

# HISTORIC PRESERVATION COMMISSION

Wednesday, October 27, 2021

5:00 p.m.

Council Board Room

One Batavia City Centre, Batavia NY

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## AGENDA

I. Roll Call

II. Call to Order

III. Approval of Minutes – 7/28/21

IV. Proposals

**Address:** 201 East Main Street

**Applicant:** GO ART!

Proposal: Install HVAC system

Actions: 1. Review application  
2. Public hearing  
3. Discussion and action by the board

VI. Old Business:

- A. Ross Street historic sign replacement
- B. Centennial Park/Redfield Parkway pillar designation
- C. Brisbane Mansion tour
- D. Della Penna progress

VII. New Business

- A. GCASA historic district
- B. Genesee/Finger Lakes Regional Planning Council Fall 2021 Local Government Workshop

VIII. Adjournment

# HISTORIC PRESERVATION COMMISSION

## *DRAFT MINUTES*

**July 28, 2021**

**5:00 pm**

Council Board Room

One Batavia City Centre, Batavia NY

Members present: *Connie Boyd, Sharon Burkel, Ryan Duffy, Caroline Hosek*

Members absent: Alexis Green

Others present: Meg Chilano – Recording Secretary, Ron Panek - Code Enforcement Officer

### **I. Roll Call**

Roll call of the members was conducted. Four members were present.

### **II. Call to order**

Chair Sharon called the meeting to order at 5:15 p.m.

### **III. Previous Meeting Minutes**

Ms. Burkel wanted the minutes corrected to note that she had read from a memo written by Matt Worth. The memo had given the HPC instructions on how to table applications that were deemed incomplete. The minutes were approved as corrected by unanimous consent.

**RESULT: Approval of June 23, 2021 meeting minutes.**

### **IV. Proposals**

- A. Proposal #1: place a non-permanent fairy garden in front of the black railing on the Bank Street side of the building. The project would also include painting a mural on the side portion of the ramp facing Bank Street

**Address:** 201 East Main Street

**Applicant:** Go Art!

- Actions:**
1. Review application for completeness
  2. Public hearing
  3. Discussion and action by the board

#### **1. Review Application for Completeness**

The board agreed that the application was complete.

#### **2. Public Hearing**

Ms. Burkel opened the public hearing at 5:16 p.m. Gregory Hallock, Executive Director of Go Art! told the board that the idea for the fairy garden originated with the question of how to draw visitors to Genesee County and entice them to walk around after they have arrived. The

ideas is for every town in the county to create doors that open into gardens. Batavia is the designated test site for the idea.

Mr. Hallock would like to begin the project with a fairy garden in the side yard of the Go Art! building. He put out a call for artists in the area to create the fairy garden doors.

Ms. Burkel closed the public hearing at 5:24.

### **3. Discussion and Action by the Board**

Ms. Boyd asked if there are plans to extend the idea to involve homeowners, and Mr. Hallock answered yes, that he would like to provide an opportunity for a more extended walking tour through Batavia.

**MOTION:** Ms. Boyd moved to approve the project; Mr. Duffy seconded the motion, and all voted in favor.

**RESULT: Approval of the application.**

#### **B. Proposal #2: replace the old shingles on a small portion of the roof with slate which would match the remainder of the roof**

**Address:** 314 *East Main Street*

**Applicant:** Timothy and Elizabeth Jess

- Actions:**
1. Review application for completeness
  2. Public hearing
  3. Discussion and action

#### **1. Review Application for Completeness**

The board agreed that the application was complete.

#### **2. Public Hearing**

Ms. Burkel opened the public hearing at 5:27 p.m. Mr. Jess brought a sample of the slate shingles he will be using on the roof. He said that the small back portion of the roof needs to be replaced, and he has a large number of reclaimed slate shingles he intends to use for the project.

Ms. Burkel asked if Mr. Jess has enough slate shingles to cover the entire roof. According to Mr. Jess, he has enough shingles to cover the front part of the roof as well. The board expressed their appreciation for the work Mr. Jess has done on maintaining the original look of the house.

Ms. Burkel closed the public hearing at 5:32.

### **3. Discussion and Action by the Board**

**MOTION:** Mr. Duffy moved to approve the project as presented; the motion was seconded by Ms. Hosek, and all voted in favor.

**RESULT: Approval of the application.**

## **V. New Business**

A. Centennial Park designation

In attendance at the meeting was a group of residents interested in designating Centennial Park as an historic landmark.

Ms. Burkel related that she has scheduled a meeting with the City Manager at which she will bring up the question of designating the park and attempt to discover if designating a City-owned property is permitted.

If the answer is yes, she intends to start the procedure for obtaining the history of the property. It needs to be determined whether Centennial Park meets the criteria for an historic landmark.

Ms. Burkel recommended for the group to read the Batavia Municipal Code regarding the designation of historic landmarks.

B. Brisbane Mansion

According to Ms. Burkel, the City is looking for grants for surveying the building. She believes the City is preparing to begin work on the new Police Department, and wants to be involved in the discussion of the building's future.

C. Redfield Pillars

Ms. Burkel asked if the board would be interested in pursuing possible designation of the Redfield Pillars now that they have been repaired. The board agreed that the effort should be made.

Ms. Burkel also addressed the issue of tabling proposals if they are considered incomplete. She noted that if the BMC could be amended to allow the board more time to consider proposals, it would resolve the issue of tabling. She told the board that she would bring up the topic at her meeting with the City Manager.

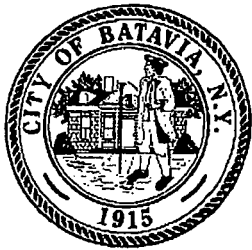
**VI. Adjournment**

Ms. Boyd moved to adjourn the meeting at 6:14 p.m.; Mr. Duffy seconded the motion. All voted in favor.

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Meg Chilano  
Recording Secretary





**City of Batavia**  
**Application to the Historic Preservation Commission**

Date: 09-13-2021

Historic Address: 201 East Main Street, Batavia, NY 14020

Owner: Genesee-Orleans Regional Arts Council (585)343-9313  
Name Phone  
201 East Main Street, Batavia, NY 14020  
Street Address City/Town Zip  
(585)343-9313 ghallock@goart.org  
Phone Email

If not Owner: ☐ Contractor ☐ Agent for Owner

Applicant: Gregory Hallock, Executive Director (646)530-1980  
Name Phone

Detailed Description of Request: HVAC - please see attached letter from  
Turnbull Heating + Air Conditioning

**Requirement Checklist:**

**Building Requirements:** ☐ Building Permit Application  
☒ Photographs of Property  
☒ Detailed Drawings  
☐ Samples of Colors  
☐ Description of Materials and/or Samples of Materials

**Sign Requirements:** ☐ Sign Permit Application  
☐ Illustration of Sign and Location on Building  
☐ Type of Lettering  
☐ Dimensions of Sign  
☐ Colors  
☐ Description of Materials  
☐ Type of Illumination  
☐ Method of Attachment

**Painting Requirements:** ☐ Samples of Colors

Signature of Applicant: Gregory A. Hallock Date: 09-13-2021

**For Office Use Only**

Reviewed by Code Enforcement Officer: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Referred to HPC

☐ Referral to HPC not needed

## CITY OF BATAVIA

## BUILDING PERMIT APPLICATION

DATE: 09-14-2021APPLICANT NAME & PHONE: Genesee-Orleans Regional Arts Council**Project Location and Information**

Permit #: \_\_\_\_\_

Fee: \_\_\_\_\_

Address of Project: 201 East Main Street, Batavia, NY 14020Owner & Address: Genesee-Orleans Regional Arts Council, 201 East Main Street, Batavia, NY 14020Phone: (585) 343-9313**Project Type/Describe Work**Estimated cost of work: \$84,000Start date: 10-18-2021

Describe project:

HVAC - please see attached write-up from Turnbull**Contractor Information** – Insurance certificates (liability & workers comp) required being on file**GENERAL**

Name/Address: \_\_\_\_\_

Phone: \_\_\_\_\_

**PLUMBING** (City of Batavia Licensed Plumber Required)

Name/Address: \_\_\_\_\_

Phone: \_\_\_\_\_

**HEATING**

Name/Address: \_\_\_\_\_

Phone: \_\_\_\_\_

**ELECTRICAL** (Third Party Electrical Inspection Required)

Name/Address: \_\_\_\_\_

Phone: \_\_\_\_\_

**FOR OFFICE USE ONLY**

Zoning District: \_\_\_\_\_ Flood Zone: \_\_\_\_\_ Corner Lot: \_\_\_\_\_ Historic District/Landmark: \_\_\_\_\_

Zoning Review: \_\_\_\_\_ Variance Required: \_\_\_\_\_ Site Plan Review: \_\_\_\_\_ Other: \_\_\_\_\_

National Grid Sign Off (Pools): \_\_\_\_\_ Lot Size: \_\_\_\_\_

Existing Use: \_\_\_\_\_ NYS Building Code Occupancy Class: \_\_\_\_\_

Proposed Use: \_\_\_\_\_ NYS Building Code Occupancy Class: \_\_\_\_\_



Go Art! Genesee-Orleans Regional Arts Council  
c/o Seymour Place  
201 East Main St  
Batavia, NY 14020

April 15, 2021

ATTN: Mr. Gregory A. Hallock  
Executive Director

Dear Mr. Hallock,

Per your request, the following is the scope of air conditioning work you requested to attempt to meet budget.

- 1) Second Floor Air Conditioning Work ~ Furnish and install a new "Unico" 5 ton high velocity air conditioning system using a heat pump outdoor unit with matching indoor "Unico" blower and coil module; To include piping (refrigerant and condensate piping), secondary pan and drain for indoor unit, "Unico" ductwork, tubing, nozzles, "Unico" return air ductwork, and filter grille; Elevate outdoor unit for proper defrost drainage; Thermostat and control wiring.
- 2) Kitchen Air Conditioning Work ~ Furnish and install two (2) "Fujitsu" 3 ½ ton hyper heat ductless split systems with high side wall indoor units with options for cassette or "free-blow" air handler hanging from the ceiling; To include setting outdoor units on the roof with 6x6 sleeper supports secured and flashed into the roof (All roofing by others), set outdoor unit on custom stand secured to 6x6 sleepers, install refrigerant and condensate piping.
- 3) Furnish labor and materials to rework and repair existing air conditioning systems known as AC-1 and AC-2 as follows:
  - AC-1 : Replace flex with hard pipe, seal duct joints (old & new), and insulate all ductwork with a foil face fiberglass duct wrap.
  - Verify operation of AC-1 and AC-2, make repairs to include compressor or replacement options.
  - Rework condensate piping for proper service of filters.
- 4) Install new thermostats in the building – seven (7) day programmable, WiFi capability, with lockable touch pad.

Page 1 of 2



## Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO  
Governor

ERIK KULLESEID  
Commissioner

July 20, 2021

Derik Kane  
Labella  
300 Pearl Street  
Buffalo, NY 14202

Re: NYSHCR  
NYMS HVAC System for 201 Main St./Batavia  
201 E Main St, Batavia, Genesee County  
21PR04801

Dear Derik Kane:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

We note that the Batavia Club/ Seymour Place is listed in the State and National Registers of Historic Places. We have reviewed the submission received on July 15, 2021, including the submitted photos and drawings dated June 14, 2021. In order to continue our review, we offer the following comments and request some additional information:

- Proposed HVAC penetrations should not impact any existing historic features or fabric and should be minimally visual. In order to understand the impact the proposed project may have on this historic resource, which retains a high degree of integrity, please provide more clarification on the following concerns:
  - Will the nozzles be recessed or will they project into the space? What will be the size of the proposed ceiling penetrations? Will any architectural trim be impacted by the proposed ceiling penetrations? Is there any way to reduce the number of penetrations to decrease the amount of physical and visual change occurring in these historic spaces?
- We note that the proposal to shorten the historic doors in order to facilitate air flow is not an appropriate treatment. We recommend consideration of another method that allows for air flow without impacting any historic features or fabric.
- Please provide the name and complete contact information for the NYSHCR representative involved with this project.

We would appreciate additional submissions be provided via our Cultural Resource Information System (CRIS) at [www.nysparks.com/SHPO/online-tools/](http://www.nysparks.com/SHPO/online-tools/). To submit, log into CRIS as a guest and choose "submit" at the very top of the menu. Go to "Other Options" and choose "submit new information for an existing project."

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### Division for Historic Preservation

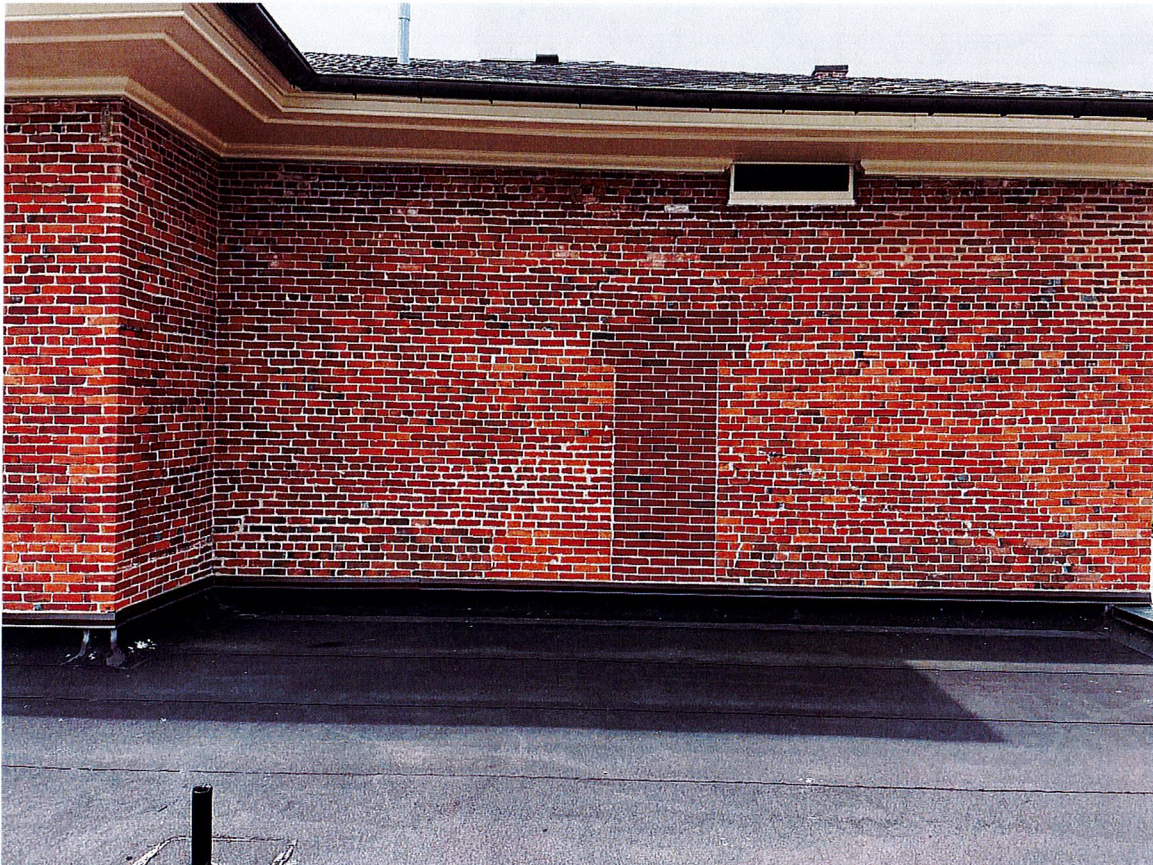
P.O. Box 189, Waterford, New York 12188-0189 • (518) 237-8643 • [parks.ny.gov](http://parks.ny.gov)



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Genesee-Orleans  
Regional Arts Council

Kitchen Roof: ACCU-1, ACCU-2, ACCU-3







Genesee-Orleans  
Regional Arts Council





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Genesee-Orleans  
Regional Arts Council







Genesee-Orleans  
Regional Arts Council







Genesee-Orleans  
Regional Arts Council

Kitchen: AC-2







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Genesee-Orleans  
Regional Arts Council

Attic: AHU-1, (6) and (3)







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Genesee-Orleans  
Regional Arts Council

Attic: (1)







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Genesee-Orleans  
Regional Arts Council

Attic: (5)







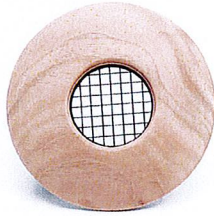
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Genesee-Orleans  
Regional Arts Council

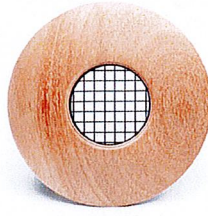
Second Floor: (1)



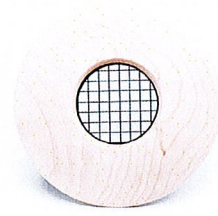




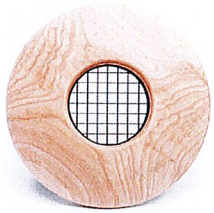
UPC-57T-WL-1  
Walnut 2" TFS Outlet



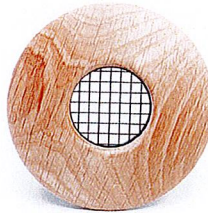
UPC-57T-MH-1  
Mahogany 2" TFS Outlet



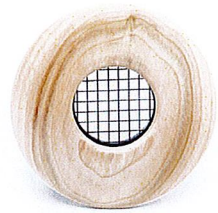
UPC-57T-MA-1  
Maple 2" TFS Outlet



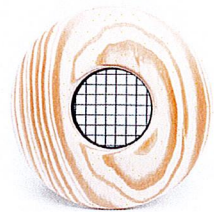
UPC-57T-B-1  
Birch 2" TFS Outlet



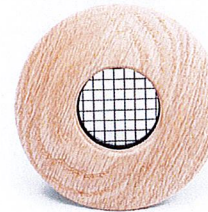
UPC-57T-WO-1  
White Oak 2" TFS Outlet



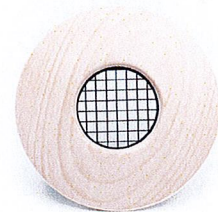
UPC-57T-PO-1  
Poplar 2" TFS Outlet



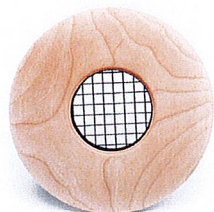
UPC-57T-PI-1  
Pine 2" TFS Outlet



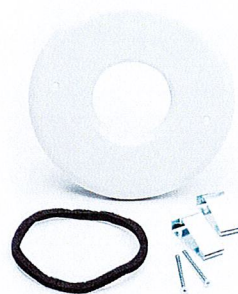
UPC-57T-RO-1  
Red Oak 2" TFS Outlet



UPC-57T-K-1  
Knotty Pine 2" TFS Outlet



UPC-57T-C-1  
Cherry 2" TFS Outlet



UPC-56TB-1  
White 2" TFS Outlet



**Parks, Recreation,  
and Historic Preservation**

**KATHY HOCHUL**  
Governor

**ERIK KULLESEID**  
Commissioner

September 1, 2021

Derik Kane  
Labella  
300 Pearl Street  
Buffalo, NY 14202

Re: NYSHCR  
NYMS HVAC system for 201 Main St./Batavia  
Batavia, Genesee County  
21PR04801

Dear Derik Kane:

Thank you for your continued consultation with the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources.

We have reviewed the submission received on August 23 and August 31, including the email conversation dated August 4, 2021 and the Unico System Nozzle cut sheet. Based on that review, it is the SHPO's opinion that the project, as described, will have No Adverse Effect on historic resources.

If you have any questions, I can be reached at 518-268-2170.

Sincerely,

A handwritten signature in black ink, appearing to read "Robyn Sedgwick".

Robyn Sedgwick  
Historic Site Restoration Coordinator  
e-mail: [robyn.sedgwick@parks.ny.gov](mailto:robyn.sedgwick@parks.ny.gov)

via e-mail only

cc: M. Barthelme – NYSHCR

## ABBREVIATIONS

AAD	AUTOMATIC AIR DAMPER	HRU	HEAT RECOVERY UNIT
AC	AIR CONDITIONING UNIT	HTR	HEATER
AD	ACCESS DOOR	HUM	HUMIDITY OR HUMIDIFIER
AFF	ABOVE FINISHED FLOOR	HVAC	HEATING, VENTILATING, AIR CONDITIONING
AHU	AIR HANDLING UNIT	HW	HOT WATER
AL or (L)	ACOUSTICAL LINING	HZ	HERTZ
AP	ACCESS PANEL	ID	INSIDE DIAMETER
AS	AIR SEPARATOR	IN	INCH
B	BOILER	IN/WG	INCHES WATER GAUGE
BAS	BUILDING AUTOMATION SYSTEM	KW	KILOWATT
BDD	BACKDRAFT DAMPER	LAT	LEAVING AIR TEMPERATURE
BG	BLAST GATE	LB	POUNDS
BHP	BRAKE HORSEPOWER	LBHR	POUNDS PER HOUR
BI	BACKWARD INCLINE	LF	LINEAR FEET
BOD	BOTTOM OF DUCT	LWT	LEAVING WATER TEMPERATURE
BOP	BOTTOM OF PIPE	MBH	1000 BTU PER HOUR
BOS	BOTTOM OF STEEL	MC	MECHANICAL CONTRACTOR
BTU	BRITISH THERMAL UNIT	MCC	MOTOR CONTROL CENTER
BTUH	BRITISH THERMAL UNIT PER HOUR	(N)	NEW
CA	COMBUSTION AIR	N/C	NOT IN CONTRACT
CC	COOLING COIL	NO	NATURALLY OPEN
CFH	CUBIC FEET PER HOUR	NC	NORMALLY CLOSED
CFM	CUBIC FEET PER MINUTE	NO	NORMALLY OPEN
CH	CHILLER	NTS	NOT TO SCALE
CP	CONDENSATE PUMP	OA	OUTSIDE AIR
CT	COOLING TON	OA	OUTSIDE AIR INTAKE
CJ	CONDENSING UNIT	OSD	OPPOSED BLADE DAMPER
CJH	CABINET UNIT HEATER	OCC	OCCUPIED
CV	CONSTANT VOLUME	OD	OUTSIDE DIAMETER
DB	DRY BULB	P	PUMP
DC	DUST COLLECTOR	P/G	PROPYLENE GLYCOL
DDC	DIRECT DIGITAL CONTROLS	PC	PLUMBING CONTRACTOR
DH	DEHUMIDIFIER	PD	PRESSURE DROP
DIA / Ø	DIAMETER	PH	PHASE
DN	DOWN	PHC	PRE-HEAT COIL
DOM	DOMESTIC	PRD	PRESSURE REDUCING DEVICE
DSO	DUCT SMOKE DETECTOR	PRV	PRESSURE REDUCING VALVE
DX	DIRECT EXPANSION	PS	PRESSURE SENSOR DUCT STATIC
(E)	EXISTING	PSF	POUND PER SQUARE FOOT
EAT	ENTERING AIR TEMPERATURE	PSIG	POUNDS PER SQUARE INCH GAUGE
EA	EXHAUST AIR	PTAC	PACKAGED TERMINAL AIR CONDITIONER
EC	ELECTRICAL CONTRACTOR	PTHP	PACKAGED TERMINAL HEAT PUMP
EC	EVAPORATIVE COOLER	PVC	POLYVINYL CHLORIDE
EDH	ELECTRIC DUCT HEATER	RA	RETURN AIR
EF	EXHAUST FAN	RAD	RADIANT CEILING PANEL
ERV	ENERGY RECOVERY VENTILATOR	RCP	RADIANT CEILING PANEL
ESP	EXTERNAL STATIC PRESSURE	REF	REFRIGERANT
ET	EXPANSION TANK	RF	RETURN AIR FAN
ETR	EXISTING TO REMAIN	RH	RELATIVE HUMIDITY
EWT	ENTERING WATER TEMPERATURE	RHC	REHEAT COIL
(F)	FUTURE	RPM	REVOLUTIONS PER MINUTE
°F	DEGREES FAHRENHEIT	RTU	ROOFTOP UNIT
F	FILTER or FAN	SA	SUPPLY AIR
FC	FORWARD CURVED	SF	SUPPLY AIR FAN
FCU	FAN COIL UNIT	SH	SENSIBLE HEAT
FH	FUME HOOD	SP	STATIC PRESSURE
FD	FIRE DAMPER	SQ FT	SQUARE FEET
FLA	FULL LOAD AMPS	S.S.	STAINLESS STEEL
FM	FLOW METER	T	THERMOSTAT
FDB	FLAT ON BOTTOM	TAB	TESTING AND BALANCING
FOT	FAN ON TOP	TEF	TOILET EXHAUST (FAN)
FPW	FEET PER MINUTE	TEMP	TEMPERATURE
FPS	FEET PER SECOND	TOO	TOP OF DUCT
FS	FLOW SWITCH	TOP	TOP OF PIPE
FT	FEET	TOS	TOP OF STEEL
FTMG	FEET WATER GAUGE	TOT	TOTAL PRESSURE
FV	FURNACE	TSP	TOTAL STATIC PRESSURE
FV	FACE VELOCITY	TT	TEMPERATURE TRANSMITTER
FZ	FREEZESTAT	UC	UNDERCUT
G	GAS	UH	UNIT HEATER
GPH	GALLONS PER HOUR	UNO	UNLESS NOTED OTHERWISE
GPM	GALLONS PER MINUTE	UNOCC	UNOCCUPIED
GAL	GALLONS	UV	UNIT VENTILATOR
GC	GENERAL CONTRACTOR	V	VENT OR VOLTS
GR/LB	GRAINS PER POUND	VAV	VARIABLE AIR VOLUME
H	HUMIDISTAT	VB	VACUUM BREAKER
HC	HEATING COIL	VEL	VELOCITY
HD	HEAD	VI	VIBRATION ISOLATOR
HX	HEAT EXCHANGER	VB	VIBRATION
HEPA	HIGH EFFICIENCY PARTICULATE ARRESTANCE FILTER	VP	VACUUM PUMP
		VRF	VARIABLE REFRIGERANT FLOW
HOA	HAND-OFF AUTOMATIC SELECTOR SWITCH	VRV	VARIABLE REFRIGERANT VOLUME
HIO	HAND-OFF SELECTOR SWITCH WITH PILOT LIGHT	VTR	VENT THROUGH ROOF
HP	HORSEPOWER or HEAT PUMP	VS	VENT BULB
		WG	WATER GAUGE

## MISC. SYMBOLS

— AAD	AUTO AIR DAMPER	— FZ	FREEZESTAT (LOW TEMPERATURE DIRECTOR)
— BDD	BACK DRAFT DAMPER	— FS	FLOW SWITCH
— CRD	CEILING RADIATION DAMPER	— TS	TEMPERATURE SWITCH
— DSD	DUCT SMOKE DETECTOR	— PS	PRESSURE SWITCH
— FS	COMBINATION FIRE/SMOKE DAMPER	— PC	POINT OF CONNECTION
— FD	FIRE DAMPER	— PD	POINT OF DISCONNECT
— MD	MOTORIZED DAMPER	— P	PUMP
— SC	SMOKE DAMPER	— P/G	PROPYLENE GLYCOL
— VD	VOLUME DAMPER	— PC	PLUMBING CONTRACTOR
— T	THERMOSTAT - DUCT MOUNTED	— PH	PHASE
— T	THERMOSTAT - WALL MOUNTED	— PHC	PRE-HEAT COIL
— T	THERMOSTAT W/ GUARD - WALL MOUNTED	— PRD	PRESSURE REDUCING DEVICE
— T	TEMPERATURE SENSOR - WALL MOUNTED	— PRV	PRESSURE REDUCING VALVE
— T	HUMIDISTAT - DUCT MOUNTED	— PS	PRESSURE SENSOR DUCT STATIC
— T	HUMIDISTAT - WALL MOUNTED	— PSF	POUND PER SQUARE FOOT

## DUCTWORK SYMBOLS

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		DENOTES RECTANGULAR OR SQUARE DUCT, SIZE IN INCHES
		DENOTES FLAT OVAL DUCT, SIZE IN INCHES
		FLEXIBLE DUCT (SIZE PER TABLE THIS SHEET)
		SUPPLY/OUTSIDE AIR DUCT
		RETURN/EXHAUST AIR DUCT
		SUPPLY/OUTSIDE AIR DUCT ELBOW
		RETURN/EXHAUST AIR DUCT ELBOW
		ROUND OR FLAT OVAL DUCT SUPPLY/OUTSIDE AIR DUCT (UP AND DOWN)
		SQUARE VANED ELBOW - 90°
		SHORT RADIUS ELBOW - 90°
		LONG RADIUS ELBOW - 90°
		TRANSITION - CONCENTRIC
		TRANSITION - ECCENTRIC
		TRANSITION - RECTANGULAR TO ROUND
		80° TAKEOFF RECTANGULAR TO RECTANGULAR SHOE TAP
		80° TAKEOFF RECTANGULAR TO ROUND SHOE TAP
		90° TAKEOFF ROUND TO ROUND STRAIGHT SHOE TAP
		90° CONICAL TAKEOFF, ROUND TO ROUND
		45° CONICAL LATERAL, ROUND TO ROUND
		45° LATERAL, ROUND TO ROUND
		DUCT SPLIT - SQUARE ELBOW (SIZE INDICATED)
		DUCT SPLIT - RADIUS ELBOW (SIZE INDICATED)
		END OF DUCT (CAPPED)
		SUPPLY AIR TERMINAL, CEILING OR DUCT MOUNTED, SQUARE & RECTANGULAR (SHADED AREA(S) DENOTE # & DIRECTION OF BLANKED OFF SECTION(S))
		RETURN/EXHAUST REGISTER, CEILING OR DUCT MOUNTED
		SIDEWALL AIR TERMINAL WITH VD (ARROWS DENOTE THROW DIRECTION)
		LINEAR DIFFUSER
		SUPPLY AIR DIFFUSER/GRILLE
		RETURN/EXHAUST AIR REGISTER/GRILLE
		DUCT RISE (IN DIRECTION OF ARROW)
		CLOSED CELL FOAM ACOUSTICAL LINING - DUCT DIMENSIONS SHOWN INDICATE INSIDE CLEAR DIMENSIONS
		EXHAUST AIR DESIGNATION
		RETURN AIR DESIGNATION
		SUPPLY AIR DESIGNATION
		TRANSFER AIR DESIGNATION

## PIPING SYMBOLS

SYMBOL	DESCRIPTION
	3-WAY MODULATING VALVE
	3-WAY TWO POSITION VALVE
	2-WAY MODULATING VALVE
	2-WAY TWO POSITION VALVE
	GATE VALVE
	TRIPLE DUTY VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	PRESSURE REGULATING VALVE
	BALL VALVE
	BALANCE VALVE
	BUTTERFLY VALVE
	VACUUM BREAKER
	SUCTION DIFFUSER
	PUMP - GENERIC
	PUMP - END SUCTION
	AIR SEPARATOR
	Y-STRAINER
	TEMPERATURE ELEMENT
	TEMPERATURE SENSOR

## LINE DESIGNATIONS

— C	COIL CONDENSATE DRAIN
— CS	CONDENSER WATER SUPPLY
— CR	CONDENSER WATER RETURN
— CWS	CHILLED WATER SUPPLY
— CWR	CHILLED WATER RETURN
— HWS	HOT WATER SUPPLY
— HWR	HOT WATER RETURN
— HPWS	HEAT PUMP WATER SUPPLY
— HPWR	HEAT PUMP WATER RETURN
— GWS	GLYCOL WATER SUPPLY
— GWR	GLYCOL WATER RETURN
— REF	REFRIGERANT PIPING
—	EXISTING PIPING/DUCTWORK
—	REMOVAL PIPING/DUCTWORK
—	NEW WORK PIPING/DUCTWORK

## MINIMUM REQUIRED CONTROLS:

- UNLESS OTHERWISE SPECIFIED IN THESE DOCUMENTS, ALL EXHAUST AND RELIEF FANS SHALL BE CONTROLLED BY TIME CLOCK, TIME CLOCK PROVIDED BY HVAC CONTRACTOR, CONNECTED TO HAND-OFF-AUTO RELAYS OF FAN MOTOR STARTERS, OR START-STOP OF VFD'S. ALL POWER WIRING OF TIME CLOCK BY HVAC CONTRACTOR.
- ALL EXHAUST AND RELIEF FANS SHALL HAVE POSITIVE CLOSURE DAMPERS INTERLOCKED TO OPEN WHEN FAN IS ENERGIZED. EXCEPTING SMOKE MANAGEMENT SYSTEMS, DRYER VENTS AND COOKING EQUIPMENT.
- ALL DIRECT DRIVE FANS SHALL BE PROVIDED WITH SOLID STATE MOTOR CONTROLLERS OR ELECTRONICALLY COMMUTATED MOTORS WITH ALL REQUIRED CONTROL DEVICES FOR SPEED ADJUSTMENT OF THE FAN MOTOR.
- FOR ALL HVAC EQUIPMENT (EXCLUDING SMOKE MANAGEMENT SYSTEMS AND COOKING APPLICATIONS) PROVIDE AN INTERLOCK TO THE MOTORIZED DAMPER SUCH THAT THE DAMPERS WILL CLOSE UPON UNOCCUPIED CONDITION. HVAC CONTRACTOR TO PROVIDE TIME CLOCK OR DDC CONTROL.
- EACH ZONE SHALL HAVE A 7 DAY-4 FUNCTION PER DAY PROGRAMMABLE CONTROLLER WITH A 5°F DEADBAND AND SETPOINT OVERLAP RESTRICTIONS.
- MINIMUM AUTOMATIC CONTROLS SHALL SETBACK TO 55°F (HEAT) AND 55°F (COOL), 7 DAY CLOCK, 2-HOUR OCCUPANT OVERRIDE, 16-HOUR BACKUP.
- PROVIDE ECONOMIZER AND RETURN SIDE DUCT SMOKE DETECTORS ON ALL HVAC EQUIPMENT OVER 2000 CFM.
- PROVIDE ECONOMIZER AND RETURN SIDE DUCT SMOKE EQUIPMENT OVER 5000 CFM SUPPLY.
- SEE SCHEDULES, SPECIFICATIONS, DETAILS AND NOTES WHICH MAY SUPERCEDE THESE MINIMUM PERFORMANCE REQUIREMENTS.
- FOR SMOKE DAMPERS, MC SHALL INSTALL DUCT SMOKE DETECTORS FURNISHED BY OTHERS.

## PIPING SYMBOLS CONT.

SYMBOL	DESCRIPTION
	PRESSURE GAUGE WITH GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK AND BOURDON TUBE
	THERMOMETER
	PRESSURE/TEMPERATURE TEST FITTING
	FLOW METER
	PIPE UP AND DOWN
	TEE CONNECTION - STRAIGHT, DOWN, AND UP
	UNION
	END CAP
	FLEXIBLE CONNECTION
	PIPE ANCHOR
	PIPE GUIDE
	AIR VENT - (MANUAL) - MV
	AUTOMATIC AIR VENT
	CONCENTRIC REDUCER
	PITCH OF PIPE, DROP (D) RISE (R)

### PIPE SIZING SCHEDULE

SIZE	MIN GPM	MAX GPM
3/4"	0	3.5
1"	3.6	7.5
1 1/4"	7.6	13
1 1/2"	13.5	20
2"	21	40
2 1/2"	41	75
3"	76	120
4"	121	250
5"	251	450
6"	451	750

NOTES: 1. PIPE SIZING TABLE SHALL BE UTILIZED IF PIPE TAG IS NOT PRESENT.

### TAP AND FLEX DUCT SIZING TABLE

TAP AND FLEX DUCT SIZE	SUPPLY DIFFUSER CFM RANGE	RETURN/EXHAUST REGISTER CFM RANGE
6"Ø FLEX / DUCT	1 CFM THRU 100 CFM	1 CFM THRU 60 CFM
8"Ø FLEX / DUCT	105 CFM THRU 200 CFM	85 CFM THRU 175 CFM
10"Ø FLEX / DUCT	205 CFM THRU 400 CFM	180 CFM THRU 300 CFM
12"Ø FLEX / DUCT	405 CFM THRU 600 CFM	305 CFM THRU 525 CFM
14"Ø FLEX / DUCT	605 CFM THRU 900 CFM	530 CFM THRU 800 CFM

NOTES: 1. PROVIDE A VOLUME DAMPER ON SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR TAPS, BALANCE TO DIFFUSER/REGISTER TAG VOLUME.

### REQUIRED 2020 IECC ENERGY CONSERVATION COMPLIANCE

CODE SECTION	COMPLIANCE
C103.2.1	REFERENCE MECHANICAL AND PLUMBING DOCUMENTS FOR DUCT AND PIPE INSULATION MATERIALS, ARCHITECTURAL DOCUMENTS FOR ALL OTHER INSULATION MATERIALS
C103.2.2	REFERENCE ARCHITECTURAL PLANS FOR FENESTRATION U-FACTORS AND SOLAR HEAT GAIN COEFFICIENTS
C103.2.3	REFERENCE ARCHITECTURAL PLANS FOR AREA-WEIGHTED U-FACTORS AND SOLAR HEAT GAIN COEFFICIENTS
C103.2.4	MECHANICAL DESIGN CONFORMS TO 2015 IECC AND IMC CODE REQUIREMENTS
C103.2.5	REFERENCE MECHANICAL AND PLUMBING DOCUMENTS FOR EQUIPMENT TYPES, SIZES AND EFFICIENCIES
C103.2.6	REFERENCE MECHANICAL DOCUMENTS FOR EQUIPMENT TYPES, SIZES AND EFFICIENCIES
C103.2.7	REFERENCE MECHANICAL DOCUMENTS FOR EQUIPMENT AND SYSTEM CONTROLS
C103.2.8	REFERENCE MECHANICAL DOCUMENTS FOR EQUIPMENT HORSEPOWER AND CONTROLS
C103.2.9	REFERENCE MECHANICAL AND PLUMBING SPECIFICATIONS FOR SEALING AND INSULATION LOCATIONS
C103.2.10	REFERENCE ELECTRICAL DOCUMENTS FOR LIGHTING FIXTURE SCHEDULE AND CONTROLS
C103.2.11	REFERENCE ELECTRICAL DRAWINGS FOR DAYLIGHTING ZONES
C103.2.12	REFERENCE MECHANICAL SPECIFICATIONS FOR AIR SEALING DETAILS
C303.3	OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO OWNER BY CONTRACTOR FOR ALL EQUIPMENT
C401.2	BUILDING COMPLIES WITH THE APPLICABLE SECTIONS OF CODE BASED ON METHOD 2
C402.5	REFERENCE ARCHITECTURAL PLANS FOR AIR LEAKAGE CRITERIA
C403.2.1	HVAC LOAD SIZING HAS BEEN PERFORMED IN THE CARRIER HAP PROGRAM, USING RTS (HEAT BALANCE) METHODOLOGY
C403.2.3	ALL HVAC EQUIPMENT MEETS OR EXCEEDS MINIMUM EFFICIENCIES, REFERENCE MECHANICAL DOCUMENTS
C403.2.4	REQUIRED HVAC CONTROLS SHALL BE PROVIDED, REFERENCE MECHANICAL DOCUMENTS
C403.2.4.3	MOTORIZED DAMPERS PROVIDED FOR EXHAUST AND OUTSIDE AIR INTAKES GREATER THAN 300 CFM OR IN BUILDINGS 3 STORIES OR LESS
C403.2.9.1	DUCT IS REQUIRED TO BE INSULATED TO THE INDICATED MINIMUM LEVEL, REFERENCE MECHANICAL DOCUMENTS
C403.2.9.3	INSTALLING CONTRACTOR SHALL ENSURE THAT ALL AIR DISTRIBUTION COMPONENTS ARE PROPERLY SEALED
C403.2.9.5	DUCT SIZING AND DUCT DESIGN HAS BEEN PERFORMED, REFERENCE MECHANICAL DOCUMENTS
C403.2.10	ALL PIPING INSULATION CRITERIA HAS BEEN MET, REFERENCE MECHANICAL / PLUMBING DOCUMENTS
C403.2.11	MECHANICAL SYSTEMS SHALL BE COMMISSIONED AS REQUIRED
C404.2	ALL WATER HEATING EQUIPMENT MEETS OR EXCEEDS MINIMUM EFFICIENCIES, REFERENCE PLUMBING DOCUMENTS
C404.4	ALL DOMESTIC HOT WATER PIPING INSULATION CRITERIA HAS BEEN MET, REFERENCE PLUMBING DOCUMENTS
C405.2	LIGHTING CONTROL CRITERIA HAS BEEN MET, REFERENCE ELECTRICAL DOCUMENTS
C405.5	EXTERIOR LIGHTING TOTAL POWER DOES NOT EXCEED THE ALLOWANCE, REFERENCE ELECTRICAL DOCUMENTS
C405.6	ELECTRICAL POWER HAS BEEN PROVIDED PER THE CODE REQUIREMENTS, REFERENCE ELECTRICAL DOCUMENTS
C406.2.2	INSTALLING CONTRACTOR SHALL TEST AND BALANCE ALL HVAC SYSTEMS AND PROVIDE REPORT TO ENGINEER

## NOTES

- NOT ALL SYMBOLS, ABBREVIATIONS AND LINE DESIGNATIONS ARE NECESSARILY USED ON THIS PROJECT.

### ENERGY CONSERVATION CODE COMPLIANCE STATEMENT

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CODE, AS ADOPTED BY THE STATE.

NO.	REVISION	DATE

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PROJECT TITLE  
**GO ART!**  
 201 EAST MAIN STREET  
 BATAVIA, NY 14020

LEGEND & ABBREVIATIONS  
 SCALE: AS NOTED  
 DRAWN BY: ASB  
 REVIEWED BY: WAM  
 PROJECT MANAGER: WAM  
 DATE: 06-14-2021

PROJECT NUMBER  
**21794**  
 DRAWING NUMBER  
**M-001**



- A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES TO PERFORM ALL OPERATIONS REQUIRED FOR THE COMPLETE INSTALLATION AND RELATED WORK AS SHOWN ON DRAWINGS AND SPECIFICATIONS.
- B. PROVIDE ALL REQUIRED SUPPLIES AND ACCESSORIES.
- C. INSTALL ALL WORK IN COMPLIANCE WITH LATEST EDITION OF:
  - 1. NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE.
  - 2. NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE.
  - 3. OSHA REQUIREMENTS
  - 4. LOCAL ORDINANCES
- D. REPAIR OR REPLACE ALL DEFECTS IN MATERIAL OR WORKMANSHIP WITHIN ONE YEAR OF PROJECT COMPLETION AND ACCEPTANCE BY THE OWNER, AT NO ADDITIONAL COST TO THE OWNER.
- E. PERFORM ALL OPERATIONS REQUIRED FOR COMPLETE TESTING OF SYSTEMS PRIOR TO FINAL ACCEPTANCE. SUBMIT ALL TEST REPORTS IN WRITING.

- 7. SUBMIT THREE (3) SETS OF SHOP DRAWINGS FOR REVIEW ON ALL CONTRACTOR FURNISHED ITEMS OF EQUIPMENT
- G. IDENTIFICATION:
  - 1. LABEL ALL MAJOR PIECES OF EQUIPMENT (I.E. BOILER, EVAPORATIVE COOLER, PUMPS, ETC.) AS DESIGNATED ON THE CONTRACT DOCUMENTS. PROVIDE PLASTIC NUMBERS WITH WHITE LETTERS. ATTACH TO EQUIPMENT WITH SCREWS OR POP RIVETS.
  - 2. LABEL ALL PIPING IN THE MECHANICAL EQUIPMENT SPACE WITH PIPE DESIGNATION AND FLOW DIRECTION ARROWS.
- H. OBSTACLES, INTERFERENCE AND COORDINATION:
  - 1. DRAWINGS SHOW GENERAL DESIGN ARRANGEMENT. INSTALL WORK SUBSTANTIALLY AS INDICATED AND VERIFY EXACT LOCATIONS AND ELEVATIONS ON SITE.
  - 2. DUE TO SMALL SCALE OF DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, CHANGES IN EQUIPMENT LOCATIONS, ETC. TO ACCOMMODATE OBSTACLES AND INTERFERENCES ENCOUNTERED.
  - 3. WORK ALL WORKS THAT ALL ITEMS DO NOT INTERFERE WITH OTHER TRADES SUCH AS ELECTRIC, PLUMBING, ETC.
- I. CUTTING AND PATCHING:
  - 1. PROVIDE ALL CUTTING AND PATCHING IN THE WORK AREA.
  - 2. NEATLY CUT EXISTING CONSTRUCTION IN A MANNER TO AVOID DAMAGE TO ADJACENT WORK.
  - 3. PATCH ALL WORK DISTURBED BY INSTALLATION OF NEW WORK.

A. MOTORS RATED 1 HP AND GREATER SHALL BE HIGH EFFICIENCY, ENERGY-SAVER TYPE WITH A GUARANTEED NEMA NOMINAL FULL-LOAD EFFICIENCY, BY IEEE STANDARD 112 TEST METHOD "B" AND GREATER THAN NEW YORK STATE ENERGY CODE REQUIREMENTS.

B. MOTOR APPLICATION:

<u>ENVIRONMENT/LOCATION</u>	<u>MOTOR ENCLOSURE TYPE</u>
GENERAL PURPOSE	OPEN DRIP-PROOF, TEFC OR ENCAPSULATED
PACKAGED REFRIGERATION	HERMETIC OR SEMI-HERMETIC COMPRESSORS

**WIRING FOR CONTROL SYSTEMS:**

- A. PROVIDE ALL WIRING FOR CONTROL OF BOILER, EVAPORATIVE COOLER, HUMIDIFIER, WATER SOURCE HEAT PUMP SYSTEM, AIR HANDLING UNITS AND FANS.
- B. PROVIDE STARTERS FOR ALL EQUIPMENT FURNISHED UNDER THE HVAC WORK. INSTALLATION AND WIRE SCHEDULES SHALL BE DESCRIBED BY M.E.C. ARTICLE 725. ALL LOW VOLTAGE WIRING CIRCUITS SOV AND UNDER SHALL BE:
  - a). WHEN INSTALLED HORIZONTALLY ABOVE LAY-IN OR SPLINE CEILING AND AT MECHANICAL ROOM CEILINGS MAY BE RUN WITHOUT CONDUIT. CABLES SHALL BE SUPPORTED USING LUMINOUS RINGS ATTACHED TO BUILDING STRUCTURE. CABLE SHALL BE UL LISTED FOR FLENUMA INSTALLATION.
  - b). ALL EXPOSED WIRING IN OCCUPIED SPACES SHALL BE RUN IN WALL CAVITY.
  - c). WHEN INSTALLED VERTICALLY IN MECHANICAL ROOMS, ALL WIRING DEVICES UP TO CEILING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT).
  - d). ALL CASES NOT SPECIFICALLY COVERED BY THE ABOVE CASES SHALL BE RUN IN EMT.

A. **TESTS:**

1. TEST AND ADJUST FAN RPM TO DESIGN REQUIREMENTS. TEST AND RECORD MOTOR NO LOAD AND FULL LOAD AMPERES, AND DETERMINE OPERATING BRAKE TORQUE POWER. TO ACHIEVE REQUIRED STATIC PRESSURE, SET FAN SPEED TO DISCHARGE. TEST AND RECORD ENTERING AND LEAVING AIR TEMPERATURES AT COILS. TEST AND ADJUST EACH DIFFUSER, GRILLE, AND REGISTER TO WITHIN 10% OF DESIGN REQUIREMENTS. A RECORD OF FINAL SETTINGS SHALL BE MADE BY DESCRIPTION ON THE REPORT SCHEDULE.

B. **WATER SYSTEMS:**

1. OPEN MANUAL VALVES TO FULL OPEN POSITION, SET AUTOMATIC CONTROL VALVES TO FULL ON. EXAMINE WATER IN SYSTEM AND DETERMINE IF CONTAMINATION HAS BEEN TREATED. CHECK FOR AIR IN SYSTEM. CHECK COMPRESSION TANKS TO DETERMINE THEY ARE NOT AIR BOUND OR WATER LOGGED, AND THAT THE SYSTEM IS FULL OF WATER AND AT PROPER MINIMUM PRESSURE. SET MINIMUM PRESSURE CONTROLS TO 2 PSI ABOVE DESIGN AND RECORD SUCTION AND DISCHARGE PRESSURES, RATED AND ACTUAL FULL LOAD MOTOR AMPS. CHECK AND SET OPERATING TEMPERATURES AND ADJUST FLOW FOR BOILERS TO DESIGN REQUIREMENTS. CHECK WATER TEMPERATURES AT INLET SIDE OF HEATING COILS, NOTE RISE OR DROP OF TEMPERATURE FROM SOURCE. PROCEED TO BALANCE COILS AND ELEMENTS. UPON COMPLETION OF FLOW READINGS AND ADJUSTMENTS, MARK SETTINGS AND RECORD DATA. FLOW THROUGH HEAT PUMPS SHALL BE ADJUSTED BY TEMPERATURE READINGS AND VALVES. THE CIRCUIT SETTER IS PROVIDED AS A PERMANENT BALANCE DEVICE ONLY.

GENERAL:

1. RATINGS BASED ON ASHRA STANDARDS.
2. FAN EFFICIENCY SHALL BE RATED FOR 200,000 HOURS AVERAGE LIFE IN ACCORDANCE WITH ANSI CODE B3.15.
3. DRIVES:
  - A. PROVIDE SHAFT GUARDS WHERE SHAFTS EXTEND BEYOND BELT GUARD.
  - B. MOTOR PULLEYS: ADJUSTABLE SHAVE-TYPE, "A" SECTION, 2.6 IN. MINIMUM PITCH DIAMETER.
4. VIBRATION ISOLATION: PROVIDE GUIDED SPRING TYPE.

AIR HANDLING UNITS:

1. FAN SECTION:
  - A. FORWARD CURVED FANS, MOTORS, BELTS, GUARD AND PULLEYS ALL PROVIDED BY UNIT MANUFACTURERS.
  - B. ACCESS DOORS FOR SERVICE ACCESS.
2. HOT WATER HEATING COIL SECTION:
  - A. NONFERROUS HEATING COILS, .025 TUBE WALL WIDTH .035 BRAZED "U" BENDS.
  - B. GALVANIZED IRON CASING FOR COILS.
  - C. COPPER TUBES, ALUMINUM FINS.
  - D. EXTERNAL FACE AND BYPASS DAMPERS.
3. FILTER SECTION:
  - A. PROVIDE WITH FILTER HOUSING SIZE TO ACCOMMODATE 2 INCH PLEATED TYPE, 30% EFFICIENCY, PRE-FILTERS.
  - B. ACCESS DOORS FOR REPLACING OF FILTERS.
  - C. FILTER POSITION PARALLEL TO FLOW OF AIR. DAMPERS SHALL BE LOW LEAKAGE TYPE AND MOUNTED ON FACE OF FILTER SECTION.
4. PACKAGED CONTROLS: THE MAKE-UP AIR HANDLING UNIT SHALL BE PROVIDED WITH PACKAGED CONTROLS AND BYPASS DAMPERS TO MAINTAIN A MINIMUM DISCHARGE AIR TEMPERATURE OF 60°F.
5. UNICO EQUIPMENT, UNICO, MITSUBISHI.
6. MAKE: AMERICAN AIR FILTER, CARRIER, MCQUAY, TRANE, YORK.

1. TRANSVERSE AND LONGITUDINAL DUCT SEAMS REINFORCEMENT SHALL CONFORM TO APPROPRIATE TABLES AND FIGURES PER SMACNA VELOCITY -PRESSURE CLASSIFICATION FOR DUCT CONSTRUCTION.

- A. TRANSVERSE JOINTS SHALL BE SEALED WITH DUCT JOINT SEALANTS. "DUCTIMATE" OR "NEXUS" 4-BOLT CONNECTION SYSTEMS MAY BE USED IN LIEU OF STANDARD CONSTRUCTION.
  - B. FIELD ASSEMBLED LONGITUDINAL SEAMS SHALL BE SEALED WITH DUCT SEALANT. FACTORY OR SHOP FABRICATED ROLLED OR MACHINE PRESSED LONGITUDINAL SEAMS SHALL NOT REQUIRE SEALANT.
  - C. CORNER CLOSURES SHALL BE REQUIRED AS DESCRIBED AND ILLUSTRATED BY SMACNA DUCT CONSTRUCTION STANDARDS.
  - D. MINIMUM RADIUS ON ALL ELBOWS SHALL NOT BE LESS THAN DIMENSION OF DUCT IN PLANE OF RADIUS. WHERE THIS CANNOT BE MAINTAINED, USE SHORTER RADIUS WITH INTERNAL GUIDE VANES, OR SQUARE ELBOW WITH TURNING VANES.
- B. ROUND DUCTWORK:
- 1. ROUND DUCTWORK:
    - A. MANUFACTURE OF GALVANIZED STEEL ASTM A527, GAUGES PER SMACNA DUCT CONSTRUCTION STANDARDS.
    - B. LONGITUDINAL SEAM DUCT WITH SNAP LOCK SEAM (STOVEPIPE) MAYBE USED ON DUCTWORK WHERE PRESSURE CLASS IS 2 IN. W.G. OR LESS, SEAL LONGITUDINAL JOINTS.
    - C. ELBOWS:
      - 1) FABRICATED TO A CENTERLINE RADIUS OF 1.5 TIMES THE CROSS-SECTION DIAMETER.
      - 2) ADJUSTABLE ELBOWS MAYBE USED FOR ROUND DUCT.

A). SEAL CLASS B, SHALL INCLUDE TRANSVERSE AND FIELD CONSTRUCTED LONGITUDINAL JOINTS - VELOCITY-PRESSURE CLASSES 2 IN W.G. AND BELOW.

1. STANDARD TYPE:
  - A) PROVIDED IN SQUARE ELBOWS AS SHOWN ON CONTRACT DRAWINGS. VANES FOR DUCTS WITH AREAS GREATER THAN 100 SQ. IN. SHALL BE "DOUBLE" TYPE HAVING DIMENSIONS AND SPACING AS DETAILED.
  - B) MAKE: ELGEN, OR CONTRACTOR FABRICATED.
- E. DAMPERS IN DUCTWORK:
  1. BLADE TYPE VOLUME DAMPERS: CONSTRUCTED PER SHAWN, ONE GAUGE HEAVIER THAN DUCT MATERIAL, SECURELY FASTENED TO 3/8 IN. SQ. COLD ROLLED STEEL OPERATOR ROD.
  2. FIRE DAMPERS: SEE "FIRE DAMPERS" SECTION.
  3. AUTOMATIC AIR DAMPERS: FURNISHED AS PART OF "CONTROL SYSTEMS"

STANDARD 181, CLASS I AIR DUCT:

- A). CONSISTING OF CORROSION RESISTANT GALVANIZED STEEL HELIX MECHANICALLY LOCKED TO FABRIC. FABRIC TO BE A TRIAMINATE OF ALUMINUM FOIL, FIBERGLASS AND ALUMINIZED POLYESTER.
- B). FACTORY APPLIED, 1 IN. FIBERGLASS EXTERIOR INSULATION, SHEATHED IN A SEAMLESS REINFORCED FIBERGLASS VAPOR BARRIER JACKET.
- C). MAXIMUM DUCTOR SIZE 24" DIA. MAX. 2 IN. WG. POSITIVE PRESSURE, 5500 FPM, OPERATING TEMPERATURE RANGE - 200° TO 2500°.

2. DESIGN EQUIPMENT: FLEXMASTER TYPE 3 (INSULATED), FLEXMASTER TYPE N1-35 (UNINSULATED).

3. MAKE: CLEVAFLEX, FLEXMASTER, GENFLEX, FLEXMASTER FLEX.

- G. FLEXIBLE CONNECTIONS TO FANS AND EQUIPMENT.
1. MATERIALS FOR FLEXIBLE CONNECTIONS SHALL BE FIRE RETARDANT, WATER AND OIL RESISTANT, AND COMPLY WITH THE FOLLOWING STANDARD: 214-A.
- A). SYSTEMS UP TO 2 IN. I.G. S.P.: APPROXIMATELY 20 OZ. OF FABRIC PER SQ. YD. VENTIFABS, INC., "VENTIFAB".
- H. ACCESS DOORS:
1. IN DUCTWORK: SHALL BE DOUBLE PANEL CONSTRUCTION, 1 IN. RIGID INSULATION WHEN INSULATED DUCTS.
2. MAKE: AIR BALANCE, RUSKIN, VENTLOK, ELGEN.
- I. INSTALLATION:

- CONNECTIONS OF DUCT CONNECTED TO FANS, AIR HANDLING EQUIPMENT AND HEAT PUMPS.
- 2. FLEXIBLE DUCTWORK:
  - A). JOINTS MADE WITH MINNESOTA 3M ADHESIVE APPLIED TO DUCT END OR COLLAR.
  - B). DUCT SLD ON DUCT OF COLLAR AND 2 IN. ON DUCT END AND SECURED WITH SHEET METAL SCREWS AND DRAWBAND, WAPLOCK 5500.
  - C). MAXIMUM LENGTH 48 IN.
  - D). MAXIMUM ONE 90 DEGREE BEND FROM DUCTWORK TO OUTLET.
- 3. TEST OF DUCTWORK:
  - A). DUCTWORK NOT FORMALLY TESTED FOR LEAKAGE SHALL BE CHECKED AND GUARANTEED TO MEET STANDARDS OF SMACNA SEAL AND LEAKAGE CLASSIFICATIONS. AIR BALANCING AND TESTING SHALL BE USED TO DETERMINE SATISFACTORY OPERATION OF DUCT SYSTEMS.
- 4. ACCESS DOORS:
  - A). PROVIDE AS REQUIRED FOR ACCESS TO DAMPERS, DAMPER MOTORS, REPLACEMENT OF FIRE DAMPER LINER, SMOKE DETECTORS, CONTROL VALVES, PAN BEAMERS, AND EQUIPMENT REQUIRING ROUTING INSPECTION OR SERVICE, COMPLETE WITH ANGLE IRON FRAME.
- 5. AIR AND WATER/TIGHT METAL WORK:
  - A). WHERE WATER OR SNOW MAY ACCUMULATE DUCTWORK AND PLenums SHALL BE WATER TIGHTED BY SOLIDIFYING, BRAZING OR WELDING OF JOINTS. PROVIDE AT INTAKE PLenums AND IN DUCTWORK 10' DOWNSTREAM OF HUMIDIFIER.
- 6. SMOKE DETECTION:
  - A). SMOKE DETECTORS WILL BE FURNISHED BY DMSION 16 "ELECTRIC". THIS CONTRACTOR SHALL INSTALL DETECTORS LOCATED IN DUCTWORK.

<u>EXHIBIT "I" - DUCTWORK MATERIALS</u>		
SERVICE	MATERIAL	SPECIAL REQUIREMENTS
SUPPLY, RETURN, VENT RELIEF, AND EXHAUST	LOCK FORMING QUALITY, GALVANIZED STEEL ASTM 525	.....
ACCESSORIES, DAMPERS AND AIR TURNS	SAME OR BETTER AS PARENT DUCT	.....

1.1 WORK INCLUDED

- 1.2 SUBMITTALS
- A. AIR-COOLED CONDENSING UNIT, COMPLETE WITH ACCESSORIES.
  - B. COMPLETE WIRING AND PIPING DIAGRAMS, SHOWING ALL PIPING AND CONTROL INTERCONNECTION.
- 1.3 GENERAL REQUIREMENTS

1. FURNISH COMPLETE INFORMATION, DRAWINGS, TEMPLATES, WIRING DIAGRAMS AND INSTRUCTION MANUALS FOR THE EQUIPMENT. MANUFACTURER'S "INSTALLATION INSTRUCTIONS" AND "START-UP AND SERVICE INSTRUCTION" AND CATALOG FOR WIRING AND PIPING SHALL BECOME A PART OF THE CONTRACT DOCUMENTS.
2. PROVIDE ADDITIONAL COPIES OF ABOVE DATA FOR OEM MANUAL.

3. PROVIDE REFRIGERANT PIPING DIAGRAM PRIOR TO INSTALLATION SHOWING EXACT LOCATION AND CONNECTIONS OF REFRIGERANTS, FLOW SWITCHES, GAUGES, THERMISTERS AND INSERTION WELLS REQUIRED.
  4. SUPERVISE AND CHECK INSTALLATION FOR COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
  5. COMPLETE START-UP FOR EACH UNIT SHALL BE PERFORMED UNDER THE DIRECTION OF THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE.
- B. CONTRACTOR SHALL:
1. PROVIDE PIPING, VALVES AND ACCESSORIES TO CONNECT THE CONDENSING UNITS TO THEIR RESPECTIVE UNITS, INCLUDING MISCELLANEOUS DEVICES TO MAKE A COMPLETE AND OPERABLE REFRIGERATION SYSTEM.
  2. PROVIDE ONE YEAR, 24-HOUR SERVICE AND GUARANTEE, FROM DATE OF FINAL ACCEPTANCE.

2. DIVISION 15A SHALL PROVIDE CONTROL WIRING INTERLOCKS AT UNITS AND INTERLOCKS TO AIR HANDLING UNITS AS REQUIRED.

D. START-UP, TESTING AND INSTRUCTIONS:

1. PROVIDE COMPLETE INSTALLATION, TESTING, WIRING, START-UP, AND INSTRUCTIONS TO OWNER'S REPRESENTATIVE'S.

- 2.1 AIR-COOLED CONDENSING UNITS
- A. GENERAL:
1. FACTORY ASSEMBLED AIR-COOLED CONDENSING UNITS WITH GALVANIZED STEEL CASINGS AND BENDING AIR-FINISH. UNITS SELECTED FOR OPERATION IN CONJUNCTION WITH RESPECTIVE AIR HANDLING UNITS.
  2. UNITS CONSTRUCTED IN ACCORDANCE WITH ANSI B9.1 AND NEC.
  3. UNIT PERFORMANCE SHALL BE CERTIFIED IN ACCORDANCE WITH ARI STANDARD LATEST EDITION.
4. CONDENSING UNIT CAPACITIES AS SCHEDULED.
- B. COMPRESSORS:

2. FIVE YEAR COMPRESSOR PARTS WARRANTY FROM DATE OF SHIPMENT.

- C. CONDENSER CIRCUITS:  
1. CONDENSER COILS OF ALUMINUM FINS MECHANICALLY BONDED TO SEAMLESS COPPER TUBING, PRESSURE TESTED FOR 425 PSI WORKING PRESSURE.  
2. TUBES CLEANED, DEHYDRATED, SEALED AND LEAK TESTED AT 150 PSIG.
- D. REFRIGERATION CIRCUITS:  
1. REFRIGERATION CIRCUITS WITH SUB-COOLING COILS, SERVICE VALVES GAUGES, PORTS, AND DRYERS.
- E. CONTROLS:

2. CONDENSER FAN MOTOR SHALL PERMIT OPERATION OF THE SYSTEM TO PREVENT SHORT CYCLING OF COMPRESSOR.

1. DIRECT DRIVEN PROPELLER FANS, VERTICAL DISCHARGE, WITH FAN GUARDS.
2. MOTORS RESILIENTLY MOUNTED AND PRE-LUBRICATED, WITH BUILT-IN OVER PROTECTION AND EQUIPPED WITH CORROSION PROTECTED FAN SHAFTS.
3. FANS STATICALLY AND DYNAMICALLY BALANCED, STEEL OR ALUMINUM BLADES, ZINC PLATED STEEL HUBS.

2. EQUIPPED WITH UNIT MOUNTING RAILS AND DRAIN HOLES.

## 2.2 REFRIGERATION ACCESSORIES

- A. FILTERS: 1. LIQUID LINE DRYER AHEAD OF SOLENOID VALVES IN EACH SYSTEM.  
2. REPLACEABLE CARTRIDGE TYPE.  
3. MAKE: ANSUL, MCINTIRE, MUELLER, SPORLAN.
- B. SIGHT GLASS:  
1. IN EACH LIQUID LINE CLOSE TO EVAPORATOR, AFTER FILTER DRYER.  
2. MAKE: ANSUL SUPER DRY-EY, HENRY, WITH ELEMENTS TO ACT AS MOISTURE INDICATOR; SPORLAN.
- C. THERMAL EXPANSION VALVE:  
1. IN EACH LIQUID LINE AT THE EVAPORATOR COIL.

E. SHUT-OFF VALVES:

1. TO ISOLATE EQUIPMENT COMPONENTS, PACKLESS TYPE.
  2. MAKE. HENRY, MUELLER, SUPERIOR.
- F. CHARGING VALVE:
1. LOCATE AND INSTALL AT A POINT TO FACILITATE CHARGING OF THE SYSTEM.
- 3.1 INSTALLATION
4. CONNECT SERVICES TO THE UNIT WHERE CALLED FOR IN COMPLETE ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

AND ELECTRICAL DATA TO PERMIT POWER WIRING CONNECTIONS TO THE UNIT, AIR  
CONTROL WIRING SERVING AIR HANDLING UNIT ASSOCIATED CONDENSING UNIT, AIR  
AUXILIARY CONTROL PANEL IN ACCORDANCE WITH SECTION "ELECTRIC WIRING." C

A. GENERAL:

- A). TREATMENT OF JACKETS OR FACINGS FOR FLAME AND SMOKE SAFETY MUST BE PERMANENT. WATER SOLUBLE TREATMENTS NOT PERMITTED.
  - B). INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS.
  - C). ASBESTOS OR ASBESTOS BEARING MATERIALS ARE PROHIBITED.
- D. DUCT INSULATION:

2. RIGID BOARD TYPE - EXPOSED: 6 LB. MINIMUM DENSITY, GLASS FIBERBOARD, 1 IN. MINIMUM THICKNESS. FACTORY APPLIED WHITE KRAFT OUTER SURFACE

- BONDED TO ALUMINUM FOIL AND REINFORCED WITH FIBERGLASS YARN JOINTS FINISHED WITH CORNER BEADING AND FIBERGLASS TAPE.
3. FLEXIBLE BLANKET TYPE: LONG GLASS FIBER BLANKET, FACTORY APPLIED, FIBERGLASS YARN, REINFORCED ALUMINUM FOIL FACED VAPOR SEAL.
- C. DUCTWORK INSULATION:
1. PROVIDE EXTERNAL THERMAL INSULATION FOR DUCT.
  6. RIGID BOARD TYPE: IMPALE BOARD OVER MECHANICAL FASTENERS, WELDED JOINTS OR ADHERED CLIPS, 12 IN. TO 18 IN. CENTERS; MINIMUM OF TWO ROWS PER SIDE. SECURE INSULATION WITH WASHERS ON CLIPS. SEAL BREAKS AND JOINTS IN VAPOR BARRIER WITH 4 IN. WIDE MATCHING TAPE OR 4 IN. GLASS-FAB TAPE WITH BF-35. APPLY TAPE OVER CORNER BEADING, WHEN EXPOSED.

6 IN. BRUSH WIDTHS AT 1 FT. INTERVALS AND AT EACH FACING EDGE.  
SQUARE DUCTS: FASTEN BY IMPALING INSULATION ON ADHERED OR WELDED CLIPS. SECURE INSULATION WITH WASHERS ON CLIPS. SEAL JOINTS AND BREAKS WITH 4 IN. WIDE MATCHING TAPE OR 4 IN. GLASS-FAB APPLIED WITH

<u>EXHIBIT "A" - DUCT INSULATION MATERIALS</u>			
<u>SERVICE</u>	<u>INSTALLATION MATERIAL</u>	<u>THICKNESS</u>	<u>REMARKS</u>
AIR CONDITIONING SUPPLY	EXPOSED: RIGID FIBERGLASS CONCEALED: FLEXIBLE FIBERGLASS	1 IN.	.....
AIR CONDITIONING RETURN	.....	NOT INSULATED	.....
VENTILATION	.....	NOT INSULATED	.....
OUTSIDE AIR DUCT AND PLENUM	RIGID FIBERGLASS	2 IN.	PROVIDE NEAT FIT AT INTAKE PLENUM
EXHAUST PLENUMS	EXPOSED: RIGID FIBERGLASS CONCEALED: FLEXIBLE FIBERGLASS	1 IN.	INSULATE PLENUMS AND DUCTWORK TO 6"-0" BEYOND DAMPER

<u>EXHIBIT 7 - PIPE INSULATION MATERIALS</u>				
<u>SERVICE</u>	<u>INSULATION MATERIALS</u>	<u>THICKNESS</u>		
<u>REMARKS</u>				
HOT WATER/ GLYCOL AND PUMPED CONDENSATE (BELOW 250°)	GLASS FIBER	1-1/2" AND SMALLER	1"	SEE NOTE 2
		2" AND LARGER	2"	SEE NOTE 6
CHILLED WATER/ GLYCOL (40° AND ABOVE)	ELASTOMERIC	1-1/2" AND SMALLER	1"	SEE NOTE 1
		2" AND LARGER	1-1/2"	
CHILLED WATER/ GLYCOL (40° AND ABOVE)	GLASS FIBER	1-1/2" AND SMALLER	1"	SEE NOTE 2
		2" AND LARGER	1-1/2"	
REFRIGERATION	ELASTOMERIC	1-1/2" AND SMALLER	1"	SEE NOTE 1
		2" AND LARGER	1-1/2"	SEE NOTE 5
CONDENSER WATER	NOT INSULATED	NOT INSULATED		SEE NOTE 1
DOMESTIC COLD WATER	GLASS FIBER (ELASTOMERIC)	2-1/2" AND LARGER	1"	SEE NOTE 4
		2" AND SMALLER	1/2"	
AC UNIT DRAINS AND OVERFLOWS	GLASS FIBER (ELASTOMERIC)	ALL SIZES	1/2"	

NOTE 1: OUTDOOR USE - PROVIDE "FLEXIBLE" INSULATION 1-1/2 IN. THICK (1/2" THICK FOR REFRIGERATION PIPING) WITH TWO COATS OF RECOMMENDED FINISH. APPLY INSULATION OVER HEAT TRACING. COVER WITH ALUMINUM JACKET. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

## SPECIFICATIONS

DATE:	06-14-2021	PROJECT MANAGER:	WAM
REVIEWED BY:		WAM	
DRAWN BY:	AB3		
SCALE:	AS NOTED		

PROJECT NUMBER  
21794  
DRAWING NUMBER

**ECAB** engineering, p.c.

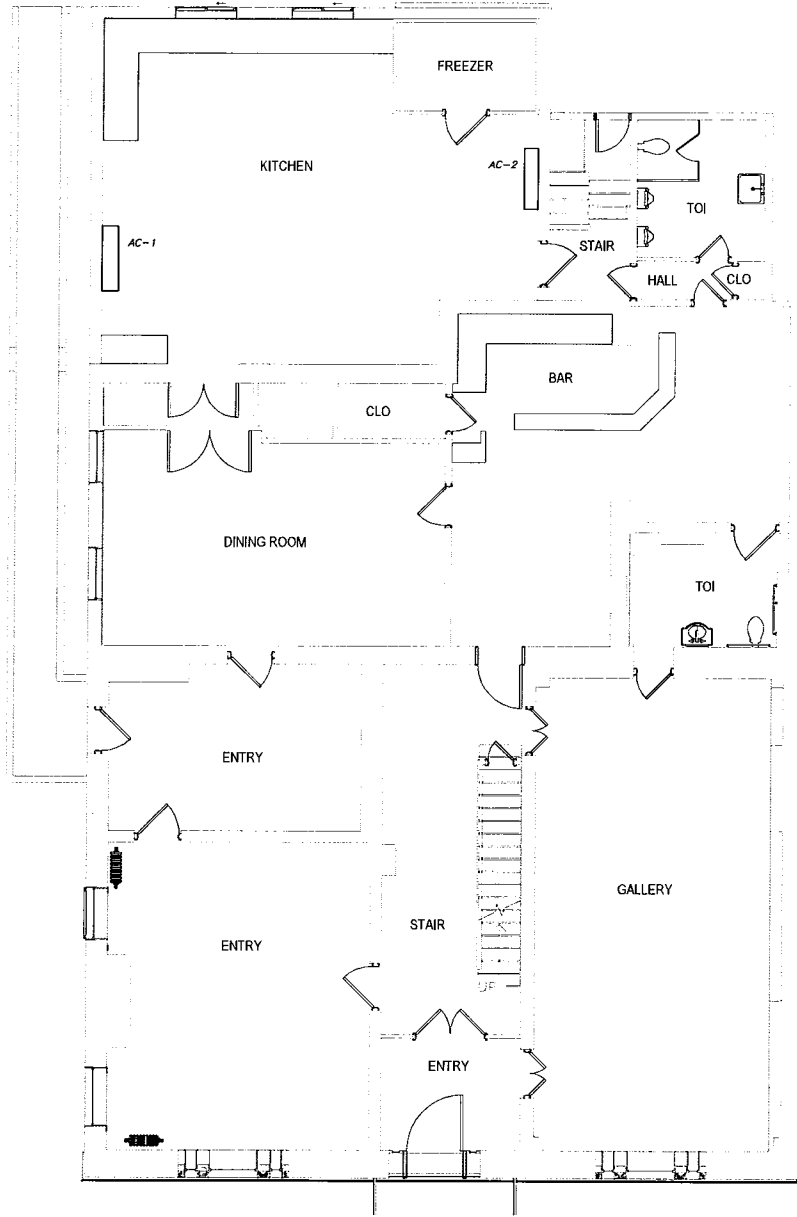
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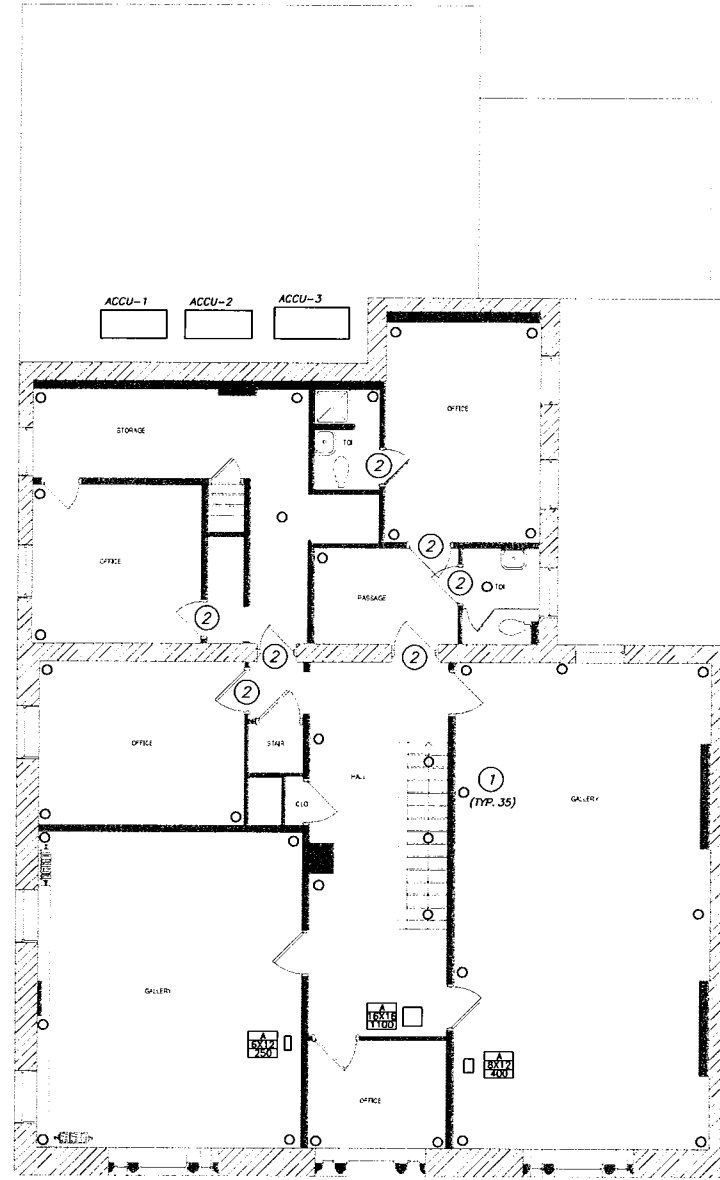
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DATE/TIME: Monday, June 14, 2021 at 9:28 PM  
 TO: 67275: 00000001



1 FIRST FLOOR PLAN  
M101 SCALE: 3/16" = 1' 0"



2 SECOND FLOOR PLAN  
M101 SCALE: 3/16" = 1' 0"

DRAWING NOTES:

- 2.5" UNICO SUPPLY NOZZLE, CEILING MOUNTED. TRIM RING TO COORDINATE WITH CEILING TYPE AND COLOR. ARCHITECT TO SELECT COLOR.
- FOR SPACES THAT DO NOT HAVE A RETURN GRILLE, EXISTING DOORS TO HAVE MINIMUM 2" UNDERCUT TO ALLOW RETURN AIR TO CORRIDOR.

NO.	REVISION	DATE

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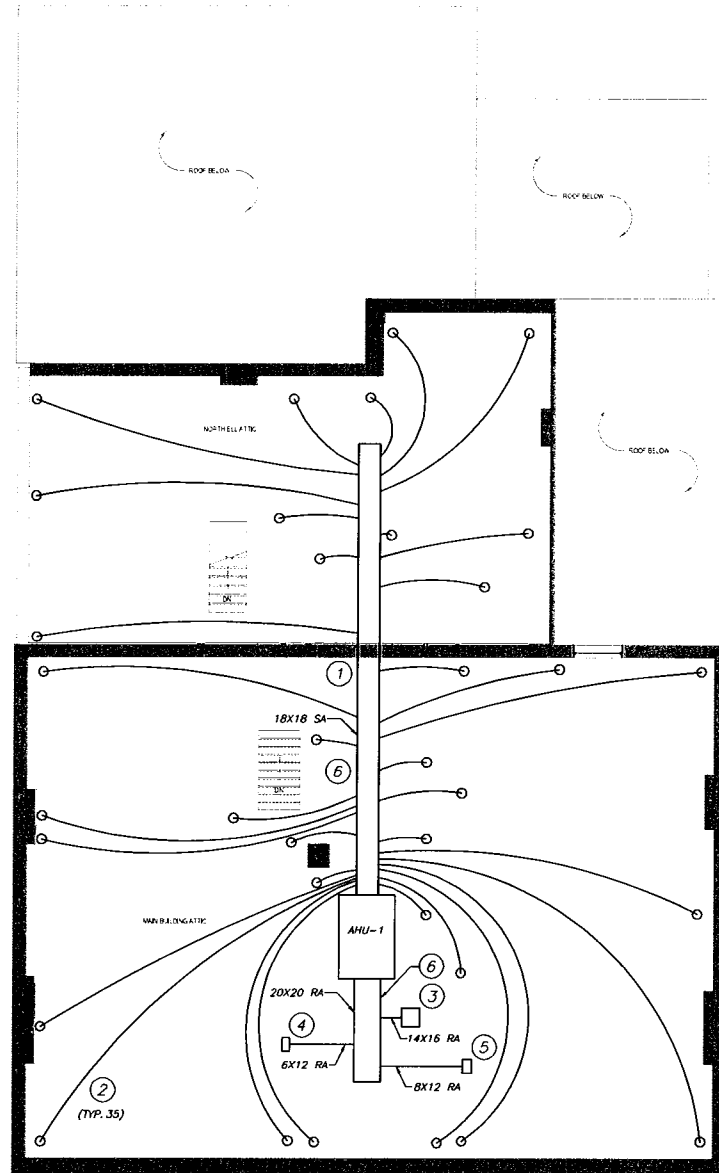
PROJECT/CLIENT  
**GO ART!**  
201 EAST MAIN STREET  
BATON, NY 14020

DRAWING TITLE  
**MECHANICAL PLAN**

DESIGNER	SCALE	AS NOTED
CONSTRUCTION	DRAWN BY:	ARE
DATE:	REVIEWED BY:	WAM
06-14-2021	PROJECT MANAGER:	WAM

PROJECT NUMBER  
21794

DRAWING NUMBER  
**M-101**



AIR HANDLING UNIT SCHEDULE - ELECTRIC / DX																		
TAG	LOCATION	SERVICE	CFM AHA	MIN OA	EXT. S.P.	FAN RPM	COOLING COIL -- DX								MOTOR			DESIGN EQUIPMENT
							TOTAL MBH	SENS. MBH	REFRIG.	EAT. EDP	EAT. EWB	LAT. EDP	LAT. EWB	VOLTS	PH	STARTER		
AHU-1	ATTIC	2ND FLOOR	3,500	0	1.5	1700	60	48	R-410A	78	65	55	55	208	1	PKGD	UNICO MB4860 1-EC2 MB4860CL 1-B	

AIR COOLED CONDENSING UNIT SCHEDULE							
TAG	LOCATION	SERVICE	CAPACITY--TONS	ELECTRICAL			DESIGN EQUIPMENT
				PH	VOLTS	AMPS	
ACCU-1	KITCHEN ROOF	AC-1	3	1	208/230	21	MITSUBISHI MUY-D36
ACCU-2	KITCHEN ROOF	AC-2	3	1	208/230	21	MITSUBISHI MUY-D36
ACCU-3	KITCHEN ROOF	AHU-1	5	1	208/230	3	YORK YXT 060

MINI SPLIT SYSTEM SCHEDULE - INDOOR									
TAG	TYPE	CFM	TMBH	SMBH	HEATING MBH	ELECTRICAL DATA			DESIGN EQUIPMENT
						VOLT	PH	FLA	
AC-1	WALL HUNG	890	34.6	21.5	N/A	240	1	1	MITSUBISHI MSY-D36
AC-2	WALL HUNG	890	34.6	21.5	N/A	240	1	1	MITSUBISHI MSY-D36

- ### **DRAWING NOTES:**
- 1 PROVIDE OPENING IN MASONRY WALL WITH LINTEL.
  - 2 2.5" UNICO FLEXIBLE DUCTWORK FROM SA TRUNK TO CEILING MOUNTED NOZZLE. PROVIDE CEILING PENETRATION FOR NOZZLE.
  - 3 16X16 RA TO CEILING MOUNTED GRILLE.
  - 4 6X12 RA TO CEILING MOUNTED GRILLE.
  - 5 8X12 RA TO CEILING MOUNTED GRILLE.
  - 6 INSULATION IN UNINSULATED ATTIC TO BE DOUBLE SPECIFIED THICKNESS.

1  
M102

ATTIC PLAN

SCALE: 3/16" = 1' 0"

N