PENETRATION(S) AT WALL/CEILING TO BE FIRESTOPPED AS REQUIRED.
29. EXISTING PENETRATION AT FLOOR SLAB BELOW TO BE FIRESTOPPED AS REQUIRED.

GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.
3. NEW FA WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW FA WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
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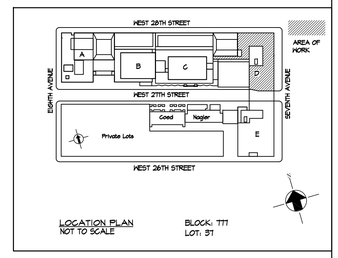
5. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
6. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.

LEGEND:

☒	F.A. DEVICE (REFER TO F.A. DWG SET)
—·—·—	PROPOSED ROUTING FOR F.A. WIRING
▨	AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOR INSTALLATION OF NEW F.A. SYSTEM
▬	AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED FOLLOWING REMOVAL OF EXISTING F.A. DEVICE
▩	AREA OF EXISTING PENETRATION(S) TO BE FIRESTOPPED
E	EXISTING FA DEVICE TO REMAIN. REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

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227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
6TH FLOOR CONSTRUCTION RCP SOUTH

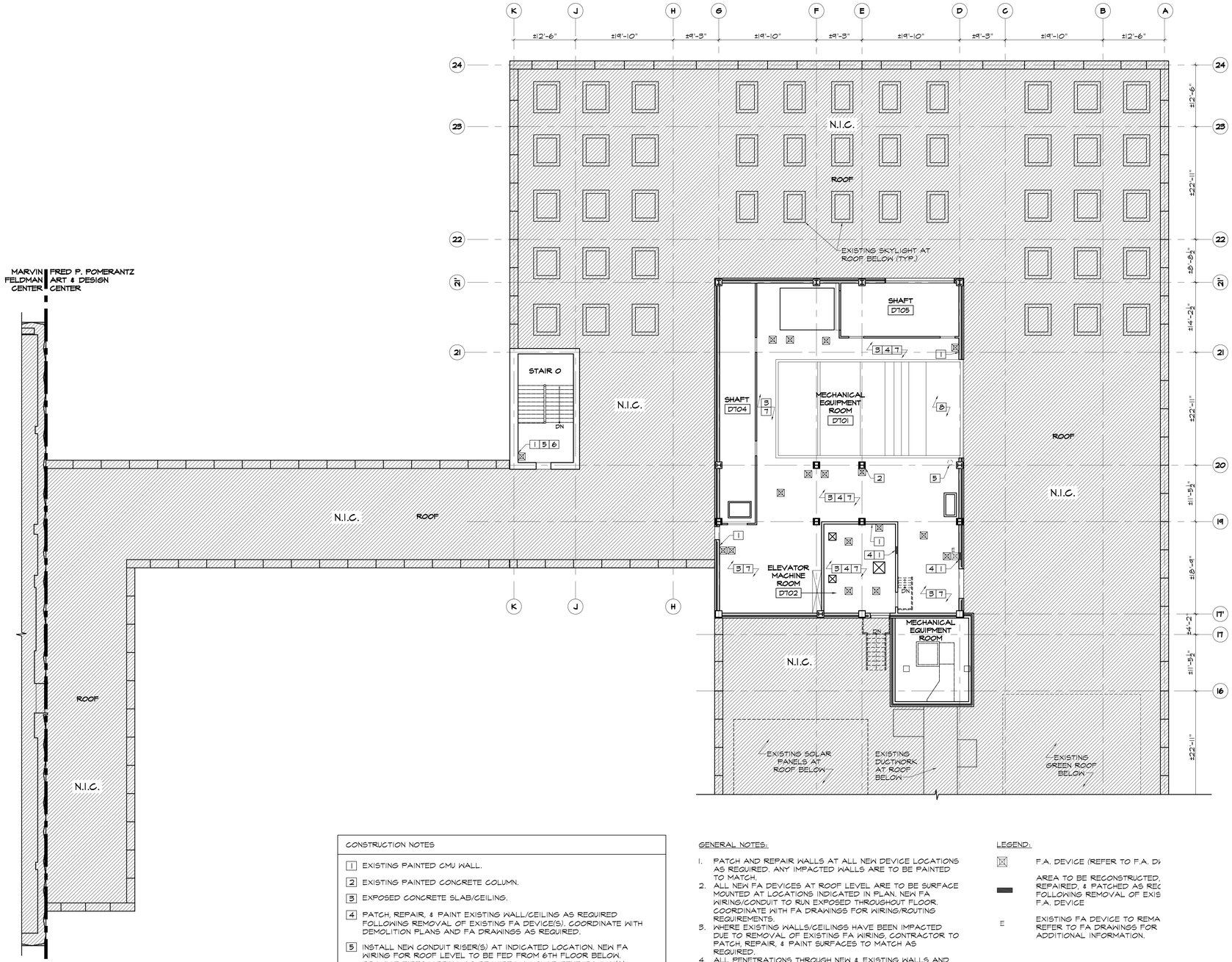
DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH GRIFFIN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-411.00
CADD FILE:	DOB page: 29 OF 44

NOT FOR CONSTRUCTION



ROOF
PARTIAL CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. EXISTING PAINTED CMU WALL.
2. EXISTING PAINTED CONCRETE COLUMN.
3. EXPOSED CONCRETE SLAB/CEILING.
4. PATCH, REPAIR, & PAINT EXISTING WALL/CEILING AS REQUIRED FOLLOWING REMOVAL OF EXISTING FA DEVICE(S). COORDINATE WITH DEMOLITION PLANS AND FA DRAWINGS AS REQUIRED.
5. INSTALL NEW CONDUIT RISER(S) AT INDICATED LOCATION. NEW FA WIRING FOR ROOF LEVEL TO BE FED FROM 6TH FLOOR BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S).
6. NEW FA DEVICE AND ASSOCIATED CONDUIT IN STAIR TO BE SURFACE MOUNTED AT INDICATED LOCATION AND FED FROM 6TH FLOOR BELOW.
7. SURFACE MOUNTED CONDUIT TO BE UTILIZED WHERE ABLE TO RUN ALL NEW FA WIRING THROUGHOUT FLOOR AS REQUIRED. COORDINATE WITH FA DRAWINGS FOR WIRING/ROUTING REQUIREMENTS.
8. EXISTING MECHANICAL EQUIPMENT TO REMAIN UNDISTURBED.

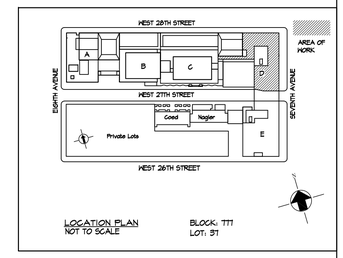
GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL NEW DEVICE LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH.
2. ALL NEW FA DEVICES AT ROOF LEVEL ARE TO BE SURFACE MOUNTED AT LOCATIONS INDICATED IN PLAN. NEW FA WIRING/CONDUIT TO RUN EXPOSED THROUGHOUT FLOOR. COORDINATE WITH FA DRAWINGS FOR WIRING/ROUTING REQUIREMENTS.
3. WHERE EXISTING WALLS/CEILINGS HAVE BEEN IMPACTED DUE TO REMOVAL OF EXISTING FA WIRING, CONTRACTOR TO PATCH, REPAIR, & PAINT SURFACES TO MATCH AS REQUIRED.
4. ALL PENETRATIONS THROUGH NEW & EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
5. ALL FA DEVICES INDICATED AS EXISTING TO REMAIN TO BE PROTECTED DURING CONSTRUCTION FOR CONNECTION TO THE NEW FA SYSTEM. COORDINATE WITH FA DRAWINGS.

LEGEND:

- ☒ F.A. DEVICE (REFER TO F.A. DI
- ▬ AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQ FOLLOWING REMOVAL OF EXIS F.A. DEVICE
- E EXISTING FA DEVICE TO REMA REFER TO FA DRAWINGS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE

BLOCK: 771
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

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227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

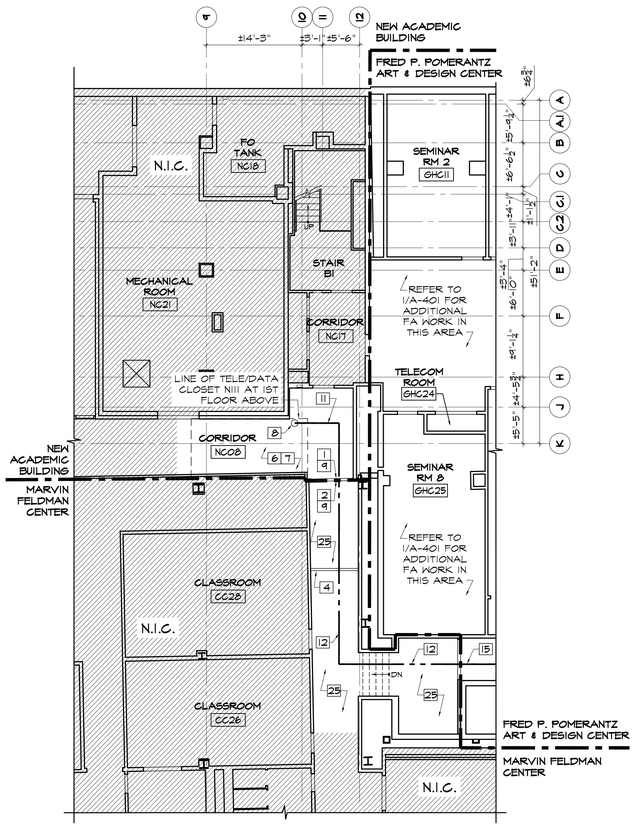
DRAWING TITLE:
ROOF
PARTIAL CONSTRUCTION RCP

DOB NOW JOB#

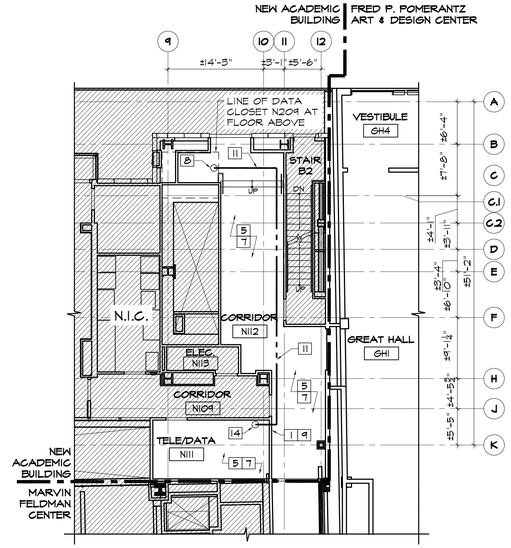
SEAL & SIGNATURE:

REGISTERED ARCHITECT ELIZABETH KERRIGAN 035589 STATE OF NEW YORK

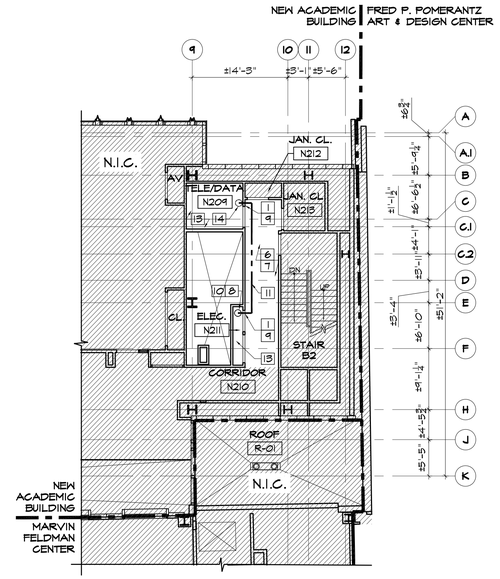
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-412.00
CADD FILE:	DOB page: 30 OF 44



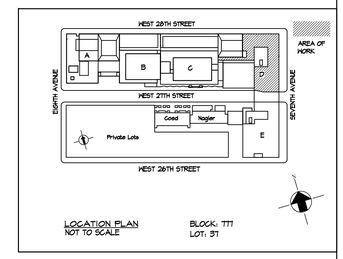
1 / A-413 CELLAR PARTIAL CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"



2 / A-413 1ST FLOOR PARTIAL CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"



3 / A-413 2ND FLOOR PARTIAL PLAN CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

CONSTRUCTION NOTES

1. EXISTING GWB WALL
2. EXISTING CONCRETE WALL
3. NOT USED
4. LINE OF EXISTING SOFFIT AT CEILING.
5. EXISTING 2'X2' TILE CEILING. ARMSTRONG OPTIMA TEGULAR ⅝" SQUARE LAY-IN MOLD RESISTANT MINERAL FIBER PANEL, FINE TEXTURE IN WHITE. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
6. EXISTING 2'X4' METAL SUSPENSION CEILING. ARMSTRONG RH200 METAL CEILING ALUMINUM INTERIOR PANELS IN WHITE WITH RD6350 PERFORATION PATTERN. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
7. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING INSTALLATION OF CONDUIT / WIRING. NEW TILES TO MATCH EXISTING.
8. LOCATION OF NEW CONDUIT RISER(S) FROM FLOOR ABOVE. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S). COORDINATE WITH DEMOLITION PLAN AND ELECTRICAL DRAWINGS AS REQUIRED.
9. EXISTING PENETRATION(S) AT WALL/CEILING TO BE FIRESTOPPED.
10. CONDUIT RISER AT THIS LOCATION TO CONTINUE THROUGH STACKED ELECTRICAL CLOSETS ABOVE FOR CONNECTION AT 10TH FLOOR. REFER TO 1/A-414 AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
11. CABLING TO RUN ABOVE CEILING IN CORRIDOR. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
12. CABLING TO RUN ABOVE ACT CEILING IN FELDMAN TO ENTER POMERANTZ VIA PLENUM. CABLING TO CONTINUE THROUGH POMERANTZ PLENUM TO CONNECT ATS CLOSET AT THE FAR EAST END OF THE POMERANTZ CELLAR. COORDINATE WITH ELECTRICAL & FA DRAWINGS AS REQUIRED.
13. EXPOSED CONCRETE SLAB/CEILING
14. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR BELOW. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S). COORDINATE WITH DEMOLITION PLAN & ELECTRICAL DRAWINGS AS REQUIRED.
15. CABLING FROM NAB GENERATOR TO NEW POMERANTZ ATS TO FOLLOW THE PATH OF NEW POMERANTZ FA ROUTING. COORDINATE WITH CONSTRUCTION PLAN AND ELECTRICAL & FA DRAWINGS AS REQUIRED.
16. CABLING TO PENETRATE THROUGH WALL OF GENERATOR ENCLOSURE FOR CONNECTION AT DISCONNECT SWITCHES MOUNTED TO SIDE OF ENCLOSURE. COORDINATE WITH ELECTRICAL DRAWINGS AS REQUIRED. EXACT LOCATION OF PENETATION AT ENCLOSURE TO BE VERIFIED IN FIELD.
17. CABLING TO RUN ALONG THE SIDE OF THE GENERATOR ENCLOSURE STRUCTURE AS REQUIRED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
18. CONDUIT RUN ALONG EXISTING ROOF TO BE SUPPORTED BY UNISTRUT SYSTEM SECURED TO EXISTING ROOF STRUCTURE. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION & REQUIREMENTS.
19. SURFACE MOUNTED CONDUIT/CABLING TO BE UTILIZED THROUGHOUT 10TH FLOOR WHERE ABLE TO RUN NEW GENERATOR WIRING UNLESS OTHERWISE NOTED. COORDINATE WITH ELECTRICAL DRAWINGS FOR WIRING/ ROUTING REQUIREMENTS.
20. NEW DISCONNECT SWITCHES TO BE MOUNTED TO THE GENERATOR ENCLOSURE. COORDINATE WITH FA-SERIES AND ELECTRICAL DRAWINGS AS REQUIRED.
21. LINE OF GENERATOR ENCLOSURE OVERHANG. WEST SIDE OF ENCLOSURE OVERHANGS ABOVE ROOF ±4'-6" A.F.F. TO UNDERSIDE OF OVERHANG. EXACT DIMENSION TO BE VERIFIED IN FIELD AS REQUIRED.
22. INSTALL NEW CONDUIT RISER(S) AT INDICATED LOCATION DOWN TO 10TH FLOOR BELOW. EXACT LOCATION OF PENETRATION(S) TO BE VERIFIED IN FIELD. COORDINATE WITH ROOFING NOTES & PENETRATION DETAILS AS REQUIRED TO ENSURE EXISTING ROOF WARRANTY IS MAINTAINED. COORDINATE WITH ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS AND REQUIREMENTS.
23. AREA OF EXISTING ROOF. PROTECT DURING CONSTRUCTION AS REQUIRED.
24. LOCATION OF NEW CONDUIT RISER(S) TO FLOOR BELOW. RISER(S) TO RUN THROUGH STACKED ELECTRICAL CLOSETS DOWN TO 2ND FLOOR. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S) AND REFER TO DRAWING A-413 FOR ADDITIONAL INFORMATION. COORDINATE WITH DEMOLITION PLAN & ELECTRICAL DRAWINGS AS REQUIRED.
25. EXISTING 2'X2' TILE CEILING. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING INSTALLATION OF NEW GENERATOR WIRING & CONDUIT. NEW TILES TO MATCH EXISTING.

GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL CABLING PENETRATION LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. NEW WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW GENERATOR WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
3. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW CABLING TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
4. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.
5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION & REQUIREMENTS.

LEGEND:

— · - · — PROPOSED ROUTING FROM NAB GENERATOR TO NEW POMERANTZ ATS

NOT FOR CONSTRUCTION

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

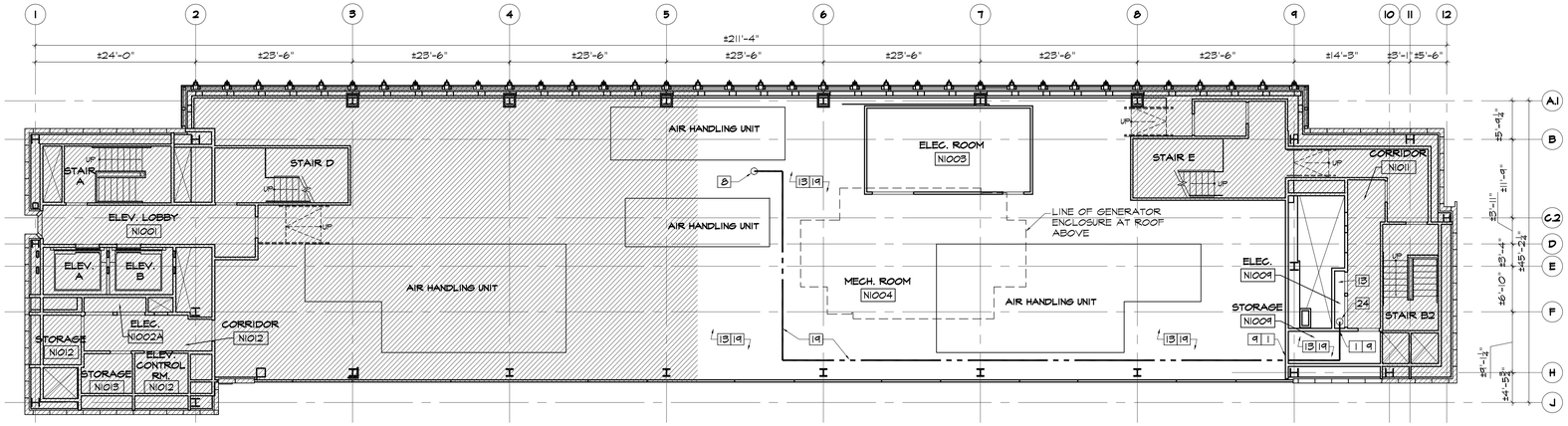
DRAWING TITLE:
NAB GENERATOR ROUTING CELLAR, 1ST & 2ND FLOOR CONSTRUCTION RCP

DOB NOW JOB#

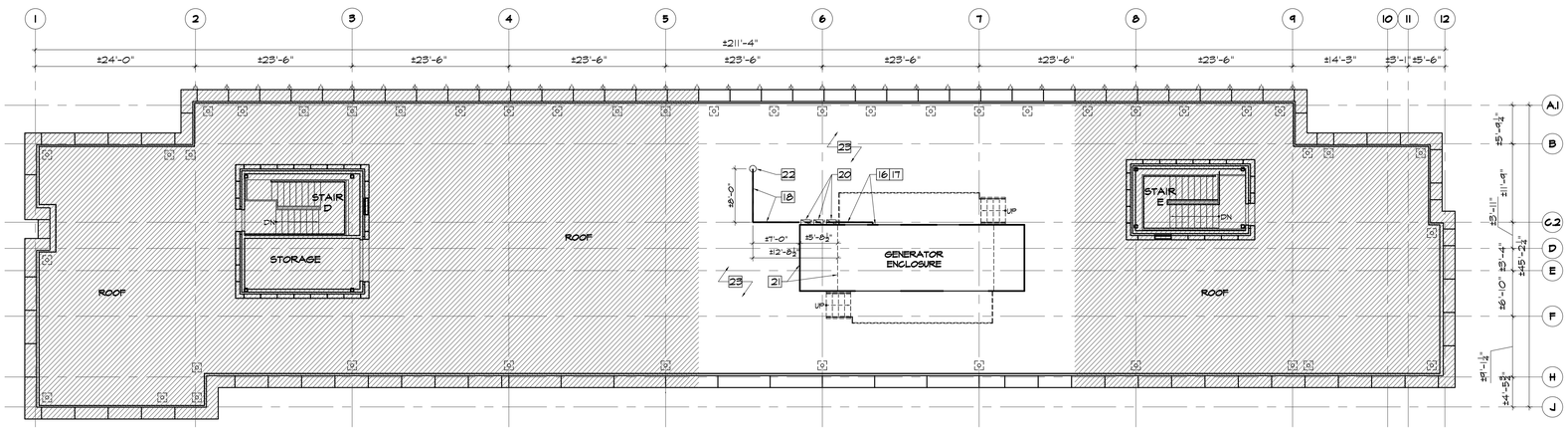
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KRIGMAN 035589 STATE OF NEW YORK

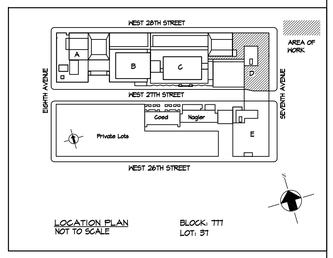
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-413.00
CADD FILE:	DOB page: 31 OF 44



1 / A-414 10TH FLOOR CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"



2 / A-414 ROOF CONSTRUCTION RCP
SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. EXISTING GWB WALL
2. EXISTING CONCRETE WALL
3. NOT USED
4. LINE OF EXISTING SOFFIT AT CEILING.
5. EXISTING 2'X2' TILE CEILING. ARMSTRONG OPTIMA TEGULAR ¾" SQUARE LAY-IN MOLD RESISTANT MINERAL FIBER PANEL. FINE TEXTURE IN WHITE. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
6. EXISTING 2'X4' METAL SUSPENSION CEILING. ARMSTRONG RH200 METAL CEILING ALUMINUM INTERIOR PANELS IN WHITE WITH RD6550 PERFORATION PATTERN. ANY DISTURBED PANELS TO BE REPLACED IN KIND AND MODIFIED AS REQUIRED.
7. REINSTALL OR REPLACE EXISTING/REMOVED CEILING TILES AS REQUIRED FOLLOWING INSTALLATION OF CONDUIT / WIRING. NEW TILES TO MATCH EXISTING.
8. LOCATION OF NEW CONDUIT RISER(S) FROM FLOOR ABOVE. PROVIDE FIRESTOPPING AS REQUIRED AT SLAB PENETRATION(S). COORDINATE WITH DEMOLITION PLAN AND ELECTRICAL DRAWINGS AS REQUIRED.
9. EXISTING PENETRATION(S) AT WALL/CEILING TO BE FIRESTOPPED.
10. CONDUIT RISER AT THIS LOCATION TO CONTINUE THROUGH STACKED ELECTRICAL CLOSETS ABOVE FOR CONNECTION AT 10TH FLOOR. REFER TO 1/A-414 AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
11. CABLING TO RUN ABOVE CEILING IN CORRIDOR. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
12. CABLING TO RUN ABOVE ACT CEILING IN FELDMAN TO ENTER POMERANTZ VIA PLENUM. CABLING TO CONTINUE THROUGH POMERANTZ PLENUM TO CONNECT ATS CLOSET AT THE FAR EAST END OF THE POMERANTZ CELLAR. COORDINATE WITH ELECTRICAL & FA DRAWINGS AS REQUIRED.
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15. CABLING FROM NAB GENERATOR TO NEW POMERANTZ ATS TO FOLLOW THE PATH OF NEW POMERANTZ FA ROUTING. COORDINATE WITH CONSTRUCTION PLAN AND ELECTRICAL & FA DRAWINGS AS REQUIRED.
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17. CABLING TO RUN ALONG THE SIDE OF THE GENERATOR ENCLOSURE STRUCTURE AS REQUIRED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
18. CONDUIT RUN ALONG EXISTING ROOF TO BE SUPPORTED BY UNISTRUT SYSTEM SECURED TO EXISTING ROOF STRUCTURE. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION & REQUIREMENTS.
19. SURFACE MOUNTED CONDUIT/CABLING TO BE UTILIZED THROUGHOUT 10TH FLOOR WHERE ABLE TO RUN NEW GENERATOR WIRING UNLESS OTHERWISE NOTED. COORDINATE WITH ELECTRICAL DRAWINGS FOR WIRING/ ROUTING REQUIREMENTS.
20. NEW DISCONNECT SWITCHES TO BE MOUNTED TO THE GENERATOR ENCLOSURE. COORDINATE WITH FA-SERIES AND ELECTRICAL DRAWINGS AS REQUIRED.
21. LINE OF GENERATOR ENCLOSURE OVERHANG. WEST SIDE OF ENCLOSURE OVERHANGS ABOVE ROOF ±4'-6" A.F.F. TO UNDERSIDE OF OVERHANG. EXACT DIMENSION TO BE VERIFIED IN FIELD AS REQUIRED.
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GENERAL NOTES:

1. PATCH AND REPAIR WALLS AT ALL CABLING PENETRATION LOCATIONS AS REQUIRED. ANY IMPACTED WALLS ARE TO BE PAINTED TO MATCH. COORDINATE WITH DEMOLITION DRAWINGS.
2. NEW WIRING/CONDUIT IN ALL SPACES WITH FINISHED CEILINGS TO BE CONCEALED IN PLENUM UNLESS OTHERWISE NOTED. WALL PENETRATIONS MADE BETWEEN ROOMS TO RUN NEW GENERATOR WIRING/CONDUIT TO ALSO TAKE PLACE ABOVE CEILING. ALL VISIBLE PORTIONS WALLS IN THESE AREAS TO REMAIN UNDISTURBED.
3. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW CABLING TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
4. SURFACE MOUNTED CONDUIT AND ASSOCIATED KINDORF SUPPORTS LOCATED IN MECHANICAL ROOMS WILL NOT REQUIRE PAINTING.
5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION & REQUIREMENTS.

LEGEND:

— · · — PROPOSED ROUTING FROM NAB GENERATOR TO NEW POMERANTZ ATS

ROOFING NOTES:

1. EXISTING ROOF IS A KEMPER SYSTEM AMERICA INC. KEMPEROL 2K-PR COLOR SYSTEM, UNDER KEMPER WARRANTY. THE KEMPER SYSTEM PROJECT NUMBER IS: KSA #23078.
2. IF ANY MODIFICATIONS ARE TO BE MADE TO THE EXISTING ROOF, KEMPER IS TO BE NOTIFIED IN ADVANCE AND AND A KEMPER APPROVED DETAIL AND CONSTRUCTION METHOD IS TO BE UTILIZED.
3. A KEMPER SYSTEM AMERICA INC. CERTIFIED INSTALLER MUST BE UTILIZED TO PERFORM ANY WORK ON THIS ROOF.
4. PRIOR TO ANY WORK BEING DONE; THE CONTRACTOR IS TO COORDINATE WITH KEMPER TO ENSURE EXISTING WARRANTY IS NOT VOIDED IN ANY WAY.
5. AFTER WORK IS COMPLETE CONTRACTOR TO OBTAIN UPDATED WARRANTY FOR THE WORK PERFORMED.
6. PREPARE ALL SUBSTRATE SURFACES IN ACCORDANCE WITH KEMPER APPLICATION REQUIREMENTS.
7. APPLY KEMPERTEC EPS PRIMER OVER CONCRETE SURFACE WITH BROADCAST OF .5 SILICA SAND INTO THE WT PRIMER 50LBS/ 100SQ FT. AND ALLOW TO CURE
8. INSTALL NEW KEMPEROL WATERPROOFING MEMBRANE/ FLASHING SYSTEM OVER PREPARED SURFACE IN ACCORDANCE WITH CURRENT INSTALLATION DETAILS. KEMPEROL MEMBRANE TO INCLUDE KEMPEROL 2KPUR RESIN WITH 165 FLEECE.
9. INSTALL OVERBURDEN ASSEMBLY TO INCLUDE DRAINAGE MAT, EXTRUDED POLYSTYRENE INSULATION, FILTER FABRIC, AND PAVERS ON PEDESTAL.
10. REFER TO PENETRATION DETAIL DRAWING 7/A-415 FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

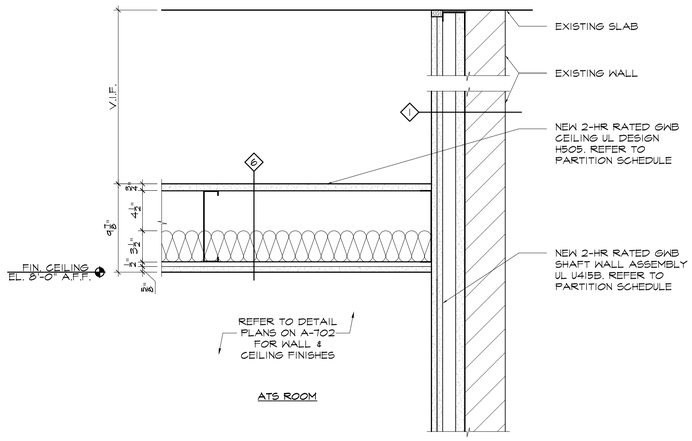
DRAWING TITLE:
NAB GENERATOR ROUTING 10TH FLOOR & ROOF CONSTRUCTION RCP

DOB NOW JOB#

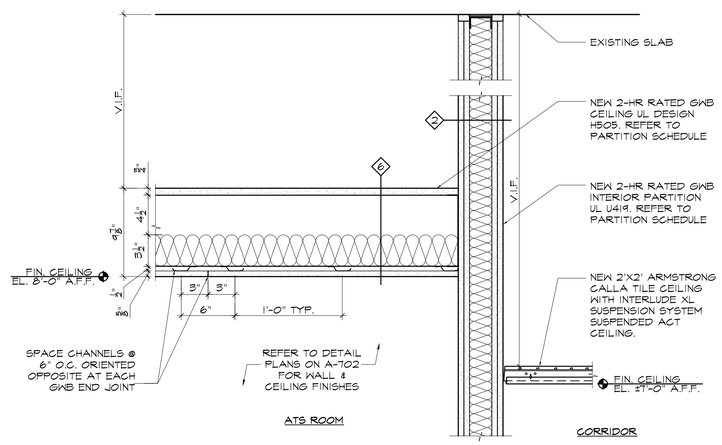
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KORIGAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-414.00
CADD FILE:	DOB page: 32 OF 44



1 A-415 CEILING DETAIL - ATS ROOM
SCALE: 1-1/2" = 1'-0"



2 A-415 CEILING DETAIL - ATS ROOM
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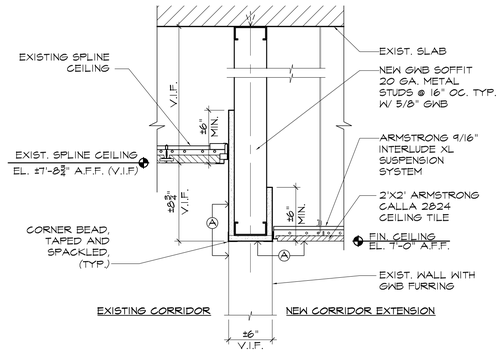

3 A-415 SOFFIT DETAIL - CELLAR CORRIDOR
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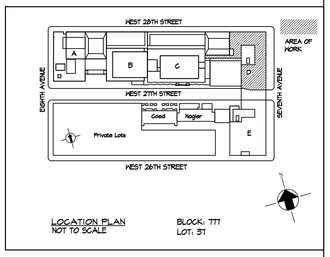

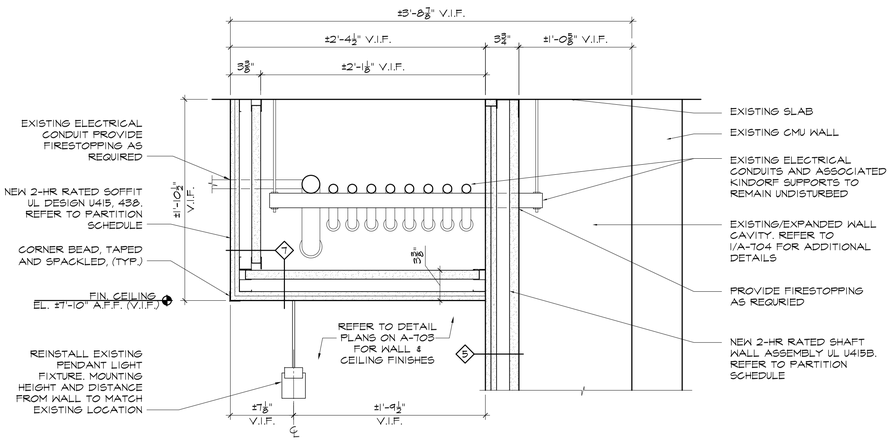

4 A-415 SOFFIT DETAIL - KITCHENETTE D125
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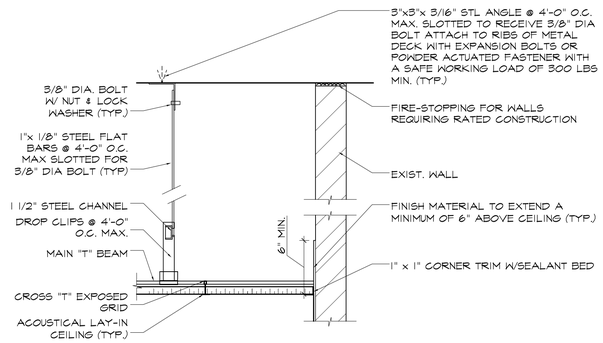
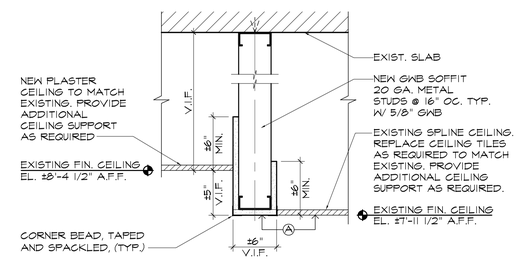


5 A-415 TYPICAL ACT CEILING DETAIL
SCALE: 1-1/2" = 1'-0"



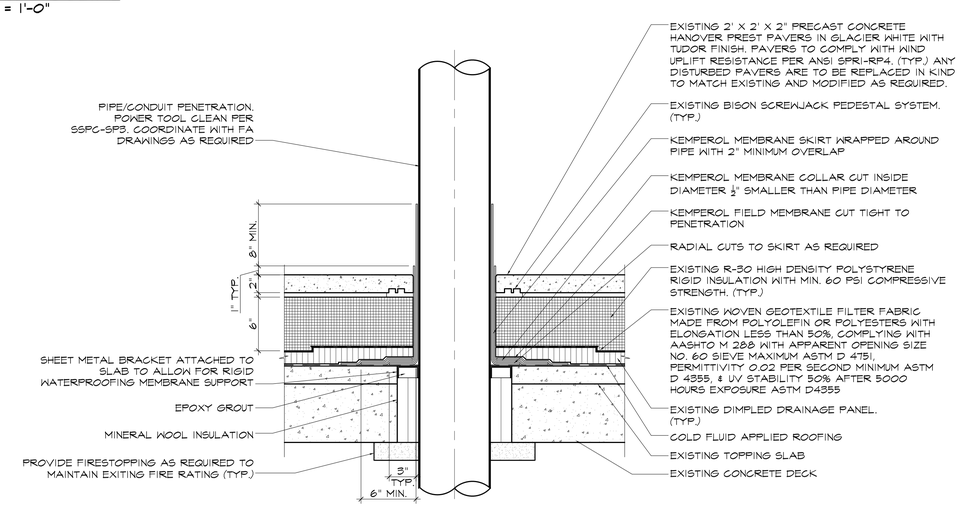
6 A-415 SOFFIT DETAIL - 3RD FLOOR CORRIDOR
SCALE: 1-1/2" = 1'-0"

ROOFING NOTES:

1. EXISTING ROOF IS A KEMPER SYSTEM AMERICA INC. KEMPEROL 2K-FR COLOR SYSTEM, UNDER KEMPER WARRANTY. THE KEMPER SYSTEM PROJECT NUMBER IS: KSA #23078.
2. IF ANY MODIFICATIONS ARE TO BE MADE TO THE EXISTING ROOF, KEMPER IS TO BE NOTIFIED IN ADVANCE AND AND A KEMPER APPROVED DETAIL AND CONSTRUCTION METHOD IS TO BE UTILIZED.
3. A KEMPER SYSTEM AMERICA INC. CERTIFIED INSTALLER MUST BE UTILIZED TO PERFORM ANY WORK ON THIS ROOF.
4. PRIOR TO ANY WORK BEING DONE, THE CONTRACTOR IS TO COORDINATE WITH KEMPER TO ENSURE EXISTING WARRANTY IS NOT VOIDED IN ANY WAY.
5. AFTER WORK IS COMPLETE CONTRACTOR TO OBTAIN UPDATED WARRANTY FOR THE WORK PERFORMED.
6. PREPARE ALL SUBSTRATE SURFACES IN ACCORDANCE WITH KEMPER APPLICATION REQUIREMENTS.
7. APPLY KEMPERTEC EPS PRIMER OVER CONCRETE SURFACE WITH BROADCAST OF .5 SILICA SAND INTO THE WT PRIMER 50LBS/ 1005Q FT. AND ALLOW TO CURE
8. INSTALL NEW KEMPEROL WATERPROOFING MEMBRANE/ FLASHING SYSTEM OVER PREPARED SURFACE IN ACCORDANCE WITH CURRENT INSTALLATION DETAILS. KEMPEROL MEMBRANE TO INCLUDE KEMPEROL 2KPUR RESIN WITH 165 FLEECE.
9. INSTALL OVERBURDEN ASSEMBLY TO INCLUDE DRAINAGE MAT, EXTRUDED POLYSTYRENE INSULATION, FILTER FABRIC, AND PAVERS ON PEDESTAL.

LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	LAMP QUANTITY	LAMP TYPE	CONTROL	COMMENTS
A1	BP-24-LS/8CS-EM/IONKIT-CEC-UNV	H.E. WILLIAMS	3	LED	ND	FLAT PANEL LIGHT FIXTURE TO BE RECESSED INTO CEILING GRID. FIXTURE TO BE NOMINALLY 2' WIDE X 1-3/4" HIGH X 4' LONG. COORDINATE WITH ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
A2	2VT2/LD5/3/DR/UNV/VT-REM-EL/ LB35/KL/SSL/U/VT2-SS-MBK	METALUX	2	LED	ND	COORDINATE WITH ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.



7 A-415 NAB ROOF PENETRATION DETAIL
SCALE: 1-1/2" = 1'-0"

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

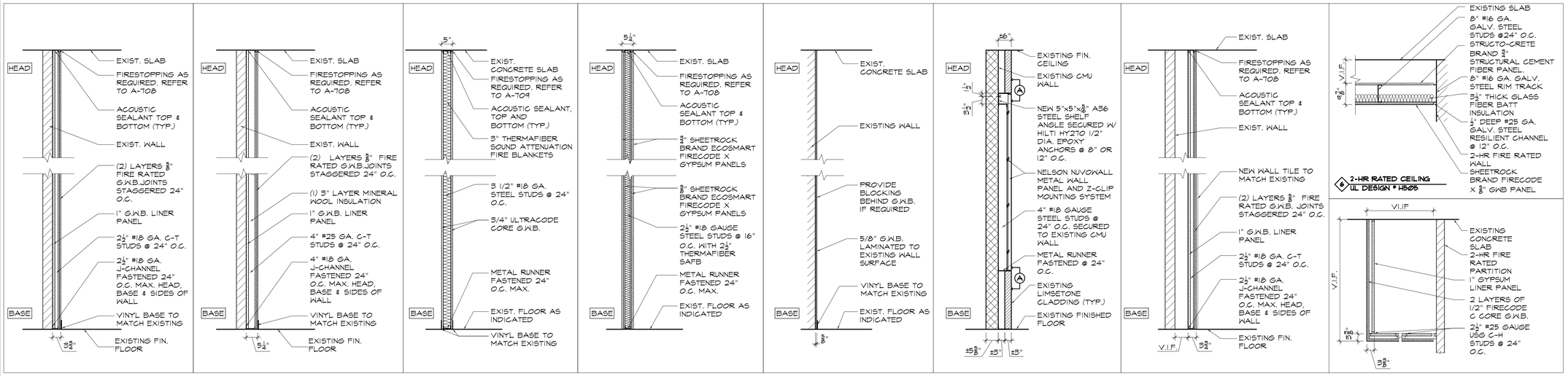
DRAWING TITLE:
CEILING DETAILS, ROOF PENETRATION DETAIL, & LIGHTING SCHEDULE

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH MORRISSEY 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-415.00
CADD FILE:	DOB page: 33 OF 44



1 2-HR RATED SHAFT PARTITION UL DESIGN # U411 C

1B 2-HR RATED SHAFT PARTITION UL DESIGN # U411 C

2 2-HR RATED PARTITION UL DESIGN # U419

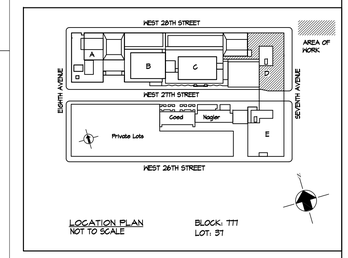
2B 2-HR RATED PARTITION UL DESIGN # U419

3 FURRED NON-RATED PARTITION

4 FURRED NON-RATED PARTITION

5 2-HR RATED SHAFT PARTITION UL DESIGN # U411 C

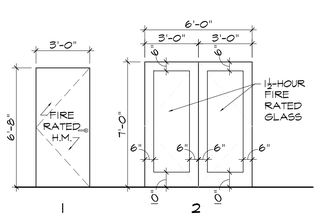
7 2-HR RATED SOFFIT UL DESIGN # U419, U438



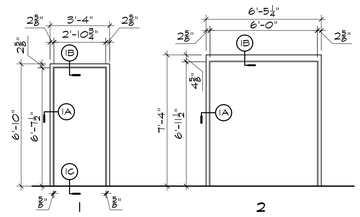
LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

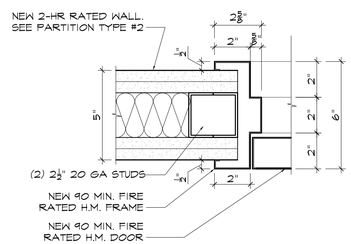
1 A-700 PARTITION SCHEDULE
SCALE: 1/2" = 1'-0"



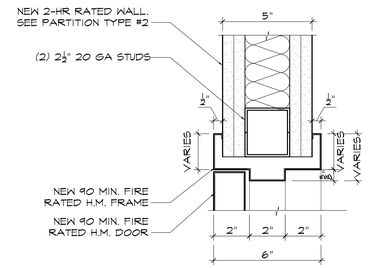
2 A-700 DOOR TYPES
SCALE: 1/4" = 1'-0"



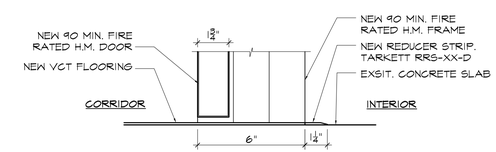
3 A-700 DOOR FRAME TYPES
SCALE: 1/4" = 1'-0"



4 A-700 DOOR JAMB DETAIL - TYPE IA
SCALE: 3" = 1'-0"



5 A-700 DOOR HEADER DETAIL - TYPE IB
SCALE: 3" = 1'-0"



6 A-700 DOOR SADDLE DETAIL - TYPE IC
SCALE: 3" = 1'-0"

Door Schedule

DOOR #	DOOR FROM	DOOR TO	DOORS SIZE	DOORS THICK	DOORS MAT.	DOORS TYPE	FRAMES MAT.	FRAMES TYPE	FRAMES JAMB	FRAMES HEAD	FRAMES SADDLE	LABEL	HW SET	HANDING	REMARKS
1	CORRIDOR	DC35 - ATS ROOM	3'-0"x6'-8"	1 3/4"	HM	1	HM	1	1A	1B	1C	1 1/2 HR	#1	LHR	DOOR AND FRAME TO BE PAINTED P4, REFER TO FINISH SCHEDULE
2	CORRIDOR	DC35B - STORAGE ROOM	3'-0"x6'-8"	1 3/4"	HM	1	HM	1	1A	1B	1C	1 1/2 HR	#1	RHR	DOOR AND FRAME TO BE PAINTED P4, REFER TO FINISH SCHEDULE
3	CORRIDOR	DC35A - STORAGE ROOM	3'-0"x6'-8"	1 3/4"	HM	1	HM	1	1A	1B	1C	1 1/2 HR	#1	RHR	DOOR AND FRAME TO BE PAINTED P4, REFER TO FINISH SCHEDULE
4	POMERANTZ CELLAR CORRIDOR	FELDMAN CELLAR CORRIDOR	(2)3'-0"x7'-0"	1 3/4"	HM/GLASS	2	HM	2	1A	1B	-	1 1/2 HR	#2	RHR/LHR	DOOR AND FRAME TO BE PAINTED P4, REFER TO FINISH SCHEDULE
5	POMERANTZ 3RD FLR. CORRIDOR	FELDMAN 3RD FLR. CORRIDOR	(2)3'-0"x7'-0"	1 3/4"	HM/GLASS	2	HM	2	1A	1B	-	1 1/2 HR	#2	RH/LH	DOOR AND FRAME TO BE PAINTED P4, REFER TO FINISH SCHEDULE

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL DOOR, FRAME, AND HARDWARE INFORMATION
2. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION
3. DOOR GLAZING TO BE SUPERLITE II-XL 90 MIN. FIRE RESISTIVE GLASS BY SAFTIFIRST.
4. FULL GLASS DOORS TO USE CURRIES GLASS MOULDING TYPE B.

Finish Legend

PAINT

P1	MFR: BENJAMIN MOORE COLOR: MATCH EXISTING	
P2	MFR: BENJAMIN MOORE NO: OC-21 COLOR: MOUNTAIN PEAK WHITE	
P3	MFR: BENJAMIN MOORE NO: OC-21 COLOR: MOUNTAIN PEAK WHITE	
P4	MFR: BENJAMIN MOORE NO: 2154-30 COLOR: IRON MOUNTAIN	
P5	MFR: BENJAMIN MOORE COLOR: MATCH EXISTING	
P6	MFR: BENJAMIN MOORE NO: OC-67 COLOR: ICE MIST	
P7	MFR: BENJAMIN MOORE NO: OC-66 COLOR: SNOW WHITE	
P8	MFR: BENJAMIN MOORE COLOR: MATCH EXISTING	
P9	MFR: BENJAMIN MOORE COLOR: MATCH EXISTING	
P10	MFR: BENJAMIN MOORE COLOR: MATCH EXISTING	
P11	MFR: BENJAMIN MOORE COLOR: MATCH EXISTING	

VINYL COMPOSITION TILE

VT1	MATCH EXISTING

WALL BASE

B1	MATCH EXISTING

REDUCING STRIP

R1	MFR: TARKETT STYLE: SSR-XX-B COLOR: MATCH VCT SIZE: DOOR WIDTH *CONFIRM COMPATIBILITY W/ DEPTH OF FIN. VCT FLOOR

WALL TILE

T1	MFR: LUNGARNO STYLE: FIELD TILE COLOR: UT1001 - GLOSSY WHITE SIZE: 12"X24"

METAL WALL PANEL

MP1	MFR: NELSON AMD STYLE: NUVO WALLS SIZE: SEE A-703 MATERIAL: GALVANIZED STEEL THICKNESS: 14GA. COLOR: MATCH P8 (POWDER COAT)
MP2	MFR: NELSON AMD STYLE: NUVO WALLS SIZE: SEE A-703 MATERIAL: GALVANIZED STEEL THICKNESS: 14GA. COLOR: MATCH P8 (POWDER COAT)

FINISH NOTES:
1. NEW HM DOORS & FRAMES TO BE PAINTED COLOR P4 ON BOTH SIDES OF OPENING (TYP.)
2. ALL EXPOSED CONDUITS TO BE PAINTED TO MATCH ADJACENT SURFACES. CONTRACTOR TO FIELD VERIFY & COORDINATE WITH F.I.T. FACILITIES AS REQUIRED.
3. WALLS & CEILINGS REQUIRING PATCH & REPAIR WORK ASSOCIATED WITH DEMOLITION/INSTALLATION OF FIRE ALARM DEVICES & WIRING TO BE PAINTED TO MATCH.
4. PROVIDE ADDITIONAL PAINT COLORS AS REQUIRED.
5. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

Hardware Schedule

HARDWARE SET #	DESCRIPTION		FINISH	MFR.
1	(3) HINGES, FULL MORTISE	TA2714 [NRP]	US26D	MCKINNEY
	(1) ENTRANCE LOCK	CL3157 NZD CT6R	626	CORBIN RUSSWIN
	(1) CONCEALED OVERHEAD STOP	1-536	689	NORTON RIXSON
	(1) SURFACE CLOSER	DC8210 A13	689	CORBIN RUSSWIN
	(1) WALL STOP	409	US26D	ROCKWOOD
	(1) GASKETING	588BL	C	PEMKO
2	(6) HINGES	T4A3786 6X6	15	MCKINNEY
	(2) EXIT DEVICE	ED4800MA X A810ET MELR M110 M51	630	CORBIN RUSSWIN
	(2) AUTO OPERATOR	ED250-BP X TOP JAMB PULL SIDE	689	DORMAKABA
	(2) WALL SWITCH	RCI 910TC (TOUCHLESS ACTUATOR)	630	DORMAKABA
	(2) ELECTROLYNX HARNESS - FRAME	QC-C1500P		MCKINNEY
	(2) ELECTROLYNX HARNESS - DOOR	QC-C500		MCKINNEY
	(2) ELECTRIC POWER TRANSFER	MCK-EL-EPT		MCKINNEY
	(1) CONTROLLER	RCI 1L06		DORMAKABA
	(6) DOOR SILENCER	SR64 X		IVES

NOTES:
1. CYLINDER TO BE 6-PIN INTERCHANGEABLE CORE
2. CONTRACTOR TO PROVIDE BOTH TEMPORARY CONSTRUCTION CORE & PERMANENT CORE FOR ALL LOCK SETS. COORDINATE WITH FIT FACILITIES AS REQUIRED REGARDING KEYWAY.

Kitchenette Equipment Schedule

ITEM NO.	DESCRIPTION	QTY.	MANUFACTURER	MODEL NO.
E1	24"X60" STAINLESS STEEL WORK TABLE WITH UNDERSHELF	1	REGENCY	ITEM# 600TS2460S
E2	12"X60"X32" STAINLESS STEEL DOUBLE DESK OVERSHELF	1	REGENCY	ITEM# 600DOS1260
E3	24"X48" STAINLESS STEEL WORK TABLE WITH UNDERSHELF	1	REGENCY	ITEM# 600TS2448S

NOTES:
1. SUPPLY & INSTALL EQUIPMENT AS LISTED IN SCHEDULE, OR APPROVED EQUAL.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
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New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

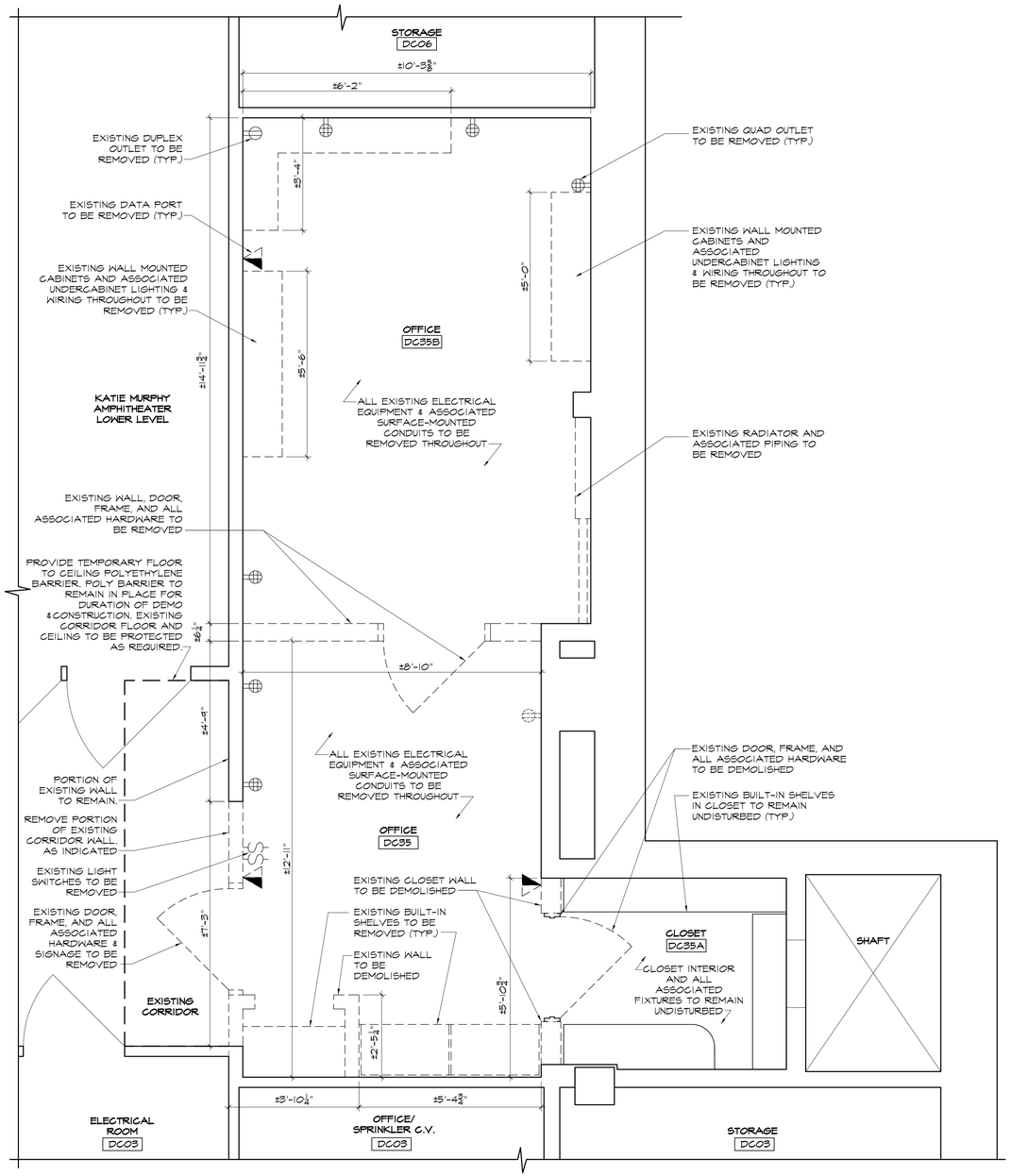
DRAWING TITLE:
DOOR & PARTITION SCHEDULES AND DETAILS

DOB NOW JOB#

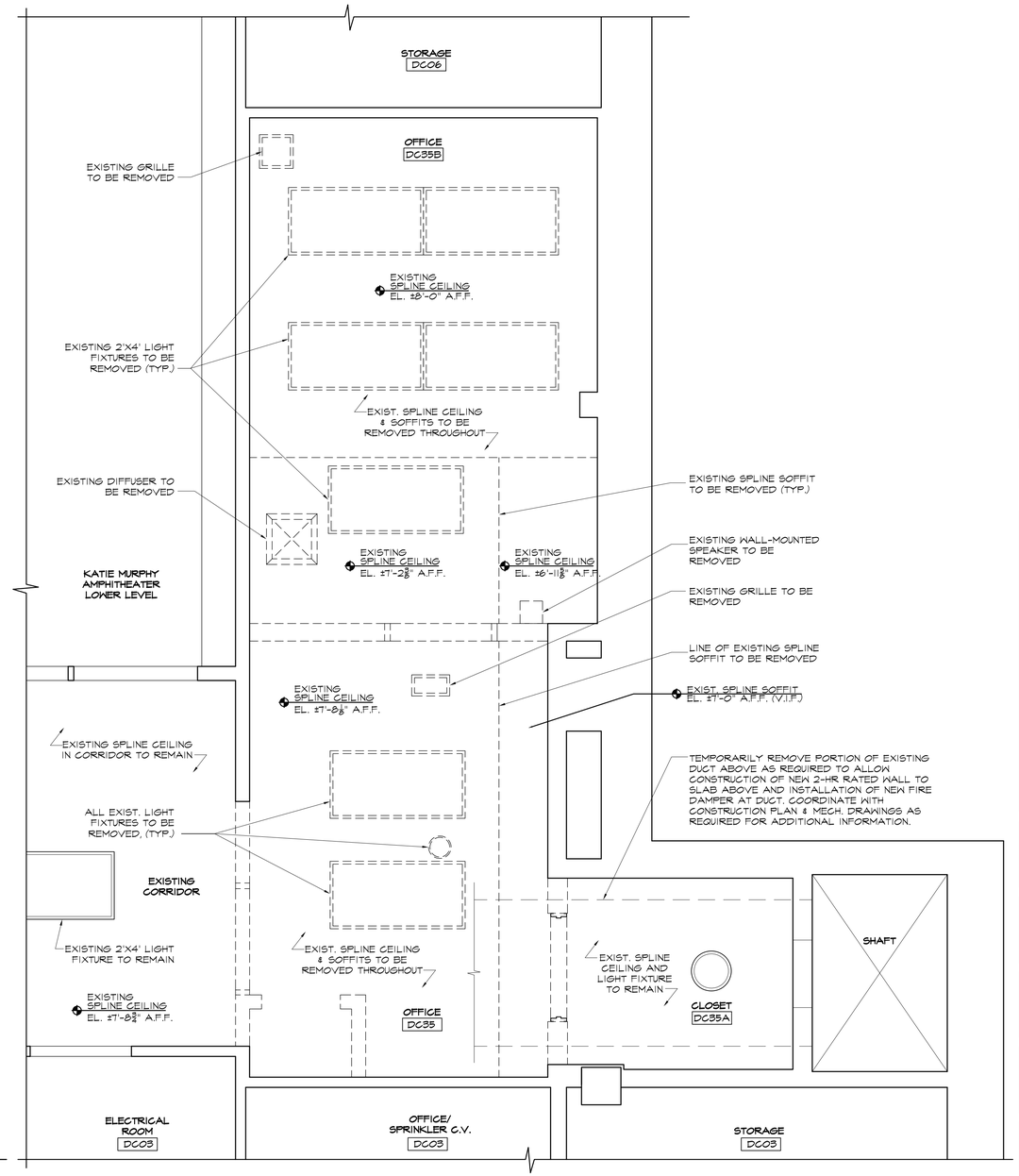
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KORIGAN 035589 STATE OF NEW YORK

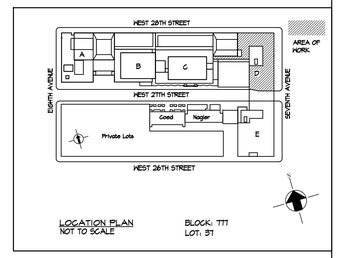
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-700.00
CADD FILE:	DOB page: 34 OF 44



1 A-701 CELLAR - PARTIAL DEMOLITION PLAN
SCALE: 1/2" = 1'-0"



2 A-701 CELLAR - PARTIAL DEMOLITION RCP
SCALE: 1/2" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

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1	03/21/2025	ISSUED FOR BID

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Architects/Planers

443 Park Avenue South — New York, NY 10016
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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
ATS ROOM & CORRIDOR EXTENSION DEMOLITION PLANS

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT
CLARE ELIZABETH KORNIGAY
035589
STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-701.00
CADD FILE:	DOB page: 35 OF 44

NOTES:
1. ALL EXISTING FURNITURE, METAL CABINETS, JANITORIAL, OR MAINTENANCE EQUIPMENT TO BE RELOCATED FOR STORAGE ELSEWHERE ON CAMPUS PRIOR TO DEMOLITION. COORDINATE WITH FIT FACILITIES AS REQUIRED.
2. ALL EXISTING DOORS TO BE DEMOLISHED ARE 3'-0"X7'-0".

