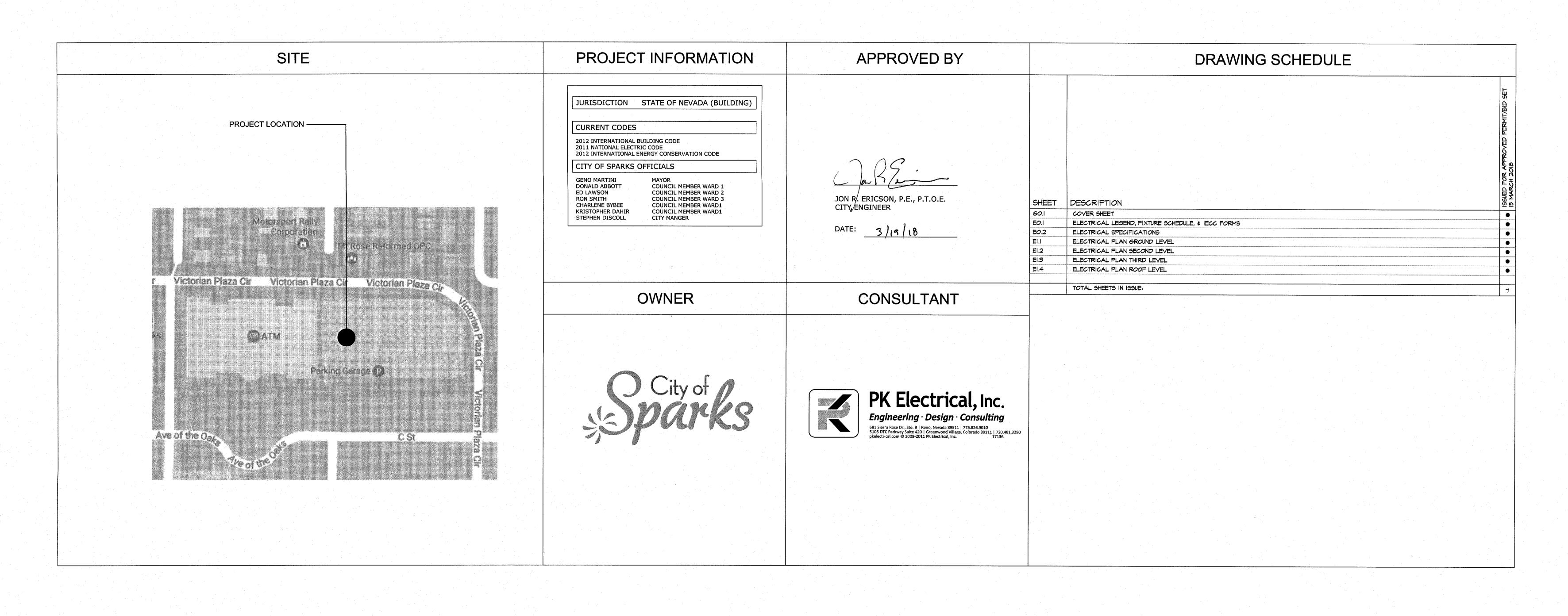
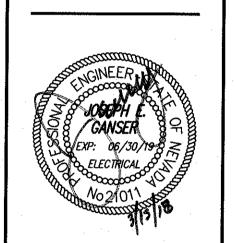
VICTORIAN SQUARE THEATER GARAGE LIGHTING PROJECT

PROGRAM #18-8500 BID #17/18-018

1150 VICTORIAN AVENUE SPARKS, NEVADA 89431

ISSUED FOR APPROVED PERMIT/BID SET MARCH 15, 2018





orian Square Theater Gara Lighting Project

REVISIONS

SHEET TITLE

DRAWN: M.

CHECKED: JE

DATE: O3/14/

JOB NUMBER: 1715

PROJECT MGR: 9

G0 1

Project Information

2012 IECC Energy Code: C STREET THEATER PARKING GARAGE Project Title: Project Type:

Construction Site: Owner/Agent: Designer/Contractor: Robert Bidart Sparks, NV 89431 City of Sparks 431 Prater Way Sparks, NV 89431

Reno, NV 89511 775 224-2976 (775) 826-9010 rbidart@cityofsparks.us

Allowed Interior Lighting Power **Area Category** Floor Area **Allowed Watts** (ft2) Watts / ft2 (B X C) 1-INTERIOR (Parking Garage:Garage areas) 164761 32952 Total Allowed Watts = 32952 Proposed Interior Lighting Power C D E Fixture ID: Description / Lamp / Wattage Per Lamp / Ballast Lamps/ # of Fixture (C X D) Fixture Fixtures Watt. INTERIOR (Parking Garage:Garage areas 164761 sq.ft.) LED 1: (E) L1: EXISTING LED: Other: LED 2: (N) L1: NEW LED: Other: 36 1656 LED 3: (N) L2/L2X: NEW LED: Other: 29 174 Induction 1: (N) L3X: NEW LED: Other: 13 29 377

PK Electrical, Inc

681 Sierra Rose Drive

Total Proposed Watts = 11664

nterior Lighting PASSES

LED 4: (N) L4X: NEW LED: Other:

Interior Lighting Compliance Statement Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in COMcheck Version 4.0.7.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Joey E. Ganser, PE Name - Title Signature

Project Title: C STREET THEATER PARKING GARAGE Data filename: \\PK-N-5138\Archive\Jobs\PK 2011 Job Archive\11126 - Victorian Square Garage LED Retrofit\04 Page 1 of 7 Calculations\1. Lighting\17136 C Street Theater Parking Garage.cck

▲ COM*check* Software Version 4.0.7.0 **Exterior Lighting Compliance Certificate**

Designer/Contractor:

PK Electrical, Inc

Total Allowed Supplemental Watts (b) =

681 Sierra Rose Drive

Energy Code: 2012 IECC Project Title: C STREET THEATER PARKING GARAGE Project Type: Alteration Exterior Lighting Zone 2 (Residential mixed use area)

Construction Site: Owner/Agent: Sparks, NV 89431 Robert Bidart City of Sparks

431 Prater Way Suite B Reno, NV 89511 Sparks, NV 89431 775 224-2976 (775) 826-9010 rbidart@cityofsparks.us Allowed Exterior Lighting Power

Area/Surface Category Allowed Watts Watts / Unit Wattage (B X C) Roof (Parking area) Total Tradable Watts (a) = Total Allowed Watts =

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces. (b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID: Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	(C X E
Roof (Parking area 55300 ft2): Tradable Wattage				
LED 1: (E) L3: POLE LT: Other:	2	4	172	68
LED 2: (E) L4: POLE LT: Other:	1	2	172	34
	Total Tradable Proposed Watts =			103

Exterior Lighting PASSES: Design 74% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2012 IECC requirements in COMcheck Version 4.0.7.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Calculations\1. Lighting\17136 C Street Theater Parking Garage.cck

Project Title: C STREET THEATER PARKING GARAGE Data filename: \\PK-N-5138\Archive\Jobs\PK 2011 Job Archive\11126 - Victorian Square Garage LED Retrofit\04 Page 2 of 7 LIGHTING FIXTURE SCHEDULE PK ELECTRICAL, INC. @ 2007 LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE TRIMS, BALLASTS, MOUNTING EQUIPMENT, FITTINGS AND LAMPS AS REQUIRED BY THE SPECIFICATIONS AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION. THIS IS NOT A STANDALONE SCHEDULE AND FIXTURES MUST INCORPORATE ALL WORK INDICATED OR IMPLIED THROUGHOUT THE DRAWINGS AND SPECIFICATIONS. SUBSTITUTION: DEFINITIONS OR EQUAL = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS WILL BE ALLOWED, ENGINEER'S PRE-BID APPROVAL IS NOT REQUIRED, PROPOSED EQUAL FIXTURES ARE SUBJECT TO REVIEW DURING THE STANDARD SUBMITTAL PROCESS. • NO EQUAL = PROVIDE SPECIFIED FIXTURE, SUBSTITUTIONS ARE NOT ALLOWED. O SUBJECT TO REVIEW = EQUAL OR SUPERIOR TO SPECIFIED IN ALL RESPECTS MAY BE ALLOWED ONLY WITH ENGINEER'S APPROVAL, ALL SUBSTITUTIONS MUST BE SUBMITTED AS REQUIRED BY SPECIFICATIONS AND ACCOMPANIED WITH POINT BY POINT LIGHTING CALCULATIONS. DETERMINATION OF EQUAL IS ENGINEER'S SOLE DISCRETION. TYPE SYMBOL DESCRIPTION AND MANUFACTURER LED SURFACE MOUNTED GARAGE LUMINAIRE, LOW GLARE, MARINE-GRADE, DIE-CAST ALUMINUM, UV STABILIZED, POLYCARBONATE CONSTRUCTION & LENS. TYPE V SQUARE DISTRIBUTION, QUICK MOUNT TO SURFACE JBOX (JBOX BY CONTRACTOR), BIRD GUARD, LIMITED 10-YEAR WARRANTY. MATTE WHITE FINISH, O-10V DIMMING. INTEGRAL LIGHTING CONTROL SYSTEM WITH OC SENSOR, DAYLIGHT HARVESTING & ADJUSTABLE TIME O OUT/DIMMING SETTING (BY HAND HELD REMOTE CONTROLLER). LED, 4,798 LUMENS, 4000K, ESTIMATED LIFE 175,000 HOURS VOLTAGE: 277V MANUFACTURER: KENALL TDI7-QM-5S-TP-MW-30L-40K7-DCC-DV-BG-TL50 (PROVIDE ONE TL50 REMOTE CONTROLLER FOR PROJECT) SUBSTITUTIONS: OR EQUAL • SUBJECT TO REVIEW ONO EQUAL LED, CEILING OR WALL MOUNT, IT" DIAMETER, MARINE-GRADE, DIE-CAST ALUMINUM, HIGH-IMPACT, POLYCARBONATE LENS, GASKET, TAMPER PROOF SCREWS, IP64 RATED, PEACE OF MIND LIFETIME GUARANTEE, BLACK FINISH, EMERGENCY BATTERY PACK -4 DEGREES F RATED. L2X LED - 15 WATT, 4000K, 2,006 LUMENS, ESTIMATED LIFE 100,000 HOURS VOLTAGE: 277V MANUFACTURER: KENALL MRITFFD-PP-MB-I5L40K-277-CEL SUBSTITUTIONS: OR EQUAL O SUBJECT TO REVIEW NO EQUAL LED, CEILING OR WALL MOUNT, 17" DIAMETER, MARINE-GRADE, DIE-CAST ALUMINUM, HIGH-IMPACT, POLYCARBONATE LENS, GASKET, TAMPER PROOF SCREWS, IP64 RATED, ' PEACE OF MIND LIFETIME GUARANTEE, BLACK FINISH, EMERGENCY BATTERY PACK -4 $_{
m J}$ DEGREES F RATED L3X LAMP: LED - 25 WATT, 4000K, 2,941 LUMENS, ESTIMATED LIFE 100,000 HOURS VOLTAGE: 277V MANUFACTURER: KENALL MRITFFD-PP-MB-25L40K-27T-CEL SUBSTITUTIONS: OR EQUAL O SUBJECT TO REVIEW NO EQUAL LED, CEILING OR WALL MOUNT, IT'' DIAMETER, MARINE-GRADE, DIE-CAST ALUMINUM, 🔻 📊 HIGH-IMPACT, POLYCARBONATE LENS, GASKET, TAMPER PROOF SCREWS, IP64 RATED, PEACE OF MIND LIFETIME GUARANTEE, BLACK FINISH, EMERGENCY BATTERY PACK -4 DEGREES F RATED WITHVINTEGRAL MOTION SENSOR L4X LAMP: LED - 25 WATT, 4000K, 2,941 LUMENS, ESTIMATED LIFE 100,000 HOURS VOLTAGE: 277V MANUFACTURER: KENALL MRITFFD-PP-MB-25L40K-2TT-CEL-MS SUBSTITUTIONS: OR EQUAL O SUBJECT TO REVIEW NO EQUAL LED, EXIT SIGN, 14-GAUGE DIE-FORMED COLD ROLLED STEEL, WELDED CORNERS ON HOUSING. SINGLE FACE, GREEN LETTERS, HARDENED TORX HEAD WITH CENTER PIN SCREWS, POWDER COAT FINISH, WET LOCATION, COLD WEATHER EMERGENCY BATTERY PACK \otimes LAMP: VOLTAGE: 277V MANUFACTURER: KENALL MMEX-I-O-G-DT-I-CEL (PROVIDE ONE TORX SCREWDRIVER) SUBSTITUTIONS: OR EQUAL • SUBJECT TO REVIEW ONO EQUAL LED, VANDAL RESITANT EMERGENCY BATTERY UNIT, NEMA 4X, ADJUSTABLE TWIN HEAD, GASKETED, UV RESISTANT POLYCARBONATE COVER, TAMPER PROOF SCREW, WHITE

SUBSTITUTIONS: OR EQUAL O SUBJECT TO REVIEW NO EQUAL LIGHTING SYSTEM FOOTCANDLE LEVELS ARE BASED ON THE UTILIZATION OF STANDARD REFLECTANCES OF 80-50-20 (CEILING-WALL-FLOOR) PER I.E.S. (ILLUMINATED ENGINEERING SOCIETY). THE ROOM SURFACES ARE USED AS AN INTEGRAL COMPONENT OF THE LIGHTING SYSTEMS. THE REFLECTANCE OF THE SURFACE PAINT COLOR, MATERIAL, AND OTHER ROOM SURFACES, DIRECTLY AFFECTS THE DELIVERY OF LIGHT TO THE WORK PLANE, A SIGNIFICANT DROP IN OVERALL LIGHTING LEVELS WILL OCCUR IF REFLECTANCES ARE LOWERED. THE ARCHITECT/OWNER SHALL NOTIFY THE ENGINEER IMMEDIATELY IF FINISHES DO NOT FALL INLINE WITH THE REFLECTANCES MENTIONED ABOVE. IF FIXTURES ARE SUBSTITUTED, PROVIDE POINT-BY-POINT FOOTCANDLE CALCULATIONS FOR ALL AREAS FOR NORMAL AND EMERGENCY LIGHTING LEVELS FOR PRIOR APPROVAL. EMERGENCY LIGHTING LEVEL IN GARAGE SHALL MEET THE REQUIREMENTS OF NFPA IOI, SECTION 7.9 (MINIMUM I FC AVERAGE, O.I FC MINIMUM - IN THE

MANUFACTURER: EMERGI-LITE W-125V24M-2-LJ-S-CW4-SMC

SHEET NOTES

MIDDLE OF THE DRIVE AISLE (6' WIDE PATH).

SETTINGS SHALL BE COORDINATED WITH CITY OF SPARKS DURING SUBMITTAL PROCESS.

HOUSING, COLD WEATHER BATTERY

VOLTAGE: 277V

LAMP: LED - 12V-6W, MRI6 LED

ELEC	TRICAL LEGEND					AUGUST 20
	PANELBOARD: SURFACE MOUNTED	6 F)	GROUND FAULT INTER	RUPTER DEVICE	A	AMPS
	PANELBOARD: FLUSH MOUNTED	M	METERING DEVICE		ADA	AMERICANS WITH DISABILITIES A
	SMITCHBOARD OR DISTRIBUTION PANEL	M	REMOTE METER		AFC	ABOVE FINISHED CEILING
XF	TRANSFORMER	(ST)	SHUNT TRIP DEVICE		AFCI	ARC-FAULT CIRCUIT INTERRUPTER
	PULLBOX / VAULT		TRANSFORMER		AFF	ABOVE FINISHED FLOOR
\boxtimes	MOTOR STARTER	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CURRENT TRANSFORM	ER	AFG AHJ	ABOVE FINISHED GRADE AUTHORITY HAVING JURISDICTION
\bowtie	COMBINATION MOTOR STARTER	/6/	GENERATOR		AIC	AMP INTERRUPTING CAPACITY
	COMBINATION MOTOR STARTER PROVIDED BY OTHERS	/# /	MOTOR - # INDICATES	, HP	AL	ALUMINUM
F	DISCONNECT SWITCH - FUSIBLE (FUSED PER EQUIP.		INTERRUPTER SWITCH		ATS	AUTOMATIC TRANSFER SMITCH
l	NAMEPLATE)	[6FI]—O	GROUND FAULT RELAY	YW/CTORSENSOR	AMG	AMERICAN WIRE GAUGE
N	DISCONNECT SWITCH - NON-FUSIBLE		- FUSE		BC	BARE COPPER
	DISCONNECT SWITCH PROVIDED BY OTHERS		CIRCUIT BREAKER		BKR	BREAKER
	VARIABLE FREQUENCY DRIVE	< < →>>	DRAWOUT CIRCUIT BRI	EAKER	C	CONDUIT/RACEWAY
	VARIABLE FREQUENCY DRIVE PROVIDED BY OTHERS	A 3		=AUTOMATIC, M=MANUAL)	CEC CKT	CALIFORNIA ENERGY COMMISSIO CIRCUIT
CB	ENCLOSED CIRCUIT BREAKER		# FOR POLES 2, 3 OR		CLG	CEILING
	GROUND ROD	SPD	SURGE PROTECTION D	EVICE	co	CONDUIT/RACEWAY ONLY
	SHUNT TRIP STATION OR EMERGENCY PUSHBUTTON	T	THERMOSTAT (PROVID	ED BY MECH. CONTRACTOR UNO)	СТ	CURRENT TRANSFORMER
M	REMOTE METER	(J	JUNCTION BOX (SIZE A	S REQUIRED UNO)	CU	COPPER
		3	SHEET NOTE DESIGNAT		DB	DISTRIBUTION BOARD
ав	LIGHTING FIXTURE - LOWERCASE LETTER DENOTES SWITCHING (a = CENTER LAMP, b = OUTER LAMPS)	(FI)	FIXTURE DESIGNATION	: FI=TYPE (SEE FIXTURE SCH.)	DDC	DIRECT DIGITAL CONTROLLER
	WALL MOUNTED FIXTURE		REVISION DELTA: NUM	BER REPRESENTS REVISION	DPDT DPST	DOUBLE-POLE, DOUBLE-THROW DOUBLE-POLE, SINGLE-THROW
	RECESSED DOWNLIGHT	(1253)	FEEDER DESIGNATION		DMG	DRAWING
$\check{\forall}$	SURFACE LUMINAIRE	AHU	TEDEN DESIGNATION		(E)	EXISTING TO REMAIN
	POLE MOUNTED LIGHT (# OF HEADS INDICATED ON DRAWING)	2	EQUIPMENT CONNECTION	ON .	ELEC	ELECTRICAL
	FLUORESCENT STRIP FIXTURE				EM	EMERGENCY
$ \otimes $	BOLLARD			WALL OR ABOVE CEILING	EMT	ELECTRICAL METALLIC TUBING
	RECESSED DOWNLIGHT (WALL WASH)			ELOW GRADE OR BELOW FLOOR	(F)	FUTURE
$\nabla\nabla\nabla$	TRACK LIGHTING	0	CONDUIT/RACEWAY UP		FLA	FULL LOAD AMPS
	EMERGENCY LIGHTING UNIT	•	CONDUIT/RACEWAY DO		FMC	FLEXIBLE METAL CONDUIT (STEEL
	EXIT SIGN FIXTURE - SHADED AREA DENOTES LIGHTED FACE		BREAK OR RUN CONTI	NUES	FPEN GFI	FUSE PER EQUIP. NAMEPLATE GROUND FAULT INTERRUPT
	- ARROWS DENOTE DIRECTION	— <i>OH</i> —	OVERHEAD SERVICE		GFR	GROUND FAULT RELAY
	EMERGENCY FIXTURE	-P-	PRIMARY		GND	GROUND
		<u> </u>	SECONDARY		HID	HIGH INTENSITY DISCHARGE
φ	SINGLE RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF (UNO)	-c-	COMMUNICATIONS OR	SIGNAL	НОА	HAND-OFF-AUTO SWITCH
φ	DUPLEX RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF (UNO)	— T —	TELEPHONE		HP	HORSEPOWER
	DUPLEX RECEPTACLE: HALF SWITCHED	_TV—	TELEVISION		HSKP	HOUSEKEEPING
I	DUPLEX RECEPTACLE: FLOOR MOUNTED	_ · -	LOW YOLTAGE AND/O	R CONTROL WIRING	IMC	INTERMEDIATE METAL CONDUIT
ÿ	QUAD RECEPTACLE: 20A, 125V, NEMA 5-20, +18" AFF (UNO)	-*-*-	EMERGENCY CIRCUIT			JUNCTION BOX
#	QUAD RECEPTACLE: FLOOR MOUNTED		CONDUIT/RACEWAY ST	UB OUT: MARK AND CAP (SITE)	KVA	kcmil (300K = 300 kcmil) KILOVOLT AMPS
	ISOLATED GROUND TYPE RECEPTACLE (ORANGE TRIANGLE) -		CONDUIT/RACEWAY SL	EEVE	KW	KILOWATT
"	20A, 125V, NEMA 5-2016, +18" AFF (UNO)				LTG	LIGHTING
🕈	DUPLEX RECEPTACLE GFI TYPE - 20A, 125V, NEMA 5-20 GFI +18" AFF (UNO)	,,,/		#12 WIRES (UNO) IF MORE THAN CEWAY, GROUNDING	16	ISOLATED GROUND
	DUPLEX RECEPTAGLE: ABOVE COUNTER (VERIFY HEIGHT)	\ \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	F	OT SHOWN) ALWAYS REQUIRED.	MCB	MAIN CIRCUIT BREAKER
	SPECIAL PURPOSE RECEPT .: SEE DWGS FOR NEMA CONFIG.	<u> </u>	ISOLATED GRO	DUNDING CONDUCTOR	MCM	THOUSAND CIRCULAR MILS
m Φ	DUPLEX RECEPTAGLE: CEILING MOUNTED		NEUTRAL COND	DUCTOR	MFG	MANUFACTURER
9 9 9	MULTI-OUTLET ASSEMBLY: SPACING PER DWGS				MLO	MAIN LUGS ONLY
 				IIT (WHEN TIC MARKS ARE NOT HASE, (I) NEUTRAL AND (I)	MS MSB	MOTOR STARTER MAIN SWITCHBOARD
V	DATA / VOICE OUTLET: 18" AFF (UNO) - 1 VOICE, 1 DATA		GROUNDING CO	DNDUCTOR	MTS	MANUAL TRANSFER SWITCH
	JACK, 2 BLANKS		HOMERUN TO P	ANELBOARD OR DEVICE	NC NC	NORMALLY CLOSED
	DATA / VOICE OUTLET: FLOOR MOUNTED	HA-[1,3,	5,3N]G HOMERUN CIRC	UIT DESIGNATION	NEC	NATIONAL ELECTRICAL CODE
<u>7</u>	DATA / VOICE OUTLET: ABOVE COUNTER (VERIFY HEIGHT)		FOUNDING CO	DNDUCTOR	NEMA	NATIONAL ELECTRICAL
	MULTI-OUTLET ASSEMBLY: SPACING PER DWGS		NEUTRAL COND 3N=3 NEUTRAL	DUCTOR (N=1, 2N=2 NEUTRALS, S)	NIC	MANUFACTURER'S ASSOCIATION
▼	TELEPHONE OUTLET: 18" AFF (UNO)	[PHASE CONDUC	CTOR(S)	NIC NL	NOT IN CONTRACT NIGHTLIGHT
∇	DATA OUTLET: 18" AFF (UNO)		PANELBOARD	DESIGNATION	NO NO	NORMALLY OPEN
(5)	SPEAKER	HA-(1.3	.5)G HOMERUN CIRC →	UIT DESIGNATION JUIT SHOWN)	NTS	NOT TO SCALE
TV	TELEVISION OUTLET: 18" AFF (UNO)		GROUNDING CO	·	NVE	NY ENERGY
	TELEPHONE TERMINAL BOARD (TTB)	[PHASE CONDUC	CTOR(S)	P	POLE
VC	VOLUME CONTROL		PANELBOARD	DEDIONA I ION	PH/Φ	PHASE
1	GROUNDING BAR	 	NORMALLY OPEN (NO	D) CONTACT	PV	PHOTOVOLTAIC
		" #	NORMALLY CLOSED		PNL	PANEL PV USA TEST CONDITIONS
\$	SINGLE POLE SMITCH 48" AFF (UNO)				PWR	POWER
\$3	THREE WAY SWITCH 48" AFF (UNO)			R CONTROL DIAGRAMS	(R)	RELOCATED
\$4	FOUR WAY SWITCH 48" AFF (UNO)			USH-TO-TEST. LETTER INDICATES GREEN, A=AMBER, Y=YELLOW)	RAC	RIGID ALUMINUM CONDUIT
S _K	KEY OPERATED SWITCH 48" AFF (UNO)				RFC	RIGID FIBERGLASS CONDUIT
S _L	SWITCH WITH LIGHTED HANDLE	(R)	- PILOT LIGHT (LED) N	ON PUSH-TO-TEST	RSC	RIGID STEEL CONDUIT
\$ <u></u>	MANUAL MOTOR STARTER		- THERMAL OVERLOAD	>	SE	SERVICE ENTRANCE
\$,	SWITCH WITH PILOT LIGHT 48" AFF (UNO)	\	- MAGNETIC OVERLOA	D	SPD	SURGE PROTECTION DEVICE
, \$ _T	TIME WALL SWITCH 48" AFF (UNO)		DIGH BITTON NODY	TILA OBENIVIO,	SPDT	SINGLE-POLE, DOUBLE-THROW
D	DIMMER OPERATED SWITCH 48" AFF (UNO)	0 0	PUSH BUTTON NORMA		SPST	SINGLE-POLE, SINGLE-THROW STANDARD TEST CONDITIONS
•	OCCUPANCY SENSOR - WALL MOUNTED 48" AFF (UNO)	مله	PUSH BUTTON NORMA	NLLY CLOSED (NC)	SW	SWITCH
05	= 360° OCCUPANCY SENSOR - CEILING MOUNTED.	H A			TEL	TELECOM
OS	= 180° ARROWS INDICATE COVERAGE, DIRECTION & PATTERN, PROVIDE WITH POWER PACK PER		HAND-OFF-AUTO /UO	A) SELECTOR SWITCH	TTB	TELEPHONE TERMINATION BOARD
<i>OS</i>	= 90° MFG REQUIREMENTS.)	, y JEED ION JAHON	TYP	TYPICAL
	CONTROL STATION			III w games Alak	UL	UNDERWRITER'S LABORATORY
	CONTACTOR OR RELAY		LIMIT SWITCH NORMA	•	UNO	UNLESS NOTED OTHERWISE
PO	PHOTOELECTRIC CELL (ON ROOF FACING NORTH UNO)	0-0	LIMIT SWITCH NORMA	ALLY CLOSED (NC)	UNSW	UNSWITCHED
(S)	TIMECLOCK	UPS UNINTERRUPTED POWER SUPPL				
			PUSH BUTTON ILLUMIN	NATED (LED)	VA VA	VOLTS VOLT AMPS
		0 0			VFD	VARIABLE FREQUENCY DRIVE
		INGLE POLE	CIRCUIT BREAKER	L = LIGHTING	N	WATTS
	SYMBOLS SHOWN ARE USED WITHIN THIS SET OF SIGHTS GIVEN ARE TO CENTER LINE OF DEVICE.	WO POLE CI	RCUIT BREAKER	R = RECEPTACLES	MP	WEATHER PROOF

20/3 THREE POLE CIRCUIT BREAKER

20A ARC FAULT CIRCUIT BREAKER

206 GFI CIRCUIT BREAKER

20C CONTROLLABLE CIRCUIT BREAKER

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MI = LARGEST MOTOR

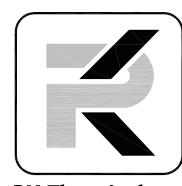
K = KITCHEN EQUIP H = ELECTRIC HEAT

E = EQUIPMENT

M = MOTOR

(X) EXISTING TO BE REMOVED

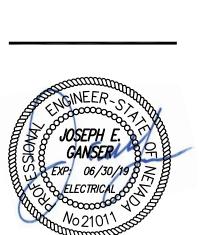
XFMR OR XF TRANSFORMER



PK Electrical, Inc.

681 Sierra Rose Dr., Ste. B Reno, Nevada 89511 775.826.9010 5105 DTC Pky, Ste 420 Greenwood Village, CO 80111 720.481.3290

pkelectrical.com



heater Ō ntin Sdu /ictoria

> REVISIONS / | 2-8-18 PLAN CHECK

SHEET TITLE ELECTRICAL LEGEND, FIXTURE SCHEDULE, &

03/15/18 JOB NUMBER: PROJECT MGR:

SECTION 16000 ELECTRICAL SPECIFICATIONS

ITEM DESCRIPTION

PART I - GENERAL

- SUMMARY

 THE WORK UNDER THIS DIVISION SHALL CONSIST OF ALL LABOR, MATERIALS, EQUIPMENT, SERVICES AND RELATED ACCESSORIES, ETC. NECESSARY AND REQUIRED TO COMPLETE ALL WORK AS SHOWN OR INFERRED ON THE DRAWINGS AND IN THE SPECIFICATIONS (CONTRACT DOCUMENTS).
- PROVIDE FIXED ELECTRICAL EQUIPMENT, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
 PROVIDE EQUIPMENT AND/OR WIRING NORMALLY FURNISHED OR REQUIRED FOR COMPLETE ELECTRICAL SYSTEMS BUT NOT SPECIFICALLY SPECIFIED ON THE DRAWINGS AND/OR IN CRECUEICATIONS. AS THOUGH CRECUEICA BY BOTH.
- SPECIFICATIONS, AS THOUGH SPECIFIED BY BOTH.
 ALL EQUIPMENT AND WIRING SHALL BE NEW, EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED OTHERWISE.
- ADOPTED CODES
 INTERNATIONAL BUILDING CODE (IBC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL (ICC).
 NATIONAL ELECTRICAL CODE (NEC) PUBLISHED BY THE NATIONAL FIRE PROTECTION
- ASSOCIATION (NFPA).

 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) PUBLISHED BY THE INTERNATIONAL CODE COUNCIL. ASHRAE / IESNA STANDARD 90.1-2004 IS INCORPORATED BY REFERENCE.
- ALL APPLICABLE PROVISIONS OF THE NEVADA REVISED STATUTES (NRS) AND THE NEVADA ADMINISTRATIVE CODE (NAC), INCLUDING THOSE LISTED BELOW.

 DEFINITIONS
- PROVIDE FURNISH, INSTALL, CONNECT AND TEST UNTIL COMPLETE
 WIRE FURNISH ALL NECESSARY WIRING, CONNECT AND TEST UNTIL COMPLETE
 INSTALL FURNISH, SET IN PLACE, WIRE AND TEST UNTIL COMPLETE
 WATERIALS, COMPLETE, XINSTALL ED. CONNECTED AND TESTED UNTIL COMP
- WORK MATERIALS COMPLETELY INSTALLED, CONNECTED, AND TESTED UNTIL COMPLETE EQUAL ACCEPTABLE EQUAL AS DETERMINED BY THE ENGINEER

 REQUIREMENTS OF REGULATORY AGENCIES

 OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK, COMPLY WITH ALL ORDINANCES PERTAINING TO WORK DESCRIBED HEREIN, PAY ALL EXPENSES ARISING
- FROM THE PROCUREMENT OF THESE CERTIFICATES AND INCLUDE IN THE BASE CONTRACT PRICE.

 INSTALL WORK UNDER THIS DIVISION PER DRAWINGS, SPECIFICATIONS, LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, (NFPA-70) INCLUDING LOCAL AMENDMENTS AND INTERPRETATIONS, LOCAL ADOPTED BUILDING CODES, AND ANY SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK WITHIN COMPLETE INSTALLATION. IN EVENT OF CONFLICT, INSTALL WORK PER MOST STRINGENT CODE REQUIREMENTS DETERMINED BY
- JURISDICTION OVER SPECIFIC PORTIONS OF WORK WITHIN COMPLETE INSTALLATION. IN EVENT OF CONFLICT, INSTALL WORK PER MOST STRINGENT CODE REQUIREMENTS DETERMINED BY ENGINEER. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.

 ALL MATERIALS, PRODUCTS, DEVICES, FIXTURES, FORMS OR TYPES OF CONSTRUCTION INCLUDED IN THIS PROJECT SHALL MEET OR EXCEED THE PUBLISHED REQUIREMENTS OF NATIONAL
- ELECTRICAL CODE (NEC), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) AND NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATIONS (NEMA). ALL EQUIPMENT SHALL BEAR THE UNDERWRITER'S LABORATORIES (UL) LABEL OR EQUIVALENT FROM APPROVED INDEPENDENT TESTING LABORATORY.

 ARRANGE, PAY FEES FOR AND COMPLETE WORK TO PASS REQUIRED TESTS BY AGENCIES
- ARRANGE, PAY FEES FOR AND COMPLETE WORK TO PASS REQUIRED TESTS BY AGENCIES
 HAVING AUTHORITY OVER WORK. DELIVER TO ENGINEER COPIES OF THE CERTIFICATES OF
 INSPECTION AND APPROVAL ISSUED BY AUTHORITIES AND PROVIDE ORIGINAL COPY OF EACH
 CERTIFICATE TO OWNER.
 WHEN REQUIRED BY LAW OR REGULATIONS, THE GOVERNMENTAL AGENCY HAVING JURISDICTION
- WHEN REQUIRED BY LAW OR REGULATIONS, THE GOVERNMENTAL AGENCY HAVING JURISDICTION FOR INSPECTIONS SHALL BE GIVEN REASONABLE NOTICE AND OPPORTUNITY TO INSPECT THE WORK. ANY WORK THAT IS ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST SHALL BE UNCOVERED AT THE CONTRACTOR'S EXPENSE; AFTER IT HAS BEEN INSPECTED, THE CONTRACTOR SHALL RESTORE THE WORK TO ITS ORIGINAL CONDITION AT HIS OWN EXPENSE.
- DRAWINGS AND SPECIFICATIONS
 DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY, WORK CALLED FOR BY ONE IS
 BINDING AS IF CALLED FOR BY BOTH, ANY DISCREPANCIES BETWEEN DRAWINGS AND
 SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION
 DURING THE BIDDING PERIOD. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE
 CONTRACTOR BY REASON OF HIS FAILURE TO HAVE BROUGHT SAID DISCREPANCIES TO THE
 ATTENTION OF THE CONSULTANT DURING THE BIDDING PERIOD OR BY REASON OF ANY ERROR
- ON THE CONTRACTOR'S PART.

 DRAWINGS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. DRAWINGS SHOW GENERAL RUN OF CIRCUITS AND APPROXIMATE LOCATION OF EQUIPMENT. THE CONTRACTOR SHALL REVIEW DRAWINGS OF ALL TRADES TO ASSURE COORDINATION PRIOR TO PLACEMENT OF WORK. RIGHT IS RESERVED TO CHANGE LOCATION OF EQUIPMENT AND DEVICES, AND ROUTING OF CONDUITS WITHIN IO FEET, WITHOUT EXTRA COST TO OWNER (PRIOR TO ROUGH-IN).
- USE DIMENSIONS IN FIGURES, SHOP DRAWINGS, ETC. AND ACTUAL SITE MEASUREMENTS IN PREFERENCE TO SCALED DIMENSIONS. DO NOT SCALE DRAWINGS FOR EXACT SIZES OR LOCATIONS USE DIMENSIONED DETAILS OR ACTUAL FIELD CONDITIONS. VERIFY ITEM MOUNTING HEIGHTS AS REQUIRED BY PROJECT CONDITIONS PRIOR TO ROUGH-IN.

ITEM DESCRIPTION

- LAYOUT EQUIPMENT AS SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE. VERIFY ACCESS
 REQUIREMENTS FOR EQUIPMENT ACTUALLY FURNISHED, AND ADJUST LAYOUT TO COMPLY WITH
 NEC IIO. RIGHT IS RESERVED TO CHANGE LAYOUT WITHIN IO FEET WITHOUT ADDITIONAL COST
 (PRIOR TO ROUGH-IN).
 THE CONTRACTOR IS RESPONSIBLE TO FIELD MEASURE AND CONFIRM THE MOUNTING HEIGHTS
 AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, DOORWAYS, AND
 OTHER ARCHITECTURAL, MECHANICAL OR STRUCTURAL WORK. DO NOT SCALE DISTANCES OFF
- THE ELECTRICAL DRAWINGS, USE ACTUAL BUILDING DIMENSIONS.

 EXECUTION OF CONTRACT IS EVIDENCE THAT CONTRACTOR HAS EXAMINED ALL EXISTING CONDITIONS, DRAWINGS AND SPECIFICATIONS RELATED TO WORK, AND IS INFORMED AS TO EXTENT AND CHARACTER OF WORK, LATER CLAIMS FOR LABOR AND MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.
- ALL WORK CALLED FOR IN THIS SECTION OF THE PLANS AND SPECIFICATIONS SHALL BE PERFORMED UNDER THIS SECTION, REGARDLESS OF WHETHER SUCH WORK MAY ALSO HAVE BEEN CALLED FOR IN OTHER SECTION(S). DISCREPANCIES IN OR CONFLICTS AMONG THE VARIOUS PARTS OF THE CONTRACT DRAWINGS SHALL NOT RELIEVE CONTRACTOR OF HIS OBLIGATION TO PERFORM.
 CHARGES FOR EXTRA WORK ARE NOT ALLOWED UNLESS WORK IS AUTHORIZED BY WRITTEN

ORDER FROM THE OWNER'S REPRESENTATIVE APPROVING CHARGES FOR WORK.

- COPYRIGHT
 THESE PLANS, SPECIFICATIONS, AND ALL RELATED ADDENDA AND DOCUMENTS CONSTITUTE
 COPYRIGHT MATERIALS OF PK ELECTRICAL. ALL RIGHTS CONFERRED BY THE COPYRIGHT AND
 SIMILAR LAWS ARE RESERVED TO PK ELECTRICAL. THESE MATERIALS SHALL REMAIN THE SOLE
 PROPERTY OF PK ELECTRICAL AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHERS OR USED
 FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF PK ELECTRICAL.
- SUBMITTALS

 BEFORE ORDERING ANY EQUIPMENT, CONTRACTOR SHALL SUBMIT SIX COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, RACEWAYS AND FITTINGS, ETC. PROPOSED FOR THIS PROJECT.
- SUBSTITUTIONS
 PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS.
 DETERMINATION OF EQUALITY RESTS SOLELY WITH ENGINEER, SUBSTITUTIONS MUST BE SUBMITTED A
 MINIMUM OF IO WORKING DAYS PRIOR TO BID FOR CONSIDERATION, PROPOSED SUBSTITUTIONS
 PROVIDED LATER WILL NOT BE REVIEWED OR ALLOWED, BID SUBSTITUTED MATERIAL WILL ONLY BE
 ALLOWED IF ACCEPTED IN WRITING BY ENGINEER.
- BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.

EXAMINATION OF SITE AND EXISTING CONDITIONS

- EXISTING OUTLETS
 EXISTING OUTLETS AND CIRCUITING NOT IN CONFLICT WITH NEW CONDITIONS SHALL REMAIN, EXTEND OUTLETS TO NEW SURFACES, CAULK AND PROVIDE JUMBO PLATES AS REQUIRED TO PRESENT A SERVICEABLE AND FINISHED APPEARANCE.
- EXISTING SWITCHGEAR
 REUSE EXISTING SWITCHGEAR AND PANELS IN PLACE WHERE SO INDICATED, MODIFY AS REQUIRED
 TO ACCOMMODATE NEW WORK, PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED,
 MATCH AIC RATINGS, REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL
 SCHEDULES, TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW RECORD PANEL SCHEDULES.
 EXISTING PANELBOARDS
- RING OUT CIRCUITS IN EXISTING PANELS, WHERE ADDITIONAL CIRCUITS ARE NEEDED REUSE CIRCUITS AVAILABLE FOR REUSE, INSTALL NEW BREAKERS AS INDICATED ON DRAWINGS, MATCH AIC RATINGS.
 TAG UNUSED CIRCUITS AS SPARE.
- WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, USE SENSING MEASURING DEVICES TO VERIFY THAT CIRCUITS FEEDING PROJECT AREA ARE NOT IN USE OR OVERLOADED.
 REMOVE EXISTING WIRE NO LONGER IN USE FROM PANEL TO EQUIPMENT.
 PROVIDE NEW UPDATED TYPED DIRECTORIES.

PART 2 - PRODUCTS 2.I MATERIALS

ALL MATERIAL SHALL BE NEW, AND HAVE A UL LABEL WHERE AVAILABLE. IF UL LABEL IS NOT AVAILABLE, MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE NEMA, IEEE AND FEDERAL STANDARDS. USE UL LABELED COMPONENTS IN ASSEMBLIES THAT DO NOT HAVE OVERALL UL LABEL. ALL EQUIPMENT SHALL COMPLY WITH THE TERMS "LISTED AND LABELED" AS DEFINED IN THE NEC 70, ARTICLE 100. SUBMIT LETTER STATING COMPLIANCE WITH THESE REQUIREMENTS.

ITEM DESCRIPTION

PART 3 - EXECUTION

- ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE
 ("SPECIFICATION GRADE"). BLANK PLATES SHALL BE STAINLESS STEEL WITH TAMPERPROOF
- ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT, OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE.
- 2.2 CIRCUITING

 ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW
- ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW INSULATED-THROAT FITTINGS SHALL BE USED IN DRY, PROTECTED INTERIOR LOCATIONS ABOVE IO' AFF. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN BELOW IO' AFF WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE.
- 2.3 | <u>MIRING</u>

 MIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE #12 AWG.

 INSULATION SHALL BE THW, THWN OR THHN.
- UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES, GROUND WIRES SHALL BE GREEN,
 NEUTRAL WIRES SHALL BE WHITE (120V) OR GREY (2TTV) AND PHASE WIRES SHALL BE BLACK
 (PHASE A), RED (PHASE B), AND BLUE (PHASE C) FOR A 120/208 VOLT SYSTEM AND BROWN
 (PHASE A), ORANGE (PHASE B), AND YELLOW (PHASE C) FOR A 2TT/480 VOLT SYSTEM.
- VISIT TO SITE
 VISIT SITE, AND SURVEY EXISTING CONDITIONS AFFECTING WORK PRIOR TO BID. INCLUDE
 NECESSARY MATERIALS AND LABOR TO ACCOMPLISH THE ELECTRICAL WORK, NO CONSIDERATION
 SHALL BE GIVEN TO FUTURE CLAIMS DUE TO EXISTING CONDITIONS, ANY DISCREPANCIES OR
 INTERFERENCES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- MORKMANSHIP

 ALL WORK PERFORMED SHALL BE FIRST CLASS WORK IN EVERY ASPECT. THE WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN THEIR RESPECTIVE TRADES, WHO SHALL AT ALL TIMES BE UNDER THE SUPERVISION OF COMPETENT PERSONS. ALL WORK SHALL BE INSTALLED TO
- BE UNDER THE SUPERVISION OF COMPETENT PERSONS. ALL WORK SHALL BE INSTALLED TO COMPLY WITH NECA'S "STANDARD OF INSTALLATION."

 IN ADDITION TO THE MATERIALS SPECIFIED ELSEWHERE, FURNISH AND INSTALL ALL OTHER MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THE WORK TO THE EXTENT THA
- MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THE WORK TO THE EXTENT THAT ALL SYSTEMS ARE COMPLETE AND OPERATIVE.

 CONDUIT SYSTEMS MUST BE COMPLETE PRIOR TO INSTALLATION OF WIRING.

 3.3 CHANGE ORDERS
- ADDITIONAL WORK MAY BE REQUIRED ON THE PROJECT WHICH IS OUTSIDE THE SCOPE OF THE CONTRACT, SUCH ADDITIONAL WORK WILL BE DESCRIBED IN SUPPLEMENTAL INSTRUCTIONS AND/OR CLARIFICATIONS, TO BE ESTIMATED AND PRICED BY THE CONTRACTOR, AND ACCEPTED BY THE OWNER, PRIOR TO COMMENCING WORK, PROPOSALS SHALL INCLUDE A LIST OF QUANTITIES OF ALL MATERIAL BEING USED WITH UNIT COSTS BROKEN DOWN INTO MATERIAL AND LABOR COSTS PER UNIT. CONTRACTOR SHALL PROVIDE ACTUAL EQUIPMENT QUOTES WHEN REQUESTED BY ENGINEER.
- REQUESTED BY ENGINEER.

 MATERIAL COSTS AND LABOR UNITS SHALL NOT EXCEED THE LATEST EDITION OF RS MEANS ELECTRICAL COST DATA.
- 3.4

 GUARANTEE

 FURNISH THE OWNER A WRITTEN GUARANTEE, STATING THAT IF THE WORKMANSHIP AND/OR
 MATERIAL EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN (I) YEAR AFTER THE
 FINAL ACCEPTANCE BY THE OWNER, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE
 - PINAL ACCEPTANCE BY THE OWNER, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED. SUBMIT WITH OPERATION AND MAINTENANCE MANUALS.

 OBTAIN FROM THE VARIOUS MANUFACTURERS OR VENDORS GUARANTEES OR WARRANTIES FOR THEIR PARTICULAR EQUIPMENT OR COMPONENTS, AND DELIVER THEM TO THE OWNER. ALL GUARANTEES AND WARRANTIES PROVIDED SHALL BE REFERENCED TO THIS PROJECT.
 - IN EVENT THAT SYSTEMS ARE PLACED IN OPERATION IN SEVERAL PHASES AT THE OWNER'S REQUEST, GUARANTEE WILL BEGIN ON DATE EACH SYSTEM OR ITEM OF EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER. PROVIDE O#M MANUALS FOR ALL EQUIPMENT WHEN EQUIPMENT IS ACCEPTED FOR SERVICE BY THE OWNER.
- ALL GUARANTEES AND WARRANTIES SHALL INCLUDE LABOR AND MATERIAL AT THE SITE OF INSTALLATION FOR THE DURATION OF THE GUARANTEE PERIOD.

 OBSERVATIONS OF WORK AND DEMONSTRATION OF OPERATION (ACCEPTANCE)
- OBSERVATIONS OF WORK AND DEMONSTRATION OF OPERATION (ACCEPTANCE)

 AT ALL OBSERVATIONS OF WORK, OPEN PANEL COVERS, JUNCTION BOX COVERS, PULL BOX COVERS, DEVICE COVERS, AND OTHER EQUIPMENT WITH REMOVABLE PLATES FOR OBSERVATION AS REQUESTED BY AHJ OR ENGINEER. PROVIDE SUFFICIENT PERSONNEL TO EXPEDITE COVER REMOVAL AND REPLACEMENT.
- CONTRACTOR TO DEMONSTRATE OPERATION OF NEW EQUIPMENT AND/OR SYSTEMS TO SATISFACTION OF OWNER/ENGINEER, CONTRACTOR TO HAVE MANUFACTURER AVAILABLE FOR DEMONSTRATION OF EQUIPMENT AND/OR SYSTEMS WHERE REQUESTED BY OWNER/ENGINEER, FURNISH AFFIDAVIT SIGNED BY OWNER'S REPRESENTATIVE INDICATING THAT DEMONSTRATION OF OPERATION HAS BEEN PERFORMED,

ITEM DESCRIPTION

- DELIVERY, STORAGE AND HANDLING

 DELIVER EQUIPMENT AND MATERIALS TO JOB SITE IN ORIGINAL, UNOPENED, LABELED CONTAINER. PRODUCTS SHALL BE PROPERLY IDENTIFIED WITH NAMES, MODEL NUMBERS, TYPES, GRADES, COMPLIANCE LABELS AND OTHER INFORMATION NEEDED FOR IDENTIFICATION. STORE TO PREVENT DAMAGE AND INJURY. STORE MATERIALS TO PREVENT CORRODING. STORE FINISHED MATERIALS AND EQUIPMENT TO PREVENT STAINING AND DISCOLORING. STORE MATERIALS AFFECTED BY CONDENSATION IN WARM DRY AREAS. PROVIDE HEATERS. CONTRACTOR SHALL VERIFY THE AVAILABILITY OF ON SITE STORAGE SPACE, IF NO ON SITE STORAGE SPACE IS AVAILABLE THEN THE CONTRACTOR SHALL COVER THE COST FOR OFF SITE STORAGE. MATERIALS STORED AT THE PROJECT SITE THAT BECOMES SOILED WITH CONSTRUCTION DIRT, CONCRETE, OR MOISTURE SHALL BE REMOVED FROM THE SITE AND REPLACED WITH NEW, DO NOT INSTALL SOILED MATERIAL.
 - INSTALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. CONFLICTS BETWEEN CONTRACT DOCUMENTS AND THESE RECOMMENDATIONS SHALL BE REFERRED TO ENGINEER FOR REMEDY.
 ELECTRICAL OR ELECTRONIC EQUIPMENT THAT HAS BEEN DAMAGED, EXPOSED TO WEATHER OR IS, IN THE OPINION OF THE ENGINEER OR ARCHITECT, OTHERWISE UNSUITABLE BECAUSE OF IMPROPER FABRICATION, STORAGE OR INSTALLATION SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR AT HIS EXPENSE.
- PROVIDE ANCHORS FOR ALL EQUIPMENT, RACEWAYS, HANGERS, ETC. TO SAFELY SUPPORT WEIGHT OF ITEM INVOLVED PLUS 100% FOR DEAD LOADS, LIVE LOADS SHALL BE CONSIDERED.
 - IN ADDITION TO DEAD LOADS.

 ANCHORS TO CONSIST OF EXPANSION TYPE DEVICES SIMILAR TO "REDHEAD" OR LEAD EXPANSION ANCHORS, PLASTIC ANCHORS ARE NOT ACCEPTABLE.
- USE PRESET ANCHOR STEEL INSERTS IN CONCRETE SLABS, PROVIDE PRESET ANCHOR SIZE AND TYPE FOR ANTICIPATED OR SPECIFIED ROD/BOLT SIZE AND LIVE/DEAD LOAD, CLEANING AND PAINTING
- CLEAN EQUIPMENT FURNISHED IN THIS DIVISION AFTER COMPLETION OF WORK. CLEAN WIPE THE INTERIOR OF ALL CONDUIT, PULLBOXES, JUNCTION BOXES, AND OUTLET BOXES, SOILED WITH DIRT AND DEBRIS PRIOR TO INSTALLATION OF WIRING.
 - DIRT AND DEBRIS PRIOR TO INSTALLATION OF WIRING.

 TOUCH-UP OR RE-PAINT DAMAGED PAINTED FINISHES AS DETERMINED BY THE ENGINEER.

 RECORD DRAWINGS

 CONTRACTOR SHALL PROVIDE PRIOR TO FINAL ACCEPTANCE AND OBSERVATION ONE-SET OF
- CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE-SET OF REVISED RECORD ELECTRICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM. ALSO INCLUDE THE FOLLOWING INFORMATION:

 CONTRACTOR SHALL PROVIDE A DOCUMENTS ON REPRODUCIBLE MEDIUM. ALSO INCLUDE THE FOLLOWING INFORMATION:

 CONTRACTOR SHALL PROVIDE A DOCUMENTS ON REPRODUCIBLE MEDIUM.
- EXACT ROUTING OF ALL CONDUITS LARGER THAN ONE INCH.

 EXACT LOCATION OF ALL SERVICE GROUNDING/ BONDING CONNECTIONS.

 CONTRACTORS NAME, ADDRESS, AND TELEPHONE NUMBER.

 RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE
- TESTING

 3.10

 PRIOR TO PLACING IN SERVICES, ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR OPENS,
 GROUNDS, AND PHASE ROTATION. THE MAIN SERVICE GROUND AND ALL LOCAL TRANSFORMER
 MADE GROUNDS SHALL BE MEGGER-TESTED. PROVIDE GFI TESTING FOR SERVICE SWITCHBOARD.
- ONGOING OPERATIONS
 THE CONSTRUCTION WORK SHALL BE PHASED SO THAT THE PARKING GARAGE MAY REMAIN OPERATIONAL DURING THE COURSE OF THE PROJECT. DRIVING AISLES WILL NEED TO REMAIN AT LEAST PARTIALLY ACCESSIBLE TO ACCESS OTHER FLOORS. WORK MAY BE DONE ON A FLOOR-BY-FLOOR BASIS AND MAY BE CLOSED ENTIRELY OR PARTIALLY. CONTRACTOR SHALL COORDINATE A PHASING PLAN TO KEEP THE GARAGE OPERATIONAL WITH THE CITY OF SPARKS PROJECT MANAGER, ROBERT BIDART (775) 224-2976. CONDUCT WORK TO MINIMIZE DISRUPTION OF OWNER'S ONGOING OPERATIONS. PROVIDE BARRICADES, NOISE ABATEMENT AND DUST CONTAINMENT MEASURES TO ENSURE THE SAFETY AND COMFORT OF PATRONS, STAFF, AND WORKERS. INTERRUPTIONS OF EXISTING POWER SYSTEMS SHALL BE PERFORMED ONLY AT SUCH TIMES AS DIRECTED BY THE OWNER. OUTAGES SHALL BE MOMENTARY IN NATURE. EACH SUCH OUTAGE (OR OPERATION WHICH MAY POSE RISK OF AN ACCIDENTAL OUTAGE) SHALL BE SCHEDULED 48 HOURS IN ADVANCE.
- DISPOSAL PROCEDURES (FLUORESCENT BULBS, BALLASTS, AND LIGHT FIXTURES)
 THESE MATERIALS DO NOT REQUIRE SPECIAL TRAINING TO REMOVE OR PACKAGE.
 THE CONTRACTOR SHALL CONTRACT WITH WASTE MANAGEMENT LAMPTRACKER OR SIMILAR RECYCLING COMPANY TO RECYCLE THE LAMPS (FLUORESCENT BULBS) AND BALLASTS REMOVED DURING THE PROJECT, THE COSTS TO RECYCLE THESE MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE DISPOSAL AND COSTS OF NON-REGULATED MATERIALS (LIGHT FIXTURES) IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS REQUIRED TO RECYCLE AS MUCH MATERIAL AS POSSIBLE.

END OF SECTION 16000

MANUALS PRIOR TO FINAL PAYMENT.



PK Electrical, Inc.
681 Sierra Rose Dr., Ste. B

Reno, Nevada 89511

5105 DTC Pky, Ste 420

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Greenwood Village, CO 80111 720.481.3290

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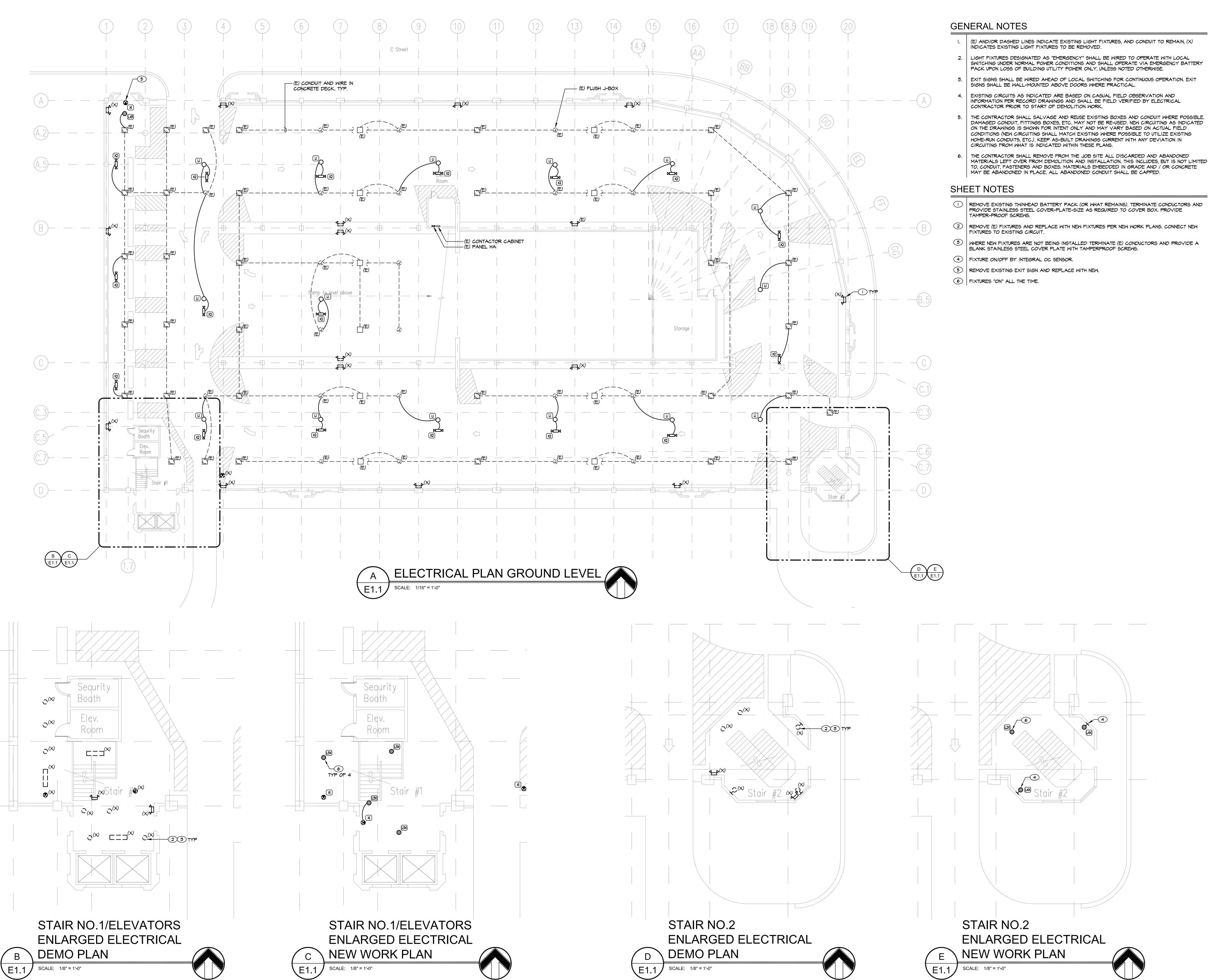
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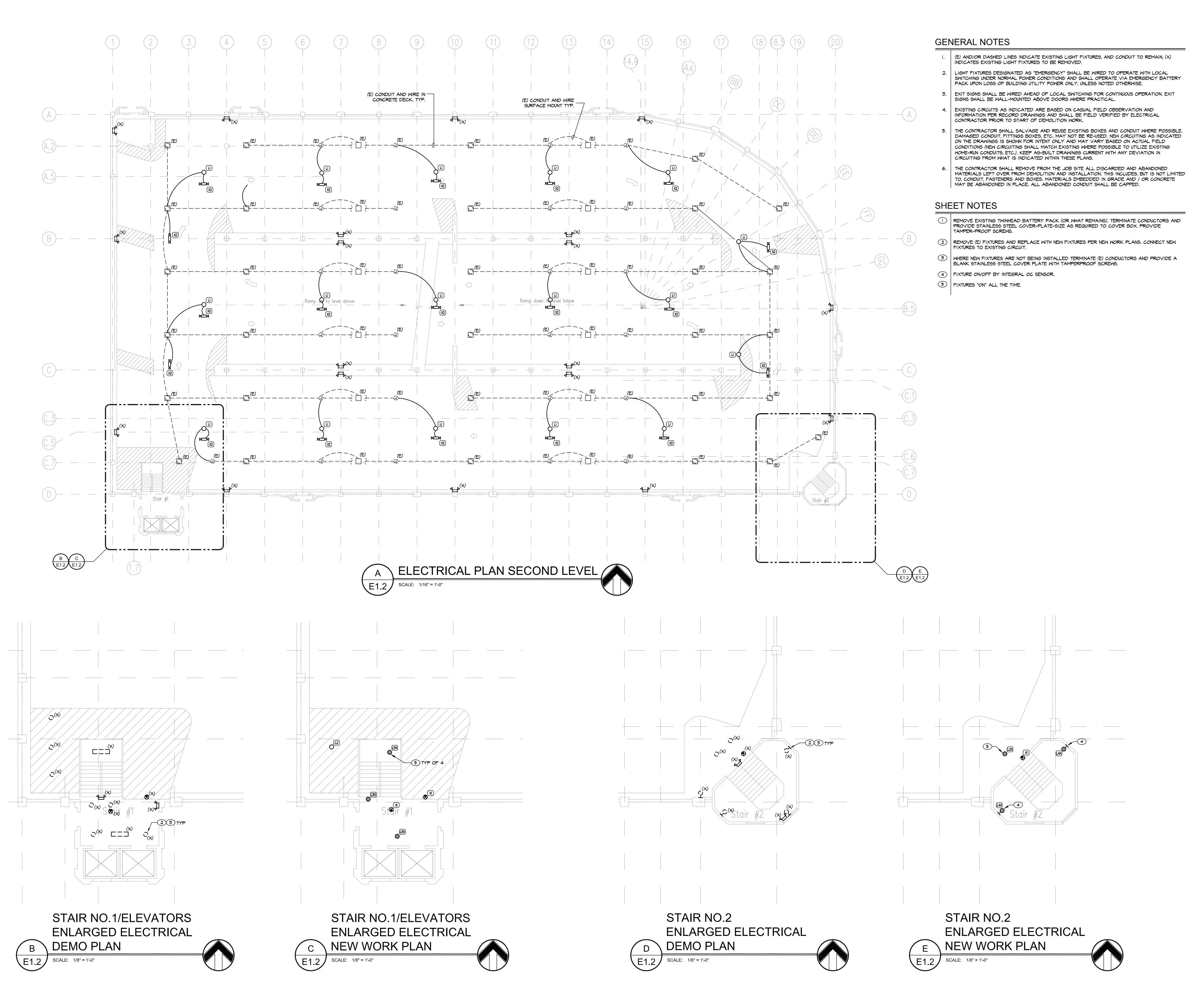
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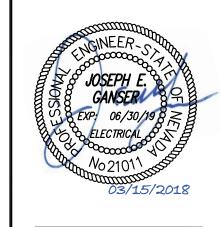
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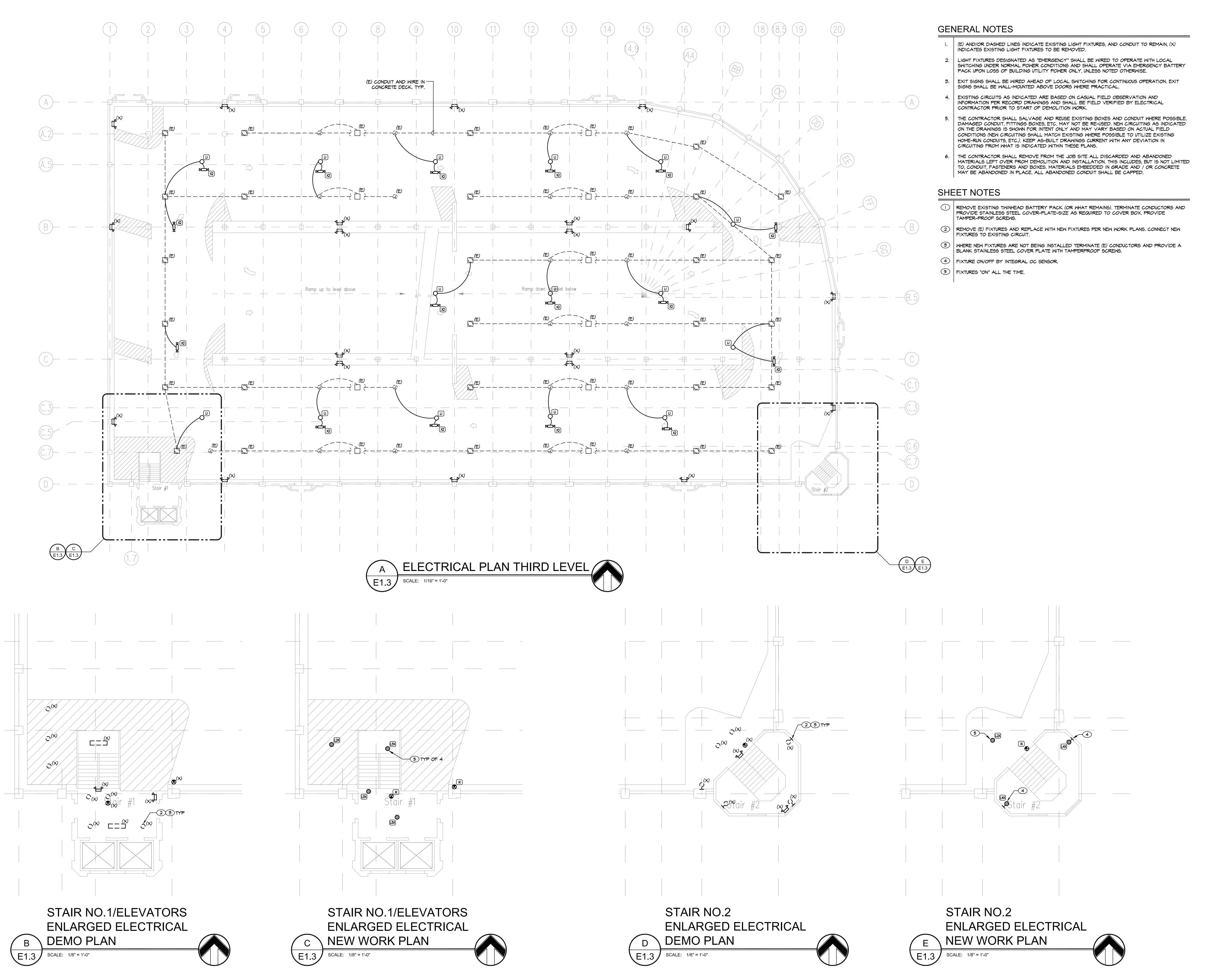
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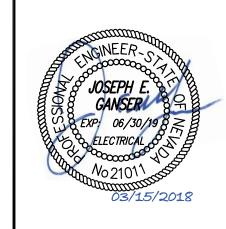




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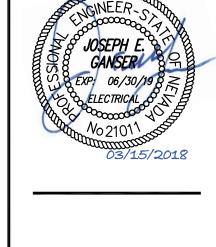
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