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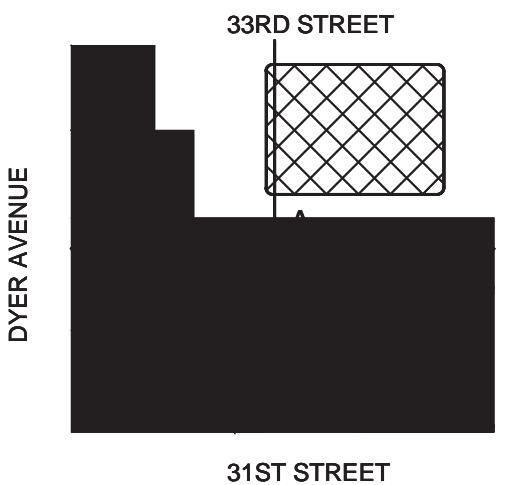
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Key Plan:



Seal & Signature:



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No. Date Description
Sheet Name:

MECHANICAL
DRAWING INDEX



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KEY TO SYMBOLS			
ABBREVIATIONS		SYMBOLS	
AC	AIR CONDITIONING UNIT		REDUCER
AD	ACCESS DOOR		DIRECTION OF FLOW
AFF	ABOVE FINISHED FLOOR		EXPANSION LINE
AHU	AIR HANDLING UNIT		UNION
AL	ACUSTICAL LINING		PUMPED CONDENSATE
ALD	AUTOMATIC LDUIVER DAMPER		DRAIN LINE
BDD	BACKDRAFT DAMPER		VENT
BI	BLACK IRON		REFRIGERANT RELIEF
BRD	BARMETRIC RELIEF DAMPER		HIGH PRESSURE STEAM
BRGD	BOTTOM REGISTER DR GRILLE		MEDIUM PRESSURE STEAM
CAV	CONSTANT AIR VOLUME		LOW PRESSURE STEAM
CC	COOLING COIL		HIGH PRESSURE CONDENSATE
CD	CEILING DIFFUSER		MEDIUM PRESSURE CONDENSATE
CHWR	CHILLED WATER RETURN		LOW PRESSURE CONDENSATE
CHWS	CHILLED WATER SUPPLY		SHUT OFF VALVE (NORMALLY OPEN)
COB	CLEAN OUT DOOR		SHUT OFF VALVE (NORMALLY CLOSED)
CRGD	CEILING REGISTER DR GRILLE		BALANCING VALVE
CV	CONSTANT VOLUME SUPPLY BOX		AUTOMATIC CONTROL VALVE
CVR	CONSTANT VOLUME RETURN BOX		SOLENOID VALVE
CWR	CONDENSER WATER RETURN		DUCT SMOKE DETECTOR
CWS	CONDENSER WATER SUPPLY		PRESSURE GAUGE
DB	DRY BULB TEMPERATURE		SAFETY RELIEF VALVE
DSO	DUCT SMOKE DETECTOR		MOTORIZED BUTTERFLY VALVE
DWIO	DOUBLE WIDTH DOUBLE INLET		STRAINER WITH BLOW OFF VALVE
E	EXHAUST / EXHAUST REGULATOR BOX		HOSE ADAPTER
EAT	ENTERING AIR TEMPERATURE		CHECK VALVE
EMR	ELEVATOR MACHINE ROOM		PIPE ANCHOR
FAI	FRESH AIR INTAKE		PIPE GUIDE
FC	FLEXIBLE CONNECTION		PIPE TURNING DOWN
FDU	FAN COIL UNIT		PIPE TURNING UP
FD	FIRE DAMPER		UNDERGROUND PIPE
FL	FIRE LIFT		PRESSURE TEMPERATURE PORT
FLCR	FUSIBLE LINK REGISTER		SUPPLY AIR DUCT UP
FLV	FIRE LIFT VESTIBULE		EXHAUST OR RETURN AIR DUCT UP
FOR	FUEL OIL RETURN		SUPPLY AIR DUCT DOWN
FOS	FUEL OIL SUPPLY		EXHAUST OR RETURN AIR DUCT DOWN
FSO	COMBINATION FIRE SMOKE DAMPER		DUCT WITH ACOUSTIC LINING
GSX	GARAGE SMOKE EXHAUST		1' THICK U.D.N.
GX	GARAGE EXHAUST		FIRE RATED DUCT CONSTRUCTION
HC	HEATING COIL		1 1/2' HOUR U.D.N.
HWR	HOT WATER RADIATION RETURN		OFFSET IN DUCT ELEVATION
HWS	HOT WATER RADIATION SUPPLY		SHEET METAL PLENUM WALL
HX	HEAT EXCHANGER (CONVERTER)		SOUND TRAP
IFP	MOTOR CONTROL CENTER		CEILING DIFFUSER (2-WAY BLOW)
JKTD	JUMP DUCT (TRANSFER DUCT)		CEILING DIFFUSER (3-WAY BLOW)
KW	KILOWATTS		CEILING DIFFUSER (4-WAY BLOW)
KX	KITCHEN EXHAUST		CEILING GRILLE (CEILING REGISTER)
LAT	LEAVING AIR TEMPERATURE		WHERE NOTED AS CR
LPS	LOW PRESSURE STEAM		THERMOSTAT
LWT	LEAVING WATER TEMPERATURE		FAN START/STOP SWITCH W/ PILOT LIGHT
M	MOTOR		AC UNIT START/STOP W/ THERMOSTAT
MEK	MECHANICAL EQUIPMENT ROOM		DOOR LOUVER (SQ. FEET)
MLVS	METAL LOUVER WITH WIRE MESH SCREEN		UNDERCUT DOOR (1')
MM	MILLIMETERS		PRESSURE TRANSMITTER
MO	MASDNRY OR WALL OPENING (1 SQ. FT. U.D.N.)		IT CABINET TEMPERATURE SENSOR
MPS	MEDIUM PRESSURE STEAM		DIFFERENTIAL PRESSURE TRANSMITTER
NC	NORTH		DUCT MOUNTED SMOKE DETECTOR
NE	NORTHWEST		STATIC PRESSURE SENSOR
NIC	NOT IN CONTRACT		HUMIDITY SENSOR
NG	NECK SIZE		FLOW TRANSMITTER
NO	NORMALLY OPEN		BTU METER
NTS	NOT TO SCALE		CARBON DIOXIDE DETECTOR
NW	NORTHWEST		CARBON MONOXIDE DETECTOR
DAI	OUTSIDE AIR INTAKE		BUTTON TEMPERATURE SENSOR
DBD	OPPOSED BLADE DAMPER		FLEXIBLE DUCT
P	PUMP		FAN
PC	PUMPED CONDENSATE		CONSTANT/VARIABLE AIR VOLUME BOX OR EXHAUST BOX
PCHWR	PROCESS CHILLED WATER RETURN		CONSTANT/VARIABLE AIR VOLUME BOX WITH REHEAT COIL
PCHWS	PROCESS CHILLED WATER SUPPLY		AUTOMATIC LOUVER DAMPER
PCVS	PRIMARY CONDENSER WATER SUPPLY		COMBINATION FIRE/SMOKE DAMPER
PCWR	PRIMARY CONDENSER WATER RETURN		AUTOMATIC LOUVER DAMPER
PHC	PRE HEAT COIL		VOLUME DAMPER
PHWR	PRIMARY HOT WATER RETURN		ACCESS DOOR
PHWS	PRIMARY HOT WATER SUPPLY		DISCONNECT SWITCH
RA	RETURN AIR		HEATING COIL
RR	REFRIGERANT RELIEF		COOLING COIL
RSX	RETAIL SMOKE EXHAUST		PUMP
RTX	RETAIL TOILET EXHAUST		THERMOMETER
R/S	RETURN/SPILL		EXISTING DUCTWORK/EQUIPMENT/PIPING TO BE REMOVED
S	SUPPLY		CONNECT NEW WORK TO EXISTING
SA	SUPPLY AIR		BEAM CUT
SCWS	SECONDARY CONDENSER WATER SUPPLY		
SCVR	SECONDARY CONDENSER WATER RETURN		
SD	SOUTH		
SE	SOUTHEAST		
SF	SQUARE FEET		
ST	SOUND TRAP		
SW	SOUTHWEST		
SWI	SINGLE WIDTH SINGLE INLET		
SX	SMOKE EXHAUST		
S/S	STAINLESS STEEL		
TD	TRANSFER DUCT		
TF	TRANSFER FAN		
TRGD	TOP REGISTER OR GRILLE		
TX	TOILET EXHAUST		
TYF	TYPICAL		
UAS	UNDER ANOTHER SECTION OF THE SPECIFICATION		
UC	UNDERCUT DOOR (1 INCH)		
UH	UNIT HEATER		
UDN	UNLESS OTHERWISE NOTED		
V	VENTILATION		
VAV	VARIABLE AIR VOLUME REGULATOR		
VD	VOLUME DAMPER		
VI	VIBRATION ISOLATOR		
VIV	VARIABLE INLET VANES		
VP	VESTIBULE PRESSURIZATION		
VR	VARIABLE AIR VOLUME BOX WITH REHEAT COIL		
VW	WEST		
V/B	WET BULB TEMPERATURE		
VMS	WIRE MESH SCREEN		
WPS	WEATHER PROOF		
W/SQ. FT	WATTS PER SQUARE FOOT		

NYC BLDG. CODE NOTES		
GENERAL N.Y.C. BUILDING CODE NOTES (BUILDING CODE CITY OF NEW YORK EFFECTIVE JULY 1, 2008, TO BE COMPLIED WITH)		
1. MATERIALS AND EQUIPMENT SUBJECT TO SPECIAL INSPECTION		
A. MECHANICAL SYSTEMS - CODE/SECTION: BC 1704.15 B. SMOKE CONTROL SYSTEMS - CODE/SECTION: BC 1704.14 C. FUEL OIL PIPING/STORAGE SYSTEMS - CODE/SECTION: BC 1704.16 D. HIGH PRESSURE STEAM PIPING - CODE/SECTION: BC 1704.17 E. HEATING SYSTEMS - CODE/SECTION: BC 1704.23 - FINAL INSPECTION PER BC 109.5 AND DIRECTIVE 14 OF 1975		
2. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC., TO COMPLY WITH THE FOLLOWINGS:		
ARTICLE OR REFERENCE:		
WORK ITEM OR MATERIAL(S)	CHAPTER	SUBPARAGRAPHS
A. DUCT CONSTRUCTION	MC603	603.1 THROUGH 603.18 INCLUSIVE
B. AIR INLETS AND OUTLETS	MC608	608.1 THROUGH 608.23 INCLUSIVE
C. FILTERS	MC605	605.1 THROUGH 605.5 INCLUSIVE
D. MOTORS AND FANS	MC503	503.1 THROUGH 503.5 INCLUSIVE
E. ELEC. WIRING AND EQUIP.	MC301	301.1 (REFERENCE TO NYCEC)
F. REFRIGERATION SYSTEMS	MC1102	1102.1 THROUGH 1102.2.2.3 INCLUSIVE
G. SMOKE CONTROLS	MC513	513.1 THROUGH 513.20.3 INCLUSIVE
H. CONTROLS	MC405	405.1 THROUGH 405.2.1 INCLUSIVE
I. HEATING CAPACITY	MC312	312.1 (BC 1204.1 THROUGH 1204.4 INCLUSIVE)
J. NOISE CONTROL REQUIREMENTS	MC328	926.1 THROUGH 926.2.9 INCLUSIVE
K. HYDRONIC PIPING	MC1201	1201.1 THROUGH 1210.3.2 INCLUSIVE
L. INTAKES AND EXHAUSTS	MC401	401.5 THROUGH 401.6 INCLUSIVE
M. FUEL OIL PIPING AND STORAGE	MC1301	1301 THROUGH 1306.3 INCLUSIVE
3. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALL COMPOSITIONS.		
4. MINIMUM TEMPERATURE TO BE MAINTAINED IN HABITABLE ROOMS: 68°F AT A POINT 3 FEET ABOVE FLOOR WHEN OUTSIDE WITH 15 MPH WIND. HEATING REQUIREMENTS PER BC 1204 (MC 308.1).		
5. VENTILATION FOR ALL AREAS IS COMPLIANT WITH BC 1203 UNDER WHICH MECHANICAL VENTILATION SHALL COMPLY WITH MC 403		
6. WHERE UNDER MECHANICAL VENTILATION, A STATEMENT WILL BE FILED (BY OWNER OR TENANT IN POSSESSION) THAT THE VENTILATING SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION DURING NORMAL OCCUPANCY OF THE PREMISES.		
7. DETAIL OF DUCT SUPPORTS:		
A. SEE NOTE 2.A. ABOVE FOR HANGERS, BRACINGS, ETC.		
B. UNLESS OTHERWISE NOTED, ALL DUCTS SHALL BE CONSTRUCTED OF GALVANIZED IRON.		
8. MECHANICAL EQUIPMENT LOCATED OUTSIDE OF THE BUILDING OR WHERE EQUIPMENT OPENS TO THE EXTERIOR OF THE BUILDING SHALL BE SUBJECT TO THE NOISE LIMITATIONS OF BC 1207 (MC 926) WHERE WINDOWS OF A DWELLING UNIT ARE WITHIN 100 FT. OF EQUIPMENT OPENING TO OR ON THE EXTERIOR OF THE BUILDING.		
9. WHERE PIPING OR DUCTWORK HAS TO BE HUNG IN SPACES WHERE INSERTS ARE NOT PROVIDED, INSTALL TWO STAR NO. 7000 DOUBLE 3/8 IN. EXPANSION SHIELDS CONNECTED BY A 2 INCH X 2 INCH ANGLE, FROM WHICH SUSPENDS THE HANGAR RODS. THE NUMBER OF HANGERS WILL BE DOUBLE THE NUMBER ALLOWED FOR INSERTS. ALL METHODS OF ATTACHMENT TO THE BUILDING STRUCTURE MUST BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO THEIR USE. ANGLE SIZE SHALL BE SUITABLE TO SUPPORT THE LOAD WHICH IS BEING SUPPORTED.		
10. PLANS ARE IN COMPLIANCE WITH LOCAL LOW 17-95		
11. THE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2007 ENERGY CONSERVATION CODE OF NEW YORK STATE CHAPTER 8 AND THE LATEST EDITION (2008) OF NYC BUILDING CODE		

GENERAL NOTES	
1. ALL LOW PRESSURE BRANCH DUCTWORK (SUPPLY AND RETURN) SHALL BE PROVIDED WITH VOLUME CONTROL. SPLITTER DAMPERS AND VOLUME DAMPERS RESPECTIVELY (PROVIDE LOCK NOT AT DAMPERS).	16. ALL FSD AND TERMINAL BOXES WITH REHEAT COILS SHALL BE PROVIDED WITH ACCESS DOORS.
2. PROVIDE COMBINATION FIRE/SMOKE DAMPER AT BRANCH CONNECTIONS TO ALL RISERS AND AT ALL SLAB AND FIRE RATED WALL PENETRATIONS.	17. ALL MER FLOORS TO BE WATERPROOFED. (REFER TO ARCH. DRAWINGS)
3. ALL DUCTWORK AND PIPING ENCLOSURES FOR HORIZONTAL OFFSETS SHALL BE OF 2HR RATED MINIMUM SHAFTHALL CONSTRUCTION (TOP, BOTTOM AND SIDES) SHALL BE SUPPORTED INDEPENDENTLY OF THE DUCTWORK OR PIPING AND SHALL BE THE WORK OF ANOTHER CONTRACTOR.	18. ALL STEAM VALVES, CHILLED WATER, CONDENSER WATER AND HOT WATER PUMPS SHALL BE PROVIDED WITH INSULATED CUSTOM FITTED BLANKET/ENCLOSURES AS PER SPECIFICATION.
4. EACH VARIABLE AIR VOLUME BOX (WITH AND WITHOUT REHEAT COIL) AND CONSTANT VOLUME BOX (WITH REHEAT COIL) SHALL BE PROVIDED WITH A THERMOSTAT FURNISHED AND INSTALLED UNDER THE B.A.T.C. SECTION OF THE SPECIFICATIONS. THERMOSTATS SHALL BE LOCATED AS SHOWN OR AS DIRECTED.	19. INSTALL INTAL CROSS CONNECTION "FLUSH VALVES" AT THE BEGINNING AND END OF ALL WATER PIPE RUNS. VALVE SIZE SHALL NOT BE LESS THAN TWO PIPE SIZES SMALLER THAN THE LINE SIZE, WITH A MINIMUM SIZE OF 1/2 INCH. WATER SYSTEMS INCLUDE: CHILLED WATER, SECONDARY CONDENSER, HOT WATER REHEAT, HOT WATER RADIATION, ETC.
5. FOR SIZES OF THE MOTOR CONTROL CENTERS (MCC, INCLUDING VARIABLE SPEED DRIVE) AND ARRANGEMENT AND/OR GROUPING OF ISOLATED STARTERS REFER TO ELECTRICAL CONTRACT DOCUMENTS.	20. ALL HEAT TRANSFER PACKAGED EQUIPMENT (PUMPS, HEAT EXCHANGERS, EXPANSION TANKS, CONDENSATE PUMPS, ETC.) SHALL BE VALVED AS SHOWN ON THE DETAIL SHEETS, AND/OR AS DESCRIBED IN THE SPECIFICATIONS.
6. ALL DRAWINGS, CATALOGS AND STEEL RING ACCESS LADDERS WILL BE PROVIDED UNDER ANOTHER SECTION OF THE SPECIFICATIONS, EXCEPT AS NOTED ON PLANS.	21. ALL TERMINAL BOXES AND EQUIPMENT THAT REQUIRE ACCESS AND SERVICE SHALL BE CENTER LINE NO MORE THAN 11'-0" ABOVE FINISH FLOOR.
7. VARIABLE AIR VOLUME AND CONSTANT AIR VOLUME BOXES AND SOUND TRAP SYMBOLS SHOWN ON DRAWINGS ARE SCHEMATIC. SEE DETAIL OF INSTALLATION FOR ACTUAL TYPICAL ARRANGEMENT REQUIRED.	22. ALL ELEVATOR HOISTWAYS SHALL BE PROVIDED WITH A 3 SQUARE FOOT VENT TO THE EXTERIOR. REFER TO ARCHITECTURAL PLANS FOR VENTING REQUIREMENTS.
8. BORDER TYPES, COLOR, FINISHES, AND METHOD OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH THE ARCHITECTURAL CEILING DETAILS AND SPECIFICATIONS.	23. ALL VALVED OUTLETS FOR FUTURE USE AND DEAD LEAS SHALL BE PROVIDED WITH A BYPASS LINE AND BALANCING VALVE (INCLUDING BUT NOT LIMITED TO THE VALVES FOR FUTURE PUMPS, VALVED OUTLETS ON FITOUT FLOORS)
9. ALL LINEAR DIFFUSERS ARE TO BE COORDINATED WITH ARCHITECTURAL PLANS FOR EXACT LENGTHS AND LOCATIONS. ACTIVE PLENUM SECTIONS SHALL BE OF THE SIZES AS SHOWN ON PLANS. EACH BRANCH TAP SERVING THE LINEAR DIFFUSER SHALL BE PROVIDED WITH A VOLUME DAMPER WHICH SHALL BE OPERABLE THROUGH THE ROOM SIDE FACE OF THE DIFFUSER. (CABLE OPERATED DAMPER) ACTIVE SUPPLY SECTIONS OF THE LINEAR DIFFUSERS SHALL BE PROVIDED WITH PATTERN CONTROL DEVICES AND EQUALIZING GRIDS. ACTIVE OR INACTIVE RETURN SECTIONS SHALL NOT BE FURNISHED WITH PATTERN CONTROL, OR EQUALIZING GRIDS. REFER TO SPECIFICATIONS FOR MODEL NUMBERS. ALL FINISH COLORS AND TYPES SHALL BE AS PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.	24. ALL DUCTWORK LOCATED IN ELECTRICAL ROOMS SHALL BE INSTALLED 6'-0" ABOVE ALL ELECTRICAL EQUIPMENT.
10. THERMOSTAT SHOULD BE LOCATED 5'-0" A.F.F. AND 9" FROM EDGE OF DOOR U.O.N. FINAL LOCATIONS TO BE VERIFIED WITH THE ARCHITECT. FINISHED PAINT COLOR TO BE SELECTED BY THE OWNER. MANUFACTURER'S LOGO SHALL NOT BE EXPOSED.	25. ALL PIPING RUNNING THROUGH OR SERVING ELECTRICAL ROOMS SHALL BE LOCATED 6'-0" ABOVE ALL ELECTRICAL EQUIPMENT. PIPING SHALL BE PROVIDED WITH A DRAIN PAN AND LEAK DETECTION TIED INTO THE BMS SYSTEM.
11. WHERE PIPING CONNECTIONS FOR EQUIPMENT SUCH AS PUMPS, CHILLERS, HEAT EXCHANGERS, ETC. DIFFER FROM THE LINE SIZE PIPING, IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FURNISH AND INSTALL THE NECESSARY REDUCER/EXPANDER FITTINGS TO ENABLE CONNECTION BETWEEN THE PIPING SYSTEM AND THE EQUIPMENT.	26. ALL CHILLED WATER VALVES SHALL BE RATED FOR ANSI CLASS 300.
12. ALL PRESSURE AND TEMPERATURE GAUGES ARE SCHEMATICALLY SHOWN ON THE PLANS. REFER TO SPECIFICATIONS FOR EXACT TYPES.	27. ALL MOTORS SHALL BE INVERTER DUTY RATED.
13. REFER TO SCHEDULE SHEETS FOR THE DIFFUSER, GRILLE AND REGISTER SCHEDULES.	28. FURNISH AND INSTALL ENGINEERED SEISMIC EXPANSION LOOPS ASSOCIATED RESTRAINT SYSTEMS FOR ALL MECHANICAL SYSTEMS (PIPING AND DUCTWORK) PASSING THROUGH OR CROSSING SEISMIC AND THERMAL EXPANSION ZONES/JOINTS. REFER TO SPECIFICATIONS AND NOTATIONS ON PLANS.
14. LOCATION OF DIRECT DIGITAL CONTROL (DDC) AND LOCAL (LC) PANELS SHOWN ON PLANS ARE SUGGESTED LOCATIONS ONLY. FINAL LOCATION AND EXACT QUANTITY OF DDC/LC PANELS, WILL BE DEPENDENT ON SELECTION OF A/C VENDOR AND SHALL BE SUBJECT TO SHOP DRAWING SUBMITTAL, REVIEW AND APPROVAL BY THE ENGINEER AND ARCHITECT.	29. ALL METAL LOUVERS, AND ALL BLANK OFF PANELS (INSULATED OR NOT INSULATED, ACTIVE OR INACTIVE) FOR LOUVERS SHALL BE PROVIDED UNDER ANOTHER SECTION OF THE SPECIFICATIONS. WIRE MESH SCREENS FOR LOUVERS SHALL BE PROVIDED BY THE LOUVER MANUFACTURER. ALL OTHER WIRE MESH SCREENS SHALL BE PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS.
15. ALL COMBINATION FIRE/SMOKE DAMPERS SHALL BE APPROVED FOR USE IN NEW YORK CITY (SHALL HAVE NEW YORK CITY M.E.A./D.S.A. No.) DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH APPROVED ULL LISTING REQUIREMENTS. DAMPERS SHALL BE RUSON AS STD.	30. ALL HORIZONTAL S.A. DUCTWORK UPSTREAM OF TERMINAL UNITS SHALL BE LEAK TESTED.
	31. DIFFUSERS LOCATED IN INACCESSIBLE CEILINGS SHALL HAVE CORO OPERATED VOLUME DAMPERS IN ITS RESPECTIVE BRANCH DUCTS OPERABLE THROUGH FACE OF THE DIFFUSER.
	32. PROVIDE CLEANOUTS FOR CONDENSATE DRAIN PIPING AT EACH CHANGE OF DIRECTION AS REQUIRED.
	33. CONTRACTOR MUST SIZE REFRIGERANT LINES ONCE AN ACCURATE PIPING LAYOUT HAS BEEN DONE DURING THE SHOP DRAWING COORDINATION PHASE. REFRIGERANT PIPING SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
	34. ALL REQUIRED SPECIAL INSPECTIONS SHALL BE CONDUCTED BY A SPECIAL INSPECTOR IN ACCORDANCE WITH REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE. SERVICES OF THE SPECIAL INSPECTORS SHALL BE RETAINED BY THE OWNER UNDER A SEPARATE CONTRACT.
	35. ALL HVAC SYSTEMS SHALL BE BALANCED. BALANCING REPORTS SHALL BE PROVIDED TO THE OWNER.

ALTERNATES	
NUMBER	DESCRIPTION
23000.1	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL AN ACOUSTIC RETURN AIR PLENUM SECTION ON EACH LOCAL FLOOR AIR CONDITIONING UNIT. THE PLENUM WILL BE OF SIMILAR CONSTRUCTION AS THE LOCAL FLOOR AIR CONDITIONING UNIT CASING WITH A PERFORATED INNER LINER WITH 2" ACOUSTIC LINING. REFER TO M-200 FOR TYPICAL FAN ROOM DETAILS. TYPICAL FOR FLOORS 6-67.
23000.2	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL OPEN/CLOSED END SWITCHES FOR EACH FIRE SMOKE DAMPER REFER TO SPECIFICATION SECTION 23.33.13.2.5 - R.
23000.3A	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL TEMPORARY HEATING ON PER FLOOR BASIS FOR SHELLED FLOORS AWAITING TENANCY (NOT FOR CONSTRUCTION PHASE HEATING). THE HEATING WOULD BE PROVIDED BY A SERIES OF TEN (10) SIZE 5 FAN-POWERED BOXES (FPB'S) MOUNTED, PIPED, TRIMMED, WIRED AND CONTROLLED. REFER TO SCHEMATIC LAYOUT OF FPB'S FOR TEMPORARY HEATING INDICATED ON M-106.
23000.3B	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL TEMPORARY HEATING ON PER FLOOR BASIS FOR SHELLED FLOORS AWAITING TENANCY (NOT FOR CONSTRUCTION PHASE HEATING). THE HEATING WOULD BE PROVIDED BY A SERIES OF EIGHT (8) 5kW ELECTRIC UNIT HEATERS (EUH'S) MOUNTED, WIRED, AND CONTROLLED. REFER TO SCHEMATIC LAYOUT OF EUH'S FOR TEMPORARY HEATING INDICATED ON M-106. (INDECO UMR SERIES #240-11050)
23000.4	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL DEDICATED SUPPLY AIR AND EXHAUST AIR SYSTEMS TO SERVE LAUNDRY ROOM ON LEVEL B. THE SERVICES WILL CONSIST OF A HEATING AND VENTILATING UNIT ON THE 5TH FLOOR MECHANICAL LEVEL AND AN EXHAUST FAN ON THE 4TH FLOOR MECHANICAL LEVEL. CAPPED SERVICE WILL TERMINATE WITHIN B LEVEL. REFER TO PLANS M-100B-A, M-101A, M-102, M-103, M-104, M-105, M-400, M-501, AND M-502.
23000.5	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL A LOW PRESSURE METEDED STEAM SERVICE FROM THE 5TH FLOOR MECHANICAL LEVEL DOWN TO THE TENANT LAUNDRY ROOM ON LEVEL B. CAPPED SERVICE WILL BE TERMINATED WITHIN TENANT SPACE. REFER TO PLANS M-100B-A, M-100-A, M-102M-104 AND M-105.
23000.6	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL A COMPLETE AIR CONDITIONING SYSTEM TO SUPPORT TENANT AREA ON THE GROUND FLOOR AND MEZZANINE LEVEL WITH CAPPED SUPPLY AIR DUCTS AT FAN ROOM WALL. THE SYSTEM WILL INCLUDE A 20-TON WATER COOLED DIRECT-EXPANSION UNIT AS SCHEDULED. SERVICES FOR OUTSIDE AIR, EXHAUST AND EXTENSION OF BUILDING METEDED CONDENSER WATER. REFER TO PLANS M-100-A, M-102 AND M-505
23000.7	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL THE MECHANICAL SYSTEMS ASSOCIATED WITH THE INSTALLATION OF THREE (3) SEPARATE 1500 KW TIER 4 STANDBY GENERATOR SYSTEMS ON THE 5TH FLOOR. THE SYSTEMS SHALL INCLUDE BUT ARE NOT LIMITED TO GENERATOR EXHAUSTS WITH SUPER CRITICAL GRADE EXHAUST SILENCERS, EXPANSION FITTINGS, INTAKE AND DISCHARGE PLENUMS WITH SOUND ATTENUATORS AND DAMPERS, FUEL OIL STORAGE AND DISTRIBUTION, FUEL OIL CONTROL AND MONITORING, VIBRATION ISOLATION AND GENERATOR ROOM VENTILATION AND EXHAUST. REFER TO SPECIFICATIONS 230900, 231000 AND THE PLANS FOR MORE INFORMATION.
23000.8	PROVIDE AN ADD ALTERNATE PRICE TO FURNISH AND INSTALL AN UPGRADE TO THE RETAIL CONDENSER WATER AND HOT WATER SYSTEM TO SUPPLY CONDENSER WATER AND HOT WATER FOR THE SOUTH RETAIL. THIS UPGRADE WILL INCLUDE BUT IS NOT LIMITED TO THE UP-SIZING OF PUMPS, HEAT EXCHANGERS, PIPING, ETC. REFER TO PLANS M-100B-A, M-100B-B, M-101-A, M-101-M, M-102, M-103, M-104, M-105, M-168, M-303, M-500, M-502, M-504, M-501, AND M-503



MECHANICAL TITLE SHEET	
Project No.: 1400A.000	B-SCAN Sheet No.: M-002.01
Date: 29 JAN 2016	Sheet No.: M-002
Scale: NTS	Page No.: 1 OF 61
File No: M-002	



MANHATTAN WEST:
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Brookfield
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Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

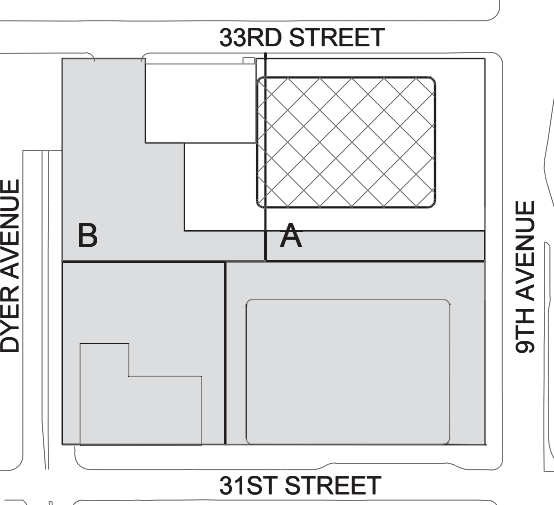
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
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Key Plan:





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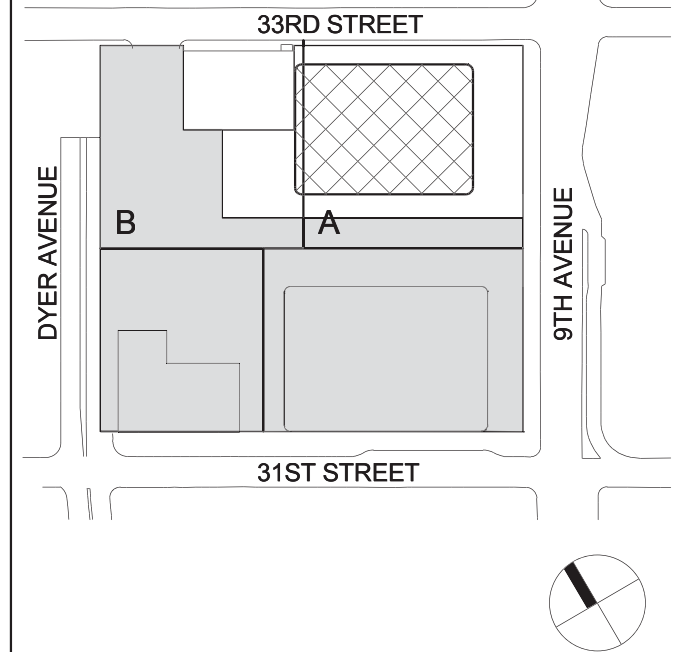
Facade Maintenance Consultant

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Ontario, Canada N1K 1B8

Key Plan:



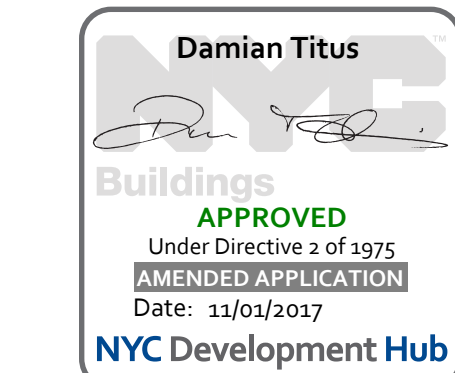
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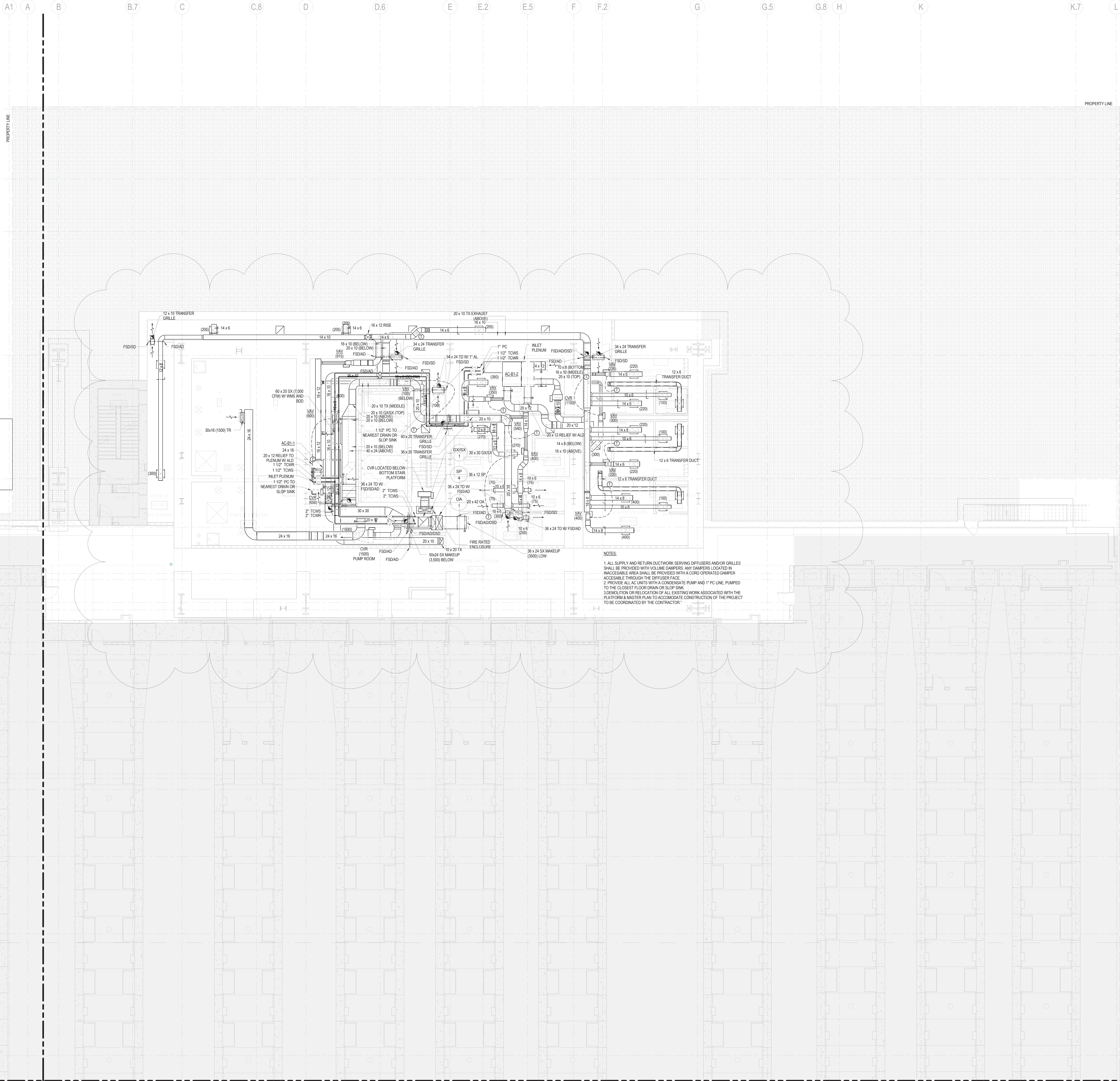
2 22 APR 2016 ISSUED FOR PAA
1 20 JUN 2014 ISSUED FOR BUILDING PERMIT
No. Date Description
Sheet Name:

MECHANICAL
CELLAR B1
FLOOR PLAN -
PART A

Project No.: 14830 A.000 B-SCAN Sheet No.:
Date: 22 APR 2016 M-095.01
Scale: 1/8" = 1'-0" Sheet No.:
File No: M-095B1-A Page No: 3 OF 34

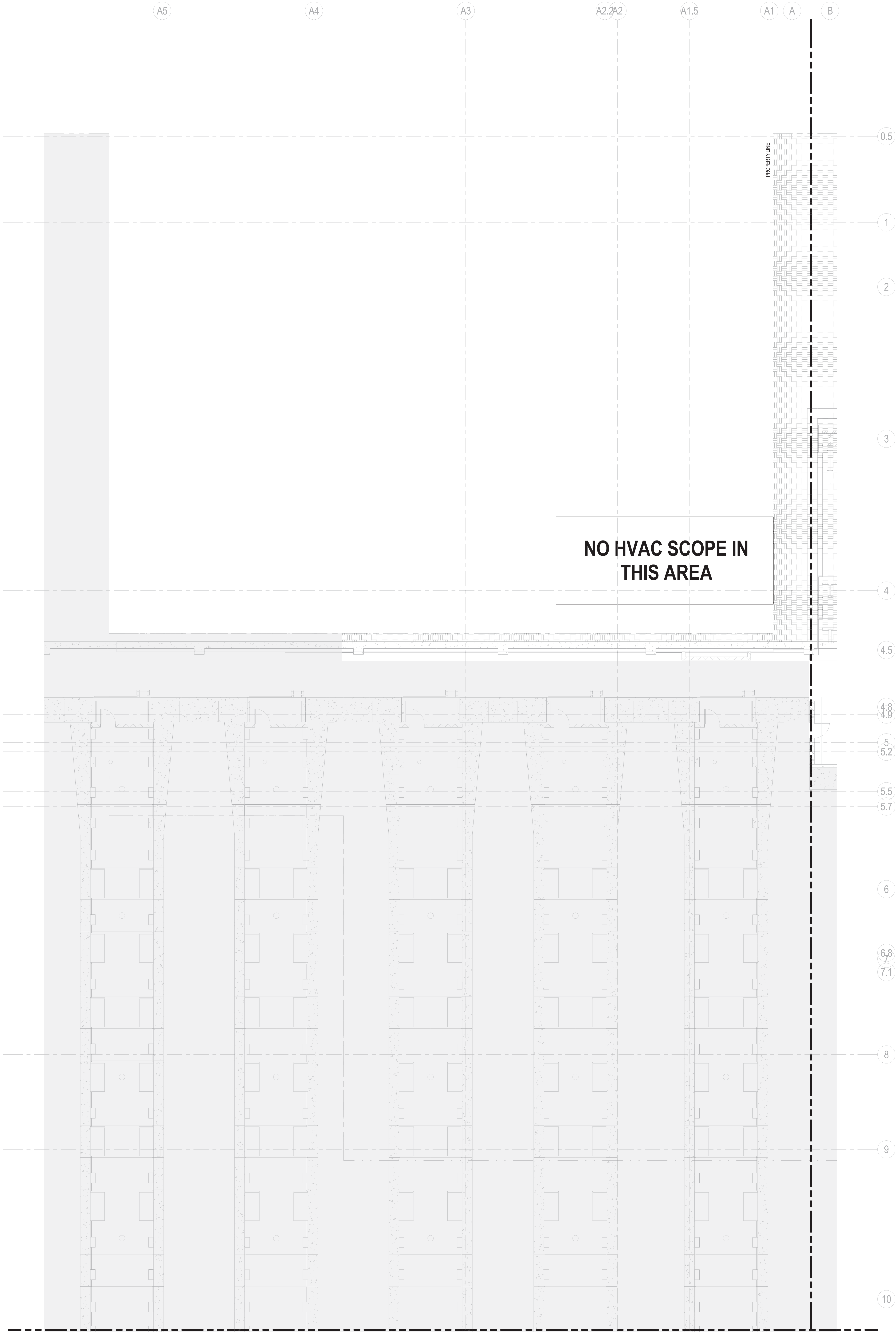


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APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS
SHOWN ARE NOT TO BE RELIED UPON OR TO BE
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ACCORDANCE WITH APPLICABLE CODES.



NOTES:
1. ALL SUPPLY AND RETURN DUCTWORK SERVING DIFFUSERS AND/OR GRILLES SHALL BE PROVIDED WITH VOLUME DAMPERS. ANY DAMPERS LOCATED IN INACCESSIBLE AREA SHALL BE PROVIDED WITH A CORD OPERATED DAMPER ACCESSIBLE THROUGH THE DIFFUSER FACE.
2. PROVIDE ALL AC UNITS WITH A CONDENSATE PUMP AND 1" PC LINE, PUMPED TO THE CLOSEST FLOOR DRAIN OR SLOP SINK.
3. DEMOLITION OR RELOCATION OF ALL EXISTING WORK ASSOCIATED WITH THE PLATFORM A MASTER PLAN TO ACCOMMODATE CONSTRUCTION OF THE PROJECT TO BE COORDINATED BY THE CONTRACTOR.

4/22/2016 3:15:55 PM



NO HVAC SCOPE IN
THIS AREA

DEPT OF BLDGS 1218743 Job Number ES09B1-B

Job Code



MANHATTAN WEST:
NORTH TOWER
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Cerami & Associates
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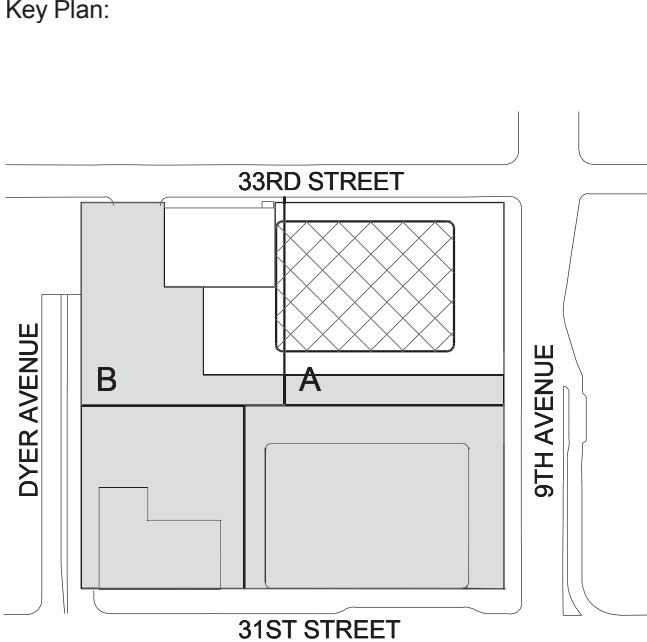
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant
Code Consultants Professional Engineers PC
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Rowan Williams Davies & Irwin Inc.
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Key Plan:



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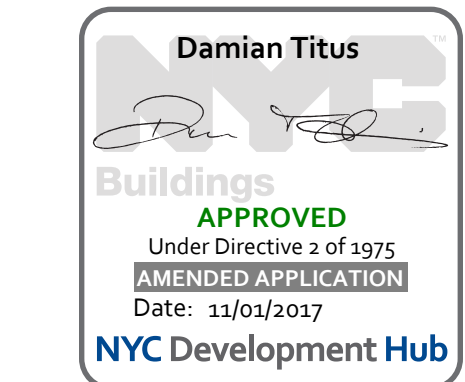


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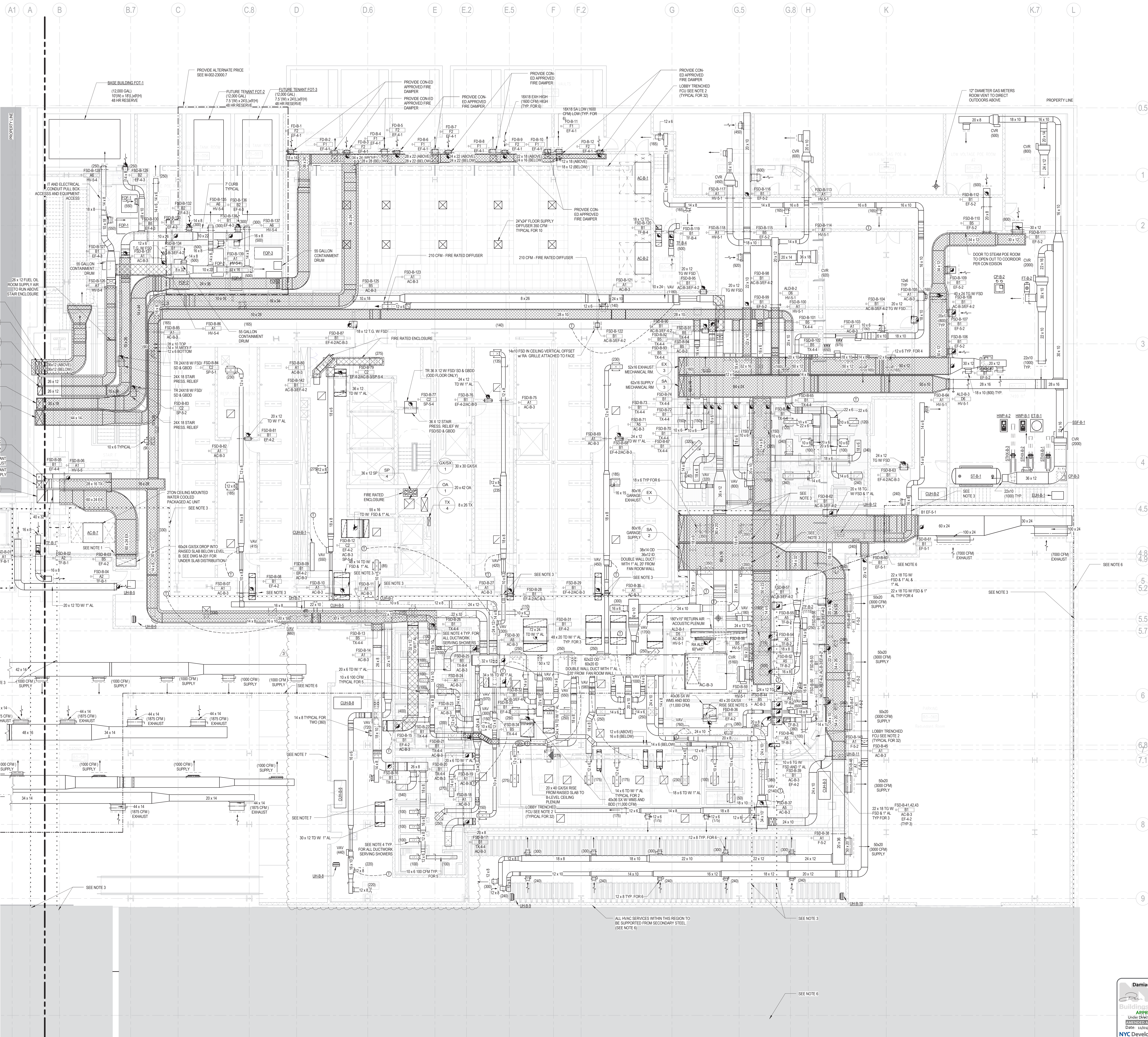
MECHANICAL
CELLAR B1
FLOOR PLAN -
PART B

Project No.: 14830 A-000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No: M-099B1-B

B-SCAN Sheet No.: M-096.01
Sheet No.: M-099B1-B
Page No.: 4 OF 34



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Client

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Project No.: 14830-A.000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No.: M-100B-A.00
Page No.: 2 OF 22

B-SCAN Sheet No.:
M-097.01

Under Contract as of 1995
DATE OF APPLICATION
Date: 12/01/2017
NYC Development Hub

Mechanical
CELLAR B FLOOR
PLAN - PART A

Project No.: 14830-A.000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No.: M-100B-A.00
Page No.: 2 OF 22

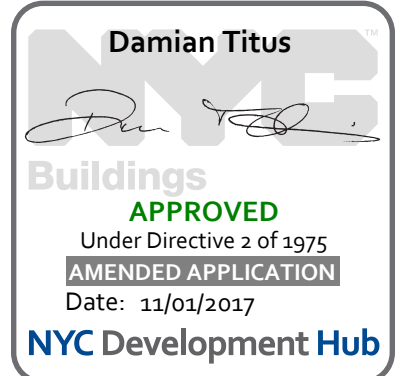
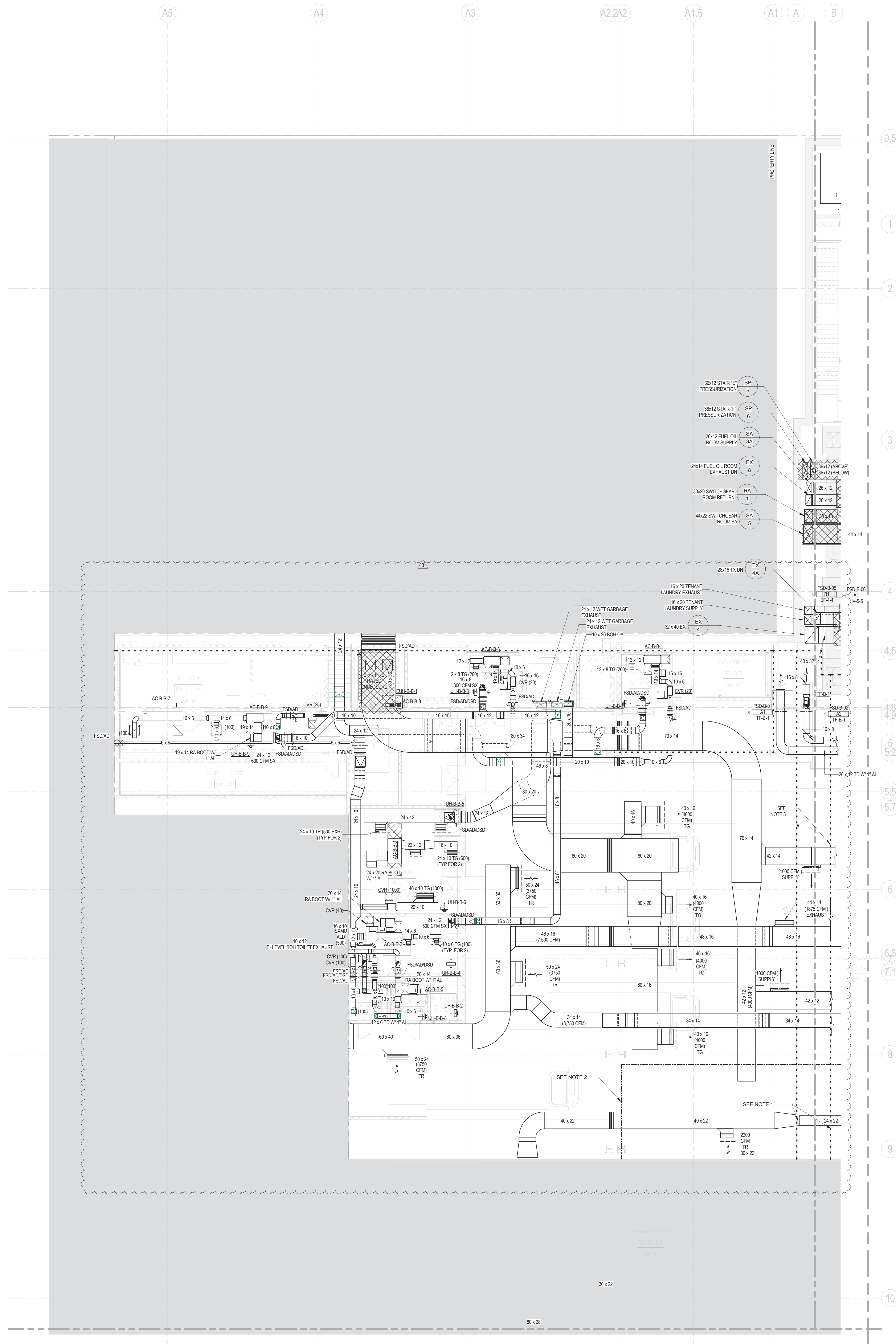
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M-097.01

Under Contract as of 1995
DATE OF APPLICATION
Date: 12/01/2017
NYC Development Hub

Mechanical
CELLAR B FLOOR
PLAN - PART A

Project No.: 14830-A.000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No.: M-100B-A.00
Page No.: 2 OF 22

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65 Broadway, Suite 401, New York, NY 10006

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Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

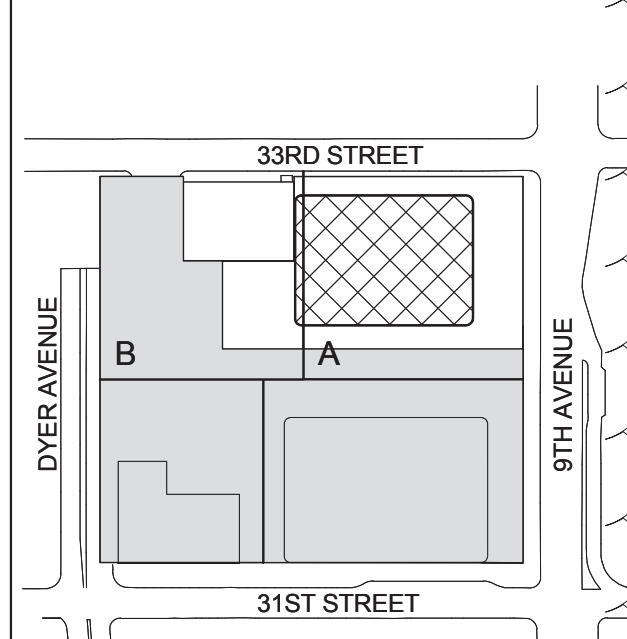
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
680 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



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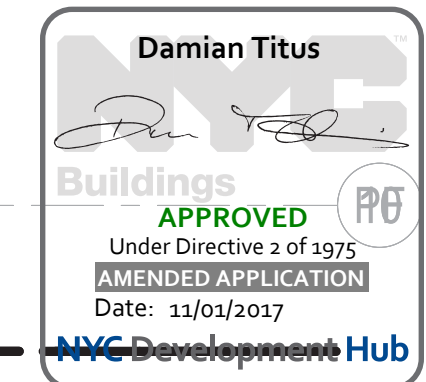
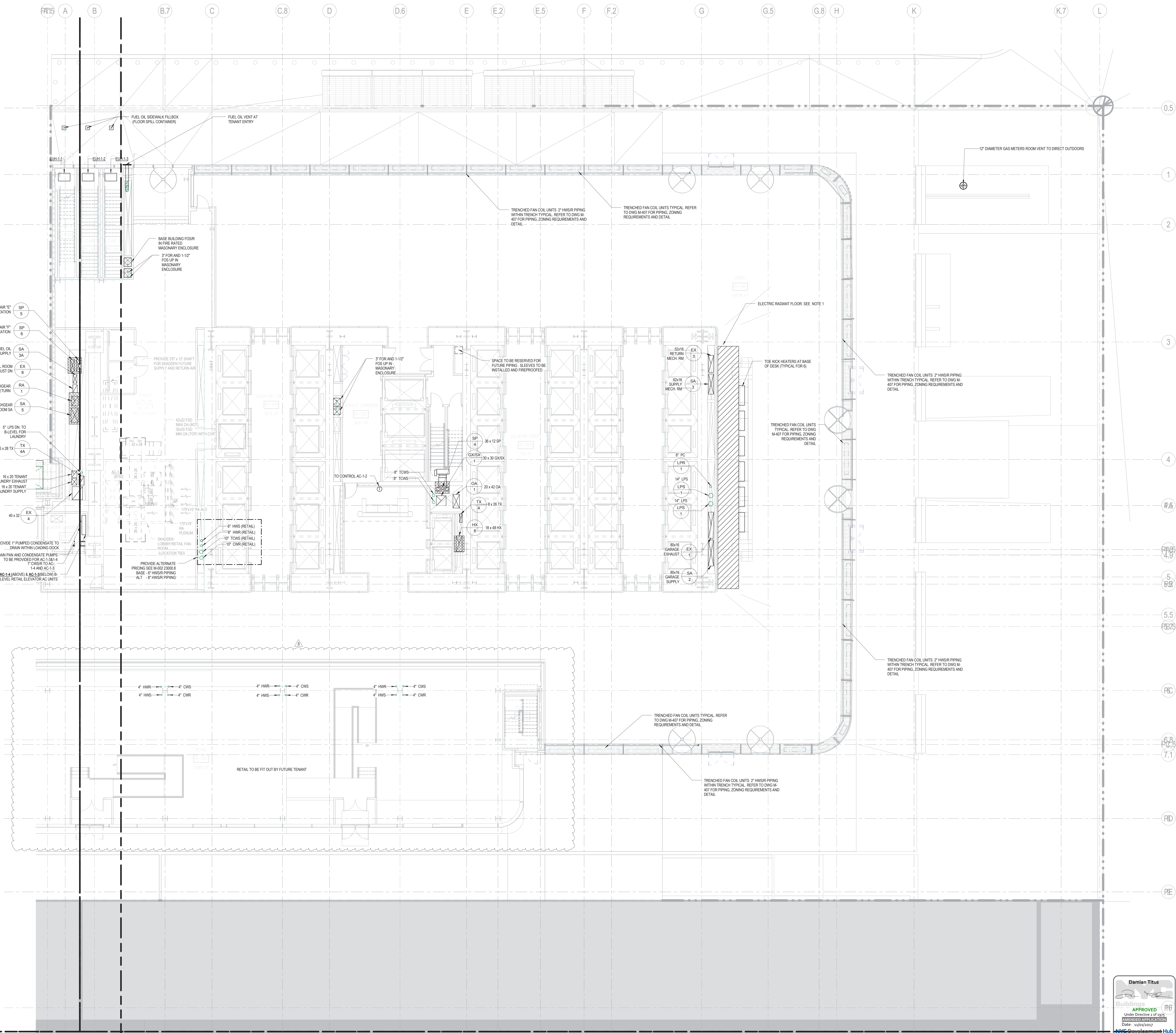
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2	22 APR 2016	ISSUED FOR PAA
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT


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**MECHANICAL
CELLAR B FLOOR
PLAN - PART B**

Project No.: 14830 A.000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No.: M-100B-B.00
B-SCAN Sheet No.: M-098.01
Sheet No.: M-100B-B.00
Page No.: 3 OF 22

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401 Ninth Avenue, New York, NY 10001
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Brookfield
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Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W. 34th Street #610,
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Ducibella, Vantor & Santore
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Blast Consultant
Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant
Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

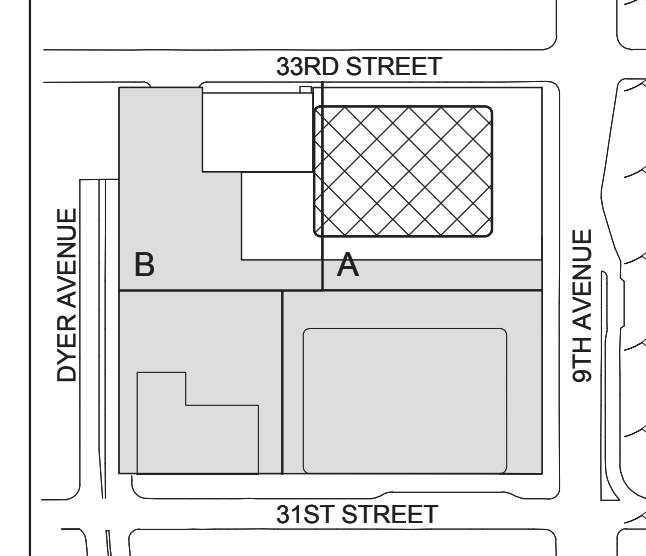
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

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215 West 40th Street, 15th Floor, New York, NY 10018

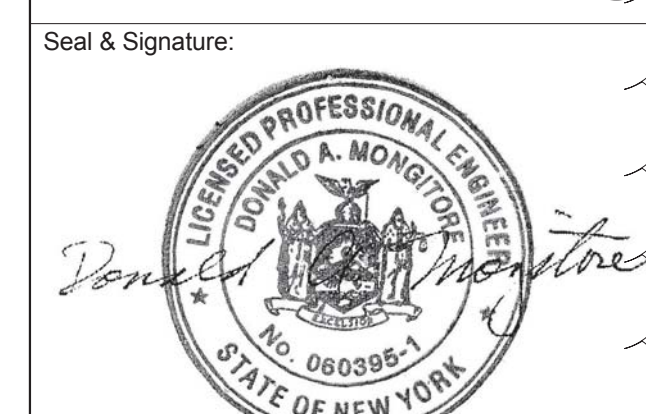
Facade Maintenance Consultant
Entek Engineering LLC
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Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



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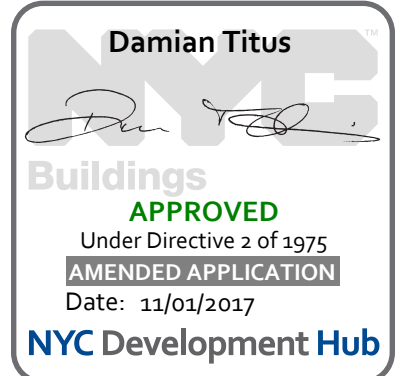
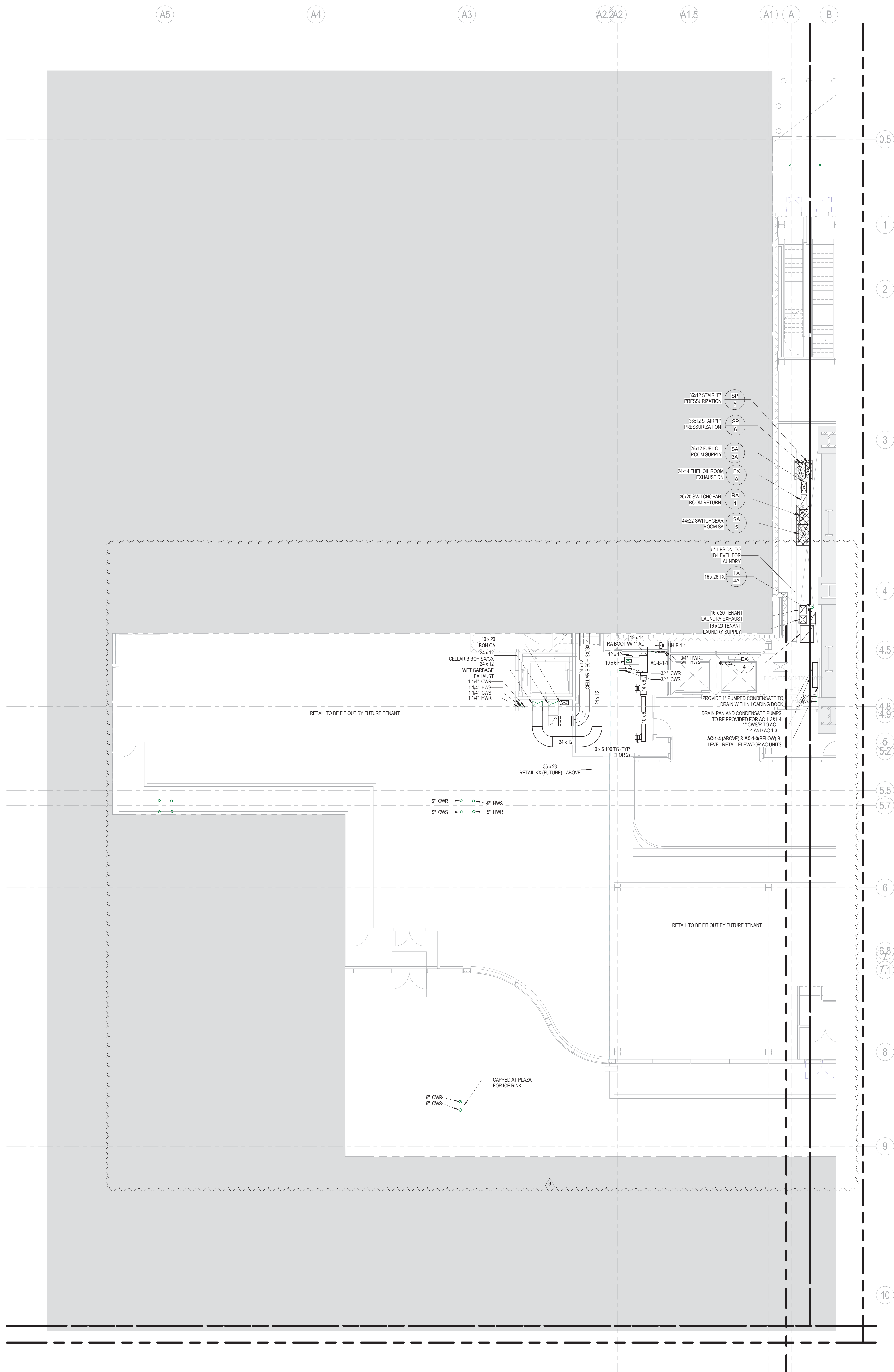
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1 20 JUN 2014 ISSUED FOR BUILDING PERMIT

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**MECHANICAL
GROUND FLOOR
PLAN - PART A**

Project No.: 14830-A-000 B-SCAN Sheet No.:
Date: 20 JUN 2014 **M-100.01**
Scale: 1/8" = 1'-0" Sheet No.:
File No: M-101-A-00 Page No.: 4 OF 22

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Weidinger Associates, Inc.
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Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

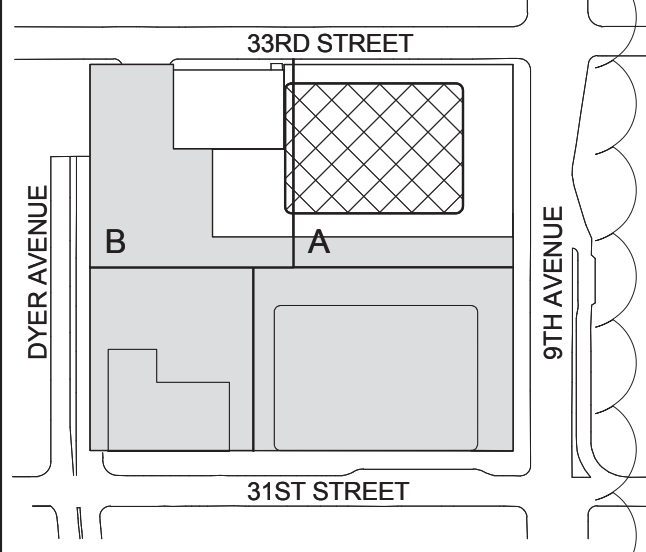
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
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Code Consultants Professional Engineers PC
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650 Woodlawn Road West, Guelph
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1	20 JUN 2014	ISSUED FOR BUILDING PERMIT