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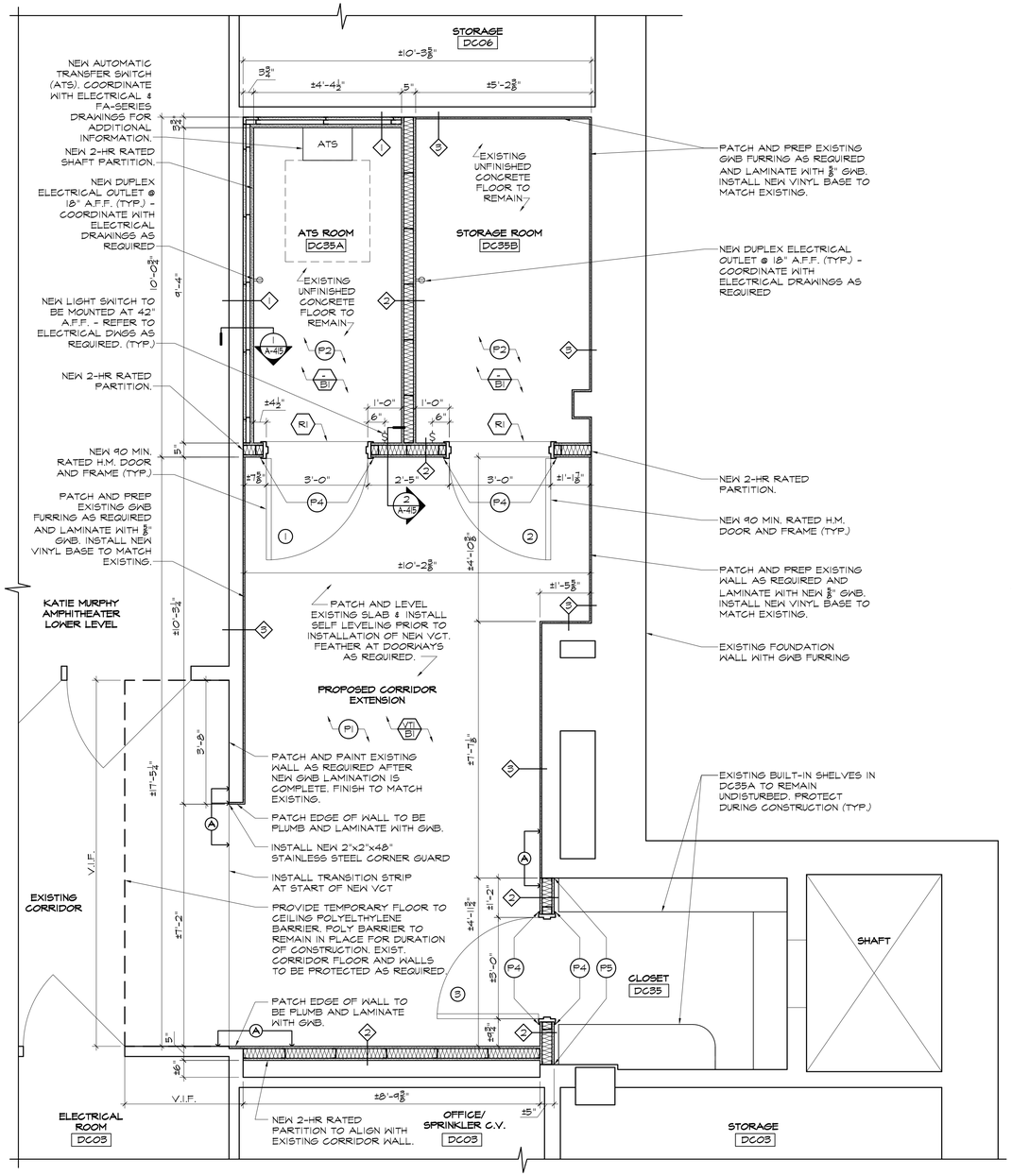
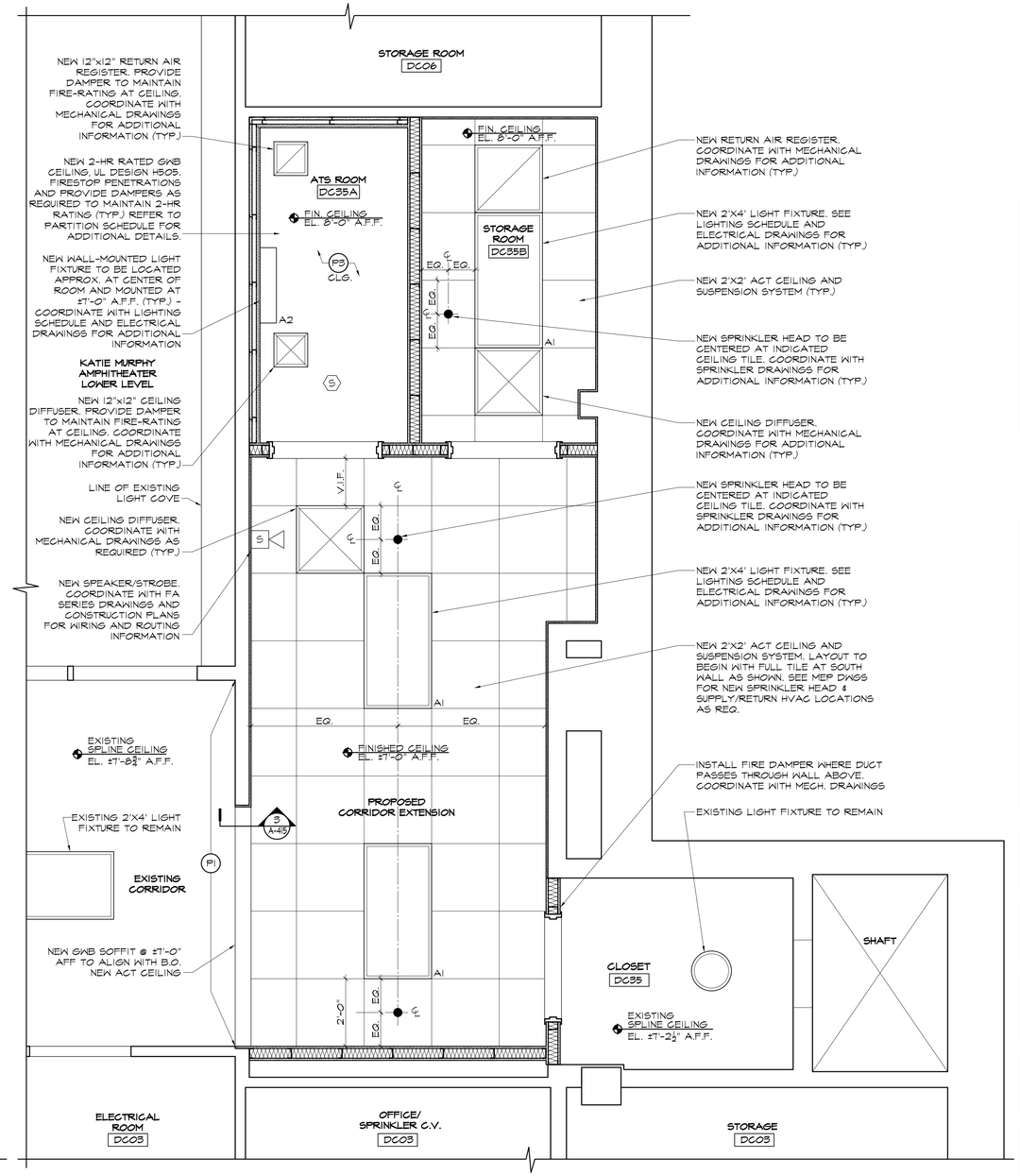
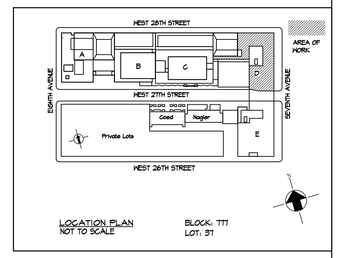


1 A-102 ATS ROOM CORRIDOR EXTENSION
CELLAR - PARTIAL CONSTRUCTION PLAN
SCALE: 1/2" = 1'-0"



2 A-102 ATS ROOM CORRIDOR EXTENSION
CELLAR - PARTIAL REFLECTED CEILING PLAN
SCALE: 1/2" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

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227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
ATS ROOM & CORRIDOR EXTENSION CONSTRUCTION PLANS

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH BORGNINO 035589 STATE OF NEW YORK

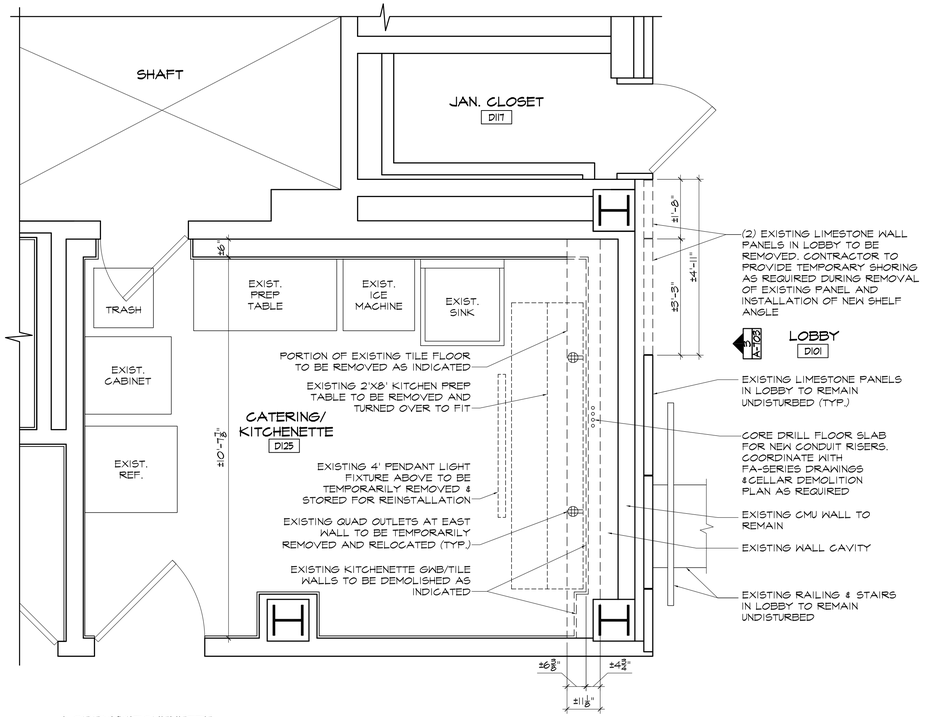
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-702.00
CADD FILE:	DOB page: 36 OF 44

Symbol Legend

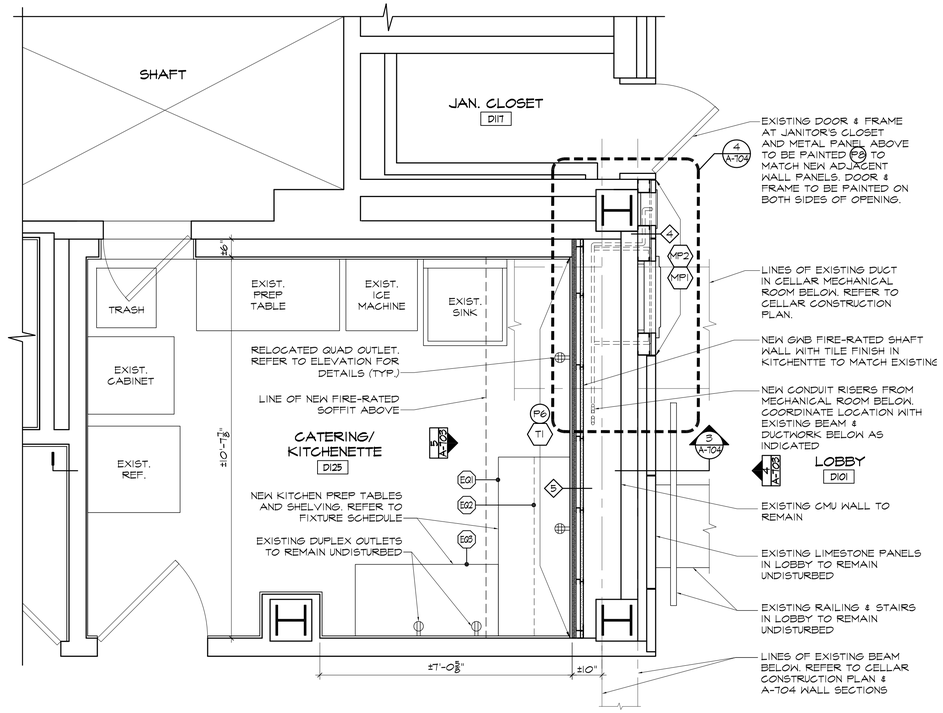
- ● SPRINKLER HEAD
- SMOKE DETECTOR
- WALL MOUNTED SPEAKER/STROBE

NOTES:
1. COORDINATE WITH FA, MECHANICAL, & ELECTRICAL DRAWINGS AS REQUIRED.
2. COORDINATE WITH CONSTRUCTION PLANS FOR WIRING ROUTING INFORMATION.
3. NEW ROOM SIGNAGE TO BE PROVIDED BY FIT.

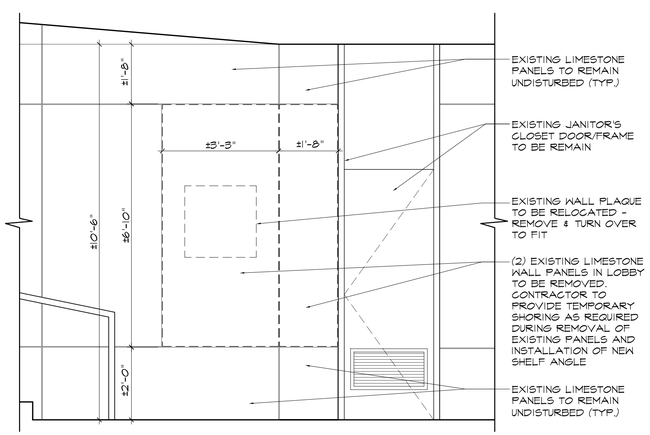
NOT FOR CONSTRUCTION



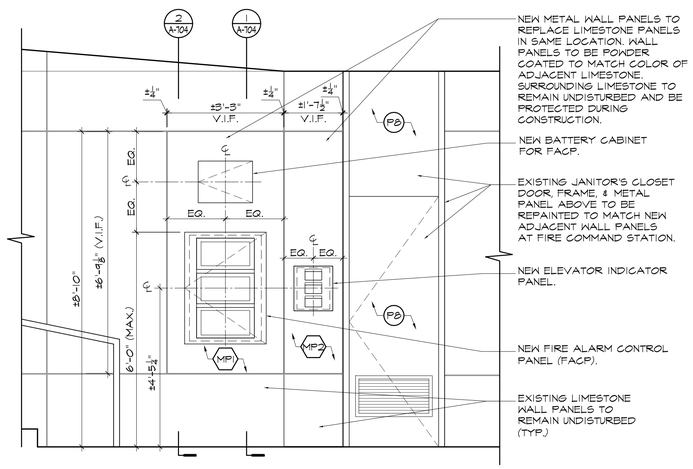
1 / A-703 LOBBY/KITCHENETTE
1ST FLOOR - PARTIAL DEMOLITION PLAN
SCALE: 1/2" = 1'-0"



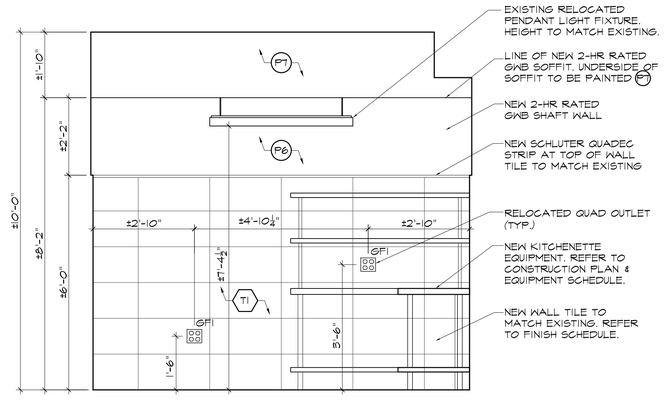
2 / A-703 LOBBY/KITCHENETTE
1ST FLOOR - PARTIAL CONSTRUCTION PLAN
SCALE: 1/2" = 1'-0"



3 / A-703 LOBBY - DEMOLITION ELEVATION
SCALE: 1/2" = 1'-0"



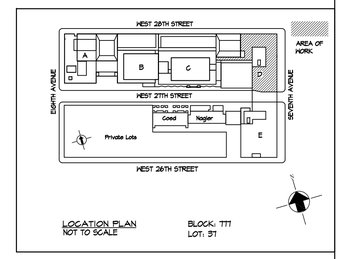
4 / A-703 LOBBY - FIRE COMMAND CENTER ELEVATION
SCALE: 1/2" = 1'-0"



5 / A-703 KITCHENETTE ELEVATION
SCALE: 1/2" = 1'-0"

NOTES:
1. FINAL LAYOUT OF EQUIPMENT FOR FIRE COMMAND STATION WILL REQUIRE SHOP DRAWING REVIEW & APPROVAL BY DESIGN TEAM AND COORDINATION WITH SHOP DRAWINGS FOR NEW METAL WALL PANELS. ALL EQUIPMENT TO BE RECESSED AT WALL PANELS AS INDICATED.
2. COORDINATE WITH ELECTRICAL & FA-SERIES DRAWINGS FOR ADDITIONAL INFORMATION REGARDING FIRE COMMAND STATION PANELS/EQUIPMENT AND WIRING REQUIREMENTS.
3. EXACT POSITION OF NEW SHAFT WALL IN KITCHENETTE WILL BE DEPENDENT ON LOCATION OF CORE DRILLS FROM CELLAR BELOW TO FEED WIRING FOR NEW FIRE COMMAND CENTER. CORE DRILL LOCATIONS TO BE COORDINATED AROUND LOCATION OF EXISTING BEAM AND DUCTWORK BELOW AS INDICATED.
4. ALL EXISTING KITCHEN EQUIPMENT, FURNITURE, & FIXTURES TO REMAIN UNDISTURBED. CONTRACTOR TO PROTECT DURING CONSTRUCTION AS REQUIRED.
5. CONTRACTOR TO PROVIDE PROTECTION AT ALL EXISTING SURFACES ADJACENT TO WORK AREA THROUGHOUT CONSTRUCTION IN BOTH KITCHENETTE AND LOBBY.
6. ALL LIMESTONE WALL PANELS, EXCEPT THOSE BEING REMOVED AS PART OF THE PROJECT SCOPE, SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
FIRE COMMAND CENTER PLANS & ELEVATIONS

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH SMOTRICH 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
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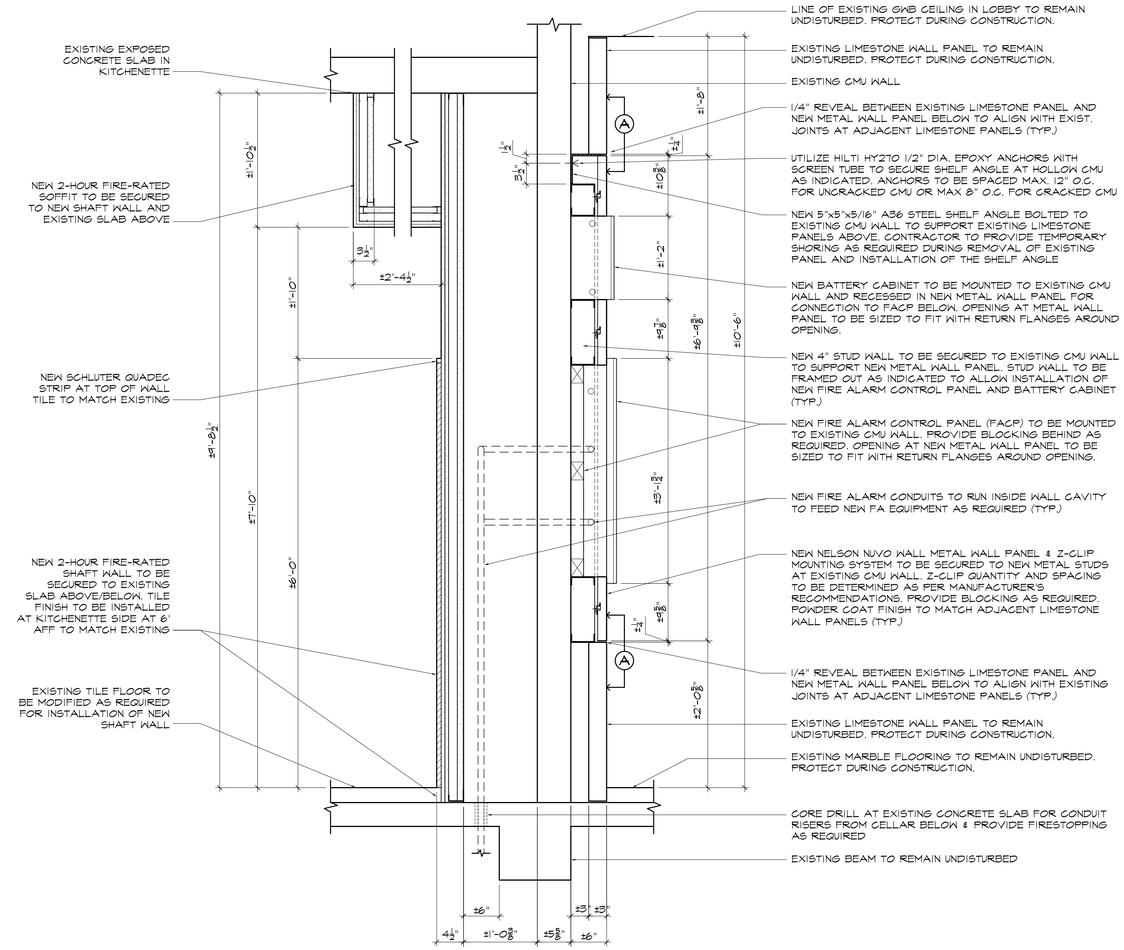
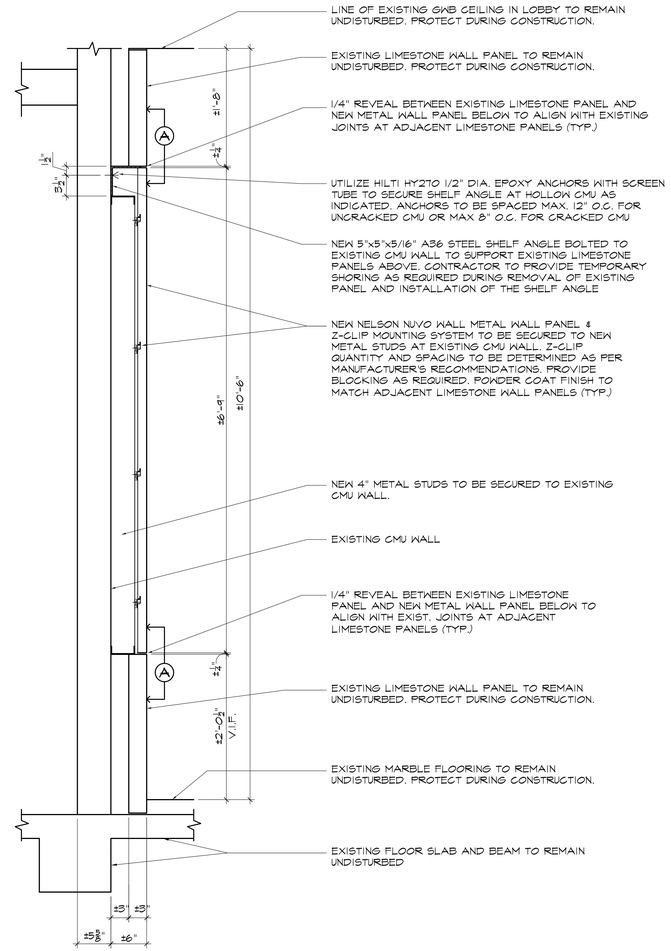
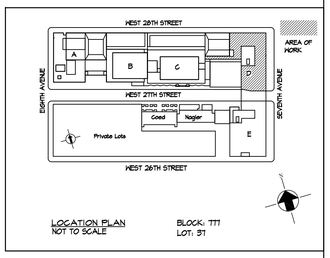
DWG No:	A-703.00
CADD FILE:	DOB page: 37 OF 44



1 A-704 WALL SECTION FIRE COMMAND CENTER
SCALE: 1" = 1'-0"

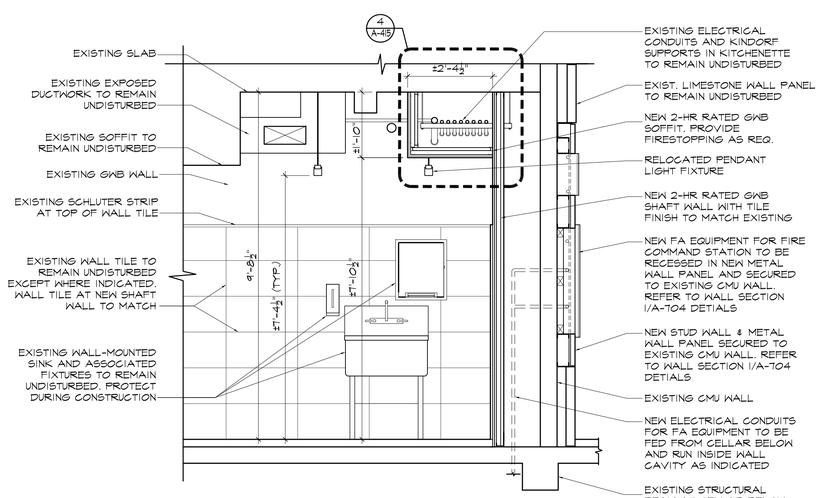


2 A-704 WALL SECTION FIRE COMMAND CENTER
SCALE: 1" = 1'-0"

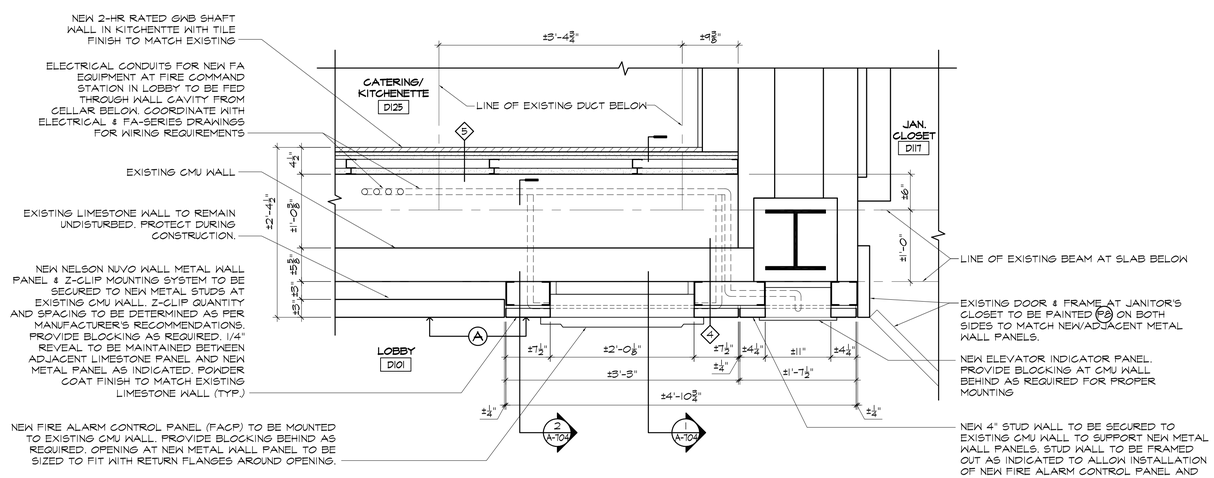


LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37



3 704 PARTIAL ELEVATION / SECTION
1ST FLOOR - KITCHENETTE & LOBBY
SCALE: 1/2" = 1'-0"



4 A-704 DETAIL PLAN FIRE COMMAND CENTER
SCALE: 1" = 1'-0"

NOT FOR CONSTRUCTION

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1	03/21/2025	ISSUED FOR BID

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

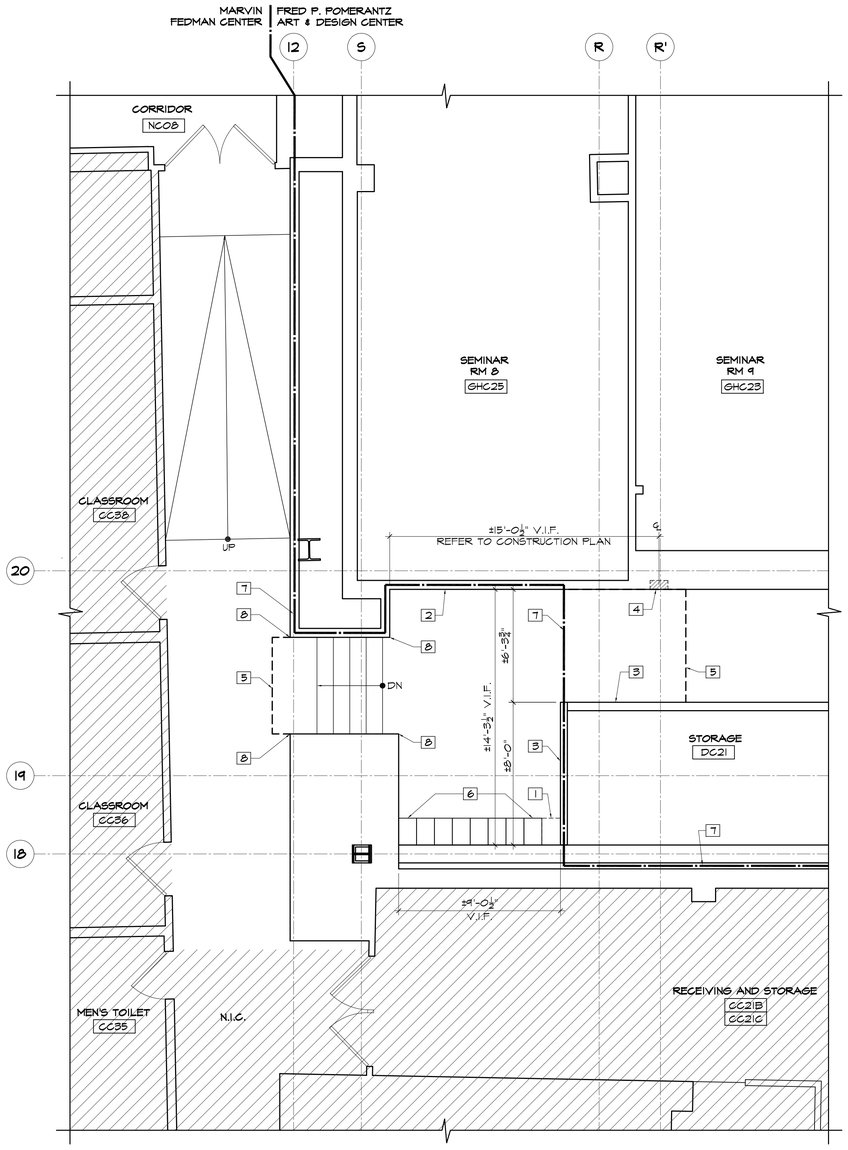
DRAWING TITLE:
FIRE COMMAND CENTER SECTIONS & DETAILS

DOB NOW JOB#

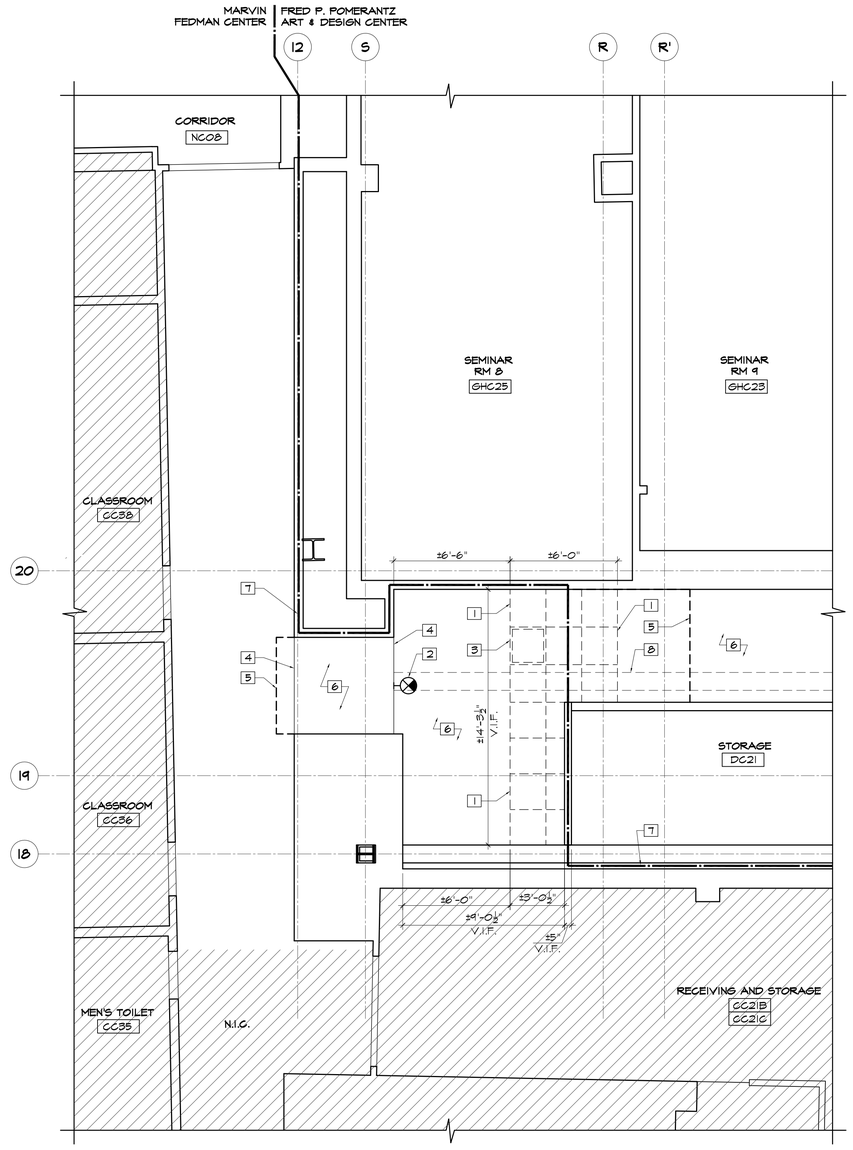
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH MORRISON 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-704.00
CADD FILE:	DOB page: 38 OF 44



1 A-705 CELLAR - PARTIAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



2 A-705 CELLAR - PARTIAL DEMOLITION RCP
SCALE: 1/4" = 1'-0"

DEMOLITION NOTES

1. EXISTING LOCKER TO BE PERMANENTLY REMOVED TO ACCOMMODATE NEW FIRE RATED GWB FURRING. COORDINATE WITH F.I.T. FACILITIES REGARDING RELOCATION AND/OR DISPOSAL.
2. EXISTING WALL TO REMAIN. CONTRACTOR TO VERIFY EXISTING WALL HAS 2-HOUR FIRE RATING.
3. EXISTING WALL TO REMAIN.
4. TRENCH EXISTING WALL AS REQUIRED TO INSTALL NEW DOOR ACTUATOR AND ASSOCIATED WIRING. REFER TO CONSTRUCTION PLAN 1/A-706.
5. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO &CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
6. EXISTING LOCKERS TO REMAIN UNDISTURBED.
7. BUILDING DIVISION LINE.
8. CONTRACTOR TO REMOVE & PROTECT EXISTING BUILDING SIGNAGE FOR TURNOVER TO COLLEGE PRIOR TO WALL DEMOLITION.

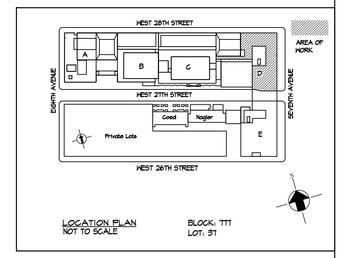
DEMOLITION RCP NOTES

1. AREA OF EXISTING 2'X2' ACT CEILING TO BE REMOVED AND REPLACED AS REQUIRED FOR INSTALLATION OF NEW FIRE-RATED WALL, DOORS, AND FURRING.
2. EXISTING EXIT SIGN TO REMAIN UNDISTURBED.
3. EXISTING 2'X2' LIGHT FIXTURE TO BE TEMPORARILY REMOVED. PROTECT AND STORE FOR REINSTALLATION. REFER TO 2/A-706.
4. LINE OF EXISTING SOFFIT.
5. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO &CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
6. EXISTING 2'X2' ACT CEILING & ASSOCIATED FIXTURES TO REMAIN UNDISTURBED
7. BUILDING DIVISION LINE.
8. TEMPORARILY REMOVE PORTION OF EXISTING DUCT ABOVE AS REQUIRED TO ALLOW CONSTRUCTION OF NEW 2-HR RATED PARTITION TO SLAB ABOVE AND NEW FIRE DAMPER AT DUCT. COORDINATE WITH CONSTRUCTION PLAN & MECH. DRAWINGS AS REQUIRED FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

1. COORDINATE WITH FA & MEP DRAWINGS AS REQUIRED. EXISTING SPRINKLERS, DUCTWORK, LIGHTING, AND OTHER SYSTEMS TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED.
2. COORDINATE WITH CONSTRUCTION PLANS FOR FA DEVICE WIRING AND ROUTING INFORMATION.
3. NEW SIGNAGE TO BE PROVIDED BY FIT. EXISTING SIGNAGE TO BE REMOVED & PROTECTED AS REQUIRED FOR TURNOVER TO THE COLLEGE.
4. PATCH, REPAIR, & PAINT ALL SURFACES ALTERED BY WORK AS REQUIRED. PAINT COLOR AND FINISH TO MATCH EXISTING.
5. PAINTING TO OCCUR CORNER TO CORNER IN ALL DIRECTIONS.
6. REMOVE & REPLACE EXISTING VINYL BASE AS REQUIRED. EXISTING BASE IN FELDMAN CORRIDOR SHALL NOT BE DISTURBED; PROTECT AS REQUIRED DURING CONSTRUCTION.
7. ALL DIMENSIONS TO BE VERIFIED IN FIELD. NOTIFY ARCHITECT IF DIMENSIONS DIFFER.
8. NEW DOORS TO HAVE 1 1/2 HOUR FIRE RATING.
9. INSTALL NEW EXIT SIGNS AS INDICATED.
10. ALL AUTOMATIC DOOR ACTUATORS TO BE MOUNTED @ 3'-0" A.F.F. UNLESS OTHERWISE NOTED.
11. CONTRACTOR TO COORDINATE WITH F.I.T. FACILITIES DEPARTMENT AND ARCHITECT TO MATCH EXISTING PAINT COLOR AND VINYL BASE. NEW VINYL BASE TO MATCH EXISTING IN COLOR, HEIGHT, AND STRAIGHT OR COVE.
12. CONTRACTOR TO REMOVE & REPLACE EXISTING 1'X1' SPLINE CEILING TILES AS REQUIRED. NEW TILES TO MATCH EXISTING. REMOVAL/REPLACEMENT OF EXISTING CEILING TILES TO OCCUR AT NEAREST FULL TILE.
13. NEW HM DOORS AND FRAME TO BE PAINTED P4. CORRIDOR WALL ABOVE TO BE P1 AS INDICATED. REFER TO FINISH SCHEDULE ON A-700 FOR DETAILS.
14. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

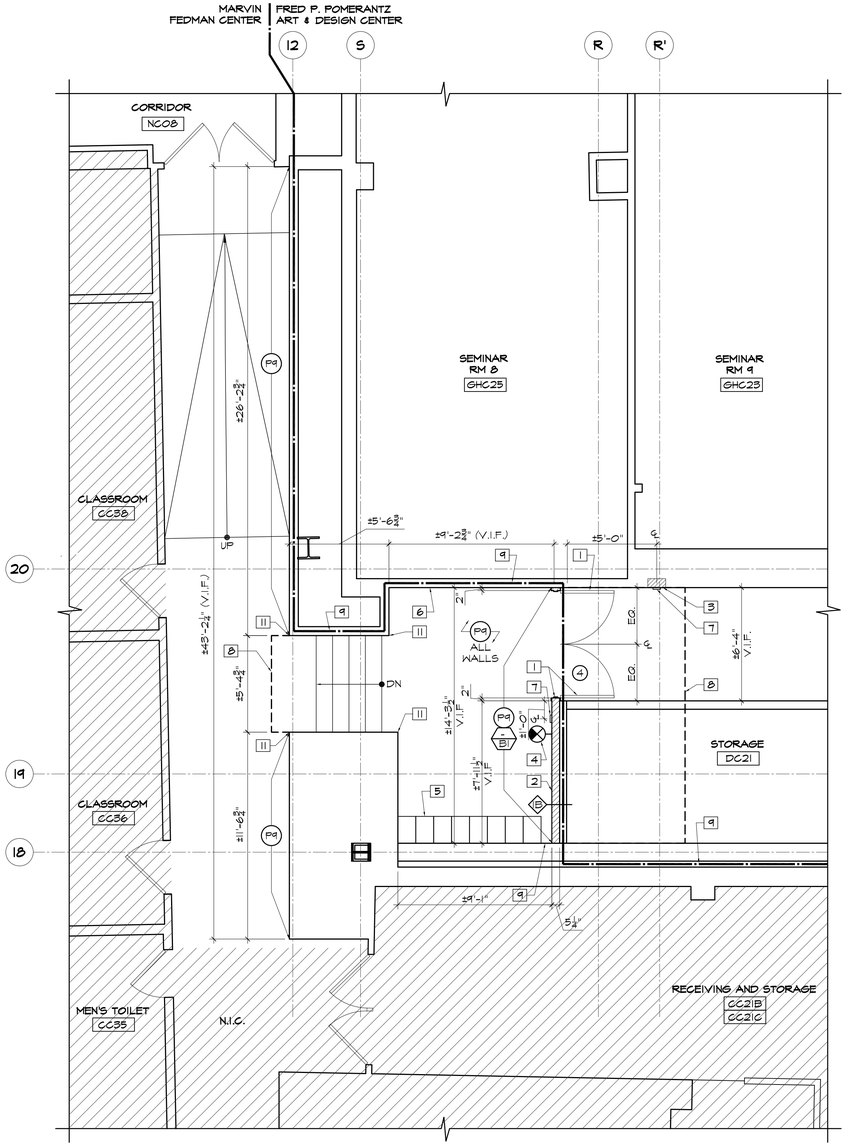
DRAWING TITLE:
CELLAR - BUILDING TRANSITION DOORS DEMOLITION PLAN & RCP

DOB NOW JOB#

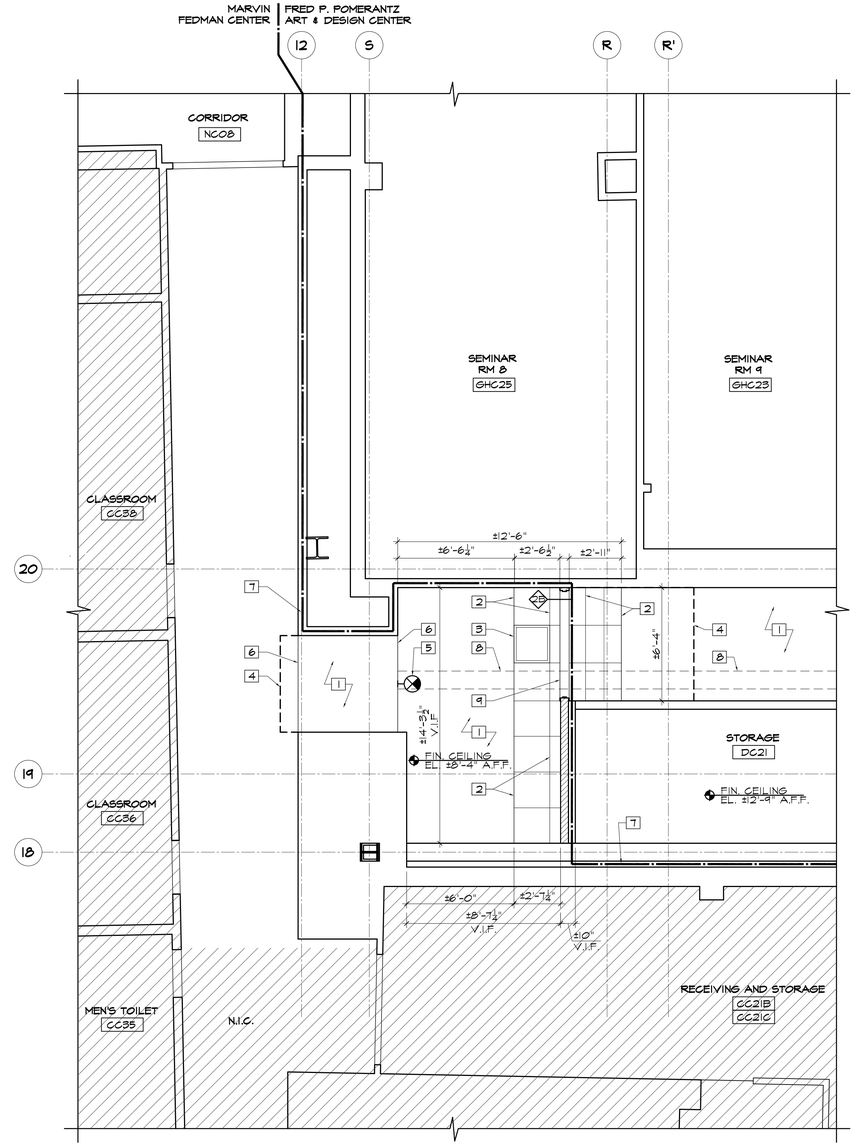
SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH CARRIGAN 035589 STATE OF NEW YORK

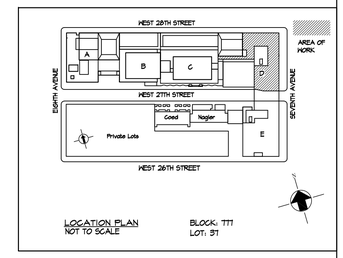
DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-705.00
CADD FILE:	DOB page: 39 OF 44



1 A-706 CELLAR - PARTIAL CONSTRUCTION PLAN
SCALE: 1/4" = 1'-0"



2 A-706 CELLAR - PARTIAL REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 771
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

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Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
CELLAR - BUILDING TRANSITION DOORS CONSTRUCTION PLAN & RCP

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT CLARE ELIZABETH KOBSON 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-706.00
CADD FILE:	DOB page: 40 OF 44

CONSTRUCTION NOTES

1. NEW 1½ HR FIRE RATED FULL GLASS HM DOORS AND FRAME. REFER TO DOOR AND HARDWARE SCHEDULES ON SHEET A-700 FOR ADDITIONAL INFORMATION. DOORS AND FRAME TO BE PAINTED P4 AS PER FINISH SCHEDULE.
2. NEW 2 HR FIRE RATED SHAFT WALL PARTITION. PAINT COLOR, FINISH, AND VINYL BASE TO MATCH EXISTING.
3. PATCH, REPAIR, & PAINT EXISTING WALL AS REQUIRED. PATCH & REPAIR OR REPLACE EXISTING VINYL BASE & FLOORING AS REQUIRED. ALL FINISHES TO MATCH EXISTING.
4. INSTALL NEW WALL MOUNTED EXIT SIGN.
5. EXISTING LOCKERS.
6. EXISTING WALL TO REMAIN. CONTRACTOR TO VERIFY EXISTING WALL HAS 2-HOUR FIRE RATING.
7. LOCATION OF NEW AUTOMATIC DOOR ACTUATOR. SEE GENERAL NOTE #10.
8. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO &CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
9. BUILDING DIVISION LINE.
10. PATCH, REPAIR, & PAINT EXISTING WALL AS REQUIRED FOLLOWING REMOVAL OF EXISTING LOCKER. ALL FINISHES TO MATCH EXISTING.
11. PATCH, REPAIR, & PAINT EXISTING WALL AS REQUIRED FOLLOWING REMOVAL OF SIGNAGE. ALL FINISHES TO MATCH EXISTING.

CONSTRUCTION RCP NOTES

1. EXISTING 2'X2' ACT CEILING & ASSOCIATED FIXTURES TO REMAIN UNDISTURBED
2. INSTALL NEW 2'X2' ACT CEILING TO MATCH EXISTING AS REQUIRED AT INDICATED AREA.
3. REINSTALL EXISTING 2'X2' LIGHT FIXTURE.
4. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO &CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
5. EXISTING EXIT SIGN TO REMAIN UNDISTURBED.
6. LINE OF EXISTING SOFFIT.
7. BUILDING DIVISION LINE.
8. LINE OF EXISTING DUCT ABOVE.
9. INSTALL NEW FIRE DAMPER AT DUCT ABOVE AT LOCATION OF NEW FIRE-RATED PARTITION. REFER TO MECHANICAL DRAWINGS FOR DETAILS.

GENERAL NOTES:

1. COORDINATE WITH FA & MEP DRAWINGS AS REQUIRED. EXISTING SPRINKLERS, DUCTWORK, LIGHTING, AND OTHER SYSTEMS TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED.
2. COORDINATE WITH CONSTRUCTION PLANS FOR FA DEVICE WIRING AND ROUTING INFORMATION.
3. NEW SIGNAGE TO BE PROVIDED BY FIT. EXISTING SIGNAGE TO BE REMOVED & PROTECTED AS REQUIRED FOR TURNOVER TO THE COLLEGE.
4. PATCH, REPAIR, & PAINT ALL SURFACES ALTERED BY WORK AS REQUIRED. PAINT COLOR AND FINISH TO MATCH EXISTING.
5. PAINTING TO OCCUR CORNER TO CORNER IN ALL DIRECTIONS.
6. REMOVE & REPLACE EXISTING VINYL BASE AS REQUIRED. EXISTING BASE IN FELDMAN CORRIDOR SHALL NOT BE DISTURBED; PROTECT AS REQUIRED DURING CONSTRUCTION.
7. ALL DIMENSIONS TO BE VERIFIED IN FIELD. NOTIFY ARCHITECT IF DIMENSIONS DIFFER.
8. NEW DOORS TO HAVE 1 1/2 HOUR FIRE RATING.
9. INSTALL NEW EXIT SIGNS AS INDICATED.
10. ALL AUTOMATIC DOOR ACTUATORS TO BE MOUNTED @ 3'-0" A.F.F. UNLESS OTHERWISE NOTED.
11. CONTRACTOR TO COORDINATE WITH F.I.T. FACILITIES DEPARTMENT AND ARCHITECT TO MATCH EXISTING PAINT COLOR AND VINYL BASE. NEW VINYL BASE TO MATCH EXISTING IN COLOR, HEIGHT, AND STRAIGHT OR COVE.
12. CONTRACTOR TO REMOVE & REPLACE EXISTING 1'X1' SPLINE CEILING TILES AS REQUIRED. NEW TILES TO MATCH EXISTING. REMOVAL/REPLACEMENT OF EXISTING CEILING TILES TO OCCUR AT NEAREST FULL TILE.
13. NEW HM DOORS AND FRAME TO BE PAINTED P4. CORRIDOR WALL ABOVE TO BE P9 AS INDICATED. REFER TO FINISH SCHEDULE ON A-700 FOR DETAILS.
14. ALL PENETRATIONS THROUGH NEW AND EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/ CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/ REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.
15. ALL EXISTING WALLS AT CORRIDOR AREA AND ADJACENT STAIRS TO WEST OF NEW TRANSITION DOORS TO BE RE-PAINTED TO MATCH EXISTING. NEW WALL AREA ABOVE DOORS TO ALSO BE PAINTED TO MATCH EXISTING AT BOTH SIDES OF DOOR.

LEGEND:

- BUILDING SEPARATION LINE
- WALL AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED
- EXIT SIGN

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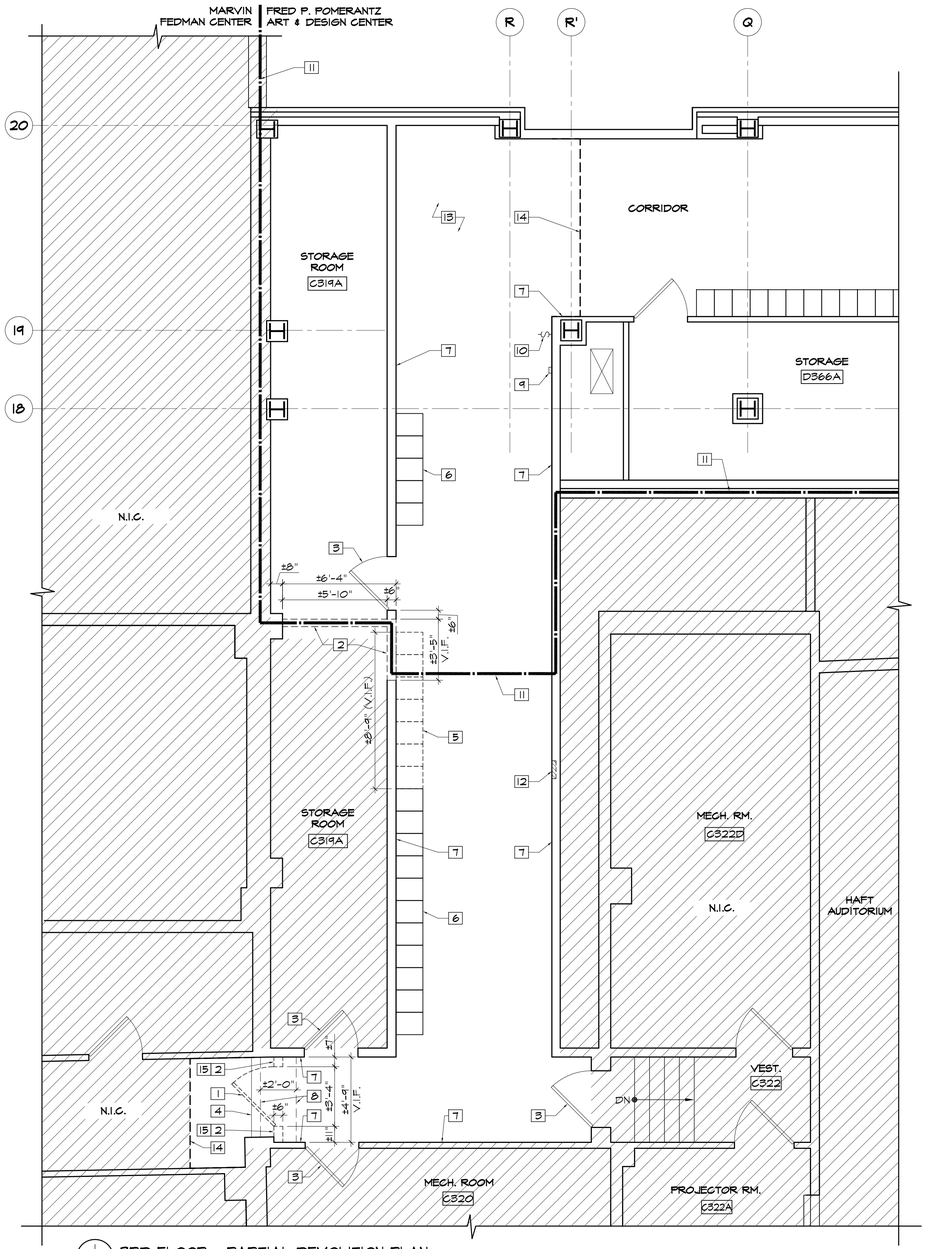
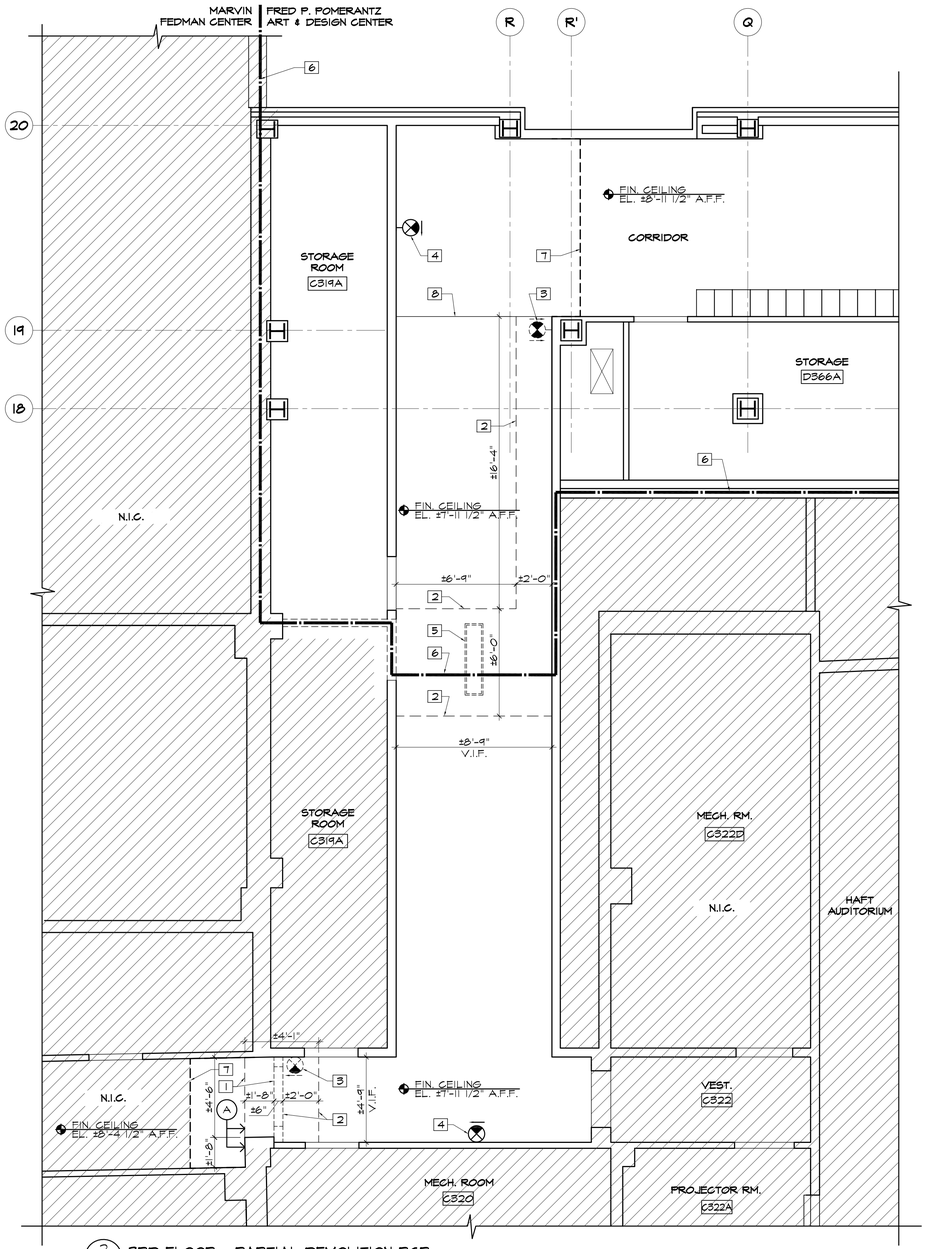
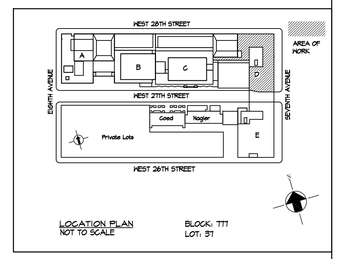


1 / A-701 3RD FLOOR - PARTIAL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



2 / A-701 3RD FLOOR - PARTIAL DEMOLITION RCP
SCALE: 1/4" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

DEMOLITION NOTES

1. EXISTING H.M. DOOR & FRAME TO BE REMOVED.
2. EXISTING WALL TO BE REMOVED AS INDICATED.
3. EXISTING H.M. DOOR AND FRAME TO REMAIN UNDISTURBED.
4. EXISTING EXPANSION JOINT AT FLOOR TO REMAIN UNDISTURBED.
5. TEMPORARILY REMOVE & RELOCATE EXISTING LOCKERS AND PROTECT FOR REINSTALLATION. COORDINATE WITH F.I.T. FACILITIES AS REQUIRED REGARDING TEMPORARY RELOCATION.
6. EXISTING LOCKERS TO REMAIN UNDISTURBED, PROTECT AS REQUIRED DURING DEMOLITION.
7. EXISTING WALL TO REMAIN.
8. AREA OF EXISTING VCT FLOORING TO BE REMOVED.
9. EXISTING EMERGENCY PHONE TO BE REMOVED AND PROTECTED FOR REINSTALLATION AT SAME LOCATION.
10. EXISTING LIGHT SWITCH TO BE REMOVED AND REINSTALLED AT SAME LOCATION.
11. BUILDING SEPARATION LINE BETWEEN FELDMAN & POMERANTZ BUILDINGS.
12. TRENCH EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW DOOR ACTUATOR AND ASSOCIATED WIRING. COORDINATE LOCATION WITH CONSTRUCTION PLAN 1/A-708.
13. PROTECT OR TEMPORARILY RELOCATE EXISTING FURNITURE LOCATED IN CORRIDOR AS REQUIRED DURING CONSTRUCTION. COORDINATE WITH F.I.T. FACILITIES REGARDING TEMPORARY RELOCATION.
14. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO & CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
15. CONTRACTOR TO REMOVE & PROTECT EXISTING BUILDING SIGNAGE FOR TURNOVER TO COLLEGE PRIOR TO WALL DEMOLITION.

DEMOLITION RCP NOTES

1. AREA OF EXISTING PLASTER CEILING TO BE REMOVED.
2. AREA OF EXISTING SPLINE CEILING TO BE REMOVED AS REQUIRED FOR INSTALLATION OF NEW FIRE RATED WALLS & FURRING.
3. EXISTING EXIT SIGN TO BE REMOVED.
4. EXISTING EXIT SIGN TO REMAIN UNDISTURBED.
5. EXISTING 1'X4' LIGHT FIXTURE AT LOCATION OF NEW BUILDING TRANSITION DOORS TO BE REMOVED.
6. BUILDING SEPARATION LINE BETWEEN FELDMAN & POMERANTZ BUILDINGS.
7. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO & CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
8. LINE OF EXISTING SOFFIT.

GENERAL NOTES:

1. COORDINATE WITH FA & MEP DRAWINGS AS REQUIRED. EXISTING SPRINKLERS, DUCTWORK, LIGHTING, AND OTHER SYSTEMS TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED.
2. COORDINATE WITH CONSTRUCTION PLANS FOR FA DEVICE WIRING AND ROUTING INFORMATION.
3. NEW SIGNAGE TO BE PROVIDED BY FIT. EXISTING SIGNAGE TO BE REMOVED & PROTECTED AS REQUIRED FOR TURNOVER TO THE COLLEGE.
4. PATCH, REPAIR, & PAINT ALL SURFACES ALTERED BY THE WORK AS REQUIRED. PAINT COLOR AND FINISH TO MATCH EXISTING.
5. PAINTING TO OCCUR CORNER TO CORNER IN ALL DIRECTIONS.
6. REMOVE & REPLACE EXISTING VINYL BASE AS REQUIRED.
7. ALL DIMENSIONS TO BE VERIFIED IN FIELD. NOTIFY ARCHITECT IF DIMENSIONS DIFFER.
8. NEW DOORS TO HAVE 1 1/2 HOUR FIRE RATING.
9. INSTALL NEW EXIT SIGNS AS INDICATED.
10. ALL AUTOMATIC DOOR ACTUATORS TO BE MOUNTED @ 3'-0" A.F.F. UNLESS OTHERWISE NOTED.
11. CONTRACTOR TO COORDINATE WITH F.I.T. FACILITIES DEPARTMENT AND ARCHITECT TO MATCH EXISTING PAINT COLOR AND VINYL BASE. NEW VINYL BASE TO MATCH EXISTING IN COLOR, HEIGHT, AND STRAIGHT OR COVE.
12. CONTRACTOR TO REMOVE & REPLACE EXISTING 1'X1' SPLINE CEILING TILES AS REQUIRED. NEW TILES TO MATCH EXISTING. REMOVAL/REPLACEMENT OF EXISTING CEILING TILES TO OCCUR AT NEAREST FULL TILE.
13. NEW HM DOORS AND FRAME TO BE PAINTED P4. CORRIDOR WALL ABOVE TO BE P9 AS INDICATED. REFER TO FINISH SCHEDULE ON A-700 FOR DETAILS.
14. ALL PENETRATIONS THROUGH NEW & EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

MEP Consultants
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227 West 27th Street
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David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
3RD FLOOR - BUILDING TRANSITION DOORS DEMOLITION PLAN & RCP

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT — CLARE ELIZABETH CARRIGAN — 035589 — STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
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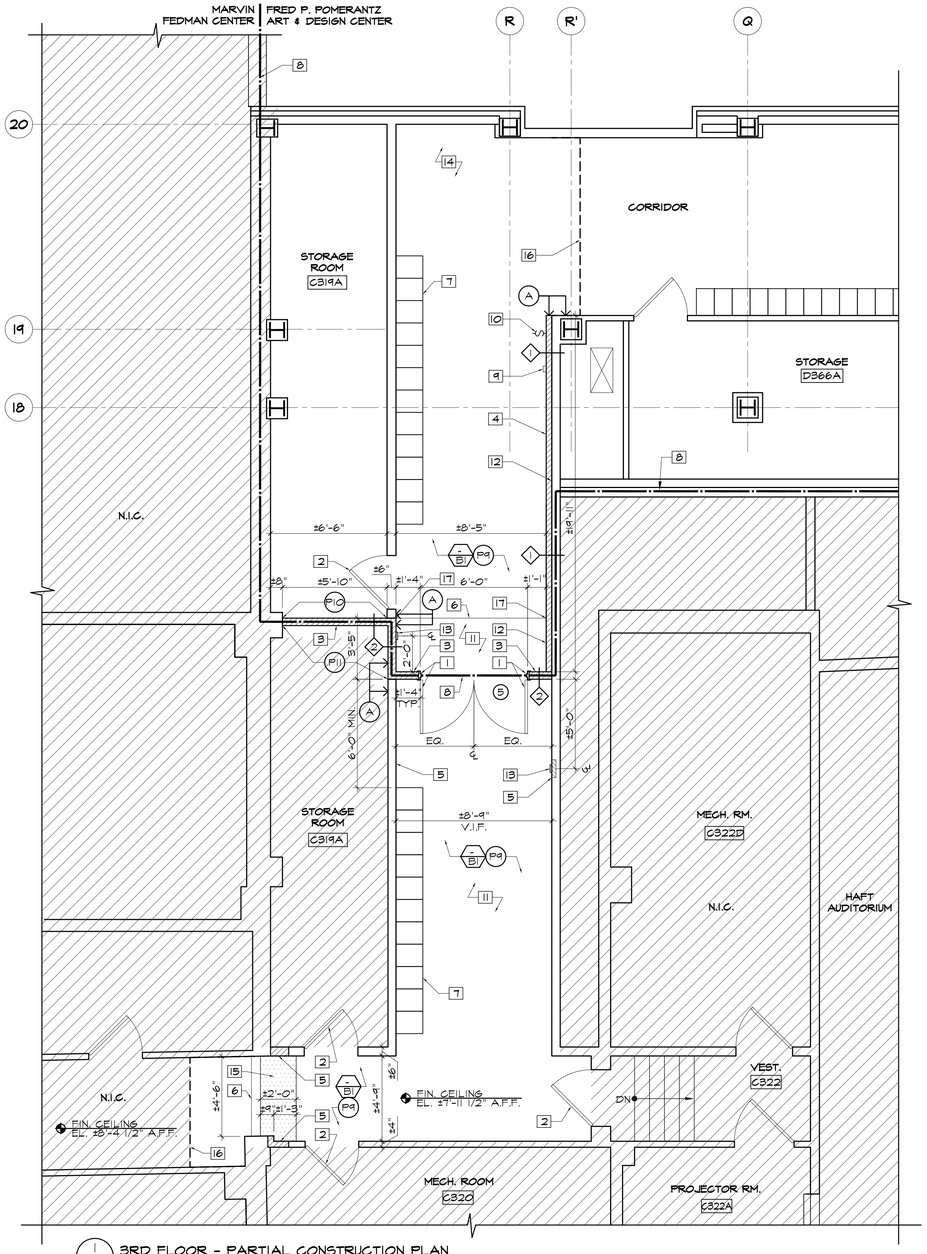
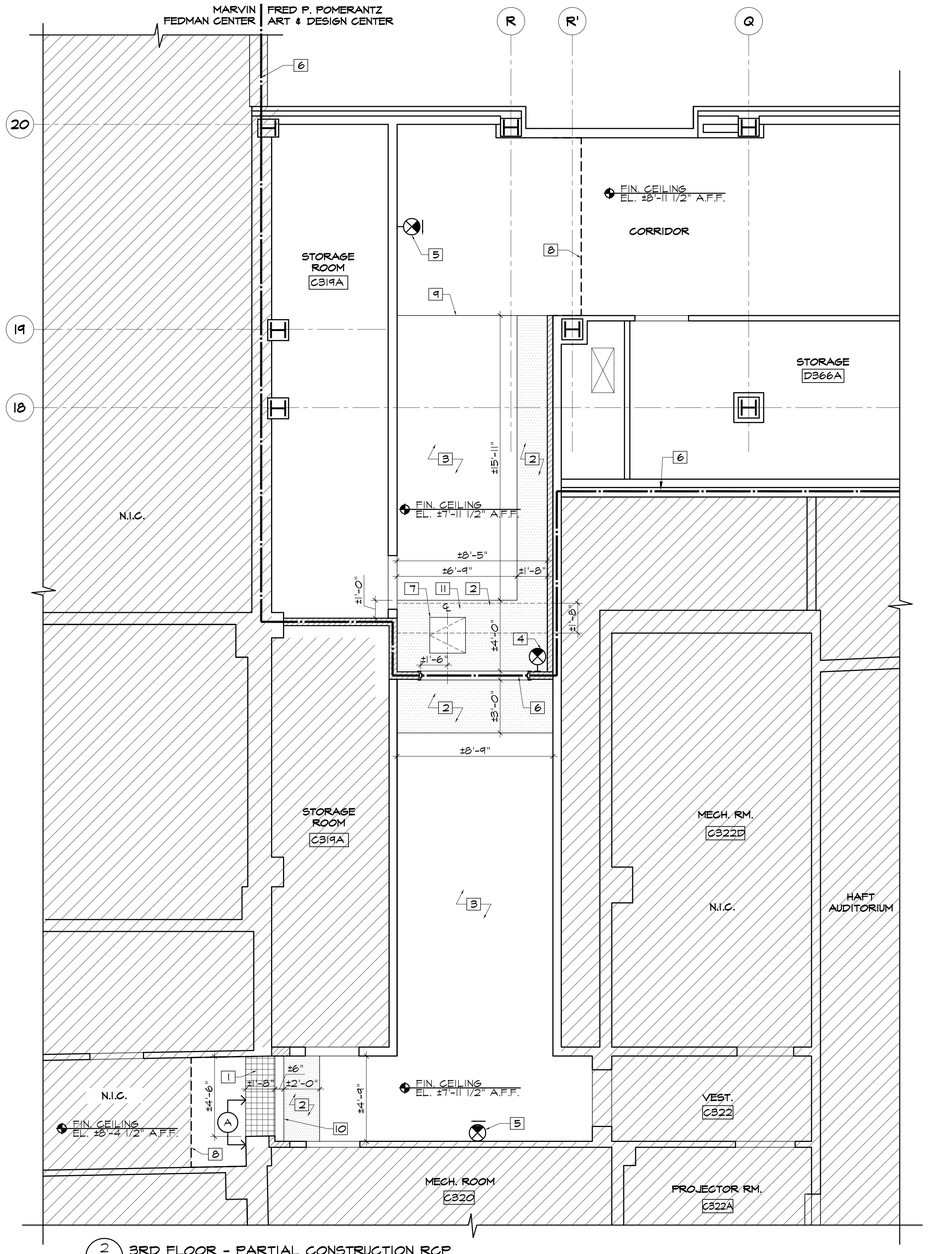
CADD FILE:	DOB page: 41 OF 44



1 / A-708 3RD FLOOR - PARTIAL CONSTRUCTION PLAN
SCALE: 1/4" = 1'-0"



2 / A-708 3RD FLOOR - PARTIAL CONSTRUCTION RCP
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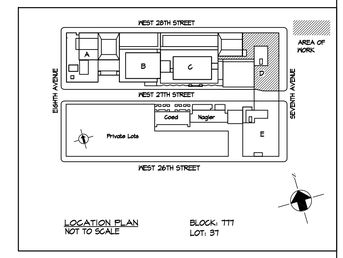


LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

CONSTRUCTION NOTES

1. NEW 1½ HR FIRE RATED FULL GLASS HM DOORS AND FRAME. REFER TO DOOR AND HARDWARE SCHEDULES ON SHEET A-700 FOR ADDITIONAL INFORMATION. DOORS AND FRAME TO BE PAINTED P4 AS PER FINISH SCHEDULE.
2. EXISTING H.M. DOOR AND FRAME TO REMAIN UNDISTURBED.
3. NEW 2 HR FIRE RATED PARTITION. NEW PARTITION TO ALIGN WITH LOCATION OF EXISTING WALL. WHERE APPLICABLE. PAINT COLOR, FINISH, AND VINYL BASE TO MATCH EXISTING.
4. NEW 2 HR FIRE RATED GWB FURRING.
5. PATCH, REPAIR, & PAINT EXISTING WALL AND INSTALL NEW VINYL BASE AS REQUIRED. ALL FINISHES TO MATCH EXISTING.
6. EXISTING EXPANSION JOINT AT FLOOR TO REMAIN UNDISTURBED.
7. REINSTALL EXISTING LOCKERS AS REQUIRED AND PROTECT DURING CONSTRUCTION.
8. BUILDING SEPARATION LINE BETWEEN FELDMAN & POMERANTZ.
9. REINSTALL EXISTING EMERGENCY PHONE.
10. REINSTALL EXISTING LIGHT SWITCH.
11. EXISTING VCT FLOOR TO REMAIN UNDISTURBED.
12. PATCH AND PREP EXISTING WALL AS REQUIRED FOR INSTALLATION OF NEW 2 HR FIRE RATED GWB FURRING.
13. LOCATION OF NEW AUTOMATIC DOOR ACTUATOR. SEE GENERAL NOTE #10.
14. PROTECT OR TEMPORARILY RELOCATE EXISTING FURNITURE LOCATED IN CORRIDOR AS REQUIRED DURING CONSTRUCTION. COORDINATE WITH F.I.T. FACILITIES REGARDING TEMPORARY RELOCATION.
15. PATCH & REPAIR EXISTING FLOOR AREA AS REQUIRED AND INSTALL NEW VCT FLOORING AT INDICATED LOCATION FOLLOWING REMOVAL OF EXISTING WALL. NEW VCT TO MATCH EXISTING.
16. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO &CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
17. NEW FIRE RATED EXPANSION JOINT TO MATCH EXISTING.

