ELECTRICAL SPECIFICATIONS

- 1. THE GENERAL CONDITIONS AND SUPPLEMENTAL GENERAL CONDITIONS BY THE ARCHITECT SHALL GOVERN WHERE APPLICABLE.
- 2.THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL VERIFY EXISTING SITE CONDITIONS AT THE JOB SITE BEFORE SUBMITTING BID. FAILURE TO RECOGNIZE WORK REQUIRED SHALL BE AT THE EXPENSE OF THIS CONTRACTOR. NO CONSIDERATION SHALL BE GIVEN FOR ADDITIONAL COMPENSATION AFTER THE LETTING OF BIDS.
- 3.ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST-CLASS WORKMANLIKE MANNER AND SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES. THE COMPLETED SYSTEMS SHALL BE FULL OPERATIONAL; ACCEPTANCE BY THE OWNER SHALL BE A CONDITION OF THE CONTRACT. ALL INTERFERENCES PRESERVE MAXIMUM HEADROOM, AND AVOID OMISSIONS. ALL MATERIALS, WORKMANSHIP, AND EQUIPMENT SHALL BE GUARANTEED FOR ONE (1) YEAR AFTER SYSTEM
- 4.RECEPTACLES AND SWITCHES SHALL BE THE TYPE AS SHOWN ON THE DRAWINGS AND SHALL BE SPECIFICATION GRADE.
- 5.MINIMUM BRANCH WIRE SIZE SHALL BE #12 AWG COPPER EXCEPT FOR CONTROL AND SIGNAL CIRCUITS. INSULATION (INTERIOR) SHALL BE SOLID TYPE THWN SIZES #12 THROUGH #10. SIZES #8 THROUGH 750 MCM SHALL BE STRANDED TYPE THHN OR THWN AT THE CONTRACTOR'S
- 6.MINIMUM OUTLET BOXES SHALL BE 4" SQUARE, UNLESS OTHERWISE SPECIFIED.
- 7.CONTRACTOR SHALL NOT SCALE DRAWINGS FOR DIMENSIONS BUT SHALL CONTACT THE PROJECT ARCHITECT FOR ALL DIMENSIONAL DATA AND SHALL VERIFY EXACT LOCATION AND MOUNTING HEIGHTS OF ALL OUTLETS WITH ARCHITECT AND/OR OWNER PRIOR TO INSTALLATION.
- 8. GROUNDING SHALL COMPLY WITH REQUIREMENTS OF ALL APPLICABLE CODES.
- 9.ALL MATERIAL USED SHALL BE NEW AND BEAR THE U/L LABEL AND BE OF THE APPROPRIATE
- 10. THIS CONTRACTOR SHALL ALLOW IN HIS INITIAL BID THE COST OF SERVICES ON ALL EQUIPMENT INSTALLED UNDER HIS CONTRACT FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE OF THE WORK.
- 11.LAYOUT IS DIAGRAMMATIC AND WORK SHALL BE INSTALLED TO MEET FIELD CONDITIONS AND EQUIPMENT SELECTED. PROVIDE SHOP DRAWINGS AS REQUIRED AND VERIFY ALL EQUIPMENT.
- 12. PANELBOARDS SHALL BE DEAD FRONT WITH BOLT—ON TYPE CIRCUIT BREAKERS W/CU BUS. A TYPED LEGEND, UNDER A CLEAR PLEXAN—GLASS SHALL BE PROVIDED FOR CIRCUIT IDENTIFICATION.
- 13. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS ITEMS REQUIRED TO COMPLETE THE WORK.

 14. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND REQUIRED INSPECTION FEES.
- 15.IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE AND REVIEW THE ELECTRICAL CHARACTERISTICS, AMPACITY, AND OTHER REQUIREMENTS OF ALL EQUIPMENT PRIOR TO INSTALLATION
- 16.IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE THE LOCATIONS OF CONDUIT ROUTING, EQUIPMENT, LIGHTING, ETC. WITH ALL OTHER TRADES IN THE FIELD PRIOR TO INSTALLATION.
- 17. THE ENTIRE INSTALLATION OF ALL COMPONENTS OF THIS PROJECT SHALL COMPLY WITH ALL FEDERAL ADA REQUIREMENTS. VERIFY EXACT LOCATIONS AND HEIGHTS OF ALL FIXTURES AND OUTLETS BEFORE INSTALLATION TO INSURE COMPLIANCE WITH FEDERAL REGULATIONS.
- 18.FOR CLARITY OF ALL PLANS, SOME CONDUIT AND WIRE HAS NOT BEEN SHOWN. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO FURNISH AND INSTALL COMPLETE AND OPERATING SYSTEMS INCLUDING ALL CONDUIT AND WIRING.
- 19.FOR ALL NIGHT LIGHTING, EXIT SIGNS, AND BATTERY POWERED EMERGENCY LIGHTING CIRCUITS THIS CONTRACTOR SHALL USE #10 AWG FOR THE ENTIRE CIRCUIT LENGTH UNLESS INDICATED OTHERWISE.
- 20. THIS CONTRACTOR SHALL MAINTAIN THE FIRE RATED INTEGRITY OF ALL FLOORS, CEILINGS, AND WALLS. ALL PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS SHALL BE EFFECTIVELY SEALED USING APPROVED MATERIALS AND METHODS. ALL LIGHTING FIXTURES MOUNTED IN FIRE RATED CEILINGS SHALL MAINTAIN THE INTEGRITY OF THE FIRE RATED CEILINGS USING APPROVED MATERIALS AND METHODS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATINGS.
- 21.THIS CONTRACTOR SHALL INSPECT THE COMPLETE SET OF DRAWINGS AND SPECIFICATION TO DETERMINE HIS ENTIRE SCOPE OF WORK. THIS CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND EXTENT OF DEMOLITION AND NEW WORK FOR THIS PROJECT PRIOR TO SUBMITTING HIS BID.
- 22.THE ELECTRICAL INSTALLATION IS TO BE IN STRICT ACCORDANCE WITH THE APPLICABLE RULES AND REGULATIONS OF ALL LOCAL, STATE, AND FEDERAL ELECTRICAL CODES AND THE LOCAL UTILITY COMPANY REQUIREMENTS OR ANY OTHER AUTHORITIES HAVING LAWFUL JURISDICTION.
- 23.ALL SITE UNDERGROUND BRANCH CIRCUIT WIRING IN CONDUCT SHALL BE TYPE THWN OR XHWN.
 24.ALL UNDERFLOOR, UNDERGROUND, OR EXPOSED TO THE WEATHER CONDUIT SHALL BE
- 25.PROVIDE BARRIERS TO SEPARATE DIFFERENCE PHASES IN 277 VOLT GANGED SWITCH BOXES.

HEAVYWALL, GALVANIZED RIGID STEEL, MINIMUM SIZE 3/4".

- 26.ALL WIRE SHALL BE INSTALLED IN THINWALL, ELECTRICAL METALLIC TUBING (EMT) CONDUIT UNLESS OTHERWISE NOTED. MINIMUM SIZE SHALL BE 34 FOR BRANCH CIRCUIT WIRING, DROPS TO SWITCHES, AND BRANCH DEVISES MAY BE ½" UNLESS OTHERWISE NOTED ON DRAWINGS. ALL THINWALL FITTING SHALL BE OF THE STEEL COMPRESSION GLAND TYPE PER ALL APPLICABLE CODE REQUIREMENTS. ALL CONDUITS SHALL BE CONCEALED WHERE POSSIBLE, WHERE EXPOSED, THIS CONTRACTOR SHALL RUN CONDUITS IN STRAIGHT LINES PARALLEL AND/OR PERPENDICULAR TO THE BUILDING CONSTRUCTION. CONDUITS INSTALLED IN AREAS SUBJECT TO MECHANICAL DAMAGE SHALL BE RIGID GALVANIZED, OR INTERMEDIATE METAL TYPE.
- 27.THIS CONTRACTOR SHALL PROVIDE ALL TEMPORARY WIRING FOR ALL TRADES FOR CONSTRUCTION EQUIPMENT (I.E. HANDTOOLS, WELDERS, PIPE BENDERS, ETC) AND CONSTRUCTION LIGHTING PER THE LATEST OSHA STANDARDS. INCLUDE ALL COSTS IN THE BASE BID. THIS CONTRACTOR SHALL ESTABLISH SAFE WORKING PROCEDURES FOR THE PROTECTION OF THE WORKMEN IN ALL PHASES OF WORK, COMPLYING WITH THE APPLICABLE PROVISIONS OF ALL CITY, STATE, AND FEDERAL SAFETY LAWS (OSHA).

GENERAL POWER NOTES

- 1.FULL COORDINATE THE INSTALLATION OF ALL ELECTRICAL DEVICES WITH THE WORK OF OTHER TRADES.
- 2.COORDINATE THE LOCATION OF ALL HVAC EQUIPMENT WITH THE MECHANICAL AND CONTROLS CONTRACTORS. PROVIDE ALL DEVICES (I.E. STARTERS, SWITCHES, CONTACTS, ETC.) REQUIRED TO ENSURE SATISFACTORY OPERATION OF ALL SYSTEMS AND EQUIPMENT. (CONTROL WIRING TO BE PROVIDED BY MECHANICAL CONTRACTOR.) COORDINATE DEVICE REQUIREMENTS WITH ACTUAL FOLLOWING
- 3.FOR ALL HVAC CONTROL DEVICES PROVIDED BY THE ELECTRICAL CONTRACTOR, PROVIDE ALL NECESSARY AUXILIARY COMPONENTS AND CONTACTS TO ENSURE PROPER SYSTEM CONTROL FUNCTIONS.

GENERAL LIGHTING NOTES

- 1.REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF AL CEILING MOUNTED DEVICES. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
- 2.SUPPORT ALL RECESSED AND PENDANT MOUNTED FIXTURES FROM STRUCTURE IN ACCORDANCE WITH APPLICABLE BUILDING CODE REQUIREMENTS. SUSPENDED CEILING MOUNTING SYSTEMS SHALL NOT BE USED TO SUPPORT FIXTURES OR RACEWAYS.
- 3.THE MAXIMUM FLEXIBLE CONDUCTOR LENGTH SHALL BE 6 FT.

GENERAL AUXILIARY SYSTEMS NOTES

- 1. DATA AND TELEPHONE CABLE ARE INCLUDED IN THIS CONTRACT. STUB EMPTY 1" CONDUIT ABOVE NEAREST ACCESSIBLE CEILING. BUSH CONDUIT END. SEE SPECIFICATIONS FOR CABLING INFORMATION.
- 2.ROUTE ALL LOW VOLTAGE CABLING IN ACCESSIBLE CEILING SPACE IN J-HOOKS. WHERE NO ACCESSIBLE CEILING EXISTS, ROUTE IN CONDUIT AS SHOWN ON POWER PLANS.

GENERAL FIRE ALARM SYSTEMS NOTES

- 1.A FULLY ALARMED FIRE SYSTEM IS TO BE INSTALLED, UNLESS NOTED OTHERWISE.

 2.FIRE ALARM HORN/STROBES WITH A 'C' DESIGNATION SHALL BE CEILING MOUNTED DEVICES. COORDINATE CEILING MOUNTED STROBES WITH ALL OTHER CEILING MOUNTED DEVICES.
- 3.PROVIDE CONNECTIONS TO SPRINKLE FLOW SWITCH, TAMPER SWITCH, AND POST INDICATING VALVE. COORDINATE LOCATION WITH MECHANICAL.
- 4.CONTRACTOR SHALL SUBMIT FIRE ALARM DRAWINGS TO AUTHORITY HAVING JURISDICTION FOR APPROVAL. IT IS THE RESPONSIBILITY OF THE CONTRACTORS TOO COORDINATE FIRE ALARM INSTALLATION/CONNECTION AND VOLTAGE WITH ALL OTHER TRADES FOR ANY TIMES WHICH REQUIRE A FIRE ALARM CONNECTION INCLUDING, BUT NOT LIMITED TO: SMOKE DAMPERS, FIRE DAMPERS, FIRE SHUTTERS, MAGNETIC HOLD OPENS, MAGNETIC DOOR LOCKS.

 5.COORDINATE WITH CIVIL DRAWINGS WHETHER A POST INDICATOR SWITCH IS PRESENT. ALLOW 100 FT OF
- 6.COORDINATE LOCATION AND QUANTITY OF SUPERVISORYVALVE/SPRINKLER TAMPER SWITCHES AND WATER FLOW VALVES. THESE ITEMS ARE NOT SHOWN ON THE ELECTRICAL PLANS. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE LOCATION WITH SPRINKLER INSTALLER AND PROVIDE NUMBER OF CONNECTIONS NECESSARY FOR A COMPLETE AND CODE COMPLIANT INSTALLATION.

1PH,4W				PANE	L-LP1		BOTTOM FEED			
240/120\	1		(EXISITNG)					SURFACE MOUNT		
125 BUS								LOCATION: UTILITY ROOM		
SL.NO. DESCRIPTION		LC	DAD	BRK	BRK			DESCRIPTION	SL.NO.	
	**	Α	С			Α	С	**		
1	OFFICE LOBBY LTG	768		20/1	20/1	391		CONF. LTG	2	
3	MEN'S & WOMEN-LTG & POW		1500	20/1	20/1		452	OFFICE LTG	4	
5	OFFICE RECEP.	1440		20/1	20/1	900		STORAGE RECEP.	6	
7	CONF. FLOOR RECEP.		1200	20/1	20/1		1500	MICROWAVE	8	
9	CONF. RECEP.	360		20/1	20/1	1500		U.C REFRIGERATOR	10	
11	ELECTRIC DRINKING FOUNTAIN		850	20/1	20/1		1,260	PRIVATE OFFICE REC.	12	
13	MECH LTG (EXISTING)	500		20/1	20/1	1,500		COPIER/PRINTER	14	
15	PANEL LP-1A		2520	30/2	20/1			SPARE	16	
17	-	2520		-	20/1			SPARE	18	
19	EF-3		300	20/1	20/1			SPARE	20	
21	SPARE			20/1	20/1			SPARE	22	
23	SPARE			20/1	20/1			SPARE	24	
25	SPARE			20/1	20/1			SPARE	26	
27	SPARE			20/1	20/1			SPARE	28	
29	SPARE			20/1	20/1			SPARE	30	
31	SPARE			20/1	20/1			SPARE	32	
33	SPARE			20/1	20/1			SPARE	34	
35	SPARE			20/1	20/1			SPARE	36	
37	SPARE			20/1	20/1			SPARE	38	
39	SPARE			20/1	20/1			SPARE	40	
41	SPARE			20/1	20/1			SPARE	42	
	TOTAL-VA	5,588	6,370			4,291	3,212			
PHASE-A			9,879							
PHASE-C			9,582							

ASE-A			9,879				
ASE-C			9,582				
TAL CO	NNECTED VA		19,461				
TAL AM	PS		81.09				
**	CIRCUIT BREAKERS SERVING	TO EMERGE	NCY AND E	EXIT SIGN	TO HAVE		

1PH,4W			PANE	L-LP2		BOTTOM FEED				
240/120V	1		(NEW)					SURFACE MOUNT		
125 BUS				22k	AIC			LOCATION:		
SL.NO.	DESCRIPTION **	LOAD		BRK	BRK			DESCRIPTION **	SL.NO	
		Α	С			Α	С	**	ŀ	
1	OFFICE AND LOBBY LTG **	771		20/1	20/1	836		OFFICE LTG	2	
3	PRIVATE OFFICE REC.		384	20/1	20/1		1500	MEN'S & WOMEN-LTG & POW	4	
5	CONF.ROOM LTG	361		20/1	20/1	1350		EXTERIOR LIGHT FIXTURES	6	
7	SPARE		0	20/1	20/1		1260	OFFICE RECEPTACLE	8	
9	OFFICE RECEPTACLE	1440		20/1	20/1	1200		FLOOR OUTLET	10	
11	RECEPTION DESK RECEP		720	20/1	20/1		900	PRIVATE OFFICE REC.	12	
13	CONFERENCE ROOM RECEP.	720		20/1	20/1	360		EXTERIOR RECEPTACLE	14	
15	ELECTRIC. DRINKING FOUNTAIN		850	20/1	20/1		1500	COPIER/PRINTER	16	
17	RTU SERVICE-GFI -WP OUTLET	500		20/1	20/1	100		TIME CLOCK	18	
19	ТТВ		360	20/1	20/1		200	FIRE ALARM PANEL	20	
21				20/1	20/1				22	
23				20/1	20/1				24	
25				20/1	20/1				26	
27				20/1	20/1				28	
29				20/1	20/1				30	
31				20/1	20/1				32	
33				20/1	20/1				34	
35				20/1	20/1				36	
37				20/1	-				38	
39				20/1	20/3				40	
41	SPARE			20/1	-				42	
	TOTAL-VA	3,792	2,314			3,846	5,360			
PHASE-A			7,638			•				
PHASE-C	1		7,674				i			
TOTAL CO	DNNECTED VA		15,312			TOTAL DE	MAND VA	9,952.80		
TOTAL AMPS		63.80			TOTAL DEMAND AMPS		27.63			

** CIRCUIT BREAKERS SERVING TO EMERGENCY AND EXIT SIGN TO HAVE HANDLE LOCKED

3PH,4W			PANEL-MDP						BOTTOM FEED		
240/120V			(EXISTING)							SURFACE MOUNT	
400 BUS,400A MLO					22k	CAIC				LOCATION: UTILITY ROOM	
SL.NO.	DESCRIPTION		LOAD		BRK	BRK				DESCRIPTION	SL.NO.
		А	В	С			Α	В	С		
1	DOWN HEAT-DOWN	2,880			30/2	30/2	2,880			DOWN HEAT-UP	2
3	-		2,880		-	-		2,880		-	4
5	Furnace-1			1,500	20/1	60/2			5,760	FAN FOR HEAT-UP (EXISTIG)	6
7	Furnace-2	1,500			20/1	-	5,760			-	8
9	Furnace-3		1,500		20/1	20/1		1,500		Furnace-4	10
11	EXISTING			1,920	20/2	100/2			9,600	PANEL LP-2 (NEW)	12
13	EXISTING	1,920				-	9,600			-	14
15	SPARE				20/2	20/2		1,875		EWH-1	16
17	SPARE				1	-			1,875		18
19	PANEL LP-1 (EXISTING)	9,600			100/2	20/2	1,875			EWH-2	20
21	-		9,600		-	-		1,875			22
23	CU-1			3744	45/2	45/2			3744	CU-2	24
25	-	3744			1	-	3744			-	26
27	CU-3		3744		45/2	45/2		3744		CU-4	28
29	-			3744	-	-			3744	-	30
	TOTAL-VA	19,644	17,724	10,908			23,859	11,874	24,723		
PHASE-A		·	43,503								
PHASE-B		29,598									
PHASE-C			35,631				1				
TOTAL CON	NECTED VA		108,732				TOTAL DEN	/AND VA		74,940	
TOTAL AMPS			261.58				TOTAL DEMAND AMPS			208.02	

THE FOLLOWING BUILDING CODE IS ADAPTED BY CITY OF ELGIN, IL.

INTERNATIONAL BUILDING CODE (2012)

INTERNATIONAL RESIDENTIAL CODE (2012)

INTERNATIONAL FIRE CODE (2012)

INTERNATIONAL MECHANICAL CODE (2012)

NATIONAL ELECTRIC CODE (2011)

ACCESSIBILITY—1997 STATE OF ILLINOIS ACCESSIBILITY CODE (2012)

INTERNATIONAL ENERGY CONSERVATION CODE (2012)

ILLINOIS STATE PLUMBING CODE (2004)

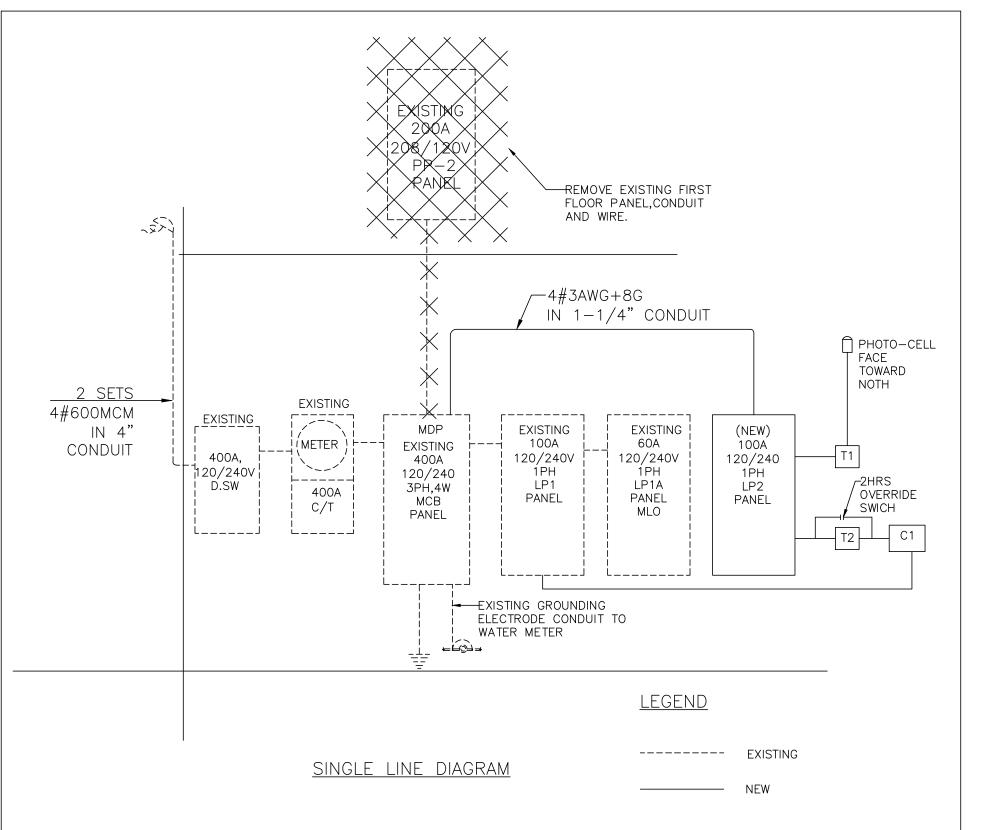
LIFE SAFETY CODE (2012 - NFPA 101)

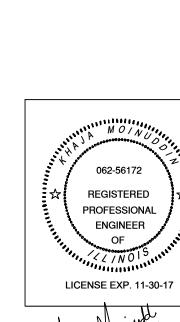
SCOPE OF WORK

 REMOVE EXISTING SUB PANEL FROM FIRST FLOOR AND PROVIDE A NEW 100A PANEL IN BASEMENT.
 DISCONNECT AND REMOVE EXISTING LIGHTING AND POWER AND CONNECT TO NEW PANEL.
 FURNISH AND INSTALL NEW LIGHTING AND RECEPTACLES AS PER NEW LAYOUT.
 DISCONNECT AND REMOVE EXISTING FEEDER FROM ROOF TOP UNIT—1 AND EXTEND TO NEW RELOCATED RTU.

FIRE ALARM SYSTEM NOTE:

FIRE ALARM CONTRACTOR SHALL SUBMIT A
SEPARATE DETAIL DRAWING WITH CALCULATION
AND DEVICES CUT SHEETS TO THE FIRE
DEPARTMENT AND OPTAIN A PERMIT PRIOR TO
FIRE ALARM SYSTEM INSTALLATION.





INSPIRED
TECHNOLOGY
CONCEPTS.
1433,TONNE ROAD
ELK GROVE, IL

60007

Tel # 847-770-5725

LEXITECT DESIGNS
912 HAYDEN DR.
MCHENRY, IL 60050
303-526-8158
LEXITECT®PEAKPEAK.COM

ARCHITECT/ENGINEER

LUCACCIONI OFFICE REMODE

721 DUNDEE AVE., ELGIN, IL

PROJECT NUMBER:

14.009

DRAWN BY:

LP

CHECKED BY:

DATE: REVISION:

. . .

DATE: ISSUED AS:

2-26-15 PRELIMINARY DESIGN

9-16-15 PERMIT SUBMITTAL

10-28-15 PERMIT REVISION

PERMIT RE-SUBMITITAL

ISSUE FOR PRICING

.

SHEET TITLE:

SPECIFCATION AND SINGLE LINE DIAGRAM

SHEET NUMBER:

E-00

All drawings and written material contained herein may not be duplicated, used or disclosed without the written consent of the architect(s).