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**MECHANICAL
GROUND FLOOR
PLAN - PART B**

Project No.: 14830-A-000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No.: M-101-B-00
B-SCAN Sheet No.:
M-101.01
Sheet No.:
M-101-B-00
Page No.: 5 OF 22



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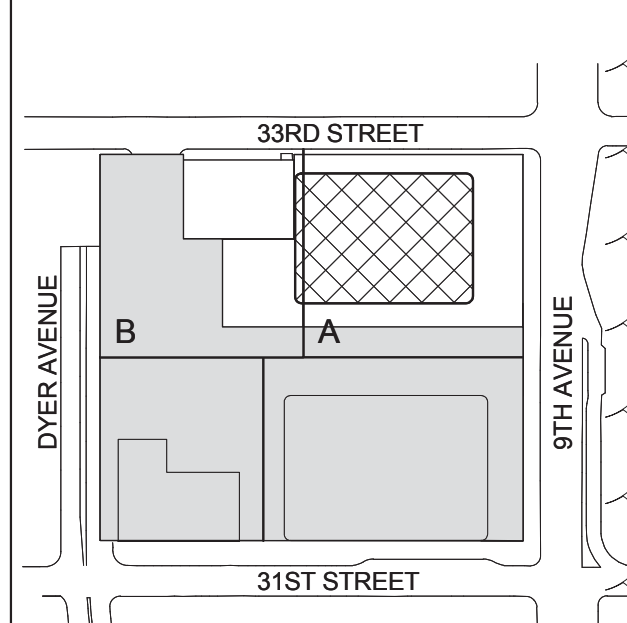
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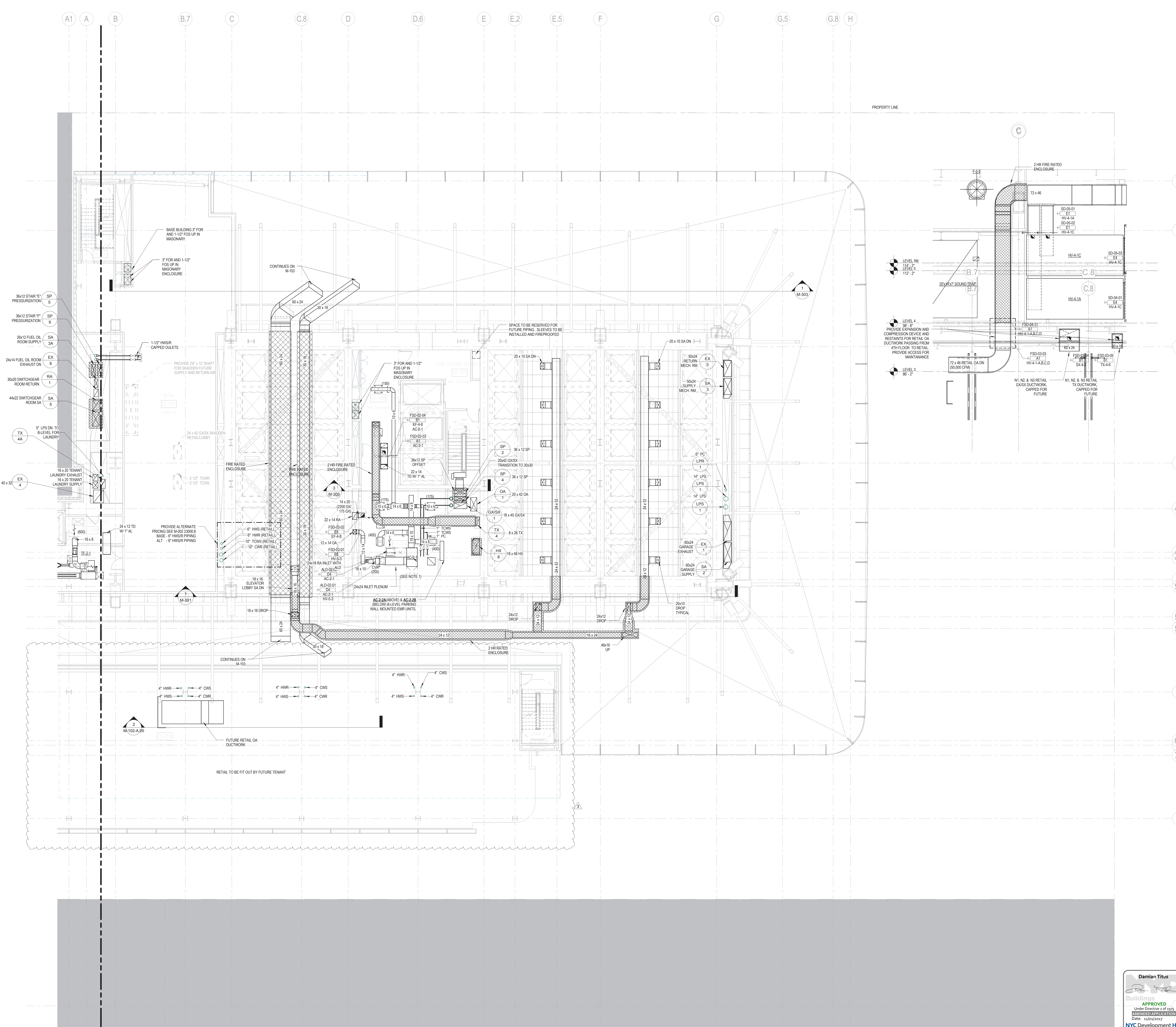
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LEVEL 2 FLOOR
PLAN - RETAIL -
PART A**

Project No.: 14830 A.000 B-SCAN Sheet No.:

Date: 20 JUN 2014 M-102.01

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File No. M-102-A.00 Page No. 6 OF 22



PROPERTY LINE

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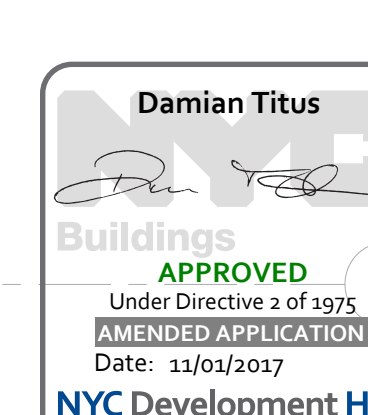
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Philip Habib & Associates
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MEP Engineering
Jaros Baum & Bolles
80 Pine Street, New York, NY 10005

Vertical Transportation
Edgett Williams Consulting Group, Inc.
102 East Blithedale Ave., Suite 1, Mill Valley, California 94041

Sustainable Design
Viridian Energy & Environmental
50 Washington Street, Newark, CT 06854

Geo-Technical Engineering
Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W. 34th Street #610,
New York, NY 10012

Landscape Consultant
Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant
Ducibella, Venter & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant
Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant
Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant
Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

Facade Maintenance Consultant
Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature



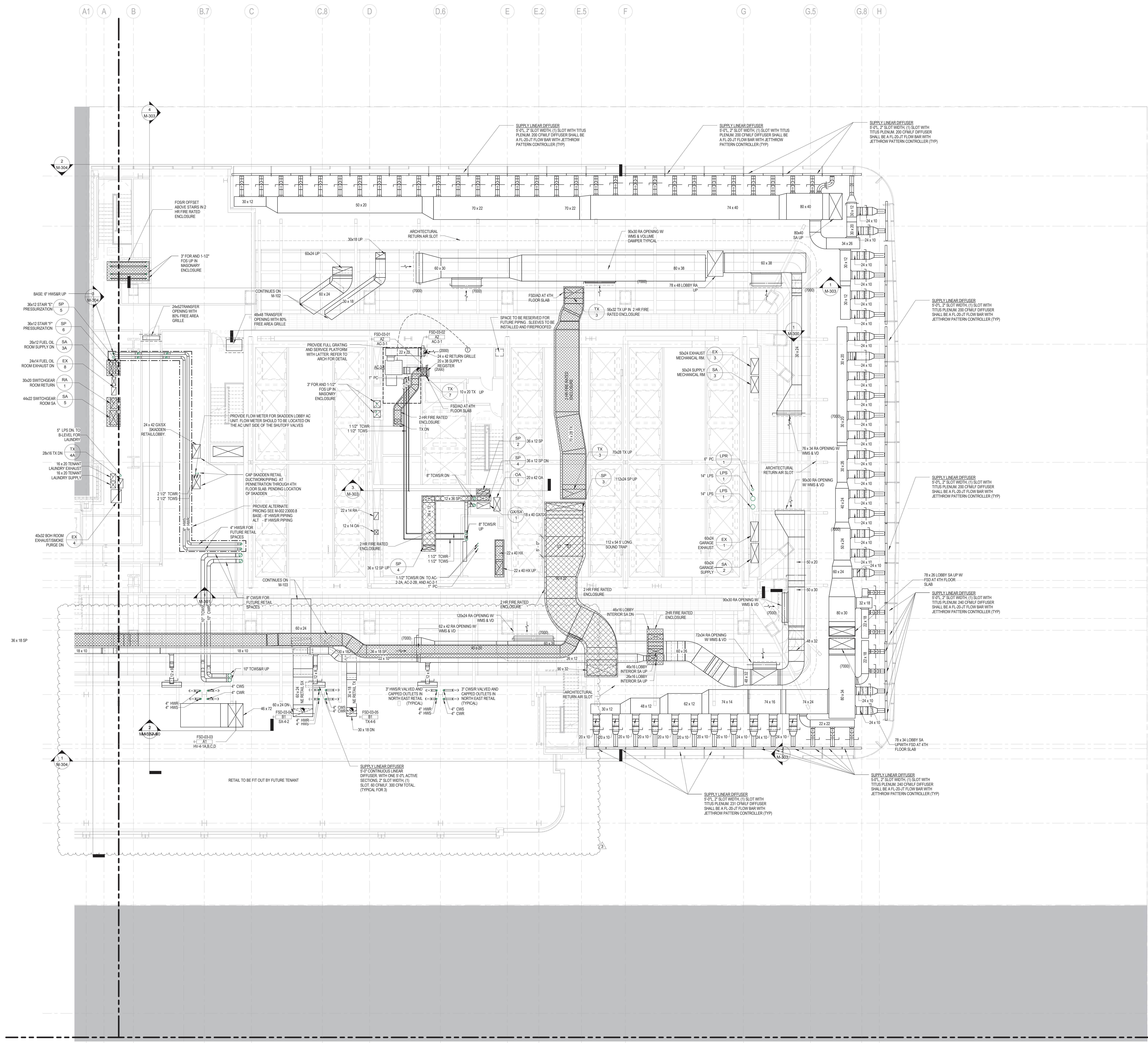
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2 22 APR 2016 ISSUED FOR P&A
1 20 JUN 2014 ISSUED FOR BUILDING PERMIT

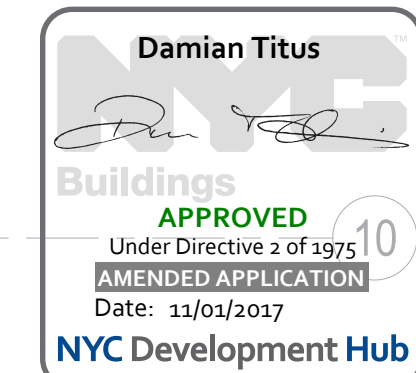
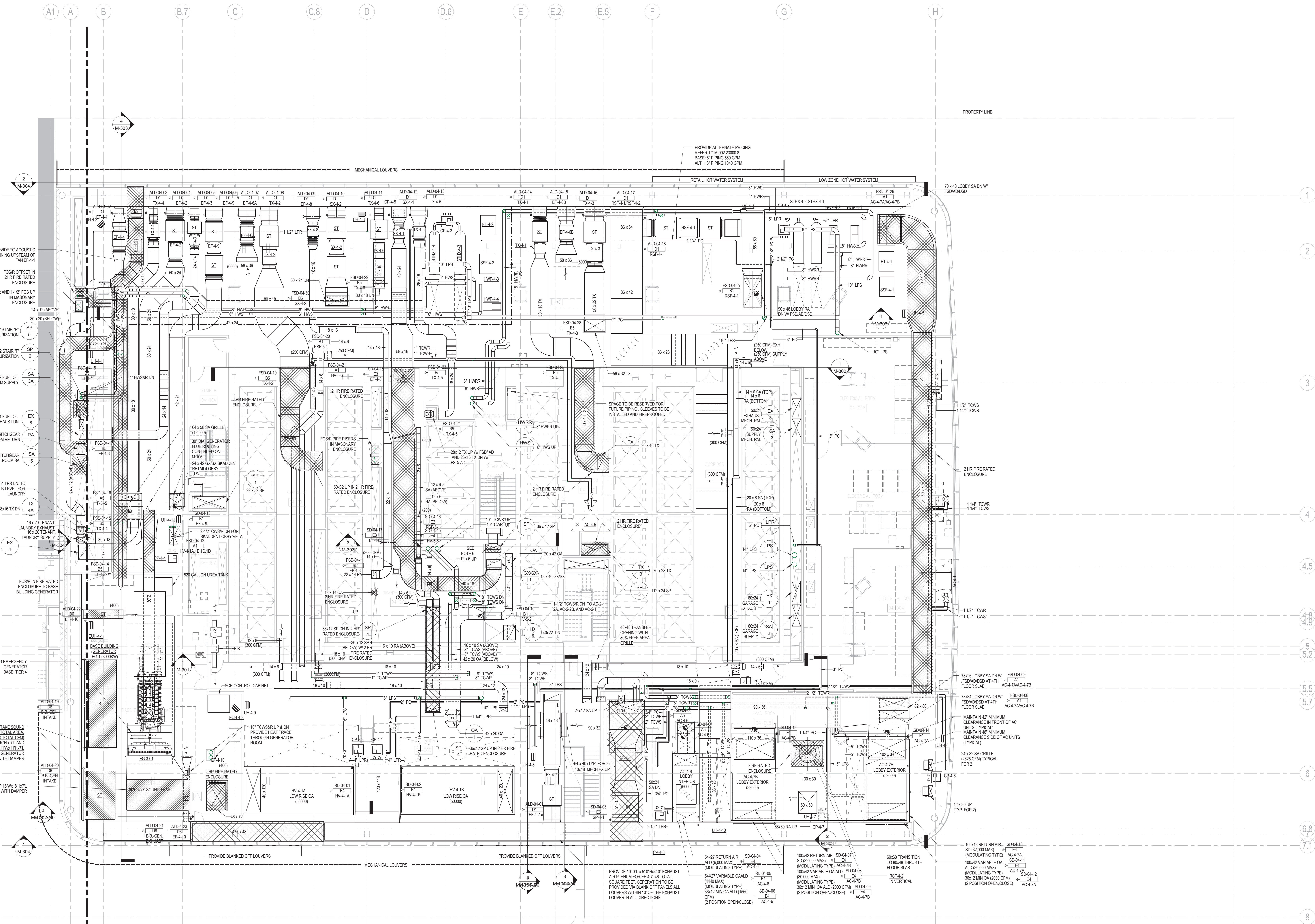
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Project No.: 14830 A.000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No.: M-103-A.00

B-SCAN Sheet No.:
M-103.01
Sheet No.:
Page No.: 7 OF 22

**MECHANICAL
LEVEL 3 FLOOR
PLAN - STAIR
TRANSFER -
PART A**





Brookfield

Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering

SOM
Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering

Philip Habb & Associates
102 Madison Avenue #11, New York, NY 10016

MEP Engineering

Jaros Baum & Boles
80 Pine Street, New York, NY 10005

Vertical Transportation

Edgett Williams Consulting Group, Inc.
102 East 87th Street, Suite 1, Mill Valley, California 94041

Sustainable Design

Viridian Energy & Environmental
50 Washington Street, Newark, CT 06854

Geo-Technical Engineering

Mueser Rutledge Consulting Engineers
14 Penn Plaza, 25th Fl, 34th Street #610,
New York, NY 10122

Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Vantor & Santoro
250 State Street #1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

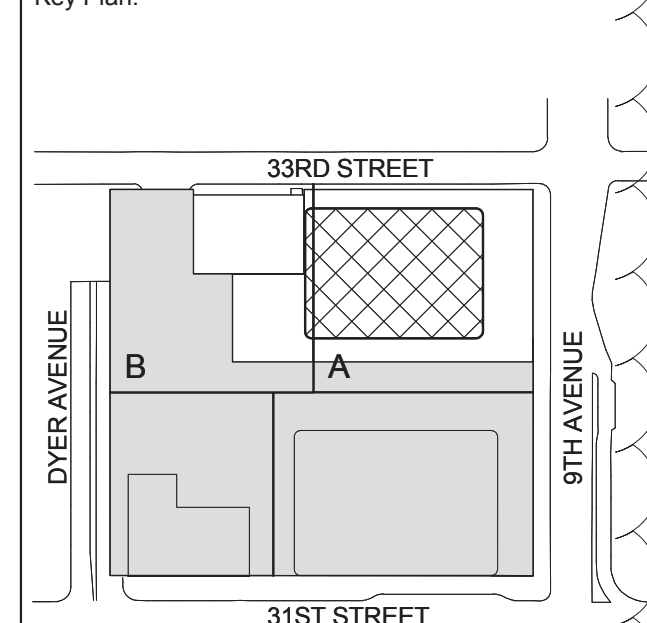
Facade Maintenance Consultant

Entek Engineering LLC
186 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
680 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature

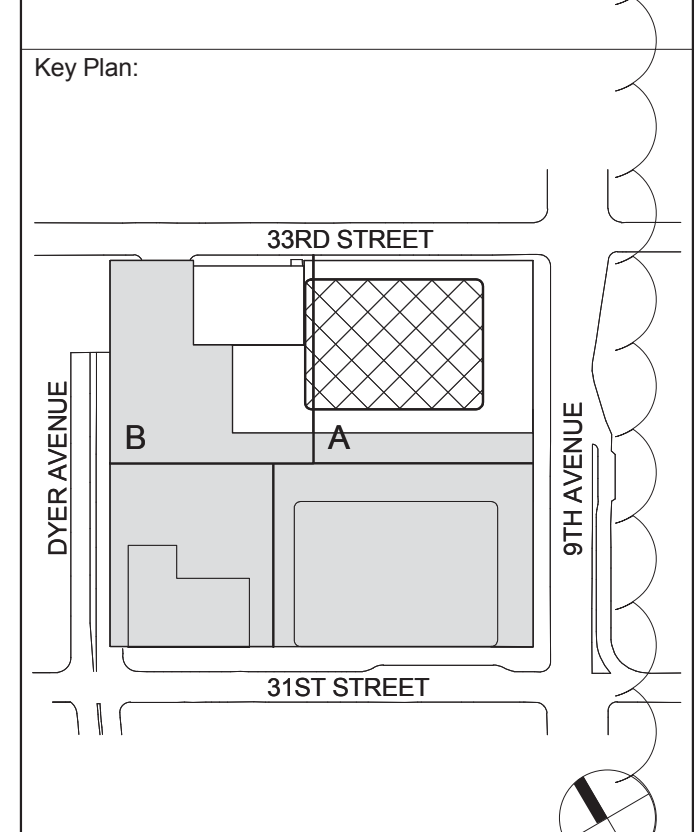
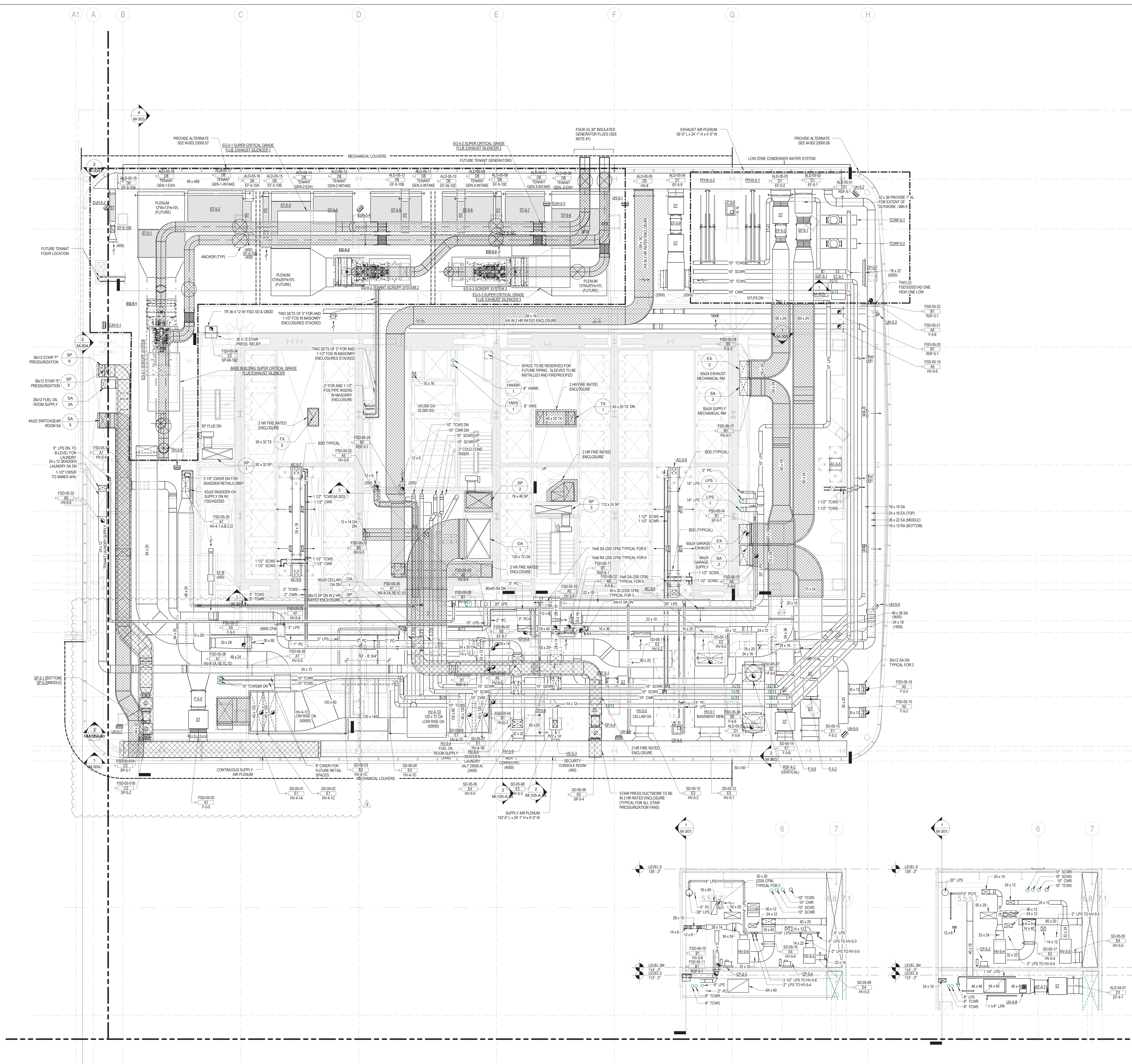


3 23 AUG 2017 ISSUED FOR DOB APPROVAL
2 22 APR 2016 ISSUED FOR PAA
1 20 JUN 2014 ISSUED FOR BUILDING PERMIT

No. Date Description
Sheet Name:

**MECHANICAL
LEVEL 4 FLOOR
PLAN -
MECHANICAL -
PART A**

Project No.: 14830.A.000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No.: M-104-A.00
B-SCAN Sheet No.:
M-104.01
Sheet No.:
Page No.: 8 OF 22



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3	23 AUG 2017	ISSUED FOR DOB APPROVAL
2	22 APR 2016	ISSUED FOR PAA
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT
No.	Date	Description
Sheet Name:		

**MECHANICAL
LEVEL 5 FLOOR
PLAN -
MECHANICAL
MEZZANINE -
PART A**

Damian Titus
Building
APPROVED
Under Ordinance of 1935
DATE OF APPLICATION
NYC Development Hub



MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
Client

Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering

SOM

Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering

Philip Habib & Associates
102 Madison Avenue #11, New York, NY 10016

MEP Engineering

Jaros Baum & Boles
80 Pine Street, New York, NY 10005

Vertical Transportation

Edgett Williams Consulting Group, Inc.
102 East Blithedale Ave., Suite 1, Mill Valley, California 94941

Sustainable Design

Viridian Energy & Environmental
50 Washington Street, Newark, CT 06854

Geo-Technical Engineering

Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W. 34th Street #610,
New York, NY 10122

Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

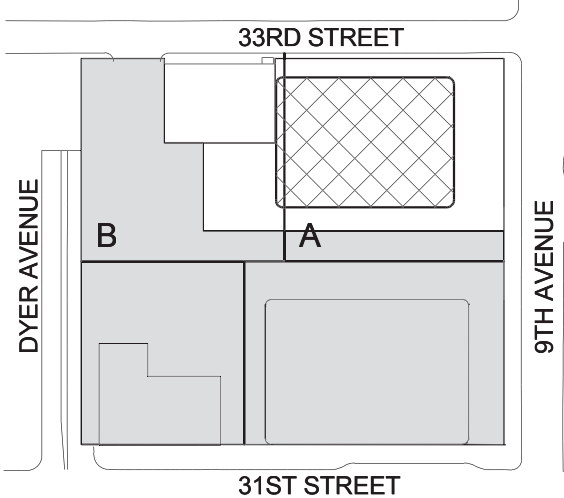
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature



2 22 APR 2016 ISSUED FOR P&A
1 20 JUN 2014 ISSUED FOR BUILDING PERMIT
No. Date Description
Sheet Name:

MECHANICAL
LEVEL 6 FLOOR
PLAN - LOW-RISE

Damian Titus
Buildings
APPROVED
Under Directive 1 of 1975
DATE OF APPLICATION
Date: 11/04/2017
NYC Development Hub

BUILDING DEPARTMENT NOTE:
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Project No.:
14830 A-000

Date:
22 APR 2016

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

File No.:
M-106

B-SCAN Sheet No.:
M-106.01

Sheet No.:
M-106

Page No.:
13 OF 94



MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
Client

Brookfield
Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering

SOM

Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering

Philip Habib & Associates
102 Madison Avenue #11, New York, NY 10016

MEP Engineering

Jaros Baum & Bolles
80 Pine Street, New York, NY 10005

Vertical Transportation

Edgett Williams Consulting Group, Inc.
102 East Blithedale Ave, Suite 1, Mill Valley, California 94941

Sustainable Design

Viridian Energy & Environmental
50 Washington Street, Norwalk, CT 06854

Geo-Technical Engineering

Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W, 34th Street #610,
New York, NY 10122

Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

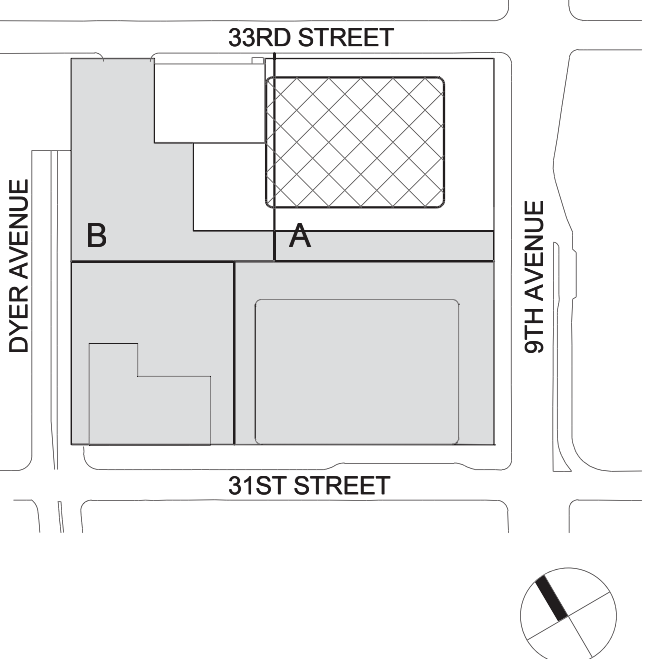
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B6

Key Plan:



Seal & Signature:



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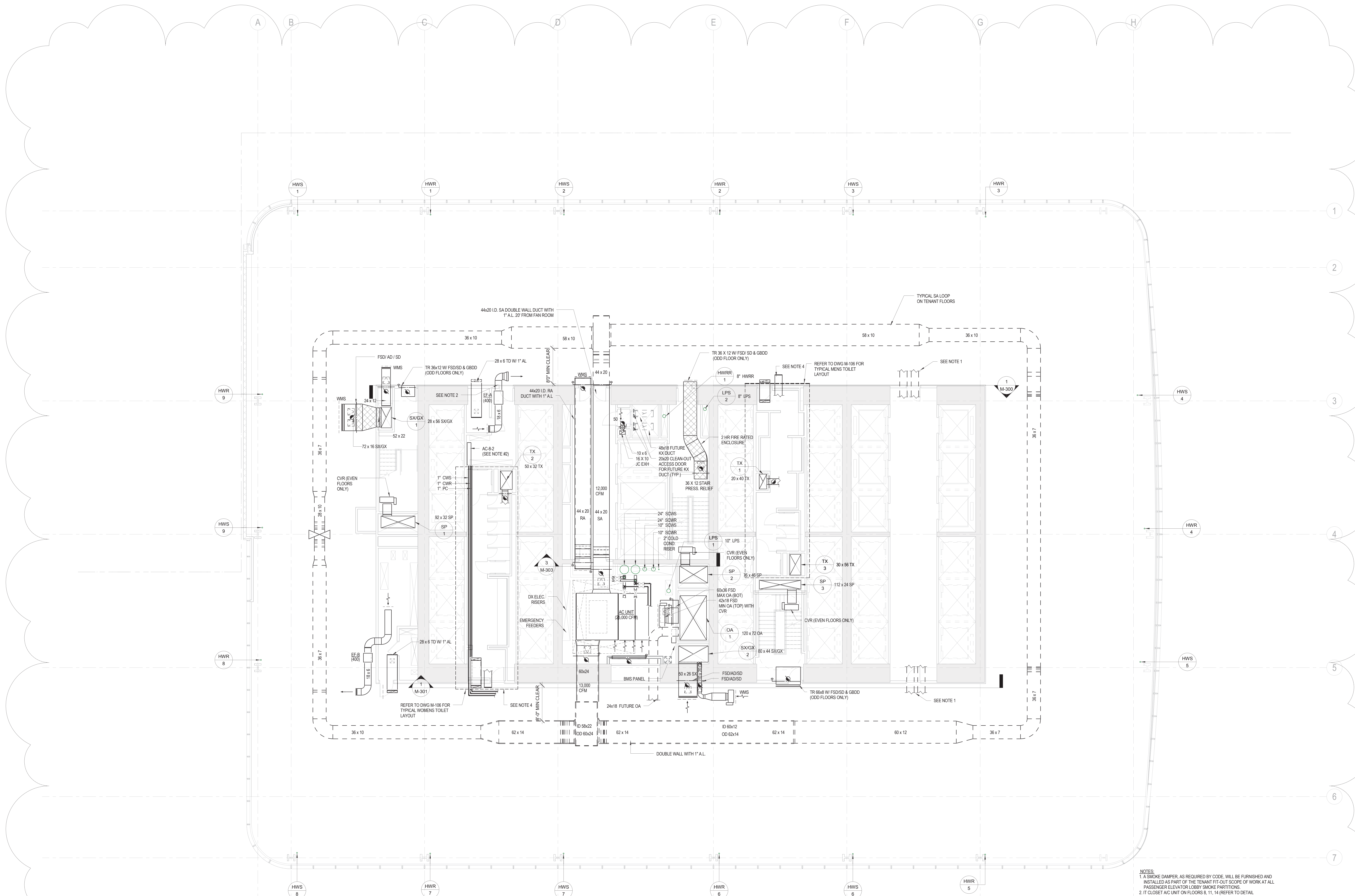
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Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-107

B-SCAN Sheet No.:
M-107.00
Sheet No.:
M-107
Page No.: 14 OF 94



NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND INSTALLED AS PART OF THE TENANT'S OUT-OF-SCOPE WORK AT ALL PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. IT CLOSET AC UNIT ON FLOORS 8, 11, 14 (REFER TO DETAIL ON M-700).
3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
4. CONNECTION PART OF TENANT'S WORK OF WORK.





MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
Client

Brookfield
Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering
SOM
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14 Wall Street, New York, NY 10005

Civil Engineering
Philip Habib & Associates
102 Madison Avenue #11, New York, NY 10016

MEP Engineering
Jaros Baum & Bolles
80 Pine Street, New York, NY 10005

Vertical Transportation
Edgett Williams Consulting Group, Inc.
102 East Blithedale Ave., Suite 1, Mill Valley, California 94041

Sustainable Design
Viridian Energy & Environmental
50 Washington Street, Newark, CT 06854

Geo-Technical Engineering
Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W. 34th Street #610,
New York, NY 10122

Landscape Consultant
Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant
Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant
Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant
Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

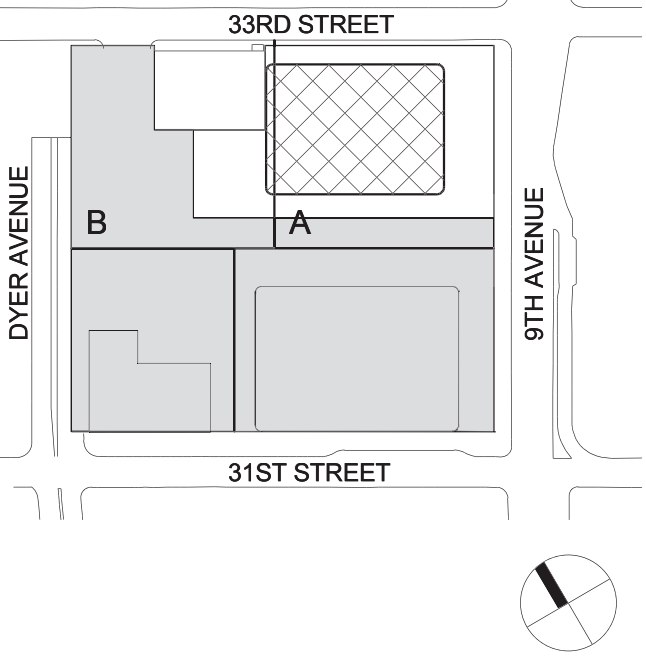
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant
Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

Facade Maintenance Consultant
Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature:



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1	20 JUN 2014	ISSUED FOR BUILDING PERMIT
No.	Date	Description
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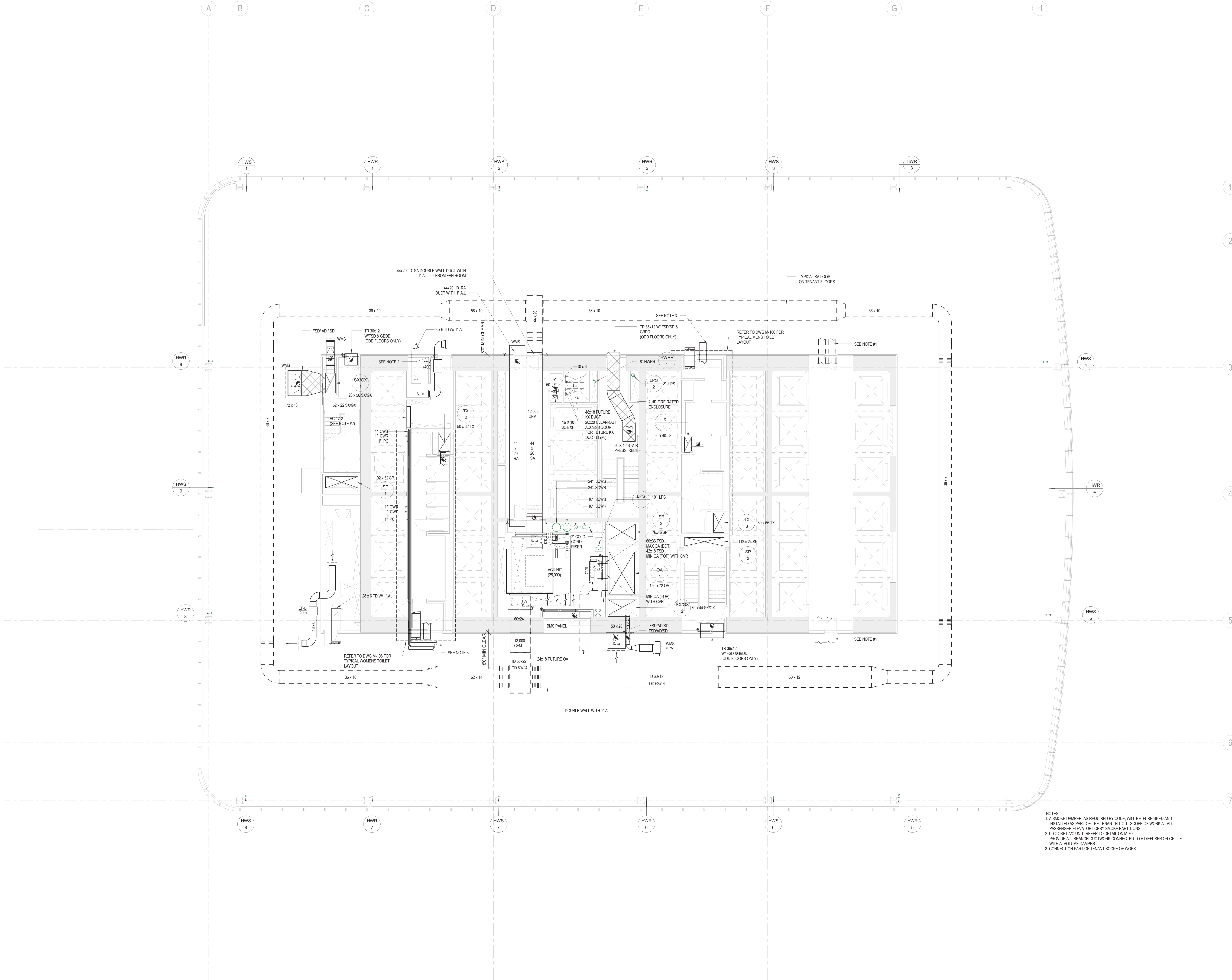
MECHANICAL LEVEL 17 FLOOR PLAN - LOW-RISE

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-117
B-SCAN Sheet No.:
M-117.01
Sheet No.:
M-117
Page No.: 15 OF 94



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NOTES:
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2. IT CLOSET AC UNIT (REFER TO DETAIL ON M-700).
3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
4. CONNECTION PART OF TENANT SCOPE OF WORK.





MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
Client

Brookfield
Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering

SOM

Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering

Philip Habb & Associates
102 Madison Avenue #11, New York, NY 10016

MEP Engineering

Jaros Baum & Boles
80 Pine Street, New York, NY 10005

Vertical Transportation

Edgett Williams Consulting Group, Inc.
102 East Blithedale Ave., Suite 1, Mill Valley, California 94941

Sustainable Design

Viridian Energy & Environmental
50 Washington Street, Newark, CT 06854

Geo-Technical Engineering

Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W. 34th Street #610,
New York, NY 10122

Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

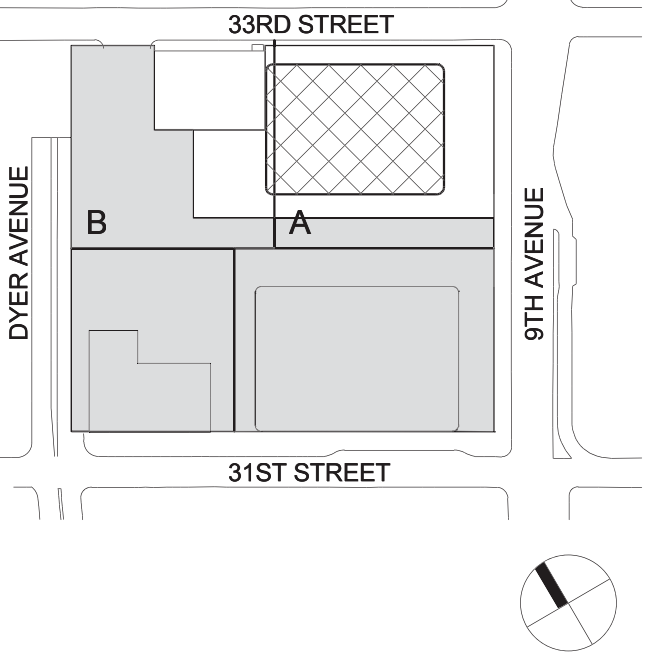
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature



No.	Date	Description
2	22 APR 2016	ISSUED FOR PAA
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT

Sheet Name: Description

MECHANICAL LEVEL 18 FLOOR PLAN - LOW-RISE OVERRUN

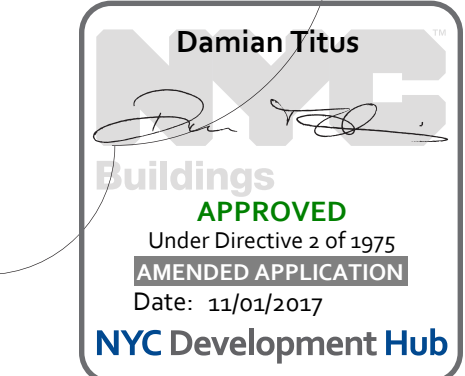
Project No.: 14830 A.000

Date: 22 APR 2016

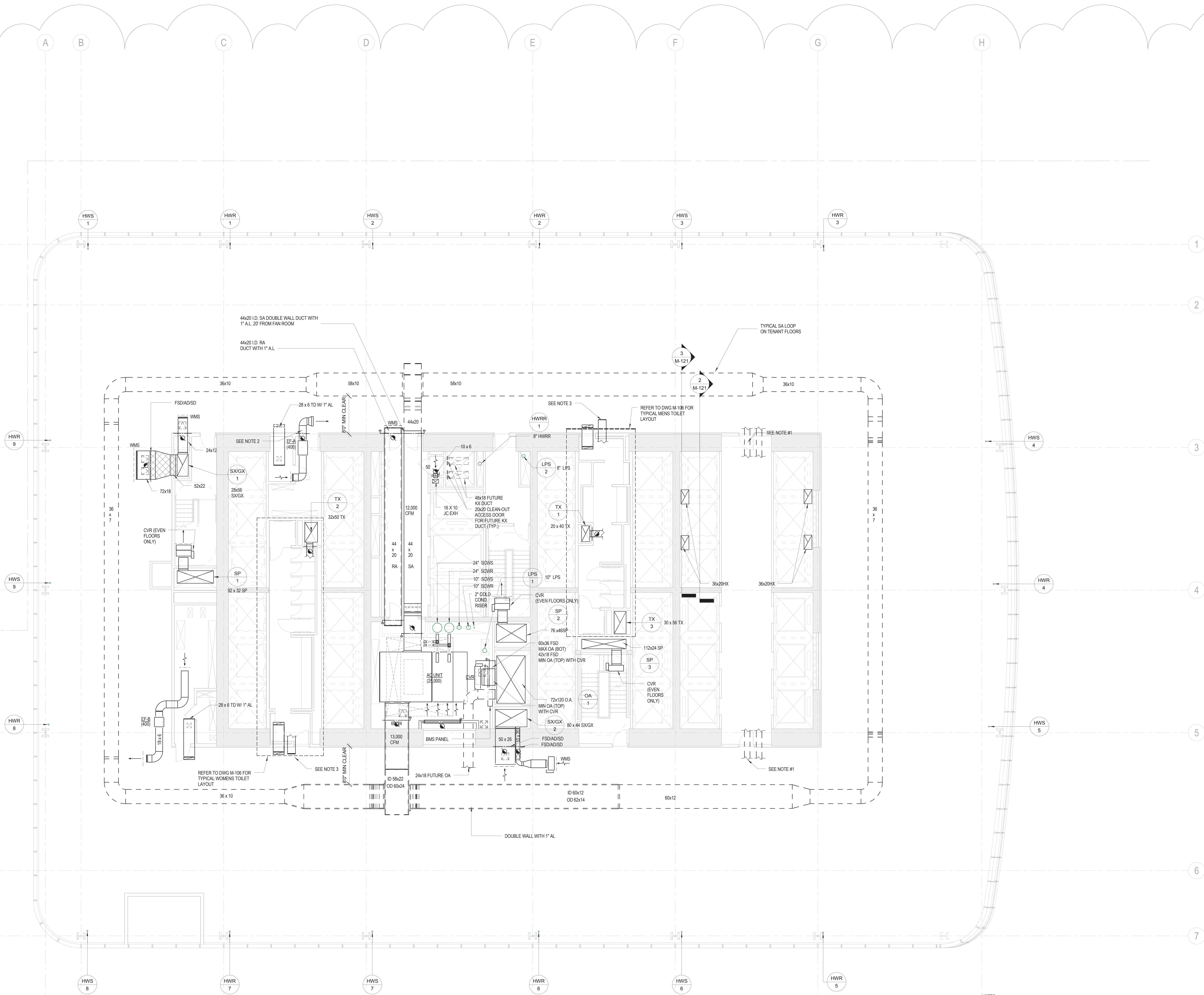
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File No.: M-118

Page No.: 16 OF 94



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ACCORDANCE WITH APPLICABLE CODES.



- NOTES
1. A SMOKE DAMPER BY CODE WILL BE FURNISHED AND INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
 2. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
 3. CONNECTION PART OF TENANT SCOPE OF WORK.



MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001

Client

Brookfield
Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering

SOM
Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering

Philip Habib & Associates
102 Madison Avenue #11, New York, NY 10016

MEP Engineering
Jaros Baum & Bolles
80 Pine Street, New York, NY 10005

Vertical Transportation

Edgett Williams Consulting Group, Inc.
102 East Blithedale Ave, Suite 1, Mill Valley, California 94041

Sustainable Design

Viridian Energy & Environmental
50 Washington Street, Newark, CT 06854

Geo-Technical Engineering

Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W, 34th Street #610,
New York, NY 10122

Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

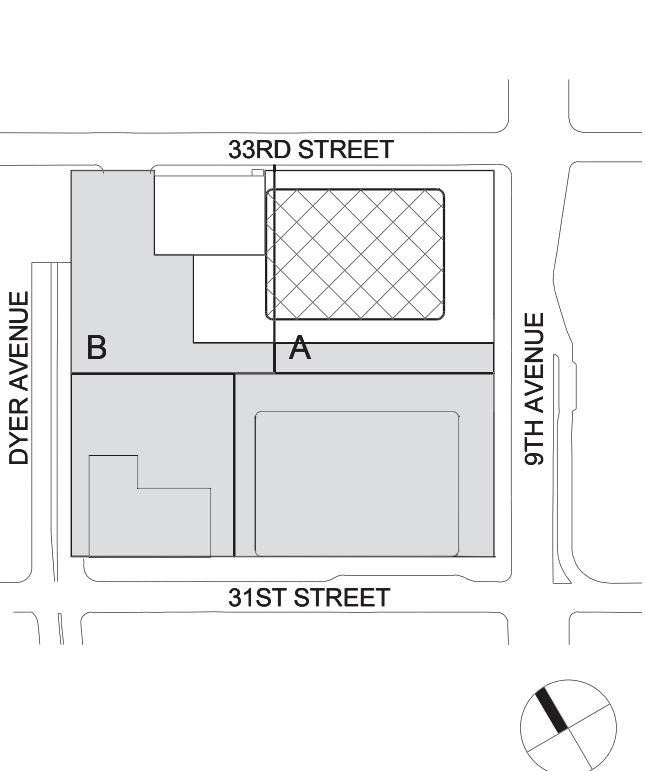
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature:



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No.	Date	Description
Sheet Name:		

**MECHANICAL
LEVEL 19 FLOOR
PLAN - LOW-RISE
EMR**

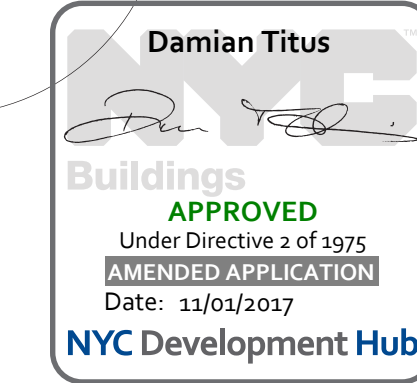
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Date: 22 APR 2016

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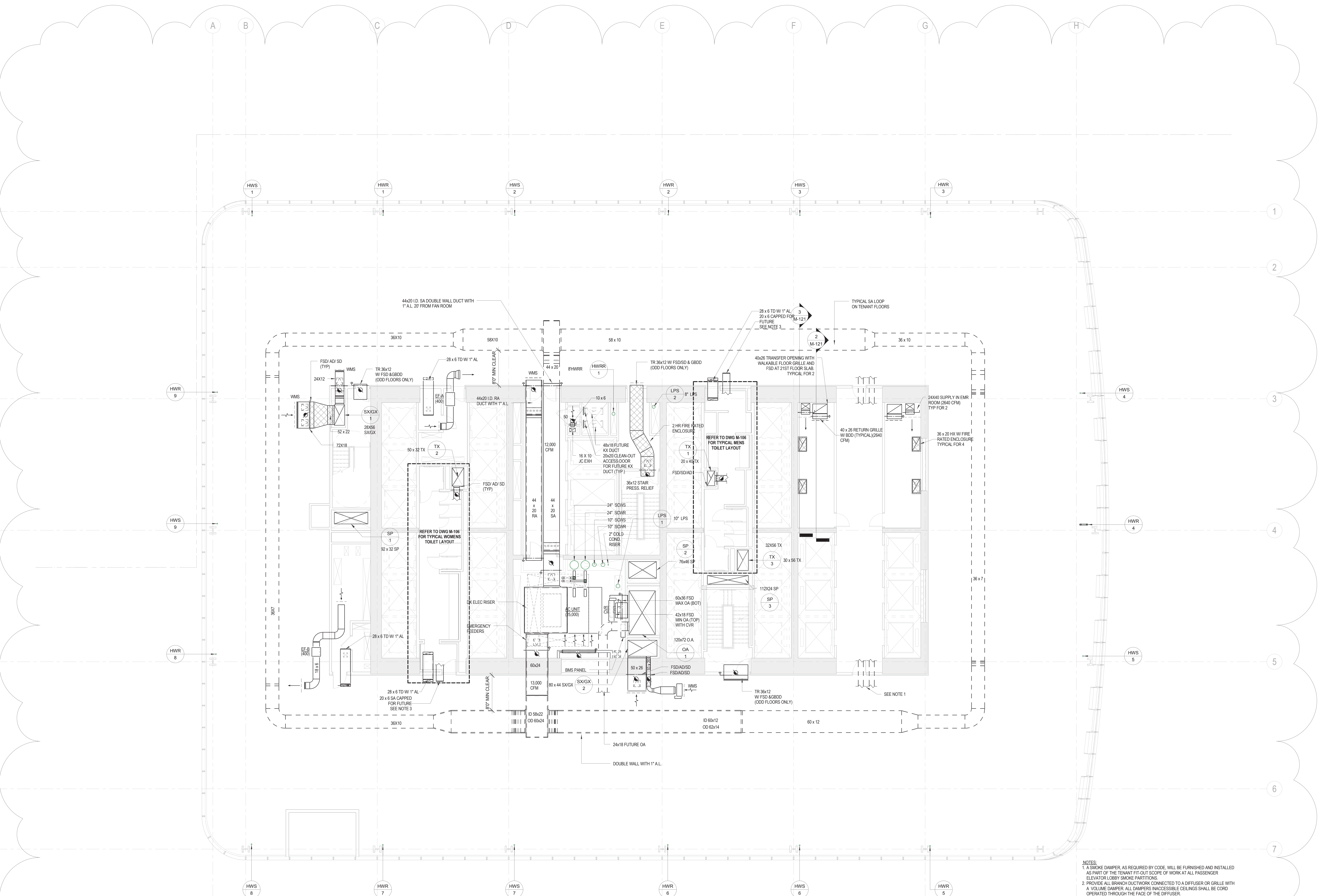
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Page No.: 17 OF 94



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NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER. ALL DAMPERS INACCESSIBLE CEILINGS SHALL BE CORD OPERATED THROUGH THE FACE OF THE DIFFUSER.
3. CONNECTION PART OF TENANT SCOPE OF WORK.





MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
Client

Brookfield
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering

SOM

Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering

Philip Habb & Associates
102 Madison Avenue #11, New York, NY 10016

MEP Engineering

Jaros Baum & Bolles
80 Pine Street, New York, NY 10005

Vertical Transportation

Edgett Williams Consulting Group, Inc.
102 East Blithedale Ave, Suite 1, Mill Valley, California 94941

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Mueser Rutledge Consulting Engineers
14 Penn Plaza, 225 W, 34th Street #610,
New York, NY 10122

Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

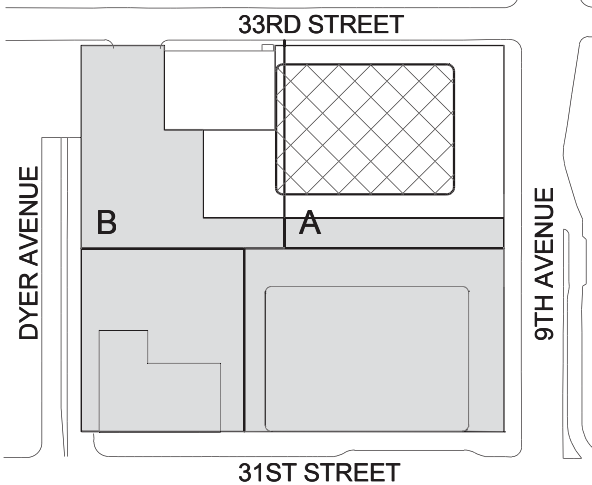
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature:



2 22 APR 2016 ISSUED FOR PAA
1 20 JUN 2014 ISSUED FOR BUILDING PERMIT
No. Date Description
Sheet Name:

MECHANICAL
LEVEL 21-26
FLOOR PLAN -
TYPICAL
LOW-RISE

Project No.:

14630 A.000

Date:

22 APR 2016

Scale:

1/8" = 1'-0"

File No.:

M-121

B-SCAN Sheet No.:

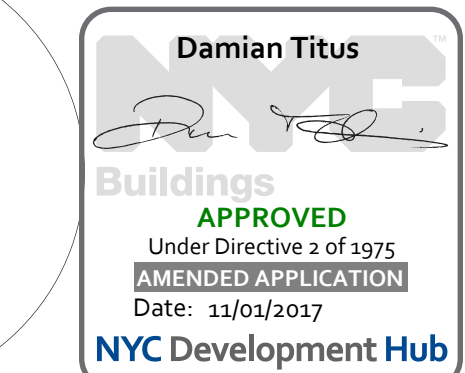
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M-121

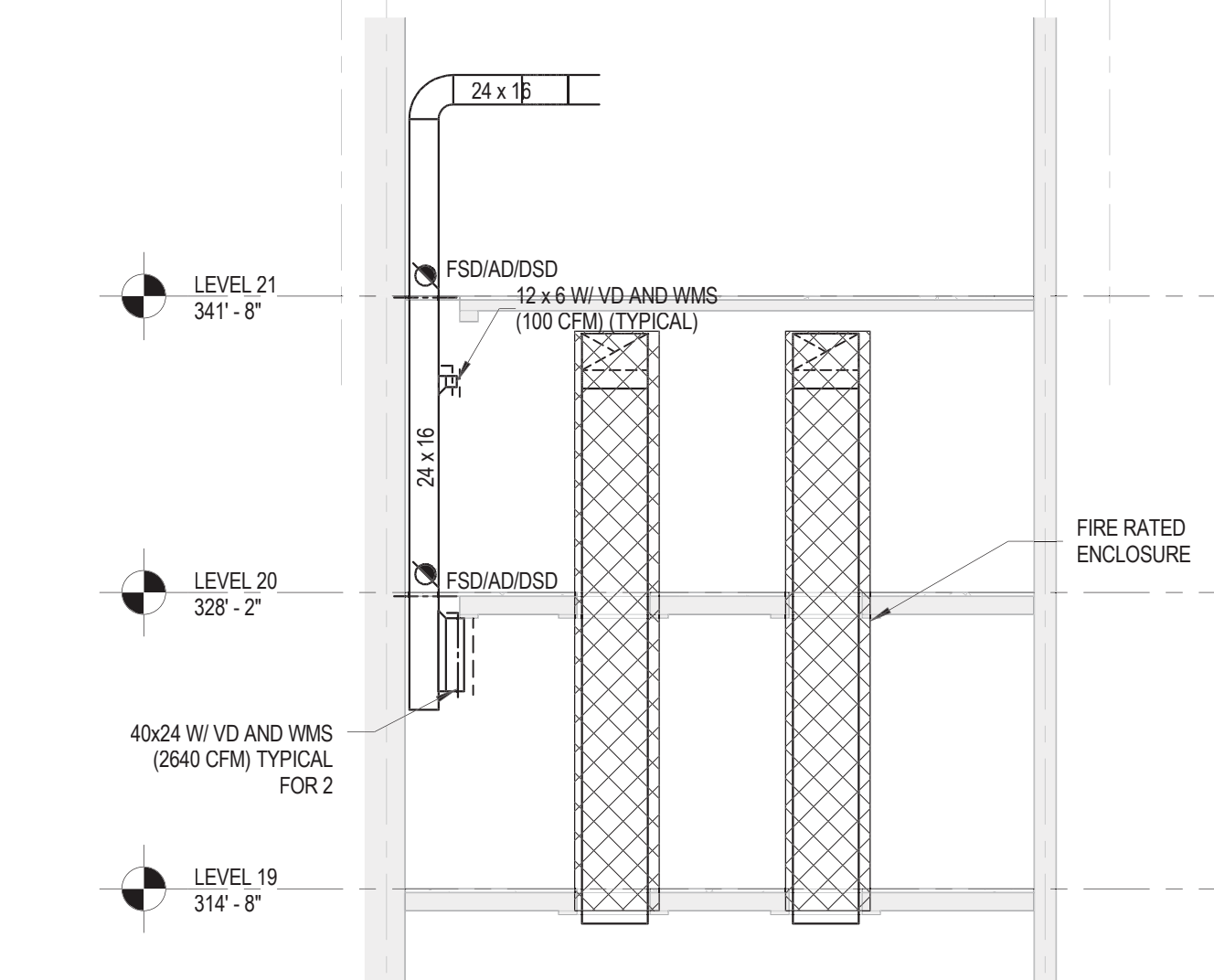
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19 OF 94

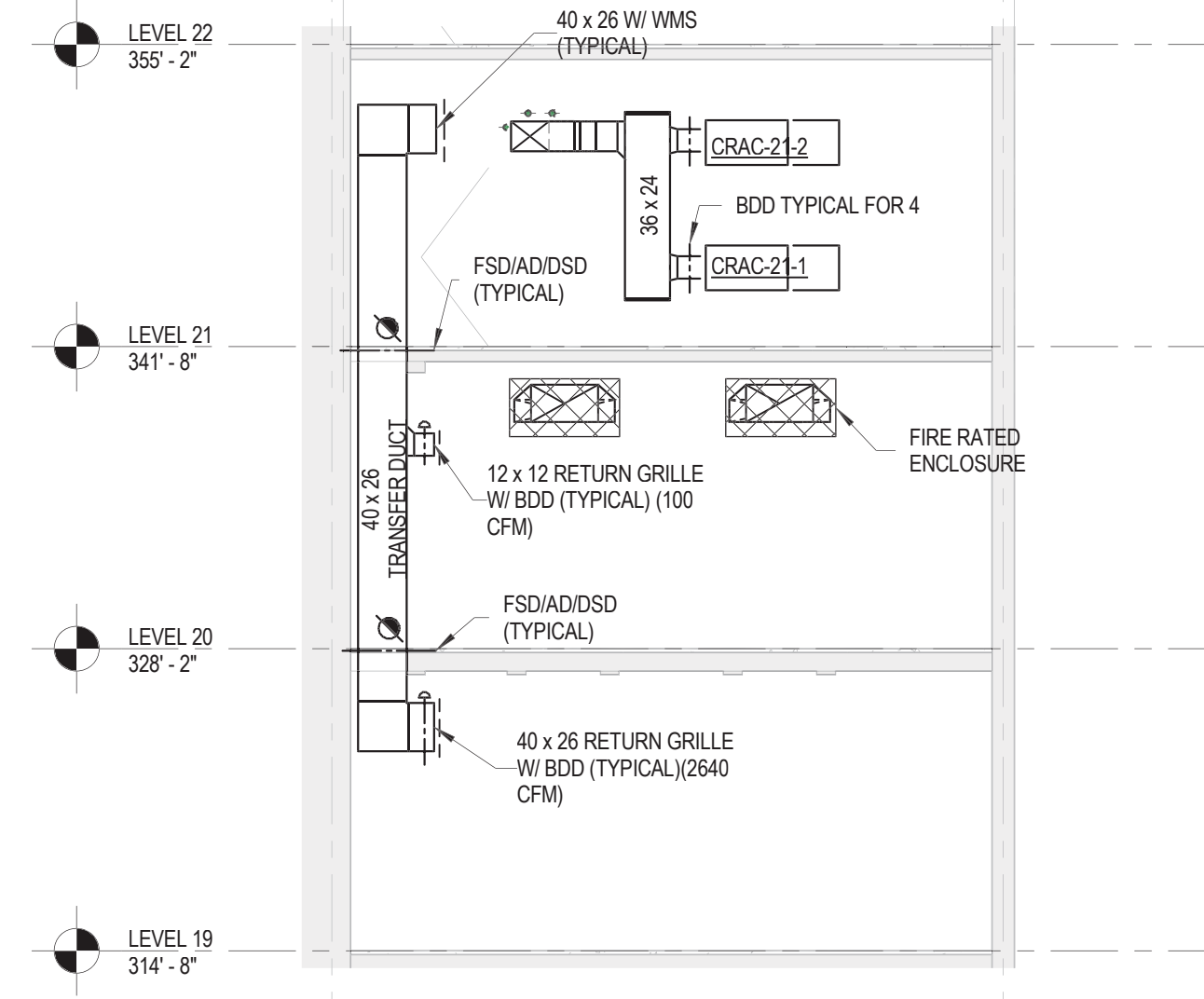


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- NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
 2. FIT CLOSET AC UNIT FOR FLOORS 23 & 26 (REFER TO DETAIL ON A-170).
 3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
 4. CONNECTION PART OF TENANT SCOPE OF WORK.