LEGEND:

- BUILDING SEPARATION LINE
- WALL AREA TO BE RECONSTRUCTED, REPAIRED, & PATCHED AS REQUIRED
- AREA OF NEW VCT FLOORING TO MATCH EXISTING
- AREA OF NEW PLASTER CEILING TO MATCH EXISTING
- AREA OF NEW SPLINE CEILING TO MATCH EXISTING AS REQUIRED
- EXIT SIGN

CONSTRUCTION RCP NOTES

1. INSTALL NEW PLASTER CEILING AS REQUIRED AT INDICATED AREA. PAINT COLOR & FINISH TO MATCH EXISTING.
2. INSTALL NEW SPLINE CEILING AS REQUIRED AT INDICATED AREA TO MATCH EXISTING.
3. EXISTING SPLINE CEILING TO REMAIN UNDISTURBED.
4. INSTALL NEW WALL-MOUNTED EXIT SIGN AT INDICATED LOCATION.
5. EXISTING EXIT SIGN TO REMAIN UNDISTURBED.
6. BUILDING SEPARATION LINE BETWEEN FELDMAN & POMERANTZ.
7. INSTALL NEW 2'X2' CHICAGO METALLIC ACCESS PANEL AT SPLINE CEILING. LOCATE AS REQUIRED TO COMPLETE ELECTRICAL WORK FOR ADA HARDWARE AT NEW TRANSITION DOORS BELOW.
8. PROVIDE TEMPORARY FLOOR TO CEILING POLYETHYLENE BARRIER. POLY BARRIER TO REMAIN IN PLACE FOR DURATION OF DEMO &CONSTRUCTION. EXISTING CORRIDOR FLOOR AND CEILING TO BE PROTECTED AS REQUIRED.
9. LINE OF EXISTING SOFFIT.
10. NEW GWB SOFFIT TO ALIGN WITH EXISTING SPLINE CEILING. SOFFIT WIDTH TO MATCH EXISTING/DEMOLISHED CORRIDOR WALL. REFER TO CEILING DETAIL 6/A-415 FOR ADDITIONAL INFORMATION.
11. APPLY FIREPROOFING AS REQUIRED TO EXISTING STEEL BEAM ABOVE.

GENERAL NOTES:

1. COORDINATE WITH FA & MEP DRAWINGS AS REQUIRED. EXISTING SPRINKLERS, DUCTWORK, LIGHTING, AND OTHER SYSTEMS TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED.
2. COORDINATE WITH CONSTRUCTION PLANS FOR FA DEVICE WIRING AND ROUTING INFORMATION.
3. NEW SIGNAGE TO BE PROVIDED BY FIT. EXISTING SIGNAGE TO BE REMOVED & PROTECTED AS REQUIRED FOR TURNOVER TO THE COLLEGE.
4. PATCH, REPAIR, & PAINT ALL SURFACES ALTERED BY THE WORK AS REQUIRED. PAINT COLOR AND FINISH TO MATCH EXISTING.
5. PAINTING TO OCCUR CORNER TO CORNER IN ALL DIRECTIONS.
6. REMOVE & REPLACE EXISTING VINYL BASE AS REQUIRED.
7. ALL DIMENSIONS TO BE VERIFIED IN FIELD. NOTIFY ARCHITECT IF DIMENSIONS DIFFER.
8. NEW DOORS TO HAVE 1 1/2 HOUR FIRE RATING.
9. INSTALL NEW EXIT SIGNS AS INDICATED.
10. ALL AUTOMATIC DOOR ACTUATORS TO BE MOUNTED @ 3'-0" A.F.F. UNLESS OTHERWISE NOTED.
11. CONTRACTOR TO COORDINATE WITH F.I.T. FACILITIES DEPARTMENT AND ARCHITECT TO MATCH EXISTING PAINT COLOR AND VINYL BASE. NEW VINYL BASE TO MATCH EXISTING IN COLOR, HEIGHT, AND STRAIGHT OR COVE.
12. CONTRACTOR TO REMOVE & REPLACE EXISTING 1'X1' SPLINE CEILING TILES AS REQUIRED. NEW TILES TO MATCH EXISTING. REMOVAL/REPLACEMENT OF EXISTING CEILING TILES TO OCCUR AT NEAREST FULL TILE.
13. NEW HM DOORS AND FRAME TO BE PAINTED P4. CORRIDOR WALL ABOVE TO BE P9 AS INDICATED. REFER TO FINISH SCHEDULE ON A-700 FOR DETAILS.
14. ALL PENETRATIONS THROUGH NEW & EXISTING WALLS AND FLOOR SLABS FOR NEW FA WIRING/CONDUIT TO BE PROPERLY FIRESTOPPED TO MAINTAIN EXISTING/REQUIRED FIRE-RATING. WALLS AT CORRIDORS, STAIRWELLS, MECHANICAL SPACES, SHAFTS, PUBLIC ASSEMBLY SPACES, AND SEPARATION WALLS BETWEEN BUILDINGS SHOULD BE PRESUMED TO BE FIRE-RATED. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL INFORMATION.

NOT FOR CONSTRUCTION

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

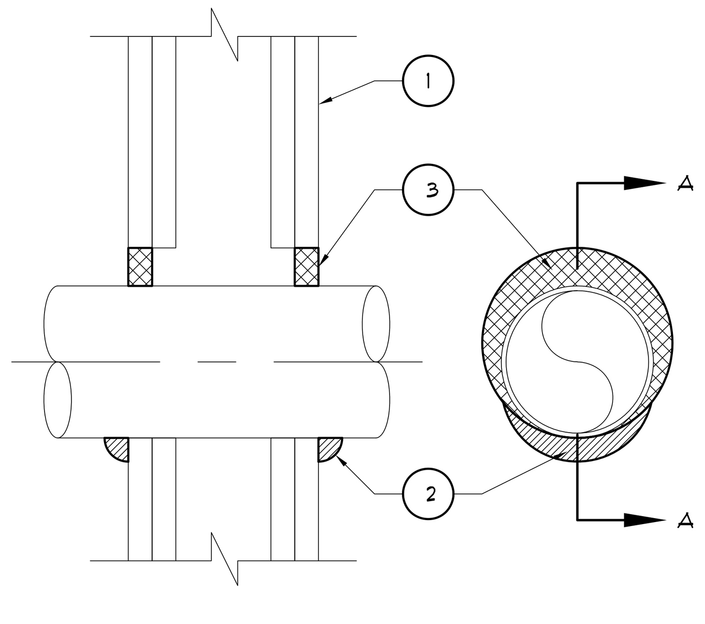
DRAWING TITLE:
3RD FLOOR - BUILDING TRANSITION DOORS CONSTRUCTION PLAN & RCP

DOB NOW JOB#

SEAL & SIGNATURE:

REGISTERED ARCHITECT ELIZABETH KARIGAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-708.00
CADD FILE:	DOB page: 42 OF 44

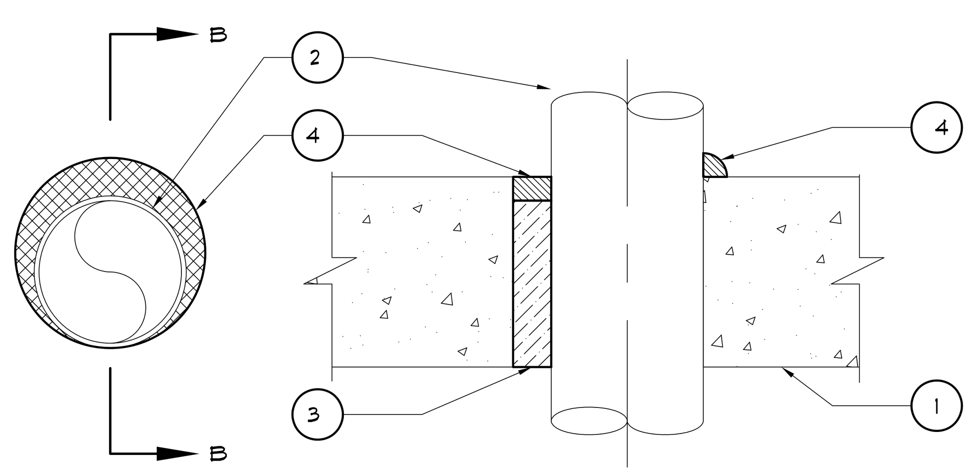


ANSI/UL 1479 (ASTM E814)
F RATING - 2 HR
T RATING - Ø HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400 F - 400 CFM/SQ FT
W RATING - CLASS 1 (SEE ITEM 4)

CAN/ULC S115
F RATING - 2 HR
FT RATING - Ø HR
FH RATING - 2 HR
FTH RATING - Ø HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400 F - 4 CFM/SQ FT

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES.
   A. STUDS - WALL FRAMING SHALL CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC.
   B. GYPSUM BOARD* - NOM 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 5-1/2 IN. THE HOURLY F AND T RATINGS OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. THROUGH PENETRANT - ONE METALLIC TUBING OR CONDUIT INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. TUBE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE ANNULAR SPACE BETWEEN THE TUBE OR CONDUIT AND PERIPHERY OF THE STEEL SLEEVE SHALL BE MIN Ø IN. (POINT CONTACT) TO MAX 1 IN. THE FOLLOWING TYPES AND SIZES OF METALLIC TUBE OR CONDUIT MAY BE USED:
   A. CONDUIT - NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
3. FILL VOID OR CAVITY MATERIAL* - PUTTY- MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT POINT CONTACT LOCATION BETWEEN PENETRANT AND WALL, A ¼ IN. CROWN OF FILL MATERIAL SHALL BE APPLIED AT THE CONDUIT/WALL INTERFACE ON BOTH SIDES OF THE ASSEMBLY, LAPPING ¼ IN. ON THE CONDUIT AND ¼ IN. BEYOND THE PERIPHERY OF THE OPENING. HILTI INC - CP618 PUTTY STICK

1 / A-707 **FIRESTOPPING DETAIL - RATED WALLS**
SCALE: 3" = 1'-0"
HILTI FIRE RATED SYSTEM NO. W-L-1175



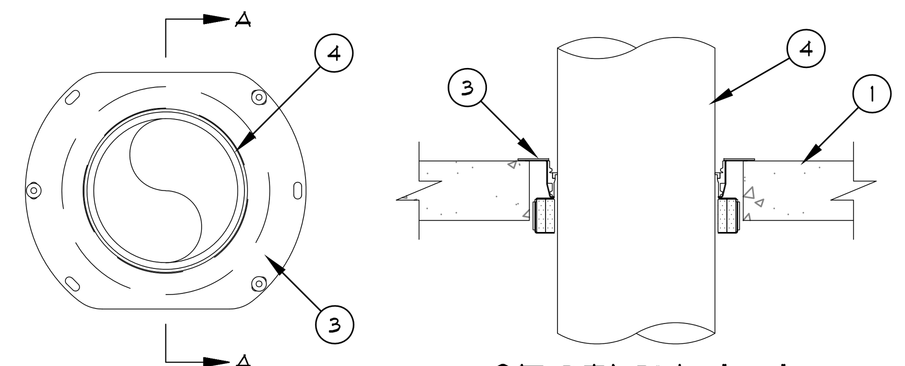
ANSI/UL 1479 (ASTM E814)	CAN/ULC S115
F RATING - 2 HR	F RATING - 2 HR
T RATING - Ø HR	FT RATING - Ø HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT	FH RATING - 2 HR
W RATING - CLASS 1 (SEE ITEM 4)	FTH RATING - Ø HR
	L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
	L RATING AT 400 F - 4 CFM/SQ FT

1. FLOOR OR WALL ASSEMBLY - MIN 4-1/2 IN. (114 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENINGS IS 12 IN. (305MM). SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE Ø IN. (POINT CONTACT) TO MAX 1-1/4 IN. (32 MM). THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE - NOM 10 IN. (254 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE
   B. IRON PIPE - NOM 10 IN. (254 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT - NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
   D. COPPER TUBING - NOM 4 IN. (102 MM) (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE - NOM 4 IN. (102 IN.) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. PACKING MATERIAL - MIN 3 IN. (76 MM) THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FOR NOM 4 IN. DIAM (AND SMALLER) PIPES, CONDUITS OR TUBINGS AND A MIN 4 IN. (102 MM) THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FOR PIPE GREATER THAN NOM 4 IN. DIAM, FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
4. FILL, VOID OR CAVITY MATERIAL* - SEALANT- MIN ½ IN. (13 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL. AT POINT CONTACT LOCATION BETWEEN PIPE AND CONCRETE, A MIN ½ IN. (13 MM) DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/PIPE INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL. W RATINGS APPLIES ONLY WHEN CFS-S SIL GG, CFS-S SIL SL (FLOORS ONLY), CP601S, CO604 SEALANT OR FS-ONE MAX INTUMESCENT SEALANT IS USED. FOR W RATING WHEN FS-ONE MAX IS USED, PACKING MATERIAL TO BE A MIN 4 IN. (102 MM) THICKNESS OF MIN 4 PCF (64KG/M3) MINERAL WOOL BATT INSULATION. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CP601S, CP604, CFS-S SIL SL (FLOORS ONLY), CP606 OR FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT.

   *INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

2 / A-707 **FIRESTOPPING DETAIL - CONCRETE SLAB OR WALL**
SCALE: 3" = 1'-0"
HILTI FIRE RATED SYSTEM NO. C-JA-1149

ANSI/UL 1479 (ASTM E814)	CAN/ULC S115
F RATING - 2 & 3 HR (SEE ITEMS 1 & 1A)	F RATING - 2 & 3 HR (SEE ITEMS 1 & 1A)
T RATING - Ø &1/4 HR (SEE ITEM 2)	FT RATING - Ø & 1/4 HR (SEE ITEM 2)
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT	FH RATING - 2 & 3 HR (SEE ITEMS 1 & 1A)
L RATING AT 400 F - LESS THAN 1 CFM/SQ FT	FTH RATING - Ø & 1/4 HR (SEE ITEM 2)
W RATING - CLASS 1 (SEE ITEM 3A)	L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
	L RATING AT 400 F - LESS THAN 1 CFM/SQ FT



SECTION A-A

1. FLOOR ASSEMBLY —MIN 2-1/2 IN. (64 MM) TO MAX 8 IN. (203 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M³) CONCRETE. WHEN CONCRETE THICKNESS IS MIN 4-1/2 IN. (114 MM), THE F AND FH RATINGS ARE 3 HR.

1A. FLOOR ASSEMBLY – (OPTIONAL, NOT SHOWN) – THE FIRE RATED CONCRETE AND STEEL DECK FLOOR ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL D700, D800 OR D900 SERIES DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND AS SUMMARIZED BELOW:
   A. CONCRETE – MIN 2-1/2 IN. (64 MM) TO MAX 8 IN. (203 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M³) CONCRETE, AS MEASURED OVER CREST OF FLUTED STEEL DECK. WHEN CONCRETE TOPPING THICKNESS IS MIN 4-1/2 IN. (114 MM), F AND FH RATINGS ARE 3 HR.
   B. STEEL FLOOR AND FORM UNITS* – COMPOSITE OR NON-COMPOSITE MAX 3 IN. (76 MM) DEEP GALV STEEL FLUTED UNITS AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN.

2. METALLIC SLEEVE – (OPTIONAL, NOT SHOWN) - NOM 4, 5 OR 6 IN. (102, 127 OR 152 MM) DIAM SCHEDULE 10 (OR HEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR ASSEMBLY, FLUSH WITH FLOOR SURFACES. WHEN METALLIC SLEEVE IS USED, THE T, FT AND FTH RATINGS ARE Ø HR.

2A. SHEET METAL SLEEVE – (OPTIONAL, NOT SHOWN) - NOM 4, 5, 6 OR 9 IN. (102, 127, 152 OR 229 MM) DIAM, MIN 26 GA GALV STEEL PROVIDED WITH A 26 GA GALV STEEL SQUARE FLANGE SPOT WELDED TO THE SLEEVE AT APPROX MID-HEIGHT, OR FLUSH WITH BOTTOM OF SLEEVE IN FLOORS, AND SIZED TO BE A MIN OF 2 IN. (51 MM) LARGER THAN THE SLEEVE DIAM. THE SLEEVE IS TO BE CAST IN PLACE AND MAY EXTEND A MAX OF 4 IN. (102 MM) BELOW THE BOTTOM OF THE DECK AND FLUSH WITH THE TOP SURFACE OF THE CONCRETE FLOOR. WHEN SHEET METAL SLEEVE IS USED, THE T, FT AND FTH RATINGS ARE Ø HR.

3. FIRESTOP DEVICE* – DROP-IN FIRESTOP DEVICE INSTALLED IN CORE-DRILLED OR SLEEVED OPENING IN CONCRETE FLOOR ASSEMBLY IN ACCORDANCE WITH ACCOMPANYING INSTALLATION INSTRUCTIONS. THE FIRESTOP DEVICE FLANGE SHOULD BE SECURED TO THE TOP SURFACE OF THE FLOOR WITH THREE 1/4 IN. (6 MM) DIAM BY MIN 1-1/4 IN. (32 MM) LONG STEEL EXPANSION BOLTS OR SCREW ANCHORS (INSTALLED IN A TRIANGULAR FASHION THROUGH HOLES PROVIDED). AS ALTERNATES TO THE ANCHORS SPECIFIED ABOVE, HILTI 1/4 IN. (6 MM) DIAM BY 1-1/4 IN. (32 MM) LONG KWIK-CON II+ CONCRETE SCREW ANCHOR, HILTI 1/4 IN. (6 MM) DIAM BY 1-3/4 IN. (45 MM) LONG KWIK-BOLT 3 STEEL EXPANSION ANCHOR OR HILTI 1/4 IN. (6 MM) BY 3/4 IN. (19 MM) LONG METAL HIT ANCHOR MAY BE USED. IN ADDITION, FOR NOM 2 IN. (51 MM), 3 IN. (76 MM) AND 4 IN. (102 MM) FIRESTOP DEVICES, FOUR 11/16 IN. (18 MM) LONG HILTI X-GH P18 MX STEEL FASTENERS MAY BE INSTALLED THROUGH THE STEEL FLANGE, TWO ON EACH SIDE. THE FIRESTOP DEVICES SHALL BE INSTALLED AS DETAILED IN THE FOLLOWING TABLE:

CORE HOLE OR SLEEVE DIAM.	FIRESTOP DEVICE	NOM. DIAM. OF THROUGH PENETRANT
4" (102 MM)	CFS-DID 2" MD	2" (51 MM) OR SMALLER
5" (127 MM)	CFS-DID 3"MD	3" (76 MM)
6" (152 MM)	CFS-DID 4"MD	4" (102 MM)
9" (229 MM)	CFS-DID 6"MD	5" (152 MM)

+ FOR PIPE SMALLER THAN NOM 2 IN. (51 MM) DIAM, ADAPTER AND TOP SEAL PLUG IS REQUIRED TO BE USED. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC —CFS-DID 2"MD, CFS-DID 3"MD, CFS-DID 4"MD, CFS-DID 6"MD

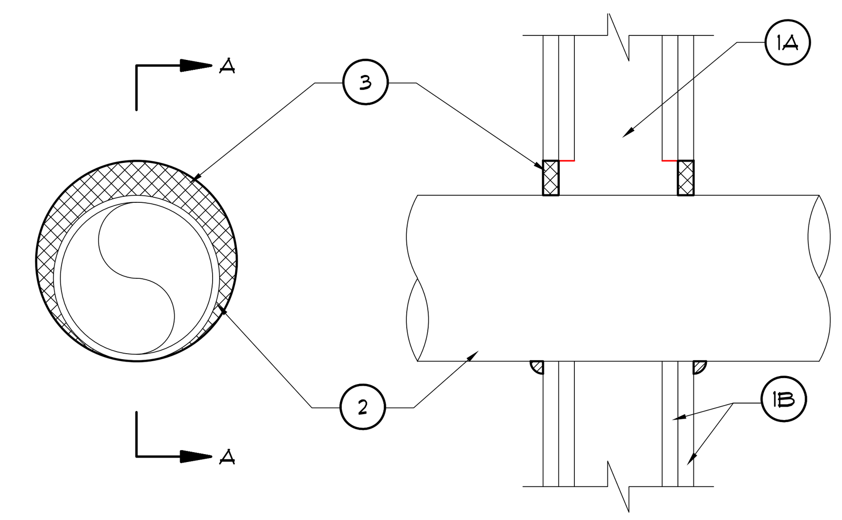
3A. FIRESTOP DEVICE* - WATER BARRIER MODULE —(OPTIONAL, NOT SHOWN) - USED IN COMBINATION WITH THE CFS-DID DEVICE AND SUPPLIED BY DEVICE MANUFACTURER. MODULE IS THREADED ONTO TOP OF DEVICE. W RATING AND L RATING APPLY ONLY WHEN WATER BARRIER MODULE IS USED.

   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC —WATER BARRIER MODULE

4. THROUGH PENETRANT —ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED WITHIN THE FIRESTOP DEVICE. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR ASSEMBLY. THE FOLLOWING TYPES OF PIPE, CONDUIT OR TUBING MAY BE USED:
   A. STEEL PIPE —NOM 6 IN. (152 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE —NOM 6 IN. (152 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT —NOM 6 IN. (152 MM) DIAM (OR SMALLER) RIGID STEEL CONDUIT.
   D. CONDUIT —NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING.
   E. COPPER TUBING —NOM 6 IN. (152 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   F. COPPER PIPE —NOM 6 IN. (152 MM) DIAM (OR SMALLER) REGULAR) OR HEAVIER COPPER PIPE.

   *BEARING THE UL CLASSIFICATION MARK

3 / A-707 **FIRESTOPPING DETAIL - SLAB**
SCALE: 3" = 1'-0"
HILTI FIRE RATED SYSTEM NO. F-A-1128



ANSI/UL 1479 (ASTM E814)	CAN/ULC S115
F RATINGS - 1 & 2 HR (SEE ITEMS 1 & 3)	F RATINGS - 1 & 2 HR (SEE ITEMS 1 & 3)
T RATING - Ø HR	FT RATING - Ø HR
L RATING (WITHOUT MOVEMENT) AT AMBIENT - LESS THAN 1 CFM/SQ FT	FH RATINGS - 1 & 2 HR (SEE ITEMS 1 & 3)
L RATING (WITHOUT MOVEMENT) AT 400° F - LESS THAN 1 CFM/SQ FT	FTH RATING - Ø HR
M RATING (MOVEMENT) - SEE TABLE 1	FTH RATING - Ø HR
	L RATING AT AMBIENT - LESS THAN 5.1 L/S/M2
	L RATING AT 204° C - LESS THAN 5.1 L/S/M2

1. WALL ASSEMBLY —THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS —WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 2-1/2 IN. (64 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC. FOR M RATING, STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE. WHEN STEEL STUDS ARE USED AND THE DIAM OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4 TO 6 IN. (102 TO 152 MM) WIDER AND 4 TO 6 IN. (102 TO 152 MM) HIGHER THAN THE DIAM OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2 TO 3 IN. (51 TO 76 MM) CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE FRAMING ON ALL FOUR SIDES.
   B. GYPSUM BOARD* —5/8 IN. (16 MM) THICK, 4 FT (122 CM) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 32-1/4 IN. (819 MM) FOR STEEL STUD WALLS. MAX DIAM OF OPENING IS 14-1/2 IN. (368 MM) FOR WOOD STUD WALLS.

   THE F AND FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY. THE M RATING IS APPLICABLE ONLY TO 1 HR RATED WALLS

2. THROUGH-PENETRANTS —ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN Ø IN. TO MAX 2-1/4 IN. (57 MM). PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE —NOM 30 IN. (762 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE —NOM 30 IN. (762 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT —NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. (152 MM) . DIAM STEEL CONDUIT.
   D. COPPER TUBING —NOM 6 IN. (152 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE —NOM 6 IN. (152 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

3. FILL, VOID OR CAVITY MATERIAL* —SEALANT —MIN 5/8 IN. (16 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. (13 MM) DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.

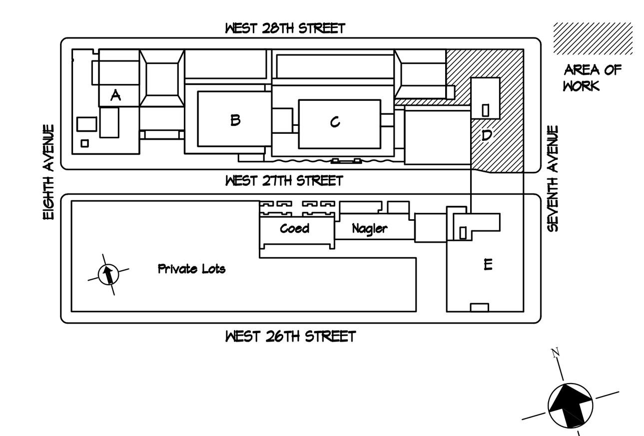
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC —FS-ONE MAX INTUMESCENT SEALANT

MOVEMENT DIRECTION	PENETRANT ITEM	NOMINAL PENETRANT DIAMETER	ANNULAR SPACE	MOVEMENT	SEALANT DEPTH	F-RATING	L-RATING WITH MOVEMENT
Y	2A, 2C*	2 IN.	MAX 2-1/4 IN.	5%	5/8 IN.	1 HR.	N/A
Z	2A, 2C*	2 IN.	2-1/4 IN.	Ø.25 IN.	5/8 IN.	1 HR.	N/A

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

4 / A-707 **FIRESTOPPING DETAIL - METAL PIPE THROUGH GYPSUM WALL**
SCALE: 3" = 1'-0"
HIILTI FIRE RATED SYSTEM NO. W-L-1054

NOT FOR CONSTRUCTION



LOCATION PLAN
NOT TO SCALE
BLOCK: 777
LOT: 37

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
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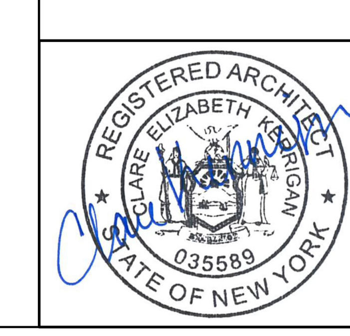
PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
FIRESTOPPING DETAILS
DOB NOW JOB#

SEAL & SIGNATURE:



DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
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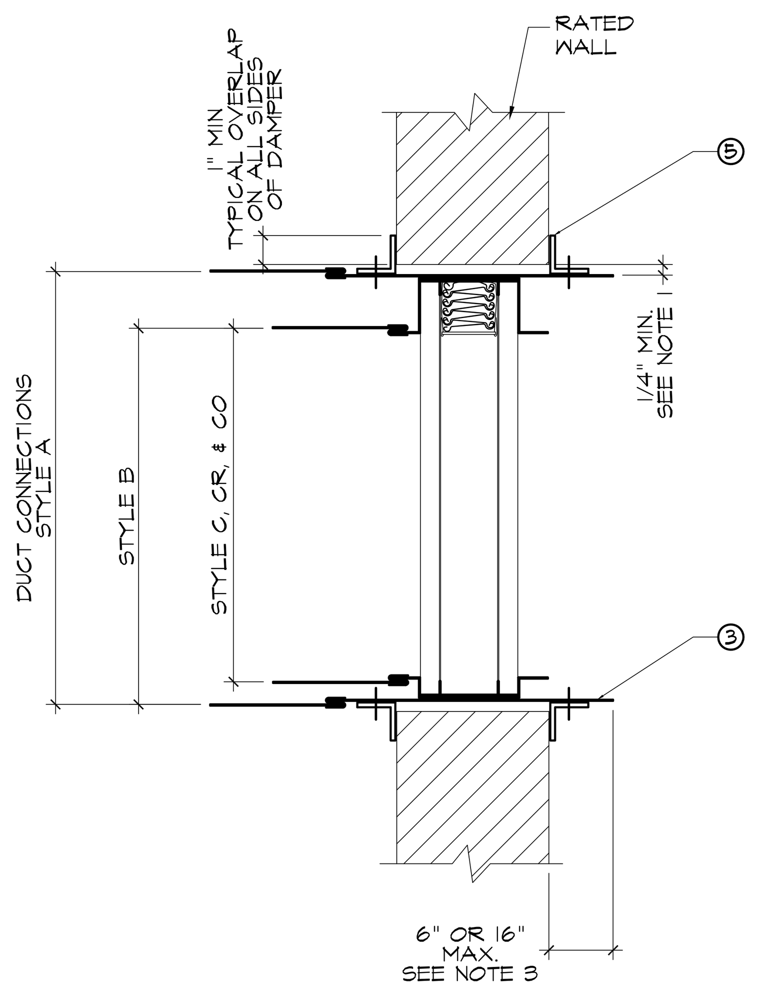
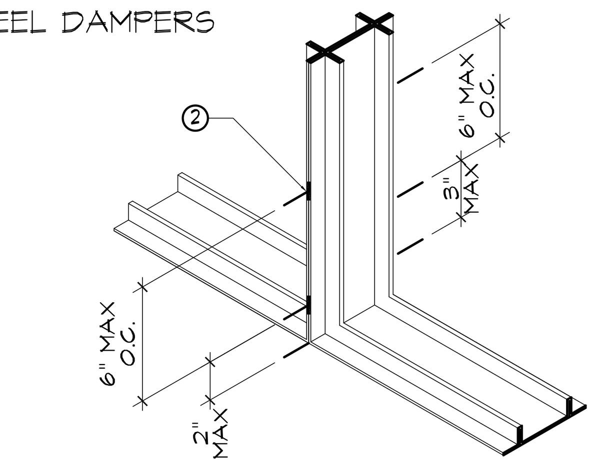
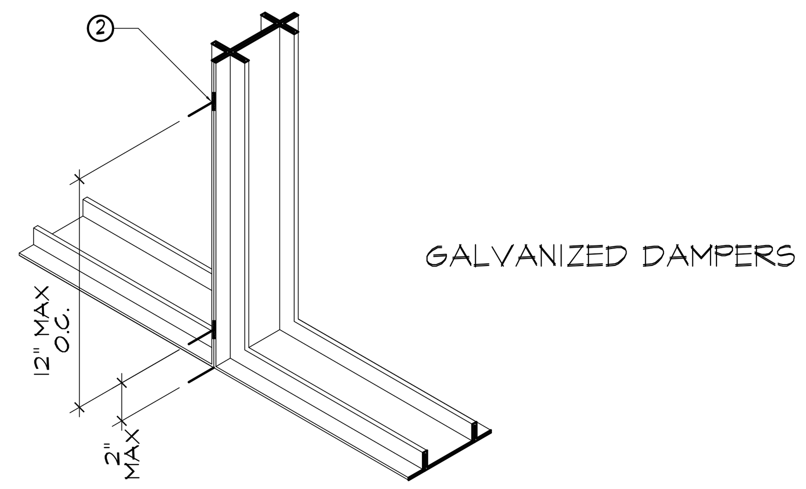
DOB page:	43 OF 44







1. OPENING CLEARANCE - THE OPENING IN THE WALL OR FLOOR SHALL BE LARGER THAN THE DAMPER/SLEEVE ASSEMBLY TO PERMIT INSTALLATION OR EXPANSION. FOR TWO ANGLE INSTALLATIONS THE OPENING SHALL BE A MINIMUM OF $\frac{1}{8}$" PER FOOT LARGER THAN THE OVERALL SIZE OF THE DAMPER/SLEEVE ASSEMBLY. THE MAXIMUM OPENING SIZE SHALL NOT EXCEED $\frac{1}{8}$" PER FOOT PLUS 2", NOR SHALL THE OPENING BE LESS THAN $\frac{1}{4}$" LARGER THAN THE DAMPER/SLEEVE ASSEMBLY. FOR ONE ANGLE INSTALLATIONS, THE OPENING SHALL BE A MINIMUM OF $\frac{1}{4}$" TO A MAXIMUM OF 1" LARGER THAN THE OVERALL SIZE OF THE DAMPER/SLEEVE ASSEMBLY. THE OPENING MAY BE AS MUCH AS 2" LARGER THAN THE DAMPER/SLEEVE ASSEMBLY IF 16 GA MOUNTING ANGLES ARE UTILIZED.

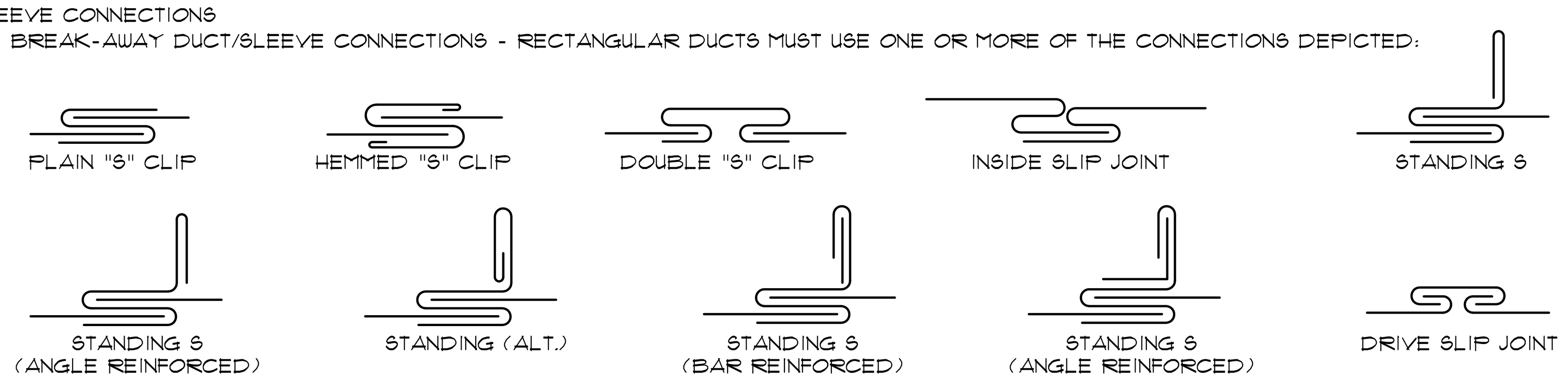
2. FASTENERS AND MULTIPLE SECTION ASSEMBLY - USE NO. 10 BOLTS OR SCREWS, $\frac{3}{16}$" RIVETS, TACK WELDS OR SPOT WELDS AS DEPICTED IN FIGURES 3 AND 4 AND SPACED AS FOLLOWS WHEN JOINING INDIVIDUAL DAMPERS TO MAKE MULTIPLE SECTION DAMPER ASSEMBLIES OR WHEN FASTENING DAMPER TO THE SLEEVE:
   VERTICAL MOUNT (IN WALL)
      GALVANIZED STEEL DAMPERS 12" SPACING
      STAINLESS STEEL DAMPERS 6" SPACING
   HORIZONTAL MOUNT (IN FLOOR)
      ALL DAMPERS 6" SPACING
   MULTIPLE SECTION HORIZONTAL MOUNT DAMPERS REQUIRE A 14 GAGE THICK X 4 $\frac{1}{2}$" WIDE STEEL REINFORCING PLATE SANDWICHED BETWEEN THE DAMPER FRAMES WITH $\frac{1}{2}$" LONG WELDS STAGGERED INTERMITTENTLY AND SPACED ON MAXIMUM 6" CENTERS. THE REINFORCING PLATE MUST BE THE SAME MATERIAL AS THE DAMPERS, THE LENGTH MUST BE EQUAL TO THE DAMPER WIDTH OF TWO OR MORE ADJOINING DAMPER SECTIONS. REINFORCING PLATES ARE NOT REQUIRED FOR ASSEMBLIES CONSISTING OF TWO DAMPERS ATTACHED END-TO-END OR THREE DAMPERS ATTACHED SIDE-TO-SIDE AS DEPICTED IN FIGURE 5.

3. DAMPER SLEEVE - SLEEVE THICKNESS MUST BE EQUAL TO OR THICKER THAN THE DUCT CONNECTED TO IT. SLEEVE GAGE REQUIREMENTS ARE LISTED IN THE SMACNA FIRE, SMOKE AND RADIATION DAMPER INSTALLATION GUIDE FOR HVAC SYSTEMS AND IN NFPA90A. IF A BREAKAWAY STYLE DUCT/SLEEVE CONNECTION IS NOT USED, THE SLEEVE SHALL BE A MINIMUM OF 16 GAGE FOR DAMPERS UP TO 36" WIDE BY 24" HIGH AND 14 GAGE FOR DAMPERS EXCEEDING 36" WIDE BY 24" HIGH. DAMPER SLEEVE SHALL NOT EXTEND MORE THAN 6" BEYOND THE FIRE WALL OR PARTITION UNLESS DAMPER IS EQUIPPED WITH A FACTORY INSTALLED ACCESS DOOR. SLEEVE MAY EXTEND UP TO 16" BEYOND THE FIRE WALL OR PARTITION ON SIDES EQUIPPED WITH A FACTORY INSTALLED ACCESS DOOR. SLEEVE SHALL TERMINATE AT BOTH SIDE OF WALL WITHIN DIMENSIONS SHOWN.

4. DAMPER ORIENTATION - USE "AIR FLOW" AND "MOUNT WITH ARROW UP" LABELS ON DYNAMIC DIBD AND DIBDX MODELS FOR PROPER DAMPER ORIENTATION. FOR STATIC IBD MODELS USE ONLY "MOUNT WITH ARROW UP" LABEL ON DAMPER FOR PROPER DAMPER ORIENTATION. STATIC AND DYNAMIC DAMPERS MUST BE INSTALLED WITH LEADING EDGE OF THE CLOSED BLADES WITHIN THE WALL OR FLOOR.

5. MOUNTING ANGLES - MOUNTING ANGLES SHALL BE A MINIMUM OF 1 $\frac{1}{2}$" X 1 $\frac{1}{2}$" X 20 GAGE STEEL. FOR OPENINGS IN METAL STUD, WOOD STUD WALLS OR CONCRETE/MASONRY WALLS AND FLOORS OF SIZES 90"X49" OR 49"X90" AND LESS MOUNTING ANGLES ARE ONLY REQUIRED ON ONE SIDE OF THE WALL OR TOP SIDE OF THE FLOOR AND MUST BE ATTACHED TO BOTH THE SLEEVE AND THE WALL OR FLOOR, MOUNTING ANGLES MAY BE INSTALLED DIRECTLY TO THE METAL STUD UNDER THE WALL BOARD ON METAL STUD WALL INSTALLATIONS ONLY. LARGER OPENINGS REQUIRE MOUNTING ANGLES ON BOTH SIDES OF THE PARTITION AND MUST BE ATTACHED ONLY TO THE SLEEVE, MOUNTING ANGLES MUST OVERLAP THE PARTITION A MINIMUM OF 1". DO NOT WELD OR FASTEN ANGLES TOGETHER AT CORNERS OF DAMPERS. RUSKIN FIRE DAMPERS MAY BE INSTALLED USING RUSKIN FAST ANGLE FOR ONE ANGLE INSTALLATION OR RUSKIN PFMA FOR TWO ANGLE INSTALLATIONS.
   A. MOUNTING ANGLE FASTENERS
      SLEEVE: #10 BOLTS OR SCREWS, $\frac{3}{16}$" STEEL RIVETS OR $\frac{1}{2}$" LONG WELDS.
      MASONRY/WALL OR FLOOR: #10 SELF-TAPPING CONCRETE SCREWS
      WOOD/STEEL STUD WALL: #10 SCREWS
   B. MOUNTING ANGLE FASTENER SPACING
      FOR ONE ANGLE INSTALLATIONS THE SLEEVE FASTENERS SHALL BE SPACED AT 6" O.C. AND THE WALL OR FLOOR FASTENERS SHALL BE SPACED AT 12" O.C. WITH A MINIMUM OF 2 FASTENERS ON EACH SIDE, TOP AND BOTTOM. SCREW FASTENERS USED IN METAL STUD MUST ENGAGE THE METAL STUD A MINIMUM OF $\frac{1}{2}$". SCREW FASTENERS USED IN WOOD STUD MUST ENGAGE THE WOOD STUD A MINIMUM OF $\frac{3}{4}$". SCREW FASTENERS USED IN MASONRY WALLS OR FLOORS MUST ENGAGE THE WALL A MINIMUM OF 1 $\frac{1}{2}$". FOR TWO ANGLE INSTALLATIONS THE FASTENERS SHALL BE SPACED AT 8" O.C.

6. DUCT/SLEEVE CONNECTIONS
   A. BREAK-AWAY DUCT/SLEEVE CONNECTIONS - RECTANGULAR DUCTS MUST USE ONE OR MORE OF THE CONNECTIONS DEPICTED:



   A MAXIMUM OF TWO #10 SHEET METAL SCREWS ON EACH SIDE AND THE BOTTOM, LOCATED IN THE CENTER OF THE SLIP POCKET AND PENETRATING BOTH SIDES OF THE SLIP POCKET MAY BE USED. CONNECTIONS USING THESE SLIP JOINTS ON THE TOP AND BOTTOM WITH FLAT DRIVE SLIPS UP TO 20" LONG ON THE SIDES MAY ALSO BE USED.

   B. ROUND AND OVAL BREAK-AWAY CONNECTIONS - ROUND AND FLAT OVAL BREAK-AWAY CONNECTIONS MUST USE EITHER A 4" WIDE DRAWBAND OR #10 SHEET METAL SCREWS SPACED EQUALLY AROUND THE CIRCUMFERENCE OF THE DUCT AS FOLLOWS:
      - DUCT DIAMETERS 22" AND SMALLER - MAXIMUM 3 SCREWS
      - DUCT DIAMETERS OVER 22" AND INCLUDING 36" - MAXIMUM 5 SCREWS
      - DUCT DIAMETERS OVER 36" AND UP TO AND INCLUDING 191" TOTAL PERIMETER - MAXIMUM 8 SCREWS. FOR FLAT OVAL DUCTS, THE DIAMETER IS CONSIDERED THE LARGEST (MAJOR) DIMENSION OF THE DUCT.

      NOTE: WHEN OPTIONAL SEALING OF THESE JOINTS IS DESIRED, THE FOLLOWING SEALANTS MAY BE APPLIED IN ACCORDANCE WITH THE SEALANT MANUFACTURER'S INSTRUCTIONS:
      DESIGN POLYMERICS - DP1010 PRECISION - PA2084T HARDCAST, INC. - IRON GRIP 601 ECO DUCT SEAL 44-52

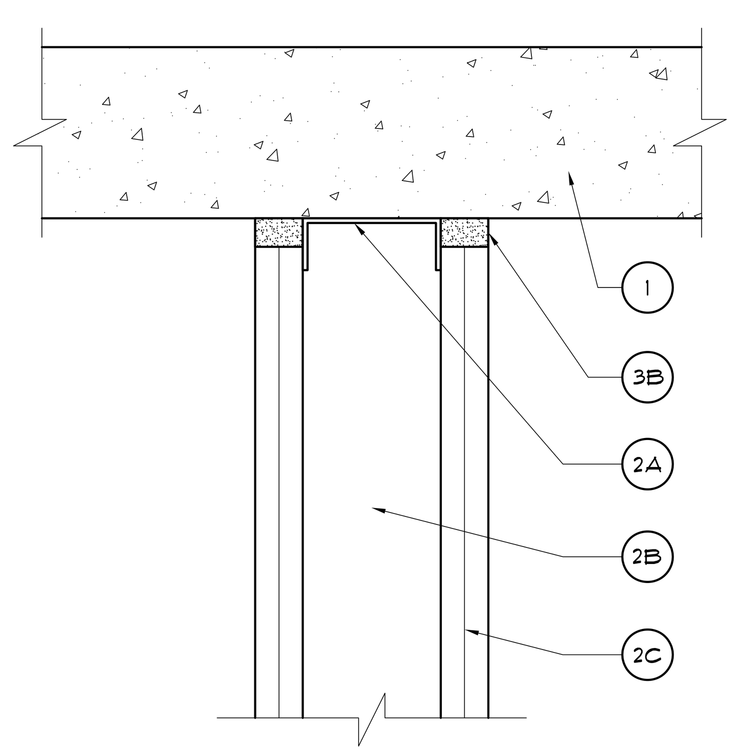
   C. FLANGED BREAK-AWAY STYLE DUCT SLEEVE CONNECTIONS - FLANGED CONNECTION SYSTEMS MANUFACTURED BY DUCTMATE, NEXUS, OR WARD ARE APPROVED BREAK-AWAY CONNECTIONS WHEN INSTALLED AS SHOWN ON THE FLANGED SYSTEM BREAKAWAY CONNECTIONS SUPPLEMENT. TDC AND TDF ROLL-FORMED FLANGED CONNECTIONS USING $\frac{3}{8}$" STELL BOLTS AND NUTS, AND METAL CLEATS, AS TESTED BY SMACNA, ARE APPROVED BREAK-AWAY CONNECTIONS WHEN INSTALLED AS SHOWN ON THE FLANGED SYSTEM BREAKAWAY CONNECTIONS SUPPLEMENT.

   D. NON-BREAK-AWAY DUCT/SLEEVE CONNECTIONS - IF OTHER DUCT SLEEVE CONNECTIONS ARE USED, THE SLEEVE SHALL BE A MINIMUM OF 16 GAGE FOR DAMPERS UP TO 36" WIDE X 24" HIGH AND 14 GAGE FOR DAMPERS EXCEEDING 36" WIDE X 24" HIGH.

7. INSTALLATION AND MAINTENANCE - TO ENSURE OPTIMUM OPERATION AND PERFORMANCE, THE DAMPER MUST BE INSTALLED SO IT IS SQUARE AND FREE FROM RACKING. EACH FIRE DAMPER SHOULD BE MAINTAINED AND TESTED ON A REGULAR BASIS AND IN ACCORDANCE WITH THE LATEST EDITIONS OF NFPA 90A AND LOCAL CODES, CARE SHOULD BE EXERCISED TO ENSURE THAT SUCH TESTS ARE PERFORMED SAFELY AND DO NOT CAUSE SYSTEM DAMAGE.

1 / A-708 **FIRESTOPPING DETAIL - DAMPER**
SCALE: 1 1/2" = 1'-0"

RUSKIN FIRE RATED SYSTEM NO. UL-R5531



1. FLOOR ASSEMBLY - MIN 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) STRUCTURAL CONCRETE.

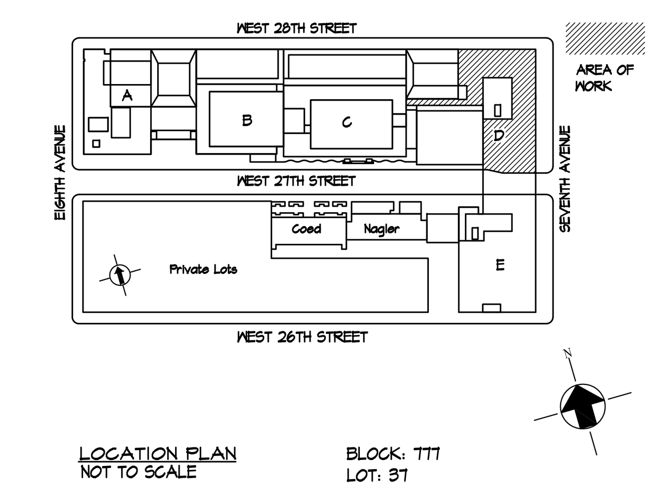
2. WALL ASSEMBLY - THE 1 OR 2 HOUR FIRE-RATED GYPSUM WALLBOARD / STEEL STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U400-SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STEEL FLOOR AND CEILING RUNNERS - FLOOR RUNNERS OF WALL ASSEMBLY SHALL CONSIST OF GALVANIZED STEEL CHANNELS SIZED TO ACCOMMODATE STEEL STUDS (ITEM 2B). CEILING RUNNERS OF WALL ASSEMBLY SHALL CONSIST OF MIN NO. 26 GAUGE GALVANIZED STEEL CHANNELS SIZED TO ACCOMMODATE STEEL STUDS (ITEM 2B). CEILING RUNNERS TO BE PROVIDED WITH 2 IN. FLANGES. CEILING RUNNER SECURED TO LOWER SURFACE OF FLOOR WITH STEEL FASTENERS SPACED MAX 7 IN OC.
   B. STUDS - STEEL STUDS TO BE MIN 2-1/2 IN. WIDE. STUDS CUT 1 IN. LESS IN LENGTH THAN ASSEMBLY HEIGHT WITH BOTTOM NESTING IN AND RESTING ON FLOOR RUNNER AND WITH TOP NESTING IN CEILING RUNNER WITHOUT ATTACHMENT. STUD SPACING NOT TO EXCEED 24 IN. OC.
   C. GYPSUM BOARD* - GYPSUM BOARD SHEETS INSTALLED TO A MIN. TOTAL THICKNESS OF 5/8 OR 1-1/4 IN. ON EACH SIDE OF WALL FOR A 1 OR 2 HOUR FIRE-RATED WALL, RESPECTIVELY. WALL TO BE CONSTRUCTED AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY, EXCEPT THAT A MAX 1 IN. GAP SHALL BE MAINTAINED BETWEEN THE TOP OF THE GYPSUM BOARD AND THE LOWER SURFACE OF THE FLOOR. THE TOP ROW OF SCREWS SHALL BE INSTALLED INTO THE STUDS 4 IN. BELOW THE LOWER SURFACE OF THE FLOOR. THE HOURLY FIRE RATING OF THE JOINT SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL.

3. JOINT SYSTEM - MAX SEPARATION BETWEEN BOTTOM OF FLOOR AND TOP OF WALL (AT TIME OF INSTALLATION OF JOINT SYSTEM) IS 1 IN. THE JOINT SYSTEM IS DESIGNED TO ACCOMMODATE A MAX. 25 PERCENT COMPRESSION FROM ITS INSTALLED WIDTH. THE JOINT SYSTEM CONSISTS OF A PACKING MATERIAL AND A FILL MATERIAL BETWEEN THE TOP OF THE WALLBOARD AND THE BOTTOM OF THE FLOOR, AS FOLLOWS:
   A. PACKING MATERIAL - (OPTIONAL, NOT SHOWN) - FOR 2 HR RATED SYSTEM, TWO LAYERS OF NOM 7/8 IN. DIAMETER POLYURETHANE BACKER ROD FRICTION-FITTED ON TOP OF EACH OTHER INTO THE GAP BETWEEN THE TOP OF THE GYPSUM BOARD AND THE BOTTOM OF THE CONCRETE FLOOR ON BOTH SIDES OF THE WALL AND RECESSED FROM EACH SURFACE OF WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
   B. FILL, VOID, OR CAVITY MATERIAL* - A MIN. 1/2 IN. THICKNESS OF FILL MATERIAL INSTALLED ON EACH SIDE OF THE WALL BETWEEN THE TOP OF THE GYPSUM BOARD AND BOTTOM OF THE CONCRETE FLOOR. FOR 1 HR SYSTEMS OR IN 2 HR SYSTEMS WHERE PACKING MATERIAL (ITEM 3A) IS NOT USED, BOND BREAKER TAPE MAY BE APPLIED TO CEILING RUNNER ON EACH SIDE OF WALL.
      UNITED STATES GYPSUM CO - TYPE A

*INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

2 / A-708 **FIRESTOPPING DETAIL - TOP OF WALL JOINT**
SCALE: 3" = 1'-0"

UL FIRE RATED JOINT SYSTEM NO. HW-D-0158



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LOT: 37

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FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
FIRESTOPPING DETAILS

DOB NOW JOB#

SEAL & SIGNATURE:
REGISTERED ARCHITECT CLARE ELIZABETH KERRIGAN 035589 STATE OF NEW YORK

DATE:	03.21.2025
PROJECT No:	22320.10
DRAWING BY:	GN / BR
CHK BY:	CK
SCALE:	AS NOTED
DWG No:	A-710.00
CADD FILE:	
DOB page:	44 OF 44

NOT FOR CONSTRUCTION

ELECTRICAL - SYMBOLS

OR	PANELBOARD
	DISTRIBUTION OR POWER PANELBOARD.
WP	3-POLE UNFUSED DISCONNECT (SAFETY) SWITCH. NUMERAL INDICATES AMPACITY, 'WP' DENOTES WEATHERPROOF ENCLOSURE. NO NUMBER INDICATES 30A OR LESS.
WP	3-POLE FUSED DISCONNECT (SAFETY) SWITCH. NUMERAL INDICATES SWITCH AMPACITY/FUSE SIZE, 'WP' DENOTES WEATHERPROOF ENCLOSURE. NO NUMBER INDICATES 30A OR LESS.
	CIRCUIT BREAKER
	FUSIBLE SWITCH
J	WALL-MOUNTED JUNCTION BOX
	DUPLEX RECEPTACLE
	QUAD RECEPTACLE
$	MANUAL ON/OFF SWITCH

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE TO VISIT AND INSPECT SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS. CONTRACTOR'S INSPECTION SHALL BE CONDUCTED PRIOR TO FINAL BID, AND ANY ADDITIONAL WORK REQUIRED DUE TO FAILURE TO VISIT SITE OR INADEQUATE INSPECTION SHALL NOT BE CONSIDERED FOR COMPENSATION.
2. THE CONTRACTOR SHALL VERIFY ELECTRICAL AND GROUNDING REQUIREMENTS OF ALL NEW AND EXISTING EQUIPMENT TO BE USED.
3. CIRCUIT NUMBERS ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE TO BALANCE PHASES. REFER TO PANEL SCHEDULES FOR BRANCH CIRCUIT REQUIREMENTS.
4. CIRCUIT WIRE SIZES OTHER THAN 2 #12-3/4"C ARE INDICATED ON PLAN. REFER TO PANEL SCHEDULES FOR BRANCH CIRCUIT BREAKERS OTHER THAN 1 POLE, 20 AMP. ALL CIRCUITS AND FEEDERS SHALL HAVE A FULL SIZE INSULATED GREEN GROUND CONDUCTOR AND BE CONNECTED TO GROUND BUS IN RESPECTIVE PANEL. MINIMUM SIZE CONDUCTOR AND CONDUIT IS #12 THHN CU, 3/4"C (EMT).
5. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND PROVIDING THE ACTUAL NUMBER OF CONDUCTORS REQUIRED FOR ALL BRANCH CIRCUIT WIRING TO SERVE THE INTENDED FUNCTION.
6. ALL DEVICE PLATE FINISHES/COLORS SHALL BE AS REQUIRED BY OWNERSHIP.
7. THIS CONTRACTOR IS TO NOTIFY ENGINEER OF ANY CONTRADICTIONS FOUND ON THE DESIGN DOCUMENTS AND BASE THE BID ON THE MORE "STRINGENT & EXPENSIVE" CONDITIONS.
8. ELECTRONIC AS-BUILT DRAWINGS, SHOWING CONDUIT RUNS AND CIRCUITING MUST BE GIVEN TO ARCHITECT, ENGINEER AND OWNER AT THE COMPLETION OF THE JOB.
9. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ELECTRICAL LAYOUTS. ALL WORK WHICH IS NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
10. PANEL DIRECTORIES SHALL BE MODIFIED AND COMPLETELY FILLED IN AT COMPLETION OF JOB.
11. ANY EXISTING WORK NOT STATED FOR REMOVAL AND DAMAGED AS A RESULT OF PERFORMING THE WORK OF THIS CONTRACT SHALL BE REPAIRED OR REPLACED AS REQUIRED. MATERIAL AND FINISH TO MATCH EXISTING TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
12. CONNECT NEW WORK TO EXISTING WORK IN A NEAT AND ACCEPTABLE MANNER.
13. DISPOSE OF REMOVED RACEWAYS, WIRE, PANELS, ETC., AS DIRECTED BY OWNERSHIP.
14. ALL ELECTRICAL WORK IN ADJOINING AREAS WHICH IS REQUIRED TO FUNCTION BUT IS AFFECTED BY THIS WORK SHALL BE RECONNECTED AND RESTORED TO ITS PRESENT FUNCTION AS PART OF THE ELECTRICAL SYSTEM OF THE BUILDING(S).
15. ALL RACEWAYS WHICH BECOME EXPOSED BEYOND FINISHED SURFACES BECAUSE OF THE ALTERATION WORK SHALL BE REMOVED AND RE-ROUTED BEHIND THE FINISHED SURFACES.
16. ANY FIRE SAFETY EQUIPMENT AND THIS ASSOCIATED CONDUIT AND WIRING SYSTEM SHALL NOT BE HARMED DURING DEMOLITION AND/OR CONSTRUCTION AND SHALL BE PROTECTED FROM ANY PHYSICAL DAMAGE.
17. ALL HOLES IN SLABS OR WALLS SHALL BE FIRE STOPPED VIA LISTED FIRE-STOPPING ASSEMBLIES. SUBMIT TO ENGINEER FOR APPROVAL.
18. CONTRACTOR TO DE-RATE CONDUCTORS IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES WHEN INSTALLING MORE THAN THREE (3) CIRCUITS IN A 3/4"C HOMERUN AND OTHERWISE REQUIRED.
19. REFER TO PROJECT 'BOOK' SPECIFICATIONS FOR ADDITIONAL, IMPORTANT REQUIREMENTS.
20. THE CONTRACTOR SHALL NOTIFY OWNERSHIP OF ANY ELECTRICAL SHUTDOWNS REQUIRED FOR AREAS OUTSIDE OF THE SCOPE AREA A MINIMUM OF 1 WEEK IN ADVANCE.

POWER NOTES

1. EXACT LOCATION AND MOUNTING HEIGHT OF ALL POWER AND MECHANICAL EQUIPMENT SHALL BE COORDINATED WITH ALL TRADES.
2. ALL BRANCH CIRCUIT WIRING SHALL BE RUN CONCEALED IN WALLS AND ABOVE HUNG CEILING, UNLESS OTHERWISE NOTED.
3. No. 12 AWG (THHN) WIRING SHALL BE THE MINIMUM SIZE AND MUST BE USED FOR ALL 15A & 20A BRANCH CIRCUIT WIRING, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ADJUST SIZE FOR VOLTAGE DROP AND OTHER DE-RATING FACTORS AS PER CODE REQUIREMENTS.
4. 3/4" CONDUIT SHALL BE THE MINIMUM TRADE SIZE OF CONDUIT.
5. CIRCUITS ARE DESIGNATED BY THE NUMBER SHOWN ADJACENT TO EACH DEVICE. PROVIDE CONDUITS, WIRES, ARMORED CABLES AND BOXES REQUIRED TO ENERGIZE THE EQUIPMENT AS SHOWN.
6. ALL COMMUNICATIONS, SECURITY WORKS ARE A SEPARATE CONTRACT, UON. EC TO PROVIDE ALL CONDUIT, RACEWAY, BACK-BOXES.
7. CONDUIT RUNS THAT ARE SHOWN ARE DIAGRAMMATICAL AND SHOW POTENTIAL ROUTING OF CONDUITS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE RUNS WITH ALL TRADES.

VOLTAGE DROP REQUIREMENTS

NOTE: FEEDERS ARE SIZED TO MEET 3% MAXIMUM VOLTAGE DROP FROM THE SEB TO THE LAST OCPD. CONTRACTOR MUST PROVIDE FEEDERS AS SIZED HERE AS A MINIMUM. IF CONTRACTOR FEEDER ROUTING INCREASES THEIR LENGTH, OR INCREASES VOLTAGE DROP FOR ANY OTHER REASON, CONTRACTOR SHALL INCREASE FEEDER SIZE AND/OR QUANTITY TO MEET 3% MAXIMUM FEEDER VOLTAGE DROP REQUIREMENTS. THE FEEDER VOLTAGE DROP IS THE SUM OF ALL FEEDER VOLTAGE DROPS FROM THE SERVICE POINT (SEB) TO THE FINAL OVER-CURRENT PROTECTIVE DEVICE OF A CIRCUIT. MAXIMUM BRANCH CIRCUIT VOLTAGE DROP IS 2%. REFER TO ADDITIONAL BRANCH CIRCUIT VOLTAGE DROP REQUIREMENTS IF SHOWN IN DETAIL ON E-500 SERIES DRAWING. ANY CHANGE REQUESTS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL IN WRITING. CONTRACTOR SHALL MEASURE FEEDER LENGTHS AS FEEDERS ARE INSTALLED AND SUBMIT THIS DATA TO ENGINEER. INCLUDE TABLE OF FEEDER LENGTHS AND TABLE OF CALCULATED BRANCH CIRCUIT VOLTAGE DROPS (AS MAY BE REQUIRED PER E-500 SERIES DETAIL) IN CONTRACTOR'S AS-BUILT DRAWINGS.

LEGEND

———	NEW WORK
— — —	EXISTING
— x - x - x - x —	DEMO

EXISTING CONDITION & RELOCATION NOTES

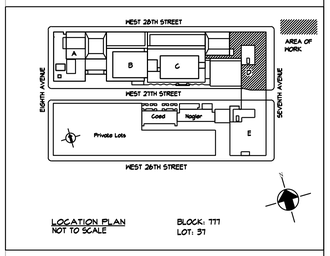
1. GENERALLY, IN AREAS SCHEDULED FOR DEMOLITION AND REMODELING REMOVE EXPOSED PORTIONS OF THE BRANCH AND SIGNAL CIRCUIT WIRING AND CONDUITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CONTINUITY OF EXISTING CIRCUITS FEEDING DEVICES THAT ARE TO REMAIN. MAINTAIN THE CONTINUITY OF EXISTING CIRCUITS SERVING OTHER SPACES BUT PASSING THROUGH THE AREA OF RENOVATION.
2. IN SUCH CASES, WHERE NEW CONDUITS ARE TO BE INSTALLED IN EXISTING WALLS, IN FURNISHED ROOMS, THEY SHALL BE CONCEALED BY CUTTING AND PATCHING THE WALLS FOR THE CONDUITS UNLESS OTHERWISE NOTED.
3. CONDUITS OR SLEEVES, THAT ARE NO LONGER REQUIRED, WHICH ARE PROTRUDING THROUGH THE FLOOR SLAB, SHALL BE CUT BACK AND CAPPED. ALL FEEDERS TO BE REMOVED BACK TO PANEL BOARD.
4. ELECTRICAL EQUIPMENT REMOVED SHALL BE RETURNED TO OWNER OR DISCARDED PER OWNER DIRECTIVE.
5. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING TO REMAIN SYSTEM CIRCUITS FOR FIRE ALARM, POWER AND TELE COMMUNICATIONS, ETC., DURING DEMOLITION.
6. THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED WIRING/CABLING NO LONGER IN USE BACK TO SOURCE.
7. UTILIZE, WHENEVER POSSIBLE, PRACTICAL, AND APPROVED BY THE ENGINEER, EXISTING OUTLET BOXES, AND RACEWAYS, ETC., COMPATIBLE WITH THE MATERIAL SPECIFIED FOR INSTALLATION IN THE NEW CONSTRUCTION AREAS. IN SUCH CASES, ALL ASSOCIATED CONDUITS AND WIRING SHALL BE ARRANGED TO ACCOMMODATE THE NEW CIRCUITING AS SHOWN ON THE DRAWING.
8. THE ELECTRICAL DEMOLITION PLANS INDICATE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL COMPONENTS AND ITEMS TO BE REMOVED OR RETAINED. DEVICES AND EQUIPMENT LOCATED ON THE WALLS AND OR CEILINGS DESIGNATED TO BE REMOVED SHALL BE REMOVED/RELOCATED. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY UNANTICIPATED OR HIDDEN CONDITIONS ENCOUNTERED DURING DEMOLITION.
9. THE CONTRACTOR SHALL CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH AND FEEDERS WITHIN OR ASSOCIATED WITH DEMOLITION SCOPE PRIOR TO DEENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS, LOAD CENTERS, MOTOR CONTROL CENTERS AND SWITCHBOARDS, IDENTIFIED FOR REMOVAL SHALL BE TRACED AND FIELD LABELED TO ENSURE THAT NO AREA OUTSIDE THE SCOPE IS AFFECTED.
10. CONTRACTOR SHALL OPEN EXISTING CEILINGS AS REQUIRED FOR INSTALLATION OF NEW WORK OR REMOVAL/MODIFICATION OF EXISTING SYSTEMS AND EQUIPMENT. CEILINGS TO BE CLOSED UPON COMPLETION OF WORK.

