POWER SYMBOL LEGEND

ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THIS DRAWING(S)

	DUPLEX OUTLET MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. BOX INDICATES FLUSH IN FLOOR OR CEILING AS SPECIFIED.
	QUAD OUTLET MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. BOX INDICATES FLUSH IN FLOOR OR CEILING AS SPECIFIED.
	DUPLEX/QUAD OUTLET MOUNTED HORIZONTALLY ABOVE COUNTERTOP OR BACKSPLASH 44" A.F.F. UNLESS NOTED OTHERWISE
GFCI	DUPLEX/QUAD OUTLET WITH GROUND FAULT INTERRUPTER, MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. BOX INDICATES FLUSH IN FLOOR OR CEILING AS SPECIFIED.
GFCI	DUPLEX/QUAD OUTLET WITH GROUND FAULT INTERRUPTER, MOUNTED HORIZONTALLY ABOVE COUNTERTOP OR BACKSPLASH 44" A.F.F. UNLESS NOTED OTHERWISE
GFCI IG	DUPLEX OUTLET WITH GROUND FAULT INTERRUPTER AND ISOLATED GROUND, MOUNTED HORIZONTALLY ABOVE COUNTERTOP OR BACKSPLASH 44" A.F.F. UNLESS NOTED OTHERWISE
IG	DUPLEX OUTLET WITH ISOLATED GROUND MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. BOX INDICATES FLUSH IN FLOOR OR CEILING AS SPECIFIED.
SP	SPECIAL PURPOSE OUTLET MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE, VOLTAGE AND AMPERAGE AS NOTED ON PLANS.
DW	DUPLEX OUTLET MOUNTED DIRECTLY ABOVE SHOW WINDOW.
SW	SWITCH DUPLEX OUTLET MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE
GFCI WP	DUPLEX OUTLET WITH WEATHERPROOF COVER AND GROUND FAULT INTERRUPTER MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE
	CONTROLLED DUPLEX OR QUAD OUTLET MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE
	JUNCTION BOX, FLUSH MOUNTED IN CEILING UNLESS NOTED OTHERWISE, STEM
TC	TIME CLOCK
	LOS, PUSHBUTTON, DOORBELL, BUZZER, OR SHUNT TRIP MOUNTED AT 42" A.F.F. UNLES NOTED OTHERWISE.
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	ELECTRICAL PANEL BOARD
	TELEPHONE BOARD (TB)
	DATA OUTLET, INSTALL PULL WIRES.
	COMMUNICATION (VOICE) OUTLET, INSTALL PULL WIRES.
	DATA/VOICE OUTLET, INSTALL PULL WIRES.
	CONDUIT, LINES INDICATES WIRE QUANTITY. LOW VOLTAGE WIRE
A-2,4,6	HOMERUN. A = PANEL DESIGNATION / 2,4,6 = CIRCUITS
T	ELECTRICAL TRANSFORMER, REFER TO PANEL SCHEDULE FOR INFORMATION.
	ELECTRICAL METER, REFER TO PANEL SCHEDULE FOR INFORMATION.
S	CEILING SPEAKER.
SC	SECURITY CAMERA CEILING.
S/CO	S=SMOKE DETECTOR - ALARM / S/CO= DUAL COMBO SMOKE AND CARBON MONOXIDE DETECTOR
HDMI	HDMI OUTLET FOR MONITOR.
6	OVERHEAD PROJECTOR WITH SCREEN, SCREEN SIZE SHOWN ON PLANS. 6-DENOTES TYPE

FEEDER & BRANCH CONDUCTOR SCHED

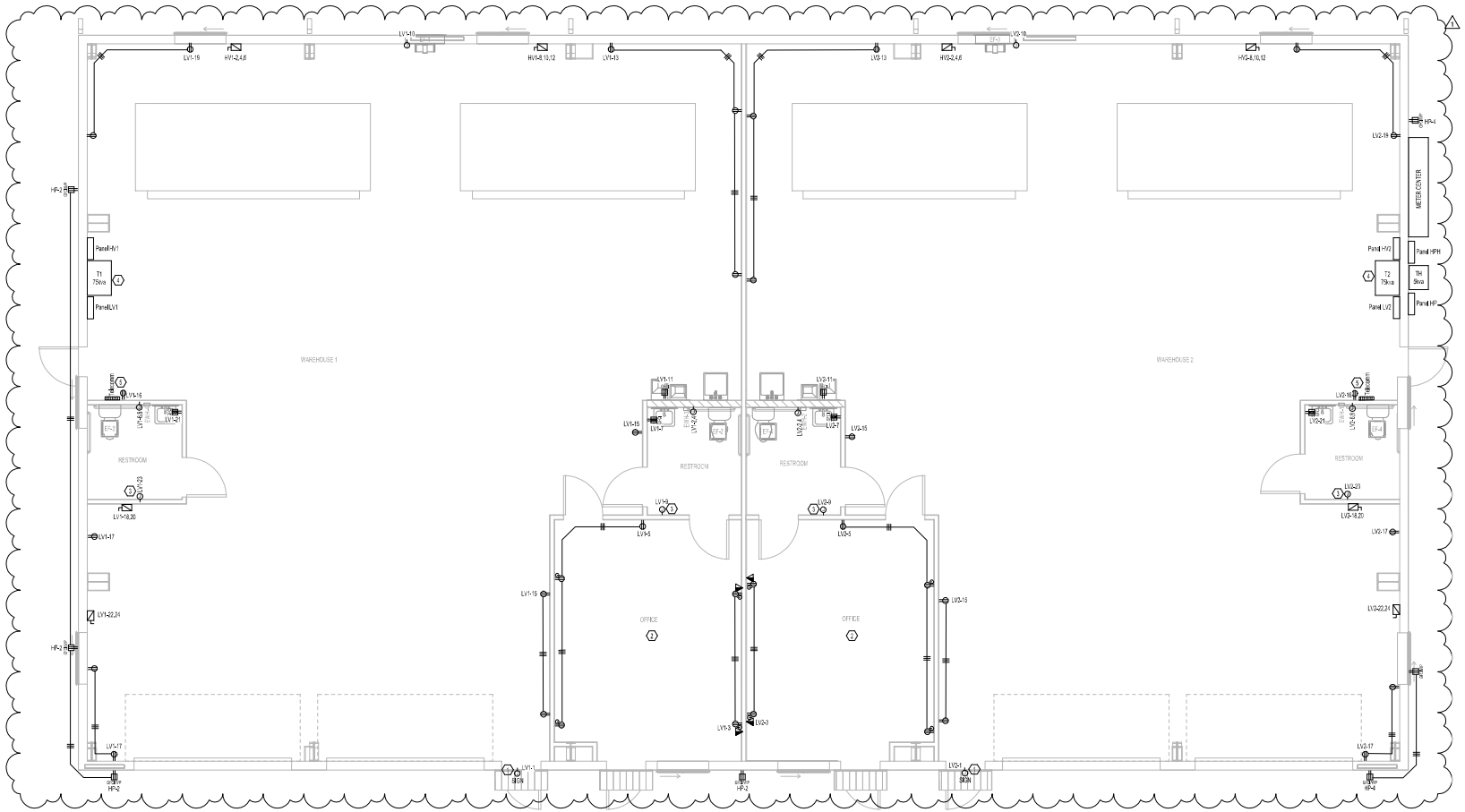
NEC TABLE 8, TABLE & EXAMPLES

DEVICE TYPE	CONDUCTOR	MULTIPLIER	DISTANCE	LOADING (A)	% VOLTAGE DROP
LIGHTS	12		75	10	2.18
RECEPT	12		75	8	1.75
EWH-3	10		60	30	1.92
AHU	-		-	-	-
CU	-		-	-	-
SERVICE	SEE RISER DIAGRAM				

THE PROJECT IS IN COMPLIANCE WITH FBCEC 2017 SECTION C405.2.1, NEC 210.19(A)(1) WITH REGARDS TO VOLTAGE DROP FROM BOTH DISTRIBUTION PANELS AND DOWNSTREAM BRANCH CIRCUITS.

ABREVIATIONS

A	AMPERES	LED	LIGHT EMITTING DIODE
A/C	AIR CONDITIONING	LTG	LIGHTING
AC	ALTERNATING CURRENT	KCML	THOUSANDS OF CIRCULAR MILS
AFF	ABOVE FINISHED FLOOR	MCU	MASTER CONTROL UNIT
AFG	ABOVE FINISHED GRADE	MCP	MOTOR CIRCUIT PROTECTION
AHU	AIR HANDLING UNIT	MH	METAL HALIDE
AWG	AMERICAN WIRE GAUGE	N	NEUTRAL
C	CONDUIT	NA	NOT APPLICABLE
CFL	COMPACT FLUORESCENT LAMP	NF	NON-FUSED
CH	COUNTER HEIGHT	NL	NIGHT LIGHT
CONC	CONCRETE	NEC	NATIONAL ELECTRICAL CODE
COND	CONDUIT	NIC	NOT IN CONTRACT
CU	COPPER	NL	NIGHT LIGHT
DISC	DISCONNECT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
ECB	ENCLOSED CIRCUIT BREAKER	NFPA	NATIONAL FIRE PROTECTION ASSOC.
ELEC	ELECTRICAL	O.C.	ON CENTER
EM	EMERGENCY	P	POLE
EMS	ENERGY MANAGEMENT SYSTEM	PNL	PANELBOARD
EMT	ELECTRICAL METALLIC TUBING	PVC	POLYVINYL CHLORIDE
EF	EXHAUST FAN	RM	ROOM
EWC	ELECTRIC WATER COOLER	RGS	RIGID GALVANIZED STEEL
ETR	EXISTING TO REMAIN	SPEC	SPECIFICATION
EX	EXISTING	SS	STAINLESS STEEL
FA	FIRE ALARM	TBD	TO BE DETERMINED
FACP	FIRE ALARM CONTROL PANEL	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
FPL	FLORIDA POWER AND LIGHT	TYP	TYPICAL
G	GROUND	UON	UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTER	V	VOLTS
GND	GROUND	W	WIRE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	W	WATT
IG	ISOLATED GROUND	WP	WEATHERPROOF
J	JUNCTION		
KAIC	(THOUSAND) AMPERE INTERRUPTING CAPACITY		
KVA	KILOVOLT-AMPERES		
KW	KILOWATT		

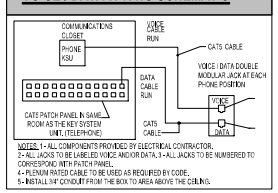


1 / E-1 01-Electrical-Power
1/4" = 1'-0"

ELECTRICAL NOTES:

1. ALL LIGHTING AND RECEPTACLE CIRCUITS UP TO 75' IN LENGTH SHALL USE #12 WIRES MINIMUM. CIRCUITS FROM 75'UP TO 125' IN LENGTH SHALL USE #10 WIRES MINIMUM AND FROM 125' AND UP SHALL USE #6 WIRES MINIMUM UNLESS OTHERWISE SPECIFIED.
2. THESE DRAWINGS ARE DIAGRAMMATIC - REFER TO ARCHITECTURAL FOR EXACT HEIGHT, DIMENSIONS AND LOCATION.
3. OPERATING AND MAINTENANCE MANUALS WILL BE PROVIDE TO OWNER BY ELECTRICAL CONTRACTOR AS REQUIRED PER SECTION C408.6.1 IN FBC-ENERGY CONSERVATION 6TH EDITION (2017).
4. COORDINATE WITH OWNER FOR EXACT DATA/COMM REQUIREMENTS.
5. INSTALL NEW FIRE ALARM DEVICES IN ACCORDANCE WITH NFPA 72 AND FLORIDA FIRE PREVENTION CODE (6TH EDITIONS).
6. IF PROJECT IS NOT CONNECTED TO A CENTRAL FIRE ALARM SYSTEM, PROVIDE LOCAL AUDIBLE/VISUAL SIGNALS UPON INITIATING TROUBLE.
7. DIVISION 16 CONTRACTOR SHALL COORDINATE EXACT MECHANICAL REQUIREMENTS WITH DIVISION 15 DRAWINGS.
8. THIS PROJECT IS IN COMPLIANCE WITH FBCEC 2017 SECTION C405.2.1, NEC 210.19(A)(1) WITH REGARDS TO VOLTAGE DROP FOR DOWNSTREAM BRANCH CIRCUITS, AND NEC 215.2 FOR FEEDER CONDUCTORS.

VOICE / DATA WIRING SCHEMATIC



NOTES: 1 - ALL COMPONENTS PROVIDED BY ELECTRICAL CONTRACTOR.
2 - ALL JACKS TO BE LABELED VOICE AND/OR DATA. 3 - ALL JACKS TO BE NUMBERED TO CORRESPOND WITH PATCH PANEL.
4 - PLENUM RATED CABLE TO BE USED AS REQUIRED BY CODE.
5 - INSTALL 3/4" CONDUIT FROM THE BOX TO AREA ABOVE THE CEILING.

ARC FLASH WARNING

WARNING

Arc Flash and Shock Hazard
Appropriate PPE Required NEC-110.16, 110.22

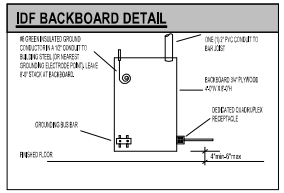
CAUTION - SERIES COMBINATION SYSTEM RATED.
99.XXX AMPERES. IDENTIFIED REPLACEMENT COMPONENT REQUIRED

NOTES:
1. PROVIDE/INSTALL SIGN ON ALL EQUIPMENT PER ANSI, NEC AND OSHA, ANSI Z535.4-1998, PRODUCT SAFETY SIGNS AND LABELS. PROVIDES GUIDELINES FOR THE DESIGN OF SAFETY SIGNS AND LABELS FOR APPLICATION TO PRODUCTS.
2. REFER TO RISER DIAGRAM FOR SHORT CIRCUIT AMPERAGE INFORMATION.

Reference Notes

# Number	Description
1	J-BOX FOR FUTURE SIGN MOUNTED ABOVE CEILING. PULL WIRES AS REQUIRED PER TENANT PANEL SCHEDULE INTO J-BOX. COIL WIRES AND STOWIN J-BOX AND COVER FOR FUTURE SIGNAGE CONNECTION. COORDINATE LOCATION AND MOUNTING HEIGHT OF J-BOX WITH ARCHITECTURAL ELEVATION DRAWINGS. CIRCUIT CONNECTED VIA TIME CLOCK CONTACTOR. CIRCUIT CALCULATE AS A CONTINUOUS LOAD
2	PROVIDE OCCUPANCY SENSOR TO AUTOMATIC SHUT-OFF 50% CONTROLLED RECEPTACLES AS NOTED. RECEPTACLES CONTROLLED SHALL BE LABELED. REFER TO LIGHTING/RECEPTACLE CONTROL AND WIRING DETAIL. REFER TO ASHRAE 90.1-4.4.2 (2010), NEC-406.3(E) (2014).
3	PROVIDE J-BOX FOR FUTURE HAND DRYER DESIRED BY OWNER. FIELD VERIFY EXACT LOCATION.
4	PROVIDE LABEL ON TRANSFORMER SPECIFYING THE LOCKABLE CIRCUIT BREAKER LOCATION. PER NEC 450.14.
5	SEE IDF BACKBOARD DETAIL FOR CONNECTION AND INSTALLATION.

IDF BACKBOARD DETAIL



PANEL NAME:	HP		
MAIN BREAKER:	M.L.O. AMPS	3 POLE	3 PHASE
MAIN LUGS:	60 AMPS		4 WIRE
K.A.I.C. :	22 AMPS		X 208Y/120V
SURFACE MTD:	X		480Y/277V
FLUSH MTD:			240/120V

Project Name: 560 Barry St. WAREHOUSE
Project Number: EPG19114
Fed From: TRANSFORMER
Location: NEMA 3R

CKT NOTE	CKT	Load Name	Trip	P	Wire and Conduit	A		B		C		Wire and Conduit	P	Trip	Load Name	CKT	NOTE
	1	Lighting Exterior	20 A	1	3#12 IN 3/4"C	0.31	0.72					3#12 IN 3/4"C	1	20 A	Receipt Exterior	2	
	3	Irrigation Control	20 A	1	3#12 IN 3/4"C			1.20	0.24			3#12 IN 3/4"C	1	20 A	Receipt Exterior	4	
	5									0.12		3#8 IN PVC	1	25 A	Site Lighting	6	
	7															8	
	9															10	
	11															12	
	13					0.00						3#10 IN 1"C	3	30 A	Surge Protector	14	
	15							0.00				-	-	-	-	16	
	17										0.00	-	-	-	-	18	
		Phase Cen.Load:				0.2		1.7		0.1							

	CONN. LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)
Lighting	341 VA	1.25	426 VA
Receptacle	1200 VA	1.00	1200 VA
Heating	0 VA	1.00*	0 VA
Cooling	0 VA	1.00*	0 VA
Kitchen	0 VA	0.65	0 VA
Motor	0 VA	1.25	0 VA
Other	1200 VA	1.00	1200 VA

Total Connected Load: 2.5 KVA
Total Demand Load: 2.6 KVA
Demand Amps: 7 A

*Larger A/C LOAD

NOTES: 1 LOCKED CKT BREAKER 2 HACR RATED CKT BREAKER 3 MA TIMECLOCK 4 GFCI 5 ISOLATED GRND 6 TYPE D BREAKER, 7 AFCI BREAKER, 8 SHUNT TRIP

GENERAL NOTE: ALL BREAKERS ARE SIZED FOR CONTINUOUS LOAD PER NEC 210.20(A).

Mohsen Faraji Tajrishi, PE
This item has been signed and sealed by Mohsen Faraji Tajrishi using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies using epgroup@att.net

Digitally signed by mohsen f tajrishi
DN: c=US, o=Unaffiliated, ou=A01427E000001690CACE7115-000031DD, cn=mohsen f tajrishi
Date: 2019.11.04 10:34:46 -05'00'

#	DESCRIPTION	DATE
1	City Comments	10/30/19

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MOHSEN FARAJI, P.E. #.69999

560 Barry St.
WAREHOUSE
560 BARRY ST
ORLANDO, FL

DRWN:OC APVD: MTF
DATE: 07/24/2019
SCALE: AS SHOWN
JOB NUMBER:
SHEET: E-1

Approved Plans
Orange County
Division of Building Safety
Permit B19910284
Date 12/16/19

This Approval does not grant permission to violate any applicable code. Encroachment of any part of this improvement can result in a cloud on the title of this property. Keep this plan on the job site at all times.