MECHANICAL LEVEL 21 - EMR SUPPLY
AIR SECTION
1/8" = 1'-0"



MECHANICAL LEVEL 21 - EMR AC AND
TRANSFER DUCT SECTION
1/8" = 1'-0"



MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
Client

Brookfield
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Architecture/Structural Engineering
SOM
Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering
Philip Habb & Associates
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Key Plan:

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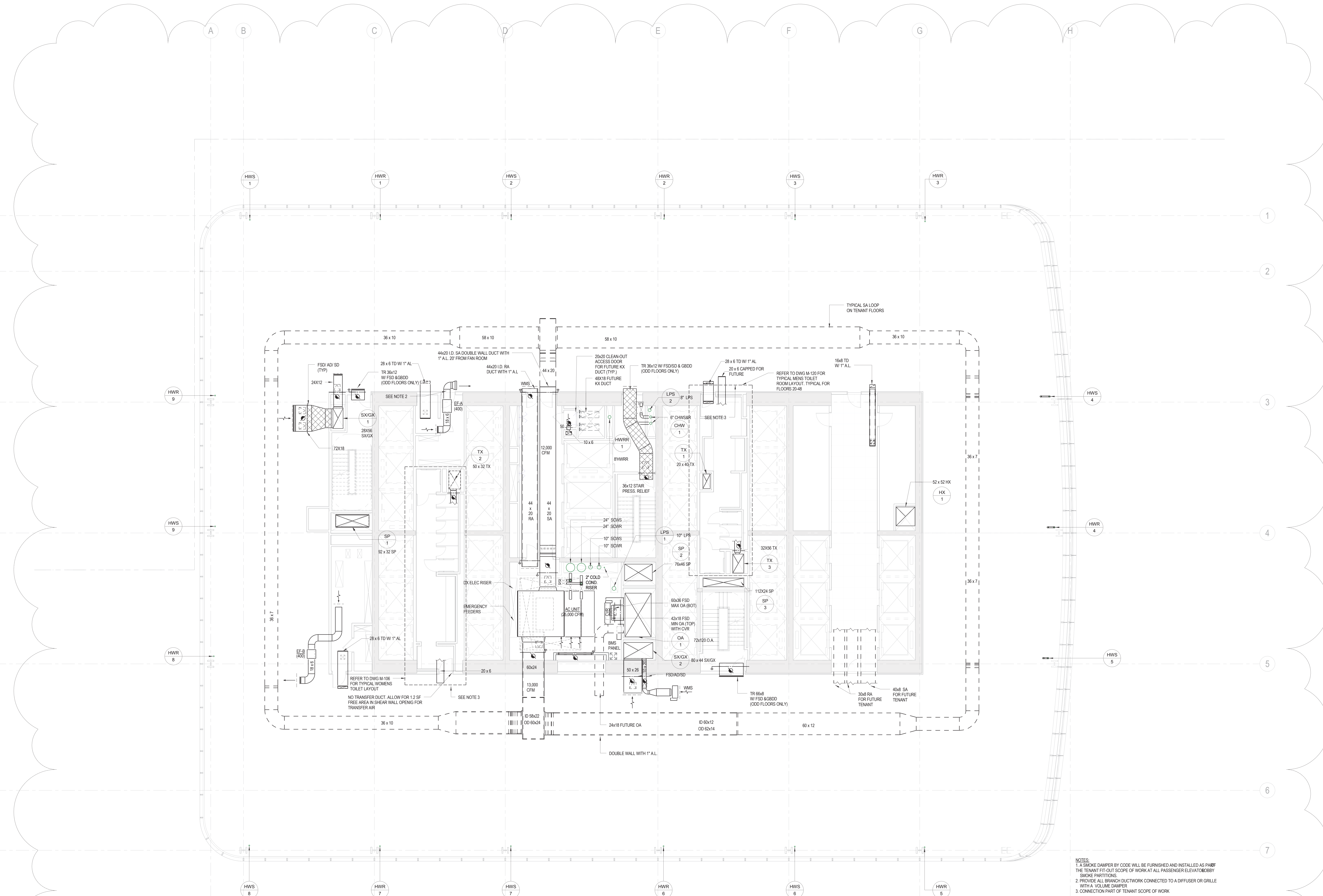
**MECHANICAL
LEVEL 27 FLOOR
PLAN - TYPICAL
LOW-RISE**

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-127

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M-127.00
Sheet No.:
Page No.: 26 OF 94



NOTES:
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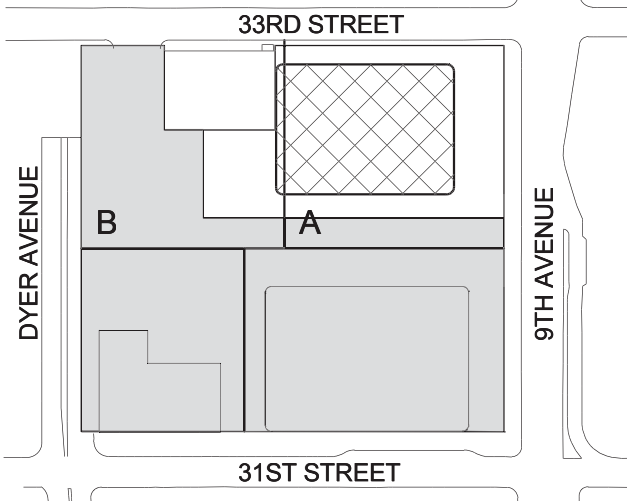
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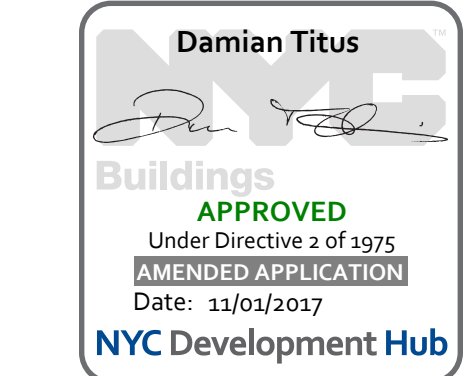
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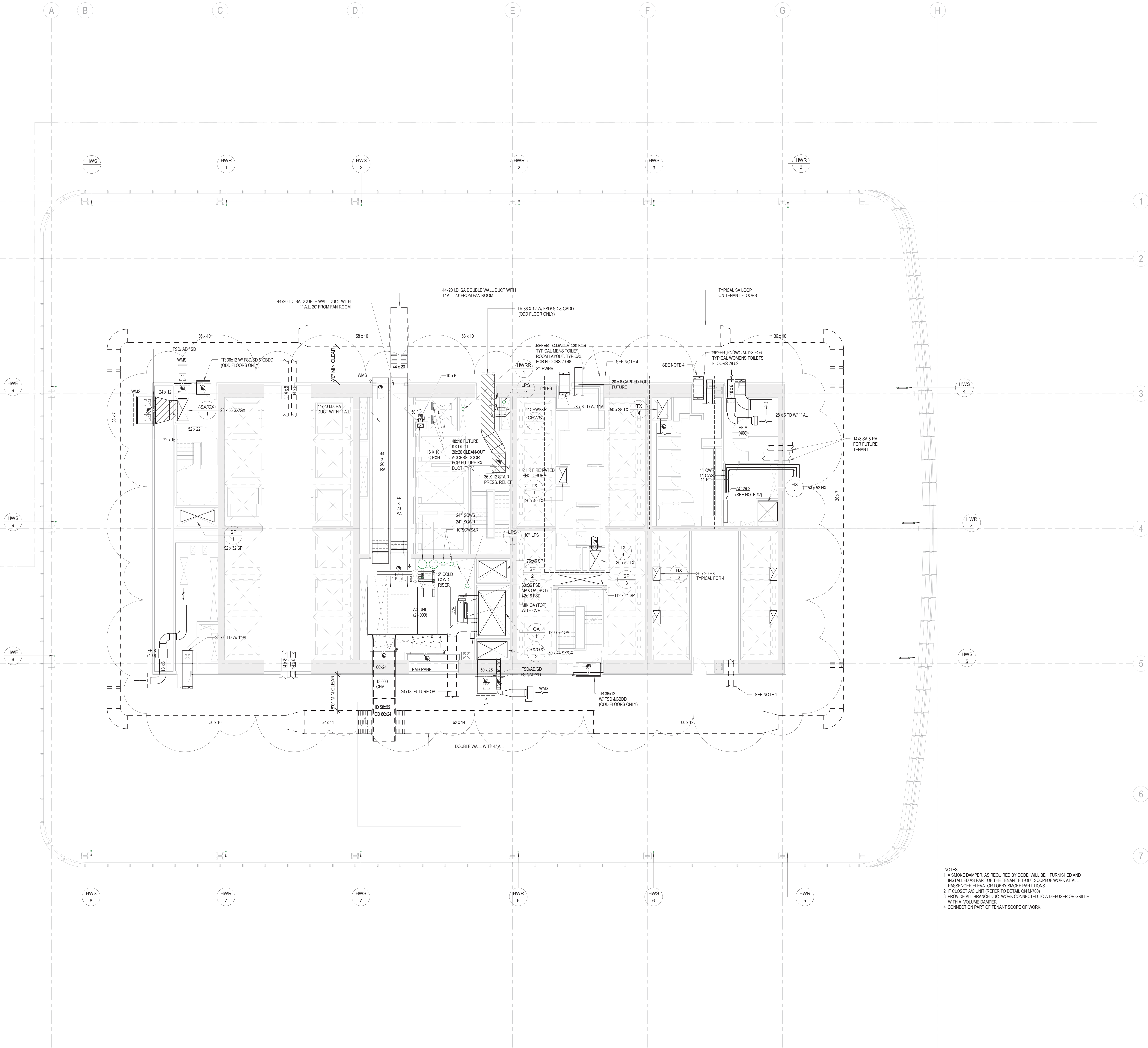
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MECHANICAL
LEVEL 29 FLOOR
PLAN - MID-RISE
OVERRUN

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-129
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M-129.01
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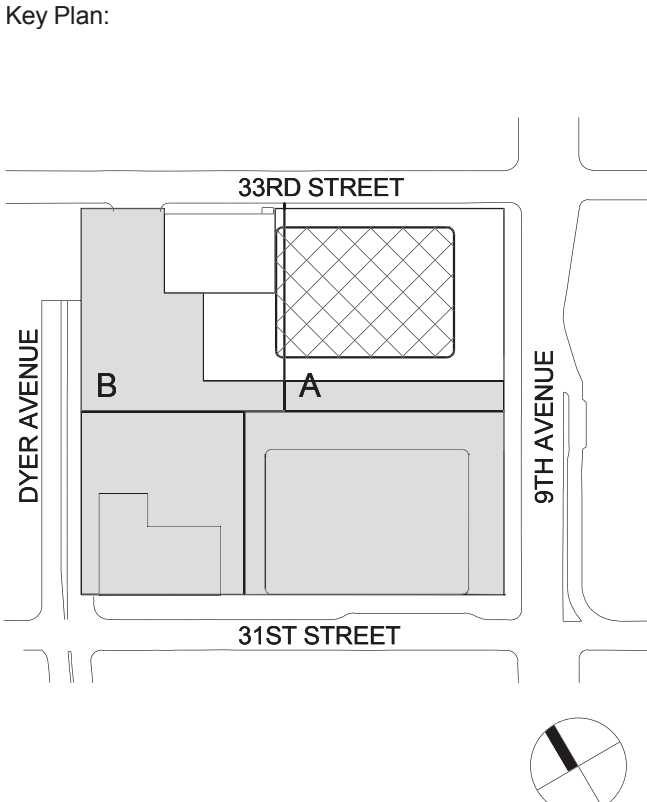
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Entek Engineering LLC
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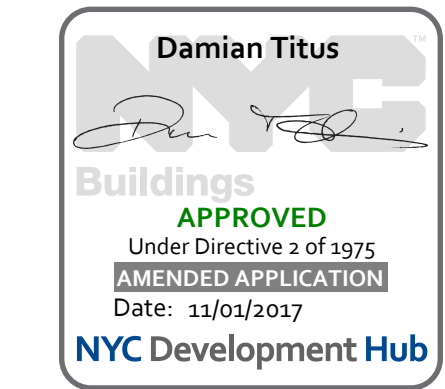
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Rowan Williams Davies & Irwin Inc.
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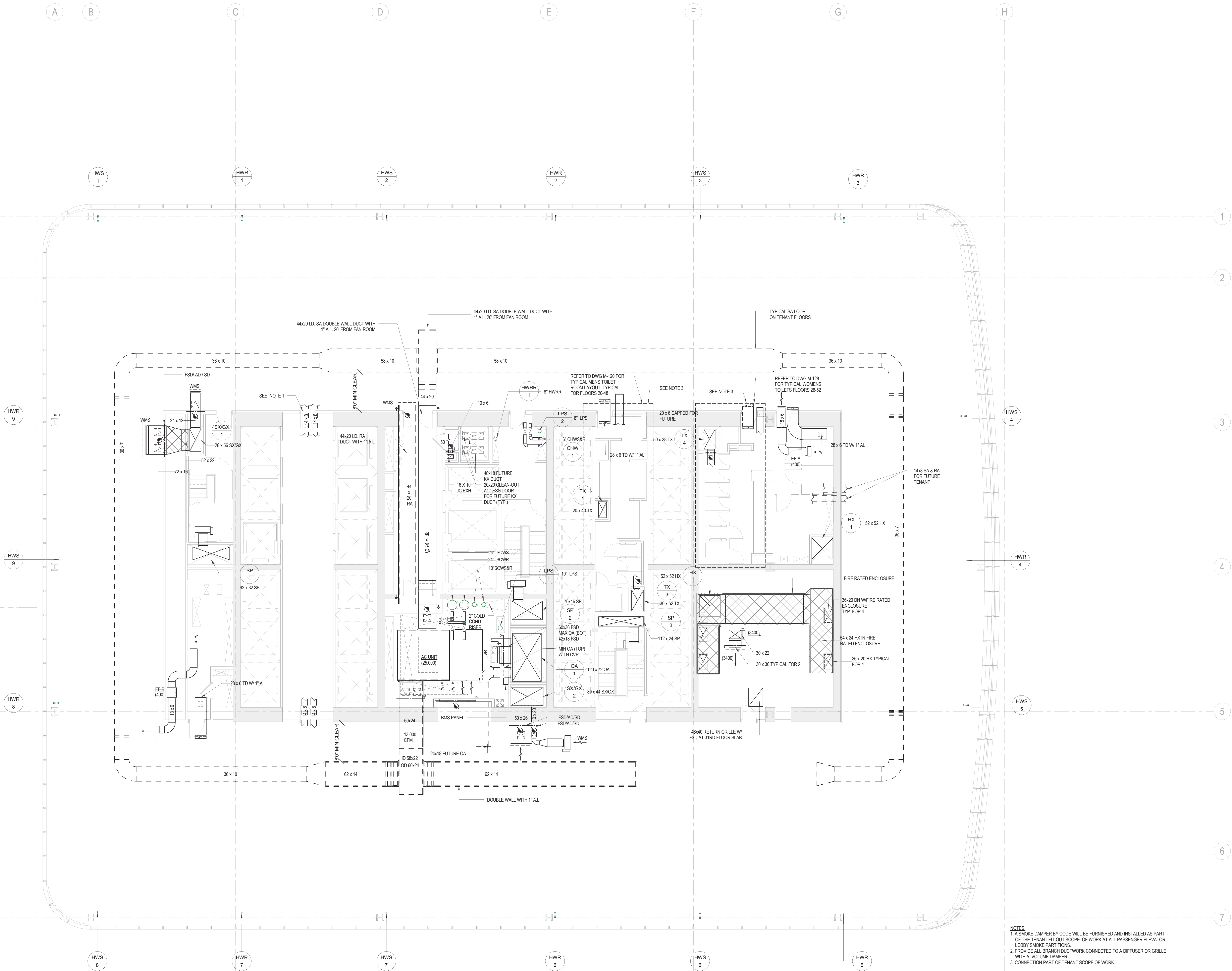
Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

Sheet No.: M-130
Page No.: 23 OF 94

**MECHANICAL
LEVEL 30 FLOOR
PLAN - MID-RISE
EMR**



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Cerami & Associates
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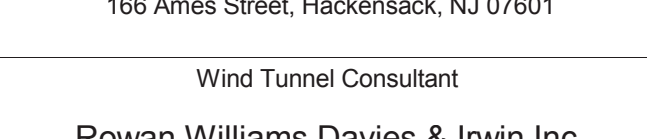
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Key Plan:



Seal & Signature



Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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MECHANICAL
LEVEL 31 FLOOR
PLAN - MID-RISE
PUMP ROOM

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MECHANICAL
LEVEL 31 FLOOR
PLAN - MID-RISE
PUMP ROOM

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Date: 22 APR 2016
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MECHANICAL
LEVEL 31 FLOOR
PLAN - MID-RISE
PUMP ROOM

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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MECHANICAL
LEVEL 31 FLOOR
PLAN - MID-RISE
PUMP ROOM

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Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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MECHANICAL
LEVEL 31 FLOOR
PLAN - MID-RISE
PUMP ROOM

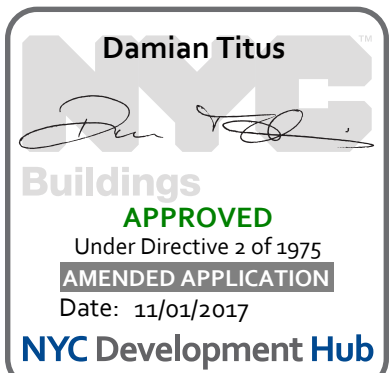
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Scale: 1/8" = 1'-0"

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M-131.01
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MECHANICAL
LEVEL 31 FLOOR
PLAN - MID-RISE
PUMP ROOM

Project No.: 14830 A.000
Date: 22 APR 2016
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M-131.01
Page No.: 24 OF 94



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Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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M-131.01
Page No.: 24 OF 94

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65 Broadway, Suite 401, New York, NY 10006

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Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

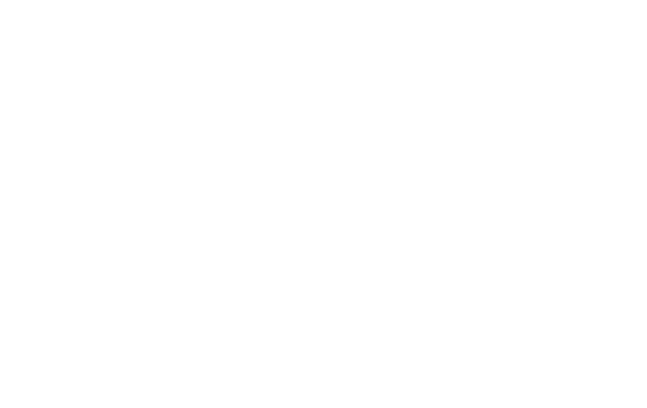
Facade Maintenance Consultant
Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

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650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B6

Key Plan:



Seal & Signature:



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Date: 22 APR 2016
Scale: 1/8" = 1'-0"

B-SCAN Sheet No.:
M-132

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M-132

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MECHANICAL
LEVEL 32 FLOOR
PLAN - MID-RISE
WATER TANK

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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M-132

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MECHANICAL
LEVEL 32 FLOOR
PLAN - MID-RISE
WATER TANK

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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M-132

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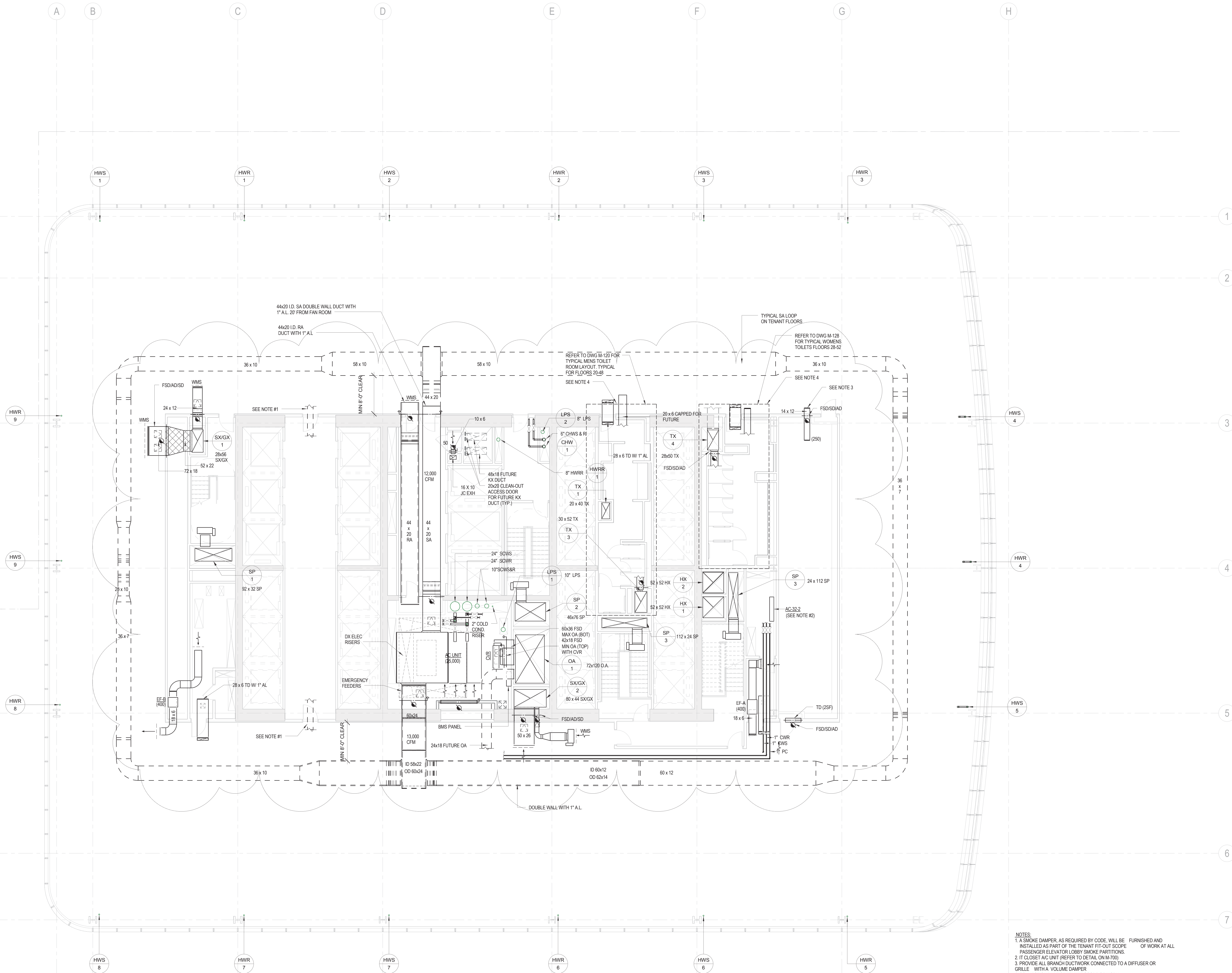
MECHANICAL
LEVEL 32 FLOOR
PLAN - MID-RISE
WATER TANK

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

B-SCAN Sheet No.:
M-132

Sheet No.:
M-132

Page No.: 25 OF 94



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3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
4. CONNECTION PART OF TENANT SCOPE OF WORK.



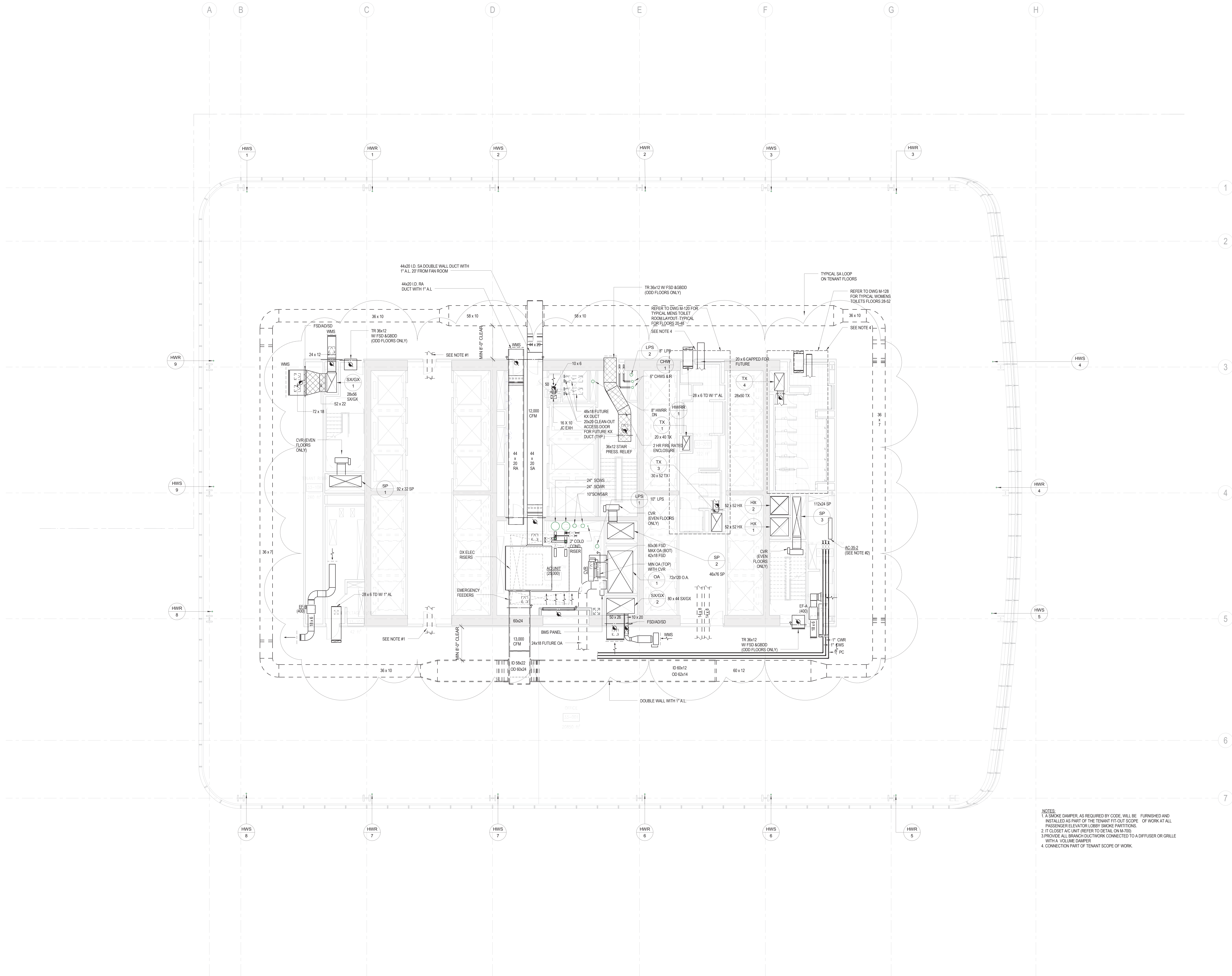
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Project No.: 14830 A.000
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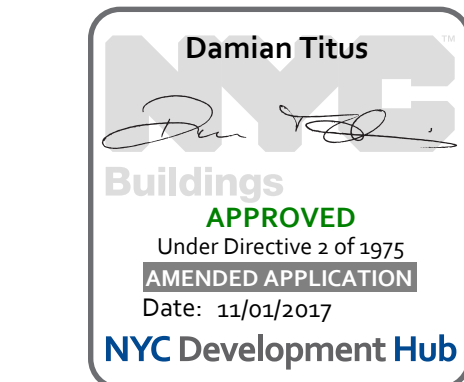
B-SCAN Sheet No.:
M-132

Sheet No.:
M-132

Page No.: 25 OF 94



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2. IT CLOSET AC UNIT REFER TO DETAIL DVA-100.
3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
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MECHANICAL LEVEL 33-35 FLOOR PLAN - TYPICAL MID-RISE

Project No.: 14830 A-000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-133
B-SCAN Sheet No.: M-133.01
Sheet No.: M-133
Page No.: 26 OF 94

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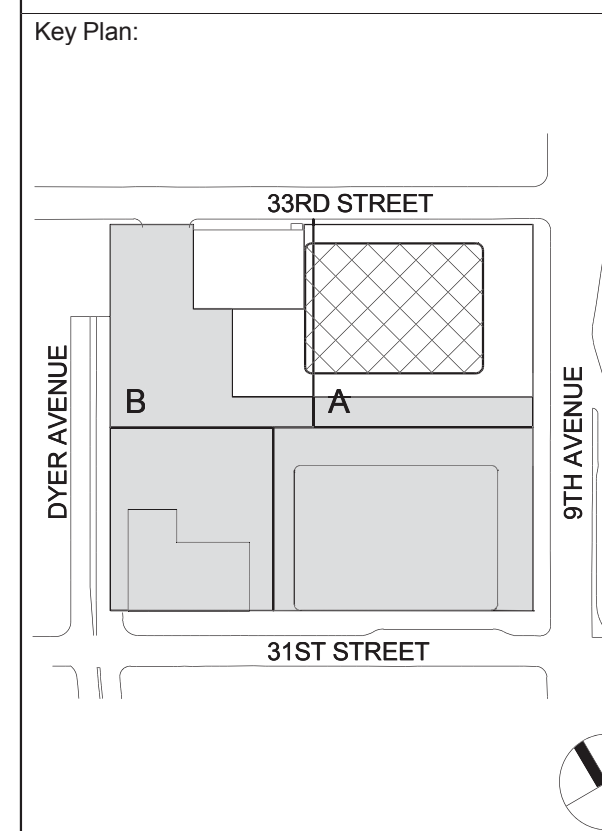
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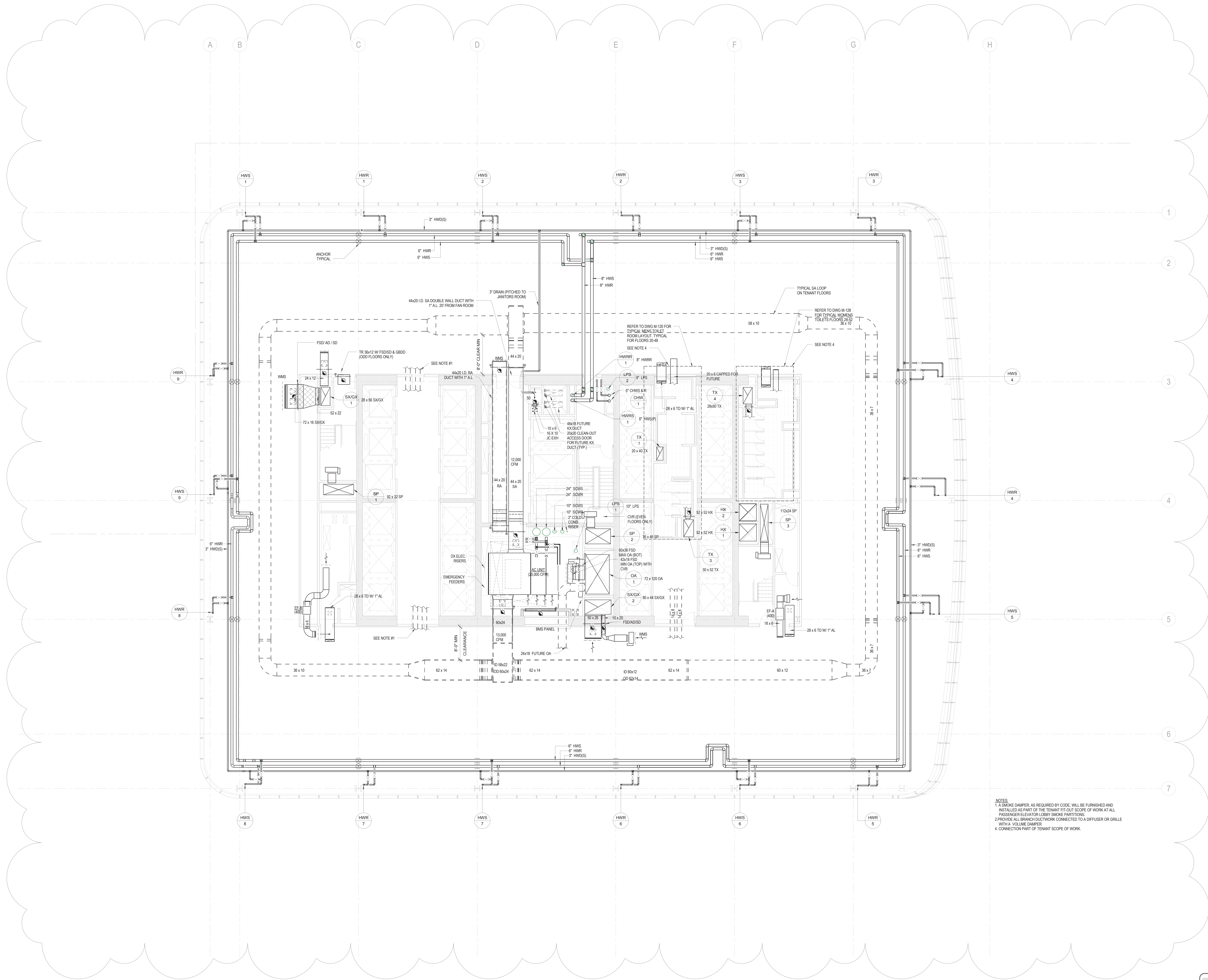
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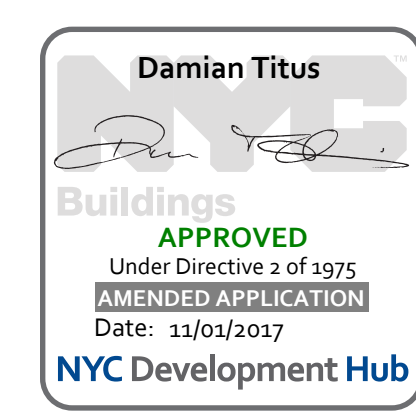
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**MECHANICAL
LEVEL 36 FLOOR
PLAN MID RISE**

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-136

B-SCAN Sheet No.:
M-136.00
Sheet No.: M-136
Page No.: 27 OF 94



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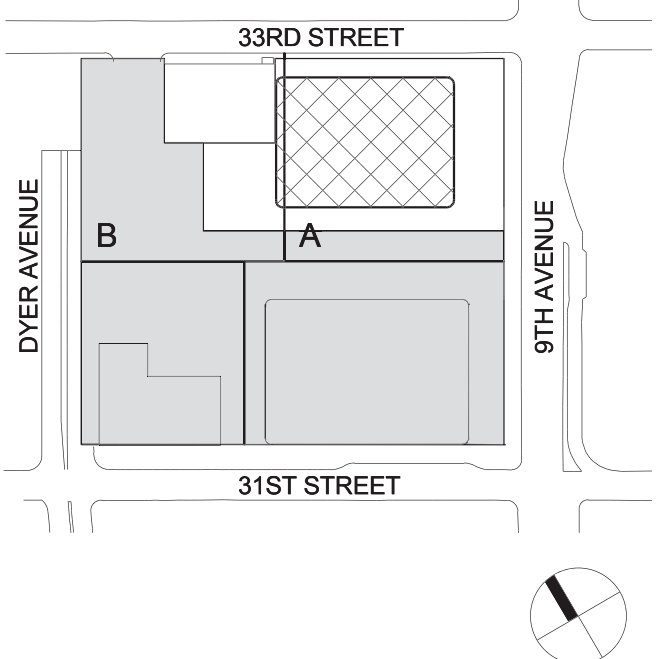
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Key Plan:



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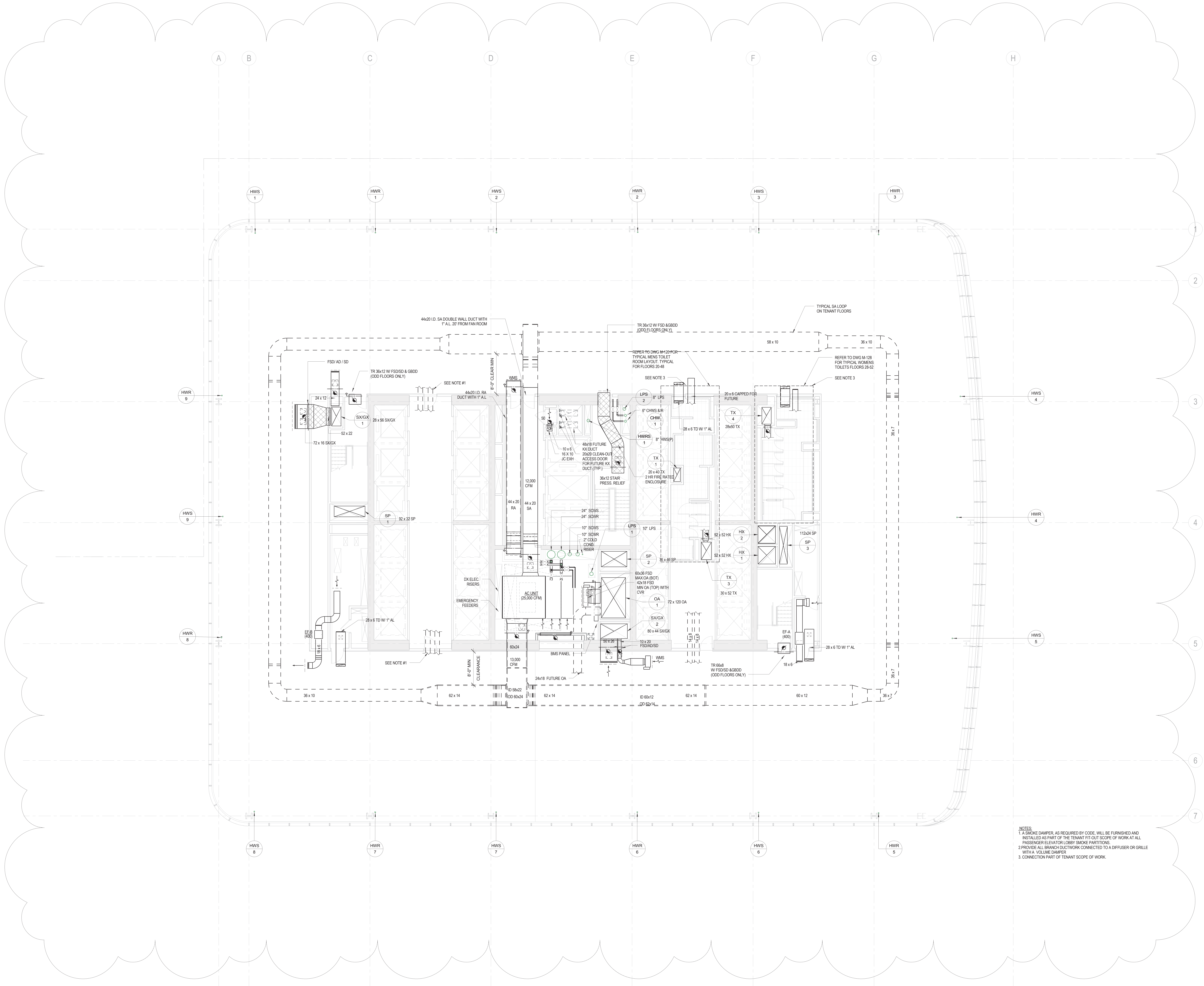
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MECHANICAL
LEVEL 37 FLOOR
PLAN - MID-RISE

Project No.:	14830 A-000	B-SCAN Sheet No.:	M-137.00
Date:	22 APR 2016	Sheet No.:	M-137
Scale:	1/8" = 1'-0"	Page No.:	28 OF 94
File No.:	M-137		



NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND
INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL
PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE
WITH A VOLUME DAMPER.
3. CONNECTION PART OF TENANT SCOPE OF WORK.





MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
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Civil Engineering

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MEP Engineering

Jaros Baum & Boles
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Vertical Transportation

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102 East Blithedale Ave., Suite 1, Mill Valley, California 94941

Sustainable Design

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Geo-Technical Engineering

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Landscape Consultant

Field Operations
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Security Consultant

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250 State Street #F1, North Haven, CT 06473

Blast Consultant

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Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

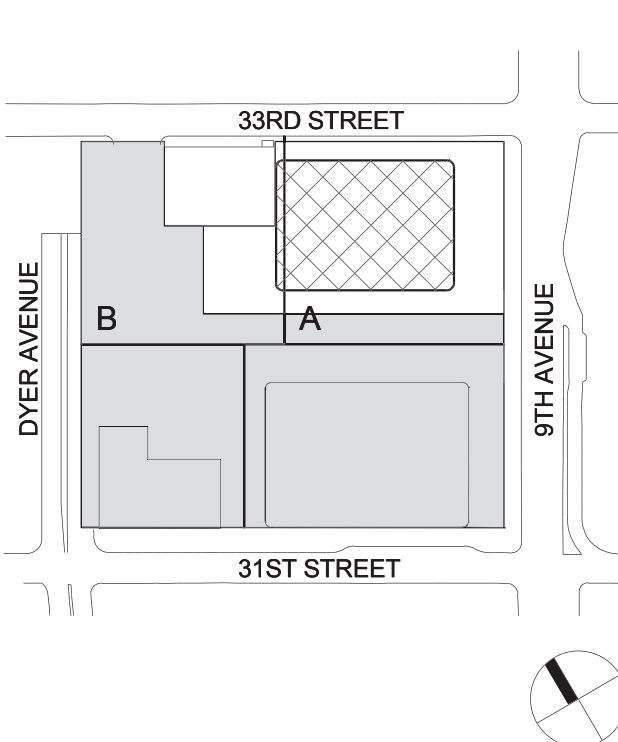
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



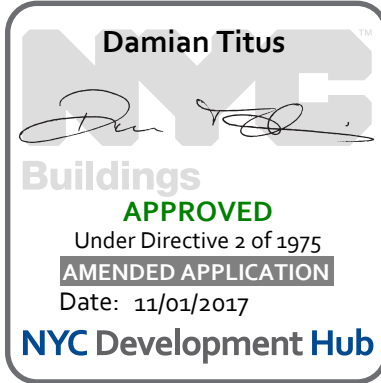
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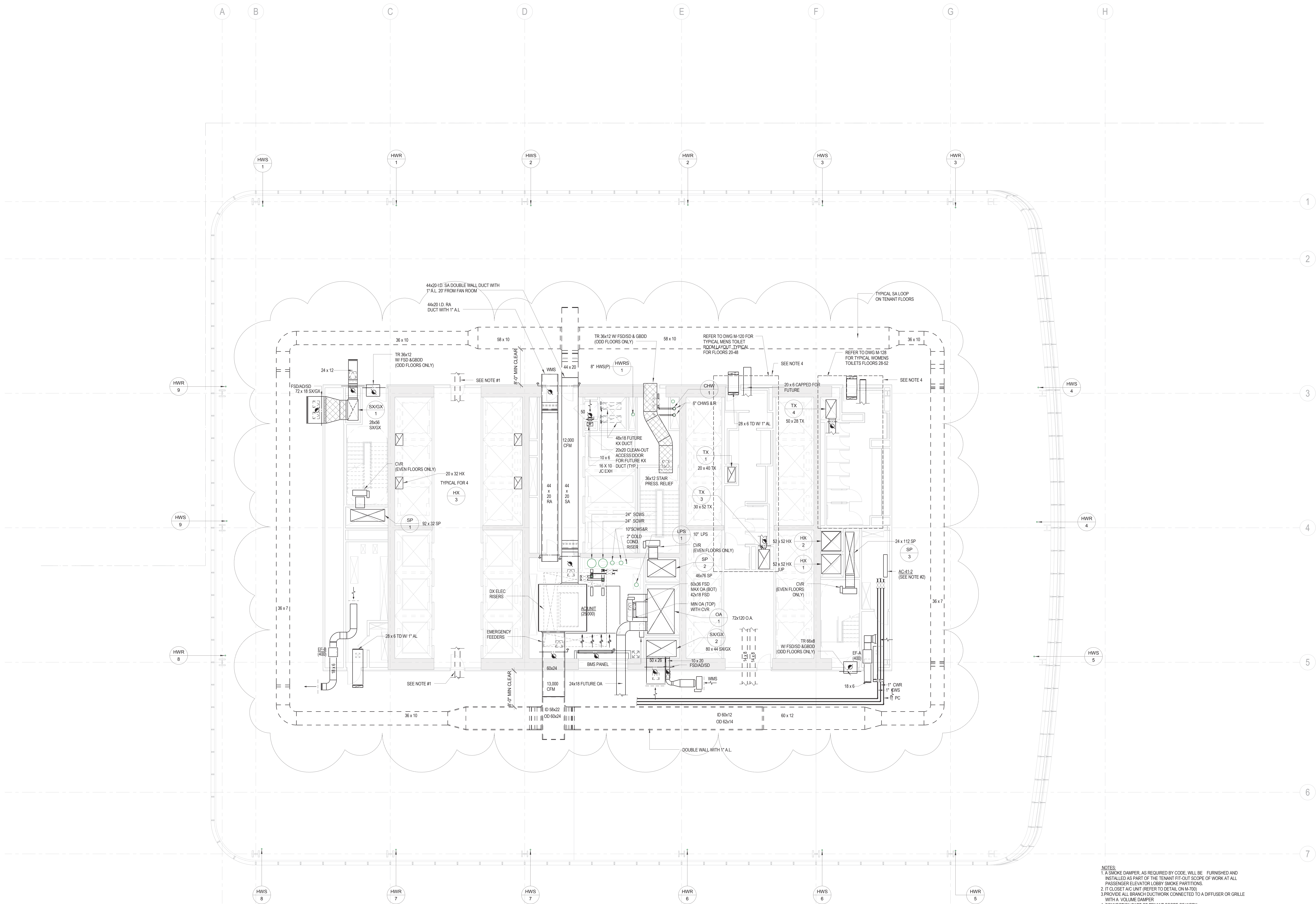
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No.	Date	Description
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**MECHANICAL
LEVEL 38-39
FLOOR PLAN -
TYPICAL
MID-RISE**

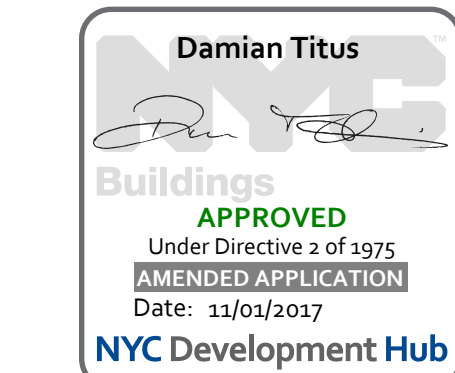
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Date: 22 APR 2016
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File No.: M-138
B-SCAN Sheet No.:
M-138.01
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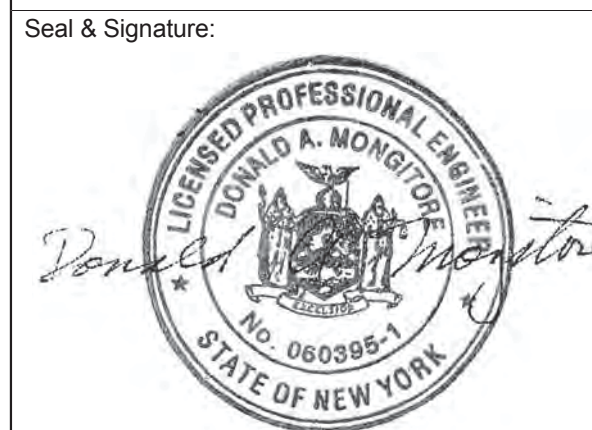
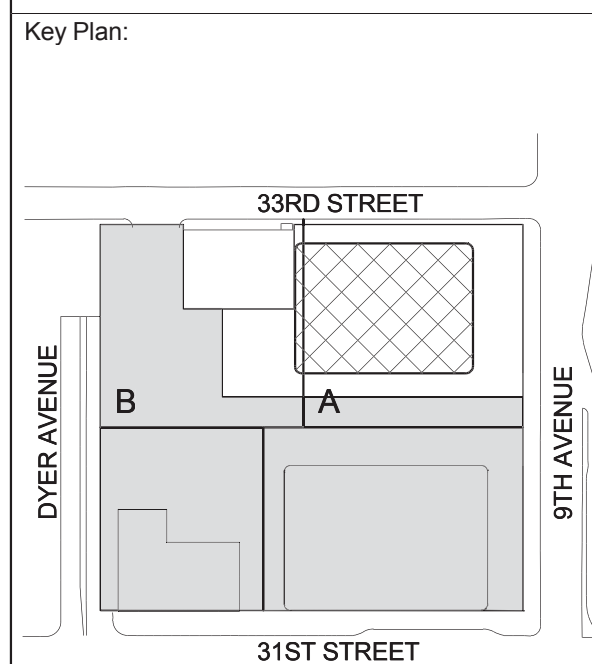
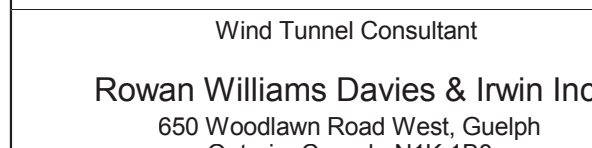
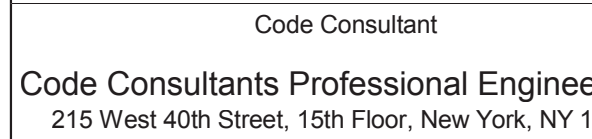
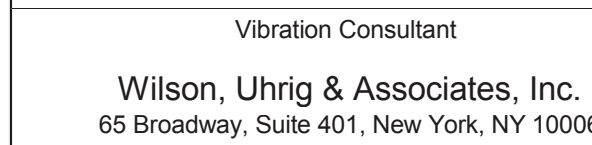
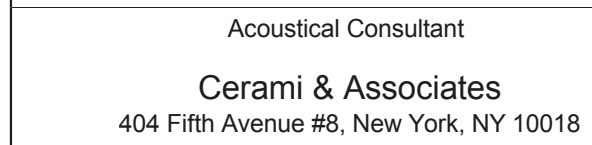
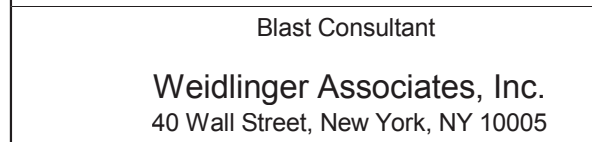
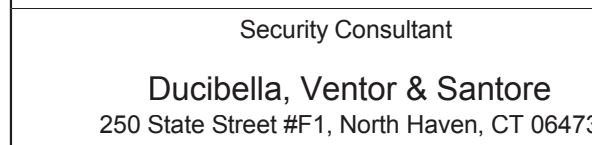
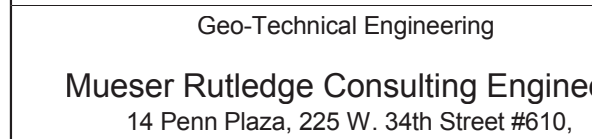
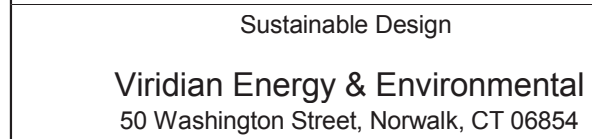
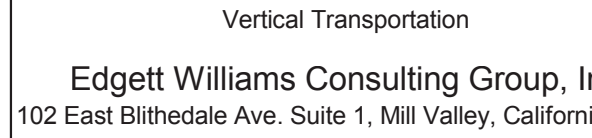
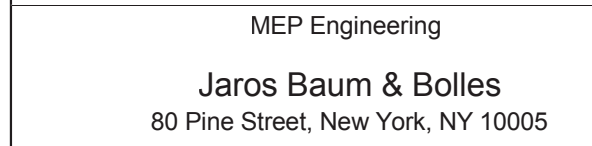
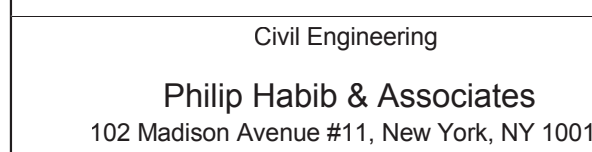
NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND
INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL
PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. IT CLOSET A/C UNIT (REFER TO DETAIL ON M-700)
3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE
WITH A VOLUME DAMPER
4. CONNECTION PART OF TENANT SCOPE OF WORK



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MECHANICAL LEVEL 40-41 FLOOR PLAN - MID-RISE OVERRUN



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Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

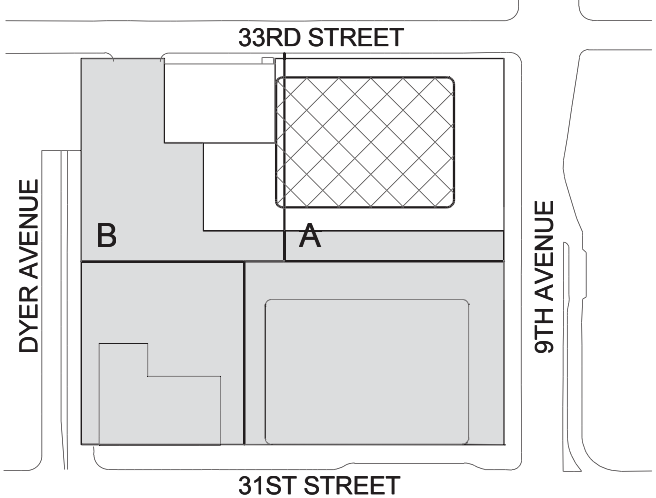
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B6

Key Plan:



Seal & Signature:



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**MECHANICAL
LEVEL 42 FLOOR
PLAN - MID-RISE
EMR**

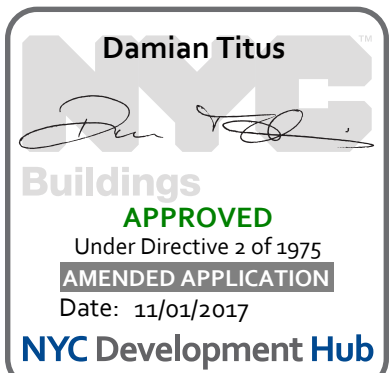
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Date: 22 APR 2016

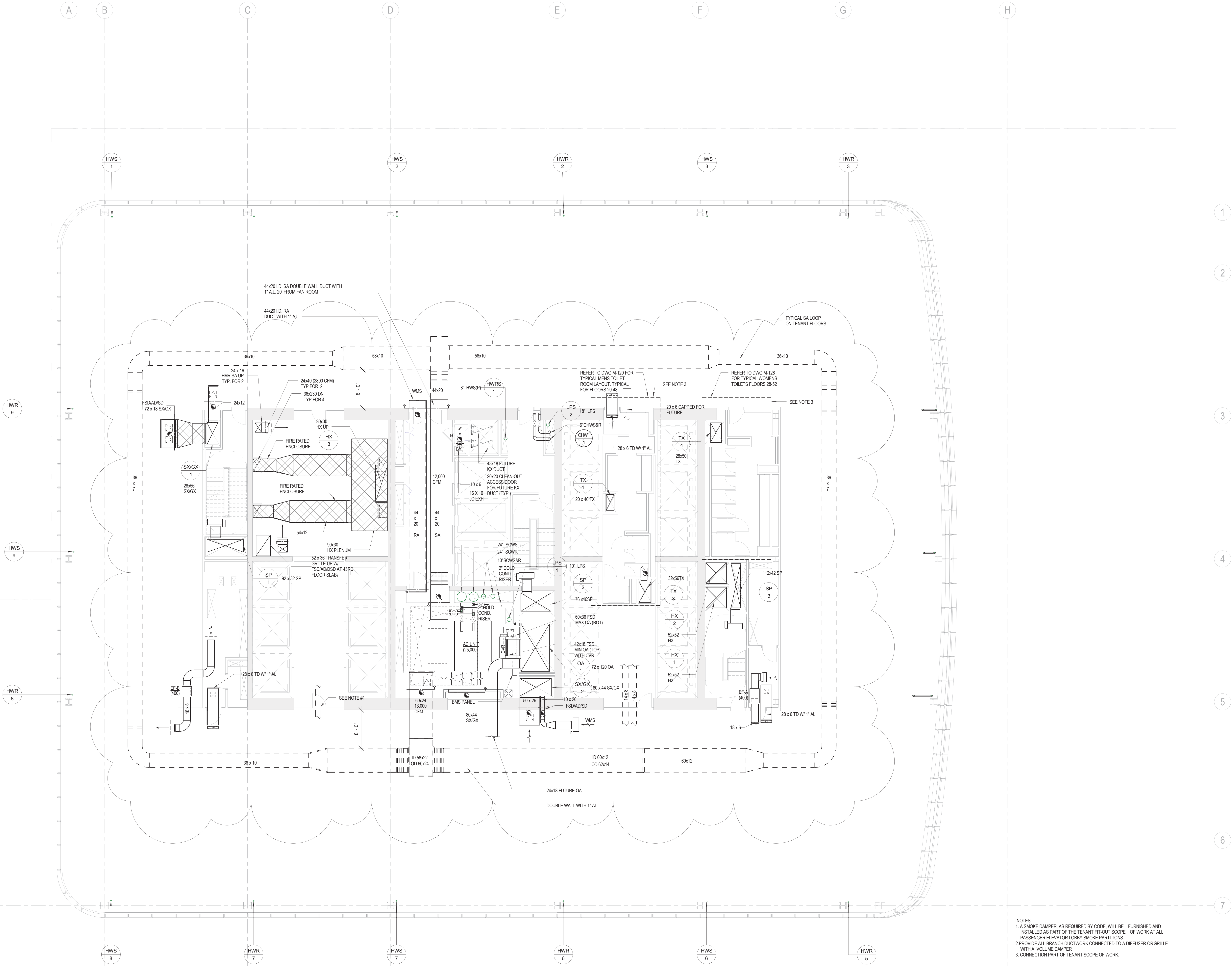
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3. CONNECTION PART OF TENANT SCOPE OF WORK.



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New York, NY 10122

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Field Operations
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Blast Consultant
Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant
Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

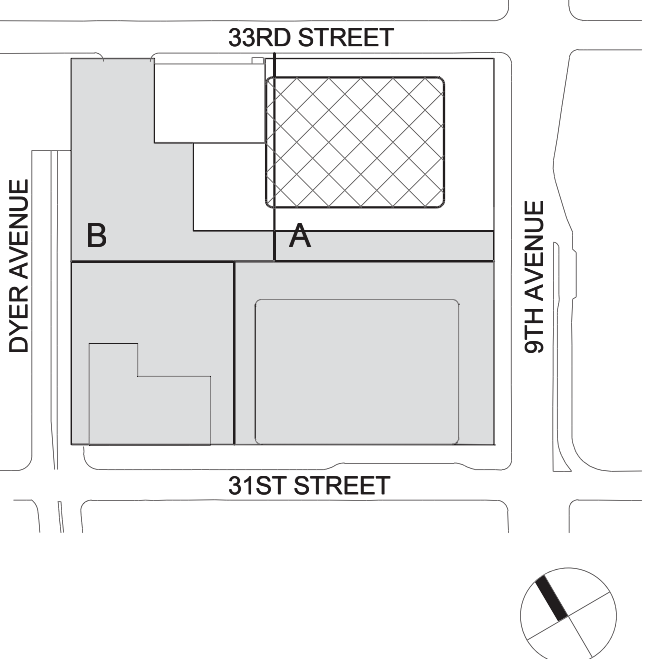
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultants
Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

Facade Maintenance Consultant
Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



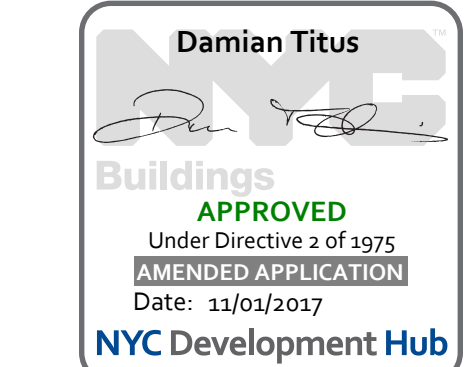
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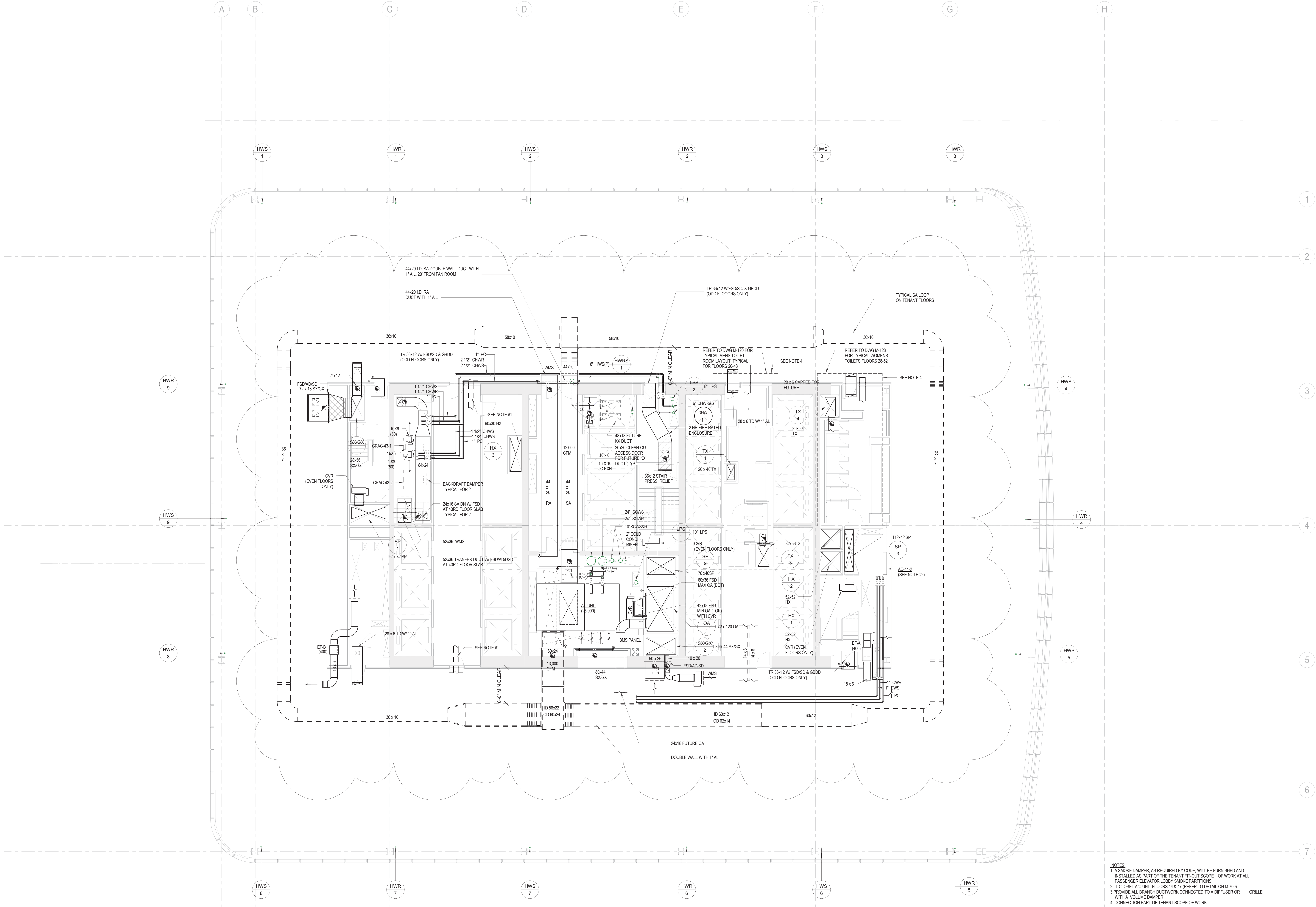
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Sheet Name:		

**MECHANICAL
LEVEL 43-48
FLOOR PLAN -
TYPICAL
MID-RISE**

Project No.: 14830 A.000	B-SCAN Sheet No.: M-143.01
Date: 22 APR 2016	Sheet No.: M-143
Scale: 1/8" = 1'-0"	Page No.: 32 OF 94
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 2. IT CLOSEST AC UNIT FLOORS 44 & 45 (REFER TO DETAIL ON M-720).
 3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
 4. CONNECTION PART OF TENANT SCOPE OF WORK.



MANHATTAN WEST:
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166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1K6

Key Plan:

33RD STREET
DYER AVENUE
31ST STREET
9TH AVENUE

Seal & Signature

Professional Engineer Seal

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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MECHANICAL
LEVEL 49 FLOOR
PLAN - MID-RISE
& HIGH-RISE

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MECHANICAL
LEVEL 49 FLOOR
PLAN - MID-RISE
& HIGH-RISE

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MECHANICAL
LEVEL 49 FLOOR
PLAN - MID-RISE
& HIGH-RISE

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MECHANICAL
LEVEL 49 FLOOR
PLAN - MID-RISE
& HIGH-RISE

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

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MECHANICAL
LEVEL 49 FLOOR
PLAN - MID-RISE
& HIGH-RISE

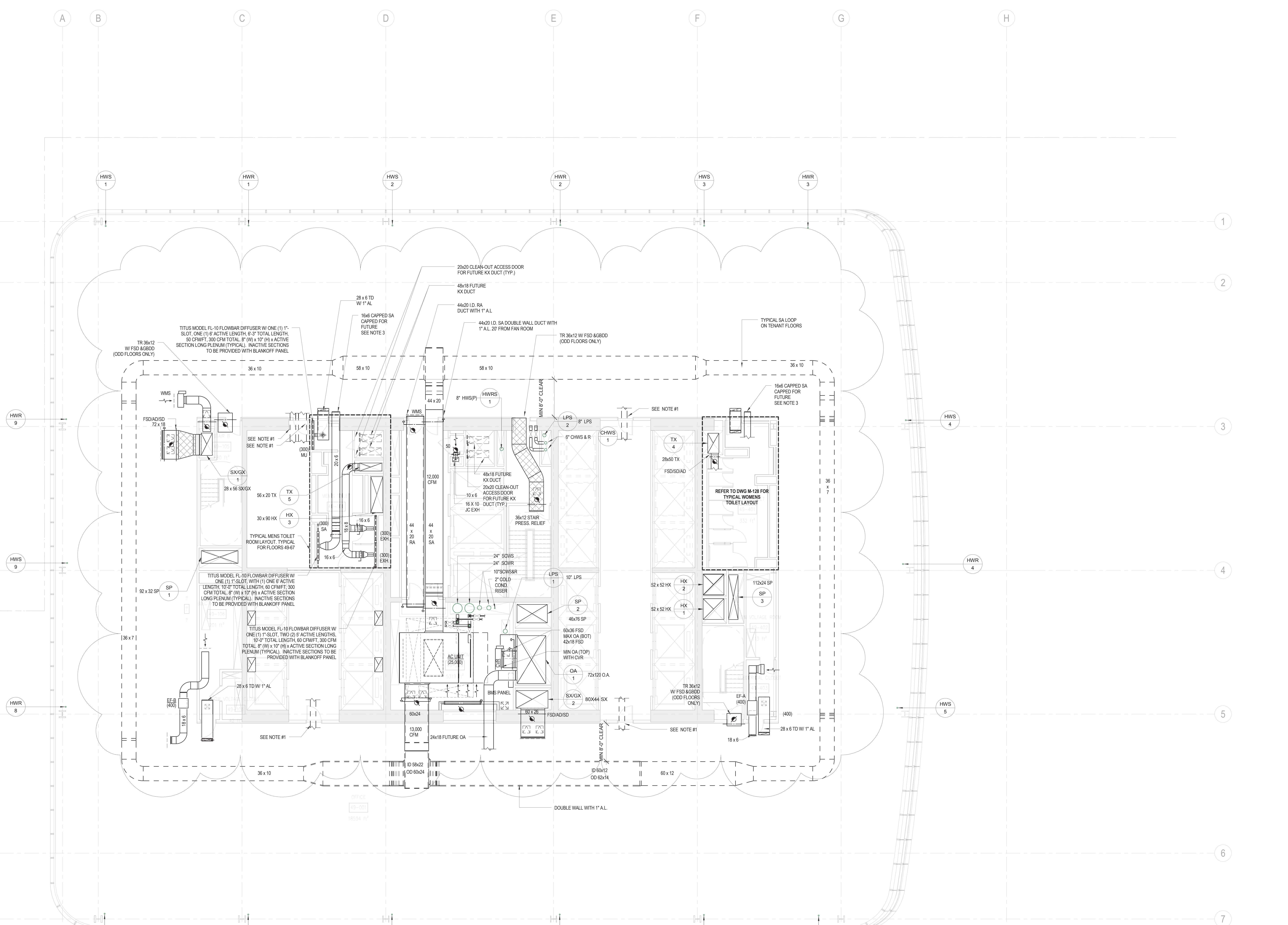
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Date: 22 APR 2016
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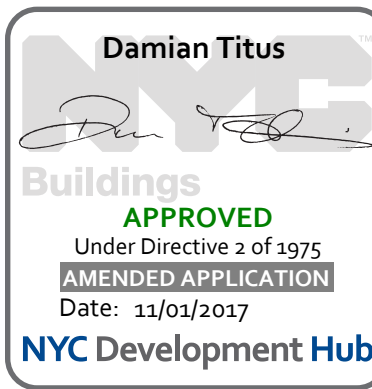
MECHANICAL
LEVEL 49 FLOOR
PLAN - MID-RISE
& HIGH-RISE

Project No.: 14830 A.000
Date: 22 APR 2016
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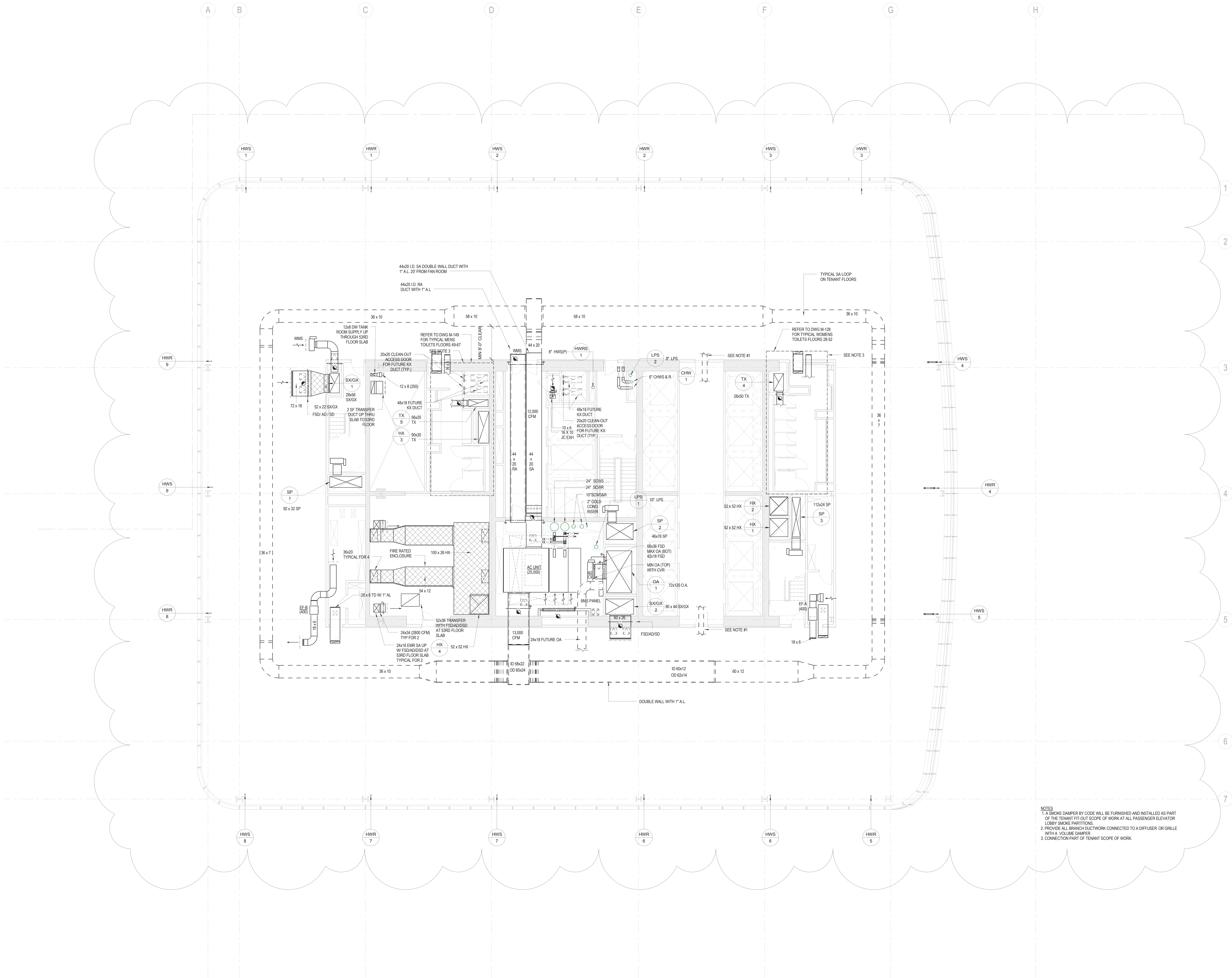
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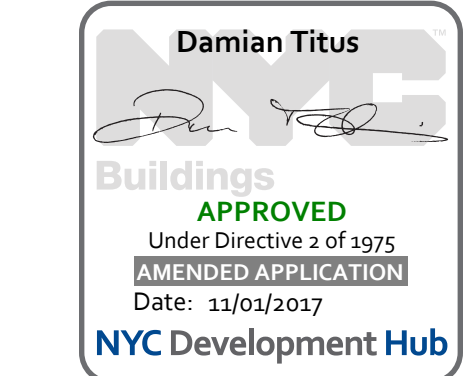
NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND
INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL
PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE
WITH A VOLUME DAMPER. ALL DAMPERS IN ACCESSIBLE CEILING SHALL BE
CORD OPERATED THROUGHOUT THE FACE OF THE DIFFUSER.
3. CONNECTION PART OF TENANT SCOPE OF WORK.