ELECTRICAL ABBREVIATIONS

A	-AMPS	KW	- KILOWATT
AC	- AIR CONDITIONING	KWH	- KILOWATT HOURS
ARCH	- ARCHITECTURAL	M	- MAIN
APPROX	- APPROXIMATELY	MACH	- MACHINE
ATS	- AUTOMATIC TRANSFER SWITCH	MCC	- MOTOR CONTROL CENTER
AUTO	- AUTOMATIC	MECH	- MECHANICAL
AWG	- AMERICAN WIRE GAUGE	MH	- MAN-HOLE
BLDG	- BUILDING	MTD	- MOUNTED
BPS	- BOLTED PRESSURE SWITCH	MTR	- MOTOR
CDT	- CONDUIT	N	- NEUTRAL
CKT	- CIRCUIT	NEC	- NATIONAL ELECTRIC CODE
CLG	- CEILING	NEMA	- NATIONAL ELECTRICAL MANUFACTURERS
COL	- COLUMN	NIC	- NOT IN CONTRACT
CONC	- CONCRETE	NTS	- NOT TO SCALE
CONST	- CONSTRUCTION	OCPD	- OVER-CURRENT PROTECTIVE DEVICE
COORD	- COORDINATE	OL	- OVERLOAD
CT	- CURRENT TRANSFORMER	O/H, OH	- OVER-HEAD
CTRL	- CONTROL	P	- POLES
CTRLR	- CONTROLLER	PB	- PULL BOX
CU	- COPPER	PF	- POWER FACTOR
DGP	- DATA GATHERING PANEL	PH	- PHASE
DISC	- DISCONNECT	PNL	- PANEL
DN	- DOWN	PP	- POWER PANEL
DP	- DISTRIBUTION PANEL	PWR	- POWER
DWG	- DRAWING	R	- RELOCATED
E	- EXISTING	RM	- ROOM
ERPL	- EXISTING TO BE REPLACED WITH NEW	SB	- SPLICE BOX
ELEC	- ELECTRICAL	SP	- SPARE
ELEV	- ELEVATOR	SPECS	- SPECIFICATIONS
EQPMT	- EQUIPMENT	STD	- STANDARD
ER	- EXISTING TO REMAIN	SURF	- SURFACE
ERL	- EXISTING TO RELOCATE	SW	- SWITCH
EXIST	- EXISTING	SWBD	- SWITCHBOARD
FA	- FIRE ALARM	SWGR	- SWITCHGEAR
FBO	- FURNISHED BY OTHERS	TELCO	- TELEPHONE COMPANY
FCO	- FUSE CUT-OUT	TV	- TELEVISION
FCS	- FIRE COMMAND STATION	TYP	- TYPICAL
FDS	- FUSED DISC. SWITCH (FIRE ALARM)	U/G, UG	- UNDER-GROUND
FT	- FEET	UF	- UNFUSED
G	- GROUND	UPS	- UNINTERRUPTIBLE POWER SUPPLY
GND	- GROUND	U.O.N., UON	- UNLESS OTHERWISE NOTED
HC	- HUNG CEILING	V	- VOLTS
HH	- HAND-HOLE	VA	- VOLT AMPERE
HP	- HORSEPOWER	VIF	-VERIFIED IN FIELD
HT	- HEIGHT	W	- WATTS
HTG	- HEATING	W/	- WITH
HVAC	- HEATING VENTILATING AND AIR CONDITIONING	XFMR	- TRANSFORMER
HZ	- HERTZ	1/C,2/C,3/C	- Q'TY OF CONDUCTORS
IC	- INTERRUPTING CAPACITY	C/B, BKR	- CIRCUIT BREAKER
IG	- ISOLATED GROUND	CT, C/T	- CURRENT TRANSFORMER
IN	- INCHES	Ø	- PHASE
JB	- JUNCTION BOX		
KVA	- KILOVOLT AMPERES		

ELECTRICAL DRAWING LIST

DWG No.	DRAWING TITLE
E-001.00	ELECTRICAL SYMBOL LIST, ABBREVIATIONS, AND NOTES
E-101.00	SUB-CELLAR AND CELLAR FLOOR ELECTRICAL POWER PART PLANS
E-102.00	1ST, 2ND, 3RD, & 6TH FLOOR ELECTRICAL POWER PART PLANS
E-201.00	ELECTRICAL CONDUIT ROUTING PART PLANS I
E-202.00	ELECTRICAL CONDUIT ROUTING PART PLANS II
E-501.00	ELECTRICAL DETAILS I
E-502.00	ELECTRICAL DETAILS II
E-900.00	CELLAR ELECTRICAL DEMOLITION PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	LAMP QUANT.	LAMP WATTS	LAMP	TOTAL WATTS	VOLTAGE	COMMENTS
AV1	METALUX - 2VT2/LD5/3/DR/UNV/VT-REM-EL/L835/WL/SSL /U/VT2-SS-MBK	METALUX	2	22W	LED 3500K	44W	120/277V	WALL MOUNTED VAPORPROOF, GASKETED, LIGHT FIXTURE. FIXTURE TO BE NOMINALLY 7" WIDE X 6" HIGH X 2' LONG. FIXTURE TO CONTAIN A PRISMATIC LENS. FIXTURE TO BE SUITABLE FOR WET LOCATION. EM DENOTES FIXTURES TO CONTAIN 10 WATT EMERGENCY INTEGRAL BATTERY DRIVER SUITABLE FOR 90 MINUTES AND MINIMUM 1100 DELIVERED LUMENS.
BP	WILLIAMS - BP-24-LS/8CS-EM/10WKITCEC-QS-UNV	WILLIAMS	2	29W	LED 3500K	58W	120/277V	SURFACE MOUNTED BACKLIT FLAT PANEL LIGHT FIXTURE. FIXTURE TO BE NOMINALLY 2' WIDE X 1-3/4" HIGH X 4' LONG. FIXTURE TO CONTAIN A PRISMATIC LENS. EM DENOTES FIXTURES TO CONTAIN 10 WATT EMERGENCY INTEGRAL BATTERY DRIVER SUITABLE FOR 90 MINUTES AND MINIMUM 1100 DELIVERED LUMENS.

NOTES
1. ALL LIGHTING FIXTURES SHALL BE LISTED.
2. CONTRACTOR SHALL SUBMIT ALL LIGHTING FIXTURE CUTS FOR REVIEW AND APPROVAL.
3. CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS WITHOUT PRIOR APPROVAL OF THE ENGINEER AND ARCHITECT.
4. EXACT MOUNTING CONDITION TO BE COORDINATED IN THE FIELD.
5. REFER TO THE ARCHITECTURAL DRAWINGS FOR FINAL LIGHT FIXTURE REQUIREMENTS.
6. MANUFACTURER TO PROVIDE SAME LED BOARDS AND DRIVERS FOR FIXTURES FROM THE SAME MANUFACTURER.

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
ELECTRICAL SYMBOL LIST, ABBREVIATIONS, AND NOTES
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	N.T.S
DWG No:	E-001.00
CADD FILE:	DOB page: 1 OF 4

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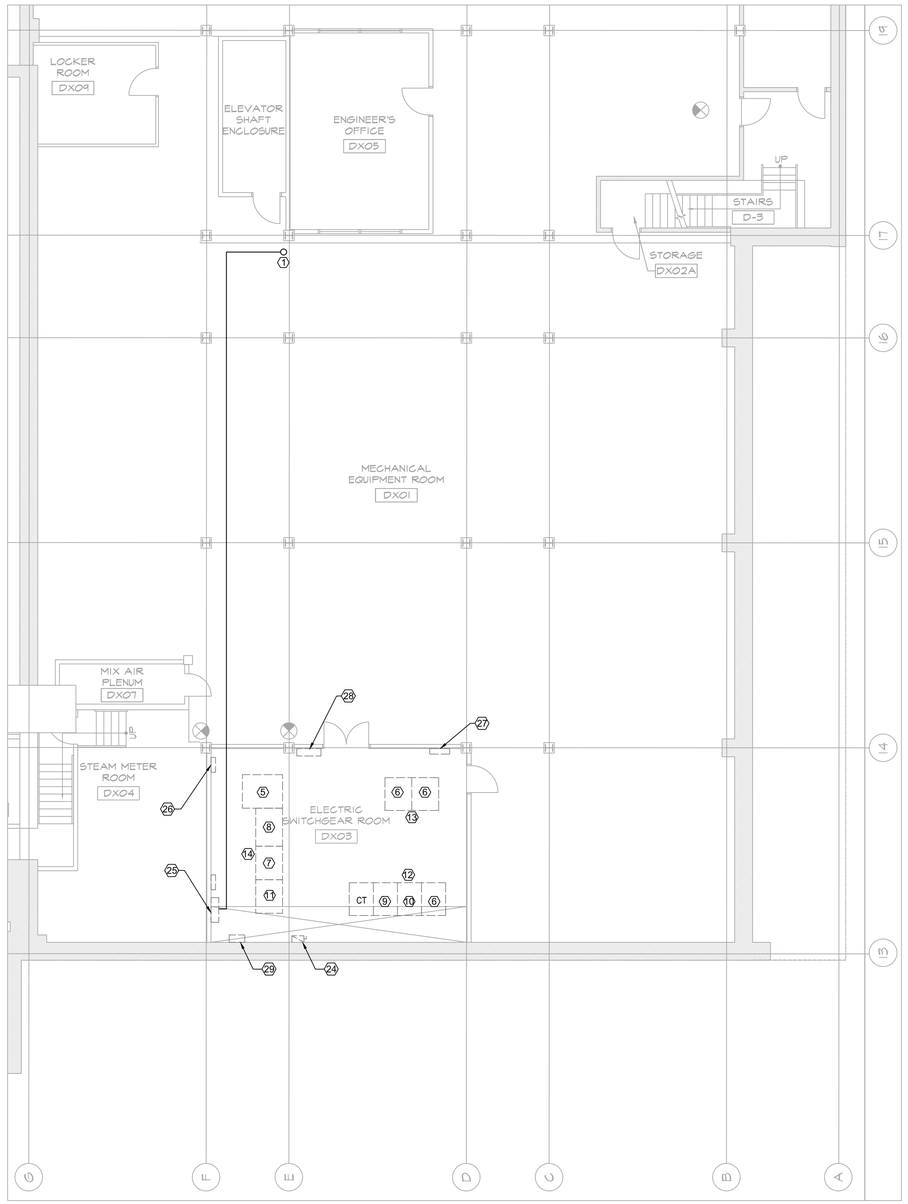
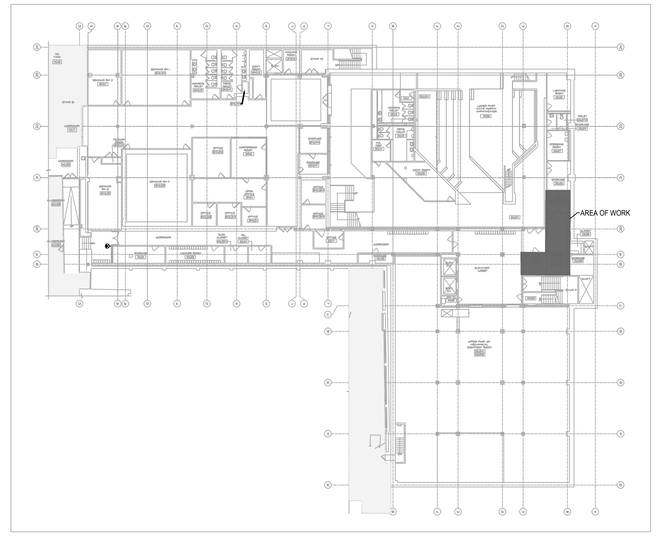
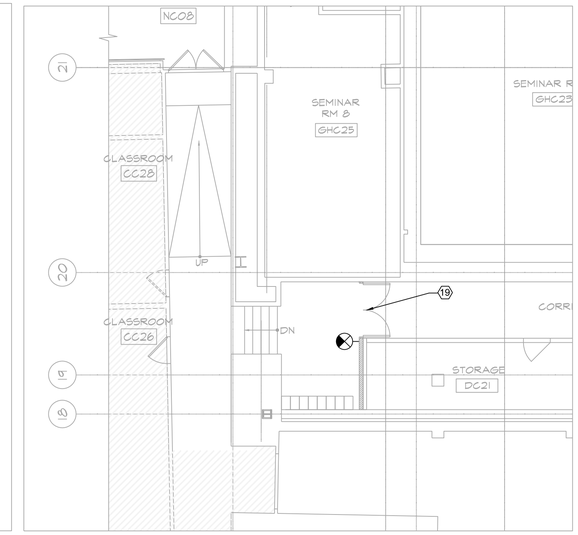


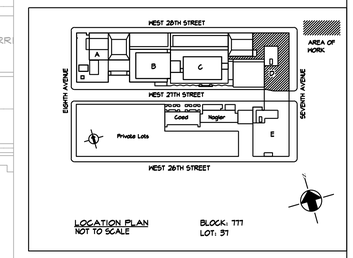
1 SUB-CELLAR ELECTRICAL POWER PART PLAN
SCALE: 1/8" = 1'-0"



2 CELLAR ELECTRICAL AREA OF WORK
SCALE: 1/32" = 1'-0"

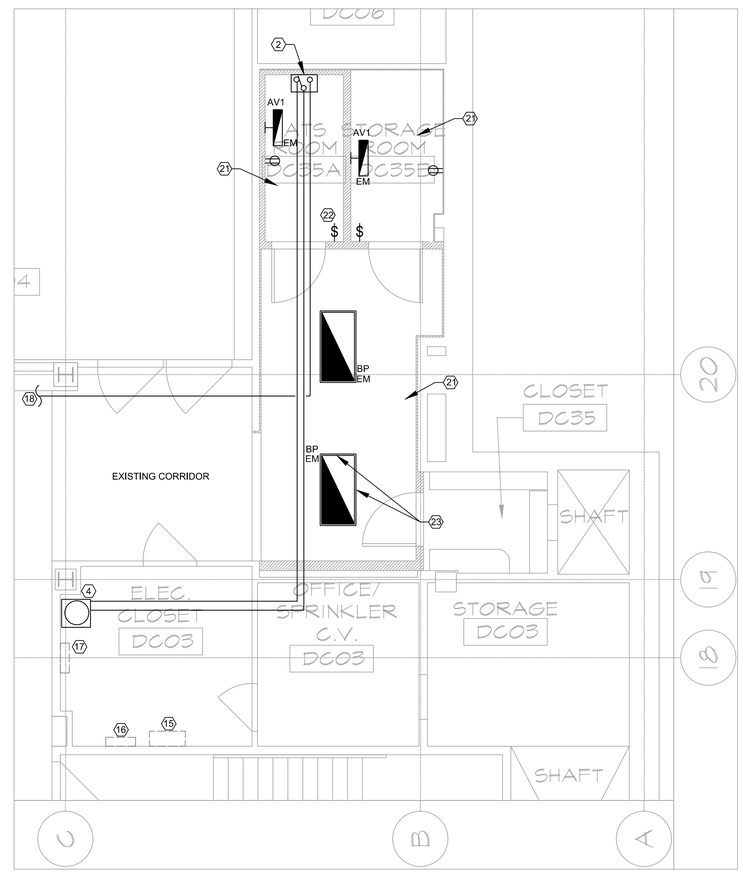


4 CELLAR FLOOR ELECTRICAL POWER PART PLAN
SCALE: 1/8" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37



3 CELLAR ELECTRICAL POWER PART PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES:

1. CONTRACTOR SHALL ROUTE THE CONDUIT & WIRING UP TO THE 1ST FLOOR TO ENERGIZE THE NEW FIRE COMMAND STATION
2. NEW 208V, 3PH, 125A AUTOMATIC TRANSFER SWITCH (ATS-LS-1). LOAD SIDE OF THE ATS IS THE FIRE ALARM FUSED CUT-OUT PANEL IN THE SUB CELLAR. REFER TO E-601 FOR ADDITIONAL INFORMATION.
3. NOT USED.
4. FIRE ALARM RISER FROM THE SUB-CELLAR TO THE 6TH FLOOR.
5. EXISTING MS2-2A IN ELECTRICAL SWITCHGEAR ROOM.
6. EXISTING DISTRIBUTION SWITCHES IN ELECTRICAL SWITCHGEAR ROOM.
7. EXISTING SS#1 (SERVICE 1)
8. EXISTING SS#2 & SS#3 (SERVICE 1)
9. EXISTING SS#1 (SERVICE 2)
10. EXISTING SS#2 (SERVICE 2)
11. EXISTING SERVICE END BOX
12. EXISTING SWITCHBOARD MSD-1
13. EXISTING SWITCHBOARD MSD-2
14. EXISTING SWITCHBOARD MSD-3
15. EXISTING PANELBOARD DP-DCA (MSD-1)
16. EXISTING PANELBOARD LP-DCC
17. EXISTING PANELBOARD AP-DCA.
18. EMERGENCY POWER FEEDING THE ATS COMING FROM THE NEW ACADEMIC BUILDING GENERATOR LOCATED ON THE ROOF. REFER TO E-200 SERIES FOR CONDUIT ROUTING.
19. NOT AN EGRESS FROM POMERANTZ, EXISTING LIGHTING CIRCUITRY AND CONTROL SCHEME, AFFECTED BY THE NEW TRANSITION DOOR, SHALL BE MAINTAINED ON EITHER SIDE.
20. NOT USED
21. ALL ELECTRICAL EQUIPMENT SHALL BE REMOVED IN THIS ROOM (LIGHTING, SWITCHES, RECEPTACLES, ETC.). CONTRACTOR SHALL REUSE EXISTING CIRCUITS, CONDUIT, AND JUNCTION BOXES FOR THE NEW EQUIPMENT. CONTRACTOR SHALL PROVIDE NEW WIRING AND SPLICE AND EXTEND WIRE AND CONDUIT WHERE REQUIRED.
22. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING LIGHTING, LIGHTING CONTROLS, AND RECEPTACLES BACK TO THE SOURCE. CONTRACTOR SHALL PROVIDE WIRING TO THE NEW EQUIPMENT. (TYP. FOR ALL NEW LIGHTING EQUIPMENT AND RECEPTACLES IN THIS LOCATION)
23. CONTRACTOR SHALL REUSE EXISTING CIRCUITING AND LIGHTING CONTROLS FROM THE EXISTING ENTRIES OF LIGHTING TO ENERGIZE AND CONTROL NEW CORRIDOR LIGHTING. CONTRACTOR SHALL SPLICE AND EXTEND WIRING AND CONDUIT AS REQUIRED.
24. EXISTING FIRE ALARM SYSTEM FUSED DISCONNECT SWITCH
25. EXISTING FUSED CUT-OUT PANEL FOR FIRE ALARM SYSTEM
26. EXISTING PANEL LP-D
27. EXISTING PUMP PANEL
28. EXISTING PANEL DP-DSCA
29. EXISTING CON-ED METER

GENERAL NOTES:

1. REFER TO DWG E-001 FOR NOTES ABBREVIATIONS, AND LIGHT FIXTURE SCHEDULE.

GENERAL NOTES:

1. REFER TO SHEET E-001 FOR SYMBOLS AND ABBREVIATIONS.
2. REFER TO SHEET E-002 FOR NOTES.
3. REFER TO THE E-600 SERIES DRAWINGS FOR ONE-LINE DIAGRAM .
4. ALL CDTS SHOWN SHALL BE SUPPORTED BY STRUCTURAL CEILING AND BE INSTALLED AS HIGH AS POSSIBLE.

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
SUB-CELLAR & CELLAR FLOOR ELECTRICAL POWER PART PLANS

DOB NOW JOB#

SEAL & SIGNATURE:

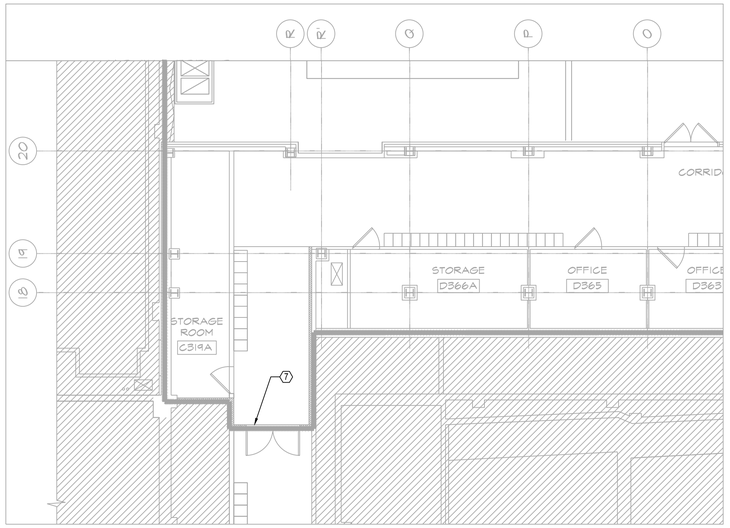
DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	AS NOTED
DWG No:	E-101.00
CADD FILE:	DOB page: 3 OF 4

GENERAL NOTES:

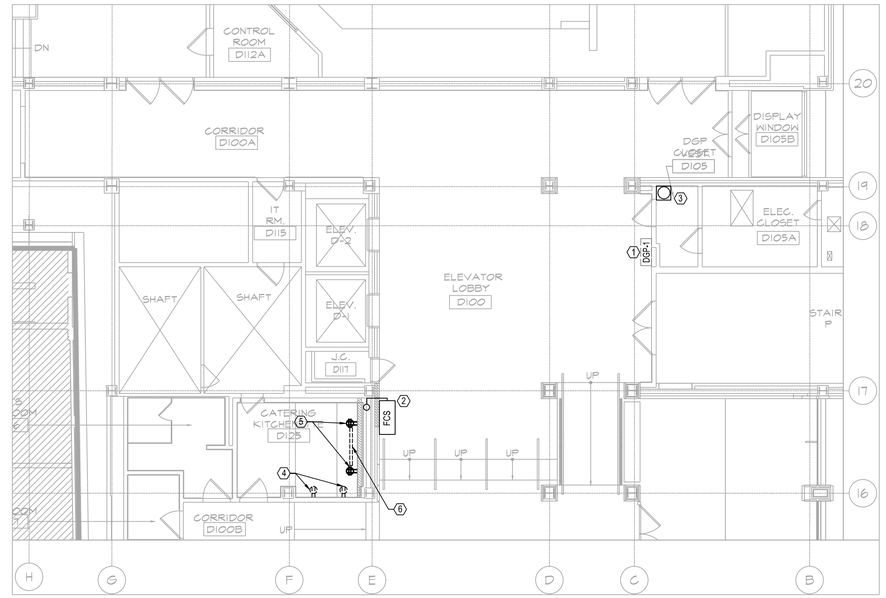
1. REFER TO SHEET E-001 FOR SYMBOLS AND ABBREVIATIONS.
2. REFER TO SHEET E-002 FOR NOTES.
3. REFER TO THE E-600 SERIES DRAWINGS FOR ONE-LINE DIAGRAM .
4. ALL CDTS SHOWN SHALL BE SUPPORTED BY STRUCTURAL CEILING AND BE INSTALLED AS HIGH AS POSSIBLE.

KEY NOTES:

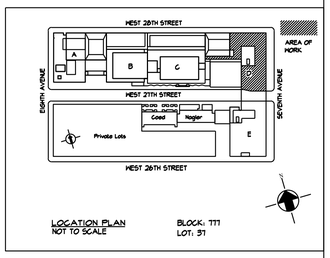
1. EXISTING FIRE ALARM SYSTEM DATA GATHERING PANEL TO REMAIN.
2. CONTRACTOR SHALL ENERGIZE THE FIRE COMMAND STATION FROM THE FIRE ALARM FUSED CUT OUT PANEL IN THE SUB-CELLAR.
3. FIRE ALARM RISER FROM THE SUB-CELLAR TO THE 6TH FLOOR.
4. EXISTING RECEPTACLES TO REMAIN.
5. CONTRACTOR SHALL REPLACE IN-KIND. SPLICE AND EXTEND EXISTING CIRCUITRY (WIRING AND CONDUIT) TO ACCOMMODATE THE NEW RECEPTACLES. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.
6. RELOCATED EXISTING LIGHT FIXTURE AFFECTED BY THE INSTALLATION OF NEW SHAFT WALL. CONTRACTOR SHALL SPLICE AND EXTEND EXISTING CIRCUITRY (WIRING AND CONDUIT) TO ACCOMMODATE THE NEW LOCATION.
7. NOT AN EGRESS FROM POMERANTZ. EXISTING LIGHTING CIRCUITRY AND CONTROL SCHEME, AFFECTED BY THE NEW TRANSITION DOOR, SHALL BE MAINTAINED ON EITHER SIDE.
8. CDT UP TO THE ELEVATOR MACHINE ROOM ABOVE FOR FIRE ALARM DEVICE WIRING.



4 THIRD FLOOR ELECTRICAL POWER PART PLAN
SCALE: 1/8"=1'-0"

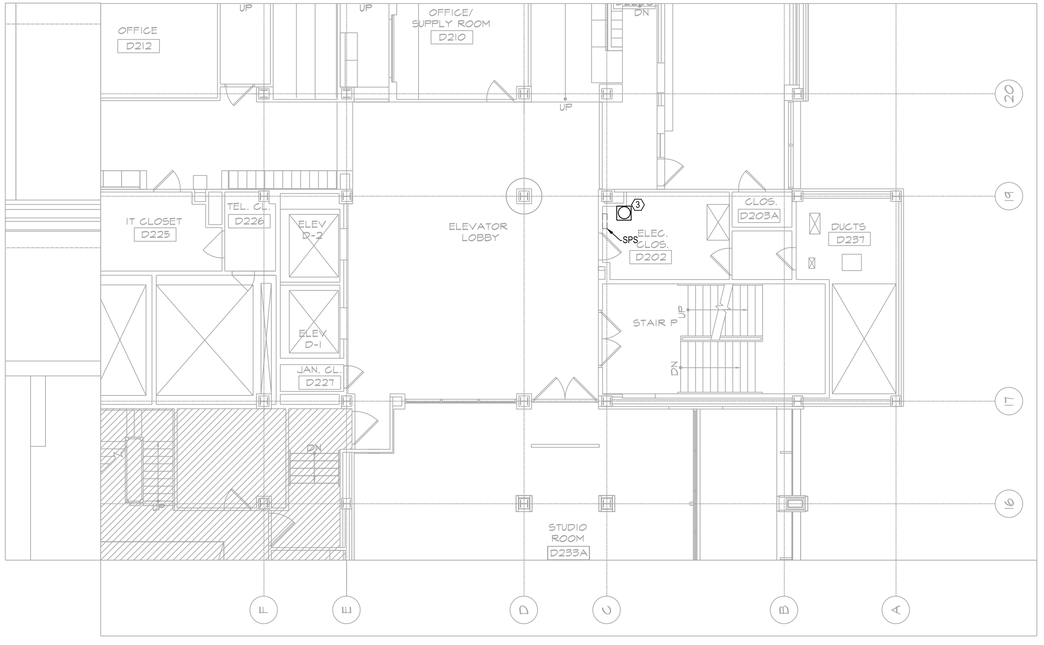


1 FIRST FLOOR ELECTRICAL POWER PART PLAN
SCALE: 1/8"=1'-0"

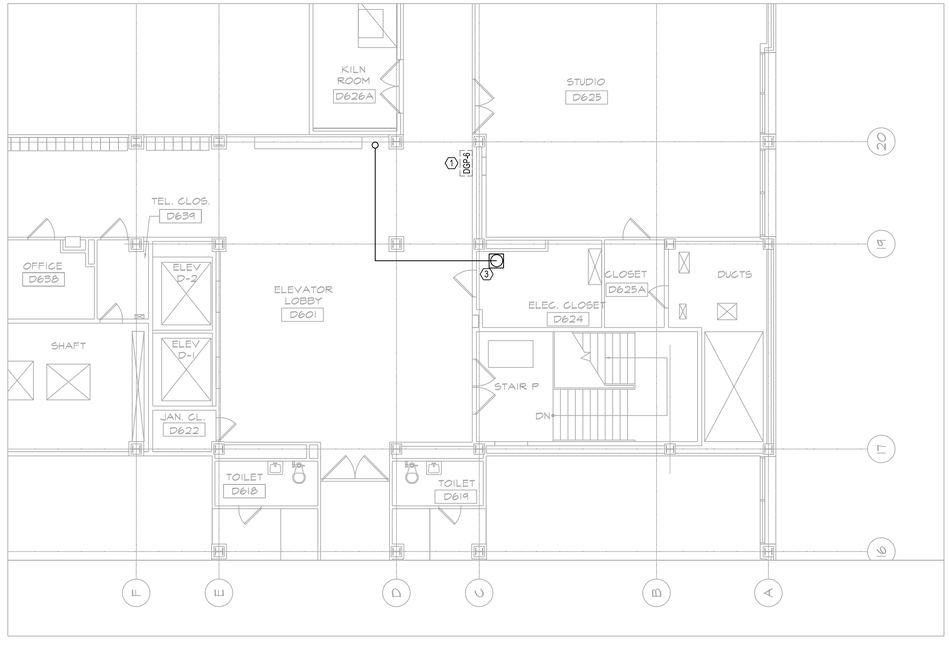


LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31



2 2ND FLOOR ELECTRICAL POWER PART PLAN
SCALE: 1/8"=1'-0"



3 SIXTH FLOOR ELECTRICAL POWER PART PLAN
SCALE: 1/8"=1'-0"

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
1ST, 2ND, 3RD, & 6TH FLOOR ELECTRICAL POWER PART PLANS
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	N.T.S
DWG No:	E-102.00
CADD FILE:	DOB page: - OF -

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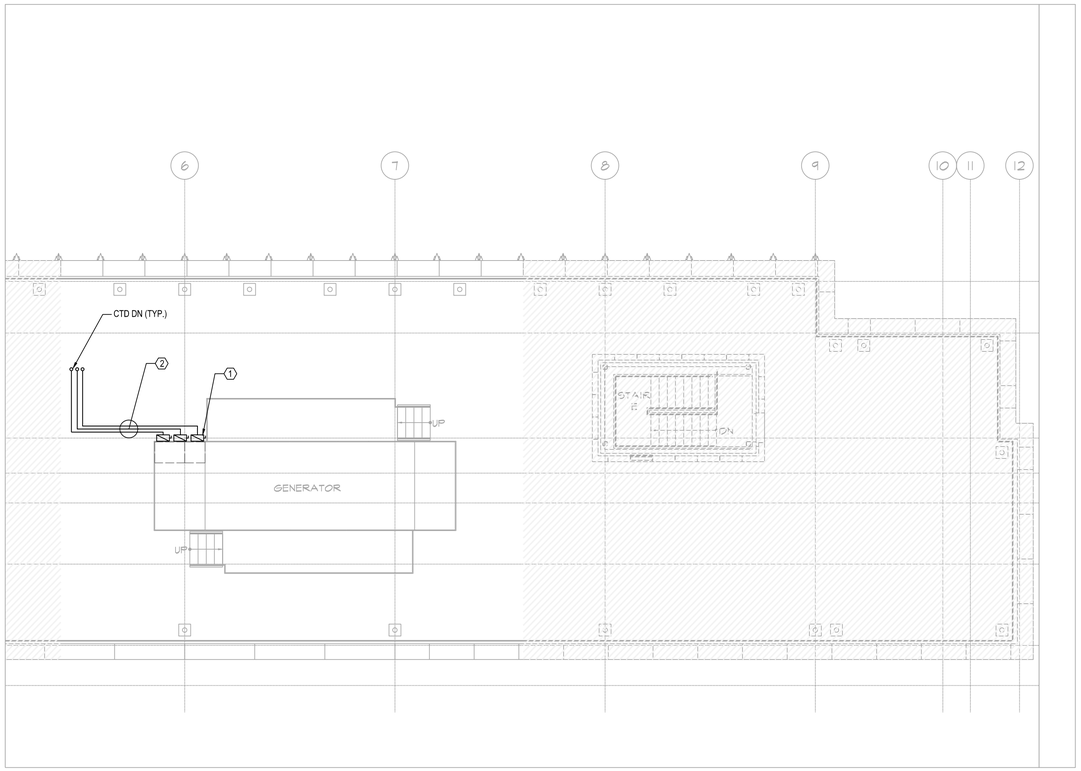
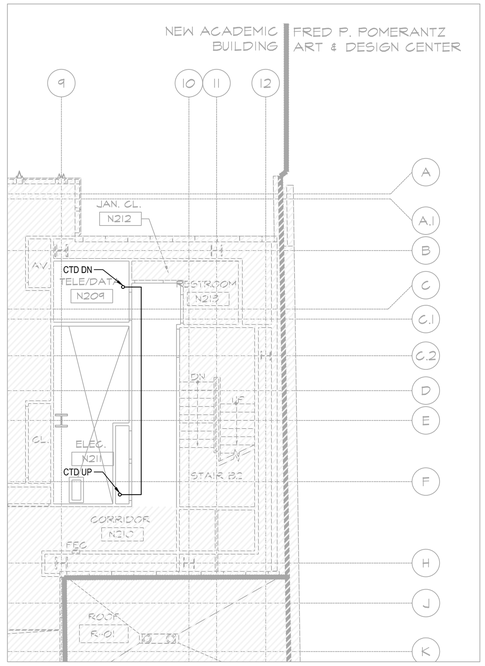


1 NEW ACADEMIC BUILDING ROOF CONDUIT ROUTING PART PLAN
SCALE: 1/8" = 1'-0"



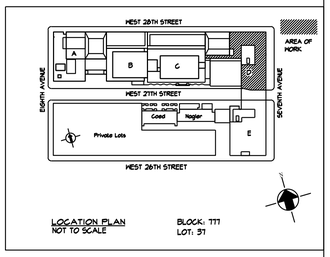
3 NEW ACADEMIC BUILDING 2ND FLOOR CONDUIT ROUTING PART PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO SHEET E-001 FOR SYMBOLS AND ABBREVIATIONS.
2. REFER TO SHEET E-002 FOR NOTES.
3. REFER TO THE E-600 SERIES DRAWINGS FOR ONE-LINE DIAGRAM.
4. ALL CDTS SHOWN SHALL BE SUPPORTED BY STRUCTURAL CEILING AND BE INSTALLED AS HIGH AS POSSIBLE.

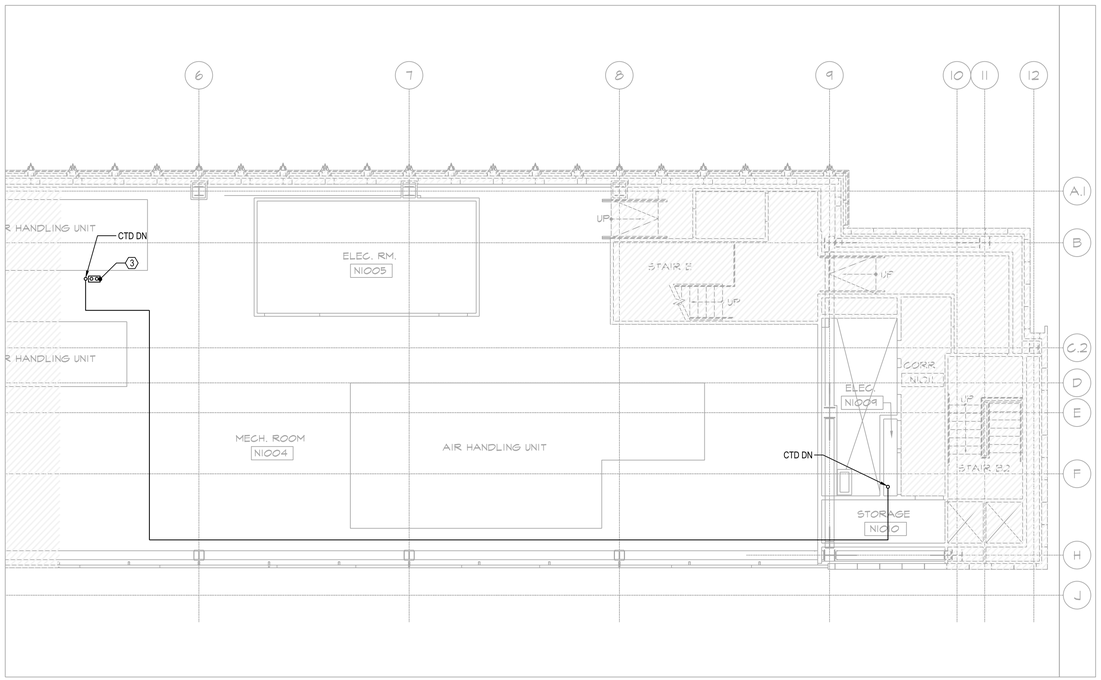
KEY NOTES:

1. TAP AHEAD OF THE MAIN SWITCH IN THE GENERATOR ENCLOSURE AND PROVIDE FOUR 200AS/100AF FDNY RED LOCKABLE IN THE "ON" POSITION DISCONNECT SWITCHES TO FEED THE EMERGENCY SOURCES OF BUILDINGS A/B, D, & E FIRE ALARM SYSTEMS. THE DISCONNECT SWITCHES FOR BUILDINGS A/B AND E CAN BE LOCKED IN THE "OFF" POSITION FOR NOW AS THEY ARE BEING INSTALLED FOR FUTURE USE. CONDUIT AND WIRING FOR BUILDINGS A/B AND E SHALL STUB DOWN INTO THE 10TH FLOOR AND BE CAPPED AND LABELED FOR FUTURE USE AT THE INDICATED LOCATION ON THIS DRAWING. CONDUIT AND WIRING FOR THE BUILDING "D" FIRE ALARM SYSTEM EMERGENCY SOURCE SHALL FOLLOW THE ROUTING SHOWN IN THE E-200 SERIES TO FEED THE EMERGENCY SOURCE OF THE ATS FOR THE BUILDING "D" FIRE ALARM SYSTEM. REFER TO E-600 SERIES FOR A ONE-LINE DIAGRAM AND ADDITIONAL INFORMATION. CONTRACTOR SHALL PROVIDE MEYERS HUBS FOR ALL PENETRATIONS THROUGH THE GENERATOR ENCLOSURE.
2. CONTRACTOR SHALL INSTALL RMC AT A MINIMUM HEIGHT OF 7'-0" ABOVE THE EXISTING ROOFTOP PAVERS, SUPPORTED BY THE STRUCTURAL ROOF, BENEATH THE PAVERS. SUPPORTS SHALL BE SPACED A MAXIMUM OF 10'-0" AND RATED FOR ROOFTOP APPLICATIONS. CONDUIT SUPPORTS SHALL BE WEATHER-RESISTANT, CAPABLE OF WITHSTANDING WIND LOADS, AND DESIGNED TO PREVENT DAMAGE TO THE ROOFTOP SURFACE. ALL CONDUITS SHALL BE SECURELY FASTENED USING UNISTRUT FRAMING. PROVIDE EXPANSION FITTINGS AS REQUIRED. FINAL ROUTING SHALL BE VIF.
3. CONDUIT FROM ROOF GENERATOR FOR FUTURE BUILDINGS 'A/B' AND E FIRE ALARM SYSTEM USE.

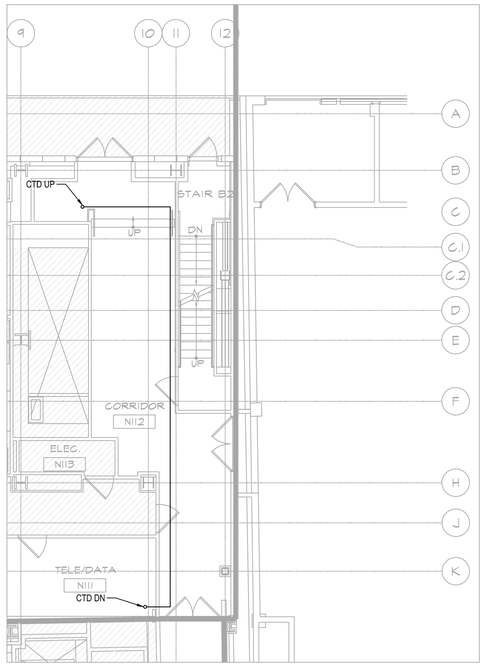


LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37



2 NEW ACADEMIC BUILDING 10TH FLOOR MECHANICAL ROOM CONDUIT ROUTING PART PLAN
SCALE: 1/8" = 1'-0"



4 NEW ACADEMIC BUILDING 1ST FLOOR CONDUIT ROUTING PART PLAN
SCALE: 1/8" = 1'-0"

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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NEW YORK CITY ENERGY CONSERVATION CODE

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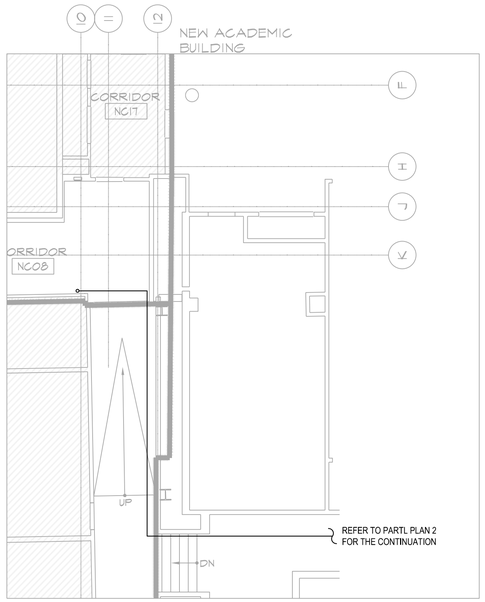
David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
ELECTRICAL
CONDUIT ROUTING
PART PLANS I
DOB NOW JOB#

SEAL & SIGNATURE:

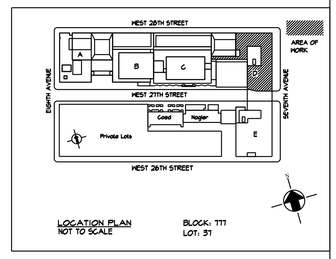
DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	NTS
DWG No:	E-201.00
CADD FILE:	DOB page: 2 OF 4

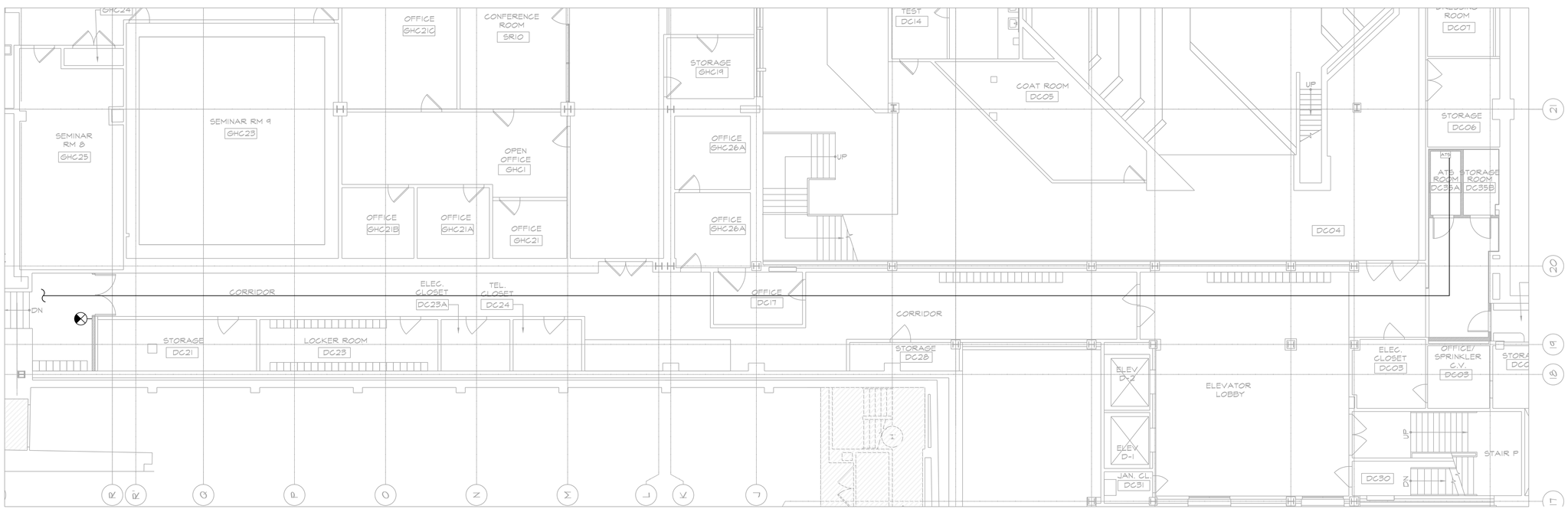


1 NEW ACADEMIC BUILDING CELLAR CONDUIT ROUTING PART PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. REFER TO DWG E-001 FOR NOTES ABBREVIATIONS, AND LIGHT FIXTURE SCHEDULE.
2. REFER TO THE E-500 SERIES FOR DETAILS, ONE-LINE DIAGRAMS, ETC.





2 POMERANTZ CELLAR CONDUIT ROUTING PART PLAN
SCALE: 1/8"=1'-0"

NOT FOR CONSTRUCTION

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DRAWING TITLE:
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CONDUIT ROUTING
PART PLANS II
DOB NOW JOB#

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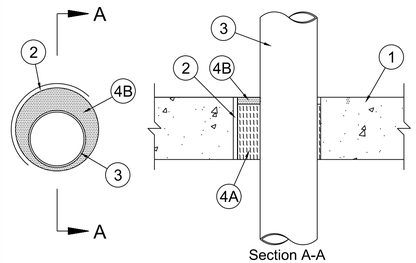
DRAWING BY:	DG
CHK BY:	WM
SCALE:	NTS
DWG No:	E-202.00
CADD FILE:	DOB page: 2 OF 4

Guide XHEZ
Through-Penetration Firestop Systems

System No. C-AJ-1319
F-Rating - 3 Hr
T-Rating - 0 Hr

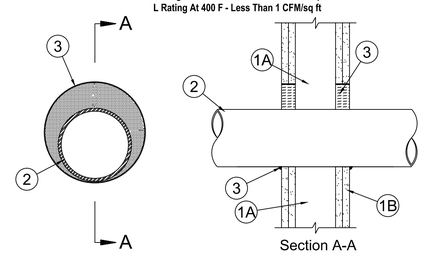


Section A-A

1. Floor or wall assembly -- min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. floor may also be constructed of any ul classified hollow core precast concrete units*. wall may also be constructed of any ul classified concrete blocks*. max diam of opening is 6 in.
see concrete blocks (cazt) and precast concrete units (cftv) categories in the fire resistance directory for names of manufacturers.
2. Nonmetallic sleeve -- (optional) -- nom 6 in. diam (or smaller) schedule 40 polyvinyl chloride pipe sleeve cast or grouted into concrete flush with both surfaces of floor or wall.
3. Through penetrant -- one metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. the annular space between the pipe, conduit or tubing and the periphery of the opening shall be min 1/4 in. to max 1-3/4 in. pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. the following types and sizes of metallic pipes, conduits or tubing may be used:
A. Steel pipe -- nom 4 in. diam (or smaller) schedule 10 (or heavier) steel pipe.
B. Iron pipe -- nom 4 in. diam (or smaller) cast or ductile iron pipe.
C. Conduit -- nom 4 in. diam (or smaller) rigid steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing or nom 1 in. diam (or smaller) flexible steel conduit.
D. Copper tubing -- nom 4 in. diam (or smaller) type l (or heavier) copper tubing.
E. Copper pipe -- nom 4 in. diam (or smaller) regular (or heavier) copper pipe.
4. Firestop system -- the firestop system shall consist of the following:
A. Packing material -- min 4 in. thickness of 4 pcf mineral wool batt insulation compressed and firmly packed into opening as permanent form. packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material. in floors constructed of hollow-core precast concrete units, mineral wool packing material to extend below exposed cores in precast concrete units.
B. Fill, void or cavity material*--sealant -- min 1/2 in. thickness of fill material applied within the annulus flush with top surface of floor or with both surfaces of wall.
Specified technologies inc -- specseal series sss sealant or specseal lci sealant
*Bearing the ul classification mark

DETAIL 1

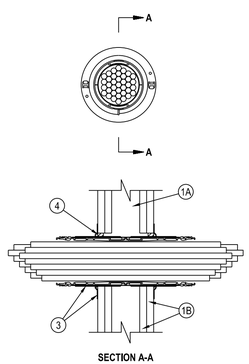
System No. W-L-1079
F Rating - 2 Hr
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



Section A-A

1. Wall assembly -- the 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual u300 or u400 series wall or partition design in the ul fire resistance directory and shall include the following construction features:
A. Studs -- wall framing may consist of either wood studs or steel channel studs. wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. oc. steel studs to be min 3-5/8 3-1/2 in. wide and spaced max 24 in. oc. when steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. the framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
B. Gypsum board* -- 5/8 in. thick, 4 ft wide with square or tapered edges. the gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual u300 or u400 series design in the ul fire resistance directory. max diam of opening is 26 in. for steel stud walls. max diam of opening is 14-1/2 in. for wood stud walls.
the hourly f rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through penetrant -- one metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. the annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 2 in. pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. the following types and sizes of metallic pipes, conduits or tubing may be used:
A. Steel pipe -- nom 24 in. diam (or smaller) schedule 10 (or heavier) steel pipe.
B. Iron pipe -- nom 24 in. diam (or smaller) cast or ductile iron pipe.
C. Conduit -- nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom 1 in. diam (or smaller) flexible steel conduit.
D. Copper tubing -- nom 6 in. diam (or smaller) type l (or heavier) copper tubing.
E. Copper pipe -- nom 6 in. diam (or smaller) regular (or heavier) copper pipe.
3. Fill, void or cavity material* -- sealant -- min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. at the point contact location between through penetrant and gypsum board, a min 3/8 in. diam bead of fill material shall be applied at the gypsum board/through penetrant interface on both surfaces of wall.
Specified technologies inc -- specseal series sss sealant or specseal lci sealant
*Bearing the ul classification mark

System No. W-L-3334
F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 0, 1, 1-3/4 and 2 Hr (See Items 2 and 3)
L Ratings at Ambient — Less Than 1 CFM/sq ft, 5 CFM/sq ft and 9 CFM/sq ft (See Item 2)
L Rating at 400F — Less Than 1 CFM/sq ft, 1 CFM/sq ft and 10 CFM/sq ft (See Item 2)



SECTION A-A

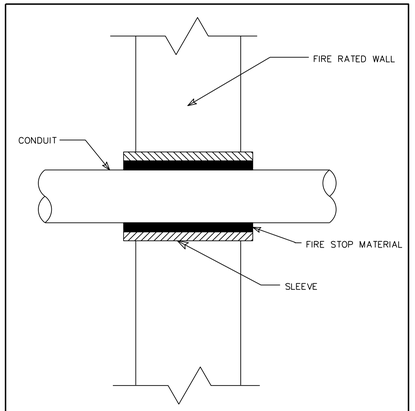
TYPICAL FIRE STOPPING FOR ALL
FIRE RATED GYPSUM WALLS
NO SCALE

1. Wall Assembly -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described within the individual U300, U400 or V400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
A. Studs -- Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced max 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
B. Gypsum Board* -- Nom 5/8 in. thick gypsum board as specified in the individual Wall and Partition Design. Opening in gypsum board to be max 2-1/2 in. diam for 2" device and max 4-1/2 in. diam for 4" device. The hourly F Rating of the firestop system is dependent upon the hourly rating of the wall in which it is installed.
2. Cables -- Within the loading area for each firestop device, the cables may represent a 0 to 100 percent visual fill. Cables to be tightly bundled within the device and rigidly supported on both sides of wall assembly. Any combination of the following types of cables may be used:
A. Max 100 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with polyvinyl chloride (PVC) jacketing and insulation.
B. Max 7/C No. 12 AWG copper conductor control cable with PVC or XLPE jacket and insulation.
C. Max 4/0 AWG Type RHH ground cable.
D. Max 4 pr No. 22 AWG Cat 5 or Cat 6 computer cables.
E. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jackeling.
F. Fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation having a max diam of 1/2 inches.
G. Max 20/C No. 22 AWG shielded printer cable with PVC jacket.
H. Through-Penetrating Product* - Two copper conductors No. 18 AWG (or smaller) Power or Non Power Limited Fire Alarm Cable with or without a jacket under a metal armor.
AFC CABLE SYSTEMS INC
I. Max. 1/4 in. diameter S-Video Cable consisting of 2 max 24 AWG 75 ohm coax or twisted pair cable with PE insulation and PVC jacket .
J. Max 3/C No 12 AWG MC Cable.
K. Through Penetrating Product* -- Any cables, Armored Cable+ or Metal Clad Cable+ currently Classified under the Through Penetrating Product category. See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of manufacturers. For openings with cables, when the hourly rating of the wall assembly is 1 hr, the T Rating is 0 hr. For openings with cables, when the hourly rating of the wall assembly is 2 hr, the T Rating is 1-3/4 hr except that when Item 2C, 2G, 2I 2J or 2K is used, the T Rating is 1 hr for 2C, 2 OR 2I and the T Rating is 1/2 hr for 2J or 2 K (see Item 3 also). L Ratings apply only when device flanges and CP 606 or FS-One Sealant is used. For blank (no cables) openings, the L Rating at Ambient and 400F is Less Than 1 CFM/sq ft (or Less Than 1 CFM/Unit). For openings with cables, the L Rating is 9 CFM/sq ft (or 1 CFM/Unit) at Ambient and 10 CFM/sq ft (or 1 CMF/Unit) at 400F. For openings with Cat 5 or 6 cables only (Item 2D), the L Rating is 5 CFM/sq ft (or Less T an 1 CFM/Unit) at Ambient and 1 CFM/sq ft (or Less Than 1 CFM/Unit) at 400F.
3. Firestop Device* -- Firestop device consists of a corrugated steel tube with an inner plastic housing, intumescent material rings and twisted inner fabric smoke seal. Firestop device to be installed in accordance with the accompanying installation instructions. As an option, the inner fabric seal may remain open except that, to attain the L Rating, the inner fabric seal shall be twisted to completely close off the opening within device. Device slid into wall such that ends project an equal distance from the approximate centerline of the wall assembly. The annular space between the device and the periphery of the opening shall be min 0 in. (point contact). Device provided with flanges that are spun clockwise onto device threads, butting tightly to both sides of wall. Device flanges are optional. When the device flanges are not used, the T Rating for the firestop system is 0 hr. For blank openings (no cables), the T Rating for the firestop system equals the F Rating only when the device flanges are used. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- CP 653 2" Speed Sleeve and CP 653 4" Speed Sleeve
4. Fill, Void or Cavity Material* - Sealant -- Min 1/2 in. thickness of fill material applied within the annulus between firestop device and wall, flush with both surfaces of wall, and an additional 1/4 in. bead applied around periphery of device. When device flanges are used, gypsum drywall compound may be used in place of the fill material.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- FS-ONE or CP 606 Sealant

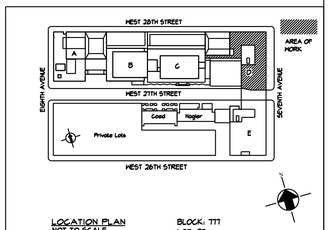
*Bearing the UL Classification Mark

DETAIL 2



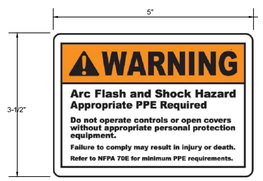
CONDUIT PENETRATION
THRU FIRE RATED WALL
NOT TO SCALE

DETAIL 3



LOCATION PLAN
NOT TO SCALE

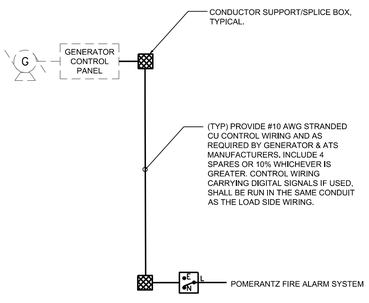
BLOCK: 777
LOT: 31



NOTES:

1. PROVIDE GENERIC ARC-FLASH LABELS AS SHOWN ON ALL ELECTRIC LOAD CENTERS, PANELBOARDS, SWITCHBOARDS, SWITCHGEAR, MOTOR CONTROLERS, VFDS, ATS, ENCLOSED SWITCHES AND CIRCUIT BREAKERS, CONTROL PANELS, SPLICE BOXES AND ALL OTHER ELECTRICAL SERVICE & DISTRIBUTION EQUIPMENT.
2. LABELS TO COMPLY WITH NFPA 70, NFPA 70E, 29 CFR 1910.144, 29 CFR 1910.145 (OSHA) AND ANSI Z535 (COLORS, SYMBOLS, ETC.)
3. LABELS SHALL BE SELF-ADHESIVE, POLYESTER OR VINYL FILM LABELS; PREPRINTED, 6-MIL-THICK, FLEXIBLE LABEL LAMINATED WITH A CLEAR, WEATHERPROOF, UV-RESISTANT, CHEMICAL RESISTANT COATING. MINIMUM LETTER HEIGHT SHALL BE 3/8 INCH.
4. INSTALL IDENTIFICATION MATERIALS AND DEVICES AT LOCATIONS FOR MOST CONVENIENT VIEWING WITHOUT INTERFERENCE WITH OPERATION AND MAINTENANCE OF EQUIPMENT. APPLY TO EXTERIOR OF DOOR, COVER, OR OTHER ACCESS.

DETAIL 4



NOTES: 1. ALL CONTROLS ARE NEW WORK.
2. CONTRACTOR SHALL COORDINATE ALL CONTROLS WIRING REQUIREMENTS WITH VENDORS OF ALL EQUIPMENT.
3. CONTRACTOR TO SUBMIT DETAILED, POINT-TO-POINT WIRING DIAGRAM TO ENGINEER FOR REVIEW & APPROVAL.
4. ALL CONTROL WIRING SHALL MEET THE REQUIREMENTS OF NFPA 70, ARTICLE 700.9(D); INCLUDING ROUTING AND PROTECTION REQUIREMENTS.
5. AC POWER TO ALL CONTROLS SHALL BE FROM LOAD SIDE OF EMERGENCY POWER ATS.
6. QUANTITY OF ATS, DESIGNATIONS AND LOADS SERVED ARE TYPICAL. REFER TO ELECTRICAL ONE-LINE / RISER DIAGRAMS AND OTHER CONTRACT DOCUMENTS FOR SPECIFIC INFORMATION.
7. IF REQUIRED, PROVIDE CONTROL WIRING BETWEEN NATURAL GAS GENERATORS AND GAS BOOSTER PUMP IN A LIKE FASHION.

Typical Generator Controls Wiring Diagram
Not to Scale

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DETAILS I

SEAL & SIGNATURE:

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DRAWING BY:	DG
CHK BY:	CTD
SCALE:	1/8"=1'-0"
DWG No:	E-501.00
CADD FILE:	DOB page: 4 OF 7

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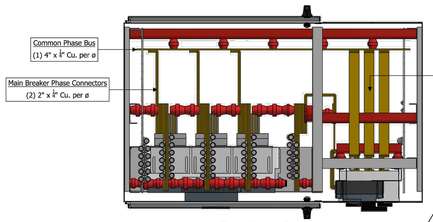
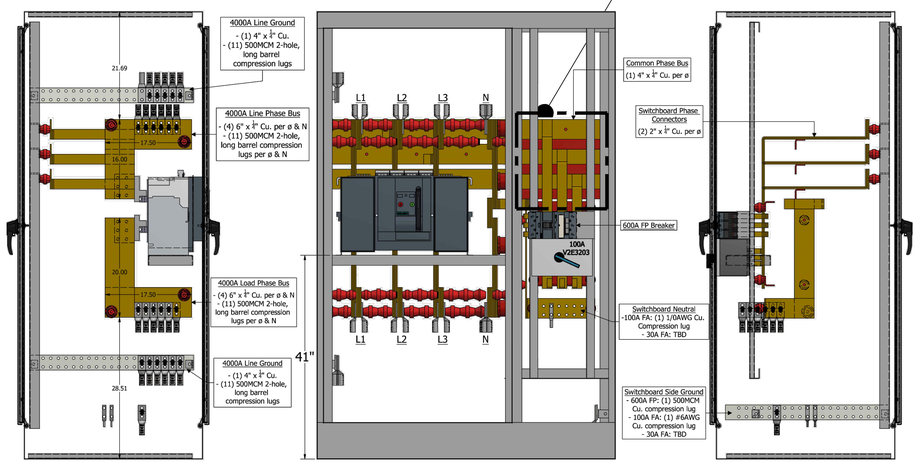


Top View - Interior

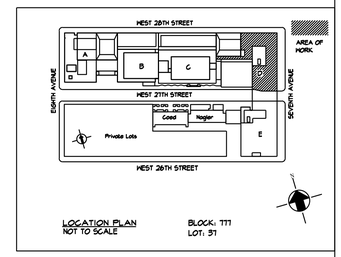
APPROXIMATE LOCATION OF LINE-SIDE TAP FOR NEW FIRE ALARM FUSED DISCONNECT SWITCHES. REFER TO SHEET E-601 FOR ADDITIONAL INFORMATION. COORDINATE WITH GENERATOR MANUFACTURER AND VENDOR PRIOR TO MAKING FINAL CONNECTION.



Side View, Main Breaker Section - Interior

Front View - Interior

Side View, Switchboard Section - Interior



LOCATION PLAN
NOT TO SCALE

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LOT: 37

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DRAWING TITLE:
ELECTRICAL
DETAILS II

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	CTD
SCALE:	1/8"=1'-0"
DWG No:	E-502.00
CADD FILE:	DOB page: 4 OF 7

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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NEW YORK CITY ENERGY CONSERVATION CODE

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK CITY ENERGY CONSERVATION CODE.

