# Alteration Type II **BURGER KING** MECHANICAL ONLY 3500 Boston Road Bronx, NY 10803

# LIST OF DRAWINGS - 9 Sheets including Title Sheet

Title Sh	neet:	
T-001.01	Project Information, List of Drawings & Plot Plan	03-23-2
Mecha	nical:	
M-001.00	HVAC Legend & Notes	03-23-2
M-100.00	Roof Mechanical Plan	02-19-2
M-101.00	First Floor Mechanical Plan	03-23-2
M-200.00	HVAC Details	03-23-2
M-300.00	HVAC Specifications	03-23-2
Energy	<b>/</b> :	
EN-001.00	Energy Code Compliance Notes	02-19-2
EN-002.00	Energy Code Progress Inspections	02-19-2
EN-003.00	Tabular Analysis	02-19-2

#### GENERAL NOTES:

- 1. CONTRACTOR TO CHECK AND VERIFY ALL MEASUREMENTS AND DIMENSIONS AND ACTUAL CONDITIONS AT SITE AND BE HELD RESPONSIBLE FOR SAME CONTRACTOR TO OBTAIN ALL PERMITS AND FEES TO START AND COMPLETE ALTERATION-UPON COMPLETION OF JOB. CONTRACTOR IS TO SUPPLY OWNER WITH A CERTIFICATE OF OCCUPANCY.
- 2. A STATEMENT SHALL BE FILED BY THE OWNER, THAT THE SYSTEM OF VENTILATION WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICATION LAWS AS FILED BY THE LICENSED PROFESSIONAL ENGINEER OR OTHER QUALIFIED PERSON WHO CONDUCTED THE TEST OF THE SYSTEM AND NOT UNTIL THE STATEMENT OF THE OWNER IS FILED
- 3. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE 2014 NYC PLUMBING CODE 4. ALL WATER SUPPLIES SHALL BE OVER THE RIM OR SHALL BE PROVIDED WITH APPROVED VACUUM BREAKER FOR WATER CLOSET FLUSH VALVES. HOW BIBBS. ETC.
- 5. ALL NOTES, DIMENSIONS, DETAILS AND JOB CONDITIONS ARE TO BE CHECKED AND VERIFIED, ANY DISCREPANCY SHALL BE BROUGHT. TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO COMMENCEMENT OF WORK.
- 6. ALL REQUIRED AND NECESSARY PERMITS SHALL BE SECURED FROM ALL MUNICIPAL AGENCIES HAVING JURISDICTION AT THE COST AND EXPENSE OF THE CONTRACTOR, PRIOR TO START OF WORK, CONTRACTOR SHALL OBTAIN APPROVAL OF ALL COMPLETED WORK AS REQUIRED BY NEW YORK CITY ADMINISTRATIVE CODE AND ALL REQUIRED AGENCIES.
- EACH CONTRACTOR WILL BE HELD RESPONSIBLE FOR HIS WORK. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE BUILDINGS AND CONDITIONS AT THE BUILDINGS AND WILL BE RESPONSIBLE FOR THE JOINING OF WORK OF ALL TRADES
- 8. ALL MATERIALS, ASSEMBLIES AND METHODS OF CONSTRUCTION NOT LISTED AS CONTROLLED INSPECTIONS SHALL BE SUBJECT TO SEMI-CONTROLLED INSPECTION BY THE PERSON SUPERINTENDING THE CONSTRUCTION. SIGNED COPIES OF ALL TEST AND INSPECTION REPORTS SHALL BE FILED THROUGH THE ARCHITECT/ENGINEER WITH THE DEPARTMENT.
- 9. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE REQUIREMENTS OF CHAPTER 33 "SAFEGUARDS DURING CONSTRUCTION OR DEMOLITION."
- 10. CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, BARRICADES, TEMPORARY FENCES, PARTITIONS, AND EXCAVATIONS, ETC. TO ACCOMPLISH ALL OF THE WORK IN AN APPROVED MANNER. 11.NO DRAWINGS TO BE SCALED, DIMENSIONS ARE TO BE USED.
- 12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NEW YORK CITY BUILDING CODE.
- 13. ALL ELECTRIC WORK TO COMPLY WITH THE NYC BUREAU OF ELECTRICAL CONTROL
- 14. THE CONTRACTOR SHALL SEE THAT THE JOB IS BROOM SWEPT UPON COMPLETION OF THE WORK.
- 15. THE ARCHITECT/ENGINEER HAS NOT BEEN RETAINED TO SUPERVISE ANY CONSTRUCTION OR INSTALLATION FOR ANY EQUIPMENT.

### SAFEGUARDS DURING CONSTRUCTION

3301.1.2 FIRE CODE: IN ADDITION TO THE REQUIREMENTS OF THIS CHAPTER, CONSTRUCTION OR DEMOLITION OPERATIONS SHALL ALSO BE CONDUCTED IN CONFORMANCE WITH THE NEW YORK CITY FIRE CODE.

3303.7 FIRE PREVENTION AND FIRE PROTECTION: FIRE FIGHTING EQUIPMENT, ACCESS AT THE CONSTRUCTION OR DEMOLITION SITE AND THE CONDUCT OF ALL CONSTRUCTION OR DEMOLITION OPERATIONS AFFECTING FIRE PREVENTION AND FIRE FIGHTING SHALL COMPLY WITH THE NEW YORK CITY FIRE CODE.

3303.7.1 WATER SUPPLY: NO HAZARDOUS OR COMBUSTIBLE MATERIAL SHALL BE KEPT AT THE SITE UNLESS WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, IS AVAILABLE AT THE SITE.

3303.7.2 FIRE EXTINGUISHERS: FIRE EXTINGUISHERS SHALL BE PROVIDED IN ACCORDANCE WITH THE NEW YORK CITY FIRE CODE.

SECTION FC 1404: PRECAUTIONS AGAINST FIRE 1404.1 SMOKING. SMOKING SHALL BE PROHIBITED AT ALL CONSTRUCTION SITES. SIGNS SHALL BE POSTED IN ACCORDANCE WITH SECTION 310.

### **HVAC NOTES 2014:**

### **GENERAL**

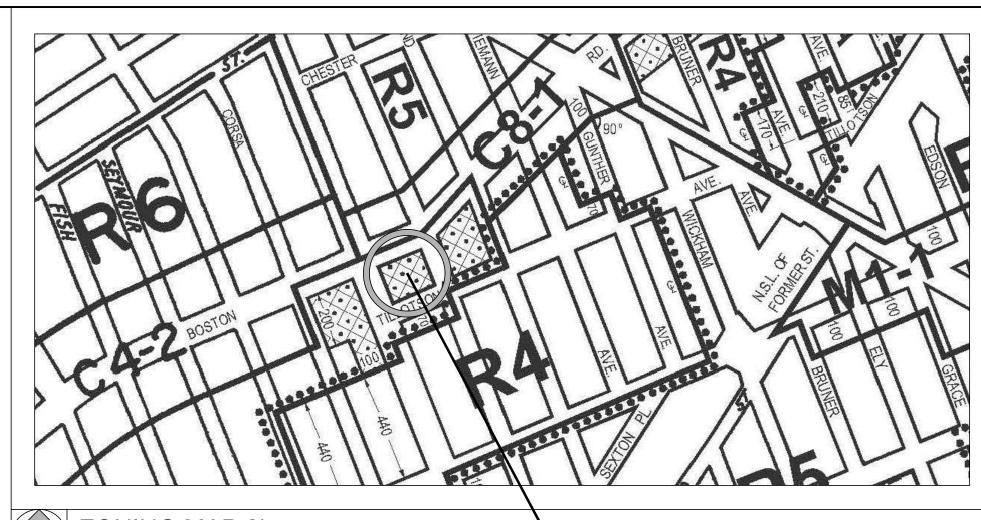
- 1. CONTRACTOR WILL BE HELD RESPONSIBLE TO HAVE VISITED AND EXAMINED TO PREMISES PRIOR TO SUBMITTING HIS PROPOSAL IN ORDER TO UNDERSTAND THE EXISTING CONDITIONS RELATED TO HIS
- WORK IN THIS BUILDING SHALL BE DONE WHEN AND AS DIRECTED AND SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO ITS OCCUPANTS. PLAN INSTALLATION OF WORK AND CONNECTIONS TO EXISTING WORK TO AVOID INTERFERENCE WITH REGULAR OPERATION OF **EXISTING FACILITIES**
- MATERIALS, DOCUMENTATION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- 4. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE WORK, EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS, CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALLOWANCE FOR SUCH REMOVALS AND RELOCATIONS.
- DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIALS, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW YORK.
- FIREPROOFING AND INSULATION DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION.
- SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL
- INVESTIGATE PATH THROUGH WHICH EQUIPMENT WILL BE MOVED. EQUIPMENT SHALL BE BROKEN DOWN IN SECTIONS AS NEEDED FOR MOVING THROUGH BUILDING SPACES. ASCERTAIN FROM BUILDING MANAGEMENT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED
- ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN FULL COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 10. INSTALL EQUIPMENT AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE REQUIRED TO ACCOMPLISH THIS.
- 11. CHANGES IN ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL AND PLUMBING REQUIREMENTS FOR SUBSTITUTED EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE BIDDER WISHING TO MAKE THE SUBSTITUTION. THIS SHALL INCLUDE THE COST OF ANY REDESIGN BY THE AFFECTED DESIGNERS. ANY ADDITIONAL COST INCURRED BY THE AFFECTED SUBCONTRACTORS SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND NOT THE OWNER
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL FLOORING AND ROOFS ALONG THE EQUIPMENT RIGGING PATH AND FOR PROVIDING ALL MATERIALS TO ENSURE THEIR PROTECTION. SUCH AS FIRE RATED PLYWOOD.
- 13. MECHANICAL CONTRACTOR, ALSO REFERRED TO AS DIVISION 15. SHALL COORDINATE ALL CONTROL WIRING AND ASSOCIATED CONDUITS WITH EQUIPMENT MANUFACTURERES, AND COORDINATE ALL POWER REQUIREMENTS WITH DIVISION 16. CONNECT ALL REMOTE DEVICES TO UNITS FOR SPECIFIED CONTROL AS REQUIRED. PROVIDE ALL ADDITIONAL DEVICES, RELAYS, TRANSFORMERS, ETC. AS SUPERVISION OF MANUFACTURERE'S REPRESENTATIVE. DIVISION 15 TO PROVIDE A COORDINATED WIRING DIAGRAM FOR REVIEW AND APPROVAL BT ENGINEER BEFORE WORK IS STARTED. PROVIDE LAMINATED AS BUILT WIRING DIAGRAM AT COMPLETION OF CONSTRUCTION.
- COORDINATE ALL WORK ASSOCIATED WITH THE EQUIPMENT MANUFACTURERES AND ALL POWER SOURCE WIRING AND INTERFACING WITH DIVISION 16. CONTROL AND INTERLOCK WIRING SHALL BE DONE BY DIVISION 15. AND DIVISION 16 SHALL PROVIDE POWER. DIVISION 15 AND MANUFACTURER SHALL FURNISH ALL REQUIRED WIRING DIAGRAMS. MECHANICAL CONTRACTOR, DIVISION 15, IS RESPONSIBLE FOR PROPER WIRING AND OPERATION OF ALL EQUIPMENT.
- 15. PIPING THROUGH WALLS, FLOORS AND BUILDING CONSTRUCTIONS SHALL BE PROVIDED WITH FIRE RATED PIPE SLEEVES. SLEEVES SHALL EXTEND THE FULL DEPTH OF THE CONSTRUCTION PENETRATED (SEE DETAIL)
- 16. ALL DIMENSIONS AND ELEVATIONS FOR NEW AND EXISTING EQUIPMENT, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR CONTRACTOR'S GUIDANCE. CONTRACTOR SHALL EXECUTE SHOP DRAWINGS SHOWING ALL DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD.
- ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.

### **BUILDING DEPARTMENT NOTES:**

- ALL WORK SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE NEW YORK CITY (2014) BUILDING CODE. MECHANICAL CODE, ENERGY CONSERVATION CODE
- MECHANICAL VENTILATION AIR CONDITIONING AND REFRIGERATION: INSPECTION AND TESTS OF THE REQUIRED VENTILATION SYSTEM AS PER NYC 2014 MECHANICAL CODE.
- 3. THE FOLLOWING WORK ITEMS, COMPONENTS MATERIALS, CAPACITIES, ETC., SHALL COMPLY WITH THE FOLLOWING CODE REFERENCE
- 4. DUCT CONSTRUCTION AND SUPPLY INTAKES, EXHAUST AND RELIEVES FILTERS
- 5. NOISE CRITERIA LEVELS AND TEST PROCEDURE FOR SOUND POWER LEVELS.

EXTERIOR WINDOWS AND/OR OPENING IN AIR CONDITIONED AREAS

- REFER TO ARCHITECTURAL DRAWING FOR FIRE RATED WALL LOCATIONS AND RATED CONSTRUCTION. 7. THE VENTILATION INDEX FOR ALL AREAS COMPLIES WITH THE MINIMUM CODE REQUIREMENTS (NYC CODE 2014). ALL CALCULATIONS OF THE VENTILATION INDEX ARE MADE WITHOUT TAKING ANY CREDIT FOR
- 8. UPON COMPLETION OF THIS VENTILATION SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE OF AND DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR HAVING NOT LESS THAN FIVE (5) YEARS OF EXPERIENCE SUPERVISING INSTALLATION OF VENTILATING SYSTEMS. THE TEST SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHO CONDUCTS THE TESTS SHALL FILE A CERTIFICATE AS TO WHETHER THE SYSTEM COMPLIES WITH THE APPLICABLE LAWS. HE SHALL ALSO FILE WITH THE CERTIFICATION. A REPORT OF THE TEST, THE TEST AND REPORT SHALL BE MADE IN A MANNER SATISFACTORY TO THE SUPERINTENDENT. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE. BASE BUILDING PLANS ARE FILED FOR SINGLE TENANT OCCUPANCY. ALL TENANT PLANS WILL BE FILED UNDER SEPARATE APPLICATIONS.
- ALL VENTILATING AND HANGING DUCTWORK, BOTH HIGH AND LOW VELOCITY, TO BE CONSTRUCTED IN ACCORDANCE WITH THE DUCT MANUALS OF SMACNA, LATEST EDITION.



# **ZONING MAP 2b**

(1) EXISTING ROOFTOP UNIT

### RELATED FILINGS:

- 1. ALTERATION TYPE I ESTABLISHING PERMITTED USE & OCCUPANCY FILED & APPROVED UNDER **SEPARATE APPLICATION #220710498**
- 2. ALL RELATED CONSTRUCTION WORK FILED UNDER SEPARATE APPLICATION IN #X00450536 DOB. 3. RELATED PLUMBING WORK FILED UNDER SEPARATE APPLICATION #X00433349-I1 IN DOB NOW.

### **ENERGY COMPLIANCE STATEMENT:**

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE & THE 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK CITY, USING CHAPTER C4.

## SPECIAL INSPECTIONS:

SPECIAL INSPECTION REPORTS TO BE PROVIDED BY A CERTIFIED SPECIAL INSPECTION AGENCY

THE FOLLOWING SPECIAL INSPECTION ITEMS ARE REQUIRED FOR THIS APPLICATION: 1. MECHANICAL SYSTEMS

### PROGRESS INSPECTIONS:

PROGRESS INSPECTION REPORTS TO BE PROVIDED BY A CERTIFIED SPECIAL INSPECTION AGENCY

- THE FOLLOWING PROGRESS INSPECTION ITEMS ARE REQUIRED FOR THIS APPLICATION
- 1. ENERGY CODE COMPLIANCE INSPECTIONS
- 2. FINAL

### **ENERGY CODE PROGRESS INSPECTIONS:**

ENERGY CODE PROGRESS INSPECTION REPORTS TO BE PROVIDED BY A CERTIFIED SPECIAL INSPECTION AGENCY

**TILLOTSON AVENUE** 

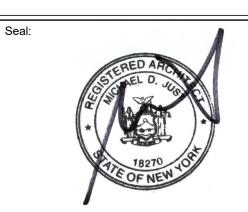
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- THE FOLLOWING ENERGY CODE PROGRESS INSPECTION ITEMS ARE REQUIRED FOR THIS APPLICATION:
- 1. HVAC-R AND SERVICE WATER HEATING EQUIPMENT
- 2. HVAC-R AND SERVICE WATER HEATING CONTROLS
- 3. HVAC-R AND SERVICE WATER PIPING DESIGN AND INSULATION
- 4. MAINTENANCE INFORMATION

#### EXISTING ENCLOSRE 12 11) 10 DELIVERY EXISTING ENTRY 1-STORY BUILDING : 8 CONST. " CLASS IIB 7 3401 6 **EXISTING** 1-STORY BRICK BUILDING CONST. CLASS IIB

**PLOT PLAN** 

3500 Boston Post Road Bronx, NY 10803



PROJECT INFORMATION. LIST OF DRAWINGS & PLOT PLAN

NYCDOB APPLICATION:

BLOCK:

ZONE:

MAP:

LOT:

X00433355-P1

Job No.: BLOCK: 4723 LOT: 66 18049 02-19-21 C2-2 in R5 Drawn By: (Sheet: 18049 ZONE: MAP: MY 1 of 9 4723 C2-2 IN R5 T-001.01

191.02'(LOT) 8'-0" HANDICAP **ENTRY** ACCESSIBLE ISLE -HANDICAP-(1) & ACCESSIBLE AISLE • **BOSTON POST ROAD** 

SCALE: 1/32" = 1'-0"

SHALL BE DUPLICATED. USED BY OR DISCLOSED TO AN PERSON, FIRM OR CORPORATION FOR ANY PURPOSE 200 Garden City Plaza Garden City, NY 11530

mjust@mjarch.com

02-11-21 AS PER DOB OBJECTIONS

02-19-21 AS PER DOB OBJECTIONS

MECHANICAL SCOPE OF

03-23-21 AS PER CHANGES TO

Special & Progress Inspections

M JUST ARCHITECTURE PC SHALL ONLY IDENTIFY AL REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE

INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL &

THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO

BE CONSIDERED EITHER BEING APPROVED OR IN

IT IS A VIOLATION OF NEW YORK REGULATION 69.5(b)

EM IN ANY WAY WITHOUT AFFIXING TO THE ITEM HIS

SEAL AND THE NOTIFICATION "ALTERED BY". FOLLOW

BY A SIGNATURE. DATE OF SUCH ALTERATION AND A

THIS DRAWING HEREIN CONSTITUTE ORIGINAL AND

PROPERTY OF M. JUST ARCHITECTURE, PC AND WER

UNPUBLISHED WORK AND ARE OWNED BY AND

OR ANY PERSON. UNLESS ACTING UNDER THE

New York Alteration Warning Statement

SPECIFIC DESCRIPTION OF THE ALTERATION

www.justarchitectureny.com

**DOB Approval Stamps** 

Jay DellaMonica

### **HVAC BUILDING NOTES**

#### A. GENERAL

- 1. CONTRACTOR WILL BE HELD RESPONSIBLE TO HAVE VISITED AND EXAMINED TO PREMISES PRIOR TO SUBMITTING HIS PROPOSAL IN ORDER TO UNDERSTAND THE EXISTING CONDITIONS RELATED TO HIS
- 2. WORK IN THIS BUILDING SHALL BE DONE WHEN AND AS DIRECTED AND SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO ITS OCCUPANTS. PLAN INSTALLATION OF NEW YORK AND CONNECTIONS TO EXISTING WORK TO AVOID INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES.
- 3. MATERIALS, DOCUMENTATION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS, LOCAL CODES AND AS SPECIFIED.
- 4. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE WORK, EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS. CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALLOWANCE FOR SUCH REMOVALS AND RELOCATIONS.
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- 12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL FLOORING AND ROOFS ALONG THE EQUIPMENT RIGGING PATH AND FOR PROVIDING ALL MATERIALS TO ENSURE THEIR PROTECTION. SUCH AS FIRE RATED PLYWOOD.
- 13. MECHANICAL CONTRACTOR, ALSO REFERRED TO AS DIVISION 15. SHALL COORDINATE ALL CONTROL WIRING AND ASSOCIATED CONDUITS WITH EQUIPMENT MANUFACTURERES, AND COORDINATE ALL POWER REQUIREMENTS WITH DIVISION 16. CONNECT ALL REMOTE DEVICES TO UNITS FOR SPECIFIED CONTROL AS REQUIRED. PROVIDE ALL ADDITIONAL DEVICES, RELAYS, TRANSFORMERS, ETC. AS SUPERVISION OF MANUFACTURERE'S REPRESENTATIVE. DIVISION 15 TO PROVIDE A COORDINATED WIRING DIAGRAM FOR REVIEW AND APPROVAL BT ENGINEER BEFORE WORK IS STARTED. PROVIDE LAMINATED AS BUILT WIRING DIAGRAM AT COMPLETION OF CONSTRUCTION.
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- 16. ALL DIMENSIONS AND ELEVATIONS FOR NEW AND EXISTING EQUIPMENT, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR CONTRACTOR'S GUIDANCE. CONTRACTOR SHALL EXECUTE SHOP DRAWINGS SHOWING ALL DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD.
- 17. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.

### **B. BUILDING DEPARTMENT NOTES:**

- 1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE NEW YORK CITY (2014) BUILDING CODE. MECHANICAL CODE. ENERGY CONSERVATION CODE.
- 2. MECHANICAL VENTILATION AIR CONDITIONING AND REFRIGERATION: INSPECTION AND TESTS OF THE REQUIRED VENTILATION SYSTEM AS PER NYC 2014 MECHANICAL CODE.
- 3. THE FOLLOWING WORK ITEMS, COMPONENTS MATERIALS, CAPACITIES, ETC., SHALL COMPLY WITH THE FOLLOWING CODE REFERENCE.
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- 5. NOISE CRITERIA LEVELS AND TEST PROCEDURE FOR SOUND POWER LEVELS.
- 6. REFER TO ARCHITECTURAL DRAWING FOR FIRE RATED WALL LOCATIONS AND RATED CONSTRUCTION.
- 7. THE VENTILATION FOR ALL AREAS COMPLIES WITH THE MINIMUM CODE REQUIREMENTS (NYC CODE 2014). ALL CALCULATIONS OF THE VENTILATION ARE MADE WITHOUT TAKING ANY CREDIT FOR EXTERIOR WINDOWS AND/OR OPENING IN AIR CONDITIONED AREAS.
- 8. UPON COMPLETION OF THIS VENTIALION SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE OF AND DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR HAVING NOT LESS THAN FIVE (5) YEARS OF EXPERIENCE SUPERVISING INSTALLAION OF VENTILATING SYSTEMS. THE TEST SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHO CONDUCTS THE TESTS SHALL FILE A CERTIFICATE AS TO WHETHER THE SYSTEM COMPLIES WITH THE APPLICABLE LAWS. HE SHALL ALSO FILE WITH THE CERTIFICATION. A REPORT OF THE TEST, THE TEST AND REPORT SHALL BE MADE IN A MANNER SATISFACTORY TO THE SUPERINTENDENT. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE. BASE BUILDING PLANS ARE FILED FOR SINGLE TENANT OCCUPANCY. ALL TENANT PLANS WILL BE FILED UNDER SEPARATE APPLICATIONS.
- 9. ALL VENTILATING AND HANGING DUCTWORK, BOTH HIGH AND LOW VELOCITY, TO BE CONSTRUCTED IN ACCORDANCE WITH THE DUCT MANUALS OF SMACNA, LATEST EDITION. CREDIT FOR EXTERIOR WINDOWS AND/OR OPENING IN AIR CONDITIONED AREAS.
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- 9. ALL VENTILATING AND HANGING DUCTWORK, BOTH HIGH AND LOW VELOCITY, TO BE CONSTRUCTED IN ACCORDANCE WITH THE DUCT MANUALS OF SMACNA, LATEST EDITION.

**HVAC SYMBOLS** SINGLE LINE DUCTWORK - NEW SINGLE LINE DUCTWORK - NEW WITH 1.5" ACOUSTICAL LINING **DUCT UNDER PRESSURE** (SUPPLY AIR OR FAN DISCHARGE) **DUCT UNDER NEGATIVE PRESSURE** (RETURN, EXHAUST OR OUTSIDE AIR) **VOLUME DAMPER** COD = CABLE TYPED REMOTE VOLUME DAMPER COMBINATION FIRE SMOKE DAMPER AND ACCESS DOOR —— - —— FSD/AD FIRE DAMPER AND ACCESS DOOR —— - —— FD/AD **BACK DRAFT DAMPER** — BDD **AUTOMATIC DAMPER (ELECTRIC) CUBIC FEET PER MINUTE** COR CFM DIAMETER **SQUARE FEET** UNDERCUT DOOR <del>UC ►</del>

300 CFM RETURN AIR

10" BY 8" CEILING REGISTER (CEILING GRILLE)

VANED ELBOW (SEE DETAIL) OR RADIUS ELBOW

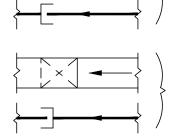
VANED ELBOW (SEE DETAIL)

RADIUS ELBOW

SEE DUCT DETAILS FOR TYPE OF BRANCH CONNECTION

**DUCT FLEXIBLE CONNECTION** 

VERTICAL DUCT DROP



VERTICAL DUCT RISE



SMOKE DETECTOR

TEMPERATURE SENSOR

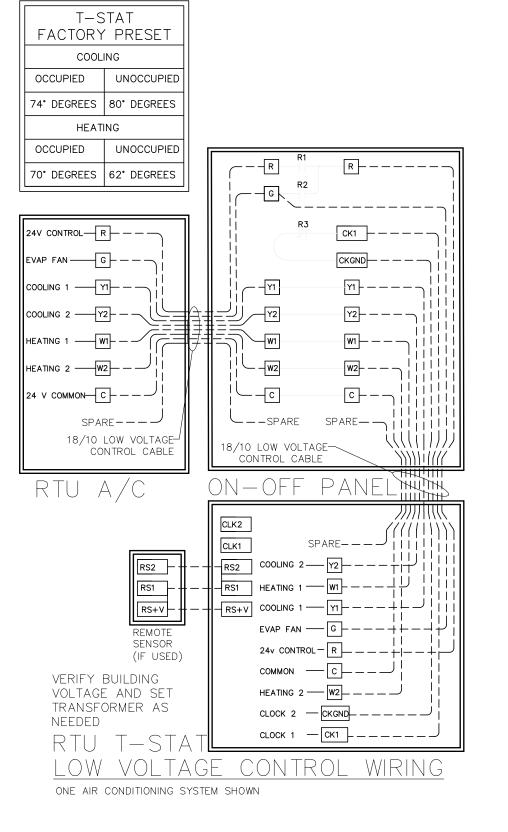


(WS)

WALL SWITCH

### **GENERAL NOTES**

- 1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENTS OF SYSTEMS AND SCOPE OF WORK INCLUDED IN CONTRACT. DRAWINGS ARE INTENDED TO SHOW THE PROPER SIZE AND GENERAL LOCATION OF THE EQUIPMENT, PIPING, DUCTWORK, ETC. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND FIELD CONNECTIONS. DEVIATION FROM LAYOUT SHOWN MUST BE APPROVED BY THE ARCHITECT
- 2. ALL HVAC WORK SHALL CONFORM WITH NEW YORK CITY BUILDING CODE, NEW YORK STATE ENERGY CONSERVATION CODE AND ALL APPLICABLE AGENCIES HAVING JURISDICTION.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS. CONTROLLED INSPECTION SHALL BE PERFORMED BY THIS CONTRACTOR.
- 4. ALL DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR DROPS, RISES AND TRANSITIONS.
- 5. ALL DUCTWORK DIMENSIONS INDICATED ARE NET INSIDE DIMENSIONS.
- 6. CONTRACTOR TO COORDINATE HVAC WORK WITH ALL OTHER TRADES. SHEET METAL SHOP DRAWINGS SHALL INDICATE ALL HUNG CEILING STARTING POINTS, ELEVATIONS, BREAK LINES, PIPING, LIGHTING FIXTURES, PIPING OF OTHER TRADES, ETC. DUCTWORK SHALL BE SET UP OR DOWN TO AVOID CONFLICTS.
- 7. FOR EXACT LOCATIONS OF DIFFUSERS, GRILLES, REGISTERS, LOUVERS, ETC. SEE ARCHITECTURAL DRAWINGS.
- DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS IF REQUIRED WITH NO EXTRA COST TO THE OWNER.
- 9. PROVIDE MANUAL DAMPERS AT ALL BRANCH TAP CONNECTIONS TO TRUNK DUCTS FOR BALANCING PURPOSES, EACH DAMPER SHALL BE PROVIDED WITH OPERATOR AND LOCKING DEVICE. PROVIDE CABLE TYPE OPERATED VOLUME DAMPER FOR GROUND FLOOR THRU PENTHOUSE.
- 10. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF DIFFUSER AND REGISTER FRAME TYPE WITH ARCHITECTURAL FINISHES.
- 11. SHOP DRAWINGS SHALL BE PREPARED WITH COMPLETE DIMENSIONAL INFORMATION, INCLUDING COORDINATES TO BRANCH DUCT AND DIFFUSERS STUBS. ELEVATIONS TO THE UNDERSIDE OF EXISTING LOW PRESSURE DUCTS AND NEW DUCTS, SHALL BE CLEARLY INDICATED ON THE DRAWING SUBMITTED AND SHALL BE CAREFULLY CHECKED FOR CONFORMANCE WITH CEILING HEIGHT REQUIREMENTS. ALL CONFLICTS MUST BE FLAGGED ON THE SHOP DRAWINGS. SHOP DWG SHALL INCLUDE A LIST OF REFERENCE DRAWINGS USED.
- 12. CONTRACTOR TO SURVEY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. BRING ANY DEFICIENCIES/DISCREPANCIES TO ENGINEER'S ATTENTION, ALL NEW WORK TO COMPLY WITH ALL CODE REQUIREMENT AND ETC.
- 13. ALL ROUND DUCT TO BE SPINAL DUCT AS PER SMACNA STANDARDS



TTENTION GENERAL CONTRACTOR: "RE-ENGINEERING" DEVIATIONS FROM THE SHOWN DESIGN AND REQUIRED HVAC EQUIPMENT MUST BE APPROVED IN ADVANCE BY THE ARCHITECT AND PROFESSIONAL ENGINEER. UNAUTHORIZED SUBSTITUTIONS OR ALTERATIONS WILL VOID THE SIGNATURE AND|SEAL OF THE PROFESSIONAL ENGINEER AND LEAVE VIOLATORS RESPONSIBLE FOR RESUBMISSION OF SIGNED AND SEALED DRAWINGS.

UPON COMMENCEMENT OF ROUGH-IN AS SCHEDULED BY NCA CONSULTANTS, THE AIR CONDITIONING CONTRACTOR IS TO REMAIN ON THE JOB SITE FULL TIME UNTIL THE ROUGH-IN IS 100% COMPLETE. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT WILL VERIFY. UPON COMMENCEMENT OF TRIM-OUT AS SCHEDULED BY NCA CONSULTANTS, THE AIR CONDITIONING CONTRACTOR IS TO REMAIN ON THE JOB SITE FULL TIME UNTIL THE TRIM-OUT IS 100% COMPLETE. THE GENERAL CONTRACTOR'S SITE

SUPERINTENDENT WILL VERIFY.



Rev. #	Date:	Description:
	02-11-21	AS PER DOB OBJECTIONS
	02-19-21	AS PER DOB OBJECTIONS
1	03-23-21	AS PER CHANGES TO MECHANICAL SCOPE OF WORK
		ress Inspections:

REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE DESIGN APPLICANT.

THE OWNER MUST RETAIN A CERTIFIED SPECIAL INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL & PROGRESS INSPECTION ITEMS

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 EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

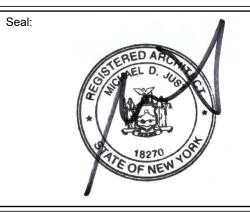
New York Alteration Warning Statement: IT IS A VIOLATION OF NEW YORK REGULATION 69.5(b) FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY WITHOUT AFFIXING TO THE ITEM HIS SEAL AND THE NOTIFICATION "ALTERED BY". FOLLOWER BY A SIGNATURE DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION

ALL IDEAS, DESIGNS, ARRANGEMENTS, DRAWINGS AND WRITTEN MATERIALS INDICATED OR REPRESENTED BY THIS DRAWING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK AND ARE OWNED BY AND PROPERTY OF M. JUST ARCHITECTURE, PC AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE IN CONNECTION WITH THIS SPECIFIC PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE DUPLICATED, USED BY OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF M. JUST ARCHITECTURE, PC

Jay DellaMonica 200 Garden City Plaza Garden City, NY 11530

DOB Approval Stamps:

3500 Boston Post Road Bronx. NY 10803



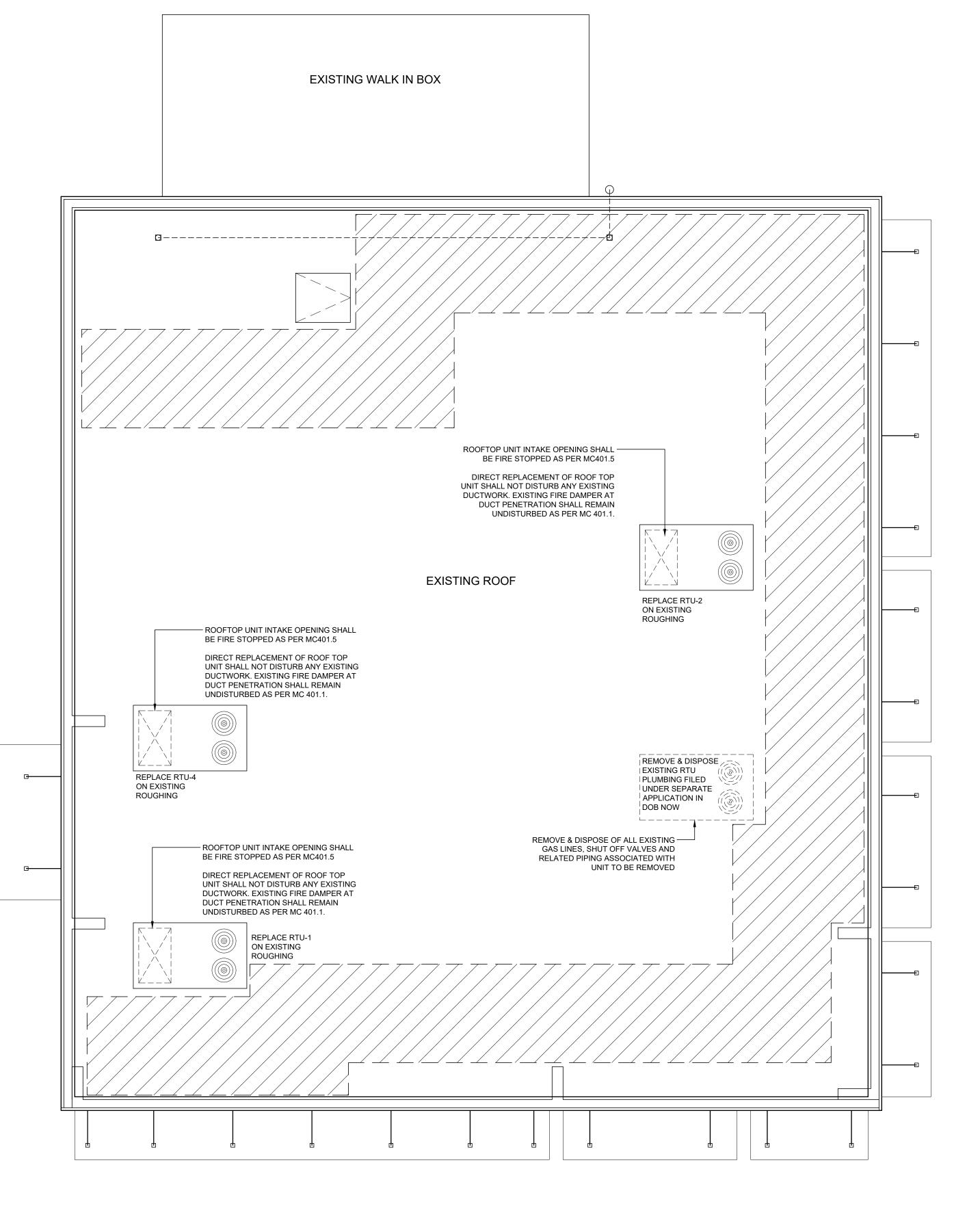
Drawing Title: **HVAC LEGEND &** NOTES

NYCDOB APPLICATION:

Job No.: BLOCK: 4723 LOT: 18049 66 ZONE: C2-2 in R5 Drawn By: Sheet: MAP: MY

M-001.00

Drawing No.:



**BOSTON ROAD** 

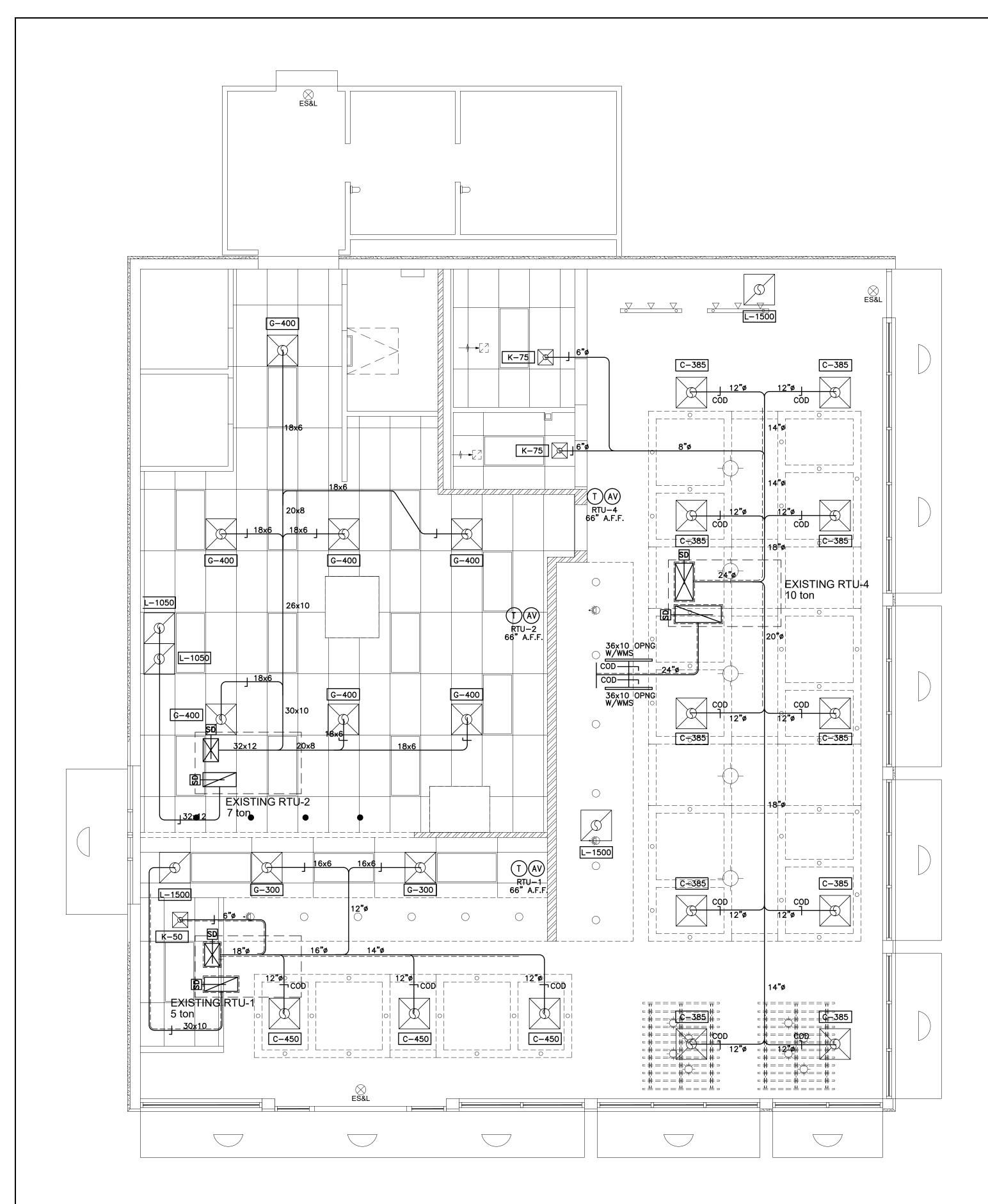


Michael D. Just, R.A., A.I.A. ROOF MECHANICAL LEGEND mjust@mjarch.com www.justarchitectureny.com EXISTING CONSTRUCTION TO REMAIN UNDISTURBED RCHITECTURE MINIMUM 6'-0"Wx9'-0"H FDNY CLEAR ACCESS PATH Rev. Date: Description: 02-11-21 AS PER DOB OBJECTIONS MY 02-19-21 AS PER DOB OBJECTIONS MY 03-23-21 AS PER CHANGES TO **ROOF MECHANICAL NOTES** MECHANICAL SCOPE OF ALL CONDITIONS ARE EXISTING TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED ALL RELATED PLUMBING WORK FILED UNDER APPLICATION #X00433349-I1 IN DOB NOW. CAP & REMOVE (1) EXISTING ROOFTOP UNIT AS INDICATED ON PLAN. REPLACE (3) EXISTING GAS-FIRED HVAC UNITS ON EXISTING GAS ROUGHING AS INDICATED ON PLAN. AS PER TABLE C403.3.2(1) OF THE 2020 NYCECC - AIR CONDITIONERS, AIR COOLED <65,000 BTU/HR, ALL OTHER HEATING SECTION TYPE, SINGLE PACKAGE SHALL HAVE A MINIMUM EFFICIENCY OF 13.0 SEER AS PER TEST PROCEDURE AHRI AS PER TABLE C403.3.2(1) OF THE 2020 NYCECC - AIR CONDITIONERS, AIR COOLED >=135,000 BTU/HR AND <240,000 BTU/HR, ALL OTHER HEATING SECTION TYPE, SINGLE PACKAGE SHALL HAVE A MINIMUM EFFICIENCY OF 12.2 IEER AS PER TEST PROCEDURE AHRI 340/360. AS PER TABLE C403.3.2(4) OF THE 2020 NYCECC - WARM-AIR FURNACES, GAS-FIRED, <225,000 BTU/HR, MAXIMUM CAPACITY SHALL HAVE A MINIMUM EFFICIENCY OF 80% AFUE OR 80% THERMAL EFFICIENCY AS PER TEST PROCEDURE DOE 10 CFR PART 430 OR SECTION 2.39 THERMAL EFFICIENCY, ANSI Z21.47. AS PER SECTION C403.5 OF THE 2020 NYCECC - ECONOMIZERS ARE REQUIRED FOR INDIVIDUAL FAN SYSTEMS WITH COOLING CAPACITY GREATER THAN OR EQUAL TO 54,000 BTU/H SERVING OTHER THAN GROUP R OCCUPANCIES. AS PER SECTION C408 OF THE 2020 NYCECC - THE BUILDING OPERATIONS AND MAINTENANCE DOCUMENTS SHALL BE Special & Progress Inspections: PROVIDED TO THE OWNER AND SHALL CONSIST OF MANUFACTURERS' INFORMATION, SPECIFICATIONS AND M. JUST ARCHITECTURE, PC SHALL ONLY IDENTIFY ALL REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE RECOMMENDATIONS; PROGRAMMING PROCEDURES AND DATA POINTS; NARRATIVES; AND OTHER MEANS OF DESIGN APPLICANT. ILLUSTRATING TO THE OWNER HOW THE BUILDING, EQUIPMENT AND SYSTEMS ARE INTENDED TO BE INSTALLED, THE OWNER MUST RETAIN A CERTIFIED SPECIAL INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A MAINTAINED AND OPERATED. REQUIRED REGULAR MAINTENANCE ACTIONS FOR EQUIPMENT AND SYSTEMS SHALL BE WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL & PROGRESS INSPECTION ITEMS. CLEARLY STATED ON A READILY VISIBLE LABEL. THE LABEL SHALL INCLUDE THE TITLE OR PUBLICATION NUMBER FOR THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT THIS PLAN IS APPROVED ONLY FOR WORK INDICATED OF THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED EITHER BEING APPROVED OR IN ADDITIONAL 2020 ENERGY CODE REQUIREMENTS: ACCORDANCE WITH APPLICABLE CODES. 1. SEE ENERGY CODE COMPLIANCE NOTES, ENERGY CODE PROGRESS INSPECTIONS AND TABULAR ANALYSIS FOR New York Alteration Warning Statement: ENERGY REQUIREMENTS AND PROJECT COORDINATION. IT IS A VIOLATION OF NEW YORK REGULATION 69.5(b) FOR ANY PERSON, UNLESS ACTING UNDER THE 2. MAINTENANCE INSTRUCTIONS FOR NEW MECHANICAL UNITS SHALL BE FURNISHED AS REQUIRED BY THE CODE. DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY WITHOUT AFFIXING TO THE ITEM HIS 3. DESIGN LOADS DETERMINED IN ACCORDANCE WITH ANSI/ASHRAE/ACCA STANDARD 183. SEAL AND THE NOTIFICATION "ALTERED BY". FOLLOWER BY A SIGNATURE. DATE OF SUCH ALTERATION AND A 4. SPECIFIED EQUIPMENT SIZED WITHIN LOAD CALCULATION LIMITS. SPECIFIC DESCRIPTION OF THE ALTERATION 5. ONE THERMOSTAT IS TO BE PROVIDED FOR EACH ZONE TO MEET THE REQUIREMENTS OF THE CODE. EACH THERMOSTAT WILL BE PROGRAMMED TO MEET THE REQUIREMENTS OF THE CODE. ALL IDEAS, DESIGNS, ARRANGEMENTS, DRAWINGS AND WRITTEN MATERIALS INDICATED OR REPRESENTED BY 7. DUCTS SHALL BE INSULATED AND TAPED TO MEET THE REQUIREMENTS OF THE CODE. THIS DRAWING HEREIN CONSTITUTE ORIGINAL AND 8. ALL REFRIGERANT PIPING SHALL BE THERMALLY INSULATED TO MEET THE REQUIREMENTS OF THE CODE. UNPUBLISHED WORK AND ARE OWNED BY AND PROPERTY OF M. JUST ARCHITECTURE, PC AND WERE 9. EXTERIOR REFRIGERANT PIPING SHALL BE PROTECTED FROM DAMAGE TO MEET THE REQUIREMENTS OF THE CODE. CREATED, EVOLVED AND DEVELOPED FOR USE IN ONNECTION WITH THIS SPECIFIC PROJECT. NONE OF 10. ECONOMIZERS TO BE PROVIDED TO MEET THE REQUIREMENTS OF THE CODE SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE DUPLICATED. USED BY OR DISCLOSED TO ANY PERSON FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF M. JUST ARCHITECTURE, PC **RELATED FILINGS:** 1. RELATED EXTERIOR SIGNAGE FOR BURGER KING FILED UNDER SEPARATE APPLICATION. 2. RELATED TEMPORARY WOOD CONSTRUCTION FENCE FILED UNDER SEPARATE APPLICATION IN DOB NOW. Jay DellaMonica 3. RELATED PLUMBING WORK FILED UNDER SEPARATE APPLICATION #X00433349-I1 IN DOB NOW. 200 Garden City Plaza Garden City, NY 11530 4. RELATED CONSTRUCTION WORK FILED UNDER SEPARATE APPLICATION #X00450536IN DOB. DOB Approval Stamps PROPOSED HVAC INFORMATION: RTU-2 RTU-1 MAKE: CARRIER CARRIER MAKE: MODEL #: 48KCEA06A2AA5-0A0A0 48TCED08A2A5-0A0G0 MODEL #: **COOLING CAPACITY:** 58,500 BTU/HR COOLING CAPACITY: 83,000 BTU/HR COOLING EFFICIENCY: 14.1 SEER/12.0 EER **COOLING EFFICIENCY:** 12.8 IEER/11.0 EER AS PER TEST PROCEDURE: AHRI 340/360 AS PER TEST PROCEDURE: AHRI 340/360 130,000 BTU/HR **HEATING CAPACITY: HEATING CAPACITY:** 180,000 BTU/HR **HEATING EFFICIENCY:** 81% THERMAL EFFICIENCY **HEATING EFFICIENCY:** 82% THERMAL EFFICIENCY AS PER TEST PROCEDURE: ANSI Z21.47 AS PER TEST PROCEDURE: ANSI Z21.47 APPROVAL # **CSA CERTIFIED** APPROVAL# **CSA CERTIFIED** RTU-4 MAKE: CARRIER MODEL #: 3500 Boston Post Road 48TCED12A2A5-0A0G0 **COOLING CAPACITY:** 114,000 BTU/HR Bronx, NY 10803 COOLING EFFICIENCY: 12.8 IEER/11.10 EER AS PER TEST PROCEDURE: AHRI 340/360 **HEATING CAPACITY:** 224,000 BTU/HR Seal: **HEATING EFFICIENCY:** 82% THERMAL EFFICIENCY AS PER TEST PROCEDURE: ANSI Z21.47 **CSA CERTIFIED** APPROVAL # Drawing Title: ROOF MECHANICAL PLAN NYCDOB APPLICATION: X00433355-I1 BLOCK: 4723 LOT: 66 18049 02-19-21 C2-2 in R5 Drawn By: ( Sheet:

ZONE: MAP:

Drawing No.:

M-100.00



**BOSTON ROAD** 



			DIFFUSER	SCHEDULE			
SYN	1.SIZE	TYPE	DUCT SIZE	MODEL#	FINISH	BOOT SIZE	OPENING SIZE
С	24X24	SUPPLY 4 WAY	10"Ø	NCA10	WHITE	10"Ø	SURFACE
D	24X24	SUPPLY 3 WAY	12"Ø	NCA12-2C	WHITE	12"Ø	T-BAR
E	24X24	SUPPLY 2 WAY (PARALLEL)	12"Ø	NCA12-2P	WHITE	12"Ø	T-BAR
F	24X24	SUPPLY 1 WAY	12"Ø	NCA12-1	WHITE	12"Ø	T-BAR
G	24X24	SUPPLY 4 WAY	10"Ø	NCA10	WHITE	10"Ø	T-BAR
Н	24X24	SUPPLY 2 WAY (CORNER)	10"Ø	NCA10-2C	WHITE	10"Ø	T-BAR
J	12X12	SUPPLY 1 WAY W/O.B.D.	8"Ø	RH-1	WHITE	12X12	SIZE + 1/4"
K	12X12	SUPPLY 1 WAY W/O.B.D.	6"Ø	RH-1	WHITE	12X12	SIZE + 1/4"
L	24X24	RETURN	18"Ø	RH-6	WHITE	22X22	T-BAR
M	12X12	EXHAUST	8"Ø	RH-1	WHITE	12X12	SIZE + 1/4"
N	12X12	EXHAUST	6"Ø	RH-1	WHITE	12X12	SIZE + 1/4"

ALL DIFFUSERS SHALL BE MANUFACTURED BY METALAIRE AND 100% ALUMINUM CONSTRUCTION

\* PROVIDE WITH FOUR 14"Ø TO 12"Ø REDUCERS FOR TOP OF DIFFUSER \*\* PROVIDE WITH OPPOSED-BLADE DAMPER AT GRILLE

NOTE: LOCATION AND ORIENTATION OF DIRECTIONAL BLOW PATTERN DIFFUSERS IN THE KITCHEN IS CRITICAL. INSTALLER WILL ENSURE PROPER INSTALLATION OF DIFFUSERS. CONTACT THE NCA CONSULTANTS PROJECT COORDINATOR IMMEDIATELY WITH ANY CONFLICTS THAT PREVENT INSTALLATION PER THE PROPOSED DESIGN.

	NOT COUEDING	
AIR BALAI	NCE SCHEDULE	:

			/ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	"TOL COLLEDO			
TAG	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR	BLDG. PRESSURE	% OUTSIDE AIR	
RTU-1	2000 CFM	500 CFM	1500 CFM		+ 500 CFM	25	
RTU-2	2800 CFM	700 CFM	2100 CFM		+ 700 CFM	25	
RTU-3	4000 CFM	1000 CFM	3000 CFM		+ 1000 CFM	25	
EF-1				850 CFM*	- 850 CFM		
EF-2				1100 CFM*	- 1100 CFM		
EF-3				150 CFM	- 150 CFM		
TOTA	LOGGO OFM	2200 0514	CCOO CEM	0400 OEM	1 400 OFM		

| <u>TOTAL8800 CFM | 2200 CFM | 6600 CFM | 2100 CFM | + 100 CFM</u> \*NOTE: UPON START-UP VERIFY THAT THE EXHAUST FAN CURRENT SENSOR IS SET TO THE MOTOR AMPERAGE. IF IT IS NECESSARY TO ADJUST THE AMPERAGE OF THE EXHAUST HOOD FAN MOTOR, THE FAN MOTOR CURRENT SENSOR MUST BE RESET BY THE ELECTRICAL CONTRACTOR AS FOLLOWS: ADJUST UNDERCURRENT POTENTIOMETER TO MINIMUM (CLOCKWISE IS MAXIMUM.) APPLY CURRENT. ONCE CURRENT IS STABILIZED, INCREASE UNDERCURRENT POT UNTIL RED LED LIGHTS. WITHIN SEVEN SECONDS TURN DOWN UNTIL RED LIGHT TURNS OFF. IF A LIGHT REMAINS ON FOR MORE THAN TEN SECONDS, DISCONNECT SUPPLY VOLTAGE TO RESET. SEE MANUFACTURERS OPERATION-INSTALLATION INSTRUCTIONS THAT SHIP WITH THE FAN WITH LIMITED BUILDING PRESSURE, THE ±10% TOLERANCE IS NOT ACCEPTABLE. SET CFM AS SPECIFIED. ENSURE THAT EXHAUST FAN PULLEY IS ADJUSTED FOR PROPER ALIGNMENT.

Michael D. Just, R.A., A.I.A. mjust@mjarch.com www.justarchitectureny.com

	Rev. #	Date:	Description:	Ву:
-		02-11-21	AS PER DOB OBJECTIONS	MY
		02-19-21	AS PER DOB OBJECTIONS	MY
	1	03-23-21	AS PER CHANGES TO MECHANICAL SCOPE OF WORK	MY
-				
			ress Inspections: CTURE. PC SHALL ONLY IDENTIFY A	

M. JUST ARCHITECTURE, PC SHALL ONLY IDENTIFY ALL REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE DESIGN APPLICANT.

THE OWNER MUST RETAIN A CERTIFIED SPECIAL INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL & PROGRESS INSPECTION ITEMS.

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Jay DellaMonica Creative Food Corp 200 Garden City Plaza Garden City, NY 11530

DOB Approval Stamps:

3500 Boston Post Road Bronx, NY 10803



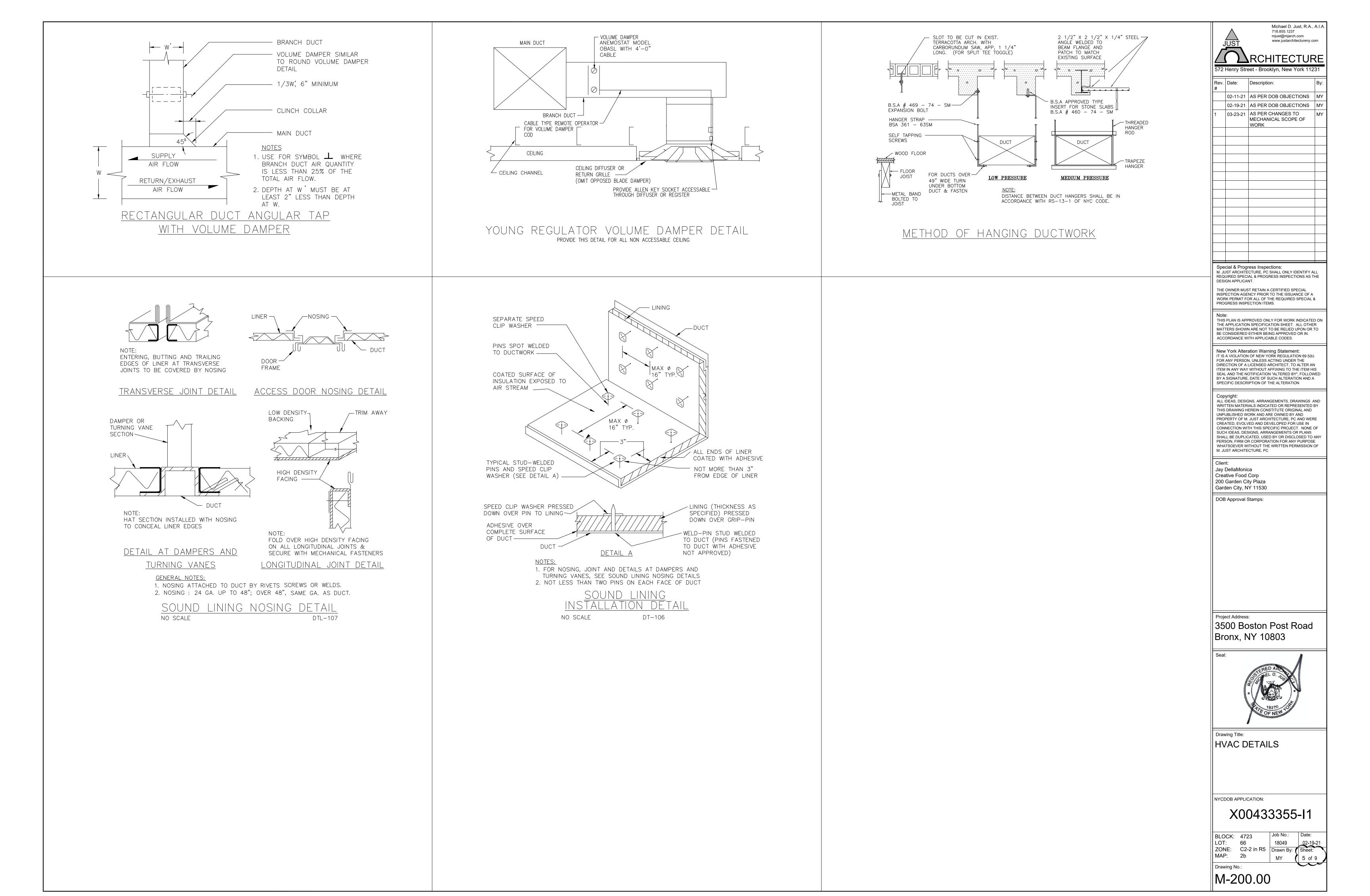
Drawing Title: FIRST FLOOR MECHANICAL PLAN

NYCDOB APPLICATION:

X00433355-I1

BLOCK: 4723 LOT: 66 LOT: 66 18049 02-19-21 ZONE: C2-2 in R5 Drawn By: (Sheet: 18049 MAP: Drawing No.:

M-101.00



- 1. GENERAL
- A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA DOCUMENT A201, LATEST EDITION, AND THIS SPECIFICATION AS APPLICABLE ARE PART OF THIS CONTRACT
- B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
- C. INVESTIGATE EACH SPACE THROUGH WITH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
- D. DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF ARCHITECT. COORDINATION WITH THE EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES IS REQUIRED.
- E. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. SINGLE ROD SHALL BE SIMILAR TO GRINNELL FIG. 281. MULTI-ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.
- F. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
- G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP THE WORK PROPOSAL.
- H. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.
- I. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT.
- J. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
- K. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
- L. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL.
- M. PROVIDE ALL NECESSARY FLASHING AND COUNTER-FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED
- N. ALL PRESENT MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.
- O. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- P. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
- Q. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.
- R. UNLESS OTHERWISE SPECIFICALLY SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.
- S. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL VOLUME AND FIRE DAMPERS, VALVES, AUTOMATIC DAMPERS AND ALL OTHER MECHANICAL EQUIPMENT AND DEVICES. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
- T. ALL EQUIPMENT SHALL HAVE UL LIST NUMBER. THIS INFORMATION MUST BE INCLUDED IN THE SUBMITTAL PACKAGE. SPECIAL INSPECTIONS TO BE HIRED BY CONTRACTOR.
- U. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- V. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON-SITE INSPECTION SHALL VERIFY EXISTING DUCTWORK, PIPING (SIZES, CLEARANCES, ETC) AND CONDITIONS.

- W. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
- X. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.
- Y. THIS CONTRACTOR SHALL PREPARE A LIST OF ALL ACCESS DOORS REQUIRED FOR OPERATION AND MAINTENANCE OF ALL CONCEALED EQUIPMENT, VALVES, DAMPERS, CONTROLS, AND OTHER SIMILAR DEVICES, WHICH SHALL BE SUPPLIED TO THE GENERAL CONTRACTOR WHO SHALL FURNISH AND INSTALL SAME AFTER COORDINATING FINAL LOCATIONS WITH ARCHITECT. ACCESS DOORS SHALL BE OF AMPLE SIZE AND MINIMUM OF 16" X 16" OR AS APPROVED.
- Z. THE CONTRACTOR SHALL REMOVE, RELOCATE, REPLACE, ADJUST, ADAPT AND MODIFY EXISTING EQUIPMENT AND/OR SYSTEM AS REQUIRED BY THE DRAWINGS OR SPECIFICATIONS AND AS MAY BE REQUIRED WHEN SUCH WORK IS UNCOVERED AND FOUND TO INTERFERE WITH THE COMPLETION OF WORK IN THE CONTRACT OR OTHER CONTRACT WORK.
- AA. SUPPLEMENTAL STEEL SUPPORTS FOR CEILING-MOUNTED AC UNITS SHALL BE PROVIDED BY THIS CONTRACTOR. COORDINATE WITH BUILDING OWNER, HIS STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR FOR ACCEPTABLE METHODS OF SUPPORTS. OBTAIN WRITTEN PERMIT FOR BUILDING OWNER PRIOR TO STARTING WORK.
- BB. ALL DAMPERS, VALUES, AND OTHER APPARATUS REQUIRING ACCESS SHALL BE LOCATED OVER ACCESSIBLE AREAS ONLY. WHERE IT IS UNAVOIDABLE, COMPLETE ALL WORK (BALANCING, ETC.) PRIOR TO FINISHING SHEETWORK CEILING. COORDINATE WITH G.C. AS REQUIRED.
- CC. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

#### 2. SCOPE OF WORK

- A. THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
- B. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.
- C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES, BY OWNER, INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.
- E. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, DUCTWORK, PIPING AND CONTROL SYSTEMS INDICATING CAPACITY DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

### 3. SHEET METAL WORK AS PER ECCC C403.2.9.1

- A. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE GALVANIZED SHEET STEEL AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. DUCT CONSTRUCTION STANDARDS, PRESSURE CLASSIFICATION 2 IN. W.G. ALL DUCTWORK TO BE MINIMUM 24 GAUGE.
- B. VOLUME DAMPERS: GALVANIZED STEEL, PER SMACNA "LOW VELOCITY MANUAL," EXCEPT PROVIDE BEARING AT ONE END OF DAMPER ROD AND QUADRANT, WITH LEVER AND LOCKSCREW AT OTHER END. FOR INSULATED DUCTS, QUADRANTS MOUNTED ON COLLAR TO CLEAR INSULATION. INSTALL WITH LEVERS ACCESSIBLE. PROVIDE AT EACH DUCT TAP AND AT EACH BRANCH TAKE-OFF FROM MAIN.
- C. TURNING VANES: GALVANIZED STEEL SMALL DOUBLE-THICKNESS VANES WITH 2 IN. INSIDE RADIUS.
- D. REFER TO NOISE CONTROL SECTION FOR MORE DUCTWORK
- REQUIREMENTS
- E. ALL DUCT DIMENSIONS INDICATED ON PLANS ARE INSIDE CLEAR DIMENSIONS.
- F. WIRE MESH SCREEN (WMS): NO. 16 USSG, 3/4 SQUARE MESH, IN 1 IN. WIDE GALVANIZED STEEL ENCLOSING FRAME. FLANGED DUCT OPENING TO RECEIVE FRAME. PROVIDE WIRE MESH SCREEN FOR ALL DUCT OPENING ABOVE HUNG CEILING.

# 4. AIR OUTLETS

### A. GENERAL:

- MARGIN TYPES, COLORS, FINISH AND METHODS OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING AND WALL DETAILS AND SPECIFICATIONS.
- 2. FRAME TYPE SUITABLE FOR MOUNTING IN CEILING OR WALL CONSTRUCTION SHALL BE OF CLIPPED TYPE. COUNTER-SUNK SCREWS SHALL NOT BE USED UNLESS OTHERWISE NOTED ON ARCHITECTURAL PLANS.
- 3. EXACT LOCATION OF ALL AIR OUTLETS AS PER ARCHITECTURAL
- 4. SUITABLE FOR OPERATION AT 20% EXCESS AND 20% LESS THAN NOTED CAPACITY FOR CONSTANT VOLUME SYSTEMS AND AT 20% EXCESS AND 60% LESS THAN NOTED CAPACITY FOR VARIABLE VOLUME SYSTEMS.

  MANUFACTURER RESPONSIBLE FOR EXAMINING APPLICATION OF EACH OUTLET AND GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING
- 5. ALL REGISTERS AND DIFFUSERS SHALL BE PROVIDED WITH OPPOSED

- BLADE VOLUME DAMPERS. DAMPER OPERATING LEVERS SHALL BE ACCESSIBLE AT THE FACE OF AIR OUTLETS.
- 6. MANUFACTURERS: ANEMOSTAT, OR APPROVED EQUAL.
- B. SEE HVAC SCHEDULE FOR ADDITIONAL SPECIFICATIONS.

#### 5. NOISE CONTROL

- A. ACOUSTICAL CRITERIA:
- NOISE LEVELS DUE TO EQUIPMENT AND DUCTWORK SHALL PERMIT ATTAINING SOUND PRESSURE LEVELS IN ALL 8 OCTAVE BANDS IN UNOCCUPIED SPACES CONFORMING TO NC CURVES AS FOLLOWS:

#### ALL SPACES NC-28

- B. PROVIDE MINIMUM OF 1.5" THICK SOUNDLINING FOR THE FOLLOWING DUCTWORK:
- SUPPLY AND RETURN DUCTWORK WITHIN 15' FROM THE FAN EXCEPT RTU-2
   AIR TRANSFER DUCTS.
- C. SOUNDLINING IN DUCTWORK: FIBROUS GLASS, MINIMUM 3 LB DENSITY, 1.5 IN. THICKNESS, MAXIMUM 0.25 K FACTOR AT 75F MEAN TEMPERATURE WITH ACRYLIC COATED FINISH FACTORY APPLIED EDGE COATING AND STENCILED IN ACCORDANCE WITH NFPA 90. FLAMESPREAD SHALL BE A MAXIMUM OF 25. LINING SHALL NOT SUPPORT MICROBIAL GROWTH AND SHALL BE TESTED IN ACCORDANCE WITH ASTM C 1071 AND ASTM G21/G22. SIMILAR TO MANVILLE PERMACOTE LINACOUSTIC RC WITH R-VALUE OF 6.3.
- D. ALL SOUNDLINING, ADHESIVES, FACES AND ACCESSORIES TO BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, EXCEPT AS OTHERWISE NOTED.

#### 6. TESTING AND BALANCING AS PER ECC C408.22

- A. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF FANS AND BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY.
- C. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL REBALANCE ANY EXISTING PORTIONS OF AIR DISTRIBUTION SYSTEM AND WATER DISTRIBUTION SYSTEM AFFECTED BY THE RENOVATION AND ALSO BALANCE ALL NEW WORK.
- D. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PRESSURE GAUGES, FLOW METERS, SHEAVES, AND BELTS REQUIRED TO BALANCE SYSTEMS.
- E. BALANCING REPORT SHALL BE PROVIDED ON AABC-TYPE FORMS.
- F. FANS, AIR HANDLING UNITS, PUMPS, AND COILS SHALL BE BALANCED TO WITHIN +/-5% OF THEIR DESIGN CAPACITIES. ALL OTHER AIR AND WATER QUANTITIES SHALL BE BALANCED TO WITHIN +/-10% OF THE DESIGN QUANTITIES.
- G. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY ONE OF THE FOLLOWING INDEPENDENT FIRMS SPECIALIZING IN TESTING AND BALANCING:
- 1. INDEPENDENCE TESTING AND BALANCING, INC.
- INTERNATIONAL TESTING AND BALANCING CORP.
   ALL CITY TESTING AND BALANCING CORP.
- H. THE PERFORMANCE AND CAPACITY OF ALL SYSTEMS AND EQUIPMENT TO BE DEMONSTRATED BY THE CONTRACTOR.

### 7. SHOP DRAWINGS

A. INDICATE ON EACH SUBMISSION: PROJECT NAME AND LOCATION, ARCHITECT AND ENGINEER, ITEM IDENTIFICATION AND APPROVAL STAMP OF PRIME CONTRACTOR.

### B. SUBMISSIONS:

- 1. SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.
- 2. SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.
- 3. SUBMIT SAMPLES WHERE NOTED.
- C. SUBMIT SHOP DRAWINGS AND SAMPLES FOR THE FOLLOWING:
- DUCTWORK LAYOUT AND SHEET METAL SHOP STANDARDS.
  - AIR OUTLETS.
     AIR BALANCING REPORT.
- 4. OPERATING SEQUENCES AND CONTROL WIRING DIAGRAM.
- D. AS-BUILTS AND EQUIPMENT OPERATION INSTRUCTIONS
- 1. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS, EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.
- 2. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE-RING BINDERS WITH CLEAR ACETATE COVERS. THE CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.
- 3. THE INSTRUCTION BOOKLET SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE COVER OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER, MECHANICAL CONTRACTOR AND SUBCONTRACTORS.
- 4. REPRODUCIBLE "AS-BUILT" DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.
- E. EQUIPMENT SUBSTITUTIONS:
- IF THE CONTRACTOR ELECTS TO PROPOSE EQUIPMENT SUBSTITUTIONS, THEY SHALL BE SUBMITTED IN ADVANCE AND SHALL INCLUDE A COMPLETE DETAILED LIST INDICATING ALL DEVIATIONS ITEM BY ITEM.
- 2. SUBMISSIONS SHALL INCLUDE A LIST OF LOCAL INSTALLATIONS NOT LESS THAN FIVE YEARS. SUBMISSIONS WILL BE AUTOMATICALLY REJECTED WITHOUT REVIEW IF REQUIRED INFORMATION IS NOT SUBMITTED.
- IT SHALL REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY DEMONSTRATE TO THE ENGINEER'S SATISFACTION THAT THE

- SUBSTITUTION IS EQUIVALENT OR BETTER. THE ENGINEER'S APPROVAL OR DISAPPROVAL SHALL BE FINAL.
- 4. ANY ADDITIONAL COST INCURRED AS A RESULT OF AN EQUIPMENT SUBSTITUTION BY THIS CONTRACTOR, SUCH AS AN INCREASE IN SCOPE OF WORK FOR ANOTHER CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.

#### 8. INSULATION - GENERAL REQUIREMENTS

A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES ARE TO BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC. USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A2.5-1963). FLAMESPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.

#### B. DEFINITIONS:

- EXPOSED: INDOOR DUCTS, PIPING OR EQUIPMENT LOCATED IN MECHANICAL EQUIPMENT ROOMS AND IN AREAS WHICH WILL BE VISIBLE WITHOUT REMOVING CEILINGS OR OPENING ACCESS PANELS.
- 2. CONCEALED: INDOOR DUCTS, PIPING OR EQUIPMENT WHICH IS NOT EXPOSED.

#### 9. DUCTWORK INSULATION AS PER ECC C403.2.9

A. INSULATE ALL DUCTWORK IN ACCORDANCE WITH INSULATION SCHEDULE EXCEPT AS OTHERWISE NOTED.

#### INSULATION SCHEDULE - DUCTWORK

- 1. SUPPLY AND RETURN: 1.5" FIBERGLASS TYPE D-1
- B. REINSULATE ALL DUCTWORK AND PIPING WHICH IS DAMAGED DURING CONSTRUCTION.
- C. NON-INSULATED DUCTWORK:
- 1. WHERE SOUNDLINING IS OF MINIMUM THICKNESS SPECIFIED FOR INSULATION.

### D. MATERIAL:

- 1. TYPE D-1: MINIMUM 1-LB DENSITY FIBERGLASS BLANKET, MAXIMUM 0.28 K-FACTOR AT 75F MEAN TEMPERATURE WITH FACTORY-APPLIED FOIL-SKRIM-KRAFT FACING SIMILAR TO MANVILLE MICROLITE PSK FACED 2" THICKNESS WITH R VALUE OF 6.
- 2. TYPE D-2: 3 LB. FIBERGLASS BOARD. THE MAXIMUM K FACTOR SHALL BE 0.23 AT 75F MEAN TEMPERATURE WITH A MINIMUM DENSITY OF 3 LB. THE INSULATION SHALL BE PROVIDED WITH A FACTORY-APPLIED ALL PURPOSE OR ALL SERVICE FACING. THE INSULATION SHALL BE EQUAL TO MANVILLE TYPE 814 SPIN-GLAS AP 2" THICKNESS WITH R VALUE OF 9.09

#### E. INSTALLATION:

1. FIBERGLASS BLANKET: 2 IN. LAP STRIPS AT ALL SEAMS. SECURE BOTTOM OF ALL DUCTS OVER 24 IN. WIDE WITH MIN. 2 ROWS OF WELD PINS 12 IN. ON CENTER. SECURE ALL SEAMS WITH FOIL VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE.

### 13. AUTOMATIC CONTROLS - GENERAL REQUIREMENTS

- A. FURNISH AND INSTALL A COMPLETE ELECTRIC OR ELECTRONIC CONTROL SYSTEM TO PROVIDE TEMPERATURE CONTROL AS SPECIFIED UNDER DESCRIPTION OF OPERATION.
- B. WORK SHALL INCLUDE ALL WIRING, CONTROL EQUIPMENT, TRANSFORMERS AND ACCESSORIES NECESSARY TO MAKE THIS SYSTEM COMPLETE. ALL WIRING SHALL BE 24 VOLT. COORDINATE WITH MANUFACTURER FOR INTERCONNECTION WITH CONTROLS INCLUDED IN EQUIPMENT. ALL CONTROL WORK SHALL BE INSTALLED BY HVAC CONTRACTOR.

### C. OPERATION OF TYPICAL CONTROL SAFETY DEVICES.

- 1. HOA SUPPLY FAN SWITCHES: SAFETY DEVICES SHALL BE INTERLOCKED WITH "HAND" AND "AUTOMATIC" POSITIONS IN SERIES WITH MOTOR CONTROLLER HOLDING COIL CIRCUIT. INTERLOCKING WITH OTHER FANS AND EQUIPMENT OF SYSTEM SHALL BE THROUGH "AUTOMATIC" POSITION ONLY. "HAND" POSITION SHALL BE FOR MAINTENANCE ONLY.
- 2. RETURN FAN, TRANSFER FAN, EXHAUST FAN HOA SWITCHES
  (INTERLOCKED WITH SUPPLY FANS): REMOTE STARTING SHALL BE FROM
  SUPPLY FAN THROUGH "AUTOMATIC" POSITION ONLY. "HAND" POSITION
  SHALL BE FOR MAINTENANCE OPERATION ONLY. INTERLOCK THROUGH
  AUXILIARY CONTACT OF LEAD EQUIPMENT MOTOR CONTROLLER.
- 3. EXHAUST FANS, SUCH AS GENERAL OR TOILET (OPERATING INDEPENDENTLY): ALL SAFETY DEVICES SHALL BE INTERLOCKED WITH "HAND" AND "AUTOMATIC" POSITIONS IN SERIES WITH MOTOR CONTROLLER HOLDING COIL CIRCUIT. REMOTE STARTING SHALL BE THROUGH AUTOMATIC POSITION ONLY. "HAND" POSITION SHALL BE FOR MAINTENANCE OPERATION ONLY.
- 4. SAFETY DEVICES FOR ALL SYSTEMS, EXCEPT AS OTHERWISE NOTED BELOW:
- a. FOR SYSTEMS OVER 2,000 CFM, A DUCT MOUNTED SMOKE DETECTOR OF THE IONIZATION TYPE LOCATED IN THE SUPPLY DUCT SHALL STOP THE SUPPLY FAN AND ASSOCIATED INTERLOCKED EQUIPMENT SHOULD PRODUCTS OF COMBUSTION BE SENSED.
- b. DAMPER END SWITCHES SHALL PREVENT OPERATION OF FANS UNTIL DAMPER IS FULLY OPEN. PROVIDE RELAYS SO IT WILL NOT BE NECESSARY TO HOLD START BUTTON UNTIL DAMPER IS FULLY OPEN. PROVIDE DAMPER END SWITCHES ON ALL AUTOMATIC DAMPERS.
- 14. AUTOMATIC CONTROLS SEQUENCE OF OPERATIONS:
- A. EXISTING RTU MAINTAIN THE SAME SEQUENCE OF OPERATION.



Rev. #	Date:	Description:	Ву:
	02-11-21	AS PER DOB OBJECTIONS	MY
	02-19-21	AS PER DOB OBJECTIONS	MY
1	03-23-21	AS PER CHANGES TO MECHANICAL SCOPE OF WORK	MY

Special & Progress Inspections:
M. JUST ARCHITECTURE, PC SHALL ONLY IDENTIFY ALL
REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE
DESIGN APPLICANT.

THE OWNER MUST RETAIN A CERTIFIED SPECIAL INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL & PROGRESS INSPECTION ITEMS.

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 EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

New York Alteration Warning Statement:
IT IS A VIOLATION OF NEW YORK REGULATION 69.5(b)
FOR ANY PERSON, UNLESS ACTING UNDER THE
DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN
ITEM IN ANY WAY WITHOUT AFFIXING TO THE ITEM HIS
SEAL AND THE NOTIFICATION "ALTERED BY", FOLLOWEI
BY A SIGNATURE, DATE OF SUCH ALTERATION AND A
SPECIFIC DESCRIPTION OF THE ALTERATION

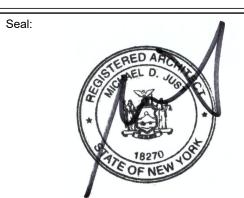
ALL IDEAS, DESIGNS, ARRANGEMENTS, DRAWINGS AND WRITTEN MATERIALS INDICATED OR REPRESENTED BY THIS DRAWING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK AND ARE OWNED BY AND PROPERTY OF M. JUST ARCHITECTURE, PC AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE IN CONNECTION WITH THIS SPECIFIC PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE DUPLICATED, USED BY OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF M. JUST ARCHITECTURE, PC

Client:
Jay DellaMonica
Creative Food Corp
200 Garden City Plaza
Garden City, NY 11530

DOB Approval Stamps:

Project Address:
3500 Boston Post Road

Bronx, NY 10803



Drawing Title:
HVAC
SPECIFICATIONS

CDOB APPLICATION:

X00433355-I1

BLOCK: 4723 LOT: 66 | 18049 | 02-19-21 ZONE: C2-2 in R5 | Drawn By: Sheet: MY | 6 of 9

M-300.00

### 2020 NOTES FOR ENERGY CODE COMPLIANCE - COMMERCIAL BUILDINGS

**BUILDING MECHANICAL SYSTEMS REQUIREMENTS AS PER SECTION ECC C403** 

#### C403.1 GENERAL

MECHANICAL SYSTEMS AND EQUIPMENT SERVING THE BUILDING HEATING, COOLING, VENTILATING OR REFRIGERATING NEEDS SHALL COMPLY WITH THIS SECTION.

#### C403.1.1 CALCULATION OF HEATING AND COOLING LOADS

DESIGN LOADS ASSOCIATED WITH HEATING, VENTILATING AND AIR CONDITIONING OF THE BUILDING SHALL BE DETERMINED IN ACCORDANCE WITH ANSI/ASHRAE/ACCA STANDARD 183 OR BY AN APPROVED EQUIVALENT COMPUTATIONAL PROCEDURE USING THE DESIGN PARAMETERS SPECIFIED IN CHAPTER C3. HEATING AND COOLING LOADS SHALL BE ADJUSTED TO ACCOUNT FOR LOAD REDUCTIONS THAT ARE ACHIEVED WHERE ENERGY RECOVERY SYSTEMS ARE UTILIZED IN THE HVAC SYSTEM IN ACCORDANCE WITH THE ASHRAE HVAC SYSTEMS AND EQUIPMENT HANDBOOK BY AN APPROVED EQUIVALENT COMPUTATIONAL PROCEDURE.

#### C403.2 SYSTEM DESIGN

MECHANICAL SYSTEMS SHALL BE DESIGNED TO COMPLY WITH SECTIONS C403.2.1 AND C403.2.2. WHERE ELEMENTS OF A BUILDING'S MECHANICAL SYSTEMS ARE ADDRESSED IN SECTIONS C403.3 THROUGH C403.12, SUCH ELEMENTS SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF THOSE SECTIONS.

#### C403.2.1 ZONE ISOLATION REQUIRED

HVAC SYSTEMS SERVING ZONES THAT ARE OVER 25,000 SQUARE FEET (2323 M2) IN FLOOR AREA OR THAT SPAN MORE THAN ONE FLOOR AND ARE DESIGNED TO OPERATE OR BE OCCUPIED NONSIMULTANEOUSLY SHALL BE DIVIDED INTO ISOLATION AREAS. EACH ISOLATION AREA SHALL BE EQUIPPED WITH ISOLATION DEVICES AND CONTROLS CONFIGURED TO AUTOMATICALLY SHUT OFF THE SUPPLY OF CONDITIONED AIR AND OUTDOOR AIR TO AND EXHAUST AIR FROM THE ISOLATION AREA. EACH ISOLATION AREA SHALL BE CONTROLLED INDEPENDENTLY BY A DEVICE MEETING THE REQUIREMENTS OF SECTION C403.4.2.2. CENTRAL SYSTEMS AND PLANTS SHALL BE PROVIDED WITH CONTROLS AND DEVICES THAT WILL ALLOW SYSTEM AND EQUIPMENT OPERATION FOR ANY LENGTH OF TIME WHILE SERVING ONLY THE SMALLEST ISOLATION AREA SERVED BY THE SYSTEM OR PLANT.

#### **EXCEPTIONS**

- 1. EXHAUST AIR AND OUTDOOR AIR CONNECTIONS TO ISOLATION AREAS WHERE THE FAN SYSTEM TO WHICH THEY CONNECT IS NOT GREATER THAN 5,000 CFM (2360 L/S).
- 2. EXHAUST AIRFLOW FROM A SINGLE ISOLATION AREA OF LESS THAN 10 PERCENT OF THE DESIGN AIRFLOW OF THE EXHAUST SYSTEM TO WHICH IT CONNECTS. 3. ISOLATION AREAS INTENDED TO OPERATE CONTINUOUSLY OR INTENDED TO BE INOPERATIVE ONLY WHEN ALL OTHER ISOLATION AREAS IN A ZONE ARE INOPERATIVE

#### C403.2.2 VENTILATION

VENTILATION, EITHER NATURAL OR MECHANICAL, SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 4 OF THE NEW YORK CITY MECHANICAL CODE. WHERE MECHANICAL VENTILATION IS PROVIDED. THE SYSTEM SHALL PROVIDE THE CAPABILITY TO REDUCE THE OUTDOOR AIR SUPPLY TO THE MINIMUM REQUIRED BY CHAPTER 4 OF THE NEW YORK CITY MECHANICAL CODE.

#### C403.3 HEATING AND COOLING EQUIPMENT EFFICIENCIES

HEATING AND COOLING EQUIPMENT INSTALLED IN MECHANICAL SYSTEMS SHALL BE SIZED IN ACCORDANCE WITH SECTION C403.3.1 AND SHALL BE NOT LESS EFFICIENT IN THE USE OF ENERGY THAN AS SPECIFIED IN SECTION C403.3.2.

#### C403.3.1 EQUIPMENT SIZING

THE OUTPUT CAPACITY OF HEATING AND COOLING EQUIPMENT SHALL BE NOT GREATER THAN THAT OF THE SMALLEST AVAILABLE EQUIPMENT SIZE THAT EXCEEDS THE LOADS CALCULATED IN ACCORDANCE WITH SECTION C403.1.1. A SINGLE PIECE OF EQUIPMENT PROVIDING BOTH HEATING AND COOLING SHALL SATISFY THIS PROVISION FOR ONE FUNCTION WITH THE CAPACITY FOR THE OTHER FUNCTION AS SMALL AS POSSIBLE, WITHIN AVAILABLE EQUIPMENT OPTIONS.

### **EXCEPTIONS:**

- 1. REQUIRED STANDBY EQUIPMENT AND SYSTEMS PROVIDED WITH CONTROLS AND DEVICES THAT ALLOW SUCH SYSTEMS OR EQUIPMENT TO OPERATE AUTOMATICALLY ONLY WHEN THE PRIMARY EQUIPMENT
- 2. MULTIPLE UNITS OF THE SAME EQUIPMENT TYPE WITH COMBINED CAPACITIES EXCEEDING THE DESIGN LOAD AND PROVIDED WITH CONTROLS THAT ARE CONFIGURED TO SEQUENCE THE OPERATION OF EACH UNIT BASED ON LOAD.

#### C403.3.2 HVAC EQUIPMENT PERFORMANCE REQUIREMENTS

EQUIPMENT SHALL MEET THE MINIMUM EFFICIENCY REQUIREMENTS OF TABLES C403.3.2(1) THROUGH C403.3.2(8) AND TABLES C403.3.2(10) THROUGH C403.3.2(14) WHEN TESTED AND RATED IN ACCORDANCE WITH THE APPLICABLE TEST PROCEDURE. PLATE-TYPE LIQUID-TO-LIQUID HEAT EXCHANGERS SHALL MEET THE MINIMUM REQUIREMENTS OF TABLE C403.3.2(9). THE EFFICIENCY SHALL BE VERIFIED THROUGH CERTIFICATION UNDER AN APPROVED CERTIFICATION PROGRAM OR, WHERE A CERTIFICATION PROGRAM DOES NOT EXIST, THE EQUIPMENT EFFICIENCY RATINGS SHALL BE SUPPORTED BY DATA FURNISHED BY THE MANUFACTURER. WHERE MULTIPLE RATING CONDITIONS OR PERFORMANCE REQUIREMENTS ARE PROVIDED, THE EQUIPMENT SHALL SATISFY ALL STATED REQUIREMENTS. WHERE COMPONENTS, SUCH AS INDOOR OR OUTDOOR COILS, FROM DIFFERENT MANUFACTURERS ARE USED, CALCULATIONS AND SUPPORTING DATA SHALL BE FURNISHED BY THE DESIGNER THAT DEMONSTRATES THAT THE COMBINED EFFICIENCY OF THE SPECIFIED COMPONENTS MEETS THE REQUIREMENTS HEREIN.

### C403.4 HEATING AND COOLING SYSTEM CONTROLS

EACH HEATING AND COOLING SYSTEM SHALL BE PROVIDED WITH CONTROLS IN ACCORDANCE WITH SECTIONS C403.4.1 THROUGH C403.4.5

#### C403.4.1 THERMOSTATIC CONTROLS

THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

- EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES, GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED THAT BOTH OF THE FOLLOWING CONDITIONS ARE MET:
- 1. THE PERIMETER SYSTEM INCLUDES NOT FEWER THAN ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN ± 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15 240 MM).
- 2. THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.

### C403.4.1.1 HEAT PUMP SUPPLEMENTARY HEAT

HEAT PUMPS HAVING SUPPLEMENTARY ELECTRIC RESISTANCE HEAT SHALL HAVE CONTROLS THAT, EXCEPT DURING DEFROST, PREVENT SUPPLEMENTARY HEAT OPERATION WHERE THE HEAT PUMP CAN PROVIDE THE HEATING LOAD.

### C403.4.1.2 DEADBAND

WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS. THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

### **EXCEPTIONS**

- 1. THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.
- 2. OCCUPANCIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY THE BUILDING OFFICIAL

### C403.4.1.3 SETPOINT OVERLAP RESTRICTION

WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.4.1.2.

### C403.4.2 OFF-HOUR CONTROLS

EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.

1. ZONES THAT WILL BE OPERATED CONTINUOUSLY. 2. ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A MANUAL SHUTOFF SWITCH LOCATED WITH READY ACCESS

### C403.4.2.1 THERMOSTATIC SETBACK

THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

### C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN

AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

### C403.4.2.3 AUTOMATIC START

AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.

### C403.5 ECONOMIZERS

ECONOMIZERS SHALL COMPLY WITH SECTIONS C403.5.1 THROUGH C403.5.5.

### AN AIR OR WATER ECONOMIZER SHALL BE PROVIDED FOR THE FOLLOWING COOLING SYSTEMS:

- 1. CHILLED WATER SYSTEMS WITH A TOTAL COOLING CAPACITY, LESS COOLING CAPACITY PROVIDED WITH AIR ECONOMIZERS, AS SPECIFIED IN TABLE C403.5(1).
- 2. INDIVIDUAL FAN SYSTEMS WITH COOLING CAPACITY GREATER THAN OR EQUAL TO 54,000 BTU/H (15.8 KW) SERVING OTHER THAN GROUP R OCCUPANCIES.
- THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING OTHER THAN GROUP R OCCUPANCIES NOT PROVIDED WITH ECONOMIZERS SHALL NOT EXCEED 20 PERCENT OF THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING OTHER THAN GROUP R OCCUPANCIES OR 300,000 BTU/H (88 KW), WHICHEVER IS GREATER.
- 3. INDIVIDUAL FAN SYSTEMS WITH COOLING CAPACITY GREATER THAN OR EQUAL TO 270,000 BTU/H (79.1 KW) SERVING GROUP R OCCUPANCIES. THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING GROUP R OCCUPANCIES NOT PROVIDED WITH ECONOMIZERS SHALL NOT EXCEED 20 PERCENT OF THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING GROUP R OCCUPANCIES OR 1,500,000 BTU/H (440 KW), WHICHEVER IS GREATER.

### **EXCEPTIONS:** ECONOMIZERS ARE NOT REQUIRED FOR THE FOLLOWING SYSTEMS.

- 1. INDIVIDUAL FAN SYSTEMS NOT SERVED BY CHILLED WATER FOR BUILDINGS LOCATED IN CLIMATE ZONES 1A AND 1B.
- 2. WHERE MORE THAN 25 PERCENT OF THE AIR DESIGNED TO BE SUPPLIED BY THE SYSTEM IS TO SPACES THAT ARE DESIGNED TO BE HUMIDIFIED ABOVE 35°F (1.7°C) DEW-POINT TEMPERATURE TO SATISFY PROCESS NEEDS.
- 3. SYSTEMS EXPECTED TO OPERATE LESS THAN 20 HOURS PER WEEK.
- 4. SYSTEMS SERVING SUPERMARKET AREAS WITH OPEN REFRIGERATED CASEWORK.
- WHERE THE COOLING EFFICIENCY IS GREATER THAN OR EQUAL TO THE EFFICIENCY REQUIREMENTS IN TABLE C403.5(2).6.SYSTEMS THAT INCLUDE A HEAT RECOVERY SYSTEM IN ACCORDANCE WITH SECTION C403.9.5.

#### C403.5.5 ECONOMIZER FAULT DETECTION AND DIAGNOSTICS

AIR-COOLED UNITARY DIRECT-EXPANSION UNITS LISTED IN TABLES C403.3.2(1) THROUGH C403.3.2(3) AND VARIABLE REFRIGERANT FLOW (VRF) UNITS LISTED IN TABLES C403.3.2(10) AND C403.3.2(11) THAT ARE EQUIPPED WITH AN ECONOMIZER IN ACCORDANCE WITH SECTIONS C403.5 THROUGH C403.5.4 SHALL INCLUDE A FAULT DETECTION AND DIAGNOSTICS SYSTEM COMPLYING WITH THE FOLLOWING:

- 1.1. OUTSIDE AIR.
- 1.2. SUPPLY AIR.
- 1.3. RETURN AIR.
- TEMPERATURE SENSORS SHALL HAVE AN ACCURACY OF ±2°F (1.1°C) OVER THE RANGE OF 40°F TO 80°F (4°C TO 26.7°C).

1. THE FOLLOWING TEMPERATURE SENSORS SHALL BE PERMANENTLY INSTALLED TO MONITOR SYSTEM OPERATION:

- REFRIGERANT PRESSURE SENSORS, WHERE USED, SHALL HAVE AN ACCURACY OF ±3 PERCENT OF FULL SCALE.
- 4. THE UNIT CONTROLLER SHALL BE CONFIGURED TO PROVIDE SYSTEM STATUS BY INDICATING THE FOLLOWING:
- 4.1. FREE COOLING AVAILABLE.
- 4.2. ECONOMIZER ENABLED.
- 4.3. COMPRESSOR ENABLED.
- 4.4. HEATING ENABLED. MIXED AIR LOW LIMIT CYCLE ACTIVE
- 4.6. THE CURRENT VALUE OF EACH SENSOR
- 5. THE UNIT CONTROLLER SHALL BE CAPABLE OF MANUALLY INITIATING EACH OPERATING MODE SO THAT THE OPERATION OF COMPRESSORS, ECONOMIZERS, FANS AND THE HEATING SYSTEM CAN BE INDEPENDENTLY TESTED AND VERIFIED
- 6. THE UNIT SHALL BE CONFIGURED TO REPORT FAULTS TO A FAULT MANAGEMENT APPLICATION AVAILABLE FOR ACCESS BY DAY-TO-DAY OPERATING OR SERVICE PERSONNEL, OR ANNUNCIATED LOC ZONE THERMOSTATS.
- 7. THE FAULT DETECTION AND DIAGNOSTICS SYSTEM SHALL BE CONFIGURED TO DETECT THE FOLLOWING FAULTS:
- 7.1. AIR TEMPERATURE SENSOR FAILURE/FAULT.
- 7.2. NOT ECONOMIZING WHEN THE UNIT SHOULD BE ECONOMIZING.
- 7.3. ECONOMIZING WHEN THE UNIT SHOULD NOT BE ECONOMIZING.
- 7.4. DAMPER NOT MODULATING.

7.5. EXCESS OUTDOOR AIR.

#### C403.7 VENTILATION AND EXHAUST SYSTEMS

IN ADDITION TO OTHER REQUIREMENTS OF SECTION C403 APPLICABLE TO THE PROVISION OF VENTILATION AIR OR THE EXHAUST OF AIR, VENTILATION AND EXHAUST SYSTEMS SHALL BE IN ACCORDANCE WITH SE C403.7.1 THROUGH C403.7.7.

**C403.7.1 DEMAND CONTROL VENTILATION** DEMAND CONTROL VENTILATION (DCV) SHALL BE PROVIDED FOR SPACES LARGER THAN 500 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE FEET (46.5 M2) AND WITH AN AVERAGE OCCUPANT LOAD OF 25 PEOPLE OR GREATER PER 1,000 SQUARE PEOPLE PEOPLE

- FEET (93 M2) OF FLOOR AREA, AS ESTABLISHED IN THE NEW YORK CITY MECHANICAL CODE, AND SERVED BY SYSTEMS WITH ONE OR MORE OF THE FOLLOWING: 1. AN AIR-SIDE ECONOMIZER.
- 2. AUTOMATIC MODULATING CONTROL OF THE OUTDOOR AIR DAMPER. 3. A DESIGN OUTDOOR AIRFLOW GREATER THAN 3,000 CFM (1416 L/S).

### **EXCEPTIONS:**

1. SYSTEMS WITH ENERGY RECOVERY COMPLYING WITH SECTION C403.7.4.

- 2. MULTIPLE-ZONE SYSTEMS WITHOUT DIRECT DIGITAL CONTROL OF INDIVIDUAL ZONES COMMUNICATING WITH A CENTRAL CONTROL PANEL 3. SYSTEMS WITH A DESIGN OUTDOOR AIRFLOW LESS THAN 1,200 CFM (566 L/S).
- 4. SPACES WHERE THE SUPPLY AIRFLOW RATE MINUS ANY MAKEUP OR OUTGOING TRANSFER AIR REQUIREMENT IS LESS THAN 1,200 CFM (566 L/S).
- 5. VENTILATION PROVIDED ONLY FOR PROCESS LOADS.

### C403.7.3 VENTILATION AIR HEATING CONTROL

1. UNITS THAT PROVIDE VENTILATION AIR TO MULTIPLE ZONES AND OPERATE IN CONJUNCTION WITH ZONE HEATING AND COOLING SYSTEMS SHALL NOT USE HEATING OR HEAT RECOVERY TO WARM SUPPLY AIR TO A TEMPERATURE GREATER THAN 60°F (16°C) WHEN REPRESENTATIVE BUILDING LOADS OR OUTDOOR AIR TEMPERATURES INDICATE THAT THE MAJORITY OF ZONES REQUIRE COOLING.

### C403.7.4 ENERGY RECOVERY VENTILATION SYSTEMS

WHERE THE SUPPLY AIRFLOW RATE OF A FAN SYSTEM EXCEEDS THE VALUES SPECIFIED IN TABLES C403.7.4(1) AND C403.7.4(2), THE SYSTEM SHALL INCLUDE AN ENERGY RECOVERY SYSTEM. THE ENERGY RECOVERY SYSTEM SHALL BE CONFIGURED TO PROVIDE A CHANGE IN THE ENTHALPY OF THE OUTDOOR AIR SUPPLY OF NOT LESS THAN 50 PERCENT OF THE DIFFERENCE BETWEEN THE OUTDOOR AIR AND RETURN AIR ENTHALPIES, AT DESIGN CONDITIONS. WHERE AN AIR ECONOMIZER IS REQUIRED, THE ENERGY RECOVERY SYSTEM SHALL INCLUDE A BYPASS OR CONTROLS THAT PERMIT OPERATION OF THE ECONOMIZER AS REQUIRED BY SECTION C403.5.

### EXCEPTION: AN ENERGY RECOVERY VENTILATION SYSTEM SHALL NOT BE REQUIRED IN ANY OF THE FOLLOWING CONDITIONS:

- 1. WHERE ENERGY RECOVERY SYSTEMS ARE PROHIBITED BY THE NEW YORK CITY MECHANICAL CODE. 2. LABORATORY FUME HOOD SYSTEMS THAT INCLUDE NOT FEWER THAN ONE OF THE FOLLOWING FEATURES
- 2.1. VARIABLE-AIR-VOLUME HOOD EXHAUST AND ROOM SUPPLY SYSTEMS CONFIGURED TO REDUCE EXHAUST AND MAKEUP AIR VOLUME TO 50 PERCENT OR LESS OF DESIGN VALUES. 2.2. DIRECT MAKEUP (AUXILIARY) AIR SUPPLY EQUAL TO OR GREATER THAN 75 PERCENT OF THE EXHAUST RATE, HEATED NOT WARMER THAN 2°F (1.1°C) ABOVE ROOM SETPOINT, COOLED TO NOT COOLER
- THAN 3°F (1.7°C) BELOW ROOM SETPOINT, WITH NO HUMIDIFICATION ADDED, AND NO SIMULTANEOUS HEATING AND COOLING USED FOR DEHUMIDIFICATION CONTROL 3. SYSTEMS SERVING SPACES THAT ARE HEATED TO LESS THAN 60°F (15.5°C) AND THAT ARE NOT COOLED.
- 4. WHERE MORE THAN 60 PERCENT OF THE OUTDOOR HEATING ENERGY IS PROVIDED FROM SITE-RECOVERED OR SITE-SOLAR ENERGY. 5. HEATING ENERGY RECOVERY IN CLIMATE ZONES 1 AND 2.
- 6. COOLING ENERGY RECOVERY IN CLIMATE ZONES 3C, 4C, 5B, 5C, 6B, 7 AND 8.
- SYSTEMS REQUIRING DEHUMIDIFICATION THAT EMPLOY ENERGY RECOVERY IN SERIES WITH THE COOLING COIL 8. WHERE THE SUM OF THE AIRFLOW RATES EXHAUSTED AND RELIEVED WITHIN 30 FEET OF EACH OTHER IS LESS THAN 75 PERCENT OF THE DESIGN VENTILATION OUTDOOR AIR FLOW RATE, EXCLUDING
- EXHAUST AIR THAT IS ANY OF THE FOLLOWING:
- A. USED FOR ANOTHER ENERGY RECOVERY SYSTEM B. NOT ALLOWED BY ASHRAE STANDARD 170 FOR USE IN ENERGY RECOVERY SYSTEMS WITH LEAKAGE POTENTIAL,
- C. PROHIBITED BY THE NEW YORK CITY MECHANICAL CODE. ORD.OF CLASS 4 AS DEFINED IN ASHRAE 62.1. 9. SYSTEMS EXPECTED TO OPERATE LESS THAN 20 HOURS PER WEEK AT THE OUTDOOR AIR PERCENTAGE COVERED BY TABLE C403.7.4(1).
- 10. SYSTEMS EXHAUSTING TOXIC. FLAMMABLE. PAINT OR CORROSIVE FUMES OR DUST 11. COMMERCIAL KITCHEN HOODS USED FOR COLLECTING AND REMOVING GREASE VAPORS AND SMOKE

### C403.8 FANS AND FAN CONTROLS

FANS IN HVAC SYSTEMS SHALL COMPLY WITH SECTIONS C403.8.1 THROUGH C403.8.5.1.

### C403.8.1 ALLOWABLE FAN HORSEPOWER

EACH HVAC SYSTEM HAVING A TOTAL FAN SYSTEM MOTOR NAMEPLATE HORSEPOWER EXCEEDING 5 HP (3.7 KW) AT FAN SYSTEM DESIGN CONDITIONS SHALL NOT EXCEED THE ALLOWABLE FAN SYSTEM MOTOR NAMEPLATE HP (OPTION 1) OR FAN SYSTEM BHP (OPTION 2) SHOWN IN TABLE C403.8.1(1). THIS INCLUDES SUPPLY FANS, EXHAUST FANS, RETURN/RELIEF FANS, AND FAN-POWERED TERMINAL UNITS ASSOCIATED WITH SYSTEMS PROVIDING HEATING OR COOLING CAPABILITY. SINGLE-ZONE VARIABLE AIR VOLUME SYSTEMS SHALL COMPLY WITH THE CONSTANT VOLUME FAN POWER LIMITATION.

- 1. HOSPITAL, VIVARIUM AND LABORATORY SYSTEMS THAT UTILIZE FLOW CONTROL DEVICES ON EXHAUST OR RETURN TO MAINTAIN SPACE PRESSURE RELATIONSHIPS NECESSARY FOR OCCUPANT HEALTH
- AND SAFETY OR ENVIRONMENTAL CONTROL SHALL BE PERMITTED TO USE VARIABLE VOLUME FAN POWER LIMITATION. 2. INDIVIDUAL EXHAUST FANS WITH MOTOR NAMEPLATE HORSEPOWER OF 1 HP (0.746 KW) OR LESS ARE EXEMPT FROM THE ALLOWABLE FAN HORSEPOWER REQUIREMENT.

### C403.8.2 MOTOR NAMEPLATE HORSEPOWER

- FOR EACH FAN, THE FAN BRAKE HORSEPOWER SHALL BE INDICATED ON THE CONSTRUCTION DOCUMENTS AND THE SELECTED MOTOR SHALL BE NOT LARGER THAN THE FIRST AVAILABLE MOTOR SIZE GREATER THAN
- THE FOLLOWING: 1. FOR FANS LESS THAN 6 BHP (4413 W), 1.5 TIMES THE FAN BRAKE HORSEPOWER.
  - 2. FOR FANS 6 BHP (4413 W) AND LARGER, 1.3 TIMES THE FAN BRAKE HORSEPOWER 3. SYSTEMS COMPLYING WITH SECTION C403.8.1 FAN SYSTEM MOTOR NAMEPLATE HP (OPTION 1).
  - **EXCEPTION:** FANS WITH MOTOR NAMEPLATE HORSEPOWER LESS THAN 1 HP (746 W) ARE EXEMPT FROM THIS SECTION.

### C403.8.3 FAN EFFICIENCY

FANS SHALL HAVE A FAN EFFICIENCY GRADE (FEG) OF NOT LESS THAN 67, AS DETERMINED IN ACCORDANCE WITH AMCA 205 BY AN APPROVED, INDEPENDENT TESTING LABORATORY AND LABELED BY THE MANUFACTURER. THE TOTAL EFFICIENCY OF THE FAN AT THE DESIGN POINT OF OPERATION SHALL BE WITHIN 15 PERCENTAGE POINTS OF THE MAXIMUM TOTAL EFFICIENCY OF THE FAN.

**EXCEPTION:** THE FOLLOWING FANS ARE NOT REQUIRED TO HAVE A FAN EFFICIENCY GRADE:

- 1. FANS OF 5 HP (3.7 KW) OR LESS AS FOLLOWS:
- 1.1. INDIVIDUAL FANS WITH A MOTOR NAMEPLATE HORSEPOWER OF 5 HP (3.7 KW) OR LESS, UNLESS EXCEPTION 1.2 APPLIES. 1.2. MULTIPLE FANS IN SERIES OR PARALLEL THAT HAVE A COMBINED MOTOR NAMEPLATE HORSEPOWER OF 5 HP (3.7 KW) OR LESS AND ARE OPERATED AS THE FUNCTIONAL EQUIVALENT OF A SINGLE
- 2. FANS THAT ARE PART OF EQUIPMENT COVERED IN SECTION C403.3.2. FANS INCLUDED IN AN EQUIPMENT PACKAGE CERTIFIED BY AN APPROVED AGENCY FOR AIR OR ENERGY PERFORMANCE.
- 4. POWERED WALL/ROOF VENTILATORS. 5. FANS OUTSIDE THE SCOPE OF AMCA 205.6.
- 6. FANS THAT ARE INTENDED TO OPERATE ONLY DURING EMERGENCY CONDITIONS

## C403.8.4 FRACTIONAL HP FAN MOTORS

MOTORS FOR FANS THAT ARE NOT LESS THAN 1/2 HP (0.062 KW) AND LESS THAN 1 HP (0.746 KW) SHALL BE ELECTRONICALLY COMMUTATED MOTORS OR SHALL HAVE A MINIMUM MOTOR EFFICIENCY OF 70 PERCENT, RATED IN ACCORDANCE WITH DOE 10 CFR 431. THESE MOTORS SHALL HAVE THE MEANS TO ADJUST MOTOR SPEED FOR EITHER BALANCING OR REMOTE CONTROL. THE USE OF BELT-DRIVEN FANS TO SHEAVE ADJUSTMENTS FOR AIRFLOW BALANCING INSTEAD OF A VARYING MOTOR SPEED SHALL BE PERMITTED.

- **EXCEPTIONS:** THE FOLLOWING MOTORS ARE NOT REQUIRED TO COMPLY WITH THIS SECTION:
- 1. MOTORS IN THE AIRSTREAM WITHIN FAN COILS AND TERMINAL UNITS THAT ONLY PROVIDE HEATING TO THE SPACE SERVED. MOTORS IN SPACE-CONDITIONING EQUIPMENT THAT COMPLY WITH SECTION C403.3.2 OR SECTIONS C403.8.1. THROUGH C403.8.3.
- 3. MOTORS THAT COMPLY WITH SECTION C405.7.

### **GENERAL REQUIREMENTS AS PER SECTION ECC C408**

C408.1.1 BUILDING OPERATIONS AND MAINTENANCE INFORMATION THE BUILDING OPERATIONS AND MAINTENANCE DOCUMENTS SHALL BE PROVIDED TO THE OWNER AND SHALL CONSIST OF MANUFACTURERS' INFORMATION, SPECIFICATIONS AND RECOMMENDATIONS; PROGRAMMING PROCEDURES AND DATA POINTS; NARRATIVES; AND OTHER MEANS OF ILLUSTRATING TO THE OWNER HOW THE BUILDING, EQUIPMENT AND SYSTEMS ARE INTENDED TO BE INSTALLED, MAINTAINED AND OPERATED. REQUIRED REGULAR MAINTENANCE ACTIONS FOR EQUIPMENT AND SYSTEMS SHALL BE CLEARLY STATED ON A READILY VISIBLE LABEL. THE LABEL SHALL INCLUDE THE TITLE OR PUBLICATION NUMBER | Drawing No.: FOR THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT



Description

Rev. Date:

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Special & Progress Inspections M JUST ARCHITECTURE PC SHALL ONLY IDENTIFY AL REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE DESIGN APPLICANT.

THE OWNER MUST RETAIN A CERTIFIED SPECIAL INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL & PROGRESS INSPECTION ITEMS.

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED OF

THE APPLICATION SPECIFICATION SHEET. ALL OTHER

MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES. New York Alteration Warning Statement: IT IS A VIOLATION OF NEW YORK REGULATION 69.5(b) FOR ANY PERSON, UNLESS ACTING UNDER THE

RECTION OF A LICENSED ARCHITECT. TO ALTER AN

ITEM IN ANY WAY WITHOUT AFFIXING TO THE ITEM HIS

SEAL AND THE NOTIFICATION "ALTERED BY". FOLLOWER

BY A SIGNATURE DATE OF SUCH ALTERATION AND A

ALL IDEAS, DESIGNS, ARRANGEMENTS, DRAWINGS AND WRITTEN MATERIALS INDICATED OR REPRESENTED BY THIS DRAWING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK AND ARE OWNED BY AND PROPERTY OF M. JUST ARCHITECTURE, PC AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE IN CONNECTION WITH THIS SPECIFIC PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE DUPLICATED, USED BY OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF

SPECIFIC DESCRIPTION OF THE ALTERATION

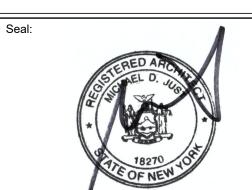
Jay DellaMonica reative Food Corp 200 Garden City Plaza Garden City, NY 11530

**DOB Approval Stamps:** 

M. JUST ARCHITECTURE, PC

3500 Boston Post Road

Bronx, NY 10803



ENERGY CODE NOTES

Job No.: BLOCK: 4723 LOT: 66 18049

ZONE: C2-2 in R5 Drawn By: ( Sheet:

EN-001.00

MAP: 2b

202	0 PROGRESS INSPECTIONS FOR ENERGY (	CODE COMPLIANCE - CO	MMERCIAL BUILDINGS	
INSP	ECTION/TEST	PERIODIC(MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER C4) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIB	MECHANICAL AND SERVICE WATER HEAT	ING INSPECTIONS		
IIB3	HVAC-R AND SERVICE WATER HEATING EQUIPMENT: EQUIPMENT SIZING, EFFICIENCIES AND OTHER PERFORMANCE FACTORS OF ALL MAJOR EQUIPMENT UNITS, AS DETERMINED BY THE APPLICANT OF RECORD, AND NO LESS THAN 15% OF MINOR EQUIPMENT UNITS, SHALL BE VERIFIED BY VISUAL INSPECTION AND, WHERE NECESSARY, REVIEW OF MANUFACTURER'S DATA.	PRIOR TO FINAL PLUMBING AND CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C403.1, C403.2, C403.3, C403.7.5, C404.2, C404.5, C404.9, C405.10, C406; ASHRAE 90.1 – 6.3, 6.4, 6.5, 6.7, 7.4, 7.5, 7.8, 10.4.6, APPENDIX I
	POOL HEATERS AND COVERS SHALL BE VERIFIED BY VISUAL INSPECTION.			
IIB4	HVAC-R AND SERVICE WATER HEATING SYSTEM CONTROLS:  NO LESS THAN 20% OF EACH TYPE OF REQUIRED CONTROLS AND ECONOMIZERS SHALL BE VERIFIED BY VISUAL INSPECTION AND TESTED FOR FUNCTIONALITY AND PROPER OPERATION. SUCH CONTROLS SHALL INCLUDE, BUT ARE NOT LIMITED TO:  THERMOSTATIC SET POINT OVERLAP RESTRICTION OFF-HOUR SHUTOFF DAMPER SNOW-MELT SYSTEM DEMAND CONTROL SYSTEMS OUTDOOR HEATING SYSTEMS AIR SYSTEMS AIR SYSTEMS VARIABLE AIR VOLUME FAN SINGLE ZONE COOLING SYSTEMS HEAT REJECTION EQUIPMENT FAN SPEED COMPLEX MECHANICAL SYSTEMS SERVING MULTIPLE ZONES VENTILATION ENERGY RECOVERY SYSTEMS HOT GAS BYPASS LIMITATION TEMPERATURE SERVICE WATER HEATING HOT WATER SYSTEM POOL HEATER AND TIME SWITCHES EXHAUST HOODS RADIANT HEATING SYSTEMS HVAC CONTROL IN GROUP R-1 SLEEPING ROOMS  CONTROLS WITH SEASONALLY DEPENDANT FUNCTIONALITY: CONTROLS WHOSE COMPLETE OPERATION CANNOT BE DEMONSTRATED DUE TO PREVAILING WEATHER CONDITIONS TYPICAL OF THE SEASON DURING WHICH	AFTER INSTALLATION AND PRIOR TO FINAL ELECTRICAL AND CONSTRUCTION INSPECTION, EXCEPT THAT FOR CONTROLS WITH SEASONALLY DEPENDANT FUNCTIONALITY, SUCH TESTING SHALL BE PERFORMED BEFORE SIGN-OFF FOR ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY	APPROVED CONSTRUCTION DOCUMENTS, INCLUDING CONTROL SYSTEMS NARRATIVES; ASHRAE GUIDELINE 1: THE HVAC COMMISSIONING PROCESS WHERE APPLICABLE	C403, C404, C406; ASHRAE 90.1 – 6.3, 6.4, 6.5, 6.6, 7.4, 7.5, APPENDIX I
	PROGRESS INSPECTIONS WILL BE PERFORMED SHALL BE PERMITTED TO BE SIGNED OFF FOR THE PURPOSE OF A TEMPORARY CERTIFICATE OF OCCUPANCY WITH ONLY A VISUAL INSPECTION, PROVIDED, HOWEVER, THAT THE PROGRESS INSPECTOR SHALL PERFORM A SUPPLEMENTAL INSPECTION WHERE THE CONTROLS ARE VISUALLY INSPECTED AND TESTED FOR FUNCTIONALITY AND PROPER OPERATION DURING THE NEXT IMMEDIATE SEASON THEREAFTER.  THE OWNER SHALL PROVIDE FULL ACCESS TO THE PROGRESS INSPECTOR WITHIN TWO WEEKS OF THE PROGRESS INSPECTOR'S REQUEST FOR SUCH ACCESS TO PERFORM THE PROGRESS INSPECTION.			
	FOR SUCH SUPPLEMENT INSPECTIONS, THE DEPARTMENT SHALL BE NOTIFIED BY THE APPROVED PROGRESS INSPECTION AGENCY OF ANY UNRESOLVED DEFICIENCIES IN THE INSTALLED WORK WITHIN 180 DAYS OF SUCH SUPPLEMENTAL INSPECTION.			
IIB5	HVAC-R AND SERVICE WATER PIPING DESIGN AND INSULATION: INSTALLED DUCT AND PIPING INSULATION SHALL BE VISUALLY INSPECTED TO VERIFY PROPER INSULATION PLACEMENT AND VALUES.	AFTER INSTALLATION AND PRIOR TO CLOSING SHAFTS, CEILINGS, AND WALLS	APPROVED CONSTRUCTION DOCUMENTS; SMACNA DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE	C403.11, C404.4, C404.5; MC 603.9; ASHRAE 90.1 – 6.3, 6.4.4, 6.8.2, 6.8.3, 7.4.3
	JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK SHALL BE VISUALLY INSPECTED FOR PROPER SEALING.			
IID	OTHER		I	1
IID1	MAINTENANCE INFORMATION:  MAINTENANCE MANUALS FOR MECHANICAL, SERVICE HOT WATER AND ELECTRICAL EQUIPMENT AND SYSTEMS REQUIRING PREVENTIVE MAINTENANCE SHALL BE REVIEWED FOR APPLICABILITY TO INSTALLED EQUIPMENT AND SYSTEMS BEFORE SUCH MANUALS ARE PROVIDED TO THE OWNER. LABELS REQUIRED FOR SUCH EQUIPMENT OR SYSTEMS SHALL BE INSPECTED FOR ACCURACY AND COMPLETENESS.	PRIOR TO SIGN-OFF OR ISSUANCE OF FINAL CERTIFICATE OF OCCUPANCY	APPROVED CONSTRUCTION DOCUMENTS, INCLUDING ELECTRICAL DRAWINGS WHERE APPLICABLE; ASHRAE GUIDELINE 4: PREPARATION OF OPERATING AND MAINTENANCE DOCUMENTATION FOR BUILDING SYSTEMS	C408.1.1, C408.2.5.2, C408.3.2; ASHRAE 90.1 – 4.2.2.3, 6.7.2.2, 6.7.2.3.5.2, 8.7.2, 9.7.2.2, 9.4.3.2.2



Rev. #	Date:	Description:
	02-11-21	AS PER DOB OBJECTIONS
	02-19-21	AS PER DOB OBJECTIONS
1	03-23-21	AS PER CHANGES TO MECHANICAL SCOPE OF WORK

M. JUST ARCHITECTURE, PC SHALL ONLY IDENTIFY ALL REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE DESIGN APPLICANT.

THE OWNER MUST RETAIN A CERTIFIED SPECIAL INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL & PROGRESS INSPECTION ITEMS.

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 EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

New York Alteration Warning Statement:
IT IS A VIOLATION OF NEW YORK REGULATION 69.5(b)
FOR ANY PERSON, UNLESS ACTING UNDER THE
DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN
ITEM IN ANY WAY WITHOUT AFFIXING TO THE ITEM HIS SEAL AND THE NOTIFICATION "ALTERED BY", FOLLOWED BY A SIGNATURE, DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION

Copyright:
ALL IDEAS, DESIGNS, ARRANGEMENTS, DRAWINGS AND WRITTEN MATERIALS INDICATED OR REPRESENTED BY THIS DRAWING HEREIN CONSTITUTE ORIGINAL AND UNPUBLISHED WORK AND ARE OWNED BY AND PROPERTY OF M. JUST ARCHITECTURE, PC AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE IN CONNECTION WITH THIS SPECIFIC PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE DUPLICATED, USED BY OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF M. JUST ARCHITECTURE, PC

Jay DellaMonica Creative Food Corp 200 Garden City Plaza Garden City, NY 11530

DOB Approval Stamps:

Project Address: 3500 Boston Post Road Bronx, NY 10803



Drawing Title:
ENERGY CODE
PROGRESS
INSPECTIONS

NYCDOB APPLICATION:

X00433355-I1

BLOCK: 4723 LOT: 66 18049 02-19-21 ZONE: C2-2 in R5 Drawn By: Sheet: MY 8 of 9

Drawing No.: EN-002.00

#### Michael D. Just, R.A., A.I.A. **ENERGY COMPLIANCE STATEMENT** 718.855.1237 mjust@mjarch.com TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK CITY, USING CHAPTER C4. www.justarchitectureny.com TABULAR ANALYSIS CLIMATE ZONE: 4A AS PER TABLE C301.1 COMMERCIAL BUILDING ev. Date: Description SUPPORTING **CODE PRESCRIPTIVE VALUE AND CITATION WORK ITEMS INCLUDING NEW AND/OR REPLACEMENT** PROPOSED DESIGN VALUE **DOCUMENTATION** 02-11-21 AS PER DOB OBJECTIONS M 02-19-21 AS PER DOB OBJECTIONS MY **BUILDING ENVELOPE REQUIREMENTS AS PER SECTION C402:** 03-23-21 AS PER CHANGES TO MECHANICAL SCOPE OF NOT AFFECTED UNDER THIS APPLICATION **BUILDING MECHANICAL SYSTEMS REQUIREMENTS AS PER SECTION C403:** DESIGN LOADS DETERMINED IN ACCORDANCE WITH ANSI/ASHRAE/ACCA AS PER SECTION C403.1.1 CALCULATION OF HEATING AND COOLING LOADS - DESIGN LOADS ASSOCIATED WITH HEATING, VENTILATING AND AIR CONDITIONING OF THE BUILDING SHALL BE DETERMINED IN ACCORDANCE WITH SEE NOTES ON M-100. **CALCULATION OF HEATING AND COOLING LOADS:** STANDARD 183. ANSI/ASHRAE/ACCA STANDARD 183 OR BY AN APPROVED EQUIVALENT COMPUTATIONAL PROCEDURE USING THE DESIGN PARAMETERS SPECIFIED IN CHAPTER C3. HEATING AND COOLING LOADS SHALL BE ADJUSTED TO ACCOUNT FOR REPLACED HVAC UNITS LOAD REDUCTIONS THAT ARE ACHIEVED WHERE ENERGY RECOVERY SYSTEMS ARE UTILIZED IN THE HVAC SYSTEM IN ACCORDANCE WITH THE ASHRAE HVAC SYSTEMS AND EQUIPMENT HANDBOOK BY AN APPROVED EQUIVALENT COMPUTATIONAL PROCEDURE. SPECIFIED EQUIPMENT SIZED WITHIN LOAD CALCULATION LIMITS AS PER SECTION C403.3.1 EQUIPMENT SIZING - THE OUTPUT CAPACITY OF HEATING AND COOLING EQUIPMENT SHALL BE NOT GREATER THAN THAT OF THE SMALLEST AVAILABLE EQUIPMENT SIZE THAT EXCEEDS THE LOADS CALCULATED SEE NOTES ON M-100. **EQUIPMENT SIZING:** REPLACED HVAC UNITS IN ACCORDANCE WITH SECTION C403.1.1. A SINGLE PIECE OF EQUIPMENT PROVIDING BOTH HEATING AND COOLING SHALL SATISFY THIS PROVISION FOR ONE FUNCTION WITH THE CAPACITY FOR THE OTHER FUNCTION AS SMALL AS POSSIBLE, WITHIN AVAILABLE EQUIPMENT OPTIONS. **ELECTRICALLY OPERATED UNITARY AIR CONDITIONERS &** 14.1 SEER AS PER TEST PROCEDURE AHRI 210/360 AS PER TABLE C403.3.2(1) OF THE 2020 NYCECC - AIR CONDITIONERS, AIR COOLED <65,000 BTU/HR, ALL OTHER HEATING SECTION TYPE, SINGLE PACKAGE SHALL HAVE A MINIMUM EFFICIENCY OF 13.0 SEER AS PER TEST PROCEDURE AHRI SEE NOTES ON M-100. **CONDENSING UNITS:** REPLACED RTU-1 COOLING CAPACITY: 58,500 BTU/HR WARM-AIR FURNACES & COMBINATION WARM-AIR AS PER TABLE C403.3.2(4) OF THE 2020 NYCECC - WARM-AIR FURNACES. GAS-FIRED. <225.000 BTU/HR. MAXIMUM CAPACITY SHALL HAVE A MINIMUM EFFICIENCY OF 80% AFUE OR 80% THERMAL EFFICIENCY AS PER TEST PROCEDURE DOE 10 81% THERMAL EFFICIENCY AS PER TEST PROCEDURE ANSI Z21.47 SEE NOTES ON M-100. CFR PART 430 OR SECTION 2.39 THERMAL EFFICIENCY, ANSI Z21.47. FURNACES/AIR CONDITIONING UNITS: **REPLACED RTU-1** Special & Progress Inspections: M. JUST ARCHITECTURE. PC SHALL ONLY IDENTIFY ALI HEATING CAPACITY: 130,000 BTU/HR REQUIRED SPECIAL & PROGRESS INSPECTIONS AS THE DESIGN APPLICANT THE OWNER MUST RETAIN A CERTIFIED SPECIAL **ELECTRICALLY OPERATED UNITARY AIR CONDITIONERS &** 12.8 IEER AS PER TEST PROCEDURE AHRI 340/360 AS PER TABLE C403.3.2(1) OF THE 2020 NYCECC - AIR CONDITIONERS, AIR COOLED >=135,000 BTU/HR AND <240,000 BTU/HR, ALL OTHER HEATING SECTION TYPE, SINGLE PACKAGE SHALL HAVE A MINIMUM EFFICIENCY OF 12.2 IEER AS PER SEE NOTES ON M-100. INSPECTION AGENCY PRIOR TO THE ISSUANCE OF A TEST PROCEDURE AHRI 340/360. **CONDENSING UNITS:** WORK PERMIT FOR ALL OF THE REQUIRED SPECIAL & PROGRESS INSPECTION ITEMS. **REPLACED RTU-2** COOLING CAPACITY: 83,000 BTU/HR 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 82% THERMAL EFFICIENCY AS PER TEST PROCEDURE ANSI Z21.47 AS PER TABLE C403.3.2(4) OF THE 2020 NYCECC - WARM-AIR FURNACES, GAS-FIRED, <225,000 BTU/HR, MAXIMUM CAPACITY SHALL HAVE A MINIMUM EFFICIENCY OF 80% AFUE OR 80% THERMAL EFFICIENCY AS PER TEST PROCEDURE DOE 10 WARM-AIR FURNACES & COMBINATION WARM-AIR SEE NOTES ON M-100. BE CONSIDERED EITHER BEING APPROVED OR IN CFR PART 430 OR SECTION 2.39 THERMAL EFFICIENCY, ANSI Z21.47. **FURNACES/AIR CONDITIONING UNITS:** ACCORDANCE WITH APPLICABLE CODES. **REPLACED RTU-2** HEATING CAPACITY: 180,000 BTU/HR New York Alteration Warning Statement: IT IS A VIOLATION OF NEW YORK REGULATION 69.5(b) FOR ANY PERSON. UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT. TO ALTER AN AS PER TABLE C403.3.2(1) OF THE 2020 NYCECC - AIR CONDITIONERS, AIR COOLED >=135,000 BTU/HR AND <240,000 BTU/HR, ALL OTHER HEATING SECTION TYPE, SINGLE PACKAGE SHALL HAVE A MINIMUM EFFICIENCY OF 12.2 IEER AS PER **ELECTRICALLY OPERATED UNITARY AIR CONDITIONERS &** 12.8 IEER AS PER TEST PROCEDURE AHRI 340/360 SEE NOTES ON M-100. ITEM IN ANY WAY WITHOUT AFFIXING TO THE ITEM HIS SEAL AND THE NOTIFICATION "ALTERED BY". FOLLOWE TEST PROCEDURE AHRI 340/360. **CONDENSING UNITS:** BY A SIGNATURE, DATE OF SUCH ALTERATION AND A **REPLACED RTU-4** SPECIFIC DESCRIPTION OF THE ALTERATION COOLING CAPACITY: 114,000 BTU/HR ALL IDEAS, DESIGNS, ARRANGEMENTS, DRAWINGS AND WRITTEN MATERIALS INDICATED OR REPRESENTED BY WARM-AIR FURNACES & COMBINATION WARM-AIR 82% THERMAL EFFICIENCY AS PER TEST PROCEDURE ANSI Z21.47 AS PER TABLE C403.3.2(4) OF THE 2020 NYCECC - WARM-AIR FURNACES, GAS-FIRED, <225,000 BTU/HR, MAXIMUM CAPACITY SHALL HAVE A MINIMUM EFFICIENCY OF 80% AFUE OR 80% THERMAL EFFICIENCY AS PER TEST PROCEDURE DOE 10 | SEE NOTES ON M-100. THIS DRAWING HEREIN CONSTITUTE ORIGINAL AND CFR PART 430 OR SECTION 2.39 THERMAL EFFICIENCY, ANSI Z21.47. **FURNACES/AIR CONDITIONING UNITS:** UNPUBLISHED WORK AND ARE OWNED BY AND PROPERTY OF M. JUST ARCHITECTURE, PC AND WERE **REPLACED RTU-4** CREATED, EVOLVED AND DEVELOPED FOR USE IN HEATING CAPACITY: 224,000 BTU/HR CONNECTION WITH THIS SPECIFIC PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE DUPLICATED, USED BY OR DISCLOSED TO ANY PERSON. FIRM OR CORPORATION FOR ANY PURPOSE ONE THERMOSTAT IS PROVIDED FOR EACH ZONE AS PER SECTION C403.4.1 THERMOSTATIC CONTROLS - THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF SEE NOTES ON M-100. THERMOSTATIC CONTROLS: M. JUST ARCHITECTURE, PC WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED. NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM. THERMOSTATS FOR REPLACED HVAC UNIT Jay DellaMonica **OFF-HOUR CONTROLS:** EACH THERMOSTAT WILL BE PROGRAMMABLE TO MEET THE AS PER SECTION C403.4.2 OFF-HOUR CONTROLS - EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM. SEE NOTES ON M-100. reative Food Corp REQUIREMENTS 200 Garden City Plaza ALL ZONES Garden City, NY 11530 DOB Approval Stamps EACH THERMOSTAT WILL BE PROGRAMMABLE TO MEET THE AS PER SECTION C403.4.2.1 THERMOSTATIC SETBACK - THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP THERMOSTATIC SETBACK: SEE NOTES ON M-100. REQUIREMENTS TO 85°F (29°C). ALL ZONES EACH THERMOSTAT WILL BE PROGRAMMABLE TO MEET THE AS PER SECTION C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN - AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER SEE NOTES ON M-100. **AUTOMATIC SETBACK AND SHUTDOWN:** WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS, ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF REQUIREMENTS ALL ZONES THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR. EACH THERMOSTAT WILL BE PROGRAMMABLE TO MEET THE AS PER SECTION C403.4.2.3 AUTOMATIC START - AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SEE NOTES ON M-100. **AUTOMATIC START:** REQUIREMENTS SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY. **ALL ZONES** ECONOMIZERS SHALL BE PROVIDED FOR THE REPLACED HVAC UNIT AS PER AS PER SECTION C403.5 ECONOMIZERS - ECONOMIZERS SHALL COMPLY WITH SECTIONS C403.5.1 THROUGH C403.5.5. AN AIR OR WATER ECONOMIZER SHALL BE PROVIDED FOR THE FOLLOWING COOLING SYSTEMS: 1. CHILLED WATER **ECONOMIZERS** SEE NOTES ON M-100. THE REQUIREMENTS OF THE CODE. SYSTEMS WITH A TOTAL COOLING CAPACITY, LESS COOLING CAPACITY PROVIDED WITH AIR ECONOMIZERS, AS SPECIFIED IN TABLE C403.5(1). 2. INDIVIDUAL FAN SYSTEMS WITH COOLING CAPACITY GREATER THAN OR EQUAL TO 54,000. REPLACED HVAC BTU/H (15.8 KW) SERVING OTHER THAN GROUP R OCCUPANCIES. THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING OTHER THAN GROUP R OCCUPANCIES NOT PROVIDED WITH ECONOMIZERS SHALL NOT EXCEED 20 PERCENT OF THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING OTHER THAN GROUP R OCUPANCIES OR 300,000 BTU/H (88 KW). WHICHEVER IS GREATER. 3. INDIVIDUAL FAN SYSTEMS WITH COOLING CAPACITY GREATER. THAN OR EQUAL TO 270,000 BTU/H (79.1 KW) SERVING GROUP R OCCUPANCIES. THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING GROUP R OCCUPANCIES NOT PROVIDED WITH ECONOMIZERS SHALL NOT EXCEED 20 PERCENT OF THE TOTAL SUPPLY CAPACITY OF ALL FAN COOLING UNITS SERVING GROUP R OCCUPANCIES OR 1,500,000 BTU/H (440 KW), WHICHEVER IS GREATER. 3500 Boston Post Road Bronx, NY 10803 SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED TO AS PER SECTION C403.11.1 DUCT AND PLENUM INSULATION AND SEALING - SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH NOT LESS THAN R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND SEE NOTES ON M-100. **DUCT AND PLENUM INSULATION AND SEALING:** WHERE LOCATED OUTSIDE THE BUILDING WITH NOT LESS THAN R-8 INSULATION IN CLIMATE ZONES 1 THROUGH 4 AND NOT LESS THAN R-12 INSULATION IN CLIMATE ZONES 5 THROUGH 8. WHERE LOCATED WITHIN A BUILDING ENVELOPE MEET THE REQUIREMENTS OF THE CODE. **DUCT SEALING** ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY NOT LESS THAN R-8 INSULATION IN CLIMATE ZONES 1 THROUGH 4 AND NOT LESS THAN R-12 Seal: INSULATION IN CLIMATE ZONES 5 THROUGH 8 AS PER SECTION C403.11.3 PIPING INSULATION - PIPING SERVING AS PART OF A HEATING OR COOLING SYSTEM SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLE C403.11.3. SEE NOTES ON M-100. **PIPING INSULATION:** ALL PIPING SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLE **INSULATION FOR PIPING** C403.11.3 ALL EXTERIOR PIPING SHALL BE PROTECTED TO MEET THE REQUIREMENTS AS PER SECTION C403.11.3.1 PROTECTION OF PIPING INSULATION - PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE, INCLUDING THAT CAUSED BY SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE PROTECTION OF PIPING INSULATION: SEE NOTES ON M-100. AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVE TAPE SHALL NOT BE PERMITTED. PROTECTION FOR EXTERIOR PIPING OF THE CODE. **SERVICE WATER HEATING REQUIREMENTS AS PER SECTION C404:** TABULAR ANALYSIS NOT AFFECTED UNDER THIS APPLICATION **ELECTRICAL POWER AND LIGHTING SYSTEMS REQUIREMENTS AS PER SECTION C405:** NOT AFFECTED UNDER THIS APPLICATION MAINTENANCE INFORMATION AND SYSTEM COMMISSIONING AS PER SECTION C408: MAINTENANCE INSTRUCTIONS AS PER SECTION C408 OF THE 2020 NYCECC - THE BUILDING OPERATIONS AND MAINTENANCE DOCUMENTS SHALL BE PROVIDED TO THE OWNER AND SHALL CONSIST OF MANUFACTURERS' INFORMATION, SPECIFICATIONS AND SEE NOTES ON M-100 **MAINTENANCE INFORMATION:**

SHALL BE FURNISHED AS REQUIRED BY SECTION C408 RECOMMENDATIONS; PROGRAMMING PROCEDURES AND DATA POINTS; NARRATIVES; AND OTHER MEANS OF ILLUSTRATING TO THE OWNER HOW THE BUILDING, EQUIPMENT AND SYSTEMS ARE INTENDED TO BE INSTALLED, FOR NEW MECHANICAL UNITS MAINTAINED AND OPERATED. REQUIRED REGULAR MAINTENANCE ACTIONS FOR EQUIPMENT AND SYSTEMS SHALL BE CLEARLY STATED ON A READILY VISIBLE LABEL. THE LABEL SHALL INCLUDE THE TITLE OR PUBLICATION NUMBER FOR THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT.

Job No.: BLOCK: 4723 LOT: 18049 66 C2-2 in R5 Drawn By: Sheet: ZONE:

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Drawing No.

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MAP: