

GENERAL ELECTRICAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND VERIFYING JOB CONDITIONS PRIOR TO SUBMITTING BID.
- THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL OTHER TRADES AND COORDINATE THE INSTALLATION OF ELECTRICAL SYSTEMS WITH OTHER BUILDING SYSTEMS.
- THE ELECTRICAL CONTRACTOR SHALL INSTALL COMPLETE AND OPERATING ELECTRICAL SYSTEMS, INCLUDING ELECTRICAL SERVICE AND CONNECTIONS TO ALL ITEMS REQUIRING ELECTRICAL POWER, REGARDLESS OF THE INSTALLING TRADE.
- THE ELECTRICAL CONTRACTOR SHALL INSTALL A TEMPORARY ELECTRICAL PANELBOARD IN EACH CONSTRUCTION AREA FOR USED BY ALL TRADES.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE, NFPA 70, AS ADOPTED AND ENFORCED BY THE COMMONWEALTH OF KENTUCKY, AND ANY STATE OR LOCAL AMMENDMENTS.
- THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. THE ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATIONS OF ELECTRICAL EQUIPMENT, WIRING, AND DEVICES WITH OTHER TRADES AND DESIGN DISCIPLINES. DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS SHALL GOVERN.
- THE ELECTRICAL CONTRACTOR SHALL ARRANGE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS, AND SHALL LEAVE WORK EXPOSED UNTIL APPROVED BY THE INSPECTOR.
- THE ELECTRICAL CONTRACTOR SHALL MAINTAIN A SET OF UPDATED "AS-BUILT" PROGRESS DRAWINGS AT THE SITE. THE ELECTRICAL CONTRACTOR SHALL SUBMIT "RED-LINED" AS BUILT DRAWINGS AT THE COMPLETION OF CONSTRUCTION.
- THE ELECTRICAL CONTRACTOR SHALL PREPARE TYPEWRITTEN PANEL LEDGERS FOR ALL PANELBOARDS.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ETCHED PLASTIC LAMINATED LABELS FOR ALL ELECTRICAL DISTRIBUTION EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL MARK ALL JUNCTION BOXES WITH THE SOURCE PANEL DESIGNATION AND CIRCUIT NUMBERS.
- ALL NEW OR RELOCATED MATERIAL INSTALLED IN CEILING PLENUMS SHALL BE U.L. LABELED AND LISTED FOR PLENUM INSTALLATION.
- ALL NEW OR RELOCATED ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED.
- EXISTING BRANCH CIRCUITS MAY BE REUSED IF FEASIBLE, AND SUITABLE FOR REUSE. PANELBOARDS AND DEVICES SHALL BE NEW.
- THE MINIMUM WIRE SIZE FOR BRANCH CIRCUITS IS NO. 12.
- THE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE. ALL GROUNDING ELECTRODES SHALL BE BONDED TO FORM A SINGLE GROUNDING SYSTEM.
- ELECTRICAL CIRCUITS MAY BE COMBINED IN RACEWAYS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.

POWER WIRING

- THE ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATING POWER DISTRIBUTION SYSTEM AS SHOWN ON THE DRAWINGS, TO INCLUDE BRANCH CIRCUITS AND CONNECTIONS TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL POWER.
- POWER WIRING SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, NFPA 70, AS ADOPTED AND ENFORCED BY THE COMMONWEALTH OF KENTUCKY, AND AS AMENDED BY STATE OR LOCAL AUTHORITIES HAVING JURISDICTION. WIRING METHODS USED SHALL BE APPROVED WIRING METHODS.
 - ALL CONDUCTORS SHALL BE COPPER.
 - WIRING EXPOSED TO VIEW SHALL BE INSTALLED IN METALLIC RACEWAYS.
 - ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE A GROUNDING CONDUCTOR.
 - BACK-TO-BACK OUTLETS AND THROUGH-WALL BOXES WILL NOT BE PERMITTED.
 - INSTALL DUPLEX RECEPTACLES IN 4X4 BOXES WITH MUD RINGS.
 - CONNECT RECEPTACLES TO BRANCH CIRCUITS WITH STRANDED WIRE PIGTAILS.
 - GFCI RECEPTACLES MAY BE USED TO PROTECT DOWN STREAM STANDARD RECEPTACLES IF INSTALLED IN ACCORDANCE WITH RECEPTACLE MANUFACTURER'S INSTRUCTIONS.
 - PROVIDE SAFETY DISCONNECT SWITCHES AT ALL FIXED BUILDING EQUIPMENT. INSURE THAT SAFETY DISCONNECT SWITCHES FURNISHED WITH EQUIPMENT ARE IN COMPLIANCE WITH THE NEC. FURNISH AND INSTALL FUSES AND CIRCUIT BREAKERS ARE RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
 - PROVIDE DOOR-IN-DOOR PANELBOARDS WITH QUICK-MAKE, QUICK-BREAK CIRCUIT BREAKERS, FULL-SIZE GROUND BUS AND NEUTRAL BUS. ALL BUSES SHALL BE COPPER. LOAD CENTERS ARE NOT ACCEPTABLE.
 - LABEL RECEPTACLES WITH PANEL DESIGNATION AND CIRCUIT NUMBER.
 - ALL WALL-MOUNTED SWITCHES AND RECEPTACLES SHALL BE RATED AT 20A UNLESS NOTED OTHERWISE.
 - MINIMUM WIRE SIZE IS 12 GA. MINIMUM CIRCUIT BREAKER SIZE IS 20 AMPS.

DATA & COMMUNICATION ROUGH-IN

- PROVIDE DATA AND TELEPHONE OUTLET ROUGH-IN AS SHOWN ON THE DRAWINGS. COORDINATE EXACT LOCATIONS WITH THE ARCHITECTURAL PLANS AND/OR FURNITURE LAYOUT.
- PROVIDE DATA/COMMUNICATION RACEWAYS CONSISTING OF A 4 X 4 BOX, 3/4" METALLIC RACEWAY TO A POINT 6" ABOVE THE CEILING, A BUSHING AT THE TOP, AND A PULL STRING.
- PROVIDE PLYWOOD MOUNTING BOARDS FOR TELEPHONE AND DATA SERVICE ENTRY POINTS.
- PROVIDE SEPARATE CONDUITS FOR TELEPHONE AND DATA SERVICE UNLESS OTHERWISE NOTED.
- DO NOT INSTALL SEPARATE OR ISOLATED GROUND RODS FOR DATA/TELEPHONE SYSTEMS. GROUNDING CONDUCTORS FOR THESE SYSTEMS SHALL BE BONDED TO THE BUILDING GROUNDING ELECTRODE SYSTEM.

LIGHTING

- FURNISH AND INSTALL NEW LIGHTING FIXTURES AS SHOWN ON THE DRAWINGS
- 2 x 4 FLUORESCENT LIGHTING FIXTURES SHALL USE ENERGY EFFICIENT T8 32 WATT LAMPS AND ENERGY EFFICIENT ELECTRONIC "INSTANT START" BALLASTS.
- FLEXIBLE WIRING WHIPS SHALL BE SUPPORTED INDEPENDENTLY OF THE FIXTURE.
- CEILING OUTLET BOXES SUPPORTING SURFACE MOUNTED OR PENDANT LIGHT FIXTURES SHALL BE RATED FOR CEILING FAN INSTALLATION, AND SHALL INCORPORATE SUPPORT BARS FASTENED TO TWO JOISTS, TRUSSES, OR BAR JOISTS.

OUTDOOR LIGHTING

- PROVIDE WALL-PACKS AS SHOWN ON THE DRAWINGS. PROVIDE A MINIMUM OF ONE PHOTOCELL PER WALL.
- PROVIDE ONE PHOTOCELL PER LIGHT POLE FOR CONTROL OF POLE-MOUNTED LIGHT FIXTURES.

POWER TO BUILDING COMPONENTS

ARCHITECTURAL:

- PROVIDE BRANCH CIRCUITS FOR ILLUMINATED SIGNAGE FURNISHED AND/OR INSTALLED BY THE GENERAL CONTRACTOR.

MECHANICAL:

- PROVIDE BRANCH CIRCUITS FOR ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER, WHETHER SHOWN IN ELECTRICAL PANEL SCHEDULES, IN NOTES, OR IN MECHANICAL EQUIPMENT SCHEDULES INDICATING EQUIPMENT REQUIRES ELECTRICAL POWER. COORDINATE WITH MECHANICAL CONTRACTOR.
- PROVIDE HEATING TRACING AND POWER TO HEAT TRACING FOR EXPOSED PIPING INSTALLED BY THE MECHANICAL CONTRACTOR, OR OTHER PIPING AND EQUIPMENT REQUIRING FREEZE PROTECTION.
- PROVIDE BRANCH CIRCUITS TO POWER CONTROL PANELS FURNISHED AND/OR INSTALLED BY THE MECHANICAL CONTRACTOR.

PLUMBING:

- PROVIDE BRANCH CIRCUITS FOR ALL PLUMBING EQUIPMENT REQUIRING ELECTRICAL POWER, WHETHER SHOWN IN ELECTRICAL PANEL SCHEDULES, IN NOTES, OR IN PLUMBING EQUIPMENT SCHEDULES INDICATING EQUIPMENT REQUIRES ELECTRICAL POWER. COORDINATE WITH PLUMBING CONTRACTOR.
- HARD-WIRED AUTOMATIC FLUSH VALVES AND AUTOMATIC FAUCETS MAY BE CONNECTED TO LIGHTING CIRCUITS OR RECEPTACLE CIRCUITS IF NOT SHOWN ON DEDICATED CIRCUITS.

LEGEND - ELECTRICAL NOTES
1" = 1'-0"

- 120V DUPLEX RECEPTACLE
- 120V QUADPLEX RECEPTACLE
- 220V (208V) SIMPLEX RECEPTACLE
- 120V DUPLEX GFCI RECEPTACLE
- WEATHERPROOF DUPLEX RECEPTACLE
- FLOOR RECEPTACLE
- MOTOR WATCHMAN SWITCH
- STARTER
- DISCONNECT - SAFETY SWITCH

LEGEND - ELECTRICAL POWER WIRING
1/8" = 1'-0"

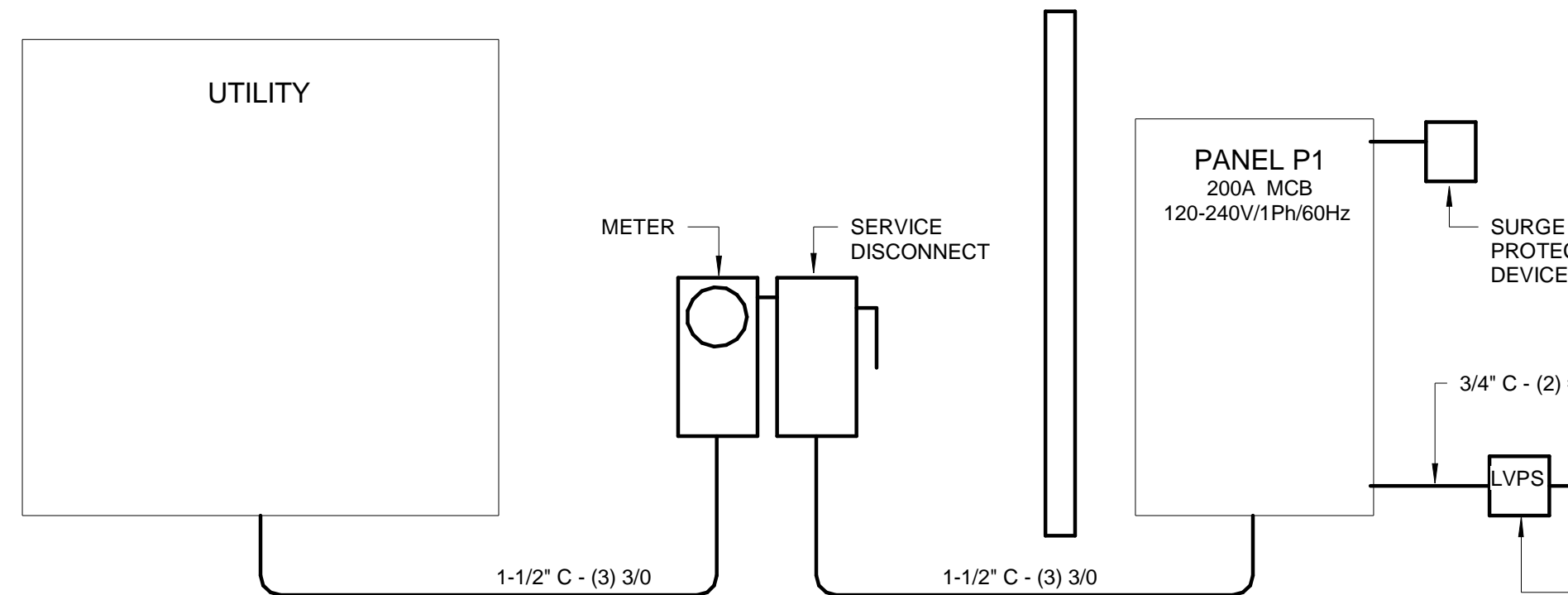


DIAGRAM - ELECTRICAL RISER DIAGRAM
6" = 1'-0"

Branch Panel: P1

Location: ELECTRICAL 3
Supply From:
Mounting: Surface
Enclosure:

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating: 14000
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 200 A

Notes:

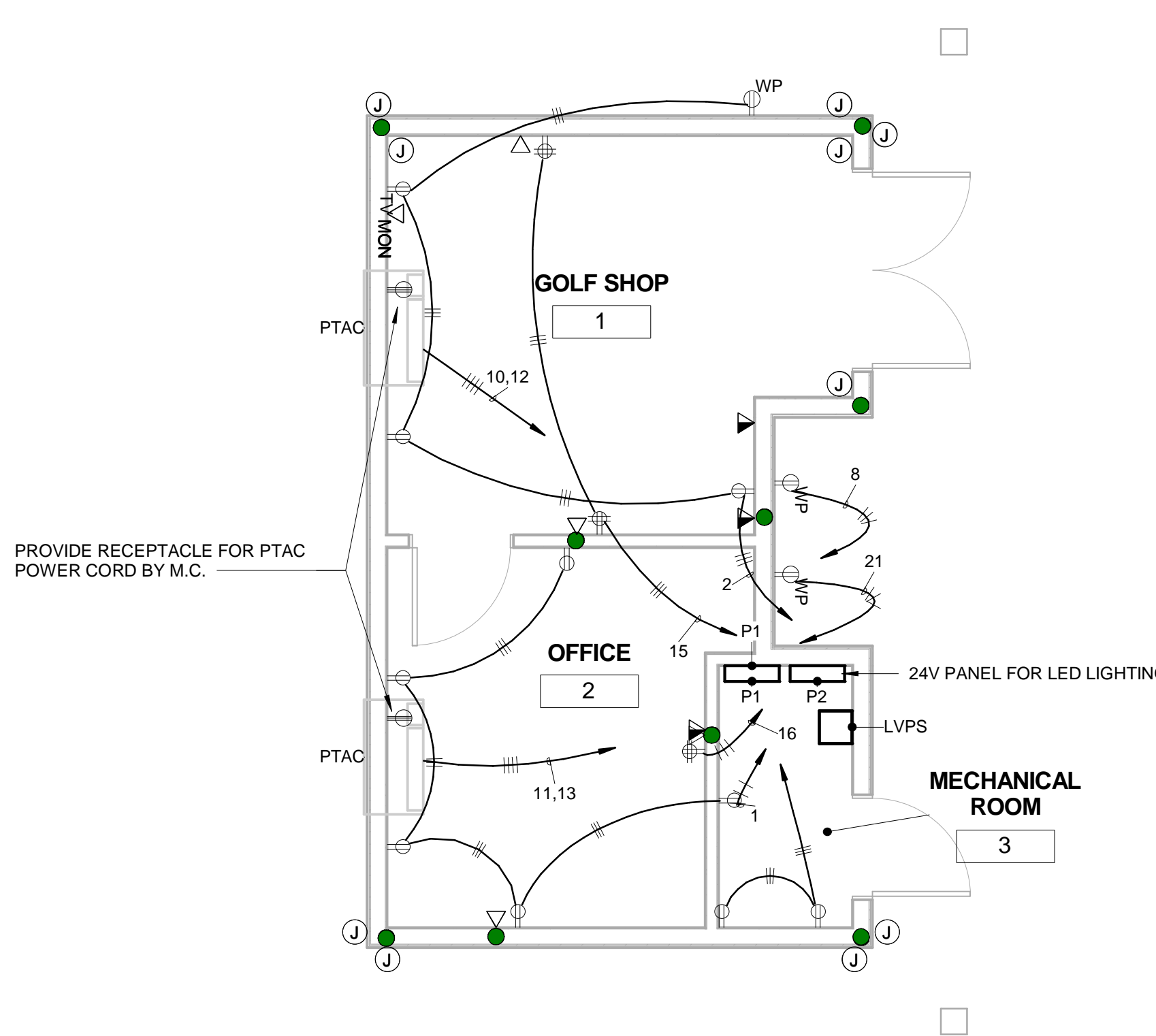
CKT	Circuit Description	Trip	Poles	A	B	Poles	Trip	Circuit Description	CKT
1	RECEPTACLES - OFFICE	20 A	1	900 VA	720 VA		20 A	Receptacle	2
3	RECEPTACLES - RESTROOMS	20 A	1		1080 VA	2400 VA	40 A	WATER HEATER - WOMENS	4
5	WATER HEATER - MENS	40 A	2	2400 VA	2400 VA		--		6
7	--	--	--		2400 VA	180 VA	1	Receptacle	8
9	Lighting	20 A	1	255 VA	275 VA		20 A	PTAC - SHOP	10
11	PTAC - OFFICE	30 A	2		275 VA	275 VA	--	--	12
13	--	--	--	275 VA	360 VA		1	Receptacle Space 3	14
15	RECEPTACLES - SHOP	20 A	1		720 VA	360 VA	1	Receptacle Space 2	16
17	Other Room 1, 3, 2	20 A	1	0 VA	411 VA		1	Lighting	18
19	Room 1, 5, 4	20 A	1		300 VA	0 VA	1	DRINKING FOUNTAIN	20
21	Receptacle	20 A	1	180 VA	92 VA		1	HVAC	22
23	Receptacle	20 A	1		720 VA	0 VA	1	Spare	24
25	Spare	20 A	1	0 VA	0 VA		1	Spare	26
27	Spare	20 A	1		0 VA	0 VA	1	Spare	28
29	Spare	20 A	1	0 VA	0 VA		1	Spare	30
				Total Load:	6316 VA	6350 VA			
				Total Amps:	53 A	53 A			

Legend:

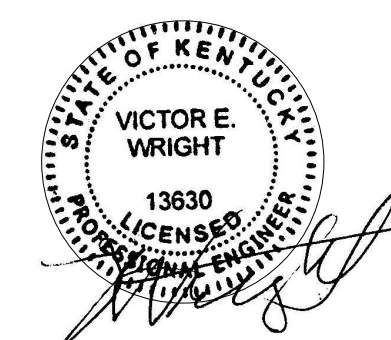
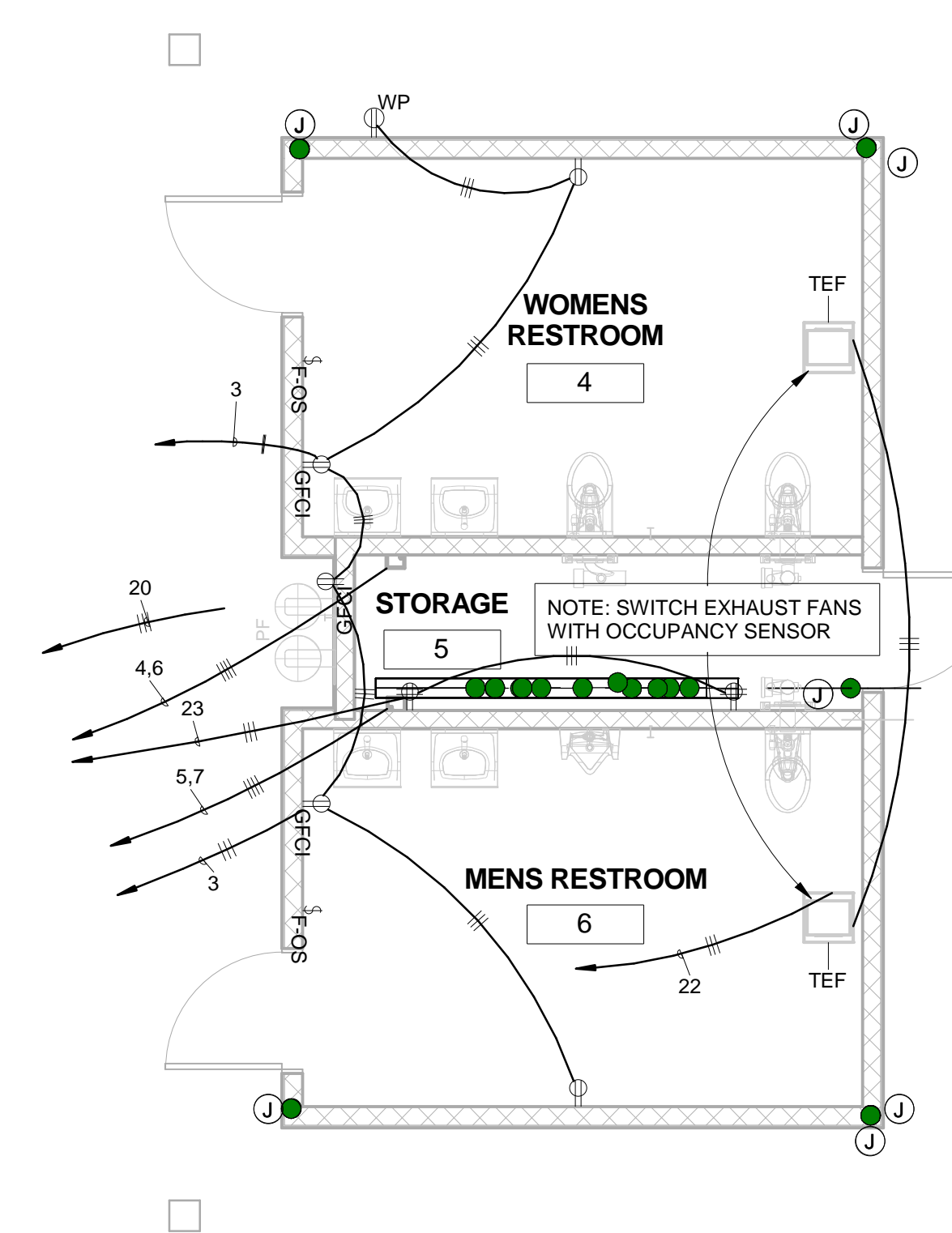
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	1189 VA	100.00%	1189 VA	
Lighting - Dwelling Unit	542 VA	100.00%	542 VA	Total Conn. Load: 12633 VA
Other	100 VA	100.00%	100 VA	Total Est. Demand: 12633 VA
Receptacle	5220 VA	100.00%	5220 VA	Total Conn.: 53 A
Power	9600 VA	100.00%	9600 VA	Total Est. Demand: 53 A
Lighting	456 VA	100.00%	456 VA	

Notes:

LOW VOLTAGE POWER SUPPLY BY LED FIXTURE VENDOR



1 - Electrical Power & Data Plan
1/4" = 1'-0"



REVISIONS

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DOCUMENT PHASE
CONSTRUCTION
DOCUMENTS
DATE ISSUED
8/15/2017

SHEET NAME
ELECTRICAL
POWER &
DATA PLAN
E1.0