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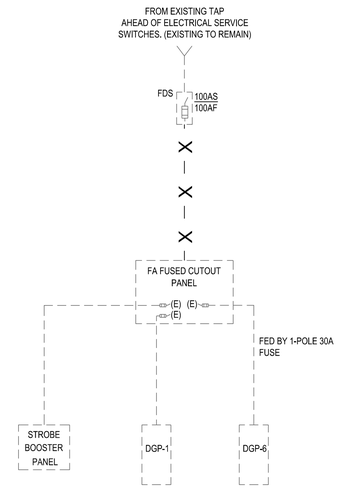
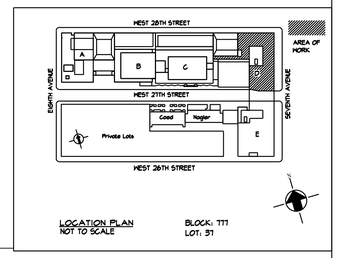
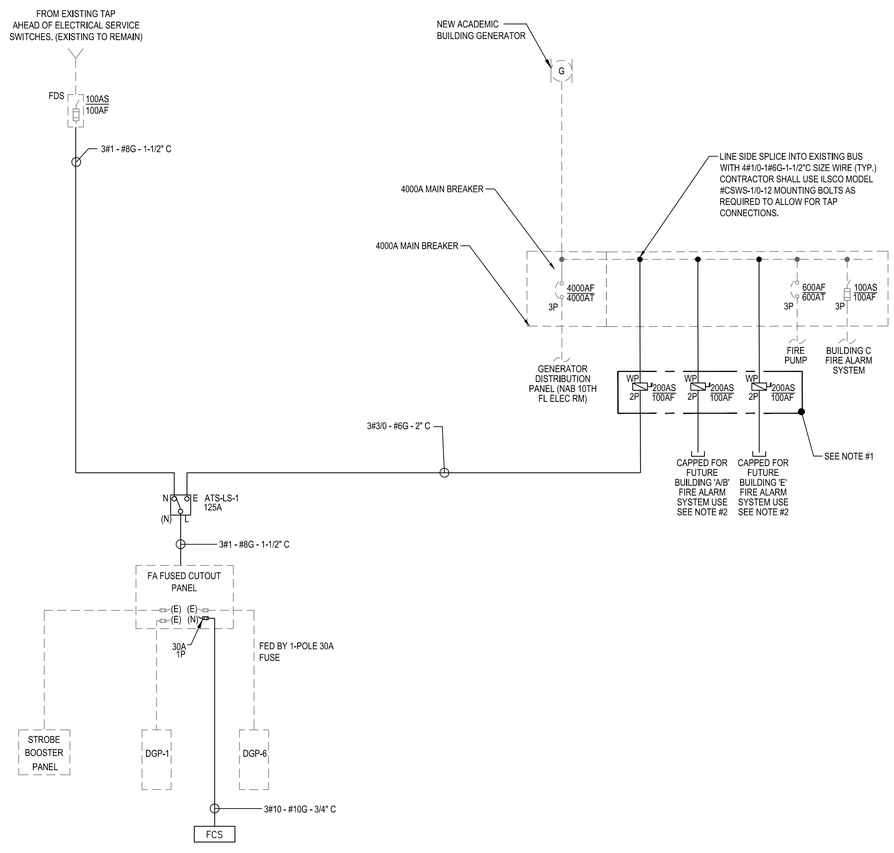
MG Engineering D.P.C. / we engineer success
116 West 33nd Street, 12th Floor, New York, N.Y. 10001
P 212.643.9055 www.mgedpc.net



1 ELECTRICAL DEMOLITION ONE-LINE DIAGRAM
N.T.S





NOTES:

1. NEW FIRE ALARM DISCONNECT SWITCHES SHALL BE RED AND LOCKABLE IN THE "ON" POSITION.
2. FOR FUTURE USE. CAP THE CONDUIT AND WIRING FROM EACH SWITCH IN THE 10TH FLOOR AT THE CEILING. SEE E-200 SERIES FOR ADDITIONAL INFO (TYP)

2 NEW CONSTRUCTION ELECTRICAL ONE-LINE DIAGRAM
N.T.S

NO.	DATE	REVISION
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MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
ELECTRICAL
DETAILS I

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DATE:	03.21.2025
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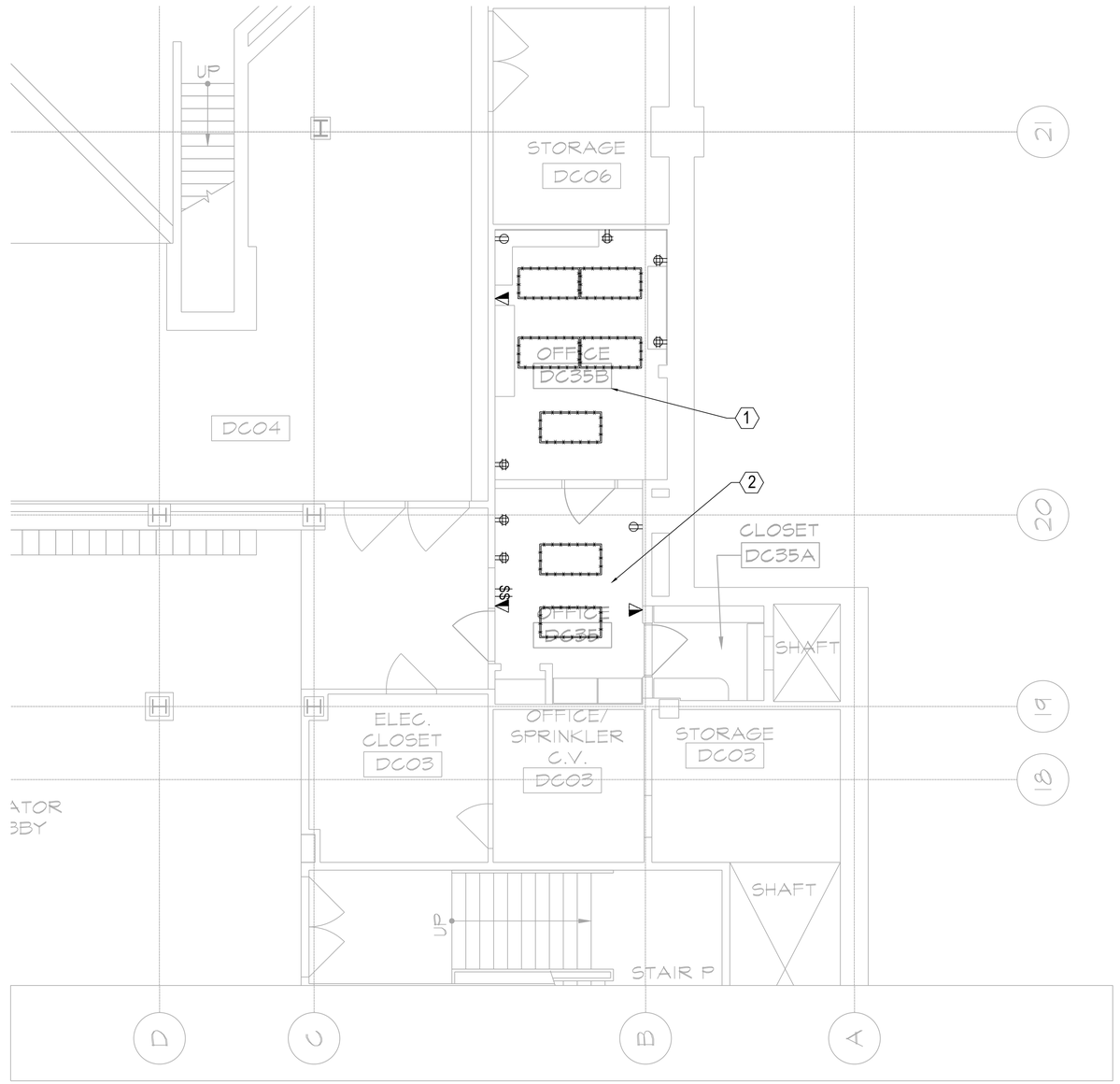
GENERAL NOTES:

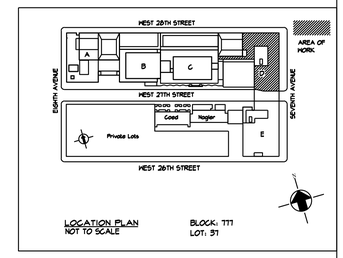
1. REFER TO SHEET E-001 FOR SYMBOLS AND ABBREVIATIONS.
2. REFER TO SHEET E-002 FOR NOTES.
3. REFER TO THE E-600 SERIES DRAWINGS FOR ONE-LINE DIAGRAM .
4. ALL CDTS SHOWN SHALL BE SUPPORTED BY STRUCTURAL CEILING AND BE INSTALLED AS HIGH AS POSSIBLE.

KEY NOTES:

1. ALL WIRING DEVICES IN THIS AREAS (LIGHTING, RECEPTACLES, ETC.) SHALL BE REMOVED. THE ASSOCIATED EXISTING CONDUIT AND WIRING SHALL BE MAINTAINED FOR REUSE BY NEW EQUIPMENT. REFER TO SHEET E-101 FOR ADDITIONAL INFORMATION.

2. CONTRACTOR SHALL REMOVE THE EQUIPMENT BACK TO THE SOURCE IN THIS AREA.





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443 Park Avenue South New York, NY 10016
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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

CELLAR ELECTRICAL DEMOLITION PLAN

DOB NOW JOB#

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

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NEW YORK CITY ENERGY CONSERVATION CODE

EXEMPTION WHEN COMPLIANCE WITH FIRE PROTECTION, DETECTION, ALARM AND/OR SUPPRESSION REQUIREMENTS OF TITLE 28 AND/OR THE 2022 NEW YORK CITY CONSTRUCTION CODES CONFLICTS WITH 2020 NYCECC COMPLIANCE, THE TITLE 28 AND/OR 2014 CONSTRUCTION CODES SAFETY PROVISIONS WILL TAKE PRECEDENCE OVER CONFLICTING PROVISIONS IN 2020 NYCECC.

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CADD FILE:	DOB page: - OF -

ENERGY DRAWING LIST

SHEET			DRAWING	DESCRIPTION
1	OF	2	EN-001	ENERGY COVER SHEET
2	OF	2	EN-002	ENERGY ATS AND UPS ROOM PART PLAN

LIGHTING SYMBOLS

$	MANUAL ON/OFF LIGHT SWITCH

NYCECC CODE COMPLIANCE PATH

- [X] NYCECC 2020
- [ ] ASHRAE 90.1 - 2016

TABLE II – PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE – COMMERCIAL BUILDINGS

	Inspection/Test	Periodic (minimum)	Reference Standard (See ECC Chapter C6) or Other Criteria	ECC or Other Citation
IIC	**Electrical Power and Lighting Systems**			
IIC1	**Metering:** The presence and operation of all required meters for monitoring total electrical energy usage and/or total fuel use, system energy usage, tenant energy usage, or electrical energy usage in the building, in individual dwelling units, or in tenant spaces must be verified by visual inspection.	Prior to final electrical and construction inspection	Approved construction documents	C405.5, C405.11, C405.12; ASHRAE 90.1 – 8.4.3, 8.4.5, 8.4.6, 10.4.5
IIC2	**Lighting in dwelling units:** Lamps in permanently installed lighting fixtures must be visually inspected to verify compliance with high-efficacy requirements.	Prior to final electrical and construction inspection	Approved construction documents	C405.1; ASHRAE 90.1 – 9.1.1
IIC3	**Interior lighting power:** Installed lighting must 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	C405.3, C406; ASHRAE 90.1 –9.1, 9.2, 9.5, 9.6, 9.7; IRCNY §101-07(c)(3)(v)(C)4, Appendix 1
IIC4	**Exterior lighting power:** Installed lighting must be verified for compliance with source efficacy and/or the lighting power allowance by visual inspection of fixtures, lamps, ballasts and relevant transformers.	Prior to final electrical and construction inspection	Approved construction documents	C405.4; ASHRAE 90.1 –9.4.2; IRCNY §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 • egress illumination controls must 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	C405.2, C406; ASHRAE 90.1 – 9.4.1, 9.4.3, 9.7, Appendix1
IIC6	**Electric motors and elevators:** Where required by the construction documents for energy code compliance, motor listing or labels be visually inspected to verify that they comply with the respective energy requirements in the construction documents. Elevators and escalators must be inspected for compliance with regenerative drive requirements.	Prior to final electrical and construction inspection	Approved construction documents	C403.8, C405.6, C405.7, C405.8, C405.9; ASHRAE 90.1 – 8.4.4, 10.4, 10.8
IID	**Other**			
IID1	**Maintenance information:** Maintenance manuals for mechanical, service hot water and electrical equipment and systems requiring preventive maintenance must be reviewed for applicability to installed equipment and systems before such manuals are provided to the owner. Labels required for such equipment or systems must 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	C408.11, C408.2.5.2, C408.3.2; ASHRAE 90.1 – 4.2.2.3, 6.7.2.2, 6.7.2.3.5.2, 8.7.2, 9.4.3.2.2, 9.7.2.2

ENERGY CODE COMPLIANCE NYCECC 2020

ELECTRICAL POWER & LIGHTING

ITEM DESCRIPTION	COMPLIANCE & CONTRACTOR REQUIREMENTS
ELECTRICAL ENERGY CONSUMPTION METERS - DWELLING UNITS	CONTRACTOR SHALL PROVIDE ALL DWELLING UNITS WITH SEPARATE METER OR SUB-METER TO MEASURE THE ELECTRICAL CONSUMPTION OF THE SPACE. DWELLING UNIT METERS ARE SHOWN ON ENERGY CODE SUPPORTIVE PLAN DOCUMENTS IN THIS FILING SET. REFER TO REFER TO ELECTRICAL POWER PLANS, DRAWINGS AND SPECIFICATIONS FOR EXACT REQUIREMENTS AND LOCATIONS OF METERS AND METER BANKS.
PERMANENTLY INSTALLED LIGHTING EFFICACY - DWELLING UNITS	90% OF ALL PERMANENTLY INSTALLED LIGHT FIXTURES TO HAVE LAMPS WITH EFFICACY AT LEAST 65 LUMENS PER WATT OR TOTAL LUMINAIRE EFFICACY OF AT LEAST 45 LUMENS PER WATT.
ELECTRICAL ENERGY CONSUMPTION - COMMERCIAL OFFICES	CONTRACTOR SHALL PROVIDE COMMERCIAL TENANT SPACES IN COVERED BUILDINGS INCLUDING OFFICES, RETAIL SPACES, ETC., WITH THEIR OWN SEPARATE METER OR SUB-METER TO MEASURE THE ELECTRICAL CONSUMPTION OF THE SPACE, EXCEPTIONS ARE COMMERCIAL SPACES OF 5,000 SQUARE FEET OR LESS ON SHARED MULTI-TENANT FLOORS WITH COMMON ELECTRICAL DISTRIBUTION. THE CONTRACTOR SHALL PROVIDE THESE COVERED TENANT SPACES WITH EITHER; METERS THAT ARE SHARED WITH OTHER COVERED TENANT SPACES ON THE SAME MULTI-TENANT FLOOR; OR SEPARATE METERS OR SUB-METERS. ALL METERS SHALL MEET BUILDING AND PROJECT SPECIFICATIONS. REFER TO ELECTRICAL POWER PLANS FOR SPECIFIC REQUIREMENTS AND LOCATIONS OF METERS FOR THIS PROJECT.
ELECTRIC MOTORS	MOTORS FOR EACH HVAC SYSTEM INCLUDING ALL SUPPLY FANS, RETURN FANS, EXHAUST FANS, RELIEF FANS AND FAN-POWERED TERMINAL UNITS ASSOCIATED WITH HEATING AND COOLING SYSTEMS, SHALL COMPLY WITH THE 2020 NYCECC SECTION C405.7. FAN MOTOR HORSEPOWER, BRAKE HORSEPOWER AND CONTROLS ARE SHOWN ON THE MECHANICAL HVAC DRAWINGS IN THIS FILING SET.
TRANSFORMERS	LOW-VOLTAGE DRY-TYPE TRANSFORMERS TRANSFORMERS SHALL MEET THE US DEPARTMENT OF ENERGY 2016 ENERGY EFFICIENCY STANDARDS, AS APPLICABLE.
VOLTAGE DROP	VOLTAGE DROPS SHALL MEET THE REQUIREMENTS OF THE 2011 NYC ELECTRICAL CODE. CONTRACTOR MAY NOT MAKE ANY SUBSTITUTIONS IN FEEDER SIZING, QUANTITY, LENGTH, ETC., WITHOUT SUBMITTING SUITABLE VOLTAGE DROP CALCULATIONS FOR THE PROPOSED SUBSTITUTIONS TO THE ENGINEER OF RECORD. CONTRACTOR SHALL SECURE APPROVAL FOR ALL SUBSTITUTIONS IN WRITING FROM THE ENGINEER OF RECORD. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS SHOWING ALL SUBSTITUTIONS TO THE ENGINEER AND OWNER.
ELEVATOR CABS	ELEVATOR CAB LUMINAIRE TOTAL EFFICACY SHALL NOT BE LESS THAN 36 LUMENS PER WATT. CAB VENTILATION FANS FOR CABS WITHOUT THEIR OWN AIR-CONDITIONING SYSTEM SHALL NOT CONSUME MORE THAN 0.33 WATTS / CFM AT THE MAXIMUM RATED SPEED OF THE FAN. CONTROLS SHALL BE PROVIDED THAT WILL DE-ENERGIZE VENTILATION FANS AND LIGHTING SYSTEMS WHEN THE ELEVATOR IS STOPPED, UNOCCUPIED AND WITH ITS DOORS CLOSED FOR OVER 15 MINUTES.

LIGHTING SYSTEM START-UP

THE CONTRACTOR SHALL PROVIDE START-UP FOR LIGHTING CONTROL EQUIPMENT OF CALIBRATION, ADJUSTMENT, PROGRAMMING AND TESTING UPON COMPLETION OF INSTALLATION, EQUIPMENT SHALL BE COMMISSIONED BY A FACTORY-TRAINED TECHNICIAN. THE TEST REPORT SHALL BE PROVIDED TO THE OWNER. START-UP SHALL BE COMPLETED PRIOR TO FUNCTIONAL TESTING.

PROGRESS INSPECTION & TESTING

NOTES: IN ACCORDANCE WITH ARTICLE 116 OF TITLE 28 AND SECTION BC 110, CONSTRUCTION SHALL BE SCHEDULED TO ALLOW REQUIRED PROGRESS INSPECTIONS TO TAKE PLACE. 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.

IN ACCORDANCE WITH NYC BUILDING CODE SECTION 110.9 AND NYC ENERGY CONSERVATION CODE (NYCECC) SECTION 104.2.3, WHERE AN INSPECTION OR TEST FAILS, THE CONTRACTOR SHALL CORRECT THE CONSTRUCTION AND BE AVAILABLE FOR, AND PROVIDE REINSPECTION AND RE-TESTING BY THE PROGRESS INSPECTOR UNTIL THE SYSTEM / EQUIPMENT PASSES THE INSPECTION OR TEST, AND COMPLIES WITH THE APPLICABLE CODE REQUIREMENTS.

LIGHTING SYSTEM FUNCTIONAL TESTING REQUIREMENTS

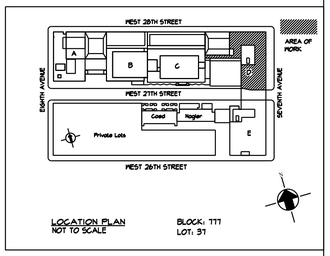
THIS PROJECT SHALL COMPLY WITH FUNCTIONAL TESTING REQUIREMENTS OF THE NYC ENERGY CONSERVATION CODE AS DESCRIBED IN NYCECC SECTION C408 AND PER ASHRAE 90.1-2016 9.4.3. LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS SHALL BE TESTED BY AN APPROVED TESTING AGENCY TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED, TESTED AND IN PROPER WORKING ORDER PER THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTRUCTIONS. APPROVED TESTING AGENCY TO CERTIFY THAT INSTALLED LIGHTING CONTROLS INCLUDING OCCUPANT SENSORS, TIME-SWITCH CONTROLS, AND DAYLIGHT-RESPONSIVE CONTROLS HAVE BEEN TESTED AND PERFORM AS INTENDED AND PER C408.3 AND 9.7.3.1. THE FOLLOWING PROCEDURES SHALL BE PERFORMED AT A MINIMUM:

1. OCCUPANCY SENSOR CONTROLS (OCCUPANCY AND VACANCY)
   - 1.1. WHERE OCCUPANT SENSOR CONTROLS INCLUDE STATUS INDICATORS, VERIFY CORRECT OPERATION.
   - 1.2. VERIFY THAT CONTROLLED LIGHTS TURN OFF OR DOWN TO PERMITTED LEVEL WITHIN REQUIRED TIME.
   - 1.3. FOR AUTO-ON OCCUPANT SENSOR CONTROLS (OCCUPANCY), VERIFY THAT THE LIGHTS TURN ON TO THE PERMITTED LEVEL WHEN AN OCCUPANT ENTERS THE SPACE.
   - 1.4. FOR MANUAL-ON OCCUPANT SENSOR CONTROLS (VACANCY.) VERIFY THAT TURN LIGHTS ON ONLY WHEN MANUALLY ACTIVATED.
   - 1.5. VERIFY THAT THE LIGHTS ARE NOT INCORRECTLY TURNED ON BY MOVEMENT IN ADJACENT AREAS OR BY HVAC OPERATION.
2. TIME-SWITCH CONTROLS
   - 2.1. CONFIRM THAT THE TIME-SWITCH CONTROL IS PROGRAMMED WITH ACCURATE WEEKDAY, WEEKEND AND HOLIDAY SCHEDULES.
   - 2.2. VERIFY THAT CORRECT TIME AND DATE PROGRAMMED IN TIME SWITCH.
   - 2.3. VERIFY THAT ANY BATTERY BACK-UP IS INSTALLED AND ENERGIZED.
   - 2.4. VERIFY THAT THE OVERRIDE TIME LIMIT IS SET TO NOT MORE THAN 2 HOURS.
   - 2.5. SIMULATE OCCUPIED CONDITION, VERIFY THAT ALL LIGHTS CAN BE TURNED ON AND OFF BY THEIR RESPECTIVE AREA CONTROL SWITCH.
   - 2.6. SIMULATE OCCUPIED CONDITION, VERIFY THAT THE SWITCH ONLY OPERATES LIGHTING IN THE ENCLOSED SPACE IN WHICH THE SWITCH IS LOCATED.
   - 2.7. SIMULATE UNOCCUPIED CONDITION, VERIFY THAT NONEXEMPT LIGHTING TURNS OFF.
   - 2.8. SIMULATE UNOCCUPIED CONDITION, VERIFY THAT THE MANUAL OVERRIDE SWITCH ALLOWS ON THE LIGHTS IN THE ENCLOSED SPACED WHERE THE OVERRIDE SWITCH IS LOCATED TO TURN ON OR REMAIN ON UNTIL THE NEXT SCHEDULED SHUTOFF OCCURS.
3. DAYLIGHT RESPONSIVE CONTROLS
   - 3.1. CONTROL DEVICES HAVE BEEN PROPERLY LOCATED, FIELD CALIBRATED AND SET FOR ACCURATE SETPOINTS AND THRESHOLD LIGHT LEVELS.
   - 3.2. DAYLIGHT CONTROLLED LIGHTING LOADS ADJUST TO LIGHT LEVEL SETPOINTS IN RESPONSE TO AVAILABLE DAYLIGHT.
   - 3.3. THE CALIBRATION ADJUSTMENT EQUIPMENT IS LOCATED FOR READY ACCESS ONLY BY AUTHORIZED PERSONNEL.

DOCUMENTATION SHOULD BE PROVIDED TO BUILDING OWNER WITHIN 90 DAYS OF THE DATE OF RECEIPT OF CERTIFICATE OF OCCUPANCY AND INCLUDE CONSTRUCTION DOCUMENTS, OEPRATING AND MAINTENANCE MANUAL AND REPORT OF TEST RESULTS.

ENERGY CODE PROGRESS INSPECTION

Y	N	PROGRESS INSPECTIONS
[ ]	[X]	PROTECTION OF EXPOSED FOUNDATION INSULATION
[ ]	[X]	INSULATION PLACEMENT AND R-VALUES
[ ]	[X]	FENESTRATION U-FACTOR AND PRODUCT RATINGS
[ ]	[X]	FENESTRATION AIR LEAKAGE
[ ]	[X]	FENESTRATION AREAS
[ ]	[X]	AIR BARRIER - VISUAL INSPECTION
[ ]	[X]	AIR BARRIER - TESTING
[ ]	[X]	AIR BARRIER CONTINUITY PLAN TESTING/INSPECTION
[ ]	[X]	VESTIBULES
[ ]	[X]	FIREPLACES
[ ]	[X]	VENTILATION AND AIR DISTRIBUTION SYSTEM
[ ]	[X]	SHUTOFF DAMPERS
[ ]	[X]	HVAC-R AND SERVICE WATER HEATING EQUIPMENT
[ ]	[X]	HVAC-R AND SERVICE WATER HEATING SYSTEM CONTROLS
[ ]	[X]	HVAC-R AND SERVICE WATER PIPING DESIGN AND INSULATION
[ ]	[X]	DUCT LEAKAGE TESTING, INSULATION AND DESIGN
[ ]	[X]	METERING
[ ]	[X]	LIGHTING IN DWELLING UNITS
[X]	[ ]	INTERIOR LIGHTING POWER
[ ]	[X]	EXTERIOR LIGHTING POWER
[X]	[ ]	LIGHTING CONTROLS
[ ]	[X]	ELECTRICAL MOTORS AND ELEVATORS
[ ]	[X]	MAINTENANCE INFORMATION
[ ]	[X]	PERMANENT CERTIFICATE
[ ]	[X]	ELECTRIC VEHICLE SERVICE EQUIPMENT REQUIREMENTS



COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2020 New York City Energy Conservation Code
Project Title: FIT 8969-74 UPS & ATS ROOMS
Project Type: Addition

Construction Site:
227 W 27TH STREET
NEW YORK, NY 10001

Owner/Agent:

Designer/Contractor:
MICHAEL GERAZOUNIS
MG ENGINEERING
116 WEST 32ND STREET
NEW YORK, NY 10001

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Electrical/Mechanical	74	0.39	29
2-Common Space Types:Electrical/Mechanical	42	0.39	16
		Total Allowed Watts =	45

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Common Space Types:Electrical/Mechanical LED 1: LED Linear 22W;	1	1	22	22
2-Common Space Types:Electrical/Mechanical LED 2: LED Linear 22W;	1	1	22	22
		Total Proposed Watts =		44

Interior Lighting PASSES: Design 3% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2020 New York City Energy Conservation Code requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

Project Title: FIT 8969-74 UPS & ATS ROOMS — Report date: 04/03/24
Data filename: M:\8969-74\calculations\Electrical\FIT FA UPGRADE POMERANTZ UPS & ATS ROOMS.cck — Page: 1 of 7

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FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

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COVER SHEET

DOB NOW JOB#

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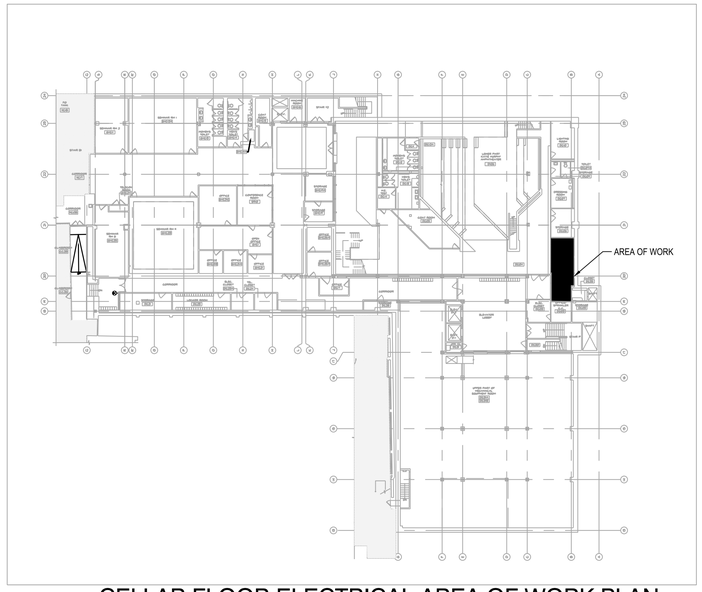


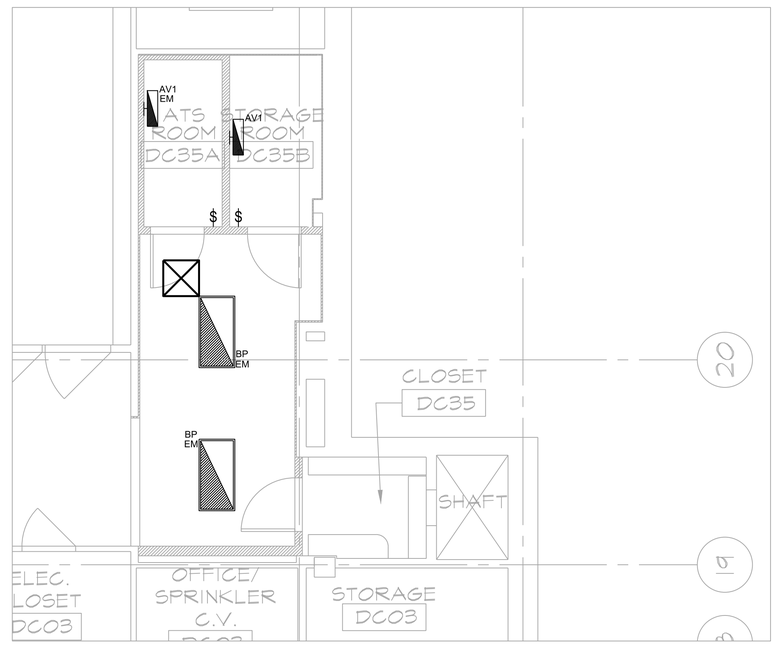
1 CELLAR FLOOR ELECTRICAL AREA OF WORK PLAN
SCALE: 1/32"=1'-0"

GENERAL NOTES:

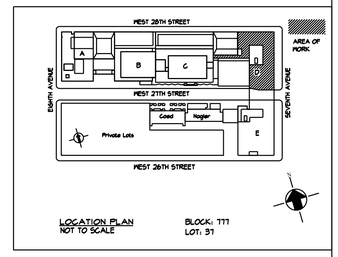
1. REFER TO EN-001 SHEET FOR NOTES, ABBREVIATIONS, ENERGY DRAWINGS LIST, AND SYMBOL LIST.

LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	LAMP			TOTAL WATTS	VOLTAGE	COMMENTS
			LAMP QUANT.	WATTS				
AV1	METALUX - 2VT2/LD53/DR/UNV/VT-REM-EL/L835/WL/SSL /UVT2-SS-MBK	METALUX	2	22W	LED 3500K	44W	120/277V	WALL MOUNTED VAPORPROOF, GASKETED, LIGHT FIXTURE. FIXTURE TO BE NOMINALLY 7" WIDE X 6" HIGH X 2' LONG. FIXTURE TO CONTAIN A PRISMATIC LENS. FIXTURE TO BE SUITABLE FOR WET LOCATION. EM DENOTES FIXTURES TO CONTAIN 10 WATT EMERGENCY INTEGRAL BATTERY DRIVER SUITABLE FOR 90 MINUTES AND MINIMUM 1100 DELIVERED LUMENS.
BP	WILLIAMS - BP-244-S/8CS-EM/10WKTCEC-QS-UNV	WILLIAMS	2	29W	LED 3500K	58W	120/277V	SURFACE MOUNTED BACKLIT FLAT PANEL LIGHT FIXTURE. FIXTURE TO BE NOMINALLY 2' WIDE X 1-3/4" HIGH X 4' LONG. FIXTURE TO CONTAIN A PRISMATIC LENS. EM DENOTES FIXTURES TO CONTAIN 10 WATT EMERGENCY INTEGRAL BATTERY DRIVER SUITABLE FOR 90 MINUTES AND MINIMUM 1100 DELIVERED LUMENS.



2 CELLAR FLOOR ENERGY PART PLAN
SCALE: 1/4"=1'-0"



NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
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New York, NY, 10001

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EPM, Inc.
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Fashion Institute of Technology
227 West 27th Street
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David Smotrich & Partners LLP
Architects/Planers

443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
ENERGY STORAGE & ATS ROOM PART PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	AS NOTED
DWG No:	EN-002.00
CADD FILE:	DOB page: 2 OF 3

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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NEW YORK CITY ENERGY CONSERVATION CODE

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK CITY ENERGY CONSERVATION CODE.

MGE
MG Engineering D.P.C. / we engineer success
116 West 32nd Street, 12th Floor, New York, N.Y. 10001
P 212.643.9055 www.mgedpc.net

GENERAL NOTES

1. THE GENERAL NOTES APPLY TO ALL DRAWINGS UNDER THIS CONTRACT. REFER TO INDIVIDUAL DRAWINGS FOR ADDITIONAL NOTES.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK. MAINTAIN HEADROOM AND SPACE CONDITIONS CONSISTENT WITH PROJECT CRITERIA.
3. JUNCTION AND PULL BOXES SHALL GENERALLY BE LOCATED FOR FLUSH MOUNTING IN FINISHED SPACES. WHERE NECESSARY, CONDUIT SHALL BE REROUTED OR OTHER ARRANGEMENTS SHALL BE MADE FOR CONCEALMENT. PULL BOXES SHALL BE PROVIDED AS INDICATED AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE AND COORDINATE LOCATION WITH OTHER TRADES. COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE.
4. ALL SUPPORTS TO BUILDING STRUCTURE SHALL BE SECURED AS NOTED IN THE SPECIFICATIONS. HORIZONTAL RUNS OF METALLIC CONDUIT SHALL BE SUPPORTED AT INTERVALS OF NOT MORE THAN 10 FEET APART. RACEWAY RISERS SHALL BE SUPPORTED AT EACH FLOOR LEVEL. EXPOSED RACEWAYS SHALL RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
5. JUNCTION BOXES AND PULL BOXES SHALL BE SUPPORTED INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON CONDUIT.
6. NO RACEWAYS SHALL BE INSTALLED WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES, OR APPLIANCES, EXCEPT FOR CROSSINGS WHERE RACEWAYS SHALL BE AT LEAST 1 INCH FROM PIPE COVER.
7. CONDUIT ENDS SHALL BE CUT SQUARE AND REAM SMOOTH. MALE THREADS OF FIELD THREADED CONDUIT SHALL BE PAINTED WITH GRAPHITE BASED PIPE COMPOUND AND DRAWN UP TIGHT WITH CONDUIT COUPLINGS.
8. WIRE COLOR CODING SHALL CONFORM TO CODE REQUIREMENTS.
9. IN UNFINISHED PORTIONS OF THE BUILDING, SUCH AS BOILER ROOM, FAN ROOMS, PIPE SPACES, ETC., LOCATIONS OF CONDUIT ARE APPROXIMATE AND SHALL CLEAR PIPING AND ALL OTHER CONSTRUCTION. CONDUITS IN THESE PORTIONS OF THE BUILDING SHALL BE RUN EXPOSED.
10. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CEILING WORK WITH AND DETERMINE CEILING TYPE PRIOR TO FURNISHING OF SMOKE DETECTORS, OR ANY OTHER CEILING MOUNTED ELECTRICAL ELEMENTS. ELECTRICAL WORK SHALL ALSO BE COORDINATED WITH LOCATION OF DIFFUSERS, SPRINKLERS AND OTHER MECHANICAL WORK.
11. ALL OUTLET BOXES RECEIVING 1-1/4" CONDUIT SHALL BE A MINIMUM OF 2-1/2"DEEP.
12. SUFFICIENTLY LONG WIRE SLACK SHALL BE LEFT IN RUNS TO PERMIT MAKING PROPER FINAL CONNECTIONS. ALL EMPTY CONDUIT SHALL BE PROVIDED WITH #12 AWG STEEL DRAG WIRE.
13. ALL WIRING, POWER, CONDUCTORS, CONDUITS ETC. SHALL MEET THE NYC ELECTRICAL CODE.
14. ALL WORK SHALL BE IN ACCORDANCE WITH THE NYS BUILDING CODE AND NFPA 72.
15. ALL FIRE ALARM EQUIPMENT SHALL BE APPROVED (MEA, BSA OR COA APPROVED).
16. ALL FIRE ALARM CIRCUITS SHALL BE SIZED TO A MAXIMUM OF 80% OF CAPACITY.
17. ALL FIRE ALARM CIRCUITS SHALL BE WIRED NFPA STYLE 4/Y/B (CLASS B) WITH THE EXCEPTION OF THE NETWORK CIRCUIT WHICH SHALL BE NFPA STYLE 7 (CLASS A WITH ISOLATION). DUAL CLASS B NETWORKING IS NOT STYLE 7 AND WILL NOT BE APPROVED. ALL AUDIBLE AND VISUAL CIRCUITS SHALL BE STYLE Y/CLASS B AND SPLIT A/B. SPLIT A/B CIRCUITS SHALL BE WIRED SO THAT EVERY OTHER DEVICE IS WIRED ON AN ALTERNATE CIRCUIT.
18. CONDUITS MAY NOT ENTER THE TOP OF ANY FIRE ALARM EQUIPMENT CABINET.
19. ALL FIRE ALARM EQUIPMENT SHALL BE INSTALLED WITH AESTHETICS IN MIND. CABINETS SHALL BE SEMI FLUSH MOUNTED AND CABLE TRAYS SHALL BE HIDDEN.
20. ALL FIRE ALARM WIRE SHALL BE CLEARLY LABELED IN JUNCTION BOXES AND CABINETS. ALL TERMINALS SHALL BE NUMBERED AND LABELED. ALL CONNECTIONS SHALL BE EITHER SOLDERED, 70DBA APPROVED TERMINAL STRIPS OR SCOTCH LOCKS.
21. ALL LOW VOLTAGE FIRE ALARM CONDUCTORS SHALL BE PROTECTED BY EITHER BUILDING CONSTRUCTION OR CONDUIT TO 8 FEET ABOVE THE FINISHED FLOOR. LOADING DOCKS, GARAGES, SUPPRESSION AND EXTINGUISHING SYSTEM WIRING, MECHANICAL AND ELECTRICAL ROOMS AND OTHER LOCATIONS SUBJECT TO MECHANICAL DAMAGE SHALL BE IN FULL RIGID CONDUIT. IN ALL OTHER AREAS APPROVED WIRE MAY BE RUN WITHOUT CONDUIT ABOVE 8 FT.
ALL WIRING INSTALLATION EXPOSED IN FINISHED AREAS SHALL BE AS FOLLOWS:
A) ON WALLS – IN SINGLE PIECE 1/2" SURFACE MOUNTED STEEL RACEWAY.
B) WHERE CEILING IS NOT ACCESSIBLE – IN SINGLE PIECE SURFACE MOUNTED STEEL RACEWAY.
22. FIRE ALARM CABLES SHALL NOT BE MIXED WITH NON FIRE ALARM CABLING. LOW VOLTAGE FIRE ALARM CABLING SHALL NOT BE MIXED OR WIRED NEAR ANY AC CIRCUIT
23. ALL LOW VOLTAGE WIRING SHALL BE FPLP 150 DEGREE C. ALL NOTIFICATION CIRCUITS SHALL BE A MINIMUM OF 14 AWG AND ALL OTHER LOW VOLTAGE FIRE ALARM CIRCUITS SHALL BE 16 AWG MINIMUM.
24. VERTICAL RISER CABLE FOR ALL SYSTEMS SHALL BE INSTALLED IN A 2 HOUR RATED SHAFT.
25. POLARITY SHALL BE OBSERVED ON ALL CIRCUITS. T-TAPPING SHALL NOT BE ALLOWED ON ANY NOTIFICATION CIRCUITS (HORN, STROBE OR SPEAKER). T-TAPPING SHALL NOT BE PERMITTED ON ADDRESSABLE CIRCUITS.
26. ALL WIRING SHALL BE INSPECTED TO ASSURE THERE ARE NO OPENS, SHORTS OR EARTH GROUNDS.
27. SHIELDED CONDUCTORS OR RUNNING IN SEPARATE RACEWAY SHALL BE AS INSTRUCTED BY THE FIRE ALARM MANUFACTURER'S DOCUMENTATION. ALL NON-POWER LIMITED WIRING SHALL BE RUN IN A SEPARATE RACEWAY.
28. ALL AREA OR DUCT SMOKE DETECTORS SHALL BE PHOTO-ELECTRIC TYPE.
29. SMOKE DETECTORS MUST BE MOUNTED AT LEAST 3 FT AWAY FROM ANY AIR REGISTER.
30. DEVICE LOCATIONS MUST BE READILY ACCESSIBLE TO ALLOW FOR MAINTENANCE AND REPAIR.
31. DUCT MOUNTED SMOKE DETECTORS SHALL BE MOUNTED ON THE DUCTWORK IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. ALL DUCT DETECTORS SHALL BE PROVIDED WITH A REMOTE LED IN AN OBSERVABLE AREA. EACH LED STATION TO BE LABEL PER UNIT AND DEVICE MONITORY.
32. ALL STROBE LIGHTS SHALL BE UL-1971 APPROVED/LISTED. THE MINIMUM CANDELA IS 75 UNLESS OTHERWISE NOTED.
33. NOTIFICATION DEVICES THAT INCLUDE A STROBE SHALL BE MOUNTED 80 INCHES OFF THE FINISHED FLOOR TO THE BOTTOM OF THE STROBE, NOT NECESSARILY THE ELECTRICAL BOX.
34. ALL AUXILIARY RELAYS FOR FAN SHUTDOWN, DOOR RELEASE, DAMPER CONTROL, ELEVATOR CONTROL, ETC. SHALL BE WIRED A MAXIMUM OF 3 FT FROM THE CONTROLLED DEVICE. THE AUXILIARY RELAY SHALL FUNCTION WITHIN THE REQUIRED VOLTAGE AND CURRENT OF THE CONTROLLED DEVICE. SLAVE OR INTERPOSING RELAYS SHALL BE INCLUDED AND POWERED BY THE FIRE ALARM CONTROL PANEL IN A FAIL-SAFE (FIRE FUNCTION) POSITION. POWER TO THE INTERPOSING RELAY SHALL BE MONITORED BY THE FIRE ALARM SYSTEM.
35. OBTAIN APPROVAL OF PLANS BY THE FIRE DEPARTMENT PRIOR TO THE BEGINNING OF ANY WORK.
36. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY AND ALL ABANDONED FIRE ALARM CABINETS, DEVICES, AND WIRE. PAINT, PATCH AND CLEANUP SHALL ALSO BE INCLUDED.
37. PROVIDE AUDIBILITY LEVELS PER NFPA72.
38. COORDINATE WITH FIRE PROTECTION DRAWINGS FOR LOCATION AND CONNECTION OF POWER AND CONTROL TO THE EXISTING AND NEW TAMPER AND FLOW SWITCH DEVICES.
39. COORDINATE WITH MECHANICAL DRAWINGS FOR LOCATION AND CONNECTION OF POWER AND CONTROL TO THE EXISTING AND NEW FSD AND DUCT SMOKE DETECTOR DEVICES.
40. THE CONTRACTOR IS REQUIRED TO COORDINATE THE SCHEDULING OF ALL INSPECTIONS WITH THE NYC FIRE DEPARTMENT WITH:

    High RISE FIRE & SECURITY
    703 3RD AVE
    BROOKLYN, NY 11232

    IN ORDER TO OBTAIN THE FINAL FDNY LETTER OF APPROVAL AND SIGNOFF THE DOB APPLICATION AS PART OF THE SCOPE OF FIRE AND BUILDING CODE SERVICES, INC. AT EACH INSPECTION, A MINIMUM OF TWO FIRE ALARM TECHNICIANS WITH S97 OR S98 CERTIFICATIONS AND ONE ELECTRICIAN SHOULD BE PRESENT.
41. THE CONTRACTORS PRESENCE AT ALL OF THE OWNERS PRE-INSPECTIONS PRIOR TO THE FDNY INSPECTION AND ALL FDNY INSPECTIONS. A MINIMUM OF ONE ELECTRICAL CONTRACTOR AND TWO (2) FIRE ALARM TECHNICIANS SHALL BE PRESENT AT ALL INSPECTIONS.
42. THE CONTRACTOR IS RESPONSIBLE TO PREPARE AND PROVIDE THE AS-BUILT RISER PLAN AND THE APPLICANT OF RECORD IS PETER GERZAOUNIS WHO WILL BE SIGNING AND SEALING THE FUNCTIONALITY STATEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF 3RCNY R105.01(C) (2) (A) (3) AND (4).
43. EXISTING DEVICES AND FIRE ALARM EQUIPMENT SHALL BE PROPERLY PROTECTED DURING DEMOLITION AND CONSTRUCTION.

SYMBOL LEGEND

FACP	FIRE ALARM CONTROL PANEL
DGP	DATA GATHERING PANEL
SPS	STROBE POWER SUPPLY
FCS	FIRE COMMAND STATION
RAN	REMOTE ANNUNCIATOR
S	AREA SMOKE DETECTOR EL – DENOTES ELEVATOR RELATED DEVICE
H	AREA HEAT DETECTOR
SL	CEILING MOUNTED STROBES
S	DUCT SMOKE DETECTOR; R – RETURN FAN DUCT DETECTOR; S – SUPPLY FAN DUCT DETECTOR
PRC	COMPUTER AND FIRE ALARM EVENT PRINTER
C	FIRE WORKS COMPUTER
F	MANUAL PULL STATION, MOUNTED NOT LESS THAN 42" AND NOT MORE THAN 48" ABOVE FINISH FLOOR.
	BELL
SL	WALL MOUNTED, STROBE ONLY APPLIANCE
XX S	WALL MOUNTED, COMBINATION SPEAKER/STROBE APPLIANCE XX – DENOTES CANDELA RATINGS (TYP.)
XX S	CEILING MOUNTED, COMBINATION SPEAKER/STROBE APPLIANCE XX – DENOTES CANDELA RATINGS (TYP.)
XX H	CEILING MOUNTED, COMBINATION HORN/STROBE APPLIANCE XX – DENOTES CANDELA RATINGS (TYP.)
H	WALL MOUNTED, COMBINATION HORN/STROBE APPLIANCE
R	RELAY
TS	TAMPER SWITCH
WS	WATER FLOW SWITCH
CM	CONTROL MODULE
MM	MONITORING MODULE
UR	UPS RUNNING MONITORING MODULE
UF	UPS FAIL MONITORING MODULE
S	SPEAKER ONLY DEVICE
DH	MAGNETIC DOOR HOLDING DEVICE
	20 WATT SPEAKER
	40 WATT SPEAKER
E	EXISTING TO REMAIN
EL	ASSOCIATED WITH ELEVATOR RECALL
ERL	EXISTING TO BE RELOCATED
FS	FAN SHUTDOWN
N	NEW

ABBREVIATIONS

	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
DGP	DATA GATHERING PANEL
DWG	DRAWING
E	EXISTING TO REMAIN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ER	EXISTING TO RELOCATE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FCO	FUSED CUTOUT
NIC	NOT IN CONTRACT
R	REMOVE
RE	RELOCATED EXISTING DEVICE
FS	FAN SHUTDOWN

SEQUENCE OF OPERATION

SYSTEM OUTPUTS

FIRE COMMAND STATION ANNUNCIATION:
- A – ACTUATE COMMON ALARM SIGNAL INDICATOR & LOCAL AUDIBLE ALARM SIGNAL AT THE FIRE COMMAND STATION AND REMOTE ANNUNCIATOR WHERE APPLICABLE
- B – VISUALLY ANNUNCIATE THE DEVICE IN ALARM AT THE FIRE COMMAND STATION AND REMOTE ANNUNCIATOR WHERE APPLICABLE
- C – ACTUATE COMMON TROUBLE SIGNAL INDICATOR & LOCAL AUDIBLE TROUBLE SIGNAL AT THE FIRE COMMAND STATION AND REMOTE ANNUNCIATOR WHERE APPLICABLE
- D – VISUALLY ANNUNCIATE THE DEVICE OR CIRCUIT IN TROUBLE AT THE FIRE COMMAND STATION AND REMOTE ANNUNCIATOR WHERE APPLICABLE
- E – ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR, DISPLAY ON LCD AND REMOTE ANNUNCIATOR WHERE APPLICABLE
- F – ACTUATE LOCAL AUDIBLE SUPERVISORY SIGNAL AND REMOTE ANNUNCIATOR WHERE APPLICABLE

NOTIFICATION:
- G – ACTUATE STROBE APPLIANCES ON ALL FLOORS
- H – ACTUATE SPEAKER APPLIANCES TO SOUND EVAC. TONE ON ALL FLOORS IN THE BUILDING.
- I – ACTUATE SPEAKER APPLIANCES TO SOUND INQUIRY TONE ON ALL FLOORS
- J – TRANSMIT ALARM SIGNAL TO CENTRAL STATION
- K – TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
- L – TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION
- M – ACTUATE FLASHING FIRE SIGN AT THE FIRE COMMAND STATION
- N – PRINT EVENTS AT THE FIRE COMMAND STATION

FIRE SAFETY CONTROL:
- O – RECALL ELEVATORS TO THE DESIGNATED LEVEL
- P – SHUTDOWN ALL AIR HANDLING UNITS 2000 CFM AND LARGER SERVING THE FLOOR IN ALARM
- Q – CLOSE ALL REQUIRED FIRE/SMOKE DAMPERS
- R – OPERATE ALL DOOR STRIKE RELEASE RELAYS TO OPEN LOCKED DOORS
- S – OPERATE ALL DOOR HOLDER RELEASE RELAYS TO ALLOW DOORS TO CLOSE

	SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	MANUAL PULL STATION	●	●					●	●	●	●			●	●					
2	AREA SMOKE DETECTOR	●	●					●	●	●	●			●	●		●	●	●	●
3	ELEVATOR RELATED SMOKE DETECTOR	●	●					●	●	●	●			●	●	●	●	●	●	●
4	IN-DUCT SMOKE DETECTOR	●	●					●	●	●	●			●	●		●	●	●	●
5	HEAT DETECTOR	●	●					●	●	●	●			●	●		●	●	●	●
6	WATERFLOW SWITCH	●	●					●	●	●	●			●	●	●	●	●	●	●
7	TAMPER SWITCH					●	●						●		●					
8	TROUBLE CONDITIONS			●	●							●			●					

FIRE ALARM DRAWING LIST

DWG No.	DRAWING TITLE
FA-001.00	FIRE ALARM SYMBOL LIST, ABBREVIATIONS, NOTES, AND MATRIX
FA-099.00	FIRE ALARM SUB-CELLAR PLAN
FA-100.00	FIRE ALARM CELLAR PLAN
FA-101.00	FIRST FLOOR FIRE ALARM PLAN
FA-102.00	SECOND FLOOR FIRE ALARM PLAN
FA-103.00	THIRD FLOOR FIRE ALARM PLAN
FA-104.00	FOURTH FLOOR FIRE ALARM PLAN
FA-105.00	FIFTH FLOOR FIRE ALARM PLAN
FA-106.00	SIXTH FLOOR FIRE ALARM PLAN
FA-107.00	SEVENTH FLOOR FIRE ALARM PLAN
FA-501.00	FIRE ALARM DETAILS
FA-601.00	FIRE ALARM RISER DIAGRAM
FA-602.00	FIRE ALARM NOTES AND SPECIFICATIONS
FA-899.00	FIRE ALARM DEMOLITION SUB-CELLAR PLAN
FA-900.00	FIRE ALARM DEMOLITION CELLAR PLAN
FA-901.00	FIRST FLOOR FIRE ALARM DEMOLITION PLAN
FA-902.00	SECOND FLOOR FIRE ALARM DEMOLITION PLAN
FA-903.00	THIRD FLOOR FIRE ALARM DEMOLITION PLAN
FA-904.00	FOURTH FLOOR FIRE ALARM DEMOLITION PLAN
FA-905.00	FIFTH FLOOR FIRE ALARM DEMOLITION PLAN
FA-906.00	SIXTH FLOOR FIRE ALARM DEMOLITION PLAN
FA-907.00	SEVENTH FLOOR FIRE ALARM DEMOLITION PLAN

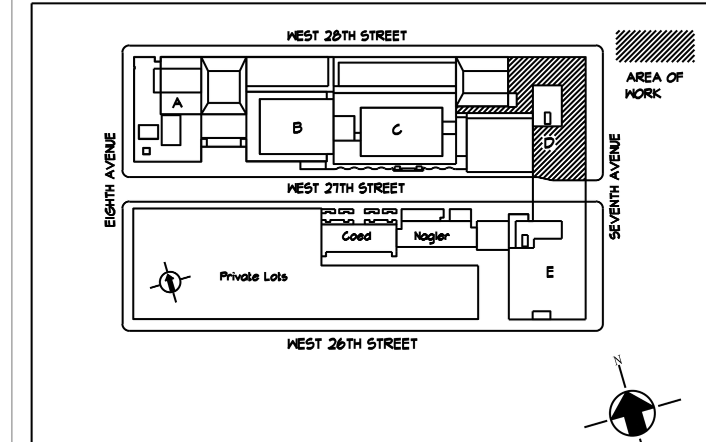
DESIGN NOTES:

1. AUDIBLE DEVICES SHALL PROVIDE ALARM SIGNALS THAT ARE EQUAL TO 15 DECIBELS ABOVE AMBIENT SOUND PRESSURE LEVEL FOR THE OCCUPANCY. BUSINESS OCCUPENCY HAS AMBIENT SOUND PRESSURE LEVEL 55 DECIBELS PER NFPA 72. THEREFORE, AUDIBLE DEVICES SHALL BE 70 DECIBELS OR MORE SOUND PRESSURE LEVEL. MECHANICAL SPACES SHALL PROVIDE MINIMUM SOUND PRESSURE LEVEL OF 90 DECIBELS.
2. ADDRESSABLE DEVICES SHALL BE WIRED CLASS B CIRCUIT & LEVEL 1 SURVIVABILITY.
   AUDIBLE AND VISUAL DEVICES SHALL BE WIRED CLASS B CIRCUIT & LEVEL 1 SURVIVABILITY.

THERE ARE NO CO PRODUCING EQUIPMENT LOCATED IN THIS BUILDING

TOTAL BUILDING SQFT = 163,000 SQFT

MARVIN FELDMAN CENTER BIN #1014251
FRED P. POMERANTZ ART AND DESIGN CENTER BIN #1014252
SHIRLEY GOODMAN RESOURCE CENTER BIN #1014236



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

PROJECT PHASING NOTES

Phase	Area	Scope of Work	Fire Watch Requirements	Special Notes
Phase 1	Throughout Pomerantz	**1a**- Install new fire alarm Fire Command Station (FCS), the Automatic Transfer Switch (ATS), and all associated line voltage circuitry.		
	The Katie Murphy Amphitheater and all areas outside of the Pomerantz Lobby, Great Hall, and Film & Media	**1b**- Install new strobes, combination speaker/strobes, manual pull stations, and smoke detector to existing DGPs while maintaining existing fire bells, manual pull stations, and smoke detectors. Install new wiring and new speakers to new speaker modules within existing DGPs.		
Phase 2	Pomerantz Lobby, Film & Media, and Great Hall	**2a**- Replace existing horn/strobes with new speaker/strobes (reuse backboxes). Provide new wiring, modules, and amplifiers in existing DGPs for new speaker devices. **2b**- New speaker modules shall be programmed to temporarily send a WAV file to new speakers to mimic horn functionality and to maintain fire alarm audible annunciation coverage.	Fire watch will be required while installing new wiring, modules, and amplifiers for new speaker devices.	WAV file ensures temporary audible coverage until the new system is signed off. The existing FACP in Stair #2 Landing #GH8, adjacent to the Great Hall will remain and be used to provide fire alarm circuitry to new strobes and pull stations.
Phase 3	Throughout Pomerantz	Once the new system is signed off, take existing system offline and demolish the existing devices as required by the demolition drawings. Patch and repair openings as per the architectural drawings.		

NOTES:
1. CONTRACTOR MUST SUBMIT PHASING PLAN AND EXPECTED DURATION OF FIRE WATCH AT THE ONSET OF THE CONTRACT.

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE
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NEW YORK CITY ENERGY CONSERVATION CODE
EXEMPTION WHEN COMPLIANCE WITH FIRE PROTECTION, DETECTION, ALARM AND/OR SUPPRESSION REQUIREMENTS OF TITLE 28 AND/OR THE 2022 NEW YORK CITY CONSTRUCTION CODES CONFLICTS WITH 2020 NYCECC COMPLIANCE, THE TITLE 28 AND/OR 2014 CONSTRUCTION CODES SAFETY PROVISIONS WILL TAKE PRECEDENCE OVER CONFLICTING PROVISIONS IN 2020 NYCECC.

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P 212.643.9055 www.mgedpc.net

NO.	DATE	REVISION
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1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

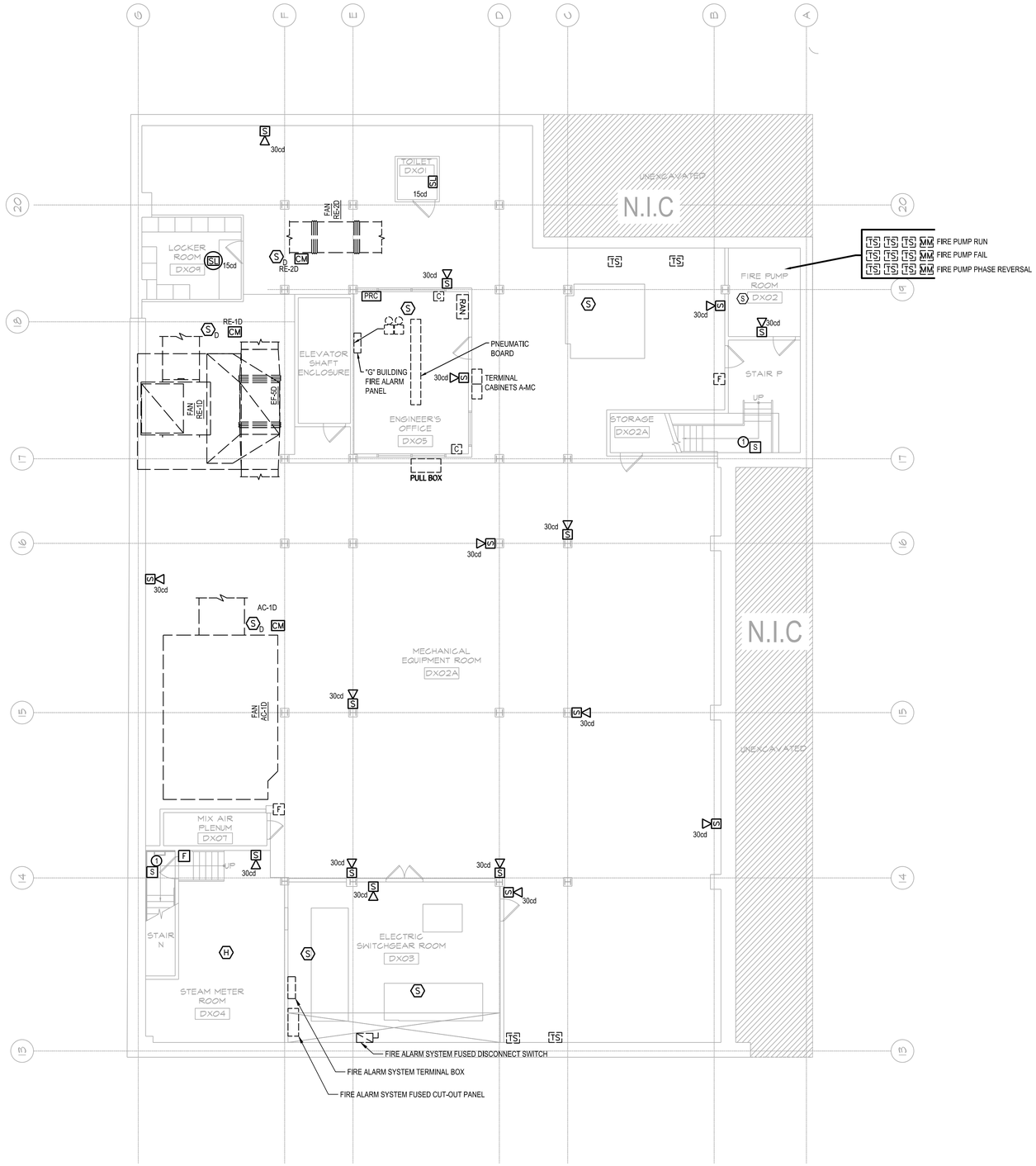
David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

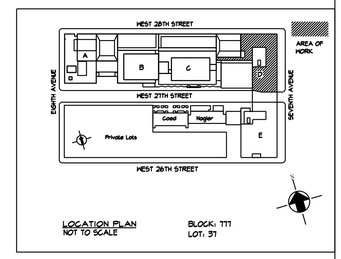
PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
FIRE ALARM
COVER SHEET &
NOTES
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	N.T.S
DWG No:	FA-001.00
CADD FILE:	DOB page: 1 OF 23





LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES	
1	SPEAKER ONLY DEVICE SHALL BE FED BY STAIRWELL RISER.

LEGEND	
———	INDICATES NEW WORK
— — —	INDICATES EXISTING TO REMAIN

NO.	DATE	REVISION
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Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
SUB-CELLAR
FIRE ALARM
PLAN
DOB NOW JOB#

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE
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NEW YORK CITY ENERGY CONSERVATION CODE
EXEMPTION WHEN COMPLIANCE WITH FIRE PROTECTION, DETECTION, ALARM AND/OR SUPPRESSION REQUIREMENTS OF TITLE 28 AND/OR THE 2022 NEW YORK CITY CONSTRUCTION CODES CONFLICTS WITH 2020 NYCECC COMPLIANCE, THE TITLE 28 AND/OR 2014 CONSTRUCTION CODES SAFETY PROVISIONS WILL TAKE PRECEDENCE OVER CONFLICTING PROVISIONS IN 2020 NYCECC.