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Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-152

B-SCAN Sheet No.:
M-152.01
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**MANHATTAN WEST:
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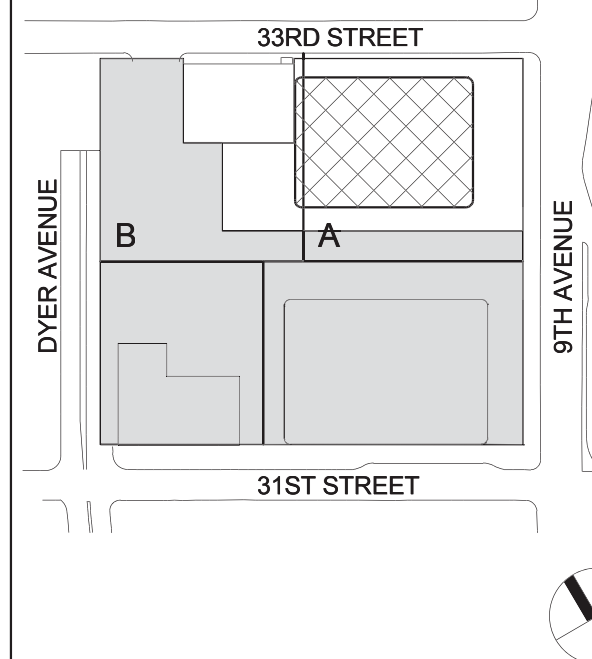
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

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Key Plan:



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MECHANICAL LEVEL 52 FLOOR PLAN - HIGH-RISE EMR



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NORTH TOWER
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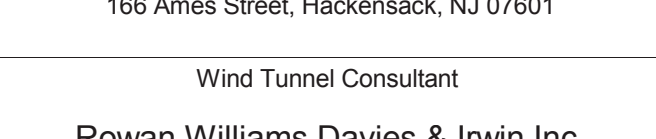
Vibration Consultant
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Code Consultants Professional Engineers PC
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680 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



Seal & Signature



Project No.: 14830 A.000
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MECHANICAL
LEVEL 53 FLOOR
PLAN - HIGH-RISE
PUMP ROOM

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MECHANICAL
LEVEL 53 FLOOR
PLAN - HIGH-RISE
PUMP ROOM

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Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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MECHANICAL
LEVEL 53 FLOOR
PLAN - HIGH-RISE
PUMP ROOM

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MECHANICAL
LEVEL 53 F



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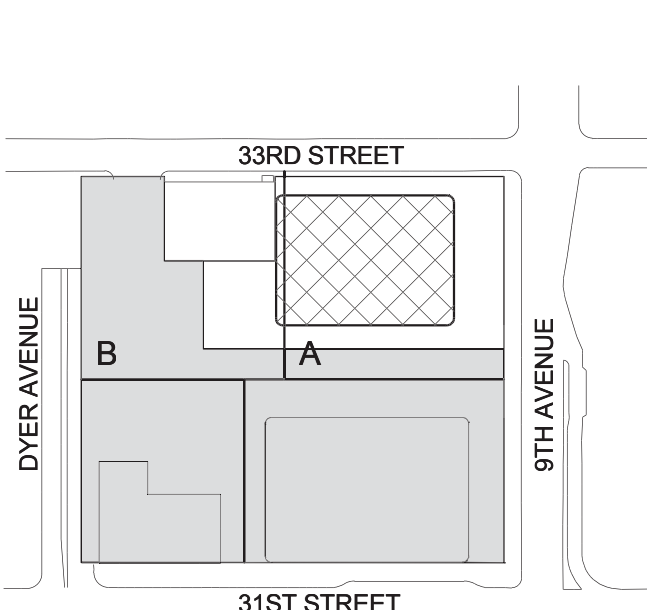
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Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

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Code Consultants Professional Engineers PC
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Key Plan:



Seal & Signature:

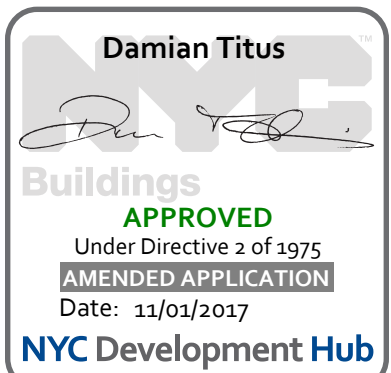


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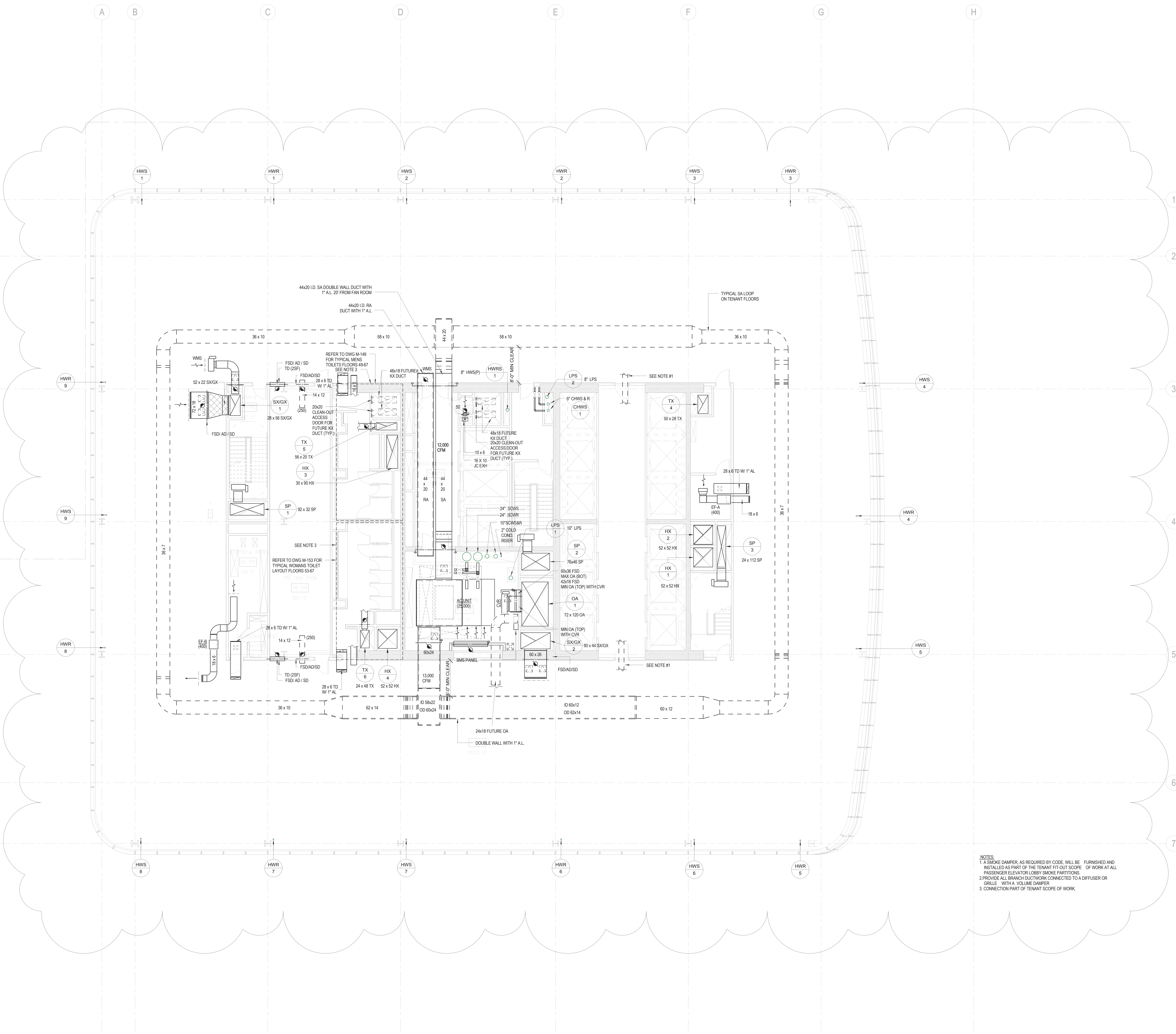
MECHANICAL
LEVEL 54 FLOOR
PLAN - HIGH-RISE
WATER TANK

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NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND
INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL
PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR
GRILLE WITH A VOLUME DAMPER.
3. CONNECTION PART OF TENANT SCOPE OF WORK.



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Cerami & Associates
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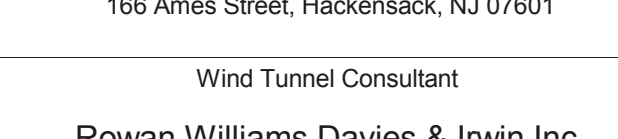
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Key Plan:



Seal & Signature:



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LEVEL 55 FLOOR
PLAN - HIGH-RISE

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MECHANICAL
LEVEL 55 FLOOR
PLAN - HIGH-RISE

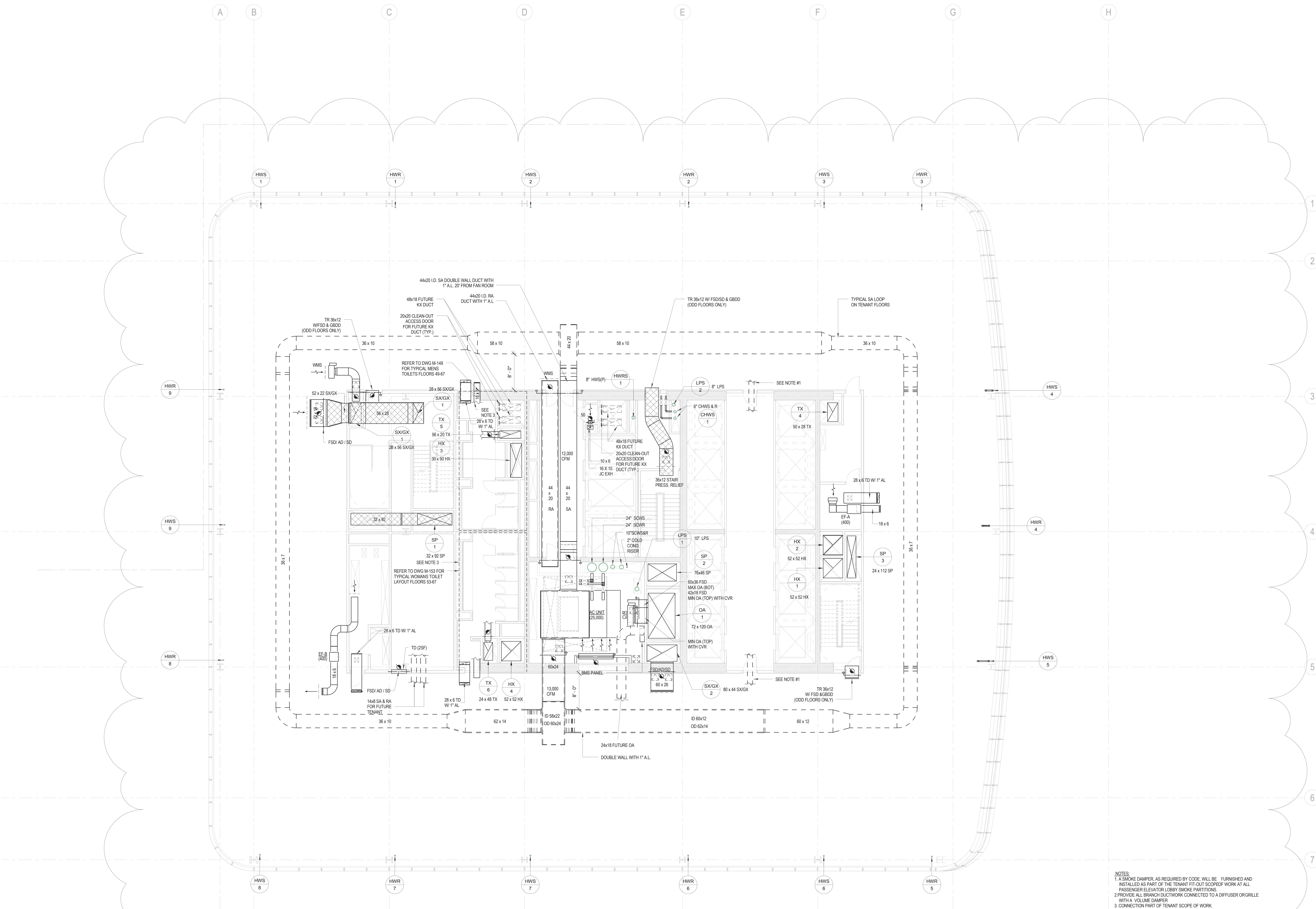
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MECHANICAL
LEVEL 55 FLOOR
PLAN - HIGH-RISE



NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE OF WORK AT ALL PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
3. CONNECTION PART OF TENANT SCOPE OF WORK.



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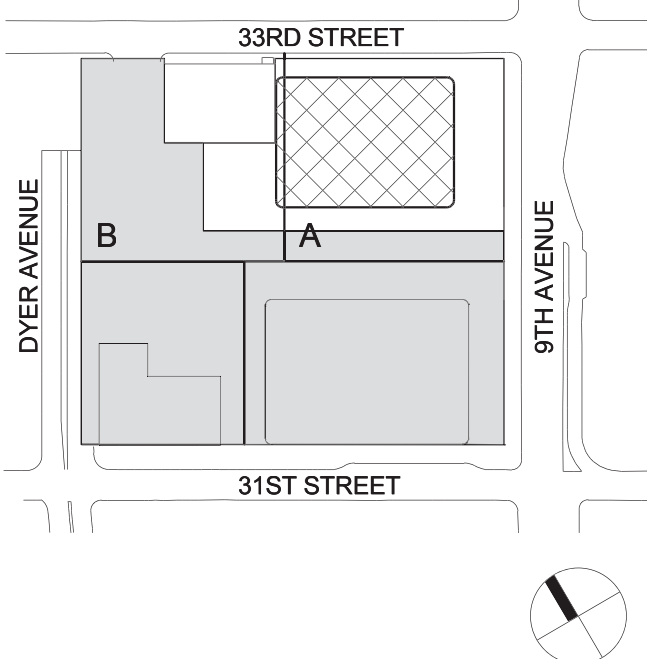
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Key Plan:



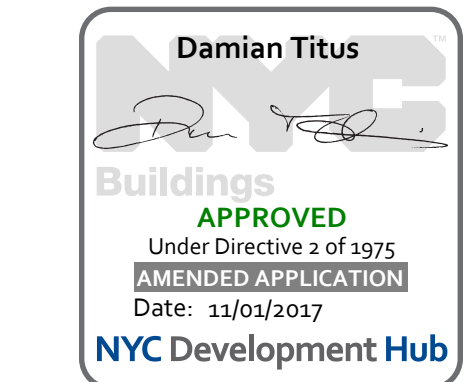
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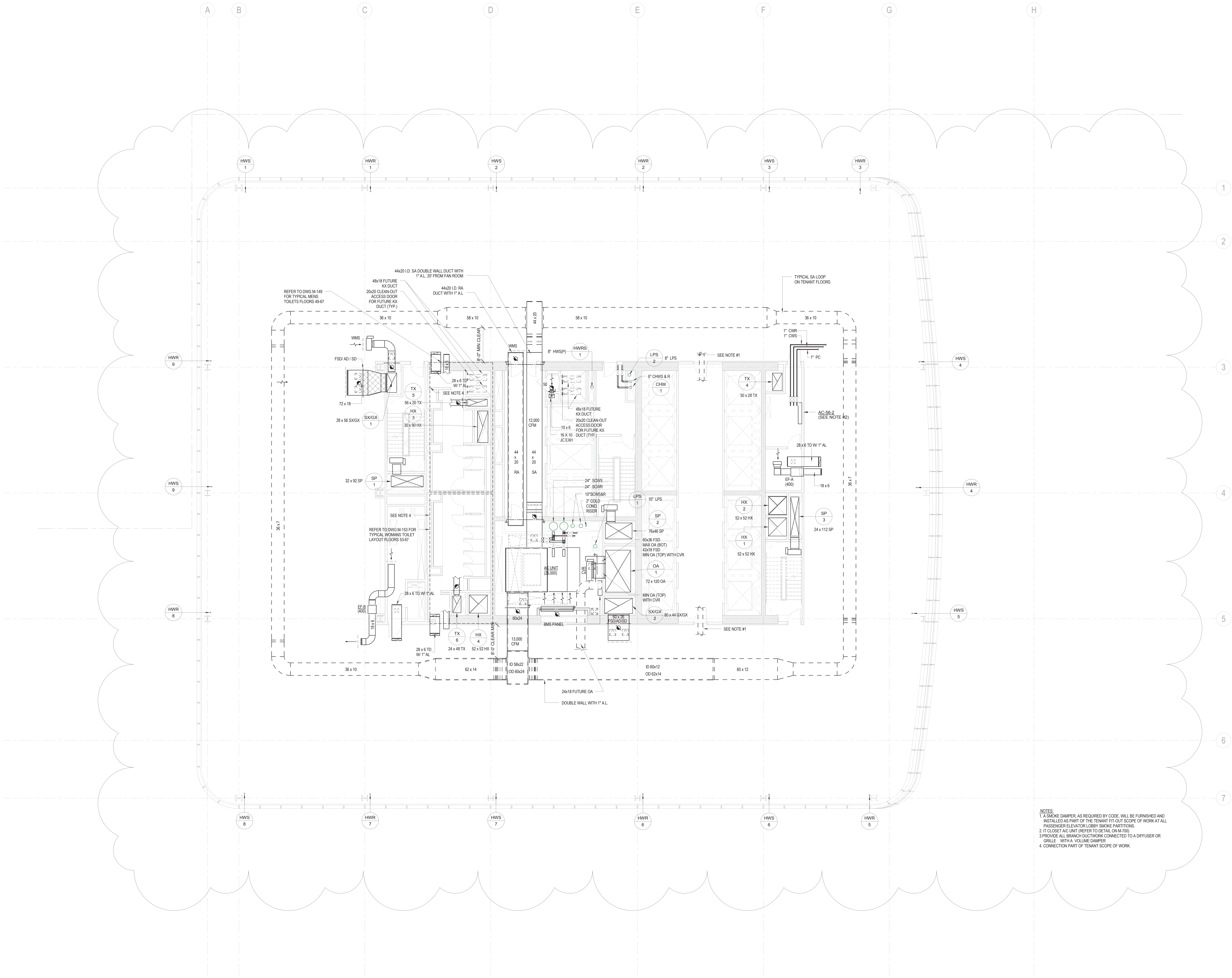
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**MECHANICAL
LEVEL 56 FLOOR
PLAN - HIGH-RISE**

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2. IF CLOSET A/C UNIT (REFER TO DETAIL ON M-700)
3. PROVIDE ALL BRANCH DUCTWORK CONNECTED TO A DIFFUSER OR GRILLE, WITH A VOLUME DAMPER.
4. CONNECTION PART OF TENANT SCOPE OF WORK.



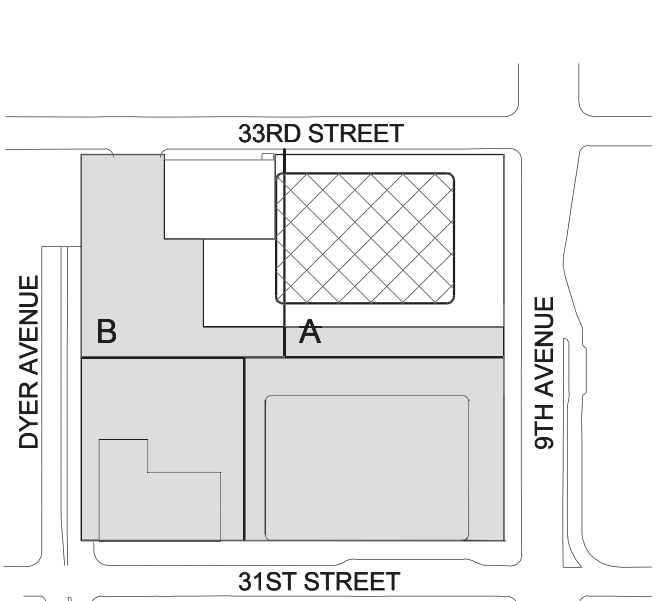
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650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



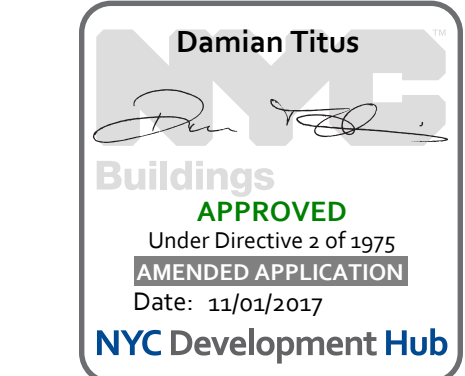
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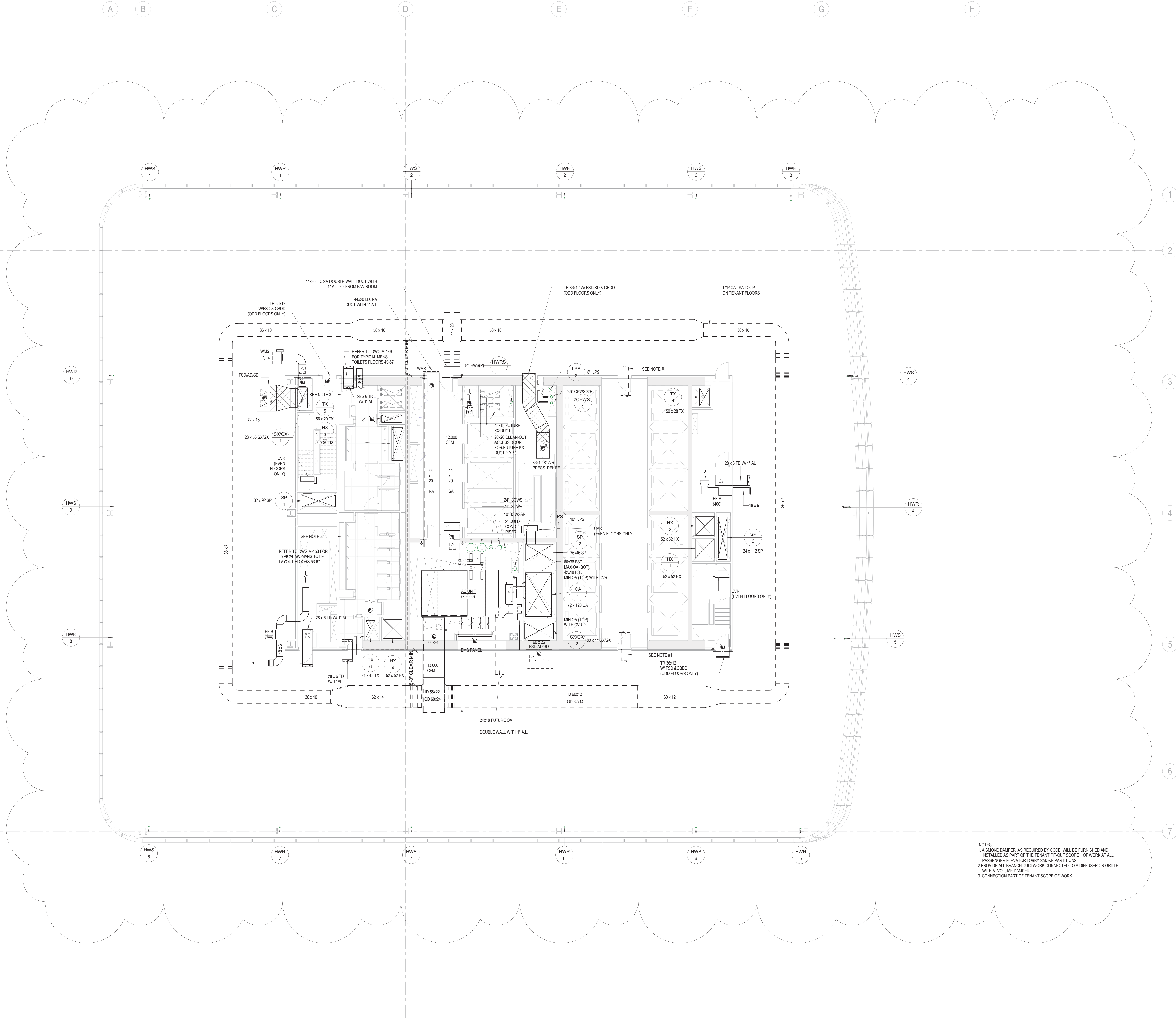
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**MECHANICAL
LEVEL 57-58
FLOOR PLAN -
TYPICAL
HIGH-RISE**

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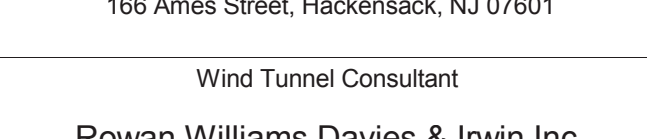
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Key Plan:



Seal & Signature:



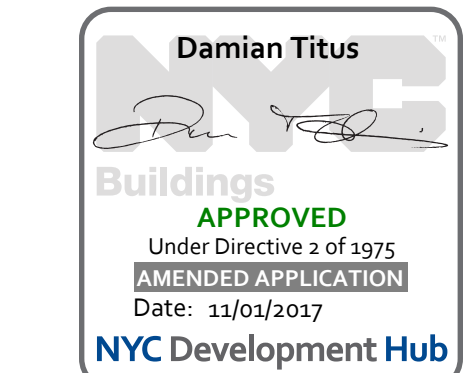
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Date: 22 APR 2016
Scale: 1/8" = 1'-0"

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MECHANICAL
LEVEL 59 FLOOR
PLAN - HIGH-RISE



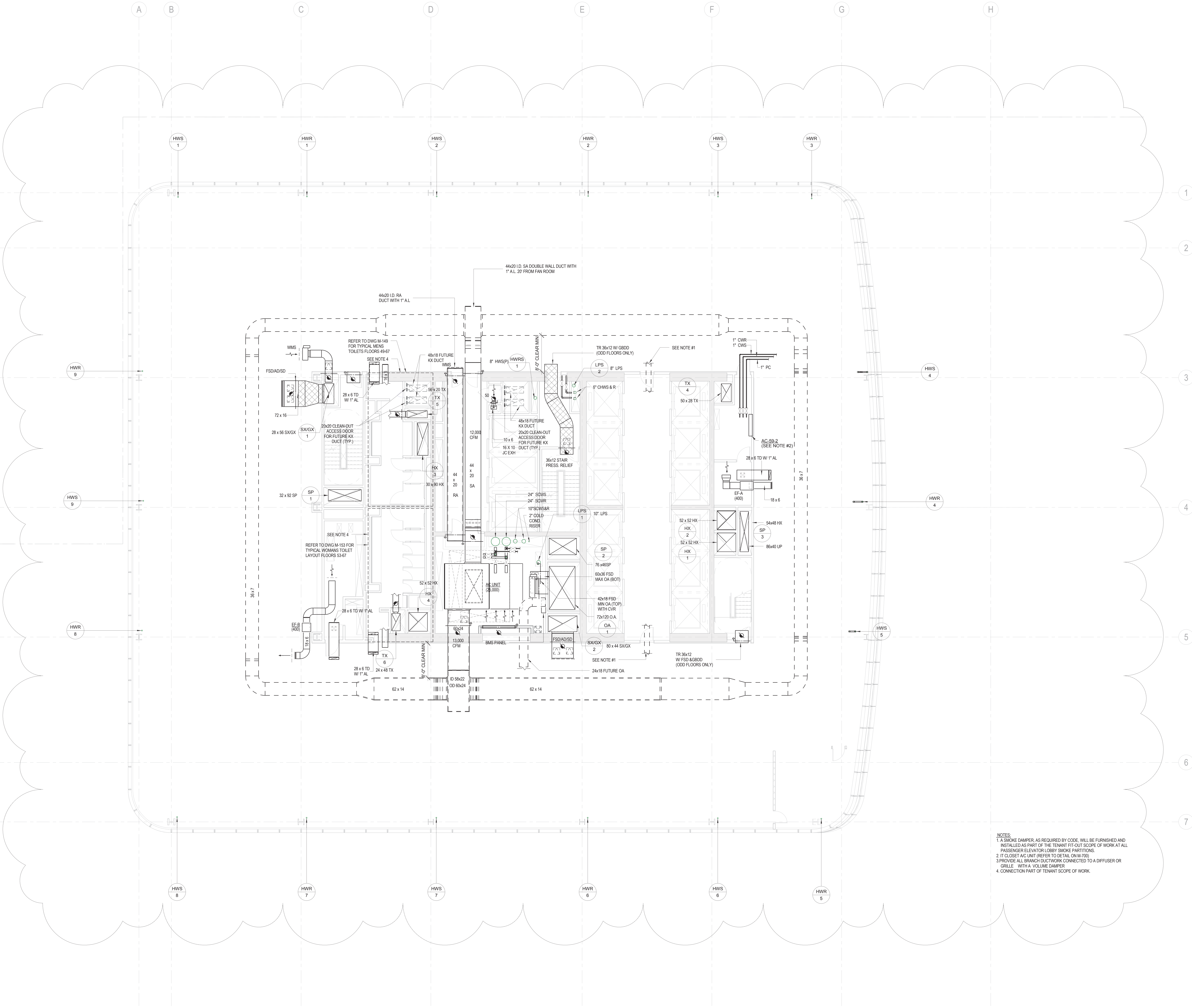
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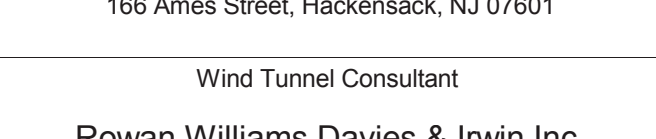
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MECHANICAL
LEVEL 62 FLOOR
PLAN - HIGH-RISE
EMR

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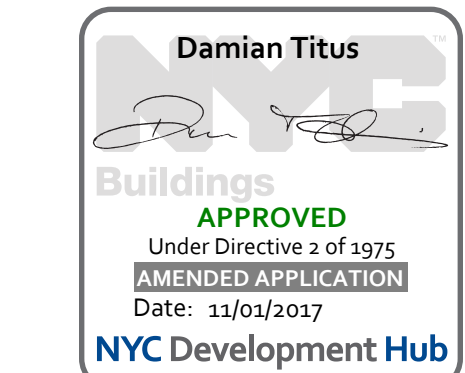
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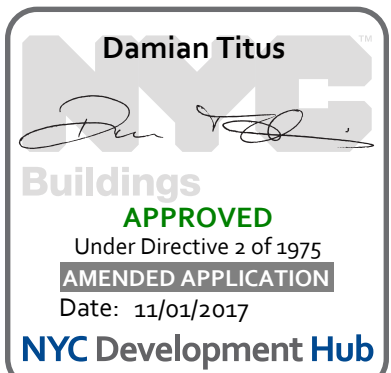
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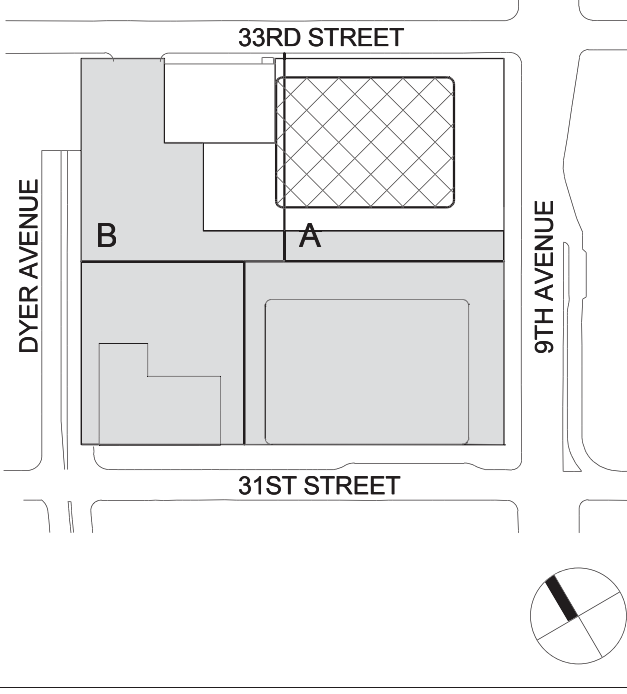
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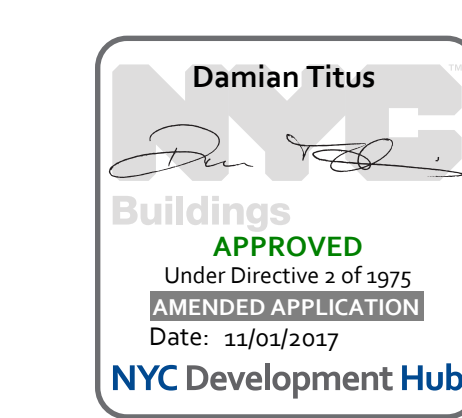


No.	Date	Description
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2	20 JUN 2014	ISSUED FOR BUILDING PERMIT

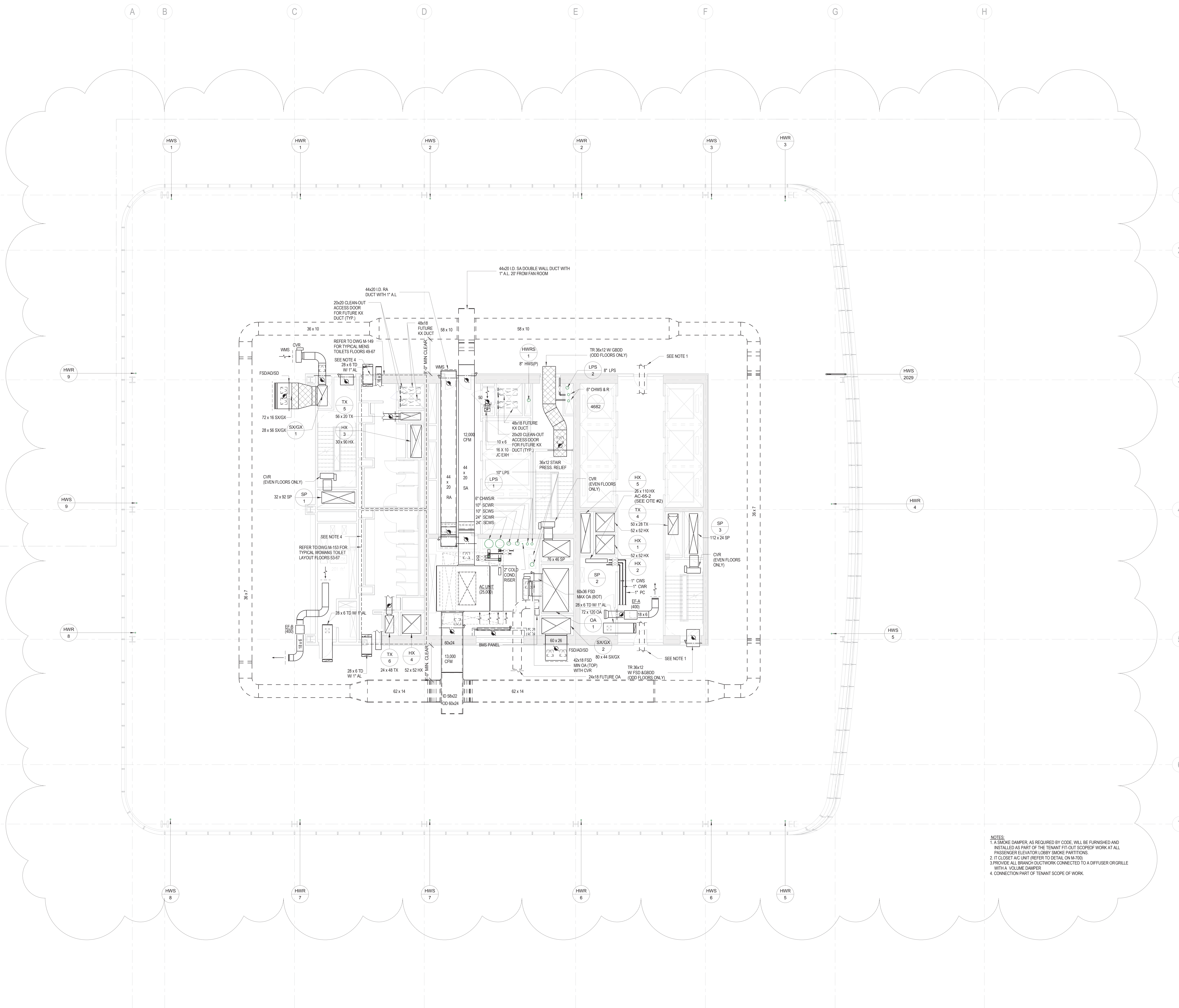
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MECHANICAL
LEVEL 64-66
FLOOR PLAN -
TYPICAL
HIGH-RISE

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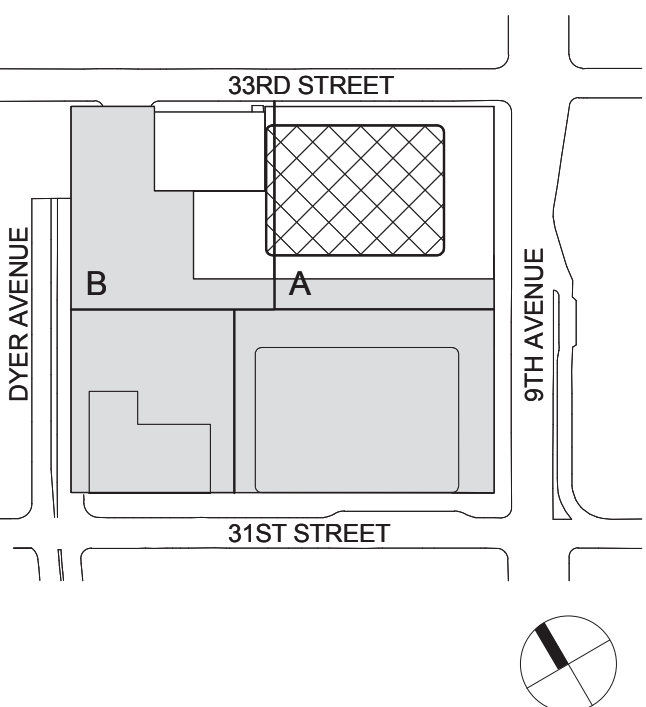
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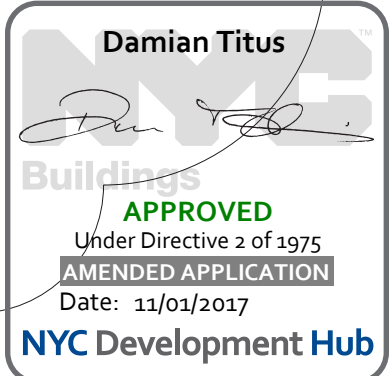
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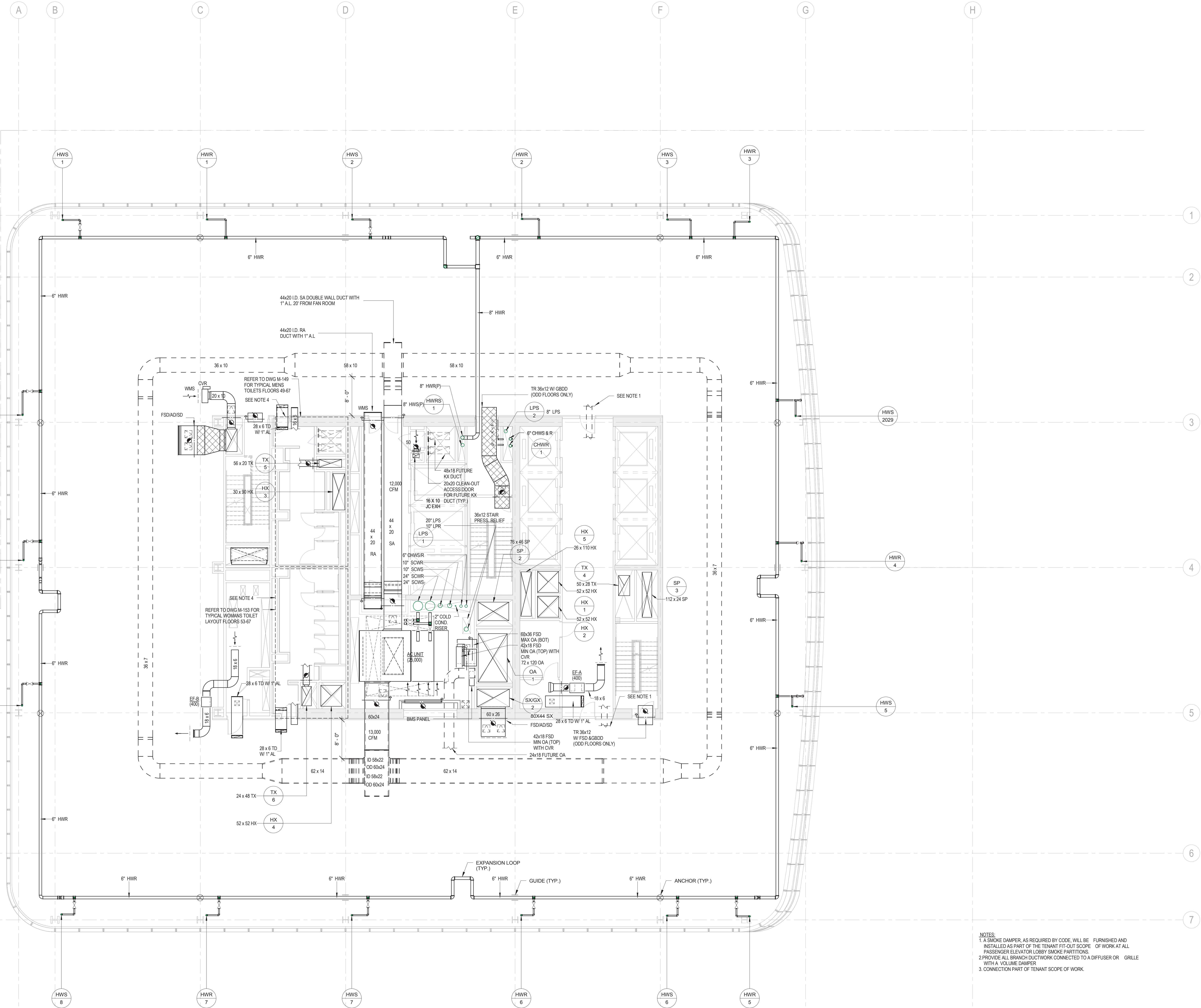
**MECHANICAL
LEVEL 67 FLOOR
PLAN - HIGH-RISE**

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-167

Re-Scan Sheet No.:
M-167.00
Sheet No.: M-167
Page No.: 46 OF 94



NOTES:
1. A SMOKE DAMPER, AS REQUIRED BY CODE, WILL BE FURNISHED AND INSTALLED AS PART OF THE TENANT FIT-OUT SCOPE. OF WORK AT ALL PASSENGER ELEVATOR LOBBY SMOKE PARTITIONS.
2. PROVIDE ALL BRANCH ELECTRIC WORK CONNECTED TO A DIFFUSER OR GRILLE WITH A VOLUME DAMPER.
3. CONNECTION PART OF TENANT SCOPE OF WORK.





MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001
Client

Brookfield
Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10021

Architecture/Structural Engineering
SOM

Skidmore, Owings & Merrill LLP
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102 Madison Avenue #11, New York, NY 10016

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Jaros Baum & Bolles
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Edgett Williams Consulting Group, Inc.
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Viridian Energy & Environmental
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475 10th Avenue, New York, NY 10018

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Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant
Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant
Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

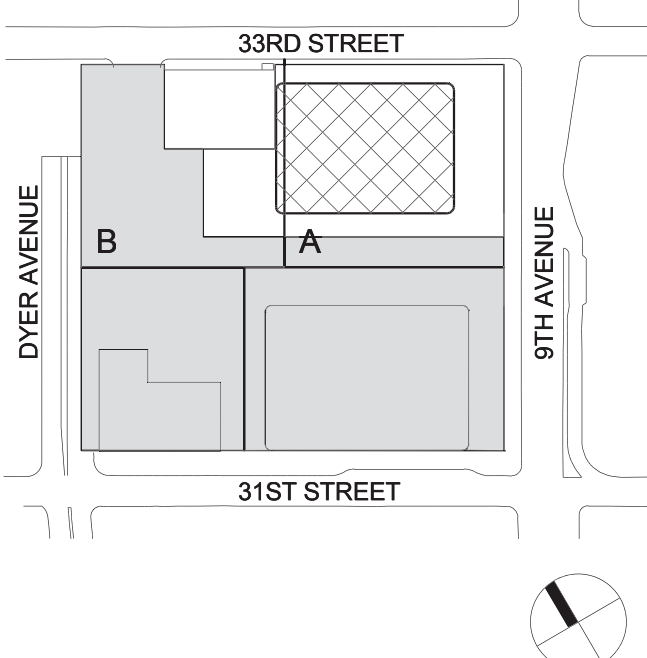
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant
Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

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166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



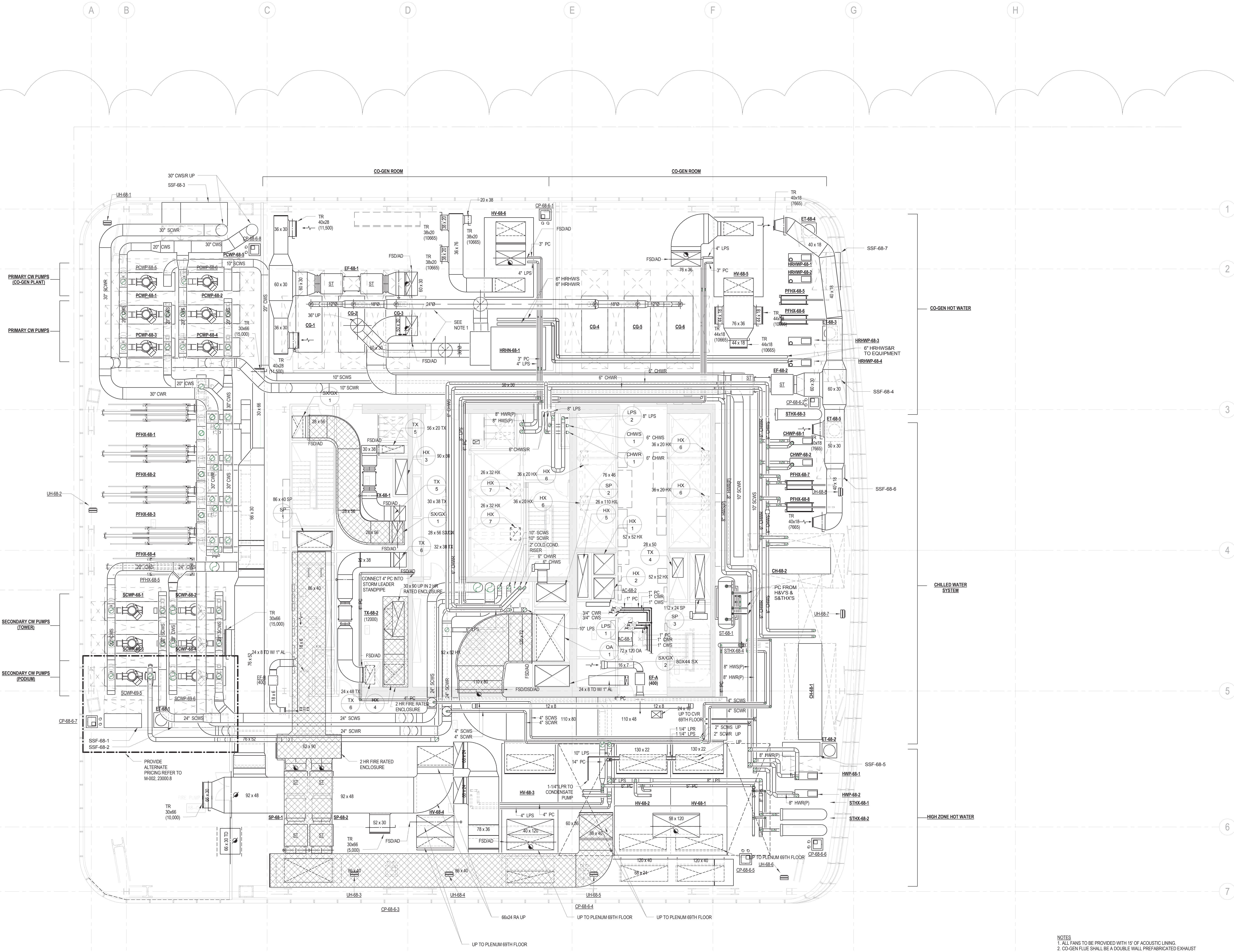
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2 22 APR 2016 ISSUED FOR P&A
1 20 JUN 2014 ISSUED FOR BUILDING PERMIT
No. Date Description
Sheet Name:

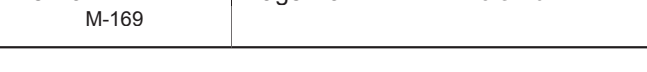
**MECHANICAL
LEVEL 68 FLOOR
PLAN -
MECHANICAL**

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-168
B-SCAN Sheet No.:
M-168.01
Sheet No.:
M-168
Page No.: 47 OF 94



NOTES
1. ALL FANS TO BE PROVIDED WITH 15" OF ACOUSTIC LINING.
2. CO-GEN FLUE SHALL BE A DOUBLE WALL PREFABRICATED EXHAUST SYSTEM (SIMILAR TO SHERLOCK MODEL P1). THE SYSTEM SHALL HAVE A TYPE 304 STAINLESS STEEL INNER LINER, ONE INCH FIBER CERAMIC AND AN ALUMINIZED OUTER JACKET (WITHIN THE BUILDING) AND A TYPE STAINLESS STEEL OUTER JACKET (WHEN EXPOSED AT THE ROOF).







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Blast Consultant
Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant
Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

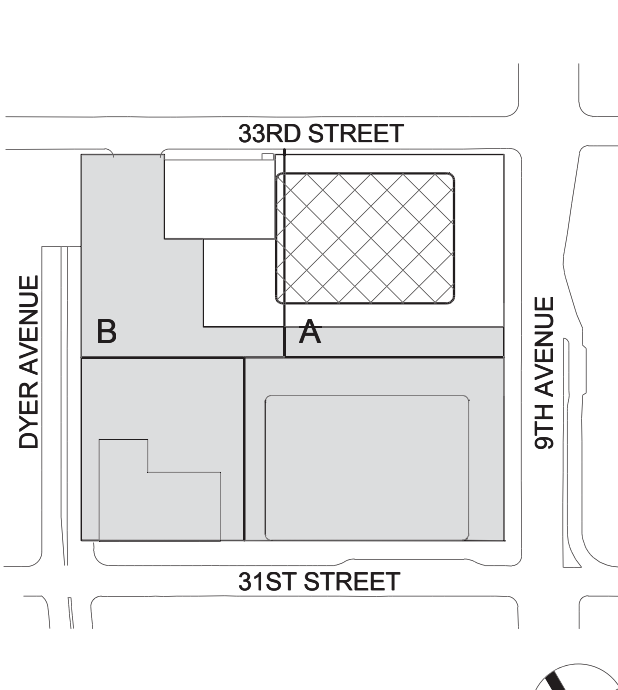
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant
Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

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Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B6

Key Plan:



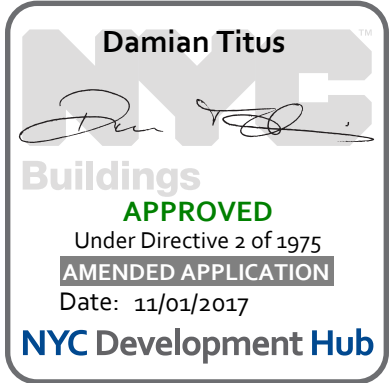
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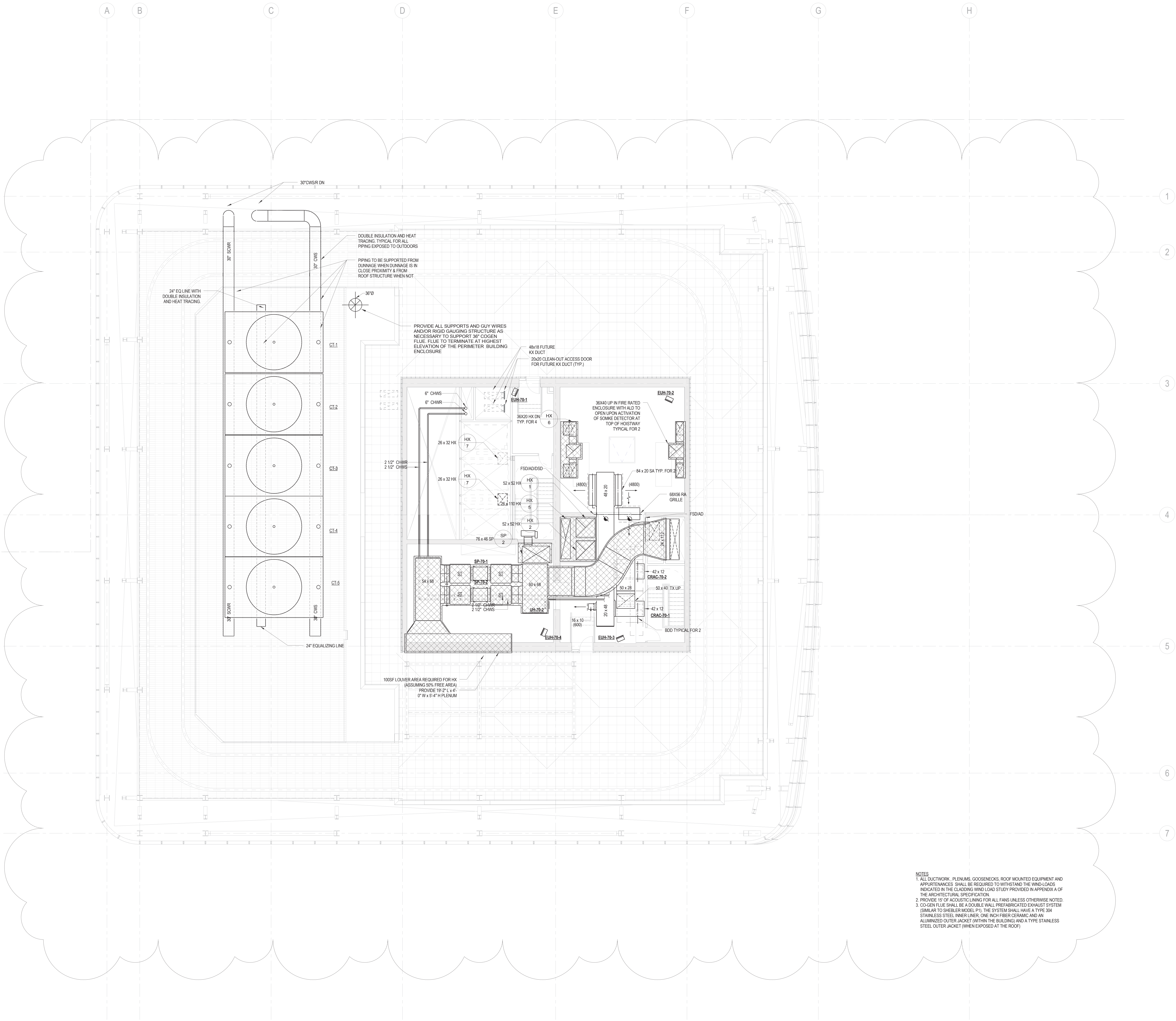
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No.	Date	Description
Sheet Name:		

MECHANICAL
ROOF PLAN -
MECHANICAL
PENTHOUSE

Project No.:	14830 A-000	B-SCAN Sheet No.:	M-170.01
Date:	22 APR 2016	Sheet No.:	M-170
Scale:	1/8" = 1'-0"	Page No.:	48 OF 94
File No.:	M-170		



NOTES:
1. ALL DUCTWORK, PLENUMS, GOOSENECKS, ROOF MOUNTED EQUIPMENT AND APPURTENANCES SHALL BE REQUIRED TO WITHSTAND THE WIND LOADS INDICATED IN THE CLADDING WIND LOAD STUDY PROVIDED IN APPENDIX A OF THE ARCHITECTURAL SPECIFICATION.
2. PROVIDE 15' OF ACOUSTIC LINING FOR ALL FANS UNLESS OTHERWISE NOTED.
3. CO-GEN FLUE SHALL BE A DOUBLE WALL PREFABRICATED EXHAUST SYSTEM (SIMILAR TO SHELLEX MODEL PT). THE SYSTEM SHALL HAVE A TYPE 304 STAINLESS STEEL INNER LINER, ONE HIGH-FIBER CERAMIC AND AN ALUMINIZED OUTER JACKET (WITHIN THE BUILDING) AND A TYPE STAINLESS STEEL OUTER JACKET (WHEN EXPOSED AT THE ROOF).





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Cerami & Associates
404 Fifth Avenue #8, New York, NY 10016

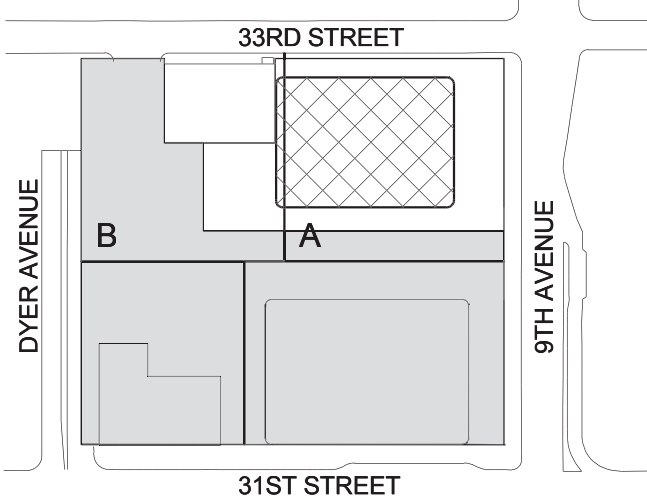
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
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Code Consultants Professional Engineers PC
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Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B6

Key Plan:



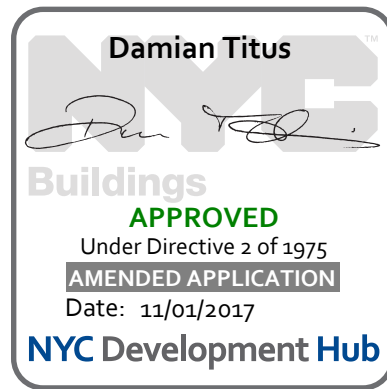
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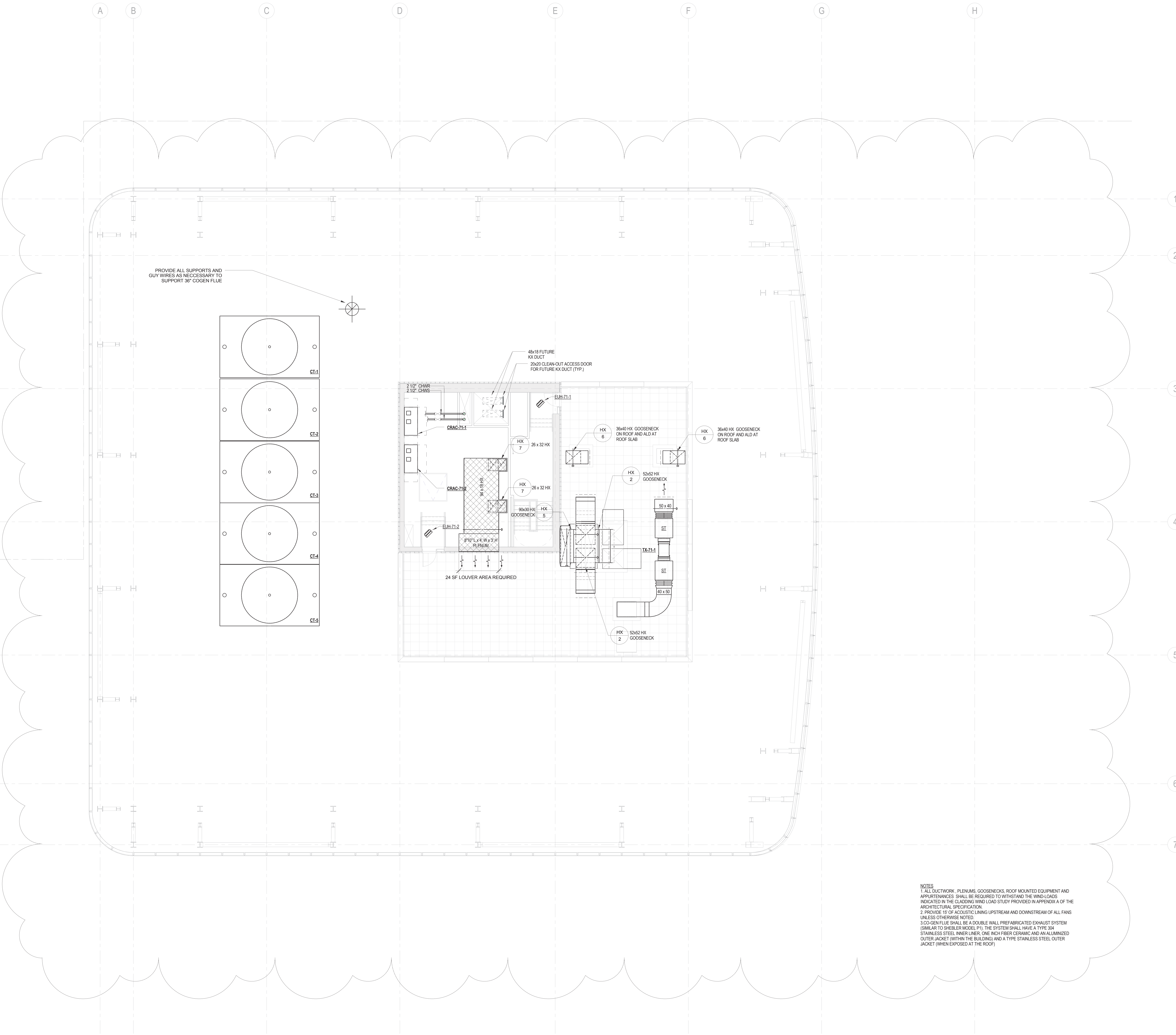
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MECHANICAL
ROOF PLAN -
MECHANICAL
PENTHOUSE
ROOF

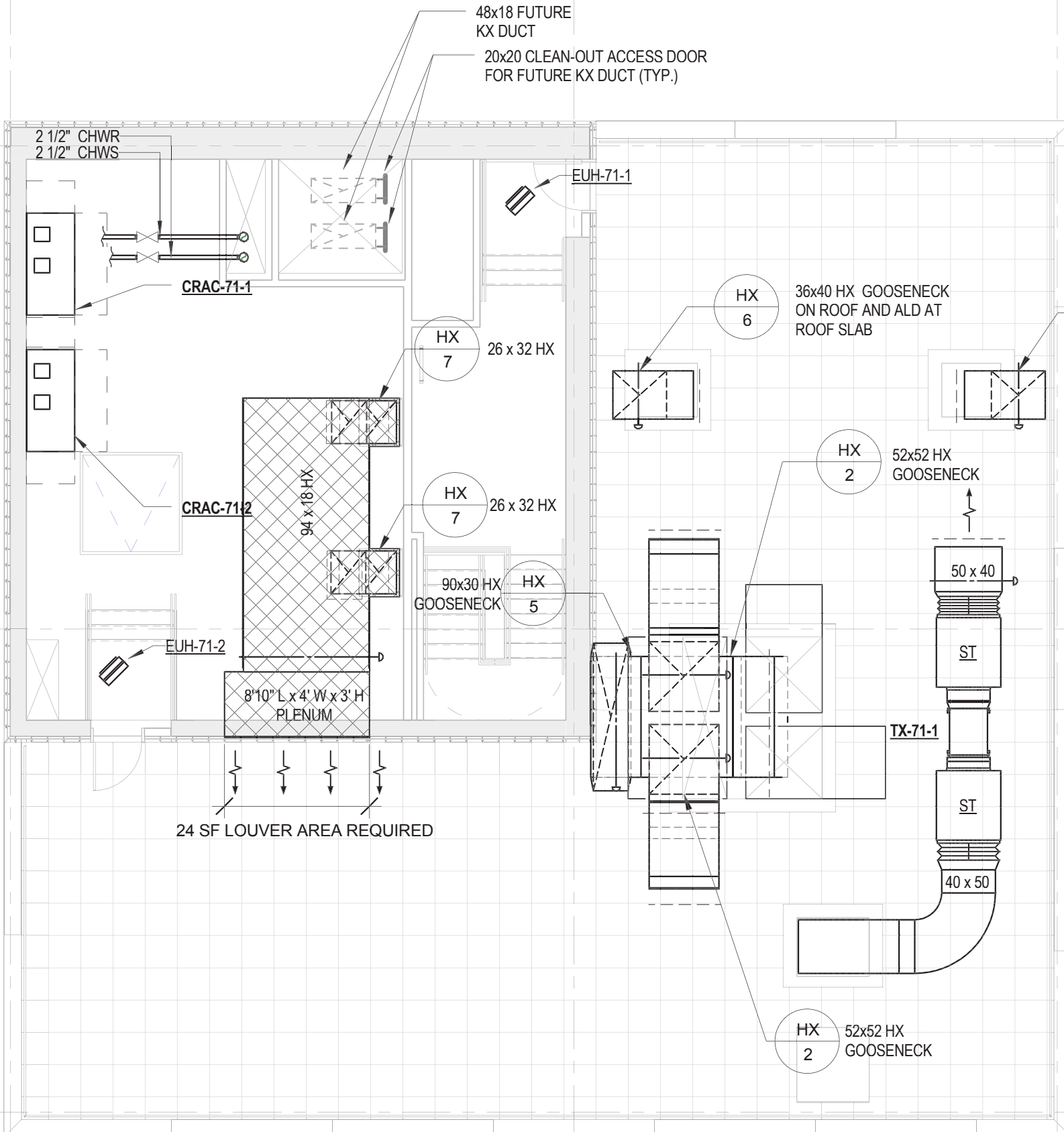
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Sheet No.: M-171
Page No.: 50 OF 94

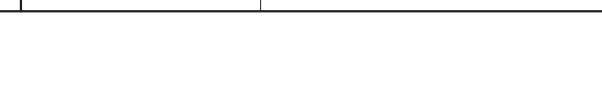


NOTES:
1. ALL DUCTWORK, PLENUMS, GOOSENECKS, ROOF MOUNTED EQUIPMENT AND APPURTENANCES SHALL BE REQUIRED TO WITHSTAND THE WIND LOADS INDICATED IN THE CLADDING WIND LOAD STUDY PROVIDED IN APPENDIX A OF THE ARCHITECTURAL SPECIFICATION.
2. PROVIDE 18" OF ACOUSTIC LAMINATE UPSTREAM AND DOWNSTREAM OF ALL FANS UNLESS OTHERWISE NOTED.
3. CO-GEN FUELS SHALL BE A DOUBLE WALL PREPARED DRAINAGE SYSTEM (SIMILAR TO SHELTER MODE IPI). THE SYSTEM SHALL HAVE A TYPE 304 STAINLESS STEEL INNER LINER, ONE INCH FIBER CERAMIC AND AN ALUMINIZED OUTER JACKET (WITHIN THE BUILDING) AND A TYPE STAINLESS STEEL OUTER JACKET (WHEN EXPOSED AT THE ROOF).

