CAPEHART PARK HVAC REPLACEMENT

COMMISSIONER BETSY VANDERLEY DISTRICT 1

COMMISSIONER ROD A. LOVE DISTRICT 2

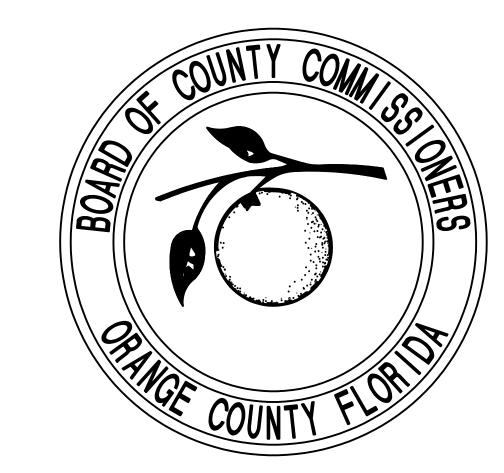
COMMISSIONER PETE CLARKE DISTRICT 3

SCOPE OF WORK:

PROVIDE NEW 100% OUTDOOR AIR UNIT SPLIT SYSTEM. PROVIDE A NEW VARIABLE REFRIGERANT FLOW (VRF) SYSTEM INCLUDING (5) VERTICAL INDOOR AIR CONDITIONING UNITS, (1) DUCTLESS MINI-SPLIT INDOOR AIR CONDITIONING UNIT AND (2)HEAT PUMP CONDENSING UNITS PIPED AND CONTROLLED AS A VRF SYSTEM. PROVIDE ALL NEW BMS CONTROLS AND MODIFY EXISTING FRONT END CONTROLS TO MATCH NEW SYSTEM REQUIREMENTS. PROVIDE NEW CONDENSATE DRAIN SYSTEM. PROVIDE NEW ELECTRICAL AS REQUIRED TO SUPPORT NEW HVAC SYSTEMS.

715 CAPEHART DRIVE ORLANDO, FLORIDA

MAYOR TERESA JACOBS



COMMISSIONER JENNIFER THOMPSON DISTRICT 4

> COMMISSIONER EMILY BONILLA DISTRICT 5

COMMISSIONER VICTORIA P. SIPLIN DISTRICT 6



LOCATION MAP PROJECT LOCATION: 715 CAPEHART DRIVE, ORLANDO, FLORIDA 32822

DRAWING INDEX

<u>6HEET No.</u>	<u>Sheet title</u>
C0.01	Cover sheet
M0.01	MECHANICAL N
MD1.01	MECHANICAL D
M2.01	MECHANICAL F
M6.01	MECHANICAL D
M7.01	MECHANICAL D
E0.01	ELECTRICAL SYN
ED1.01	ELECTRICAL DEN
E1.01	ELECTRICAL FLC
E5.01	ELECTRICAL ON

ISSUE: 100% CD DATE: SEPTEMBER 18 2018

SGM ENGINEERING MEP CONSULTING ENGINEERS CA-00006208 935 Lake Baldwin Lane Orlando, FL 32814 Tel: 407-767-5188 Fax: 407-767-5188 Fax: 407-767-5772 www.sgmengineering.com Copyright © 2018 SGM Engineering, Inc.
<text></text>
Issue: No. Date Description 0 8/18/18 100% CDs
Project Name: CAPEHART PARK HVAC REPLACEMENT Project Number: 2018–131 Scale: AS NOTED Design By: Design By:
Drawn By: Checked By: Engineer of Record: License Number: Sheet Name: COVER SHEET
Sheet Number:

NOTES, LEGENDS, SCHEDULES DEMOLITION FLOOR PLAN FLOOR PLAN DETAILS CONTROLS MBOLS AND LEGENDS EMOLITION FLOOR PLAN

OOR PLAN NE LINE, PANEL SCHEDULES & DETAILS

MECHANICAL GENERAL NOTES

- IF THE INTENT OF ARCHITECT/ ENGINEER WITH REGARD TO ANY DETAIL IS NOT CLEAR, OR IS CAPABLE OF MORE THAN ONE INTERPRETATION, SUCH M/ BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE SUBMISSION OF BIDS, AND THE ENGINEER SHALL MAKE CORRECTION OR WRITING. OTHERWISE, NO EXTRA CHARGE WILL BE ALLOWED FOR THE WORK OR MATERIAL IN QUESTION.
- THE PLANS AND SPECIFICATIONS ARE INTENDED AS A GENERAL DESCRIPTION OF THE WORK TO BE PERFORMED. ALL ITEMS NOT SPECIFICALLY SHOWN, BUT NECESSARY FOR THE COMPLETION OF THE INSTALLATION, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. THIS CONTR THOROUGHLY ACQUAINT THEMSELVES WITH THE MECHANICAL, AND ELECTRICAL PLANS BEFORE SUBMITTING THEIR FINAL BID.
- 4. ALL WORK SHALL BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2017, FLORIDA MECHANICAL & ELECTRICAL CODES, 2017 AND LATEST N.E.C & I
- THE SIZE AND LOCATION OF EQUIPMENT INSTALLED UNDER DIVISION 23 MECHANICAL SHALL BE COORDINATED WITH OTHER TRADES. CONNECTION SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FO FURNISHED.
- DUCTWORK AND PIPING TO MECHANICAL EQUIPMENT SHALL BE INSTALLED IN A MANNER THAT DOES NOT OBSTRUCT EQUIPMENT SERVICE CLEARANCES 6.
- INTERRUPTION OF EXISTING SERVICES SHALL BE MINIMAL AND SHALL BE FULLY COORDINATED WITH THE OWNER AND ALL TRADES IN ADVANCE TO 7. INTERRUPTIONS DURING NON-CRITICAL TIMES. OWNER SHALL BE PROVIDED WITH THREE BUSINESS DAYS NOTICE PRIOR TO INTERCEPTION.
- DISCONNECT SWITCHES REQUIRED FOR THE MECHANICAL EQUIPMENT SHALL BE PROVIDED BY DIVISION 26 ELECTRICAL EXCEPT WHEN INDICATED ON 8.
- PROVIDE 4" HIGH CONCRETE PADS UNDER ALL FLOOR MOUNTED EQUIPMENT, WITH CHAMFERED EDGES AND 6" EXTENSIONS BEYOND EQUIPMENT 9 OTHERWISE.
- 10. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED AND/OR SPECIFIED. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED VIBRATION-FREE, RIGID INSTALLATION. SUPPORT ALL OBJECTS FROM STRUCTURE WITHOUT PENETRATING THE CEILING.
- 11. ALL HVAC EQUIPMENT LOCATION & WEIGHT SHALL BE COORDINATED AND APPROVED BY THE STRUCTURAL ENGINEER, CONTRACTOR AND OWN PURCHASE AND INSTALLATION.
- CONDENSATE DRAINS FROM ALL MECHANICAL EQUIPMENT SHALL BE COORDINATED FOR PROPER DRAINAGE TO SUIT EQUIPMENT FURNISHED. AL 12. DRAIN LINES SHALL BE INSULATED AND INSTALLED WITH A 'P' TRAP AT THE UNIT.
- ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH LATEST SMACNA, NFPA 90A AND 90B REQUIREMENTS. OFFSETS IN DUC 13. AND TRANSITIONS AROUND OBSTRUCTIONS. PROVIDE ALL TRANSITIONS, ELBOWS, FITTINGS, ETC., TO ALLOW SMOOTH FLOWS.
- PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTS CONNECTING TO EACH FAN, AIR HANDLING UNIT AND FAN COIL UNIT. COORDINATE DIFFUSE 14. REGISTER LOCATIONS WITH EQUIPMENT OF ALL TRADES and VERIFY CEILING FINISHES.
- 15. ALL OPERABLE THERMOSTAT PARTS SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR. ROOM THERMOSTATS DO NOT REQUIRE COVERS. VOLTAGE SH/ UNLESS OTHERWISE INDICATED.
- ALL CONTROL WIRING AND HARDWARE TO COMPLETE THE HVAC CONTROL SYSTEM SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 23 MECHAN 16. CONTRACT DOCUMENTS.
- 17. INSTALLATION OF DUCT SMOKE DETECTORS SHALL BE BY DIVISION 23 AND FURNISHED BY DIVISION 26.
- THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND ENGINEER FOR REVIEW, A TEST AND BALANCE REPORT OF ALL SYSTEMS. THE TESTING AND BAL 18. BE PERFORMED BY A CERTIFIED TEST AND BALANCE COMPANY. TEST AND BALANCE REPORT SHALL BE COMPLETED BY SUBSTANTIAL COMPLETION DAT
- 19. PROVIDE ALL MANUFACTURER INSTALLATION & MAINTENANCE MANUALS FOR EQUIPMENT INSTALLED FOR ENGINEER REVIEW BEFORE RELEASE TO THE

				FAN					DX COIL CHAI	RACTERIS	TICS			HE	ATING COIL ((ELECTRIC))	Fi	TER	8.	ECTRICAL	DATA
UNIT NO.	MANUF. & MODEL NO.	SERVICE	AIRFLOW CFM	OUTSIDE A IR (MA X/MIN) CFM	ESP (IN	FAN MOTOR HP	REFRIG. TY PE	CAP. TOTAL	CAP. SENSIBLE	EAT	(°F)	LA	ſ (°F)	CAPACITY (KW)	STAGES	AIR TE	BMP (°F)	тнск	EFF	MCA	моср	V/PH/HZ
				CEIVI				(MBH)	(MBH)	DB	WB	DB	WB			MAT	LAT					
OAU-1	TRANE BCHD024E1	100% OA	700	700	0.50	0.5	R410A	69.6	27.5	88	80	52.2	52.1	5	3	38	60	2	MERV 11	20.4	25	208/3

) A HUS SHALL INCLUDE INTEGRAL DISCONNECT

			VA	ARIABLE R	EFRIGERAN	NT VOLUME -		NIT SCH	EDULE						
				CONNE	CTED TO:	AIRFLO	W	(OOLING CAP	ACITY		HEATING		ELECTRICA	L
TAG	BASIS OF DESIGN	NOMINAL	ТҮРЕ	CONDENSING	ZONE	AIR FLOW RATE	OUTSIDE AIR	TOTAL	SENSIBLE	ENTERI	NG AIR	TOTAL	POWER SUPPLY	MIN CIRCUIT AMPS	MAX OVERCURRENT
	(MITSUBISHI)	TONNAGE		UNIT	CHANGEOVER DEVICE	CFM	CFM	мвн	мвн	°F DB	°F WB	мвн	VOLTAGE/ PHASE	МСА	мор
AC-1	PVFY-P48NAMU-E	4	Multi Position Air Handler	CU-1	Yes	1,375	75 / 350 (2)	35	24	76	64	54	208/1	5.63	15
AC-2	PVFY-P48NAMU-E	4	Multi Position Air Handler	CU-1	Yes	1,400	75 / 350 (2)	35	24	76	64	54	208/1	5.63	15
AC-3	PVFY-P54NAMU-E	4.5	Multi Position Air Handler	CU-1	Yes	1,485	100	44	33	76.1	63.8	60	208/1	5.63	15
AC-4A	PVFY-P48NAMU-E	4	Multi Position Air Handler	CU-1	Yes	1,400	175	32	27	77.3	64.2	54	208/1	5.63	15
AC-4B	PVFY-P48NAMU-E	4	Multi Position Air Handler	CU-1	Yes	1,400	175	32	27	77.3	64.2	54	208/1	5.63	15
AC-5	MSY-GL09NA-U1	0.75	Wall Mounted Unit	CU-1	Yes	260	0	9	6	75	63	8	208/1	0.3	15

NOTES:

1) INCLUDE FACTORY DISCONNECT 2) MIN OA = 75 CFM, OUTSIDE AIR FROM OAU-1 = 350 CFM

				co	OLING CAPACITY	HEA	ATING CAPACITY		ELECTRICAL		EFFI	CIENCY
TAG: ROOM	BASIS OF DESIGN (MITSUBISHI)	NOMINAL TONNAGE	DESCRIPTION	MBH	AMBIENT DESIGN (°F DB)	мвн	AMBIENT DESIGN (°F)	VOLTAGE- PHASE	MCA	мор	EER	IEER
HP-1A	PURY-P96TLMU-A	8	Air cooled VRF Heat Pump	96	95	108	32	208/3	33	50	12	24.1
HP-18	PURY-P144TLMU-A	12	Air cooled VRF Heat Pump	144	95	160	32	208/3	52	80	12.2	19.7
	Provide low ambient kit Provide BC Controller Submitted performance of System must provide con	for heating. data must be fully e itinuous heating du	IMU with twinning kit (CMY-E de-rated for all components a uring defrost and oil return. S lous performance rating data	nd access ystems wi	ories, including but not ithout this capability mu	ist be de-r	ated to account for he	ating lost durin		+		
	Provide low ambient kit Provide BC Controller Submitted performance of System must provide con Manufacturer must have Condensing units must h EEV actuators must be re Systems using solenoid of Solenoid control valves a Condensing units must b Manufacturers submitta Contractor to verify pipil	for heating, data must be fully attinuous heating du published continu- nave fully modulati nave have auto cha emovable from valves control valves mus and full port isolat be furnished with p l must include refr ng dimensions.	de-rated for all components a uring defrost and oil return. S ious performance rating data ng INVERTER compressors. ngeover functions re body without disturbing the t include full port isolation va- ion valves must be rated for 2 rotective coil coating to withs igerant piping diagram with p	nd access ystems wi at least 1 refrigera ilves befo 1.5 times t tand ASTN ipe diamo	ories, including but not ithout this capability mu 20F and -4F to ensure pe nt system. re and after refrigerant e he maximum working pr M B117 salt spray test fo eters, lengths, and refrig	ist be de-r erformanc control bo essure in r a minim erant volu	ated to account for he e during extreme cond ix the system and be ration um of 2500 hours.Per- ime.	ating lost durin itions . ed for a minimul	g defrost cyclo n L10 life of 5	e and unit 00, 000 hour		

					11
	UNIT NO.	MANUFACTURER & MODEL NO.	SERVICE	LOCATION	
	CU-2	TRA NE 4TTA 3060D3	OAU-1	CUYARD	
ļ	NOTES:				

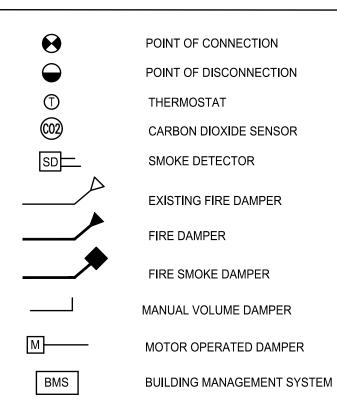
1) PROVIDE ANTI-SHORT CY CLE TIMER, EVAPORATOR DEFROST CONTROL, RUBBER ISOLATORS)

	M	ECHANICAL ABBRE	VIATIO	NS
MATTERS WILL BE	AAV	AUTOMATIC AIR VENT	HOA	HAND-OFF-AUTOMATIC
R EXPLANATION IN	AC	AIR CONDITIONING	HP	HORSEPOWER, HEAT PUMP
	ACU	AIR CONDITIONING UNIT	HVAC	HEATING VENTILATING
	AD	ACCESS DOOR, AIR DRYER		AND AIR CONDITIONING
Y MENTIONED OR	AFF	ABOVE FINISHED FLOOR	HZ	
NTRACTOR SHALL	AFMS	AIR FLOW MEASURING STATION	nz ID	HERTZ (CYCLES PER SECOND)
	AHU	AIR HANDLING UNIT		INSIDE DIAMETER INCH
	ALUM	ALUMINUM	IN	
NFPA CODES.	AP	ACCESS PANEL	KEF	KITCHEN EXHAUST FAN
	APD	AIR PRESSURE DROP	KW	KILOWATT
	ATC	AUTOMATIC TEMPERATURE CONTROL	LDB	LEAVING DRY BULB
FOR EQUIPMENT	AV	AIR VENT	LWB	LEAVING WET BULB
	BDD	BACK DRAFT DAMPER	LOR	LIMIT OF REMOVAL
ES.	BOT	BOTTOM	MAX	MAXIMUM
_0.	BFP	BACKFLOW PREVENTER	MBH	THOUSAND BTU PER HOUR
O SCHEDULE ALL	BTU	BRITISH THERMAL UNIT	MD	MANUAL DAMPER
J CONEDULE ALL	C	CELSIUS, DEGREE CELSIUS	MIN	MINIMUM
	CFM	CUBIC FEET PER MINUTE	(N)	NEW
N SCHEDULE.	CHWS&R	CHILLED WATER SUPPLY & RETURN	Ň	NORTH
	CLG	CEILING	NA	NOT APPLICABLE
T UNLESS NOTED	CF	CEILING FAN	NO OR #	NUMBER, NORMALLY OPEN
	co	CLEAN OUT	NTS	NOT TO SCALE
	COND	CONDENSATE	OA	OUTSIDE AIR
TO PROVIDE A	(D)	DEMOLISH	OBD	OPPOSED BLADE DAMPER
	DB	DRY BULB, DOWN BLOW	OD	OUTSIDE DIAMETER
	DCW	DOMESTIC COLD WATER	OPER	OPERATING
WNER PRIOR TO	DEG	DEGREE	PSI	POUNDS PER SQUARE INCH
	DELIV	DELIVERY	PSIG	POUNDS PER SQUARE INCH GAUGE
	DHW	DOMESTIC HOT WATER	RA	RETURN AIR
ALL CONDENSATE	DISC	DISCONNECT	REG	REGISTER
	DN	DOWN	RF	RETURN FAN
	(E)	EXISTING	RG	RETURN GRILLE
OUCTS AND PIPING	EA	EXHAUST AIR, EACH	RH	RELATIVE HUMIDITY
	EAT	ENTERING AIR TEMPERATURE	RHC	REHEAT COIL
ISER, GRILLE AND	EDB	ENTERING DRY BULB	RM	ROOM
SER, ORIELE AND	EF	EXHAUST FAN	SA	SUPPLY AIR
	EFF	EFFICIENCY	SEF	SMOKE EXHAUST FAN
HALL BE 24 VOLT	ELEV	ELEVATION	SF	SUPPLY FAN
	EMS	ENERGY MANAGEMENT SYSTEM	S/FD	SMOKE/FIRE DAMPER
	ENT	ENTERING	T	THERMOSTAT
ANICAL OF THESE	EWB	ENTERING WET BULB	TEC	TERMINAL EQUIPMENT CONTROLLER
	F	FAHRENHEIT	TEMP	TEMPERATURE
	FD	FIRE DAMPER, FLOOR DRAIN	T/D	TRANSFER DUCT
	FPM	FEET PER MINUTE	TYP	TYPICAL
	FPS	FEET PER SECOND	V	VENT, VOLT
ALANCING SHALL	F/SD	FIRE/SMOKE DAMPER	VD	VOLUME DAMPER
TE.	FT	FEET	VERT	VERTICAL
E OWNER.	GPH	GALLONS PER HOUR	WB	WET BULB
I A ZAVINI IN	GPM	GALLONS PER MINUTE	WPD	WATER PRESSURE DROP

S	PLIT SYS	STEM	CON	DENSING L	JNIT S	SCHED	OULE		
	COOLING			COMP	RESSOR		CONDENSER	COND.	FAN(S)
	00002110		REFRIG.		1				

	COOLING				COMPR	ESSOR		CONDENSER	COND.	FAN(S)		POWER	२	
N	CAPACITY (TONS)	EER	refrig. Type	TYPE	QTY	RLA	NO. CIRCUITS	amb. Air Temp. (°f)	QTY.	HP	MCA	MOCP	V/PH/HZ	OPER. WT. (LBS)
5	5.0	14	R410A	SCROLL	1	15.6	1	95	1	1/5	21.0	35.0	208/3/60	

MECHANICA



SCOPE OF WORK

DEMOLISH THE EXISTING (4)AHU'S AND (5) SPLIT SYSTEM CONDENSI PREPARE FOR NEW. PROVIDE A NEW VARIABLE REFRIGERANT FLOW SYSTEM INCLUDING (5) NEW AHU'S, (1) NEW 100% OA AHU, (1)DUCTLI (1) VRF CONDENSING UNIT. SYSTEM SHALL INCLUDE VRF BRANCH B OPERATED OA DAMPERS AND NEW CONTROLS WITH REVISED FRON ALL ELECTRICAL REQUIREMENTS FOR THE NEW HVAC SYSTEM SHAI

WORK SHALL BE PERFORMED DURING OFF HOURS. OFF HOURS WIL AS 6PM - 7AM, MONDAY THROUGH SUNDAY. A REQUESTED FULL SU MONDAY MAY BE AVAILABLE FOR THE FULL 24 HOURS PER DAY WHE ADVANCE . ANY ADDITIONAL TIME OR DAYS ADDED ONTO THE ABOV WHEN REQUESTED, WOULD DEPEND ON BUILDING USAGE AVAILABIL DISCRETION. BUILDING OUTAGES (POWER, COOLING, ETC) SHALL E MINIMUM OF 3 WEEKS IN ADVANCE. SYSTEMS SHALL BE INSTALLED ALLOWS THE BUILDING TO BE PARTLY OCCUPIED AND COOLED WITH BEING PERFORMED WITHIN ONE MECHANICAL ROOM AT A TIME ALLO OF THE BUILDING TO BE OCCUPIED.

THE EXISTING FRONT END CONTROL SYSTEM USES RELIABLE CONT NEW CONTROL SYSTEMS INSTALLED WILL REQUIRE COMPLETE COM COMPATIBILITY WITH THE EXISTING SYSTEMS WITH NEW GRAPHICS EXISTING FRONT END SYSTEMS.

THE CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN ALL OF THE E DUCTWORK FOR REUSE.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REBATES FF UTILITY COMPANY FOR ALL THE QUALIFYING NEW MECHANICAL SYS OBTAINING AND FILLING OUT THE REBATE FORMS AND FOLLOWING ADDITIONAL INFORMATION REQUESTED BY THE UTILITY COMPANY.

CONTRACTOR SHALL PROVIDE TEMPORARY COOLING AS REQUIRED BUILDING OCCUPIED. AREAS UNDER CONSTRUCTION WHERE THE A SYSTEMS WILL BE DOWN DUE TO CONSTRUCTION SHALL BE PROVID TEMPORARY COOLING INCLUDING; SPOT COOLERS WITH FLEX DUCT HEAT TO OUTDOOR ENVIRONMENT OR TEMPORARY AIR HANDLING E LOCATED OUTDOORS WITH SUPPLY TO WITHIN THE SPACE. ALL REC PROVIDING TEMPORARY COOLING TO KEEP SPACES OCCUPIED SHA THE SCOPE OF WORK.

				F	AN SO
MARK	SPACE SERVED	MANUF.	MODEL.#	CFM	ESP (IN.WG.)
EF-1	RESTROOMS	GREENHECK	CSP-A710	375	0.5"
NOTES:	1. PROVIDE 18" F				.1

. PROVIDE 18" ROOF CURB. 2. PROVIDE WITH BIRD SCREEN.

- 3. PROVIDE WITH BACKDRAFT DAMPER.
- 4. PROVIDE HANGING NEOPRENE ISOLATORS. 5. PROVIDE WITH INTEGRAL GRILLE
- 6. PROVIDE WITH EXPLOSION PROOF MOTOR & SPARK RESISTAL
- 7. PROVIDE WASHABLESS FILTERS

VARIABLE REFRIGERANT VO ZONE HEAT RECOVERY DEVICE

TAG: ROOM	BASIS OF DESIGN (MITSUBISHI)	CONDENSING UNIT SERVED	VOLTAGE- PHASE	МСА
BS 1	CMB-P105NU-G1	CU-1	208/1	0.4
BS 2	CMB-P105NU-G1	CU-1	208/1	0.4
Schedule	Notes:	nd changeouse 4	6 9 10 and	10 port or

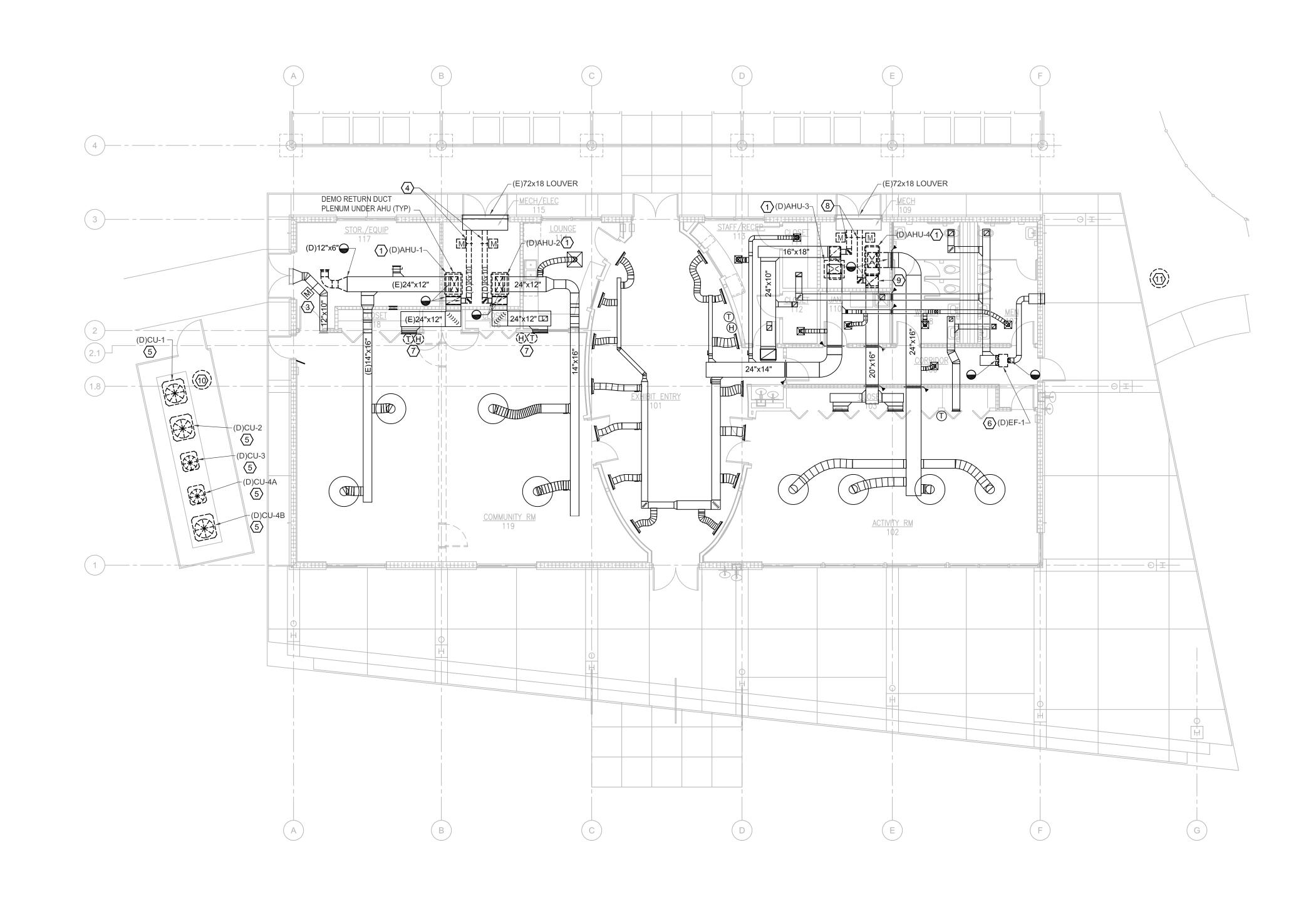
Individual control and changeover 4, 6, 8, 10 and 12 port c Unlimited number of unused ports per box or system.

No drain piping needed. Standard Limited Warranty: 10-year warranty on all parts.

SYME	OLS LEG	
>		FND
>		
		NEW WORK
>		EXISTING DUCT TO REMAIN
>		EXISTING DUCT TO BE DEMOLISHED
	\triangleleft	SUPPLY AIR DUCT
		RETURN AIR DUCT
	\leq	EXHAUST AIR DUCT
\times		ELBOW TURNED UP
		ELBOW TURNED DOWN
		TAP WITH 45° ENTRY
) HVAC C UNIT & MOTOR GRAPHICS. NCLUDED. CONSIDERED AND HEDULED IN HEDULE, T OWNER HEDULED A ANNER THAT ALLATION	M0.01 MECHA MD1.01 MECHA M1.01 MECHA M7.01 MECHA M7.02 MECHA	ANICAL LEGENDS, NOTES & SCHEDULES ANICAL DEMO. FLOOR PLAN ANICAL FLOOR PLAN ANICAL DETAILS ANICAL CONTROLS
AND ANY CATION AND TED ON THE		
IG		
HE POWER INCLUDING IH ANY		
NDITIONING TH JASTING MENT MENTS FOR INCLUDED IN		
		TYPE CONTROLS NOTES
	HP	
SPEED CONTI), UL-762 RES), HIGH WIND / 2, HINGED BA	ROLLER TAURANT EXHAUST APPLICATION SE	ATERIAL
МОР	MAX CAPACITY (per Port)	
15	48 MBH	
15 s.	<u>54 MBH</u>	
	CUNIT & MOTOR GRAPHICS. NCLUDED. CONSIDERED AND EDULED IN EDULE, OWNER EDULED A ANNER THAT ALLATION FOR PART AND ANY CATION AND TED ON THE IG IE POWER INCLUDING TH INCLUDING TH ASTING MENT MENTS FOR INCLUDED IN EDULE PRIVE FA RP MECT 100 INTEGRAL DIS SPEED CONTF UL-762 RES HIGH WIND A HIGH WIND A HIGH SAS HIGH WIND A HIGH SAS	ITS AND HVAC UNIT & MOTOR GRAPHICS. NCLUDED. CONSIDERED AND EDULED IN EDULED IN EDULED IN EDULE, OWNER EDULED A ANNER THAT ALLATION FOR PART AND ANY CATION AND FED ON THE IG IE POWER INCLUDING TH ASTING MENT MENT MENT MENT MEDT EEDULE FAN EEDULE PRIVE FAN REM MOTOR MOTOR MAX CAPACITY (per Port) IS 48 MBH IS S4

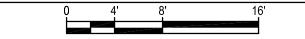
SGNEERING ENGINEERING ENGINEERING MEP CONSULTING ENGINEERS CA-00006208 935 Lake Baldwin Lane Orlando, Fl. 32814 Tel: 407-767-5188 Fax: 407-767-5188 Fax: 407-767-5772 www.sgmengineering.com Copyright © 2018 SGM Engineering, Inc.
Issue: No. Date Description
No.DateDescription08/18/18100% CDs
Project Name:
CAPEHART PARK HVAC REPLACEMENT
Project Number: 2018–131 Drawing File Name: Scale: AS NOTED Seal: Design By: Drawn By: Checked By: Engineer of Record: License Number:
Sheet Name: MECHANICAL NOTES, LEGENDS AND SCHEDULES
Sheet Number: MO.01







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



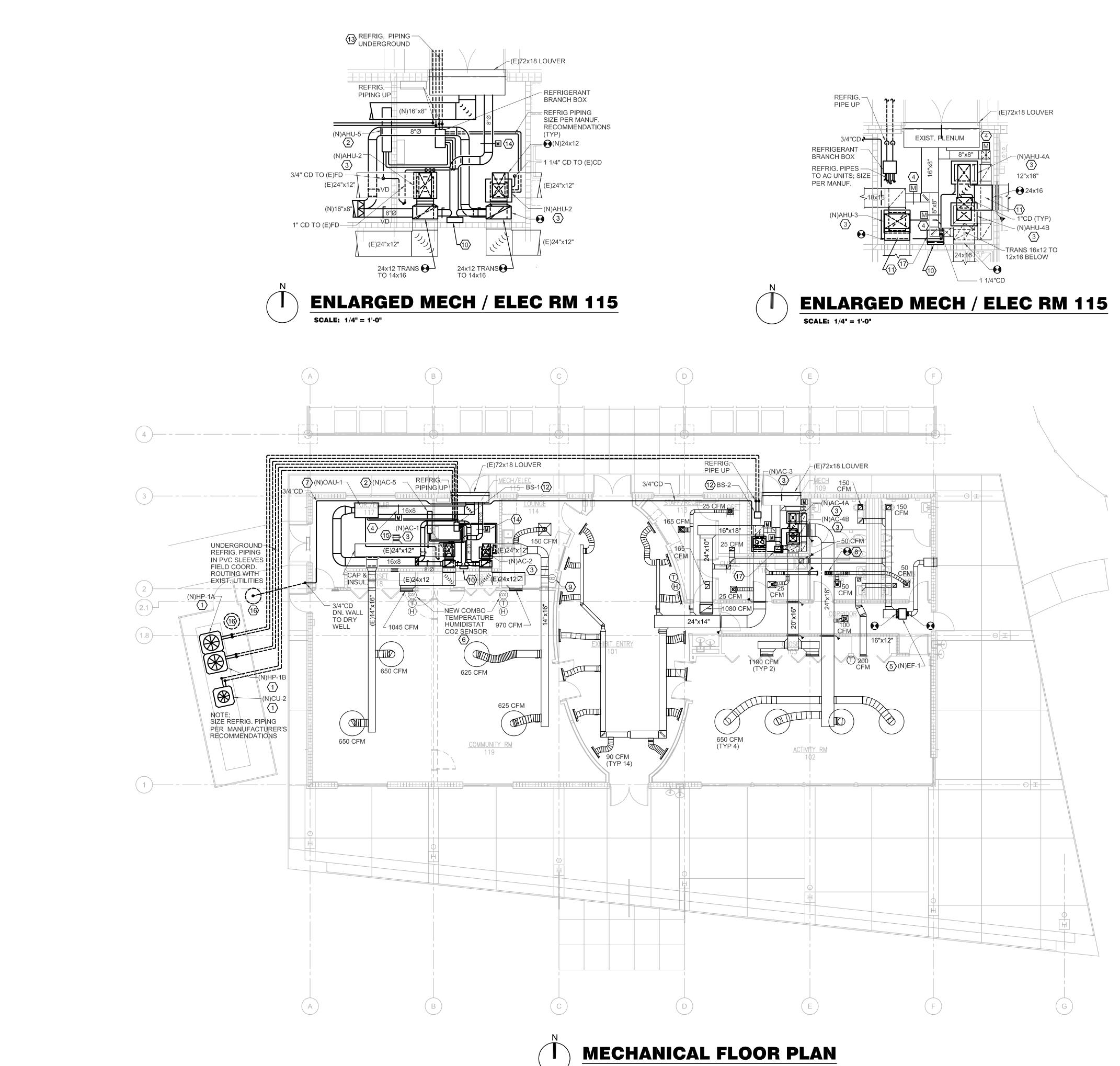
GENERAL NOTES:

A. REFER TO SHEET M0.01 FOR GENERAL NOTES.

PLAN KEY NOTES: 🐼

- DEMOLISH AND REMOVE AHU, ASSOCIATED REFRIGERANT PIPING, CD PIPING, DUCT PLENUM UNDER AHU AND SUPPLY DUCT; PREPARE EXISTING DUCTWORK FOR NEW
 NOT USED
 EXISTING MOTOR OPERATED DAMPER; DISCONN. FROM CONTROLS AND ADD TO NEW; SEE SEQUENCE OF OPERATION
- SEQUENCE OF OPERATION.
 DEMOLISH OA DUCT & MOTOR OPERATED DAMPERS; PREPARE FOR NEW.
- DEMOLISH CONDENSING UNITS AND ASSOCIATED REFRIGERANT PIPING; PREPARE FOR NEW
 DEMOLISH EXISTING IN-LINE EXHAUST FAN AND FLEX CONNECTIONS: COODD EXISTING
- CONNECTIONS; COORD. EXISTING DUCTWORK WITH NEW FAN AND MAKE NECESSARY DEMOLITION FOR NEW
- 7. DEMOLISH TEMPERATURE AND HUMIDITY SENSORS AND PREPARE FOR NEW. PATCH REPAIR WALL AS REQUIRED.
- 8. DEMOLISH OA MOTOR OPERATED DAMPERS AND OA DUCTS; PREPARE FOR NEW.
- 9. DEMOLISH RETURN DUCTWORK; COORDINATE WITH NEW; SAVE FOR RELOCATION THE SMOKE DETECTOR
- 10. DEMOLISH EXISTING DRYWELL AND PREPARE FOR NEW
- 11. DEMOLISH EXISTING DRYWELL COVER AND FOAM FILL DRAIN PIPE; FILL IN WELL WITH SOIL AND SOD OVER EXISTING OPENING. FOAM FILL EXISTING PIPE IN MECHANICAL ROOM TO CREATE A WATER TIGHT SEAL.

SGN ERINGE ENGINEERING MEP CONSULTING ENGINEERS CA-00006208 935 Lake Baldwin Lane Orlando, FI. 32814 Tel: 407-767-5188 Fax: 407-767-5188 Fax: 407-767-5772 www.sgmengineering.com Copyright © 2018 SGM Engineering, Inc.
Issue:
No.DateDescription08/18/18100% CDs
Project Name:
Project Number: Drawing File Name:
2018–131 Scale: AS NOTED Design By: Drawn By: Checked By: Engineer of Record: License Number:
Sheet Name: MECHANICAL DEMOLITION FLOOR PLAN
Sheet Number: MD1.01



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

GENERAL NOTES:

A. REFER TO SHEET M0.01 FOR GENERAL NOTES.

- B. ROUTE NEW AHU CONDENSATE DRAINS FULL SIZE OF NEW UNIT TO EXISTING CONDENSATE DRAINS WITHIN MECHANICAL ROOM
- C. RECONNECT EXISTING DUCT SMOKE DETECTOR SMOKE CONTROLS TO NEW AHU'S (TYP)
 D. RECONNECT EXISTING TEMPERATURE AND HUMIDITY
- CONTROLS TO NEW AHUS E. PAINT NEW DUCTWORK INSULATION & PIPING INSULATION IN
- ROOM 117 BLACK TO HIDE EXPOSED EQUIPMENT (TYP FOR EXPOSED EQUIPMENT)
 F. CONTRACTOR SHALL PROVIDE TEMPORARY COOLING IN ALL AREAS WHERE THE COOLING SYSTEM WILL BE DOWN FOR REPLACEMENT. TEMPORARY COOLING SHALL CONSIST OF SPOT COOLERS AND/OR PACKAGED EXTERIOR SYSTEMS THAT PROVIDE CONDITIONED AIR TO SPACES WITHOUT COOLING; CONTRACTOR SHALL PROVIDE ALL PROVISIONS TO ALLOW FOR TEMPORARY COOLING INCLUDING POWER, FLEX DUCTS, CONDESNATE REM,OVAL, ETC. TO PROVIDE A COMPLET ETEMPORARY COOLING SYSTEM SO SPACES UNDER

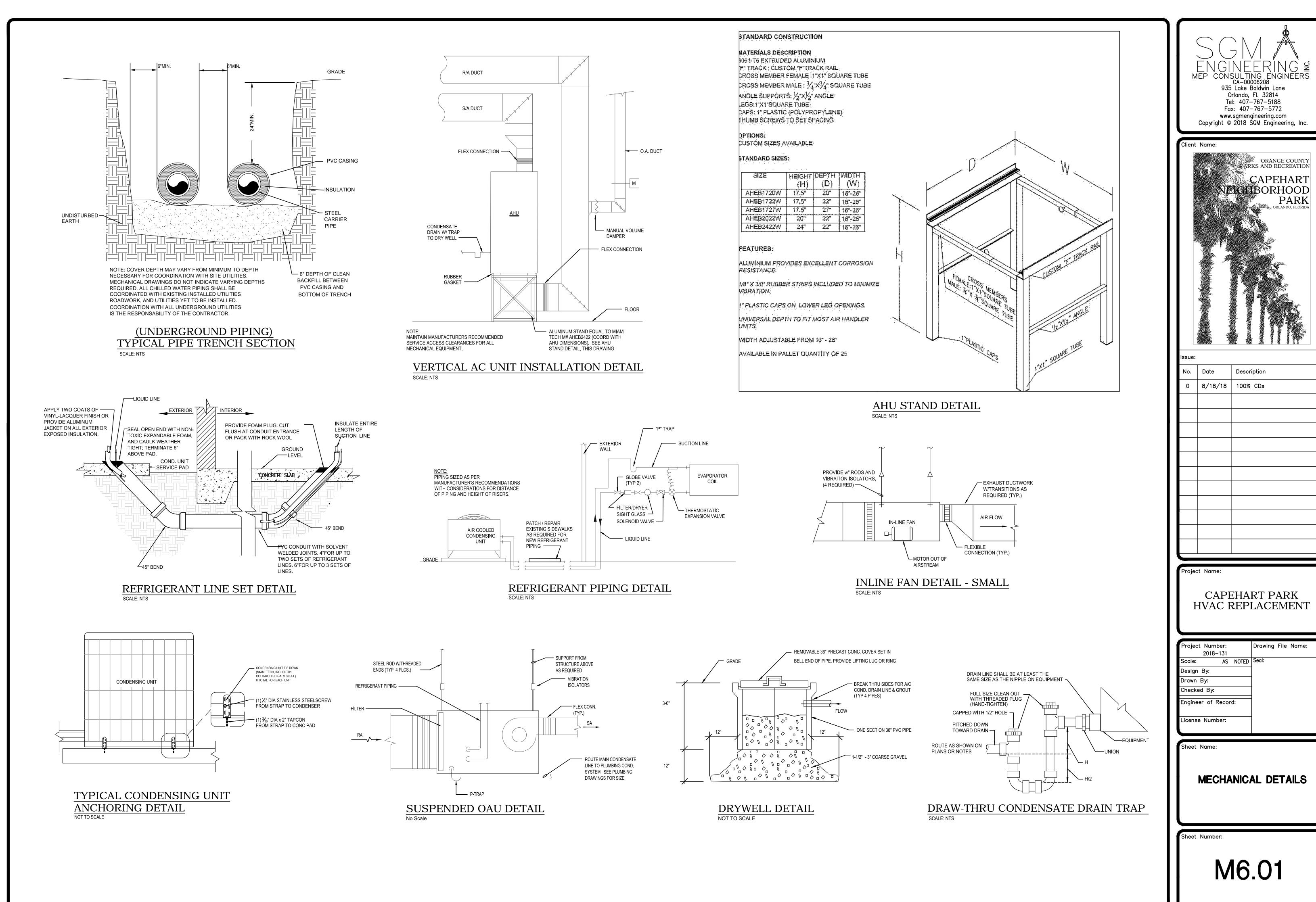
CONSTRUCTION CAN REMAIN OCCUPIED DURING

PLAN KEY NOTES:

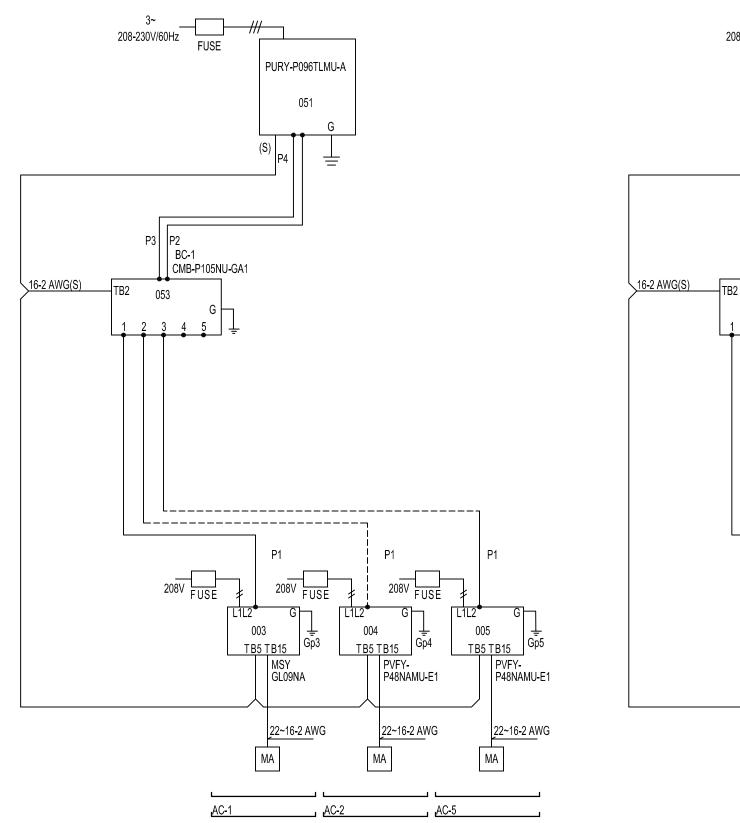
CONSTRUCTION.

- 1. PROVIDE NEW CONDENSING UNIT, ANCHOR TO EXISTING CONCRETE PAD PER DETAILS. PROVIDE NEW REFRIGERANT PIPING SIZED PER MANUFACTURERS RECOMMENDATIONS AND ROUTE UNDERGROUND TO WITHIN EACH MECHANICAL ROOM
- 2. PROVIDE NEW AHU-5 (WALL HUNG DUCTLESS SPLIT INDOOR UNIT WITH WALL MOUNTING BRACKET); ROUTE 3/4" DIA. PIPING TO FLOOR DRAIN WITHIN MECH. ROOM
- PROVIDE NEW VRF AHU'S; PROVIDE NEW DUCTWORK AND INSULATION TO RECONN EXISTING WITH NEW AHU; PROVIDE NEW RETURN DUCT VOLUME DAMPER & FLEX CONNECTIONS AT UNIT CONNECTION (TYP)
- 4. PROVIDE NEW 8x8 MOTOR OPERATED DAMPER AND RECONN. CONTROL WIRING. PROVIDE NEW CO2 SEQUENCE FOR AHU-4 MOD (SEE CONTROL SEQUENCES).
- PROVIDE NEW IN-LINE EXHAUST FAN AND SUPPORTS; PROVIDE FLEX CONENCTIONS AND CONNECT TO EXISTING DUCTWORK
- PROVIDE CO2 SPACE SENSOR AND PROGRAM CONTROLS PER SEQUENCE OF OPERATIONS. RELOCATE EXISTING THERMOSTAT FROM RM 117 FOR AHU-1 ADJACENT TO CO2 SENSOR. EXISTING THERMOSTAT FOR AHU-2 SHALL REMAIN.
 PROVIDE NEW 100% OUTSIDE AIR SYSTEM (OAU-1) WITH
- NEW DUCTWORK TO AHU-1 & AHU-2 INCLUDING MOD'S
 INTERLOCKED WITH OAU-1.
 8. DISCONNECT 6x10 OFF AHU-3 DUCTWORK AND ATTACH TO
- DISCONNECT 6XT0 OFF AND 3 DOCTWORK AND ATTAC AHU-4 DUCTWORK
 PROVIDE NEW CO2 SENSOR. SEE SEQUENCE OF
- 9. PROVIDE NEW COZ SENSOR. SEE SEQUENCE OF OPERATION FOR CONTROLS
- PROVIDE NEW CONTROLS WITHIN EXISTING CONTROL BOX
 INSTALL EXISTING SMOKE DETECTOR (TYP)
 VRF REFRIGERANT BRANCH CIRCUIT BOX
- 13. ROUTE REFRIGERANT PIPING UNDERGROUND; SAW CUT CONCRETE AS REQUIRED FOR NEW REFRIGERANT PIPING AND PATCH REPAIR AS REQUIRED TO MATCH EXISTING. PROVIDE ESCAVATION AND REFILL WITH COMPACTING AND
- PROVIDE ESCAVATION AND REFILL WITH COMPACTING AND PEE GRAVEL. SLEEVE REFRIGERANT PIPING IN SCHEDULE 80 PVC SLEEEVE.
 14. PROVIDE MIN. OA 8"Ø DUCT AND MOD; SEE SEQUENCE OF OPERATIONS.
- BALANCVE EXISTING GRILLE TO 75 CFM
 PROVIDE NEW 36" DIA. X 36" DEEP DRYWELL AND RE-ROUTE NEW EXISTING 4 4/8" CONDENDATE DIPERTOR TO MUTUWATURAL
- NEW EXISTING 1 1/8" CONDENSATE PIPES TO WITHIN NEW DRYWELL. SEE DRYWELL DETAIL. 17. PROVIDE CONDENSATE PUMP EQUAL TO LITTLE GIANT M#
- VCL-24ULS WITH 1 GAL RESEVOIR, 1/18 HP,115 (PLUG IN), 210 GPH @ 9' LIFT. ROUTE CONDENSATE FROM AHU-3, 4A & 4B IN 1 1/4" CD TO PUMP, DISCHARGE 3/4"CD TO DRY WELL.

SGA ENGINEERING MEP CONSULTING ENGINEERS CA-00006208 935 Lake Baldwin Lane Orlando, Fl. 32814 Tel: 407-767-5188 Fax: 407-767-5188 Fax: 407-767-5772 www.sgmengineering.com Copyright © 2018 SGM Engineering, Inc.
Client Name:
<text></text>
Issue: No. Date Description
No. Date Description 0 8/18/18 100% CDs
Project Name: CAPEHART PARK HVAC REPLACEMENT
Project Number: Drawing File Name: 2018–131 Drawing File Name: Scale: AS NOTED Design By: Drawn By: Drawn By: Checked By: Engineer of Record: License Number:
Sheet Name:
MECHANICAL FLOOR PLAN
Sheet Number:
M1.01



•											
SIZE		HEIGHT	DEPTH								
		(H)	(D)	$\langle W \rangle$							
AHEB17	20W	17.5"	20"	161-26*							
AHEB17	22W	17,5"	22"	16*-26*							
AHEB17	27W	17.5"	27"	16"-26"							
AHEB20	22W	20."	22"	18"-26°							
AHEB24	22W		22"	16"-26"							



SEQUENCE OF OPERATIONS: VARIABLE REFRIGERANT FLOW (VRF) SYSTEM

AHU-1, AHU-2:, AUH-3, AHU-4 & AHU-5 SHALL OPERATE AS ONE VRF SYSTEM. THE VRF SYSTEM SHALL INCLUDE HEAT MODE, ALLOWING ANY INDOOR AHU TO OPERATE IN EITHER HEAT MODE OR COOLING MODE, INDEPENDENT OF THE OTHER AHU'S. THE VRF SYSTEM CONTROLLER SHALL MAINTAIN REFRIGERANT CONTROLS AS REQUIRED AND CYCLE THE COMPRESSORS ON TO MAINTAIN COOLING AND OR HEATING REQUIREMENTS.

OCCUPIED MODE (AHU-1, AHU-2, AHU-3, AHU-4A & AHU-4B AHU-5): AHU'S SHALL BE INDEXED INTO OCCUPIED MODE ON A TIME SCHEDULE THRU BMS. DURING OCCUPIED MODE, THE AHU OA DAMPER DAMPERS SHALL OPEN, THE AHU'S SHALL BE ACTIVATED AND THE AHU'S SHALL BE CONTROLLED TO MAINTAIN A SPACE COOLING TEMPERATURE SETPOINT OF 75°F (ADJ.). ON A DROP IN TEMPERATURE THE AHU SHALL OPERATE IN HEAT PUMP MODE TO PROVIDE HEAT TO MAINTAIN HEATING SETPOINTOF 68°F (ADJ.) AHU-5 SHALL ACTIVATE ELECTRICAL HEAT TO MAINTAIN HEAT SETPOINT.

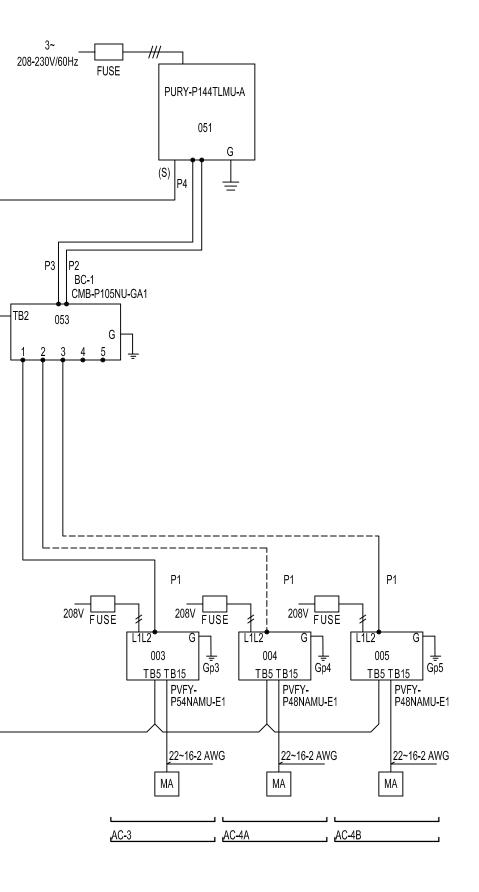
UNOCCUPIED MODE:

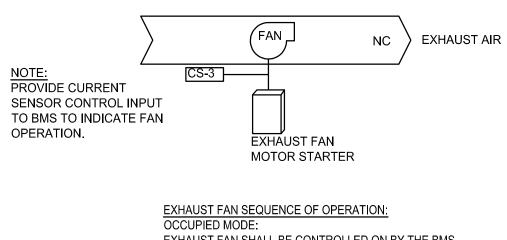
AHU'S SHALL BE DEACTIVATED AND ASSOCIATED OA DAMPERS SHALL CLOSE. ON AN INCREASE IN HUMIDITY SETPOINT ABOVE AN UNOCCUPIED MODE SETPOINT OF 65%RH (ADJ.), THE VRF CONDENSER AND ASSOCIATED AHU SHALL BE ACTIVATED AND SHALL RUN UNTIL THE SPACE HUMIIDTY SETPOINT IS SATISFIED. THE AHÙ SHÂLL RUN FOR MINIMUM OF 5 MIN (ADJ.). WHEN SPACE HUMIDITY SETPOINT, THE SYSTEM SHALL BE DEACTIVATED.

SMOKE DETECTORS SHALL BE RECONNECTED TO THE NEW CONTROLS AND SHALL DEACTIVATE ASSOCIATED AHU ON ALARM.

VRF SYSTEM CONTROL DIAGRAM

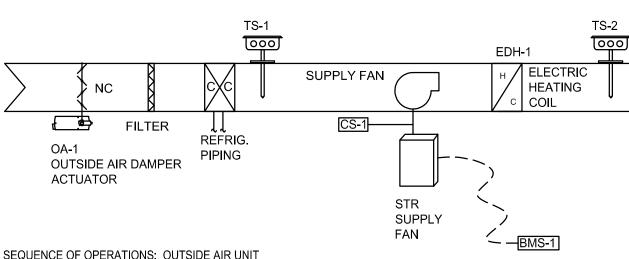
No Scale





EXHAUST FAN SHALL BE CONTROLLED ON BY THE BMS. UNOCCUPIED MODE: THE EXHAUST FANS SHALL BE DEACTIVATED.

GENERAL EXHAUST FAN CONTROL DIAGRAM



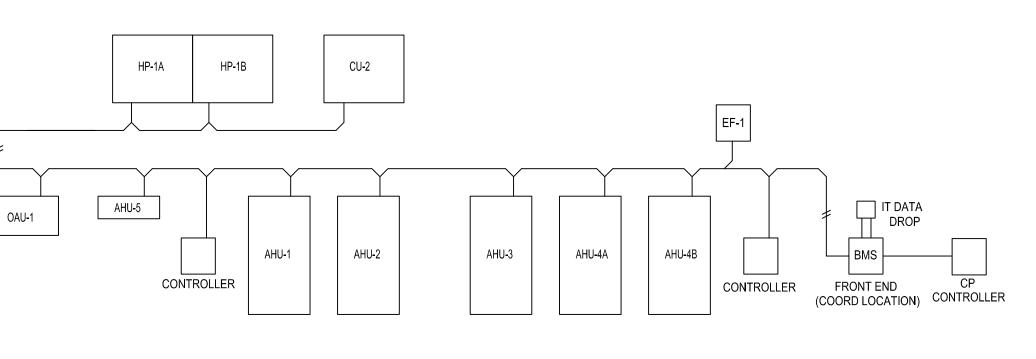
SEQUENCE OF OPERATIONS: OUTSIDE AIR UNIT OCCUPIED MODE:

OAU-1/CU-2 SHALL INDEXED TO OCCUPIED MODE SEQUENCE. . DURING OCCUPIED MODE WHEN CO2 LEVELS (EITHER SENSOR) EXCEEDS SETPOINT OF 1100 PPM (ADJ.)., THE OA DAMPER SHALL OPEN, THE MIN. OA DAMPER FOR AHU-1 & 2 SHALL CLOSE, THE PRESSURE RELIEF DAMPER SHALL OPEN AND OAU-1/CU-2 SHALL BE ACTIVATED AND CONTROLLED TO STAGE COMPRESSORS TO MAINTAIN A DISCHARGE AIR TEMPERATURE OF 55°F AS SENSED BY TS-2. ON A DROP IN TEMPERATURE BELOW 52°F, THE ELECTRIC HEATER SHALL BE STAGED ON TO MAINTAIN 52°F DISCHARGE AIR TEMPERATURE AS SENSED BY TS-2. WHEN CO2 SENSOR IS SATISFIED, THE OAU-1 SHALL BE DEACTIVATED, THE OA DAMPER SHALL CLOSE, THE PRESSURE RELIEF DAAMPER SHALL CLOSE AND THE MIN OA DAMPER FOR AHU-1 & AHU-2 SHALL RESUME NORMAL POSITION (OPEN). WHEN OAU-1 IS ACTIVATED THE UNIT SHALL RUN FOR A MINIMUM OF 5 MINUTES (ADJ.).

UNOCCUPIED MODE:

OAU-1/CU-2 SHALL BE OFF AND THE OUTSIDE AIR DAMPER SHALL BE CLOSED.

OUTSIDE AIR UNIT CONTROL DIAGRAM



BMS SYSTEM ARCHITECURE No Scale

NOTE:

THE EXISTING RELIABLE CONTROL GRAPHICS AND CONTROL SEQUENCES SHALL BE MODIFIED / REVISED / ADDED TO, AS REQUIRED, TO DEPICT AND CONTROL NEW HVAC SYSTEMS PER SEQEUNCES OF OPERATION. NEW GRAPHICS DEPICTING THE VRF SYSTEM SHALL INCLUDE INPUTS, OUTPUTS, FAULTS, SCHEDULING AND OTHER CONTROLS THAT ALLOW FOR FULL COMMUNICATION OF THE VRF SYSTEM BEYOND INTERNAL VRF CONTROLLER REQUIRED FOR VRF SYSTEM OPERATION.

SGM ENGINEERING MEP CONSULTING ENGINEERS CA-00006208 935 Lake Baldwin Lane Orlando, Fl. 32814 Tel: 407-767-5188 Fax: 407-767-5772 www.sgmengineering.com Copyright © 2018 SGM Engineering, Inc.
Client Name:
<text></text>
Issue: No. Date Description
0 8/18/18 100% CDs
Project Name: CAPEHART PARK HVAC REPLACEMENT
Project Number: Drawing File Name: 2018-131
Scale: AS NOTED Design By:
Drawn By: Checked By:
Engineer of Record:
License Number:
Sheet Name:
MECHANICAL CONTROLS
Sheet Number:
M7.01

LIGHTIN	IG FIXTURES	POWER	DISTRIBUTION	\sim	MOTOR	DACI	CVM		_
○	1'x4' FIXTURE		120/208V PANELBOARD, RECESSED 120/208V PANELBOARD, SURFACE MOUNT		GENERATOR		C SYMB		
			277/480V PANELBOARD, SURFACE MOUNT				JUL	JNCTION BOX (4'	x 4
°	2'x4' FIXTURE	577777.	277/480V PANELBOARD, RECESSED		LOCKBOX			GROUND PULL E	30X
	4' WALL MOUNT FIXTURE		EXISTING PANELBOARD		GROUND BUS BAR			ONDUIT CONCEA	
			EXISTING TRANSFORMER		GROUND ROD WITH TEST INSPECTION WELL. SEE SPECIFICATIONS.		CE	EILING OR IN WA	۱LL
	1'x4' FIXTURE, BATTERY/EMERGENCY 2'x2' FIXTURE, BATTERY/EMERGENCY		FEEDER OR BRANCH CIRCUIT CONCEALED IN WALL, CEILING OR FLOOR		SURGE PROTECTION DEVICE, SEE SPECIFICATIONS.			ONDUIT CONCEA NDERGROUND C	
		1R1-1	HOMERUN CONSISTING OF ONE SINGLE-PHASE, 1-POLE CIRCUIT, SEE		NG PROTECTION		 0 CC	ONDUIT TURNIN	GII
•	2'x4' FIXTURE, BATTERY/EMERGENCY		SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES. PANELBOARD AND CIRCUIT DESIGNATION ARE INDICATED.						
⊢− 0−−−1	4' STRIP FIXTURE				AIR TERMINAL (ALUMINUM CLASS 1 MIN).		• CO	ONDUIT TURNING	3 Di
		1M1-1:3	HOMERUN CONSISTING OF ONE SINGLE-PHASE, 2-P0LE CIRCUIT: SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE		ROOFTOP MAIN CONDUCTOR, RUN EXPOSED ACROSS ROOF.		-] co	ONDUIT STUB	
⊢-⊊1 ⊢- ∳ 1	4' STRIP FIXTURE, WALL MOUNTED 4' STRIP FIXTURE, WALL MOUNTED,		SIZES. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.		DOWN CONDUCTOR, RUN CONCEALED IN STRUCTURE -		— со	ONDUIT CONTINU	JE
' ¥ '	BATTERY/EMERGENCY				COPPER CLASS 1	\sim	∼ FI !	EXIBLE CONDU	П
$\nabla \nabla \nabla$	TRACK FIXTURE	1R1-1.3	HOMERUN CONSISTING OF TWO SINGLE-PHASE CIRCUITS: SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES.		COPPER-CLAD DRIVEN GROUND ROD AND TEST WELL. SEE SPECIFICATIONS.				
0	CEILING MOUNTED RECESSED, DOWN LIGHT CEILING MOUNTED RECESSED, EMERGENCY DOWN LIGHT	171-1,3	PANELBOARD AND CIRCUIT DESIGNATION ARE INDICATED.		BOLTED 3-WAY SPLICE	·I 	GR	ROUND OR GRO	JNI
۵ ا	CEILING MOUNTED RECESSED, WALL WASHER (ARROW		HOMERUN CONSISTING OF THREE SINGLE-PHASE CIRCUITS: SEE		BOLTED 4-WAY SPLICE		O SLE	EEVE UP	
4	INDICATES DIRECTION OF WASH)	1R1-1,3,5	SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES. PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.	_			SL!	EEVE DOWN	
Q	SURFACE MOUNTED LIGHTING FIXTURE					Г		ALL PENETRAT	TOF
Φ	WALL MOUNTED SCONCE FIXTURE, BATTERY/EMERGENCY	1M1-1:3:5	HOMERUN CONSISTING OF ONE THREE-PHASE CIRCUITS: SEE SPECIFICATIONS AND/OR FEEDER SCHEDULES FOR WIRE SIZES.	MISCELI	LANEOUS SYMBOL LEGEND				101
\propto	FLOOD LIGHT FIXTURE		PANELBOARD AND CIRCUIT DESIGNATIONS ARE INDICATED.		DETAIL NUMBER				
₽ -	EMERGENCY LIGHT FIXTURE				TLE DETAIL TITLE REFERENCE	MISCELLA	NEAU	e cvm	D
$\overline{\otimes}$	SINGLE FACE EXIT LIGHT FIXTURE ARROW INDICATES DIRECTION OF EGRESS	POWER	DEVICES		ALE: SHEET NUMBER WHERE DETAIL IS REFERENCED		NEUU	3 3 1 IVI	
	DOUBLE FACE EXIT LIGHT FIXTURE ARROW INDICATES	$\left \begin{array}{c} \bullet \\ \bullet \end{array} \right $	ABOVE COUNTER SINGLE RECEPTACLE		ADDITIONAL SHEET REFERENCES		DETAIL	NUMBER	
	DIRECTION OF EGRESS POLE MOUNTED SITE LIGHTING FIXTURE RECTANGLES INDICATE	ĕ	DUPLEX RECEPTACLE		DETAIL NUMBER		'LE		
	NUMBER OF FIXTURES	•	DOUBLE DUPLEX RECEPTACLE			XX.XX SCALE:	DETAIL	TITLE REFEREN	
0-	SINGLE POLE MOUNT LUMINAIRE-RECTANGLES INDICATE NUMBER OF FIXTURES	→			SHEET NUMBER TO WHERE DETAIL IS REFERENCED			ITIONAL SHEET F	
P	POLE MOUNTED LUMINAIRE		DUPLEX RECEPTACLE, HALF SWITCHED SPECIAL PURPOSE RECEPTACLE					MBER	
¢	BOLLARD OR PENDANT LIGHT FIXTURE		SINGLE 250V NON-LOCKING TYPE RECEPTACLE	FIRE A	ALARM SYSTEM DEVICES		DETALENON		
-	BOLLARD OR PENDANT LUMINAIRE, EMERGENCY	°⊕	DUPLEX RECEPTACLE FOR COMPUTER WORKSTATION	P	MANUAL FIRE ALARM PULL STATION		REFERENC	ED DETAIL SHE	ΕT
SWITCH	ES	C⊕	QUAD RECEPTACLE FOR COMPUTER WORKSTATION		J FIRE ALARM MINIHORN				
\$	SWITCH SWITCH, 2 POLE	e	DUPLEX RECEPTACLE FOR TV LOCATED AT 84" AFF UNLESS		FIRE ALARM COMBINATION HORN/STROBE DEVICE				
Ş₂ \$₂	SWITCH, 2-POLE SWITCH, 3-WAY	TV	NOTED OTHERWISE. DUPLEX RECEPTACLE FOR TV LOCATED AT 18"AFF. LOCATE IN		(75 CANDELA MINIMUM, 110 CANDELA WHERE NOTED)	ABBREVIA	TIONS		
\$ ₄	SWITCH, 4-WAY		COMMON BOX WITH CCTV	Image: State of the state of t	WP (75 CANDELA MINIMUM, 110 CANDELA WHERE NOTED)	A AMPERES		INC	IN
\$ _T	SWITCH - LINE VOLTAGE TIMER, 120/277 VAC. WATTSTOPPER TS-400 OR EQUAL.	♦	CEILING MOUNTED RECEPTACLE	μ. H¢-	WEATHER PROOF FIRE ALARM STROBE ONLY, 75 CANDELA MINIMUM	AE AUDIO ENHANO AFC ABOVE FINISHE		JB kV	JU KI
\$ _P	SWITCH - PILOT LIGHT		RECESSED FLOOR RECEPTACLE		135° HEAT DETECTOR	AFF ABOVE FINISHE	ED FLOOR	kVA kVAR	KI KI
\$ _a	SWITCH, 1 POLE, LETTER INDICATES SWITCHLEG CONTROLLED.		DUPLEX RECEPTACLE, GROUND FAULT	 ()	SMOKE DETECTOR, WIRED TO BUILDING FACP	AIC AMPERES INTE CAPACITY		kW	AN
\$ _{3a}	SWITCH, 3-WAY, LETTER INDICATES SWITCHLEG CONTROLLED		DUPLEX RECEPTACLE, GROUND FAULT, ABOVE COUNTER		UNIT SMOKE ALARM, 120V, W/BATTERY BACK-UP.	AL ALUMINUM AWG AMERICAN WIR		kWH LTG	Kľ
\$ _{3K}	SWITCH, KEYSWITCH, 3-WAY		QUAD RECEPTACLE, GROUND FAULT		COMBINATION SMOKE ALARM/CARBON MONOXIDE O DETECTOR, 120V, W/BATTERY BACK-UP	BFC BELOW FINISH BFG BELOW FINISH	ED CEILING	m mm	M
\$ _K	SWITCH, KEYSWITCH	WP WP	DUPLEX RECEPTACLE, GROUND FAULT WITH CAST ALUMINUM WEATHERPROOF "IN USE"	َ ®=		C CONDUIT CAB CABINET		MAX MCB	M/
Ş _m	MOMENTARY SWITCH SWITCH, EXPLOSION PROOF		COVER	s s	PROVIDE LED SUPERVISORY INDICATOR FOR BOTH DETECTOR IN AN ACCESSIBLE LOCATION AND CLEARLY LABELED.	S CFCI CONTRACTOR CONTRACTOR		MCB MCC MCP	M(
\$ _{EXP}	SWITCH, EXPLOSION PROOF	WP IIII	QUAD RECEPTACLE, GROUND FAULT WITH CAST ALUMINUM WEATHERPROOF "IN USE"	CM	CONTROL MODULE RELAY	CKT CIRCUIT	SUPPLIED	MCF MFR MH	M/
\$ _L			COVER	MM	MONITOR MODULE	CL CENTERLINE		MIN	MI
\$ _{WP}	SWITCH, WEATHERPROOF	EWC	DUPLEX RECEPTACLE, GROUND FAULT LOCATE WITHIN ELECTRIC WATER COOLER PER	<u>باسم</u> ۶- <u>WF</u> -۶	WEATHERPROOF WATER FLOW SWITCH FOR CONNECTION	CT'S CURRENT TRA CU COPPER		MISC MTR	MI M(
LIGHTIN	IG CONTROL DEVICES		MANUFACTURER'S INSTRUCTIONS	ş_ <u>_</u>	TO FIRE SPRINKLER SYSTEM	DISC DISCONNECT(I DWG DRAWING(S)	NG)	MTD MTG	M(M(
PC	PHOTOCELL	Q R		<u>, VS</u>	WEATHERPROOF WATER TAMPER SWITCH FOR CONNECTION TO FIRE SPRINKLER SYSTEM	EA EACH EF EXHAUST FAN		NEC OFOI	N/ O\
ТС	TIMECLOCK	PD	POWER/DATA POLE	54	FIRE ALARM COMBINATION SPEAKER/STROBE DEVICE (75 CANDELA MINIMUM, 110 CANDELA WHERE NOTED)	EQUIP EQUIPMENT	IETALLIC TUBING	PNL	O\ P∤
LC	LIGHTING CONTACTOR	PP				EUH ELECTRIC UNIT	FER COOLER	PSI PVC	PL P(
	*PIR-WALL MOUNT SENSOR, LOW TEMP, 24 VDC/AC, 20mA.		DISCONNECT SWITCH			EWH ELECTRIC WAT	ER HEATER	REC RGS	re Ri
(R9 LT						EXIST EXISTING EXP EXPLOSION PR	{OOF	TEL TYP	TE T\
CI	*PIR-CEILING MOUNT SENSOR 24 VDC/VAC, 11mA, WATTSTOPPER CI-205 OR EQUAL.		STARTER/DISCONNECT SWITCH			FA FIRE ALARM FLA FULL LOAD AM	PERES	UON	UN V(
	OCCUPANCY SENSOR.		VARIABLE FREQUENCY DRIVE			FLUOR FLUORESCENT GFCI GROUND FAUL	Г	VA VFD	VC
						INTERRUPTER		W WP	W.
DT	*DUAL ULTRASONIC/PIR-CEILING MOUNT SENSOR, 24 VDC/VAC, 35mA. WATTSTOPPER DT-305 OR EQUAL.		FLOOR MOUNTED JUNCTION BOX			GFP GROUND FAUL GND GROUND	I PROTECTION		TF
Ŵ	*DUAL ULTRASONIC/PIR-WALL MOUNT SENSOR, 24 VAC/VDC, 35mA.	PB C	PULL BOX EQUIPMENT CONNECTION			HGT HEIGHT HID HIGH INTENSIT			
~	WATTSTOPPER DT-205 OR EQUAL.		DOOR BELL PUSH BUTTON			HPS HIGH PRESSUF HOA HAND-OFF-AUT			
√ C∕►	*ULTRASONIC-CEILING CORRIDOR MOTION SENSOR, 24 VDC/VAC, 40mA. WATTSTOPPER WT-2250 OR EQUAL.		TRANSFORMER			HP HORSEPOWER HVAC HEATING/VENT	ILATING/		
\$	PIR-WALL SWITCH DECORATOR MOTION SENSOR, 120/277 VAC, 800/1200W. WATTSTOPPER PW-100 OR EQUAL.					AIR CONDITION HV HIGH VOLTAGE	NING		
 D1	DUAL ULTRASONIC/PIR-WALL SWITCH DECORATOR MOTION SENSOR,		DOOR BELL						
ויט	120/277VAC, 800/1200W. WATTSTOPPER DW-100 OR EQUAL.	ST	SHUNT TRIP. MTD. AT 6'-5" AFF/AFG TO TOP OF ENCLOSURE						
D2	DUAL ULTRASONIC/PIR-DUAL RELAY WALL SWITCH DECORATOR MOTION SENSOR, 120/277VAC, 800/1200W. WATTSTOPPER DW-200 OR EQUAL.								
LVS	UL 924 LISTED FAILSAFE EMERGENCY SWITCHING RELAY, LVS EPC-A OR EQUAL. LOWER CASE LETTER NEXT TO DEVICE INDICATES SWITCHLEG CONTROLLED.								
		1							
P	POWER PACK 120/277 VAC; 20 AMPS, 225mA SECONDARY.								
P	POWER PACK 120/277 VAC; 20 AMPS, 225mA SECONDARY. WATTSTOPPER BZ-250 OR EQUAL. *FOR LOW VOLTAGE OCCUPANCY SENSORS, PROVIDE POWER PACK(S) 120/277 VAC; 20 AMPS, 225mA SECONDARY AS NEEDED FOR ZONE/AREA CONTROL. WATTSTOPPER BZ-250 OR EQUAL.								

ELECTRICAL SYMBOLS AND LEGENDS

JNCTION BOX (4" x 4" x 2-1/8")

IGROUND PULL BOX

ONDUIT CONCEALED ABOVE EILING OR IN WALL ONDUIT CONCEALED IN SLAB, NDERGROUND OR UNDER FLOOR

ONDUIT TURNING UP

ONDUIT TURNING DOWN

ONDUIT CONTINUED

ROUND OR GROUND ROD AS NOTED

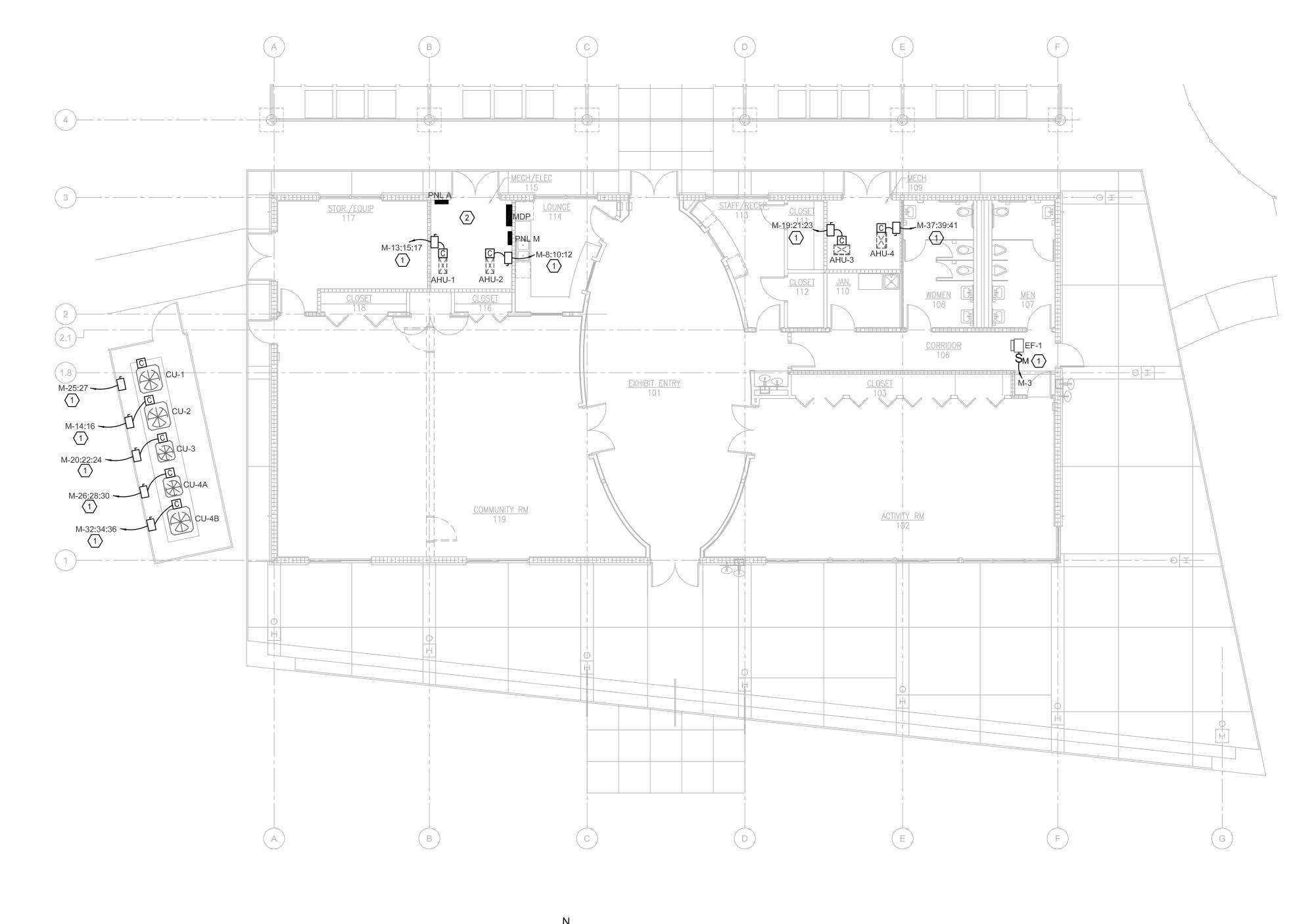
ALL PENETRATION CONDUIT SLEEVE.

SYMBOL LEGEND

TITLE REFERENCE NCED DETAIL SHEET ITIONAL SHEET REFERENCES

INC	INCANDESCENT
JB	JUNCTION BOX
kV	KILO-VOLTS
kVA	KILO-VOLTS-AMPERES
kVAR	KILO-VOLTS-
NV7 UV	AMPERES REACTIVE
kW	KILO-WATTS
kWH	KILO-WATT-HOURS
LTG	LIGHTING
m	METER
mm	MILLIMETER
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTR	MOTOR
MTD	MOUNTED
MTG	MOUNTING
NEC	NATIONAL ELECTRICAL CODE
OFOI	OWNER FURNISHED
D . II	OWNER INSTALLED
PNL	
PSI	PULL STATION INSIDE
PVC	
REC	
RGS	
TEL	TELEPHONE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	
VFD	
W	WATTS
WP	
XFMR	TRANSFORMER

	SGGNA ENGLISHED CONSULTING ENGLINEERS CA-00006208 935 Lake Baldwin Lane ORLANDO, FL. 32814 TEL: 407-767-5188 EAX: 407-767-5772 WWW.SGMENGINEERING.COM COPYRIGHT © 2018 SGM ENGINEERING, INC.
	<text></text>
	sue: No. Date Description 0 8/18/18 100% CDs
F	roject Name: CAPEHART PARK HVAC REPLACEMENT
S D C E	roject Number: 2018–131 cale: AS NOTED esign By: rawn By: hecked By: ngineer of Record: cense Number:
	heet Name: ELECTRICAL SYMBOLS AND LEGENDS
S	heet Number: E0.01





- DROP.

- SPECIFICATION.
- SPARES.

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

GENERAL NOTES:

a. REFER TO SYMBOL LEGEND ON SHEET E0.01.

b. REFER TO BOOK SPECIFICATIONS.

c. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS TO COORDINATE EXACT PLACEMENT OF ALL DEVICES, EQUIPMENT, FIXTURES, SWITCHES AND OUTLETS.

d. REFER TO EQUIPMENT SCHEDULES ON DRAWINGS E5.01 FOR DISCONNECT, CONDUIT AND WIRE SIZES.

e. ALL FEEDERS ARE TO HAVE LESS THAN 2% TOTAL VOLTAGE DROP AND ALL BRANCH CIRCUITS SHALL HAVE LESS THAN 3% VOLTAGE

f. CONTRACTOR SHALL PERFORM CIRCUIT TRACE ON ALL BRANCH CIRCUITS IN PANEL BEING REPLACED AND PROVIDE AN UPDATED TYPEWRITTEN PANEL SCHEDULE IDENTIFYING CIRCUITS FED AND LOCATION AND/OR ROOM NUMBER.

g. CONTRACTOR TO SEGREGATE ALL GROUNDS AND NEUTRALS ONTO THE CORRECT BUS.

h. CONTRACTOR TO CONFIRM THAT THERE IS A GROUND CONDUCTOR FOR EACH LOAD OR THAT THE CONDUIT PATH GROUND IS CONTINUOUS FOR EACH LOAD.

i. CONTRACTOR SHALL PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW PANELS AND PANELS BEING REPLACED.

j. CONTRACTOR TO CHECK PHASE ROTATION PRIOR TO DISCONNECTION AND AFTER RECONNECTION OF POWER.

k. CONTRACTOR TO IDENTIFY CONDUITS EXITING PANEL WITH CIRCUIT NUMBER INFORMATION.

I. ENSURE ALL WIRES ARE TAGGED PER IDENTIFICATION

m. CONTRACTOR SHALL REMOVE ALL CIRCUIT WIRES AND CONDUITS FROM REMOVED EQUIPMENT AND LEAVE CIRCUIT BREAKERS AS

n. TRACE, VERIFY, AND RECORD ALL EQUIPMENT FEEDER CIRCUITS PRIOR TO ANY WORK BEING DONE. CIRCUIT DESIGNATIONS INDICATED ARE FROM THE LATEST RECORD DOCUMENTS.

o. DRAWINGS ARE DIAGRAMMATICAL, FIELD VERIFY THE EXACT LOCATION OF ALL EQUIPMENT BEING REMOVED.

p. DISCONNECT ELECTRICAL CONNECTION FROM HVAC EQUIPMENT BEING REPLACED. PROTECT CIRCUIT DURING CONSTRUCTION AND RECONNECT TO NEW HVAC EQUIPMENT BEING INSTALLED.

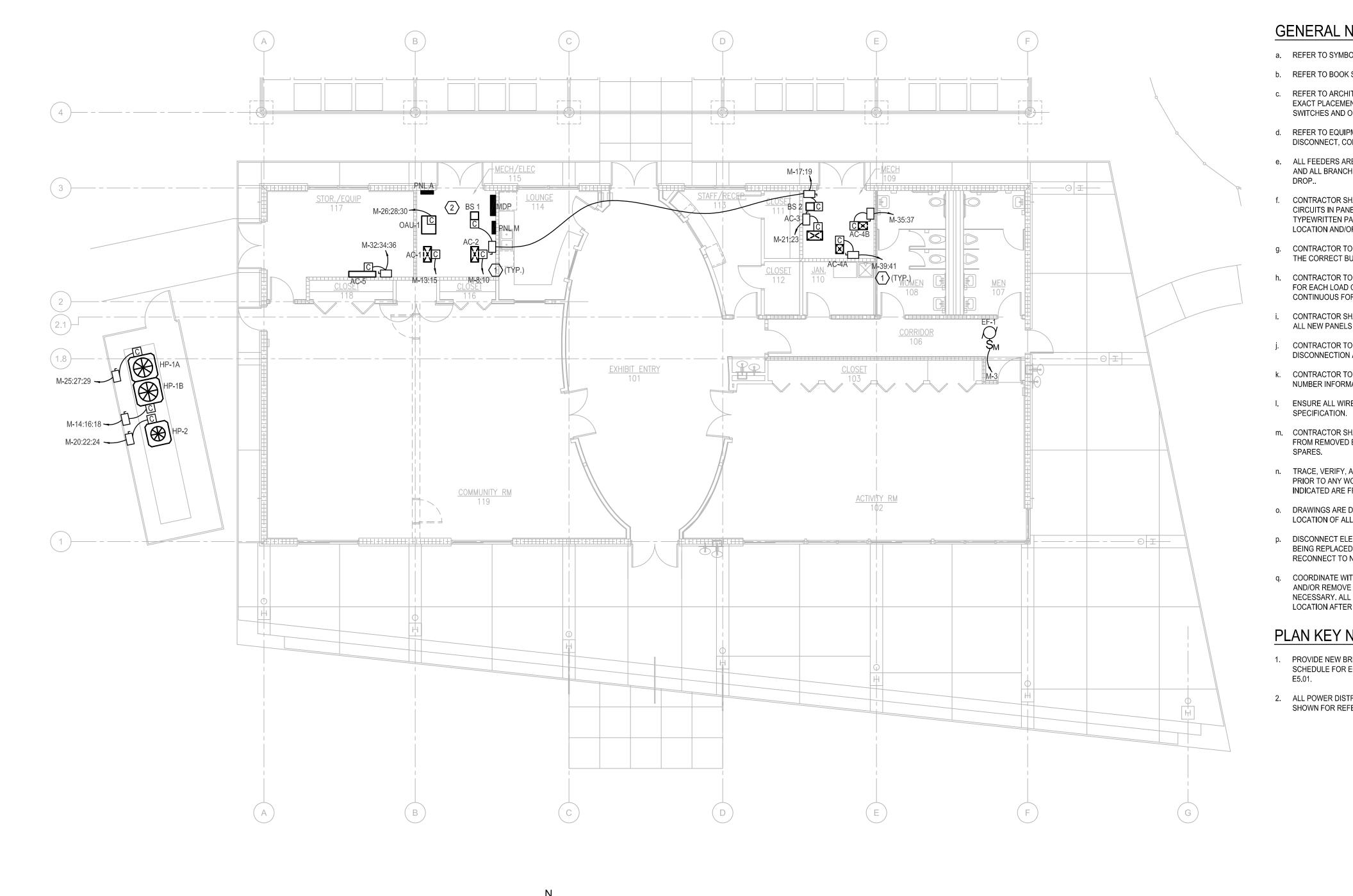
q. COORDINATE WITH HVAC SYSTEM BEING REPLACED TO RELOCATE AND/OR REMOVE ANY CEILING MOUNTED FIXTURES OR DEVICES NECESSARY. ALL ITEMS ARE TO BE REINSTALLED IN THEIR CURRENT LOCATION AFTER HVAC INSTALLATION IS COMPLETE.

PLAN KEY NOTES: (#)

1. ALL ELECTRICAL TO BE REMOVED BACK TO SOURCE.

2. ALL POWER DISTRIBUTION EQUIPMENT IS EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY.

SGGM ESGGN ESGGN ESGGN ESGGN ESGGN ESGGN ESG ESGGN ESG ESG ESG ESG ESG ESG ESG ESG ESG ESG
lssue:
No.DateDescription08/18/18100% CDs
Project Name:
Project Number: Drawing File Name:
2018–131 Scale: AS NOTED Design By: Drawn By: Checked By: Engineer of Record: License Number:
Sheet Name: ELECTRICAL DEMOLITION FLOOR PLAN
Sheet Number: ED1.01





ELECTRICAL FLOOR PLAN SCALE: 1/8"=1'-0" 0 4' 8'

GENERAL NOTES:

a. REFER TO SYMBOL LEGEND ON SHEET E0.01.

b. REFER TO BOOK SPECIFICATIONS.

c. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS TO COORDINATE EXACT PLACEMENT OF ALL DEVICES, EQUIPMENT, FIXTURES, SWITCHES AND OUTLETS.

d. REFER TO EQUIPMENT SCHEDULES ON DRAWINGS E5.01 FOR DISCONNECT, CONDUIT AND WIRE SIZES.

e. ALL FEEDERS ARE TO HAVE LESS THAN 2% TOTAL VOLTAGE DROP AND ALL BRANCH CIRCUITS SHALL HAVE LESS THAN 3% VOLTAGE

f. CONTRACTOR SHALL PERFORM CIRCUIT TRACE ON ALL BRANCH CIRCUITS IN PANEL BEING REPLACED AND PROVIDE AN UPDATED TYPEWRITTEN PANEL SCHEDULE IDENTIFYING CIRCUITS FED AND LOCATION AND/OR ROOM NUMBER.

g. CONTRACTOR TO SEGREGATE ALL GROUNDS AND NEUTRALS ONTO THE CORRECT BUS.

h. CONTRACTOR TO CONFIRM THAT THERE IS A GROUND CONDUCTOR FOR EACH LOAD OR THAT THE CONDUIT PATH GROUND IS CONTINUOUS FOR EACH LOAD.

i. CONTRACTOR SHALL PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW PANELS AND PANELS BEING REPLACED.

CONTRACTOR TO CHECK PHASE ROTATION PRIOR TO DISCONNECTION AND AFTER RECONNECTION OF POWER.

k. CONTRACTOR TO IDENTIFY CONDUITS EXITING PANEL WITH CIRCUIT NUMBER INFORMATION.

I. ENSURE ALL WIRES ARE TAGGED PER IDENTIFICATION

m. CONTRACTOR SHALL REMOVE ALL CIRCUIT WIRES AND CONDUITS FROM REMOVED EQUIPMENT AND LEAVE CIRCUIT BREAKERS AS

n. TRACE, VERIFY, AND RECORD ALL EQUIPMENT FEEDER CIRCUITS PRIOR TO ANY WORK BEING DONE. CIRCUIT DESIGNATIONS INDICATED ARE FROM THE LATEST RECORD DOCUMENTS.

o. DRAWINGS ARE DIAGRAMMATICAL, FIELD VERIFY THE EXACT LOCATION OF ALL EQUIPMENT BEING REMOVED.

p. DISCONNECT ELECTRICAL CONNECTION FROM HVAC EQUIPMENT BEING REPLACED. PROTECT CIRCUIT DURING CONSTRUCTION AND RECONNECT TO NEW HVAC EQUIPMENT BEING INSTALLED.

q. COORDINATE WITH HVAC SYSTEM BEING REPLACED TO RELOCATE AND/OR REMOVE ANY CEILING MOUNTED FIXTURES OR DEVICES NECESSARY. ALL ITEMS ARE TO BE REINSTALLED IN THEIR CURRENT LOCATION AFTER HVAC INSTALLATION IS COMPLETE.

PLAN KEY NOTES: (#)

1. PROVIDE NEW BREAKER IN PANEL M. SEE EQUIPMENT FEEDER SCHEDULE FOR EQUIPMENT FEEDER AND BREAKER SIZE ON SHEET

2. ALL POWER DISTRIBUTION EQUIPMENT IS EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY.

SGGM ENGINEERING MEP CONSULTING ENGINEERS CA-00006208 935 LAKE BALDWIN LANE ORLANDO, FL. 32814 TEL: 407-767-5188 FAX: 407-767-5188 FAX: 407-767-5772 WWW.SGMENGINEERING.COM COPYRIGHT © 2018 SGM ENGINEERING, INC.
<text></text>
sue: No. Date Description
No. Date Description 0 8/18/18 100% CDs
roject Name:
Project Number: Drawing File Name: 2018–131
cale: AS NOTED Seal: esign By: rawn By: hecked By: ngineer of Record: icense Number:
Cheet Name: ELECTRICAL FLOOR PLAN
Theet Number: E1.01

		MANUFACTURER SQ, D. TYPE: NQOD AIC RATING: 22 VOLTS L-N: 120 VOLTS L-L: 208 PHASE 3	кл V V	MPS			S.E.R GFI	MC MC ATE PRO	CB: LO: ED: OT:		AMPS			PA	NEL NAME: LOCATION MOUNTING: NEMA TYPE: WIDTH : DEPTH :	EXISTING M ELEC RM SURFACE 1 20.00 5.75	IN IN
		IDENTIFICATION	LOAD	O LOAD/PHA		DIPHASE (KVA)						LOADIPHASE (KVA)		L O A D	IDENTIFICATION		CKT
_				A	В	¢			-		-	В	C				NO.
	_					1991.00	-	-			1.50	1999		-			2
1	_		_		0.32	10/07/07		1.1				0.60		-			4
	_			ROSS		0.60		-		20		S. Sec.	0,60		BAS P	ANEL	6
	7		R	0.36		A STATES		- · ·	4 1	1.00	5.40	04,800		H		l.h.	8
	9		ε		0.60			1	3	50		5.40	0.200	H	AH	U-2	10
	11	FIRE DEPT. EMERGENCY GATE SWITCH	ε			0.84	20	1	Ц			2000	5.40	н			12
	13		н	5.40	S. State				2	40	3.00			н	a	1.2	14
1	15	AHU-1	н		5.40	Less Sol	50	3	Ĺ		1000	3.00	12332	H		-	16 18
	17		н		100/000	5.40			1		1.2.1.1			S	SPA	VCE .	
TYPE NOOD VOLTS LA TYPE NOOD VOLTS LA TOTAL COMMPS MICE RATING SERATED LOCATION MICE RATING SERATED LOCATION SERATES LOCATION SERATES LOCATION SERATES LOCATION SERATES LOCATION SERATES LOCATION SERATES		20															
1	21	AHU-3	H		5.40	122202	50	3	3	40	22022	2.88	12203	н	a	1-3	22
	23		н		25 (S. 8)	5.40	1					1002.00	2.88	H			24
	25		н	3.00		1000	40	1	П		2.76	1.00	No.	н			26
1		00-1	н	10000	3.00	Sec. St	40	2	3	40	Sec. State	2.76	10000	н	CU	-4A	28
-		SPACE	*****	0.000	CENTRAL OF			1	11		100000	S.C.S.S	2.76	-			30
	_		-	1.32	COLUMN TO A	100000			Ħ		2.76	1000	(Section)	_			32
	_	IRRIGATION PUMP		10000	1.32		30	2	3	40		2.76	10000		CU	48	34
		SPACE		200.00	3153.AUS			1	11		0.000	100000	2.76				36
				11.64		Sec. St	100	+	Ħ	1.00	1	1000	1.000	-	4.5	1.1	38
1		AHU-4		Contractor	11.64		100	3	3	30	1000		123333		SURGE PR	OTECTION	40
					10.00 C	11.84		1	11			1000		Concession in which the local division in which the local division in the local division			42
-	41	STREET STREET	1 m	R. Sectors	CUD C			CA.	TED		NK INOT	USEDA		1-	21 K.21 K	100 1 100 1	
		Entres instances instances instances			300 12	EDLOG	1 AS IND	T	T	, IF 60	AND THE PARTY	USED)	+ 5		1.750 TE 1.750 T	1. T. T. T. T. T. T.	11.212
			-	27.1	27.7	23.9					18.3	17.4	1 14 4	_			
			L	21.1	21.1	23.9	1				16.3	17.4	14.4	1			
					DEMAND	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	то									
													_	-			
		LIGHTING (L)		0.00	the second s		1		TO				and a state of the local data	-			
			-	_			1	GENERAL NOTES: a. PROVIDE ARC FLASH LABELING FOR THE PANEL IN ACCORDANCE									
			a second	And in case of the local division in which the local division in t	And a local division of the local division o												
			-	_											ANCE WITH NFPA	70 & 70	
			<u> </u>				-										
			<u> </u>				-					AND			WE AS SDACE FOR	PENO WORK	
				_			1	"	REA	OVER	ALCANER	AND WI	NING A	NO LEP	WE NO SPACE FOR	RENO HORK.	
			_														
			<u> </u>	And in case of the local division of the		and the second se	•										

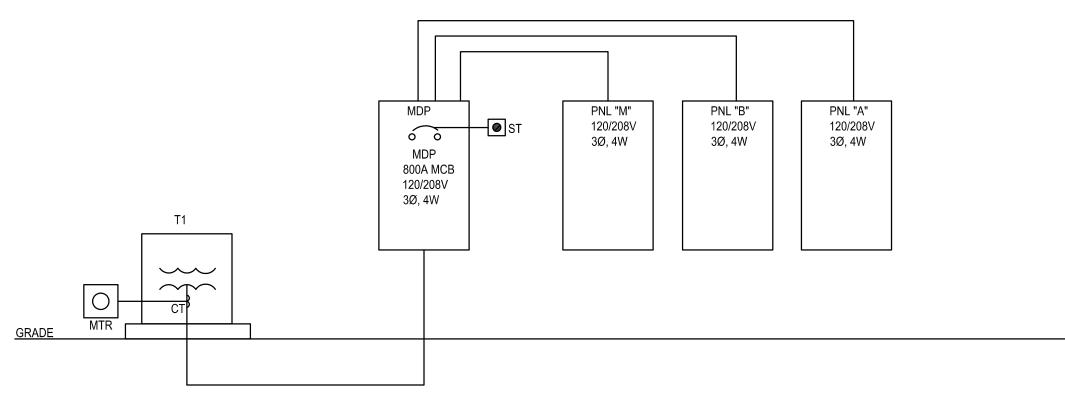
EXISTING PANEL M NOT TO SCALE

		MANUFACTURER: SQ. D. TYPE: NQOD AIC RATNG: 22 VOLTS L-N: 120 VOLTS L-L: 208 PHASE 3	K/ V V	AMPS			S.E.R GFI SHUNT	MCI MLC ATEI PRO	8: 0: D: 0.		AMPS AMPS AMPS			PA	NEL NAME: NEW M LOCATION: ELEC RM MOUNTING: SURFACE NEWA TYPE: 1 WIDTH: 20.00 DEPTH: 5.75	IN IN						
NOTES	CKT NO.	IDENTIFICATION		LOA	D/PHASE	(KVA) C				AKER	LOADIPHASE (KVA)				IDENTIFICATION	CK NO.						
1		SPARE	e	~			20	1	_	20	1.50	100000		6	EHW-1	2						
3	3	EF-1	H	CONSTRUCT	0.70	10000	15	1		20	1.00	0.60		E -	MISTER SOLENOID	4						
1	5	IRRIGATION CONTROLLER	-	10000	0.70	0.60	20		1	20		0.00	0.60	8	BAS PANEL	6						
1	7	RECEPTACLES	0	0.36	10000	0.00	20		-	2.03	0.58	0.00000	0.00	H	5000 / P1164	8						
1	-	GATE OPENER	10	0.00	0.60		20	÷	2	15	0.50	0.58		H	AC-2	10						
-	-	FIRE DEPT. EMERGENCY GATE SWITCH	12	CONTRACTOR OF	0.00	0.04	20		1	-		0.00		n i	SPACE	_						
1		THE SET I. EMENDENCE OVER OVER OF	E H	0.50		0.84	20	1	-	_	P.C.	Sector Sector	1.		GFAGE	12						
2	13	AC-1		0.58	0.50		15	2	3	60	5.04			H	HP-1B	14						
-	15		н	10000	0.58		-	11	3	cu		5.04		н	HF-ID	16						
2 H	17	8S-1 & BS-2	н		C. State	0.08	15	2	-	<u> </u>			5.04	н		18						
	19		H	0.08	NO STATE			н			2.02	S. 1938		н		20						
2	21	AC-3		12.13	0.58		15	2	3	35	1000	2.02	and the second se	н	HP-2	22						
1	23			1201043	1000000	0.58					N. 1973		2.02	H		24						
3	25	HP-1A		5.04							1.96			н		26						
	27			No. CO	5.04	32222	60	3	3	3 25	1.4.5	1.96		H	OAU-1	28						
	29		S			5.04	1.1.1				23263		1.96	н		30						
1	31	IRRIGATION PUMP	Ε	1.32			- 30	2		0.1	0.10	1000		н		32						
	33	INVOLUTION FOMP	Ε	STATES A	1.32			4	3	15	1000	0.10	10000	н	AC-5	34						
	35	AC-4B	н	CONTRACTOR OF	2000	0.58	15				Sec. 1	1000	0.10	н		36						
-	37	AC-48	H	0.58	10000	Parties ?	1 15	2				100000	Cale a	E		38						
	39	10.0	н	STATES?	0.58	000000			3	30	10000		12.000	ε	SURGE PROTECTION							
2	41	AC-4A	н	1.1.1.1.1.1	Constanting of	0.58	15	2			100000	1000		E	WHILE THE TRANSPORT OF WARRANT							
			-		SUB FE	ED LUG	S AS INDI	CAT	FD	IF BLA	NK (NOT	USED)		1 - 1		42						
			Ē		00011	ED LOO.	I	ŤT				00007				1.1						
-	-		H	1000																		
-	-		Н		100000000	A LOUGH AND A																
-				8.0	9.4	8.3			_	_	11.2	10.3	9.7			12.5						
					0.4		1				11.6	10.0		-								
				CONN	1.	DEMAND			TO	TAL CO	ONNECTE	D KVA	56.85									
				LOAD	DEMAND	LOAD		TOT			CTED AM		The second se	5								
				(KVA)	FACTOR	(KVA)				TOTA	L DEMAN	D KVA:	56.85	9								
		LIGHTING (L)	<u> </u>	0.00	1.25	0.00	1				MAND AM	IPS/PH:	150	3								
		RECEPTACLES 1ST 10 KVA(R)	h	0.36	1.00	0.36	-			RAL NO						-						
		RECEPTACLES OVER 10KVA(R)	<u> </u>	0.00	0.50	0.00	-					HLABE	LING FC	JR THE	PANEL IN ACCORDANCE WITH NFPA	70 8 70						
		HVAC EQUIPMENT(H)	<u></u>	44.11 0.00	1.00	44.11	-			PECIFIE DED ITE	D. MS ARE EX	ISTING T	OPCIMI									
		APPLIANCES (A) EQUIPMENT(E)	<u> </u>	7.38	1.00	7.38	1			DULE N		0511901	U NEMMI	a.								
		LARGEST MOTOR (M)	<u> </u>	0.00	1.25	0.00	1					R TO RE	MAIN									
		OTHER(O)		0.00	1.00	0.00 1) EXISTING BREAKER TO REMAIN. 0.00 2) PROVIDE NEW BREAKER, MATCH EXISTING PANEL CHARACTERISTICS:																
		SPARE (S)	_	5.04 1.00 5.04 MANUFACTURER, VOLTAGE, AIC, ETC.																		

NEW REVISED PANEL M

NOT TO SCALE

18\2018–131 OC CAPEHART LAST SAVED BY: ROBERTB : Q:\PROJECT FILES\2 ITED: 09/19/2018 FILE: PRINT



EXISTING POWER RISER TO REMAIN

UIPMENT FEEDER	SCHEDUL	.E:			* WRE	SIZES A	REBASE	ED ON N				1 f + 4 f + 4 i	*******		 ********							GREE COLUN
EOUIPMENT	VOLTS			MO	TOD		10NAL	L	AT ^{AD}	-		PNL	-	DISCO	 CULA I	WIRE	Y. AUTU NEUT	GND	IANCEI #	CONDUIT	APPROX	
DESCRIPTION	VOLIO		Y/N	l	MOTOR (LARGEST)		MOTORS		STRIPS				SIZE FUSE		 		WIRE	WIRE		SIZE	DIST.**	DROP NOT
DEDOMETION		1.		HP	ELA	HP.	FLA	KW	AMPS	AMPS		SIZE		1004	 	PHASE*	¥¥11 كسب		RUNS	06.6	FT	VD%
AC-1	208	1		1.1.	5.60	11.1	1 57				5.6	15	30		 1	#12	#12	#12	1	3/4"	20	0.22%
AC-2	208	1	Ý		5.60				 		5.6	15	30		 1	#12	#12	#12	1	3/4"	20	0.22%
AC-3	208	1	Ý		5.60						5.6	15	30		1	#12	#12	#12	1	3/4"	50	0.54%
AC-4A	208	1	Ý		5.60						5.6	15	30		 1	#12	#12	#12	1	3/4"	60	0.65%
AC-4B	208	1	Y		5.60						5.6	15	30		1	#12	#12	#12	1	3/4"	60	0.65%
AC-5	208	1	Ý		1.00						1.0	15	30		1	#12	#12	#12	1	3/4"	30	0.06%
OAU-1	208	3	Y	0.5	2.40			5	13.9		16.3	25	30		1	#12	#12	#12	1	3/4"	20	0.54%
HP-1A	208	3	Y							42.0	42.0	60	60		3R	#4	#4	#10	1	1-1/2"	70	0.76%
HP-18	208	3	Y	1	1		1		 	42.0	42.0	60	60		 3R	#4	#4	#10	1	1-1/2"	70	0.76%
HP-2	208	3	Y		15.60		1.20				16.8	35	30		3R	#10	#10	#10	1	3/4"	70	1.18%
BS 1	208	1	Y		l				1	0.4	0.4	15	30		1	#12	#12	#12	1	3/4"	20	0.02%
BS 2	208	1	Y			1	1			0.4	0.4	15	30		 1	#12	#12	#12	1	3/4"	60	0.05%
EF-1	120	1	Y	0.25	5.80				<u> </u>		5.8	15	MMS		 1	#12	#12	#12	1	3/4"	80	1.55%
ENERAL NOTES:						<u>;</u>										NOTES):					
- PROVIDE DISC. SW. AT	ALL PIECES	SOF	EQUIP	MENT NO	OT WITH	N SIGHI	OF THE	OVERC	URRENI	PROTE	CTIVE D	EVICE				(a)						
- FUSES SHOWN FOR RE	FERENCE (NLY	, PROV	IDE FUS	ESASE	RECOMM	ENDED E	BY EQU	P. MANU	JF.										1		
- PROVIDE NEMA OUTDO	OR RATED	ENCL	OSUR	ES FOR	ALL DIS	C. SWS	MOUNTI	ED OUTI	DOORS.		1											
- COORDINATE STARTER	TYPE WM	HME	CHANK	CAL EQU	JPMENT.										 							ĺ
- COORDINATE ALL OVE	RCURRENT	PRO	TECTIV	E DEVIC	ES WITH	THEA	CTUAL E	QUIPME	NT BEIN	G SUPPL	ED. NC)TIFY TI	HE ENC	NEER								Ì
IF DESCREPINCIES ARE	FOUND.	1			•		·															
- DISCONNECTS BETWE	ENS MOTOR	RS AI	ND VFC	S SHAI	LL BE PF	ROVIDEL	WITHA	NAUXI	ARY CO	ONTACT	AND				 						<u>.</u>	

) ELECTRICAL ONE LINE, PANEL SCHEDULES & DETAILS

	SGGNA ENGINEERING MEP CONSULTING ENGINEERS CA-00006208 935 LAKE BALDWIN LANE ORLANDO, FL. 32814 TEL: 407-767-5188 FAX: 407-767-5772 WWW.SGMENGINEERING.COM COPYRIGHT © 2018 SGM ENGINEERING, INC.
	Client Name:
	CAPEHART NEIGHBORHOOD DARKS AND RECREATION NEIGHBORHOOD DARK ORLANDO, FLORIDA
	Issue:
	No. Date Description
	0 8/18/18 100% CDs
	Project Name:
	CAPEHART PARK HVAC REPLACEMENT
	Project Number: Drawing File Name:
	2018-131 Scale: AS NOTED Seal:
	Design By:
	Drawn By: Checked By:
	Engineer of Record:
	License Number:
	Sheet Name:
	ELECTRICAL ONE LINE, PANEL SCHEDULES & DETAILS
	Sheet Number:
	E5.01
(

EXISTING PNL M

NEW PNL M