DRAW	ING ABBREVIATIONS
	ΔΙΙΤΟΜΑΤΙς ΔΙΡ VENT
АН	
AHU	
AL	
ALUIVI	
AP	
AIC	AUTOMATIC TEMP. CONTROL
AVER	
AWI	AVERAGE WATER TEMP.
в	BOILER
RR	ELECTRIC BASEBOARD RADIATION
BDD	
BFC	BELOW FINISHED CEILING
вғр	BACK FLOW PREVENTOR
BLDG	BUILDING
BLW	BELOW
BOB	BOTTOM OF BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
С	CHILLER
САР	CAPACITY
CBV	CIRCUIT BALANCING VALVE
CD	CEILING DIFFUSER
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFM	CUBIC FEET PER MINUTE
СНР	CONCRETE HOUSEKEEPING PAD
CHWP	CHILLED WATER PUMP
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPRESSOR
CON	CONCENTRIC
CONC	CONCRETE

COND	CONDENSATE
CONN	CONNECTION
CONT'	N CONTINUATION
CONT	R CONTRACTOR
СР	CONDENSATE PUMP
СТ	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CVB	CONSTANT VOLUME BOX
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DA	DIRECT ACTING
DAMP	DAMPER
DB	DRY BULB
DEPT	DEPARTMENT
DIA	DIAMETER
DIAG	DIAGRAM
DIFF	DIFFERENTIAL
DISCH	DISCHARGE
DIV	DIVISION
DIW	DOWN IN WALL
DL	DOOR LOUVER
DN	DOWN
DS	DUCT SILENCER
DWG	DRAWING
DWP	DOMESTIC WATER PUMP
DX	DIRECT EXPANSION
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EF	EXHAUST FAN
EFF	EFFICIENCY
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
ENT	ENTERING
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ER	EXHAUST REGISTER
ES	END SWITCH
ESP	EXTERNAL STATIC PRESSURE
ΕT	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE

EX EXHAUST

LII	NE DESIGNA	TION SY
	cs ———	CONDEN
	CR	CONDEN
	RL	REFRIG
	RS	REFRIGE
	RD	REFRIGE
	GS ———	GLYCOL
	GR	GLYCOL
	HWS	HOT WA
	HWR	HOT WA
	HPS	HEAT PL
	HPR	HEAT PL
	PC	PUMPED
	CF	CHEMIC
	V	VENT PI
	R	RELIEF I
	MU ———	MAKE-U
	OF	OVERFL
	D	DRAIN
	FL	FILL LINE
	G	NATURA
	GV	GAS VEN
	SW	SOFT WA
	SMS	SNOWM
	SMR	SNOWM
	CHWS ———	CHILLED
	CHWR ——	CHILLED

# **Attachment 1**

EXPAN	EXPANSION	HT	HEIGHT
EXT	EXTERNAL	HTR	HEATER
F	DEGREES FAHRENHEIT	ΗV	HEATING AND \
F/D	FIRE DAMPER	HWC	HOT WATER CO
F/S/D	WITH FIRE/SMOKE DAMPER ACCESS DOOR	HWP	HOT WATER PU
FA	FROM ABOVE	HWR	HEATING HOT V
FA	FREE AREA	HWS	HEATING HOT V
FB	FROM BELOW	ΗХ	HEAT EXCHANG
FC	FAIL CLOSED	ΗZ	HERTZ
FCU	FAN COIL UNIT	ID	INTERNAL DIAM
FCV	FLOW CONTROL VALVE	ID	INSIDE DIAMET
FD	FLOOR DRAIN	IN	INCHES
FD	FIRE DAMPER	INCL	INCLUDING
FIN	FINISHED	INT	INTERNAL
FL	FLANGE	INV	INVERT
FLA	FULL LOAD AMPS	KW	KILOWATT
FLEX	FLEXIBLE	L	LENGTH
FLR	FLOOR	LAT	LEAVING AIR TE
FO	FAIL OPEN	LB	POUND
FOB	FLAT ON BOTTOM	LD	LINEAR DIFFUSE
FOP	FUEL OIL PUMP	LF	LINEAR FEET
FOT	FLAT ON TOP	LIN	LINEAR
FP	FIRE PROTECTION	LIQ	LIQUID
FP	FIRE PUMP	LRA	LOCK ROTOR AN
FPM	FEET PER MINUTE	LVG	LEAVING
FPS	FEET PER SECOND	LVR	LOUVER
FRICT	FRICTION	LWT	LEAVING WATE
FS	FLOW SWITCH	LWT	LEAVING WATE

FTR FINNED TUBE RADIATION FV FACE VELOCITY FX FLEXIBLE CONNECTION FXC FLEXIBLE CONNECTION

FT FEET

GA GAUGE

GAL GALLON

GR GRILLE

H 20 WATER

HP HEAT PUMP

HR HOUR

GALV GALVANIZED GC GENERAL CONTRACTOR GPH GALLONS PER HOUR GPM GALLONS PER MINUTE

GRS/LB GRAINS PER POUND HB HOSE BIBB

HD HAND DAMPER HD HEAD (SEE SCHEDULES) HP HORSEPOWER

SYMBOL NSER WA NSER WA ERANT L ERANT S GERANT D SUPPL RETUR ATER SUI ATER RE UMP SUP UMP RET CONDE CAL FEED IPING PIPING JP WATE LOW

NE L GAS INT VATER MELT SUP MELT RET O WATER

O WATER 

ΗT	HEIGHT
HTR	HEATER
HV	HEATING AND VENTILATING UNIT
HWC	HOT WATER CONVERTER
HWP	HOT WATER PUMP
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
ΗХ	HEAT EXCHANGER
ΗZ	HERTZ
ID	INTERNAL DIAMETER
ID	INSIDE DIAMETER
IN	INCHES
INCL	INCLUDING
INT	INTERNAL
INV	INVERT
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LIN	LINEAR
LIQ	LIQUID
LRA	LOCK ROTOR AMPS
LVG	LEAVING
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NK	NECK
NO	NORMALLY OPEN
NO	NUMBER
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR

OAI OUTSIDE AIR INTAKE

OAT	OUTSIDE AIR TEMPERATURE
OB	OFF BOTTOM
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
осс	OCCUPIED
OD	OUTSIDE DIMENSION
OD	OUTSIDE DIAMETER
OGH	OUTSIDE GROUND HYDRANT
OPG	OPENING
ОТ	OFF TOP
OZ	OUNCE
PART	PARTIAL
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP (SEE SCHEDULE)
PDR	PLENUM DRAIN
PERF	PERFORATED
PH	PHASE
PNEU	PNEUMATIC
POS	POSITIVE PRESS
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TRANSMITTER
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
QUAN	QUANTITY
R	REGISTER
RA	RETURN AIR
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE	ROUNDED ENTRANCE/EXIT
REL	RELIEF
REQD	REQUIRED
RET	RETURN
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RICW	RUN IN CASEWORK
RIE	RUN IN ENCLOSURE
RIW	RISE IN WALL
RLA	RATED LOAD AMPS
RM	ROOM

ROD ROOF OVERFLOW DRAIN

RPM REVOLUTIONS PER MINUTE

SA SUPPLY AIR SAD SUPPLY AIR DIFFUSER SAR SUPPLY AIR REGISTER SCG SMOKE CONTROL GRILLE SCH SCHEDULE SCHEM SCHEMATIC SD SMOKE DAMPER SEF SMOKE EXHAUST FAN SF SUPPLY FAN SH SENSIBLE HEAT SP STATIC PRESSURE SPEC SPECIFICATION SQ SQUARE SS STAINLESS STEEL STD STANDARD STL STEEL STM STEAM STR STRUCTURAL SUCT SUCTION SYS SYSTEM TAD TRANSFER AIR DUCT TDH TOTAL DYNAMIC HEAD TEMP TEMPERATURE TG TRANSFER GRILLE THT TOTAL HEAT TP TOTAL PRESSURE TT TEMPERATURE TRANSMITTER TYP TYPICAL UC UNDERCUT UH UNIT HEATER UNOCC UNOCCUPIED UON UNLESS OTHERWISE NOTED V VOLTS VA VALVE VAV VARIABLE AIR VOLUME UNIT VB VACUUM BREAKER VD VOLUME DAMPER VEL VELOCITY VI VIBRATION ISOLATOR VOLT VOLTAGE VTR VENT THRU ROOF W WIDTH W/ WITH W/O WITHOUT WB WET BULB WB WET BULB WC WATER COLUMN WG WATER GAUGE WMS WIRE MESH SCREEN

LS			PIPI	NG ELEMENTS / VALVIN	G	
ATER SUPPLY ATER RETURN		EXISTING EQUIPMENT OR PIPE TO BE REMOVED.		RELIEF/SAFETY VALVE	— X A	ANCHOR
		GATE VALVE		GAS COCK	G EJ	GUIDE
DISCHARGE		GLOBE VALVE		FUSIBLE LINK VALVE-QUICK CLOSING		EXPANSION JOINT
Y N	₹	PLUG VALVE		FUSIBLE LINK VALVE-QUICK OPENING	FS	FLOW SWITCH
PPLY		BUTTERFLY VALVE		AUTOMATIC FILL VALVE		TEMPERATURE TRANSMITTER
PPLY	—	BALL VALVE	₩ MV	MANUAL AIR VENT	PT/PS	PRESSURE TRANSMITTER OR PRESSURE SWITCH
TURN ENSATE		SWING CHECK VALVE		AUTOMATIC AIR VENT (EXTEND	Ттн	THERMOMETER
)		LIFT CHECK VALVE		DISCHARGE TO DRAIN)		GAUGE WITH
		GLOBE VALVE, ANGLE		FLOW METER-VENTURI	$\sim$	& SYPHON (STEAM)
R		DIAPHRAGM VALVE	<b>&gt;</b>	DIRECTION OF FLOW	l	AQUASTAT
		BALANCING VALVE	R D	DIRECTION OF PITCH-RISE OR DROP	—X—	GAS PRESSURE REGULATOR
	CBV	CIRCUIT SETTING	-+	STRAINER	<b>•</b> _	FLOAT OPERATED CONTROL VALVE -O
		BALANCING VALVE		STRAINER WITH BLOW OFF VALVE		BASKET STRAINER
PPLY			O	PIPE RISING UP		STEAM TRAP
FURN R SUPPLY		TWO WAT CONTROL VALVE		PIPE DROPPING DOWN		ELECTRICALLY TRACED PIPING
RRETURN		SOLENOID VALVE		CONCENTRIC REDUCER	H	EXPANSION LOOP (WxH)
		PRESSURE REDUCING VALVE (PRV)		UNION - SCREWED OR FLANGED	VB	VACUUM BREAKER
		TEMPERATURE/PRESSURE RELIEF VALVE	· "	STEAM LEAK DETECTOR	1 N	

#### RESPONSIBLE DIVISION

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
EQUIPMENT COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS AND CONTACTORS	23	23 26	26 26	 23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26(1)	26(1)	26	
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS(LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)		23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)		23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

SUBSCRIPT FOOTNOTES: 1) UNDER DIVISION 23 IF FURNISHED FACTORY-WIRED AS PART OF EQUIPMENT OR IF

FURNISHED WITH COMBINATION STARTERS.

 2) IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26.
 WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23, CONNECT UNDER DIVISION 26.