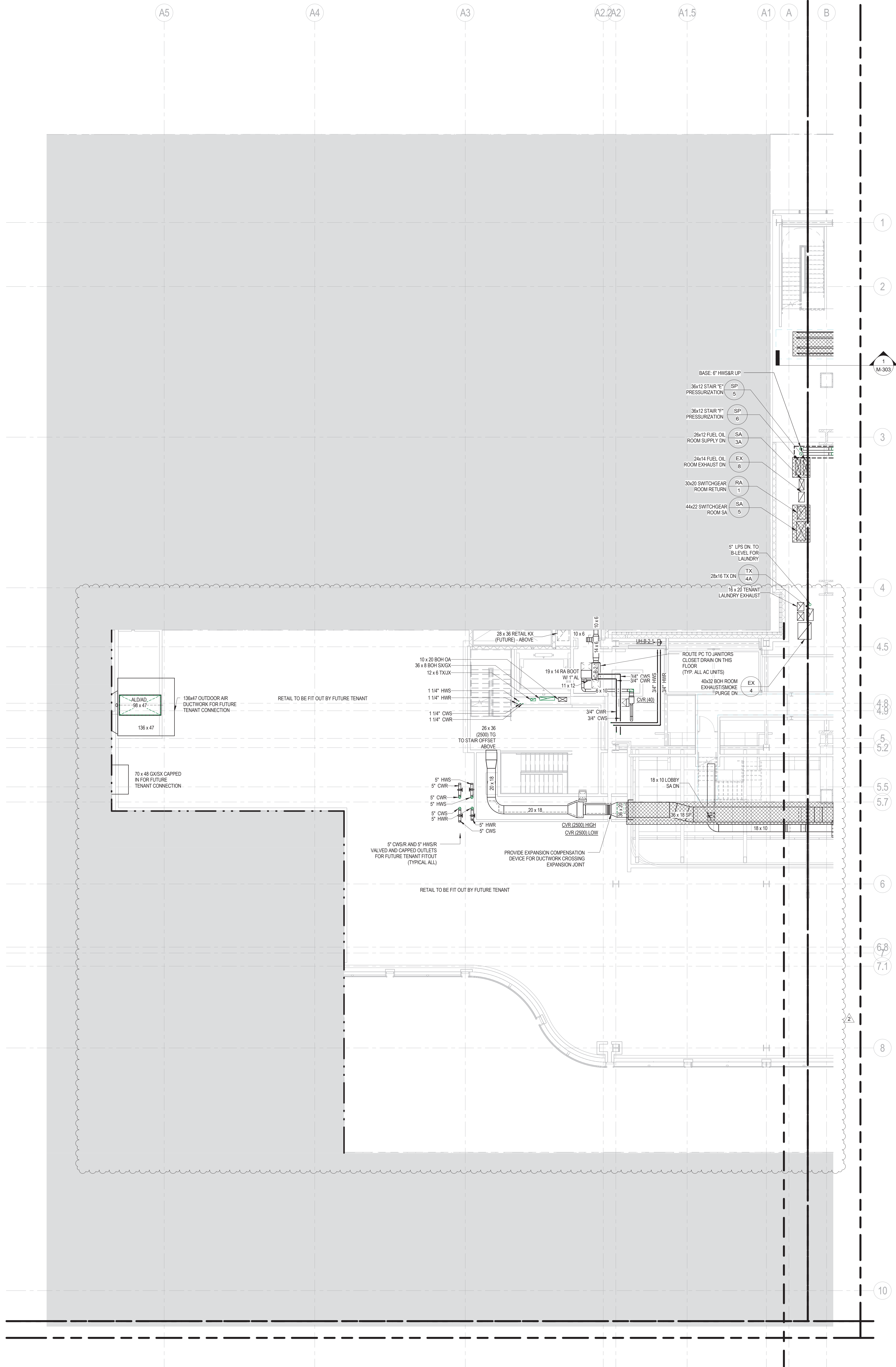


PROVIDE ALL SUPPORTS AND GUY WIRES AS NECESSARY TO SUPPORT 36" COGEN FUELS





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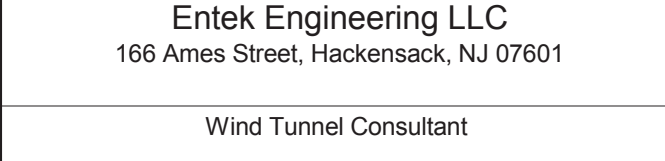
Vibration Consultant
Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

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Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

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Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8

Key Plan:



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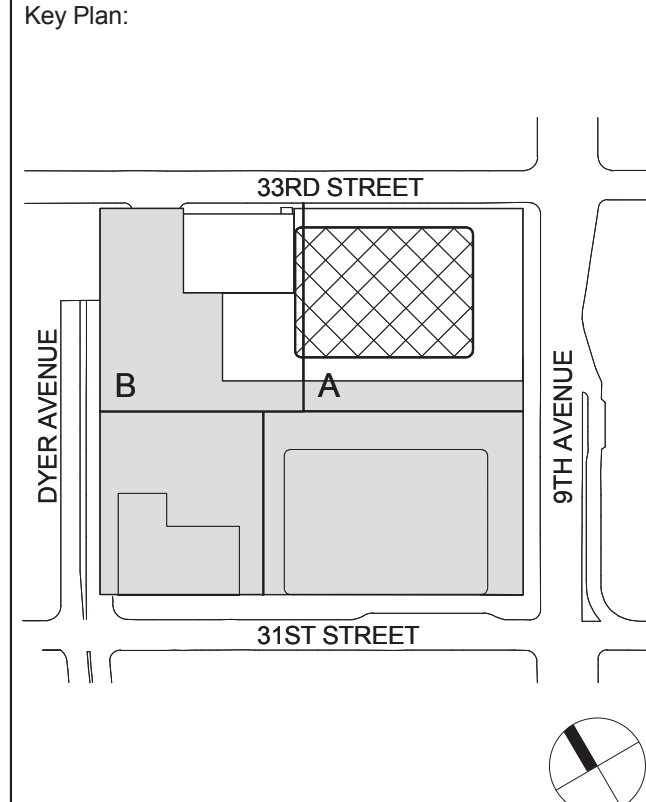
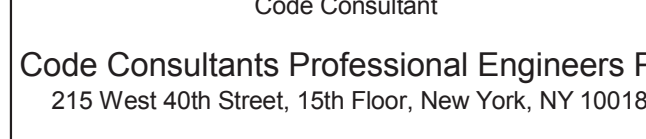
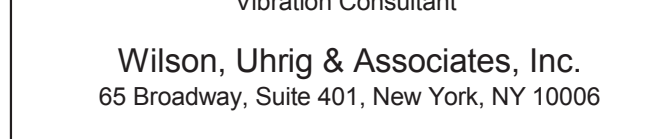
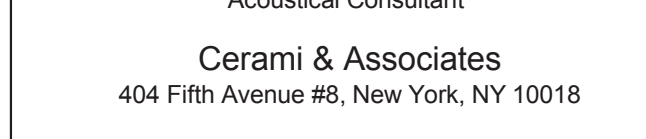
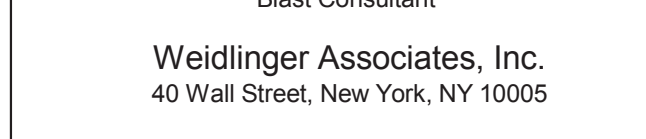
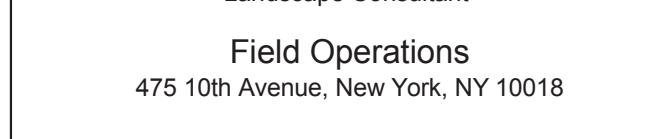
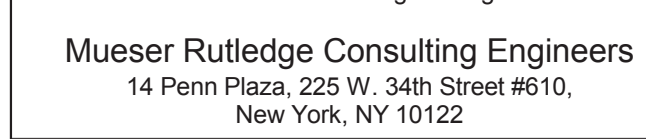
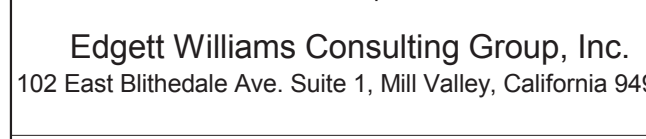
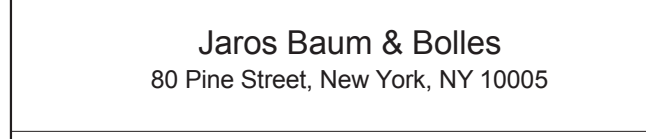
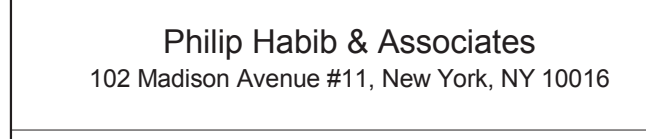
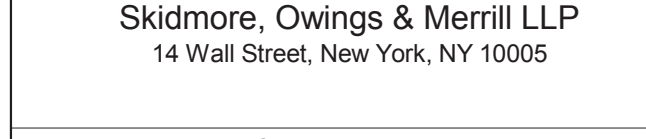
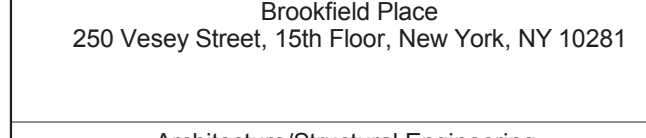
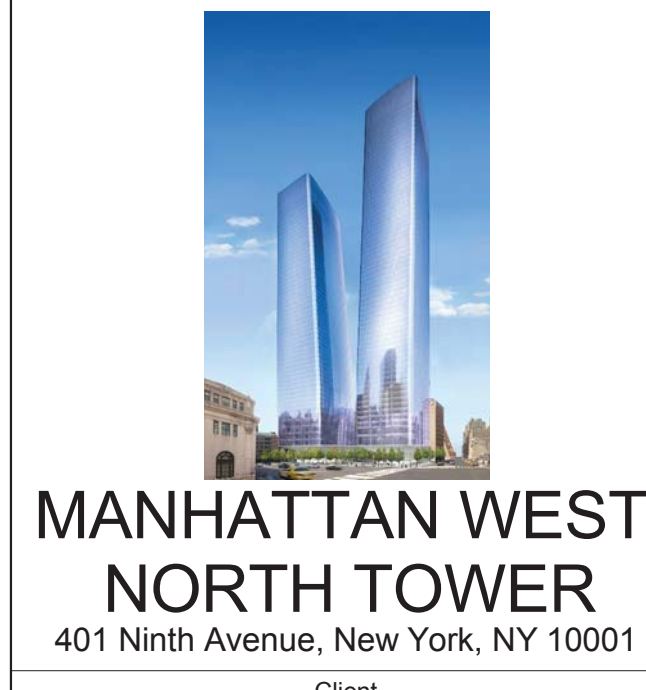
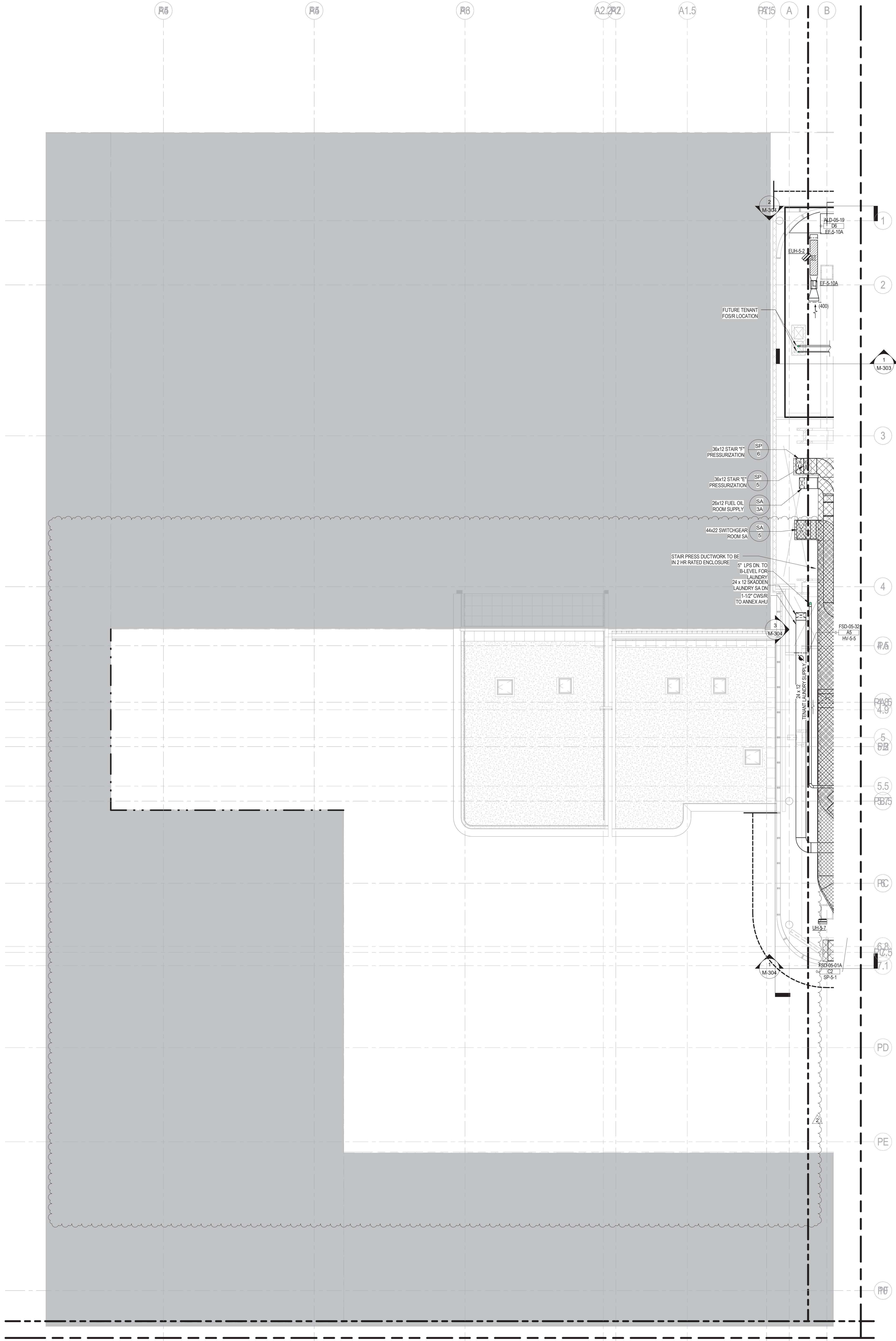


Project No.: 14830 A-000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"

B-SCAN Sheet No.: M-183.01
Sheet No.: M-103-B-00
Page No.: 13 OF 22

MECHANICAL
LEVEL 3 FLOOR
PLAN - STAIR
TRANSFER -
PART B

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1	22 APR 2016	ISSUED FOR PIA
No.	Date	Description
Sheet Name:		

MECHANICAL LEVEL 5 FLOOR PLAN - MECHANICAL MEZZANINE - PART B

Project No.: 14830 A.000	B-SCAN Sheet No.: M-185.01
Date: 22 APR 2016	Sheet No.: M-105-B.00
Scale: 1/8" = 1'-0"	Page No.: 15 OF 22
File No.: M-105-B.00	



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65 Broadway, Suite 401, New York, NY 10006

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215 West 40th Street, 15th Floor, New York, NY 10018

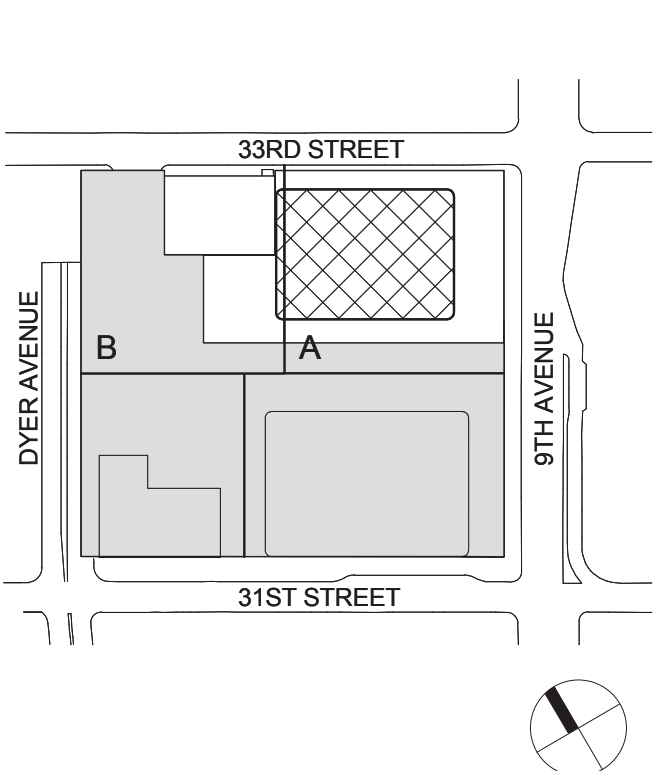
Facade Maintenance Consultant

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650 Woodlawn Road West, Guelph
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Key Plan:



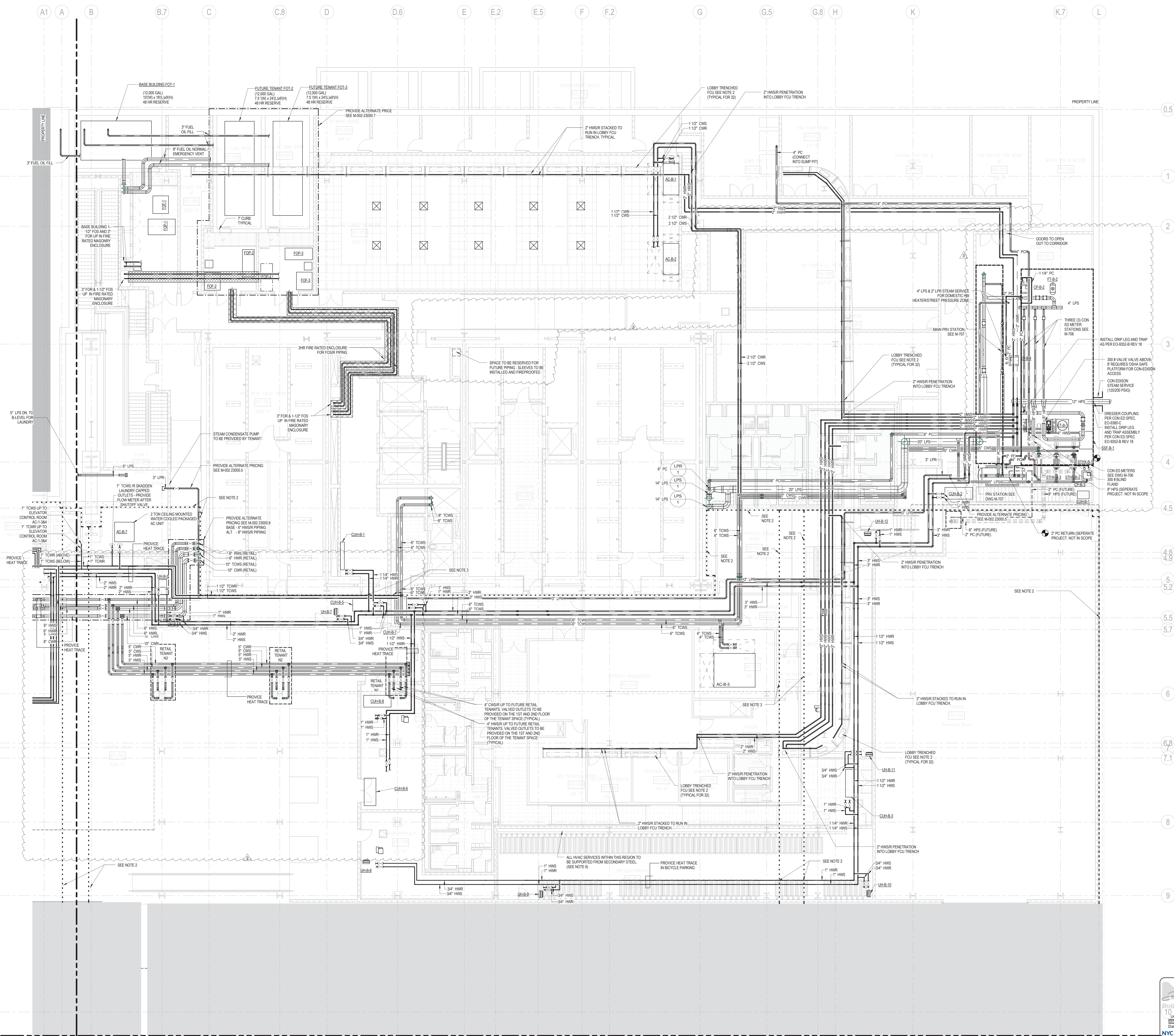
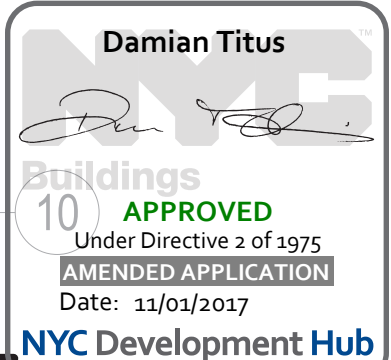
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1	22 APR 2016	ISSUED FOR P&A
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**MECHANICAL
PIPING CELLAR B
FLOOR PLAN -
PART A**

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-100BP-A.00
B-SCAN Sheet No.:
M-190.01
Sheet No.: M-100BP-A.00
Page No.: 16 OF 22





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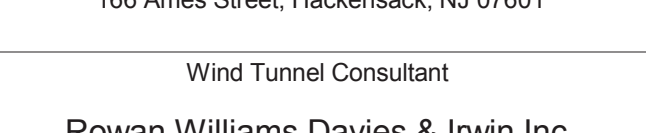
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Ontario, Canada N1K 1B8

Key Plan:



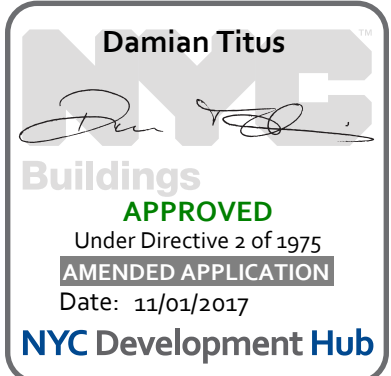
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MECHANICAL
PIPING CELLAR B
FLOOR PLAN -
PART B

Project No.: 14830 A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No.: M-100BP-B.00

B-SCAN Sheet No.:
M-191.01
Sheet No.:
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R6

R6

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PAGE 4.9

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R6.5

R6

6.8

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R6

R6

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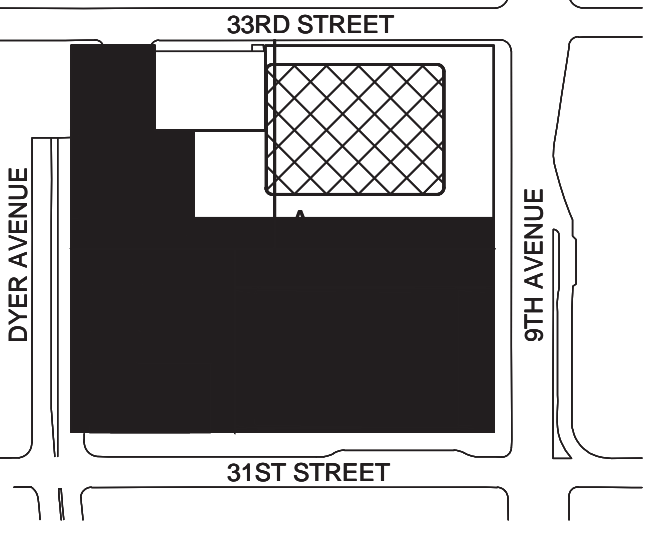
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Rowan Williams Davies & Irwin Inc.
650 Woodtown Road West, Guelph
Ontario, Canada N1K 1S8

Key Plan:



Seal & Signature:

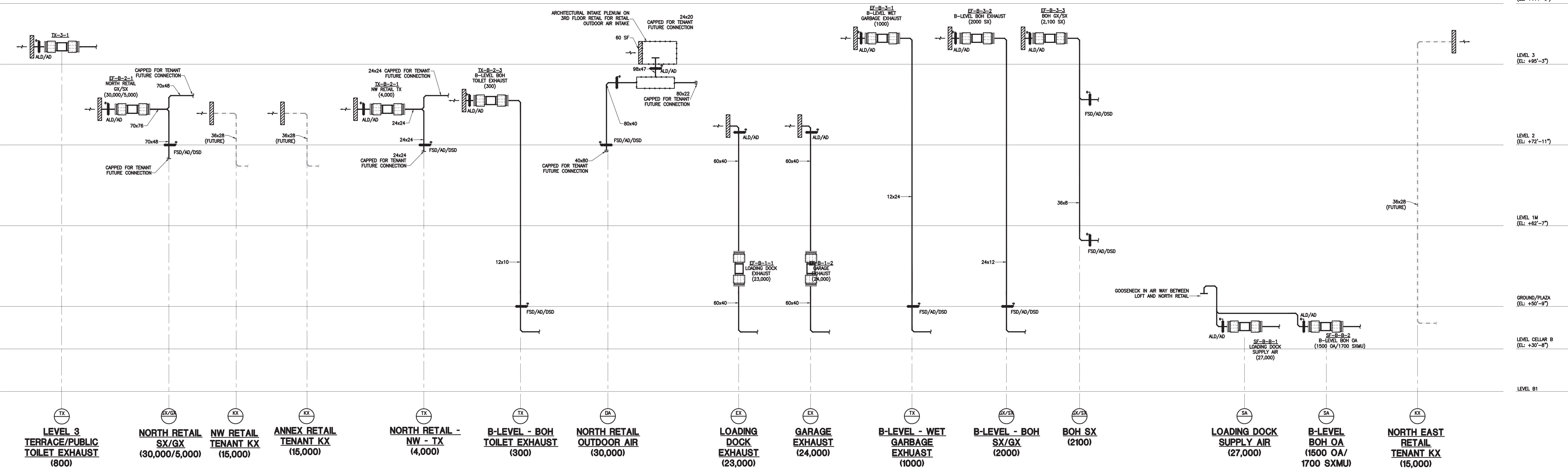


23 AUG 2017 ISSUED FOR PCB APPROVAL
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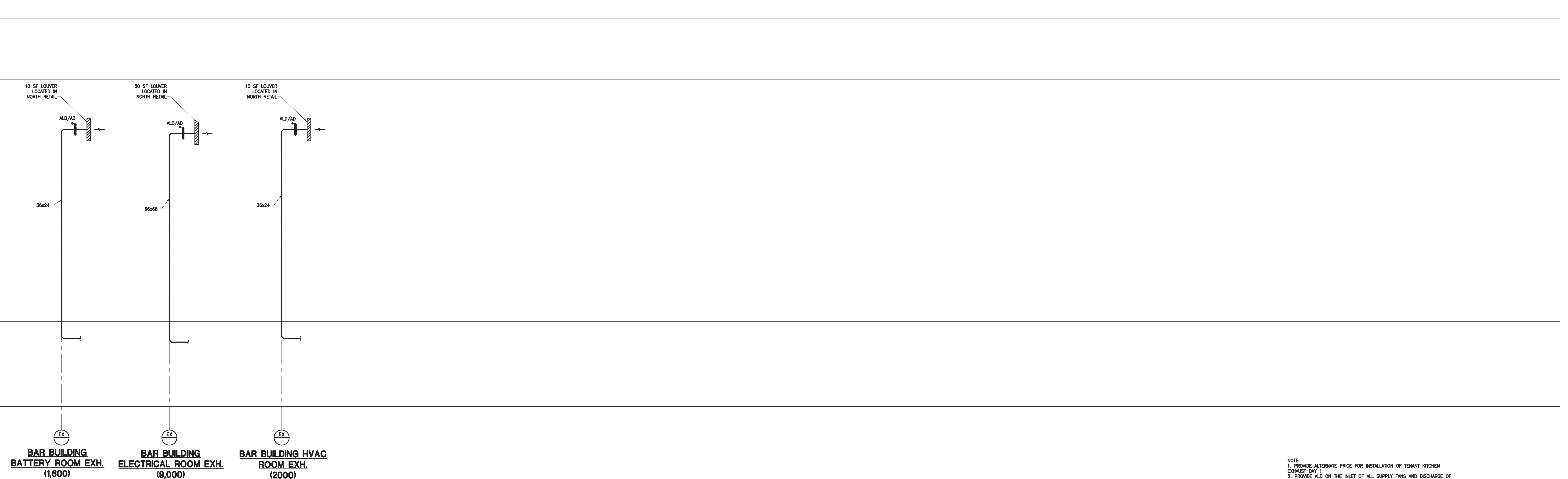
**MECHANICAL
RETAIL HOT
WATER AND
CONDENSER
WATER S-L
DIAGRAM**

Project No.: 1400A.000
Date: 23 AUG 2017
Scale: NTS
File No.:
B-SCAN Sheet No.:
M-408.00
Sheet No.: M-408.00
Page No.: 18 OF 22

NORTH RETAIL



BAR BUILDING



NOTES:
1. PROVIDE ALTERNATE PRICE FOR INSTALLATION OF TENANT KITCHEN EXHAUST DRY 1.
2. PROVIDE AID ON THE INLET OF ALL SUPPLY FANS AND DISCHARGE OF ALL EXHAUST FANS.
3. PROVIDE 20' OF 1 IN AL AT THE INLET AND DISCHARGE OF ALL FANS

Damian Titus
Buildings
APPROVED
Under Directive 1 of 1975
DATE: 11/04/2017
NYC Development Hub



MANHATTAN WEST:
NORTH TOWER
401 Ninth Avenue, New York, NY 10001

Client

Brookfield

Brookfield Place
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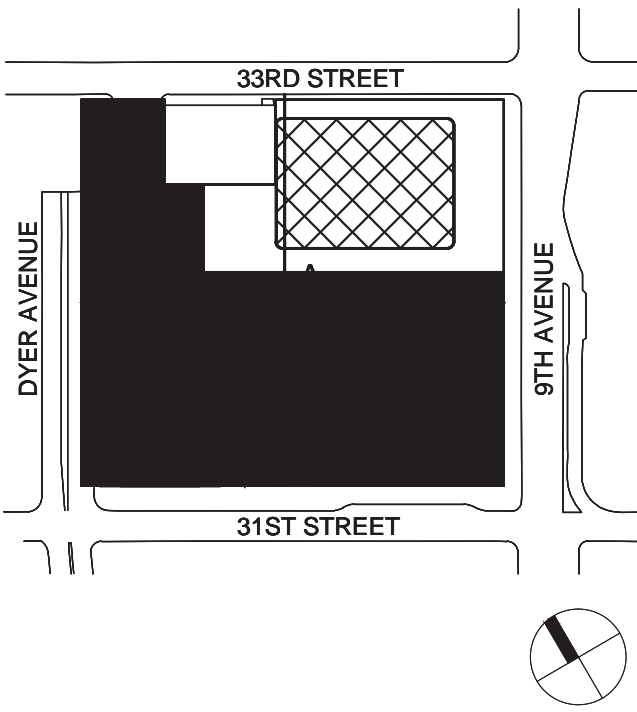
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Key Plan:



Seal & Signature:



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No. Date Description
Sheet Name:

**MECHANICAL
RETAIL AIR AND
PIPING RISER
DIAGRAM**

Project No.:
1400A.000

Date:
23 AUG 2017

Scale:
NTS

File No.:

6-SCAN Sheet No.:

M-409.00

Sheet No.:
M-409.00

Page No.:
19 OF 22

RETAIL

NE TOWER

LEVEL 5

LEVEL 4

LEVEL 3

LEVEL 2 (MECH)

GROUND

LEVEL B

LEVEL B1

RETAIL HWS/HWR EQUIPMENT IN NE TOWER
STHX-4-3
STHX-4-4
HWP-4-3
HWP-4-4

6" CWS/R FROM LOFT BUILDING TO SERVE SOUTH WEST RETAIL

8" HWS/R

10" CWS/R

8" HWS/R

8" CWS/R

10" CWS/R

CONDENSER WATER FROM
LOFT TO ICE RINK CHILLER

CONDENSER WATER TO NORTH
RETAIL LOADS AND HOT WATER TO
NORTH AND SOUTH RETAIL LOADS

CONDENSER WATER FROM
LOFT TO SOUTH RETAIL LOADS



KEY NOTES



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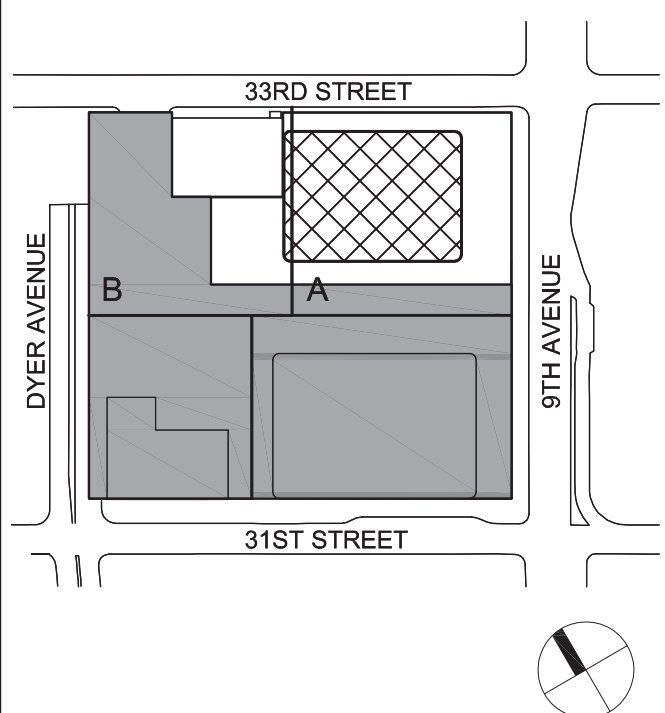
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Key Plan:



Seal & Signature:



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3	23 AUG 2017	ISSUED FOR DOB APPROVAL
2	22 APR 2016	ISSUED FOR PAA
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT
No.	Date	Description
Sheet Name:		

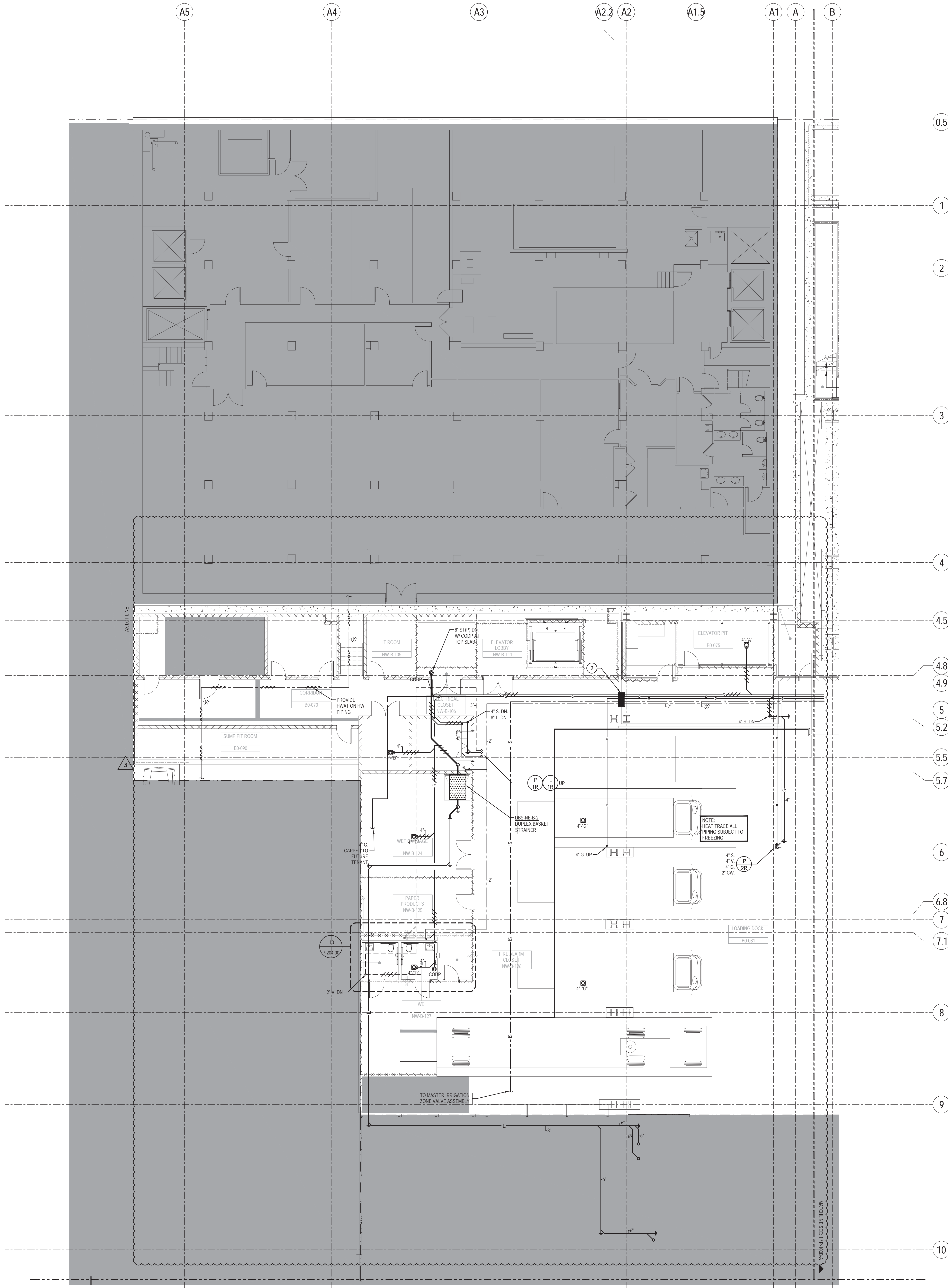


PLUMBING
DRAWING INDEX

Project No.: 14830.A.000	B-SCAN Sheet No.: P-001.02
Date: 20 JUN 2014	Sheet No.: P-001
Scale: NTS	Page No.:
File No.: P-001	

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DOB Sheet Number	Sheet Number	Sheet Name	20 JUN 2014 ISSUED FOR BUILDING PERMIT	22 APR 2016 ISSUED FOR NB AMENDMENT	23 AUG 2017 ISSUED FOR DOB APPROVAL
000 - Cover Sheet, General Notes, Legends					
P-001.02	P-001	PLUMBING DRAWING INDEX	•	•	•
P-002.01	P-002	PLUMBING ABBREVIATIONS AND SYMBOLS LIST	•	•	
100 - Floor Plans					
P-093.01	P-098B1P	PLUMBING CELLAR B1 PIT PLAN	•	•	
P-094.01	P-099B1-A	PLUMBING CELLAR B1 FLOOR PLAN - PART A	•	•	
P-095.01	P-099B1-B	PLUMBING CELLAR B1 FLOOR PLAN - PART B	•	•	
P-096.00	P-099B1-C	PLUMBING CELLAR B1 FLOOR PLAN - PART C	•	•	
P-097.01	P-100B-A	PLUMBING CELLAR B FLOOR PLAN - PART A	•	•	
P-098.02	P-100B-B	PLUMBING CELLAR B FLOOR PLAN - PART B	•	•	•
P-099.00	P-100B-C	PLUMBING CELLAR B FLOOR PLAN - PART C	•	•	
P-100.02	P-101-A	PLUMBING GROUND FLOOR PLAN - PART A	•	•	•
P-101.02	P-101-B	PLUMBING GROUND FLOOR PLAN - PART B	•	•	•
P-102.02	P-102-A	PLUMBING LEVEL 2 FLOOR PLAN - RETAIL - PART A	•	•	•
P-102.01	P-102-B	PLUMBING LEVEL 2 FLOOR PLAN - RETAIL - PART B	•	•	•
P-103.02	P-103-A	PLUMBING LEVEL 3 FLOOR PLAN - STAIR TRANSFER - PART A	•	•	•
P-103.01	P-103-B	PLUMBING LEVEL 3 FLOOR PLAN - STAIR TRANSFER - PART B	•	•	•
P-104.02	P-104-A	PLUMBING LEVEL 4 FLOOR PLAN - MECHANICAL - PART A	•	•	•
P-104.01	P-104-B	PLUMBING LEVEL 4 FLOOR PLAN - MECHANICAL - PART B	•	•	•
P-105.02	P-105-A	PLUMBING LEVEL 5 FLOOR PLAN - MECHANICAL MEZZANINE - PART A	•	•	•
P-105.01	P-105-B	PLUMBING LEVEL 5 FLOOR PLAN - MECHANICAL MEZZANINE - PART B	•	•	•
P-106.02	P-106-A	PLUMBING LEVEL 6-16 FLOOR PLAN - TYPICAL LOW-RISE - PART A	•	•	•
P-106.00	P-106-B	PLUMBING LEVEL 6-16 FLOOR PLAN - TYPICAL LOW-RISE - PART B	•	•	
P-117.01	P-117	PLUMBING LEVEL 17 FLOOR PLAN - LOW-RISE	•	•	
P-118.01	P-118	PLUMBING LEVEL 18 FLOOR PLAN - LOW-RISE OVERRUN	•	•	
P-119.01	P-119	PLUMBING LEVEL 19-20 FLOOR PLAN - LOW-RISE EMR	•	•	
P-121.01	P-121	PLUMBING LEVEL 21-27 FLOOR PLAN - TYPICAL LOW-RISE	•	•	
P-128.01	P-128	PLUMBING LEVEL 28 FLOOR PLAN - LOW-RISE & MID-RISE	•	•	
P-129.01	P-129	PLUMBING LEVEL 29 FLOOR PLAN - MID-RISE OVERRUN	•	•	
P-130.01	P-130	PLUMBING LEVEL 30 FLOOR PLAN - MID-RISE EMR	•	•	
P-131.00	P-131	PLUMBING LEVEL 31 FLOOR PLAN - MID-RISE PUMP ROOM	•	•	
P-132.01	P-132	PLUMBING LEVEL 32 FLOOR PLAN - MID-RISE WATER TANK	•	•	
P-133.01	P-133	PLUMBING LEVEL 33-37 FLOOR PLAN - TYPICAL MID-RISE	•	•	
P-138.01	P-138	PLUMBING LEVEL 38-39 FLOOR PLAN - TYPICAL MID-RISE	•	•	
P-140.01	P-140	PLUMBING LEVEL 40-41 FLOOR PLAN - MID-RISE OVERRUN	•	•	
P-142.01	P-142	PLUMBING LEVEL 42 FLOOR PLAN - MID-RISE EMR	•	•	
P-143.01	P-143	PLUMBING LEVEL 43-47 FLOOR PLAN - TYPICAL MID-RISE	•	•	
P-147.01	P-148	PLUMBING LEVEL 48 FLOOR PLAN - TYPICAL MID-RISE	•	•	
P-149.01	P-149	PLUMBING LEVEL 49 FLOOR PLAN - MID-RISE & HIGH-RISE	•	•	
P-150.01	P-150	PLUMBING LEVEL 50 FLOOR PLAN - HIGH-RISE OVERRUN	•	•	
P-151.00	P-151	PLUMBING LEVEL 51 FLOOR PLAN - HIGH-RISE OVERRUN	•	•	
P-152.01	P-152	PLUMBING LEVEL 52 FLOOR PLAN - HIGH-RISE EMR	•	•	
P-153.01	P-153	PLUMBING LEVEL 53 FLOOR PLAN - HIGH-RISE PUMP ROOM	•	•	
P-154.01	P-154	PLUMBING LEVEL 54 FLOOR PLAN - HIGH-RISE WATER TANK	•	•	
P-155.01	P-155	PLUMBING LEVEL 55 FLOOR PLAN - HIGH-RISE	•	•	
P-156.01	P-156	PLUMBING LEVEL 56 FLOOR PLAN - HIGH-RISE	•	•	
P-157.01	P-157	PLUMBING LEVEL 57-58 FLOOR PLAN - TYPICAL HIGH-RISE	•	•	
P-159.01	P-159	PLUMBING LEVEL 59 FLOOR PLAN - HIGH-RISE	•	•	
P-160.01	P-160	PLUMBING LEVEL 60-61 FLOOR PLAN - HIGH-RISE OVERRUN	•	•	
P-162.01	P-162	PLUMBING LEVEL 62 FLOOR PLAN - HIGH-RISE EMR	•	•	
P-163.01	P-163	PLUMBING LEVEL 63 FLOOR PLAN - HIGH-RISE	•	•	
P-164.01	P-164	PLUMBING LEVEL 64-66 FLOOR PLAN - TYPICAL HIGH-RISE	•	•	
P-167.01	P-167	PLUMBING LEVEL 67 FLOOR PLAN - TYPICAL HIGH-RISE	•	•	
P-168.01	P-168	PLUMBING LEVEL 68 FLOOR PLAN - MECHANICAL	•	•	
P-169.01	P-169	PLUMBING LEVEL 69 FLOOR PLAN - MECHANICAL MEZZANINE	•	•	
P-170.01	P-170	PLUMBING ROOF PLAN - MECHANICAL PENTHOUSE	•	•	
P-171.01	P-171	PLUMBING ROOF PLAN - MECHANICAL PENTHOUSE ROOF	•	•	
P-172.00	P-172	PLUMBING ROOF PLAN	•	•	
200 - Part Plans					
P-200.00	P-200	PLUMBING TOILET DETAILS - SHEET 1		•	
P-201.00	P-201	PLUMBING TOILET DETAILS - SHEET 2		•	
P-202.00	P-202	PLUMBING TOILET DETAILS - SHEET 3		•	
P-203.00	P-203	PLUMBING TANK ROOM DETAILS		•	
P-204.00	P-204	PLUMBING TOILET DETAILS - SHEET 4			•
P-205.00	P-205	PLUMBING CELLAR B1 PIT PUMP ROOM DETAIL		•	
P-206.00	P-206	PLUMBING CELLAR B1 PUMP ROOM DETAIL		•	
P-207.00	P-207	PLUMBING CELLAR B PUMP ROOM DETAIL		•	
400 - Risers & One Line Diagrams					
P-400.02	P-400	PLUMBING DOMESTIC WATER RISER DIAGRAM	•	•	•
P-401.02	P-401	PLUMBING SANITARY RISER DIAGRAM - SHEET 1	•	•	•
P-402.02	P-402	PLUMBING SANITARY RISER DIAGRAM - SHEET 2	•	•	•
P-403.02	P-403	PLUMBING STORM RISER DIAGRAM	•	•	•
P-404.01	P-404	PLUMBING NATURAL GAS RISER DIAGRAM		•	•
P-405.00	P-405	PLUMBING SANITARY RISER DIAGRAM - SHEET 3			•
P-406.00	P-406	PLUMBING DOMESTIC WATER RISER PART PLAN			•
500 - Schedules					
P-500.02	P-500	PLUMBING SCHEDULE SHEET	•	•	•
600 - Details					
P-600.02	P-600	PLUMBING DETAILS - SHEET 1	•	•	•
P-601.02	P-601	PLUMBING DETAILS - SHEET 2	•	•	•
P-602.01	P-602	PLUMBING DETAILS - SHEET 3		•	•



KEY NOTES

- 1 EXPANSION JOINT WITH INTEGRAL DRAINS 10'-0" O.C. MAX. PROVIDE INDIRECT WASTE PIPING CONNECTING TO EACH WEEP DRAIN & EXTEND TO NEAREST FLOOR DRAIN OR TRAPPED STANDPIPE DRAIN.
- 2 EXPANSION JOINT- PROVIDE EXPANSION JOINTS ON ALL PIPING CROSSING EXPANSION JOINTS.



**MANHATTAN WEST:
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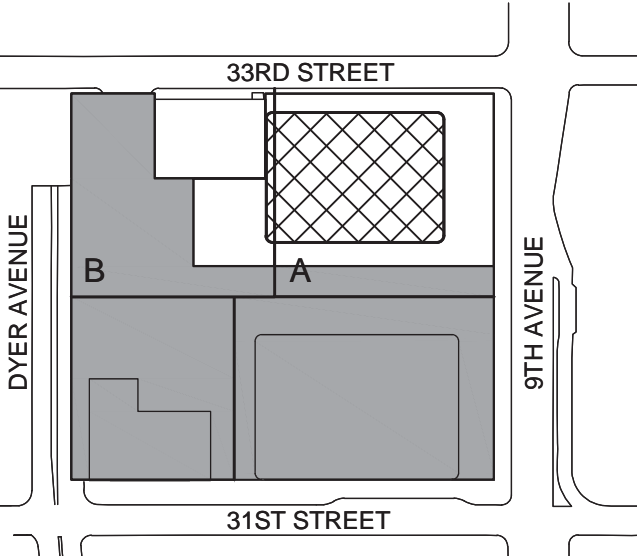
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Key Plan:



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**PLUMBING
CELLAR B
FLOOR PLAN -
PART B**

Project No.: 1400A.000

Date: 20 JUN 2014

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

File No: P-100B-B

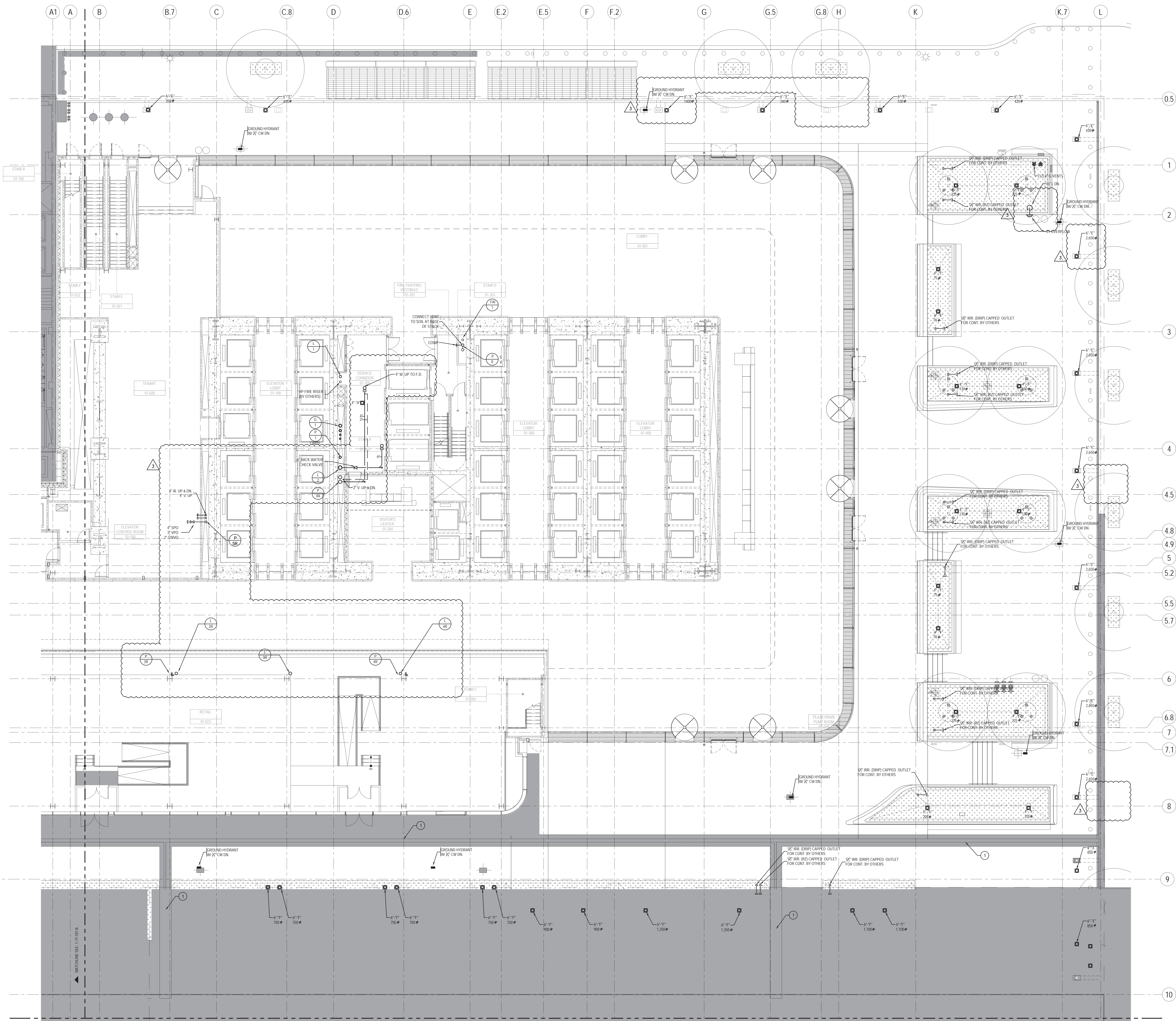
Page No.:

B-SCAN Sheet No.: P-098.02

Sheet No.: P-100B-B

Page No.:

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KEY NOTES

1. EXPANSION JOINT WITH INTEGRAL DRAINS TO 4\"/>

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Key Plan:

Seal & Signature:

3. 23 AUG 2017 ISSUED FOR DOB APPROVAL

2. 22 APR 2016 ISSUED FOR P&A

1. 22 JUN 2014 ISSUED FOR BUILDING PERMIT

No. Date Description

Sheet Name:

**PLUMBING
GROUND FLOOR
PLAN - PART A**

Project No.: 1400A.000

Date: 20 JUN 2014

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

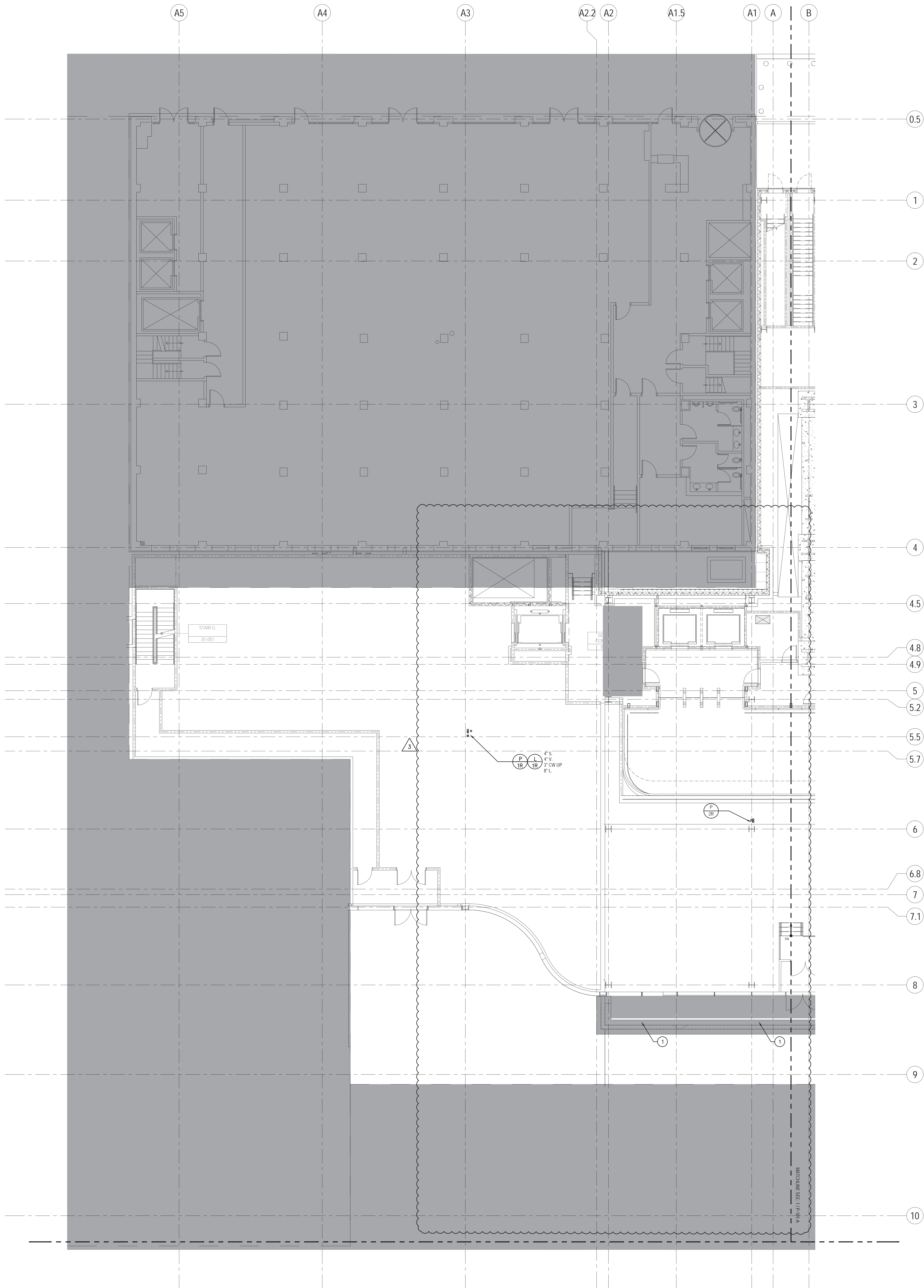
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B-SCAN Sheet No.: P-100.02

Sheet No.: P-101-A

Page No.:

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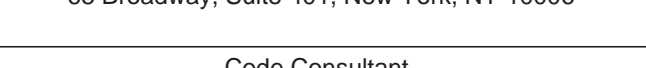
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Key Plan:



Seal & Signature:



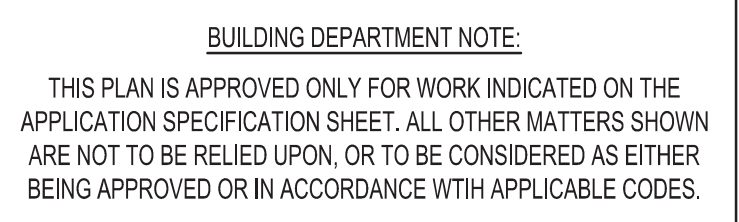
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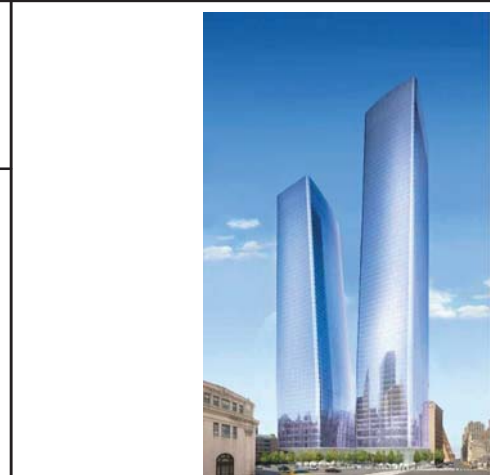


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Project No.: 1400A.000
Date: 20 JUN 2014
Scale: 1/8" = 1'-0"
File No: P-101-B
B-SCAN Sheet No.: P-101.02
Sheet No.: P-101-B
Page No.:



Project No.: 14830-A.000	B-SCAN Sheet No.: P-102.02
Date: 20 JUN 2014	Sheet No.: P-102-A
Scale: 1/8" = 1'-0"	
File No.: P-102-A	Page No.:



MANHATTAN WEST:
NORTH TOWER
375 Ninth Avenue, New York, NY 10001

Client

Brookfield

Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10281

Architecture/Structural Engineering

SOM

Skidmore, Owings & Merrill LLP
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Civil Engineering

Philip Habib & Associates
102 Madison Avenue #11, New York, NY 10016

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Jaros Baum & Bolles
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Vertical Transportation

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102 East Blithedale Ave. Suite 1, Mill Valley, California 94941

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Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

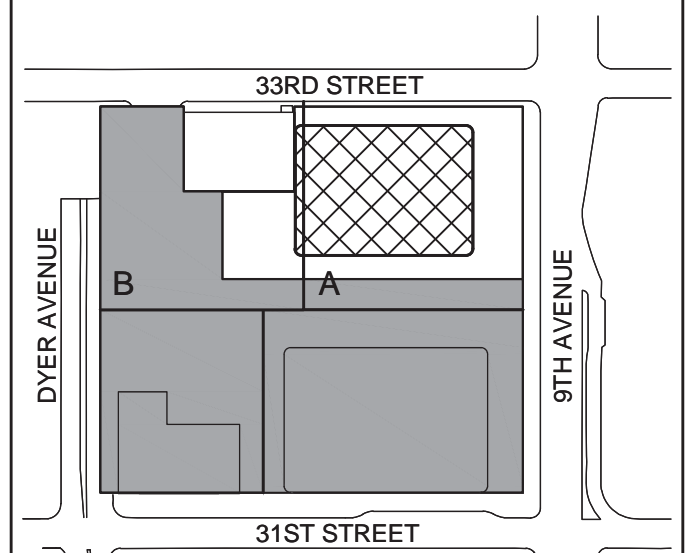
Facade Maintenance Consultant

Entek Engineering LLC
186 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1S8

Key Plan:



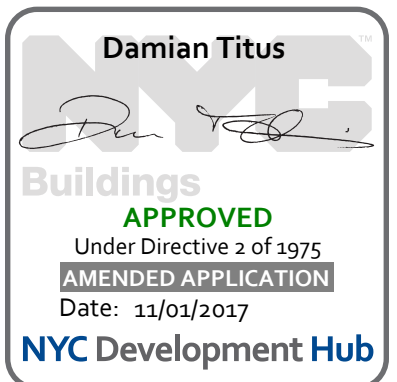
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KEY NOTES

SHEET NOTES

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- 3- ALL PIPE ELEVATIONS ARE TAKEN FROM TOP OF STEEL.



**PLUMBING
LEVEL 3
FLOOR PLAN -
STAIR TRANSFER -
PART A**

Project No.:

14001A-000

Date:

20 JUN 2014

Scale:

1/8" = 1'-0"

File No.:

P-103-A

B-SCAN Sheet No.:

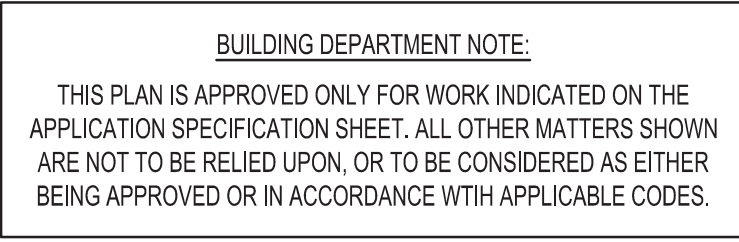
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Sheet No.:

P-103-A

Page No.:

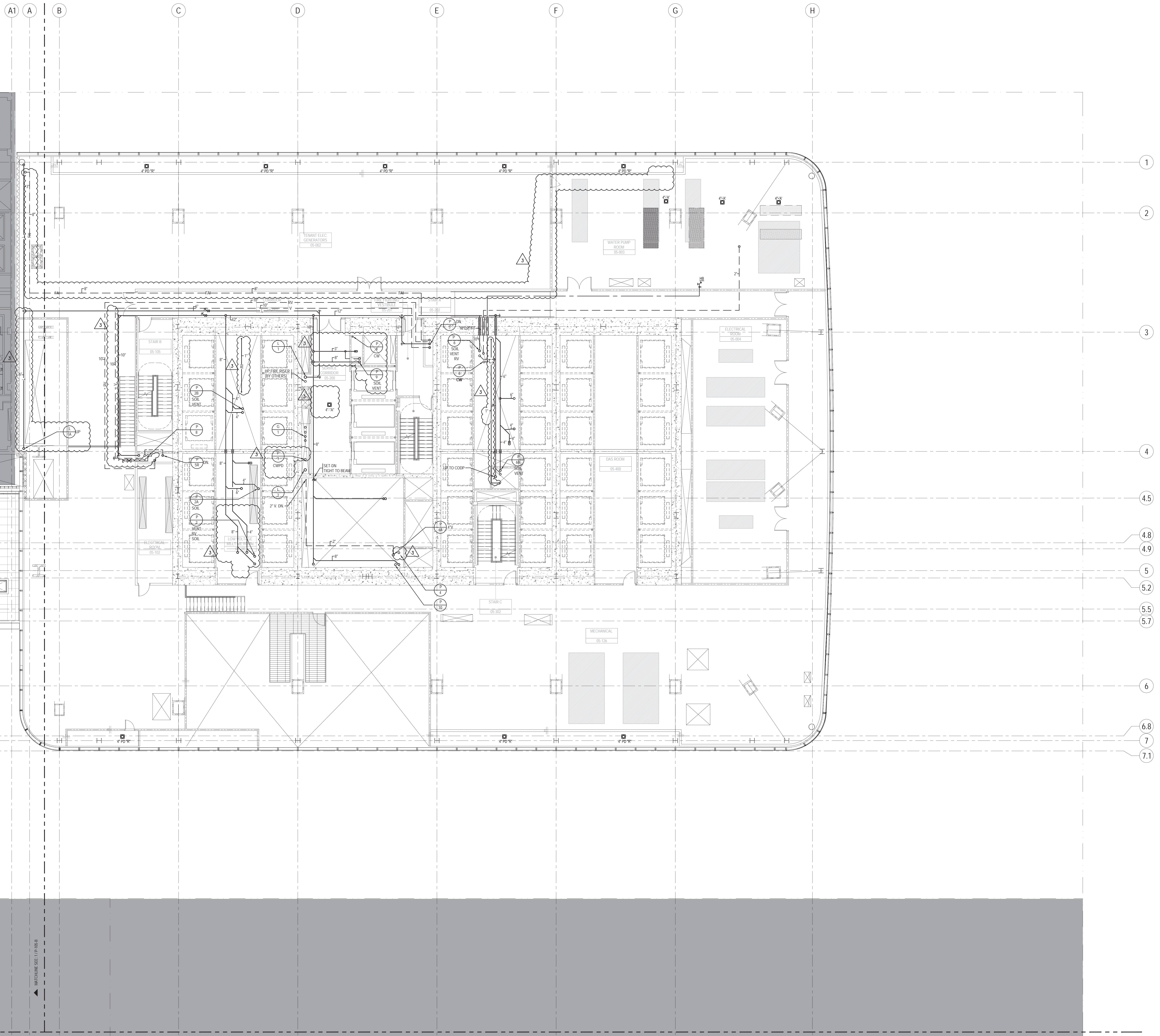
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Scale: 1/8" = 1'-0"	Sheet No.: P-104-A
File No.: P-104-A	Page No.:

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Project No.: 14630 A.000	B-SCAN Sheet No.: P-104.02
Date: 20 JUN 2014	
Scale: 1/8" = 1'-0"	
File No.: P-104-A	Sheet No.: P-104-A
	Page No.:



KEY NOTES

- 1 EXPANSION JOINT WITH INTEGRAL DRAINS 10'-0" O.C. MAX. PROVIDE INDIRECT WASTE PIPING CONNECTING TO EACH WEEP DRAIN & EXTEND TO NEAREST FLOOR DRAIN OR TRAPPED STANDPIPE DRAIN.
- 2 EXPANSION JOINT- PROVIDE EXPANSION JOINTS ON ALL PIPING CROSSING EXPANSION JOINTS.