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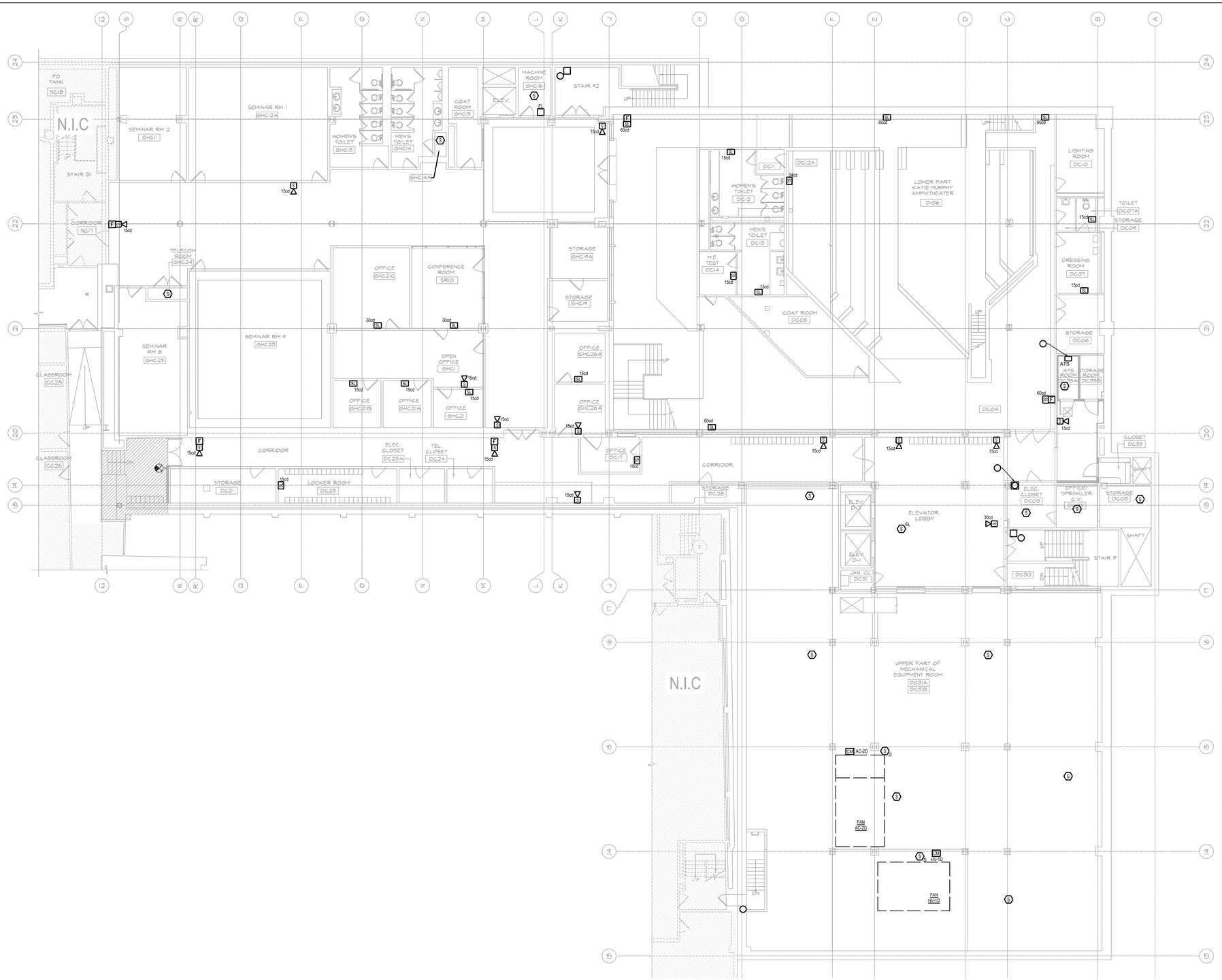
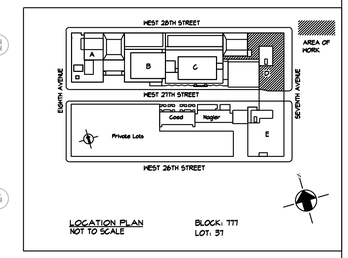
P 212.643.9055 www.mgedpc.net

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-099.00
CADD FILE:	DOB page: 2 OF 23





LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES

O	SPEAKER ONLY DEVICE SHALL BE FED FROM STAIRWELL RISER.
O	PROVIDE 2-INCH EMPTY RMC WITH PULL-BOX AND PULLSTRING AT THIS LOCATION FROM CELLAR LEVEL THROUGH THE 6TH FLOOR.
O	PROVIDE NEW 208V, 3PH, 125A AUTOMATIC TRANSFER SWITCH ATS-LS-1.
O	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION

LEGEND

——	INDICATES NEW WORK
	INDICATES EXISTING TO REMAIN

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

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Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
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227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

CELLAR FIRE ALARM PLAN

DOB NOW JOB#

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

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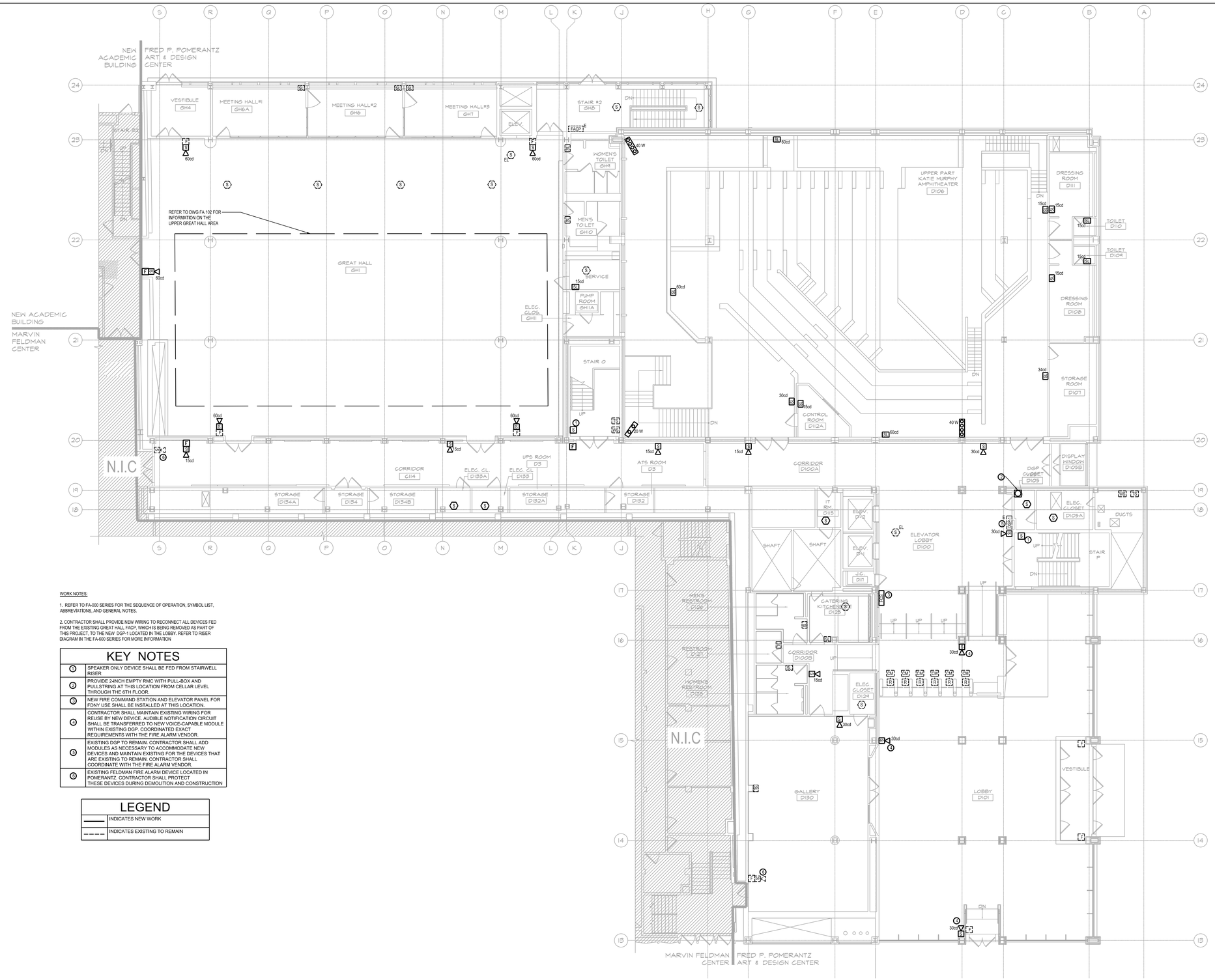
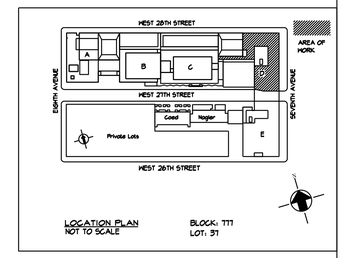
CADD FILE:	DOB page: 3 OF 23





LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

2. CONTRACTOR SHALL PROVIDE NEW WIRING TO RECONNECT ALL DEVICES FED FROM THE EXISTING GREAT HALL FACP, WHICH IS BEING REMOVED AS PART OF THIS PROJECT, TO THE NEW DGP-1 LOCATED IN THE LOBBY. REFER TO RISER DIAGRAM IN THE FA-600 SERIES FOR MORE INFORMATION

KEY NOTES

1	SPEAKER ONLY DEVICE SHALL BE FED FROM STAIRWELL RISER
2	PROVIDE 2-INCH EMPTY RMC WITH PULL-BOX AND PULLSTRING AT THIS LOCATION FROM CELLAR LEVEL THROUGH THE 6TH FLOOR.
3	NEW FIRE COMMAND STATION AND ELEVATOR PANEL FOR FDNY USE SHALL BE INSTALLED AT THIS LOCATION.
4	CONTRACTOR SHALL MAINTAIN EXISTING WIRING FOR REUSE BY NEW DEVICE. AUDIBLE NOTIFICATION CIRCUIT SHALL BE TRANSFERRED TO NEW VOICE-CAPABLE MODULE WITHIN EXISTING DGP. COORDINATED EXACT REQUIREMENTS WITH THE FIRE ALARM VENDOR.
5	EXISTING DGP TO REMAIN. CONTRACTOR SHALL ADD MODULES AS NECESSARY TO ACCOMMODATE NEW DEVICES AND MAINTAIN EXISTING FOR THE DEVICES THAT ARE EXISTING TO REMAIN. CONTRACTOR SHALL COORDINATE WITH THE FIRE ALARM VENDOR.
6	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION

LEGEND

———	INDICATES NEW WORK
– – – –	INDICATES EXISTING TO REMAIN

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Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

1ST FLOOR FIRE ALARM PLAN

DOB NOW JOB#

SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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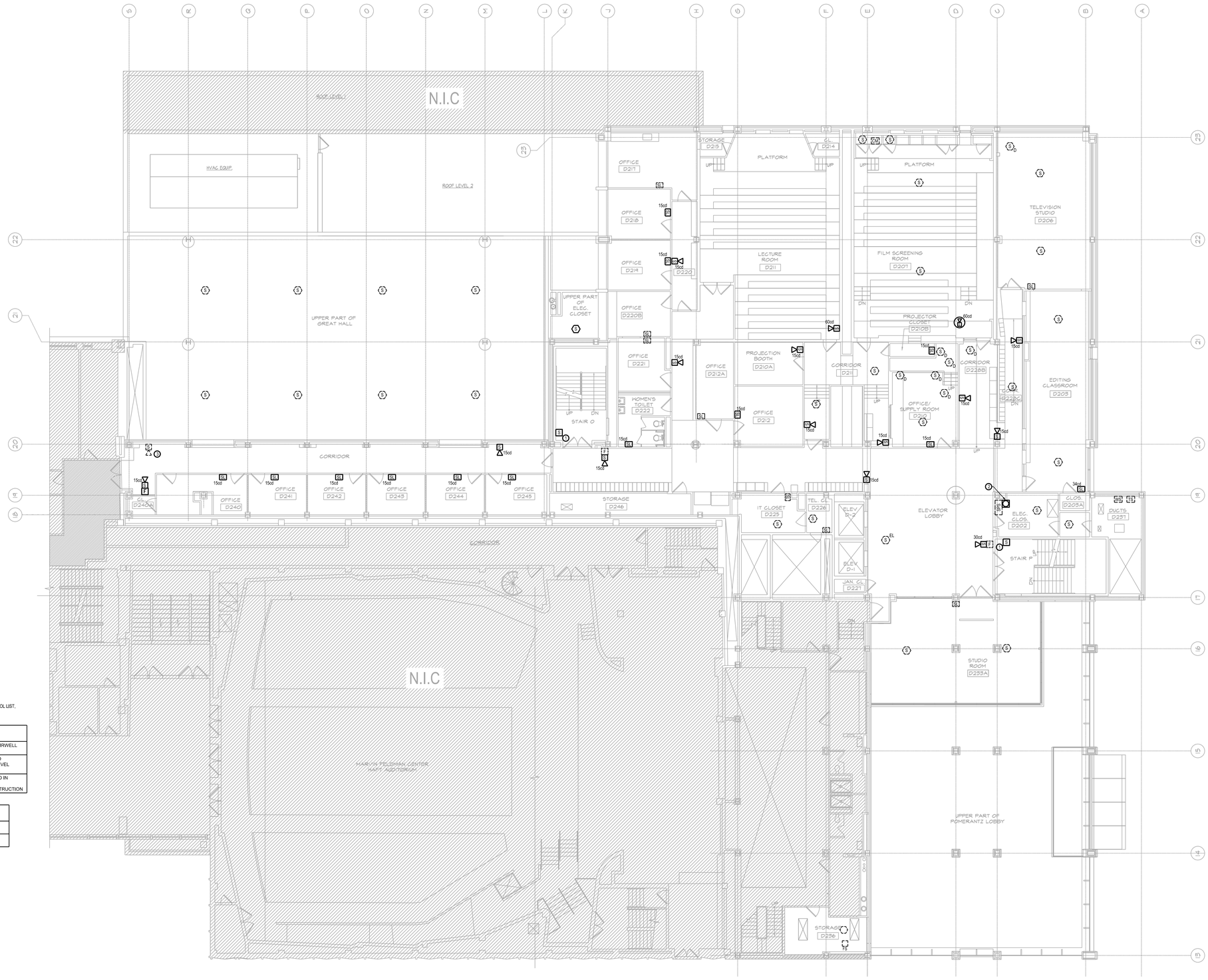
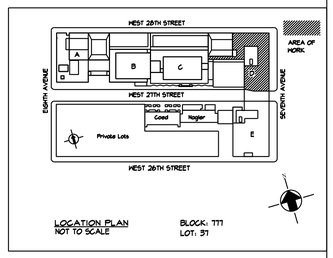
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-101.00
CADD FILE:	DOB page: 4 OF 23





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LEGEND

———	INDICATES NEW WORK
– – –	INDICATES EXISTING TO REMAIN

0 8' 16' 32'

SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

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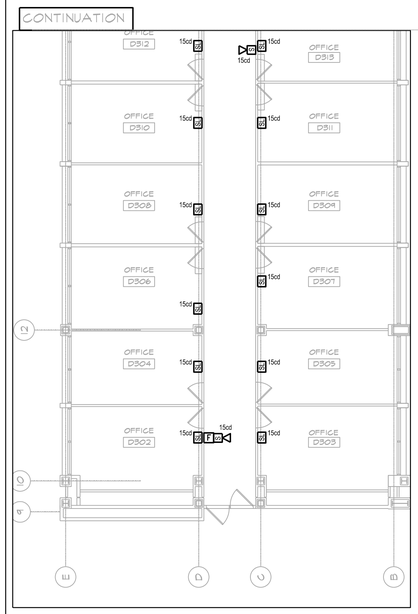
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

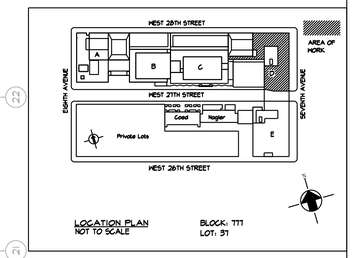
DRAWING TITLE:
2ND FLOOR FIRE ALARM PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-102.00
CADD FILE:	DOB page: 5 OF 23



1 3RD FLOOR CONTINUATION PART PLAN



WORK NOTES:

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LEGEND	
———	INDICATES NEW WORK
— — —	INDICATES EXISTING TO REMAIN

NOT FOR CONSTRUCTION

SCALE: 3/32" = 1'-0"

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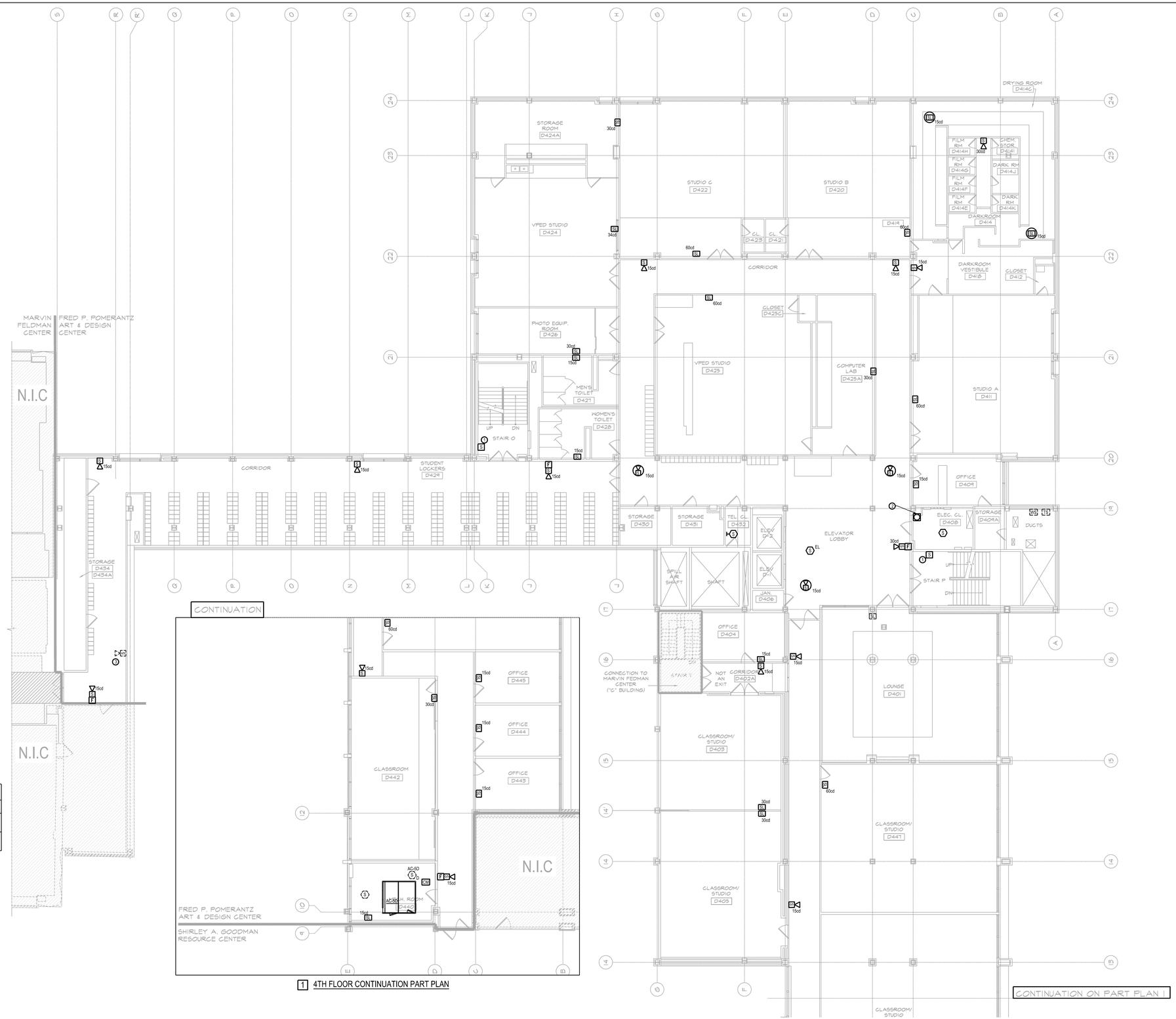
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

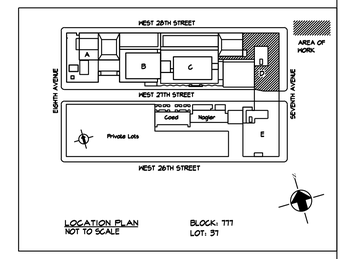
DRAWING TITLE:
3RD FLOOR FIRE ALARM PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-103.00
CADD FILE:	DOB page: 6 OF 23



1 4TH FLOOR CONTINUATION PART PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

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LEGEND

———	INDICATES NEW WORK
– – – –	INDICATES EXISTING TO REMAIN

NOT FOR CONSTRUCTION

SCALE: 3/32" = 1'-0"

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
4TH FLOOR FIRE ALARM PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

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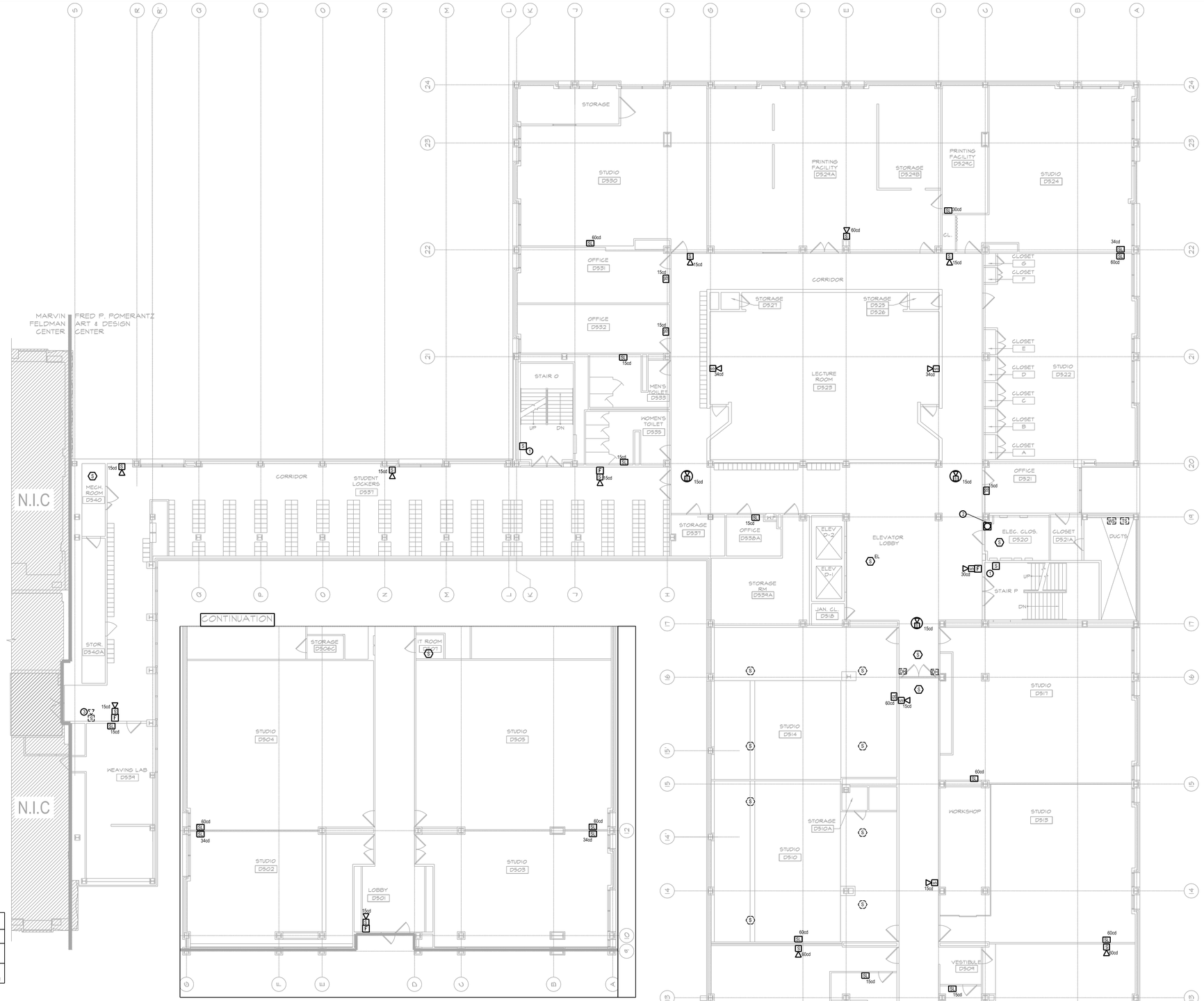
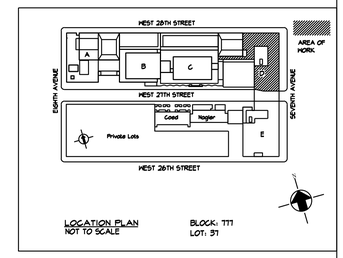


1 5THFLOOR CONTINUATION PART PLAN



LOCATION PLAN
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BLOCK: 777
LOT: 31

WORK NOTES:

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LEGEND

———	INDICATES NEW WORK
– – – –	INDICATES EXISTING TO REMAIN

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SCALE: 3/32" = 1'-0"

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
5TH FLOOR
FIRE ALARM
PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
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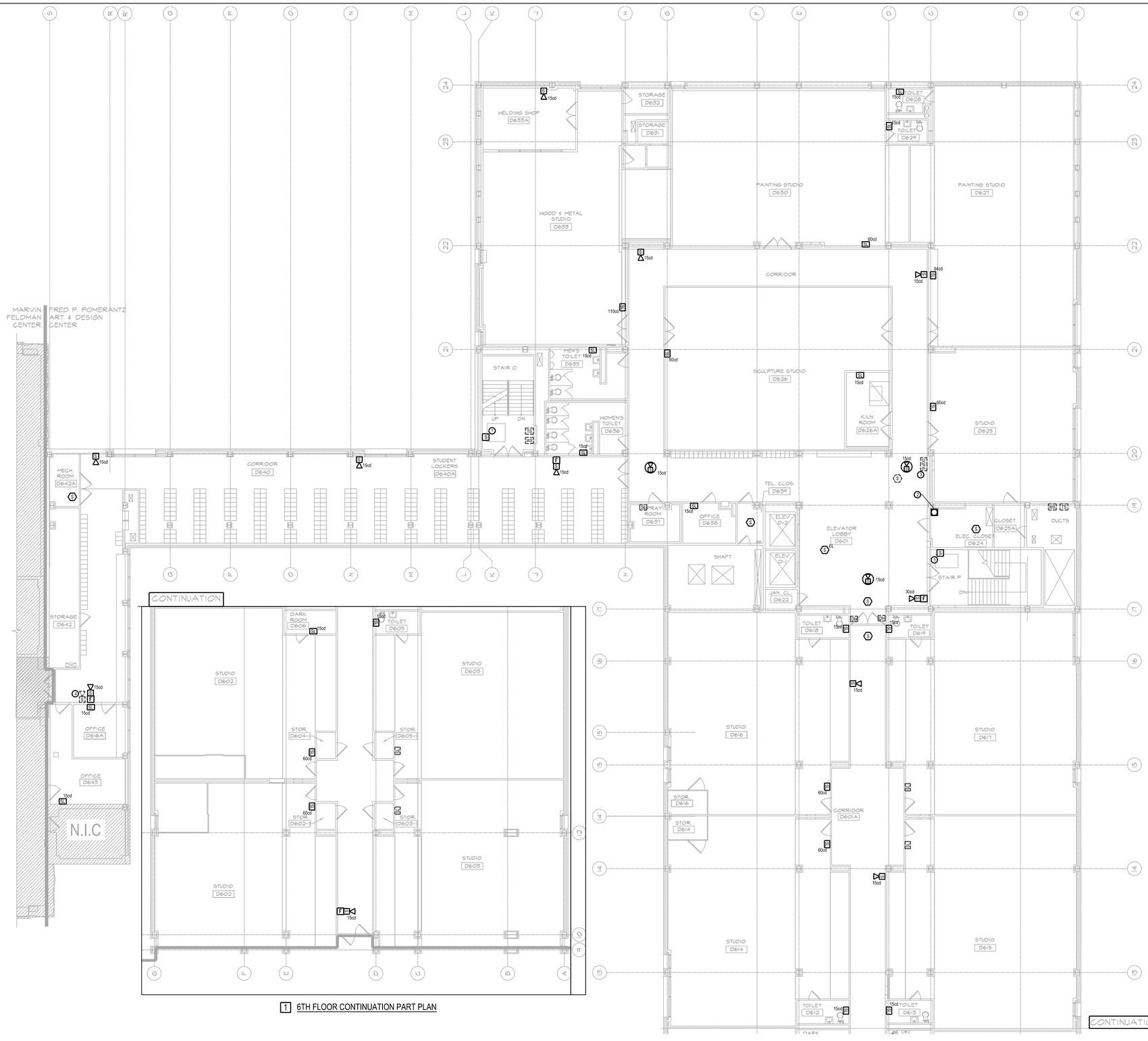
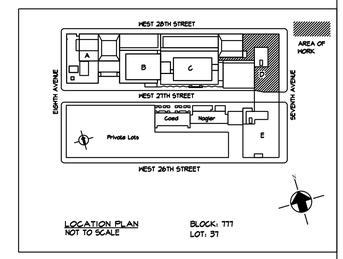


1 6TH FLOOR CONTINUATION PART PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

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LEGEND

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– – – –	INDICATES EXISTING TO REMAIN

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116 West 32nd Street, 12th Floor, New York, N.Y. 10001
P 212.643.9055 www.mgedpc.net

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
MG Engineering D.P.C.
116 West 32nd Street,
New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

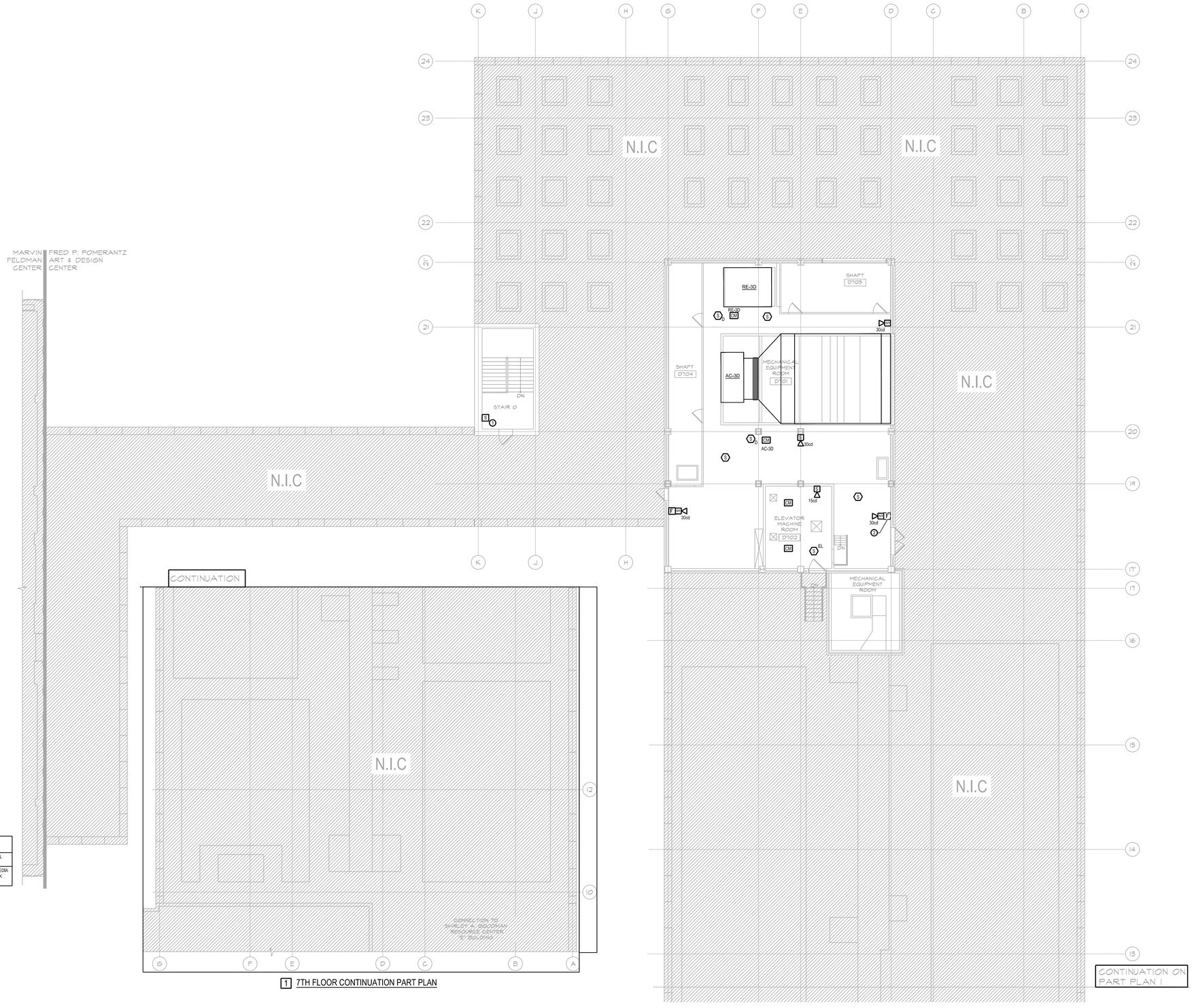
DRAWING TITLE:

6TH FLOOR FIRE ALARM PLAN

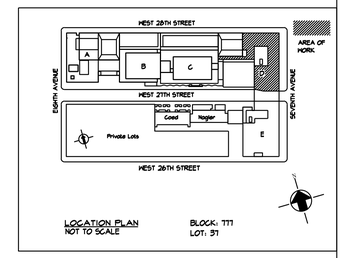
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"= 1'-0"
DWG No:	FA-106.00
CADD FILE:	



1 7TH FLOOR CONTINUATION PART PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES	
1	SPEAKER ONLY DEVICE SHALL BE FED FROM STAIRWELL RISER
2	THIS DEVICE IS PROVIDED UNDER A SEPARATE SCOPE (FILM AND MEDIA PROJECT). CONTRACTOR SHALL COORDINATE THIS SCOPE OF WORK WITH THAT PROJECT.

LEGEND	
———	INDICATES NEW WORK
– – – –	INDICATES EXISTING TO REMAIN

NO.	DATE	REVISION
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443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

ROOF FLOOR FIRE ALARM PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-107.00
CADD FILE:	DOB page: 10 OF 23

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

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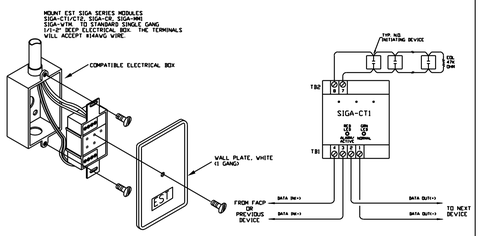
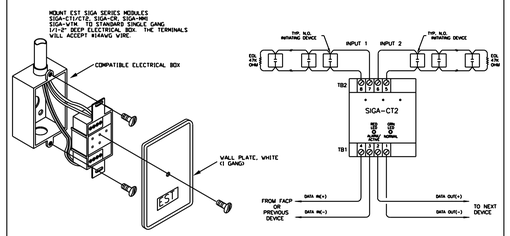


SIGA-CT1
MOUNTING DETAIL
N.T.S.

MM

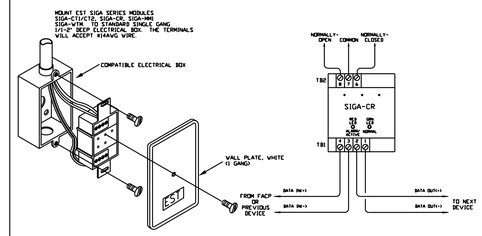
SINGLE INPUT MODULE
WIRING DIAGRAM
N.T.S.



SIGA-CT2
MOUNTING DETAIL
N.T.S.

MM2

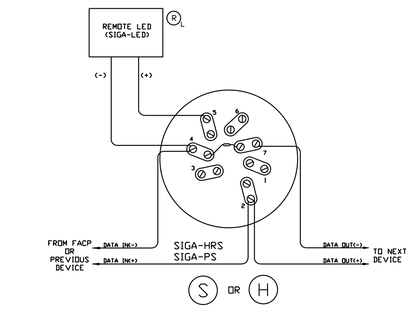
DUAL INPUT MODULE
WIRING DIAGRAM
N.T.S.



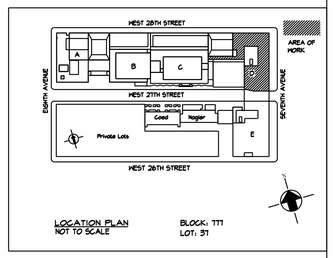
SIGA-CR
MOUNTING DETAIL
N.T.S.

CR

CONTROL RELAY MODULE
WIRING DIAGRAM
N.T.S.

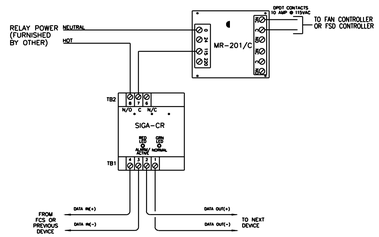


INTELLIGENT SMOKE OR HEAT DETECTOR
BASE WIRING DIAGRAM
N.T.S.

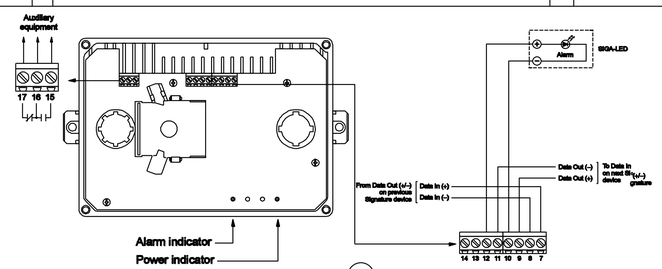


LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 37

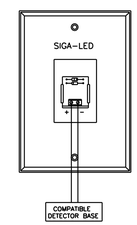


CONTROL RELAY MODULE
WIRING DIAGRAM
N.T.S.
TYPICAL FOR FAN SHUTDOWN OR FIRE SMOKE DAMPER CONTROL

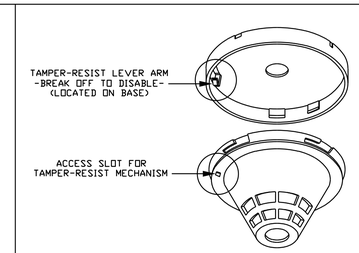


D

SIGA-SD
WIRING DIAGRAM
N.T.S.

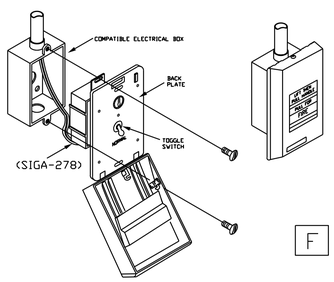


REMOTE LED ALARM INDICATOR
WIRING DIAGRAM
N.T.S.



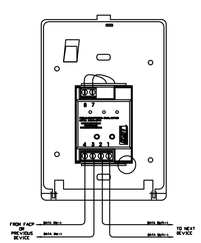
S OR H

SIGA-PS/HRS MOUNTING DETAIL
N.T.S.

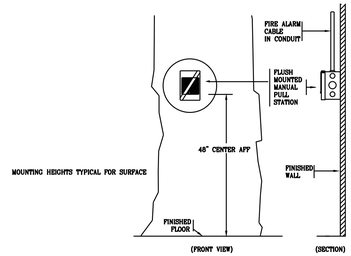


F

SIGA-278
MOUNTING DETAIL
N.T.S.

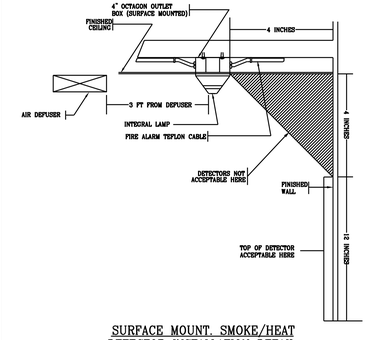


MANUAL PULL STATION
WIRING DIAGRAM
N.T.S.

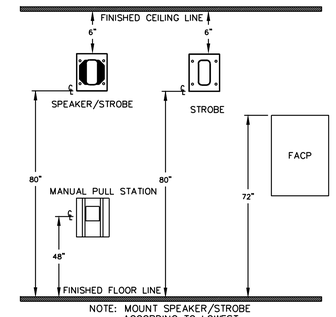


NOTE:
1. INSTALL WITH APPROVED SURFACE MOUNTED DEVICE SPECIFIC BACKBOX.

WALL MOUNT MANUAL PULL STATION
PULL STATION INSTALLATION DETAIL



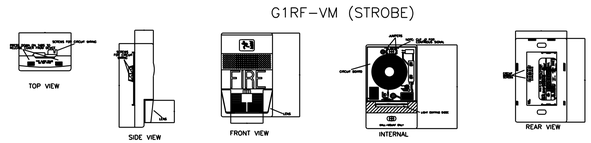
SURFACE MOUNT SMOKE/HEAT
DETECTOR INSTALLATION DETAIL



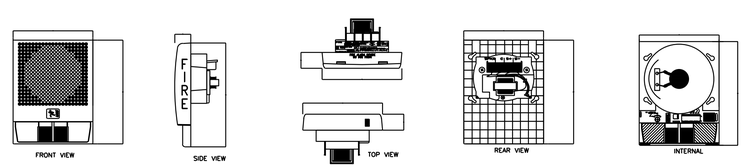
NOTE: MOUNT SPEAKER/STROBE ACCORDING TO LOWEST

DEVICE MOUNTING ELEVATIONS
N.T.S.

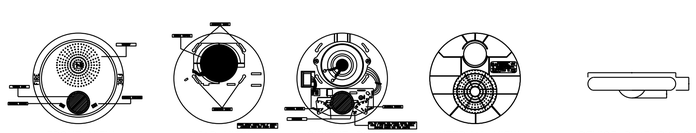
G1RF-VM (STROBE)



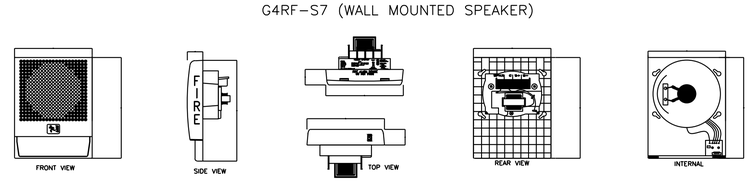
G4RF-S7VM (WALL MOUNTED SPEAKER/STROBE)



GCRF-S7VM (CEILING MOUNTED SPEAKER/STROBE)



G4RF-S7 (WALL MOUNTED SPEAKER)



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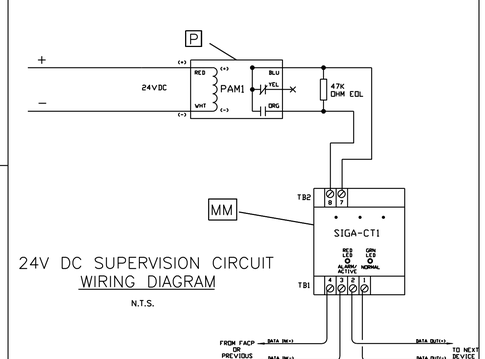

24V DC SUPERVISION CIRCUIT
WIRING DIAGRAM
N.T.S.

NOT FOR CONSTRUCTION

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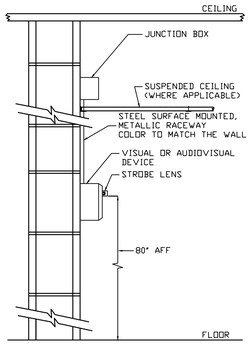
PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

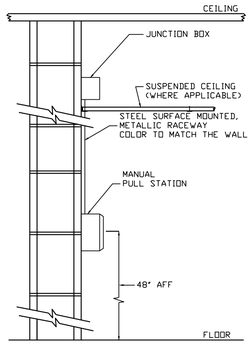
DRAWING TITLE:
FIRE ALARM
DETAILS I

SEAL & SIGNATURE:

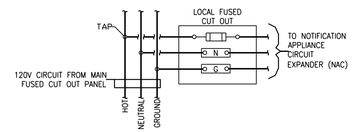
DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	CTD
SCALE:	N.T.S
DWG No:	FA-501.00
CADD FILE:	DOB page: 11 OF 23



SURFACE MOUNTED FIRE ALARM VISUAL OR AUDIOVISUAL DEVICE INSTALLATION DETAIL



SURFACE MOUNTED MANUAL PULL STATION INSTALLATION DETAIL



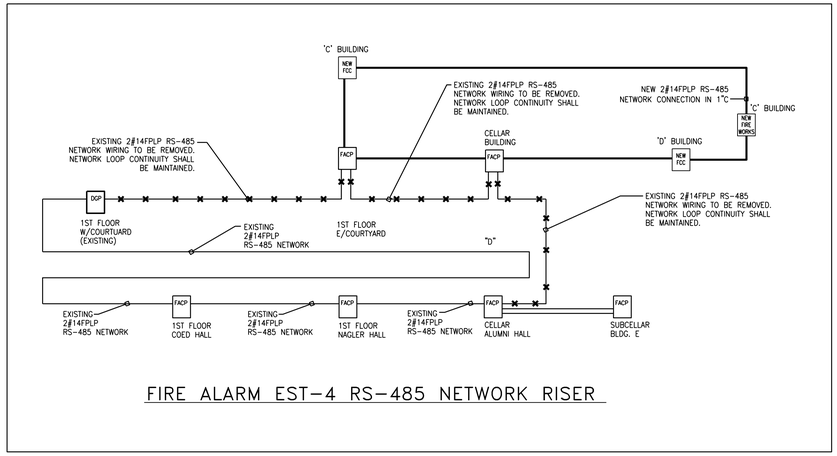
NOTES:
1. THE FA SYSTEM VENDOR SHALL DIRECT ON THE TOTAL QUANTITY OF NACS PERMITTED ON A SINGLE, 20A CIRCUIT.
2. FA POWER CIRCUIT RISER TAPS SHALL BE MADE WITH LISTED DEVICES AND COMPLY WITH NYCEC ARTICLE 240 TAP RULES.
3. ALL FA POWER CIRCUIT CONDUIT SHALL BE RMC AND ALL BOX COVERS SHALL BE RED.
4. FUSE RATING IN CUT OUT SHALL BE LESS THAN THAT SUPPLYING THE RISER.

LEGEND:
- FUSE
- G — GROUND BAR (BONDED TO ENCLOSURE)
- N — NEUTRAL BAR

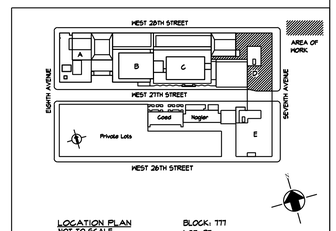
DETAIL OF LOCAL FUSED CUT OUT (FCO) FOR NOTIFICATION APPLIANCE CIRCUIT EXPANDERS (NAC)

LEGEND OF FUSED CUT OUTS ON PLANS:

- FCO-4 FCO WITH (4) FUSE HOLDERS
- FCO-3 FCO WITH (3) FUSE HOLDERS
- FCO-2 FCO WITH (2) FUSE HOLDERS
- FCO-1 FCO WITH (1) FUSE HOLDERS

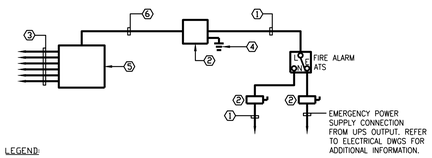


FIRE ALARM EST-4 RS-485 NETWORK RISER



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31



LEGEND:

1. EXISTING NORMAL POWER SUPPLY CONNECTION TO REMAIN
2. EXISTING SERVICE FUSED SWITCH TO REMAIN
3. BRANCH CIRCUITS
   EACH TO BE TYPE "THWN", "TFFN" OR " TFN WIRES IN -- RGS CONDUIT TO TERMINALS OF THE CENTRAL EQUIPMENT OF FIRE SIGNALING SYSTEMS AND TO OTHER ITEMS AS PER SCHEDULE IN THIS DETAIL.

   GROUNDING AND BONDING AS PER BASIC SPECIFICATIONS.
   USE #8 AWG CU WIRE FOR GROUNDING CONDUCTOR.
4. LIFE SAFETY FUSE CUT-OUT PANEL
   PAINTED RED, 100A, POLES AS REQUIRED, GROUNDED AND BONDED, WITH FIRE DEPARTMENT KEYED LOCK
5. 4#2, #8G TYPE "THWN", "TFFN" OR "TFN" IN 1 1/2" RGS CONDUIT.
6.

NOTES:

1. EXTERIOR OF ALL ITEMS TO BE PAINTED "FIRE ALARM" RED.

SCHEDULE OF FIRE SIGNALING SYSTEMS
CUT OUT PANEL AND BRANCH CIRCUITS

SYSTEM SUPPLIED	BRANCH IN CUT-OUT PANEL			BRANCH CIRCUIT
	SIZE	POLES	FUSE	CIRCUIT (WIRING & CONDUIT) SIZE
FIRE ALARM COMAND STATION POWER SUPPLY	30	1	30	SEE ONE-LINE DIAGRAM IN ELECTRICAL DRAWINGS
EXISTING 2ND FLOOR STROBE POWER SUPPLY	30	1	30	EXISTING
BLDG C FACP 1ST FLOOR	30	2	30	SEE DRAWING FA-402.00
BLDG C APS 2ND FLOOR	30	2	30	SEE DRAWING FA-402.00
BLDG C DGP #1 3RD FLOOR	30	2	30	SEE DRAWING FA-402.00
BLDG C APS 4TH FLOOR	30	2	30	SEE DRAWING FA-402.00
BLDG C APS 5TH FLOOR	30	2	30	SEE DRAWING FA-402.00
BLDG C DGP #2 6TH FLOOR	30	2	30	SEE DRAWING FA-402.00
BLDG C APS 7TH FLOOR	30	2	30	SEE DRAWING FA-402.00
BLDG C APS 8TH FLOOR	30	2	30	SEE DRAWING FA-402.00
ARCS RADIO COMMUNICATION AMPLIFIER	30	2	30	SEE DRAWING SFR-100.00
EXISTING STAGE CONTROL PANEL	30	2	30	SEE DRAWING FA-402.00
SPARE	30	2	30	
SPARE	30	2	30	
SPARE	30	2	30	

DETAIL OF FIRE SIGNALING SYSTEMS POWER SUPPLY FROM NOMINAL 208/120 VOLT ELECTRIC SERVICE

NO SCALE

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DWG No:	FA-502.00
CADD FILE:	DOB page: 12 OF 23

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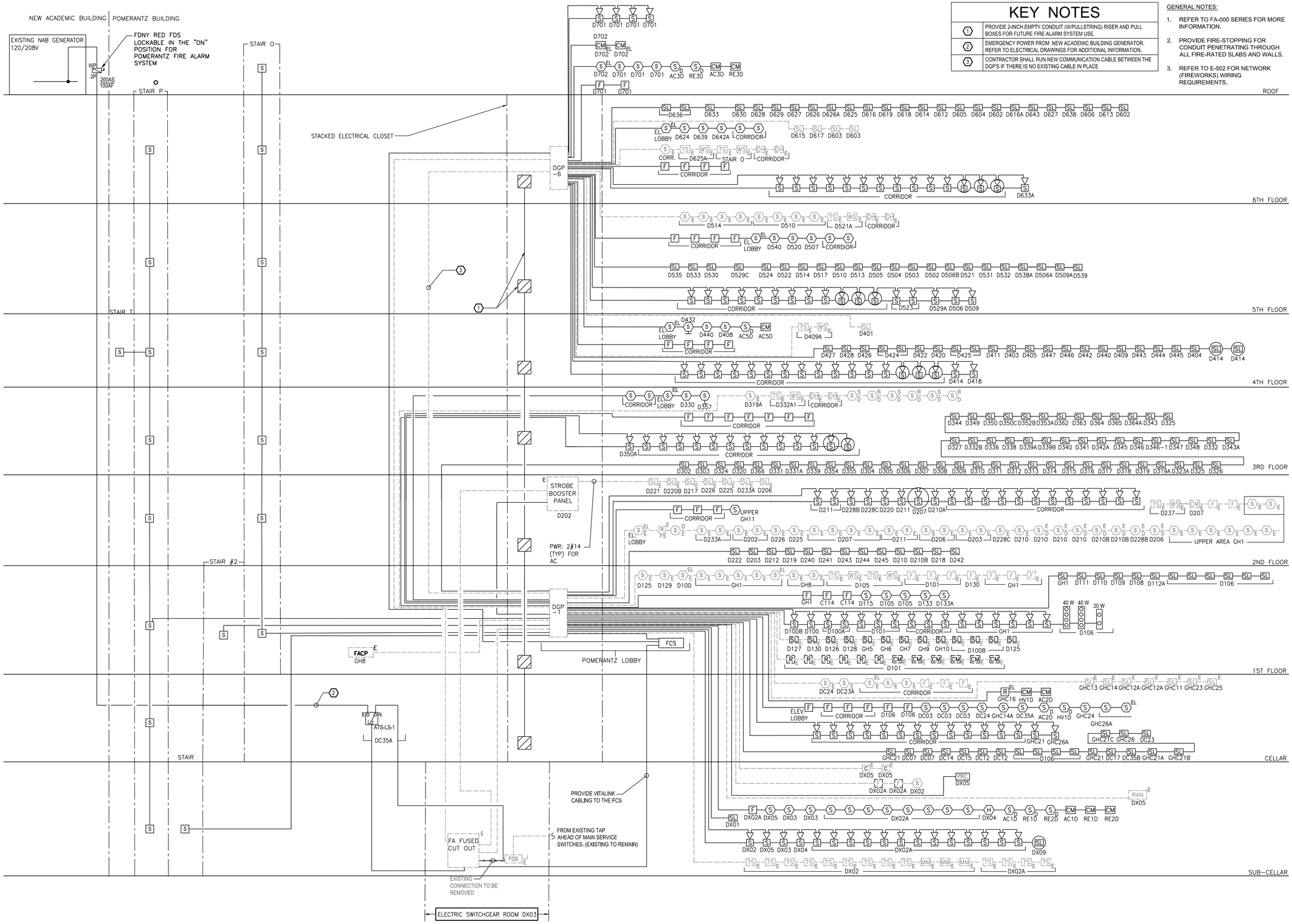
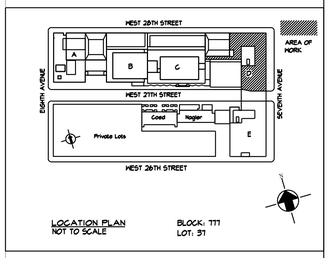


KEY NOTES

1	PROVIDE 2-INCH EMPTY CONDUIT (W/PULLSTRING) RISER AND PULL BOXES FOR FUTURE FIRE ALARM SYSTEM USE.
2	EMERGENCY POWER FROM NEW ACADEMIC BUILDING GENERATOR. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3	CONTRACTOR SHALL RUN NEW COMMUNICATION CABLE BETWEEN THE DGP'S IF THERE IS NO EXISTING CABLE IN PLACE

GENERAL NOTES:

1. REFER TO FA-000 SERIES FOR MORE INFORMATION.
2. PROVIDE FIRE-STOPPING FOR CONDUIT PENETRATING THROUGH ALL FIRE-RATED SLABS AND WALLS.
3. REFER TO E-502 FOR NETWORK (FIREWORKS) WIRING REQUIREMENTS.



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

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443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

FIRE ALARM RISER DIAGRAM

DOB OW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-601.00
CADD FILE:	DOB page: 13 OF 23

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NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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EXISTING FIRE ALARM DEVICES NOTES:

THE FOLLOWING SHALL APPLY FOR ALL DEVICES IDENTIFIED AS EXISTING TO REMAIN.

1. EXISTING WIRING SHALL BE PROTECTED DURING DEMOLITION AND CONSTRUCTION SO THAT IT CAN BE REUSED AND RECONNECTED TO MAKE EXISTING DEVICES FULLY OPERATIONAL. EXISTING WIRING THAT HAS BEEN DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.

2. EXISTING MANUAL PULL STATIONS AFFECTED BY THE SCOPE OF WORK AND INDICATED TO BE LOWERED/RELOCATED OR REPLACED SHALL BE LOWERED SO THAT THE HIGHEST OPERABLE PART IS NOT MORE THAN 48" AND SHALL NOT BE LESS THAN 42" ABOVE FINISH FLOOR. EXISTING WIRING MAY BE REUSED ONLY IF IT CAN BE EXTENDED TO THE NEW MOUNTING POSITION WITHOUT SPLICES. IF EXISTING WIRING IS TOO SHORT, FURNISH AND INSTALL NEW WIRING BACK TO THE FIRE ALARM COMMAND STATION, "DGP" OR TERMINAL CABINET.

3. THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE.

4. EXISTING BASE BUILDING FIRE ALARM EQUIPMENT AND DEVICES OUTSIDE OF THE AREA OF WORK MUST REMAIN IN SERVICE AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION.

FIRE ALARM SYSTEM DIVISION OF WORK IS AS FOLLOWS:

1) FIRE ALARM VENDOR WILL PROVIDE THE FOLLOWING INSTALLATION PACKAGE UNDER THIS CONTRACT:

A) FURNISH A COMPLETE SUBMITTAL PACKAGE INCLUDING CATALOGUE CUT SHEETS, RISER DIAGRAM WITH SEQUENCE OF OPERATIONS, POINT-TO-POINT WIRING DIAGRAM AND TYPICAL HOOK-UP DIAGRAMS.

B) FURNISH ALL DRAWINGS, MATERIAL AND PROGRAM CHANGES.

C) FILE DRAWINGS WITH THE FDNY.

D) COORDINATE INSPECTIONS WITH THE FDNY.

E) PROVIDE BUILDING OWNER WITH A LETTER ATTESTING THAT SAID SYSTEM(S) ARE FULLY OPERATIONAL PRIOR TO TENANT MOVE IN.

2) ELECTRICAL CONTRACTOR SHALL:

A) PURCHASE EQUIPMENT, DRAWINGS AND FILING FROM BUILDING FIRE ALARM VENDOR.

B) INSTALL EQUIPMENT AND WIRE RUNS TO DESIGNATED POINTS PER VENDOR DRAWINGS.

C) FILE THE A-433 FORM FOR HIS WORK WITH THE FDNY.

D) PROVIDE A LETTER OF REQUEST FOR FDNY INSPECTION AND RE-INSPECTIONS AS NECESSARY AND COORDINATE SAME WITH VENDOR, UNTIL A LETTER OF APPROVAL FROM THE FDNY IS OBTAINED.

E) CONTRACTOR SHALL ATTEND ANY FDNY INSPECTION AND RE-INSPECTION(S) /TEST(S) OF SUCH SYSTEMS, AT NO ADDITIONAL COST TO THE CLIENT.

3) THE SYSTEM MUST BE KEPT OPERABLE IN THE AREAS OUTSIDE OF THE AREA OF WORK. THIS MAY REQUIRE A TEMPORARY HOOK-UP DURING CONSTRUCTION.

FIRE ALARM NOTES:

1. PRIOR TO BID, CONTRACTOR SHALL CONTACT THE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR, HIGH RISE FIRE TO OBTAIN PRICING FOR THE EQUIPMENT AND SERVICES LISTED BELOW WHICH MUST BE PROVIDED BY THAT CONTRACTOR. THE FIRE ALARM MANUFACTURER FOR THIS FACILITY IS EDWARDS EST PRODUCTS. ELECTRICAL CONTRACTORS TO CONTACT HIGH RISE FIRE AND SECURITY FOR SITE SPECIFIC INFORMATION.

2. ALL EQUIPMENT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR AND SHALL BE PURCHASED FROM THE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR TO TO ASSURE COMPATIBILITY WITH EXISTING FIRE ALARM SYSTEM.

3. REPROGRAMMING OF FIRE COMMAND STATION AND FINAL CONNECTIONS AT THE FIRE COMMAND STATION OR DATA GATHERING PANEL ARE BY BUILDING'S FIRE ALARM MAINTENANCE CONTRACTOR. INCLUDE PRICE FOR SAME IN BID PRICE.

4. INSTALL FIRE ALARM EQUIPMENT, FIRE ALARM SPEAKERS AND STROBE LIGHTS (CANDELA TO BE SET AS INDICATED ON THE PLAN) UNITS AT LOCATION INDICATED ON THE PLAN.

5. CONNECT WIRES TO "2 WATT" TAP ON SPEAKER TRANSFORMER OR AS RECOMMENDED BY THE BUILDING'S FIRE ALARM MAINTENANCE CONTRACTOR. OPERATING VOLTAGE OF SPEAKER UNITS SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM.

6. FIRE ALARM RECESSED CEILING MOUNTED SPEAKERS AND WALL MOUNTED (PER NFPA 72 OF 2016, THE ENTIRE LENS SHALL NOT BE LESS THAN 80" AND NOT GREATER THAN 96" A.F.F.) STROBE LIGHT UNITS OR COMBINATION SPEAKER/STROBE UNITS SHALL BE BASE BUILDING TYPE.

7. ALL CABLING SHALL BE TEFLON INSULATED RATED AT 150°C AND JACKETED, "NYC CERTIFIED", FIRE PROTECTION SERVICE APPROVED, (1) PAIR #14 AWG FOR STROBES AND "POINTS" WIRING AND #16 AWG FOR SPEAKERS. PROVIDE SHIELD WIRING WHERE REQUIRED.

8. EXISTING BUILDING SYSTEM DEVICES SHOWN ARE TO REMAIN INTACT UNLESS OTHERWISE NOTED.

9. OBTAIN PERMISSION FROM BUILDING MANAGER PRIOR TO RUNNING WIRE FROM NEW FIRE ALARM DEVICES TO EXISTING FIRE COMMAND STATION OR DATA GATHERING PANELS.

10. ALL ROUTING OF CABLES TO FIRE COMMAND STATION SHALL BE DIRECTED AND APPROVED BY BUILDING MANAGER.

11. THE FIRE ALARM RISER DIAGRAM SHOWN IS AN INDICATION OF THE WORK REQUIRED AND SHALL BE USED AS GUIDE FOR DEVELOPING A COMPLETE SCOPE AND IS NOT A POINT-TO-POINT WIRING DIAGRAM. THE CONTRACTOR SHALL OBTAIN A POINT-TO-POINT WIRING DIAGRAM FROM THE BUILDING FIRE ALARM MAINTENANCE CONTRACTOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.

12. THE OPERATION OF THE FIRE ALARM INSTALLATION DOES NOT CONSTITUTE AN ACCEPTANCE OF THE WORK BY THE OWNER. FINAL ACCEPTANCE IS TO BE MADE AFTER THE CONTRACTOR HAS DEMONSTRATED THAT THE WORK FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS AND HAS FURNISHED ALL REQUIRED CERTIFICATES OF APPROVAL FROM THE STATE AUTHORITIES, MUNICIPAL AUTHORITIES AND UNDERWRITERS.

13. INCLUDE ALL FEES FOR FILING APPROVALS, AND REQUESTING FDNY INSPECTION AND RE-INPECTION OF THE FIRE ALARM INSTALLATION.

14. INSULATION OF FIRE ALARM CABLES SHALL BE MINIMUM 150° RATED AND SHALL BE UL APPROVED FOR USE IN N.Y.C..

15. ALL EXISTING FIRE ALARM DEVICES, WHETHER SHOWN ON PLANS OR NOT, SHALL REMAIN ACTIVE DURING DEMOLITION AND CONSTRUCTION.

16. AREA AND ELEVATOR LOBBY SMOKE DETECTOR SHALL BE MOUNTED AT THE HIGHEST POINT ON THE CEILING.

17. INSTALL SMOKE DETECTORS AT LEAST 3 FEET FROM ANY AIR DIFFUSER.

18. THE INSTALLATION SHALL COMPLY WITH 2022 NYC CONSTRUCTION CODES AND NFPA 72 OF 2016. ALL ELECTRICAL WORK SHALL COMPLY WITH 2011 NYC ELECTRICAL CODE ARTICLE 760.

19. ALL EQUIPMENT/DEVICES USED SHALL BE APPROVED MANUFACTURERS THAT ARE LISTED FOR THEIR USE.

20. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED "SPECIAL INSPECTIONS" AND SHALL SUBMIT THE NAME AND QUALIFICATIONS OF THE INSPECTOR TO THE ENGINEER FOR REVIEW.

21. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS TO THE ENGINEER AT LEAST TWO WEEKS PRIOR TO FDNY INSPECTION. THESE DRAWINGS SHOULD BE BUBBLED TO INDICATE ALL CHANGES AND VARIATIONS FROM THE APPROVED DRAWINGS. THE ENGINEER SHALL PROVIDE THE REQUIRED AS-BUILT DRAWING FOR THE FDNY INSPECTION. THE FUNCTIONALITY STATEMENT SHALL BE SIGNED BY THE INSTALLING CONTRACTOR PRIOR TO THE ENGINEER SIGNING AND SEALING THE OVERALL DRAWING.

22. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNUSED OR ABANDONED FIRE ALARM CABLE, CONDUIT AND DEVICES. REPROGRAM THE SYSTEM FOR DEVICES REMOVED FROM SERVICE.

23. FIRE ALARM PLANS SHALL BE APPROVED BY THE FIRE DEPARTMENT PLAN EXAMINER PRIOR TO ANY INSTALLATION WORK.

24. PRIOR TO FDNY INSPECTION THE ENTIRE INSTALLATION SHALL BE COMPLETELY TESTED BY THE FIRE ALARM VENDOR AND INSTALLING ELECTRICIAN.

25. ALL LINE VOLTAGE ELECTRICAL WORK ASSOCIATED WITH FIRE ALARM SYSTEM (IF APPLICABLE) SHALL BE FILED FOR BY A LICENSED MASTER ELECTRICIAN WITH THE BUREAU OF ELECTRICAL CONTROL (FORM 16A).

26. EXACT LOCATION OF ALL DEVICES TO BE COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION OF ANY ROUGH IN, CONDUIT, WIRING OR DEVICES.

27. 24V POWER ON ALL FIRE ALARM DEVICES (RELAYS, SOUNDER BASES, ETC.) SHALL BE SUPERVISED BY THE FIRE ALARM SYSTEM.

28. PROVIDE REMOTE LED'S FOR FSD'S LOCATED ABOVE HUNG CEILINGS. LED TO BE VISIBLE FROM TENANT SPACE TO INDICATE LOCATION/OPERATION.

29. PROVIDE REMOTE LED'S FOR AREA SMOKE DETECTORS LOCATED IN CONCEALED SPACES. LED TO BE VISIBLE FROM TENANT SPACE TO INDICATE LOCATION/OPERATION.

30. IN OCCUPIED SPACES THAT HAVE NO OR OPEN CEILINGS, FIRE ALARM WIRING SHALL BE IN CONDUIT. COORDINATE WITH ARCHITECT.

31. ALL FIRE ALARM CABLES INSTALLED BELOW HUNG CEILING SHALL BE PROVIDED IN METAL RACEWAY.

32. ALL FIRE ALARM CABLES INSTALLED IN MECHANICAL SPACES, ELEVATOR MACHINE ROOMS AND LOADING DOCKS SHALL BE PROVIDED IN METAL RACEWAY PER NYC ELECTRICAL CODE ARTICLE 760.

33. WHEN RELOCATING FIRE ALARM DEVICE(S) IF EXISTING WIRING DOES NOT REACH NEW LOCATION, PROVIDE NEW WIRING AS REQUIRED. ALL WIRING MUST BE PROPERLY SUPPORTED PER CODE.

34. MAINTAIN CONTINUITY OF CIRCUITS WHEN FIRE ALARM DEVICES ARE REMOVED FROM EXISTING CIRCUITS SERVING OTHER DEVICES. TRACE OUT CIRCUITRY TO DETERMINE ACTIVE CIRCUITS TO REMAIN. PROVIDE TERMINAL BOXES WITH ACCESS AS REQUIRED.

35. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE INSTALLATION IN COMPLIANCE WITH BUILDING REGULATIONS AND STANDARDS.

36. CEILING MOUNTED DEVICES IN AREAS WITH HUNG CEILING ARE TO BE INSTALLED ON THE BOTTOM OF HUNG CEILING, U.O.N.

37. UPON RECEIPT OF A LETTER OF ACCEPTANCE FROM THE FDNY CONTRACTOR, WITH ASSISTANCE FROM THE PROJECT EXPEDITER, MUST OBTAIN PROJECT AUTHORIZATION VIA FDNY BUSINESS PORTAL PRIOR TO COMMENCEMENT OF WORK.

38. ALL REQUIRED FIRE ALARM SYSTEM SHUTDOWNS SHALL BE COORDINATED WITH FIT. CONTRACTOR TO PROVIDE FIRE WATCH FOR THE DURATION OF EACH SHUTDOWN AS REQUIRED.

FIRE ALARM SPECIFICATIONS

I. NEW FIRE ALARM SYSTEM WORK

A. NEW FIRE ALARM STROBE LIGHT SUB-PANEL

1. PROVIDE NEW STROBE LIGHT CONTROL PANEL IN ACCORDANCE WITH THE FOLLOWING:

a. PANEL SHALL BE APPROVED BY THE BUREAU OF ELECTRICAL CONTROL OR APPROVED BY THE BOARD OF STANDARDS AND APPEALS/MEA.

b. PANEL SHALL CAUSE FIRE ALARM SIGNAL RECEIVED FROM BUILDING FIRE ALARM SYSTEM TO ACTIVATE STROBES.

c. PANEL SHALL BE EQUIPPED WITH A BATTERY AND CHARGER CAPABLE OF PROVIDING AT LEAST FIFTEEN (45) MINUTES OF OF FULL SYSTEM ALARM OPERATION FOLLOWING TWENTY-FOUR (24) HOURS OF SUPERVISORY OPERATION.

d. WHEN IT IS NOT PHYSICALLY POSSIBLE FOR THE STROBE LIGHT CONTROL PANEL TO BE RESET FROM THE BUILDING FIRE COMMAND STATION, A TIMER TO SHUT OFF THE STROBES AND RESET THE PANEL FIVE (5) MINUTES AFTER THEY ARE ACTIVATED SHALL BE PROVIDED IN THE PANEL.

e. PANEL SHALL INCORPORATE THE ELECTRICAL SUPERVISION OF THE FOLLOWING:

(1) ALARM CIRCUITRY FOR THE STROBES.

(2) INITIATING CIRCUITRY FROM THE BUILDING FIRE ALARM SYSTEM.

(3) THE 120 VOLT POWER SOURCE AND BATTERY.

f. PANEL SHALL HAVE A TROUBLE CONTACT FOR REPORTING TO THE BUILDING FIRE ALARM AND SIGNAL SYSTEM.

g. THE PANEL SHALL BE CAPABLE OF DISCONNECTING ANY FLASHING OR IN-MOTION LIGHTING THAT MAY MAKE STROBES INEFFECTIVE.

h. PANEL SHALL HAVE AN INDEPENDENT 120V POWER SUPPLY DERIVED FROM A NORMAL OR EMERGENCY SOURCE SUPPLYING THE FLOOR, VIA A SEPARATELY INSTALLED FIRE ALARM FUSED DISCONNECT LOCKABLE IN THE "ON" POSITION CONNECTED TO THE ELECTRICAL SUPPLY IN ACCORDANCE WITH THE REQUIREMENT OF THE ELECTRICAL CODE OF THE STATE OF NEW YORK.

i. PROVIDE SMOKE DETECTOR ABOVE NEW STROBE PANEL IF THERE IS NO EXISTING SMOKE DETECTOR AT LOCATION OF NEW STROBE PANEL.

II. NEW FIRE ALARM SYSTEM WORK

A. STROBE LIGHT: PROVIDE 24VDC, STROBE LIGHTS (CANDELA TO BE SET AS INDICATED ON THE PLANS) TO BE FLUSH WALL MOUNTED AS INDICATED ON THE DRAWINGS. PROVIDE DEVICE WITH WHITE LENS AND THE WORD "FIRE" ENGRAVED IN RED. MOUNT DEVICES PER NFPA 72 OF 2016, THE ENTIRE LENS SHALL NOT BE LESS THAN 80" AND NOT GREATER THAN 96" A.F.F., NEW WALL MOUNTED FIRE ALARM STROBES SHALL MATCH EXISTING BUILDING FIRE ALARM STROBES AND BE WIRED TO THE EXISTING BUILDING FIRE ALARM SYSTEM ANNUNCIATION CIRCUITS IN TYPICAL "A-B" LOOPS. ALL NOTIFICATION CIRCUITS ARE TO BE SUPERVISED.

B. FIRE ALARM SPEAKERS: NEW WALL MOUNTED FIRE ALARM SPEAKERS SHALL MATCH EXISTING BUILDING FIRE ALARM SPEAKERS AND BE WIRED TO THE EXISTING BUILDING FIRE ALARM SYSTEM ANNUNCIATION CIRCUITS IN TYPICAL "A-B" LOOPS. ALL NOTIFICATION CIRCUITS ARE TO BE SUPERVISED.

