			ROIS
NOTF· T⊦	ELECTRICA IIS IS A TYPICAL SYNBOL LIST, NOT ALL SYMBOLS ARE USED ON T	-	
SYMBOL	EXPLANATION	SYMBOL	EXPLANATION
	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL	\$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)
	BRANCH CIRCUIT CONCEALED IN GROUND OR FLOOR		3 3-WAY SWITCH 4 4-WAY SWITCH
	BRANCH CIRCUIT HOMERUNS TO PANEL		D DIMMER SWITCH 2 TWO POLE SWITCH
DOWN	Conduit stub – vertical		K KEYED SWITCH
O_UP			T TIMER SWITCH M MANUAL STARTER WITH THERMAL OVERLOAD
	CONDUIT STUB – HORIZONRAL (CAP CONDUIT)		F EXHAUST FAN TIMER SWITCH ∞ OCCUPANCY SENSOR SWITCH
FLUSH	PANELBOARD – 480Y/277 VOLT		P PILOT LIGHT
SURFACE	PANELBOARD – 208Y/120 VOLT, 208/120 VOLT, 240/120 VOLT	\$°\$Þ	L LOW VOLTAGE SWITCH CONTROLLING SWITCH (LETTER INDICATES CONTROL CIRCUIT)
$\langle X \rangle$	MECHANICAL EQUIPMENT SYMBOL		
	KITCHEN EQUIPMENT SYMBOL	\$\$	DOUBLE GANG SWITCH
$\otimes$	KEYED NOTE REFERENCE	Ś	OCCUPANCY SENSOR SWITCH (CELLING MOUNTED)
J CEILING		Ô	DAY LIGHTING SENSOR SWITCH (CELLING MOUNTED)
H) WALL	JUNCTION BOX - POWER	I	MOTOR (NUMBER INDICATES HORSEPOWER)
C CEILING FC WALL		Ъ	THERMOSTAT OUTLET
	JUNCTION BOX – COMMUNICATIONS SYSTEM (TELEPHONE/DATA)	নি	EXHAUST FAN (CEILING MOUNTED)
Ð	DUPLEX RECEPTACLE	୍ର ପ୍ର	
	WP		BELL
	REF     →     EQUIPMENT DESIGNATION       WP     WEATHERPROOF COVER	•	PUSHBUTTON
	+44" MOUNTING HEIGHT ABOVE FLOOR OR GRADE GIVEN IN INCHES REF REFRIGERATOR	:	STOP/START STATION
	DW DISHWASHER DISP DISPOSAL	Ê.	"EMERGENCY POWER OFF" MUSHROOM TYPE BUTTON
	WASH WASHING MACHINE		SOUND SYSTEM AMPLIFIER
	MW MICROWAVE OVEN GROUND FAULT DUPLEX RECEPTACLE	μ	
-		FV S ceiling	SOUND SYSTEM VOLUME CONTROL
	QUAD RECEPTACLE	HS WALL	SOUND SYSTEM SPEAKER
-	GROUND FAULT QUAD RECEPTACLE	FLOOR	SOUND SYSTEM MICROPHONE
<b></b>	SPLIT WIRED DUPLEX RECEPTACLE	—s—	SOUND SYSTEM CONDUIT
₩₽	DUPLEX RECEPTACLE WEATHERPROOF WITH GFCI	WALL FLOOR	TELEPHONE OUTLET
EWC	DUPLEX RECEPTACLE FOR ELECTRIC WATER COOLER (EWC)	V WALL	COMPUTER DATA OUTLET
 ●	220V RECEPTACLE	FLOOR	DATA AND VOICE OUTLET
_		FLOOR	
<b>⊕</b> =	ISOLATED GROUND RECEPTACLE	TV (P) CEILING	TELEVISION OUTLET
$( \ )$	DUPLEX RECEPTACLE - FLOOR MOUNTED	HP CEILING	PHOTOCELL
$\square$	DUPLEX RECEPTACLE - CEILING MOUNTED	TS	TIME SWITCH
۲	SPECIAL RECEPTACLE	LC	LIGHTING CONTACTOR
	POWER/DATA/TELEPHONE POLE	Ē	FIRE ALARM PULL STATION
ΦΦΦ	MUTI-OUTLET WIREWAY		FIRE ALARM HORN/STROBE
			· · · · · · · · · · · · · · · · · · ·
	DRY TYPE TRANSFORMER (PLAN VIEW)	Ø	FIRE ALARM STROBE
	DISTRIBUTION SWITCHBOARD	(2)	SMOKE DETECTOR (SUBSCIPT AS INDICATED BELOW)
	TELEPHONE AND/OR DATA TERMINAL BOARD		CO SMOKE AND CARBON MONOXIDE DETECTOR COMBINATION B SMOKE DETECTOR BATTERY-BACKED
- Non-Fused - Fused	DISCONNECT SWITCH		D DUCT SMOKE DETECTOR R SMOKE DETECTOR WITH ELEVATOR RECALL MODULE
NON-FUSED	DISCONNECT SWITCH WITH MOTOR STARTER	0	HEAT DETECTOR
	MOTOR STARTER	@	TAMPER SWITCH
VFD	VARIABLE FREQUENCY DRIVE	گ ^	FLOW SWITCH
	FLUORESCENT FIXTURE (TYPICAL)		POST INDICATION VALVE
EM	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT OR WITH EMERGENCY BATTER PACK	ହ	DOOR HOLDER
ο¤	CEILING MOUNTED FIXTURE	K	FIRE/SMOKE DAMPER
Ø	PENDANT MOUNTED FIXTURE	[]	ADA TWO-WAY AUDIO VISUAL COMMUNICATIONS UNIT
		СМ	CONTROL MODULE
	RECESSED FIXTURE		
Ю	WALL MOUNTED FIXTURE	MM	MONITOR MODULE
Ю	HID WALL PACK	•	CARBON MONOXIDE GAS DETECTOR
<b></b>	FLUORESCENT STRIP	FACP	FIRE ALARM CONTROL PANEL
	TRACK LIGHTING	[VOICE]	FIRE ALARM VOICE PANEL
\$_\$	EMERGENCY LIGHTING UNIT	FAA ]	FIRE ALARM REMOTE ANNUNCIATOR PANEL
F1 © CEILING	FIXTURE TYPE SYMBOL		NAC PANEL
€H WALL	EXIT LIGHT (SINGLE FACE)		INTERCOM CALL BUTTON
CEILING	EXIT LIGHT (DOUBLE FACE)	S CEILING HS WALL	INTERCOM SYSTEM SPEAKER
♦€ CEILING ♦€H WALL	EXIT LIGHT WITH DIRECTIONAL ARROW (SINGLE FACE)	৸৾৾৾৾৾	INTERCOM SYSTEM EXTERIOR WALL MOUNTED PA SPEAKER
CEILING	EXIT LIGHT WITH DIRECTIONAL ARROW(S) (DOUBLE FACE)	[INTC]	MASTER INTERCOM CONTROL
(			
42X	FEEDER TAG (SEE FEEDER SCHEDULE)	$\bigcirc$	CLOCK SYSTEM WALL CLOCK

AFG AFP AIC AL BG C CFCI CKT CO CU C/w DISP DRY DW EM (E)	DISHWASHER EMERGENCY
AFP AIC AL BG C CFCI CKT CO CU C/w DISP DRY DW EM (E)	ARC FAULT PROTECTOR AMP INTERRUPTING CURRENT (SYMMETRICAL) ALUMINUM BELOW GRADE CONDUIT CONTRACTOR FURNISHED CONTRACTOR INSTALLED CIRCUIT CONDUIT ONLY COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
AIC AL BG C CFCI CKT CO CU C/w DISP DRY DW EM (E)	AMP INTERRUPTING CURRENT (SYMMETRICAL) ALUMINUM BELOW GRADE CONDUIT CONTRACTOR FURNISHED CONTRACTOR INSTALLED CIRCUIT CONDUIT ONLY COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
AL BG CFCI CKT CO CU C/w DISP DRY DW EM (E)	ALUMINUM BELOW GRADE CONDUIT CONDUIT CONTRACTOR FURNISHED CONTRACTOR INSTALLED CIRCUIT CONDUIT ONLY COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
BG CFCI CKT CO CU C/w DISP DRY DW EM (E)	BELOW GRADE CONDUIT CONTRACTOR FURNISHED CONTRACTOR INSTALLED CIRCUIT CONDUIT ONLY COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
C CFCI CKT CO CU C/w DISP DRY DW EM (E)	CONDUIT CONTRACTOR FURNISHED CONTRACTOR INSTALLED CIRCUIT CONDUIT ONLY COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
CFCI CKT CO CU C/w DISP DRY DW EM (E)	CONTRACTOR FURNISHED CONTRACTOR INSTALLED CIRCUIT CONDUIT ONLY COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
CKT CO CU DISP DRY DW EM (E)	CIRCUIT CONDUIT ONLY COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
CO CU C/w DISP DRY DW EM (E)	Conduit only Copper Conduit with Disposal Dryer Dishwasher Emergency
CU C/w DISP DRY DW EM (E)	COPPER CONDUIT WITH DISPOSAL DRYER DISHWASHER EMERGENCY
DISP DRY DW EM (E)	DISPOSAL DRYER DISHWASHER EMERGENCY
DISP DRY DW EM (E)	DISPOSAL DRYER DISHWASHER EMERGENCY
DW EM (E)	DISHWASHER EMERGENCY
DW EM (E)	DISHWASHER EMERGENCY
(E)	
	<b>EVICTINO</b>
	EXISTING
	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
	ELECTRIC WATER HEATER
(F)	FUTURE
• •	FIRE ALARM
FLA	FULL LOAD AMPS
FRZ	FREEZER
FS	FUSED SWITCH
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GRC	GALVANIZED RIGID CONDUIT
GRD	GROUND
IG	ISOLATED GROUND
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MW	MICROWAVE
(N)	NEW
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NFS	NON-FUSED SWITCH
	NOT TO SCALE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
ofoi	OWNER FURNISHED OWNER INSTALLED
PNL	PANEL
(R)	RELOCATE
REF	REFRIGERATOR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
	WASHER
	WEATHER PROOF
•••	DEMOLISH/DELETE
	TRANSFORMER
(XP)	EXPLOSION PROOF

- 2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE GENERAL CONTRACTOR.
- 3. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO DUCTS, PIPING, OR EQUIPMENT FOREIGN TO THE ENTER, OR PASS THROUGH ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS. THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE MOST RECENT VERSION OF THE NATIONAL ELECTRICAL CODE REGARDING CLEARANCES REQUIRED AROUND THE PANELBOARD(S).
- 4. DO NOT SCALE DRAWINGS VERIFY DIMENSIONS IN FIELD PRIOR TO MAKING ANY Rough-INS.
- FLOOR PLANS PRIOR TO ROUGH IN OF ELECTRICAL DEVICE JUNCTION BOXES.
- FIXTURES, SPEAKERS, SMOKE DETECTORS ETC.
- 7. ELECTRICAL CONTRACTOR SHALL MEET WITH THE CEILING AND MECHANICAL REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO DUCT, PIPING AND CEILING INSTALLATIONS.
- THE MECHANICAL EQUIPMENT.
- DRAWINGS TO VERIFY AND MAINTAIN REQUIRED CLEARANCES.
- EACH PIECE OF EQUIPMENT REQUIRING POWER. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE PROJECT ENGINEER.
- AND TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
- 12. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
- 13. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE WITH EQUIPMENT ACTUALLY SUPPLIED.
- IN CONDUCTORS SMALLER THAN #10 AWG.
- THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
- 16. ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 21/8" UNLESS OTHERWISE INSTALL PROPER PLASTER RINGS.
- OUTLETS.
- WITH ONE PIECE COVERPLATE.
- BOLTS ARE NOT ACCEPTED.
- COVER PLATES FOR ALL JUNCTION BOXES WHERE DEVICES HAVE NOT YET BEEN INSTALLED.
- WITH FIRE RATED MATERIAL. 3M IS AN APPROVED MANUFACTURER.
- 22. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
- 23. NO WIRING SHALL RUN IN DUCT WORK.
- AND INCLUDE IN HIS BID PACKAGE ALL CHARGES DUE TO EXISTING CONDITIONS. SHOP DRAWINGS ARE REQUIRED.
- THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
- 26. ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.

1. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND OTHER DRAWINGS PRIOR TO BID.

GENERAL CONTRACTOR TO PROVIDE AND INSTALL TEMPORARY POWER FOR PROJECT CONSTRUCTION AS REQUIRED. ALL ENERGY COSTS ARE THE RESPONSIBILITY OF THE

OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN,

5. ELECTRICAL CONTRACTOR SHALL REVIEW ALL ARCHITECTS ELEVATIONS, SECTIONS AND

6. CONSULT ARCHITECT'S REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF LIGHTING

CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, CEILING TYPES AND ROUGH-IN

8. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. REFER TO THE MECHANICAL SHEETS FOR THE EXACT LOCATION OF

9. ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH-INS. CONSULT CONTRACT DOCUMENT DRAWINGS AND SHOP

10. CONTRACTOR SHALL VERIFY ACTUAL ELECTRICAL LOADS FROM NAMEPLATE RATINGS OF

11. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD

CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE

14. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED

15. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO

SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND

17. COORDINATE WITH THE OWNER AND ARCHITECT FOR THE EXACT LOCATION OF THE

18. LIGHT SWITCHES INSTALLED ADJACENT TO EACH OTHER, SHALL BE GANGED TOGETHER

19. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR

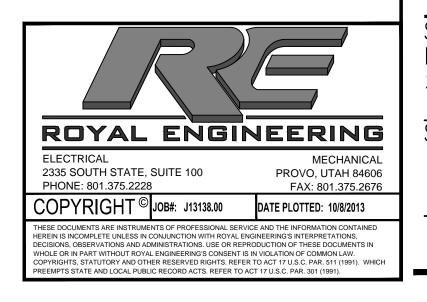
20. AT THE END OF THE JOB, PROVIDE BLANK COVER PLATES TO MATCH THE OTHER

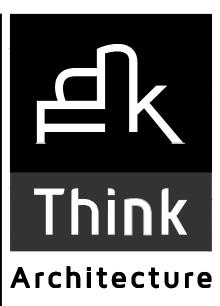
21. SEAL AROUND ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS

24. PRIOR TO SUBMITTING A BID THE ELECTRICAL CONTRACTOR SHALL INSPECT THE SITE

25. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL

CONNECTION REQUIREMENT, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS



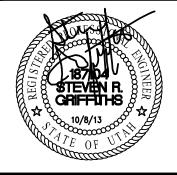


Architecture Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

he designs shown and described herein including all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.

These drawings are available for limited review and evaluation by clients, consultants, contractors, government agencies, vendors, and office personnel only in accordance with this notice.



SШ RECOVERY WAYS CHATHAM HOUSE EET 385 WEST 4800 SOUTH STR MURRAY, UTAH 84123

PROJECT NO. 13016

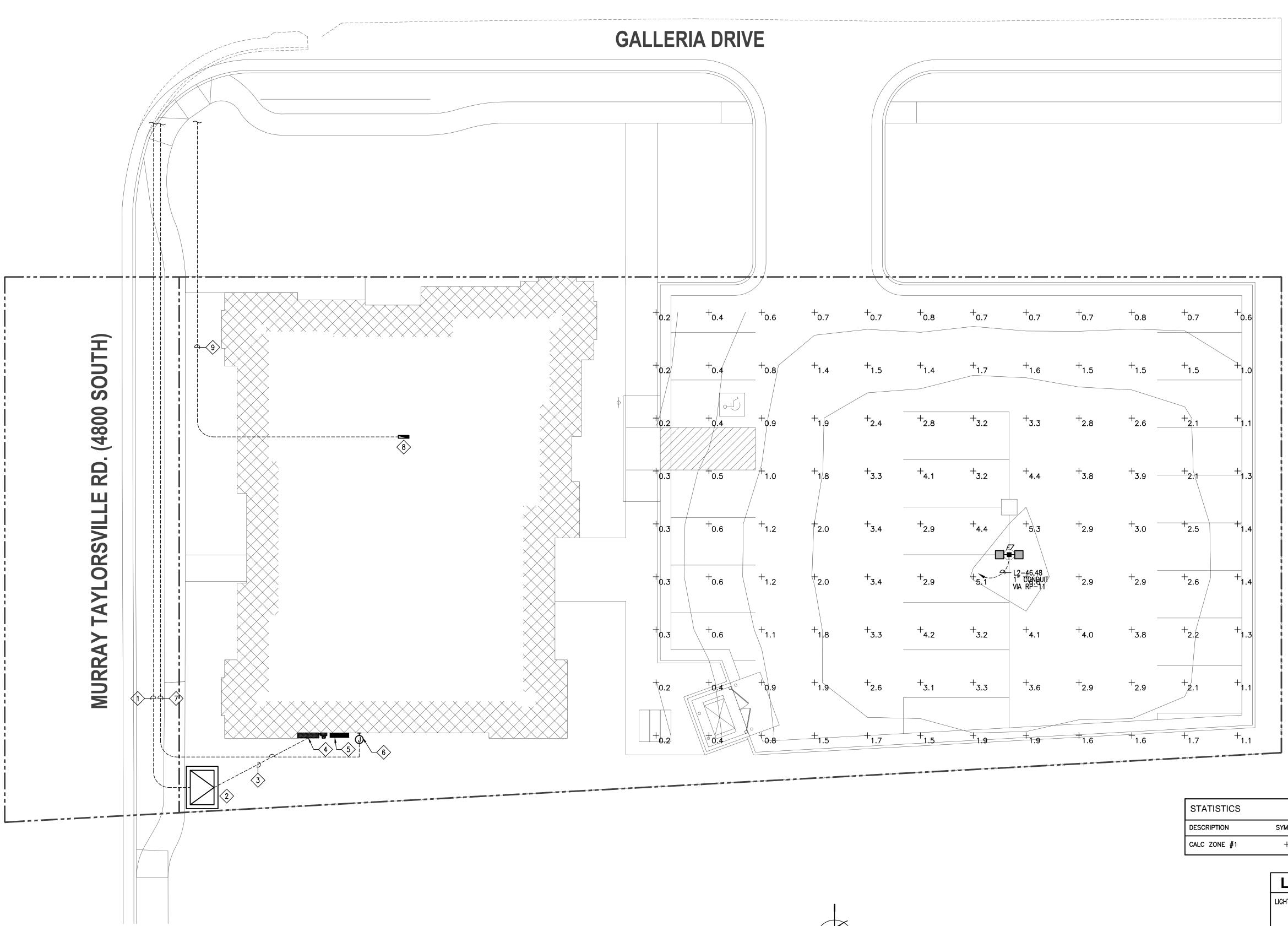
DATE: 30, SEPT. 2013

**REVISIONS:** 

1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

SHEET TITLE ELECTRICAL LEGEND, SYMBOLS, & NOTES







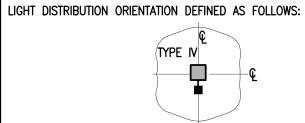
- 1. ELECTRICAL CONTRACTOR TO REFER TO THE CIVIL ENGINEER'S DRAWING AND COORDINATE ELECTRICAL INSTALLATION WITH ALL UTILITIES.
- 2. ELECTRICAL CONTRACTOR TO VERIFY ALL THE UTILITY COMPANY SERVICE (POWER, TELEPHONE, ETC.) TERMINATION POINTS DURING THE BIDDING PROCESS. PROVIDE CONDUIT AS REQUIRED TO THE BUILDING TO ACCOMMODATE ALL UTILITY COMPANY SERVICES. REPORT ANY CONFLICTING CONDITIONS TO THE ARCHITECT.

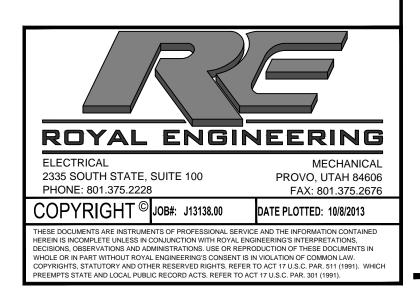
#### **KEYED NOTES**

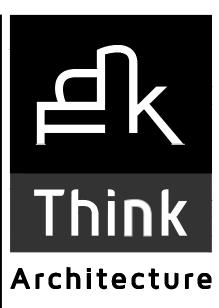
- PRIMARY FEEDER CONDUIT FROM GROUND SLEEVE TO TRANSFORMER VAULT, SEE ONE LINE DIAGRAM. PROVIDE ALL TRENCHING AND BACKFILL. FIELD VERIFY GROUND SLEEVE LOCATION PRIOR TO ROUGH-IN.
- $\langle 2 \rangle$  TRANSFORMER VAULT. PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. VAULT MUST MEET CURRENT POWER COMPANY SPECIFICATIONS. INSTALLATION MUST BE AS PER CURRENT POWER COMPANY STANDARDS. FIELD VERIFY THE LOCATION WITH THE POWER COMPANY PRIOR TO ROUGH-IN.
- (3) MAIN FEEDER CONDUIT, REFER TO THE ONE LINE DIAGRAM. PROVIDE ALL TRENCHING AND BACKFILL.
- (4) COMMERCIAL GRADE CT ENCLOSURE, AS PER CURRENT POWER COMPANY STANDARDS. REFER TO THE ONE LINE DIAGRAM.
- $\langle 5 \rangle$  main switchboard 'mdp'. Refer to the one line diagram.
- 6 CABLE TELEVISION SERVICE JUNCTION BOX. REFER TO THE COMMUNICATIONS RISER DIAGRAM.
- CABLE TELEVISION SERVICE CONDUIT. REFER TO COMMUNICATIONS SYSTEM RISER DIAGRAM.
- (8) MAIN TELEPHONE BOARD, REFER TO THE COMMUNICATIONS SYSTEMS  $\checkmark$  riser diagram.
- (9) MAIN TELEPHONE CONDUIT. REFER TO THE COMMUNICATIONS RISER DIAGRAM. FIELD VERIFY SERVICE TERMINATION POINT WITH UTILITY COMPANY PRIOR TO ROUGH-IN.

ATISTICS						
CRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
C ZONE #1	+	1.9 FC	6.6 FC	0.2 FC	33.0:1	9.5:1

# LIGHT DISTRIBUTION NOTES:





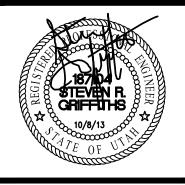


#### Architecture Interior Design Landscape Architecture Land Planning Construction Management

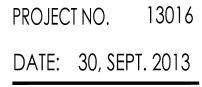
5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

he designs shown and described herein includin all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.

These drawings are available for limited review and evaluation by clients, consultants, contractors, government agencies, vendors, and office personnel only in accordance with this notice.



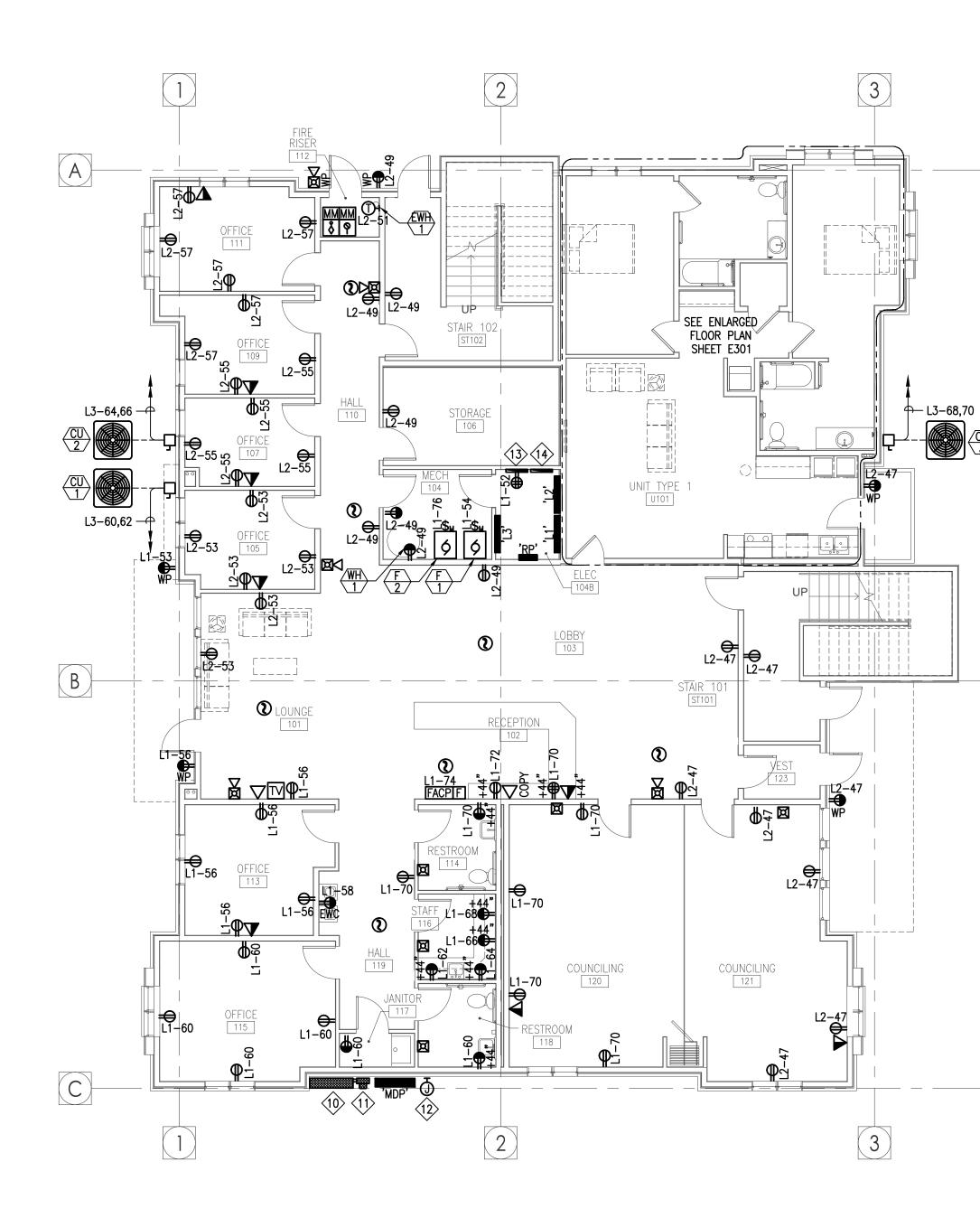




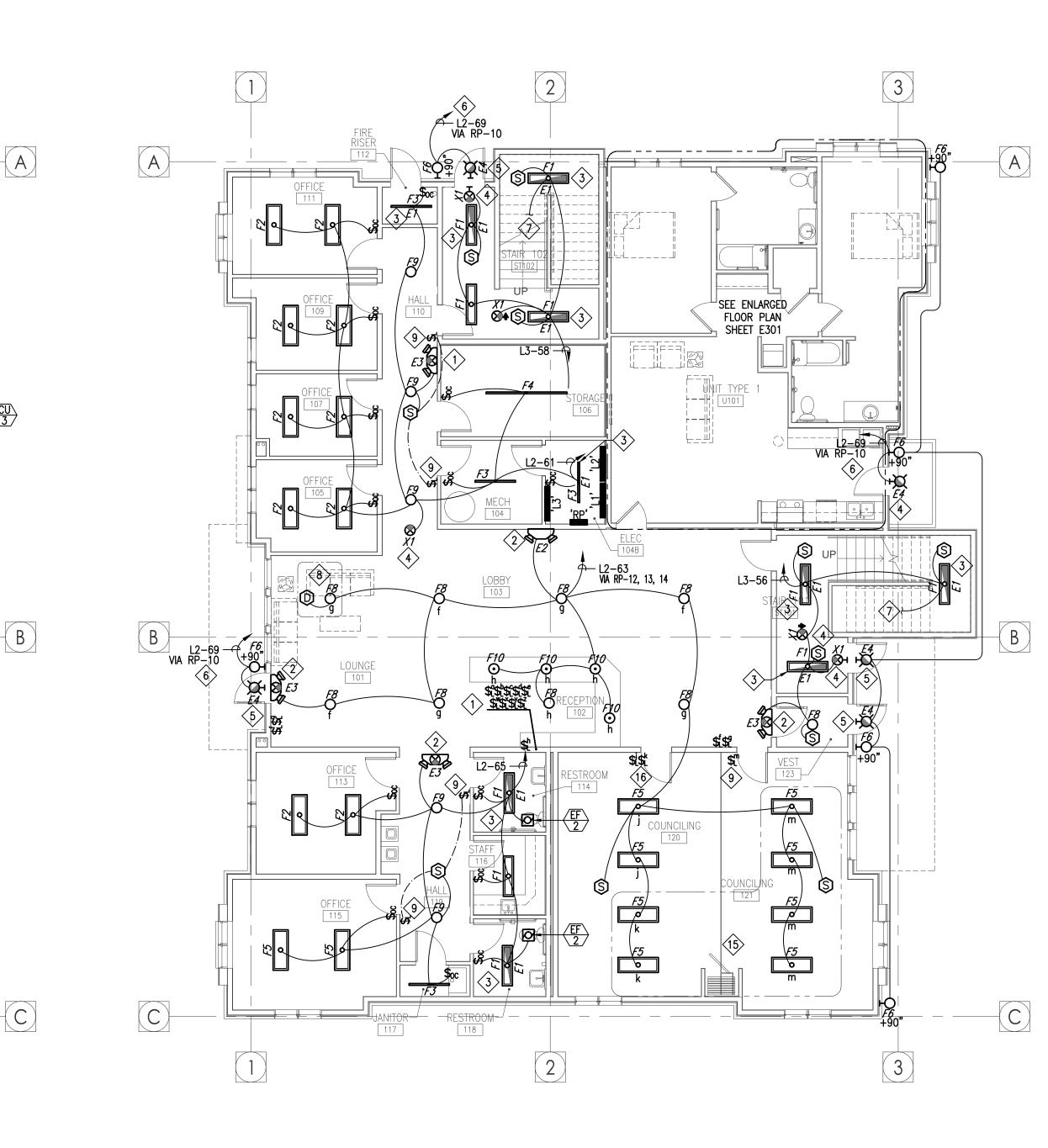
**REVISIONS:** 

1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1







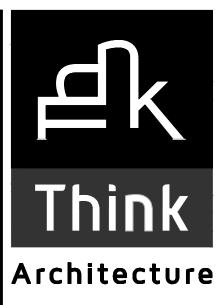




- ALL WALL MOUNTED MOTION SENSORS SHALL BE A DUAL TECHNOLOGY MOTION SENSOR WITH INTEGRAL OVERRIDE SWITCH. MOTION SENSOR TO MOUNT IN A STANDARD SWITCH BOX. MOTION SENSOR TO HAVE A FIFTEEN MINUTE TIME DELAY SET AT TEN MINUTES. USE HUBBELL, SENSOR SWITCH, LEVITON, OR APPROVED EQUAL.
- ALL CEILING MOUNTED MOTION SENSORS SHALL BE A DUAL TECHNOLOGY MOTION SENSOR WITH POWER PACK AS REQUIRED TO CONTROL LIGHTING. MOTION SENSOR TO HAVE A FIFTEEN MINUTE DELAY SET AT TEN MINUTES. CONTRACTOR TO SUBMIT FLOOR PLAN TO MOTION SENSOR SUPPLIER FOR FACTORY TO LOCATE MOTION SENSOR FOR OPTIMAL PERFORMANCE TO AVOID NUISANCE SHUT OFF OF LIGHTING. MANUFACTURERS LAYOUT PLAN TO BE PART OF SUBMITTALS. PROVIDE SUFFICIENT BOX DEPTH AND CORRECT PLASTER RING TO ACCOMMODATE ACTUAL RELAY UNIT AND OCCUPANCY SENSOR INSTALLED. PROVIDE PROPER SEPARATION OF 120 VOLT AND CLASS 2 WIRING AS NECESSARY IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE. USE HUBBELL, SENSOR SWITCH, LEVITON OR APPROVED EQUAL.
- SUB-LETTERS NEXT TO SWITCHES INDICATE SWITCHING ASSIGNMENTS. ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL ALL NECESSARY CONDUIT, WIRE, JUNCTION BOXES, ETC., AS REQUIRED TO EXTEND CIRCUITING FROM WALL BOX AND/OR THE LIGHTING CONTROL PANEL TO FIXTURES FOR SWITCHING ASSIGNMENTS. LOWER CASE LETTERS ON OR NEAR FIXTURES INDICATE CONTROLLING SWITCHES. SWITCH LEG(S) NOT SHOWN.
- H. MULTI-WIRE BRANCH CIRCUITS: ELECTRICAL CONTRACTOR TO COMPLY WITH THE NATIONAL ELECTRICAL CODE, ARTICLE 210.4, MULTI-WIRE BRANCH CIRCUITS. ELECTRICAL CONTRACTOR TO ALLOW FOR DRANCH CIRCUITS. MULTI-WIRE BRANCH CIRCUIT WIRE AMPACITY ADJUSTMENT AS PER ARTICLE 310, TABLE 310.15(B)(2)(A) OF THE NATIONAL ELECTRICAL CODE.

## **KEYED NOTES**

- $\langle 1 \rangle$  location of low voltage switches to control television duplex RECEPTACLES LOCATED IN TENANT LIVING ROOMS. REFER TO SHEETS E401 AND E402 FOR LOCATIONS OF THE DUPLEX RECEPTACLES.
- $\langle 2 \rangle$  Emergency light fixture to be unswitched, provide continuous CIRCUIT. CONNECT TO UNSWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED, REFER EMERGENCY BALLAST WIRING DETAIL.
- $\langle 3 \rangle$  Emergency light fixture to be switched. Connect to switched CONDUCTOR ON BRANCH CIRCUIT INDICATED, REFER TO THE EMERGENCY BALLAST WIRING DETAIL.
- EXIT SIGN TO BE UNSWITCHED, PROVIDE CONTINUOUS CIRCUIT. CONNECT TO UNSWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED.
- $\langle 5 \rangle$  EMERGENCY EGRESS FIXTURE ON EM BATTERY PACK, MOUNTED ON BUILDING EXTERIOR ABOVE THE DOOR, CONNECT TO UNSWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED.
- (6) CIRCUIT VIA LIGHTING CONTROL PANEL 'RP', REFER TO THE LIGHTING CONTROL DETAIL. PROVIDE A SWITCHED AND UNSWITCHED CIRCUIT(S) AS REQUIRED.
- $\langle 7 \rangle$  BRANCH CIRCUIT UP TO LIGHTING FIXTURE ON LEVEL 2.
- $\langle 8 \rangle$  daylighting zone. Refer to day lighting zone connection DIAGRAM.
- 9 LOW VOLTAGE OVERRIDE SWITCH. REFER TO MOTION SENSOR WITH LOW VOLTAGE SWITCH OVERRIDE DETAIL.
- COMMERCIAL GRADE CT ENCLOSURE AS PER POWER COMPANY STANDARDS. REFER TO THE ONE LINE DIAGRAM.
- COMMERCIAL GRADE METER BASE AS PER POWER COMPANY STANDARDS. REFER TO THE ONE LINE DIAGRAM.
- (12) CABLE TELEVISION SERVICE JUNCTION BOX. REFER TO THE COMMUNICATIONS SYSTEM RISER DIAGRAM.
- $\langle 13 \rangle$  main telephone board. Refer to the communications system riser DIAGRAM.
- CABLE TELEVISION TERMINAL BOARD. REFER TO THE COMMUNICATIONS SYSTEM RISER DIAGRAM.
- (15) DAYLIGHTING ZONE.
- (16) LOW VOLTAGE OVERRIDE SWITCH. REFER TO MOTION SENSOR WITH LOW VOLTAGE SWITCH OVERRIDE DETAIL (DUAL LEVEL).



#### Architecture

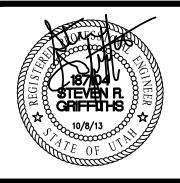
Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

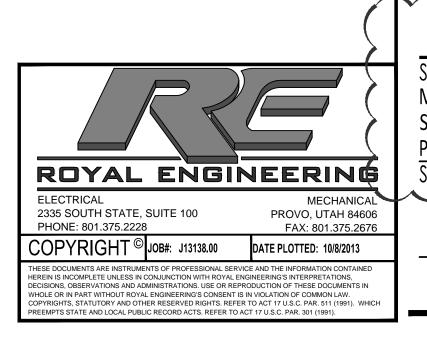
all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc

he designs shown and described herein includin

These drawings are available for limited review and evaluation by clients, consultants, contractors, government agencies, vendors, and office personnel only in accordance with this notice.



35 WEST 4800 SOUTH STREET	MIRRAY IITAH 84123
385	
	385 WEST 4800 SOUTH STREET



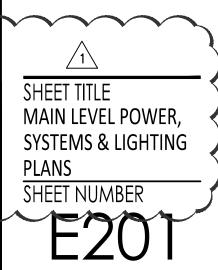


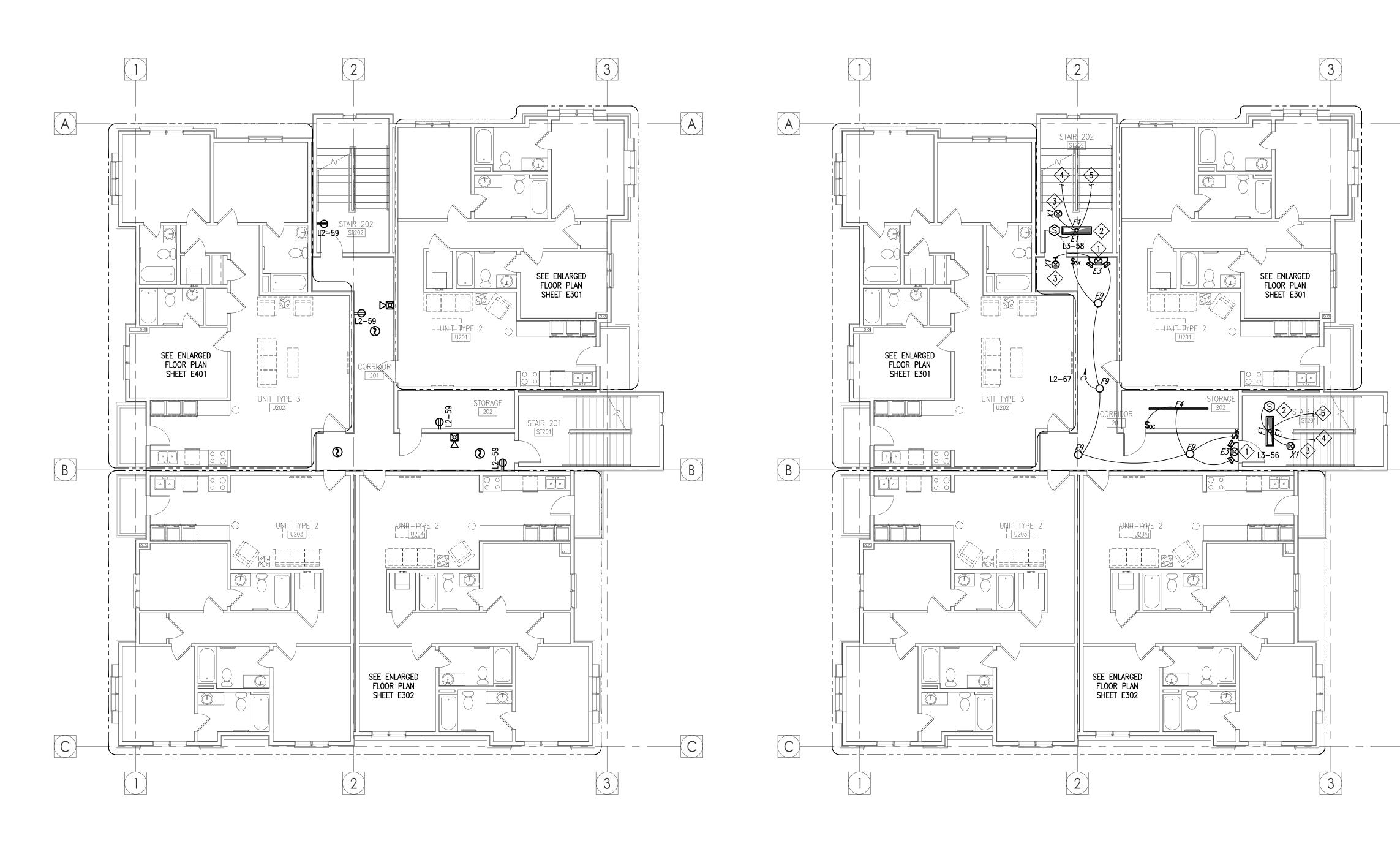
PROJECT NO. 13016

DATE: 30, SEPT. 2013

revisions:

1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1









# Think Architecture

# **GENERAL NOTES**

MULTI-WIRE BRANCH CIRCUITS: ELECTRICAL CONTRACTOR TO COMPLY WITH THE NATIONAL ELECTRICAL CODE, ARTICLE 210.4, MULTI-WIRE BRANCH CIRCUITS. ELECTRICAL CONTRACTOR TO ALLOW FOR MULTI-WIRE BRANCH CIRCUIT WIRE AMPACITY ADJUSTMENT AS PER ARTICLE 310, TABLE 310.15(B)(2)(A) OF THE NATIONAL ELECTRICAL CODE.