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Facade Maintenance Consultant

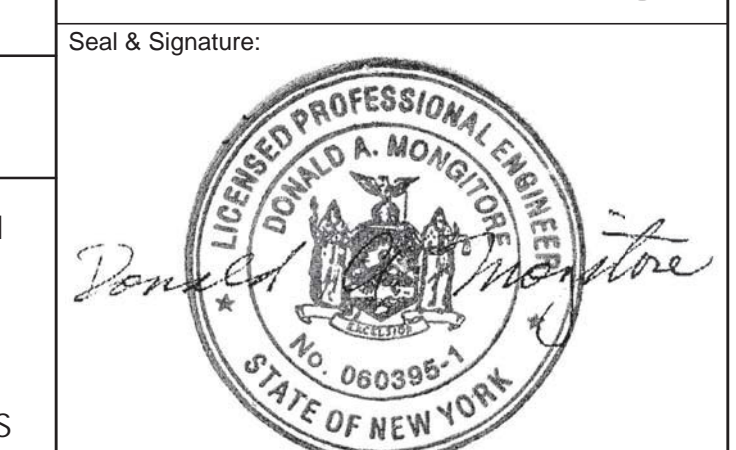
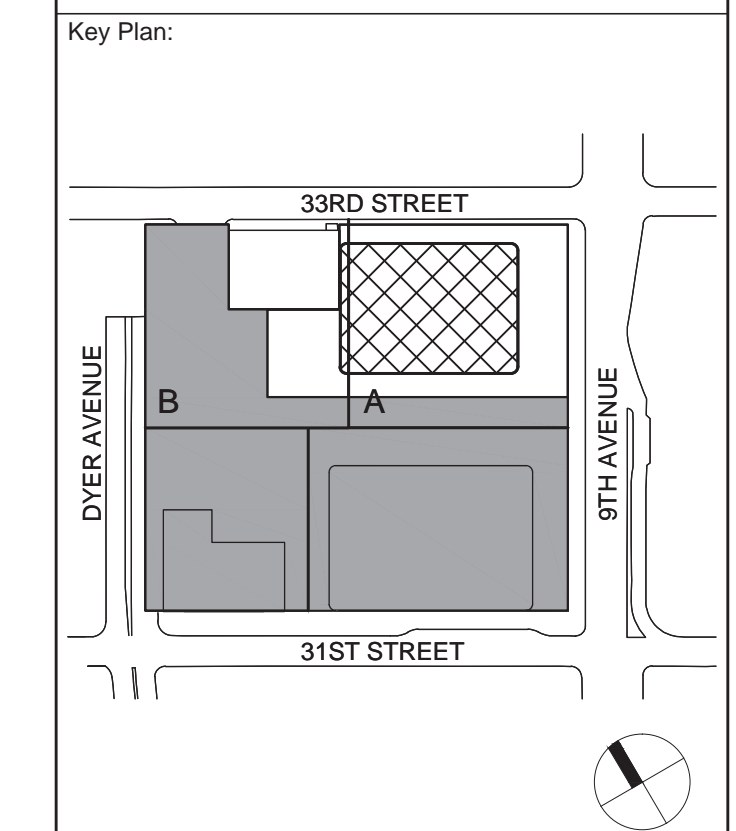
Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

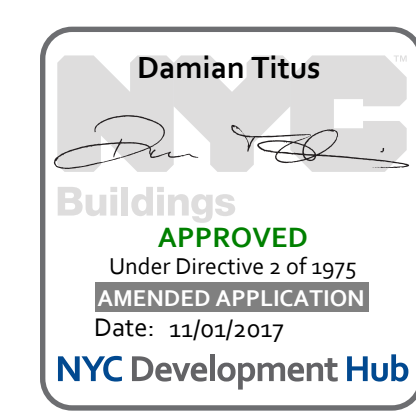
Rowan Williams Davies & Irwin Inc.
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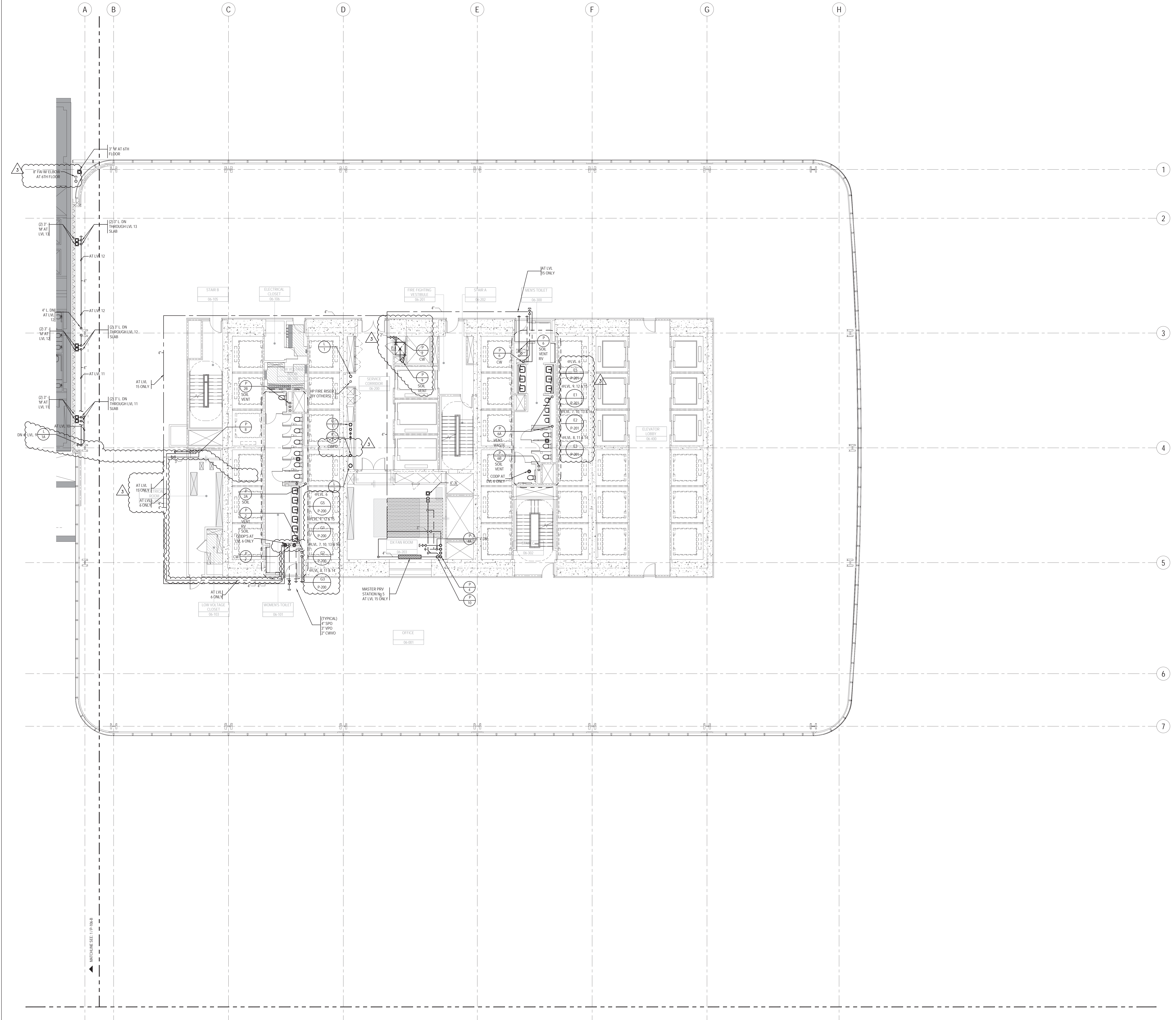
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2	22 APR 2016	ISSUED FOR PAA
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT
No.	Date	Description
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**PLUMBING
LEVEL 5
FLOOR PLAN -
MECHANICAL
MEZZANINE -
PART A**

Project No.: 1400A.000	B-SCAN Sheet No.: P-105.02
Date: 20 JUN 2014	Sheet No.: P-105-A
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File No: P-105-A	



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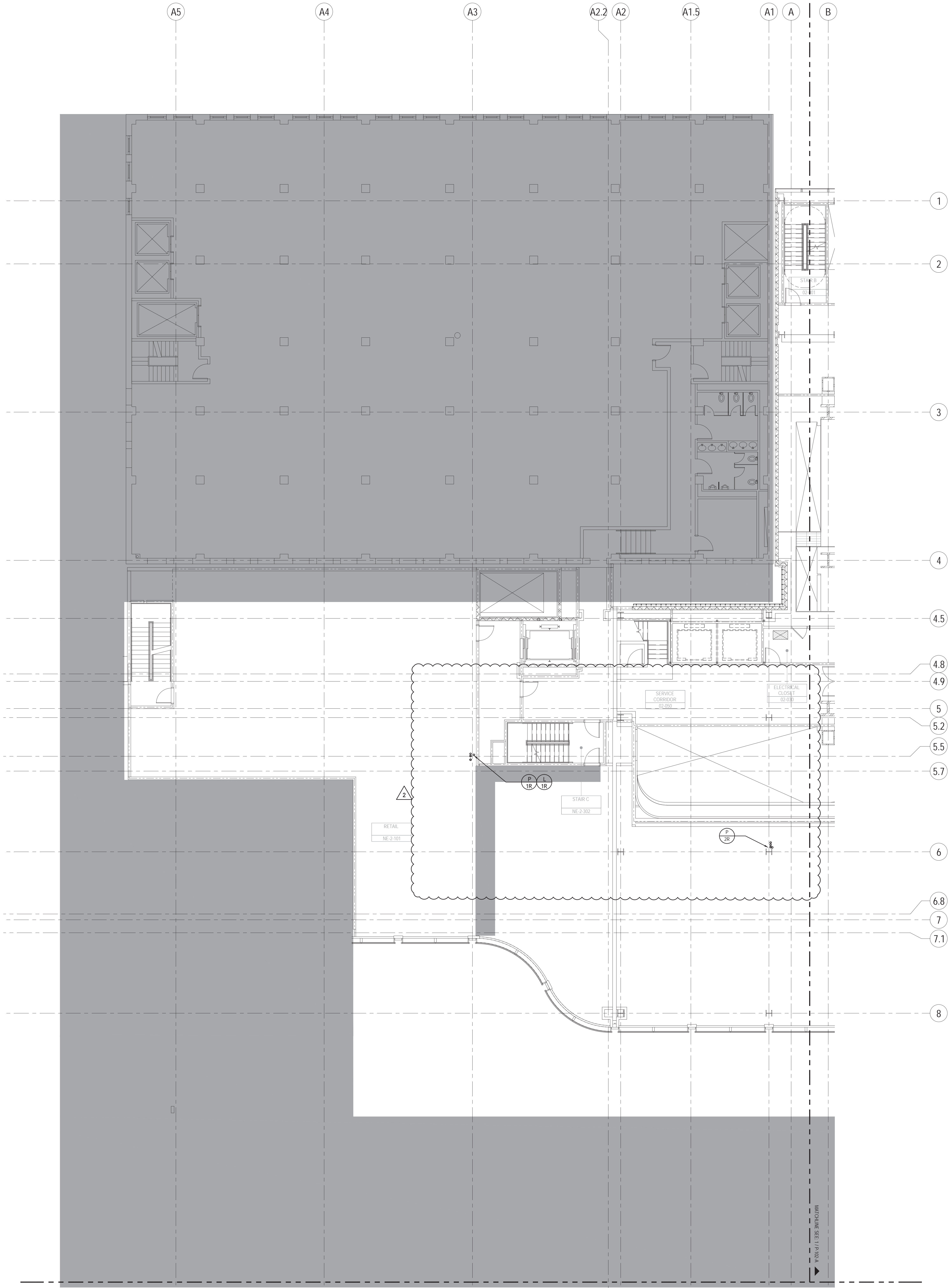
Key Plan:

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3	23 AUG 2017	ISSUED FOR DOB APPROVAL
2	22 APR 2016	ISSUED FOR PAA
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT
No.	Date	Description
Sheet Name:		

**PLUMBING
LEVEL 6-16
FLOOR PLAN -
TYPICAL
LOW-RISE - PART A**

Project No.: 1400A.000	B-SCAN Sheet No.: P-106.02
Date: 20 JUN 2014	Sheet No.: P-106-A
Scale: 1/8" = 1'-0"	Page No.:
File No.: P-106-A	



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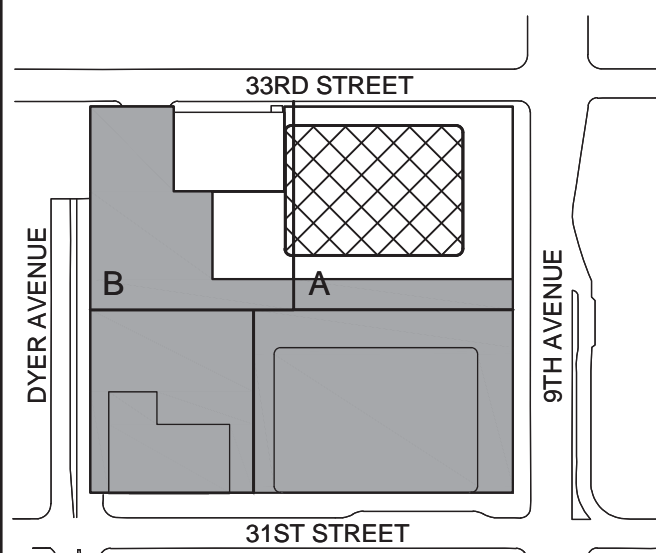
Vibration Consultant
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Key Plan:



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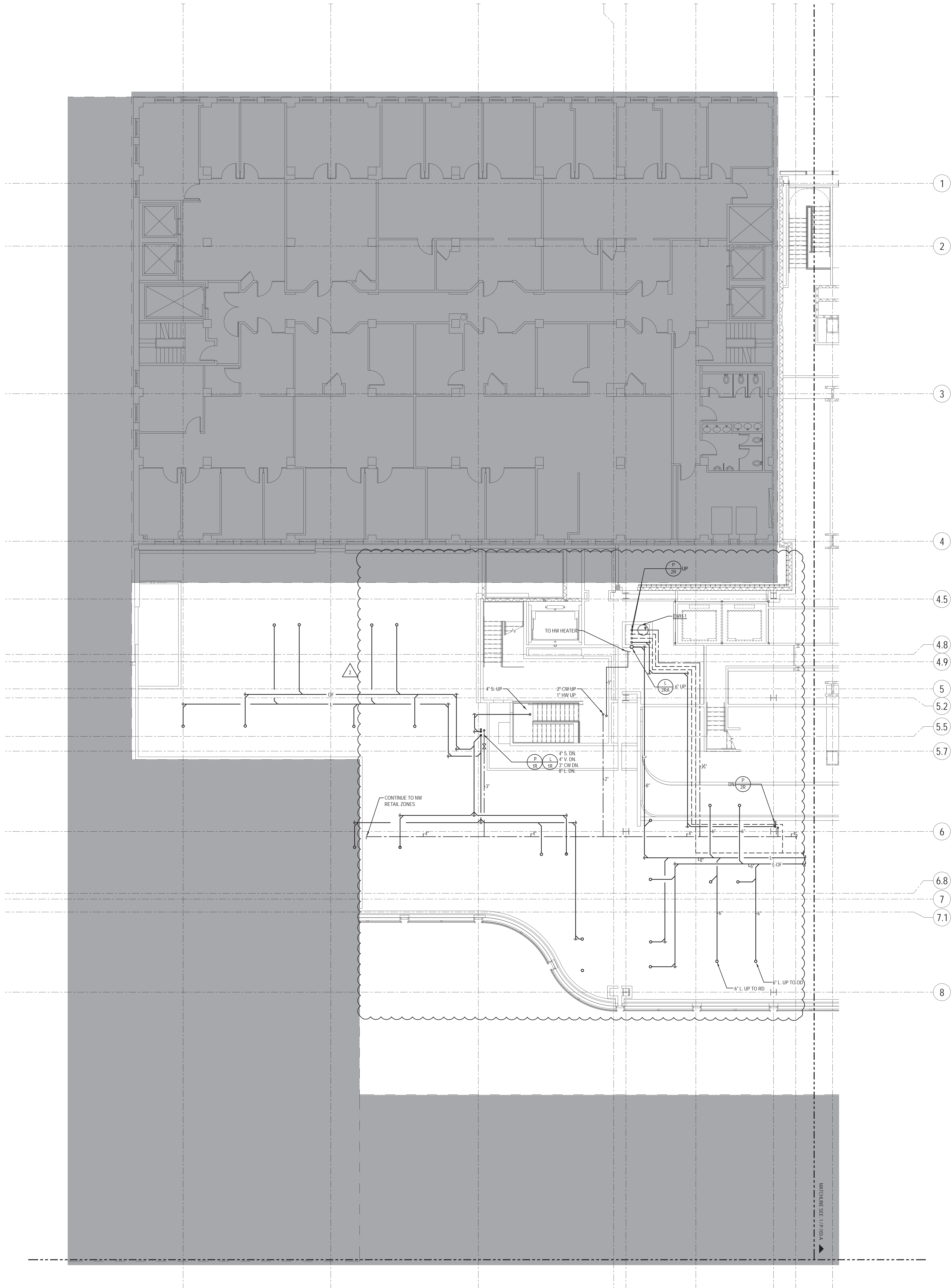


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1	22 APR 2016	ISSUED FOR P&A
2	23 AUG 2017	ISSUED FOR DOB APPROVAL

Sheet Name:

PLUMBING
LEVEL 2 FLOOR
PLAN - RETAIL -
PART B

Project No.: 1400A.000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No: P-102-B
B-SCAN Sheet No.: P-182.01
Sheet No.: P-102-B
Page No.:



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Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1S8

Key Plan:

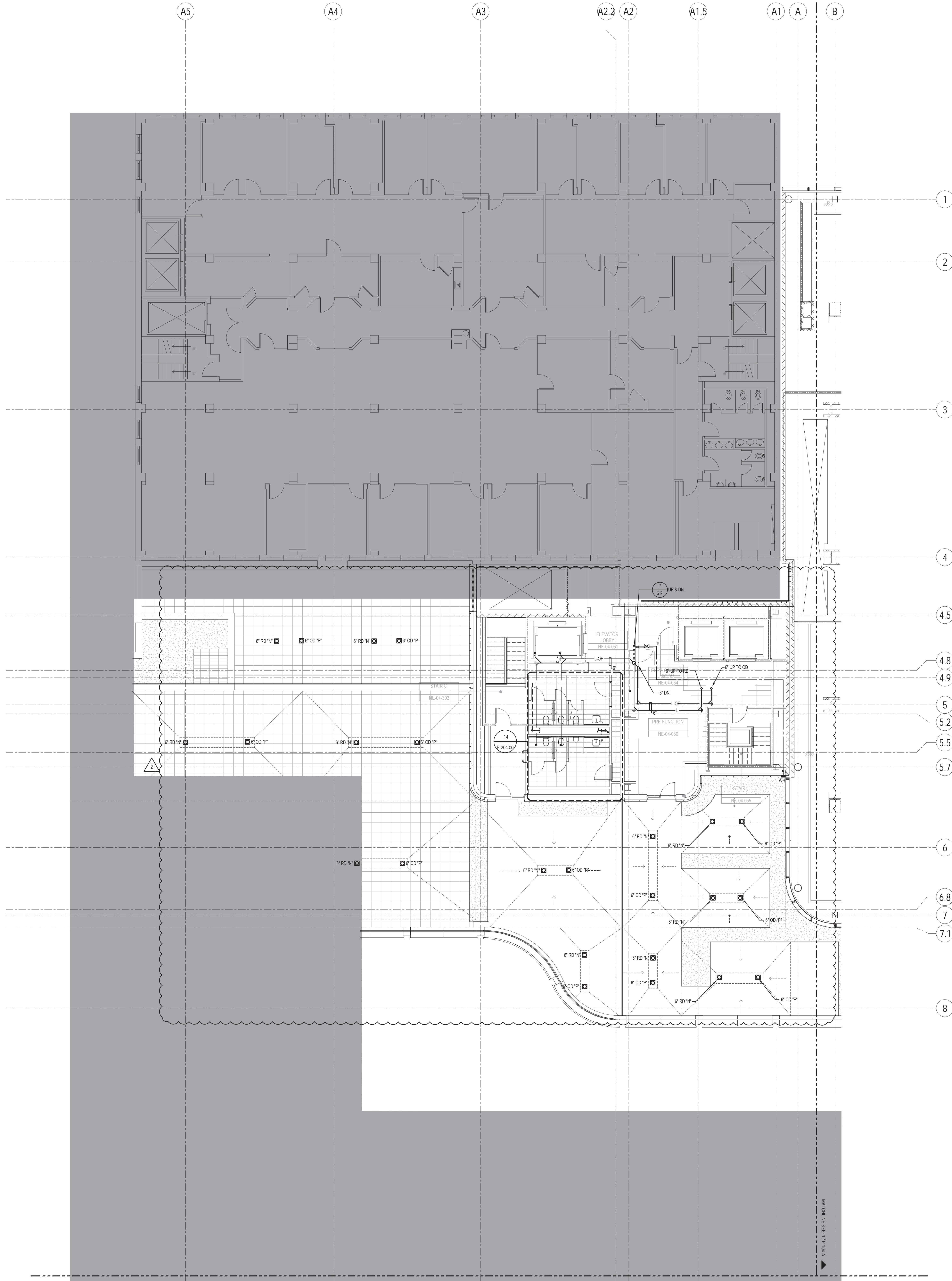
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**PLUMBING
LEVEL 3
FLOOR PLAN -
STAIR TRANSFER -
PART B**

Project No.: 1400A.000	B-SCAN Sheet No.: P-183.01
DWG: 22 APR 2016	Sheet No.: P-103-B
Scale: 1/8" = 1'-0"	Page No.: P-103-B
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Damian Titus
Buildings
APPROVED
Under Directive 1 of 1975
DATE OF APPLICATION
Date: 11/04/2017
NYC Development Hub



KEY NOTES

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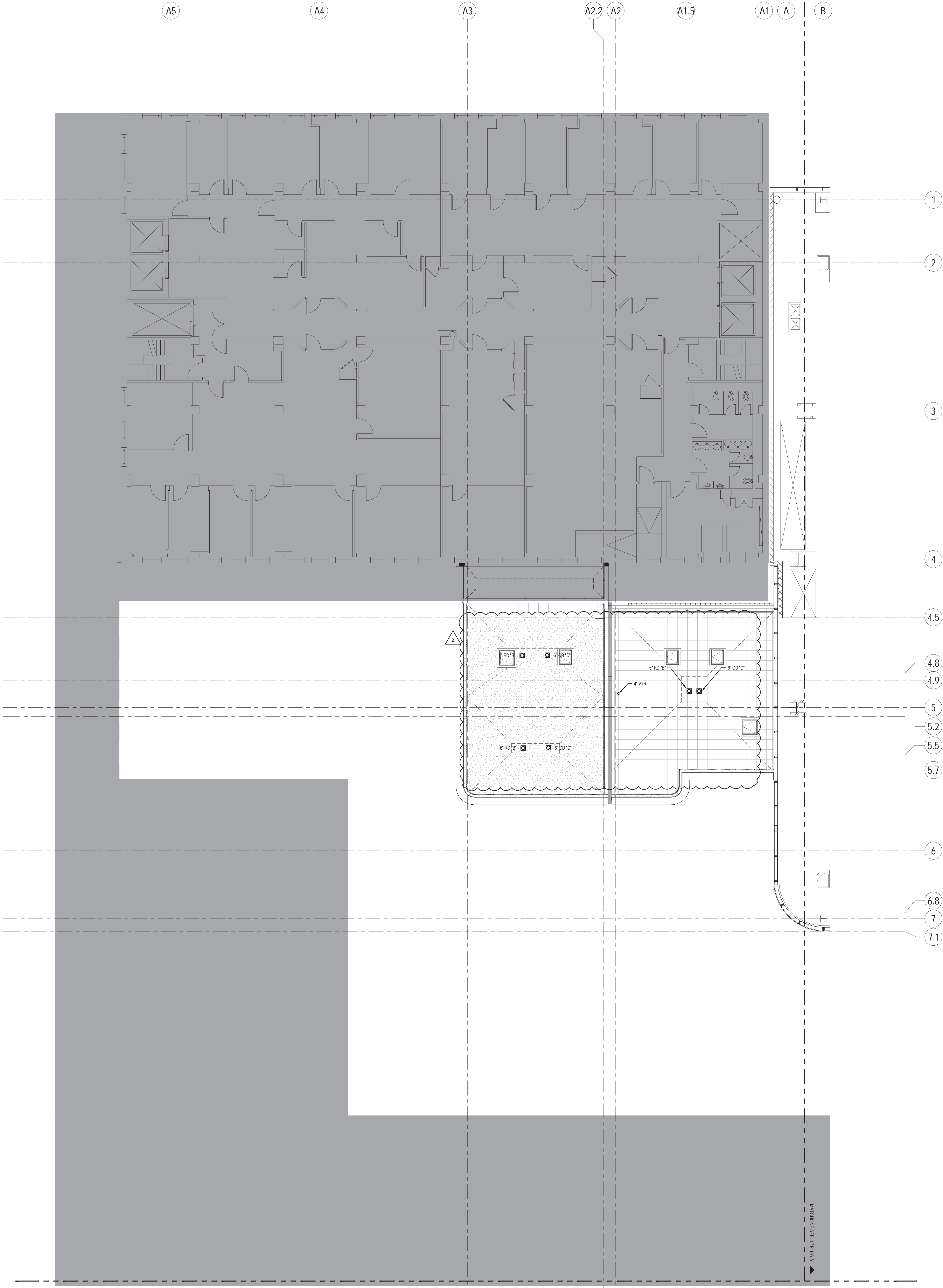
Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1S8

Key Plan:

Seal & Signature:

Project No.: 14801A-000
Date: 22 APR 2016
Scale: 1/8" = 1'-0"
File No: P-104-B

B-SCAN Sheet No.:
P-184.01
Sheet No.: P-104-B
Page No.:



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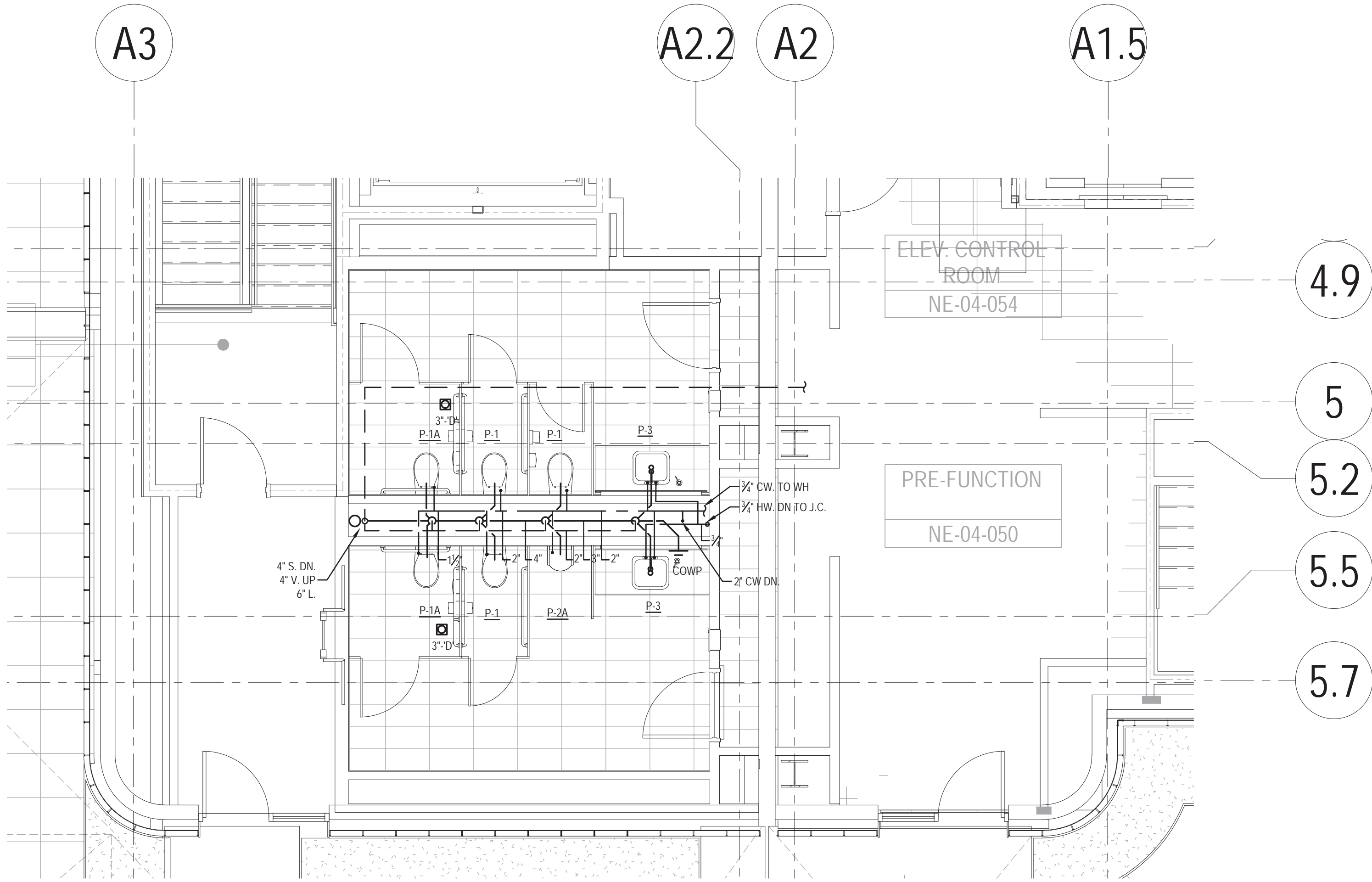
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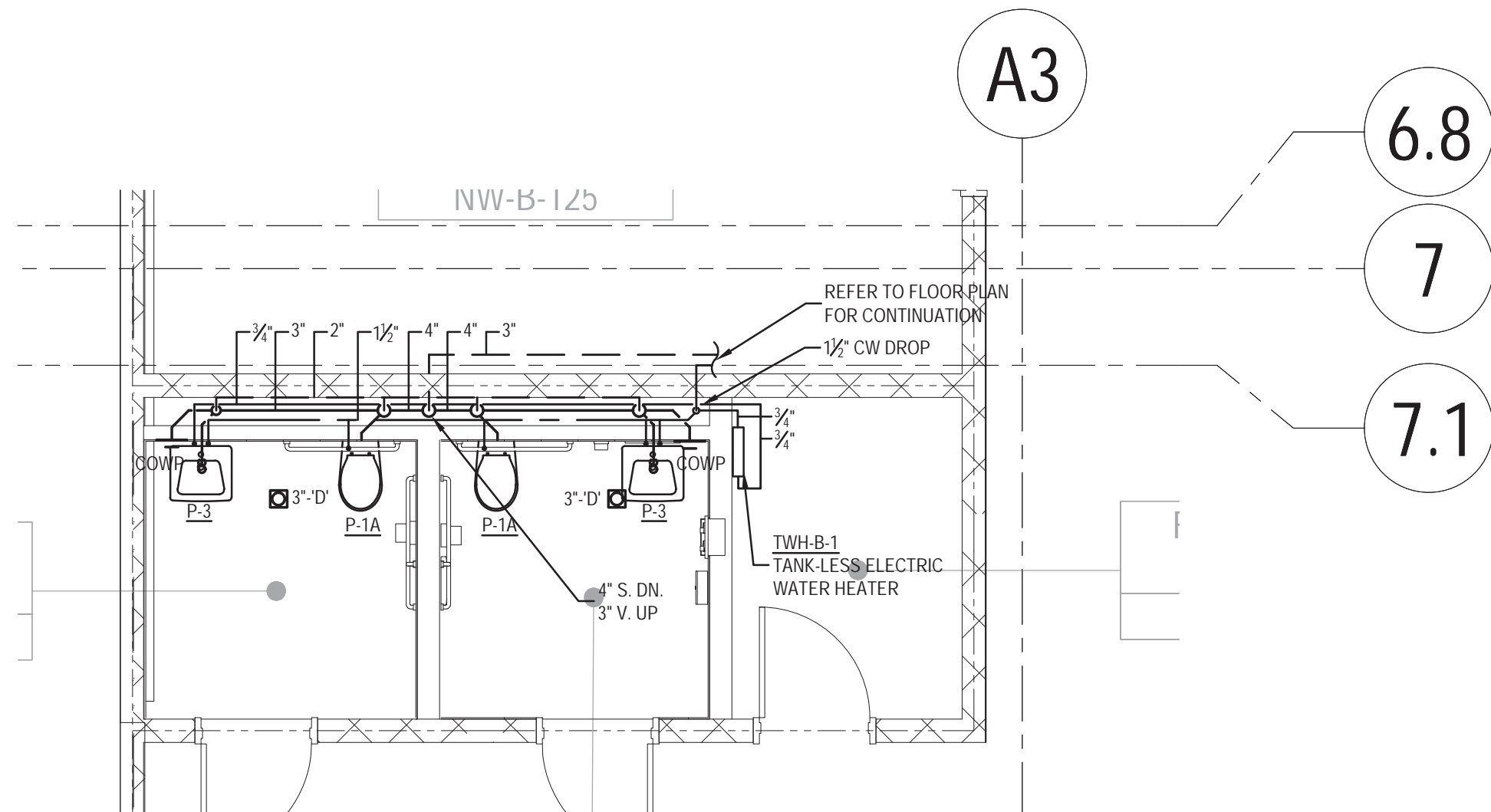
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**PLUMBING
LEVEL 5
FLOOR PLAN -
MECHANICAL
MEZZANINE -
PART B**

Project No.: 1480A.000	B-SCAN Sheet No.: P-185.01
Date: 22 APR 2016	Sheet No.: P-105-B
Scale: 1/8" = 1'-0"	Page No.: P-105-B
File No.: P-105-B	



14 PART PLAN DETAIL OF LEVEL 4
FLOOR - PARTIAL B MEN'S &
WOMEN'S TOILET
SCALE: 1/4" = 1'-0"

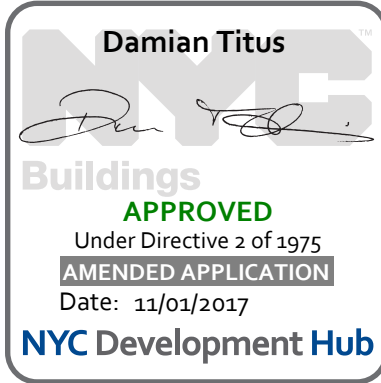


13 PART PLAN DETAIL OF CELLAR B
FLOOR - PARTIAL B MEN'S &
WOMEN'S TOILET
SCALE: 1/4" = 1'-0"

KEY NOTES

SHEET NOTES

- 1 - REFER TO NOTES & DESIGN CRITERIA ON DWG. P-204.00 FOR ADDITIONAL INFORMATION, REQUIREMENTS & CLARIFICATIONS.
- 2 - REFER TO RISER DIAGRAMS, PART PLANS & DETAILS FOR ADDITIONAL INFORMATION & REQUIREMENTS.
- 3 - ALL PIPE ELEVATIONS ARE TAKEN FROM TOP OF STEEL.
- 4 - COORDINATE FINAL MOUNTING HEIGHT & LOCATION OF SHOWER VALVE ASSEMBLIES WITH ARCHITECTURAL DRAWINGS AND DETAILS.



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14 Penn Plaza, 22nd W. 34th Street #610,
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Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Ventor & Santore
250 State Street #F1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

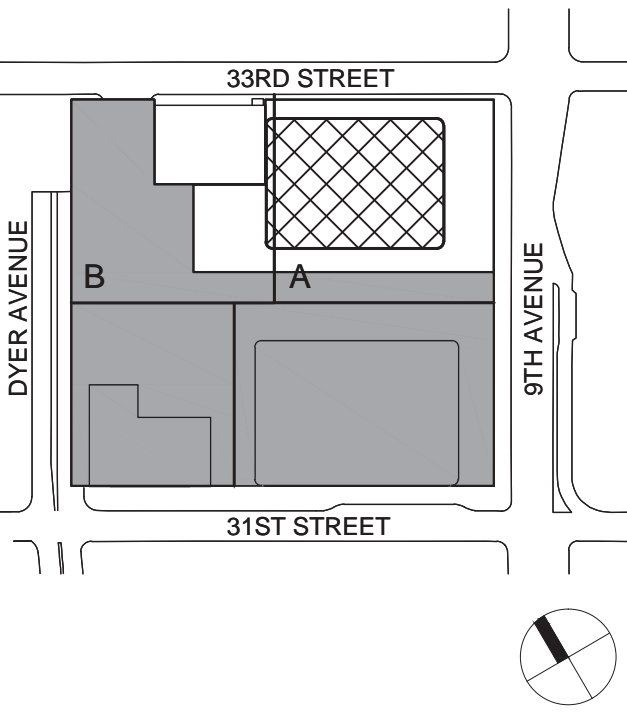
Facade Maintenance Consultant

Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1S8

Key Plan:



Seal & Signature:

PLUMBING TOILET
DETAILS -
SHEET 4

Project No.:

14801A.000

Date:

23 AUG 2017

Scale:

1/4" = 1'-0"

File No.:

P-204

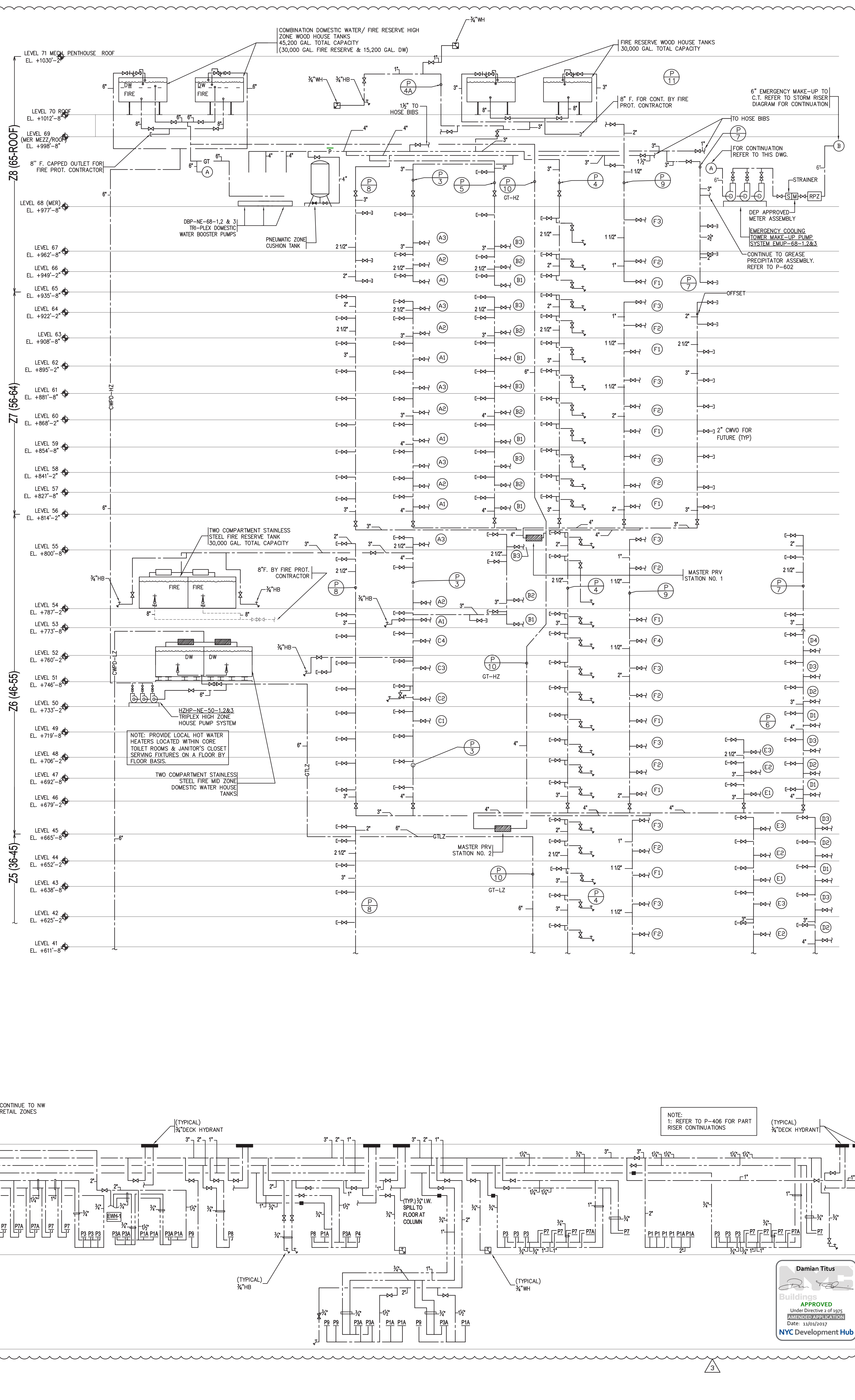
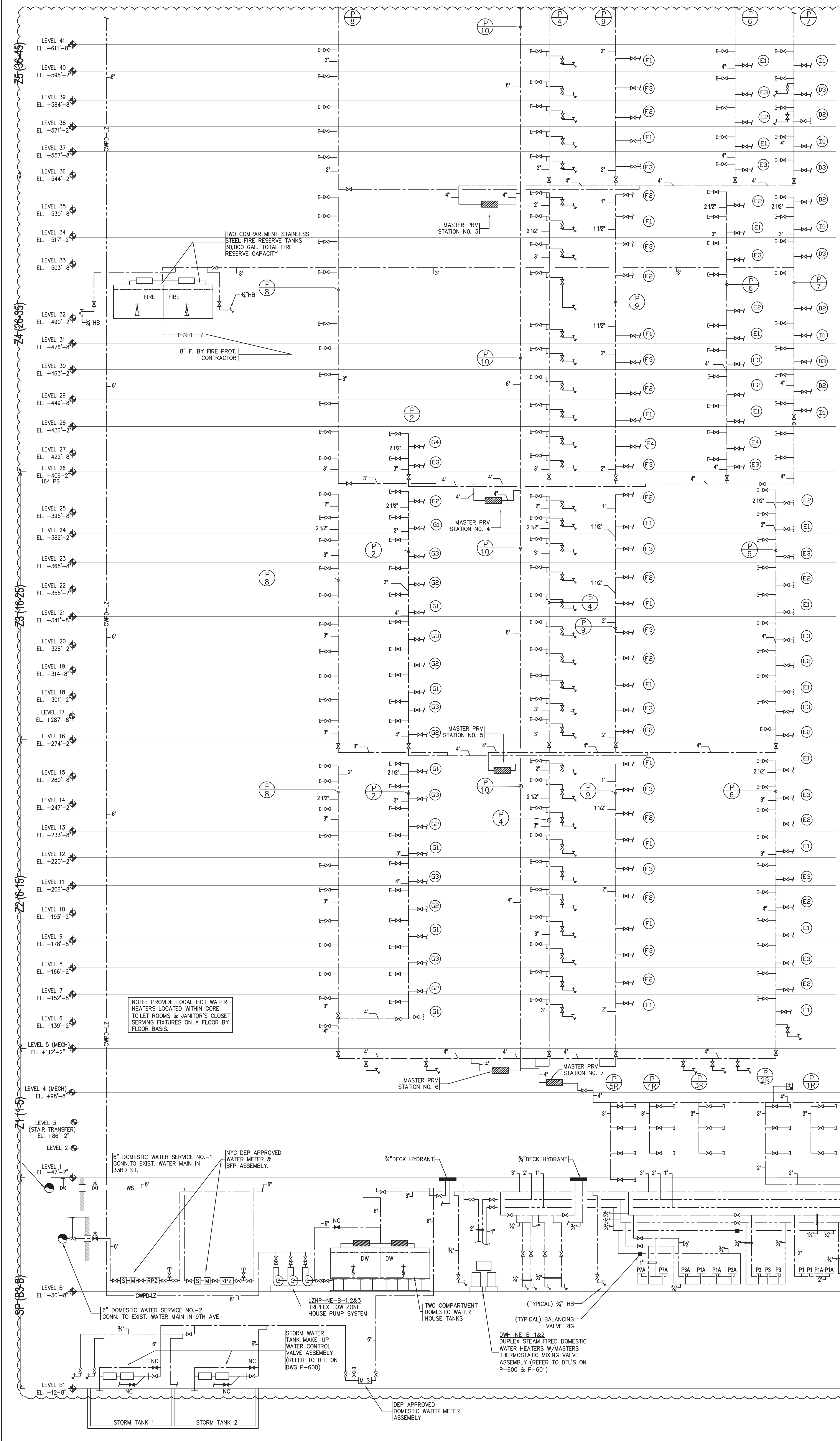
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P-204.00

Sheet No.:

P-204

Page No.:





**MANHATTAN WEST:
NORTH TOWER**
375 Ninth Avenue, New York, NY 10001

Client

Brookfield

250 Vesey Street, 15th Floor, New York, NY 10281

Architecture/Structural Engineering

SOM

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Civil Engineering

Philip Habib & Associates
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215 West 40th Street, 15th Floor, New York, NY 10018

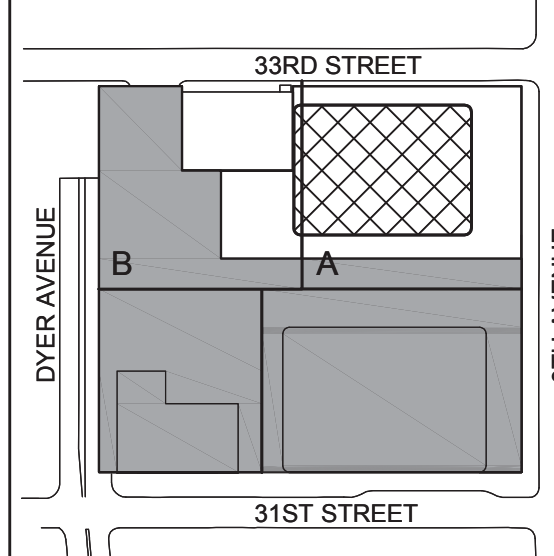
Facade Maintenance Consultant

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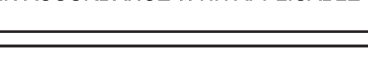
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Sheet Name:

**PLUMBING
DOMESTIC WATER
RISER
DIAGRAM**

Project No.: 14830.A.000
Date: 22 JUN 2014
Scale: NTS
File No: P-400

B-SCAN Sheet No.:
P-400.02
Sheet No.:
P-400
Page No.:



LEVEL 26
EL. +409'-2"

LEVEL 25
EL. +395'-8"

LEVEL 24
EL. +382'-2"

LEVEL 23
EL. +368'-8"

LEVEL 22
EL. +352'-2"

LEVEL 21
EL. +341'-8"

LEVEL 20
EL. +328'-2"

LEVEL 19
EL. +314'-8"

LEVEL 18
EL. +301'-2"

LEVEL 17
EL. +287'-8"

LEVEL 16
EL. +274'-2"

LEVEL 15
EL. +260'-8"

LEVEL 14
EL. +247'-2"

LEVEL 13
EL. +233'-8"

LEVEL 12
EL. +220'-2"

LEVEL 11
EL. +206'-8"

LEVEL 10
EL. +193'-2"

LEVEL 9
EL. +179'-8"

LEVEL 8
EL. +166'-2"

LEVEL 7
EL. +152'-8"

LEVEL 6
EL. +139'-2"

LEVEL 5
EL. +112'-2"

LEVEL 4
EL. +98'-8"
TO PDS

LEVEL 3
EL. +86'-2"

LEVEL 2
EL. +72'-11"

LEVEL 1
EL. +47'-2"

3

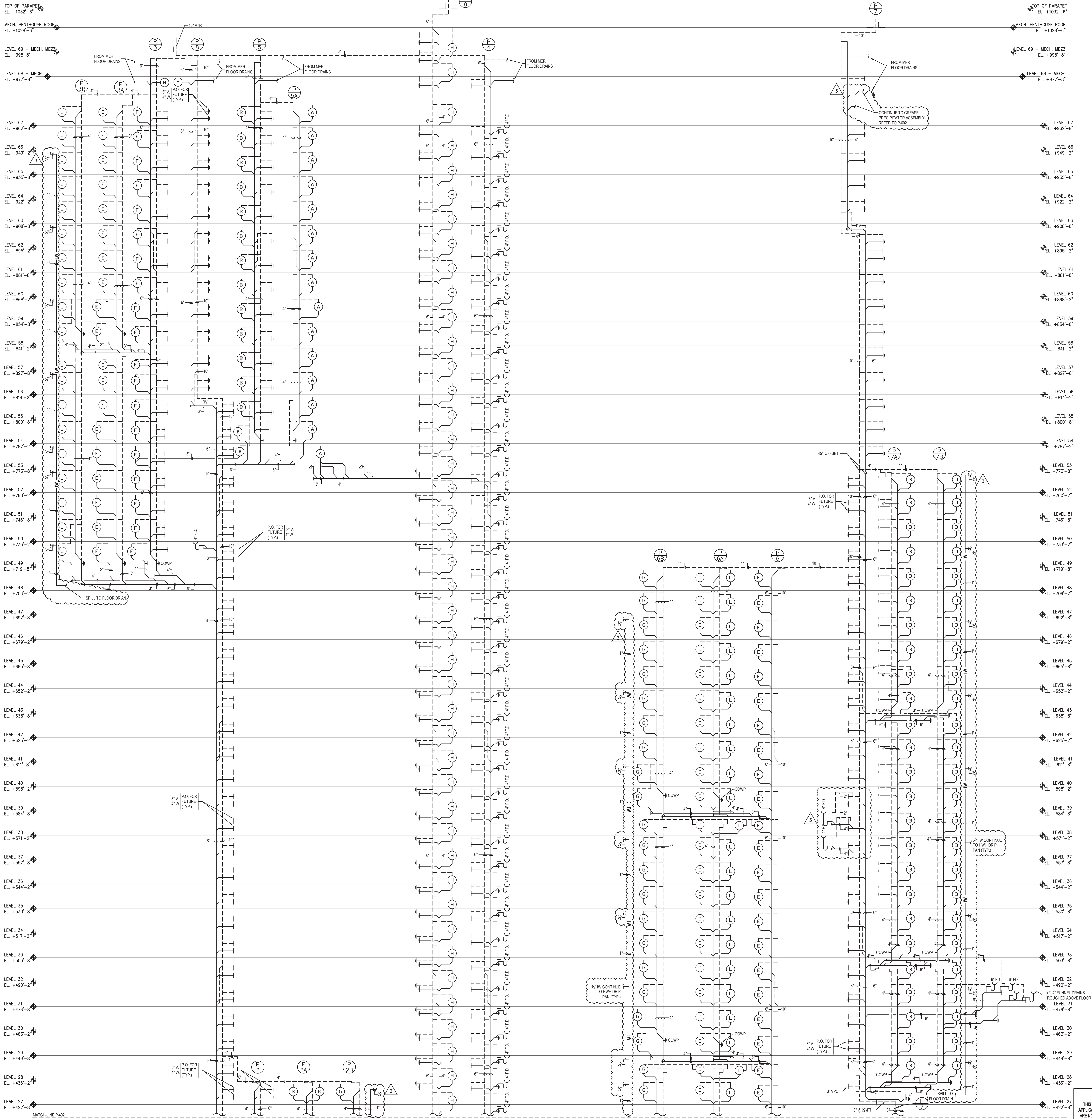
RAISED FL.
EL. +30'-8"

LEVEL B
EL. +26'-8"

LEVEL B1
EL. +112'-8"

Project No.: 14830 A.000	B-SCAN Sheet No.: <h1>P-401.02</h1>
Date: 20 JUN 2014	
Scale: NTS	
File No.:	Sheet No.: P-401
	Page No.:

SANITARY RISER KEY	
ID	SANITARY PIPING AND FIXTURES
(A)	
(B)	
(C)	
(D)	
(E)	
(F)	
(G)	
(H)	
(I)	
(J)	
(K)	
(L)	
(M)	



Damian Titus
Buildings
APPROVED
Under Ordinance of 1935
INTERPRETATION
Date: 12/20/2017
NYC Development Hub

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Wind Tunnel Consultant
Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1S8

Key Plan:

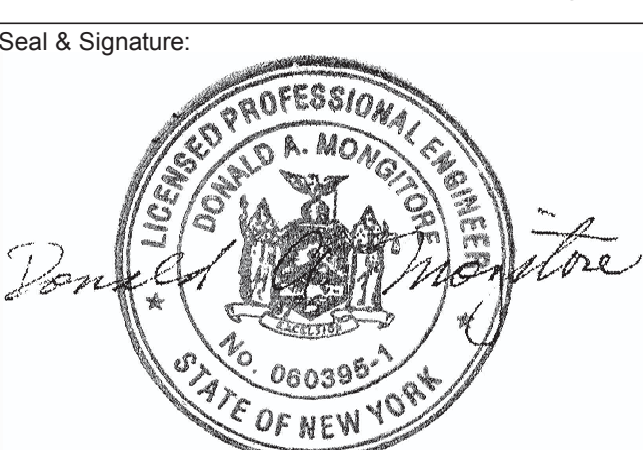
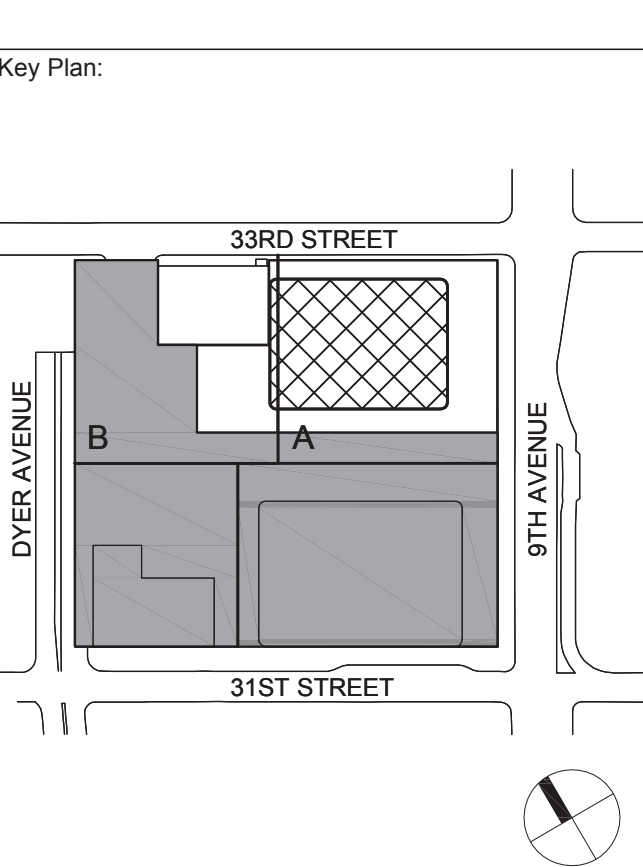
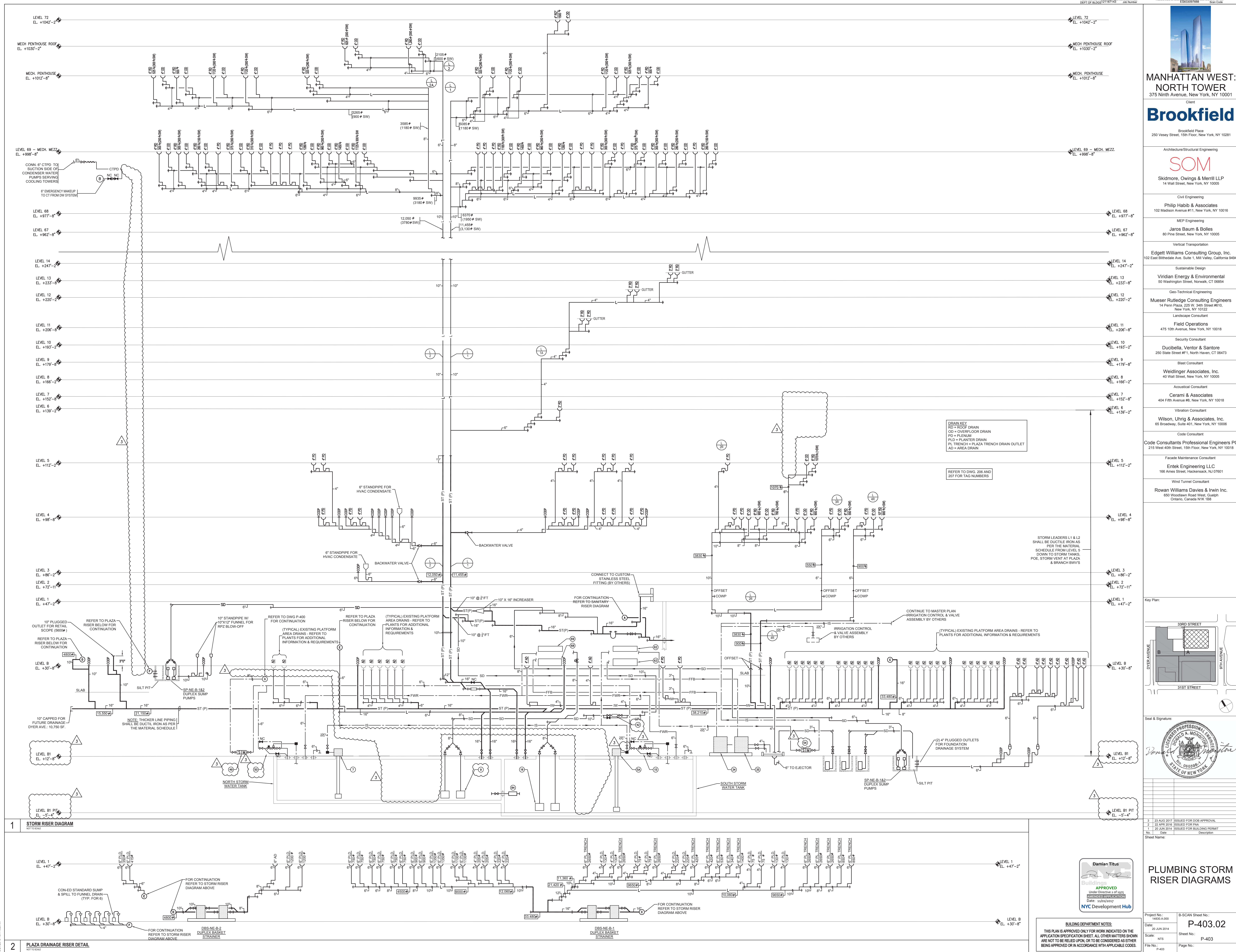
Seal & Signature:

Damian Titus

No.	Date	Description
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2	22 APR 2016	ISSUED FOR PAA
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT

Sheet Name: **PLUMBING
SANITARY RISER
DIAGRAM -
SHEET 2**

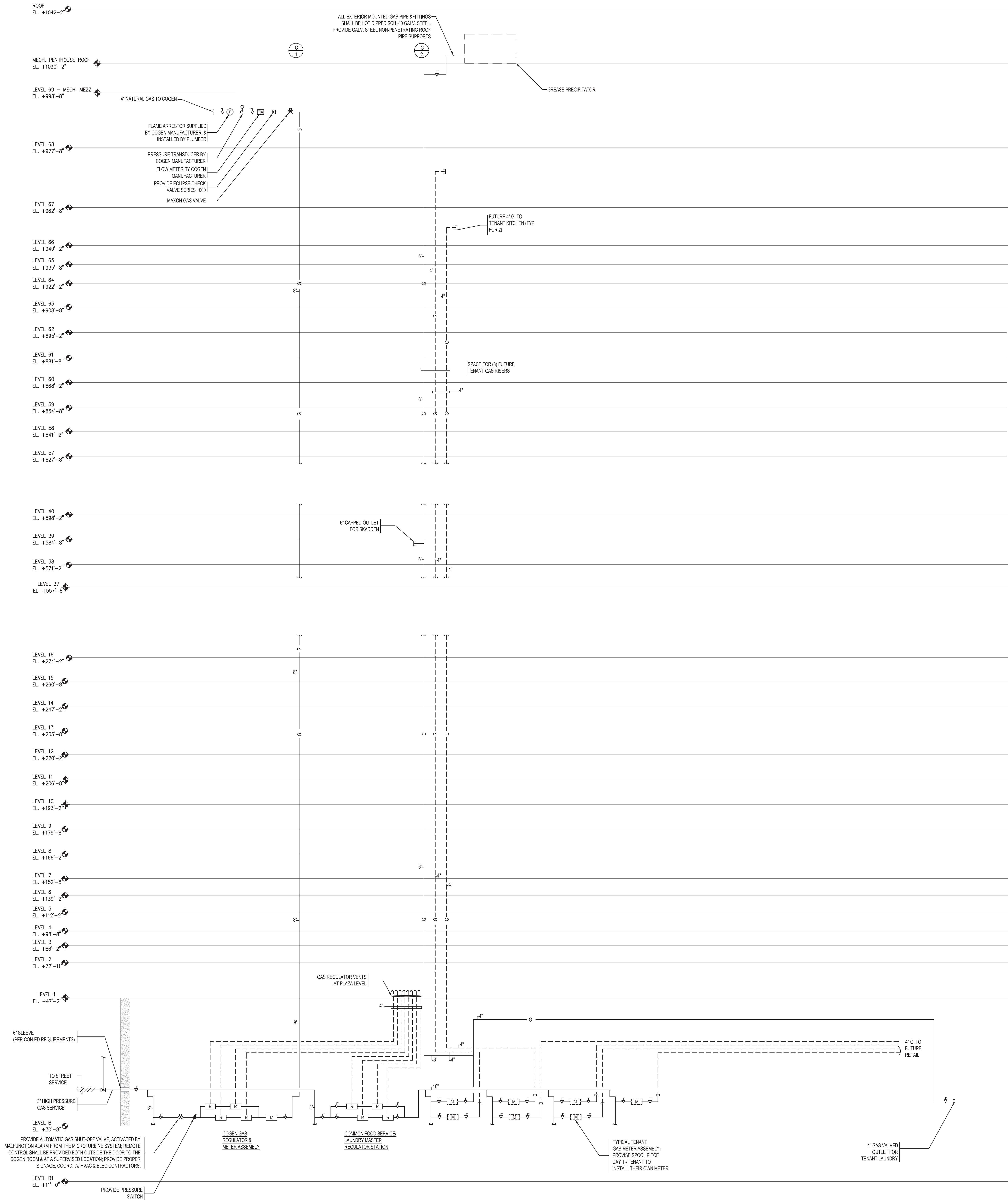
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2	22 APR 2016	ISSUED FOR P&A
1	20 JUN 2014	ISSUED FOR BUILDING PERMIT
No.	Date	Description
Sheet Name:		

PLUMBING STORM RISER DIAGRAMS

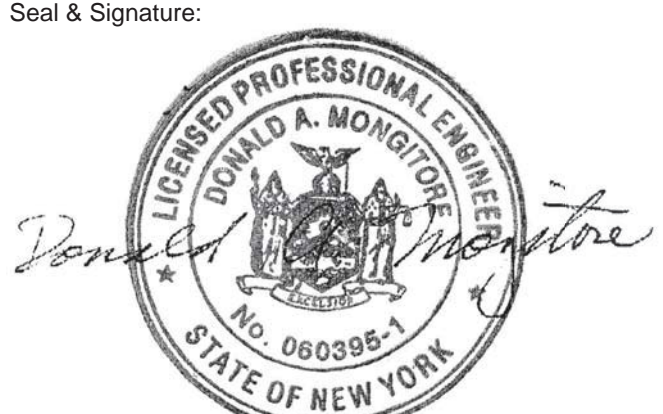
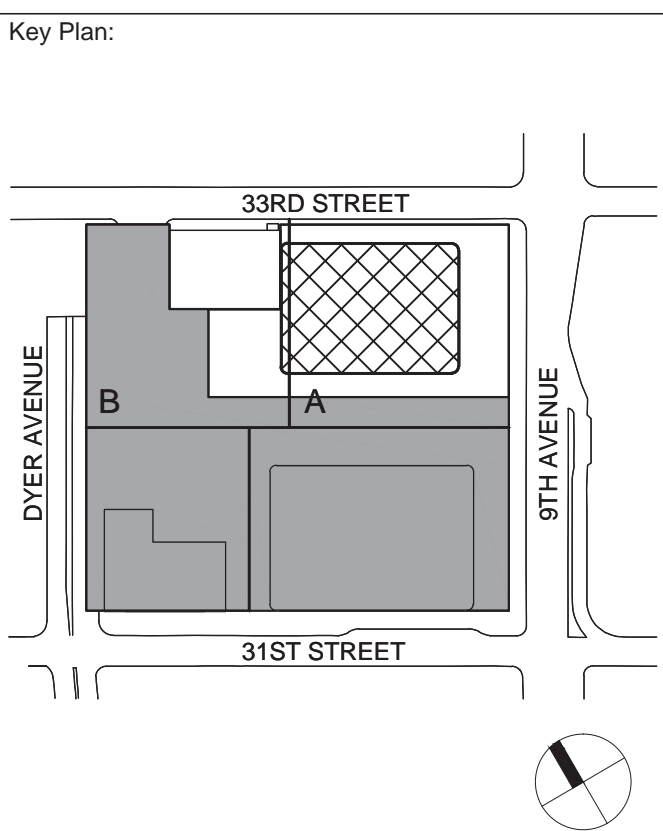
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Project No.: 14830 A-000	B-SCAN Sheet No.: P-404.01
Date: 22 APR 2016	Sheet No.: P-404
Scale: NTS	Page No.:
File No.: P-404	