C. COMBINATION SPEAKER/STROBE LIGHTS: PROVIDE WALL MOUNTED COMBINATION SPEAKER/STROBE LIGHTS IN LOCATION INDICATED ON THE DRAWINGS. PROVIDE DEVICE WITH WHITE LENS AND THE WORD "FIRE" ENGRAVED IN RED. MOUNT DEVICES PER NFPA 72 OF 2016, THE ENTIRE LENS SHALL NOT BE LESS THAN 80" AND NOT GREATER THAN 96" ABOVE FINISH FLOOR. SPEAKERS SHALL BE WIRED FROM THE EXISTING BUILDING FIRE ALARM SYSTEM ANNUNCIATION CIRCUITS IN TYPICAL "A-B" LOOPS. ALL NOTIFICATION CIRCUITS ARE TO BE SUPERVISED.

D. FAN SHUT DOWN: PROVIDE REQUIRED RELAYS FOR FAN SHUTDOWN IN ACCORDANCE WITH 2022 NYC MECHANICAL CODE SECTION 606.4, AND AS INDICATED ON DRAWINGS. COORDINATE RELAY REQUIREMENTS WITH MECHANICAL CONTRACTOR. FANS THAT WERE SHUTDOWN DURING SMOKE/FIRE CONDITION MUST NOT AUTOMATICALLY RE-START OR BE RE-ENERGIZED UPON RESET OF FIRE ALARM CONTROL PANEL. A MANUAL MEANS OF RESTARTING THE FANS OR FAN SYSTEM SHALL FUNCTION INDEPENDENTLY FROM THE MANUAL RESETTING OF EITHER THE AUTOMATIC FIRE DETECTING DEVICE OR FIRE ALARM SYSTEM. ALL DUCT DETECTORS SHALL BE PROVIDED WITH A REMOTE ALARM LED.

E. CONTRACTORS SHALL BE HELD RESPONSIBLE FOR CONTRACTING THE BUILDING FIRE ALARM SYSTEM VENDOR FOR ALL INTERCONNECTIONS OF NEW FIRE ALARM EQUIPMENT TO THE EXISTING BUILDING'S FIRE ALARM SYSTEM FOR REQUIRED MODULES, RELAYS, ADDITIONAL BATTERIES, ETC. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO COORDINATE THE EXTENT OF FIRE ALARM WORK WITH THE BUILDING VENDOR.

F. ALL NEW EQUIPMENT SHALL BE BUILDING STANDARD DEVICES AND BE IN COMPLIANCE WITH ALL LOCAL CODES.

III. EXISTING AND/OR NEW FIRE ALARM SYSTEM WORK

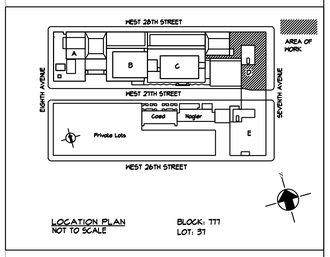
A. WHERE NEW HUNG CEILING INTERFERES WITH EXISTING FIRE ALARM EQUIPMENT OR IS LOCATED ON EXISTING CEILINGS/ WALLS TO BE DEMOLISHED, IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO NOTIFY BUILDING OWNER BEFORE REMOVING SUCH DEVICES AND PROVIDE SUITABLE TEMPORARY SUPPORT AND MAINTAIN CONTINUITY OF SERVICE TO SUCH EQUIPMENT.

B. THE BUILDING MUST BE NOTIFIED WHEN ANY ALARM DEVICE ON A FLOOR IS DISARMED TEMPORARILY FOR CONSTRUCTION OR WHEN DEVICES ARE TEMPORARILY PROTECTED FROM DUST DURING DEMOLITION.

C. ELECTRIC WIRING FOR CLASS "E" SYSTEMS FOR RELOCATION OF SMOKE DETECTORS, SPRINKLER FLOW SWITCHES TAMPER SWITCHES, ETC. SHALL BE APPROVED BY THE FIRE DEPARTMENT. CONTRACTOR MUST FILE FORM A-433 APPLICATION FOR ELECTRICAL INSPECTION WITH THE FIRE DEPARTMENT. A WRITE-OFF MUST BE GIVEN TO THE BUILDING MANAGER AT THE COMPLETION OF THE JOB. NO ADDITIONAL DETECTOR, SWITCHES, ETC. MAY BE INSTALLED, ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FEES, INCLUDING NEW YORK FIRE DEPARTMENT INSPECTION.

WORKING HOURS NOTE

1. ALL WORK SHALL BE PERFORMED AT NIGHTIME, OR AT AN APPROVED TIME BY THE FIT CONSTRUCTION REPRESENTATIVE, WHILE CLASSES ARE NOT CONDUCTED AND/OR WHEN STUDENTS ARE NOT PRESENT.



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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
FIRE ALARM
NOTES &
SPECIFICATIONS SHEET
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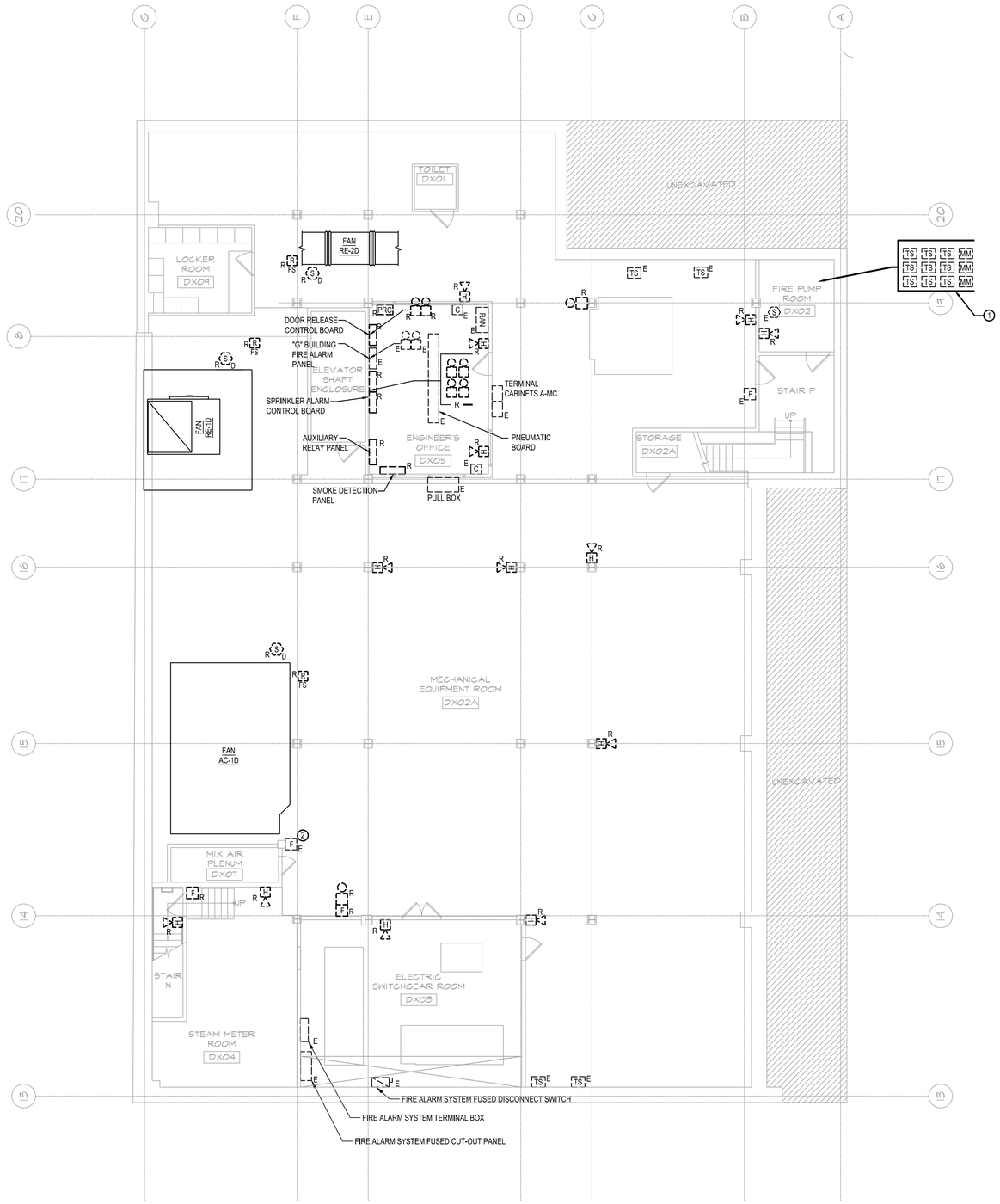

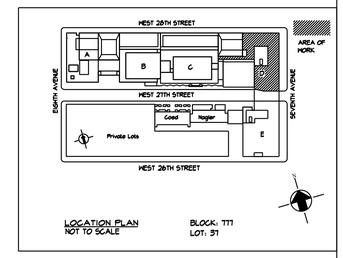

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WORK NOTES:

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

SUB-CELLAR FIRE ALARM DEMOLITION PLAN

DOB NOW JOB#

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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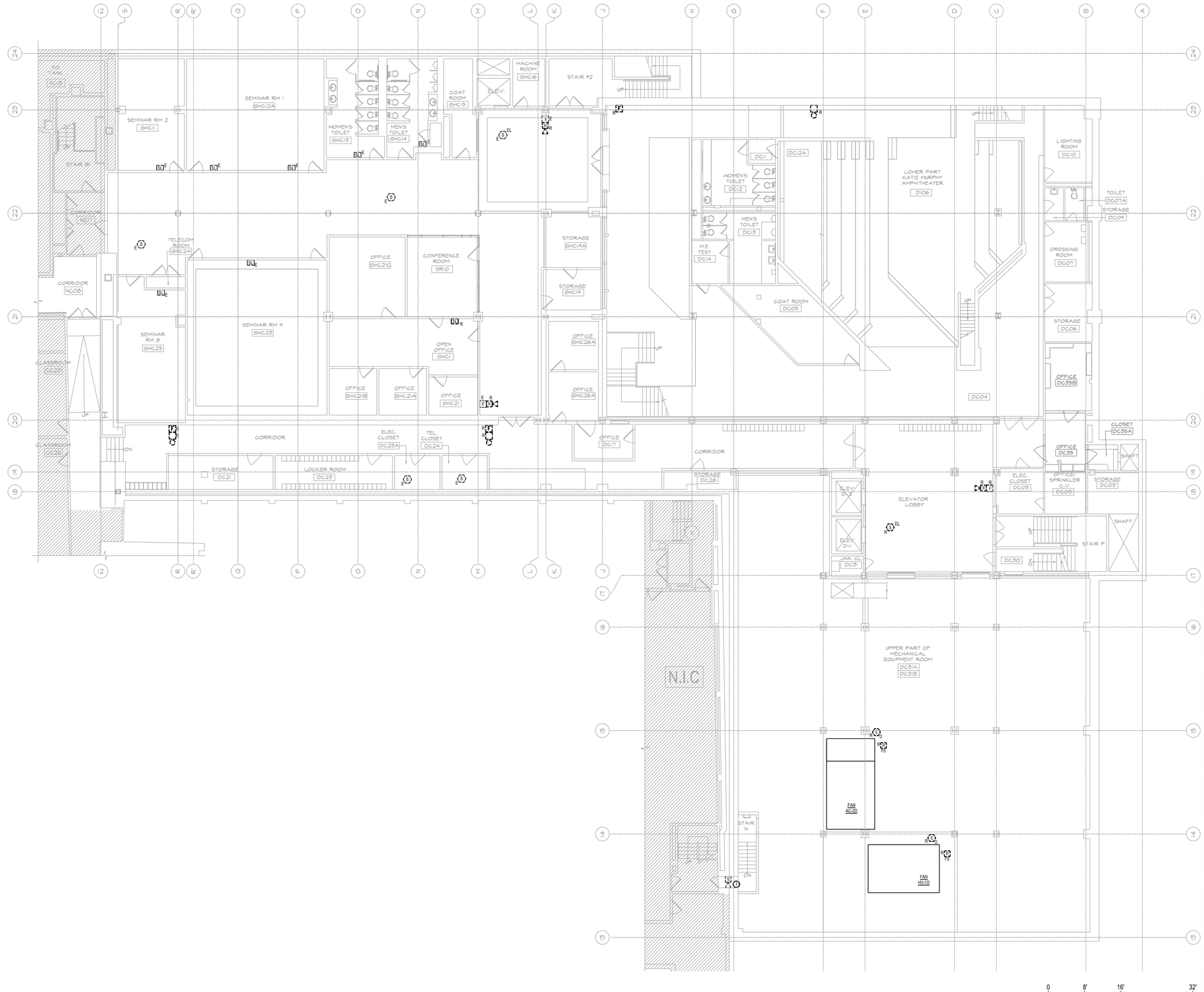

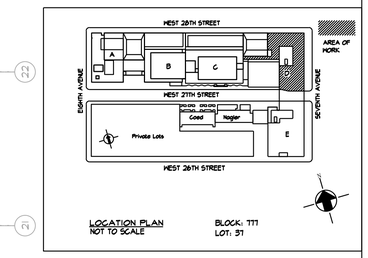

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WORK NOTES:

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KEY NOTES

0	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION.

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FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

CELLAR FIRE ALARM DEMOLITION PLAN

DOB NOW JOB#

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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NEW YORK CITY ENERGY CONSERVATION CODE

EXEMPTION WHEN COMPLIANCE WITH FIRE PROTECTION, DETECTION, ALARM AND/OR SUPPRESSION REQUIREMENTS OF TITLE 28 AND/OR THE 2022 NEW YORK CITY CONSTRUCTION CODES CONFLICTS WITH 2020 NYCECC COMPLIANCE, THE TITLE 28 AND/OR 2014 CONSTRUCTION CODES SAFETY PROVISIONS WILL TAKE PRECEDENCE OVER CONFLICTING PROVISIONS IN 2020 NYCECC.

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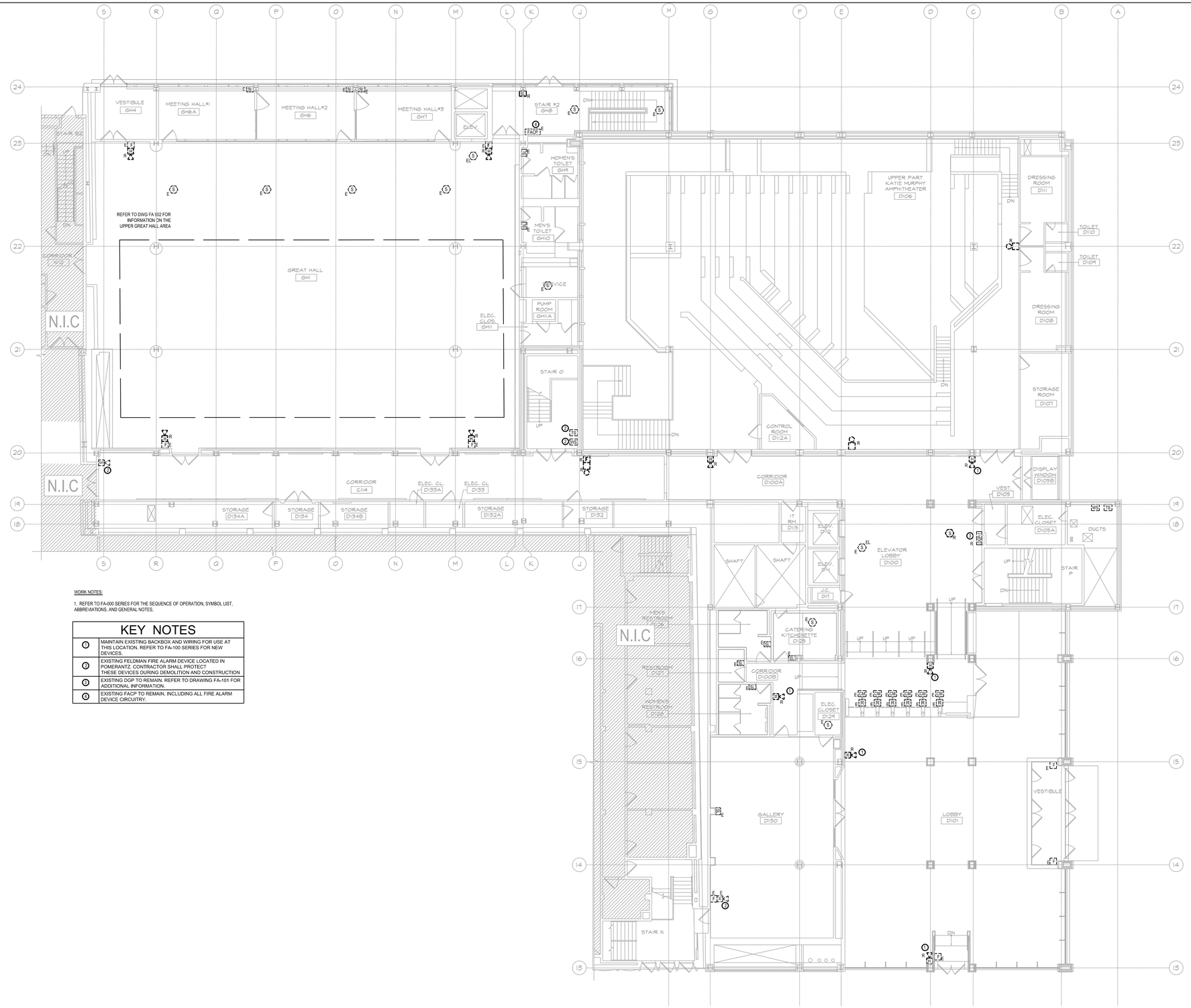
116 West 32nd Street, 12th Floor, New York, N.Y. 10001
P 212.643.9055 *www.mgedpc.net*

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-900.00
CADD FILE:	DOB page: 16 OF 23

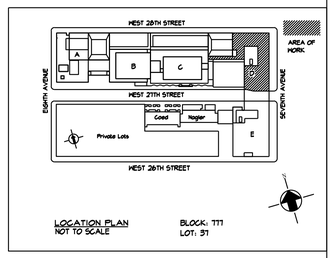


WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES

1	MAINTAIN EXISTING BACKBOX AND WIRING FOR USE AT THIS LOCATION. REFER TO FA-100 SERIES FOR NEW DEVICES.
2	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION.
3	EXISTING DGP TO REMAIN. REFER TO DRAWING FA-101 FOR ADDITIONAL INFORMATION.
4	EXISTING FACP TO REMAIN. INCLUDING ALL FIRE ALARM DEVICE CIRCUITRY.



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

MEP Consultants
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New York, NY, 10001

Environmental Consultants
EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

1ST FLOOR FIRE ALARM DEMOLITION PLAN

DOB NOW JOB#

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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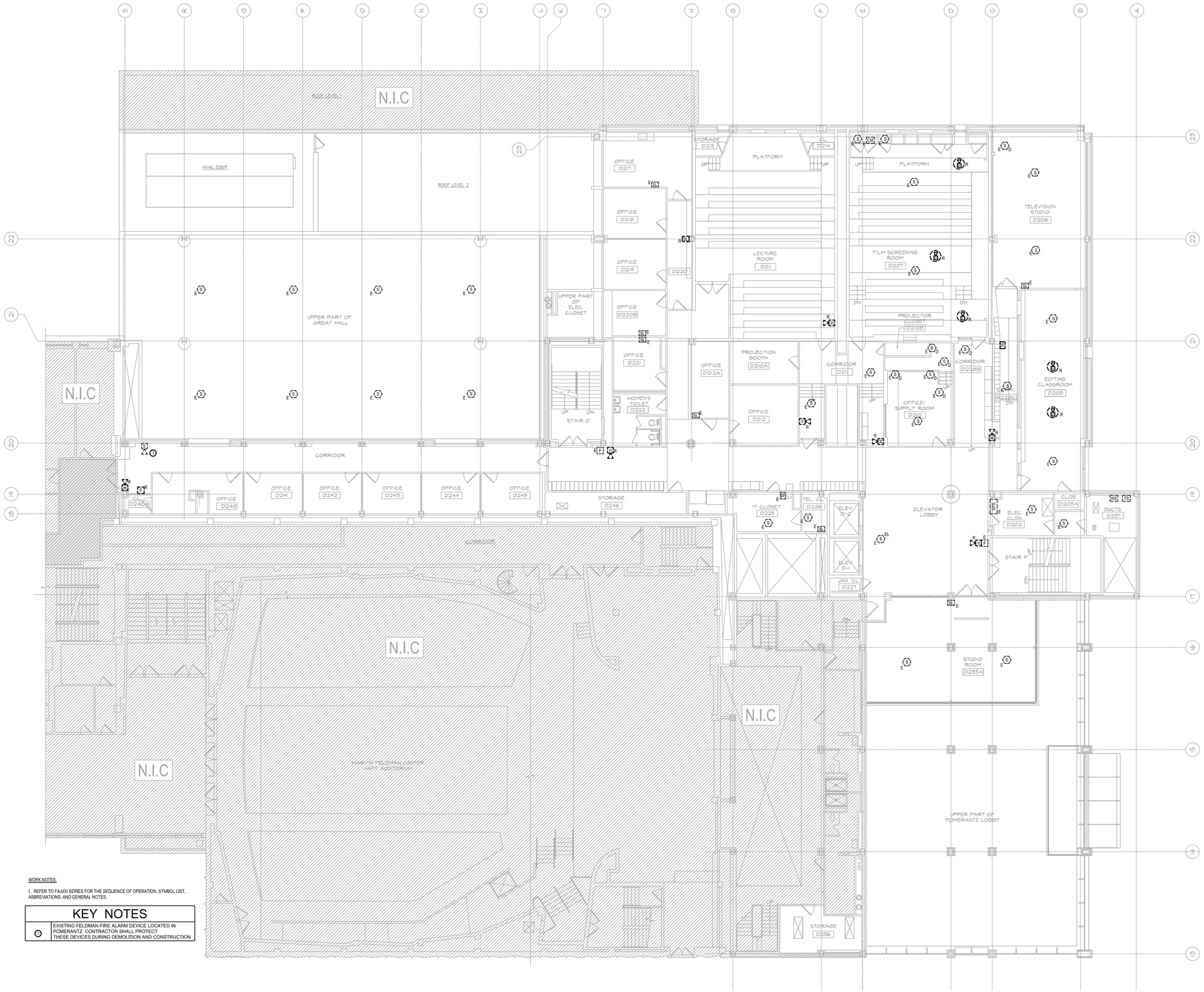
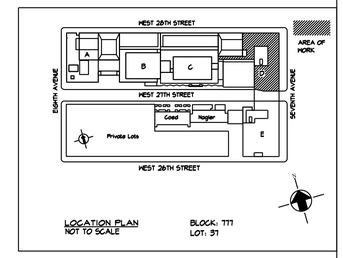
CADD FILE:	DOB page: 17 OF 23





LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

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KEY NOTES

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0 8' 16' 32'
SCALE: 3/32" = 1'-0"

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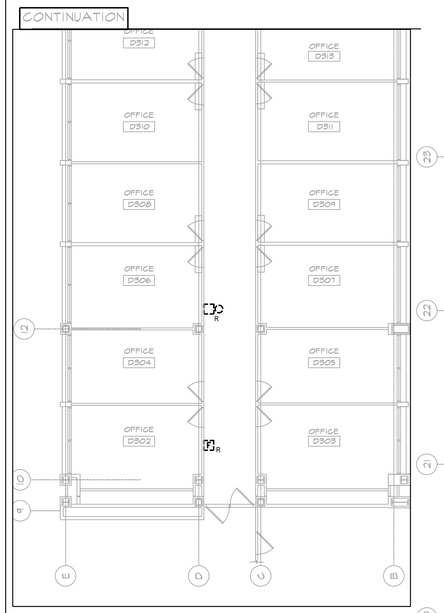
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

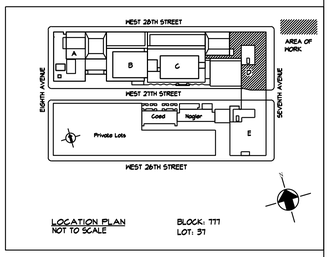
DRAWING TITLE:
2ND FLOOR FIRE ALARM DEMOLITION PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-902.00
CADD FILE:	DOB page: 18 OF 23



1 3RD FLOOR CONTINUATION PART PLAN



WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES

1	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION

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443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

3RD FLOOR FIRE ALARM DEMOLITION PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

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DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32"=1'-0"
DWG No:	FA-903.00
CADD FILE:	DOB page: 19 OF 23

NOT FOR CONSTRUCTION

SCALE: 3/32" = 1'-0"

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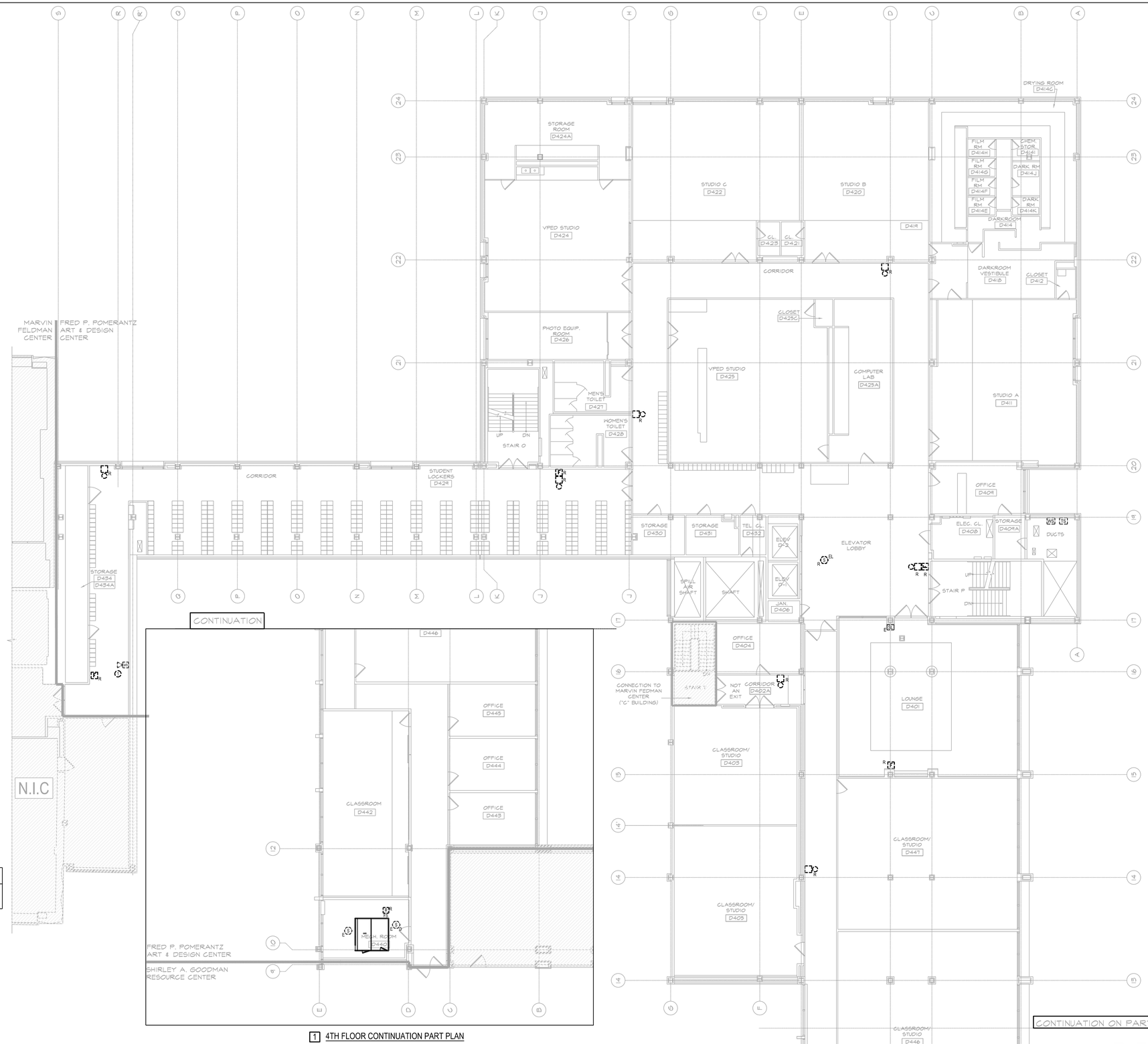
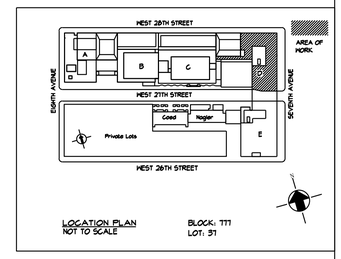


1 4TH FLOOR CONTINUATION PART PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES

1	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

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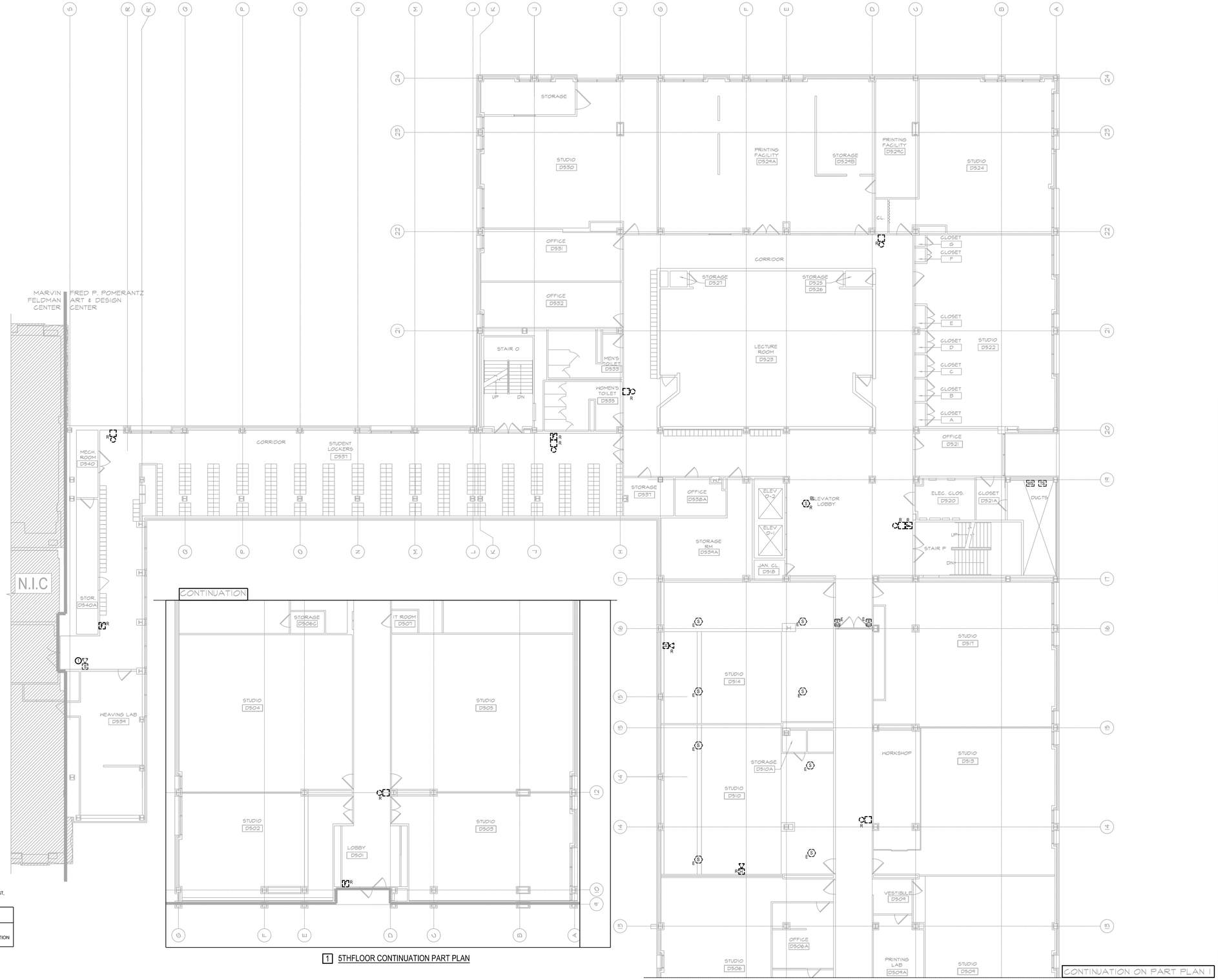
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

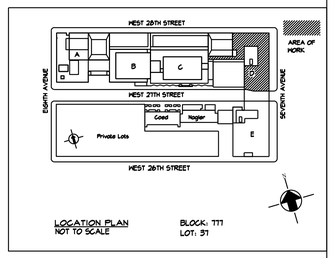
DRAWING TITLE:
4TH FLOOR FIRE ALARM DEMOLITION PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	DG
CHK BY:	WM
SCALE:	3/32" = 1'-0"
DWG No:	FA-904.00
CADD FILE:	DOB page: 20 OF 23



1 5THFLOOR CONTINUATION PART PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES	
0	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

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443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
5TH FLOOR FIRE ALARM DEMOLITION PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
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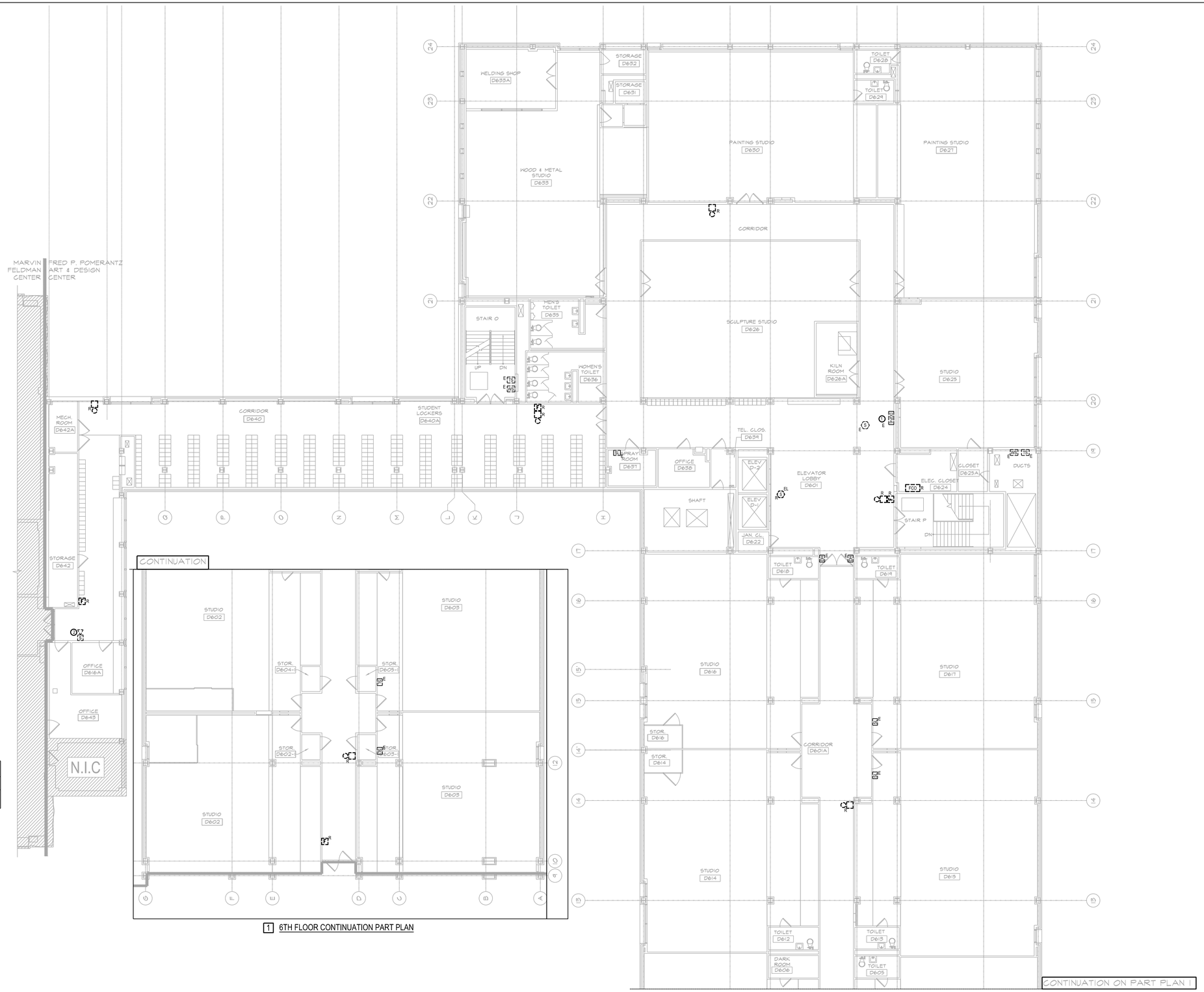
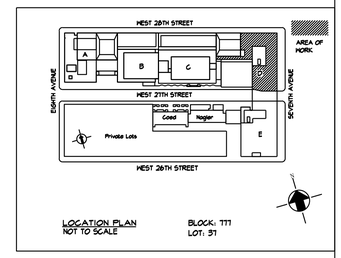


1 6TH FLOOR CONTINUATION PART PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES	
1	EXISTING DGP TO REMAIN. REFER TO DRAWING FA-106 FOR ADDITIONAL INFORMATION.
2	EXISTING FELDMAN FIRE ALARM DEVICE LOCATED IN POMERANTZ. CONTRACTOR SHALL PROTECT THESE DEVICES DURING DEMOLITION AND CONSTRUCTION

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

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443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
6TH FLOOR FIRE ALARM DEMOLITION PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

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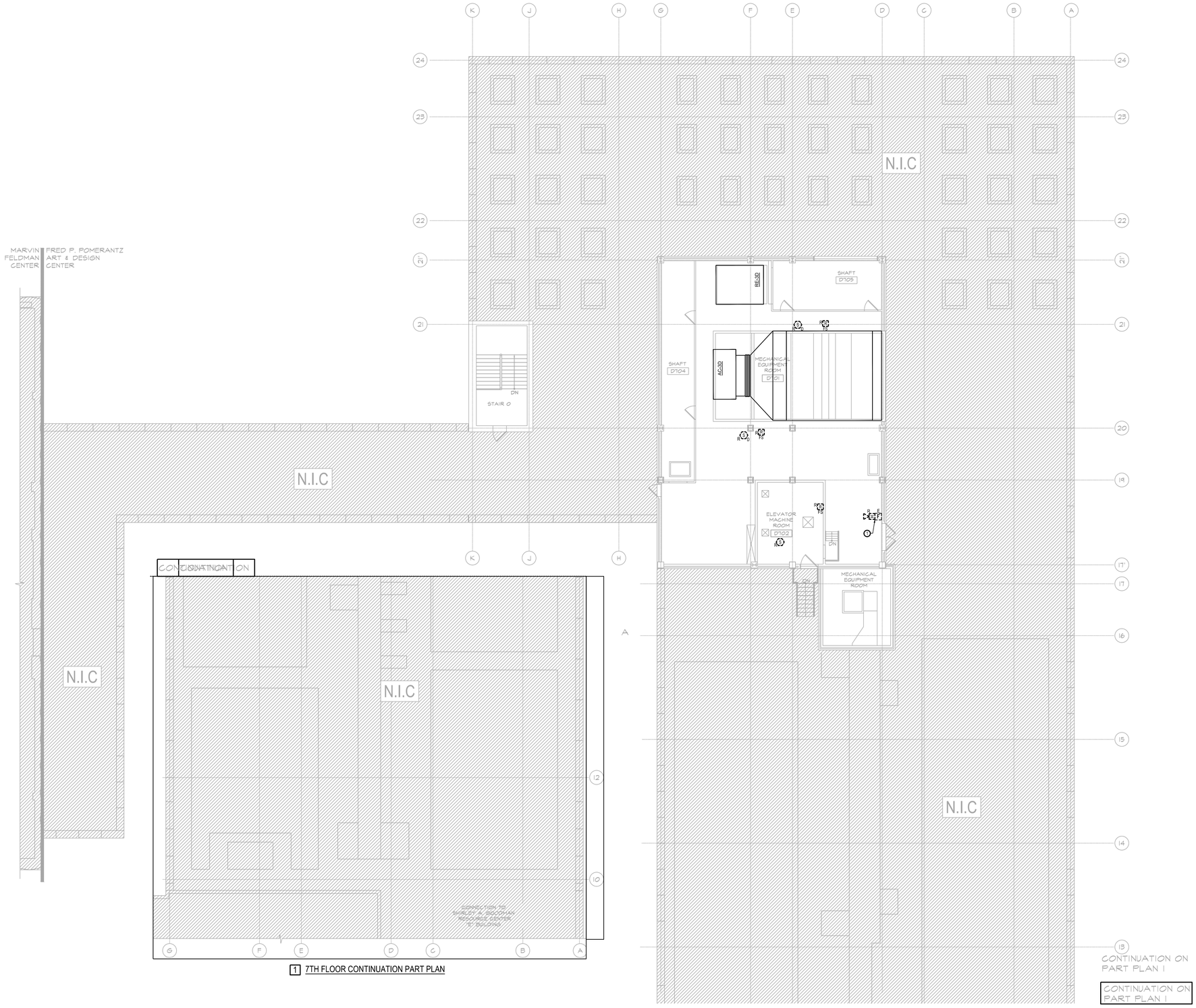
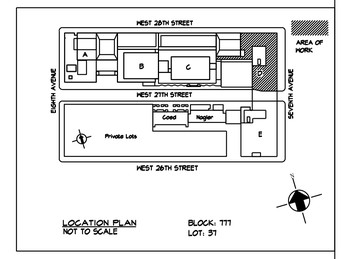


1 7TH FLOOR CONTINUATION PART PLAN



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

WORK NOTES:

1. REFER TO FA-000 SERIES FOR THE SEQUENCE OF OPERATION, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.

KEY NOTES	
1	THESE DEVICES ARE PROVIDED UNDER A SEPARATE SCOPE (FILM AND MEDIA PROJECT). CONTRACTOR SHALL COORDINATE THIS SCOPE OF WORK WITH THAT PROJECT.

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

NOT FOR CONSTRUCTION

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443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

ROOF FLOOR FIRE ALARM DEMOLITION PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
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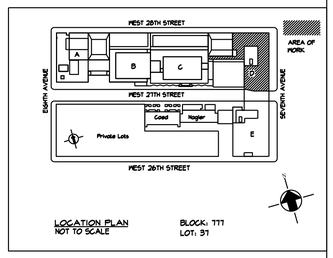
	Provision	Item Description			Supporting Documentation
C403.1.1	**Calculation of heating and cooling loads (Mandatory)**	*Load calculations for HVAC systems*	*Determined in accordance with ANSI/ASHRAE/ACCA Standard 183 HVAC Systems and Equipment Handbook*	*Design loads are determined in accordance with the procedures described in the ANSI/ASHRAE/ACCA Standard183.*	*Signed and sealed statement from Engineer certifying compliance with Energy Code*
C403.2.2	**Ventilation (Mandatory)**	*Ventilation cfm and Outdoor air control*	*Where mechanical ventilation is provided, systems shall be capable of reducing outdoor air to the minimum requirements from Chapter 4 of the NYC MC*	*Motorized dampers shall have ability to operate at minimum required ventilation rates, per requirements - list minimum CFM per space type*	*See mechanical schedule, M-501*
C403.11.2	**Duct Construction (Mandatory)**	*Ductwork*	*Shall be constructed and erected in accordance with the NYCMC*	*Ductwork must be constructed and erected in accordance with the NYCMC*	*See mechanical floorplans*
C403.11.2.1	**Low-Pressure Duct Systems (Mandatory)**	*Low Pressure Ductwork*	*All low pressure ducts, operating at 2" of W.G. or less shall be properly sealed with approved methods*	*All low pressure ducts properly sealed as per requirements*	*See mechanical floorplans*

PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE COMMERCIAL BUILDINGS

	INSPECTION/TEST	PERIODIC (MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER 6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIB MECHANICAL AND SERVICE WATER HEATING INSPECTIONS				
IIB6	DUCT LEAKAGE TESTING, INSULATION AND DESIGN: FOR DUCT SYSTEMS DESIGNED TO OPERATE AT STATIC PRESSURES IN EXCESS OF 3 INCHES W.G. (747 PA), REPRESENTATIVE SECTIONS, AS DETERMINED BY THE PROGRESS INSPECTOR, TOTALING AT LEAST 25% OF THE DUCT AREA, MUST BE TESTED TO VERIFY THAT ACTUAL AIR LEAKAGE IS BELOW ALLOWABLE AMOUNTS. INSTALLED DUCT INSULATION MUST BE VISUALLY INSPECTED TO VERIFY PROPER INSULATION PLACEMENT AND VALUES. JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK MUST BE VISUALLY INSPECTED FOR PROPER SEALING.	AFTER INSTALLATION AND SEALING AND PRIOR TO CLOSING SHAFTS, CEILINGS AND WALLS.	APPROVED CONSTRUCTION DOCUMENTS; SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL; SMACNA DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE	C403.11;



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MEP Consultants
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Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
MECHANICAL ENERGY COMPLIANCE

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	NTS
DWG No:	EN-003.00
CADD FILE:	DOB page: 1 OF 3

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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NEW YORK CITY ENERGY CONSERVATION CODE

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SYMBOL LIST AND ABBREVIATIONS

ABBREV.	SYMBOL	DESCRIPTION
(E)		EXISTING WORK TO REMAIN
		NEW WORK
		EXISTING WORK TO BE REMOVED
		DIRECTION OF FLOW
		RETURN OR EXHAUST DUCT DOWN
		RETURN OR EXHAUST DUCT UP
		SUPPLY DUCT DOWN
		SUPPLY DUCT UP
MD	MD MD	MOTORIZED DAMPER
FSD/AD, FD/AD, SD/AD		FIRE & SMOKE DAMPERS W/ACCESS DOOR IN DUCT AT WALL
FC	FC	FLEXIBLE CONNECTION
	SD	SMOKE DETECTOR
	T	THERMOSTAT WITH DISPLAY
	H	HUMIDISTAT WITH DISPLAY
		CONNECT NEW TO EXISTING WORK
		POINT OF DISCONNECTION. CAP IF NOT TO BE RECONNECTED

NOTE

SYMBOLS AND ABBREVIATIONS LISTED IN THE TABLES ABOVE ARE TYPICAL FOR HVAC AIR AND WATER DISTRIBUTION SYSTEMS. NOT ALL OF LISTED SYMBOLS OR ABBREVIATIONS WERE USED IN THIS PROJECT.

MECHANICAL DRAWING LIST

DWG No.	DRAWING TITLE
M-001.00	MECHANICAL SYMBOL LIST, ABBREVIATIONS, AND NOTES
M-099.00	SUBCELLAR MECHANICAL PLAN
M-100.00	CELLAR MECHANICAL PLAN
M-103.00	3RD FLOOR MECHANICAL PLAN
M-104.00	4TH FLOOR MECHANICAL PLAN
M-107.00	ROOF PLAN MECHANICAL
M-501.00	MECHANICAL DETAILS AND SCHEDULES
M-899.00	SUBCELLAR MECHANICAL PLAN
M-900.00	CELLAR MECHANICAL PLAN
M-903.00	3RD FLOOR MECHANICAL PLAN
M-904.00	4TH FLOOR MECHANICAL PLAN
M-907.00	ROOF PLAN MECHANICAL

ABBREVIATIONS

ABV	ABOVE
AC	AIR CONDITIONING
ACC	AIR COOLED CONDENSER
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFM	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
AL	ACOUSTIC LINING
APD	AIR PRESSURE DROP
ATC	AUTOMATIC TEMPERATURE CONTROL
BHP	BRAKE HORSEPOWER
BG	BOTTOM GRILLE
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BR	BOTTOM REGISTER
BTU	BRITISH THERMAL UNITS
CAR	CONSTANT AIRFLOW REGULATOR
CD	CEILING DIFFUSER
CFM	CUBIC FEET OF AIR PER MINUTE
CHWS/R	CHILLED WATER SUPPLY AND RETURN
CO	CLEANOUT
COP	COEFFICIENT OF PERFORMANCE
CR	CEILING REGISTER
CT	COOLING TOWER
CTE	CONNECT TO EXISTING
CW	DOMESTIC COLD WATER MAKE-UP
CWS/R	CONDENSER WATER SUPPLY AND RETURN
DB	DRY BULB (TEMPERATURE)
DDC	DIRECT DIGITAL CONTROL
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DR	DRAIN
DWG	DRAWING
E	EXISTING
EAT	ENTERING AIR TEMPERATURE
EBH	ELECTRIC BASEBOARD HEATER
ELEV	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWT	ENTERING WATER TEMPERATURE
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FSD	COMBINATION FIRE/SMOKE DAMPER
FLA	FULL LOAD AMPERES
FLR	FLOOR
FOF	FUEL OIL FILL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FPM	FEET PER MINUTE
FT	FEET
FTR	HOT WATER FINNED TUBE RADIATION
GA	GAUGE
GAL	GALLONS
GPM	GALLONS PER MINUTE
GS/R	GLYCOL SUPPLY AND RETURN
HP	HORSEPOWER
HPWLS/R	HEAT PUMP LOOP SUPPLY AND RETURN
HWS/R	HOT WATER SUPPLY AND RETURN
HZ	HERTZ
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MD	MOTORIZED DAMPER
MER	MECHANICAL EQUIPMENT ROOM
MFS	MAXIMUM FUSE SIZE
MHP	MOTOR HORSEPOWER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NC	NORMALLY CLOSED
N/C	NOT IN CONTACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OED	OPEN ENDED DUCT
PD	PRESSURE DROP
PH	PHASE
PRV	PRESSURE REDUCING VALVE
RG	RETURN GRILLE
RL	REFRIGERANT LIQUID PIPING
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISER
RS	REFRIGERANT SUCTION PIPING
SD	SMOKE DAMPER
SEN	SENSIBLE
SR	SUPPLY REGISTER
SPXF	SMOKE PURGE EXHAUST FAN
TG	TOP GRILLE
TO	TRANSFER OPENING
TR	TOP REGISTER
TRXF	TRASH ROOM EXHAUST FAN
TSP	TOTAL STATIC PRESSURE
TX	TOILET EXHAUST
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VENT
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VRV	VARIABLE REFRIGERANT VOLUME
WB	WET BULB (TEMPERATURE)
WC	WATER COLUMN
WCC	WATER COOLED CONDENSER
WMS	WIRE MESH SCREEN
WPD	WATER PRESSURE DROP
WT	WEIGHT

N.Y.C. BUILDING DEPARTMENT NOTES

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE BUILDING CODE, NEW YORK CITY, EFFECTIVE NOVEMBER 7, 2022 AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE, AND MATERIALS AND EQUIPMENT SUBJECT TO SPECIAL INSPECTION.
2. THE FOLLOWING SPECIAL INSPECTIONS ARE REQUIRED BY THE NYC BUILDING CODE FOR HVAC SYSTEMS:
   a) FIRE-RESISTANT PENETRATIONS AND JOINTS - BC 1705.17
   b) SMOKE CONTROL SYSTEMS TESTING - BC 1705.18
   c) MECHANICAL SYSTEMS - BC 1705.21
3. THE FOLLOWING ITEMS REQUIRE PROGRESS INSPECTIONS:
   a) ENERGY CODE COMPLIANCE INSPECTIONS - BC 110.3.5
4. UPON COMPLETION OF THE WORK, A TEST SHALL BE CONDUCTED IN THE PRESENCE AND UNDER DIRECTION OF A SPECIAL INSPECTOR RETAINED BY THE OWNER QUALIFIED TO CONDUCT SUCH TESTS. THE TEST SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES, BEFORE THE SYSTEM IS APPROVED (BC 1705.21).
5. ALL INSPECTIONS AND TESTS WILL BE MADE IN COMPLIANCE WITH BC 1705.
6. CERTIFICATES OF COMPLIANCE (BC 110.6 AND 28-116.4) SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
7. ALL HVAC SYSTEMS AND EQUIPMENT COMPLY WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF THE STATE OF NEW YORK (MC 301.2).
8. THE FOLLOWING ENERGY CODE INSPECTIONS ARE REQUIRED BY THE NYC ENERGY CONSERVATION CODE FOR HVAC SYSTEMS:
   a) DUCT LEAKAGE TESTING, INSULATION AND DESIGN - (IIB6), (IIB6)
8. TEST OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION MC 108 AND THE FOLLOWING SECTIONS OF THE NEW YORK CITY MECHANICAL CODE:
   a) SMOKE CONTROL SYSTEMS - BC 909.3, MC 513, MC 606
9. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC., SHALL COMPLY WITH THE FOLLOWING CODE REFERENCE:
   a) DUCT CONSTRUCTION, SUPPORT - MC 603
   b) FIRE DAMPERS AND SMOKE DAMPERS AND SMOKE DETECTORS - MC 607
   c) MANUAL AND AUTOMATIC, FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS - MC 513
10. MINIMUM TEMPERATURE TO BE MAINTAINED DURING HEATING SEASON: BC 1204 - WHEN 13 DEGREES FAHRENHEIT OUTSIDE.
11. VENTILATION FOR ALL AREAS SHALL COMPLY WITH MC 401, MC 402, AND MC 403.
12. UPON COMPLETION OF THIS VENTILATION SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE OF AND DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR HAVING NOT LESS THAN FIVE (5) YEARS OF EXPERIENCE SUPERVISING INSTALLATION OF VENTILATING SYSTEMS. THE TEST SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED, THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHO CONDUCTS THE TESTS SHALL FILE A CERTIFICATE AS TO WHETHER THE SYSTEM COMPLIES WITH THE APPLICABLE LAWS. HE SHALL ALSO FILE WITH THE CERTIFICATION, A REPORT OF THE TEST. THE TEST AND REPORT SHALL BE MADE IN A MANNER SATISFACTORY TO THE SUPERINTENDENT. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE. BASE BUILDING PLANS ARE FILED FOR SINGLE TENANT OCCUPANCY. ALL TENANT PLANS WILL BE FILED UNDER SEPARATE APPLICATIONS.
13. ALL FIRE DAMPERS SHALL BE APPROVED BY THE NEW YORK CITY DEPARTMENT OF BUILDINGS AND SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH UL 555, STANDARD FOR FIRE DAMPERS AND CEILING DAMPERS.
14. COMBINATION FIRE/SMOKE DAMPERS AND SMOKE DAMPERS SHALL BE ACCEPTED FOR USE BY THE NEW YORK CITY DEPARTMENT OF BUILDINGS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH UL 555S.
15. SMOKE DETECTORS, COMBINATION FIRE/SMOKE DAMPERS AND SMOKE DAMPERS SHALL BE INSTALLED AS REQUIRED TO CLOSE DAMPERS AND AUTOMATICALLY SHUT DOWN THE FAN-MC 606.
16. REFER TO ARCHITECTURAL DRAWING FOR FIRE RATED WALL LOCATIONS AND RATED CONSTRUCTION.

GENERAL NOTES

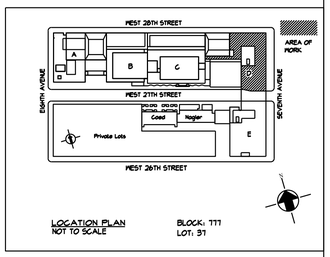
1. ANY EXISTING LEAD-BASED PAINT AREAS OF THE BUILDING WHERE THE CONTRACTOR AND ITS SUBCONTRACTORS ARE REQUIRED TO WORK SHALL BE MITIGATED PRIOR TO BEGINNING WORK. SUCH MITIGATION MAY INCLUDE FIT DIRECTING THE CONTRACTOR TO TAKE NECESSARY PRECAUTIONS AND WEAR PROTECTIVE GEAR TO WORK IN THE VICINITY OF THE LEAD PAINT. CONTRACTOR WILL NOT BE RESPONSIBLE FOR DELAYS CAUSED BY THE MITIGATION ACTIVITIES OR ANY ASSOCIATED COSTS.
2. ALL PIPING AND DUCTWORK SHALL BE SUSPENDED FROM BUILDING STRUCTURE ONLY, EXCEPT AS SPECIFICALLY ALLOWED IN THE SPECIFICATIONS. HVAC CONTRACTOR SHALL PROVIDE SUPPLEMENTARY STEEL AS NECESSARY TO SUPPORT PIPES AND DUCTS FROM BUILDING STRUCTURE. THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE THE SOLE DETERMINANT AS TO PERMISSIBILITY OF HANGING NEW WORK FROM BUILDING STRUCTURE AND SLABS.
3. PIPING AND DUCTWORK PROVIDED UNDER THIS CONTRACT SHALL BE COORDINATED UNDER THIS CONTRACT WITH WORK BEING PROVIDED BY OTHER TRADES.
4. WHILE THE DRAWINGS SHALL BE ADHERED TO AS CLOSELY AS POSSIBLE, THE ARCHITECT'S RIGHT IS RESERVED TO VARY THE RUN AND SIZE OF DUCTS DURING THE PROGRESS OF THE WORK IF REQUIRED TO MEET CEILING HEIGHTS, TO MEET STRUCTURAL AND FIELD CONDITIONS. CONTRACTOR SHALL PROVIDE REDRAWING OF SHOP DRAWINGS AS NECESSARY TO ACCOMMODATE THE ARCHITECT'S REQUIREMENTS, AT NO ADDITIONAL COST TO THE OWNER. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR REQUIRED CEILING HEIGHTS.
5. INSTALL ALL DUCTWORK IN STRICT ADHERENCE TO THE CEILING HEIGHTS INDICATED ON THE ARCHITECT'S DRAWINGS. CONSULT WITH OTHER CONTRACTORS AND IN CONJUNCTION WITH THE OTHER CONTRACTORS, ESTABLISH THE NECESSARY SPACE REQUIREMENTS FOR EACH TRADE.
6. 6. THE SHEET METAL DUCTWORK SHALL, WHETHER INDICATED OR NOT, RISE AND/OR DROP AND/OR CHANGE IN SHAPE TO CLEAR ANY AND ALL OTHER DUCTWORK, CONDUITS, LIGHTING FIXTURES, PLUMBING AND HEATING/COOLING MAINS TO MAINTAIN THE DESIRED CEILING HEIGHTS AND TO PROVIDE ADEQUATE MAINTENANCE ROOM AND HEADROOM IN MECHANICAL EQUIPMENT ROOMS. THE DRAWINGS, IN GENERAL, DO NOT SHOW ALL RISES, DROPS AND DUCT TRANSITIONS REQUIRED. THE DRAWINGS SHOW GENERAL ROUTING REQUIREMENTS ONLY.
7. ALL RECTANGULAR DUCTWORK, UNLESS OTHERWISE NOTED, SHALL BE BUILT FROM GALVANIZED SHEET STEEL AND THOROUGHLY BRACED AND STIFFENED.
8. PROVIDE 12" x 12" ACCESS DOORS EVERY 50'-0" RUN OF SUPPLY AND RETURN AIR DUCT FOR CLEANING PURPOSES, EXCEPT IN DUCT ABOVE SOUND CONTROL CEILING. PROVIDE 18" x 18" ACCESS DOORS UPSTREAM AND DOWNSTREAM OF EACH REHEAT COIL, AT EACH FIRE AND FIRE/SMOKE DAMPER, AT EACH MOTORIZED DAMPER, AT EACH CV AND VAV TERMINAL BOX AND WHEREVER ELSE INDICATED IN THE SPECIFICATION. IF THE DUCT IS TOO SMALL TO PROVIDE AN 18" x 18" ACCESS DOOR, A 12" x 12" ACCESS DOOR SHALL BE PROVIDED. SEE SPECIFICATIONS FOR ADDITIONAL ACCESS DOOR REQUIREMENTS.
9. SEE SPECIFICATION FOR DUCTS REQUIRED TO BE ACOUSTICALLY LINED. DIMENSIONS GIVEN ON PLANS ARE INSIDE CLEAR DIMENSIONS. INCREASE SIZE OF SHEET METAL DUCT TO PROVIDE THE SPECIFIED INSIDE CLEAR DIMENSION WITH ACOUSTICAL LINING ADDED.
10. PROVIDE ISOLATION VALVES WHERE TYING NEW PIPING INTO THE EXISTING SYSTEM. REFER TO THE VALVES SPECIFICATIONS FOR THE PROPER VALVE TYPE FOR THE SERVICE. REFER TO THE DRAWINGS FOR THE PIPE/VALVE SIZE. IN ADDITION TO THE ISOLATION VALVES AT THE TIE-IN POINTS, ALSO PROVIDE A BALANCING VALVE ON THE SUPPLY SIDE FOR CHILLED WATER, CHILLED GLYCOL/BRINE, CONDENSER WATER AND HEATING/REHEAT HOT WATER SYSTEM TIE-INS.
11. SYMBOLS AND ABBREVIATIONS SHOWN ON THE DRAWINGS ARE FOR MECHANICAL DRAWINGS ONLY. SEE OTHER TRADES DRAWINGS FOR THEIR RESPECTIVE SYMBOLS AND ABBREVIATIONS.
12. PRIOR TO PERFORMING ANY CORE DRILLING OR CUTTING OF EXISTING FLOOR OR ROOF SLAB, CONTRACTOR SHALL PERFORM A SCAN OF THE SLAB USING GROUND PENETRATING RADAR (GPR) TO CONFIRM THAT THERE ARE NO EXISTING CONDUITS OR PIPES IN THE AREA OF CORE DRILL OR CUTTING OF THE SLAB.

DEMOLITION NOTES

1. DEMOLITION OF HVAC ITEMS SHALL BE PERFORMED UNDER THE HVAC CONTRACT.
2. LOCATION OF THE EXISTING DUCTWORK & PIPING AS SHOWN ON DRAWINGS IS APPROXIMATE.
3. PROVIDE TEMPORARY SUPPORTS WHERE REQUIRED.
4. DURING DEMOLITION, PROPERLY CAP AND PROTECT ALL DUCTWORK, EQUIPMENT, AND PIPING THAT WILL REMAIN IN OPERATION.
5. WHERE EXISTING INSULATION TO REMAIN IS DAMAGED BY THE REQUIREMENTS OF THE WORK, REPLACE ANY DAMAGED INSULATION TO MATCH EXISTING.
6. DEMOLISH ALL EQUIPMENT AS INDICATED, FIXTURES AND/OR MISCELLANEOUS ARTICLES IN THEIR ENTIRETY INCLUDING AUXILIARY EQUIPMENT, PIPING, WIRING, CONDUIT AND DUCTWORK. DEMOLITION WORK SHALL BE PERFORMED BY WORKMEN EXPERIENCED IN THIS TYPE OF WORK AND SHALL BE CARRIED THROUGH TO COMPLETION WITH DUE REGARDS TO THE SAFETY OF ALL BUILDING OCCUPANTS AND THE EMPLOYEES OF THE CONTRACTOR WITH AS LITTLE DISTURBANCE AS POSSIBLE.
7. MATERIALS RESULTING FROM THE DEMOLITION OPERATIONS SHALL NOT BE ALLOWED TO ACCUMULATE ON THE FLOORS AND ROOF SURFACES, EXTERIOR GRADE SURFACES OR OTHER PARTS OF THE PREMISES, AND SHALL BE PROMPTLY REMOVED AND DISPOSED OF AWAY FROM THE PREMISES.
8. INCLUDE ALL DEMOLITION OF SYSTEMS AND COMPONENTS WHERE SYSTEMS SHALL BE REPLACED BY NEW WORK. REFER TO THE DRAWINGS AND SPECIFICATIONS FOR THE SCOPE OF NEW AND RECONNECTED WORK. THE INTENT OF THIS REQUIREMENT IS TO HAVE THE CONTRACTOR DISCONNECT, DEMOLISH AND REMOVE ALL EXPOSED AND CONCEALED WORK WHERE BEING REPLACED OR CONNECTED TO THE NEW LAYOUTS.
9. COORDINATE ELECTRICAL POWER DISCONNECTION PRIOR TO DEMOLITION WITH ELECTRICAL CONTRACTOR.
10. PROTECT ALL HVAC WORK AND WORK OF OTHER TRADES WHICH IS TO REMAIN, FROM DAMAGE DURING DEMOLITION.
11. ALL PIPING AND DUCTWORK TO REMAIN SHALL HAVE ENDS TERMINATED IN A NEAT MANNER READY FOR CONNECTION OF NEW WORK. ALL EXPOSED ENDS OF PIPING AND DUCTWORK SHALL BE CAPPED. SCREWED PIPING SHALL END ON A SCREWED JOINT. FLANGED PIPE SHALL END WITH A FLANGED JOINT. WELDED PIPING SHALL BE MECHANICALLY CUT, CLEANED OF BURRS AND A CAP WELDED TO THE PIPE. DUCTWORK SHALL BE CAPPED WITH SHEET METAL CONNECTED TO THE DUCT TO REMAIN.
12. REMOVAL OF EQUIPMENT, PIPING AND DUCTWORK SHALL INCLUDE ALL HANGERS & SUPPORT ASSOCIATED WITH THE EQUIPMENT, PIPING AND DUCTWORK TO BE REMOVED.

SCOPE OF WORK

1. REPLACING EXISTING SMOKE DETECTORS SERVING AC UNITS IN POMERANTZ BUILDING WITH NEW SMOKE DETECTORS.
2. INSTALLING NEW DUCTWORK AND DIFFUSERS IN NEW ATS ROOM IN CELLAR.



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

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212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
SYMBOL LIST, ABBREVIATIONS AND NOTES

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	3/32"=1'-0"
DWG No:	M-001.00
CADD FILE:	DOB page: 1 OF 12

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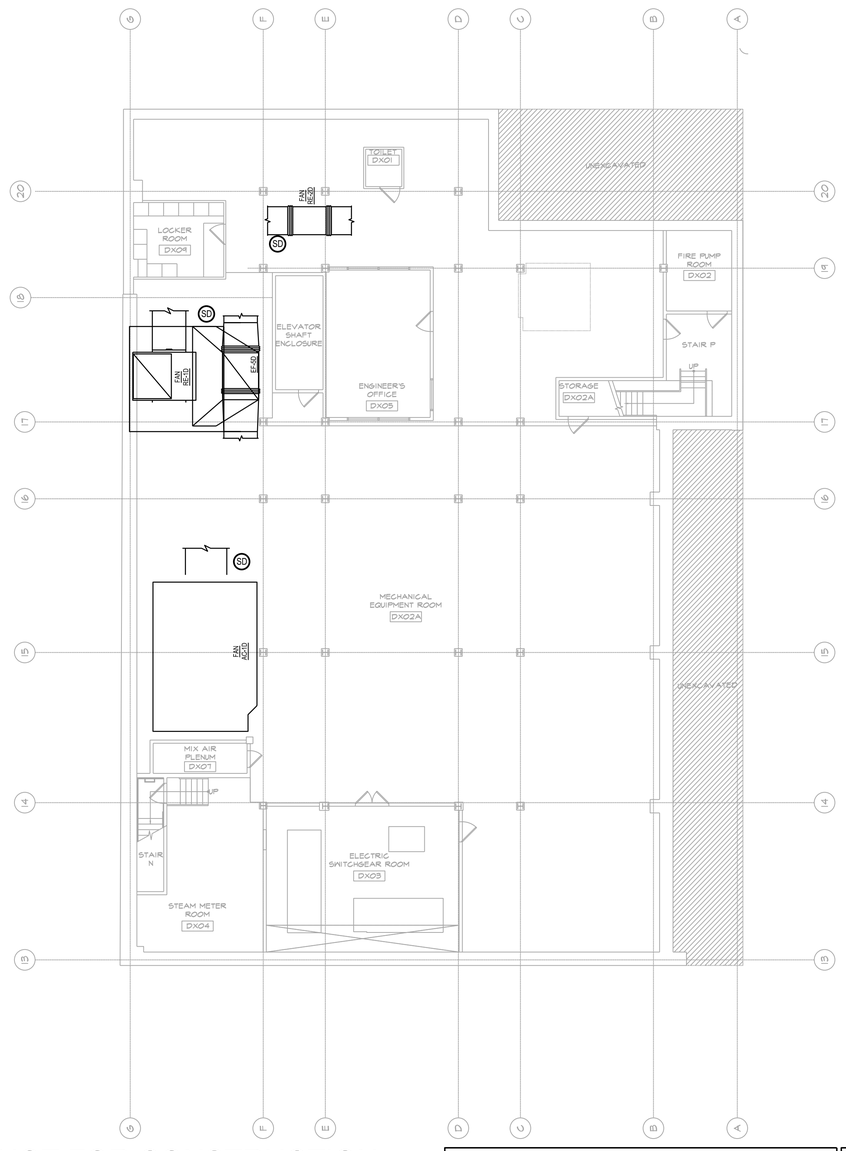
NOTES:

1. INSTALL NEW SMOKE DETECTORS.



SUB-CELLAR MECHANICAL PLAN

SCALE: 3/32"=1'-0"

NORTH

0 8' 16' 32'

SCALE: 3/32" = 1'-0"

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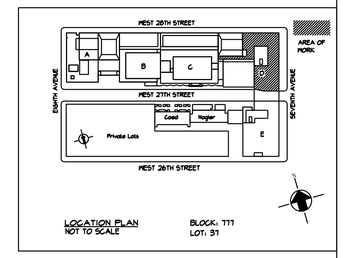

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DRAWING TITLE:
SUB-CELLAR
MECHANICAL PLAN

DOB NOW JOB#

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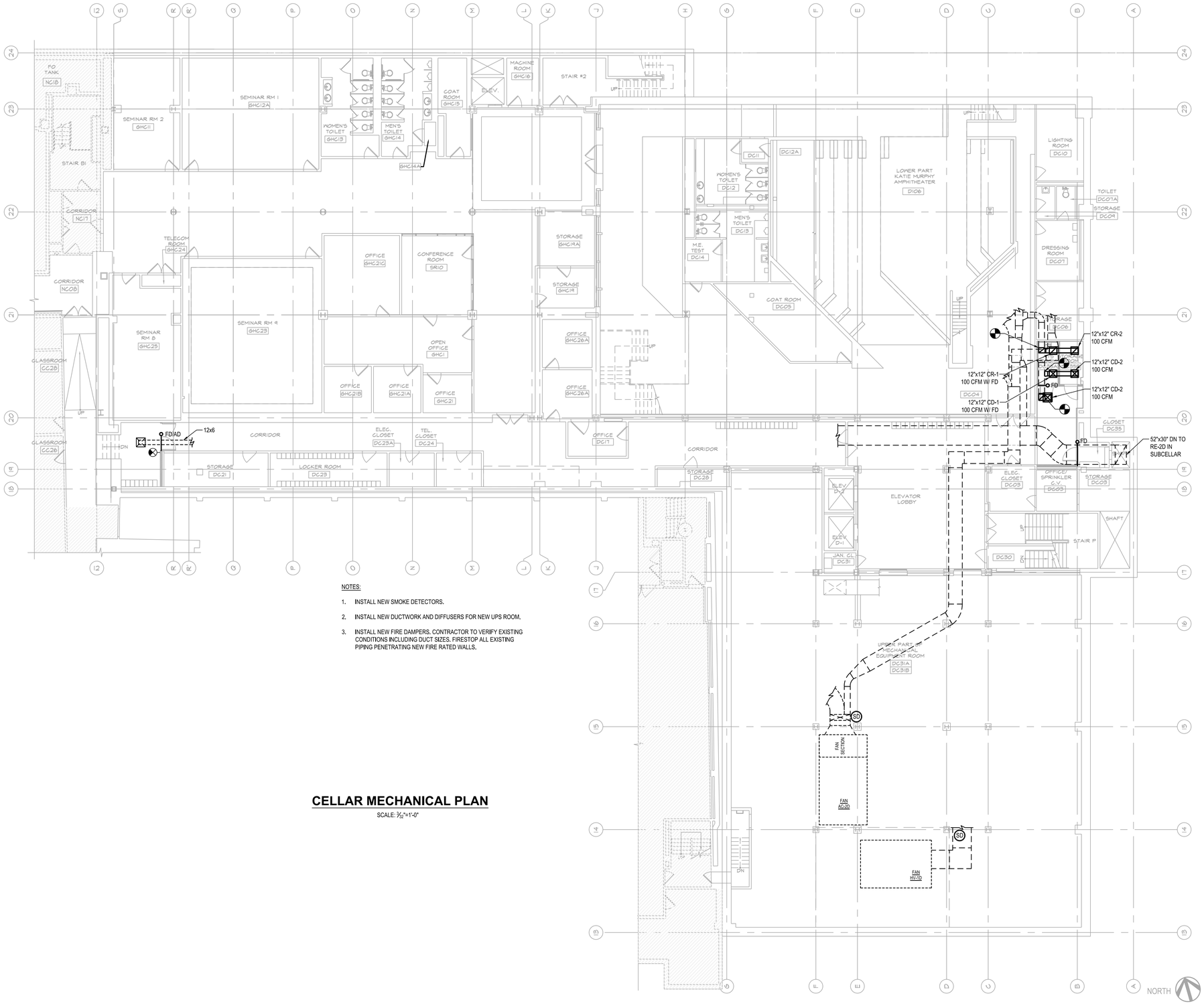
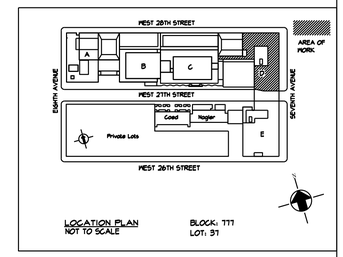


NOTES:

1. INSTALL NEW SMOKE DETECTORS.
2. INSTALL NEW DUCTWORK AND DIFFUSERS FOR NEW UPS ROOM.
3. INSTALL NEW FIRE DAMPERS. CONTRACTOR TO VERIFY EXISTING CONDITIONS INCLUDING DUCT SIZES. FIRESTOP ALL EXISTING PIPING PENETRATING NEW FIRE RATED WALLS.

CELLAR MECHANICAL PLAN

SCALE: 3/32"=1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

NO.	DATE	REVISION
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Architects/Planers

443 Park Avenue South — New York, NY 10016
212 889 4045 — Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
CELLAR MECHANICAL PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	3/32"=1'-0"
DWG No:	M-100.00
CADD FILE:	DOB page: 3 OF 12

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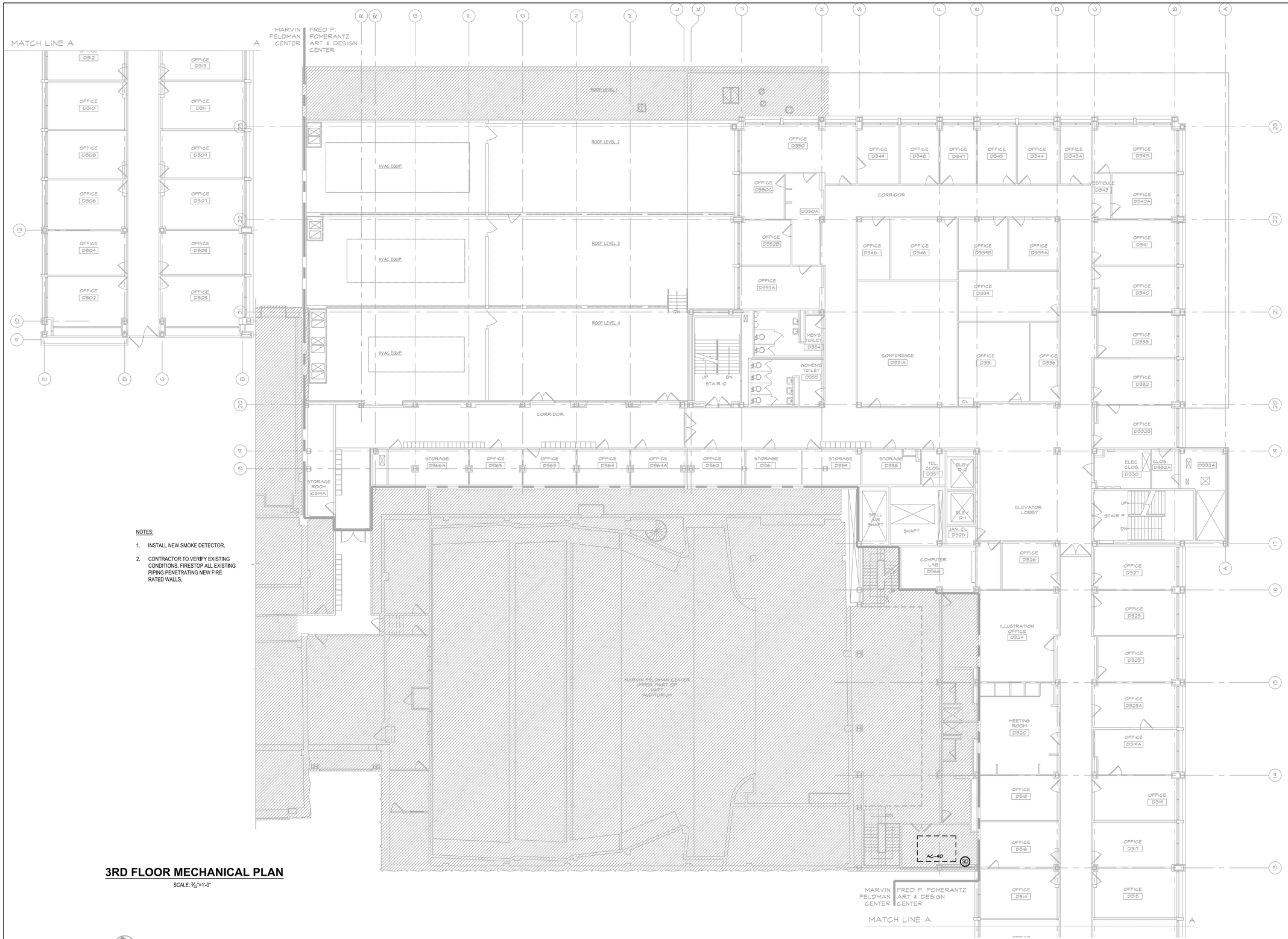
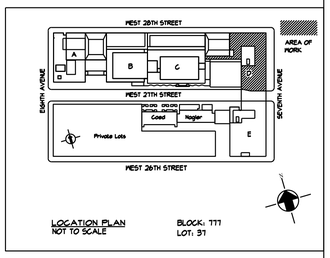


NOTES:

1. INSTALL NEW SMOKE DETECTOR.
2. CONTRACTOR TO VERIFY EXISTING CONDITIONS. FIRESTOP ALL EXISTING PIPING PENETRATING NEW FIRE RATED WALLS.

3RD FLOOR MECHANICAL PLAN

SCALE: 3/32"=1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
3RD FLOOR
MECHANICAL PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	3/32"=1'-0"
DWG No:	M-103.00
CADD FILE:	DOB page: 4 OF 12

NORTH

0 8' 16' 32'

SCALE: 3/32" = 1'-0"

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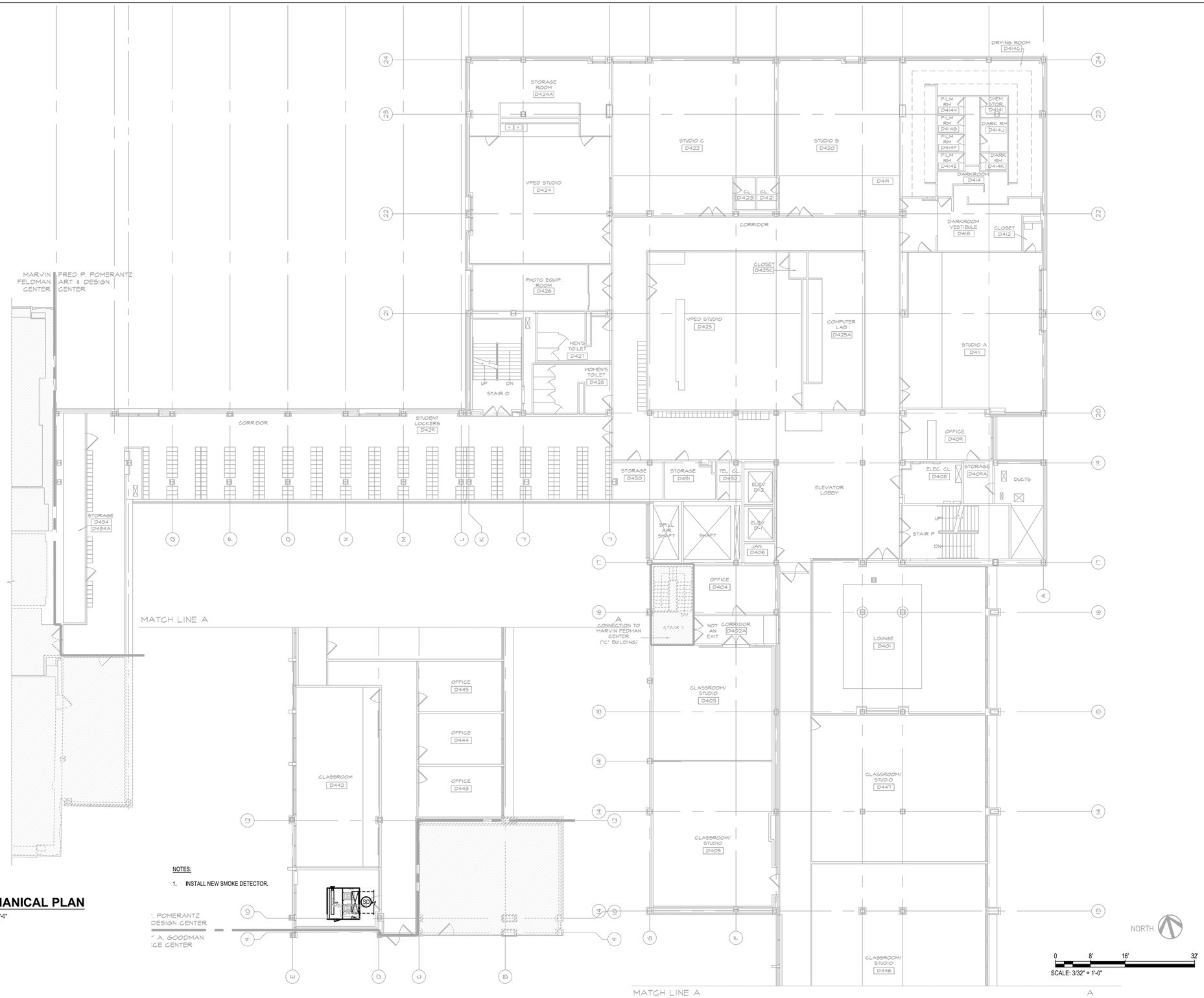

4TH FLOOR MECHANICAL PLAN

SCALE: 3/32"=1'-0"

NOTES:

1. INSTALL NEW SMOKE DETECTOR.

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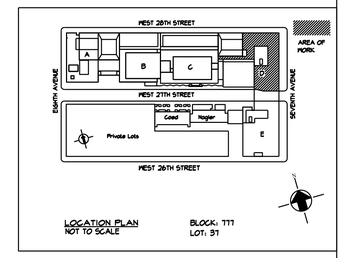

LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

NO.	DATE	REVISION
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443 Park Avenue South New York, NY 10016
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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
4TH FLOOR
MECHANICAL PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
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SCALE:	3/32"=1'-0"
DWG No:	M-104.00
CADD FILE:	DOB page: 5 OF 12

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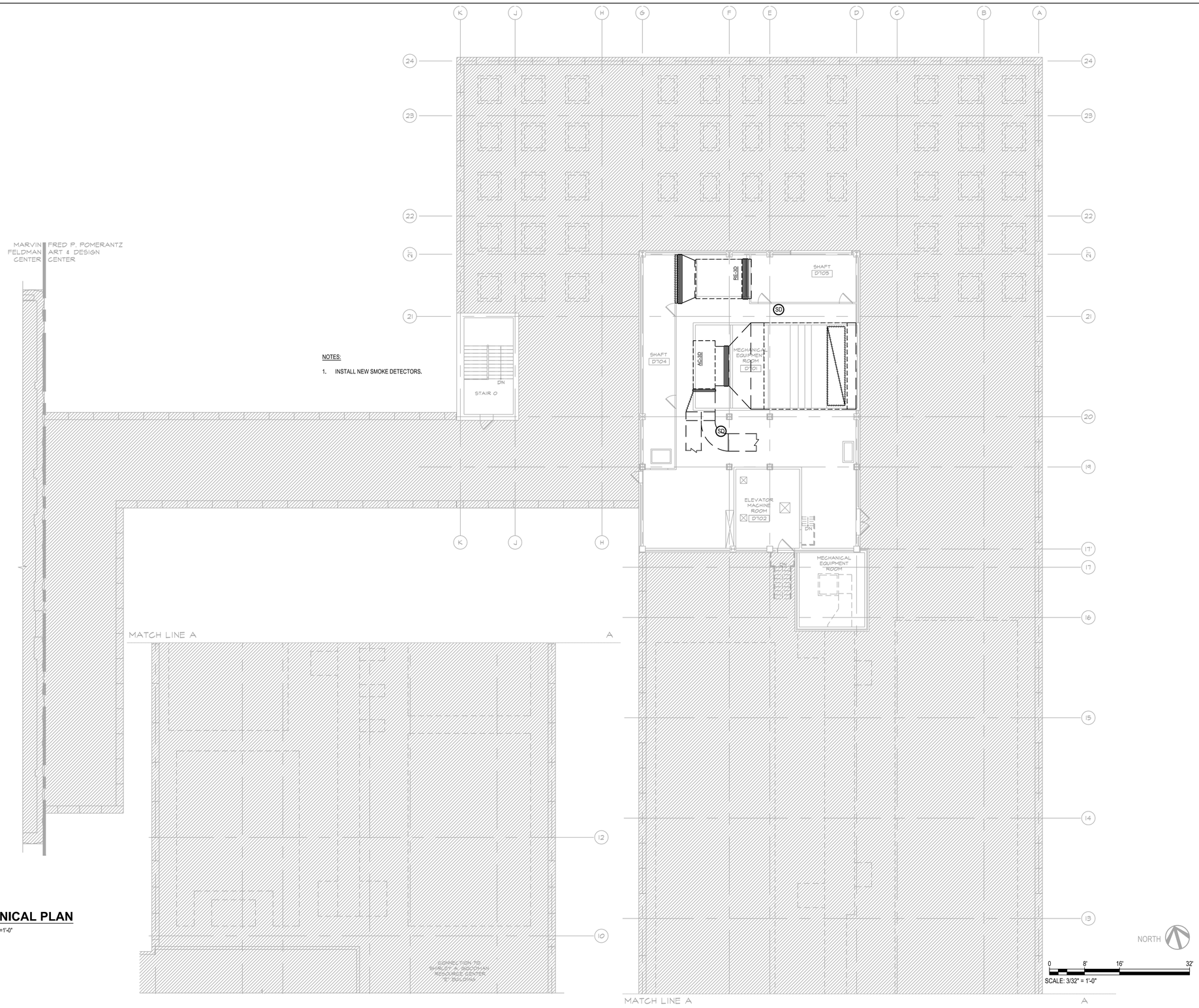
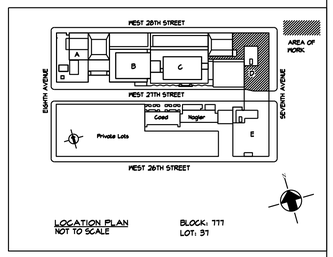


NOTES:

1. INSTALL NEW SMOKE DETECTORS.

ROOF MECHANICAL PLAN

SCALE: 3/32"=1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

ROOF FLOOR MECHANICAL PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	3/32"=1'-0"
DWG No:	M-107.00
CADD FILE:	DOB page: 6 OF 12

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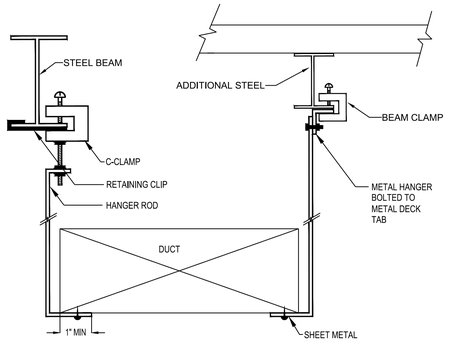


NOTES:

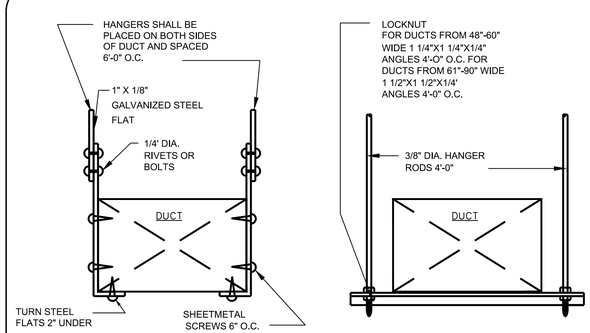
1. HANGERS SHALL BE OF METAL NOT LESS THAN 1/16" FOR DUCTS 2 SQ.FT. & LESS, AND NOT LESS THAN 1/8" FOR DUCTS LARGER THAN 2 SQ.FT.
2. WHERE CROSS-SECTIONAL AREA OF DUCT EXCEEDS 8 SQ.FT., HANGERS SHALL BE SPACED NOT MORE THAN 4 FT. ON CENTERS.
3. C-CLAMP FOR DUCTS UP TO 36" MAXIMUM DIMENSION.

1 DUCT SUPPORT ATTACHMENT TO STRUCTURE

DUCT SUPPORT SCHEDULE

HALF OF DUCT PERIMETER	PAIR AT 10 FT. SRACING		PAIR AT 8 FT. SRACING		PAIR AT 5 FT. SRACING		PAIR AT 4 FT. SRACING	
	STRAP	WIRE/ ROD	STRAP	WIRE/ ROD	STRAP	WIRE/ ROD	STRAP	WIRE/ ROD
30"	1" x 22 GA	10 GA (.135")	1" x 22 GA	10 GA (.135")	1" x 22 GA	12 GA (.135")	1" x 22 GA	12 GA (.135")
72"	1" x 18 GA	3/8"	1" x 20 GA	1/4"	1" x 22 GA	1/4"	1" x 22 GA	1/4"
96"	1" x 16 GA	3/8"	1" x 18 GA	3/8"	1" x 20 GA	3/8"	1" x 22 GA	1/4"
120"	10" x 16 GA	1/2"	1" x 16 GA	3/8"	1" x 18 GA	3/8"	1" x 20 GA	1/4"
168"	10" x 16 GA	1/2"	10" x 16 GA	1/2"	1" x 16 GA	3/8"	1" x 18 GA	3/8"
192"	-	1/2"	10" x 16 GA	1/2"	1" x 16 GA	3/8"	1" x 16 GA	3/8"

2 DUCT SUPPORT SCHEDULE

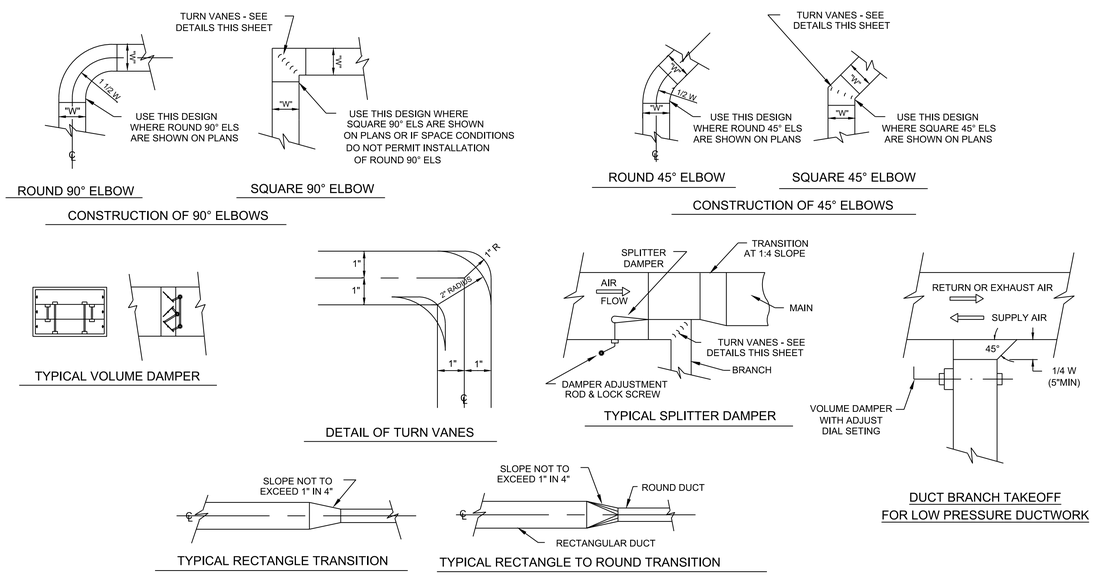


UP TO 8SQ. FT. IN AREA AND 47" WIDTH MAX.

OVER 8SQ. FT. IN AREA AND OVER 47" WIDE

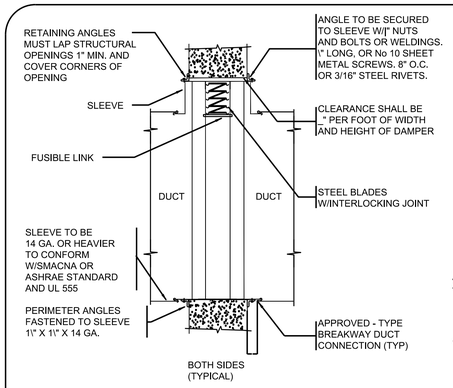
3 METHOD OF SUPPORTING DUCTS

NTS



4 DUCTWORK DETAILS

NTS



NOTES:

A. SECURE DAMPER TO SLEEVE USING |" NUTS & BOLTS OR WELDING, \" LONG, OR No 10 SHEET METAL SCREWS. 8" O.C. OR 3/16" STEEL RIVETS.
B. PROVIDE ACCESS DOOR IN DUCT UPSTREAM OR DOWNSTREAM OF THE FIRE DAMPER.
C. INSTALLATION AS INDICATES SHALL BE COORDINATED WITH DAMPER MANUFACTURER INSTALLATION INSTRUCTIONS.

5 FIRE DAMPER DETAIL

NTS

AIR OUTLET SCHEDULE "TITUS" AS STANDARD

MARK	SERVICE	QUANTITY	CFM	NECK SIZE (IN.)	TOTAL PRESSURE DROP (Pt) AT MAX FLOW (IN. WC)	SOUND LEVEL (NC)	DAMPER STYLE	BORDER TYPE	MANUFACTURER	MODEL	NOTES
CD-1	SUPPLY	1	100	6" ROUND	0.22	16	NONE	LAY IN	TITUS	PAS-FR 12X12	FIRE RATED WITH FIRE DAMPER SEE NOTES
CR-1	RETURN	1	100	6" ROUND	0.22	16	NONE	LAY IN	TITUS	PAR-FR 12X12	FIRE RATED WITH FIRE DAMPER SEE NOTES
CD-2	SUPPLY	2	100	6" ROUND	0.076	>12	NONE	LAY IN	TITUS	OMNI 12X12	SEE NOTES
CR-2	RETURN	1	100	12X12	0.012	>13	NONE	LAY IN	TITUS	23RL 12X12	SEE NOTES

NOTE:

1. ALL DIFFUSERS & DAMPERS TO BE PER SCHEDULE. PROVIDE WHITE COLOR AND COORDINATE WITH ARCHITECT FOR COLOR FINISHING.
2. ALL DIFFUSERS TO BE STANDARD FACTORY POWDER COATED. PROVIDE CONCEALED FASTENERS FOR ALL AIR OUTLETS.
3. FOR EXACT LOCATIONS OF CEILING AIR OUTLETS, SEE ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATION IS REQUIRED.
4. COORDINATE WITH THE ARCHITECT ON COLOR, FINISHES AND BORDER TYPE.

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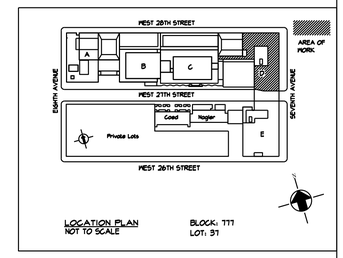

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:

MECHANICAL DETAILS AND SCHEDULES

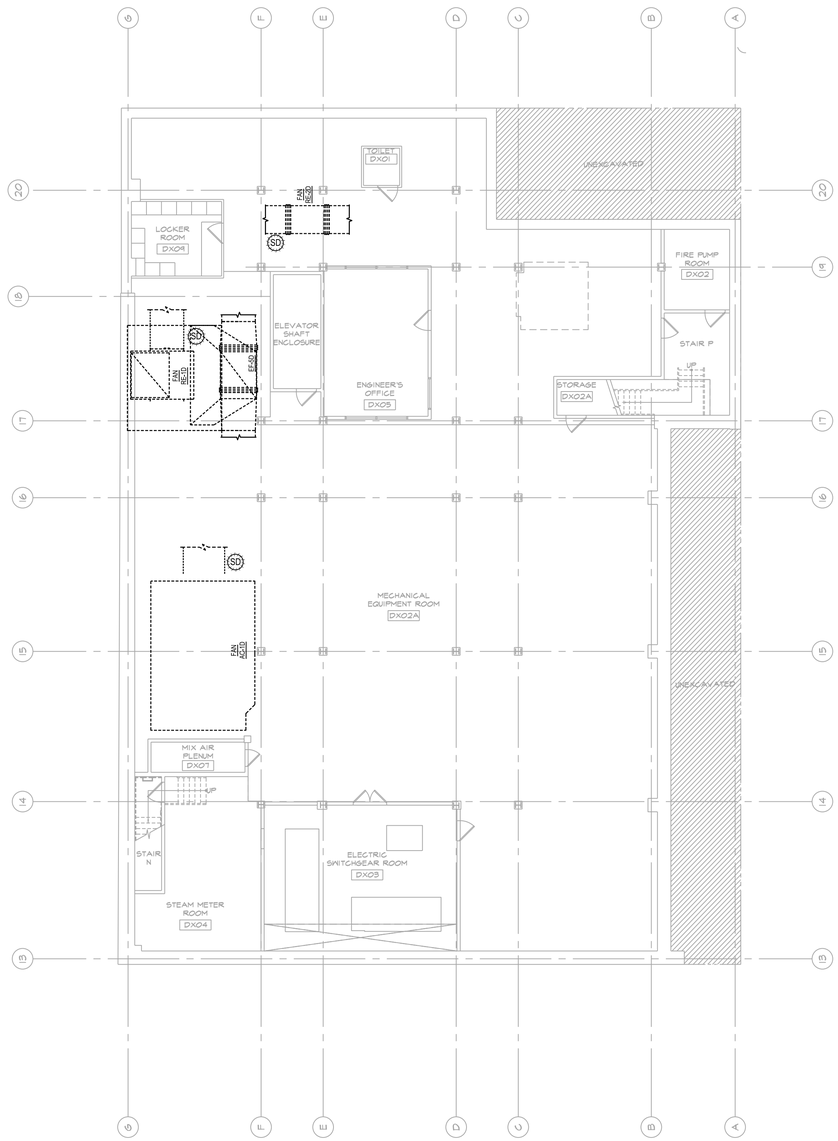
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	NONE
DWG No:	M-501.00
CADD FILE:	DOB page: 7 OF 12

NOTES:

1. REMOVE EXISTING SMOKE DETECTORS.



SUB-CELLAR MECHANICAL DEMOLITION DUCTWORK PLAN

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

NORTH

0 8' 16' 32'

SCALE: 3/32" = 1'-0"

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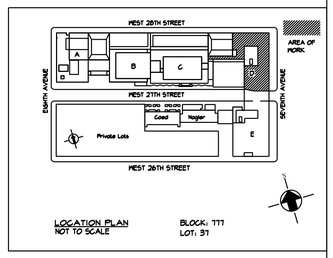

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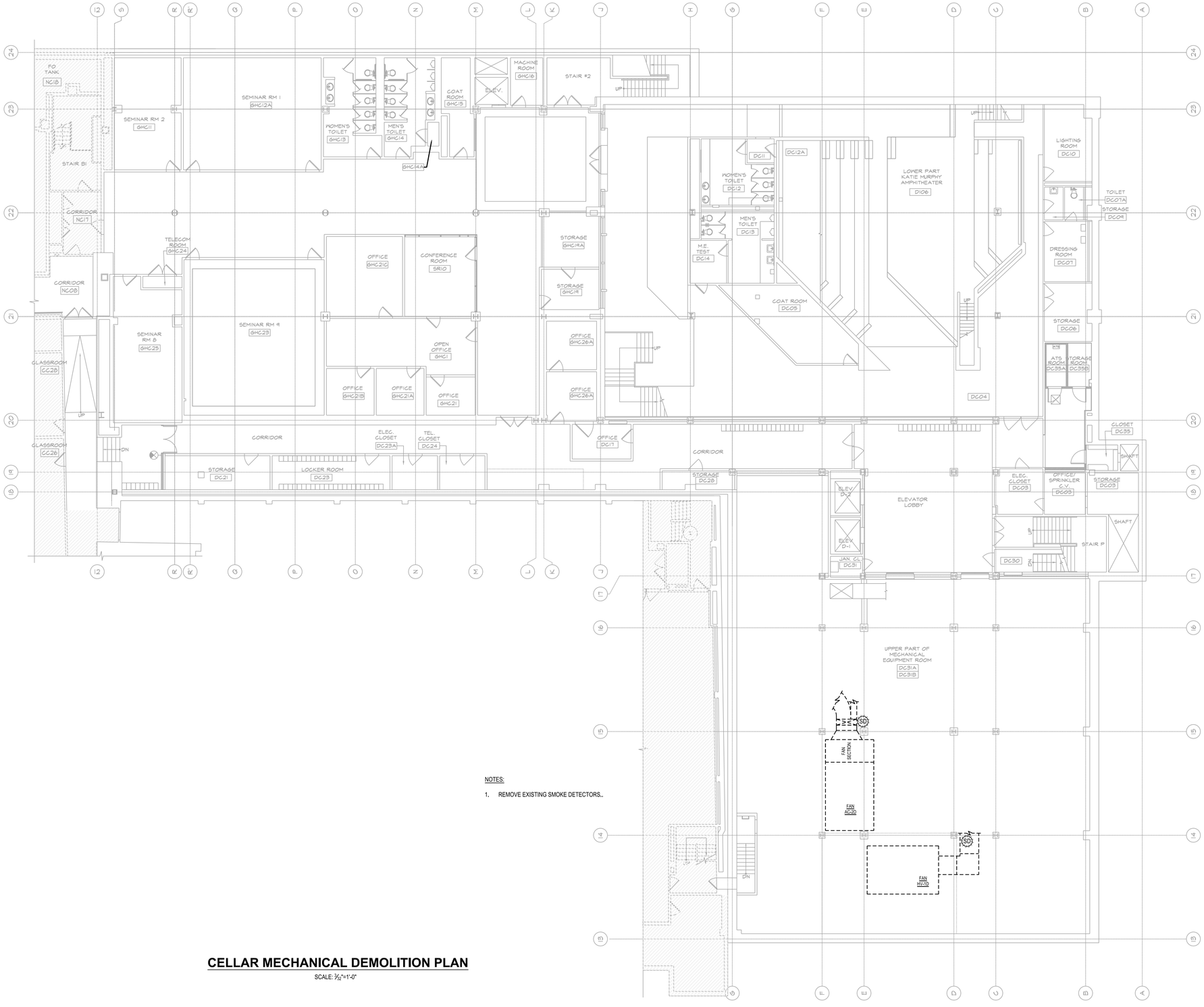
PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
SUB-CELLAR
MECHANICAL
DEMOLITION PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	1/8"=1'-0"
DWG No:	M-899.00
CADD FILE:	DOB page: 8 OF 12



NOTES:

1. REMOVE EXISTING SMOKE DETECTORS..

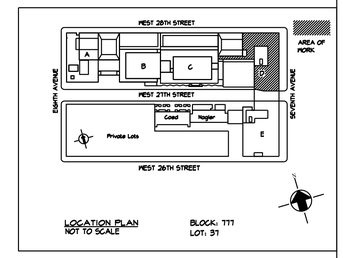
CELLAR MECHANICAL DEMOLITION PLAN

SCALE: 3/32"=1'-0"

NORTH

0 8' 16' 32'

SCALE: 3/32" = 1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

NO.	DATE	REVISION
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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
CELLAR MECHANICAL DEMOLITION PLAN

DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	3/32"=1'-0"
DWG No:	M-900.00
CADD FILE:	DOB page: 9 OF 12

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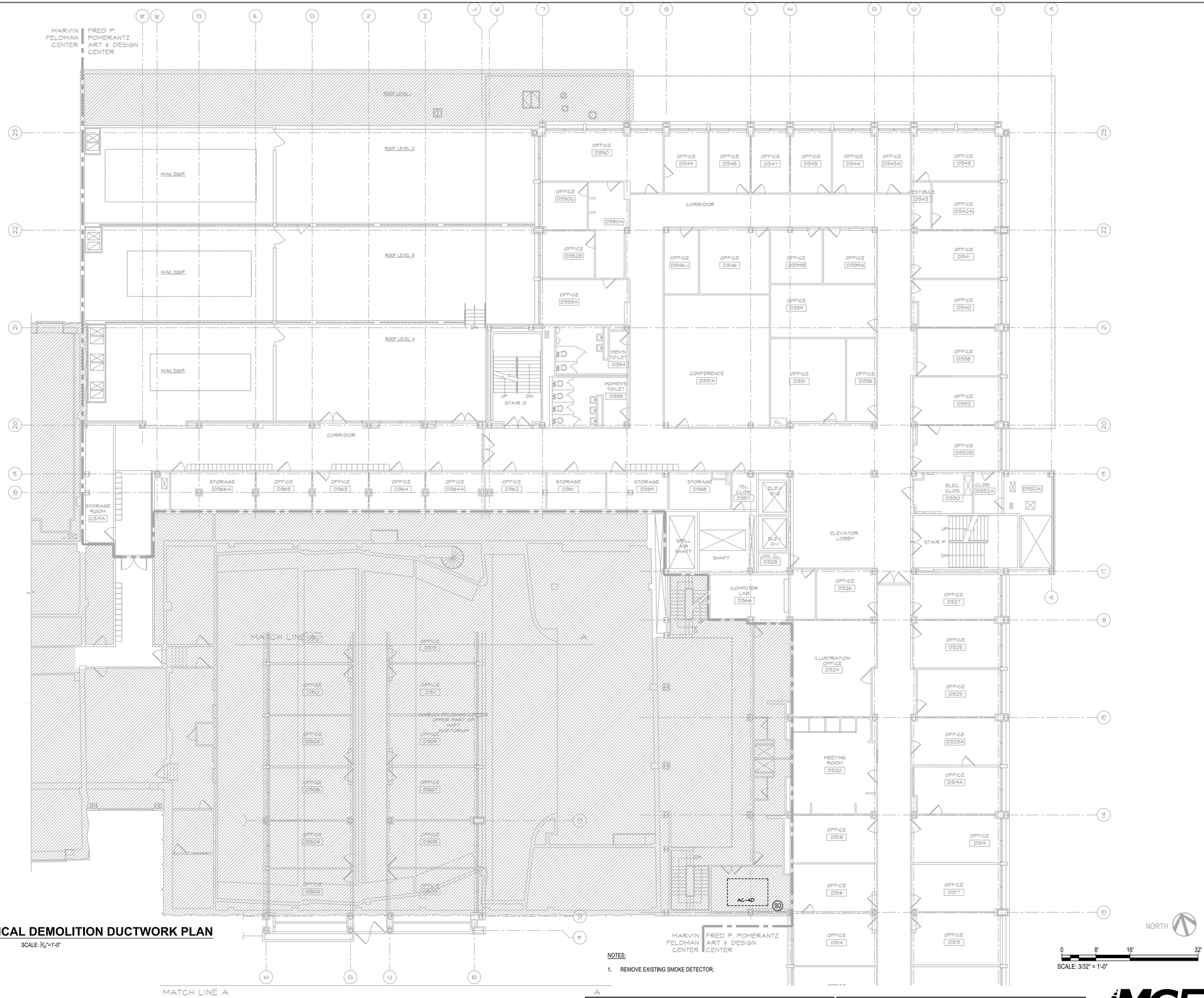

3RD FLOOR MECHANICAL DEMOLITION DUCTWORK PLAN

SCALE: 3/32"=1'-0"

NOTES:

1. REMOVE EXISTING SMOKE DETECTOR.

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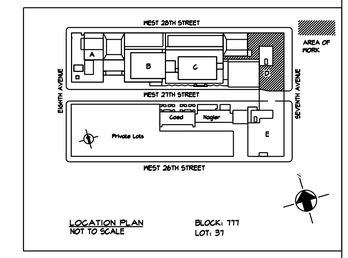

LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

NO.	DATE	REVISION
1	03/21/2025	ISSUED FOR BID

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116 West 32nd Street,
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EPM, Inc.
1983 Marcus Ave. Suite 109
Lake Sucess, NY 11042 / (516) 328-1194

Fashion Institute of Technology
227 West 27th Street
New York, NY 10001

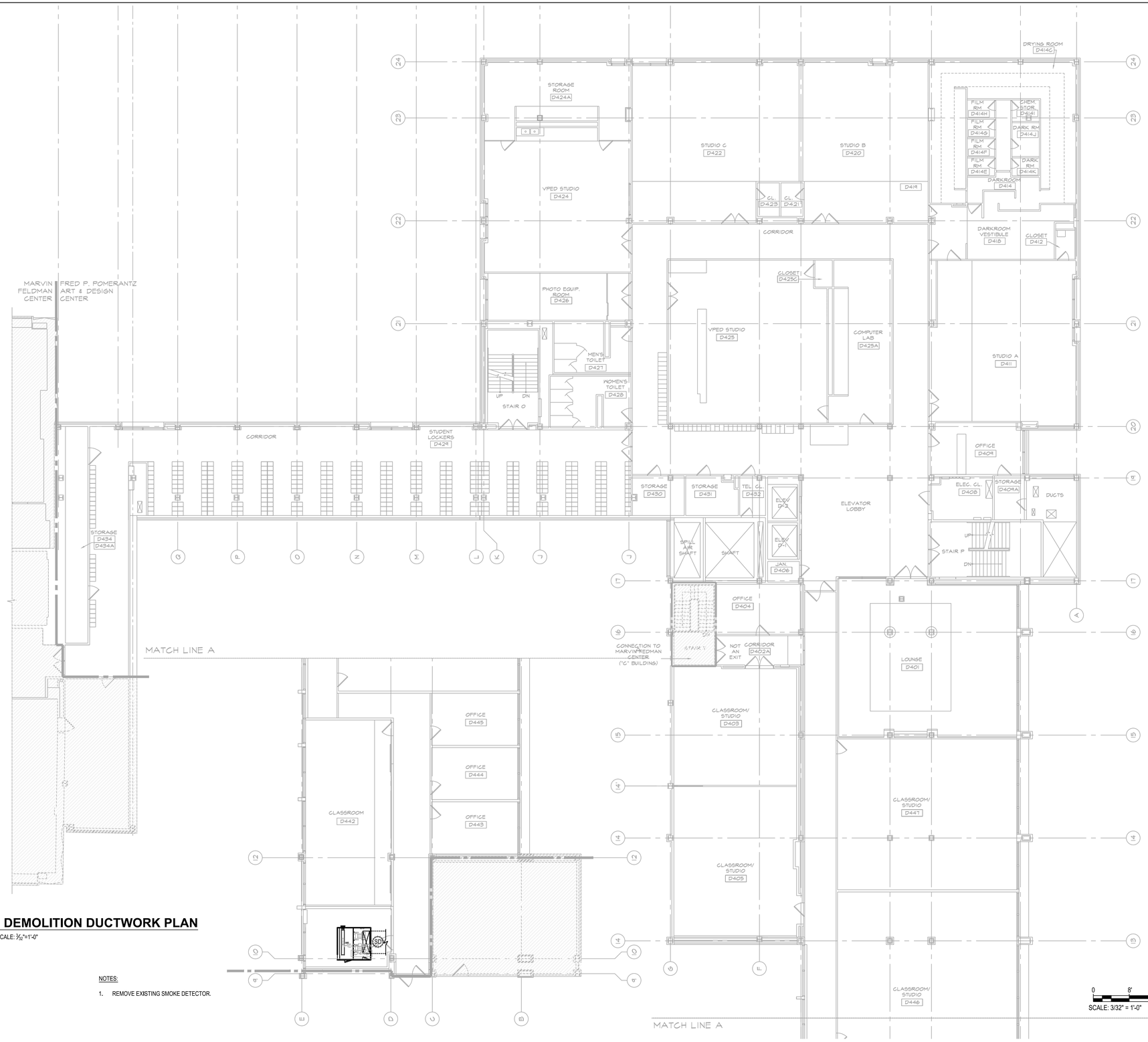
David Smotrich & Partners LLP
Architects/Planers
443 Park Avenue South New York, NY 10016
212 889 4045 Fax 212 889 3672

PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
3RD FLOOR
MECHANICAL
DEMOLITION PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	1/8"=1'-0"
DWG No:	M-903.00
CADD FILE:	DOB page: 10 OF 12



4TH FLOOR MECHANICAL DEMOLITION DUCTWORK PLAN

SCALE: 3/32"=1'-0"

NOTES:

1. REMOVE EXISTING SMOKE DETECTOR.

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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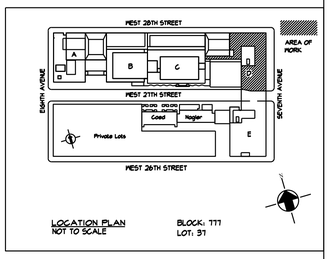

LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

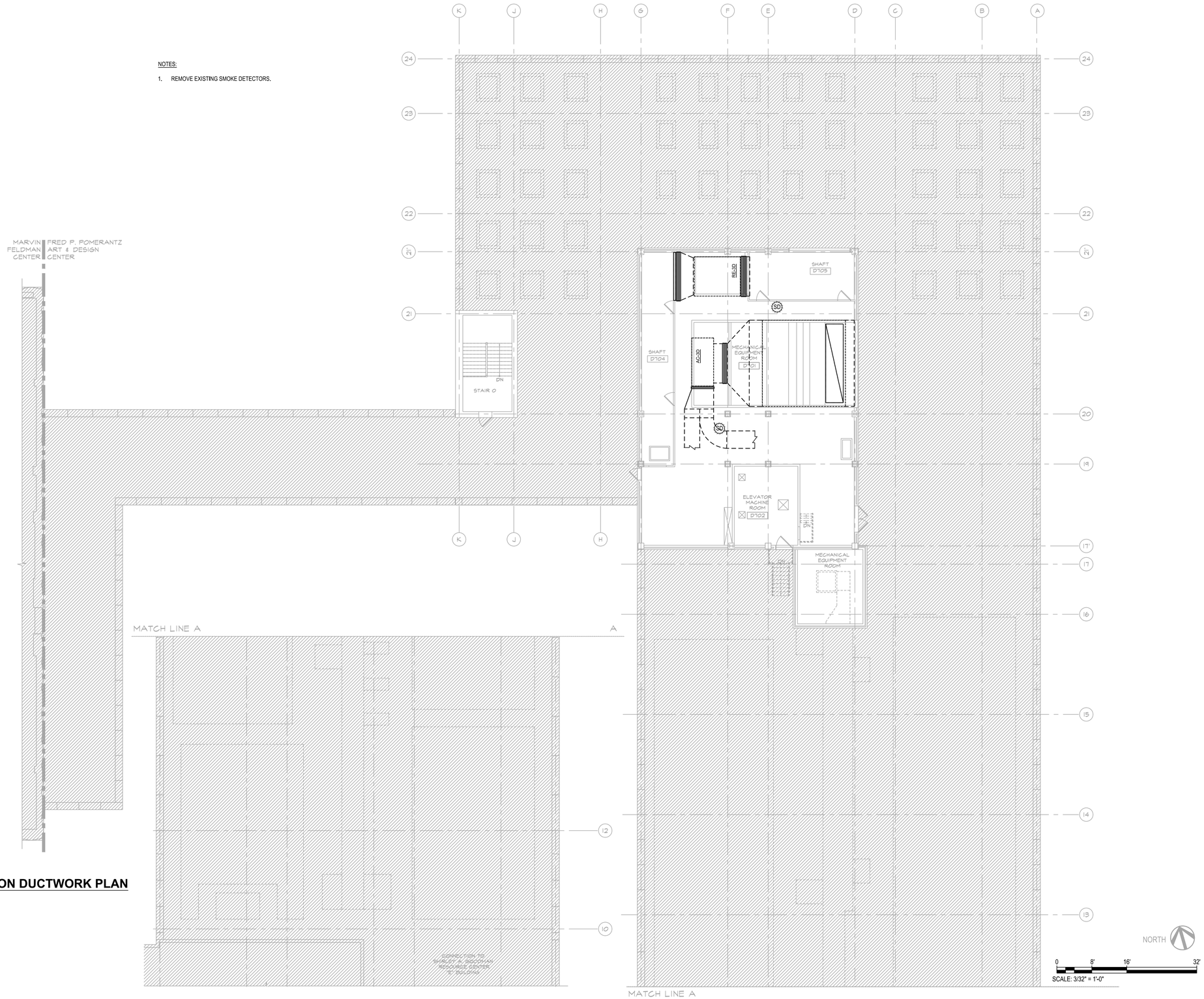
DRAWING TITLE:
4TH FLOOR MECHANICAL DEMOLITION PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	ASB
CHK BY:	DNE
SCALE:	3/32"=1'-0"
DWG No:	M-904.00
CADD FILE:	DOB page: 11 OF 12

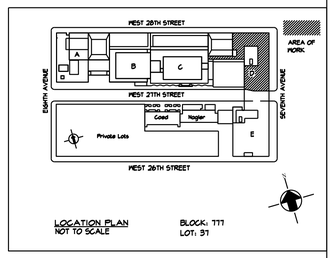
NOTES:

1. REMOVE EXISTING SMOKE DETECTORS.



ROOF MECHANICAL DEMOLITION DUCTWORK PLAN

SCALE: 3/32"=1'-0"



LOCATION PLAN
NOT TO SCALE

BLOCK: 777
LOT: 31

NO.	DATE	REVISION
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PROJECT: POMERANTZ DESIGN CENTER
FIRE ALARM SYSTEM
300 7TH AVENUE NEW YORK, NY, 10001

DRAWING TITLE:
ROOF FLOOR
MECHANICAL
DEMOLITION PLAN
DOB NOW JOB#

NOT FOR CONSTRUCTION

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE

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SCALE:	3/32"=1'-0"
DWG No:	M-907.00
CADD FILE:	DOB page: 12 OF 12

FIRE PROTECTION SYMBOLS

SP	SPRINKLER MAIN PIPING
	SPRINKLER BRANCH PIPING
SP	EXISTING PIPING (REFER TO LETTER DESIGNATION ABOVE)
	EXISTING PIPING TO BE REMOVED
	UPRIGHT/ PENDANT SPRINKLER HEAD
	CONCEALED SPRINKLER HEAD
	CAPPED OUTLET
	FLOOR CONTROL VALVE ASSEMBLY (FCVA)
	CONNECT NEW WORK TO EXISTING
	DISCONNECT EXISTING WORK & CAP

SPRINKLERS DURING CONSTRUCTION

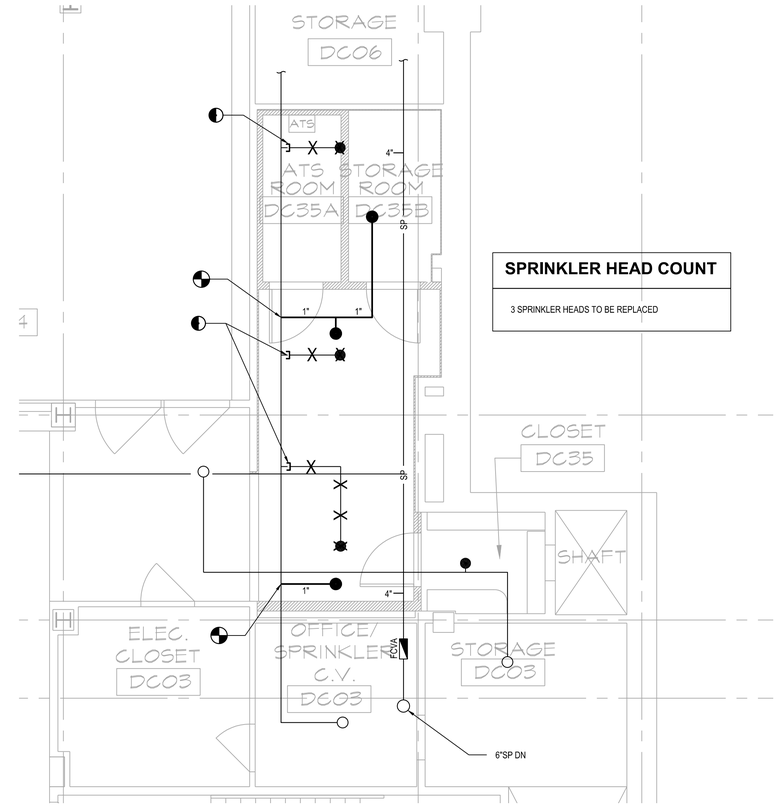
AS PER FIRE CODE SECTION 901.7.2 PROVIDE FIRE WATCH UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. THE BUILDING SHALL BE EVACUATED OR A FIRE WATCH MAINTAINED IN ACCORDANCE WITH THIS SECTION WHEN A STANDPIPE SYSTEM, SPRINKLER SYSTEM OR FIRE ALARM SYSTEM IS OUT OF SERVICE. SUCH FIRE WATCH SHALL BE CONDUCTED IN COMPLIANCE WITH THE REQUIREMENTS OF FC 901.7.2.1 THROUGH 901.7.2.3.

FIRE PROTECTION GENERAL NOTES

1. ALL SPRINKLER LOCATIONS SHOWN ON SPRINKLER DRAWING ARE DIAGRAMMATIC. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT SPRINKLER LOCATION AND ALIGNMENT.
2. SPRINKLER CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE SHOP DRAWINGS INCLUDING HEAD LOCATIONS, PIPE SIZING AND HYDRAULIC CALCULATIONS.
3. THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS, INSPECTIONS & SIGN-OFF REQUIRED BY THE BUILDING DEPT. OFFICIALS.
4. SPRINKLER HEADS IN GYPSUM BOARD CEILING AREAS TO BE ALIGNED WITH OR CENTERED BETWEEN ADJACENT LIGHT FIXTURES.
5. PROVIDE 'SWING ARM' CONNECTION TO ALL SPRINKLER HEADS TO ASSURE PRIOR ALIGNMENT.
6. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWING FOR EXACT SIZE & LOCATION OF SLAB PENETRATIONS, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL PENETRATIONS FOR APPROVAL TO STRUCTURAL & MEP ENGINEER PRIOR INSTALLATION OF SPRINKLER WORK.
7. PROVIDE SPRINKLER COVERAGE UNDER OBSTRUCTIONS 48" IN WIDTH OR GREATER.
8. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
9. EXISTING PIPING WHERE SHOWN FOR VARIOUS SYSTEMS IS DIAGRAMMATIC ONLY.
10. BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING OF THE PRESENT INSTALLATIONS, INCLUDING LOCATIONS, SIZES, AND ELEVATIONS OF PIPING, TO WHICH CONNECTIONS MUST BE MADE OR WHICH MUST BE CHANGED OR ALTERED. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER, AND NO CONSIDERATION WILL BE GRANTED BY REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR WITH ACTUAL PHYSICAL CONDITIONS AT THE SITE.
11. INSTALL ALL WORK IN FULL ACCORDANCE WITH THE REQUIREMENTS OF ALL LOCAL AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION OVER THESE MATTERS, AS WELL AS WITH ANY REQUIREMENTS OF THE NFPA, UL, AND OTHER APPLICABLE CODES. SECURE AND PAY FOR NECESSARY APPROVALS, PERMITS, INSPECTIONS, ETC., AND DELIVER THE OFFICIAL RECORDS OF THE GRANTING OF PERMITS TO THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.
12. PREPARE AND SUBMIT FOR APPROVAL MANUFACTURER'S SHOP DRAWINGS AND DATA FOR EQUIPMENT, AND DETAILED DRAWINGS OF ALL SPRINKLER PIPING WORK.
13. KEEP AN ACCURATE RECORD ON ALL DEVIATIONS BETWEEN WORK SHOWN ON DRAWINGS AND THAT WHICH IS ACTUALLY PERFORMED.
14. ALL FIRESTOPPING MUST BE APPROVED PRODUCTS THAT ARE UL RATED.
15. ALL SPRINKLER HEADS TO BE INSTALLED SHALL BE NEW.

SPRINKLER DEMOLITION NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT.
2. VERIFY ALL GOVERNING DIMENSIONS, PIPE SIZES AND LOCATION OF THE PIPING AND EQUIPMENT TO BE REMOVED.
3. NOTIFY BUILDING MANAGER AT LEAST 48 HOURS BEFORE DEMOLITION WORK OR BEFORE SHUT DOWN OF EXISTING SERVICES. RISER SHUT DOWNS SHALL BE PERFORMED AT TENANT'S COST, AT DESIGNATED TIMES UNDER BUILDING MANAGER'S SUPERVISION AND ONLY WITH HIS APPROVAL.
4. ALL EQUIPMENT, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, RELOCATED, TURNED OVER OR SALVAGED AS DIRECTED BY THE BUILDING OWNER.
5. UPON COMPLETION OF ALL NEW WORK NO ABANDONED PIPING SHALL REMAIN. EXISTING BRANCH PIPING SERVING REMOVED SPRINKLER SHALL BE COMPLETELY REMOVED TO MAIN BRANCH AND CAPPED AT TEE WITH NEW FITTINGS.
6. THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL NEW WORK.
7. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. FIELD VERIFY EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING AT THE SITE.
8. NO REMOVED EXISTING PIPING FITTINGS, VALVES, FIXTURES, ETC. SHALL BE REUSED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
9. THE CONTRACTOR SHALL NOT INTERRUPT ANY OF THE SERVICES OF THE EXISTING BUILDING NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT THE EXPRESS PERMISSION IN WRITING BY THE BUILDING MANAGER. SUCH INTERRUPTIONS AND INTERFERENCES SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT THE TIME STATED BY THE BUILDING MANAGER.
10. CONTRACTOR & THEIR SUBCONTRACTOR'S SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING SPRINKLERS AND RELATED PIPING AND REMOVING SPRINKLERS AND RELATED PIPING AS REQUIRED TO MEET NEW PROPOSED SPRINKLER HEAD LAYOUT.
11. AS PART OF THIS CONTRACT, THE CONTRACTOR SHALL INCLUDE A FIREWATCH FOR THE DURATION OF THE SPRINKLER SHUT-DOWN. WHERE APPROVED BY BUILDING MANAGEMENT, A TEMPORARY SPRINKLER LOOP MAY BE PROVIDED IN LIEU OF THE REQUIRED FIRE WATCH. THERE SHALL BE NO APPROVED CHANGE ORDERS FOR THIS SCOPE.
12. CONTRACTOR SHALL EXERCISE EXTREME CARE IN PROTECTING AREAS ADJACENT TO CONSTRUCTION AREAS, SHALL FULLY PROTECT THEM FROM ANY DAMAGE RESULTING FROM CONTRACTOR'S WORKMEN, SUBCONTRACTORS OR AGENTS, SHALL BE RESPONSIBLE FOR REPAINTING, CLEANING OR REPLACING ANY SUCH DAMAGE.
13. THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS AND FIRE PROTECTION SYSTEMS PRIOR TO THE BEGINNING OF DEMOLITION WORK.
14. SPRINKLER COVERAGE OF THE EXISTING SPRINKLER SYSTEM OUTSIDE THE AREA OF WORK SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
15. PROVIDE TEMPORARY SPRINKLER LOOP WHEN THE NEW CONSTRUCTION BEGINS TO PROTECT ALL MEANS OF EGRESS. IN ACCORDANCE W/ BUILDING BULLETIN 2017-009
16. IN THE EVENT OF ANY DISCREPANCY BETWEEN THE DEMOLITION PLAN AND THE CONSTRUCTION PLANS, CONSTRUCTION PLANS AND INTENT SHALL GOVERN.

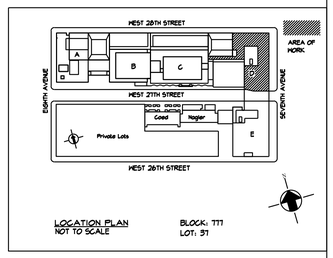


CELLAR FLOOR SPRINKLER PARTIAL PLAN
SCALE: 1/4"=1'-0"

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

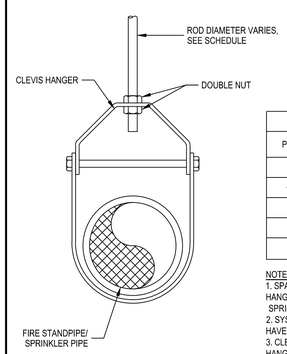
SPRINKLER HEAD COUNT

3 SPRINKLER HEADS TO BE REPLACED



LOCATION PLAN
NOT TO SCALE

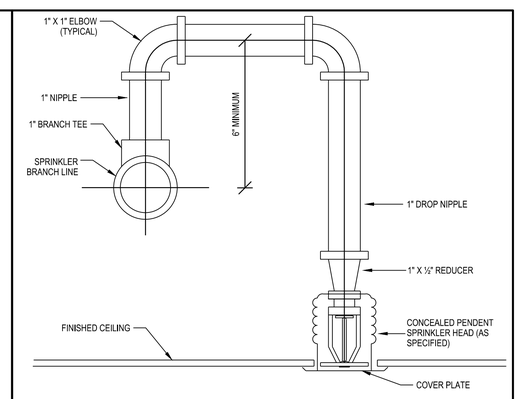
BLOCK: 777
LOT: 37



ROD SCHEDULE		
PIPE SIZE	MAX HANGER SPACING	ROD SIZE
1" - 1 1/2"	12'-0"	3/8"
1 1/2" - 4"	15'-0"	3/8"
5" - 8"	15'-0"	1/2"
10"	15'-0"	5/8"
12"	15'-0"	3/4"

NOTE:
1. SPACE SUPPORTS TO AT LEAST ONE (1) HANGER/LENGTH OF PIPE AND WITHIN 36 INCHES OF END SPRINKLER HEAD.
2. SYSTEMS WITH PRESSURES EXCEEDING 100 PSI SHALL HAVE RESTRAINTS TO PREVENT UPWARD MOVEMENT.
3. CLEVIS HANGER IS INDICATED HOWEVER ALTERNATIVE HANGERS ARE PERMITTED AS SPECIFIED.

1 **Fire Protection Hanger Detail**
Not to Scale



2 **Typical Arm Over Connection**
Not to Scale

SPRINKLER HEAD SCHEDULE

SYMBOL	MANUFACTURER MODEL No	SIZE	TYPE	SIN	RESPONSE	K-FACTOR	TEMP. RATING	COVERAGE	APPROVED FINISHES	APPROVED ESCUTCHEONS	LOCATION
●	RELIABLE G5-56	1/2"	CONCEALED	RA3415	QUICK	5.6	165 F	STANDARD	WHITE COVER PLATE	-	AREAS WITH SUSPENDED CEILING LIGHT & ORDINARY HAZARD OCCUPANCY

1. CONTRACTOR SHALL APPLY FOR A LAA IN ORDER TO PULL THE WORK PERMIT FOR THIS JOB. CONTRACTOR SHALL INCLUDE ALL EXPENSES RELATED TO OBTAINING THE WORK PERMIT IN HIS PROPOSAL.

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DRAWING TITLE:
SPRINKLER SYMBOL LIST, SCHEDULES, NOTES, AND CELLAR LEVEL PARTIAL PLAN
DOB NOW JOB#

SEAL & SIGNATURE:

DATE:	03.21.2025
PROJECT No:	8969.74
DRAWING BY:	C.N.N.
CHK BY:	R.M.
SCALE:	AS NOTED
DWG No:	SP-001.00
CADD FILE:	DOB page: 1 OF 1

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EXEMPTION WHEN COMPLIANCE WITH FIRE PROTECTION, DETECTION, ALARM AND/OR SUPPRESSION REQUIREMENTS OF TITLE 28 AND/OR THE 2022 NEW YORK CITY CONSTRUCTION CODES CONFLICTS WITH 2020 NYCECC COMPLIANCE, THE TITLE 28 AND/OR 2014 CONSTRUCTION CODES SAFETY PROVISIONS WILL TAKE PRECEDENCE OVER CONFLICTING PROVISIONS IN 2020 NYCECC.

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