# KEYED NOTES

(A)

B

(C)

- DEMERGENCY LIGHT FIXTURE TO BE UNSWITCHED, PROVIDE CONTINUOUS CIRCUIT. CONNECT TO UNSWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED, REFER EMERGENCY BALLAST WIRING DETAIL.
- 2 EMERGENCY LIGHT FIXTURE TO BE SWITCHED. CONNECT TO SWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED, REFER EMERGENCY BALLAST WIRING DETAIL.
- 3 EXIT SIGN TO BE UNSWITCHED, PROVIDE CONTINUOUS CIRCUIT. CONNECT TO UNSWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED.
- 4 BRANCH CIRCUIT DOWN TO LIGHTING FIXTURES ON MAIN LEVEL.
- $\langle 5 \rangle$  branch circuit up to lighting fixtures on level three.

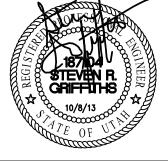


5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.

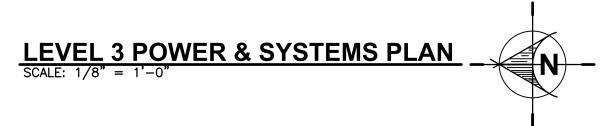
The designs shown and described herein including



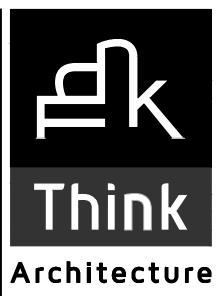


	RECOVERY WAYS CHATHAM HOUSE 385 WEST 4800 SOUTH STREET MURRAY, UTAH 84123
	PROJECT NO. 13016 DATE: 30, SEPT. 2013
	REVISIONS: 1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1
$\sum_{i=1}^{n}$	
	SHEET TITLE LEVEL 2 POWER, SYSTEMS & LIGHTING PLANS
ROYAL ENGINEERING         ELECTRICAL       MECHANICAL         2335 SOUTH STATE, SUITE 100       PROVO, UTAH 84606         PHONE: 801.375.2228       FAX: 801.375.2676         COPYRIGHT®       JOB#: J13138.00    DATE PLOTTED: 10/8/2013	SHEET NUMBER
THESE DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND THE INFORMATION CONTAINED HEREIN IS INCOMPLETE UNLESS IN CONJUNCTION WITH ROYAL ENGINEERING'S INTERPRETATIONS, DECISIONS, OBSERVATIONS AND ADMINISTRATIONS. USE OR REPRODUCTION OF THESE DOCUMENTS IN WHOLE OR IN PART WITHOUT ROYAL ENGINEERING'S CONSENT IS IN VIOLATION OF COMMON LAW. COPYRIGHTS, STATUTORY AND OTHER RESERVED RIGHTS. REFER TO ACT 17 U.S.C. PAR. 511 (1991). WHICH PREEMPTS STATE AND LOCAL PUBLIC RECORD ACTS. REFER TO ACT 17 U.S.C. PAR. 301 (1991).	









MULTI-WIRE BRANCH CIRCUITS: ELECTRICAL CONTRACTOR TO COMPLY WITH THE NATIONAL ELECTRICAL CODE, ARTICLE 210.4, MULTI-WIRE BRANCH CIRCUITS. ELECTRICAL CONTRACTOR TO ALLOW FOR MULTI-WIRE BRANCH CIRCUIT WIRE AMPACITY ADJUSTMENT AS PER ARTICLE 310, TABLE 310.15(B)(2)(A) OF THE NATIONAL ELECTRICAL CODE.

## **KEYED NOTES**

 $\square$ 

- EMERGENCY LIGHT FIXTURE TO BE UNSWITCHED, PROVIDE CONTINUOUS CIRCUIT. CONNECT TO UNSWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED, REFER EMERGENCY BALLAST WIRING DETAIL.
- 2 EMERGENCY LIGHT FIXTURE TO BE SWITCHED. CONNECT TO SWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED, REFER EMERGENCY BALLAST WIRING DETAIL.
- $\langle 3 \rangle$  branch circuit down to lighting fixtures on level two.
- 4 EXIT SIGN TO BE UNSWITCHED, PROVIDE CONTINUOUS CIRCUIT. CONNECT TO UNSWITCHED CONDUCTOR ON BRANCH CIRCUIT INDICATED.



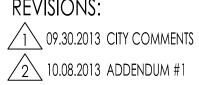
5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

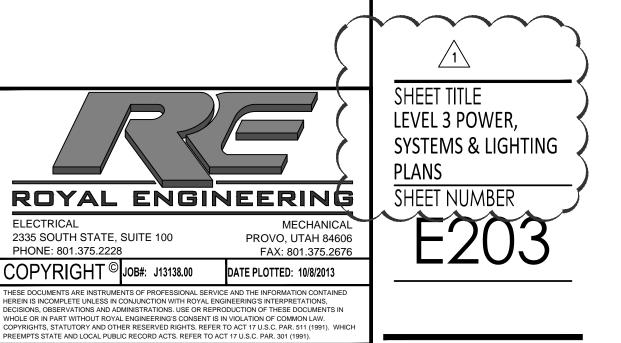
all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.

he designs shown and described herein including



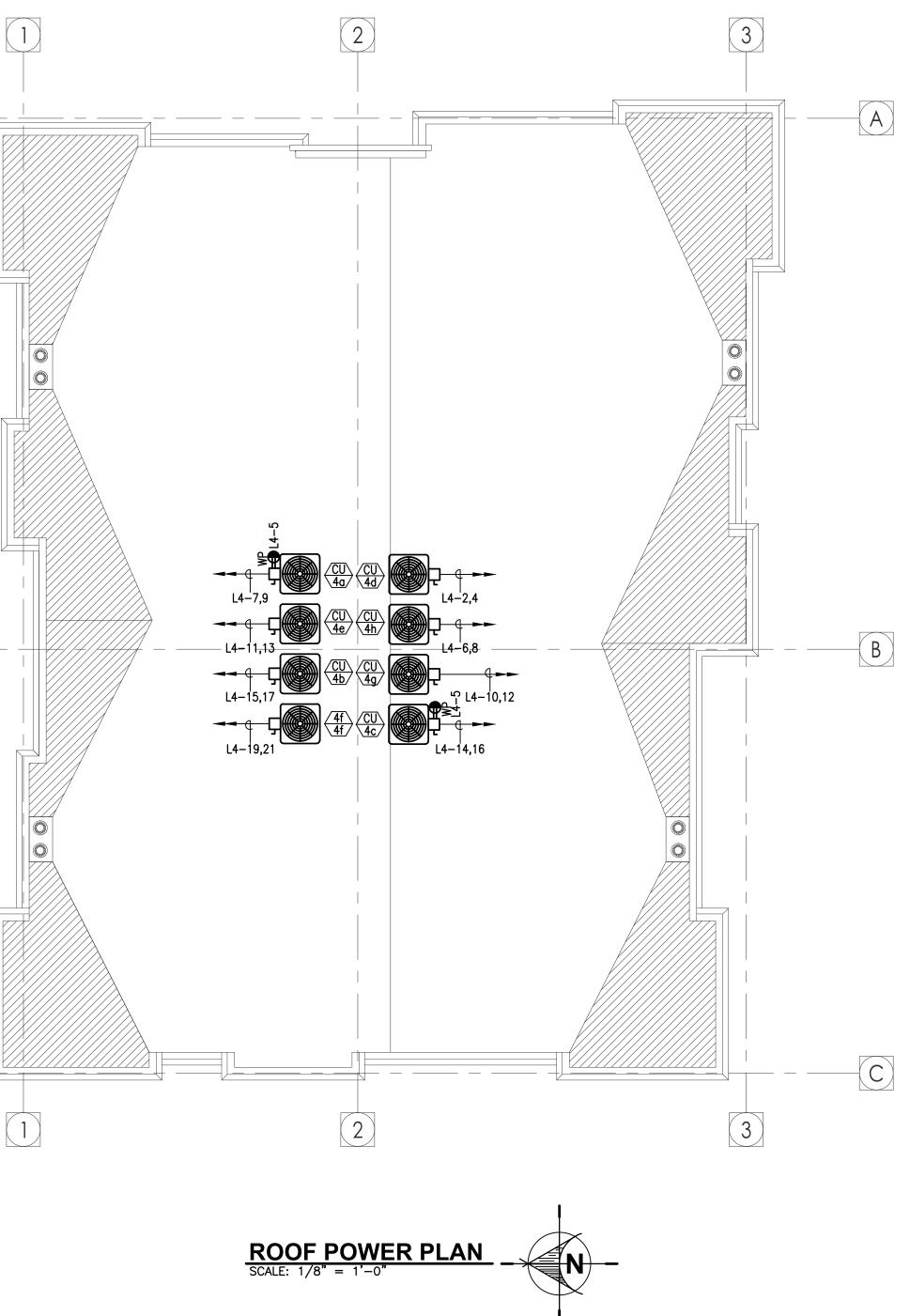


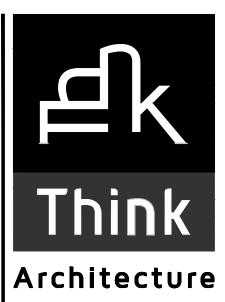




A B

С





Architecture Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

The designs shown and described herein including all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.





RECOVERY WAYS CHATHAM PLACE 385 WEST 4800 SOUTH STREET MURRAY, UTAH 84123

PROJECT NO. 13016

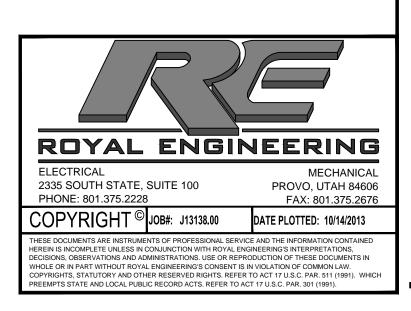
DATE: 30, SEPT. 2013

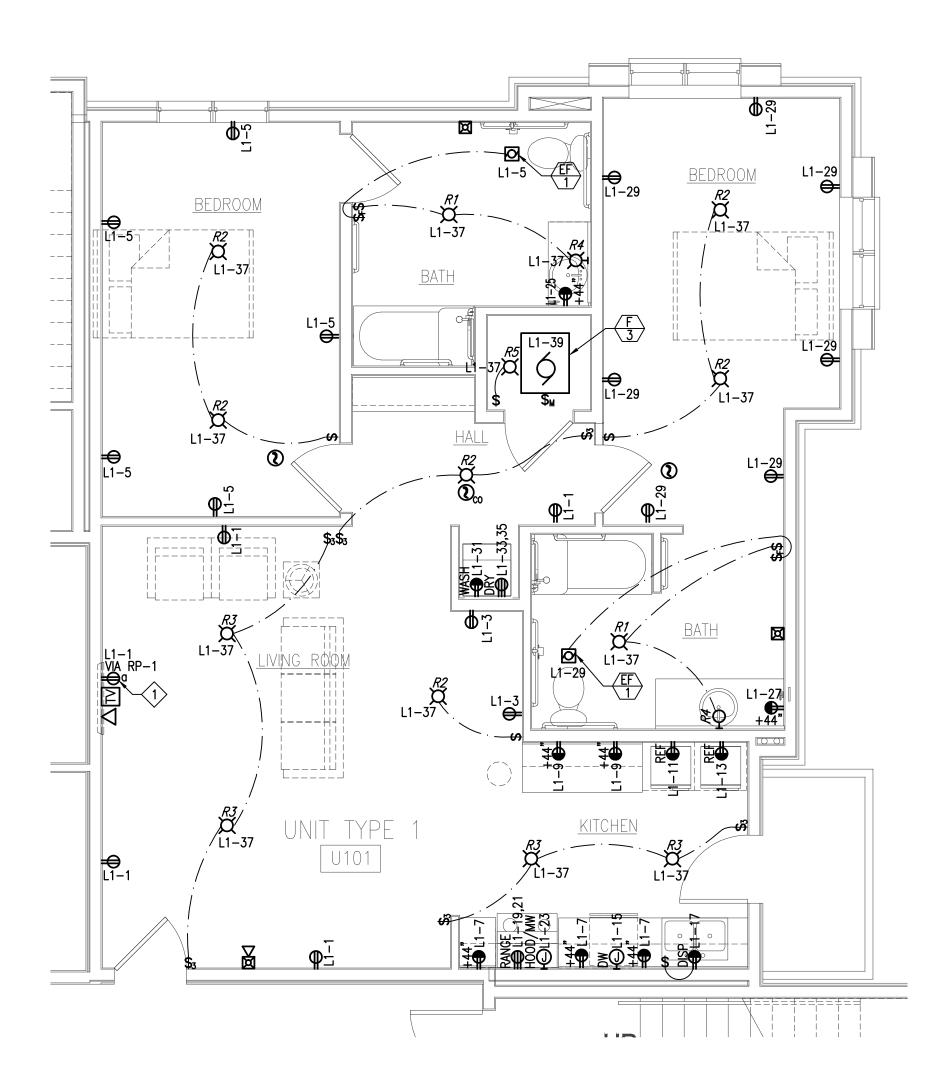
**REVISIONS:** 

1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

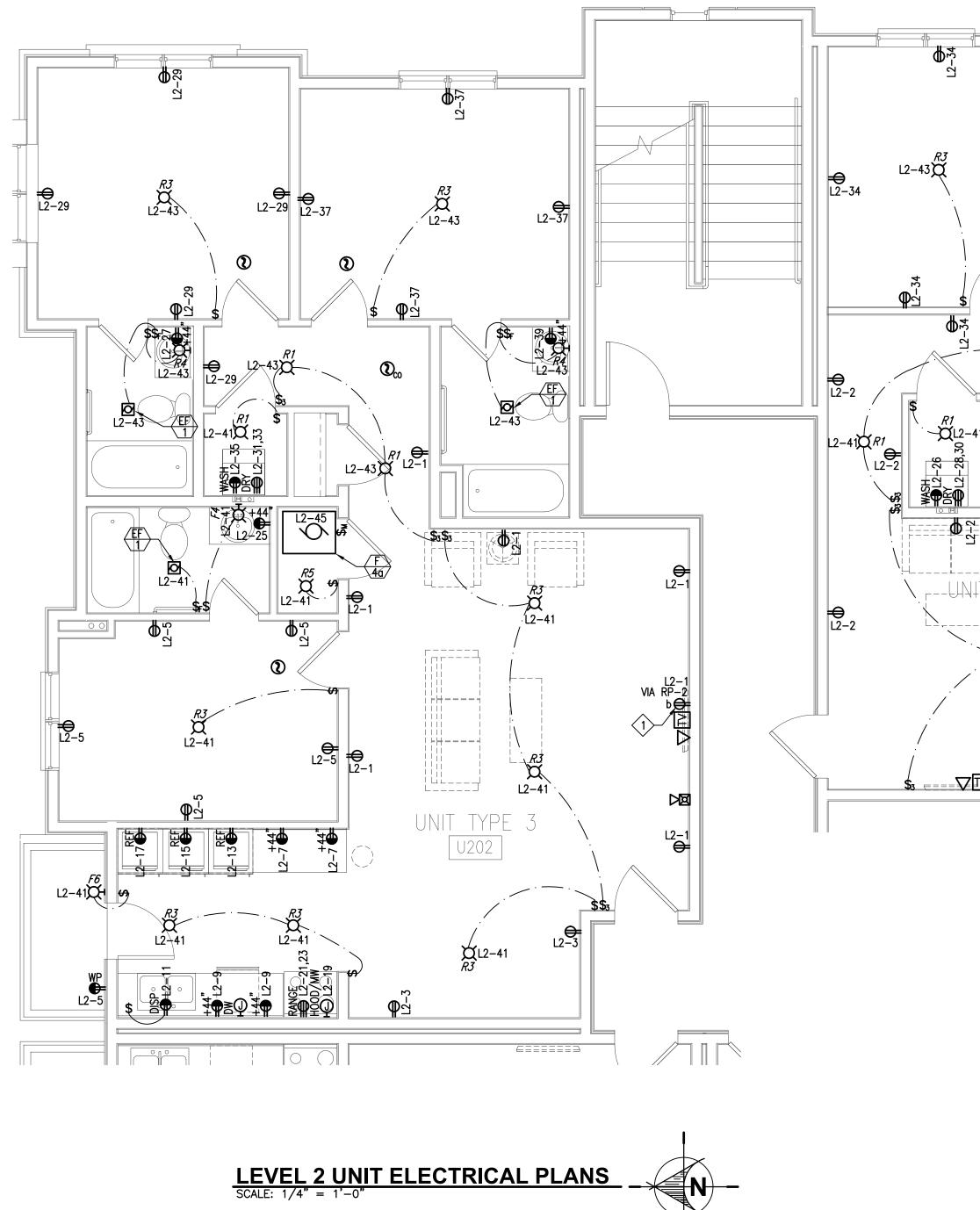


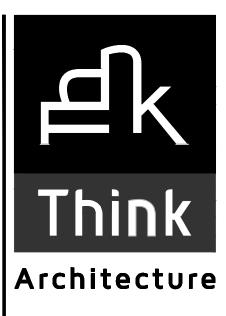












Architecture Interior Design

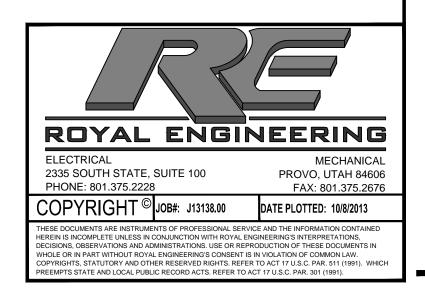
# $L2-43\mathbf{O}$ 12-€ L2-40 L2-40 $\textcircled{\blue}{\blue}$ ₽₽ ∑L2-4′ L2-44 $\sim$ L2-41 L2-41 ð ⊖= L2-18 L2-41 **⊖** L2−2 ---UNIT--TYPE U201 **\$**# 24 F6 F6 L2-41 2 L2-41 RANGE 012-8, HOOD/MW **1**2−2

# **GENERAL NOTES**

- 1. SEE ARCHITECTURAL ENLARGED ROOM PLANS AND ELEVATIONS FOR ALL RECEPTACLE AND LIGHTING FIXTURE LOCATIONS AND MOUNTING HEIGHTS. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER THESE DRAWINGS FOR RECEPTACLE/OUTLET AND LIGHTING FIXTURE HEIGHTS AND LOCATIONS.
- 2. ALL 120 VOLT, SINGLE PHASE, 15 AND 20 AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
- 3. PROVIDE AND INSTALL TAMPER-RESISTANT RECEPTACLES ON ALL 120 VOLT RECEPTACLES IN ALL AREAS SPECIFIED IN 210.52 OF THE NATIONAL ELECTRICAL CODE AS REQUIRED UNDER 406.11 OF THE NATIONAL ELECTRICAL CODE.