2	23 AUG 2017	ISSUED FOR DOB APPROVAL
1	22 APR 2016	ISSUED FOR P&I
No.	Date	Description
Sheet Name:		

PLUMBING NATURAL GAS RISER DIAGRAMS

Project No.: 14830 A-000	B-SCAN Sheet No.: P-404.01
Date: 22 APR 2016	Sheet No.: P-404
Scale: NTS	Page No.:
File No.: P-404	



Brookfield

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Weidinger Associates, Inc.
40 Wall Street, New York, NY 10005

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Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

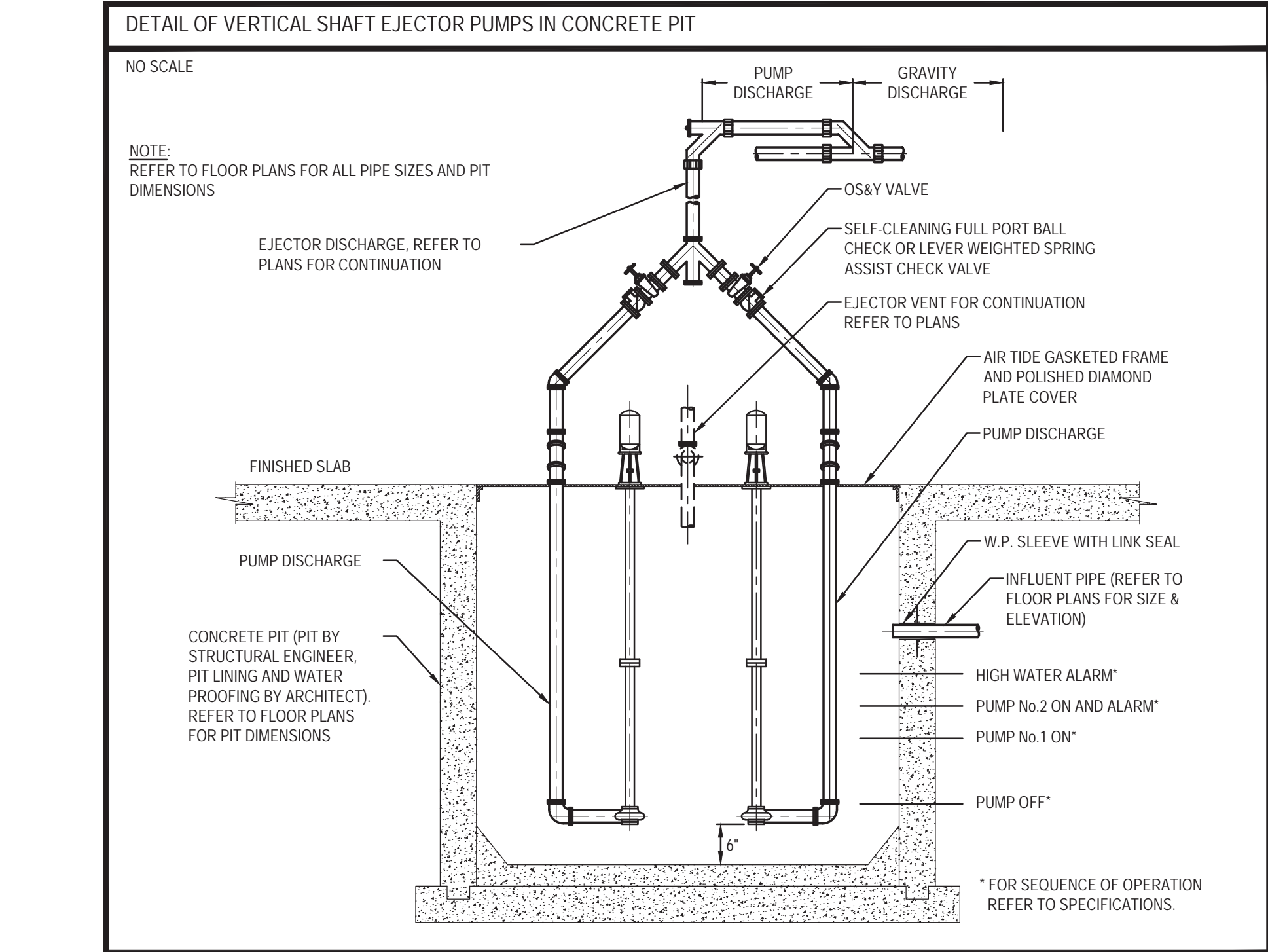
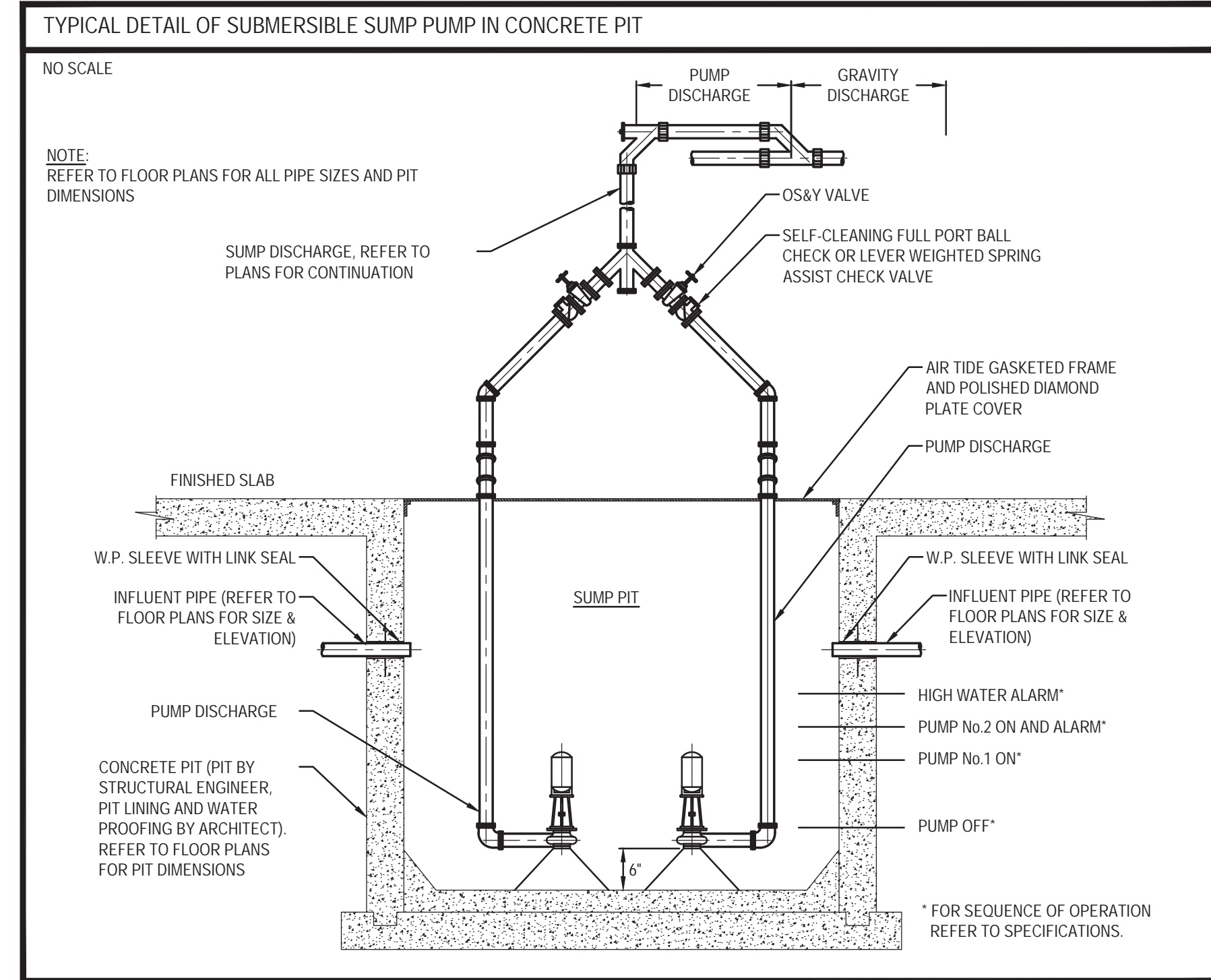
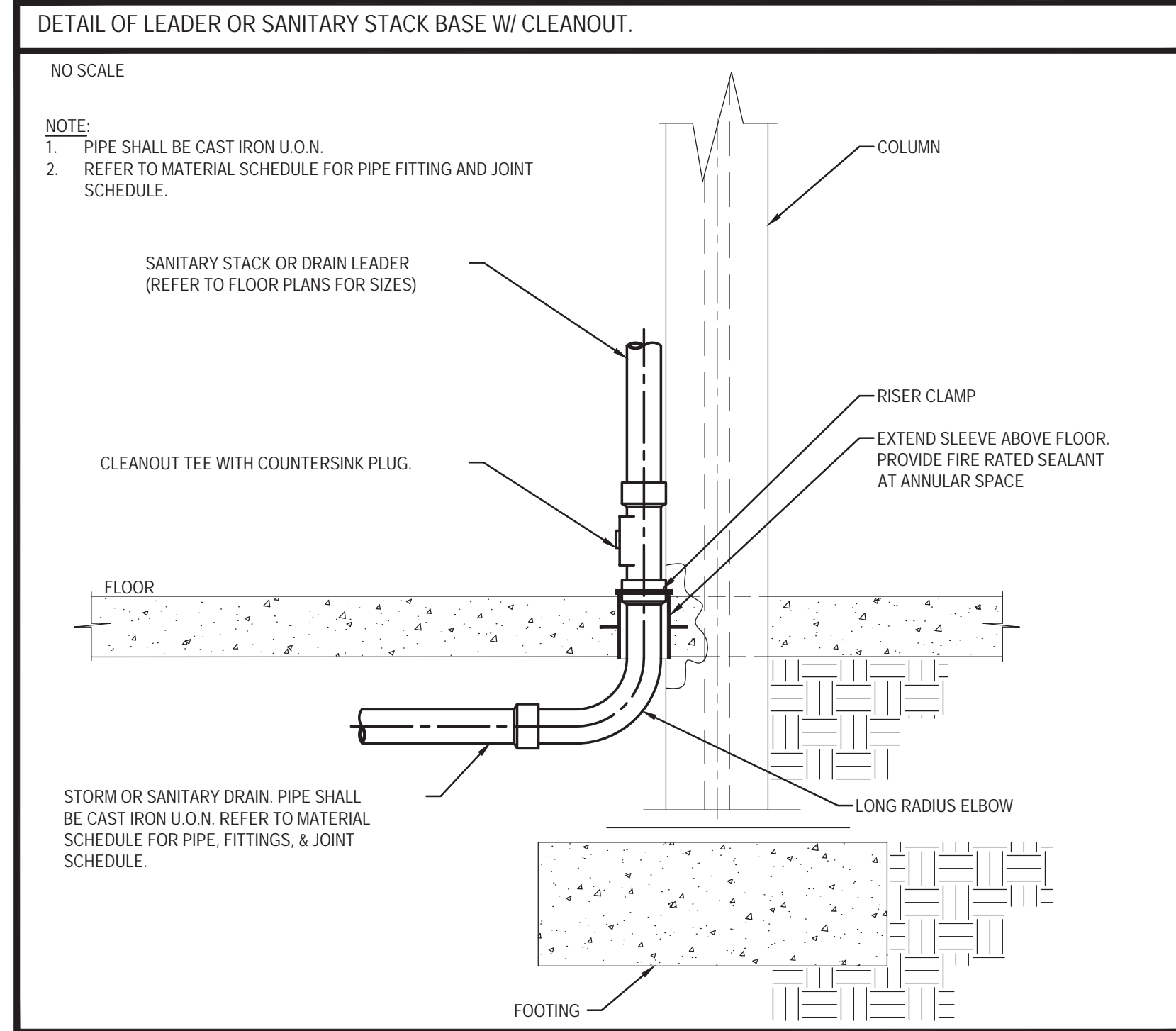
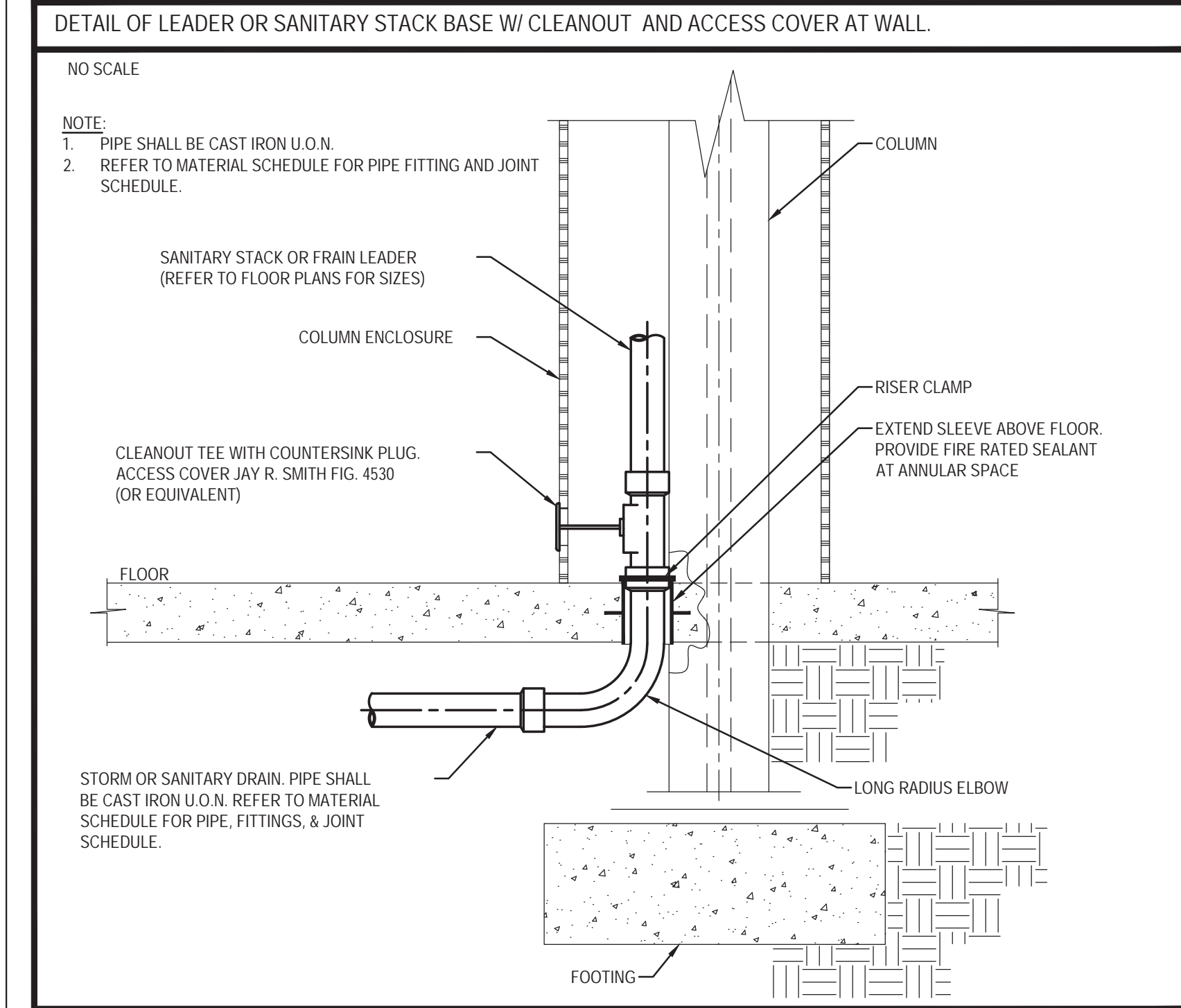
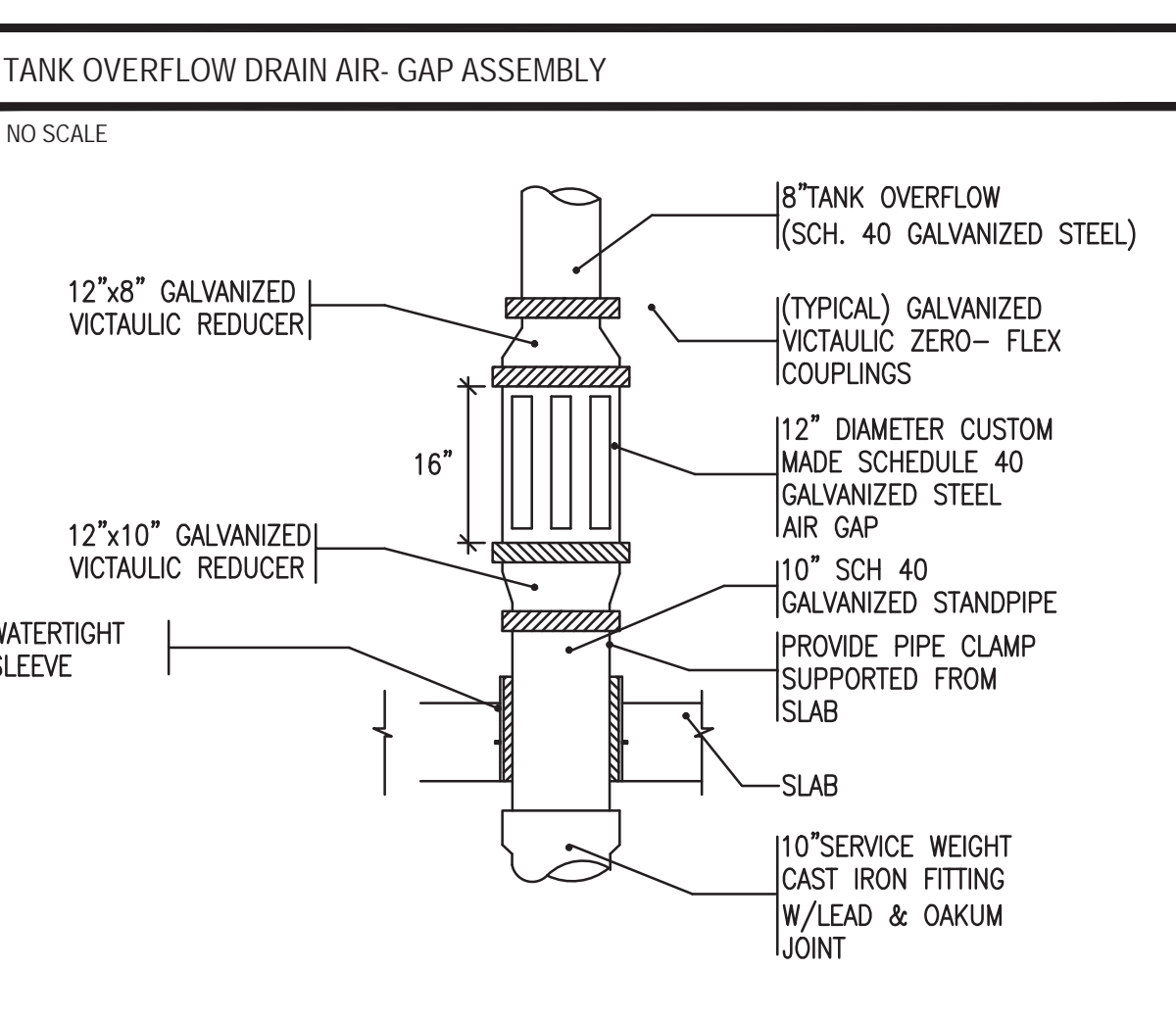
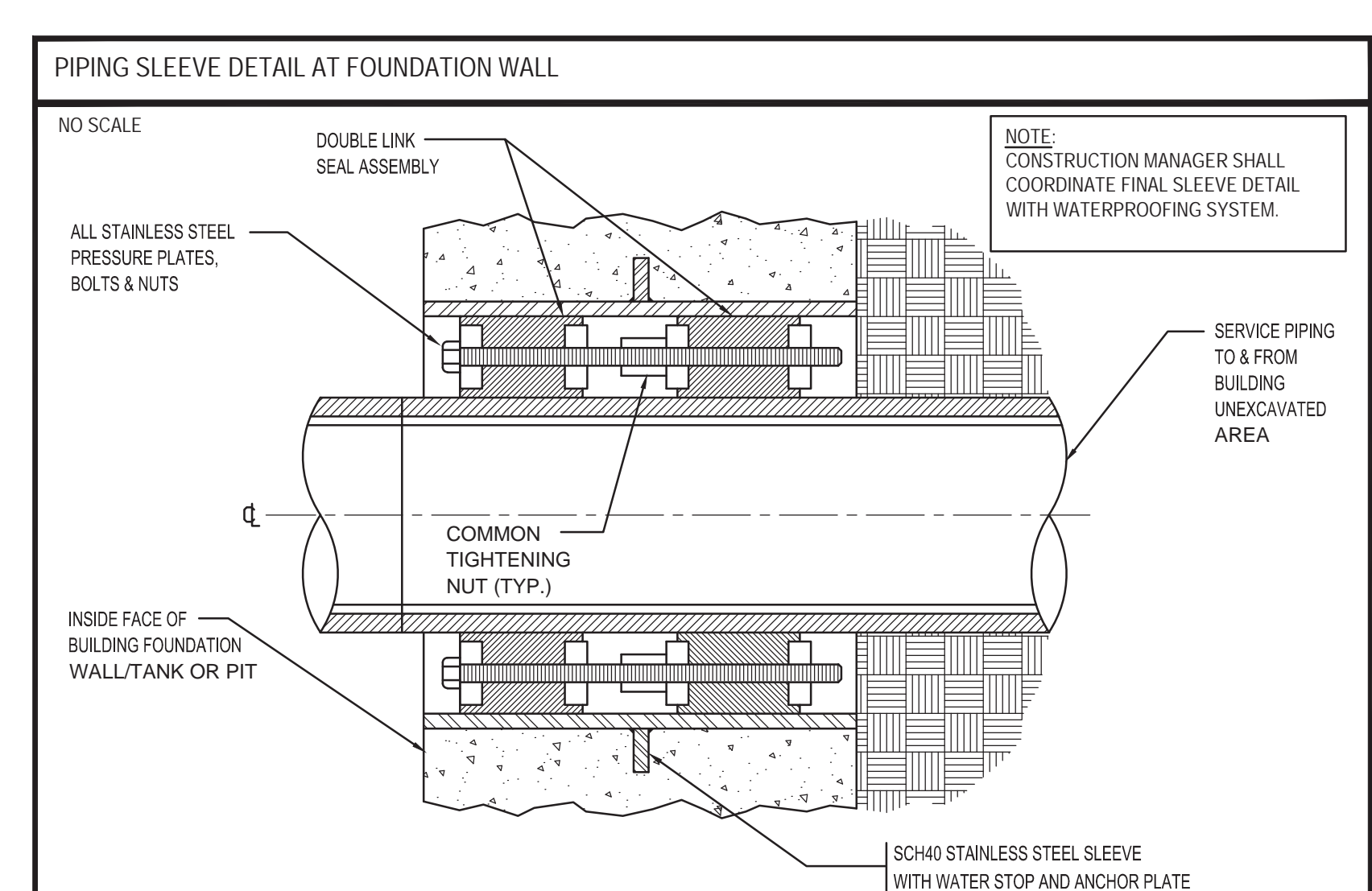
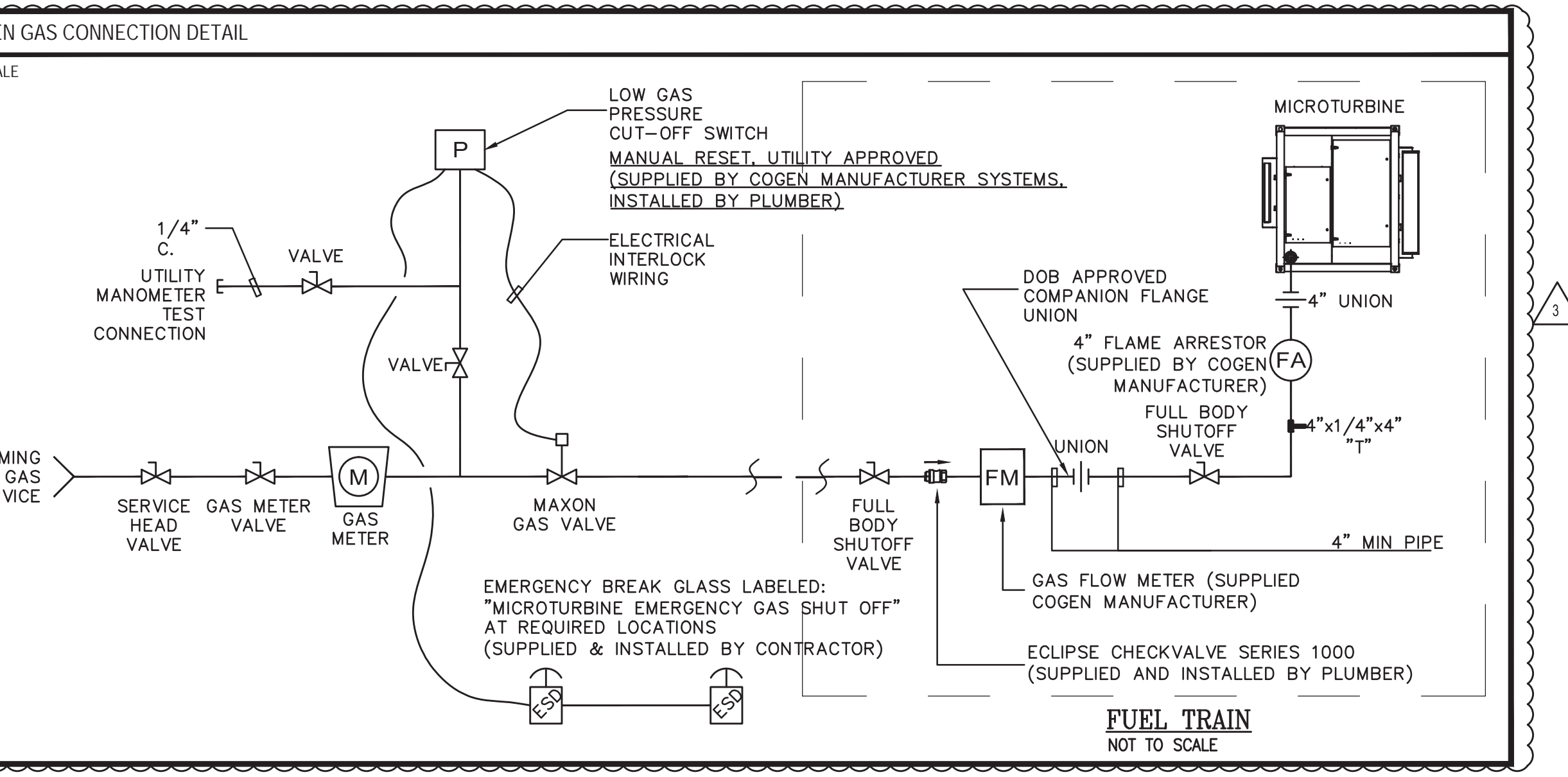
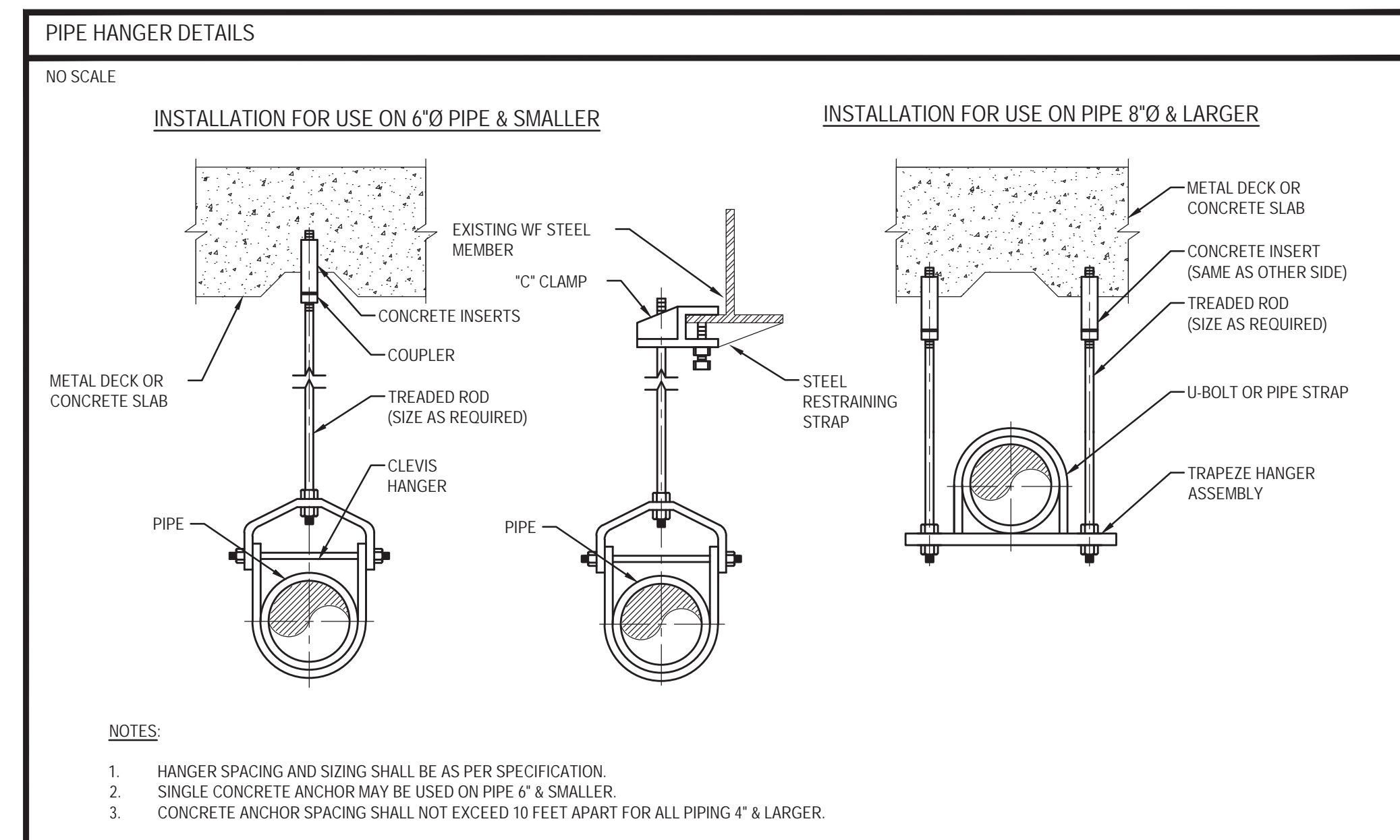
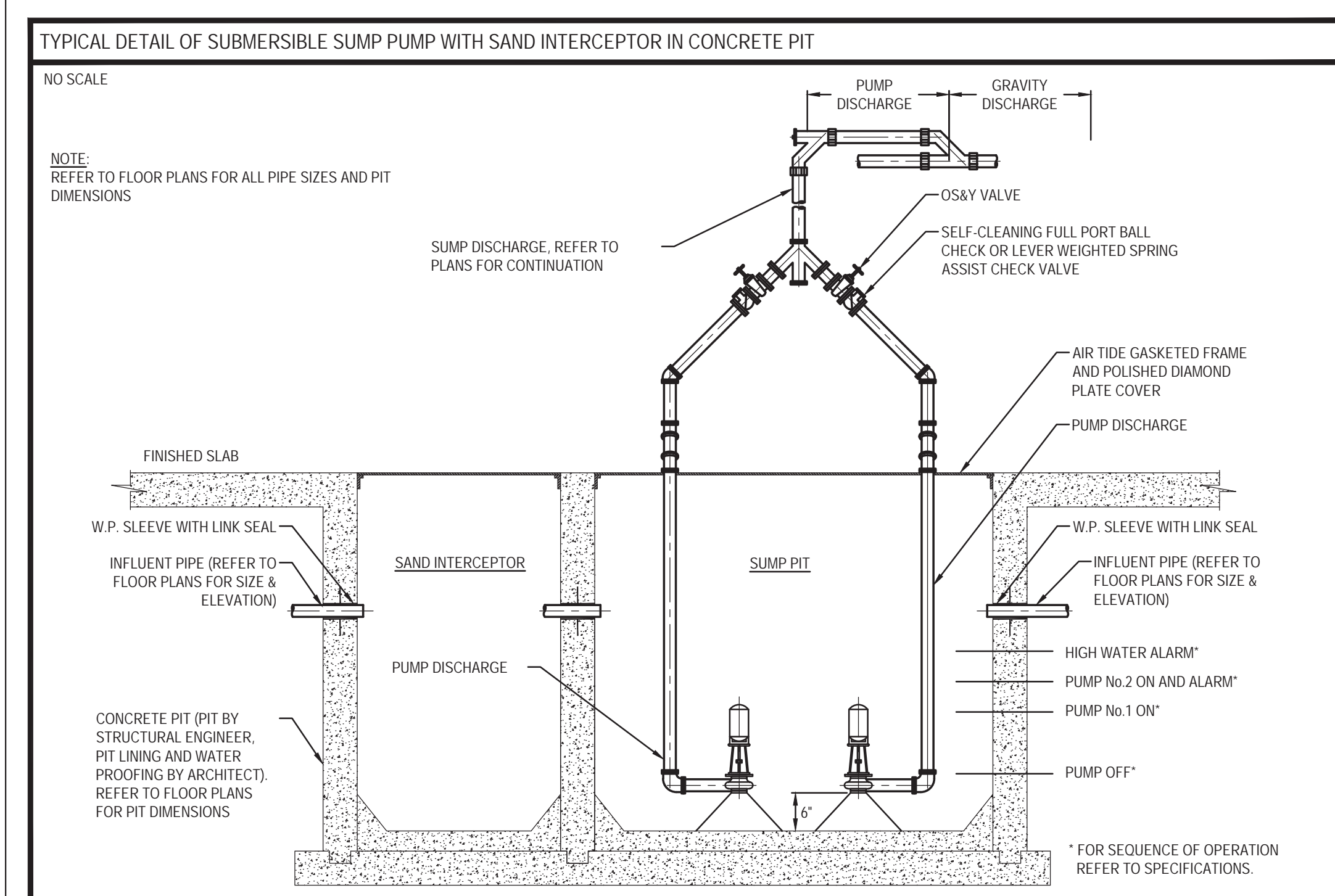
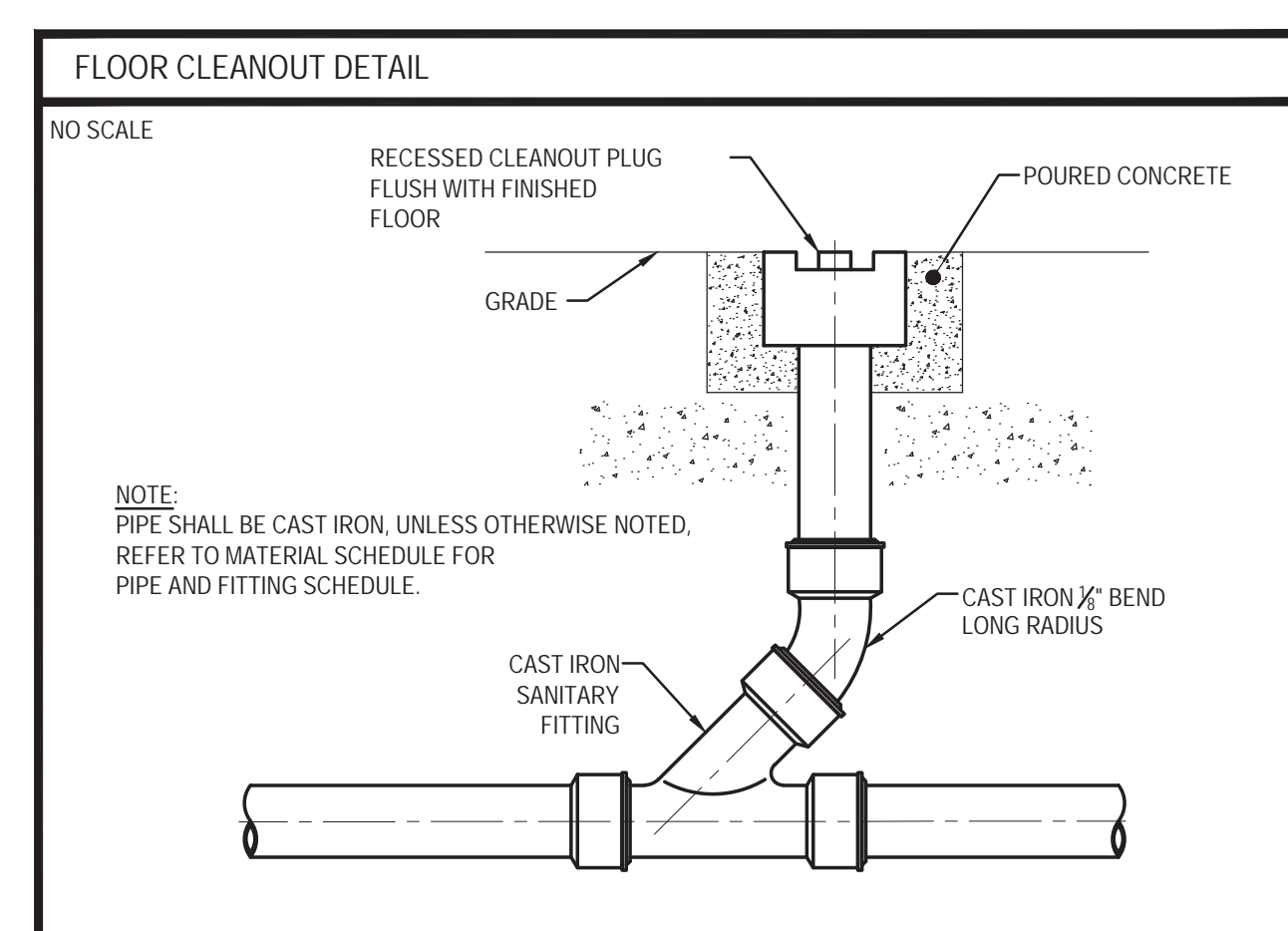
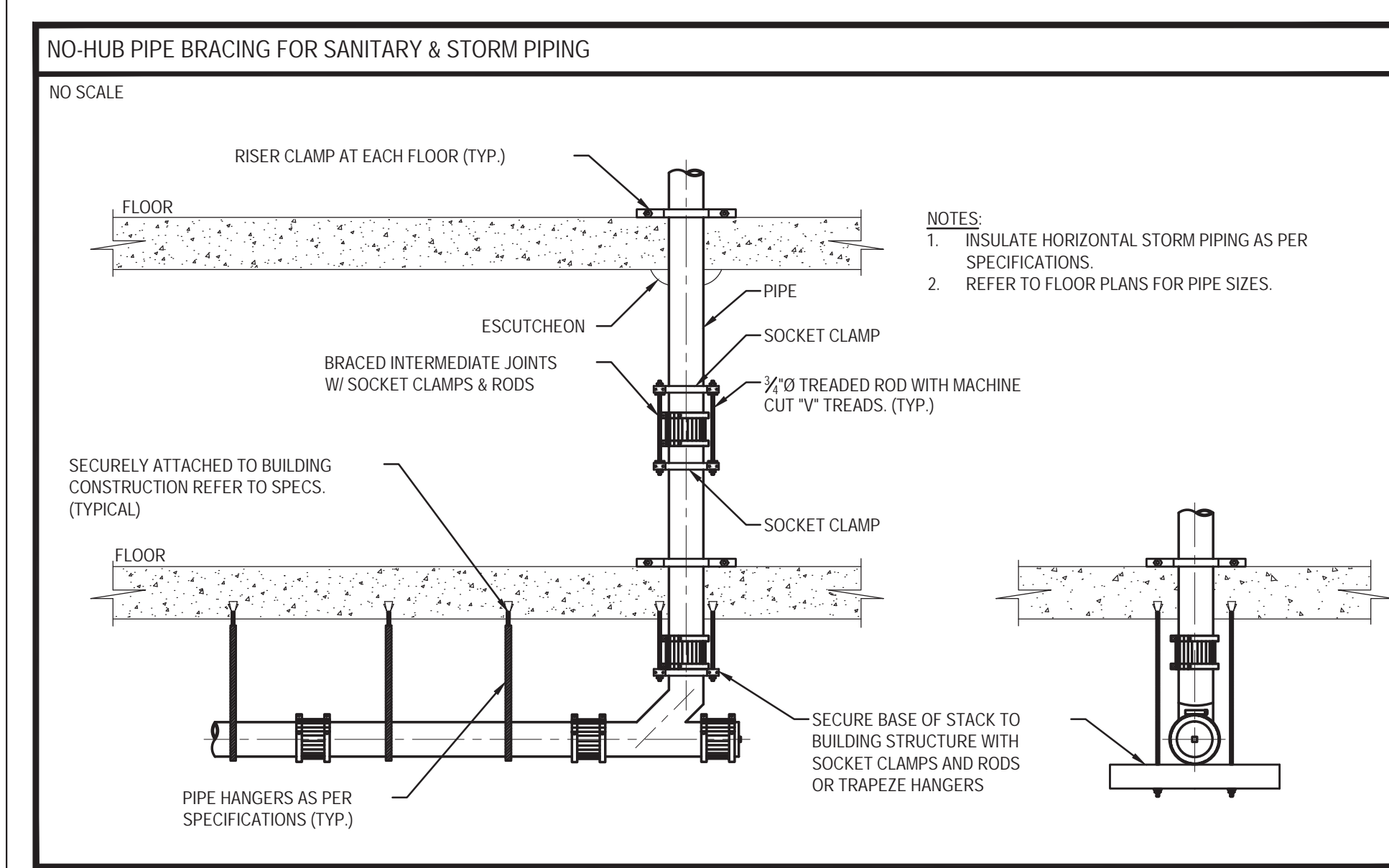
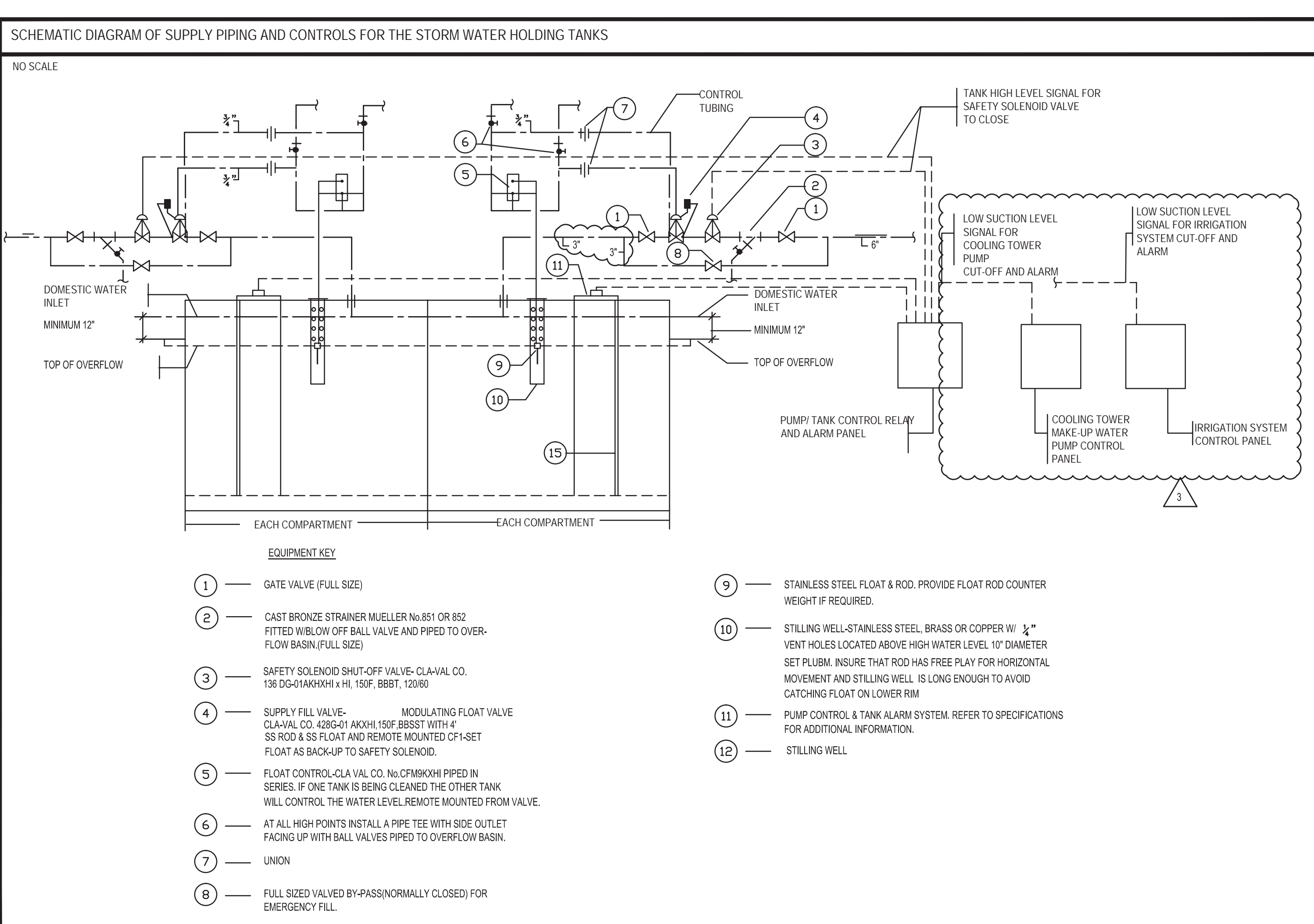
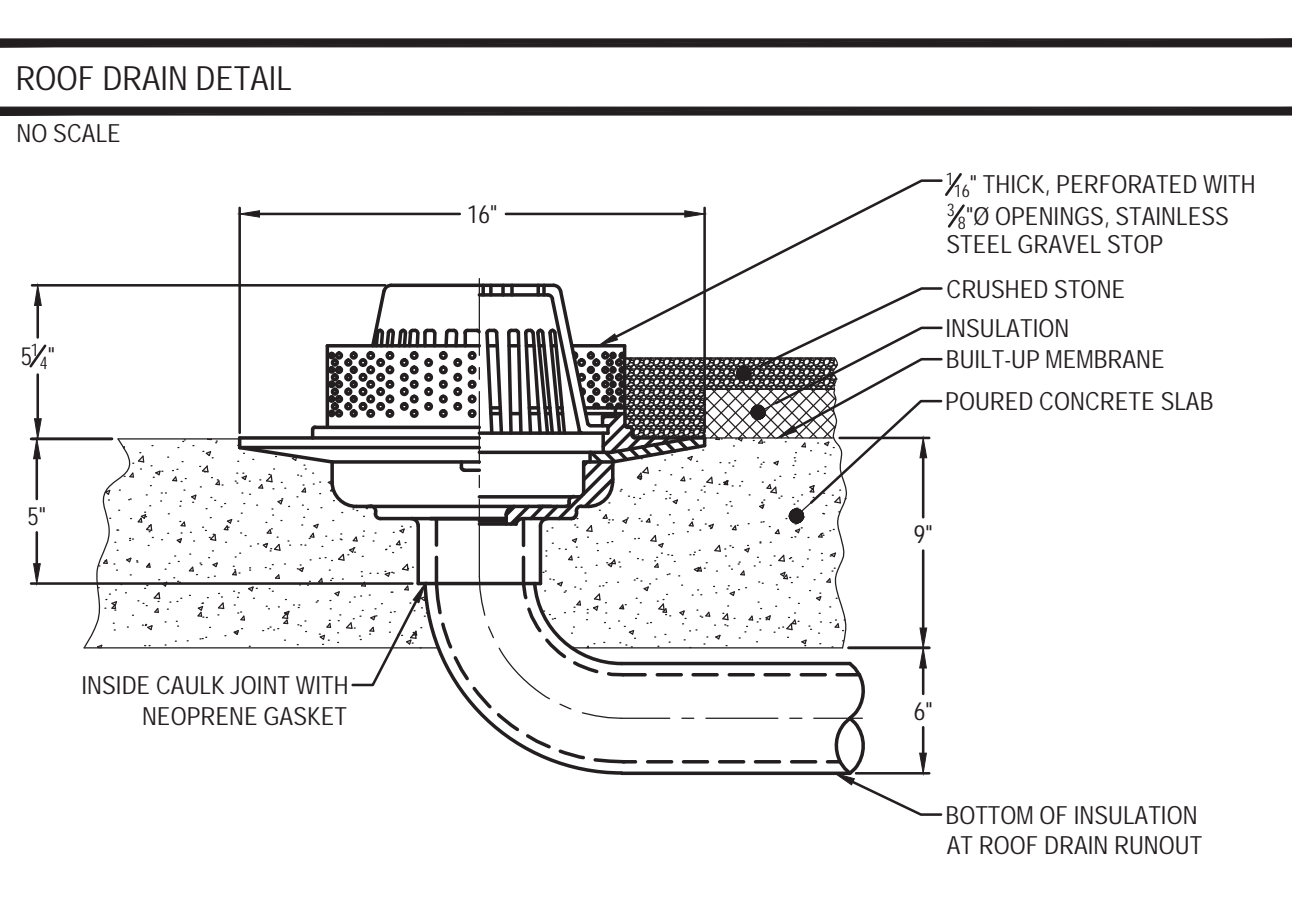
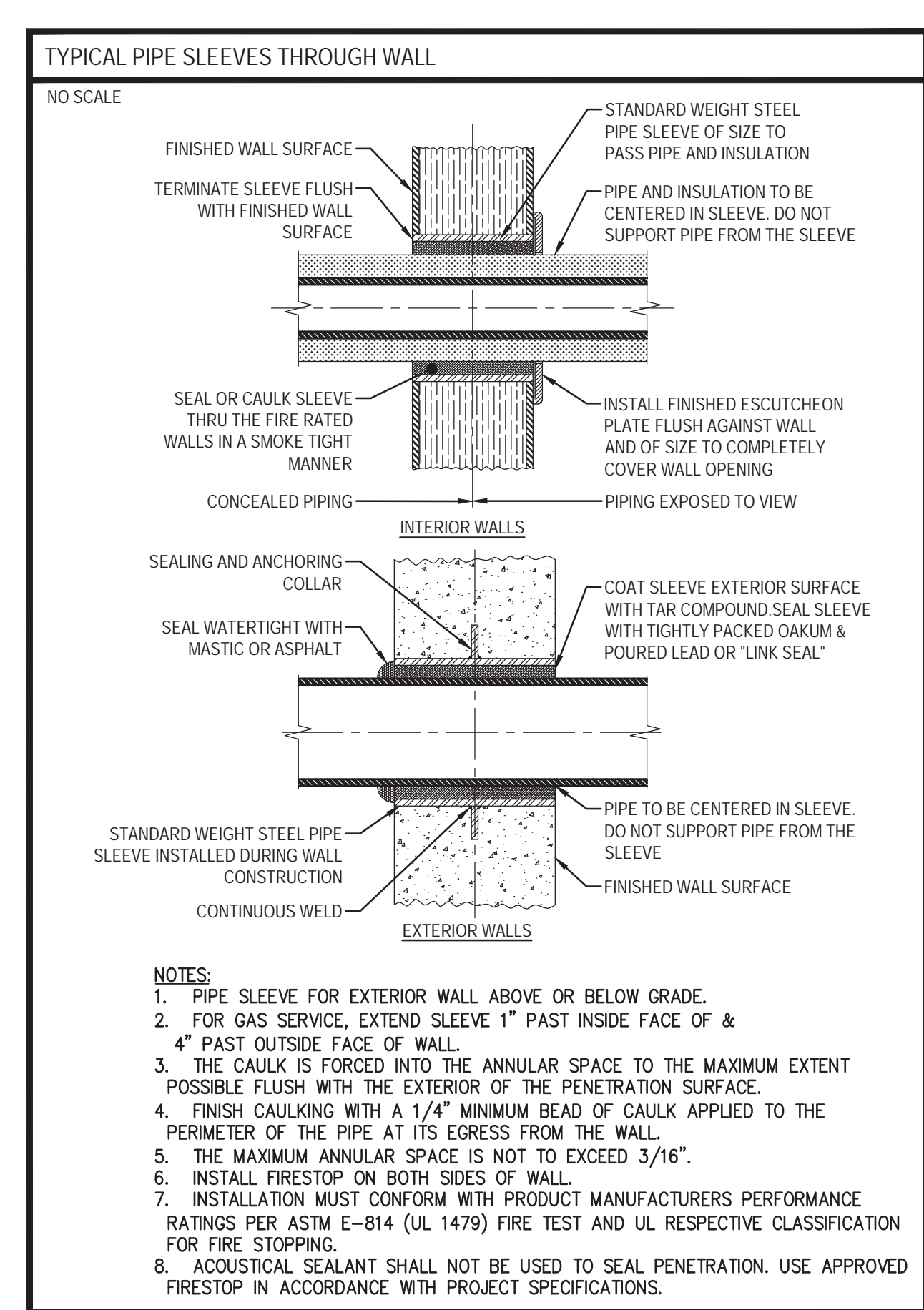
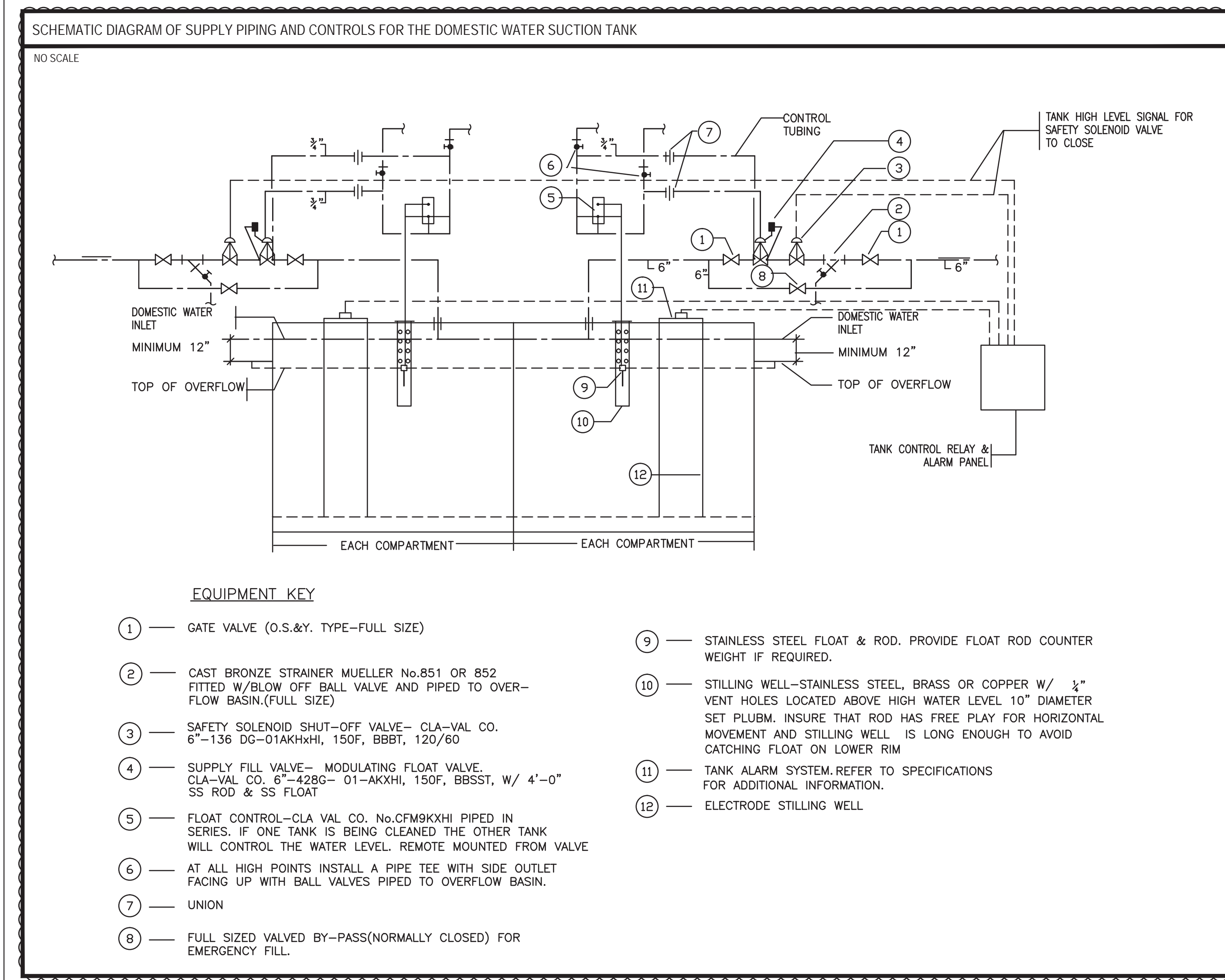
Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

Facade Maintenance Consultant

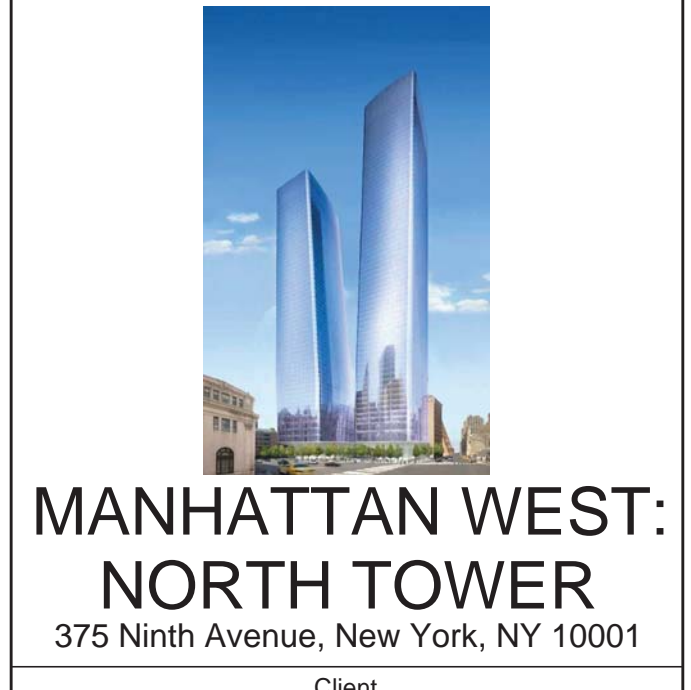
Entek Engineering LLC
166 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1B8



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250 State Street #F1, North Haven, CT 06473

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Wedinger Associates, Inc.
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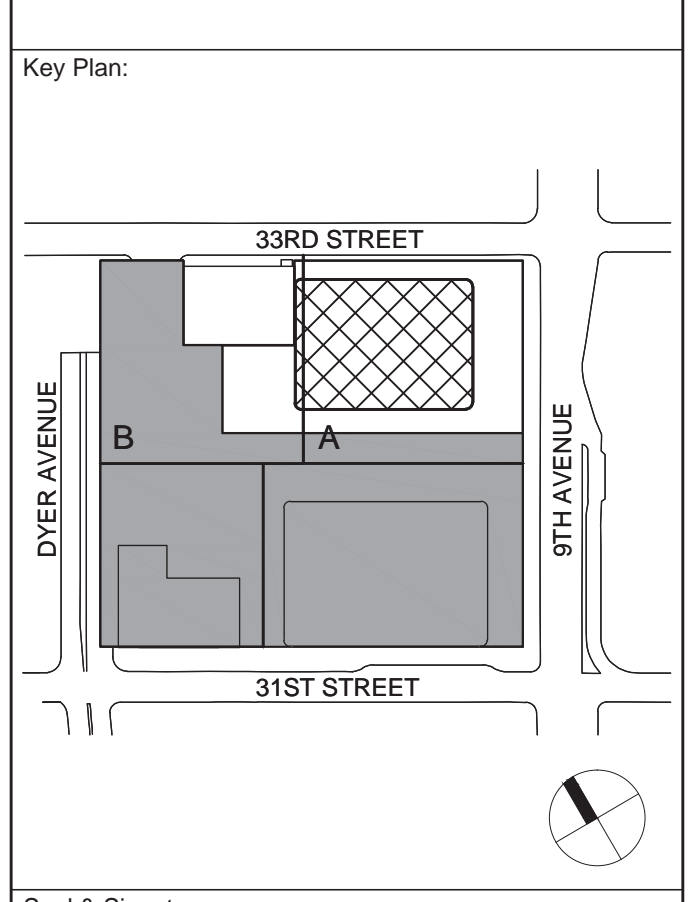
Acoustical Consultant
Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

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65 Broadway, Suite 401, New York, NY 10006

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186 Ames Street, Hackensack, NJ 07601

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650 Woodlawn Road West, Guelph, Ontario, Canada N1K 1S8