#### HVAC & DUC



ст	WORK SYMBOLS SECTION THROUGH RETURN OR EXHAUST AIR SECTION THROUGH SUPPLY OR OUTSIDE AIR DUCT SUPPLY OR OUTSIDE AIR DUCT ACCESS DOOR (BOTTOM OR SIDE) ACOUSTICALLY LINED DUCT DAMPER, FIRE DAMPER, MANUAL VOLUME INCLINED DROP IN DIRECTION OF ARROW INCLINED DROP IN DIRECTION OF ARROW INCLINED RISE IN DIRECTION OF ARROW INCLINE FAN TRANSITION, RECTANGULAR TO ROUND FLEXIBLE DUCT CEILING SUPPLY AIR DIFFUSER (CD) SIDEWALL SUPPLY AIR REGISTER (SR) ELBOW TURNED UP ELBOW, RADIUS TYPE ELBOW, SQUARE OR RECTANGULAR TYPE WITH AIRFOIL TURNING VANES RETURN OR EXHAUST AIR DUCT CEILING RETURN AIR REGISTER (RR) SIDEWALL RETURN AIR REGISTER (RR) OPEN END DUCT FLEXIBLE CONNECTION	
	SECTION THROUGH RETURN OR EXHAUST AIR	
	SECTION THROUGH SUPPLY OR OUTSIDE AIR DUC	
	SUPPLY OR OUTSIDE AIR DUCT	
	ACCESS DOOR (BOTTOM OR SIDE)	
	ACOUSTICALLY LINED DUCT	
	DAMPER, FIRE	
	DAMPER, MANUAL VOLUME	
	INCLINED DROP IN DIRECTION OF ARROW	
	INCLINED RISE IN DIRECTION OF ARROW	
	TRANSITION, RECTANGULAR TO ROUND	
	FLEXIBLE DUCT	
	IN-LINE FAN	
	TRANSITION, RECTANGULAR	
	SPIN-IN COLLAR INTO ADAPTER ON TOP OF DUCT	
	CEILING SUPPLY AIR DIFFUSER (CD)	
	SIDEWALL SUPPLY AIR REGISTER (SR)	
	ELBOW TURNED DOWN	
	ELBOW TURNED UP	
	ELBOW, RADIUS TYPE	
	ELBOW, SQUARE OR RECTANGULAR TYPE WITH AIRFOIL TURNING VANES	
	RETURN OR EXHAUST AIR DUCT	
	CEILING RETURN AIR REGISTER (RR)	
	SIDEWALL RETURN AIR REGISTER (RR)	
	OPEN END DUCT	
	FLEXIBLE CONNECTION	
	CARBON MONOXIDE	
	THERMOSTAT	







## MECHANICAL - MEZZANINE LOBBY FLOOR PLAN

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



1. DRAWING IS DIAGRAMMATIC IN NATURE. LOCATIONS AND SIZES MAY VARY DURING FIELD COORDINATION & INSTALLATION OF MECHANICAL, PLUMBING, & ELECTRICAL. DRAWINGS DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.

2. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING MECHANICAL EQUIPMENT AND DUCTWORK.

3. EXISTING FAN COILS, ASSOCIATED DUCTWORK, AND PIPING TO BE ABANDONED IN SITE. EXISTING CONDENSING UNITS ON ROOF TO BE REMOVED.

4. MAIN LOBBY AND MEZZANINE LOBBY TO BE NATURALLY VENTILATED PER 2018 I.M.C SECTION 402.2.

5. IN LOCATIONS WHERE ROOF TOP EQUIPMENT IS TO BE REMOVED, INSULATE AND CAP CURB UNLESS OTHERWISE STATED.

6. NEW RTU-5 AND VRF AE-200 TO BE CONNECTED TO THE EXISTING TRANE TRACER SC SYSTEM AND COM TRUNK IN THE BUILDING. PROVIDE ALL COMMUNICATIONS INTERFACE NECESSARY AND PROVIDE PROGRAMMING AS NEEDED FOR INTERFACE.





MECHANICAL GENERAL NOTES:

1. DRAWING IS DIAGRAMMATIC IN NATURE. LOCATIONS AND SIZES MAY VARY DURING FIELD COORDINATION & INSTALLATION OF MECHANICAL, PLUMBING, & ELECTRICAL. DRAWINGS DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.

2. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING MECHANICAL EQUIPMENT AND DUCTWORK.

3. EXISTING FAN COILS, ASSOCIATED DUCTWORK, AND PIPING TO BE ABANDONED IN SITE. EXISTING CONDENSING UNITS ON ROOF TO BE REMOVED.

4. MAIN LOBBY AND MEZZANINE LOBBY TO BE NATURALLY VENTILATED PER 2018 I.M.C SECTION 402.2.

5. IN LOCATIONS WHERE ROOF TOP EQUIPMENT IS TO BE REMOVED, INSULATE AND CAP CURB UNLESS OTHERWISE STATED.

6. TIE NEW CONTROLS FROM MANUFACTURER TO EXISTING CITY TRANE TRACER SC SYSTEM.





MECHANICAL - STAGE FLOOR PLAN

DO NOT REPR	ODUCE THESE	DRAWINGS AND
PERMISSION OF T SPECIFICATIONS AF SHALL REMAIN T WHETHER THE PR EXECUTED OR N SPECIFICATIONS S	THE DESIGNER. T RE INSTRUMENTS ( "HE PROPERTY OJECT FOR WHICI IOT. THESE SHALL NOT BE US	HE DRAWINGS AND DF THE SERVICE AND OF THE DESIGNER H THEY ARE MADE IS DRAWINGS AND SED BY ANYONE ON
ANY OTHER PROJE BY OTHERS EXC PERMISSION OF TH	ETS FOR ADDITION	NS TO THIS PROJECT PRESSED WRITTEN
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	æ	Ilting   Electric
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DATE: 04/16/2020 F	ISSUEE	) FOR: TRUCTION
DATE: JOB NO: DRAWN PY		4-16-2020 20-039 BCF
DATE: JOB NO: DRAWN BY CHECKED B SCALE: SHEET NUM	: ЗҮ: ИBER:	4-16-2020 20-039 BCE BCE AS SHOWN







NORTH



1. DRAWING IS DIAGRAMMATIC IN NATURE. LOCATIONS AND SIZES MAY VARY DURING FIELD COORDINATION & INSTALLATION OF MECHANICAL, PLUMBING, & ELECTRICAL. DRAWINGS DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.

2. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING MECHANICAL EQUIPMENT AND DUCTWORK.

 EXISTING FAN COILS, ASSOCIATED DUCTWORK, AND PIPING TO BE ABANDONED IN SITE. EXISTING CONDENSING UNITS ON ROOF TO BE REMOVED.
 MAIN LOBBY AND MEZZANINE LOBBY TO BE NATURALLY VENTILATED PER 2018 I.M.C SECTION 402.2.

5. IN LOCATIONS WHERE ROOF TOP EQUIPMENT IS TO BE REMOVED, INSULATE AND CAP CURB UNLESS OTHERWISE STATED.

6. TIE NEW CONTROLS FROM MANUFACTURER TO EXISTING CITY TRANE TRACER SC SYSTEM.

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386 Indian Road 101 W 11th Street #109-C Grand Junction, CO 81501 Durango, CO 81301		Bighorn Consulting Engineers, Inc. Mechanical & Electrical Engineers
THE AVALON	LOBBY AND STAGE UPGRADES	645 MAIN STREET GRAND JUNCTION, COLORADO
DATE: 04/16/2020 F	ISSUEI OR CONS	D FOR: TRUCTION
DATE: JOB NO: DRAWN BY: CHECKED E SCALE: SHEET NUM	век: 11-3	4-16-2020 20-039 BCE BCE AS SHOWN

	PURY-HP72TN 72,151 BTU/h 80,895 BTU/h	NU-A	Pipe Dia. Lio Pipe Length	quid / Gas Model Numb (Elbows) Group / Roor	er Clg.Total (Sens.) Htg.Total m / Tag Ref.		
51 System 1	<u>5/8 / 3/4</u> 25.0ft (3)	CMB-P108NU-JA1 5	52 68,143 76,467	BTU/h (51,707 BTU/h) BTU/h			
-		<u>1/4</u> 15.0	/ <u>1/2</u> )ft(2) 1	LFY-P12NCMU-ER4	12,025 BTU/h (8,603 BTU/h) 13,494 BTU/h	Est. Cooling Discharge Air Temp: 59.2 Est. Heating Discharge Air Temp: 102.1	
		<u>1/4</u> 15.0	/ <u>1/2</u> )ft(2) 2	LFY-P12NCMU-ER4	12,025 BTU/h (8,603 BTU/h) 13,494 BTU/h	Est. Cooling Discharge Air Temp: 59.2 Est. Heating Discharge Air Temp: 102.1	
		<u>1/4</u> 15.0	/ <u>1/2</u> )ft(2) 3	LFY-P12NCMU-ER4	12,025 BTU/h (8,603 BTU/h) 13,494 BTU/h	Est. Cooling Discharge Air Temp: 59.2 Est. Heating Discharge Air Temp: 102.1	
		<u>1/4</u> 15.0	/ <u>1/2</u> )ft(2) 4	/ 4	8,017 BTU/h (6,224 BTU/h) 8,996 BTU/h	Est. Cooling Discharge Air Temp: 61.3 Est. Heating Discharge Air Temp: 96.5	
		<u>1/4</u> 15.0	/ <u>1/2</u> )ft(2) 5	/ 5	8,017 BTU/h (6,558 BTU/h) 8,996 BTU/h	Est. Cooling Discharge Air Temp: 62.3 Est. Heating Discharge Air Temp: 93.8	
		<u>1/4</u> 15.0	/ <u>1/2</u> )ft(2) 6	/ 6	8,017 BTU/h (6,558 BTU/h) 8,996 BTU/h	Est. Cooling Discharge Air Temp: 62.3 Est. Heating Discharge Air Temp: 93.8	
		<u>1/4</u> 15.0	/ <u>1/2</u> )ft(2) 7	LFY-P08NCMU-ER4	8,017 BTU/h (6,558 BTU/h) 8,996 BTU/h	Est. Cooling Discharge Air Temp: 62.3 Est. Heating Discharge Air Temp: 93.8	
		0.0f	t(0)				
		0.0f	t(0)				

	ROOFTOP AIR HANDLING UNIT SCHEDULE															
EQUIPMENT NO. SERVICE		SUPPLY	OUTSIDE	TSIDE AIR CFM) E.S.P. (IN. W.G.)	COOLING		HEATING			EVAP FAN (HP)	ELECTRICAL			UNIT		
	SERVICE	AIR (CFM)	AIR (CFM)		NOM. (TONS)	GAS (CFH)	INPUT (MBH)	OUTPUT (MBH)	FILTERS		V./PH./HZ.	MCA (A)	MOCP (A)	UEIGHT	MANUFACTURER & MODEL	OPTIONS /ACCESSORIES
RTU-5	STAGE	5,000	1,500	1.0	12.5	283	250	200	2" MERV 8	5	208/3/60	61	80	2402	YHD150	NOTE-1

1. PROVIDE WITH ADAPTER CURB, COIL GUARDS, TCI MODULE, 100% MODULATING ECONOMIZER, POWERED EXHAUST FAN, FACTORY UNITARY CONTROLS, FUSED DISCONNECT SWITCH, HIGH ALTITUDE KIT, POWERED CONVENIENCE OUTLET AND CO2 DEMAND CONTROLLED VENTILATION SENSOR AND SEQUENCE. PROVIDE RETURN DUCT SMOKE DETECTOR WITH AUDIBLE AND VISUAL ALARMS CONNECTED TO THE FIRE ALARM CONTROL PANEL.

	VRF AIR COOLED CONDENSING UNIT SCHEDULE										
EQUIPMENT	NT SERVICE NOMINAL REF		REFRIG	REFRIG. PIPING		ELECTRIC					
NO.	SERVICE	CAPACITY (MBH)	CAPACITY (MBH)	LIQUID	VAPOR	V/PH/HZ	MOP (A)	MCA (A)	MANUFACTURER & MODEL	OF HUNS/ACESSURIES	
CU-1	VRF SYSTEM	72	80	5/8	3/4	208/3/60	60	38	MITSUBISHI PURY-HP72TNU-A NOTE 1		
NOTES:	NOTES: . PROVIDE LINE SET AS RECOMMENDED BY MANUFACTURER. POWER DISCONNECT. AE-200 CONTROLLER WITH BACNET. POWERED CONVENIENCE OUTLET.										

	VRF BRANCH CIRCUIT CONTROLLER SCHEDULE									
EQUIPMENT				ELECTRICAL			DIMENSIONS			
NO.	NO. SYSTEM NO.	# BRANCH CIRCUITS PER UNIT	LOCATION	MCA	МОСР	V./PH./HZ.	LxWxH INCHES	MANUFACTURE & MODEL	OPTIONS/ACCESSORIES	
BC-1	1	7	MEZZANINE	0.4	1	208/1/60	25"X15.7"X10"	MITSUBISHI CMB-P108NU-JA1	NOTE-1	
NOTES:	NOTES:									

1. PROVIDE WITH POWER DISCONNECT, CONDENSATE CATCH PAN AND CONDENSATE PUMP, ISOLATION VALVES UPSTREAM AND DOWNSTREAM OF BRANCH CONTROLLER BOX.