# KEYED NOTES

CIRCUIT INDICATED DUPLEX RECEPTACLE VIA THE LIGHTING CONTROL PANEL 'RP'. PROVIDE AND INSTALL LOW VOLTAGE OVERRIDE SWITCH TO BE LOCATED AT THE RECEPTION DESK.





RECOVERY WAYS CHATHAM HOUSE 385 WEST 4800 SOUTH STREET MURRAY, UTAH 84123

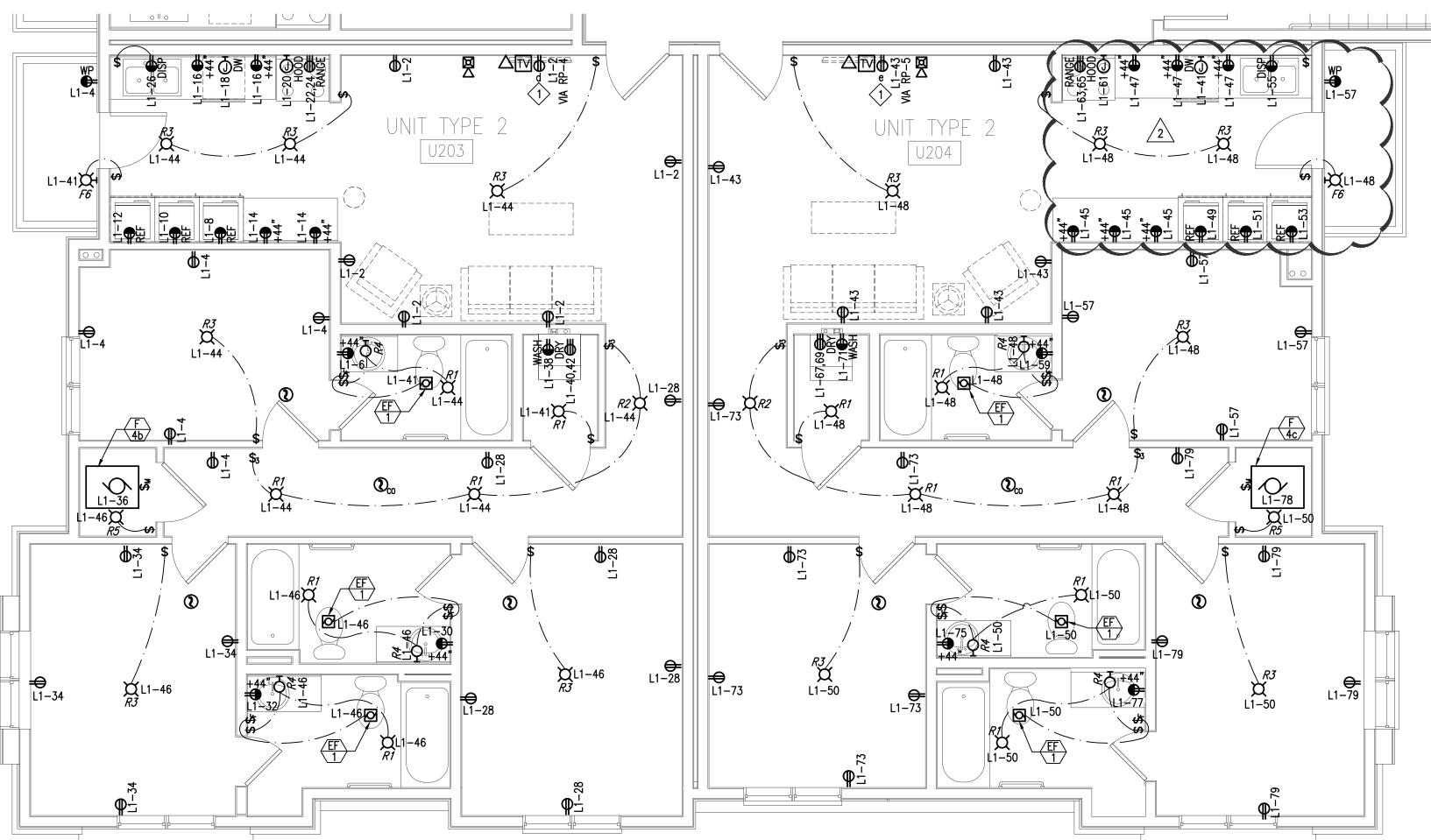
PROJECT NO. 13016

DATE: 30, SEPT. 2013

**REVISIONS:** 

09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

sheet title Unit electrical Plans







- 1. SEE ARCHITECTURAL ENLARGED ROOM PLANS AND ELEVATIONS FOR ALL RECEPTACLE AND LIGHTING FIXTURE LOCATIONS AND MOUNTING HEIGHTS. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER THESE DRAWINGS FOR RECEPTACLE/OUTLET AND LIGHTING FIXTURE HEIGHTS AND LOCATIONS.
- 2. ALL 120 VOLT, SINGLE PHASE, 15 AND 20 AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
- 3. PROVIDE AND INSTALL TAMPER-RESISTANT RECEPTACLES ON ALL 120 VOLT RECEPTACLES IN ALL AREAS SPECIFIED IN 210.52 OF THE NATIONAL ELECTRICAL CODE AS REQUIRED UNDER 406.11 OF THE NATIONAL ELECTRICAL CODE.

# **KEYED NOTES**

CIRCUIT INDICATED DUPLEX RECEPTACLE VIA THE LIGHTING CONTROL PANEL 'RP'. PROVIDE AND INSTALL LOW VOLTAGE OVERRIDE SWITCH TO BE LOCATED AT THE RECEPTION DESK.



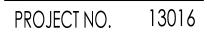
Architecture Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

The designs shown and described herein including all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.



RECOVERY WAYS CHATHAM HOUSE 385 WEST 4800 SOUTH STREET MURRAY, UTAH 84123



DATE: 30, SEPT. 2013

**REVISIONS:** 

1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

SHEET TITLE UNIT ELECTRICAL PLANS



ROYAL ENGINEERING

THESE DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND THE INFORMATION CONTAINED HEREIN IS INCOMPLETE UNLESS IN CONJUNCTION WITH ROYAL ENGINEERING'S INTERPRETATIONS, DECISIONS, OBSERVATIONS AND ADMINISTRATIONS. USE OR REPRODUCTION OF THESE DOCUMENTS IN WHOLE OR IN PART WITHOUT ROYAL ENGINEERING'S CONSENT IS IN VIOLATION OF COMMON LAW. COPYRIGHTS, STATUTORY AND OTHER RESERVED RIGHTS. REFER TO ACT 17 U.S.C. PAR. 511 (1991). WHICH PREEMPTS STATE AND LOCAL PUBLIC RECORD ACTS. REFER TO ACT 17 U.S.C. PAR. 301 (1991).

ELECTRICAL

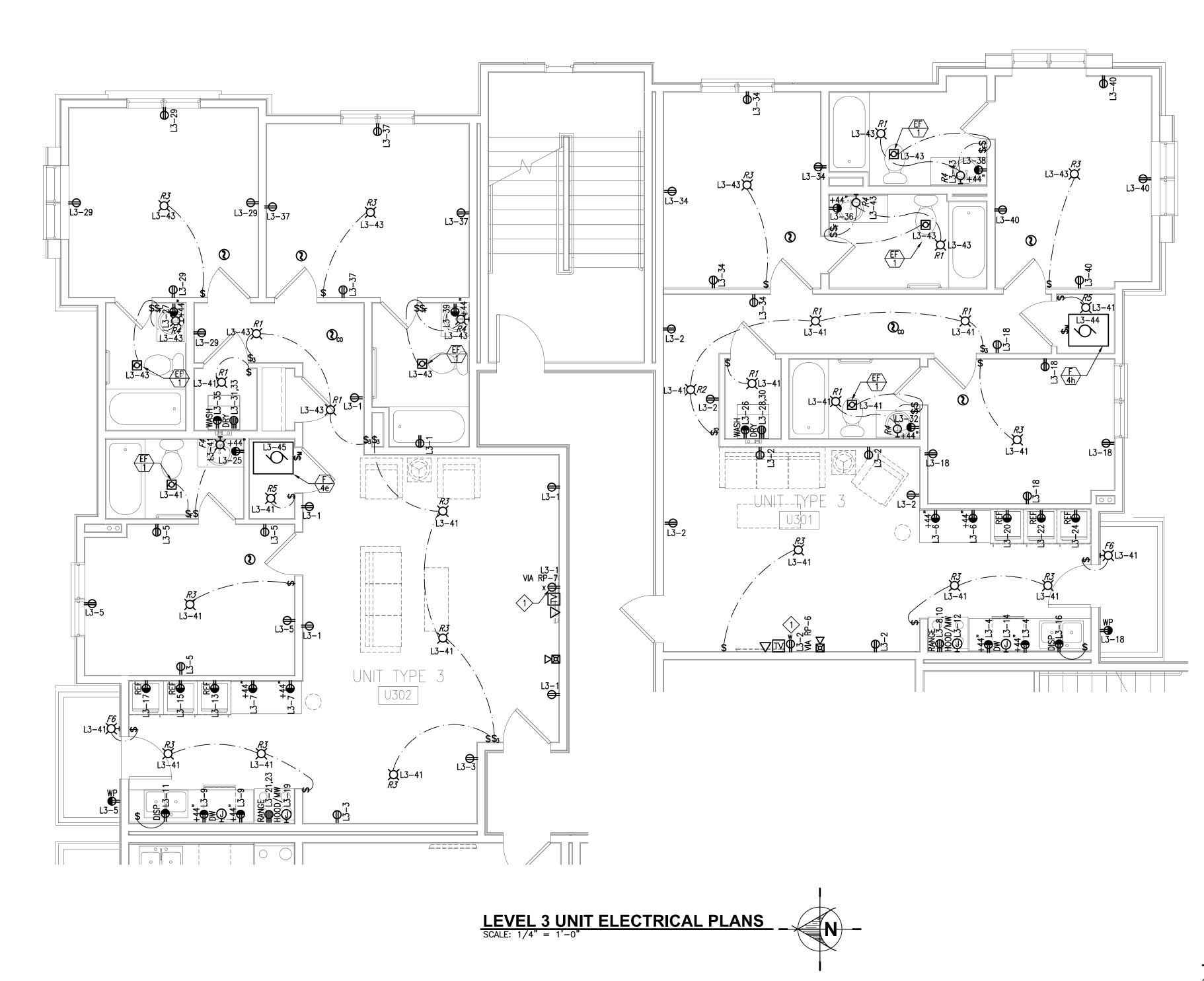
PHONE: 801.375.2228

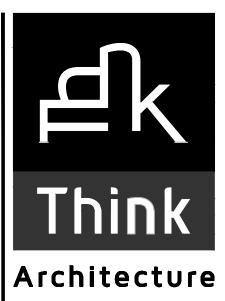
2335 SOUTH STATE, SUITE 100

COPYRIGHT © JOB#: J13138.00

MECHANICAL PROVO, UTAH 84606 FAX: 801.375.2676

DATE PLOTTED: 10/8/2013





Architecture Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

The designs shown and described herein including all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.



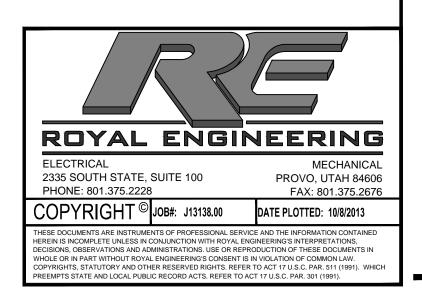
RECOVERY WAYS CHATHAM HOUSE 385 WEST 4800 SOUTH STREET MURRAY, UTAH 84123

# **GENERAL NOTES**

- 1. SEE ARCHITECTURAL ENLARGED ROOM PLANS AND ELEVATIONS FOR ALL RECEPTACLE AND LIGHTING FIXTURE LOCATIONS AND MOUNTING HEIGHTS. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER THESE DRAWINGS FOR RECEPTACLE/OUTLET AND LIGHTING FIXTURE HEIGHTS AND LOCATIONS.
- 2. ALL 120 VOLT, SINGLE PHASE, 15 AND 20 AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
- 3. PROVIDE AND INSTALL TAMPER-RESISTANT RECEPTACLES ON ALL 120 VOLT RECEPTACLES IN ALL AREAS SPECIFIED IN 210.52 OF THE NATIONAL ELECTRICAL CODE AS REQUIRED UNDER 406.11 OF THE NATIONAL ELECTRICAL CODE.

## KEYED NOTES

1 CIRCUIT INDICATED DUPLEX RECEPTACLE VIA THE LIGHTING CONTROL PANEL 'RP'. PROVIDE AND INSTALL LOW VOLTAGE OVERRIDE SWITCH TO BE LOCATED AT THE RECEPTION DESK.



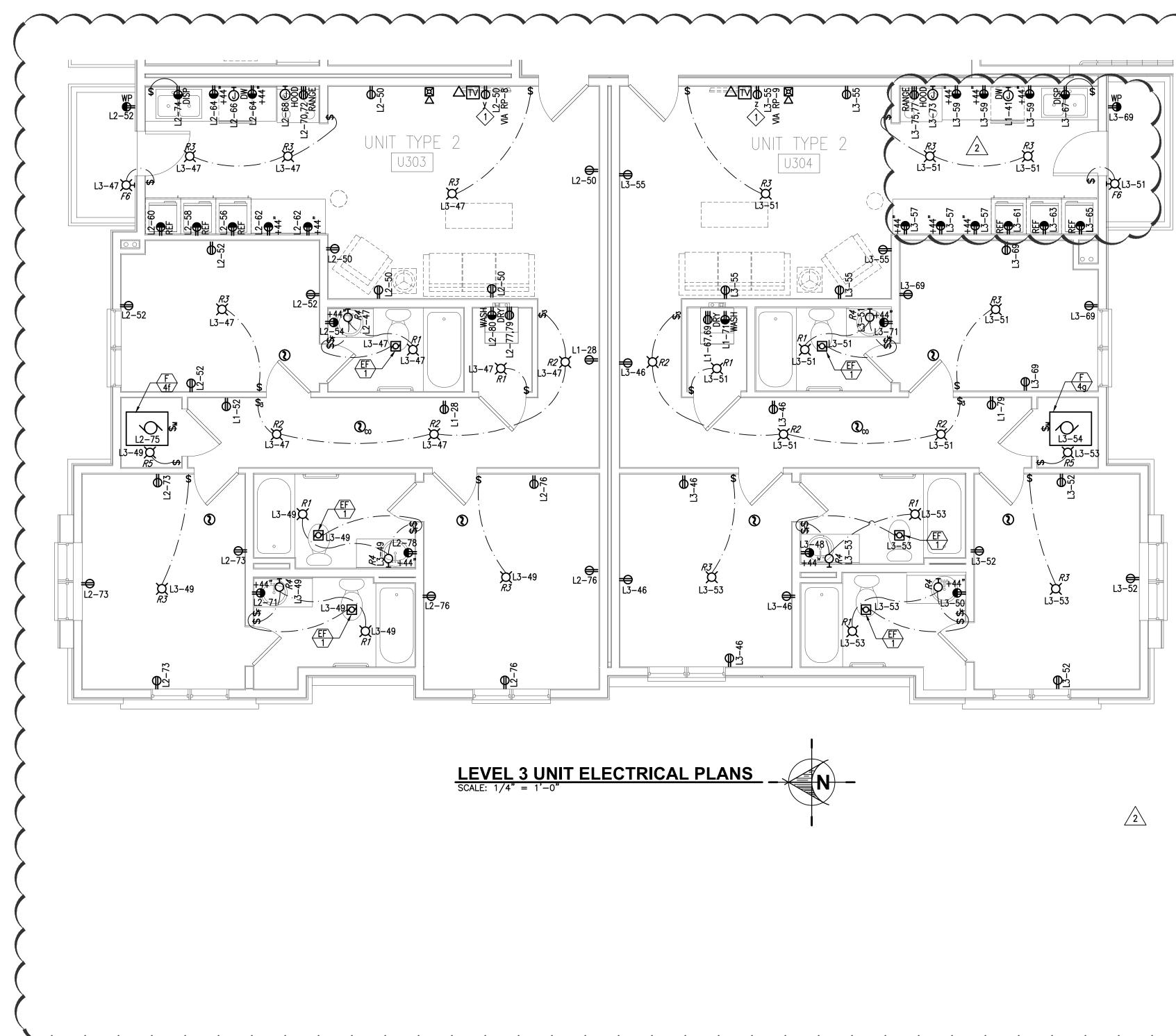
PROJECT NO. 13016

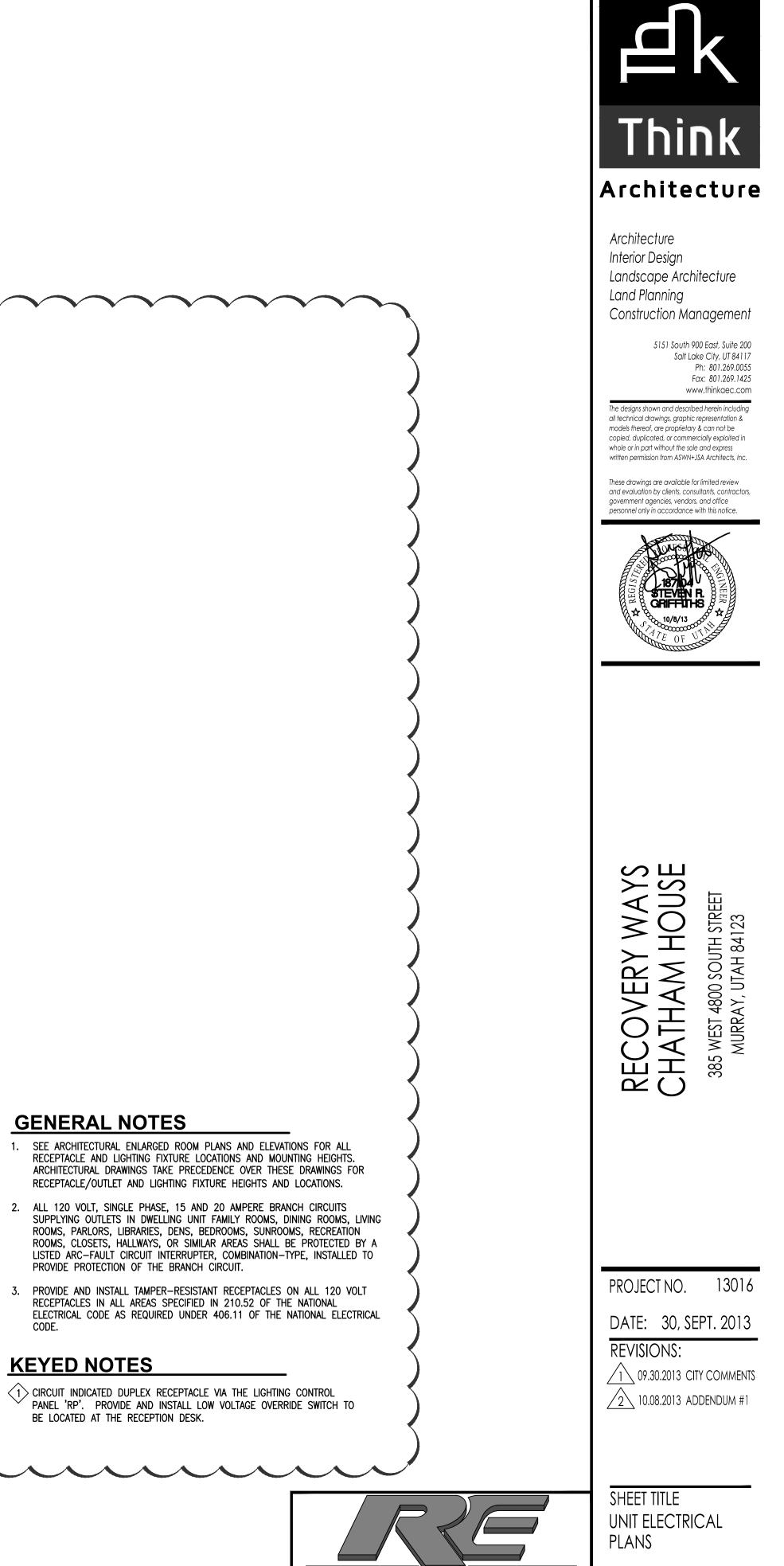
DATE: 30, SEPT. 2013

**REVISIONS:** 

09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

Sheet title Unit electrical Plans





ROYAL ENGINEERING

THESE DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND THE INFORMATION CONTAINED HEREIN IS INCOMPLETE UNLESS IN CONJUNCTION WITH ROYAL ENGINEERING'S INTERPRETATIONS, DECISIONS, OBSERVATIONS AND ADMINISTRATIONS, USE OR REPRODUCTION OF THESE DOCUMENTS IN