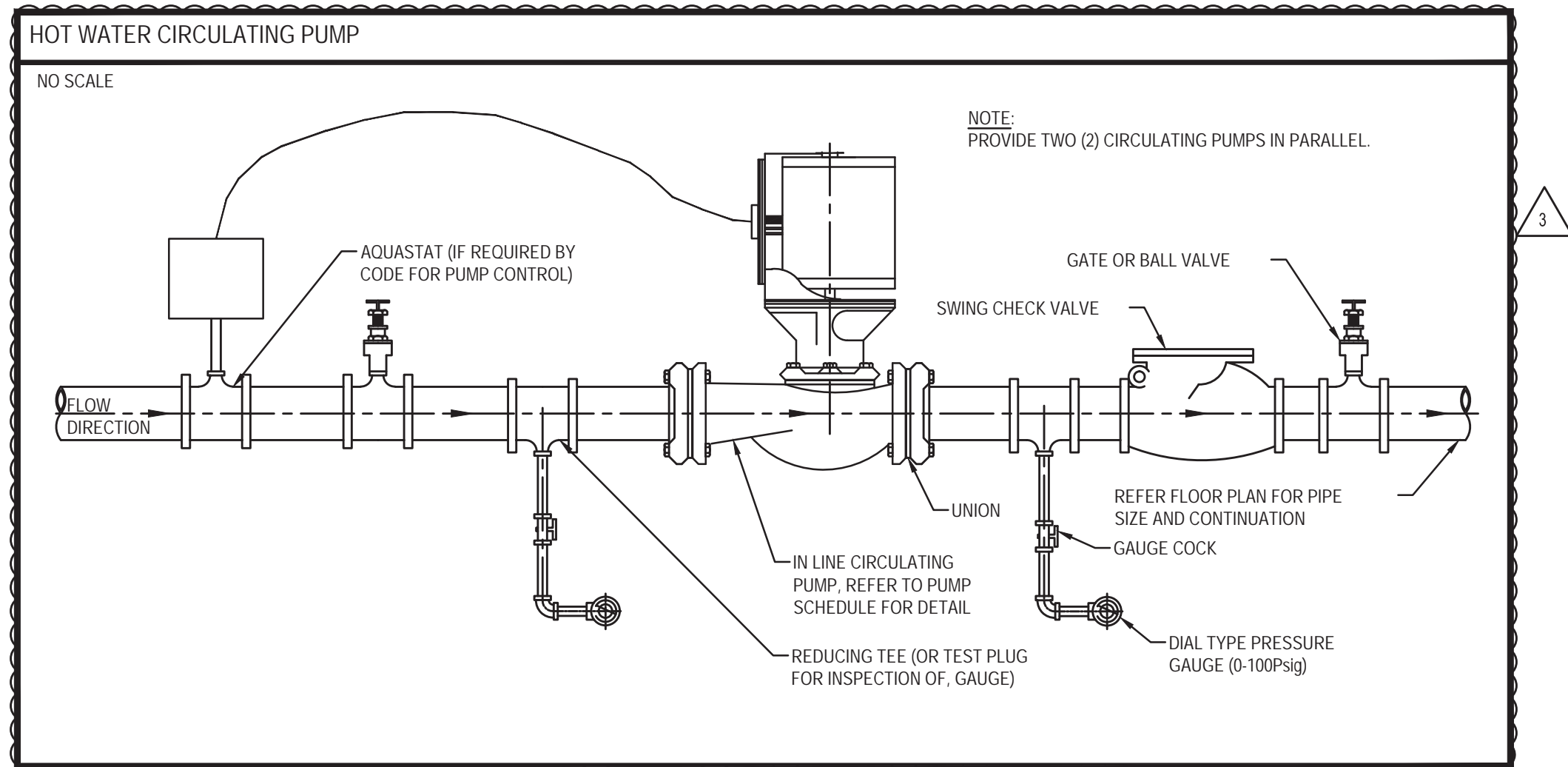
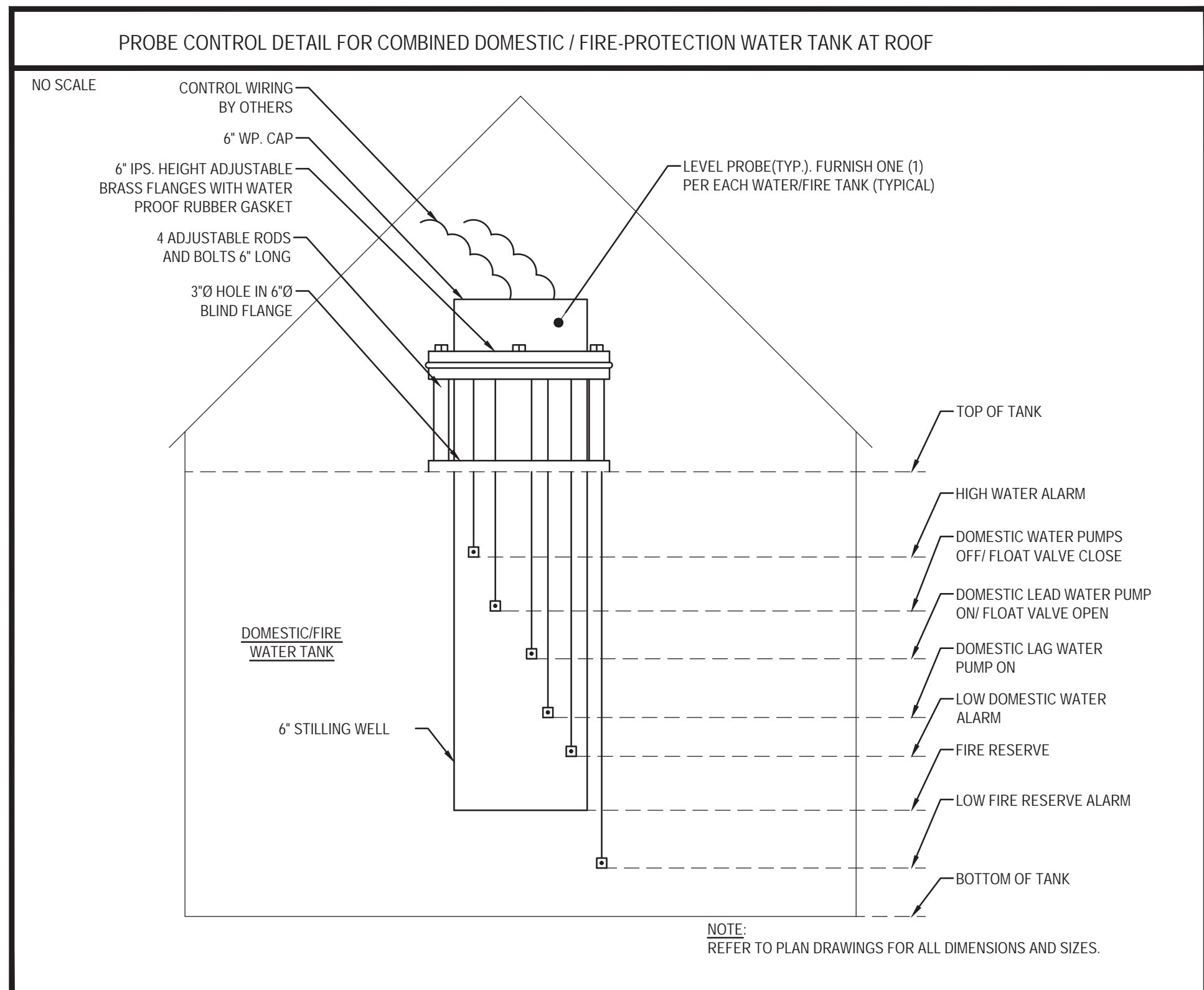
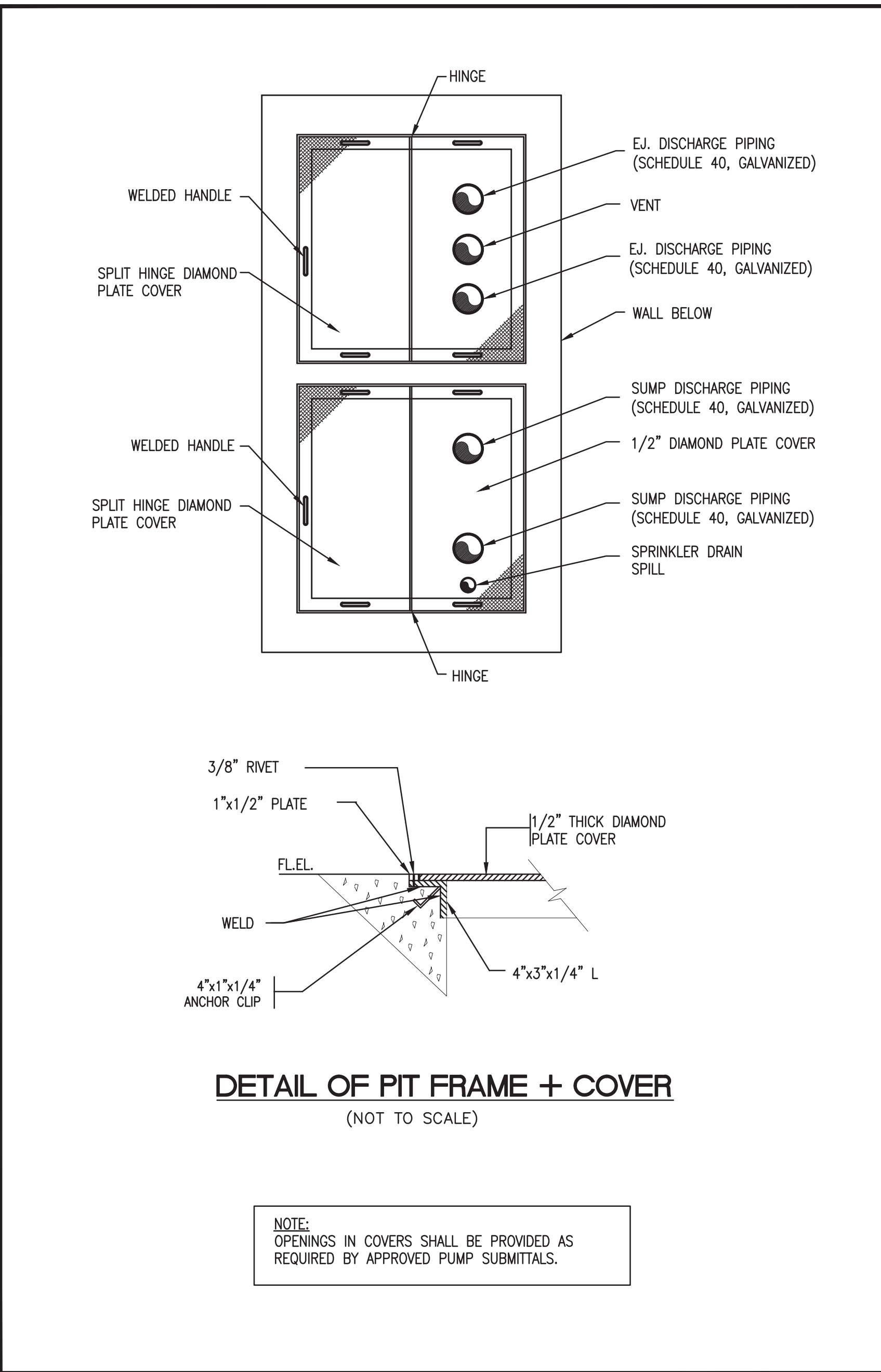
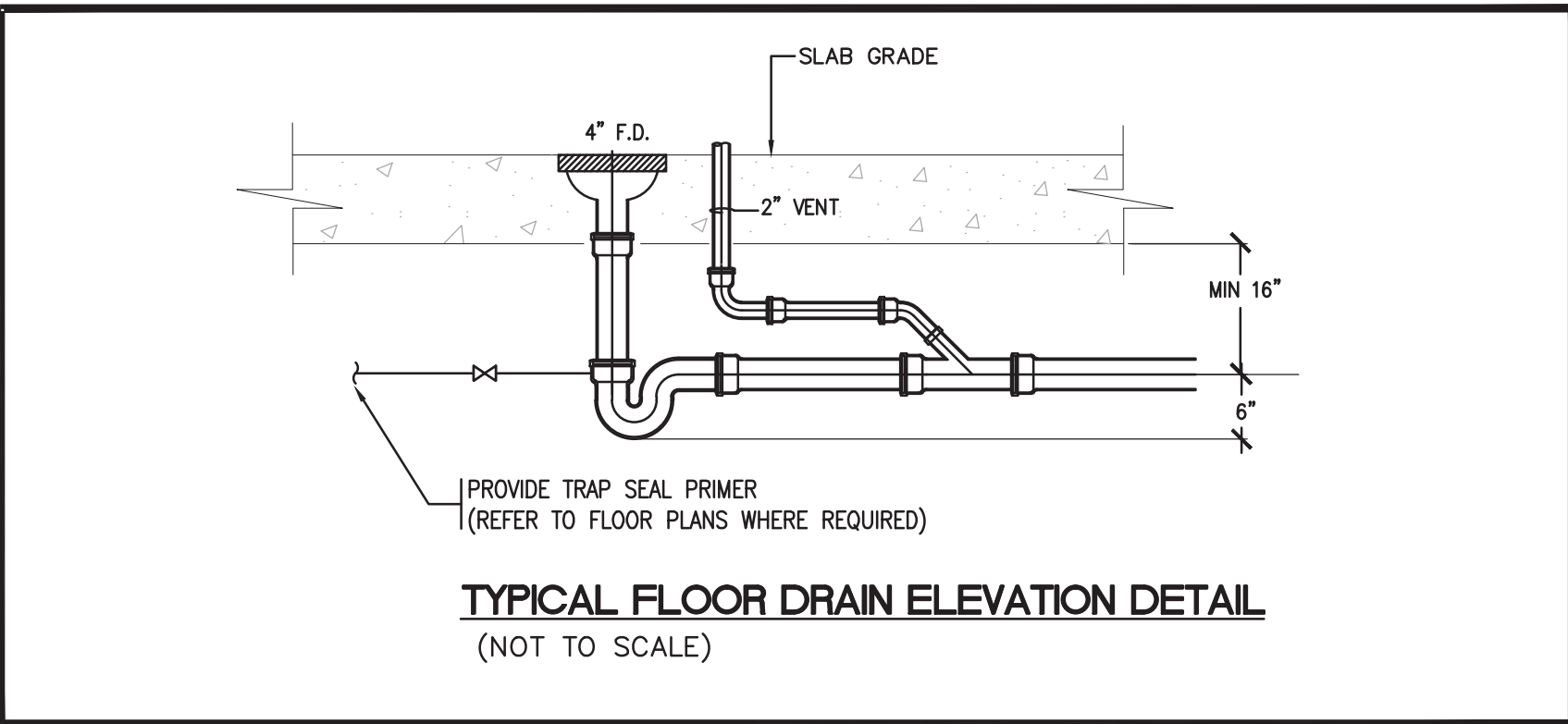
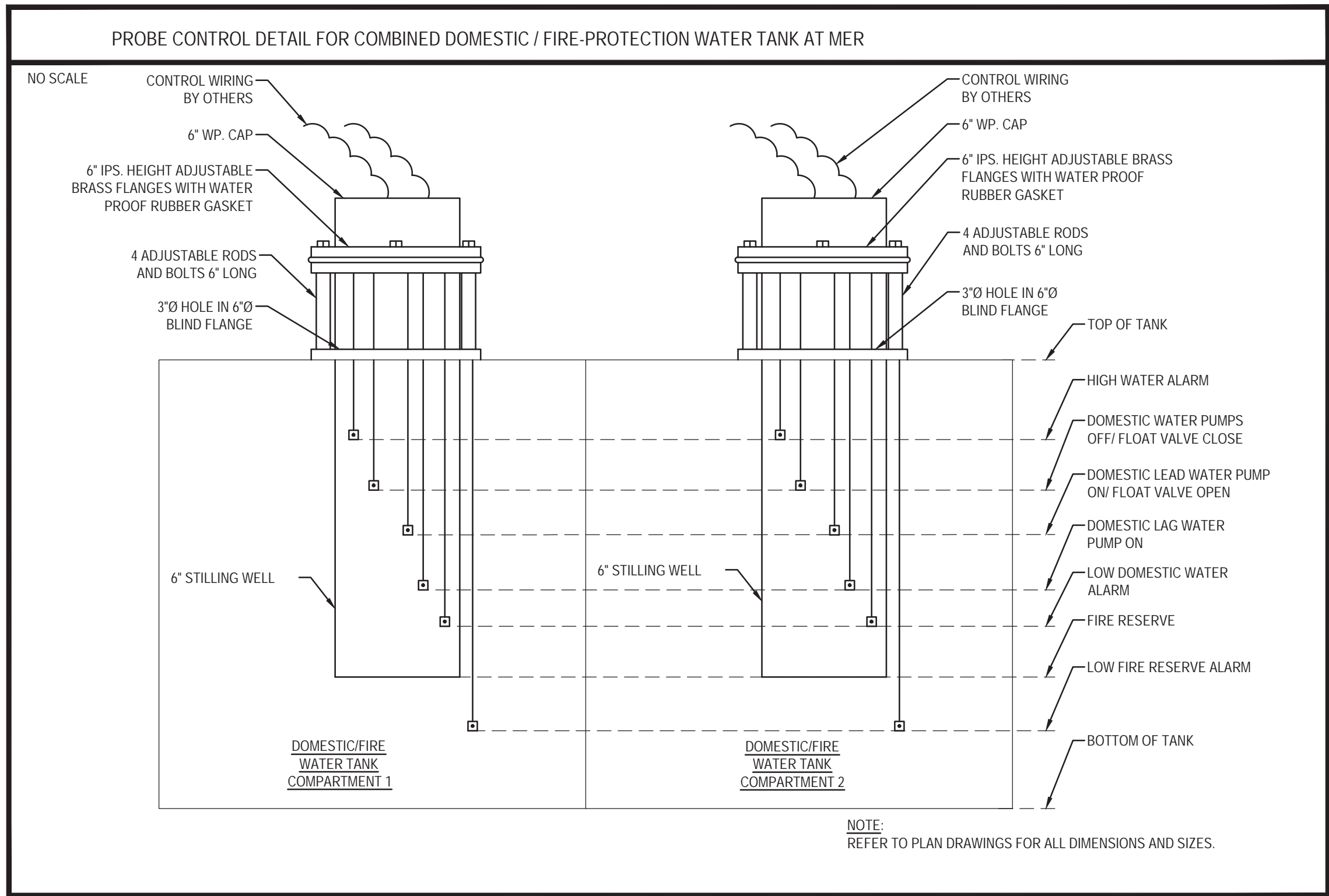
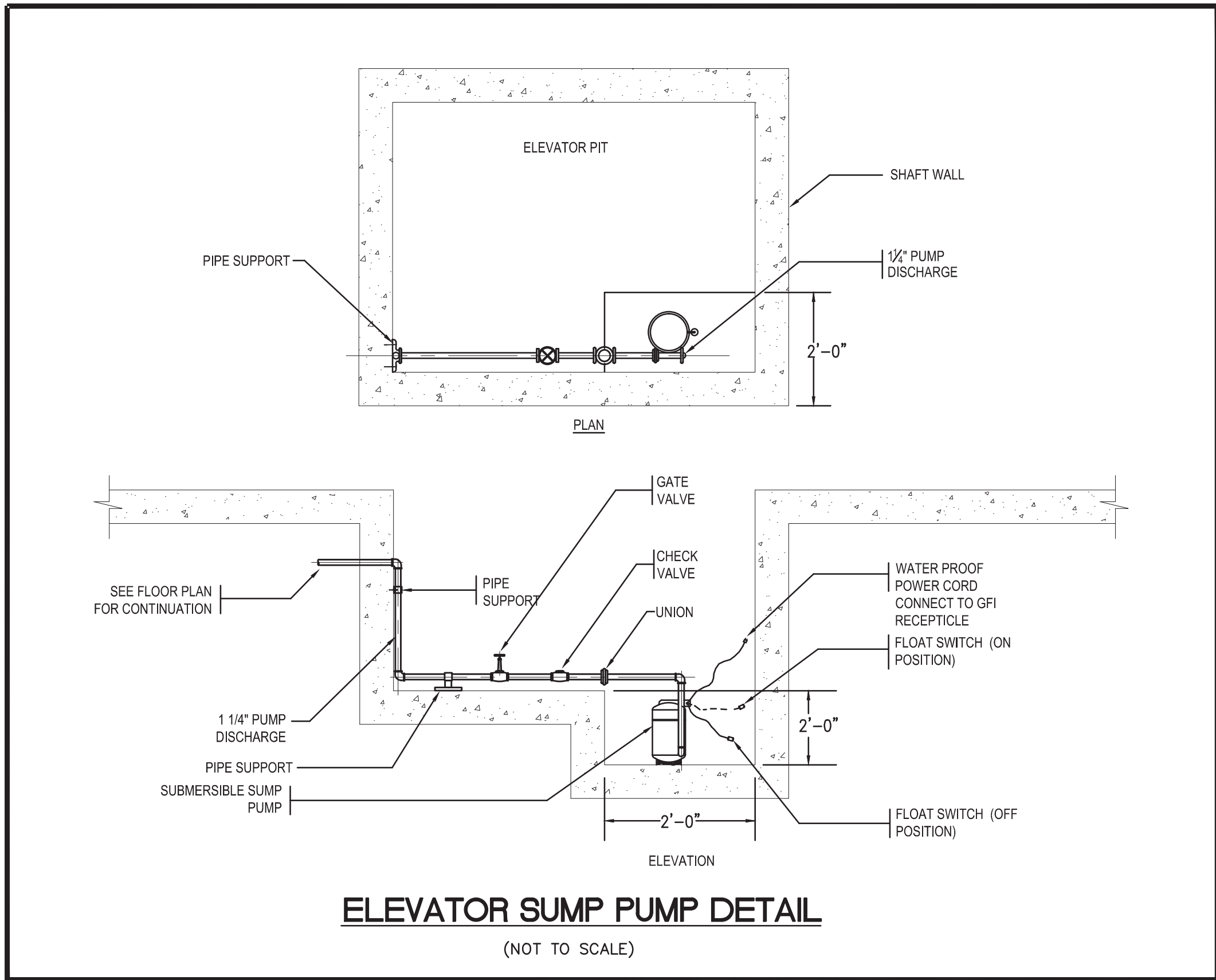
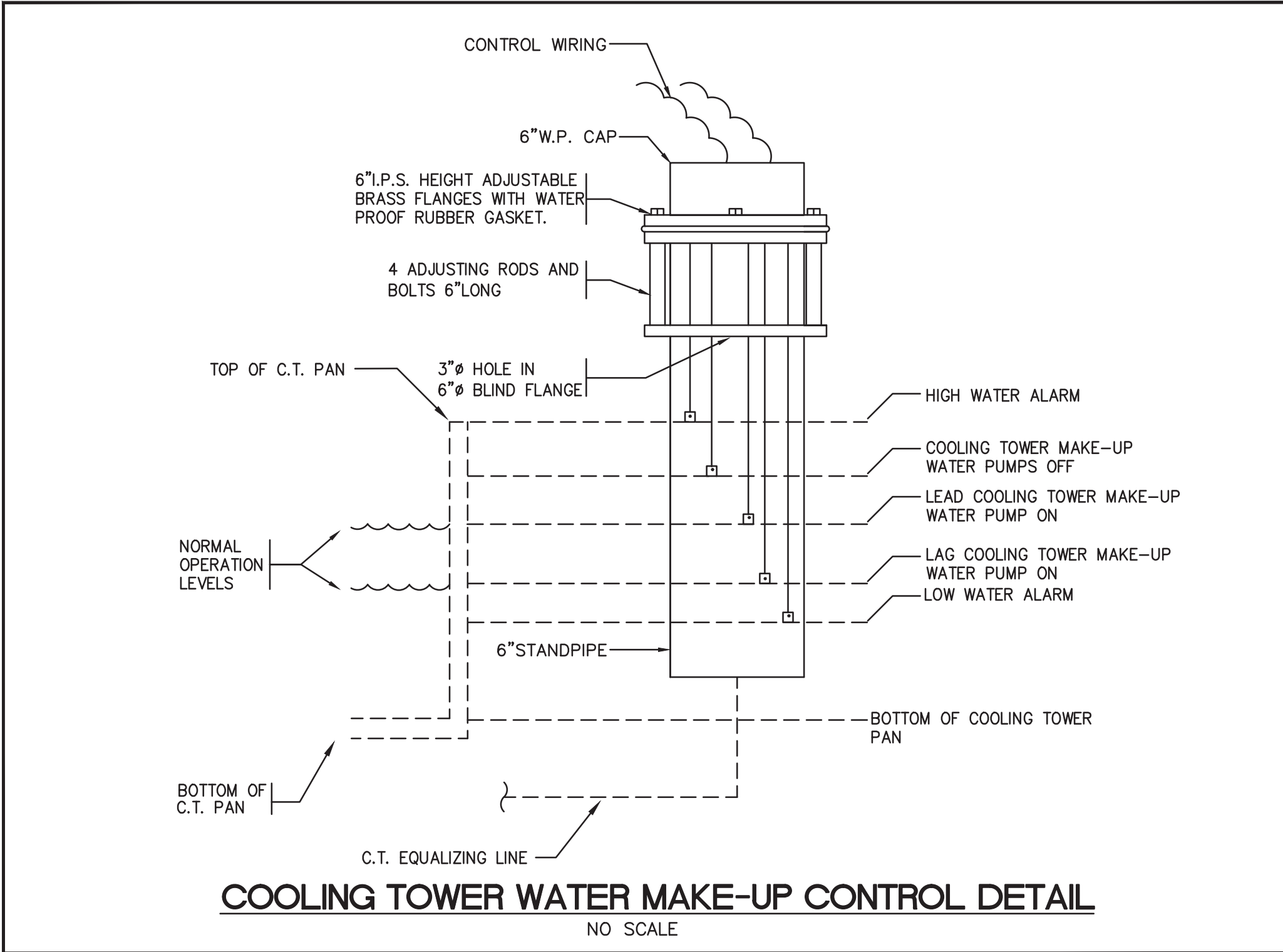
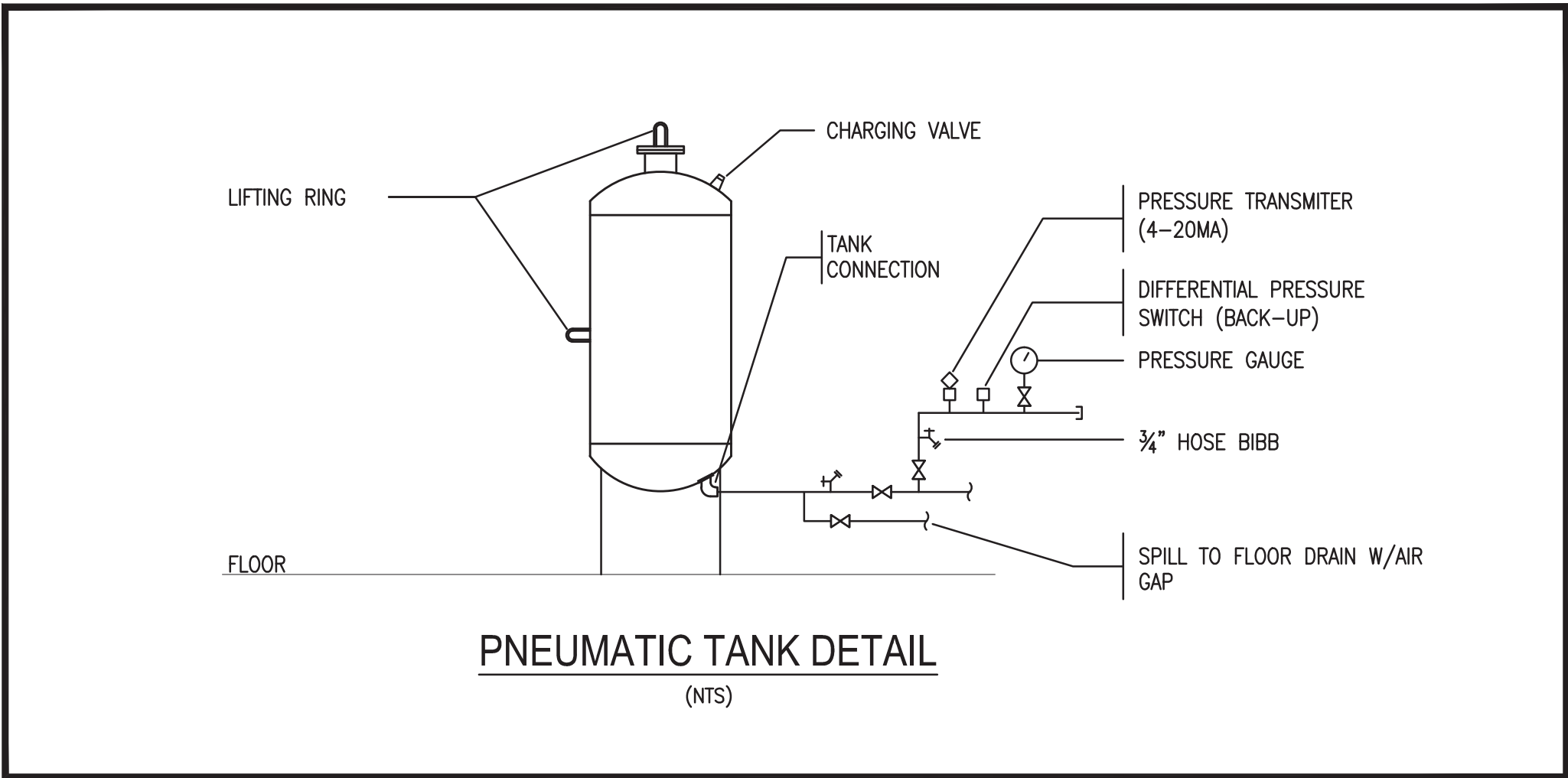
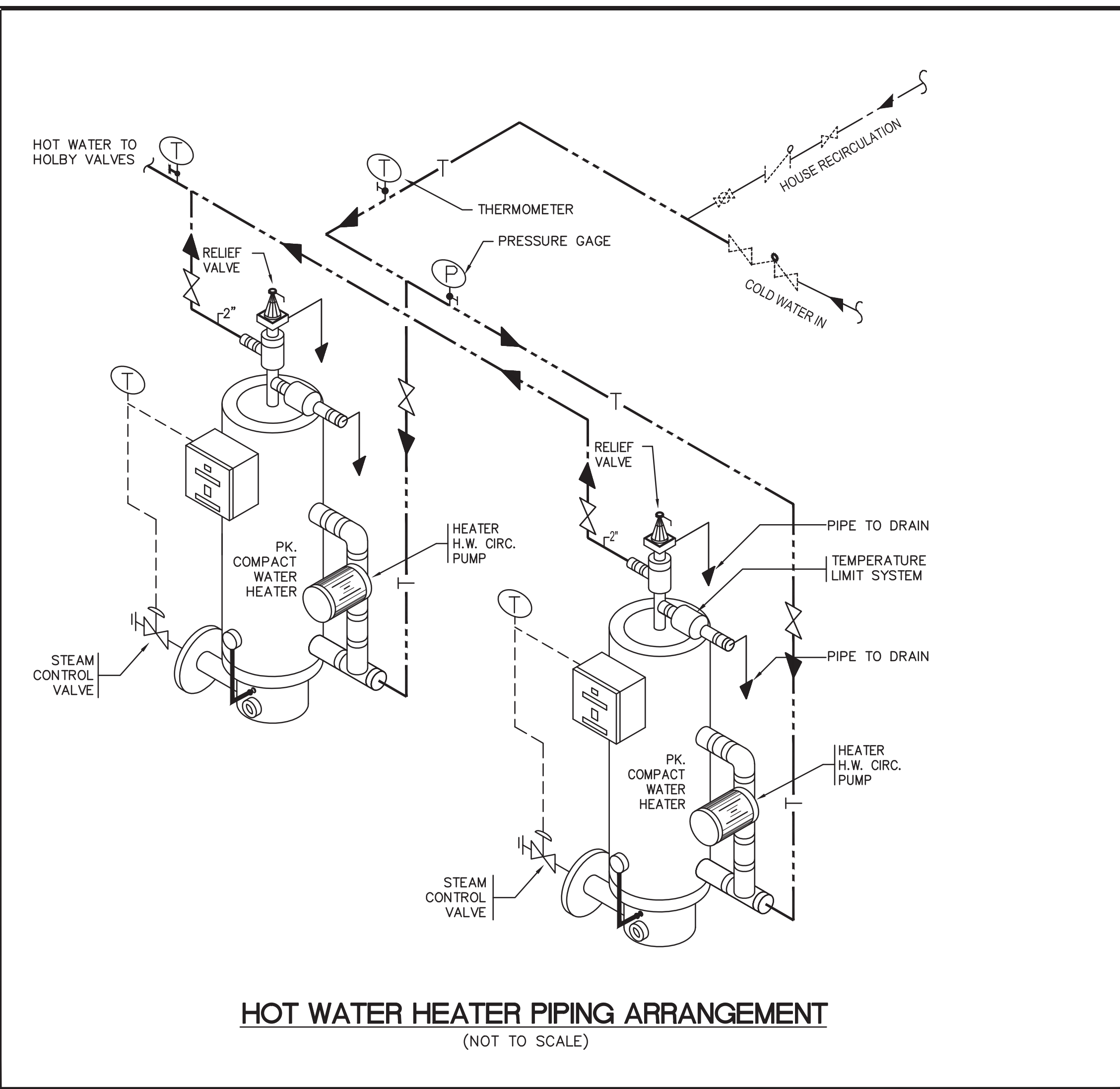
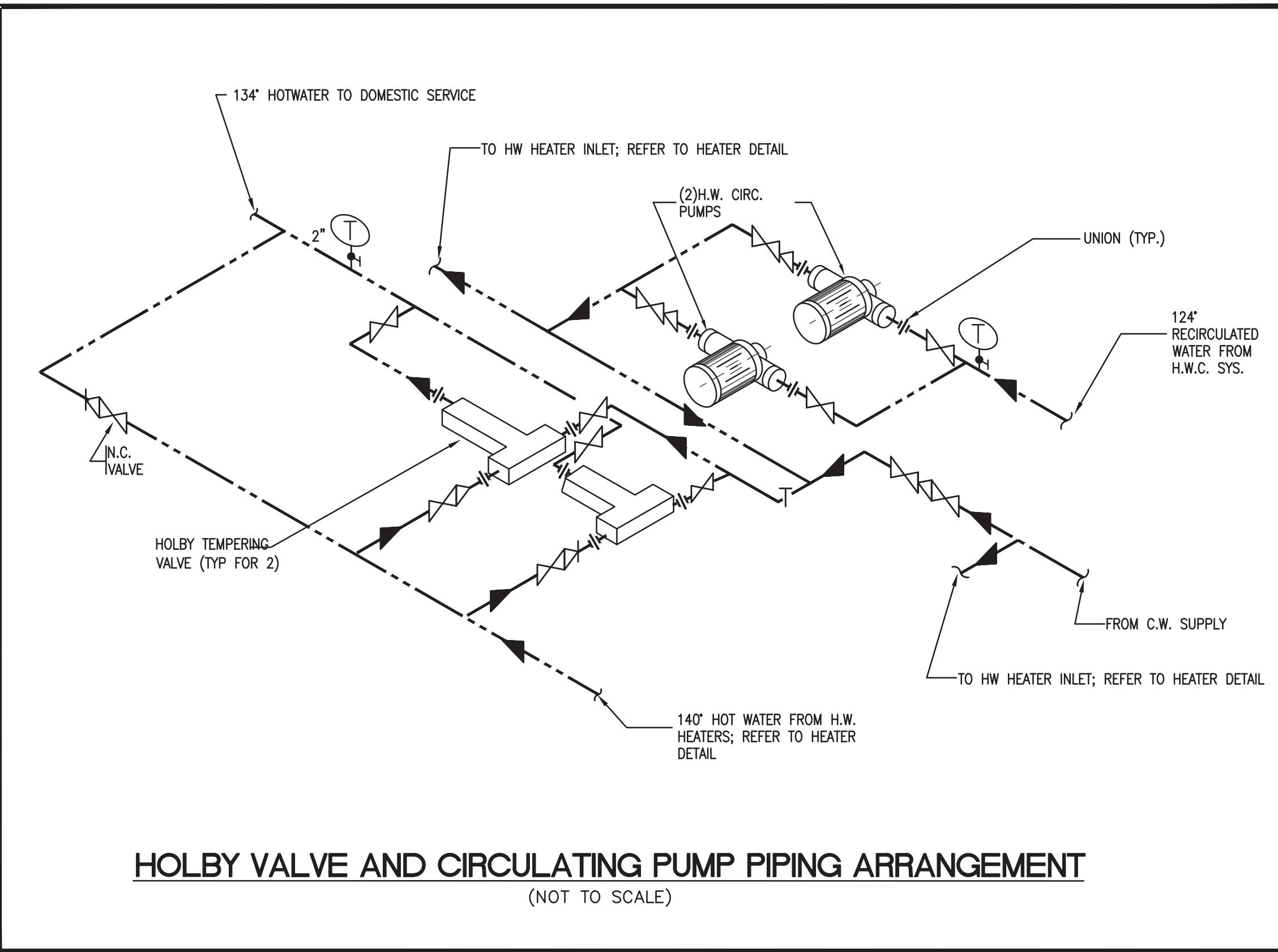
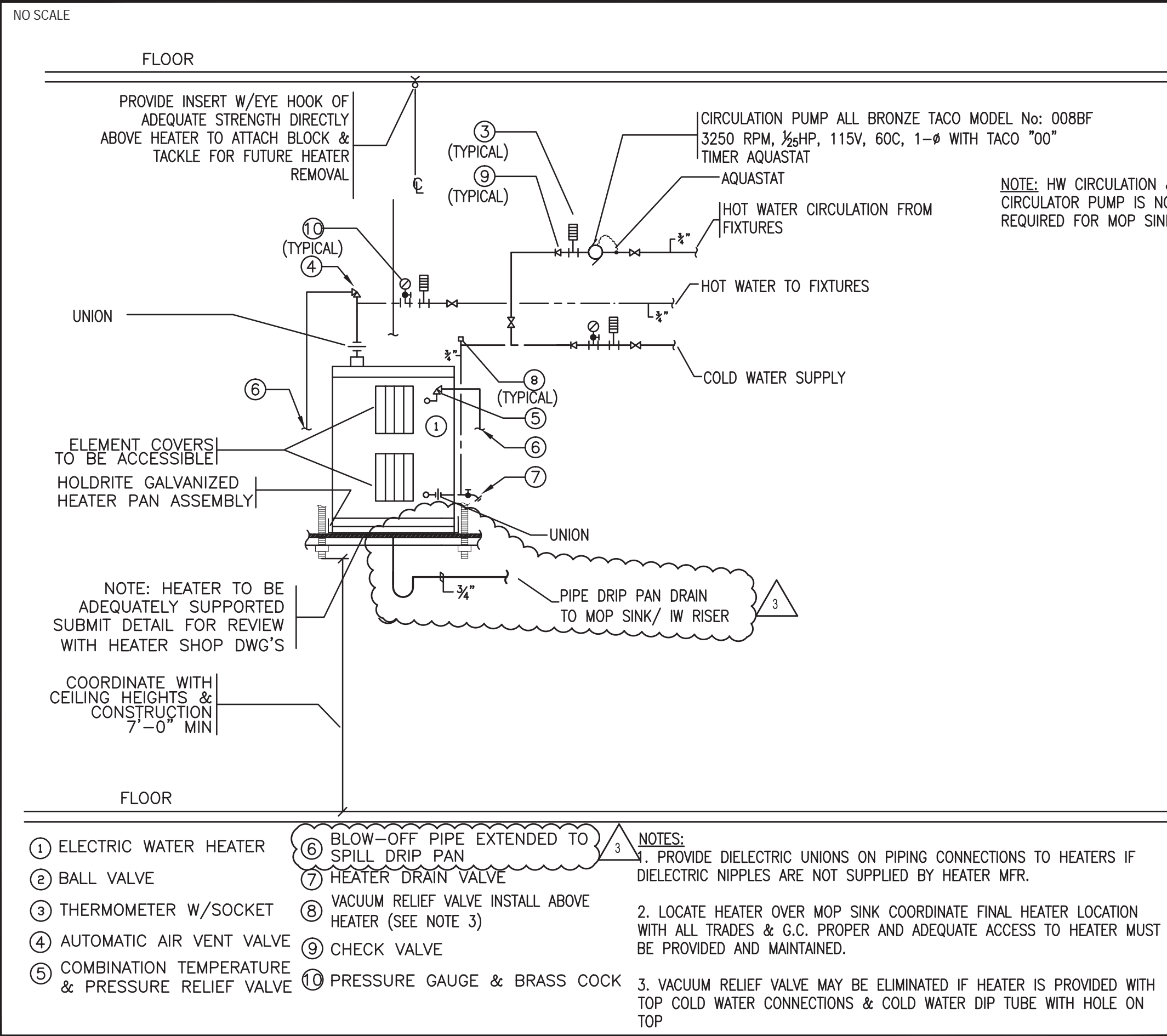
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PLUMBING DETAILS - SHEET 1

Project No.: 1480A.000
Scale: NTS
Sheet No.: P-600.02
Page No.: P-600

WATER HEATER DETAIL SUPPORTED FROM OVERHEAD STRUCTURAL SLAB



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650 Woodlawn Road West, Guelph, Ontario, Canada N1K 1S8

Key Plan:

Seal & Signature:

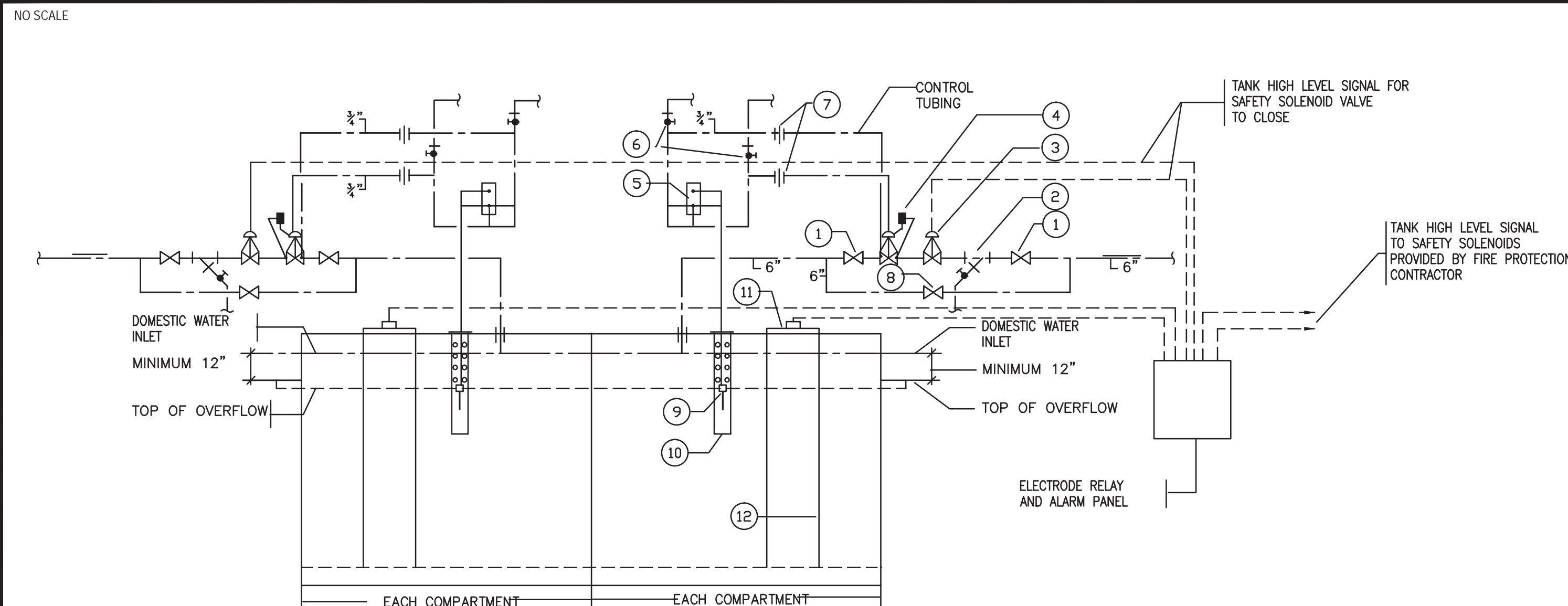
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No.	Date	Description
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1	20 JUN 2014	ISSUED FOR BUILDING PERMIT

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Scale: NTS
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B-SCAN Sheet No.:
P-601.02
Sheet No.:
P-601
Page No.:

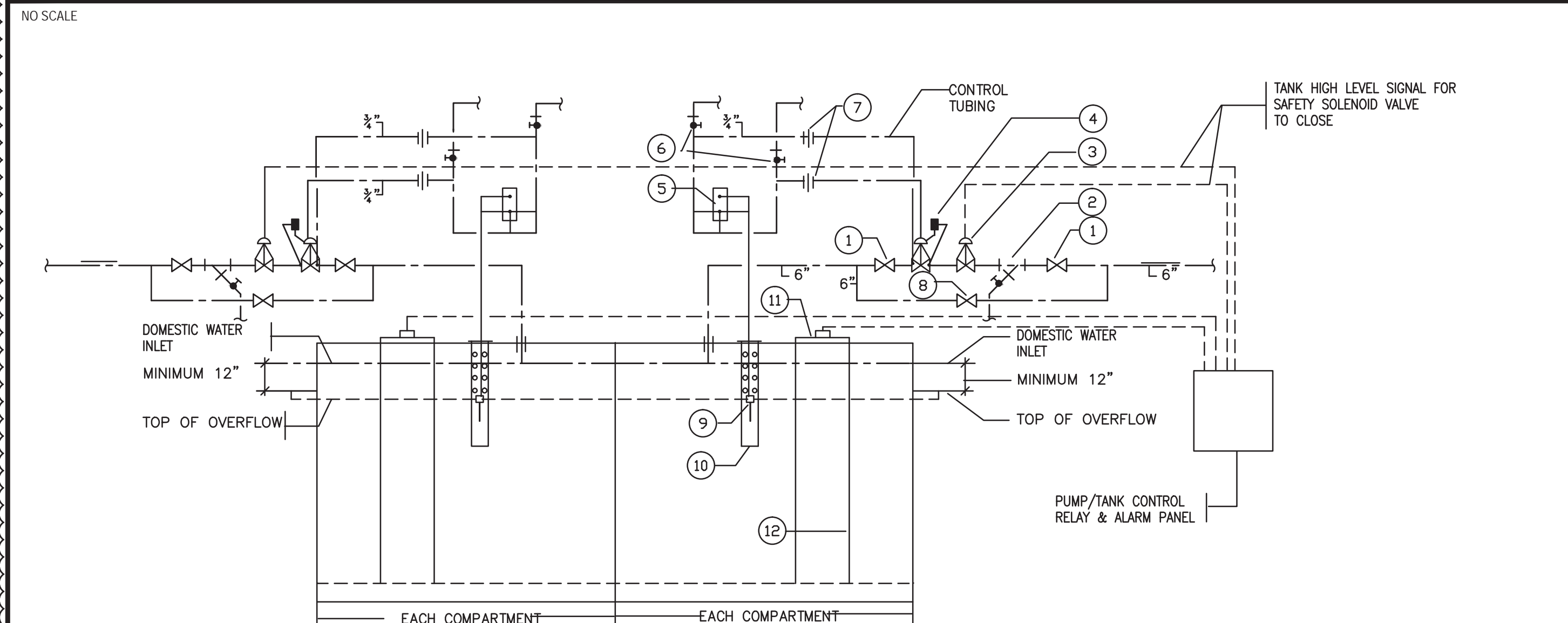
SCHEMATIC DIAGRAM OF SUPPLY PIPING AND CONTROLS FOR THE FIRE RESERVE TANKS



EQUIPMENT KEY

- 1 — GATE VALVE (O.S.&Y. TYPE-FULL SIZE) FIRE PROTECTION CONTRACTOR PROVIDE TAMPER SWITCHES ON VALVES.
- 2 — CAST BRONZE STRAINER MUELLER No.851 OR 852 FITTED W/BLOW OFF BALL VALVE AND PIPED TO OVER-FLOW BASIN(FULL SIZE).
- 3 — SAFETY SOLENOID SHUT-OFF VALVE— CLA-VAL CO. 6"-136 DG-01AKKH, 150F, BBST, 120/60
- 4 — SUPPLY FILL VALVE— MODULATING FLOAT VALVE. CLA-VAL CO. 6"-428G- 01-AKXH, 150F, BBST, W/ 4'-0" SS ROD & SS FLOAT
- 5 — FLOAT CONTROL—CLA VAL CO. No.CFM9KXH PIPED IN SERIES. IF ONE TANK IS BEING CLEANED THE OTHER TANK WILL CONTROL THE WATER LEVEL. REMOTE MOUNTED FROM VALVE
- 6 — AT ALL HIGH POINTS INSTALL A PIPE TEE WITH SIDE OUTLET FACING UP WITH BALL VALVES PIPED TO OVERFLOW BASIN.
- 7 — UNION
- 8 — FULL SIZED VALVED BY-PASS(NORMALLY CLOSED) FOR EMERGENCY FILL.
- 9 — STAINLESS STEEL FLOAT & ROD. PROVIDE FLOAT ROD COUNTER WEIGHT IF REQUIRED.
- 10 — STILLING WELL—STAINLESS STEEL, BRASS OR COPPER W/ 1/2" VENT HOLES LOCATED ABOVE HIGH WATER LEVEL 10" DIAMETER SET PLUMB. INSURE THAT ROD HAS FREE PLAY FOR HORIZONTAL MOVEMENT AND STILLING WELL. IS LONG ENOUGH TO AVOID CATCHING FLOAT ON LOWER RIM
- 11 — PUMP CONTROL & TANK ALARM SYSTEM. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 12 — ELECTRODE STILLING WELL

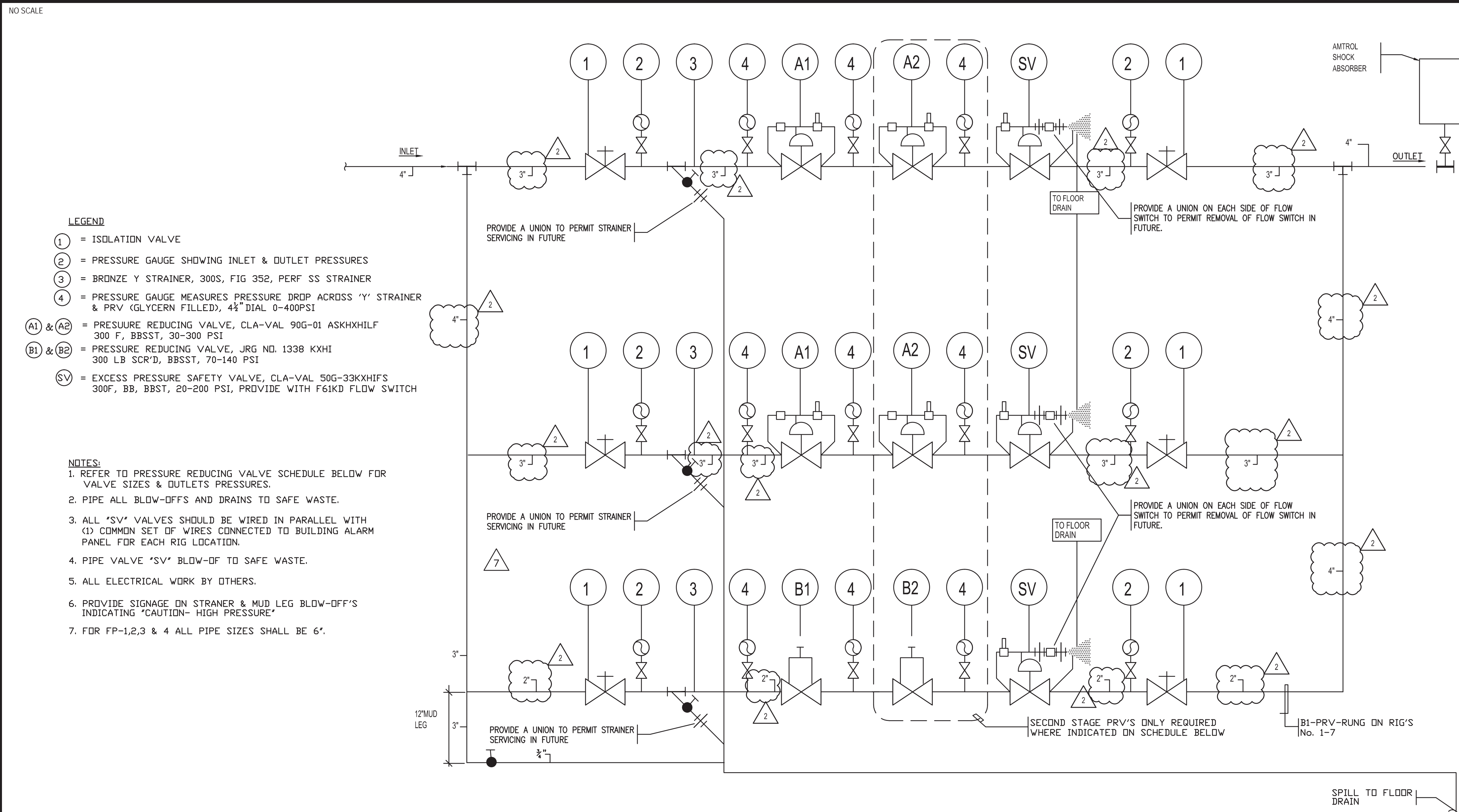
SCHEMATIC DIAGRAM OF SUPPLY PIPING AND CONTROLS FOR THE DOMESTIC WATER HOUSE TANK (SIMILAR FOR COMBINATION DOMESTIC/FIRE RESERVE TANKS)



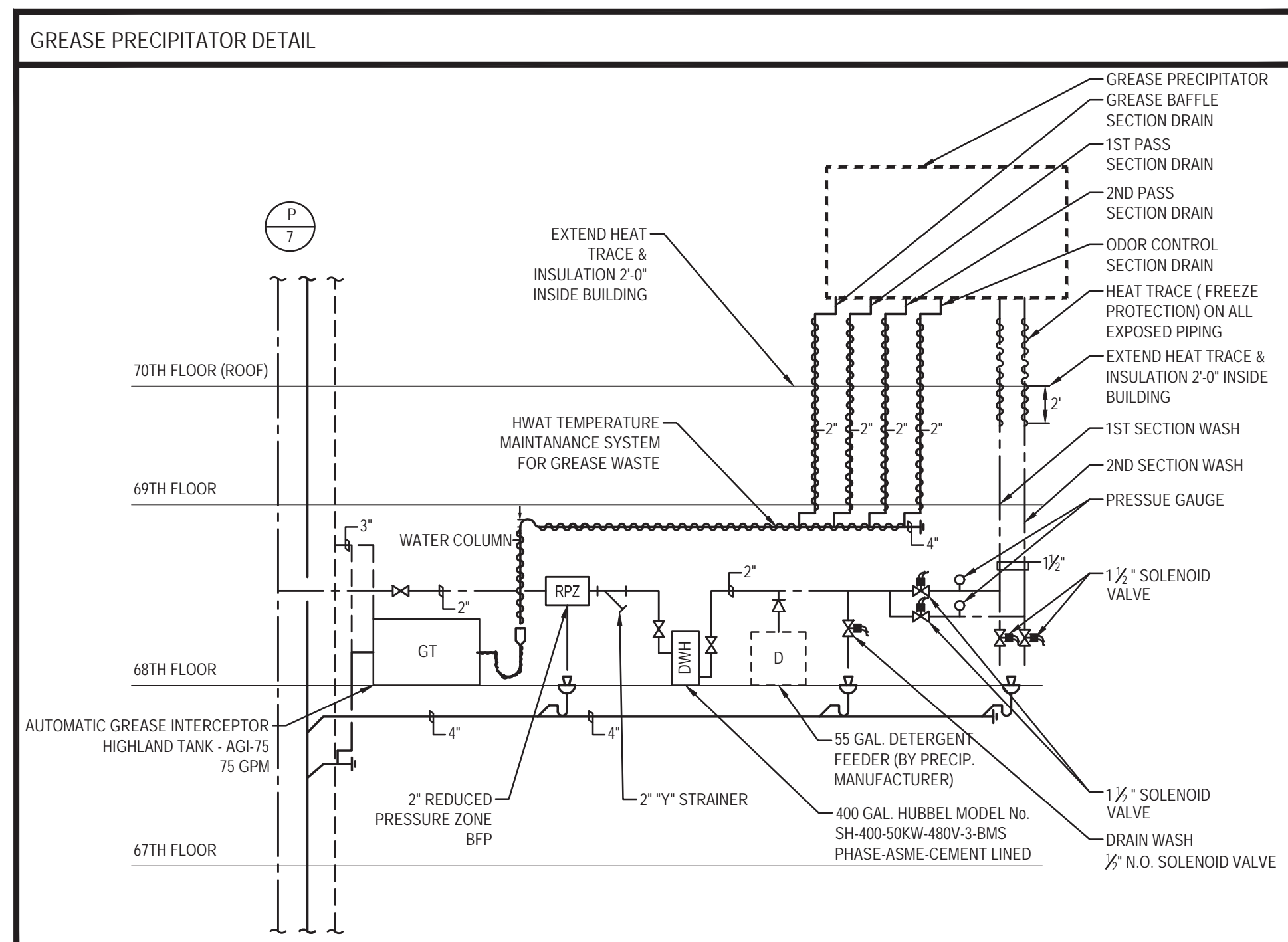
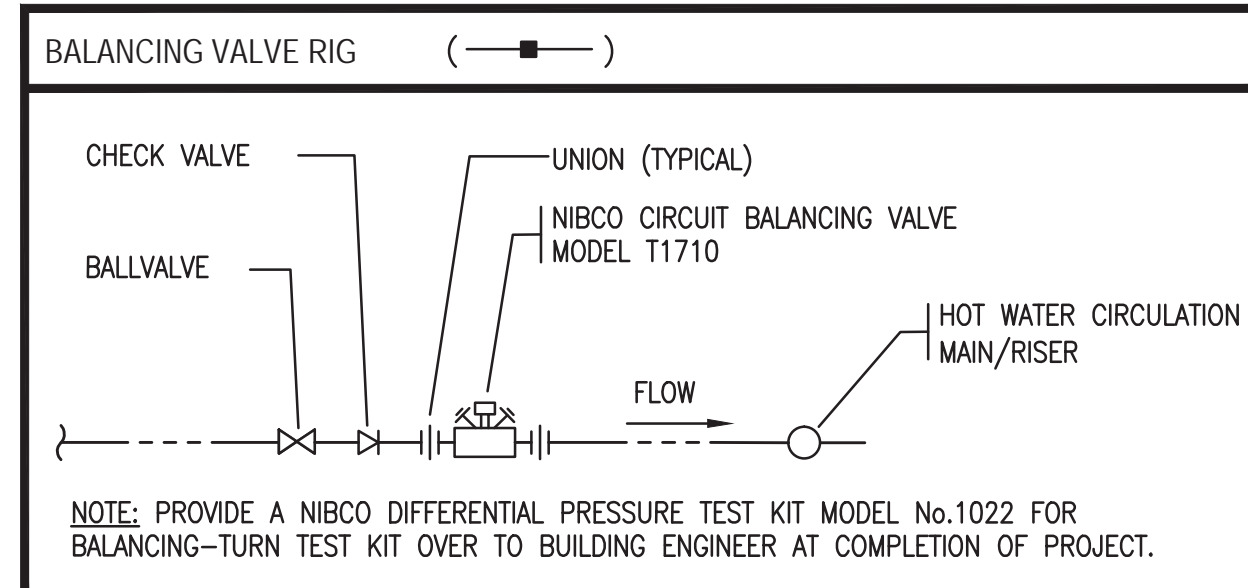
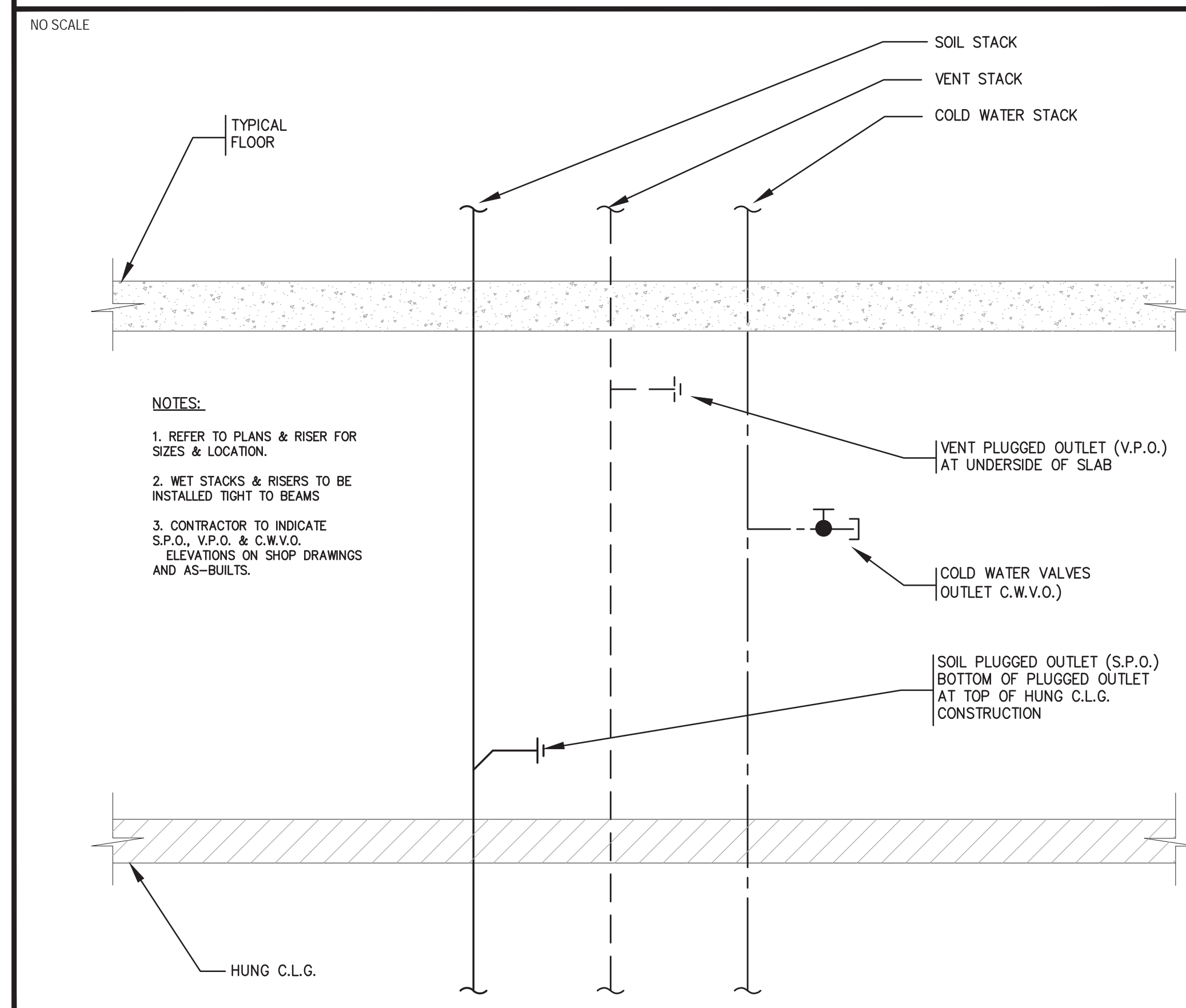
EQUIPMENT KEY

- 1 — GATE VALVE (O.S.&Y. TYPE-FULL SIZE)
- 2 — CAST BRONZE STRAINER MUELLER No.851 OR 852 FITTED W/BLOW OFF BALL VALVE AND PIPED TO OVER-FLOW BASIN(FULL SIZE)
- 3 — SAFETY SOLENOID SHUT-OFF VALVE— CLA-VAL CO. 6"-136 DG-01AKKH, 150F, BBST, 120/60
- 4 — SUPPLY FILL VALVE— MODULATING FLOAT VALVE. CLA-VAL CO. 6"-428G- 01-AKXH, 150F, BBST, W/ 4'-0" SS ROD & SS FLOAT
- 5 — FLOAT CONTROL—CLA VAL CO. No.CFM9KXH PIPED IN SERIES. IF ONE TANK IS BEING CLEANED THE OTHER TANK WILL CONTROL THE WATER LEVEL. REMOTE MOUNTED FROM VALVE
- 6 — AT ALL HIGH POINTS INSTALL A PIPE TEE WITH SIDE OUTLET FACING UP WITH BALL VALVES PIPED TO OVERFLOW BASIN.
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- 8 — FULL SIZED VALVED BY-PASS(NORMALLY CLOSED) FOR EMERGENCY FILL.
- 9 — STAINLESS STEEL FLOAT & ROD. PROVIDE FLOAT ROD COUNTER WEIGHT IF REQUIRED.
- 10 — STILLING WELL—STAINLESS STEEL, BRASS OR COPPER W/ 1/2" VENT HOLES LOCATED ABOVE HIGH WATER LEVEL 10" DIAMETER SET PLUMB. INSURE THAT ROD HAS FREE PLAY FOR HORIZONTAL MOVEMENT AND STILLING WELL. IS LONG ENOUGH TO AVOID CATCHING FLOAT ON LOWER RIM
- 11 — PUMP CONTROL & TANK ALARM SYSTEM. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 12 — ELECTRODE STILLING WELL

MAIN PRV STATION DETAIL

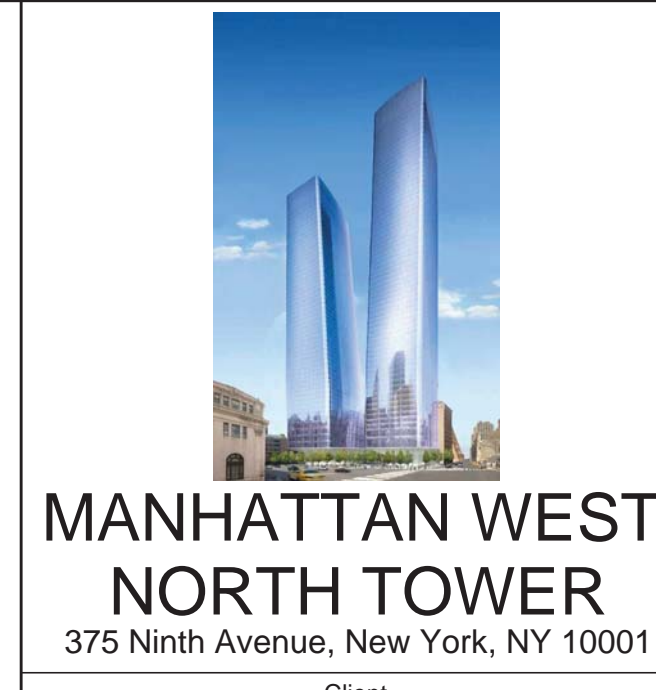


TYPICAL LOCATION OF PLUGGED AND CAPPED OUTLETS ABOVE HUNG CEILING



PRESSURE REDUCING VALVE SCHEDULE

PRV RIG NO.	LOCATION	AREA SERVED	MAX. GPM	MAXIMUM INLET PRESSURE (P.S.I.)	PRV "A1"		PRV "A2"		PRV "B1"		PRV "B2"		SV	SAFETY VALVE SIZES BY PRV RUNG		
					1ST STAGE	2ND STAGE	1ST STAGE	2ND STAGE	1ST STAGE	2ND STAGE	1ST STAGE	2ND STAGE		A1	A1	B1
1	55TH FLOOR	ZONE 7	200	95	3"	83	3"	—	2"	85	2"	—	95	3"	3"	2"
2	45TH FLOOR	ZONE 6	200	155	3"	83	3"	—	2"	85	2"	—	100	3"	3"	2"
3	35TH FLOOR	ZONE 5	200	94	3"	83	3"	—	2"	85	2"	—	94	3"	3"	2"
4	25TH FLOOR	ZONE 4	200	152	3"	83	3"	—	2"	85	2"	—	100	3"	3"	2"
5	15TH FLOOR	ZONE 3	200	210	3"	140	3"	83	2"	140	2"	85	100	3"	3"	2"
6	4TH FLOOR	ZONE 2	200	280	3"	140	3"	83	2"	140	2"	85	100	3"	3"	2"
7	4TH FLOOR	ZONE 1	200	280	3"	140	3"	83	2"	140	2"	85	100	3"	3"	2"



Client
Brookfield

Brookfield Place
250 Vesey Street, 15th Floor, New York, NY 10281

Architecture/Structural Engineering

SOM

Skidmore, Owings & Merrill LLP
14 Wall Street, New York, NY 10005

Civil Engineering

Philip Habib & Associates
102 Madison Avenue #11, North Haven, NY 10016

MEP Engineering

Jaros Baum & Bolles
80 Pine Street, New York, NY 10005

Vertical Transportation

Edgett Williams Consulting Group, Inc.
102 East Biddle Ave. Suite 1, Mill Valley, California 94941

Sustainable Design

Viridian Energy & Environmental
50 Washington Street, Norwalk, CT 06854

Geo-Technical Engineering

Mueser Rutledge Consulting Engineers
14 Penn Plaza, 220 W. 34th Street #610,
New York, NY 10122

Landscape Consultant

Field Operations
475 10th Avenue, New York, NY 10018

Security Consultant

Ducibella, Ventor & Santoro
250 State Street #F1, North Haven, CT 06473

Blast Consultant

Weidinger Associates, Inc.
40 West Street, New York, NY 10005

Acoustical Consultant

Cerami & Associates
404 Fifth Avenue #8, New York, NY 10018

Vibration Consultant

Wilson, Uhrig & Associates, Inc.
65 Broadway, Suite 401, New York, NY 10006

Code Consultant

Code Consultants Professional Engineers PC
215 West 40th Street, 15th Floor, New York, NY 10018

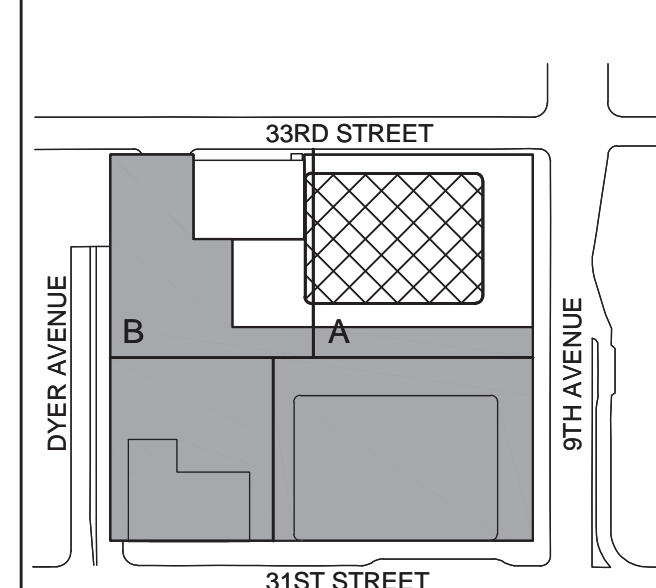
Facade Maintenance Consultant

Entek Engineering LLC
186 Ames Street, Hackensack, NJ 07601

Wind Tunnel Consultant

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West, Guelph
Ontario, Canada N1K 1S8

Key Plan:

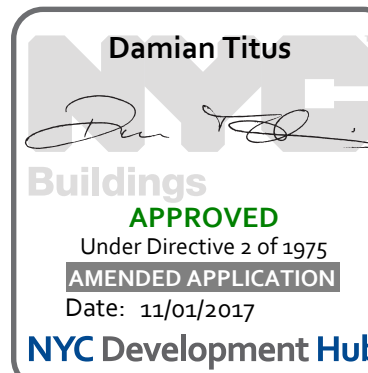


Seal & Signature:



2 23 AUG 2017 ISSUED FOR DOB APPROVAL
1 22 APR 2016 ISSUED FOR P&A
No. Date Description
Sheet Name:

**PLUMBING
DETAILS - SHEET 3**



BUILDING DEPARTMENT NOTE:
THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

Project No.: 1480A.0.00

Date:

Scale: NTS

File No: P-602

B-SCAN Sheet No.:

P-602.01

Sheet No.:

P-602

Page No.: