



verdantas

ELECTRICAL SYMBOLS, NOTES, DETAILS

JEFFERSON COMMUNITY PARK IMPROVEMENTS

VILLAGE OF JEFFERSON
262 E JEFFERSON ST

SCALE: As indicated
CONTRACT NO: 242425
SHEET E0.01

ELECTRICAL DEMOLITION NOTES

- A. DEMOLITION INDICATED ON THE CONTRACT DOCUMENTS IS SHOWN IN GENERAL TO INDICATE THE EXTENT OF DEMOLITION AND IS NOT TO BE CONSIDERED AS A RECORD DRAWING OF EXISTING CONDITIONS. ACCORDINGLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DEMOLITION OF THE ELECTRICAL WORK INDICATED INCLUDING ANY CONCEALED ITEMS OR ANY EXISTING ITEMS NOT SHOWN ON THE CONTRACT DOCUMENTS. BEFORE DEMOLITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR APPROPRIATE FIELD-TESTING TO DETERMINE THE NATURE OF THE EXISTING ELECTRICAL WORK TO BE DEMOLISHED TO PROTECT EXISTING WORK REMAINING IN PLACE AND TO PROTECT THE PUBLIC.
- B. REPAIR AND RESTORE TO ORIGINAL SOUND CONDITION ALL ITEMS OR PORTIONS OF ELECTRICAL WORK, WHICH ARE NOT NOTED TO BE DEMOLISHED, BUT ARE DAMAGED BY WORK UNDER THIS CONTRACT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND RETAIN POWER TO ALL EXISTING EQUIPMENT THAT SHALL REMAIN. RECONNECT ANY EQUIPMENT BEING DISTURBED BY THIS RENOVATION, YET REQUIRED FOR CONTINUED SERVICE TO SAME OR NEAREST AVAILABLE PANEL.
- C. WHERE WORK BY THE GENERAL CONTRACTOR (WALL REMOVAL, NEW OR RELOCATED WALL OPENING, ETC.) RESULTS IN THE REMOVAL, RELOCATION, OR REFEEDING OF ELECTRICAL DEVICES OR LUMINARIES, THE ELECTRICAL CONTRACTOR SHALL DISCONNECT OR RECONNECT ALL ACTIVE DEVICES REMAINING ON THAT CIRCUIT SYSTEM.
- D. CONTRACTOR SHALL VERIFY ALL CIRCUITS IN EXISTING PANEL AFFECTED BY THIS ALTERATION. WHERE ADDITIONAL CIRCUITS ARE NEEDED, USE AVAILABLE SPARE BREAKERS IN THE PANEL AND TIGHTEN ALL CONNECTIONS.
- E. DO NOT PROCEED WITH DEMOLITION WITHOUT WRITTEN AUTHORITY. PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER AND COORDINATE WITH ALL TRADES INVOLVED. COORDINATE AND SEQUENCE DEMOLITION SO AS NOT TO CAUSE A SHUTDOWN OF OPERATION OF SURROUNDING AREAS.
- F. DISCONNECT OR SHUT OFF SERVICE TO AREAS WHERE ELECTRICAL WORK IS TO BE REMOVED. REMOVE ALL ELECTRICAL LUMINARIES, EQUIPMENT, AND RELATED SWITCHES, OUTLETS, CONDUIT, AND WIRING, WHICH ARE NOT A PART OF THE FINAL PROJECT IN ALL AREAS WHERE WORK OF THIS CONTRACT IS TO BE PERFORMED. ALL REMOVED EQUIPMENT SHALL BE DISPOSED OF BY THIS CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE. ABANDONED CONDUIT SHALL BE REMOVED, ALONG WITH WIRE NO LONGER IN USE FROM DEVICE LOCATION BACK TO PANEL.
- G. ARRANGE TIMING OF SHUTDOWN PERIODS OF ALL IN-SERVICE PANELS WITH THE OWNER'S REPRESENTATIVE. DO NOT SHUTDOWN ANY SERVICE WITHOUT PRIOR WRITTEN APPROVAL.
- H. DISPOSAL OF LAMPS, BALLASTS, TRANSFORMERS, BATTERIES, ETC., SHALL BE IN ACCORDANCE WITH APPLICABLE EPA REQUIREMENTS.
- I. WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, THE CONTRACTOR SHALL USE SENSING MEASURING DEVICES TO VERIFY THAT CIRCUITS FEEDING OTHER LOADS NOT WITHIN PROJECT AREA ARE NOT OVERLOADED.
- J. ELECTRICAL CONTRACTOR SHALL COMPLETELY REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND/OR DEVICES IN THE SPACE AS REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION.

ELECTRICAL GENERAL NOTES

- A. THE ELECTRICAL INSTALLATION MUST MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND ANY APPLICABLE STATE OR LOCAL CODES, AS INTERPRETED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- B. CONFIRM THE CEILING TYPES IN ALL AREAS WITH THE GENERAL TRADES CONTRACTOR OR WITH THE EXISTING BUILDING CEILING CONDITIONS, AND FURNISH THE PROPER LIGHT FIXTURE TRIMS AND SUPPORTS TO SUIT EACH CEILING TYPE.
- C. ALL LIGHTING FIXTURE LOCATIONS INDICATED ON THIS DRAWING SHALL BE SUPERSEDED BY THE ARCHITECTURAL REFLECTED CEILING PLAN FOR THE AREA. ELECTRICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF LIGHT FIXTURES.
- D. ALL WALL MOUNTED LIGHTING FIXTURE LOCATIONS INDICATED ON THIS DRAWING SHALL HAVE THE MOUNTING HEIGHTS VERIFIED WITH THE ARCHITECT BEFORE ROUGH-IN.
- E. BRANCH CIRCUIT WIRING FOR EMERGENCY LIGHTING BATTERY PACKS AND EXIT LIGHTS SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH ARTICLE 700 OF THE NATIONAL ELECTRICAL CODE.
- F. THIS CONTRACTOR SHALL COORDINATE ALL FLOOR OUTLETS WITH FURNITURE PLAN LAYOUTS BEFORE ROUGH-IN. FINAL LOCATIONS SHALL BE APPROVED BY THE ARCHITECT. OBTAIN FURNITURE PLANS FROM ARCHITECT OR INTERIOR SPACE PLANNER.
- G. ALL EXISTING UNUSED ELECTRICAL WIRE, CONDUIT, AND EQUIPMENT SHALL BE REMOVED.
- H. OPEN WIRE AND OPEN CABLES INSTALLED WITHIN THE RETURN AIR CEILING SPACE SHALL BE PLUMED RATED LETTER CODE 'P'.
- I. ALL WIRE FOR POWER, LIGHTING, AND CONTROL SYSTEMS SHALL BE 600 VOLT THHN-THWN, 90 DEGREE INSULATED AND SHALL BE COPPER. ALL WIRE FOR COMMUNICATIONS SYSTEMS SHALL BE COPPER.
- J. FIRE SEAL OPENINGS AROUND ALL CONDUIT PENETRATIONS. PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE SEALED WITH LISTED FIRE RATED MATERIALS.
- K. UNLESS OTHERWISE NOTED, ALL HOMERUN WIRING SHALL BE RUN IN EMT THIN-WALL THREADLESS CONDUIT. TYPE MC CABLE MAY BE INSTALLED CONCEALED WITHIN WALL AND CEILING SPACES FOR BRANCH CIRCUIT WIRING.
- L. ALL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED OR LABELED.
- M. COORDINATE THE ELECTRICAL WORK WITH ALL TRADES ON SITE AND WITH THE OWNER'S REPRESENTATIVE. REFER TO THE PLANS AND DETAILS SHOWING THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND TECHNOLOGY WORK TO PROPERLY PLAN AND INSTALL THE ELECTRICAL SYSTEMS AND EQUIPMENT.
- N. PROVIDE LABELS FOR NEW PANELBOARDS TO WARN OF POTENTIAL ARC FLASH HAZARDS IN ACCORDANCE WITH NEC 110.16(A).
- O. PROVIDE LABEL TO INDICATE MAXIMUM AVAILABLE FAULT CURRENT AT SERVICE EQUIPMENT IN ACCORDANCE WITH NEC 110.24(A).