DECISIONS, OBSERVATIONS AND ADMINISTRATIONS, OL OK NET RODOLOTION OF COMBOD SOCIAL SOC

ELECTRICAL

PHONE: 801.375.2228

2335 SOUTH STATE, SUITE 100

COPYRIGHT © JOB#: J13138.00

MECHANICAL PROVO, UTAH 84606 FAX: 801.375.2676

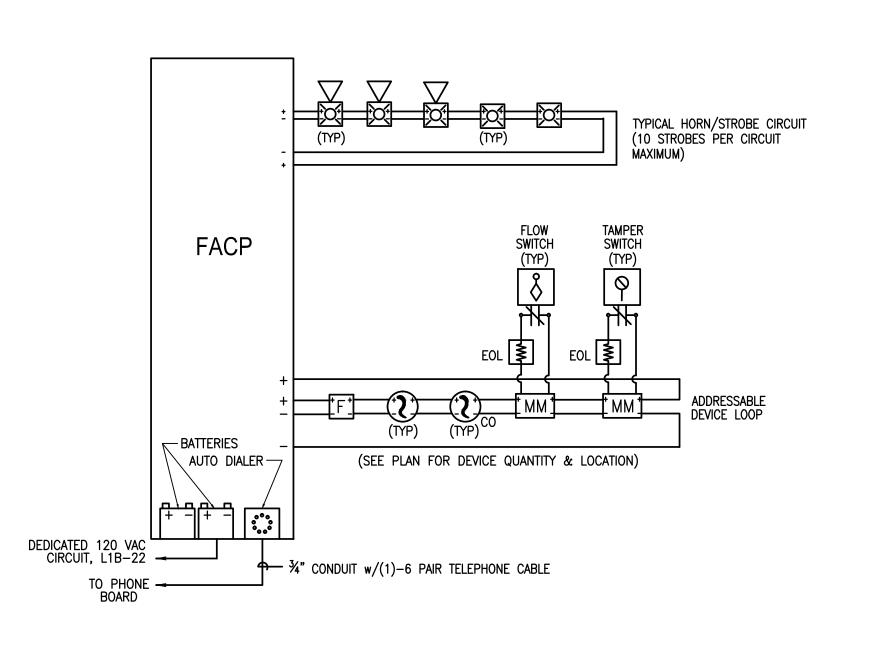
DATE PLOTTED: 10/8/2013

						FE	EDE	ER S	CHE	EDU	LE						
	CONDU	IT SIZE	CONDU	JCTORS	75°C AMP		CONDU	IT SIZE	CONDL	JCTORS	75°C AMP	T/DE	CONDU	IT SIZE	CONDU	JCTORS	7
TYPE	PVC	EMT	QTY.	SIZE	RATING	TYPE	PVC	EMT	QTY.	SIZE	RATING	TYPE	PVC	EMT	QTY.	SIZE	R
(212)	¾"	3⁄4"	2	#12		(21X)	11/4"	11/4"	2	1/0		250	2½"	21/2"	2	500 KCMIL	
312	<sup>3</sup> ⁄4"	3⁄4"	3	<b>#</b> 12	25	<u>(31X)</u>	1½"	1½"	3	1/0	150	350	3 <b>"</b>	21/2"	3	500 KCMIL	]
(412)	3⁄4"	3⁄4"	4	<b>#</b> 12	]	(41X)	1½"	1½"	4	1/0	]	(450)	4"	3½"	4	500 KCMIL	1
20	<sup>3</sup> ⁄4"	3⁄4"	2	<b>#</b> 10		(22X)	11/4"	11/4"	2	2/0		260	2½"	21/2"	2	600 KCMIL	Γ
30	<sup>3</sup> ⁄4"	3⁄4"	3	<b>#</b> 10	35	<u>32X</u>	1½"	1½"	3	2/0	175	360	3½"	3½"	3	600 KCMIL	1
40	3⁄4"	34"	4	<b>#</b> 10	1	(42X)	2"	2"	4	2/0	1	(460)	4"	4"	4	600 KCMIL	1
28	3∕4"	34"	2	#8		(23X)	1½"	11/4"	2	3/0		270	21/2"	2½"	2	700 KCMIL	T
38	3⁄4"	34"	3	#8	50	(33X)	2"	2"	3	3/0	200	370	3"	3"	3	700 KCMIL	1
48	3⁄4"	34"	4	#8	1	(43X)	2"	2"	4	3/0	1	(470)	4"	4"	4	700 KCMIL	1
26	3⁄4"	34"	2	#6		(24X)	1½"	1½"	2	4/0		275	3"	3"	2	750 KCMIL	T
36	3⁄4"	34"	3	#6	65	34X	2"	2"	3	4/0	230	375	4"	4"	3	750 KCMIL	1
46	1"	1"	4	#6	1	(44X)	2½"	2½"	4	4/0		475	4"	4"	4	750 KCMIL	1
24	3⁄4"	3⁄4"	2	#4		225	2"	2"	2	250 KCMIL							_
34	1"	1"	3	#4	85	325	2"	2"	3	250 KCMIL	255			OUNDING (	CONDUCTO		
(44)	41/"	41/ "		Щл	1	(425)	3"	01/"		250	1	OVERC	URRENT [ 15	DEVICE		COPPER 14	
<b>(††)</b>	11/4"	11/4"	4	#4		425		21⁄2"	4	KCMIL			20			14	
23	1"	1"	2	#3		(230)	2"	2"	2	300 KCMIL			30			10	
33	1"	1"	3	#3	100	(330)	21⁄2"	21/2"	3	300	285		<u>40</u> 60			10	
				#5				4/2		KCMIL			100			10 8	
(43)	11⁄4"	11⁄4"	4	#3		(430)	3"	21/2"	4	300 KCMIL			200			6	
22	1"	1"	2	#2		235	2"	2"	2	350 KCMIL			300 400			<u>4</u> 3	
32	11/4"	11/4"	3	#2	115	335	2½"	21/2"	3	350 KCMIL	310		500 600			2 1	
(42)	41/19	4147			1	(435)	3"	01/ "	4	350	1		800			1/0	
42	11/4"	11/4"	4	#2		400	5	21⁄2"		KCMIL	1		1000			2/0	
21	11/4"	11/4"	2	#1		240	2"	2"	2	400 KCMIL			1200 1600			<u>    3/0    </u> 4/0	
			_		1	(740)		4.00	7	400	775		2000			250KCMIL	
$\bigcirc 31 \bigcirc$	11/4"	11⁄4"	3	#1	130	340	21⁄2"	2½"	3	KCMIL	335		2500			350KCMIL	
(41)	11/2"	1½"	4	#1		(440)	3"	3"	4	400			3000			400KCMIL	
$\smile$	* 4	· · ·		l "						KCMIL			4000			500KCMIL	<u> </u>

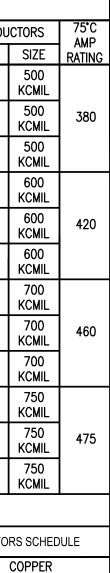
SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETIAIL FOR GROUND CONDUCTORS RATING.

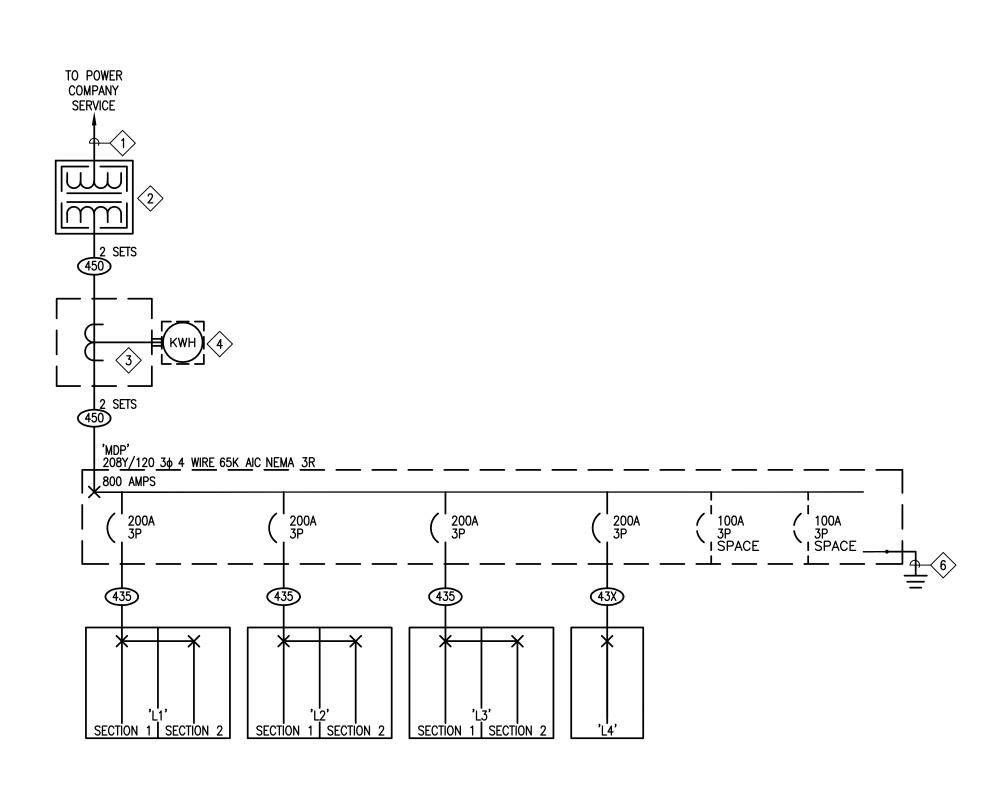
ALL INSULATION SHALL BE THHN UNLESS NOTED OTHERWISE. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC IS APPROVED FOR UNDERGROUND FEEDERS ONLY.

4. ALL FEEDERS ARE COPPER UNLESS SHOWN WITH "AL" NEXT TO SYMBOL TO INDICATE ALUMINUM CONDUCTOR(S).



#### FIRE ALARM RISER DIAGRAM





ONE LINE DIAGRAM

#### FIRE ALARM GENERAL NOTES:

1. COORDINATE FIRE ALARM DEVICES WITH LIGHTING FIXTURES, SPEAKERS, GRILLS, ETC. 2. DO NOT INSTALL SMOKE DETECTORS WITHIN 3'-0" OF ANY MECHANICAL GRILL.

3. FIRE ALARM CONTROL PANEL AND ANNUNCIATOR ENCLOSURES SHALL CONTAIN A FLANGE AROUND PERIMETER TO FACILITATE AND IMPROVE THE AESTHETIC TRANSITION FROM ENCLOSURE TO SHEETROCK.

4. VERIFY ANY POTENTIAL ADDITIONAL REQUIREMENTS WITH THE AUTHORITY HAVING JURISDICTION.

5. PLANS ARE BASED UPON 99 MONITOR AND CONTROL DEVICES PER ADDRESSABLE LOOP. OTHER CONFIGURATIONS ARE ACCEPTABLE SUBJECT TO CONTRACTOR ALLOWING FOR INCREASED WIRING CONFIGURATION. MAXIMUM INITIAL DEVICES PER LOOP SHALL NOT EXCEED 75% MAXIMUM ALLOWABLE.

PLANS ARE BASED UPON THE WIRING SCHEDULE SHOWN. WHERE MANUFACTURER'S REQUIREMENTS EXCEED REQUIREMENTS SHOWN, INCLUDE ADDITIONAL ASSOCIATED COSTS & SUBMITTAL DRAWINGS INDICATING NEW WIRING CONFIGURATION.

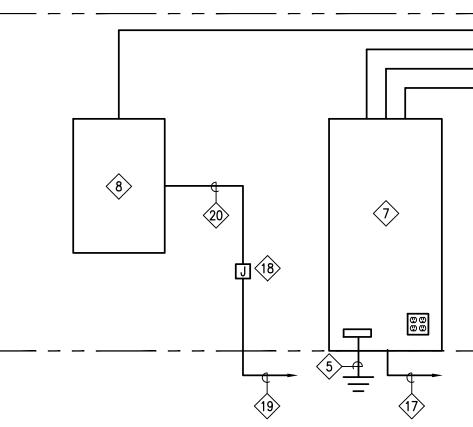
7. PLANS ARE BASED UPON TEN (10) TOTAL STROBE LIGHTS (WHATEVER COMBINATION HORN/STROBE OR INDIVIDUAL STROBES) PER CIRCUIT. PROVIDE FIRE ALARM HORN ON EXTERIOR OF BUILDING. SELECT STROBES BASED UPON ROOM SIZE AND MANUFACTURER. FLOW & TAMPER CONFIGURATION BASED UPON FIRE SPRINKLER DESIGN CONCEPT. FIELD VERIFY ACTUAL REQUIREMENTS. INCLUDE ANY ADDITIONAL MONITORING DEVICES REQUIRED BY ACTUAL REQUIREMENTS.

9. ALL OUTPUT DEVICES ARE DESIGNED ON SYSTEMS WITH 2 AMP POWER SUPPLY.

10. HORN/STROBE BASED ON 120 MILLIAMPS.

11. BATTERY CAPACITY TO BE ADEQUATE TO OPERATE 15 MINUTES AFTER 60 HOURS PLUS 25% SPARE CAPACITY.

FIRE ALARM WIRING SCHEDULE											
FUNCTION	LESS THAN 500'–0	LESS THAN 1000'—0"	1000'-0" TO 3000'-0"	GREATER THAN 3000'—0							
ADDRESSABLE LOOP	#18 TSP	#18 TSP	#16 TSP	#14 TSP							
POWER LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN							
SPARE LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN							
STROBE/HORN LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN							
MAGNETIC DOOR HOLDER LOOP	#12 THWN	#10 THWN									
SPEAKERS	#16 TSP	#16 TSP	#14 TSP	#14 TSP							



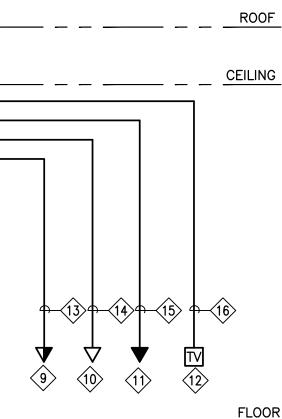
**COMMUNICATIONS RISER DIAGRAM** SCALE: NTS

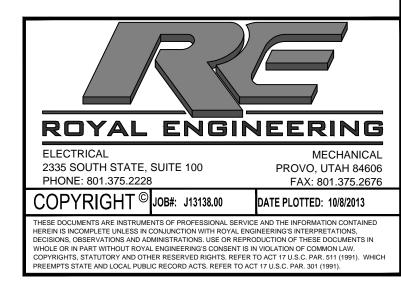
## **GENERAL NOTES**

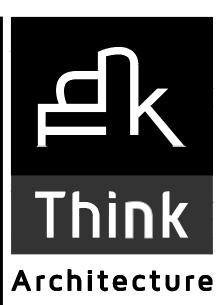
- CONTRACTOR TO PROVIDE ALL TRENCHING AND BACKFILL. POWER COMPANY TO PROVIDE AND INSTALL PRIMARY CABLE. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS. ALL SERVICE WORK SHALL CONFORM TO POWER COMPANY INSTALLATION STANDARDS.
- 2. PROVIDE AND INSTALL GROUNDING CONDUCTOR(S) IN ALL FEEDER CONDUITS REGARDLESS OF CONDUIT TYPE AS PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE. CONDUIT GROUNDING IS PROHIBITED, NO EXCEPTIONS TAKEN.

# **KEYED NOTES**

- (1)-4" PRIMARY CONDUIT PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MINIMUM DEPTH 48". PRIMARY CONDUCTORS PROVIDED AND INSTALLED BY POWER COMPANY.
- $\langle 2 \rangle$ TRANSFORMER AND CONCRETE VAULT. TRANSFORMER PROVIDED AND INSTALLED BY POWER COMPANY. CONCRETE VAULT PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS PER POWER COMPANY REQUIREMENTS AND SPECIFICATIONS.
- 3 COMMERCIAL GRADE CT ENCLOSURE IN NEMA 3R ENCLOSURE. ENCLOSURE TO BE AS PER POWER COMPANY STANDARDS.
- 4 METER BASE IN NEMA 3R ENCLOSURE. ENCLOSURE TO BE AS PER POWER COMPANY STANDARDS.
- 5 #6 COPPER TO SERVICE GROUND.
- 6 #3/0 AWG COPPER TO GROUND AS PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE. REFER TO THE SERVICE GROUNDING DETAIL.
- MAIN TELEPHONE TERMINAL BOARD. PROVIDE AND INSTALL 24"x96"x<sup>3</sup>/<sub>4</sub>" CDX PLYWOOD PAINTED WITH THREE COATS OF FIRE RETARDANT PAINT. ELECTRICAL CONTRACTOR SHALL PROVIDE PUNCH-DOWN BLOCKS, CABLES, JACKS, AND TERMINATIONS REQUIRED FOR A COMPLETE INSTALLATION.
- (8) MAIN CABLE TELEVISION TERMINAL BOARD. PROVIDE AND INSTALL 24"x48"x3/4" CDX PLYWOOD PAINTED WITH THREE COATS OF FIRE RETARDANT PAINT.
- (9) TYPICAL DATA/VOICE OUTLET.
- (10) TYPICAL DATA OUTLET.
- (11) TYPICAL VOICE OUTLET.
- (12) TYPICAL CABLE TELEVISION OUTLET.
- (2)-4 PAIR CAT5E CABLE.
- (1)-4 PAIR CAT5E CABLE.
- (1)-4 PAIR CAT3 CABLE.
- (1)-RG6/U CABLE.
- $\langle 17 \rangle$  (2)-4" CONDUIT TO TELEPHONE COMPANY SERVICE PEDESTAL. FIELD ✓ VERIFY TELEPHONE COMPANY SERVICE LOCATION PRIOR TO ROUGH−IN
- CABLE TELEVISION SERVICE JUNCTION BOX MOUNTED ON THE EXTERIOR OF THE BUILDING.
- 2"C w/(2)-RG6/U CABLES TO CABLE TV SERVICE. FIELD VERIFY LOCATION WITH CABLE TELEVISION COMPANY SERVICE LOCATION PRIOR TO ROUGH-IN.
- 20 2"C w/(2)-RG6/U CABLES.







#### Architecture

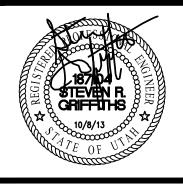
Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

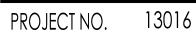
all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc

he designs shown and described herein includin









DATE: 30, SEPT. 2013

**REVISIONS:** 

1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

SHEET TITLE ELECTRICAL RISER DIAGRAMS



		FIXTU	RF							POLE			
BER	MANUFACTURER	CATALOG #	DESCRIPTION	VOLTS	MOUNTING	TYPE	QTY.	WATTS	MANUFACTURER	CATALOG #	HEIGHT	Fixtures Per Pole	REMARKS
7	METALUX LSI COLUMBIA	WS-232A-EB81 WNA10-232-SS010-UE WC4 232 EPU	1X4 SURFACE FLUORESCENT (2 LAMP)	120	SURFACE CEILING	F32T8/SP35 ECO	2	66	-	-	-	-	
F2	METALUX LSI COLUMBIA	WSA-232A-EB81 WNA14-232-SS010-UE WCW4 232 EPU	1X4 SURFACE FLUORESCENT WIDE BODY (2 LAMP)	120	SURFACE CEILING	F32T8/SP35 EC0	2	66	-	-	-	-	
FJ	METALUX LSI COLUMBIA	SSF-232-EB81 S-232-SS010-UE CS4 232 EPU	48" Double tube strip	120	SURFACE	F32TB/SP35 ECO	2	66	-	-	-	-	
F4	METALUX LSI COLUMBIA	8TSSF-232-EB81 S2-232-SS010-UE CS8 232 4EPU	96" DOUBLE TUBE STRIP (TANDEM)	120	SURFACE	F32T8/SP35 ECO	4	132	-	-	-	-	
F3	METALUX LSI COLUMBIA	WS-332A-EB81 WNA14-332-SS010-UE WCW4 332 3EPU	1X4 SURFACE FLUORESCENT WIDE BODY (3 LAMP)	120	SURFACE CEILING	F32T8/SP35 ECO	3	99	-	-	-	-	
F6	ECLIPSE LIGHTING EVERGREEN	JU-FB-L-DTT-EBU-PNA 801306	WALL SCONCE	120	SURFACE WALL	26W DTT	2	54	-	-	-	-	COLOR TO BE SELECTED BY ARCHITECT
F7	McGRAW-EDISON LSI SPAULDING	GLEON-AA-03-LED-E1-T4-SCBA XAM3-FT-LED-119-450-NW-UE-CBA CL1A60LU5K4SCBA	Pole monted led fixture - type iv distribution	208	POLE	LED	-	154 161 140	Cooper Lighting Lyte Pole Spaulding	SSS-4A18-SFXXX 101-4011-18 SSS18 *0 1 *X SCBA	18'-0 <b>"</b>	2	COLOR TO BE SELECTED BY ARCHITECT
F8	BROWNLEE APX LIGHTING	2062-24-SCBA-326Q-BAC CAF14226QMV-SCBA	SURFACE MOUNTED ROUND FLORESCENT	120	SURFACE	26W DTT	3	81	-	-	-	-	SCBA = COLOR SELECTED BY THE ARCHIECT
F9	BROWNLEE APX LIGHTING	2062-16-SCBA-226Q-BAC CAF24426QMV-SCBA	SURFACE MOUNTED ROUND FLORESCENT	120	SURFACE	26W DTT	2	54	-	-	-	-	
F10	JUNO WAC LIGHTING	PKL3240PAL PLD-F2-454WT-BN	PENDANT MOUNTED FIXTURE	120	PENDANT	LED 18W GU24	- 1	5 13	-	-	-	-	
R1	SEAGULL LIGHTNG WESTINGHOUSE PROGRESS LIGHTING	77063-962 6430400 P3687-09WB	RESIDENTIAL SURFACE MOUNTED	120	SURFACE	60W A19	1	60	-	-	-	-	Color to be selected by architect
R2	SEAGULL LIGHTNG WESTINGHOUSE SUNSET LIGHTING	77064-962 6430500 F7632-53	RESIDENTIAL SURFACE MOUNTED	120	SURFACE	60W A19	2	120	-	-	-	-	COLOR TO BE SELECTED BY ARCHITECT
R3	SEAGULL LIGHTNG WESTINGHOUSE SUNSET LIGHTING	77065-962 6430600 F7634-53	RESIDENTIAL SURFACE MOUNTED	120	SURFACE	60W A19	3	180	-	-	-	-	COLOR TO BE SELECTED BY ARCHITECT
R4	SEAGULL LIGHTNG WESTINGHOUSE SUNSET LIGHTING	4738-98 6641100 F3542-53	RESIDENTIAL BATHROOM FIXTURE	120	SURFACE WALL	60W A19	4	240	-	-	-	-	COLOR TO BE SELECTED BY ARCHITECT
R5	LEVITON GE EAGLE BRYANT	9875 GE5740-7 604 5228	PORCELAIN SOCKET	120	SURFACE	75WA19	1	75	-	-	-	-	PROVIDE METAL WIRE GUARD
E1	ENVOY BODINE IOTA	FB1400 B50 I 320	EMERGENCY BALLAST ((2)-4 FOOT T-8 LAMP)	120	-	-	-	-	-	-	-	-	EMERGENCY BALLAST (1)—4 FOOT T8 LAMP, 1100 LUMENS MIN. VERIFY COMPATIBILITY BEFORE ORDERING
E2	DUAL-LITE	EV2	2-HEAD LED EM WALL PACK (SURFACE)	120	SURFACE WALL	INCLUDED	2	5.4	-	-	-	-	
EJ	dual-lite	EVC-U-G-W	2-HEAD LED EM WALL PACK (SURFACE) WITH EXIT LIGHT	120	SURFACE WALL	INCLUDED	2	5.4	_	-	-	-	
E4	EVENLITE MULE ISOLITE	WLEM-BZ MAKO-3-CBA-CW-SD ELED EM SCBA	EMERGENCY EGRESS LIGHT - METAL	120	SURFACE WALL	6W XENON INCLUDED	2	12	-	-	-	-	Emergency Egress
X1	evenlite LSI Isolite	RZR-EM-G-1-AA-XX EXC-G-U-WB-XX LPDCEMGS WW UN	POWERED SINGLE FACE EXIT W/ "EM" BATTERY PACK	120	UNIVERSAL	INCLUDED	2	11.2	-	-	-	-	NICKEL/CADMIUM BATTERY SINGLE FACE EXIT

									PAI	NELBOA	RD SC	HEDUL	E			
PANEL: L4 VOLTAGE: 208Y/120 PHASE: 3 WIRE: 4 MOUNTING: SURFACE ENCLOSURE: NEMA 1 REMARKS: BREAKER KEYED NOTE CIRCUIT NAME 1 20 1 LEVEL 3 CORRIDOR RCPT 3 20 1 LEVEL 3 CORRIDOR RCPT						bus am Main de Minimum	VICE:	ient ratin	G:		225 LUGS 10,000 AMI	ps (rms-sy	M)			
	BREAKE	R	KEYED		FEE	DER		CKT. LO	AD	LOA	D/PHASE (	VA)	CI	(T. LOAD		F
No.	AMPS	POLE	NOTE	CIRCUIT NAME	WIRE	GRD	USE	WATTS	DEMAND	¢A	φB	фС	DEMAND	WATTS	USE	GRE
					<b>#</b> 12	<b>#</b> 12	R	900	100%	4,020			100%	3,120	E	<b>#</b> 10
3	20	1		LEVEL 3 CORRIDOR LTG	<b>#</b> 12	<b>#</b> 12	L	336	125%		3,540		100%	3,120	E	
5	20	1		ROOFTOP RCPT	<b>#</b> 10	<b>#</b> 10	R	360	100%			3,480	100%	3,120	E	#10
7	40	2		CU-4a	#8	<b>#</b> 10	E	3,120	100%	6,240	0.040		100%	3,120	E	-
9 11	-	- 2		-	#8 #8	- #10	E	3,120 3,120	100%		6,240	6.040	100%	3,120 3,120	E	#10
	40	<u> </u>		CU-4e -	#0 #8	#10 -	E	3,120	100%	6,240		6,240	100%	3,120	E	
13 15	- 40	2		 CU <b>_4</b> b	#° #8	_ #10	E	3,120	100%	0,240	6,240		100%	3,120	E	-
15	40	-		-	#° #8	#10 -	E	3,120	100%		0,240	3,120	100%	3,120	┝┶	
19	40	2		 CU_4f	#8	<b>#</b> 10	E	3,120	100%	3,120		5,120			┣───	
21	+0	-		-	#8	-	E	3,120	100%	5,120	3,120				┣───	
23	20	1		SPARE	70	_	L	0,120	100/8		0,120					
25	20			SPACE												
27				SPACE											<u> </u>	
29				SPACE											<u> </u>	-
LIGHTIN EQUIPN KITCHE MOTOR TOTAL TOTAL TOTAL RECEP TOTAL	ig load (v ient load n demand load: load per load per demand lo facle demu demand lo	(A): (VA) (VA): PHASE (VA) PHASE (AMI OAD w/o RE AND LOAD A OAD w/o 25	: PS): CCEPTACLE A DJUSTMENT	Demand Adjustment: Djustment: As per Nec 220.44 (VA) Motor Load (VA):						φA 900 0 18,720 0 0 19,620 54 51,600 0 51,600	φB 0 420 18,720 0 0 19,140 53	¢C 360 0 12,480 0 0 12,840 36		B. C. D. F. G. <u>GENERAL 1</u> 1. 2.	LOCK- PROVID PROVID SHUNT HID RA EXISTIN NEW B <u>NOTES</u> ALL IN INSULA LOAD I ELECTR PANEL	De Arc De Gro Trip Nted B Ig Bre Ig Bre Reake Sulati Tion ( Demani Rical ( Cover
TOTAL	argest mo Demand Lo Demand Lo								0 51,600 143				4.	PERMAI SECTIO HAZARI CIRCUI ELECTR	in 110 d". T iden	

						E	EQUIPME	ENT SO	CHEDU	LE				
		SER	VICE		DISCO	ONNECT	_	-	STARTER	NEMA RCPT		LOAD		
unit #	DESCRIPTION	VOLTS	PHASE	TYPE	SIZE	FUSE	ENCLOSURE	KEYED NOTES	SIZE	#	HP	VA	AMPS	REMARKS
F-1	FURNACE MOTOR	120	1	MANUAL STARTER	-	-	NEMA 1	A	-	-	I	1,440 VA	12.0 A	
F-2	FURNACE MOTOR	120	1	MANUAL STARTER	-	-	NEMA 1	A	-	-	-	1,200 VA	10.0 A	
F-3	FURNACE MOTOR	120	1	MANUAL STARTER	-	-	NEMA 1	A	-	-	-	960 VA	8.0 A	
F-4	FURNACE MOTOR	120	1	MANUAL STARTER	-	-	NEMA 1	A	-	-	-	1,200 VA	10.0 A	
CU-1	CONDENSING UNIT	208	1	NON-FUSED SWITCH	60A/2P	-	NEMA 3R	A	-	-	-	8,320 VA	40.0 A	
CU-2	CONDENSING UNIT	208	1	NON-FUSED SWITCH	60A/2P	-	NEMA 3R	A	-	-	-	6,240 VA	30.0 A	
CU-3	CONDENSING UNIT	208	1	NON-FUSED SWITCH	30A/2P	-	NEMA 3R	A	-	-	-	4,160 VA	20.0 A	
CU-4	CONDENSING UNIT	208	1	NON-FUSED SWITCH	60A/2P	-	NEMA 3R	A	-	-	-	6,240 VA	30.0 A	
EF-1	EXHAUST FAN	120	1	INTEGRAL RECEPTACLE	-	-	NEMA 1	В	-	-	-	16 VA	0.1 A	
EF-2	EXHAUST FAN	120	1	INTEGRAL RECEPTACLE	-	-	NEMA 1	В	-	-	-	87 VA	0.7 A	
EWH-1	ELECTRIC WALL HEATER	120	1	THERMOSTAT	-	-	NEMA 1	A	-	-	-	1,500 VA	12.5 A	
WH-1	WATER HEATER	120	1	RECEPTACLE	-	-	NEMA 1	A	-	5–20R	-	500 VA	4.2 A	

verify all equipment locations and connection requirements (i.e. voltage, phase, fla, etc.) with Mechanical drawings/submittals before beginning rough in.
 all fuses shall be dual element time delay. Final breaker/fuse & disconnect size shall be determined

BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED.

	D	ISTRIBUTION P	ANELBOA	ARD SCH	EDULE							
Panel: Voltage: Phase: 3 Enclosure: Mounting: Remarks:	MDP 208y / 120 Wire: 4 Nema 3r Surface	bus Amps: Main Device: Main bus Bra	cing (amps rm	is sym):		800 MLO 42,000						
			LOAD									
скт. #	DESCRIPTION	design kva	design fla	demand kva	demand fla	AMF TRIF						
1	PANELBOARD 'L1'	52.0	144.3	52.0	144.3	200						
2	PANELBOARD 'L2'	58.0	160.9	58.0	160.9	200						
3	PANELBOARD 'L3'	60.9	169.1	60.9	169.1	200						
4	PANELBOARD 'L4'	51.6	143.2	51.6	143.2	200						
5	SPACE											
6	SPACE											
design kva: Demand kva:	222.5 222.5	design fla: Demand fla:		617.6 617.6								

NAME:	RP								AUTO	MATION	SCHE	D
Volts: Phase: 3 Mounting: Enclosure:	208/120 WIRE: 4 SURFACE NEMA 1	IRE: 4 IRFACE			Auto OFF	Auto OFF	Manual OFF					
SPACE	RELA	Y		SUPPLY					N /		Dawn	
NUMBER	AMP	POLE	PANEL	скт 🛔	VA	D UNIT U101 TELEVISION RCPT D UNIT U202 TELEVISION RCPT	lv switch*	Auto ON	Manual ON	Manual ON	Dusk - I	L
1	20	1	L1	1	180	UNIT U101 TELEVISION RCPT	a			•		Γ
2	20	1	L2	1	180	UNIT U202 TELEVISION RCPT	b			•		Γ
3	20	1	12	2	180	UNIT U201 TELEVISION RCPT	c			٠		Ι
4	20	1	L1	2	180	UNIT U203 TELEVISION RCPT	d			•		Ι
5	20	1	L1	43	180	UNIT U204 TELEVISION RCPT	e			•		Ι
6	20	1	IJ	2	180	UNIT U301 TELEVISION RCPT	W			•		Ι
7	20	1	L3	1	180	UNIT U302 TELEVISION RCPT	x			•		Ι
8	20	1	12	50	180	UNIT U303 TELEVISION RCPT	у			•		Ι
9	20	1	L3	55	180	UNIT U304 TELEVISION RCPT	z			•		Ι
10	20	1	12	69	210	EXTREIOR BLDG LTG						Ι
11	20	2	12	46,48	160	PARKING LTG						Ι
-	-	-	-	-	-	_						
12	20	1	12	63	324	LOBBY LIGHTING	f	•				
13	20	1	12	63	324	LOBBY LIGHTING	g	•				
14	20	1	12	63	711	LOBBY LIGHTING	h	•				
15	20	1				SPACE						
16	20	1				SPACE						ſ

1. ELECTRICAL CONTRACTOR TO PROVIDE SPACE IN THIS PANEL FOR FUTURE EXPANSION. 2. DURING A POWER FAILURE ALL RELAYS SHALL FAIL IN THE NORMALLY CLOSED "FAIL-SAFE" POSITION.

BREAKER RC FAULT (AFCI) PROTECTION FOR CIRCUIT ROUND FAULT (GFCI) PROTECTION FOR CIRCUIT.

BREAKER. BREAKER. BREAKER.

#8

LATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. ON ON ALL UNDERGROUND CONDUCTORS SHALL BE THHW. WANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL

NVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A IT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE 110. LABEL SHALL READ AS FOLLOWS: "DANGER: POTENTIAL ARC FLASH

INTIFICATION SHALL BE AS PER SECTION 408.4 OF THE NATIONAL CODE.

3. MAXIMUM VALUES INDICATED. 4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B). 5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).

 $\frac{\text{USE CODE}}{\text{R} = \text{RECEPTACLE LOAD}}$ L = LIGHTING LOAD E = EQUIPMENT LOADK = KITCHEN EQUIPMENT LOADM = MOTOR LOAD 
 KEYED NOTE
 BREAKER

 POLE
 AMPS
 No.

 2
 40
 2

 4

 2
 40
 6

 8

 2
 40
 10
 CIRCUIT NAME CU-4d -CU-4h

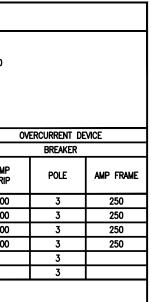
				1 10	
•	<b>#</b> 8	-	-	-	8
0	<b>#</b> 8	CU-4g	2	40	10
•	<b>#</b> 8	-	-	-	12
0	<b>#</b> 8	CU-4c	2	40	14
•	<b>#</b> 8	_	-	-	16
		SPARE	1	20	18
		SPACE			20
		SPACE			22
		SPACE			24
		SPACE			26
		SPACE			28
		SPACE			30

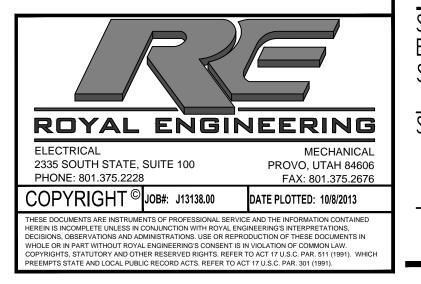
<u>Keyed Notes:</u> A. Furnished, installed and final connection by the electrical contractor. B. Furnished and installed under another division,

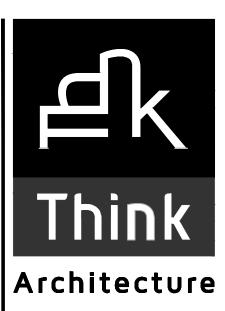
FINAL CONNECTION BY THE ELECTRICAL CONTRACTOR.

C. FURNISHED UNDER ANOTHER DIVISION, INSTALLATION AND FINAL CONNECTION BY THE ELECTRICAL CONTRACTOR. D. FURNISHED, INSTALLATION, AND FINAL CONNECTION UNDER

ANOTHER DIVISION.







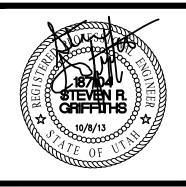
Architecture Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.

The designs shown and described herein including

These drawings are available for limited review and evaluation by clients, consultants, contractors, government agencies, vendors, and office personnel only in accordance with this notice.



