

# BATTERY PARK CITY AUTHORITY

## SITE 3 MECHANICAL SYSTEMS UPGRADE

### 75 BATTERY PLACE

### NEW YORK, NY



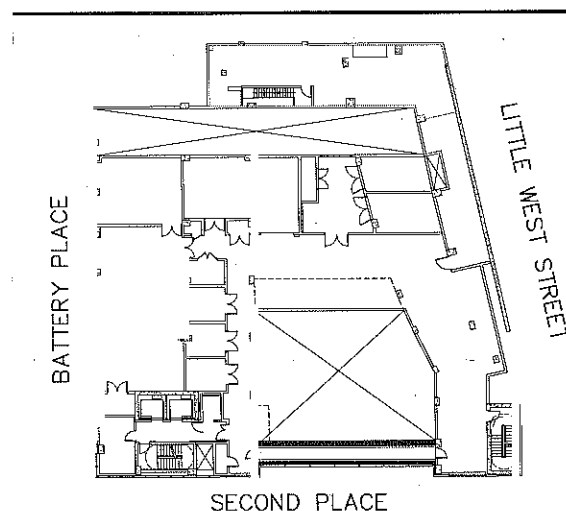
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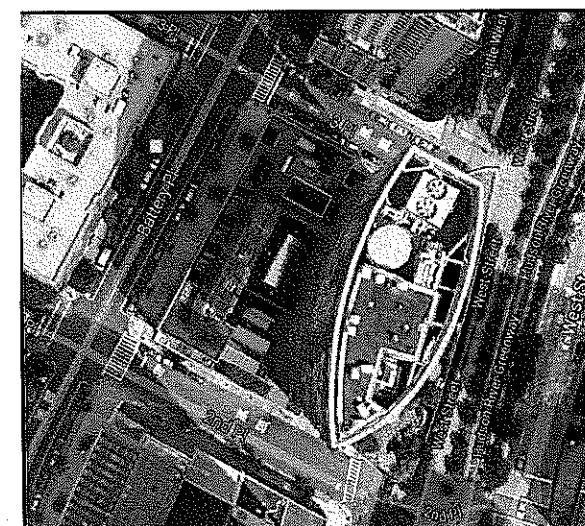
BATTERY PARK  
CITY AUTHORITY  
BPCPC MAINTENANCE FACILITY  
75 BATTERY PLACE, NY

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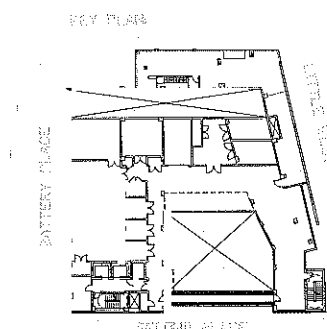
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SITE KEY PLAN



LOCATION



No.	ISSUE OR REVISION	DATE
2	65% REVIEW	2/2/14
1	PROGRESS SET	1/31/14

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PROJECT TITLE

BPCPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE

COVER SHEET

SCALE	AS NOTED	PROJECT NO.
DATE	1/31/14	NSPC000200
DRAWING NO.	KB/JK	
		T-001.00
		PAGE 1 OF 32

PRELIMINARY  
NOT FOR CONSTRUCTION

DOC NUMBER

# PROGRESS INSPECTIONS - IIB - MECHANICAL AND SERVICE WATER HEATING

COMMERCIAL

BPCPC MAINTENANCE FACILITY - SITE 3 MECHANICAL SYSTEMS UPGRADE

CLIMATE ZONE 4A

2010 NEW YORK CITY ENERGY CONSERVATION CODE - CHAPTER 6

No.	INSPECTION/TEST	PERIODIC (MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER 6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIB2	OUTDOOR AIR INTAKES AND EXHAUST OPENINGS: DAMPERS FOR STAIR AND ELEVATOR SHAFT VENTS AND OTHER OUTDOOR AIR INTAKES AND EXHAUST OPENINGS INTEGRAL TO THE BUILDING ENVELOPE SHALL BE VISUALLY INSPECTED TO VERIFY THAT SUCH DAMPERS, EXCEPT WHERE PERMITTED TO BE GRAVITY DAMPERS, COMPLY WITH APPROVED CONSTRUCTION DRAWINGS. MANUFACTURER'S LITERATURE SHALL BE REVIEWED TO VERIFY THAT THE PRODUCT HAS BEEN TESTED AND FOUND TO MEET THE STANDARD.	AS REQUIRED DURING INSTALLATION	APPROVED CONSTRUCTION DOCUMENTS; AMCA 5000	502.4.4; ASHRAE 90.1 - 6.4.3.4
IIB4	HVAC SYSTEM CONTROLS AND ECONOMIZERS AND SERVICE HOT WATER SYSTEM CONTROLS: NO LESS THAN 20% OF EACH TYPE OF REQUIRED CONTROLS AND ECONOMIZERS SHALL BE VERIFIED BY VISUAL INSPECTION AND TESTED FOR FUNCTIONALITY AND PROPER OPERATION. SUCH CONTROLS SHALL INCLUDE, BUT ARE NOT LIMITED TO: - THERMOSTATIC - SET POINT OVERLAP RESTRICTION - OFF-HOUR - SHUTOFF DAMPER - SNOW-MELT SYSTEM - DEMAND CONTROL SYSTEMS - OUTDOOR HEATING SYSTEMS - ZONES - ECONOMIZERS - AIR SYSTEMS - VARIABLE AIR VOLUME FAN - HYDRONIC SYSTEMS - HEAT REJECTION EQUIPMENT FAN SPEED - COMPLEX MECHANICAL SYSTEMS SERVING MULTIPLE ZONES - VENTILATION - ENERGY RECOVERY SYSTEMS - HOT GAS BYPASS LIMITATION - TEMPERATURE - SERVICE WATER HEATING - HOT WATER SYSTEM - POOL HEATER AND TIME SWITCHES - EXHAUST HOODS - RADIANT HEATING SYSTEMS.  CONTROLS WITH SEASONALLY DEPENDENT FUNCTIONALITY: CONTROLS WHOSE COMPLETE OPERATION CANNOT BE DEMONSTRATED DUE TO PREVAILING WEATHER CONDITIONS TYPICAL OF THE SEASON DURING WHICH PROGRESS INSPECTIONS WILL BE PERFORMED SHALL BE PERMITTED TO BE SIGNED OFF FOR THE PURPOSE OF A TEMPORARY CERTIFICATE OF OCCUPANCY WITH ONLY A VISUAL INSPECTION, PROVIDED, HOWEVER, THAT THE PROGRESS INSPECTOR SHALL PERFORM A SUPPLEMENTAL INSPECTION WHERE THE CONTROLS ARE VISUALLY INSPECTED AND TESTED FOR FUNCTIONALITY AND PROPER OPERATION DURING THE NEXT IMMEDIATE SEASON THEREAFTER. THE OWNER SHALL PROVIDE FULL ACCESS TO THE PROGRESS INSPECTOR WITHIN TWO WEEKS OF THE PROGRESS INSPECTOR'S REQUEST FOR SUCH ACCESS TO PERFORM THE PROGRESS INSPECTION. FOR SUCH SUPPLEMENTAL INSPECTIONS, THE DEPARTMENT SHALL BE NOTIFIED BY THE APPROVED PROGRESS INSPECTION AGENCY OF ANY UNRESOLVED DEFICIENCIES IN THE INSTALLED WORK WITHIN 180 DAYS OF SUCH SUPPLEMENTAL INSPECTION.	AFTER INSTALLATION AND PRIOR TO FINAL ELECTRICAL AND CONSTRUCTION INSPECTION, EXCEPT THAT FOR CONTROLS WITH SEASONALLY DEPENDENT FUNCTIONALITY, SUCH TESTING SHALL BE PERFORMED BEFORE SIGN-OFF FOR ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY	APPROVED CONSTRUCTION DOCUMENTS, INCLUDING CONTROL SYSTEM NARRATIVES; ASHRAE GUIDELINE 1: THE HVAC COMMISSIONING PROCESS WHERE APPLICABLE	503.2.4, 503.2.5.1, 503.2.11, 503.3, 503.4, 504.3, 504.6, 504.7;  ASHRAE 90.1 - 6.3, 6.4, 6.5, 6.7.2.4, 7.4.4, 7.4.5
IIB5	DUCT, PLENUM AND PIPING INSULATION AND SEALING: INSTALLED DUCT AND PIPING INSULATION SHALL BE VISUALLY INSPECTED TO VERIFY PROPER INSULATION PLACEMENT AND VALUES. JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK SHALL BE VISUALLY INSPECTED FOR PROPER SEALING.	AFTER INSTALLATION AND PRIOR TO CLOSING SHAFTS, CEILINGS AND WALLS	APPROVED CONSTRUCTION DOCUMENTS; SMACNA DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE	503.2.7, 503.2.8, 504.5;  ASHRAE 90.1 - 6.3, 6.4.4.2, 6.8.2, 6.8.3; 7.4.3
IIB6	AIR LEAKAGE TESTING FOR HIGH-PRESSURE DUCT SYSTEMS: FOR DUCT SYSTEMS DESIGNED TO OPERATE AT STATIC PRESSURES IN EXCESS OF 3 INCHES W.G. (746 PA), REPRESENTATIVE SECTIONS, AS DETERMINED BY THE PROGRESS INSPECTOR, TOTALING AT LEAST 25% OF THE DUCT AREA, PER ECC 503.2.7.1.3, SHALL BE TESTED TO VERIFY THAT ACTUAL AIR LEAKAGE IS BELOW ALLOWABLE AMOUNTS.	AFTER INSTALLATION AND SEALING AND PRIOR TO CLOSING SHAFTS, CEILINGS AND WALLS	APPROVED CONSTRUCTION DOCUMENTS; SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL	503.2.7.1.3; ASHRAE 90.1 - 6.4.4.2

# PROGRESS INSPECTIONS - IIC - ELECTRICAL POWER AND LIGHTING SYSTEMS

COMMERCIAL

BPCPC MAINTENANCE FACILITY - SITE 3 MECHANICAL SYSTEMS UPGRADE

CLIMATE ZONE 4A

2010 NEW YORK CITY ENERGY CONSERVATION CODE - CHAPTER 6

No.	INSPECTION/TEST	PERIODIC (MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER 6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIC5	LIGHTING CONTROLS: EACH TYPE OF REQUIRED LIGHTING CONTROLS, INCLUDING: - OCCUPANT SENSORS - MANUAL INTERIOR LIGHTING CONTROLS - LIGHT-REDUCTION CONTROLS - AUTOMATIC LIGHTING SHUT-OFF - DAYLIGHT ZONE CONTROLS - SLEEPING UNIT CONTROLS - EXTERIOR LIGHTING CONTROLS  SHALL BE VERIFIED BY VISUAL INSPECTION AND TESTED FOR FUNCTIONALITY AND PROPER OPERATION.	PRIOR TO FINAL ELECTRICAL AND CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENTS, INCLUDING CONTROL SYSTEM NARRATIVES	505.2, 505.2.2.2;  ASHRAE 90.1 - 9.4.1, 9.4.1.2 (AS MODIFIED BY SECTION ECC A102)
IIC9	ELECTRIC MOTORS (INCLUDING BUT NOT LIMITED TO FAN MOTORS): WHERE REQUIRED BY THE CONSTRUCTION DOCUMENTS FOR ENERGY CODE COMPLIANCE, MOTOR LISTING OR LABELS SHALL BE VISUALLY INSPECTED TO VERIFY THAT THEY COMPLY WITH THE RESPECTIVE ENERGY REQUIREMENTS IN THE CONSTRUCTION DOCUMENTS.	PRIOR TO FINAL ELECTRICAL AND CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	503.2.10; ASHRAE 90.1 - 10.4

# PROGRESS INSPECTIONS - IID - OTHER

COMMERCIAL

BPCPC MAINTENANCE FACILITY - SITE 3 MECHANICAL SYSTEMS UPGRADE

CLIMATE ZONE 4A

2010 NEW YORK CITY ENERGY CONSERVATION CODE - CHAPTER 6

No.	INSPECTION/TEST	PERIODIC (MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER 6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IID1	MAINTENANCE INFORMATION: MAINTENANCE MANUALS FOR MECHANICAL, SERVICE HOT WATER AND ELECTRICAL EQUIPMENT AND SYSTEMS REQUIRING PREVENTIVE MAINTENANCE SHALL BE REVIEWED FOR APPLICABILITY TO INSTALLED EQUIPMENT AND SYSTEMS BEFORE SUCH MANUALS ARE PROVIDED TO THE OWNER. LABELS REQUIRED FOR SUCH EQUIPMENT OR SYSTEMS SHALL BE INSPECTED FOR ACCURACY AND COMPLETENESS.	PRIOR TO SIGN-OFF OR ISSUANCE OF FINAL CERTIFICATE OF OCCUPANCY	APPROVED CONSTRUCTION DOCUMENTS, INCLUDING ELECTRICAL DRAWINGS WHERE APPLICABLE; ASHRAE GUIDELINE 4: PREPARATION OF OPERATING AND MAINTENANCE DOCUMENTATION FOR BUILDING SYSTEMS	303.3, 503.2.9.3;  ASHRAE 90.1 - 4.2.2.3, 6.7.2.2, 8.7.2

# ENERGY ANALYSIS

COMMERCIAL

BPCPC MAINTENANCE FACILITY - SITE 3 MECHANICAL SYSTEMS UPGRADE

CLIMATE ZONE 4A

2010 NEW YORK CITY ENERGY CONSERVATION CODE - CHAPTER 6

ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE PRESCRIPTIVE VALUE AND CITATION
NEW INTERIOR SUPPLY AND RETURN AIR DUCTWORK	DUCT INSULATION THICKNESS = 1.5", K = 0.27, R = 5.6	MINIMUM R-5 INSULATION (SECTION 503.2.7)
NEW HOT WATER PIPING	FOR PIPE DIAMETER ≤ 1.5", INSULATION THICKNESS = 1.5", K=0.23  FOR PIPE DIAMETER > 1.5", INSULATION THICKNESS = 2.0", K=0.23	FOR PIPE DIAMETER ≤ 1.5", MINIMUM INSULATION THICKNESS = 1.5", K=0.27  FOR PIPE DIAMETER > 1.5", MINIMUM INSULATION THICKNESS = 2.0", K=0.27 (TABLE 503.2.8)
NEW REFRIGERANT PIPING	FOR PIPE DIAMETER ≤ 1.5", INSULATION THICKNESS = 1.5", K=0.27  FOR PIPE DIAMETER > 1.5", INSULATION THICKNESS = 1.5", K=0.27	FOR PIPE DIAMETER ≤ 1.5", MINIMUM INSULATION THICKNESS = 1.5", K=0.27  FOR PIPE DIAMETER > 1.5", MINIMUM INSULATION THICKNESS = 1.5", K=0.27 (TABLE 503.2.8)
NEW GAS-FIRED HOT WATER CONDENSING BOILER B-2	INPUT CAPACITY = 500,000 BTU/H THERMAL EFFICIENCY = 93.3%	300,000 BTU/H ≤ INPUT CAPACITY ≤ 2,500,000 BTU/H MINIMUM COMBUSTION EFFICIENCY = 80% MINIMUM THERMAL EFFICIENCY = 75% (TABLE 503.2.3(5))
AIR COOLED PACKAGED CHILLER		

STATEMENT OF COMPLIANCE:  
TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE. PROPOSED WORK MEETS THE GUIDELINES AND PRESCRIPTIONS OUTLINED IN THE 2010 NYCECC.

# NEW YORK CITY DEPARTMENT OF

# BUILDINGS

# LIST OF REQUIRED SPECIAL INSPECTIONS

INSPECTION/TEST	PERIODIC (MINIMUM)	CODE/SECTION
MECHANICAL SYSTEMS	AS REQUIRED DURING INSTALLATION	BC 1704.15
HEATING SYSTEMS	AS REQUIRED DURING INSTALLATION	BC 1704.23
FIRESTOP, DRAFTSTOP, AND FIREBLOCK SYSTEMS	AS REQUIRED DURING INSTALLATION	BC 1704.25

# NEW YORK CITY DEPARTMENT OF

# BUILDINGS

# LIST OF REQUIRED PROGRESS INSPECTIONS

INSPECTION/TEST	PERIODIC (MINIMUM)	CODE/SECTION
ENERGY CODE COMPLIANCE INSPECTIONS	AS REQUIRED DURING INSTALLATION	BC 109.3.5
FINAL INSPECTION	PRIOR TO CERTIFICATE OF OCCUPANCY OR LETTER OF OCCUPANCY	28-116.2.4.2 BC 109.5 DIRECTIVE 14 OF 1975 1 RCNY 101-10

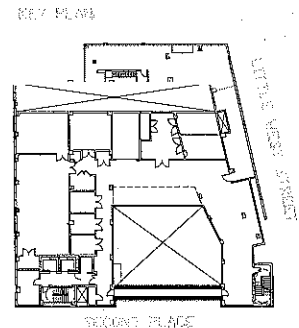


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75 BATTERY PLACE, NY



2	65% REVIEW	2/21/14
1	PROGRESS SET	1/31/14
No.	ISSUE OR REVISION	DATE

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PROJECT TITLE

BPCPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE

ENERGY CODE  
ANALYSIS AND LIST  
OF PROGRESS INSPECTIONS

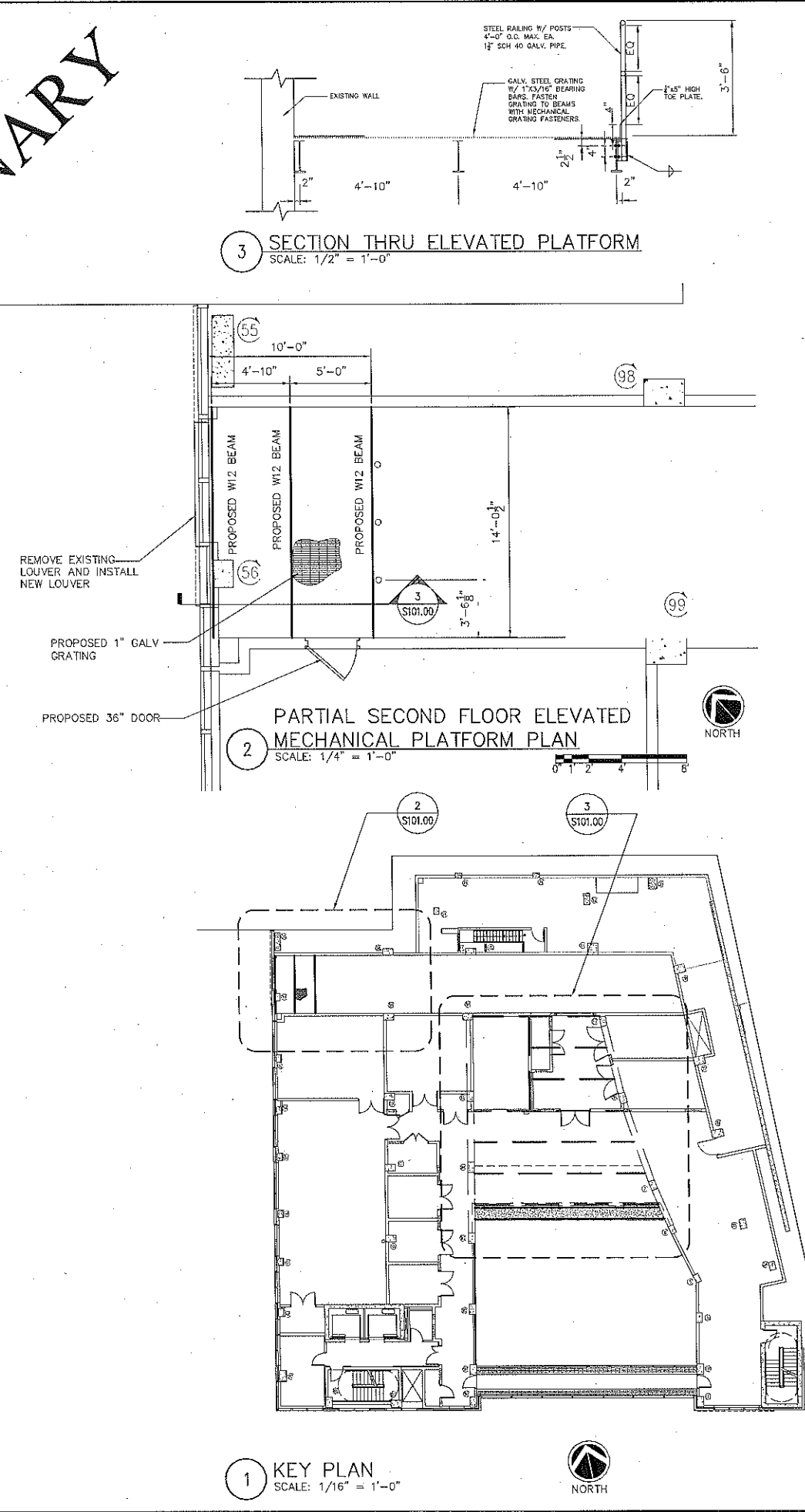
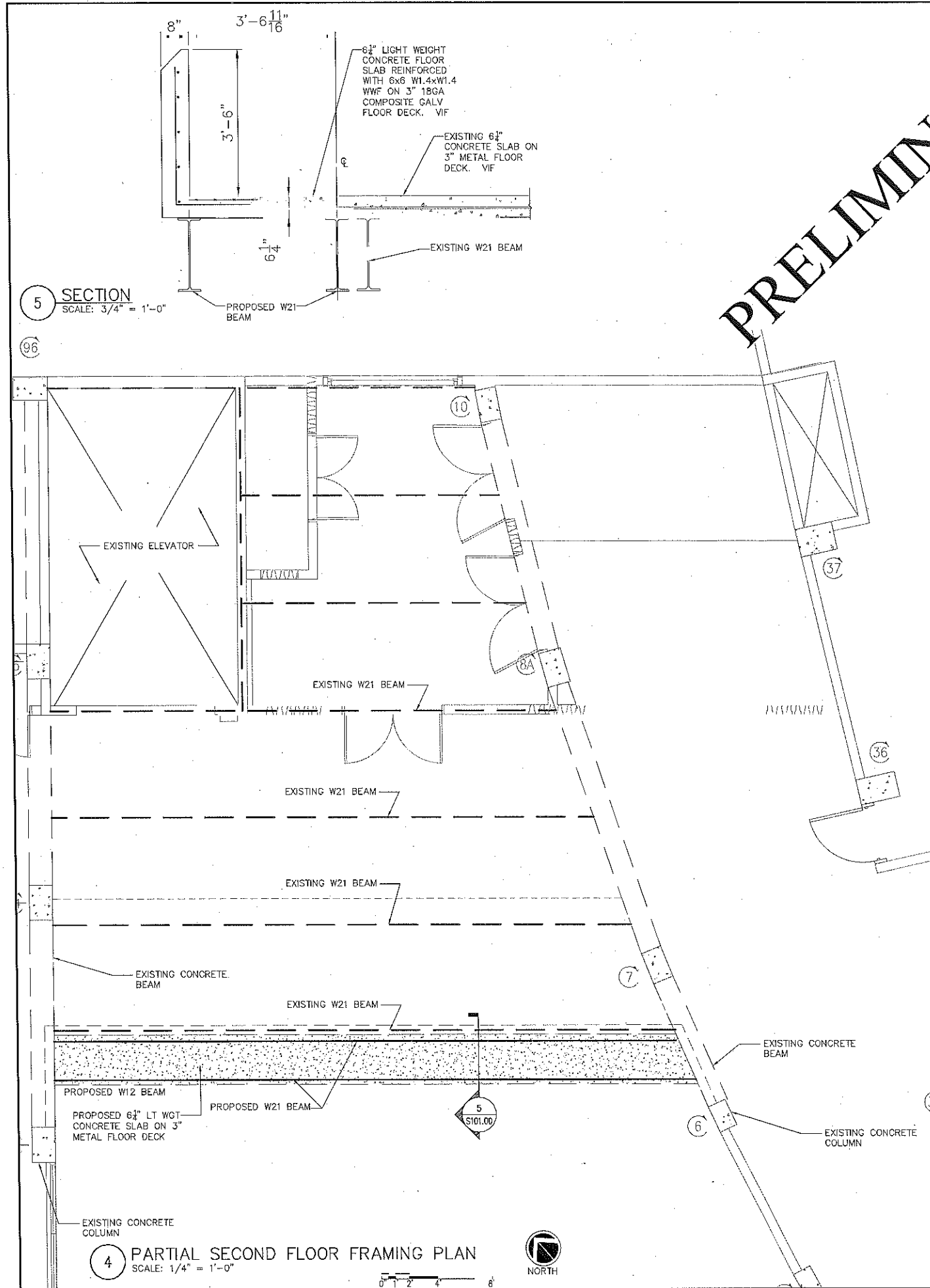
SCALE

AS NOTED  
DATE 1/31/14  
DRAWING NO. EN-001.00

PROJECT NO. NBP000002.00  
DRAWN/CHK BY KS/JK

NYC DOB NUMBER

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**BATTERY PARK CITY AUTHORITY**  
BPCPC MAINTENANCE FACILITY  
75 BATTERY PLACE, NY

**STRUCTURAL ENGINEER**  
**BSES**  
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Tel 860-620-1777 Fax 860-628-9219  
helmut@bseinc.com

**BATTERY PLACE**  
**LITTLE WEST STREET**  
**SECOND PLACE**

2	65% FOR REVIEW	2/21/14
1	SCHEMATIC DESIGN	1/21/14
No.	ISSUE OR REVISION	DATE

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**PROJECT TITLE**  
BPCPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE

**DRAWING TITLE**  
SECOND FLOOR PARTIAL FRAMING PLAN


**SCALE**  
AS NOTED  
DATE 1/21/14  
DRAWING NO. S-101.00

**PROJECT NO.**  
NBPC0002.00  
DRAWN/CHK BY HEJ / JK

**NYC DOB NUMBER**

# SYMBOL & ABBREVIATIONS

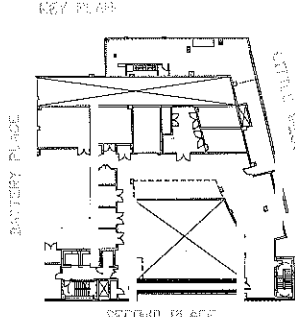
SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
—	AC—	AIR CONDITIONING UNIT	—	—	3-WAY VALVE	—	DS —	DIESEL SUPPLY	—	—	DUCT RISE
—	ACC—	AIR COOLED CONDENSING UNIT	—	—	FLEXIBLE CONNECTION	—	DR —	DIESEL RETURN	—	—	DUCT DROP
—	AD —	ACCESS DOOR	—	—	2-WAY VALVE	—	GLS —	GLYCOL SUPPLY	—	—	DUCT TRANSITION
—	AFF	ABOVE FINISHED FLOOR	—	—	PLUG VALVE	—	GLR —	GLYCOL RETURN	—	—	ALUMINUM DUCT
—	AHC	ABOVE HUNG CEILING	—	—	LOCK SHIELD VALVE	—	HPS —	HIGH PRESSURE STEAM SUPPLY	—	AL	ACOUSTIC LINING
—	AHU—	AIR HANDLING UNIT	—	—	GATE VALVE	—	HPR —	HIGH PRESSURE STEAM RETURN	—	FD/AD	FIRE DAMPER W/ ACCESS DOOR
—	AP	ACCESS PANEL	—	—	GLOBE VALVE	—	MPS —	MEDIUM PRESSURE STEAM SUPPLY	—	SD/AD	SMOKE DAMPER W/ ACCESS DOOR
—	BDD	BACKDRAFT DAMPER	—	—	TEE DOWN	—	MPR —	MEDIUM PRESSURE STEAM RETURN	—	CFSD	COMBINATION FIRE/SMOKE DAMPER W/ ACCESS DOOR
—	BHP	BRAKE HORSEPOWER	—	—	ELBOW DOWN	—	LPS —	LOW PRESSURE STEAM SUPPLY	—	VD	VOLUME DAMPER
—	BTU	BRITISH THERMAL UNIT	—	—	TEE UP	—	LPR —	LOW PRESSURE STEAM RETURN	—	AL	ACOUSTIC LINING
—	CFM	CUBIC FEET PER MINUTE	—	—	ELBOW UP	—	HWS —	HOT WATER SUPPLY	—	—	DUCT SIZE — 1ST FIGURE IS SIDE SHOWN
—	CH—	CABINET HEATER	—	—	CONCENTRIC REDUCER	—	HWR —	HOT WATER RETURN	—	FC	FLEXIBLE CONNECTION
—	CL	CENTERLINE	—	—	ECCENTRIC REDUCER	—	PD —	PUMP DISCHARGE, CONDENSATE	—	—	ALUMINUM DUCT
—	CP—	CONDENSATE PUMP	—	—	OS&Y GATE VALVE	—	RL —	REFRIGERANT LIQUID	—	—	SECTION CALLOUT
—	DB	DRY BULB TEMPERATURE	—	—	PIPE GUIDE	—	RS —	REFRIGERANT SUCTION	—	—	—
—	DIA. OR Ø	DIAMETER	—	—	PIPE ANCHOR	—	HG —	REFRIGERANT HOT GAS	—	—	—
—	DX	DIRECT EXPANSION	—	—	STRAINER	—	—	—	—	—	—
—	EA	EXHAUST AIR	—	—	BASKET STRAINER	—	—	—	—	—	—
—	EAT	ENTERING AIR TEMPERATURE	—	—	PRESSURE REDUCING	—	—	—	—	—	—
—	EF—	EXHAUST FAN	—	—	FLOW ARROW	—	—	—	—	—	—
—	EL	ELEVATION	—	—	BUTTERFLY	—	—	—	—	—	—
—	ER	EXHAUST REGISTER	—	—	BALANCING VALVE	—	—	—	—	—	—
—	ESP	EXTERNAL STATIC PRESSURE	—	—	MANUAL AIR VENT	—	—	—	—	—	—
—	EWI	ENTERING WATER TEMPERATURE	—	—	AUTO AIR VENT	—	—	—	—	—	—
—	FCU—	FAN COIL UNIT	—	—	SOLENOID VALVE	—	—	—	—	—	—
—	FPM	FEET PER MINUTE	—	—	MOTORIZED VALVE	—	—	—	—	—	—
—	FPS	FEET PER SECOND	—	—	ANGLE GLOBE VALVE	—	—	—	—	—	—
—	FTR	FINNED TUBE RADIATION	—	—	ANGLE GATE VALVE	—	—	—	—	—	—
—	GPM	GALLONS PER MINUTE	—	—	T&P RELIEF VALVE	—	—	—	—	—	—
—	HP	HORSE POWER	—	—	FILTER DRYER	—	—	—	—	—	—
—	HV—	HEATING AND VENTILATING UNIT	—	—	FILTER	—	—	—	—	—	—
—	HVAC—	HEATING, VENTILATING AND AIR CONDITIONING UNIT	—	—	FLOAT AND THERMOSTATIC TRAP	—	—	—	—	—	—
—	KX—	KITCHEN EXHAUST	—	—	FLOAT TRAP	—	—	—	—	—	—
—	LAT	LEAVING AIR TEMPERATURE	—	—	BALL VALVE	—	—	—	—	—	—
—	LF	LINEAR FEET	—	—	PRESSURE GAGE	—	—	—	—	—	—
—	LWT	LEAVING WATER TEMPERATURE	—	—	THERMOMETER	—	—	—	—	—	—
—	MBH	1000 BRITISH THERMAL UNITS PER HOUR	—	—	CHECK VALVE	—	—	—	—	—	—
—	MER	MECHANICAL EQUIPMENT ROOM	—	—	UNION	—	—	—	—	—	—
—	NC	NORMALLY CLOSED	—	—	—	—	—	—	—	—	—
—	NIC	NOT IN CONTRACT	—	—	—	—	—	—	—	—	—
—	NO	NORMALLY OPEN	—	—	—	—	—	—	—	—	—
—	OAI	OUTSIDE AIR INTAKE	—	—	—	—	—	—	—	—	—
—	PSI	POUNDS PER SQUARE INCH	—	—	—	—	—	—	—	—	—
—	RA	RETURN AIR	—	—	—	—	—	—	—	—	—
—	RF—	RETURN FAN	—	—	—	—	—	—	—	—	—
—	RPM	REVOLUTIONS PER MINUTE	—	EX.	EXISTING TO REMAIN	—	—	—	—	—	—
—	RTU—	ROOFTOP UNIT	—	REL.	REMOVE AND RELOCATE	—	—	—	—	—	—
—	SA	SUPPLY AIR	—	NEW	NEW WORK	—	—	—	—	—	—
—	SP	STATIC PRESSURE	—	DEM.	EXISTING TO BE REMOVED	—	—	—	—	—	—
—	TD	TRANSFER DUCT	—	—	COMPRESSED AIR	—	—	—	—	—	—
—	TDH	TOTAL DYNAMIC HEAD	—	—	CHILLED WATER SUPPLY	—	—	—	—	—	—
—	TF—	TRANSFER FAN	—	—	CHILLED WATER RETURN	—	—	—	—	—	—
—	TSP	TOTAL STATIC PRESSURE	—	—	CONDENSER WATER SUPPLY	—	—	—	—	—	—
—	TYP.	TYPICAL	—	—	CONDENSER WATER RETURN	—	—	—	—	—	—
—	U.O.N.	UNLESS OTHERWISE NOTED	—	—	DRAIN	—	—	—	—	—	—
—	UV—	UNIT VENTILATOR	—	—	VACUUM LINE	—	—	—	—	—	—
—	WB	WET BULB TEMPERATURE	—	—	FUEL OIL SUPPLY	—	—	—	—	—	—
—	WG	INCHES OF WATER GAUGE	—	—	FUEL OIL RETURN	—	—	—	—	—	—
—	WMS	WIRE MESH SCREEN	—	—	FUEL OIL VENT	—	—	—	—	—	—



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**75 BATTERY PLACE, NY**



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PROJECT TITLE

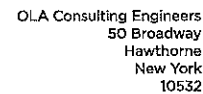
**BPCPC  
MAINTENANCE FACILITY**  
SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE

**MECHANICAL SYMBOLS  
AND ABBREVIATIONS**

SCALE	AS NOTED	PROJECT NO.
DATE	1/31/14	NRPC0002.00
DRAWING NO.	M-001.00	
1 PAGE OF 36		

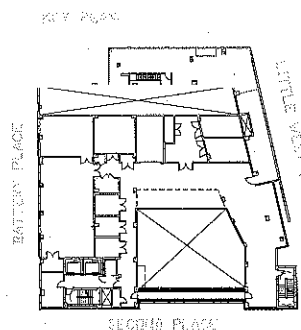
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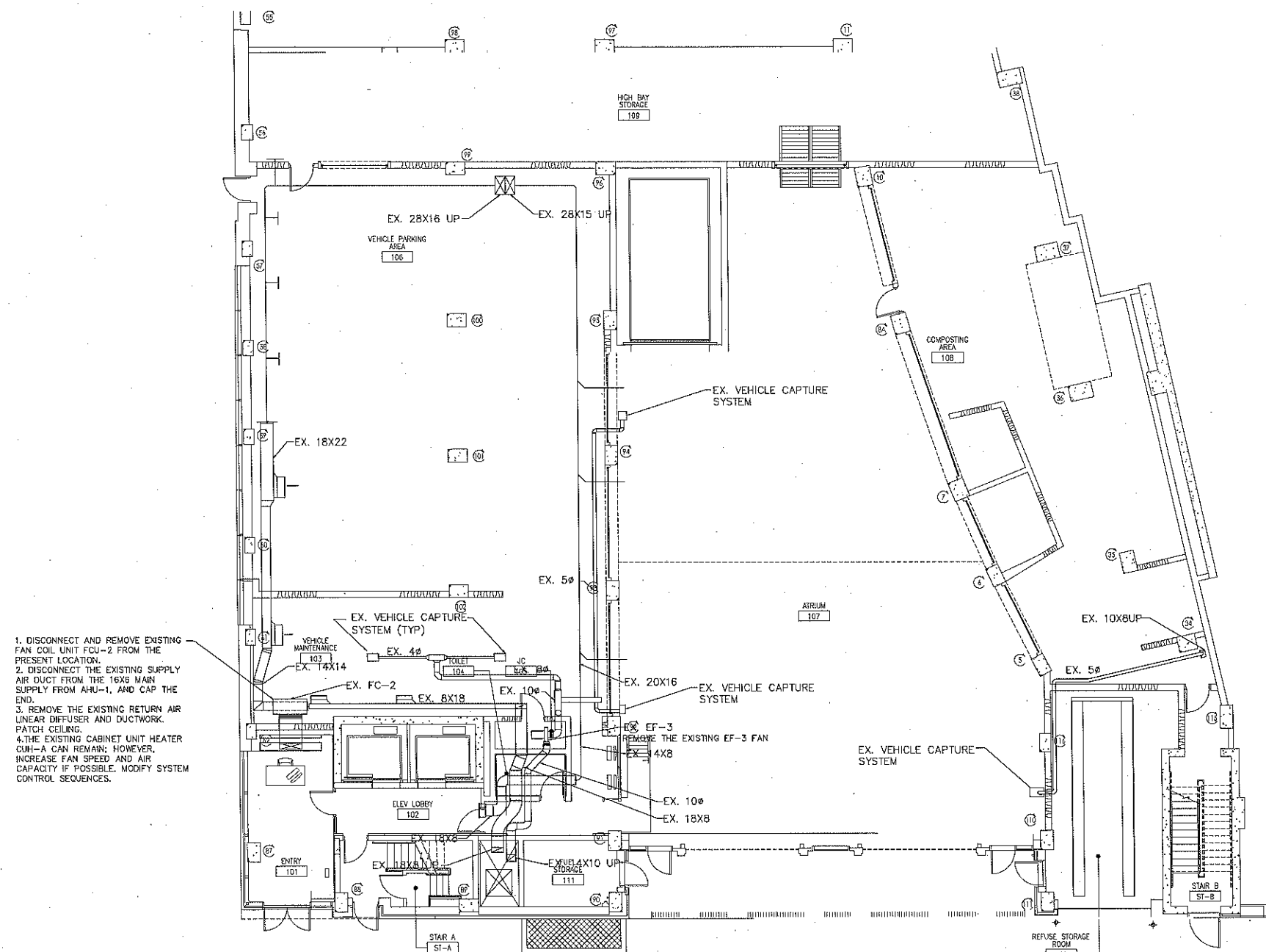
**FIRST FLOOR MECHANICAL  
DEMOLITION PLAN**

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SCALE AS NOTED	PROJECT NO. NBPC000
DATE 1/31/14	DRAWN/CHK KS/JL
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1ST FLOOR MECHANICAL DEMOLITION PLAN  
SCALE: 1/8" = 1'-0"

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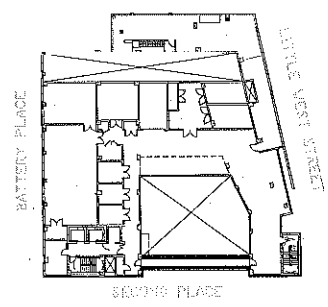
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DRAWING TITLE

**SECOND FLOOR MECHANICAL  
DEMOLITION PLAN**

SEAL

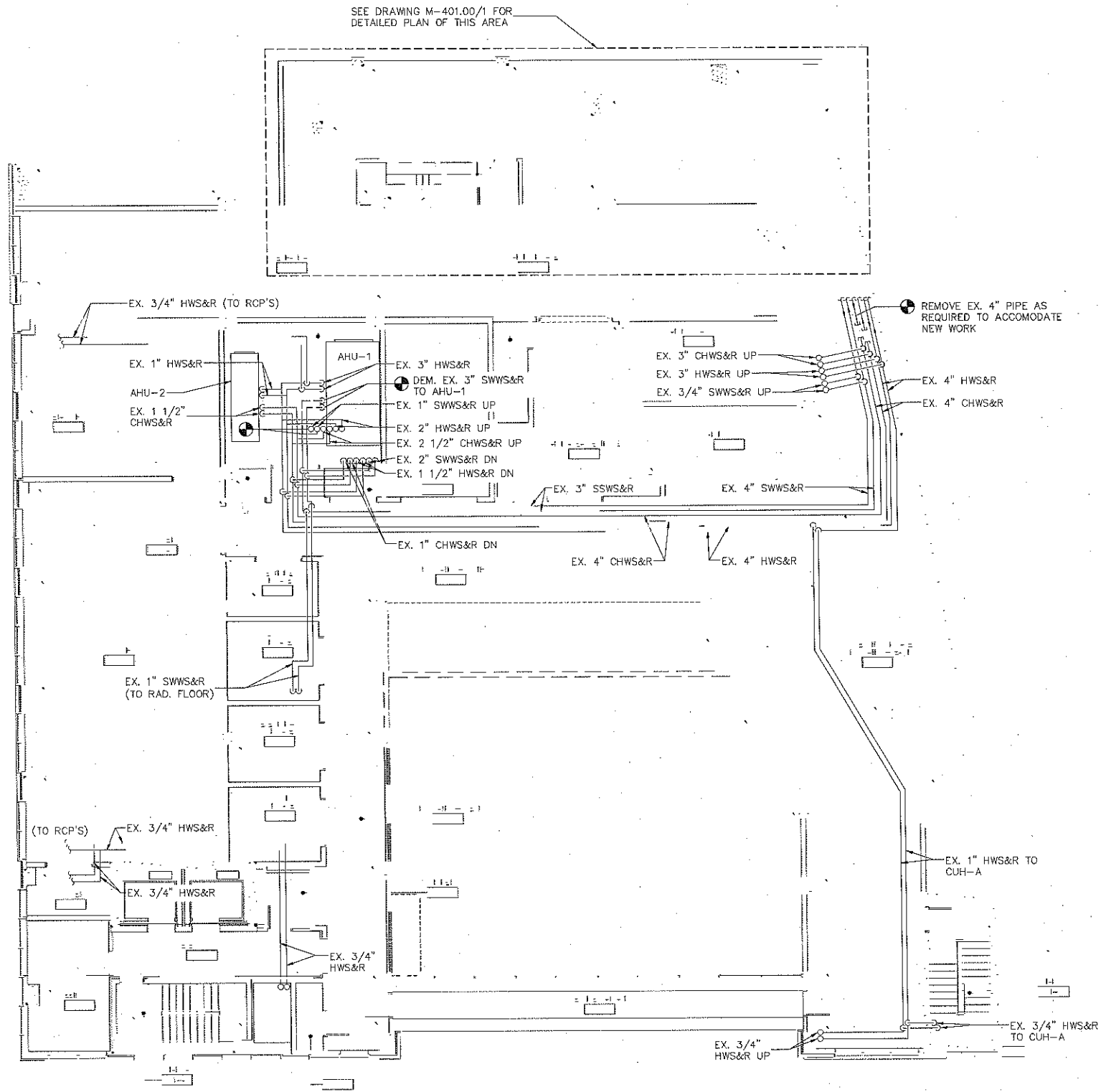
SCALE  
AS NOTED  
DATE  
1/3/14  
DRAWING NO.

PROJECT NO.  
NBPC000200  
DRAWN/CHK BY  
KS/KK

**M-102.00**

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**1 2ND FLOOR MECHANICAL DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"

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SECOND FLOOR

LITTLE WEST STREET

No.	ISSUE OR REVISION	DATE
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1	PROGRESS BET	7/31/4

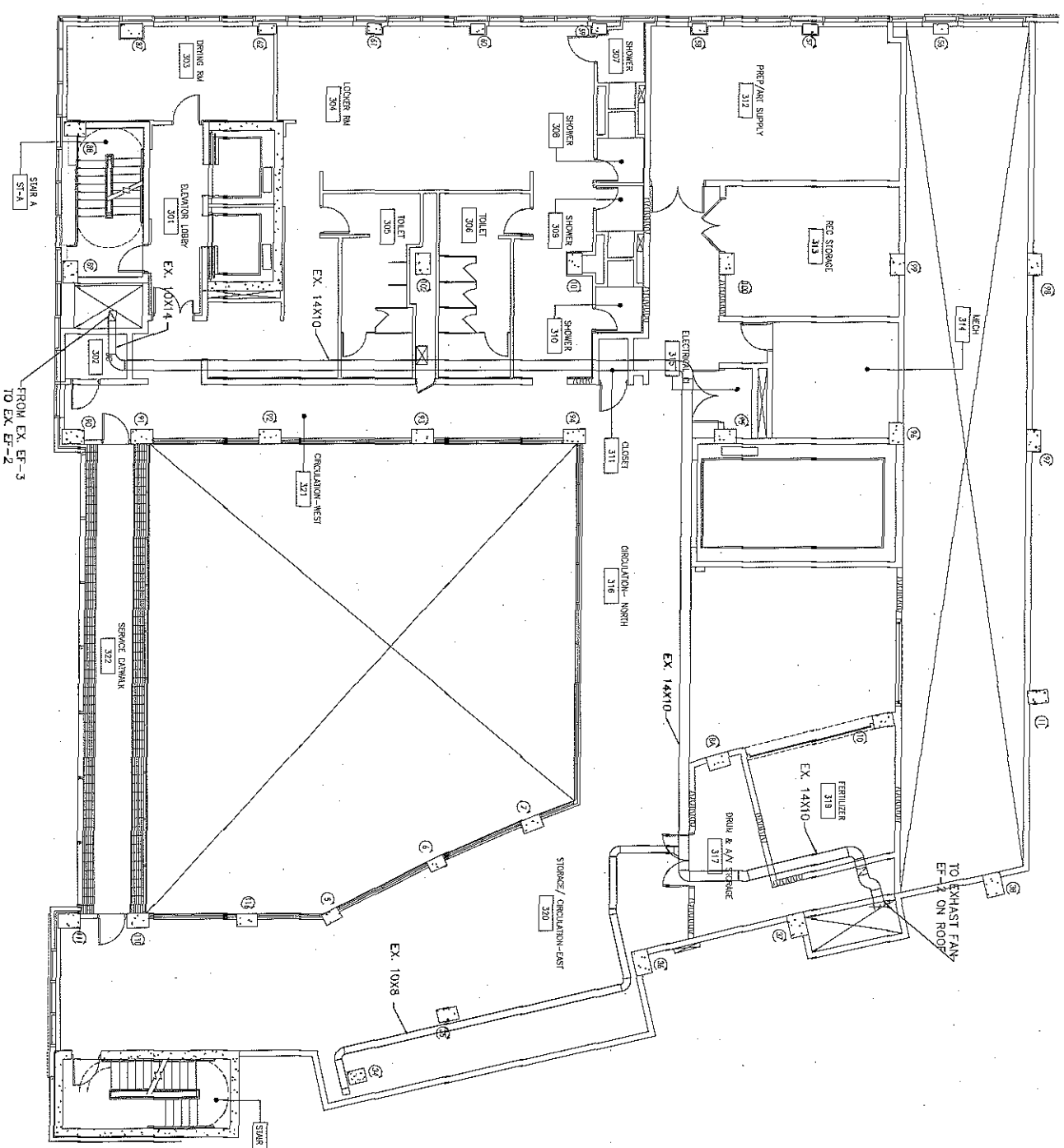
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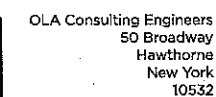
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DRAWING NO.	
M-103.00	
PAGE 6 OF 8	

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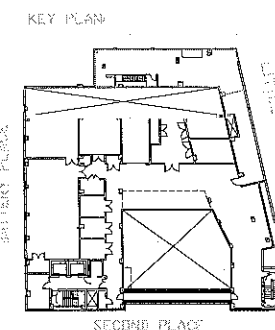


1 THIRD FLOOR MECHANICAL DEMOLITION PLAN  
SCALE: 1/8" = 1'-0"  
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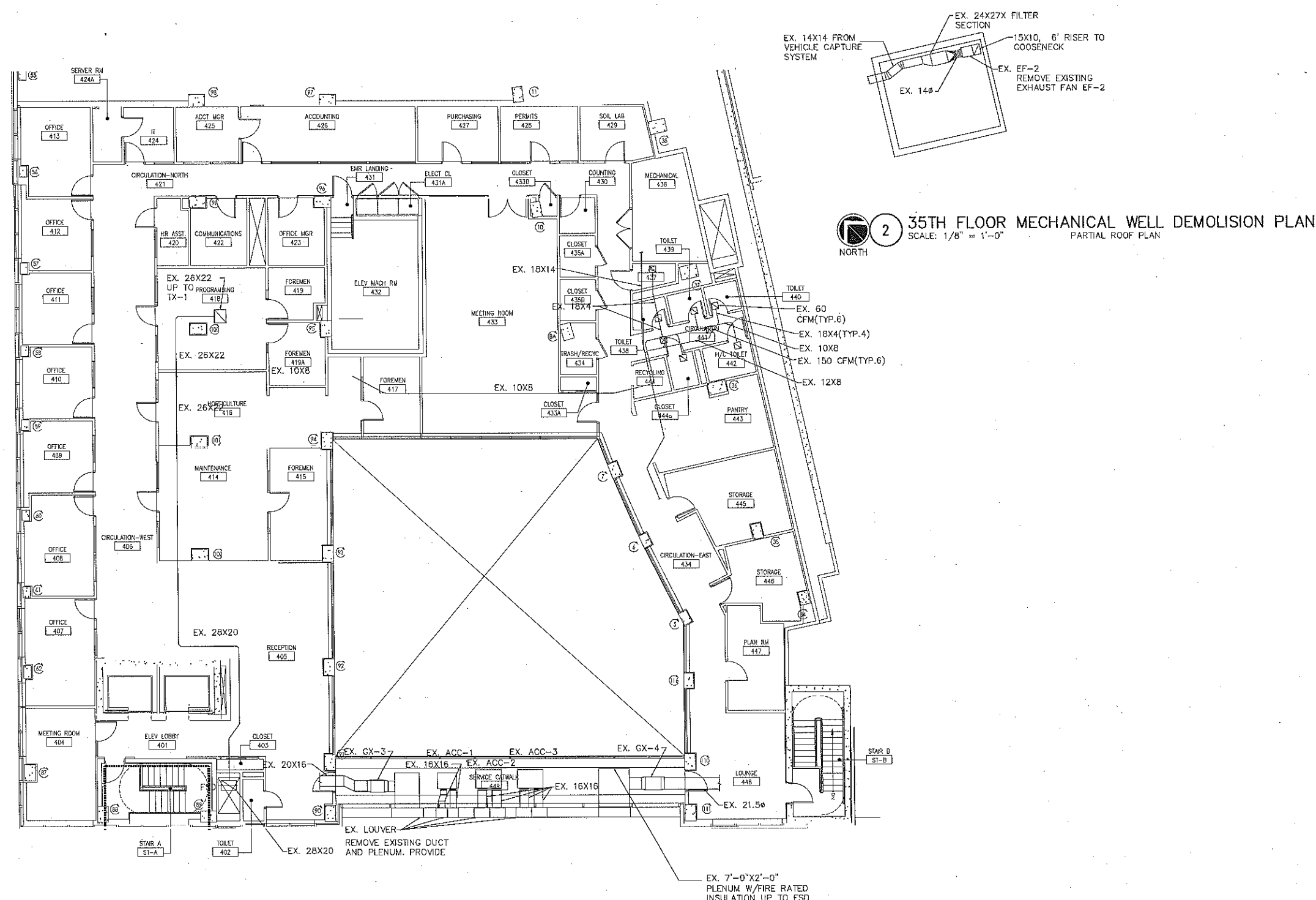
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DRAWING TITLE

**FOURTH FLOOR MECHANICAL  
DEMOLITION PLAN**

SEAL	SCALE	PROJECT NO.
	AS NOTED	NBPC0002
	DATE	DRAWN/CHK' E
	1/31/14	KS/JK
	DRAWING NO.	
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	1 PAGE 6 OF 6	

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 1 4TH FLOOR MECHANICAL DEMOLITION PLAN  
SCALE: 1/8" = 1'-0"

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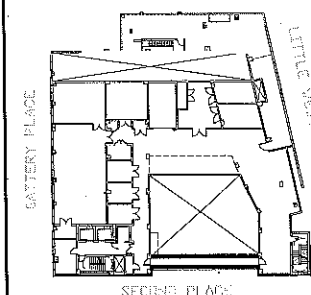
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DRAWING TITLE

FIRST FLOOR MECHANICAL  
NEW WORK PLAN

SEAL

SCALE  
AS NOTED  
DATE  
1/31/14  
DRAWING NO.