ELECTRICAL SYMBOLS

- A 3,5 BRANCH CIRCUIT HOMERUN TO PANEL "A", CIRCUIT #3 AND #5. PROVIDE THE PROPER QUANTITY OF 12 AWG CONDUCTORS FOR THE CIRCUIT(S) INDICATED. A SEPARATE GROUNDING CONDUCTOR IS REQUIRED FOR ALL BRANCH CIRCUITS.
- Conduit turned up/conduit turned down
- Conduit stub
- Heavy line weight indicates this equipment is new or relocated existing unless noted otherwise
- Light line weight indicates this equipment is existing to remain, unless noted otherwise
- Heavy dashed line weight indicates existing equipment is to be removed unless noted otherwise
- S Single pole switch - mounting at 48" A.F.F.
- M Occupancy sensor switch with override switch - wall mounted at 48" A.F.F. or as noted
- M Occupancy sensor switch - ceiling mounted. Provide one power pack per zone to be controlled. Power packs are not shown on plans
- A Light fixture type 'A'
- B Light fixture type 'B'
- C Light fixture type 'C' - wall mounted. See floor plans or luminaire schedule for mounting heights
- P Duplex receptacle - mounting at 18" A.F.F.
- P 48" Duplex receptacle - indicates mounting at 48" A.F.F.
- P Duplex receptacle - mounting at 6" above counter
- P G Duplex receptacle - ground fault circuit interrupter (GFCI) type
- J Junction box - mounting height and size as required
- P Panelboard - 0 to 150 Volts to ground
- 60AS Unfused disconnect switch - "60/3" indicates 60 ampere switch rating and poles
- 60AS/50AF Fused disconnect switch - "60AS" indicates 60 ampere switch rating and poles / "50AF" indicates 50 ampere fuse
- S1 Magnetic motor starter - "S1" indicates NEMA size 1 starter
- 60AS/50AF One-line diagram representation of a fused switch - "60AS" indicates 60 ampere fusible switch rating, "50AF" indicates 50 ampere fuse
- 60/3 One-line diagram representation of a molded case circuit breaker - "60/3" indicates 60 ampere circuit breaker rating and poles
- TF One-line diagram representation of a transformer, size as noted
- M One-line diagram representation of a meter
- 4 Plan note tag, refer to plans for description
- AH-3 Indicates power connection to air handler #3-refer to equipment connection schedules for requirements
- A.F.F. Above finished floor
- U.O.N. Unless otherwise noted
- AS/AF/AT Ampere switch/ampere fuse/ampere trip
- MLO Main lug only
- MCB Main circuit breaker

LUMINAIRE SCHEDULE								
TYPE	LUMINAIRE	LAMP TYPE	DESCRIPTION	MOUNTING	MANUFACTURER	CATALOG NUMBER	REMARKS	
WATTS	VOLTS							
A	32	120	LED 4,000K 4,500 LUMENS 1x4' CURVED STRIP FIXTURE WITH FROSTED LENS, WIDE OPTICS AND 0-10V DIMMING.	SURFACE	COLUMBIA LIGHTING, OR EQUALS BY LITHONIA, PHILIPS, COOPER	MPS-4-40-ML-C-W-ED-U		
AE	32	120	LED 4,000K 4,500 LUMENS SAME AS TYPE 'A' BUT WITH INTEGRAL EMERGENCY BATTERY PACK.	SURFACE	COLUMBIA LIGHTING, OR EQUALS BY LITHONIA, PHILIPS, COOPER	MPS-4-40-ML-C-W-ED-U-ELL14	1	
B	27	120	LED 4,000K 4,200 LUMENS 4' NARROW WRAP-AROUND FIXTURE WITH CURVED FROSTED LENS. DAMP LOCATION LISTED.	SURFACE	COLUMBIA LIGHTING, OR EQUALS BY LITHONIA, PHILIPS, COOPER	RLW-4-40-LW-FA-W-E		
BE	27	120	LED 4,000K 4,200 LUMENS SAME AS TYPE 'B' BUT WITH INTEGRAL EMERGENCY BATTERY PACK.	SURFACE	COLUMBIA LIGHTING, OR EQUALS BY LITHONIA, PHILIPS, COOPER	RLW-4-40-LW-FA-W-E-ELL14	1	
B2	18	120	LED 4,000K 2,600 LUMENS 2' NARROW WRAP-AROUND FIXTURE WITH CURVED FROSTED LENS. DAMP LOCATION LISTED.	SURFACE	COLUMBIA LIGHTING, OR EQUALS BY LITHONIA, PHILIPS, COOPER	RLW-2-40-LW-FA-W-E		
W	28	120	LED 4,000K 3,500 LUMENS EXTERIOR WALL SCONCE DARK BRONZE FINISH.	WALL	COLUMBIA LIGHTING, OR EQUALS BY LITHONIA, PHILIPS, COOPER	LNC2-48L-25-4K7-4W-UNV-FINISH	2	

SCHEDULE REMARKS

1. PROVIDE A SEPARATE UN-SWITCHED HOT AHEAD OF ALL CONTROLS FOR EMERGENCY BATTERY OPERATION.
2. FIXTURE TO BE CONTROLLED VIA TIME CLOCK.

MECHANICAL EQUIPMENT WIRING SCHEDULE												
"DC"= DIRECT CONNECT		"VFD"= VARIABLE FREQUENCY DRIVE		COMBINATION STARTER AND FUSED DISCONNECT		FUSED DISCONNECT		NON-FUSED DISCONNECT		SMH	MANUAL MOTOR STARTER	S JUNCTION BOX
ITEM NO.	EQUIPMENT	HP	KW	MCA	FLA	Volts	φ	CONNECTION BY EC	PANEL / CKT.NO.	CIRC BKR	WIRING AND CONDUIT	NOTES
EF-1	EXHAUST FAN	-	0.16	-	-	120	1	①	LP / 46	20	1	2-12 AWG & 1-12 AWG GND - 3/4" C.
EF-2	EXHAUST FAN	-	0.11	-	-	120	1	①	LP / 46	20	1	2-12 AWG & 1-12 AWG GND - 3/4" C.
EH-1	ELECTRIC UNIT HEATER	-	4	-	16.7	240	1	①	LP / 2,4	25	2	2-10 AWG & 1-10 AWG GND - 3/4" C.
EH-2	ELECTRIC UNIT HEATER	-	3	-	12.5	240	1	①	LP / 6,8	20	2	2-12 AWG & 1-12 AWG GND - 3/4" C.
EH-3	ELECTRIC UNIT HEATER	-	1.5	-	6.25	240	1	①	LP / 10,12	20	2	2-12 AWG & 1-12 AWG GND - 3/4" C.
EH-4	ELECTRIC UNIT HEATER	-	1.5	-	6.25	240	1	①	LP / 14,16	20	2	2-12 AWG & 1-12 AWG GND - 3/4" C.
EH-5	ELECTRIC UNIT HEATER	-	1.5	-	6.25	240	1	①	LP / 18,20	20	2	2-12 AWG & 1-12 AWG GND - 3/4" C.
EH-6	ELECTRIC UNIT HEATER	-	3	-	12.5	240	1	①	LP / 22,24	20	2	2-12 AWG & 1-12 AWG GND - 3/4" C.
EH-7	ELECTRIC UNIT HEATER	-	3	-	12.5	240	1	①	LP / 26,28	20	2	2-12 AWG & 1-12 AWG GND - 3/4" C.
EWH-1	ELECTRIC WATER HEATER	-	4.8	-	20	240	1	□ 30AS	LP / 30,32	30	2	2-10 AWG & 1-10 AWG GND - 3/4" C.
EWH-2	ELECTRIC WATER HEATER	-	4.8	-	20	240	1	□ 30AS	LP / 34,36	30	2	2-10 AWG & 1-10 AWG GND - 3/4" C.
EWH-3	ELECTRIC WATER HEATER	-	4.8	-	20	240	1	□ 30AS	LP / 38,40	30	2	2-10 AWG & 1-10 AWG GND - 3/4" C.
EWH-4	ELECTRIC WATER HEATER	-	4.8	-	20	240	1	□ 30AS	LP / 42,44	30	2	2-10 AWG & 1-10 AWG GND - 3/4" C.

SCHEDULE NOTES

1. EQUIPMENT FURNISHED WITH INTEGRAL DISCONNECT SWITCH.
2. PROVIDE AND WIRE THROUGH ASTRONOMICAL TIME CLOCK #4 CONTROLS.