EQUIPMENT NO.	SERVICE	NOMINAL COOLING	NOMINAL HEATING	CFM	REFRIGER DIAM	ANT PIPING ETER	ELECTF	RICAL	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES	
		(BTU/HR.)	(BTU/HR.)		LIQUID	SUCTION	MCA (AMPS)	V./PH./HZ.			
FC-1	MAIN LOBBY	12000	13500	390	1/4	1/2	0.35	208/1/60	PLFY-P12NCMU-ER4	NOTE-1	
FC-2	MEZZANINE LOBBY	8000	9000	350	1/4	1/2	0.29	208/1/60	PLFY-P08NCMU-ER4	NOTE-1	
NOTES:											

1. PROVIDE WITH POWER DISCONNECT, SIMPLE MA CONTROLLER, CONDENSATE PAN AND PUMP, ISOLATION VALVES ON CONNECTIONS TO UNIT. LINESET RECOMMENDED BY MANUFACTURER.



ROOFTOP PACKAGED HVAC UNIT DETAIL NOT TO SCALE



## INDOOR VRF UNIT EQUIPMENT SCHEDULE

GRILLE-REGISTER-DIFFUSER SCHEDULE								
EQUIPMENT NO.	SIZE	MODEL	MANUFACTURER	FINISH	OPTIONS/ACCESSORIES			
A	8"X24"	520	PRICE	FLAT BLACK	NOTE-1			
NOTES:								

1. SUPPLY GRILLE MOUNTED ON DUCT. PROVIDE WITH OBD AND MANUAL ADJUSTMENT. DIFFUSER TO BE SET AT 22.5 DEGREE DEFELCTION.



GAS CONNECTION TO EQUIPMENT DETAIL NOT TO SCALE





DRAW	ING ABBREVIATIONS
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AC	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADR	AREA DRAIN (SEE SYMBOLS)
AFF	ABOVE FINISHED FLOOR
AH	AIR HANDLER (SPLIT REFRIG)
AHU	AIR HANDLING UNIT
AL	ACOUSTICAL LINING
ALUM	ALUMINUM
AP	ACCESS PANEL
ATC	AUTOMATIC TEMP. CONTROL
AVER	AVERAGE
AWT	AVERAGE WATER TEMP.
В	BOILER
BB	ELECTRIC BASEBOARD RADIATION
BDD	BACK DRAFT DAMPER
BFC	BELOW FINISHED CEILING
BFP	BACK FLOW PREVENTOR
BLDG	BUILDING
BLW	BELOW
BOB	BOTTOM OF BEAM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
С	CHILLER
САР	CAPACITY
CBV	CIRCUIT BALANCING VALVE
CD	CEILING DIFFUSER
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFM	CUBIC FEET PER MINUTE
СНР	CONCRETE HOUSEKEEPING PAD
CHWP	CHILLED WATER PUMP
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
со	CLEAN OUT
COL	COLUMN
сомр	COMPRESSOR
CON	CONCENTRIC
CONC	CONCRETE

COND CONDENSATE CONN CONNECTION CONT'N CONTINUATION CONTR CONTRACTOR CP CONDENSATE PUMP CT COOLING TOWER CU CONDENSING UNIT CUH CABINET UNIT HEATER CVB CONSTANT VOLUME BOX CWP CONDENSER WATER PUMP CWR CONDENSER WATER RETURN CWS CONDENSER WATER SUPPLY DA DIRECT ACTING DAMP DAMPER DB DRY BULB DEPT DEPARTMENT DIA DIAMETER DIAG DIAGRAM DIFF DIFFERENTIAL DISCH DISCHARGE DIV DIVISION DIW DOWN IN WALL DL DOOR LOUVER DN DOWN DS DUCT SILENCER DWG DRAWING DWP DOMESTIC WATER PUMP DX DIRECT EXPANSION EA EACH EAT ENTERING AIR TEMPERATURE EC ELECTRICAL CONTRACTOR ECC ECCENTRIC EF EXHAUST FAN EFF EFFICIENCY EJ EXPANSION JOINT EL ELEVATION ELEC ELECTRIC ELEV ELEVATOR ENT ENTERING EQ EQUAL EQUIP EQUIPMENT EQUIV EQUIVALENT ER EXHAUST REGISTER ES END SWITCH ESP EXTERNAL STATIC PRESSURE ET EXPANSION TANK EWC ELECTRIC WATER COOLER

EWT ENTERING WATER TEMPERATURE

EX EXHAUST

EXPAN EXPANSION EXT EXTERNAL F DEGREES FAHRENHEIT F/D FIRE DAMPER F/S/D WITH FIRE/SMOKE DAMPER ACCESS DOOR FA FROM ABOVE FA FREE AREA FB FROM BELOW FC FAIL CLOSED FCU FAN COIL UNIT FCV FLOW CONTROL VALVE FD FLOOR DRAIN FD FIRE DAMPER FIN FINISHED FL FLANGE FLA FULL LOAD AMPS FLEX FLEXIBLE FLR FLOOR FO FAIL OPEN FOB FLAT ON BOTTOM FOP FUEL OIL PUMP FOT FLAT ON TOP FP FIRE PROTECTION FP FIRE PUMP FPM FEET PER MINUTE FPS FEET PER SECOND FRICT FRICTION FS FLOW SWITCH FT FEET FTR FINNED TUBE RADIATION FV FACE VELOCITY FX FLEXIBLE CONNECTION FXC FLEXIBLE CONNECTION GA GAUGE GAL GALLON GALV GALVANIZED GC GENERAL CONTRACTOR GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GR GRILLE GRS/LB GRAINS PER POUND H 20 WATER HB HOSE BIBB HD HAND DAMPER HD HEAD (SEE SCHEDULES) HP HORSEPOWER HP HEAT PUMP HR HOUR

#### LIGHTING LEGEND

#### SYMBOLS SHOWN ARE STANDARD. VARIATION AND/OR COMBINATIONS MAY BE USED ON THE PLANS. THIS LIST SHOWS STANDARD SYMBOLS AND ALL MAY NOT APPEAR ON THE PROJECT DRAWINGS; HOWEVER, WHEREVER THE SYMBOL ON THE PROJECT DRAWINGS OCCUR; THE ITEM SHALL BE PROVIDED AND INSTALLED.

A LOWER CASE LETTER NEXT TO LIGHT FIXTURE OR SWITCH INDICATES A SWITCH DESIGNATION.

AN UPPER CASE LETTER NEXT TO A SWITCH INDICATES THE TYPE OF

AN UPPER CASE LETTER NEXT TO A LIGHT FIXTURE INDICATES THE TYPE OF FIXTURE. REFER TO THE LUMINAIRE SCHEDULE FOR FIXTURE SPECIFICATIONS.

#### SWITCHES

\$	SINGLE	POLE	SWITCH
т			

- \$<sub>2</sub> TWO POLE SWITCH
- THREE-WAY SWITCH

SWITCH. SEE THE LIST BELOW

- FOUR-WAY SWITCH
- \$<sub>D</sub> DIMMER SWITCH
- \$3D 3 WAY DIMMER SWITCH (4D INDICATES A 4WAY DIMMER)
- \$<sub>DR</sub> DOOR ACTIVATED SWITCH
- WALL MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACUITY SENSOR SWITCH
- \$<sub>LV</sub> LOW VOLTAGE LIGHT SWITCH
- \$<sub>TO</sub> MANUAL MOTOR STARTER
- \$<sub>P</sub> PILOT LIGHT SWITCH
- \$<sub>OS</sub> MANUAL ON / AUTO OFF LIGHT SWITCH
- \$<sub>MAD</sub> MANUAL ON / AUTO OFF DIMMING LIGHT SWITCH
- \$<sub>K</sub> KEY OPERATED LIGHT SWITCH
- \$<sub>T</sub> TIMER SWITCH CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH

\$ <sub>SC</sub>	SCENE CONTROL STATION
\$ <sub>MS</sub>	UNIT LIGHTING MANAGEMENT CONTROL STATION,

### LIGHT FIXTURES

ALL FIXTURES: THE UPPER CASE LETTER INDICATES FIXTURE TYPE RE: THE LUMINAIRE SCHEDULE FOR SPECIFICATIONS, THE LOWER CASE LETTER INDICATES WHICH SWITCH CONTROLS THE LIGHT.					
TURE ON PLANS MAY VARY FROM THE SYMBOL SHOWN HERE					
1'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED					
2'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED					
2'x2' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED					
WALL BRACKET LIGHT FIXTURE					
RECESSED DOWNLIGHT CAN FIXTURE					
SURFACE CEILING OR PENDANT MOUNTED FIXTURE					
DOUBLE FACE EXIT SIGN, WALL AND CEILING MOUNTED					
SINGLE FACE EXIT SIGN, WALL AND CEILING MOUNTED					
WALL MOUNTED EMERGENCY LIGHT					

EMR 😅 EMERGENCY EXTERIOR EGRESS FIXTURE

HT	HEIGHT
HTR	HEATER
HV	HEATING AND VENTILATING UNIT
HWC	HOT WATER CONVERTER
HWP	HOT WATER PUMP
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HX	HEAT EXCHANGER
ΗZ	HERTZ
ID	INTERNAL DIAMETER
ID	INSIDE DIAMETER
IN	INCHES
INCL	INCLUDING
INT	INTERNAL
INV	INVERT
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LIN	LINEAR
LIQ	LIQUID
LRA	LOCK ROTOR AMPS
LVG	LEAVING
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NK	NECK
NO	NORMALLY OPEN
NO	NUMBER
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE

- OA OUTSIDE AIR
- OAI OUTSIDE AIR INTAKE
- ELECTRICAL EQUIPMENT LEGEND
- BRANCH CIRCUIT PANELBOARD TELEPHONE TERMINAL BOARD ✓ ELECTRIC MOTOR F FUSED SAFETY SWITCH / DISCONNECT COMBINATION 4 MOTOR STARTER CONTACTOR LA-7 CIRCUITRY HOMERUN: PANEL LA - CIR. #7 CONDUIT OR WIRE CONCEALED IN WALL/CLG.
- ------ CONDUIT OR WIRE UNDERFLOOR/UNDERGND.

#### MAIN DISTRIBUTION GEAR

6 6 CIRCUIT BREAKER IN A PANEL BOARD

PAD MOUNTED UTILITY TRANSFORMER

FUSED DISCONNECT 100A = AMP RATING 2P = NUMBER OF POLES

FUSED DISCONNECT

35

ELECTRICAL METER SHOWN IN PLAN VIEW

ELECTRICAL POWER PANEL WITH MAIN LUG OR MAIN BREAKER PP1= PANEL NAME 225A MLO = MAIN LUG OR BREAKER SIZE 120/208V = PANEL VOLTAGE 3PH, 4 WIRE = PANEL PHASE AND WIRE SIZE

PP1 PP1 225A MLO 225A MLO 120/208V 120/208V 3PH, 4W 3PH, 4W

#### ELECTRICAL DEVICE LEGEND

 $\bigcirc$ CEILING JUNCTION BOX - SURFACE/FLUSH IJН WALL JUNCTION BOX - SURFACE/FLUSH  $\ominus$ DUPLEX RECEPTACLE FLOOR MOUNTED RECEPTACLE **•** SPLIT WIRED DUPLEX RECEPTACLE  $\bigcirc$ CEILING MOUNTED DUPLEX RECEPTACLE FOURPLEX RECEPTACLE  $\square$ FLOOR MOUNTED FOURPLEX RECEPTACLE ŧ APPLIANCE RECEPTACLE - 3 WIRE  $\Psi_{\rm GFCI}$  GROUND FAULT CIRCUIT INTERRUPTER USB RECEPTACLE WITH USB CHARGING CAPABILITES  $\Psi$  cw receptacle mounted in Casework ELECTRIC HAND DRYER (T)THERMOSTAT OPEN/CLOSE/STOP PUSH BUTTON

OAT OUTSIDE AIR TEMPERATURE OB OFF BOTTOM OBD OPPOSED BLADE DAMPER OC ON CENTER OCC OCCUPIED OD OUTSIDE DIMENSION OD OUTSIDE DIAMETER OGH OUTSIDE GROUND HYDRANT OPG OPENING OT OFF TOP OZ OUNCE PART PARTIAL PBD PARALLEL BLADE DAMPER PD PRESSURE DROP (SEE SCHEDULE) PDR PLENUM DRAIN PERF PERFORATED PH PHASE PNEU PNEUMATIC POS POSITIVE PRESS PRESS PRESSURE PRV PRESSURE REDUCING VALVE PS PRESSURE SWITCH PSI POUNDS PER SQUARE INCH PT PRESSURE TRANSMITTER PTAC PACKAGED TERMINAL AIR CONDITIONER PV PLUG VALVE PVC POLYVINYL CHLORIDE QUAN QUANTITY R REGISTER RA RETURN AIR RAG RETURN AIR GRILLE RAR RETURN AIR REGISTER RCP REFLECTED CEILING PLAN RD ROOF DRAIN RE ROUNDED ENTRANCE/EXIT REL RELIEF REQD REQUIRED RET RETURN RF RETURN FAN RH RELATIVE HUMIDITY RHC REHEAT COIL RICW RUN IN CASEWORK RIE RUN IN ENCLOSURE RIW RISE IN WALL RLA RATED LOAD AMPS RM ROOM ROD ROOF OVERFLOW DRAIN RPM REVOLUTIONS PER MINUTE

F

 $\boxtimes$ 

 $\bigtriangledown$ 

(D)--

 $\langle R_L \rangle$ 

(S)<sup>b</sup>

(H)<sub>135</sub>

M1

**F**s

**T**S

Q

 $\bigcirc \bigcirc$ 

S

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SAD SUPPLY AIR DIFFUSER SAR SUPPLY AIR REGISTER SCG SMOKE CONTROL GRILLE SCH SCHEDULE SCHEM SCHEMATIC SD SMOKE DAMPER SEF SMOKE EXHAUST FAN SF SUPPLY FAN SH SENSIBLE HEAT SP STATIC PRESSURE SPEC SPECIFICATION SQ SQUARE SS STAINLESS STEEL STD STANDARD STL STEEL STM STEAM STR STRUCTURAL SUCT SUCTION SYS SYSTEM TAD TRANSFER AIR DUCT TDH TOTAL DYNAMIC HEAD TEMP TEMPERATURE TG TRANSFER GRILLE THT TOTAL HEAT TP TOTAL PRESSURE TT TEMPERATURE TRANSMITTER TYP TYPICAL UC UNDERCUT UH UNIT HEATER UNOCC UNOCCUPIED UON UNLESS OTHERWISE NOTED V VOLTS

SA SUPPLY AIR

- VA VALVE
- VAV VARIABLE AIR VOLUME UNIT
- VB VACUUM BREAKER
- VD VOLUME DAMPER VEL VELOCITY
- VI VIBRATION ISOLATOR
- VOLT VOLTAGE VTR VENT THRU ROOF
- W WIDTH
- W/ WITH
- W/O WITHOUT WB WET BULB
- WB WET BULB

- WC WATER COLUMN
- WG WATER GAUGE WMS WIRE MESH SCREEN

#### RESPONSIBLE DIVISION

PLACE AND WIRED AS FOLLOWS: ITEM

#### EQUIPMENT COMBINATION MAGNETIC MOTOR STARTERS, MAGN MOTOR STARTERS AND CONTACTORS

#### TRANSFORMERS

#### DAMPER MOTORS, PE & E SWITCHES

# SUBSCRIPT FOOTNOTES:

DIVISION 26.

FIRE A	LARM EQUIPMENT LEGEND			
E ] 	FIRE ALARM PULL STATION FIRE ALARM HORN	*	SYMBOLS PLANS. TH PROJECT OCCUR; T	SHOWN ARE IIS LIST SHOV DRAWINGS; I HE ITEM SHA
	FIRE ALARM HORN/STROBE		LETTER N DEVICE IN	EXT TO A SW
7] ) 2) <sub>P</sub>	CEILING MOUNTED SPEAKER DUCT DETECTOR REMOTE LAMP SMOKE DETECTOR - STANDARD		1. FIELD BIDDI CONT 2. ELEC SERV 3. COOP THE L MECH	COORDINAT NG THIS WOF INGENCIES. TRIC UTILITY ICE MODIFIC/ RDINATE THE UMINAIRES / IANICAL DRA
)135° 1]	135° STANDARD HEAT DETECTOR PIR DETECTOR FLOW SWITCH TAMPER SWITCH		4. ALL V 5. COOF COUN ELEV, 6. ALL B LARG 7. ALL E APPL 8. ALL V CONF	/IRE TO BE #' IDINATE THE ITERS, CASE ATIONS. RANCH CIRC ER. LECTRICAL V ICABLE LOCA VIRING IS SH( DITIONS PRIO
	COMMUNICATION LEGEND		9. COOF 10. ALL S EXTE	CORE PATH O
	CLOCK ONLY CLOCK / PA SPEAKER WALL MOUNTED ROUND CEILING MOUNTED SPEAKER SQUARE SPEAKER INTERCOM PUSH TO CALL SWITCH		11. THE L STAIF TIME WHEF 12. VERIF ORDE 13. THE L AS AF	IGHTS IN ALL WELLS ARE DELAY, THE 1 RE THE SWITC THE OVER RING. IGHTING PAC PROVED EQ
$\bigtriangleup$				

	ABOVE THE CEILING PROJECTOR CONNECTION
□ HDMI	WALL MOUNTED HDMI
$\triangleleft$	PLAIN DATA OUTLET
80"	PLAIN DATA OUTLET WITH MOUNTING HEIGHT

#### SECURITY SYSTEM LEGEND

SECURITY CAMERA

ADA DOOR OPERATOR PUSH BUTTON

$\smile$	
ROOM 100	ROOM
NL	NIGH
WP	WEAT
A.F.F.	ABOV
AC.	ABOV
GFCI	GROL
CW	COOI
EM	EMER
44"	MOUN
GFCI WP	GROL WITH
GFCI 44"	GROL MOUN

#### UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN

I LAGE AND WINED AS I OLLOWS.				
ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
EQUIPMENT COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS AND	23	23	26	
CONTACTORS	23	26	26	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26(1)	26(1)	26	
MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS(LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)		23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)		23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

1) UNDER DIVISION 23 IF FURNISHED FACTORY-WIRED AS PART OF EQUIPMENT OR IF FURNISHED WITH COMBINATION STARTERS. 2) IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23, CONNECT UNDER

#### **GENERAL NOTES:**

HOWN ARE STANDARD. VARIATION AND/OR COMBINATION MAY BE USED ON THE IS LIST SHOWS STANDARD SYMBOLS AND ALL MAY NOT APPEAR ON THE RAWINGS; HOWEVER, WHEREVER THE SYMBOL ON THE PROJECT DRAWINGS E ITEM SHALL BE PROVIDED AND INSTALLED.

AND/OR COMBINATION MAY BE USED ON THE PLANS SUCH AS A LOWER CASE XT TO A SWITCH INDICATES THE SWITCH DESIGNATION. A NUMBER NEXT TO A DICATES A CIRCUIT NUMBER

COORDINATION DURING CONSTRUCTION IS IMPERATIVE. CONTRACTORS IG THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN

RIC UTILITY TO ADVISE OWNER AND/OR THE ELECTRICAL ENGINEER, PRIOR TO CE MODIFICATION REQUIRING COST TO THE OWNER. DINATE THE LOCATION OF LIGHTING EQUIPMENT INCLUDING BUT NOT LIMITED TO IMINAIRES AND SWITCHES WITH THE ARCHITECTURAL, STRUCTURAL AND NICAL DRAWINGS AND ALL OTHER TRADES AS REQUIRED. IRE TO BE #12 UNLESS NOTED OTHERWISE.

INATE THE MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE ERS, CASEWORK AND APPLIANCE RECEPTACLES WITH ARCHITECTURAL

ANCH CIRCUITS WITH HOME RUNS OVER 50 FEET, WILL BE SIZED ONE SIZE ECTRICAL WORK TO COMPLY WITH LATEST EDITION OF NEC AND ALL

ABLE LOCAL CODES. RING IS SHOWN DIAGRAMMATICALLY ON DRAWING, FIELD VERIFY ALL

TIONS PRIOR TO ROUGH-IN. DINATE LUMINAIRE MOUNTING REQUIREMENTS PRIOR TO PLACING ORDER. AIRWELLS AND PATHS OF EGRESS TO THE EXTERIOR DOORS, AND THE IOR PATH OF EGRESS AWAY FROM THE BUILDING SHALL RECEIVE EMERGENCY NG PER CODE.

HTS IN ALL RESTROOMS, STORAGE CLOSETS, JANITORS CLOSETS AND VELLS ARE TO BE SWITCHED WITH A MOTION SENSOR ON/OFF SWITCH WITH A ELAY, THE TIME DELAY LENGTH AS DIRECTED BY THE OWNER. EXCEPT IN AREA THE SWITCH IS LOCATED OUTSIDE THE AREA WHERE THE LIGHT IS LOCATED. THE OVERALL HEIGHT OF ALL PENDANT MOUNTED FIXTURES PRIOR TO GHTING PACKAGE SHALL BE APPROVED BY BOTH ARCHITECTS AND ENGINEERS PROVED EQUAL BEFORE BID

#### ABBREVIATIONS LEGEND

AA DRAWING KEYED NOTES

OM DESIGNATION

IT/SECURITY LIGHT - DO NOT SWITCH

THERPROOF **VE FINISHED FLOOR** 

VE COUNTER

OUND FAULT CIRCUIT INTERRUPTER

ORDINATE MOUNTING HEIGHT W/ CASEWORK RGENCY FUNCTION

NTING HEIGHT - A.F.F. OR A.F.G. TO C.L. HIGH UND FAULT CIRCUIT INTERRUPTER RECEPTACLE

H A WEATHER PROOF COVER

GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE MOUNTED AT 44" ABOVE FINISHED FLOOR







## ELECTRICAL - MEZZANINE LOBBY FLOOR PLAN

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

NORTH

# ELECTRICAL - MAIN LOBBY FLOOR PLAN

NORTH





MECHANICAL EQUIPMENT SCHEDULE												
COMB: MAG:	COMBINATION MOTOR STARTER MAGNETIC MOTOR STARTER	MOTOR STARTER     NR: NONE REQUIRED     CONT: CONTRACTOR       TOR STARTER     P/I: PLUG-IN UNIT     MAN: MANUAL MOTOR STARTER       W/U: SUPPLIED WITH UNIT:     W/U: SUPPLIED WITH UNIT:										
UNIT	FUNCTION	LOAD VOLTS & FULL BR		FULL BRANCH CIRCUIT		CUIT	GRND	BRKR		DISC		
NO	(NOTES)	20/12	VOLIO	~	LOAD AMPS	CONDUIT SIZE	NO.	WIRE SIZE	WIRE SIZE	SIZE		FUSE
$\left< \begin{array}{c} BC \\ 1 \end{array} \right>$	BRANCH SELECTOR		208	1	0.4A	1/2"	2	12	12	20A	NR	\$ <sub>2</sub>
	CONDENSING UNIT		208	3	38A	1"	3	6	10	60A	NR	60 60
FC 1	FAN COIL UNIT		208	1	0.35A	1/2"	2	12	12	20A	NR	<b>\$</b> 2
FC 2	FAN COIL UNIT		208	1	0.29A	1/2"	2	12	12	20A	NR	<b>\$</b> 2
RTU 1	ROOF TOP UNIT		208	3	61.0A	1.25"	3	4	6	80A	NR	100 80





DO NOT REPRODUCE THESE DRAWINGS AND SPECIFICATIONS WITHOUT THE EXPRESSED WRITTEN PERMISSION OF THE DESIGNER. THE DRAWINGS AND SECUCICATIONS ARE INSTRUMENTS OF THE SECUCIE AND							
SHALL REMAIN 1 WHETHER THE PR EXECUTED OR N SPECIFICATIONS 3 ANY OTHER PROJE	THE PROPERTY ( OJECT FOR WHICH IOT. THESE SHALL NOT BE US CCTS FOR ADDITION	OF THE DESIGNER H THEY ARE MADE IS DRAWINGS AND SED BY ANYONE ON NS TO THIS PROJECT					
BY OTHERS EXC PERMISSION OF T	EPT BY THE EXP HE DESIGNER.	PRESSED WRITTEN					
0 2	20						
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11th Duran	one: (9	ers, ers					
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CHECKED BY:     BCE       SCALE:     AS SHOWN       SHEET NUMBER:							
<b>E2-3</b>							
April 17, 2020 - 8:17:02am							