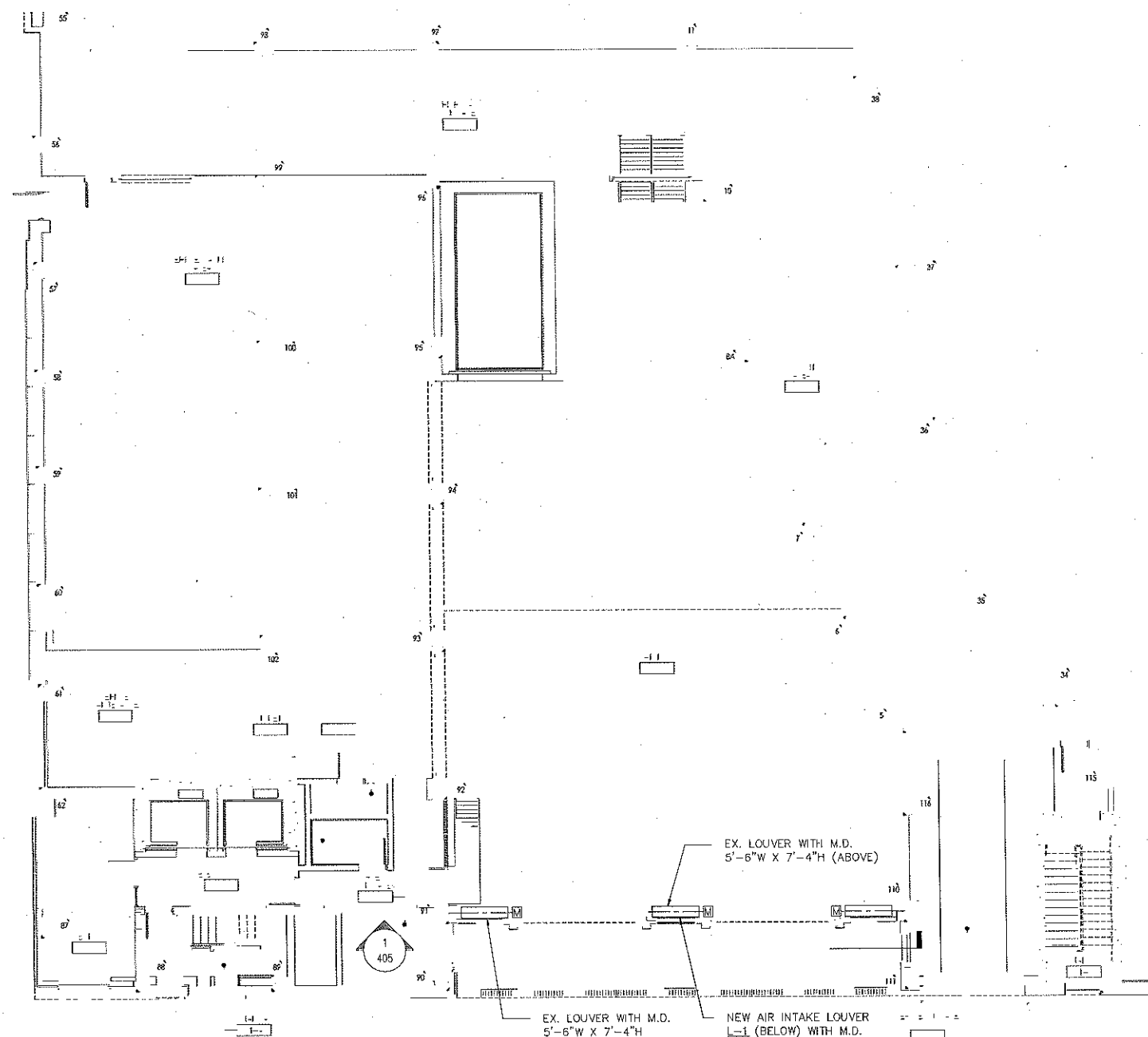
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NBPC000200

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NYC DOB NUMBER



1 1ST FLOOR MECHANICAL NEW WORK PLAN — PIPING  
SCALE: 1/8" = 1'-0"



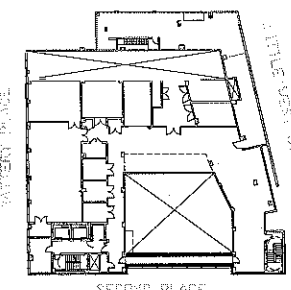
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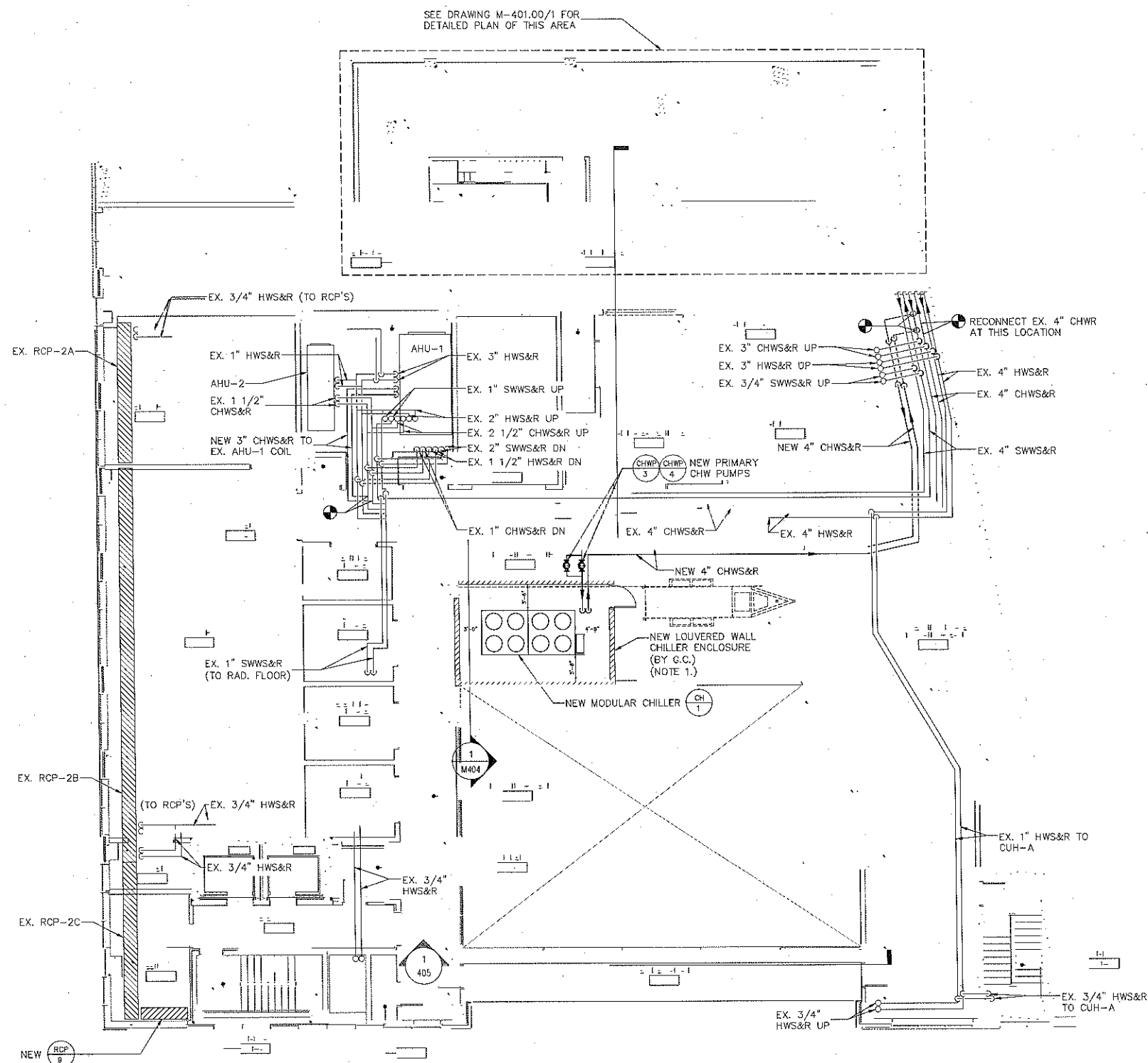
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DRAWING TITLE  
**SECOND FLOOR MECHANICAL  
NEW WORK PLAN  
PIPING**

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PAGE 10 OF 38

NYC DOB NUMBER



**1 2ND FLOOR MECHANICAL NEW WORK PLAN - PIPING**  
SCALE: 1/8" = 1'-0"

NOTES:  
1. THE ACOUSTICAL ENCLOSURE SHALL BE DESIGNED WITH PANELS THAT CAN YIELD A MINIMUM STC 35 RATING, SUCH AS THE TYPE H/P 38 QUIETMOD PANELS BY NOISE BARRIERS, LLC. DOORS AND VENTILATION OPENINGS SHALL BE DESIGNED WITH THE APPROPRIATE NOISE CONTROL MEASURES SO AS TO MAINTAIN THE ACOUSTICAL PERFORMANCE OF THE ENCLOSURE



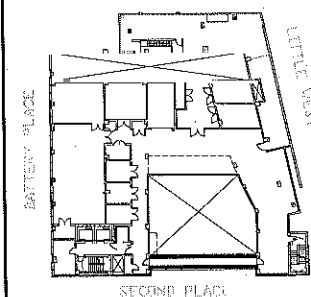
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THIRD FLOOR MECHANICAL  
NEW WORK PLAN

SCALE

SCALE

AS NOTED

DATE

1/31/14

DRAWING NO.

M-203.00

PROJECT NO.

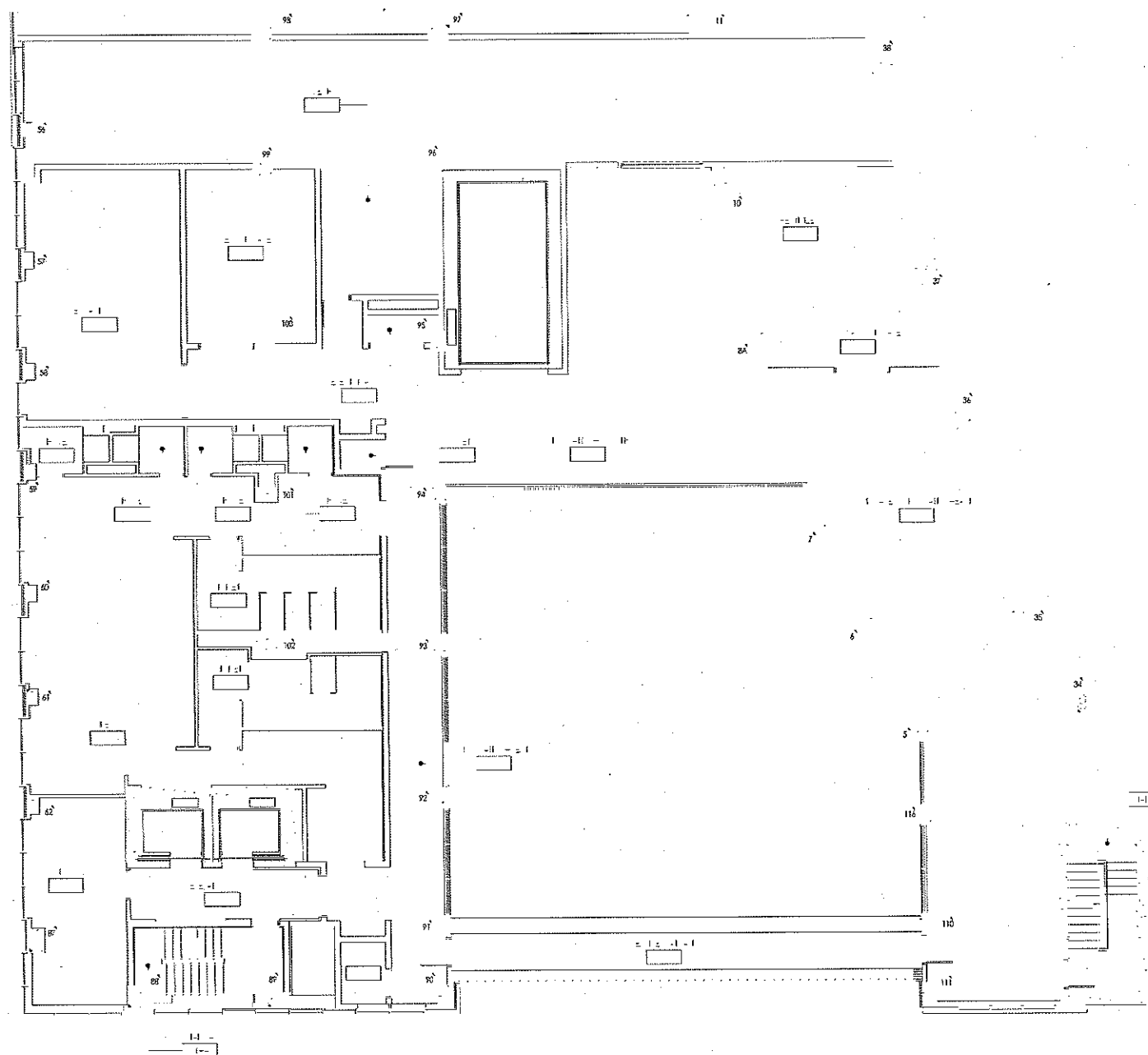
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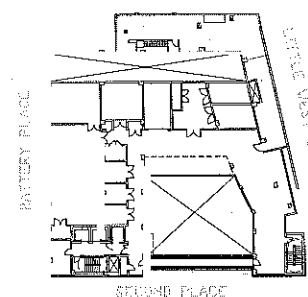
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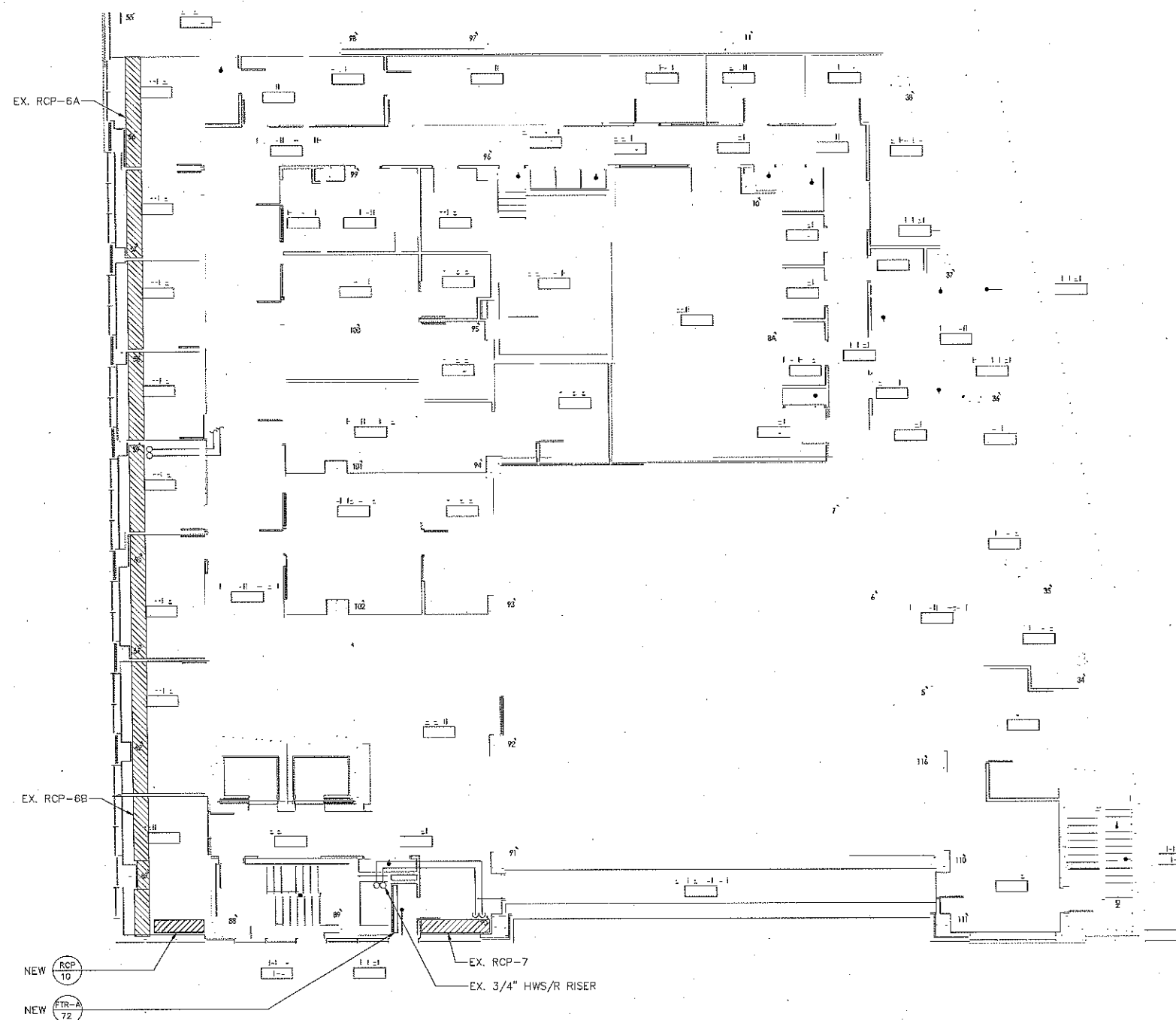
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DRAWING TITLE

FOURTH FLOOR MECHANICAL  
NEW WORK PLAN

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DATE	1/31/14	NBPC0002.00
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M-204.00		KS/JK
PAGE 12 OF 38		

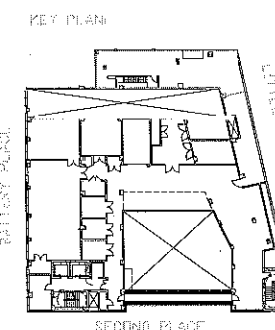
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1 4TH FLOOR MECHANICAL NEW WORK PLAN -- PIPING  
SCALE: 1/8" = 1'-0"

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SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE

**FIRST FLOOR MECHANICAL  
NEW WORK PLAN**

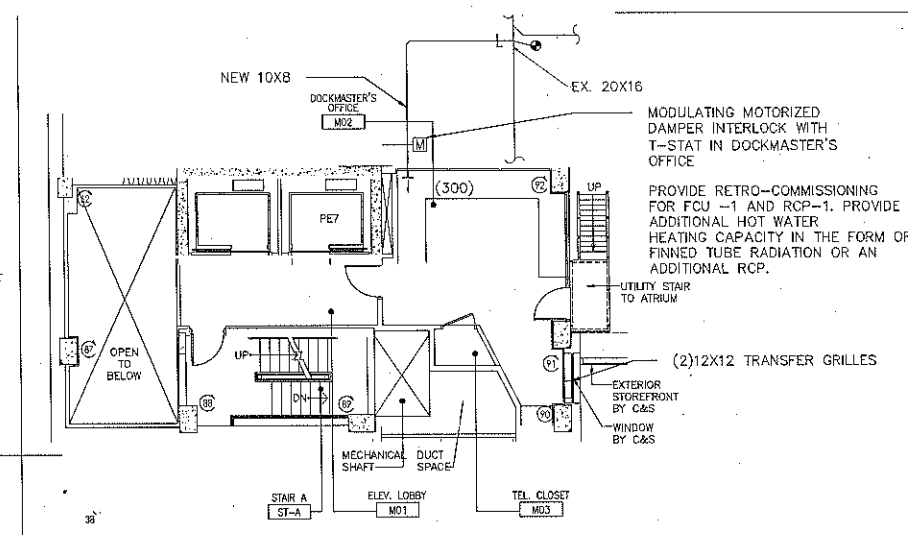
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SCALE	PROJECT NO.
AS NOTED	NBPC000200
DATE	DRAWN/CHK BY
1/31/14	KS/JK
DRAWING NO.	

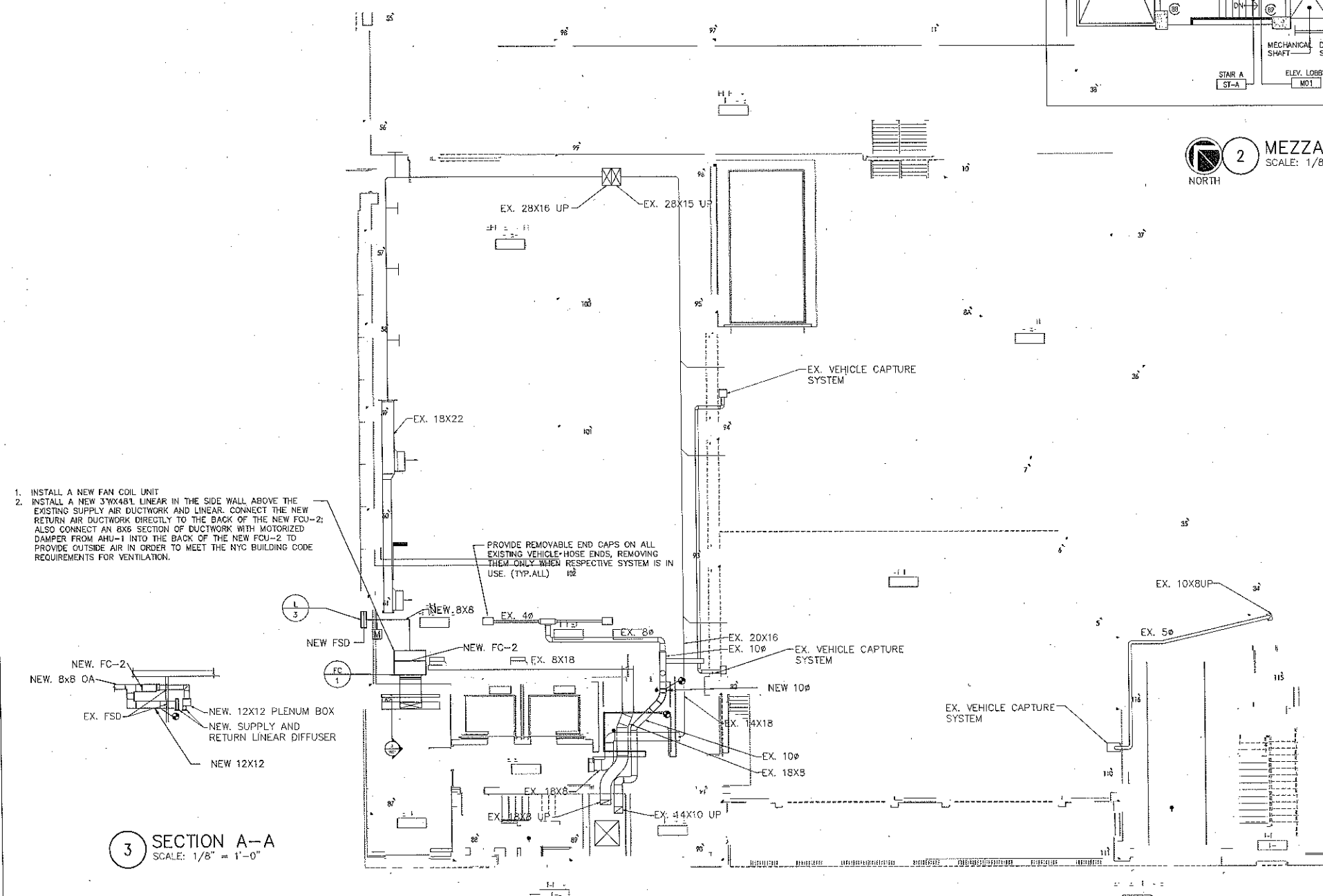
M-205.00

NYC DOB NUMBER


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Engineering PC



MEZZANINE DOCKMASTER'S OFFICE-HVAC  
SCALE: 1/8" = 1'-0"



3 SECTION A-A  
SCALE: 1/8" = 1'-0"

 1ST FLOOR MECHANICAL NEW DUCTWORK PLAN - HVAC  
SCALE: 1/8" = 1'-0"



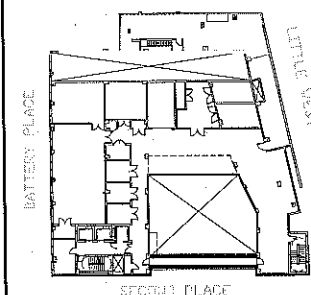
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SECOND FLOOR MECHANICAL  
NEW DUCTWORK PLAN

SCALE AS NOTED	PROJECT NO. NBPC0000200
DATE 1/31/14	DRAWN/CHK BY KS/JK
DRAWING NO. M-206.00	

NYC DOB NUMBER

PAGE 14 OF 38

NEW FAI LOUVERS  
L-2 AND L-3  
WITH M.D.  
(30,000 CFM)

NEW FRESH AIR  
INTAKE FAN

42"X42"

36"X25" FAI UP

AIR INTAKE PLENUM

NEW SERVICE  
PLATFORM (BY G.C.)

