ELECTRICAL GENERAL SPECIFICATION NOTES

G1. CONTRACTOR RESPONSIBILITY: THE ELECTRICAL NOTES, SPECIFICATIONS, AND PLANS ("THE DOCUMENTS") ADDRESS THE REQUIREMENTS AND RESPONSIBILITIES OF THE ELECTRICAL CONTRACTOR: UNLESS NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK OF AN ELECTRICAL NATURE. THE TERM "PROVIDE" USED IN THESE DOCUMENTS SHALL BE DEFINED AS "FURNISH AND INSTALL."

G2. COMPLETE SYSTEMS: PROVIDE LABOR, MATERIALS, EQUIPMENT, AND TRANSPORTATION TO RECEIVE, INSTALL, ADJUST, AND PUT INTO OPERATION COMPLETE ELECTRICAL SYSTEMS IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. PROVIDE PRODUCTS NOT MENTIONED BUT OBVIOUSLY NECESSARY AND INCIDENTAL TO THE COMPLETION OF THIS WORK.

G3. SCOPE: WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: POWER DISTRIBUTION AND LIGHTING.

G4. UTILITIES: COORDINATE WITH ALL BUILDING SERVICES AS REQUIRED. NOTIFY LANDLORD OF COMMENCEMENT OF WORK. PROVIDE ALL WORK AND MATERIALS NECESSARY TO COMPLY WITH ALL UTILITY COMPANY REGULATIONS AND REQUIREMENTS.

G5. PERMITS: OBTAIN ALL NECESSARY PERMITS TO BEGIN AND CONTINUE WITH WORK. PAY ALL ASSOCIATED FEES FOR PERMITS AND OTHER MUNICIPAL AND GOVERNING REQUIREMENTS.

G6. EXPERIENCE: ALL WORK DONE SHALL BE PERFORMED BY QUALIFIED ELECTRICIANS UNDER THE SUPERVISION AND DIRECTION OF A SUPERINTENDENT HAVING SUCCESSFUL EXPERIENCE INSTALLING AND SUPERVISING EQUIPMENT AND SYSTEMS OF SIMILAR TYPE AND SIZE AS INDICATED BY CONTRACT DOCUMENTS.

G7. REGULATIONS: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT RULES, REGULATIONS, AND INDUSTRY STANDARDS OF THE 2008 NATIONAL ELECTRICAL CODE (NEC). U. NEMA, NFPA, OSHA, NATIONAL ELECTRICAL SAFETY CODE, 2009 INTERNATIONAL ENERGY CONSERVATION CODE, 2009 IBC, ADA, AND ANY LOCAL CODES, LAWS OR ORDINANCES. IN THE EVENT THAT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

GB. COSTS AND CONDITIONS. EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTRETY. SURVEY THE PROJECT AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND SCOPE OF WORK. ALL COSTS SUBMITTED SHALL BE BASED ON A THOROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED. ANY ADDITIONAL COSTS DUE TO FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

OR. SPECIFICATIONS: BECOME FAMILIAR WITH ALL SPECIFICATIONS, INSTALLATION RECUIREMENTS, AND EQUIPMENT PRICUIREMENTS PRIOR TO ANY EQUIPMENT PURCHASE OR INSTALLATION. REFERENCE SPECIFICATIONS FOR DEVOKES, MATERIALS, AND WORKMANSHIP REQUIREMENTS. ADDITIONAL REQUIREMENTS ARE GIVEN IN THESE NOTES AND THE DRAWINGS. THERE SHALL BE NO DEWAITONS FROM SPECIFICATIONS WITHOUT THE APPROVAL OF THE ARCHITECT AND THE ENGINEER.

G10. COORDINATION: COORDINATE WORK AND SCHEDULING WITH ALL OTHER TRADES. GIVE SPECIAL CONSIDERATION TO COORDINATING INSTALLATION OF LIGHTING, & PLUMBING PIPING. VERIFY EXACT LOCATION, COLOR, AND FINISH OF LIGHT FIXTURES WITH THE ARCHITECT.

G11. PRODUCTS: ALL PRODUCTS SHALL BE NEW (UNLESS NOTED OTHERWISE), U.L. APPROVED, AND OF A SPECIFICATION GRADE. PROVIDE THE STANDARD PRODUCTS OF MANUFACTURERS REGULARLY NORAGED IN THE PRODUCTS OF MANUFACTURERS REGULARLY NORAGED IN THE PRODUCTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NATIONALLY RECOGNIZED AND ACCEPTED STANDARDS AND PROCEDURES. COMPLY WITH ALL MANUFACTURERS' REQUIREMENTS AND RECOMMENDATIONS. CONTRACTOR SHALL NOT MAKE PRODUCT SUBSTITUTIONS WITHOUT PRIOR APPROVAL.

G13. BRANCH CIRCUIT IDENTIFICATION: EACH BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICE SHALL BE IDENTIFIED BY CIRCUIT NUMBER AND TYPED SCHEDULED HISDE PANEL DOOR. EACH BRANCH CIRCUIT TERMINATION SHALL BE IDENTIFIED BY PANEL AND CIRCUIT DESIGNATION SHOWN ON THE JUNCTION OR OUTLET BOX, OR UPON INDIVIDUAL WIRES IN CASES WHERE WORE THAN ONE OF EACH PHOSE CONDUCTOR COCKIN. EACH CONDUCTOR TERMINATION SHALL BE IDENTIFIED BY NUMBER AT EACH DEVICE, MISDE BOX, ON WRIE BY APPROVED MEANS.

C14. WRING ALL CONDUCTORS CARRYING GREATER THAN 50 VOLTS SHALL BE MINIMUM #12 AWG, SOLID COPPER, SOFT DRAWN OF 98% CONDUCTIVITY, UNLESS NOTED OTHERWES. CONDUCTORS OF SIZE #8 AWG OR LARGER SHALL BE CONCENTRIC LAY STRANDED. PROVIDE MINIMUM #14 AWG CONDUCTORS, CARRYING LESS THAN LINE VOLTAGE, FOR COMMUNICATIONS, CONTROLS, OR LOW VOLTAGE LIGHTING, UNLESS NOTED OTHERWISE.

G15. INSULATION: PROVIDE TYPE THHN/THWN OR THW, TYPE INSULATION COORDINATE INSULATION TYPES WITH CONDITIONS, NEC REQUIREMENTS, AND CONFILE REQUIREMENTS. ALL WIRING SIZES ARE BASED ON GOC OR 75C INSULATION ACCORDING TO CURRENT, RECARDLESS OF ACTUAL INSULATION USED. COMPLY ALL UL. "GREEN BOOK" REQUIREMENTS. REFERENCE COMPUTI NOTES BELLOW.

G19. GROUNDING: ALL CIRCUITS SHALL BE RUN WITH A MINIMUM #12 AWG INSULATED GREEN COPPER EQUIPMENT GROUND WRE, UNLESS OTHER WIRE SIZE IS NOTED. USE OF CONDUIT AS SOLE GROUND IS UNACCEPTABLE: DO NOT BOND NEUTRAL TO GROUND AT ANY POINT IN THIS INSTALLATION, WHERE ISOLATED GROUND RECEPTACLES ARE SHOWN, PROVIDE AN ADDITIONAL #12 GROUND WIRE (IG).

G20. CONDUIT: ALL WIRING SHALL BE IN METAL CONDUIT. MINIMUM 1/2" EMT CONDUIT IS ACCEPTABLE INDOORS FOR SIZES UP TO 3" IN DIAMETER. MINIMUM 1/2" EXPUBLE METAL CONDUIT IS ACCEPTABLE ONLY WITH SEPRATE INSULATED GROUND WIRE FOR BRANCH CIRCUITS (MC CABLE). ENT, ALUMINUM CONDUIT, NM ("ROMEX"), NMC, AND SNM ARE NOT ACCEPTABLE.

C22. FITTINGS: USE ONLY FITTINGS APPROPRIATE FOR TYPES OF CONNECTIONS TO BE MADE. ALL FITTINGS SHALL BE COMPRESSION OR THREADED TYPE. USE OF SET SCREW FITTINGS IS ACCEPTABLE ONLY IF A PROVED BY LOCAL AUTHORITIES FITTINGS FOR PVC, WHEN ALLOWED, SHALL BE APPROVED FOR USE WITH PVC AND WATERTIGHT. ALL FITTINGS MADE BELOW GRADE SHALL BE WATERTIGHT.

ELECTRICAL GENERAL SPECIFICATION NOTES, CONTINUED G23. CONDUIT FILL: CONDUIT FILL IS CALCULATED BASED ON TYPE THW INSULATION AND CONCENTRIC STRANDED CONDUCTORS. IF ALTERNATE CONDUIT SIZING IS DESIRED Y CONTRACTOR BASED ON THINN INSULATION, CONTRACTOR IS RESPONSIBLE FOR CALCULATING ALTERNATE CONDUIT SIZES, SUBJECT TO APPROVAL BY ENGINEER.

G24. CIRCUIT BREAKERS: ALL BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICES (CIRCUIT BREAKERS) SHALL BE INVERSE TIME THERNAL MAGNETIC BOLT-ON CIRCUIT BREAKERS, RATED 20 AMPERES, UNLESS OTHER MAPGLIY IS NOTED. MUILT-POLE BREAKERS SHALL BE INTEGRAL UNITS. USE OF HANDLE TIES IS NOT ACCEPTABLE. CIRCUIT BREAKERS FOR LIGHTING CRCUITS SHALL BE RATED FOR USE AS A SWITCH. CIRCUIT BREAKER MANUFACTURER SHALL BE THE SAME AS THE EXISTING

G25. BRANCH CIRCUIT AND LIGHTING PANELBOARDS: PANELBOARDS SHALL CONSIST OF A BOX, FRONT, INTERIOR, AND CIRCUIT PROTECTIVE DEWICES AND BE MANUFACTURED IN ACCORDANCE WITH NEMA AND UL. THE DEAD FRONT INTERIOR SHALL HAVE A MAXIMUM OF 42-POLES WITH COPPER BUSSING, COPPER NEUTRAL AND GROUND BARS. CIRCUIT BREAKERS SHALL BE AS REQUITED BELOW AND SHALL BE FULLY AIC RATED. SERIES RATING IS NOT ACCEPTABLE. PANELBOARDS DESIGNED FOR 14KAIC, 277/4807. 3-PANES, 4-WINE SERVICE SHALL BE SIEMENS SENTRON SERIES, BOLT-IN BRANCH BREAKERS OR EQUAL.

G26. LOADING: ELECTRICAL LOADS SHALL BE APPROXIMATELY BALANCED ACROSS ALL THREE PHASES WITH 10% VARIANCE.

G27. LOW VOLTAGE REQUIREMENTS: PROVIDE CONDUIT UP TO ACCESSIBLE CEILING FOR DATA, TELEPHONE, SPEAKERS, BELL SYSTEMS AND ETC. COORDINATE ROUTING

LOCAL REGULATIONS AND ORDINANCES.

G29. PROJECT RECORD DOCUMENTS: UPON COMPLETION OF WORK, PREPARE LIGHTING AND POWER PROJECT RECORD DOCUMENTS ("AS—BUILTS") ON A SUITABLE REPRODUCIBLE MEDIUM. PRESSINT COMPLETED DRAWINGS TO OWNER. "AS—BUILT" DRAWINGS SHALL INCLUDE ALL BRANCH CIRCUIT WORK, ALL PANCLEDOARD INFORMATION AVAILABLE, AND ALL SUBMITAL AND SHOP DRAWING MATERIALS.

G30. WARRANTY: WARRANT ALL MATERIALS, EQUIPMENT, AND INSTALLATION FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY TENANT.

GENERAL LIGHTING NOTES

L1. FIXTURES TYPES: IN GENERAL, FIXTURE TYPES ARE TO BE AS SPECIFIED OR APPROVED EQUAL. VERIFY REQUIREMENTS WITH ARCHITECT.

L2. DESIGNATIONS: REFERENCE LIGHTING FIXTURE SCHEDULE FOR COMPLETE DESCRIPTION OF EACH FIXTURE TYPE. LIGHT FIXTURES ARE IDENTIFIED BY LETTERS AND SYMBOLS.

PANEL	Н										* INDI	CATES 2#12, #12	G, 3/4"C
	MAIN SIZE: AIC RATING:				TYPE: NTING:							/480 V 3PH, NEMA 3R	4W
				KVA		Г			KVA				
SERVES	FEEDER	TRIP	Α	В	C			Α	В	С	TRIP	FEEDER	SERVES
SITE LTS - EAST	2#12,#12G,1°C	20-2	3.27			1	2	2.45			20-2	2#12,#12G,1"C	SITE LTS - NORTH
-		-		3.27		3	4		2.45		-		-
SITE LTS - SOUTH	2#12,#12G,1°C	20-2			2.05	5	6			2.30	20-2	2#12,#12G,1"C	SITE LTS - FAR EAST
-		-	2.05			7	8	2.30			-		-
SITE LTS - SOUTH	2#12,#12G,1°C	20-2		2.45		9	10		1.00		20-1	2#10,#10G,1"C	SITE SIGN - FAR EAS
-		-			2.45	11	12			1.00	20-1		SITE SIGN - EAST
SITE LTS - WEST	2#12,#12G,1°C	20-2	1.227			13	14	1.00			20-1	2#8,#10G,1"C	SITE SIGN - FAR S.E.
-		-		1.227		15	16		0.77		20-1	*	LTS - CANOPY
SITE SIGN - WEST	2#10,#10G,1"C	20-1			1.00	17	18			1	20-1	*	SIGN - BLDG TWR
SPARE		20-1				19	20				20-1		SPARE
SPARE		20-1				21	22				20-1		SPARE
SPARE		20-1				23	24				20-1		SPARE
SPACE ONLY						25	26						SPACE ONLY
SPACE ONLY						27	28						SPACE ONLY
SPACE ONLY						29	30						SPACE ONLY
DEMAND KV	'A: 41.6											DEMAND AMPS:	50.1

PANEL	L										* IND	CATES 2#12, #12	G, 3/4"C
	MAIN SIZE				TYPE:							/208 V 3PH,	4W
	AIC RATING	3: 25K		MOU	NTING:	SU	RFA	E	ACC	CESSOR	RIES:	NEMA 3R	
				KVA					KVA				
SERVES	FEEDER	TRIP	Α	В	C	l		Α	В	C	TRIP	FEEDER	SERVES
SCONCE-EAST, WALL		20-1	0.87			1	2						SPACE ONLY
SCONCE-WEST		20-1		0.61		3	4						SPACE ONLY
ELEC. HTR.		20-1			1.5	5	6						SPACE ONLY
FIRE ALARM PANEL		20-1	0.5			7	8						SPACE ONLY
LTS/RECPT - FIRE SP.		20-1		0.79		9	10						SPACE ONLY
SIGN-ROOF		20-1			0.50	11	12						SPACE ONLY
DEMAND KVA:	5.5	1										DEMAND AMPS:	15.1

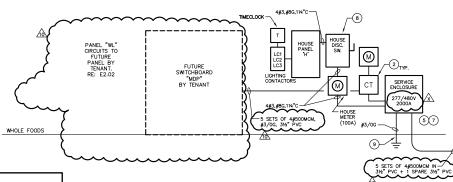
TYPE	DESCRIPTION	CATALOG NO.	LAMP	VOLTAGE	REMARKS
SA	SITE POLE MOUNTED FIXTURE	GARDCO #HPV23-3-5XVF-750PSMH-BRP	(1) 750W PSMH	480V, 1PH	1
	WITH 3 HEADS, TYPE V, 30' POLE	POLE: KW #SSP30-5.0-7-DM3090-BC-BRP			2, 3
SB	SITE POLE MOUNTED FIXTURE	GARDCO #HPV23-2-5XVF-750PSMH-BRP	(1) 750W PSMH	480V, 1PH	1
	WITH 2 HEADS, TYPE V, 30' POLE	POLE: KW #SSP30-5.0-7-DM2180-BC-BRP			2, 3
SC	SITE POLE MOUNTED FIXTURE WITH	GARDCO #HPV23-1-3XVF-750MH-BRP	(1) 750W PSMH	480V, 1PH	1
	1 HEAD, TYPE III, 30' POLE	POLE: KW #SSP30-5.0-11-DM10-BC-BRP			2, 3
SD	SITE POLE MOUNTED FIXTURE WITH	EMCO #ECA18-1-3H-400PSMH-BRP	(1) 400W PSMH	480V, 1PH	1
	1 HEAD, TYPE III, 30' POLE	POLE: KW #SSP30-5.0-11-DM10-BC-BRP			2, 3
SE	EXISTING POLE MOUNTED FIXTURE	EXISTING	(5) CFL LAMPS		1
	5 SPHERE HEADS, 12'+/- POLE				2, 3
SF	SITE POLE MOUNTED FIXTURE WITH	EMCO #ECA18-1-QH-400PSMH-BRP	(1) 400W PSMH	480V, 1PH	1
	1 HEAD, TYPE V, 30' POLE	POLE: KW #SSP30-5.0-11-DM10-BC-BRP			2. 3

- DARK BRONZE PAINT EXIST, CENTER FIXTURES ARE DRB.
- PAINT COLOR OF POLES SHALL MATCH FIXTURE COLOR

TYPE	DESCRIPTION	CATALOG NO.	LAMP	VOLTAGE	REMARKS
Α	ASYMMETRICAL SCONCE	BEGA #	(1) 42W CFTRT	UNIV.	1
		6890-P-BRZ	835	1	l
В	EXTERIOR SURFACE MTD.	BEGA #	(1) 32W CFTRT	UNIV.	1, 3
	RECTANGULAR FIXTURE	2709-P-BRZ	835	1	l '
BE	SAME AS "B", EXCEPT WITH CONTR.	BODINE #B94CG OR AS		UNIV.	1, 3
	WIRED REMOTE EMERG. BALLAST	REQUIRED		1	l
С	4' STRIP W/EM. BATTERY	DAY-BRITE #	(1) F32T8	120	1, 3
	CHAIN HUNG	T-132-277-FKR-126-EM	735	1	l '
D	TRAPEZOIDAL SCONCE, SMALL	GARDCO #	(1) 32W CFTRT	120-277	1, 3
DE	MEDIUM THROW (INTEGRAL EM BALL.)	111-MT-32TRV-UNV-BRP-(EM)	835	1	l
F	TRAPEZOIDAL SCONCE, LARGE	GARDCO #	(1) BT28/E28	120/208/	1
	FORWARD THROW	141-FT-250MH-QUAD-BRP	250W MH	240/277	l
G	BULLET LIGHT, WALL MTD.	BEGA #	(1) 32W CFTRT	UNIV.	1
		6585P-BRZ	835	1	l
GE	SAME AS "G", EXCEPT WITH CONTR.	BODINE #B94CG OR AS		UNIV.	1, 3
	WIRED REMOTE EMERG. BALLAST	REQUIRED		1	l
Н	TRAPEZOIDAL SCONCE, SMALL	GARDCO #	(1) 70W MH	120	1
	WIDE THROW	111-WT-70MH-120-BRP			
KE	RECESSED 6" DOWNLIGHT	OMEGA #	(1) 32W CFTRT	UNIV.	1, 3
	W/INTEGRAL EMERG. BALLAST	S6-1H32PLT-IE-U-T6-1H-CSS-IE	835	1	l
L	EXTERIOR PENDANT	PER WHOLE FOODS SPEC.	(1) 32W CFTRT	277	1, 3
(LE)	W/CONTR. WIRED REMOTE EMERG.	INTRIGUE #ELPM-32CFL-GRY-277	835	1	l
	BALLAST	WITH IOTA #1420-EM-A		1	l

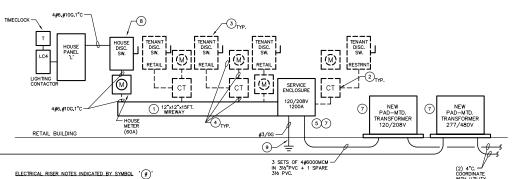
COORDINATE LAMP WITH MANUFACTURER'S REQUIREMENTS - ALL FIXTURES.
PROVIDE EMERGENCY BATTERY BALLAST (90 MIN.) FOR FIXTURES INDICATED AS CROSS-HATCHED OR WITH "E" DESIGNATION

GROUNDING SYSTEM DETAIL



NAME	DESCRIPTION	CONTACTOR TYPE	CIRCUIT NUMBERS	CONTROL
LC1	SITE LIGHTS	ELECTRICALLY HELD	H-1,3,5,7,9,11,13,15	DUSK ON VIA PHOTOCELL
		10 POLE, NEMA 3R	SP, SP	NIGHT OFF VIA TIMECLOCK 1
LC2	SITE & CANOPY LIGHTS	ELECTRICALLY HELD	H-2,4,6,8,16	DUSK ON VIA PHOTOCELL
		6 POLE, NEMA 3R	SP	NIGHT OFF VIA TIMECLOCK 1
LC3	SIGN LIGHTS	ELECTRICALLY HELD	H-17,10,12,14,18	DUSK ON VIA PHOTOCELL
		6 POLE, NEMA 3R	SP	NIGHT OFF VIA PHOTOCELL
LC4	CANOPY LIGHTS	ELECTRICALLY HELD	L-1,3	DUSK ON VIA PHOTOCELL
		4 POLE, NEMA 3R	SP, SP	NIGHT OFF VIA TIMECLOCK 2
REMARKS		•		•
1	SP = SPARE CONTACTOR	3	PROVIDE PHOTOCELL AN	D TIMECLOCKS - DIGITAL
2	PROVIDE CIRCUIT FOR COIL.		365 DAY, 24 HR. ASTRO	
			TORK #DWZ100A OR EQL	JAL.

1) ELECTRICAL RISER DIAGRAM



- 1) NEMA 3R/LOCKABLE WIREWAY, MOUNTED AT 24" AFG, SHALL BE PROVIDED BY CONTRACTOR.
- 2 FUTURE TENANT METER BASE.
- 4 FUTURE CONDUIT & WIRE TO BE SIZED BASED ON RATING OF DISCONNECT SWITCH.
- WEATHERPROOF SERVICE CHOILOGUER WITH BUS BARS AND SET SOREW COMMISCITES SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR PER THE UTILITY'S REQUIREMENTS. LEAVE SPACE FOR A POSSIBLE FUTURE TENANT AT EACH ENCOUSURE.
- 7) COORDINATE ALL WORK ASSOCIATED WITH UTILITY WITH ALL UTILITY REQUIREMENTS.
- 8 HOUSE DISC. SW. 60/60/3P WITH SOLID NEUTRAL, SERVICE ENTRANCE RATED, NEMA 3R, LOCKABLE. $\begin{picture}(40,0)\put(0,0){\line(0,0){100}}\end{picture}$ 8'-0" x 3/8" ground rod. Bond to building steel & water piping.

Omni SERVICES GROUP 11130 PETAL STREET, SUITE 300, DALLAS, TX 75238 RECORD DRAWINGS - 9/24/2013

ELEC. DETAILS & SPECIFICATIONS

BBM

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Project No. Date 05.25.12 Last Revision

Architects

Farrell

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Good Fulton

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PARKWAY

. NO

VILLAGE

/7\ 11.15.12 ASI #5 10 01.22.13 ASI#8

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