33"X36" FAI

EX, 36"X30" FAI

NEW LOUVER L-4  
FOR WELDING  
HOOD EXHAUST

NEW EXHAUST  
FAN FOR  
WELDING HOOD



2ND FLOOR MECHANICAL NEW DUCTWORK PLAN  
SCALE: 1/8" = 1'-0"

NOTES:

1. REFER TO M-206.01 FOR  
ADDITIONAL WORK ON THIS FLOOR



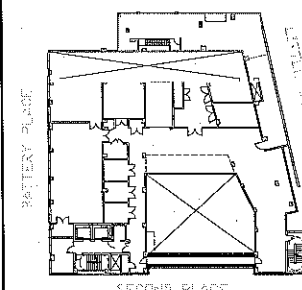
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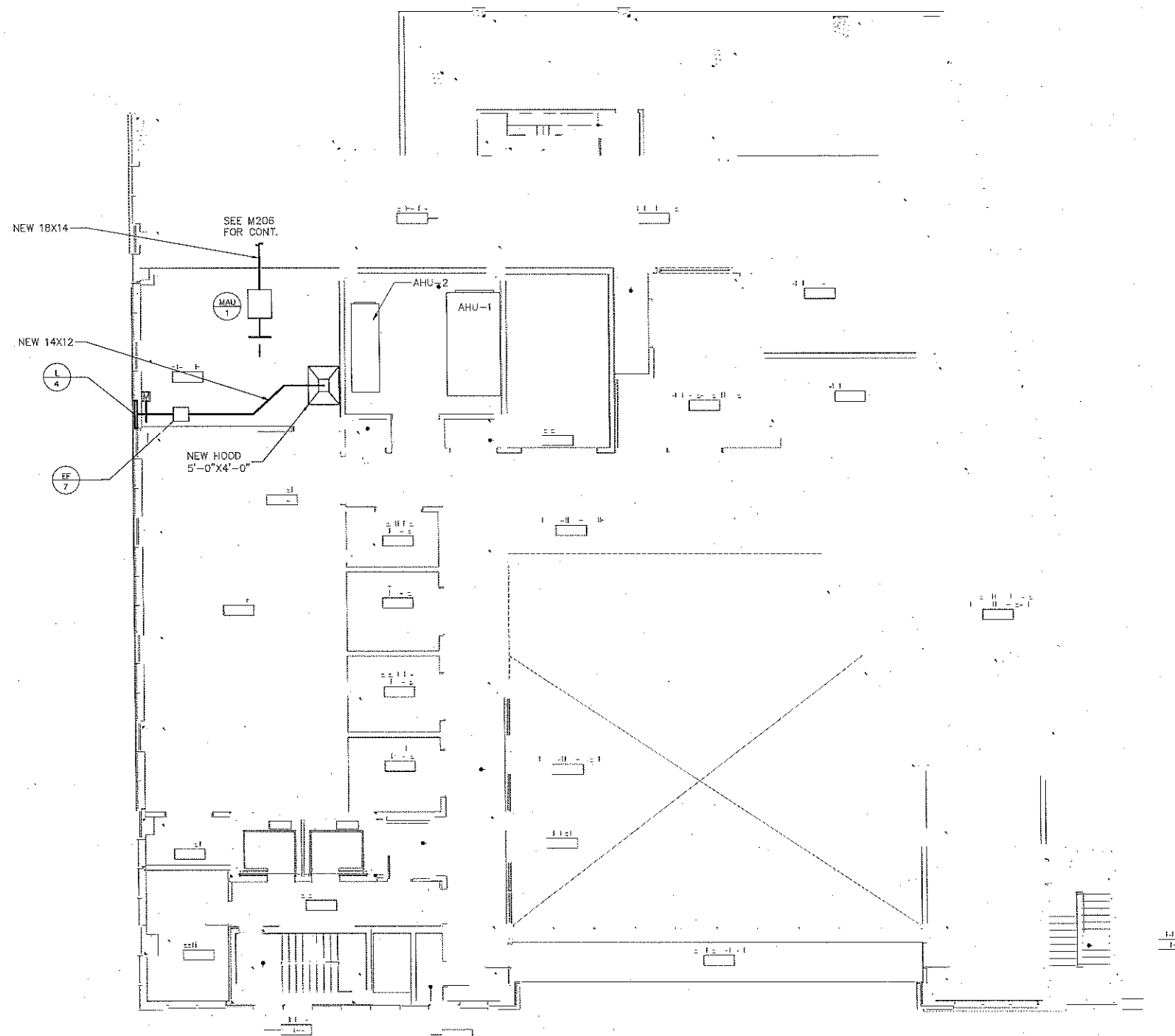
DRAWING TITLE

**SECOND FLOOR MECHANICAL  
NEW WORK PLAN  
PIPING**

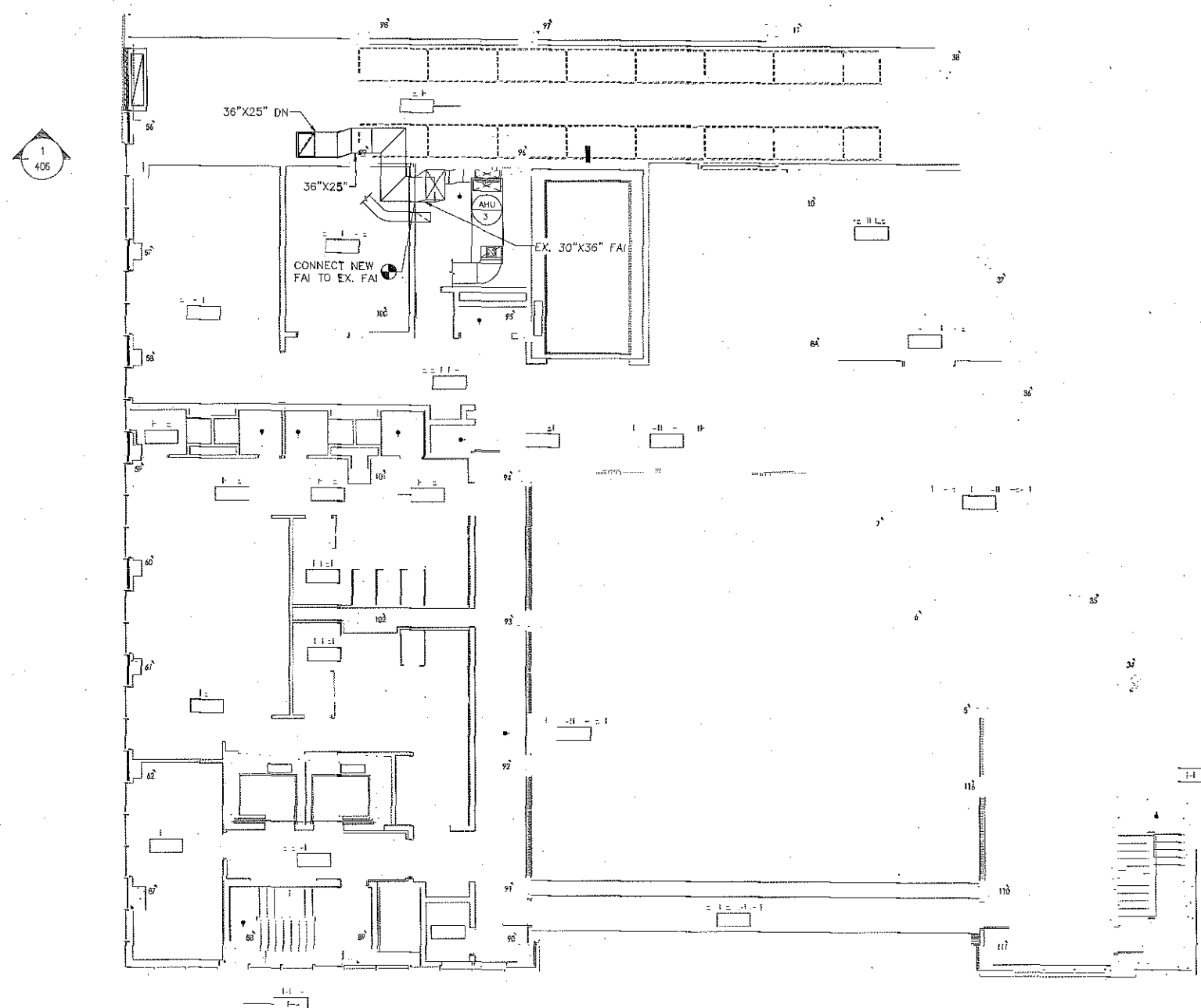
SCALE AS NOTED	PROJECT NO. NBPC0002.00
DATE 1/31/14	DRAWN/CHK BY KS/UK
DRAWING NO. <b>M-206.01</b>	PAGE 6 OF 27


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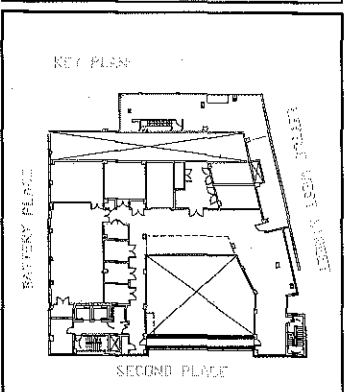
**1 2ND FLOOR MECHANICAL NEW DUCTWORK PLAN — HVAC**  
SCALE: 1/8" = 1'-0"




**1** 3RD FLOOR MECHANICAL NEW DUCTWORK PLAN  
 SCALE: 1/8" = 1'-0"

NOTES:  
 1. REFER TO M-207.01 FOR  
 ADDITIONAL WORK ON THIS FLOOR

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DRAWING TITLE  
 THIRD FLOOR MECHANICAL  
 NEW DUCTWORK PLAN

SEAL  
 SCALE AS NOTED  
 DATE 1/31/14  
 DRAWING NO. M-207.00  
 PROJECT NO. NEPC000200  
 DRAWN/CHK BY KSA/JK  
 1 PAGE 18 OF 38

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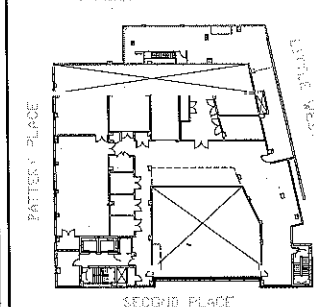
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DRAWING TITLE

THIRD FLOOR MECHANICAL  
NEW WORK PLAN

SEAL

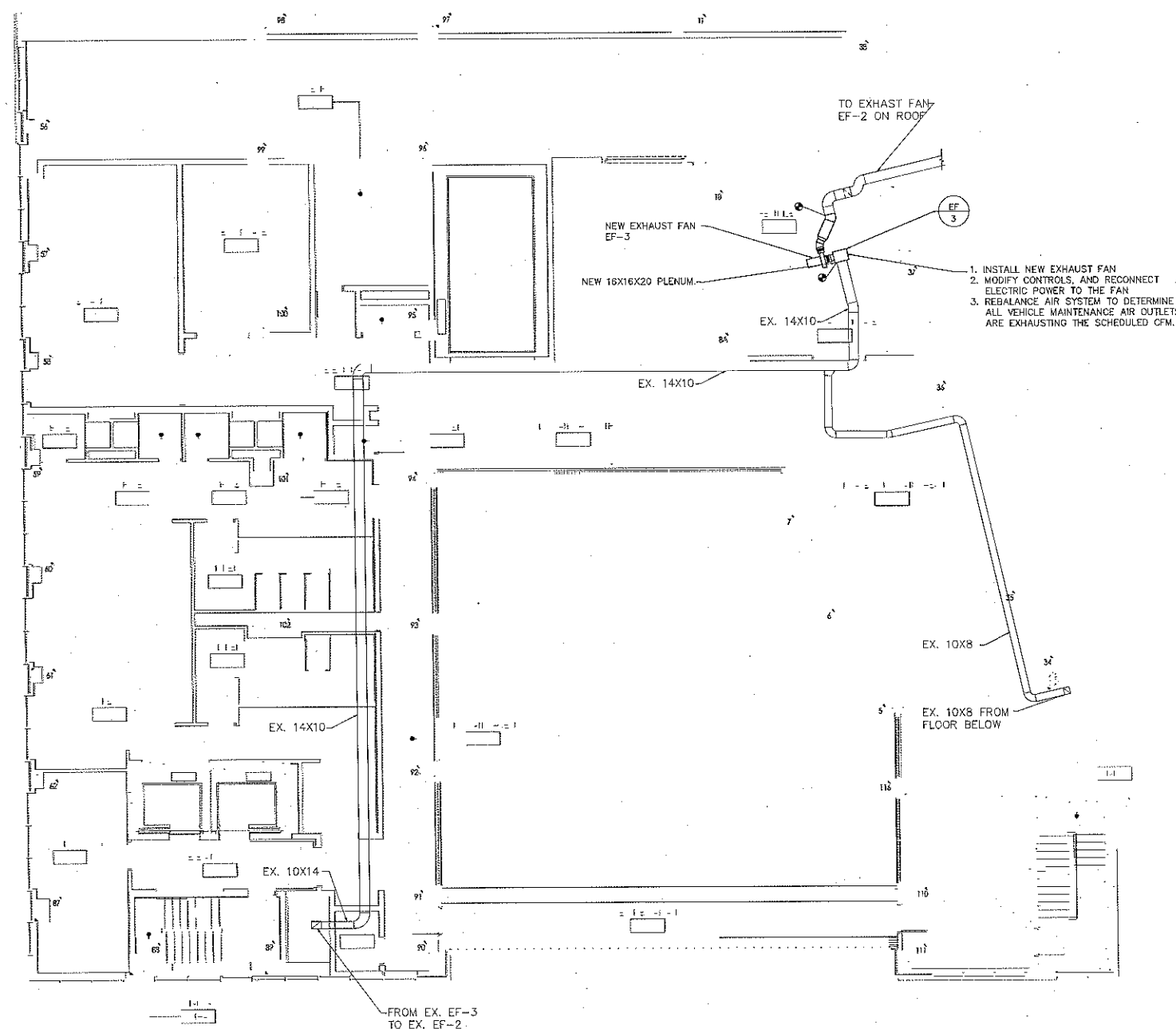
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DRAWING NO.

PROJECT NO.  
NBPC0000200  
DRAWN/CHK. BY  
KS/JK

M-207.01

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NYC DOB NUMBER



3RD FLOOR MECHANICAL NEW DUCTWORK PLAN - HVAC  
SCALE: 1/8" = 1'-0"

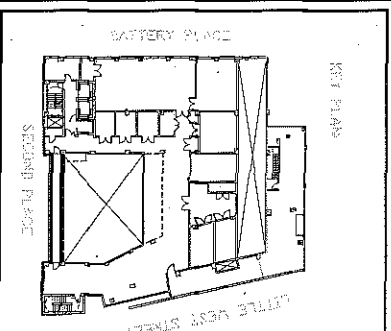
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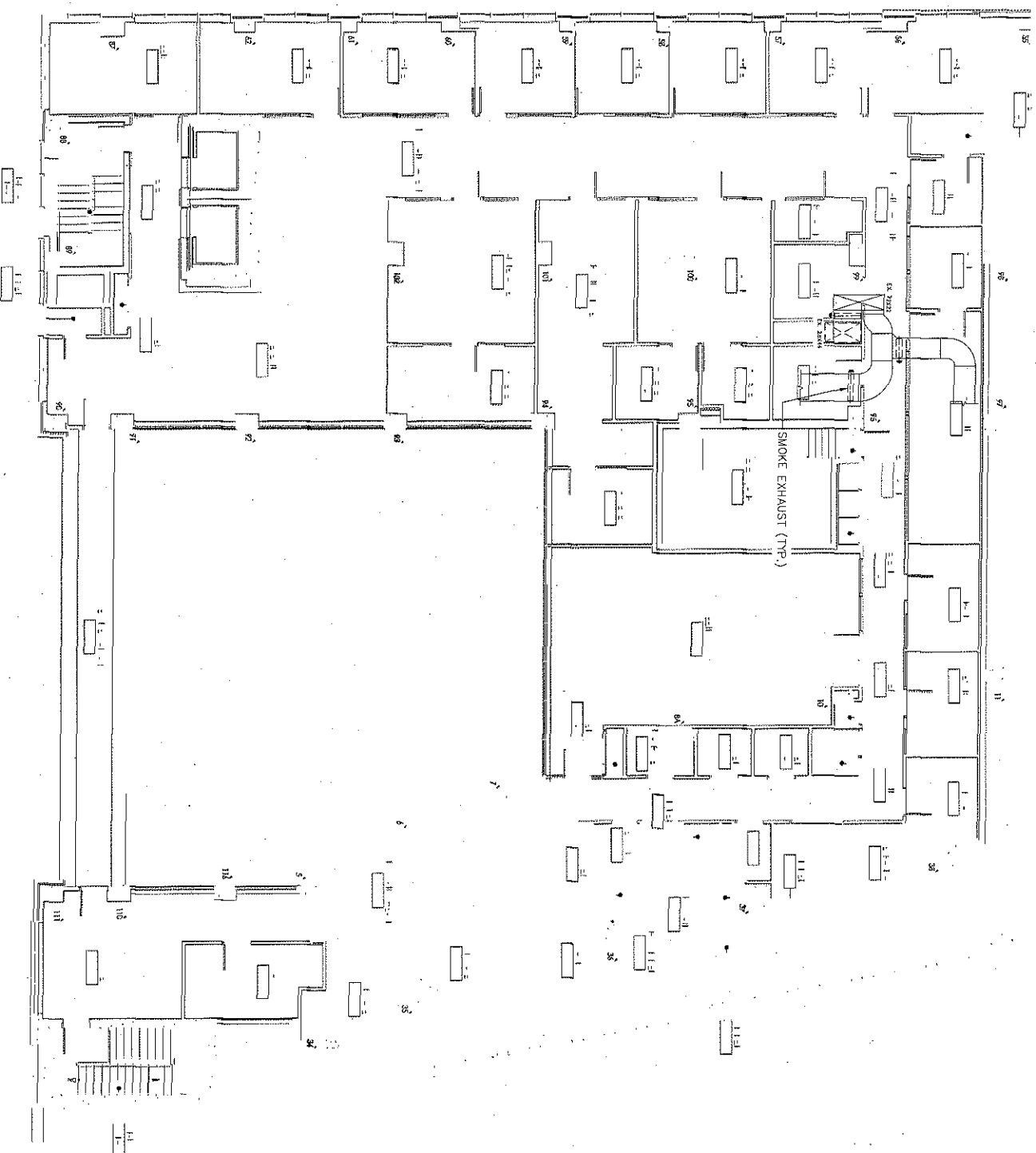
**BP/CP  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE**

DRAFTING TITLE

**FOURTH FLOOR MECHANICAL  
NEW DUCTWORK PLAN**

SCALE		PROJECT NO.	
AS NOTED		NBP-CORR-20	
DATE	1/27/14	ISSUED/CHK BY	
DRAWING NO.		KSL/KK	
M-208.00			
PAGE 15 OF 15			

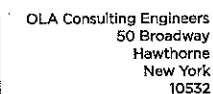
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NOTES:

1. REFER TO M-208.01 FOR  
ADDITIONAL WORK ON THIS FLOOR

4TH FLOOR MECHANICAL NEW DUCTWORK PLAN  
1  
SCALE: 1/8" = 1'-0"  
NORTH

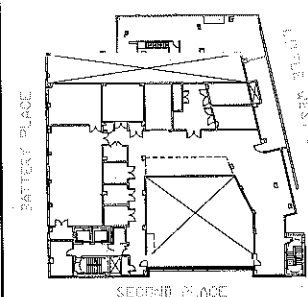


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## KEY POINTS



2	65% REVIEW	2/21/14
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SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE

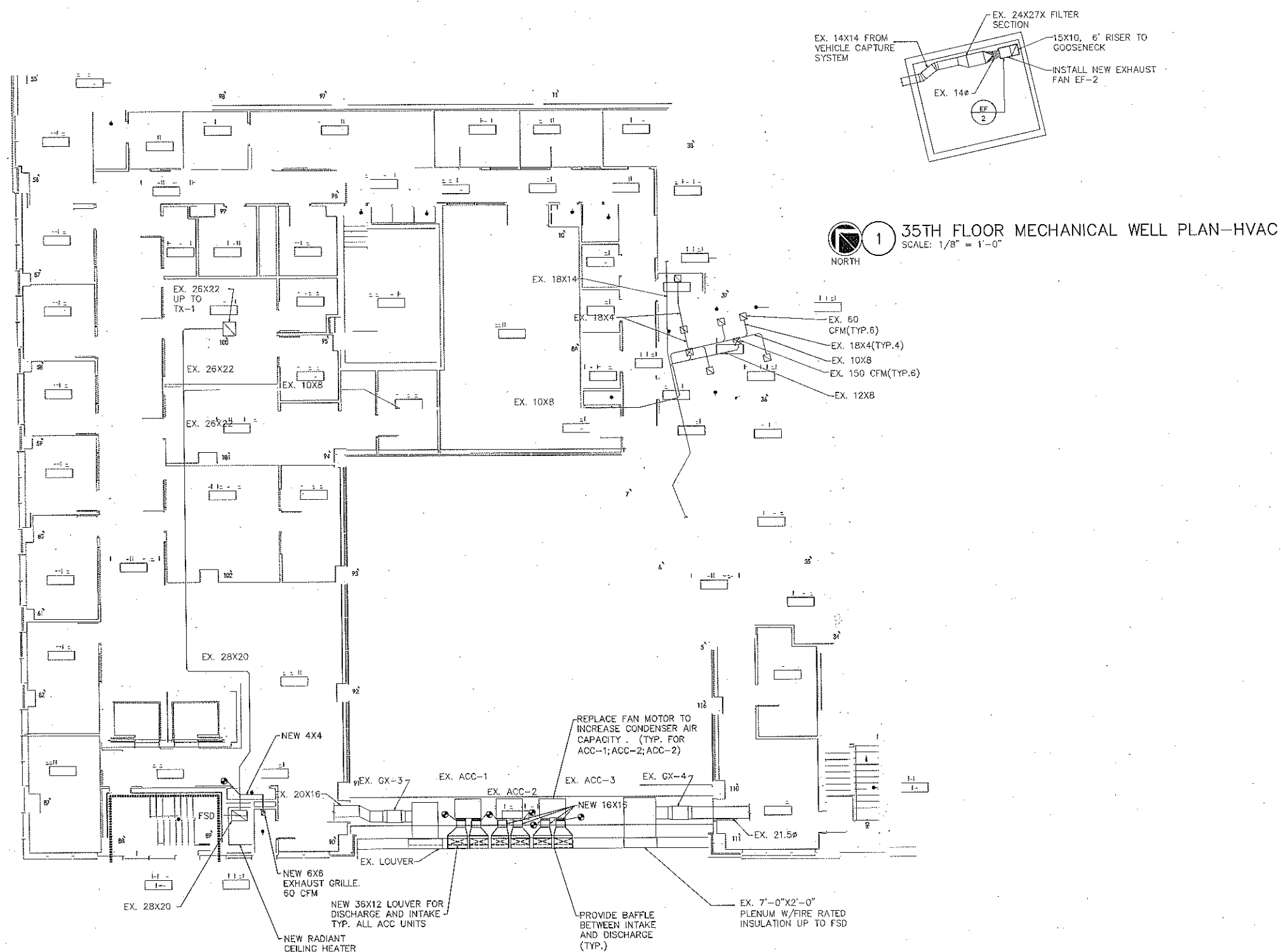
FOURTH FLOOR MECHANICAL  
NEW WORK PLAN

SEARCH

SCALE AS NOTED	PROJECT NO. NBPC000200
DATE 1/31/14	DRAWN/CHK BY KS/JK
DRAWING NO.	

**M-208.01**

INFC DOB NUMBER



4TH FLOOR MECHANICAL NEW DUCTWORK PLAN - HVAC  
SCALE: 1/8" = 1'-0"

**AVCON**  
Engineering PC

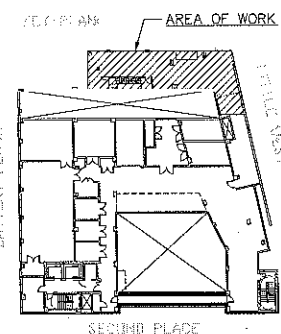


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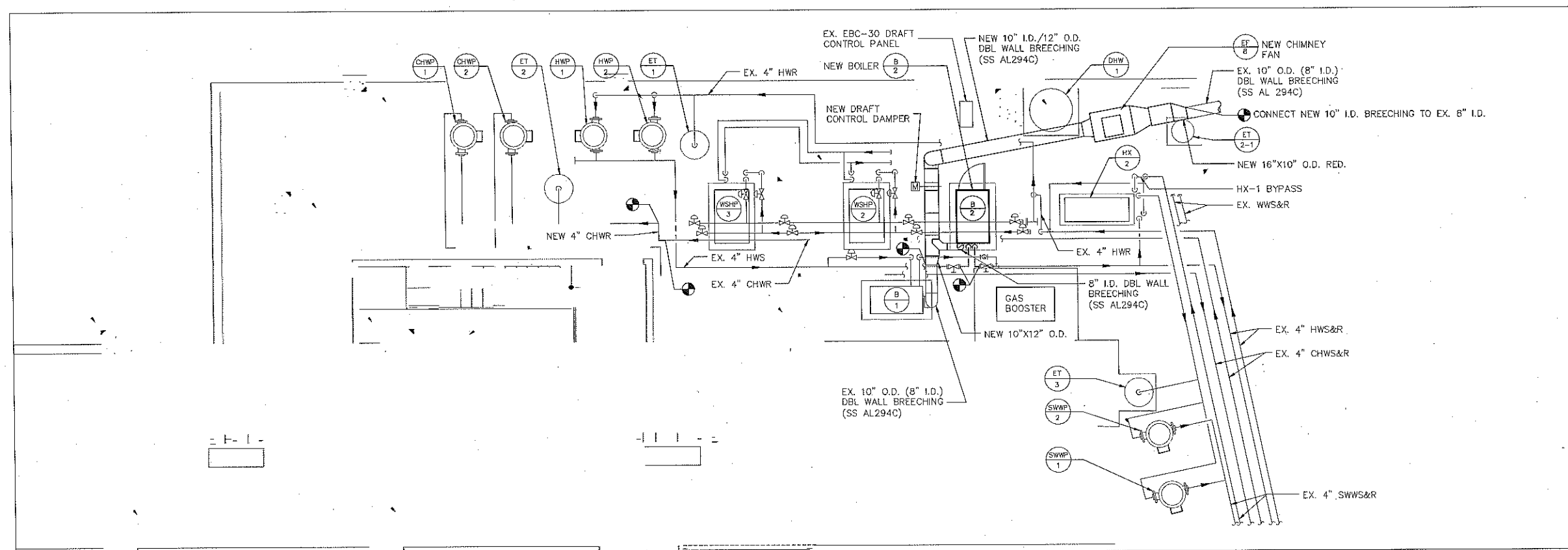
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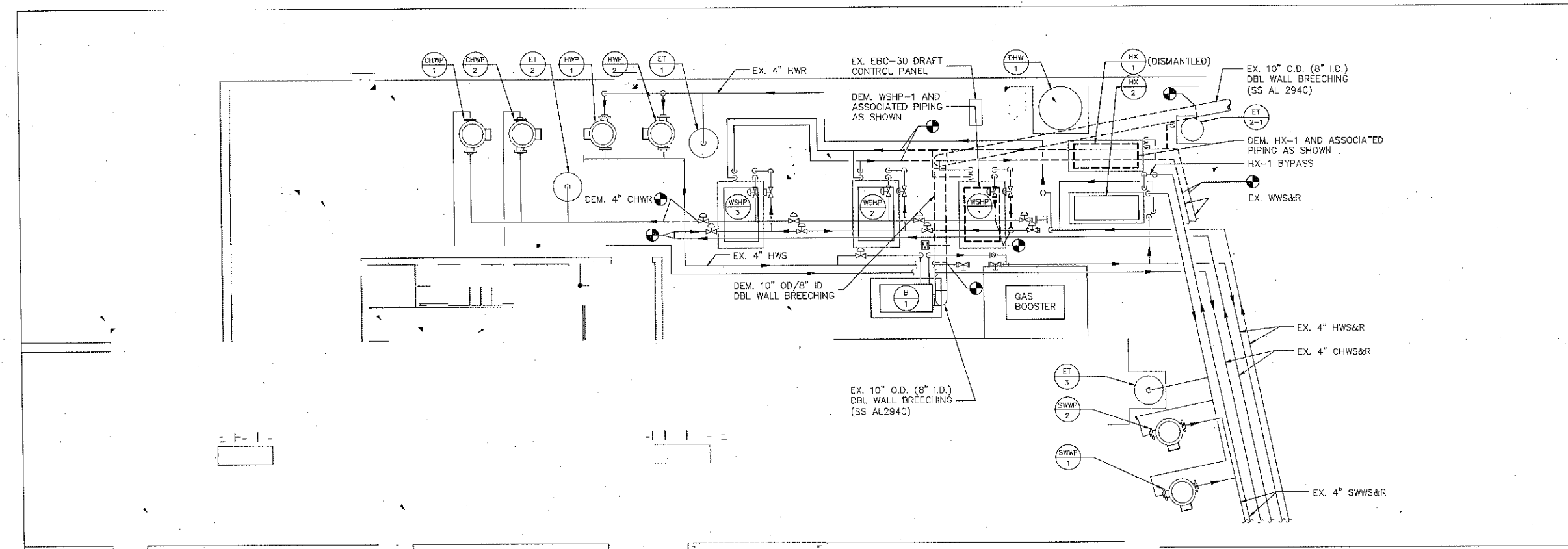
DRAWING TITLE  
**MECHANICAL BOILER ROOM  
DEMOLITION AND NEW  
WORK PARTIAL PLANS**

SCALE AS NOTED	PROJECT NO. NBPC0002.00
DATE 1/31/14	DRAWN/CHK BY KS/UK
DRAWING NO. <b>M-401.00</b>	PAGE 20 OF 38

NYC DOB NUMBER



**2 MECHANICAL BOILER ROOM NEW WORK PARTIAL PLAN**  
SCALE: 1/4" = 1'-0"  
NORTH



**1 MECHANICAL BOILER ROOM DEMOLITION PARTIAL PLAN**  
SCALE: 1/4" = 1'-0"  
NORTH



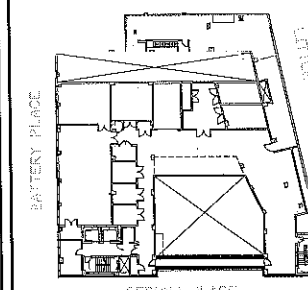
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2 11TH FLOOR FAN ROOM SECTION  
SCALE: 3/8" = 1'-0"  
NORTH

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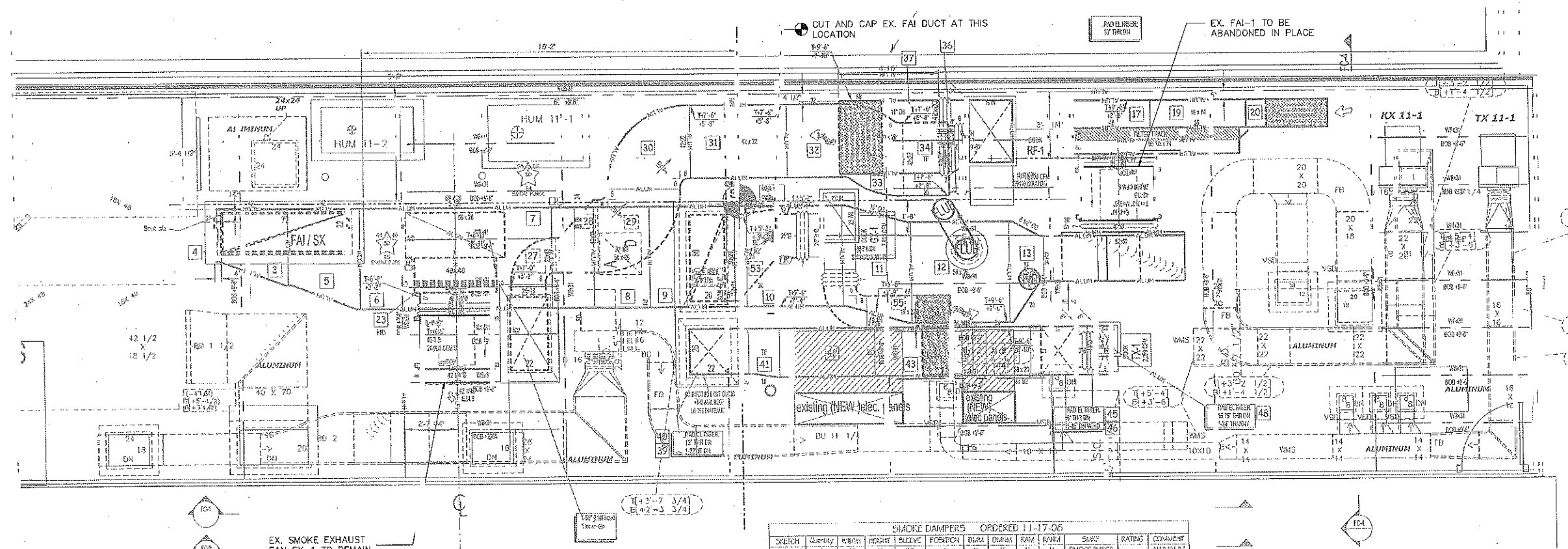
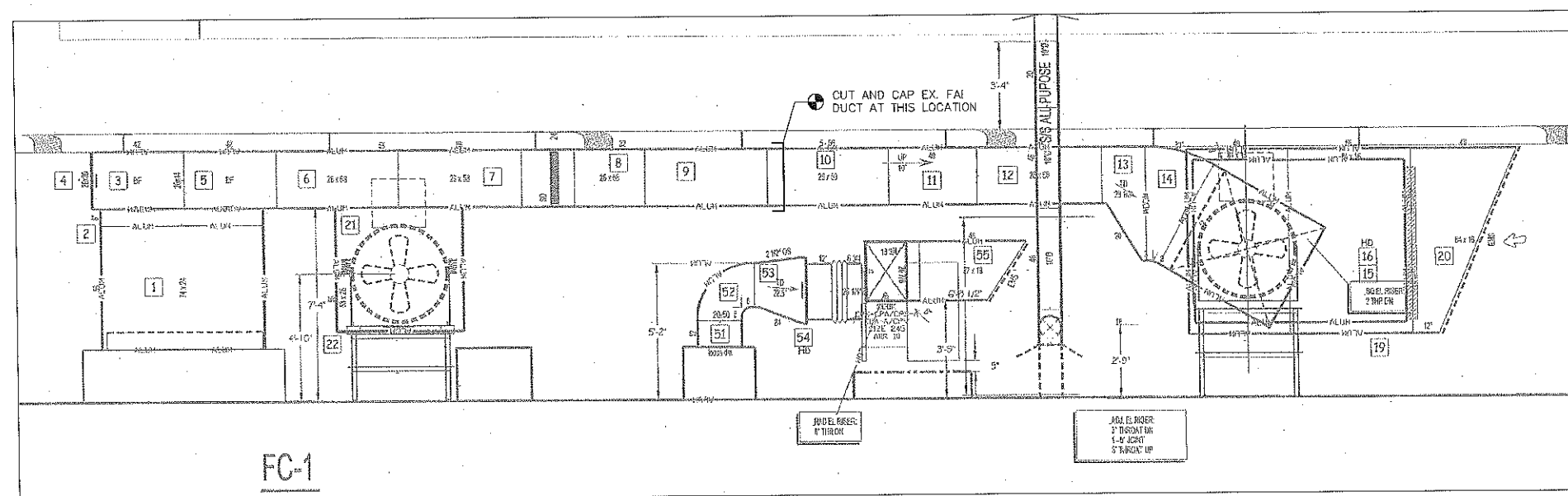
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DRAWING TITLE  
**11TH FLOOR FAN ROOM  
MECHANICAL NEW WORK PLAN**

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NYC DOB NUMBER



1 11TH FLOOR FAN ROOM MECHANICAL NEW WORK PLAN  
SCALE: 3/8" = 1'-0"  
NORTH

SKETCH	QUANTITY	W/B/H	REMARKS	SLAVE	DATE	STATUS	COMMENTS



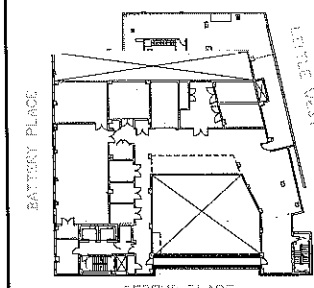
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DRAWING TITLE

**SECTION THRU ATRIUM  
LOOKING EAST**

SEAL

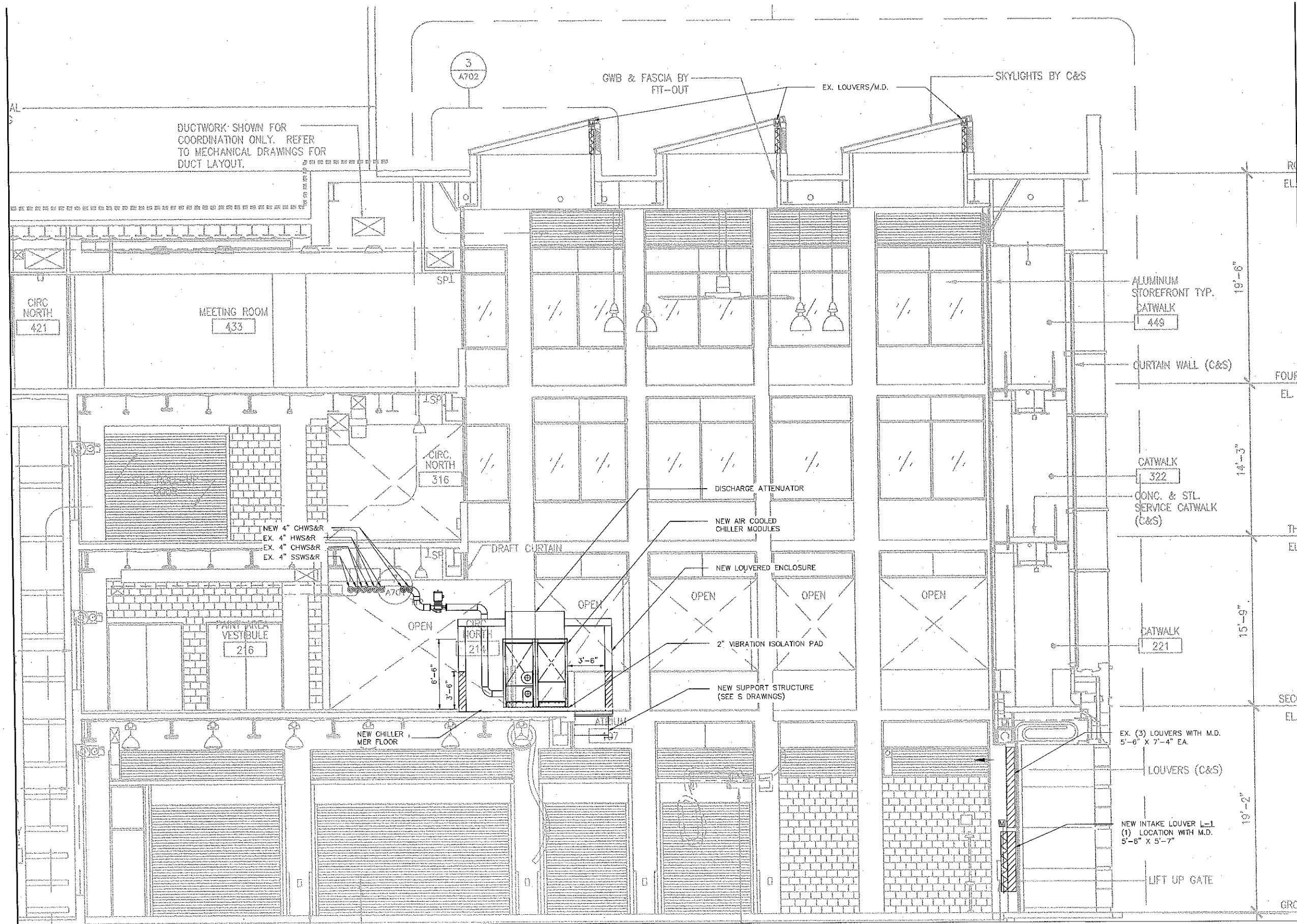
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**M-404.00**

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NYC DOB NUMBER



**1 SECTION THRU ATRIUM - LOOKING EAST**  
SCALE: 1/4" = 1'-0"



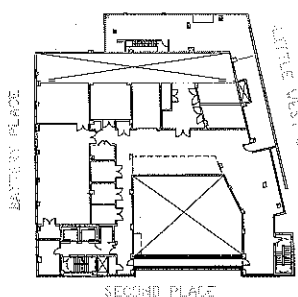
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DRAWING TITLE

SECTION THRU ATRIUM  
LOOKING SOUTH

SEAL

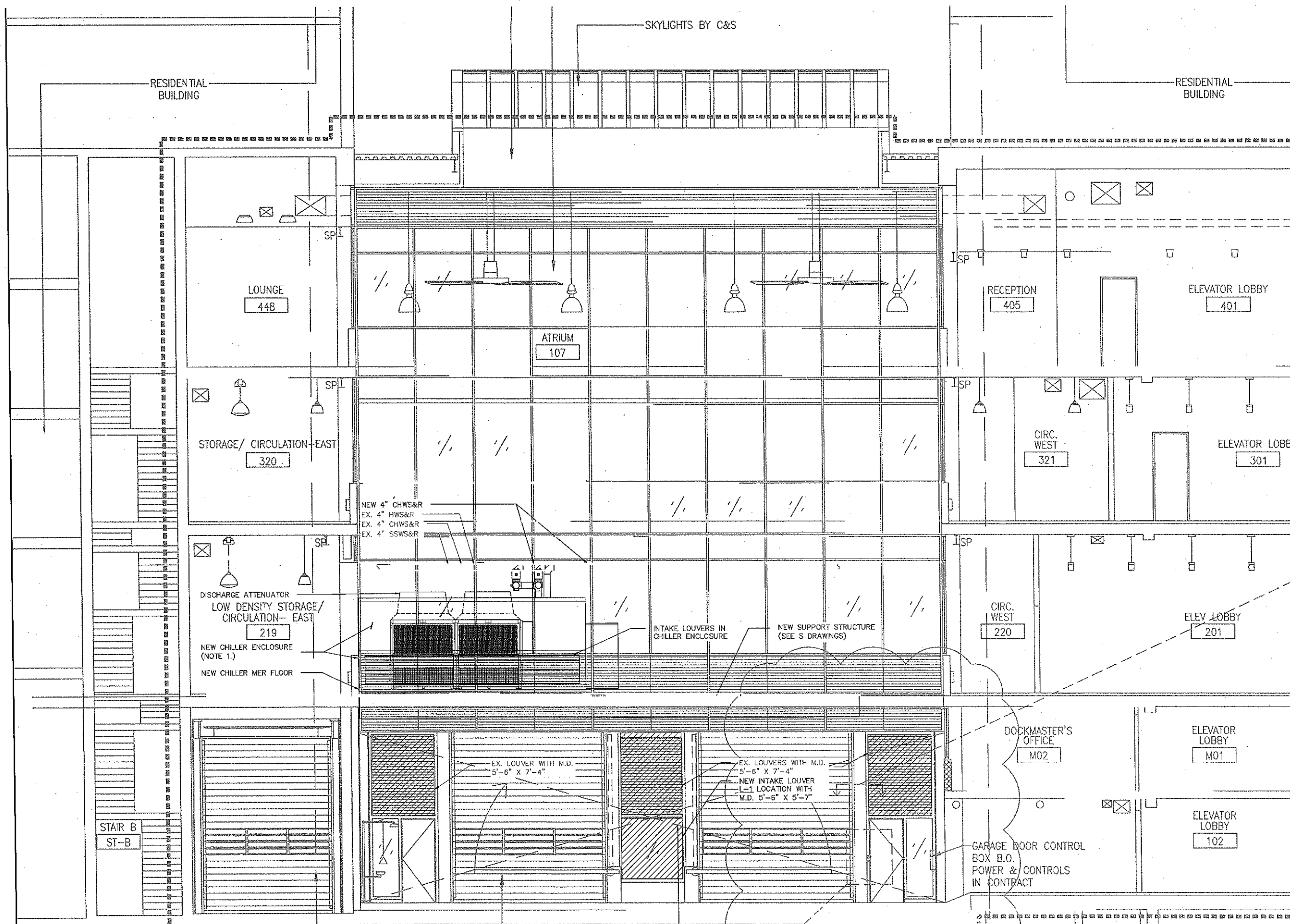
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M-405.00

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NYC DOB NUMBER



1 SECTION THRU ATRIUM - LOOKING NORTH  
SCALE: 1/4" = 1'-0"

NOTES:  
1. THE ACOUSTICAL ENCLOSURE SHALL BE DESIGNED WITH PANELS THAT CAN YIELD A MINIMUM STC 35 RATING, SUCH AS THE TYPE H/P 38 QUIETMOD PANELS BY NOISE BARRIERS, LLC. DOORS AND VENTILATION OPENINGS SHALL BE DESIGNED WITH THE APPROPRIATE NOISE CONTROL MEASURES SO AS TO MAINTAIN THE ACOUSTICAL PERFORMANCE OF THE ENCLOSURE.

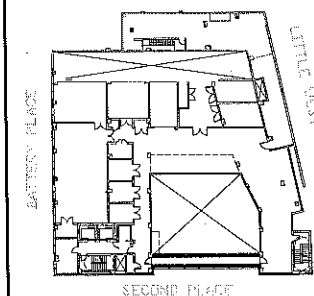


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DRAWING TITLE  
**SECTION LOOKING NORTH  
THRU HIGH BAY STORAGE**

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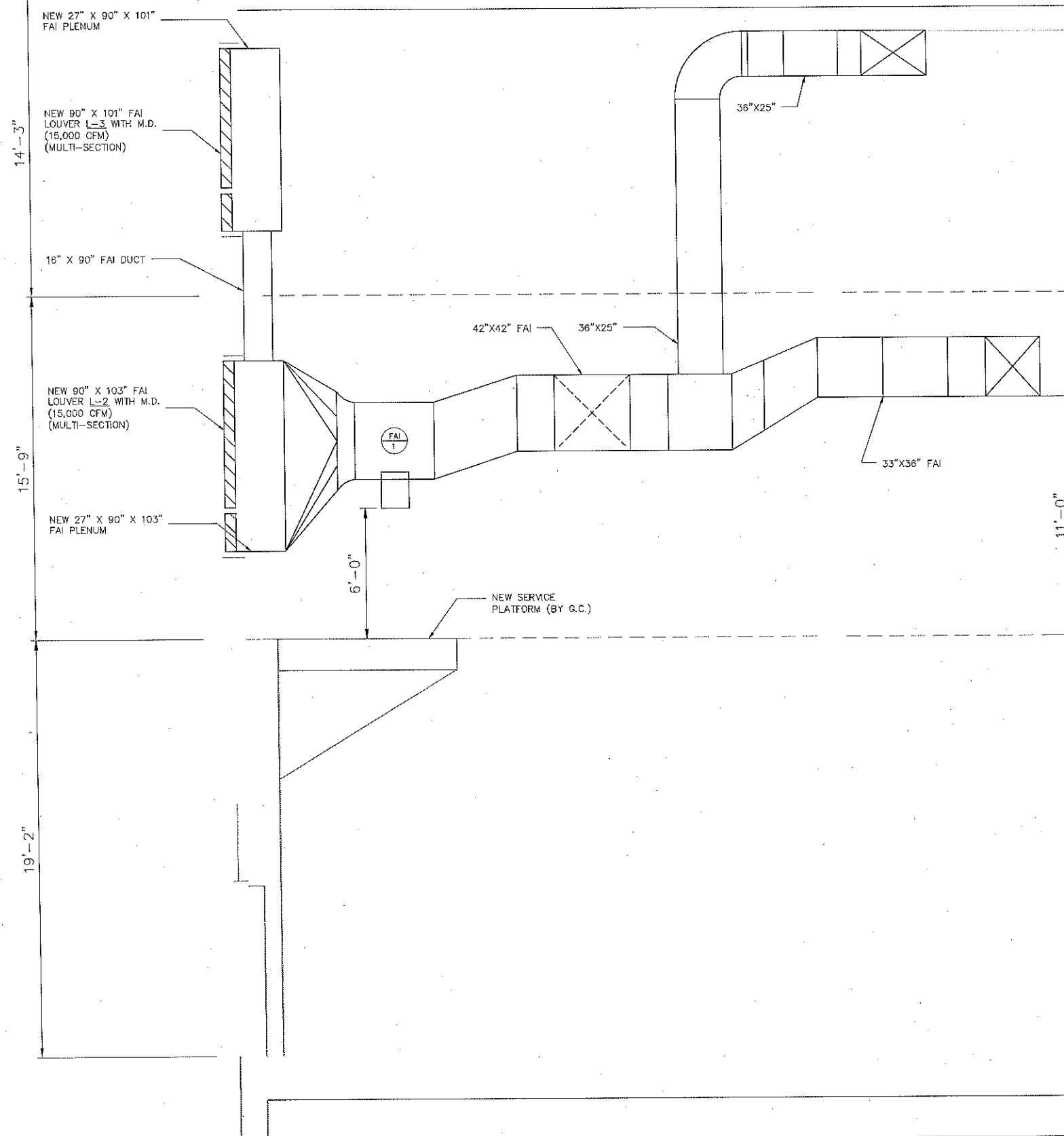
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FOURTH FLOOR  
EL. 59'-10"

THIRD FLOOR  
EL. 45'-7"

SECOND FLOOR  
EL. 29'-10"

GROUND FLOOR  
EL. 10'-8"



1 SECTION LOOKING NORTH THRU HIGH BAY STORAGE  
SCALE: 3/8" = 1'-0"





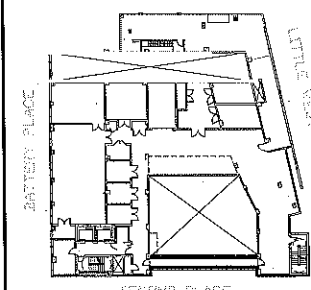
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DRAWING TITLE

**MECHANICAL SYSTEMS  
SCHEMATIC**

SCALE

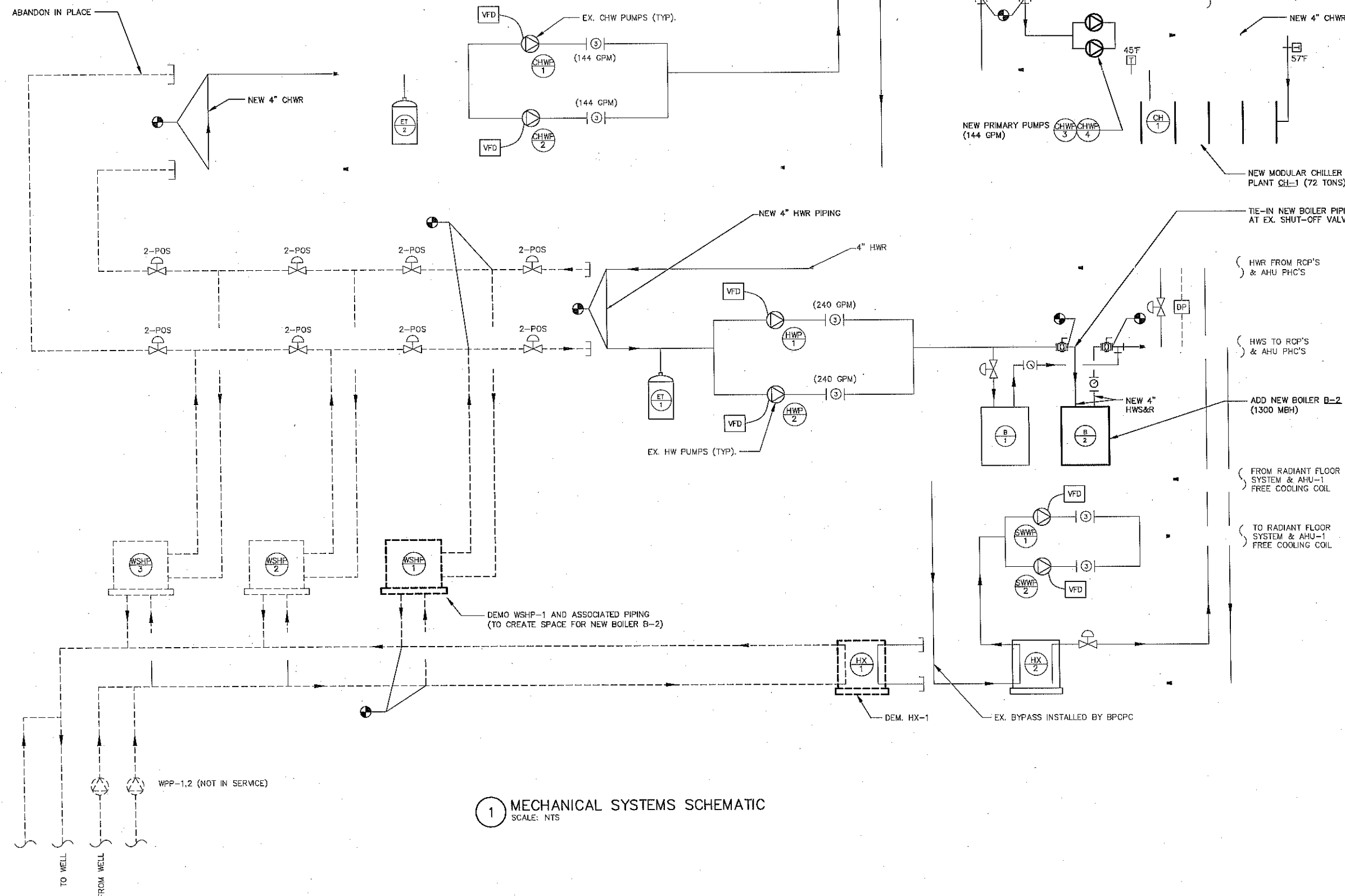
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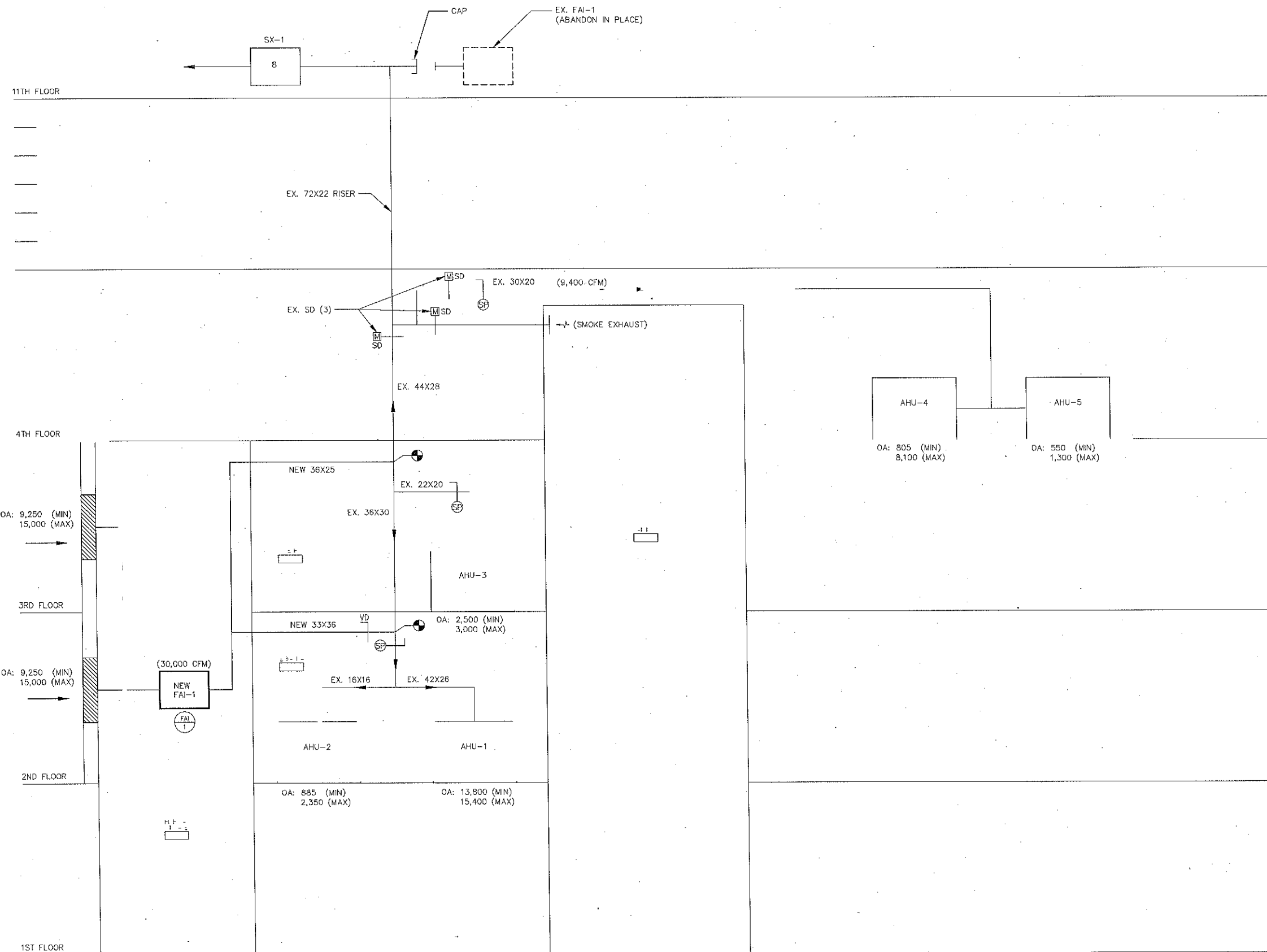
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1 FRESH AIR INTAKE SYSTEM — RISER DIAGRAM  
SCALE: NTS



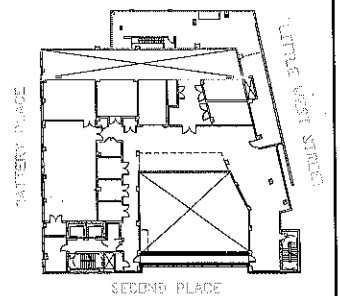
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DRAWING TITLE  
**FRESH AIR INTAKE SYSTEM  
RISER DIAGRAM**

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DRAWING NO. <b>M-502.00</b>		
		PAGE 28 OF 38

NYC DOB NUMBER

AIR COOLED PACKAGED CHILLER SCHEDULE	
DESIGNATION	CH-1
LOCATION	2ND FL
NOMINAL CAP. (TONS)	71.7
MODEL	(4) ASP020X
TYPE	MODULAR SCROLL
NO. OF MODULES	4
EER	8.3
NPLV (KW/TON)	0.845
REFRIGERANT TYPE	R-410A
REFRIGERANT CHARGE (LBS)	100 PER MODULE
L X W X H (IN)	144 X 72 X 77.32
DRY/OPERATING WEIGHT (LBS)	6800/7300
EVAPORATOR:	
GPM	144
E.W.T./L.W.T. (°F)	57/45
W.P.D. (FT H <sub>2</sub> O)	4.15
MINIMUM FLOW	144
COMPRESSOR:	
QUANTITY	2 PER MODULE (8 TOTAL)
NOMINAL TONS (EA.)	10
TYPE	SCROLL
COMPRESSOR RLA (PER COMPRESSOR)	35
COMPRESSOR LRA (PER COMPRESSOR)	-
CONDENSER:	
COIL TYPE	AL/CU
DESIGN OUTDOOR AIR TEMP °F	105
No. OF CIRCUITS	
FANS:	
QUANTITY	2 PER MODULE
H.P. (EA.)	2
VOLTS/ø/Hz	208/3/60
MCA	348
MAX FUSE AMPS	400
NOTES:	
1. UNITS BASED ON MULTISTACK.	
2. FURNISH AND INSTALL VIBRATION ISOLATORS AS PER THE SPECIFICATION FOR EACH CHILLER AS FURNISHED BY THE MANUFACTURER.	
3. CHILLERS SHALL BE EQUIPPED WITH THE FOLLOWING:	
• CHILLED WATER RESET	
• LOSE OF CHILLED WATER FLOW SENSOR	
• GAUGES	
• MULTISTACK MICROPROCESSOR CONTROLS	

HOT WATER BOILER SCHEDULE	
DESIGNATION	B-1
LOCATION	2ND FL MER
MODEL	BMK
UNIT SIZE	1500
OUTPUT (MBH)	1305-1425
MAX GAS PRESSURE	14"
MIN GAS PRESSURE	4"
MAX ALLOWED WORKING PRESSURE	160 PSIG
WATER CONNECTIONS (FLANGED)	4"
MIN WATER FLOW (GPM)	25
MAX WATER FLOW (GPM)	250
W.P.D.	3.0 PSIG @ 170 GPM
EWI/LWT (°F)	-/180
L X W X H (IN)	28 X 43.6 X 78
DRY/OPERATING WEIGHT (LBS)	27/32
GAS BURNER:	
MAX INPUT (MBH)	1500
EFFICIENCY (%)	87-99
NPT	1.5"
ELECTRICAL DATA:	
VOLTS/ø/Hz	120/1/60
FLA	16A
NOTES:	
1. BOILERS BASED ON AERCO.	
2. PROVIDE BOILERS WITH 100 PSI ASME RELIEF VALVES, 3-1/4" PRESSURE AND TEMPERATURE GAUGES, AUTOMATIC RESET HIGH LIMIT AQUASTAT, MANUAL RESET HIGH LIMIT AQUASTAT, LOW WATER CUT OFF AND AQUASTAT FOR SUPPLY WATER TEMPERATURE CONTROL.	

FAN SCHEDULE					
DESIGNATION	FAI-1	FAI-2	EF-7	RAF-4	EF-3
LOCATION	2ND/3RD FL HIGH BAY AREA	2ND/3RD FL HIGH BAY AREA	2ND FL METALSHOP	4TH FL MER	3RD FL
AREA SERVED	FAI SYSTEM		METAL SHOP		
MODEL	VAB-42F17-I-20		BDF-90-10		
CFM	30000	4000	1800	8000	
BHP	-	-	0.82		-
HP	20	2	1	2	10
RPM	1261				
SP (IN H <sub>2</sub> O)	2.0		1.2		
VOLTS/ø/Hz	208/3/60	208/3/60	208/3/60	208/3/60	208/3/60
STARTER TYPE	VFD	HOA	HOA	VFD	HOA
INTERLOCK			MAU-1		
NOTES:					
1. FANS BASED ON GREENHECK.					
2. ALL MOTORS SHALL BE PREMIUM EFFICIENCY					
3. FURNISH MOTOR STARTERS AND DISCONNECT SWITCHES FOR EACH FAN					
4. FURNISH MOTOR AND BELT GUARD FOR ALL EXTERNAL MOTOR DRIVES					
5. FURNISH RUBBER IN SHEAR OR SPRING VIBRATION ISOLATORS AS PER THE SPECIFICATION					

PUMP SCHEDULE		
DESIGNATION	CHW-3	CHW-4
LOCATION	2ND FL	2ND FL
SYSTEM SERVED	CH-1 CHW	CH-1 CHW
MODEL	80	80
TYPE	3X3X7B	3X3X7B
GPM	144	144
FLUID	WATER	WATER
FLUID TEMP. (°F)	57	57
TOTAL DYNAMIC HEAD (FT H <sub>2</sub> O)	25	25
RPM	1750	1750
NPSHr (FT. H <sub>2</sub> O)	4.5	4.5
MOTOR:		
BHP/HP	1.41/2.00	1.41/2.00
VOLTAGE/ø/Hz	208/3/60	208/3/60
STARTER:		
TYPE	VFD	VFD
LOCATION	2ND FL	2ND FL
NOTES:		
1. PUMPS BASED ON BELL AND GOSSETT.		
2. REFER TO PUMP SPECIFICATIONS FOR PUMP CONSTRUCTION AND ADDITIONAL REQUIREMENTS.		
3. ALL MOTORS SHALL BE PREMIUM EFFICIENCY.		
4. ALL PUMPS SHALL BE FURNISHED WITH A COMBINATION MOTOR STARTER/DISCONNECT SWITCH OR VFD PER THE SPECIFICATIONS.		

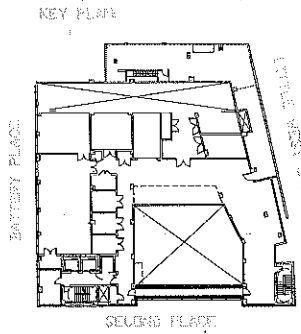
LOUVER SCHEDULE					
DESIGNATION	L-1	L-2	L-3	L-4	L-5
LOCATION	1ST FL	2ND FL HIGH BAY AREA	3RD FL HIGH BAY AREA	METAL SHOP 211	1ST FL
AREA/SYSTEM SERVED	ATRIUM	FAI	FAI	WELDING EXHAUST	FCU-2
MODEL	(TBD)	(TBD)	(TBD)	ELF375D	ELF375D
DIMENSIONS	5'-6" X 5'-7"	7'-6" X 8'-7"	7'-6" X 8'-5"	2'-8" X 1'-4"	1'-0" X 1'-0"
FINISH					
COLOR					
NOTES:					
1. LOUVERS BASED ON GREENHECK.					
2. COORDINATE EXACT LOUVER SIZE WITH ARCHITECTURAL PLANS AND WITH WALL OPENINGS IN THE FIELD.					
3. CUSTOM COLORED LOUVERS SHALL BE SELECTED BY OWNER. SUBMIT COLOR CHART FOR REVIEW.					
4. FURNISH 1/2" GALVANIZED BIRD SCREEN FOR ALL LOUVERS.					
5. BLANK OFF UNUSED SECTIONS OF LOUVERS WITH SHEET METAL PANELS. PAINT PANELS TO MATCH LOUVER AND INSULATE WITH 1" RIDGED BOARD INSULATION.					

FINNED TUBE RADIATION SCHEDULE	
DESIGNATION	FTR-A
MODEL	
NOMINAL TUBE SIZE	
FIN SIZE	
FIN THICKNESS	
FINS PER L.F.	
TUBE/FIN MATERIAL	
No. OF ROWS	
FLUID (% PG)	
AVG WATER TEMP (°F)	
BTUH PER L.F. (NOTE 7)	
STYLE	
ENCLOSURE HT. (IN)	
MOUNTING HT. (IN)	
NOTES:	
1. FINNED TUBE RADATION BASED ON MODINE.	
2. FURNISH ALL REQUIRED PIPE AND ENCLOSURE SUPPORTS, BRACKET FASTENERS, ETC. FURNISH VALVE ACCESS DOORS AND "KNOCK OUTS" FOR ELECTRICAL RECEPTICALS. FURNISH END CAPS AND CORNER CAPS. RUN ENCLOSURES CONTINUOUS WALL TO WALL. FINISH SHALL BE BAKED ENAMEL.	
3. SUBMIT COLOR CHART FOR REVIEW AND APPROVAL BY OWNER.	
4. COORDINATE ALL MOUNTING HEIGHTS WITH FIELD CONDITIONS.	
5. PROVIDE 16 GAUGE METAL ENCLOSURES OPTION.	
6. PROVIDE CIRCUIT SETTERS SIZED FOR FLOW AND NOT LINE SIZE.	
7. BTU/LF BASED ON 70°F EAT, 30% PG, AND MIN. FLOW RATE OF 0.25 FPS	

RADIANT CEILING PANEL SCHEDULE		
DESIGNATION	RCP-9	RCP-10
PERFORMANCE DATA:		
ROOM AIR (°F) DB		
OUTPUT (BTU/HR/SF)		
LENGTH (FT-IN)		
MEAN TEMP (°F)		
WATER GPM		
W.P.D. (FT H <sub>2</sub> O)		
CONSTRUCTION DATA:		
TUBE MATERIAL		
TUBE DIAM (IN.)		
PANEL MATERIAL		
PANEL SIZE (IN.)		
PANEL THICKNESS (IN.)		
TYPE		
NOTES:		

COMBUSTION EXHAUST AIR FAN SCHEDULE	
DESIGNATION	EF-8
LOCATION	2ND FL
AREA SERVED	
MODEL	IPVB 350
CFM	
BHP	
HP	1
RPM	1740
SP (IN H <sub>2</sub> O)	
VOLTS/ø/Hz	208/3/60
INTERLOCK	
NOTES:	
1. FAN BASED ON ENERVEX.	
2. PROVIDE THE FOLLOWING:	
• EXHAUSTO EBC-14 PRESSURE CONTROL	
• GE/ FUJI MODEL AF-300 MS II VARIABLE FREQUENCY DRIVE, 3HP	
• LOCAL DISCONNECT SWITCH	

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SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE  
**MECHANICAL SCHEDULES**

FAN COIL SCHEDULE	
DESIGNATION	FCU-2
LOCATION	1ST FLOOR
AREA SERVED	LOBBY
MODEL	42CKB10
TYPE	HORIZONTAL
CFM	645
BHP	0.25
WATT	300
RPM	1516
SP (IN H <sub>2</sub> O)	0.8
VOLTS/ø/Hz	120/1/60
HEAT TYPE	HOT WATER COIL
COOLING CAPACITY, TOTAL/SENSIBLE	31.0 MBH/23.0 MBH
COOLING COIL ROWS	4
CHILLER WATER FLUID FLOW	6.2 GPM
HOT WATER PRESSURE DROP	9.24
CHILLER WATER EWT/LWT °F	45F/50F
HEATING CAPACITY	59.5 MBH
HEATING COIL ROWS	2
HOT WATER FLUID FLOW	4.0 GPM
HOT WATER EWT/LWT °F	130F/110F
CHILLER WATER PRESSURE DR.	1.6
WEIGHT	227 LBS
INTERLOCK	TEMP. SENSOR
FILTER	10X62
NOTES: 1. FAN COIL BASED ON CARRIER 2. FURNISH 2 SPRING VIBRATION ISOLATORS AS PER THE SPECIFICATION; 3. PROVIDE FLEX DUCT CONNECTION; 4. PROVIDE WITH FACTORY INSTALLED MOTORIZED INLET DAMPER FOR FAI INTERLOCKED WITH FAN COIL; 5. PROVIDE TEMPERATURE SENSOR AND CONNECT TO BUILDING CONTROL; 6. DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR. 7. PROVIDE FILTERS PER MANUFACTURE REQUIRMENTS	

MAKE-UP UNIT SCHEDULE		
DESIGNATION	MAU-1	
LOCATION	2ND FL METAL SHOP	
AREA SERVED	METAL SHOP	
MODEL	LFC-30-FC-15	
TYPE	HORIZONTAL	
CFM	1600	
BHP	1.04	--
HP	1-1/2	
RPM	1516	
SP (IN H <sub>2</sub> O)	0.8	
VOLTS/ø/Hz	208/3/60	
HEAT TYPE	HOT WATER COIL	
COIL MODEL	HW12C02H10-15X31	
HEATING CAPACITY	104.7 MBH	
EAT	50 F	
LAT	109 F	
ROWS/FINS	2/10	
FACE VELOCITY	509 FPM	
FLUID TYPE	WATER	
FLUID FLOW	10.7 GPM	
WEIGHT	329 LBS	
INTERLOCK	HEF-1	
FILTER	16X16 & 16X20	
NOTES: 1. FANS BASED ON GREENHECK. 2. FURNISH SPRING VIBRATION ISOLATORS AS PER THE SPECIFICATION 3. MAKEUP UNIT AND ACCESSORIES SHALL BE FURNISHED AND INSTALLED BY HVAC CONTRACTOR. 4. PROVIDE WITH FACTORY INSTALLED MOTORIZED INLET DAMPER INTERLOCKED WITH MAKEUP AIR FAN; 5. FURNISH UNIT WITH DISCHARGE AIR TEMPERATURE CONTROLLER AND OUTDOOR THERMOSTAT, SET LEAVING AIR TEMPERATURE THERMOSTAT AT 50°F. SET OUTDOOR THERMOSTAT TO LOCK OUT HEAT WHEN AMBIENT TEMPERATURE IS ABOVE 50°F. UNIT SIZED TO PROVIDE 66°F TEMPERATURE RISE. 6. DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR. 7. PROVIDE WALL MOUNTED SWITCH.		

LOUVER SCHEDULE			
DESIGNATION	L-3	L-4	--
LOCATION	2ND FL	1ST FL	--
AREA/SYSTEM SERVED	EXHAUST	FAI	--
MODEL	ELF375D	ELF375D	--
DIMENSIONS	32"x16"	12"x12"	--
FINISH			
COLOR			
NOTES:			

FAN SCHEDULE				
DESIGNATION	EF-7	EF-2	EF-3	
LOCATION	2ND FL METAL SHOP	35TH FLOOR	1ST FLOOR	
AREA SERVED	METAL SHOP	VEHICLE CAPTURE SYSTEM	VEHICLE CAPTURE SYSTEM	
MODEL	BDF-90-10			
CFM	1800		2200	
BHP	0.82	--		
HP	1	--	--	
RPM				
SP (IN H <sub>2</sub> O)	1.2		--	
VOLTS/ø/Hz	208/3/60	208/3/60	208/3/60	
STARTER TYPE	HOA	HOA	HOA	
INTERLOCK	MUA-1			
NOTES:				



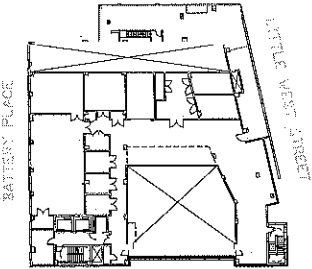
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KEY PLAN



SECTION PLANE

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1	PROGRESS SET	1/31/14
No.	ISSUE OR REVISION	DATE

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PROJECT TITLE

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SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE

MECHANICAL SCHEDULES

SEAL

SCALE  
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DATE  
1/31/14  
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PROJECT NO.  
NBPC0000200  
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PAGE 16 OF 27

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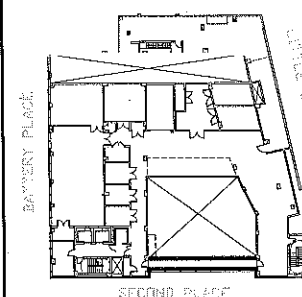
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PROJECT TITLE

BPCPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE

DRAWING TITLE

PLUMBING BOILER ROOM  
DEMOLITION AND NEW  
WORK PARTIAL PLANS

SEAL

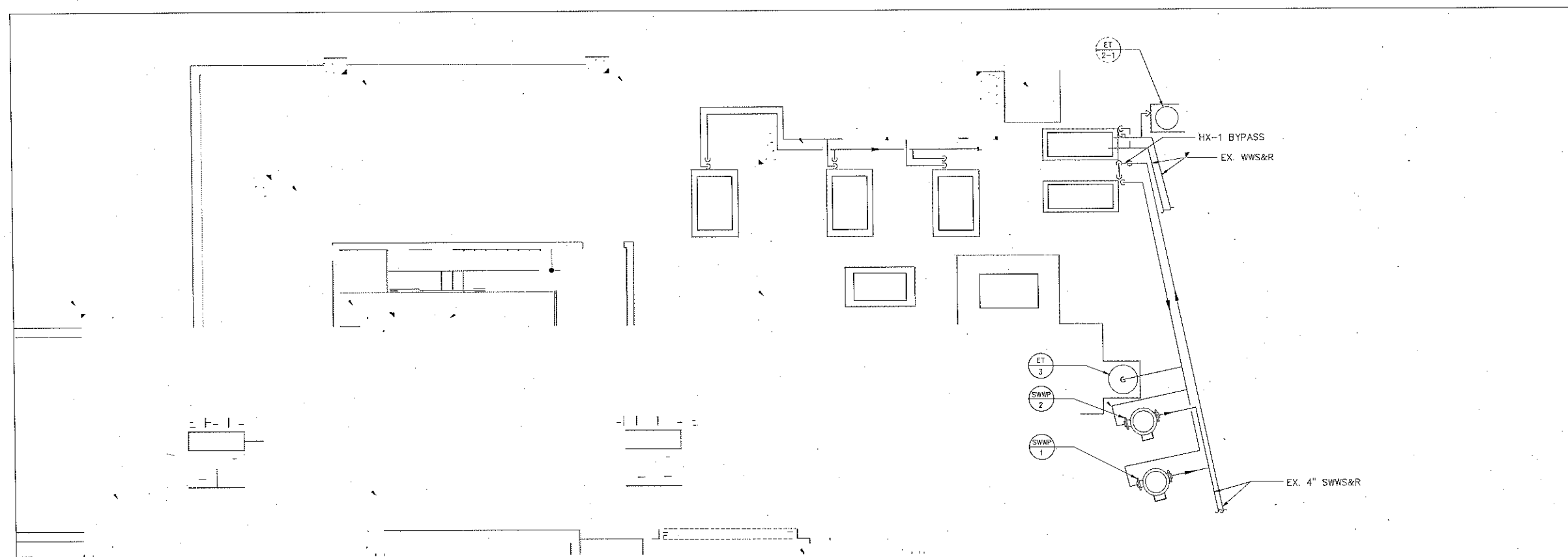
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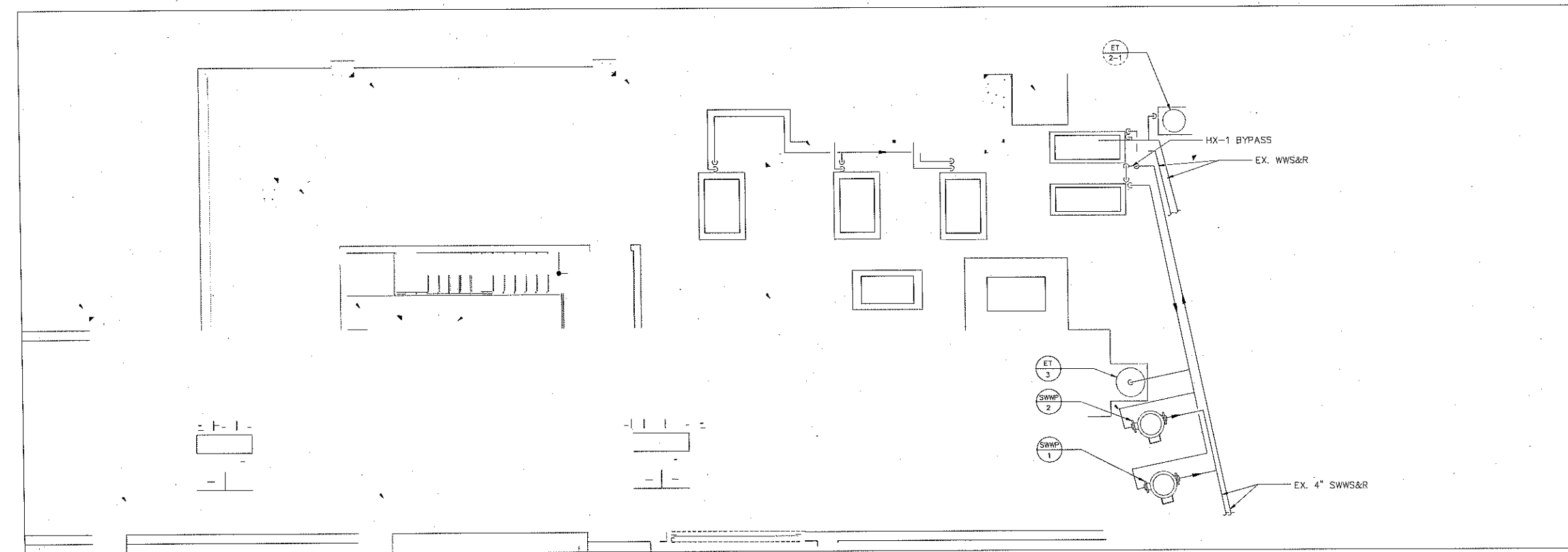
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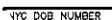
2 PLUMBING BOILER ROOM NEW WORK PARTIAL PLAN  
SCALE: 1/4" = 1'-0"  
NORTH

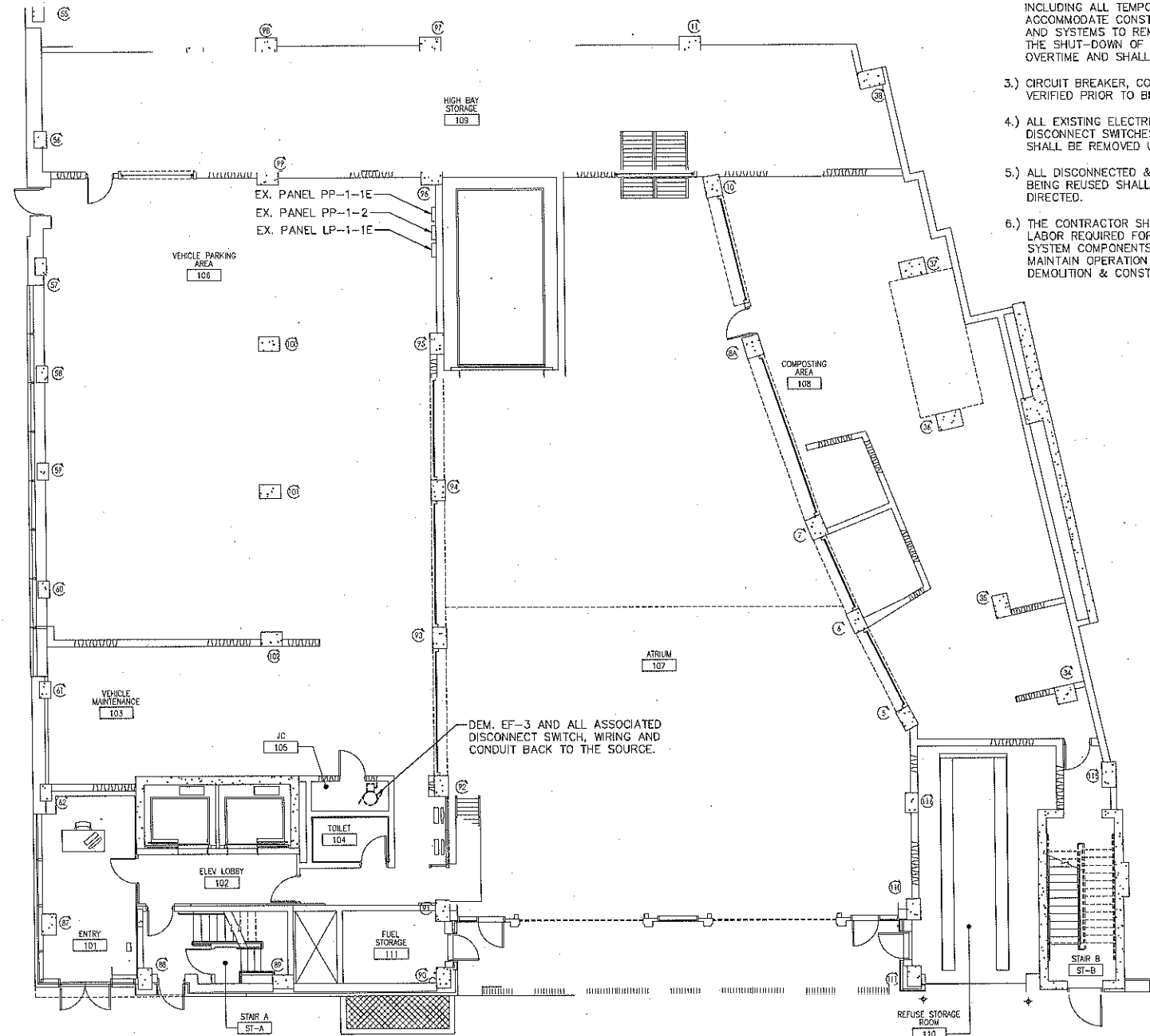


1 PLUMBING BOILER ROOM DEMOLITION PARTIAL PLAN  
SCALE: 1/4" = 1'-0"  
NORTH

SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
	-	CONDUIT AND WIRING		A	AMPERE(S)
	-	CONDUIT & WIRING TO BE REMOVED UON		AC	AIR CONDITIONER
	-	HOMERUN TO PANEL, ARROWS INDICATE # 1P		ACC	AIR CONDITIONER CONDENSER
	-	MULTI-POLE HOMERUN		AFF	ABOVE FINISHED FLOOR
	-	ELECTRICAL EQUIPMENT AS INDICATED		AF	AMPERAGE OF FUSE
	-	ELECTRICAL EQUIPMENT TO BE REMOVED UON		AGL	ABOVE GRADE LEVEL
	-	ELECTRIC METER		AHU	AIR HANDLING UNIT
	-	JUNCTION BOX		AL	ALUMINIUM
	-	FUSED DISCONNECT SWITCH		ARC	ARC FAULT INTERRUPTER
	-	UNFUSED DISCONNECT SWITCH		AS	AMPERAGE OF SWITCH
	-	COMBINATION MOTOR STARTER/FUSED DISC.		ATS	AUTOMATIC TRANSFER SWITCH
	-	MOTOR STARTER		AWG	AMERICAN WIRE GAUGE
	-	MOTOR		BCW	BARE COPPER WIRE
	-	SINGLE POLE SWITCH (x - INDICATES FIXTURE BEING CONTROLLED)		BLDG	BUILDING
	-	THREE WAY SWITCH (x - INDICATES FIXTURE BEING CONTROLLED)		BMS	BUILDING MANAGEMENT SYSTEM
	-	FOUR WAY SWITCH (x - INDICATES FIXTURE BEING CONTROLLED)		C	CONDUIT
	-	DIMMER SWITCH (x - INDICATES FIXTURE BEING CONTROLLED)		CD	CANDELA
	-	MOTOR RATED TOGGLE SWITCH		CKT	CIRCUIT
	-	KEY OPERATED SINGLE POLE SWITCH		CLG	CEILING
	-	SPEED CONTROLLER (FBO)		COL	COLUMN
	-	DUPLEX RECEPTACLE		CU	COPPER
	-	DOUBLE DUPLEX RECEPTACLE		CUH	CABINET UNIT HEATER
	-	SPECIAL RECEPTACLE		DEM.	DEMOLISH AND REMOVE
	-	PUSHBUTTON		DISC	DISCONNECT
	EPO	EMERGENCY POWER OFF SWITCH		DIM	DIMMER
	CB	CIRCUIT BREAKER		DWG	DRAWING
	-	ENCLOSED CIRCUIT BREAKER		ELEV	ELEVATOR
	-	FUSED SWITCH		EMT	ELECTRICAL METALLIC TUBING
	GEN	GENERATOR		EM	EMERGENCY
	-	GENERATOR RECEPTACLE		EX.	EXISTING TO REMAIN
	GND	GROUND AS PER LOCAL CODE		F	FLOOR
	-	GROUND BAR		FBO	FURNISHED BY OTHERS
	-	GROUND ROD		FC	FAN COIL UNIT
	-	TRANSFER SWITCH		GEN	GENERATOR
	XFMR	TRANSFORMER		GFI	GROUND FAULT INTERRUPTER
	CT	CURRENT TRANSFORMER		HP	HORSEPOWER
	-	BOILER BREAK GLASS STATION		HVAC	HEATING VENTILATION AIR CONDITIONING
	NC	NORMALLY CLOSED CONTACTS		IG	ISOLATED GROUND
	NO	NORMALLY OPEN CONTACTS		IMC	INTERMEDIATE METAL CONDUIT
	MD	MOTORIZED DAMPER		KVA	KILO-VOLT-AMPERE
	SD OR CFSD	SMOKE DAMPER		KW	KILO-WATT
	FACP	FIRE ALARM CONTROL PANEL		MAX	MAXIMUM
				MCB	MAIN CIRCUIT BREAKER
				MCC	MOTOR CONTROL CENTER
				MIN	MINIMUM
				MLO	MAIN LUG ONLY
				MTS	MANUAL TRANSFER SWITCH
				NIC	NOT IN CONTRACT
				NL	NIGHT LIGHT
				NTS	NOT TO SCALE
				OH	OVERHEAD
				PH, Ø	PHASE
				P	POLE
				PBO	PROVIDED BY OTHERS
				PNL	PANEL
				PVC	POLY VINYL CHLORIDE
				REL	REMOVE AND RELOCATE
				RGS	RIGID GALVANIZED STEEL
				RTU	ROOF TOP UNIT

16.) EACH DUPLEX AND QUAD RECEPTACLE SHALL BE LABELED WITH THE CIRCUIT NUMBER WHICH IT SERVES. ALPHANUMERICS TO BE 1/8" HIGH AND BLACK ON CLEAR BACKGROUND. LABELS SHALL BE SELF ADHESIVE. IDENTIFY ASSOCIATED PANEL AND CIRCUIT NUMBER.





# DEMOLITION NOTES

- 1.) ALL EQUIPMENT SHALL BE DISCONNECTED AND REMOVED BACK TO POWER SOURCE ORIGIN UNLESS OTHERWISE NOTED (UON) EXISTING TO REMAIN (EX.).
- 2.) CONTRACTOR SHALL VERIFY EXTENT OF DEMOLITION WORK IN THE FIELD PRIOR TO BID AND SHALL INCLUDE ALL LABOR AND MATERIALS IN BASE BID INCLUDING ALL TEMPORARY CONNECTIONS, CONDUIT AND WIRE IN ORDER TO ACCOMMODATE CONSTRUCTION AND PROVIDE CONTINUOUS SERVICE TO DEVICES AND SYSTEMS TO REMAIN. TEMPORARY AND PERMANENTLY. WORK REQUIRING THE SHUT-DOWN OF THE BUILDING POWER SHALL BE PERFORMED DURING OVERTIME AND SHALL BE INCLUDED IN BASE BID.
- 3.) CIRCUIT BREAKER, CONDUIT AND CONDUCTOR SIZES INDICATED SHALL BE FIELD VERIFIED PRIOR TO BID.
- 4.) ALL EXISTING ELECTRICAL EQUIPMENT NO LONGER IN USE, SUCH AS DISCONNECT SWITCHES, MOTOR CONTROLLERS, MOTOR STARTER PANELS, ETC. SHALL BE REMOVED UON.
- 5.) ALL DISCONNECTED & REMOVED EXISTING ELECTRICAL ITEMS THAT ARE NOT BEING REUSED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED.
- 6.) THE CONTRACTOR SHALL INCLUDE IN THE BASE BID FOR ALL MATERIAL & LABOR REQUIRED FOR THE EXTENSIONS, REROUTING & RELOCATION OF EXISTING SYSTEM COMPONENTS, EQUIPMENT, WIRING, CONDUITS & CABLING SO AS TO MAINTAIN OPERATION OF ALL SYSTEMS THROUGHOUT THE BUILDING DURING DEMOLITION & CONSTRUCTION PHASES.

## NOTE:

- 1.) FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES, REFER TO DWG E-001.



**1 ELECTRICAL FIRST FLOOR DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"



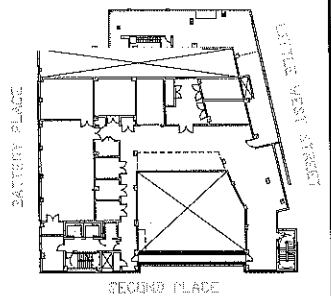
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No.	ISSUE OR REVISION	DATE

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SITE 3 MECHANICAL SYSTEMS UPGRADE**

DRAWING TITLE

**ELECTRICAL  
FIRST FLOOR  
DEMOLITION PLAN**

SCALE AS NOTED	PROJECT NO. NBPC000200
DATE 1/31/14	DRAWN/CHK BY WP/JF
DRAWING NO.	<b>E-101.00</b>
	1 PAGE 31 OF 38

NYC DOB NUMBER



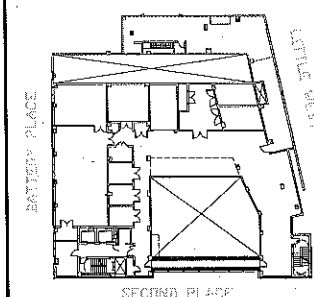
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SITE 3 MECHANICAL SYSTEMS UPGRADE**

DRAWING TITLE

**ELECTRICAL  
SECOND FLOOR  
DEMOLITION PLAN**

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DATE	1/31/14	NBPC000200
DRAWING NO.	WPJ/P	DRAWN/CHK. BY

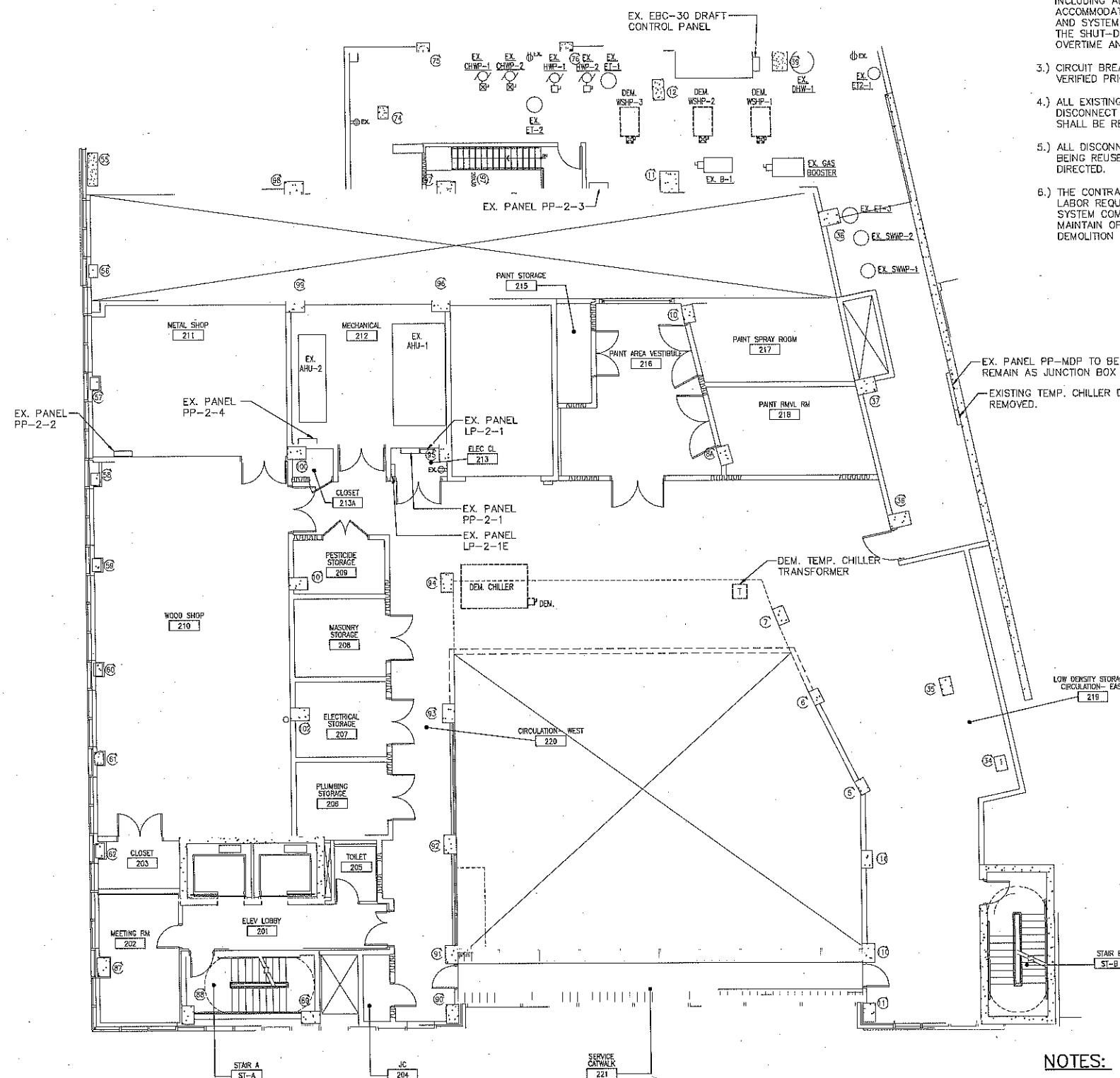
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PAGE 32 OF 35

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## DEMOLITION NOTES

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## NOTES:

- 1.) FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES, REFER TO DWG E-001.



**ELECTRICAL SECOND FLOOR DEMOLITION PLAN**

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





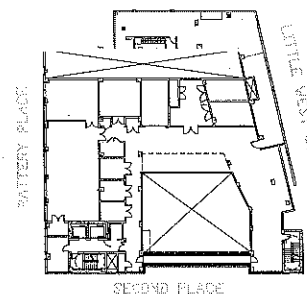
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PROJECT TITLE

**BPCPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE**

DRAWING TITLE

**ELECTRICAL  
11TH FLOOR DEMOLITION  
PART ROOF PLAN**

SEAL

SCALE  
AS NOTED  
DATE  
1/31/14  
DRAWING NO.

PROJECT NO.  
NBPC0000200  
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WPSJF

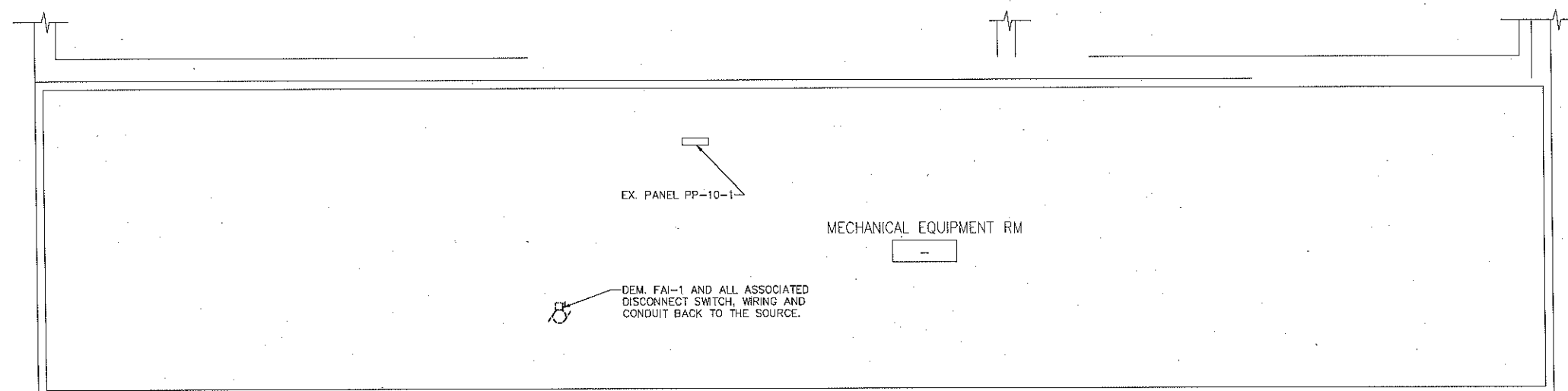
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## DEMOLITION NOTES

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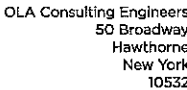


**1 ELECTRICAL 11TH FLOOR DEMOLITION PART ROOF PLAN**

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

## NOTE:

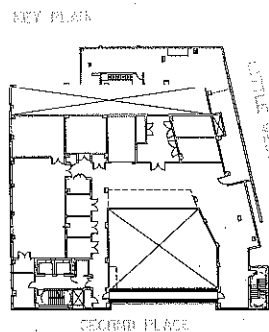
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**BPCPC  
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SITE 3 MECHANICAL SYSTEMS UPGRADE**

**DRAWING TITLE**

**ELECTRICAL  
SECOND FLOOR  
NEW WORK PLAN**

1564

SCALE	PROJECT NO.
AS NOTED	NBPC00020

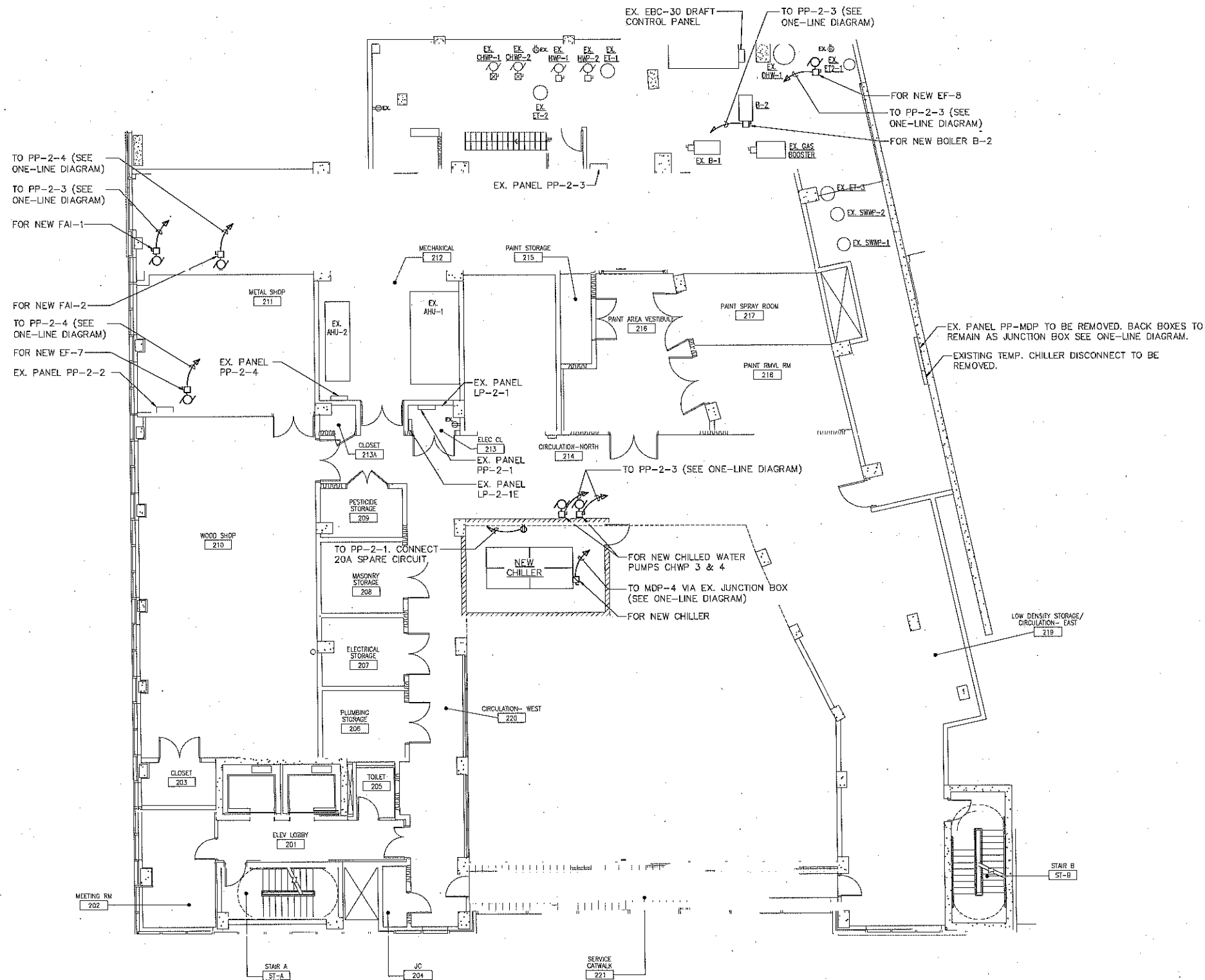
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1 PAGE 34 OF

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1) ELECTRICAL SECOND FLOOR NEW WORK PLAN  
SCALE: 1/8" = 1'-0"



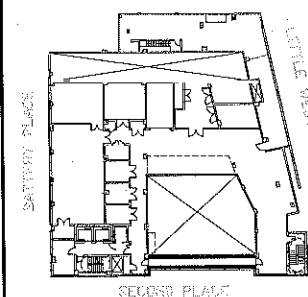
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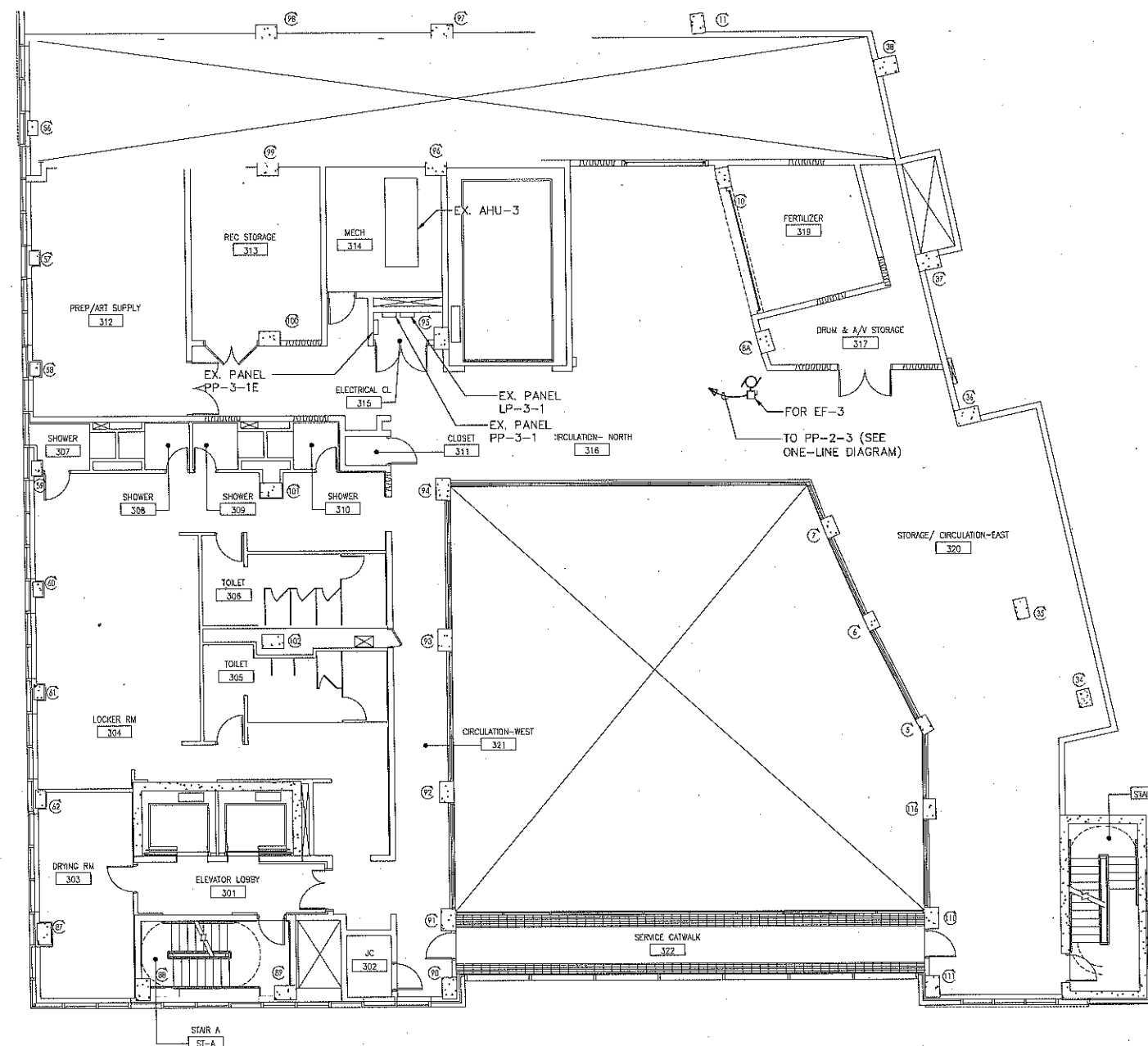
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SITE 3 MECHANICAL SYSTEMS UPGRADE**

DRAWING TITLE

**ELECTRICAL  
THIRD FLOOR  
NEW WORK PLAN**

SCALE	AS NOTED	PROJECT NO.
DATE	1/31/14	NBPC000200
DRAWING NO.	WPJUP	DRAWN/CHK BY
		WPJUP
		<b>E-302.00</b>
		PAGE 35 OF 38

NYC DOB NUMBER



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**1 ELECTRICAL THIRD FLOOR NEW WORK PLAN**  
SCALE: 1/8" = 1'-0"



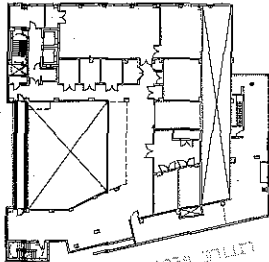
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2	65% REVIEW	B/PW4

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BRQPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE

ELECTRICAL  
FOURTH FLOOR  
NEW WORK PLAN

SCALE

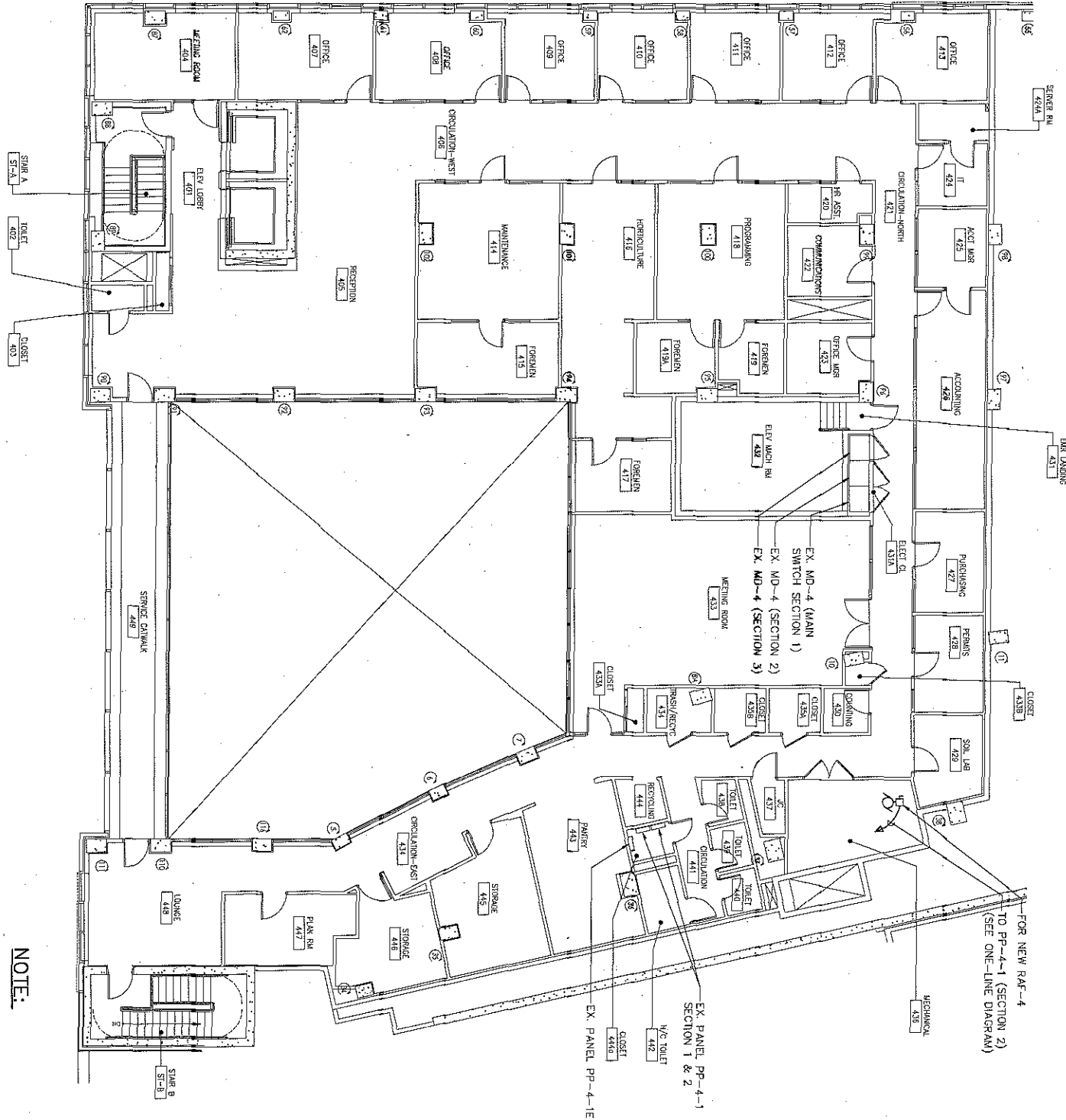
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BY: VARW  
CHECKED: B/PW4  
DATE: 10/14/11

E-303.00

PROJECT NO.

NOTE:

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# ELECTRICAL FOURTH FLOOR NEW WORK PLAN

SCALE 1/8" = 1'-0"



NORTH



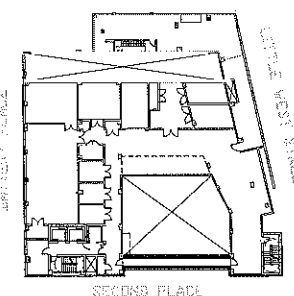
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No.	ISSUE OR REVISION	DATE
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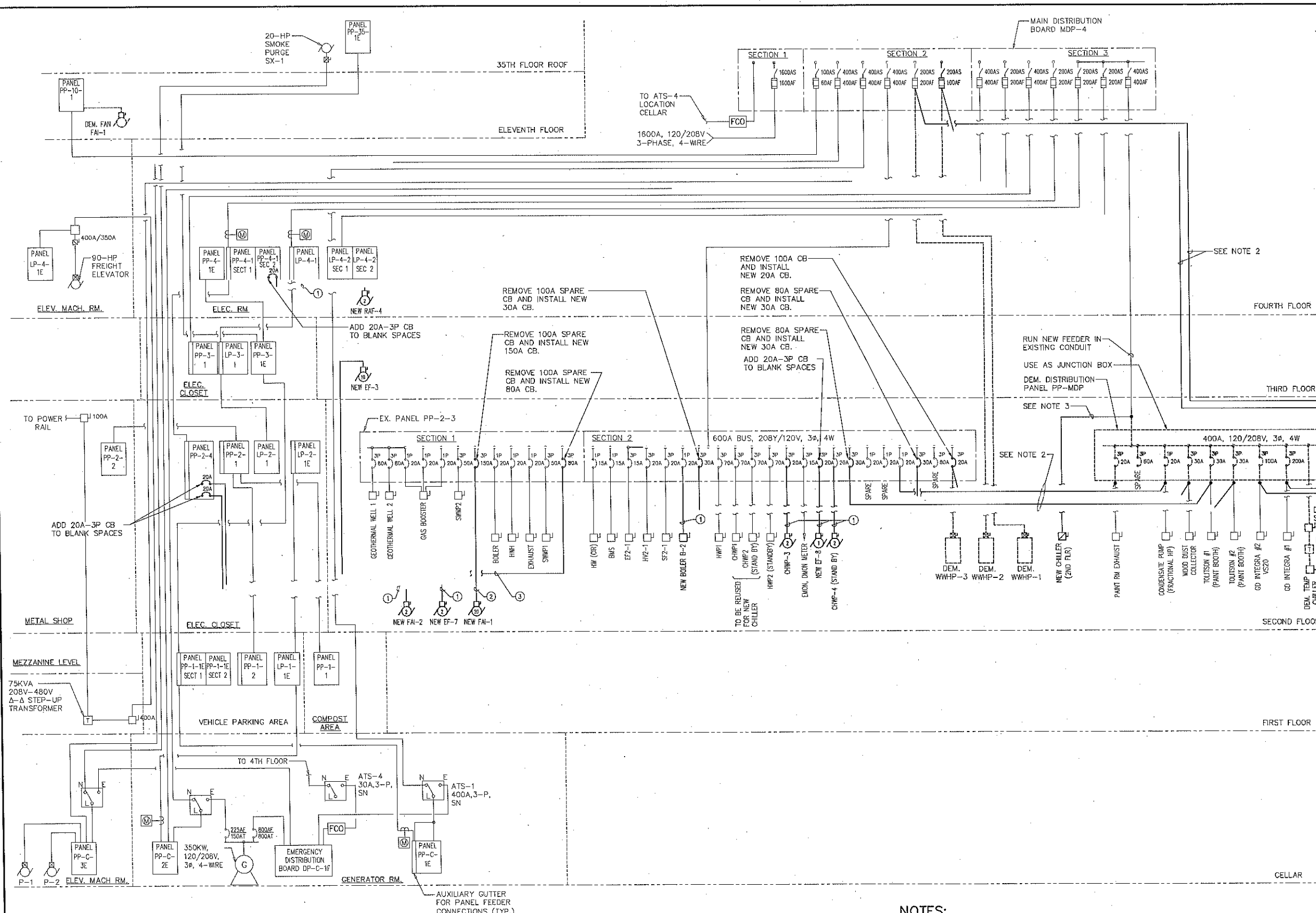
PROJECT TITLE  
**BPCPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE**

DRAWING TITLE  
**ELECTRICAL  
ONE-LINE DIAGRAM**

SCALE  
AS NOTED  
DATE  
1/31/14  
DRAWING NO.  
**E-501.00**

PAGE 37 OF 38

NYC DOB NUMBER



**WIRING/CONDUIT LEGEND:**

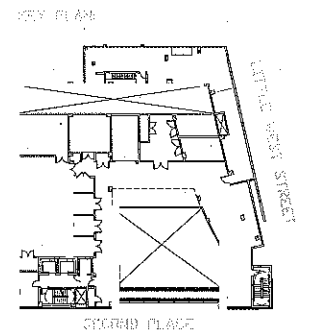
- 3-#12, & 1-#12 GND IN 3/4" C.
- 3-#3, & 1-#6 GND IN 1-1/4" C.
- 3-#8, & 1-#8 GND IN 3/4" C.

**1 POWER ONE-LINE DIAGRAM**  
NOTE TO SCALE

**NOTES:**

- ALL EQUIPMENT, WIRING & CONDUIT ARE EXISTING TO REMAIN U.O.N.
- PROVIDE NEW CONDUIT & WIRES TO MATCH EXISTING. EXTEND CONDUIT & WIRES TO MAKE A CONNECTION.
- RUN NEW CONDUIT & WIRES. CONNECT NEW CONDUIT TO EXISTING CONDUIT & RUN NEW WIRES.
- FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES, REFER TO DWG E-001.

BATTERY PARK  
CITY AUTHORITY  
BPCPC MAINTENANCE FACILITY  
75 BATTERY PLACE, NY

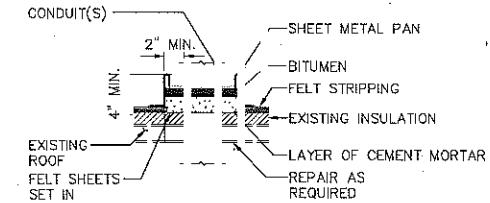


REVISIONS		
No.	ISSUE OR REVISION	DATE
2	65% REVIEW	2/21/14
1	PROGRESS SET	1/30/14
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BPCPC  
MAINTENANCE FACILITY  
SITE 3 MECHANICAL SYSTEMS UPGRADE

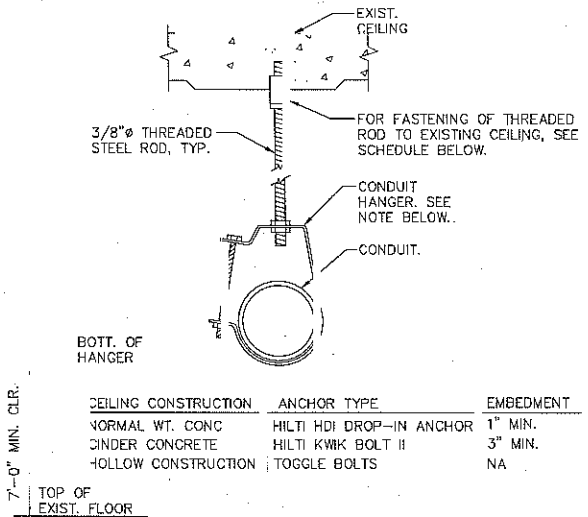
ELECTRICAL  
DETAILS

SCALE	PROJECT NO.
AS NOTED	NBPC000200
DATE	DRAWN/CHK. BY
1/31/14	WPJ/JF
DRAWING NO.	
E-701.00	
PAGE 38 OF 38	



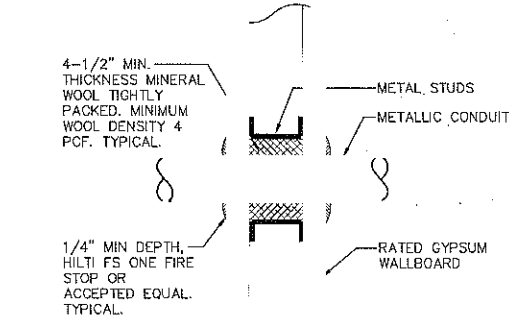
**NOTE:**  
1. PRIOR TO UTILIZING ANY ROOFING MATERIALS, VERIFY WITH BUILDING REPRESENTATIVE FOR COMPATIBILITY WITH ROOFING SYSTEM.

9 TYPICAL PITCH POCKET  
AROUND ROOF PENETRATIONS  
SCALE: NONE

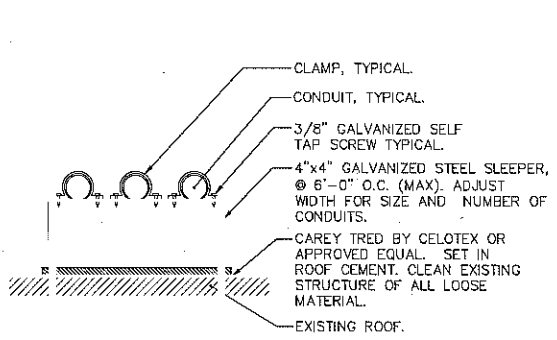


**NOTE:** CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 1". GENERAL PURPOSE HANGERS MAY BE USED ON PIPING 1" OR SMALLER.

6 SINGLE CONDUIT HANGER DETAIL  
SCALE: NONE

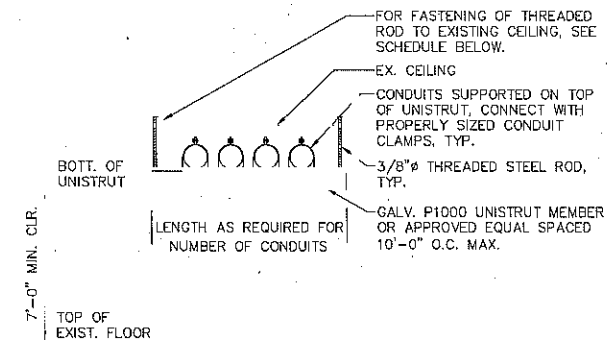


3 TYPICAL CONDUIT GYPSUM  
WALL PENETRATION DETAIL  
SCALE: NONE



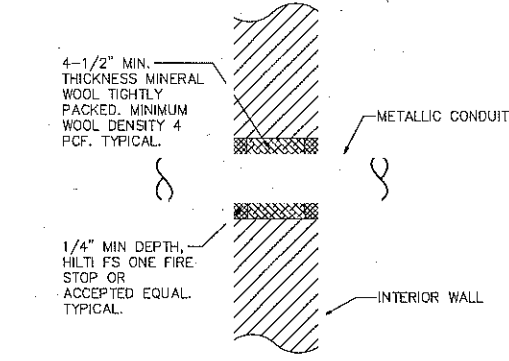
**NOTES:**  
1. PRIOR TO UTILIZING ANY ROOFING MATERIALS, VERIFY WITH BUILDING REPRESENTATIVE FOR COMPATIBILITY WITH ROOFING SYSTEM.  
2. TYPICAL FOR ANY NUMBER OF CONDUITS.

8 TYPICAL CONDUIT ON ROOF  
SUPPORT DETAIL  
SCALE: NONE

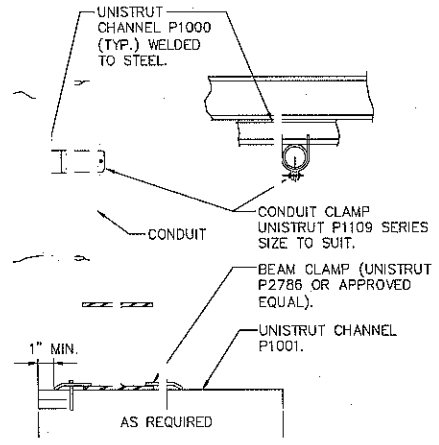


CEILING CONSTRUCTION	ANCHOR TYPE	EMBEDMENT
NORMAL WT. CONC	HILTI HDI DROP-IN ANCHOR	1" MIN.
CINDER CONCRETE	HILTI KWIK BOLT II	3" MIN.
HOLLOW CONSTRUCTION	TOGGLE BOLTS	NA

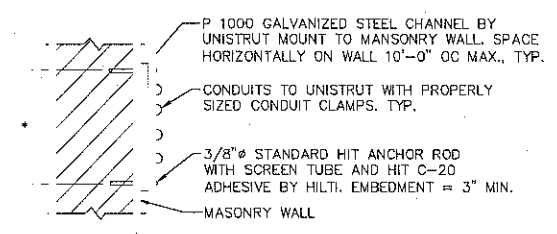
5 TRAPEZE SUPPORT DETAIL  
SCALE: NONE



2 TYPICAL CONDUIT INTERIOR MASONRY  
WALL PENETRATION DETAIL  
SCALE: NONE

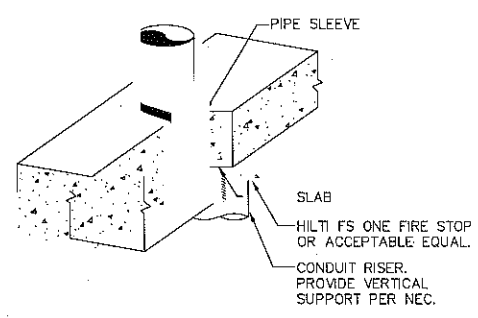


10 CONDUIT SUPPORTED FROM  
STRUCTURAL STEEL  
SCALE: NONE

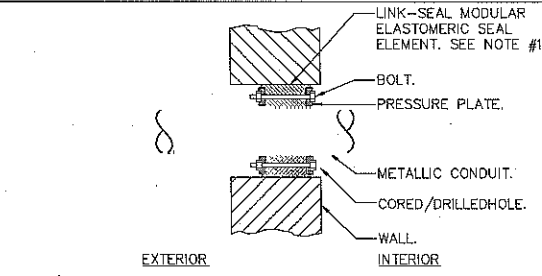


\* LENGTH AS REQUIRED FOR NUMBER OF CONDUITS

7 TYPICAL CONDUIT SUPPORT  
ON MASONRY  
SCALE: 1" = 1'-0"



4 VERTICAL CONDUIT PENETRATION  
DETAIL  
SCALE: NONE



**NOTES:**  
1. SEAL ASSEMBLY BASED ON THUNDERLINE MODEL "C" LINK-SEAL MODULAR SEAL. WITH EPDM SEAL ELEMENT, COMPOSITE PRESSURE PLATES. STEEL WITH 2-PART ZINC DICHROMATE & ORGANIC COATING NUTS AND BOLTS AND WITH A OPERATING TEMPERATURE RANGE OF -40°F TO +250°F.  
2. PROVIDE AND INSTALL TWO SEALS WHEN PENETRATED WALL THICKNESS IS GREATER THAN 12".  
3. PROVIDE SCHEDULE 80 WALL SLEEVE FOR NEW WALL CONSTRUCTION PER MANUFACTURER'S REQUIREMENTS.

1 TYPICAL BELOW GRADE CONDUIT  
EXTERIOR MASONRY WALL  
PENETRATION DETAIL  
SCALE: NONE