RECOVERY WAYS CHATHAM HOUSE 385 WEST 4800 SOUTH STREET MURRAY, UTAH 84123

PROJECT NO. 13016

DATE: 30, SEPT. 2013

**REVISIONS:** 

1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

Sheet title Electrical SCHEDULES



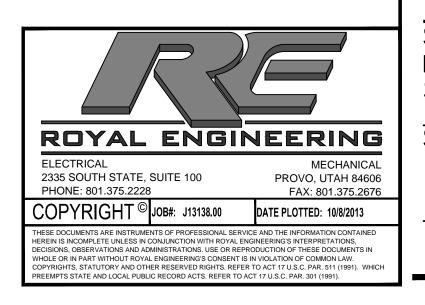
/OLTAGE: PHASE: 3	L1					_	_	_			_										
PANEL: L1 VOLTAGE: 208Y/120 PHASE: 3 WIRE: 4 MOUNTING: SURFACE ENCLOSURE: NEMA 1 REMARKS:		BUS AMPS: Main Device: Minimum equipment rating:					225 LUGS 22,000 AMPS (RMS-SYM)					$\frac{\text{USE CODE}}{\text{R}} = \text{RECEPTACLE LOAD}$ $\text{L} = \text{LIGHTING LOAD}$ $\text{E} = \text{EQUIPMENT LOAD}$ $\text{K} = \text{KITCHEN EQUIPMENT LOAD}$ $\text{M} = \text{MOTOR LOAD}$									
										CTION	1										
BREAK	ER POLE	KEYED NOTE	CIRCUIT NAME	FEEDER WIRE G	} RD נ	JSE	CKT. LO/ WATTS	AD Demand	L0 •A	AD/PHASE (	(VA) 	CI DEMAND	KT. LOAD WATTS	USE	FEE GRD	Der Wire	CIRCUIT NAME	KEYED NOTE	POLE	BREAKER AMPS	No
1 20 3 20	1	B	UNIT U101 LIVING ROOM RCPT UNIT U101 DINING AREA RCPT	#12 #	12	R	720	100%	1,800	1,080		100%	1,080 720	R	<b>#</b> 12		UNIT U203 LIVING ROOM RCPT UNIT U203 BEDRROM RCPT	B	1	20 20	2
5 <u>20</u> 5 20	1	B	UNIT U101 BEDROOM RCPT	#12 #	12 12 F	R/E	1,180	100%		1,000	1,360	100%	180	R	<b>#</b> 12	<b>#</b> 12	UNIT U203 BATHROOM RCPT	C	1	20	6
7 <u>20</u> 9 20		C C	UNIT U101 SM APPLIANCE UNIT U101 SM APPLIANCE				1,500 1,500	100% 100%	2,700	2,700		100% 100%	1,200	E	#12 #12	#12 #12	UNIT U203 REFRIGERATOR UNIT U203 REFRIGERATOR	C C	1	20 20	8
<u> </u>	1	C C	UNIT U101 REFRIGERATOR	#12 #	12	E	1,200	100%		2,700	2,400	100%	1,200	E	#12	<b>#</b> 12	UNIT U203 REFRIGERATOR	C C	1	20	1:
13 20 15 20		c	UNIT U101 REFRIGERATOR UNIT U101 DISHWASHER				1,200 1,200	100% 100%	1,380	1,380		100% 100%	180 180		#12 #12	#12 #12	UNIT U203 SMALL APPLIANCE UNIT U203 SMALL APPLIANCE	B		<u>20</u> 20	1
17 20	1	С	UNIT U101 DISPOSAL	#12 #	12	М	864	100%		1,000	2,064	100%	1,200	E	<b>#</b> 12	<b>#</b> 12	UNIT U203 DISHWASHER		1	20	1
19 <u>50</u> 21 –	2		UNIT U101 RANGE				4,000 4,000	100% 100%	5,200	8,000		100% 100%	1,200 4,000		#12 #10	#12 #6	UNIT U203 HOOD/MW UNIT U203 RANGE	<u> </u>	1 2	20 50	2
23 20	1		UNIT U101 HOOD/MW	#12 #	12	E	1,200	100%		5,000	5,200	100%	4,000	E	-	<b>#</b> 6	_		-	-	24
25 20 27 20		C C	UNIT U101 BATH RCPT UNIT U101 BATH RCPT			R R	180 180	100% 100%	1,044	1,260		100% 100%	864 1,080		#12 #12	#12 #12	UNIT U203 DISPOSAL UNIT U203 BEDRROM RCPT	C B	1	20 20	26
29 20	1	B	UNIT U101 BEDROOM RCPT	#12 #	12 F	R/E	1,180	100%		.,200	1,360	100%	180	R	<b>#</b> 12	<b>#</b> 12	UNIT U203 BATHROOM RCPT	C	1	20	- 30
<u>31 20</u> 33 30	1 2	C	UNIT U101 WASHER UNIT U101 DRYER				1,200 2,500	100% 100%	1,380	3,580		100% 100%	180 1,080		#12 #12	#12 #12	UNIT U203 BATHROOM RCPT UNIT U203 BEDROOM RCPT	C B		<u>20</u> 20	3
35 –	-	L _	-	<b>#</b> 10	-	E	2,500	100%		-,	3,700	100%	1,200	E	<b>#</b> 12	<b>#</b> 12	UNIT U203 FURNACE (F-4b)			20	- 3
37 20 39 20		В	UNIT U101 LIGHTING UNIT U101 FURNACE (F-3)		12 12	L E	1,740 960	125% 100%	4,675	3,460		100% 100%	2,500 2,500	E	#10 -	#10 #10	UNIT U203 DRYER -		2	30 -	3
41 20	1		UNIT U204 DISHWASHER				1,200	100%			2,400	100%	1,200		#12		UNIT U203 WASHER	C	1	20	42
	<b>.</b>	-				_ ,				CTION 2	2	405-21-2-2		1./-	140			1 -	<b>1</b> · ·		<del></del>
43 <u>20</u> 45 20		BC	UNIT U204 LIVING ROOM RCPT UNIT U204 SMALL APPLIANCE	#12 #		R R	1,080 360	100% 100%	2,755	1,835		125%/100% 125%/100%	1,360 1,220		#12 #12		UNIT U203 LIGHTING UNIT U203 LIGHTING	B	1	20 20	44
47 20	1	Č	UNIT U204 SMALL APPLIANCE	#12 #	12	R	360	100%				125%/100%	1,420	L/E	<b>#</b> 12	<b>#</b> 12	UNIT U204 LIGHTING	В	1	20	41
<u>49 20</u> 51 20		C C	UNIT U204 REFRIGERATOR UNIT U204 REFRIGERATOR			-	1,200	100% 100%	2,675	1,560		125%/100% 100%	1,220 360		#12 #12	#12 #12	UNIT U204 LIGHTING MAIN TELCO BOARD RCPT	В		<u>20</u> 20	5
53 20	1	Ċ	UNIT U204 REFRIGERATOR	#12 #	12	E	1,200	100%		.,	2,640	100%	1,440	E	#12	<b>#</b> 12	FURNACE (F-1)		1	20	5
55 20 57 20		C B	UNIT U204 DISPOSAL UNIT U204 BEDROOM RCPT			M R	864 900	100% 100%	1,944	1,400		100% 100%	1,080 500		#12 #12	#12 #12	OFFICE RCPT EWC			<u>20</u> 20	5
59 20	1	c	UNIT U204 BATHROOM RCPT	#12	12	R	180	100%		1,100	1,260	100%	1,080	R	#12	<b>#</b> 12	OFFICE RCPT		1	20	6
61 <u>20</u> 63 50	1 2		UNIT U204 HOOD/MW UNIT U204 RANGE		12 10		1,200 4,000	100% 100%	1,380	4,180		100%	180 180		#12 #12	#12 #12	STAFF AREA RCPT STAFF AREA RCPT			<u>20</u> 20	62 64
65 –	-		-	#6	-	E	4,000	100%		1,100	4,180	100%	180	R	<b>#</b> 12	<b>#</b> 12	STAFF AREA RCPT		1	20	66
67 <u>30</u> 69 –	2		UNIT U204 DRYER		10 -		2,500 2,500	100% 100%	2,580	3,940		100% 100%	80 1,440		#12 #12		STAFF AREA RCPT RECEPTION/COUNCIL RCPT			20 20	68
71 20	1	С	UNIT U204 WASHER	#12 #	12	E	1,200	100%	-	0,010	2,400	100%	1,200	E	<b>#</b> 12	<b>#</b> 12	COPIER		1	20	72
73 20 75 20		BC	UNIT U204 BEDROOM RCPT UNIT U204 BATHROOM RCPT		12 12		1,080 180	100% 100%	1,580	1,380		100% 100%	500 1,200	E	#12 #12	#12 #12	FACP FURNACE (F-2)			20 20	74
77 20	1	Ċ	UNIT U204 BATHROOM RCPT	#12 #	12	R	180	100%			1,380	100%	1,200		<b>#</b> 12		FURNACE (F-4c)		1	20	78
79 20 81 20	$\frac{1}{1}$	В	UNIT U204 BEDROOM RCPT SPARE	#12 #	12	R	900	100%	900								SPARE SPARE			<u>20</u> 20	80
83 20	1		SPARE														SPARE		1	20	84
ighting load ( Quipment load Itchen Demand Iotor load: Iotal load Per Otal load Per Otal Demand I	VA): ) (VA) ) (VA): ? PHASE (VA) ? PHASE (AM	): PS): Eceptacle	4 DEMAND ADJUSTMENT: ADJUSTMENT: AS PER NEC 220.44 (VA)						φA 8,240 5,025 17,000 0 1,728 31,993 89 100,202 -5,630	фВ 8,520 1,275 25,960 0 0 35,755 99	¢C 4,500 1,650 25,440 0 864 32,454 90		B C D F <u>G G</u> <u>GENERAL</u> 1	. Lock- . Provid . Provid . Shunt . Hid Ra . Existin . New Bi . New Bi	e groun Trip Br Ted Brej G Break Reaker. Sulation Tion on	AULT (AF( D FAULT EAKER. KER. ER. ON CON ALL UND CALCULA	CI) PROTECTION FOR CIRCUIT (GFCI) PROTECTION FOR CIRCUIT. DUCTORS TO BE THHN UNLESS NOTE ERGROUND CONDUCTORS SHALL BE THED AS PER SECTIONS 210 & 220 OI	IHW.			
TOTAL DEMAND LOAD w/o 25% LARGEST MOTOR LOAD (VA): 25% LARGEST MOTOR (VA)								94,572 216			۹.	3	. Panel Permai Sectio	Cover S Nent Lab N 110.	HALL BE EL AS I	FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER:	l code	IRC FLASH			
fotal demand l fotal.demand l'									SEE L	OAD CALCU	ATIONS		4				HALL BE AS PER SECTION 408.4 OF	The Nation/	NL.		
PANEL: YOLTAGE:	L2 208Y/120				s amps:			PAI	NELBO/	225	HEDUL	.E					USE CODE				
PHASE: 3 NOUNTING: INCLOSURE: REMARKS:	WIRE: 4 Surface Nema 1				in devic Nimum e		ENT RATING	3:		LUGS 22,000 AM	ps (rms-si	'M)					R = RECEPTACLE LOAD L = LIGHTING LOAD E = EQUIPMENT LOAD K = KITCHEN EQUIPMENT LOAD M = MOTOR LOAD				

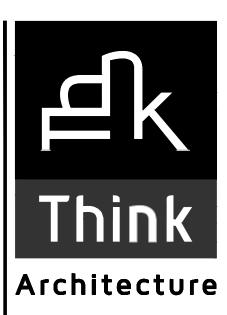
										PAI	NELBO/	ARD SC	HEDUL	.E									
PANEL VOLTAV PHASE MOUNT ENCLO REMAR	e: 3 ING: SURE:	L2 208Y/120 WIRE: 4 SURFACE NEMA 1	BUS AMPS: Main device: Minimum equipment rating:						NG:		ps (RMS-sy	м)		$\frac{\text{USE CODE}}{\text{R}} = \text{RECEPTACLE LOAD}$ $\text{L} = \text{LIGHTING LOAD}$ $\text{E} = \text{EQUIPMENT LOAD}$ $\text{K} = \text{KITCHEN EQUIPMENT LOAD}$ $\text{M} = \text{MOTOR LOAD}$									
												ECTION 1											
No.	BREAKE	r Pole	Keyed Note	CIRCUIT NAME	w	FEED Re	er Grd	USE	CKT. L WATTS	OAD DEMAND	LC ¢A	AD/PHASE ( 6B	VA) dC	CK DEMAND	(T. LOAD WATTS	USE	FE GRD	EDER WIRE	CIRCUIT NAME	KEYED NOTE	POLE	BREAKER	No.
1	20	1	B	UNIT U202 LIVING ROOM RCPT	ŧ	12	<b>#</b> 12	R	1,080	100%	2,340		ΨŬ	100%	1,260	R	<b>#</b> 12	<b>#</b> 12	UNIT U201 LIVING ROOM RCPT	В	1	20	2
3	20 20	1	B	UNIT U202 DINING AREA RCPT UNIT U202 BEDROOM RCPT		12 12	#12 #12		360 720	100%	•	540	900	100% 100%	180 180	R	#12 #12		UNIT U201 SMALL APPLIANCE UNIT U201 SMALL APPLIANCE	C C		20 20	4
7	20	1	C	UNIT U202 SM APPLINACE RCPT	Ī	12	<b>#</b> 12	R	360	100%	4,360			100%	4,000	E	<b>#</b> 10	#6	UNIT U201 RANGE		2	50	8
9	20	1	C	UNIT U202 SM APPLINACE RCPT	_	12	#12	-	360	100%		4,360	0.004	100%	4,000	E	-	#6			-	-	10
11	20 20	1	C C	UNIT U202 DISPOSAL UNIT U202 REFRIGERATOR	_	12 12	#12 #12	M E	864	100%	2,400		2,064	100% 100%	1,200	E	#12 #12		UNIT U201 HOOD/MW UNIT U201 DISHWASHER			20 20	12 14
15	20	1	C	UNIT U202 REFRIGERATOR	<u> </u>	12	#12	Ē	1,200	100%	2,700	2,064		100%	864	M	#12		UNIT U201 DISPOSAL	c		20	16
17	20	1	C	UNIT U202 REFRIGERATOR	<u> </u>	12	<b>#</b> 12	E	1,200	100%	ono de de la 1999 de la 1999 de la 1997 de l		1,920	100%	720	R		#12	UNIT U201 BEDROOM RCPT	В	1	20	18
19	20	1		UNIT U202 HOOD/MW	<u> </u>	12	#12	E	1,200	100%	2,400	5.000		100%	1,200	E		#12	UNIT U201 REFRIGERATOR	C	1	20	20
21 23	50	2		UNIT U202 RANGE		6	<b>#</b> 10 -	E	4,000	100%		5,200	5,200	100% 100%	1,200	E		#12 #12	UNIT U201 REFRIGERATOR UNIT U201 REFRIGERATOR	C C		20 20	22 24
25	20	1	С	UNIT U202 BATH RCPT	╞╴╢	12	<b>#</b> 12	R	180	100%	1,380		5,200	100%	1,200	Ē	#12	-	UNIT U201 WASHER	č	1	20	24
27	20	1	C	UNIT U202 BATH RCPT		12	<b>#</b> 12	R	180	100%		2,680		100%	2,500	Ε	<i>#</i> 10	<b>#</b> 10	UNIT U201 DRYER		2	30	28
29	20	1	B	UNIT U202 BEDROOM RCPT		12	#12	R	720	100%	0.000		3,220	100%	2,500	E	-	#10			-	-	30
31 33	30	2		UNIT U202 DRYER -	_	10 10	#10 -	E	2,500 2,500	100%	2,680	3,220		100% 100%	180 720	R R	#12 #12	#12 #12	UNIT U201 BATH RCPT UNIT U201 BEDROOM RCPT	C B		20 20	32 34
35	20	1	С	UNIT U202 WASHER		12	<b>#</b> 12	Ē	1,200	100%		0,220	1,380	100%	180	R		#12	UNIT U201 BATH RCPT	č	1	20	36
37	20	1	В	UNIT U202 BEDROOM RCPT	_	12	<b>#</b> 12		720	100%	900	anatotototototototo Silviviviviranen ele		100%	180	R		<b>#</b> 12	UNIT U201 BATH RCPT	C	1	20	38
39	20	1	c	UNIT U202 BATH RCPT		12	#12	_	180	100%		1,930	7.675	125%/100%	1,420		#12		UNIT U201 LIGHTING	B	1	20	40
41	20	1	B	UNIT U202 LIGHTING	<u></u> #	12	#12	L/E	1,300	125%/100%		CTION 2		125%/100%	1,220	L/E	#12	<b>#</b> 12	UNIT U201 LIGHTING	В	1 1	20	42
43	20	1 1	B	Unit U202 Lighting		12	<b>#</b> 12	L/E	1,280	125%/100%				100%	1,200	E	#12	#12	UNIT U201 FURNACE (F-4d)		1 1	20	44
45	20		D	UNIT U202 FURNACE (F-4a)	_	12	#12	E	1,200	100%	2,750	1,300		125%	80		#10	-	PARKING LTG		2	20	46
47	20	1		COULCILING RCPT	Ï	12	<b>#</b> 12	R	1,440	100%			1,540	125%	80	L	-	#10	-		-	-	48
49	20	1		HALL RCPT		12	#12	R	1,440	100%	2,520			100%	1,080	R	#10	#10	UNIT U303 LIVING ROOM RCPT	B	1	20	50
51 53	20 20			EWH-1 OFFICE RCPT	_	12 12	#12 #12		1,500	100%		2,220	1,260	100% 100%	720 180	R	#10 #10	#10 #10	UNIT U303 BEDRROM RCPT UNIT U303 BATHROOM RCPT	B C		20 20	52 54
55	20			OFFICE RCPT		12	#12		1,080	100%	2,280		1,200	100%	1,200	E		#10	UNIT U303 REFRIGERATOR	Ċ		20	56
57	20	1		OFFICE RCPT	<u> </u>	12	<b>#</b> 12	R	1,080	100%		2,280		100%	1,200	E		<b>#</b> 10	UNIT U303 REFRIGERATOR	C	1	20	58
59	20	1		LEVEL 2 CORRIDOR RCPT	_	12	#12	R	900	100%	4 705		2,100	100%	1,200	E	#10		UNIT U303 REFRIGERATOR	c	1	20	60
61 63	20 20	1		MAIN LEVEL OFFICE LTG MAIN LEVEL LOBBY LTG		12 12	#12 #12		1,284	125% 125%	1,785	1,879		100% 100%	180 180	R	#10 #10	#10 #10	UNIT U303 SMALL APPLIANCE UNIT U303 SMALL APPLIANCE	B		20 20	62 64
65	20			MAIN LEVEL LOBBY LIG			#12		702	125%	- oro-real-distance - 010-15-15-15-oromore - oro-real-distance - oro-real-distance	1,073	2,078	100%	1,200	E		#10	UNIT U303 DISHWASHER			20	66
67	20	1		LEVEL 2 CORRIDOR LTG		12	<b>#</b> 12	L	336	125%	1,620			100%	1,200	_	<b>#</b> 10		UNIT U303 HOOD/MW		1	20	68
69	20	1		BUILDING EXTERIOR LTG			#12		210	125%		4,263		100%	4,000	E		#6	UNIT U303 RANGE		2	50	70
71	20 20		C B	UNIT U303 BATHROOM RCPT UNIT U303 BEDROOM RCPT		10 10	#10 #10		180 1,080	100%	1,944		4,180	100% 100%	4,000 864	E	- #10	#6 #10	- Unit U303 Disposal	c	<u>  -</u>   1	- 20	72 74
75	20		D	UNIT U303 FURNACE (F-4f)	╞╴╫		#10		1,000	100%	1,377	2,280		100%	1,080	R	#10		UNIT U303 BEDROOM RCPT	B		20	76
77	35	2		UNIT U303 DRYER	Ï	8		E	2,500	100%			2,680	100%	180	R	#10		UNIT U303 BATHROOM RCPT	c	1	20	78
79	-	-		_		8	-	E	2,500	100%	2,500								SPARE		1	20	80
81 83	20 20	1	C	UNIT U303 WASHER SPARE	<b>↓ #</b>	10	<b>#</b> 10	╞	1,200	100%		1,200				+			SPARE SPARE		1 $1$ $1$	20 20	82 84
LIGHTII EQUIPI KITCHE MOTOF TOTAL TOTAL TOTAL TOTAL 25% L TOTAL	ig load (%, ient load n demand load: load per load per demand lo argest mo demand lo	a): (VA) (VA): PHASE (VA): PHASE (AMF NAD w/o RE NAD w/o RE NAD w/o 25 TOR (VA)	: PS): Ceptacle / Djustment	demand adjustment: Ndjustment: As per Nec 220.44 (VA) Motor Load (VA):							фА 8,820 3,375 18,800 0 864 31,859 88 98,871 -5,170 93,701 216 SEE 1	фВ 5,040 3,711 25,800 0 864 35,415 98	фС 6,480 3,753 20,500 0 864 31,597 88		B C D E F G <u>G</u> Eneral 1 2 3	. Lock- . Provii . Provii . Shunt . Hid R. . Existii . New E <u>Notes:</u> . All IN INSUL/ . Load Electi . Panel Perma Sectic Hazar	De grou Trip Bi Ated Brea Ng Break Breaker. Isulation Ntion on Demands Rical Co Cover Inent La DN 110. D".	FAULT (AF ND FAULT REAKER. EAKER. KER. KER. ALL ONE CALCUL/ DE. SHALL BE BEL AS LABEL S	CI) PROTECTION FOR CIRCUIT (GFCI) PROTECTION FOR CIRCUIT. NDUCTORS TO BE THHN UNLESS NOTEL PERGROUND CONDUCTORS SHALL BE THI NTED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTIC REQUIRED BY THE NATIONAL ELECTRICAL HALL READ AS FOLLOWS: "DANGER: F SHALL BE AS PER SECTION 408.4 OF T	HW. THE NATIO DN WITH A L CODE POTENTIAL A	onal Arc flash		
																ELECT	RICAL CO	de.					

PANEL: L3 Voltage: 208Y/120 PHASE: 3 WIRE: 4 MOUNTING: SURFACE ENCLOSURE: NEMA 1 REMARKS:						BUS AMPS: 225 Main Device: Lugs Minimum Equipment Rating: 10,000 AMPS (RMS-SYM												
											S	ECTION 1						
	BREAKE		KEYED	CIRCUIT NAME			DER		CKT. LC		L	DAD/PHASE (						
No.	AMPS	POLE	NOTE			WIRE	GRD	USE	WATTS	DEMAND	φA	фВ	фС	DEMAND				
1 3	<u>20</u> 20		BB	UNIT U302 LIVING ROOM RCPT UNIT U302 DINING AREA RCPT		#10 #10	#10 #10	R	1,080 360	100%	2,340	540		100% 100%				
5	20		B	UNIT U302 BEDROOM RCPT		#10	#10	R	720	100%		540	900	100%				
7	20	1	C	UNIT U302 SM APPLINACE RCPT		<b>#</b> 10	<b>#</b> 10	R	360	100%	4,360			100%				
9	20	1	C	UNIT U302 SM APPLINACE RCPT		<b>#</b> 10	#10	R	360	100%		4,360		100%				
11	20		C	UNIT U302 DISPOSAL		#10	#10	M	864	100%	2 400		2,064	100%				
13 15	20 20		C C	UNIT U302 REFRIGERATOR UNIT U302 REFRIGERATOR	-	<u>#10</u> #10	#10 #10	E	1,200	100% 100%	2,400	2,064		100% 100%				
17	20		c	UNIT U302 REFRIGERATOR		#10 #10	#10	Ē	1,200	100%		2,007	1,920	100%				
19	20			UNIT U302 HOOD/MW		#10	#10	Ē	1,200	100%	2,400			100%				
21	50	2		UNIT U302 RANGE		<b>#</b> 6	<b>#</b> 10	E	4,000	100%		5,200		100%				
23	-	-		_		<b>#</b> 6	-	E	4,000	100%			5,200	100%				
25	20	1	C	UNIT U302 BATH RCPT		<b>#</b> 10	#10	R	180	100%	1,380			100%				
27	20		C	UNIT U302 BATH RCPT	+	#10	#10	R	180	100%		2,680	7 000	100%				
29 31	<u>20</u> 35	1 2	В	UNIT U302 BEDROOM RCPT UNIT U302 DRYER	+	<u>#10</u> #8	#10 #10	R	720	100%	2,680		3,220	100%				
33		-		-	+	#8	-	Ē	2,500	100%	2,000	3,220		100%				
35	20	1	С	UNIT U302 WASHER		<b>#</b> 10	<b>#</b> 10	Ē	1,200	100%			1,380	100%				
37	20	1	В	UNIT U302 BEDROOM RCPT		<b>#</b> 10	<b>#</b> 10	R	720	100%	900			100%				
39	20	1	C	UNIT U302 BATH RCPT		<b>#</b> 10	<b>#</b> 10	R	180	100%		1,930		125%/100				
41	20	1	В	UNIT U302 LIGHTING		<b>#</b> 10	<b>#</b> 10	L/E	1,300	125%/100%			3,075	125%/100				
											SE	ECTION 2	-					
43	20	1	В	UNIT U302 LIGHTING		<b>#</b> 10	<b>#</b> 10	L/E	1,280	125%/100%	2,750			100%				
45	20	1		UNIT U302 FURNACE (F4h)		#10	#10	E	1,200	100%		2,280		100%				
47	20		B	UNIT U303 LIGHTING	_	<u>#10</u>	#10	L/E	1,360	125%/100%	4.055		1,855	100%				
49 51	20		B	UNIT U303 LIGHTING	-	<u>#10</u> #10	#10 #10	L/E L/E	1,220 1,420	125%/100% 125%/100%	1,655	2.650		100%				
53	<u>20</u> 20		B B	UNIT U304 LIGHTING UNIT U304 LIGHTING		#10 #10	#10		1,420	125%/100%		2,030	2,675	100% 100%				
55	20		B	UNIT U304 LIVING ROOM RCPT		#10	#10	R	1,080	100%	1,575		2,070	125%				
57	20	<b>1</b>	C	UNIT U304 SMALL APPLIANCE		#10	#10	R	360	100%		855		125%				
59	20	1	C	UNIT U304 SMALL APPLIANCE		<b>#</b> 10	<b>#</b> 10	R	360	100%			4,520	100%				
61	20	1	C	UNIT U304 REFRIGERATOR		<b>#</b> 10	<b>#</b> 10	E	1,200	100%	5,360			100%				
63	20		C	UNIT U304 REFRIGERATOR		<u>#10</u>	#10	E	1,200	100%		4,320	4 700	100%				
65	20		C	UNIT U304 REFRIGERATOR	_	#10	#10	E	1,200	100%	0.044		4,320	100%				
67 69	<u>20</u> 20		C B	UNIT U304 DISPOSAL UNIT U304 BEDROOM RCPT	-	#10 #10	#10 #10	M R	864 900	100%	2,944	2,980		100% 100%				
71	20		C	UNIT U304 BATHROOM RCPT		#10	#10	R	180	100%		2,300	180	100%				
73	20			UNIT U304 HOOD/MW		#10	#10	Ē	1,200	100%	1,200	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1						
75	50	2		UNIT U304 RANGE		<b>#</b> 6	<b>#</b> 10	E	4,000	100%		4,000						
77	-	-		-		<b>#</b> 6	-	Ε	4,000	100%			4,000					
79	20			SPARE	_									<u> </u>				
81 83	<u>20</u> 20			SPARE SPARE	+							5 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5		<b> </b>				
65	20			SFARE							http://www.constanting.com			<u> </u>				
lighting	CLE LOAD LOAD (V NT LOAD	(A):	IEC 220.44	DEMAND ADJUSTMENT:							фА 5,220 3,120 22,740	фВ 5,220 3,795 27,200	фС 3,240 5,625 25,580					
	DEMAND	(VA):									0	0	0	1				
NOTOR I	_OAD:										864	864	864					
		PHASE (VA): PHASE (AMP									31 <b>,944</b> 89	37,079 103	35,309 98					
		DAD w/o REC NND LOAD AD		djustment: As per nec 220.44 (VA)						•	104,332 -1,840	]						
iotal d 25% laf	emand lo Rgest mo	DAD w/o 259 TOR (VA)	6 LARGEST	MOTOR LOAD (VA):							102,492 216	]						
iotal d	EMAND LO	DAD (VA):									SEE	LOAD CALCUL	ATIONS	1				

PANELBOARD 'L1' L		HONS
OCCUPANCY TYPE:	CE AREA LOAD)	RESIDENTIAL, MULTI-UN
GROSS AREA:		3,500 SQ I
TOTAL NUMBER OF UNITS:		3 UNI
TWO BEDROOM UNIT AREA:		1,150 SQ I
NUMBER OF TWO BEDROOM UNITS:		1 UNI
TOTAL TWO BEDROOM SQUARE FOOTAGE:		1,150 SQ I
THREE BEDROOM UNIT AREA:		1,175 SQ 1
NUMBER OF THREE BEDROOM UNITS:		2 UNF
TOTAL THREE BEDROOM SQUARE FOOTAGE:		2,350 SQ 1
AVERAGE UNIT SQUARE FOOTAGE:		1,163 SQ I
		.,
ELECTRICAL LOADS (PER UNIT)		
LIGHTING/RECEPTACLES:	3,488 VA	BASED ON NEC 220.
KITCHEN LOADS:		
RECEPTACLES	3,000 VA	BASED ON NEC 220.52(
REFRIGERATOR (THREE PER UNIT)	3,600 VA	
DISPOSAL	828 VA	
DISHWASHER	1,200 VA	
RANGE	8,000 VA	
LAUNDRY LOADS:		
WASHER	1,200 VA	BASED ON NEC 220.52(
DRYER	5,000 VA	
HVAC LOADS		
FURNACE	1,200 VA	
CONDENSING UNIT	6,240 VA	
TOTAL LOAD (PER UNIT)	33,756 VA	
TOTAL BUILDING LOAD	101,267 VA	
DEMAND FACTOR	45%	
TOTAL REVISED BUILDING LOAD	45,570 VA	BASED ON NEC 220.8
TOTAL PANEL LOAD:		
TOTAL RESIDENTIAL COMPUTED LOAD:	45,570 VA	
OFFICE AREA LOAD:	<u>6.433 VA</u>	
TOTAL PANEL LOAD	52,002 VA	
VOLTAGE:	208 VOLTS	
PHASE:	3 PHASE	
TOTAL AMPERAGE:	144 AMPS	

	PA	NELBOA	RD SCH	EDUL	E													
s amps: In device: Iimum equipment rat	TING:	L	225 .UGS 0,000 AMPS (	(RMS-SYN	4)	USE CODE $R = RECEPTACLE LOAD$ $L = LIGHTING LOAD$ $E = EQUIPMENT LOAD$ $K = KITCHEN EQUIPMENT LOAD$ $M = MOTOR LOAD$												
			TION 1		04	(T. 1.04D												
R CKT. CKT. CKT. CKT. CKT. CKT. CKT. CKT. CKT. CKT.	DEMAND	¢A 2,340	D/PHASE (VA) \$B	фC	DEMAND	(T. LOAD WATTS	USE	GRD #10	EDER WIRE #10	CIRCUIT NAME	KEYED NOTE	POLE	BREAKER AMPS	No.				
10 R 1,080 10 R 360	100%	2,340	540		100%	1,260 180	R	<b>#</b> 10	<b>#</b> 10	UNIT U301 LIVING ROOM RCPT UNIT U301 SMALL APPLIANCE	B	1	20 20	2				
10 R 720 10 R 360	100%	4,360		900	100% 100%	180 4,000	R	#10 #10	#10 #6	UNIT U301 SMALL APPLIANCE UNIT U301 RANGE	C	1 2	20 50	6 8				
10 R 360 10 M 864	100%		4,360	2,064	100% 100%	4,000 1,200	E	_ #10	#6 #10	UNIT U301 HOOD/MW		-	- 20	10 12				
10 E 1,200 10 E 1,200		2,400	2,064		100% 100%	1,200 864	E	#10 #10	#10 #10	UNIT U301 DISHWASHER UNIT U301 DISPOSAL	с	1	20 20	14 16				
10 E 1,200	100%	0.400		1,920	100%	720	R	<b>#</b> 10	<b>#</b> 10	UNIT U301 BEDROOM RCPT	В	1	20	18				
10 E 1,200 10 E 4,000		2,400	5,200		100% 100%	1,200 1,200	E	#10 #10	#10 #10	UNIT U301 REFRIGERATOR UNIT U301 REFRIGERATOR	C C	1	20 20	20 22				
– <u>E</u> 4,000 10 R 180	100%	1,380		5,200	100% 100%	1,200	E	#10 #10	#10 #10	UNIT U301 REFRIGERATOR UNIT U301 WASHER	C C	1	20 20	24 26				
10 R 180	100%		2,680	3,220	100% 100%	2,500 2,500	E	<b>#</b> 10 -	#8 #8	UNIT U301 DRYER		2	35 -	28 30				
10 E 2,500 - E 2,500	100%	2,680	3,220		100%	180 720	R	#10 #10	#10 #10	UNIT U301 BATH RCPT UNIT U301 BEDROOM RCPT	C B	1	20 20	32 34				
10 E 1,200	100%			1,380	100%	180	R	<b>#</b> 10	<b>#</b> 10	UNIT U301 BATH RCPT	C	1	20	36				
10 R 720 10 R 180	100%		1,930		100% 125%/100%	180 1,420	R L/E	#10 #10	#10 #10	UNIT U301 BATH RCPT UNIT U301 LIGHTING	C B	1	20 20	38 40				
10 L/E 1,300	125%/100%		TION 2	3,075	125%/100%	1,220	L/E	<b>#</b> 10	<b>#</b> 10	UNIT U301 LIGHTING	В	1	20	42				
0 L/E 1,280					100%	1,200	E	<b>#</b> 10	<b>#</b> 10	UNIT U301 FURNACE (F-4e)		1	20	44				
0 E 1,200 0 L/E 1,360			2,280	1,855	100% 100%	1,080 180	R R	#10 #10	#10 #10	UNIT U304 BEDROOM RCPT UNIT U304 BATHROOM RCPT	BC		20 20	46 48				
0 L/E 1,220 0 L/E 1,420	125%/100%	1,655	2,650		100% 100%	180 900	R	#10 #10	#10 #10	UNIT U304 BATHROOM RCPT UNIT U304 BEDROOM RCPT	C B	1	20 20	50 52				
0 L/E 1,220	125%/100%			2,675	100% 125%	1,200 396	E	#10 #10	#10 #10	UNIT U304 FURNACE (F-4g) STAIRWELL #1 LTG		1	20 20 20	54 56				
0 R 360	100%	1,070	855	1 500	125%	396	Ĺ	<b>#</b> 10	#10	STAIRWELL #2 LTG		1	20	58				
0 R 360 0 E 1,200		5,360		4,520	100% 100%	4,160 4,160	E	#10 -	#6 #6	CU-1 -		2 -	50 -	60 62				
0 E 1,200 0 E 1,200			4,320	4,320	100% 100%	3,120 3,120	E	<b>#</b> 10 -	#8 #8	CU-2 -		2	40 -	64 66				
0 M 864	100%	2,944	2,980		100%	2,080	E	<b>#</b> 12 -	#12 #12	CU-3 -		2	25 -	68 70				
0 R 180 0 E 1,200	100%	1,200		180		_,	<u> </u>			SPARE SPARE		 1 1	20 20	70 72 74				
10 E 4,000	100%	1,200	4,000							SPARE		1	20	76				
- <u>E</u> 4,000	100%			4,000						SPARE SPARE		1	20 20	78 80				
										SPARE SPARE		1	20 20	82 84				
		31,944 89 104,332 -1,840	37,079 3 103	35,309 98		F G <u>GENERAL</u> 1	E. HID RA F. Existin G. New B <u>Notes:</u> I. All IN INSULA 2. LOAD 1	ITED BREAU IG BREAU REAKER. SULATION TION ON DEMANDS	KER. I ON CON ALL UND CALCULA	Ductors to be then unless note Erground conductors shall be th Ted as per sections 210 & 220 of	IHW.							
		89 104,332 -1,840 102,492 216		98		F G GENERAL 1 2 3	E, HID R/ F. Existin G. New B NOTES: I. All IN INSULA 2. LOAD I ELECTF 5. PANEL PERMA SECTIO HAZARI 6. CIRCUT	TED BREAM IG BREAM REAKER. SULATION TION ON DEMANDS RICAL COI COVER S NENT LAI N 110. D".	aker. Ker. All und Calcula De. Shall be Bel as Label si Tication s	ERGROUND CONDUCTORS SHALL BE TH	IHW. F THE NATION ION WITH A AL CODE POTENTIAL A	VAL RC FLASH						
CCUPANCY TYPE: NIT GROSS AREA: OTAL NUMBER OF U WO BEDROOM UNIT UMBER OF TWO BEL	NITS: AREA: DROOM UNITS:	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/	103 Ad calculatic	98 ONS	ATIONS	GENERAL 1 2 3 4 DENTIAL, M 3,5	E. HID RA F. EXISTIN NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTR PERMA SECTIO HAZARI I. CIRCUI ELECTR ULTI-UNI 25 SQ F <u>3 UNIT</u> 50 SQ F 0 UNIT	TED BREAK IG BREAK REAKER. SULATION ON DEMANDS IICAL COD IICAL COURCE NENT LAI N 110. D'. T IDENTIF IICAL COURCE T T S	AKER. KER. ALL UND CALCULA DE. SHALL BE BEL AS ILABEL SI ILABEL SI I	ERGROUND CONDUCTORS SHALL BE TH TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF PANELBOARD 'L3 (WITH CO CY TYPE:	ihw. F The Nation N with A L Code Potential A The Nationa	val rc flash l		Sidential,	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN			
CCUPANCY TYPE: NIT GROSS AREA: DTAL NUMBER OF U VO BEDROOM UNIT JMBER OF TWO BED DTAL TWO BEDROOM IREE BEDROOM UNI	NITS: AREA: DROOM UNITS: SQUARE FOOT T AREA:	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFFI	103 ad calculatic	98 ONS	ATIONS	ENTIAL, M 3.5 0ENTIAL, M 3.5	L. HID RA E. HID RA E. EXISTIN NOTES: I. ALL IN INSULA 2. LOAD I ELECTR ELECTR HAZARI I. CIRCUI ELECTR ULTI-UNI 25 SQ F <u>3 UNIT</u> 0 SQ F 0 UNIT 0 SQ F 75 SQ F	TED BREAK IG BREAK REAKER. SULATION ON DEMANDS ICAL COU COVER NENT LAI N 110. D'. T IDENTIF ICAL COU	AKER. (CR. ALL UND CALCULA DE. SHALL BE BEL AS I LABEL SI I CATION S DE. OCCUPANO UNIT GRO: TOTAL NU TWO BEDF NUMBER ( TOTAL TWI THREE BE	ERGROUND CONDUCTORS SHALL BE TH TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: D BEDROOM SQUARE FOOTAGE: D BEDROOM UNIT AREA:	IHW. F THE NATION NL CODE POTENTIAL A THE NATIONA	val rc flash l		SIDENTIAL	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ			
CCUPANCY TYPE: IT GROSS AREA: ITAL NUMBER OF U IO BEDROOM UNIT JMBER OF TWO BED ITAL TWO BEDROOM IREE BEDROOM UNI IMBER OF THREE E	NITS: AREA: DROOM UNITS: SQUARE FOOT T AREA: EDROOM UNITS	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFFI	103 ad calculatic	98 ONS	ATIONS	ENTIAL, M 3,5 1,1	L. HID RA . EXISTIN . NEW B . NOTES: . ALL IN INSULA 2. LOAD I ELECTR . PAREL PERMA SECTIO HAZARI . CIRCUI ELECTR ULTI-UNI 25 SQ F <u>3 UNIT</u> 50 SQ F 0 UNIT <u>0 SQ F</u>	TED BREAK IG BREAK REAKER. SULATION ON DEMANDS IICAL COU COVER S NENT LAI N 110. D'. T IDENTIFICAL COU	AKER. (CR. CON ALL UND CALCULA DE. SHALL BE BEL AS I LABEL SI I CATION S DE. OCCUPANO UNIT GRO: TOTAL NU TWO BEDF NUMBER ( TOTAL TWI THREE BE NUMBER (	ERGROUND CONDUCTORS SHALL BE TH TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF PANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: ROOM UNIT AREA: OF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE:	IHW. F THE NATION NL CODE POTENTIAL A THE NATIONA	val rc flash l		Sidential	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ 3 UN			
CCUPANCY TYPE: NIT GROSS AREA: DTAL NUMBER OF U VO BEDROOM UNIT JMBER OF TWO BED DTAL TWO BEDROOM IREE BEDROOM UNI JMBER OF THREE BEDROO	NITS: AREA: DROOM UNITS: SQUARE FOOT T AREA: EDROOM UNITS DM SQUARE FO	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFFI	103 ad calculatic	98 ONS	ATIONS	DENTIAL, M 3,5 1,1 2,3 3,5 1,1 1,1 1,1 3,5	E. HID RA F. EXISTIN NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTR ELECTR ULTI-UNI 25 SQ F 3 UNIT 0 SQ F 75 SQ F 3 UNIT	TED BREAUREAKER. SULATION ON DEMANDS ICAL COUCCOVER NENT LAI N 110. T IDENTIFICAL COUCCOVER T IDENTIFICAL COUCCOVER T T T S T T T S T T S S T T	AKER. (CR. (CN. CON ALL UND CALCULA DE. SHALL BE BEL AS ILABEL SI ILABEL SI IL	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF PANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: NOOM UNIT AREA: D BEDROOM SQUARE FOOTAGE: D ROOM UNIT AREA: D BEDROOM SQUARE FOOTAGE: D ROOM UNIT AREA: D F THREE BEDROOM UNITS:	IHW. F THE NATION NL CODE POTENTIAL A THE NATIONA	val rc flash l		SIDENTIAL	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> 3,525 SQ			
CCUPANCY TYPE: INIT GROSS AREA: OTAL NUMBER OF U WO BEDROOM UNIT UMBER OF TWO BED OTAL TWO BEDROOM HREE BEDROOM UNI UMBER OF THREE E OTAL THREE BEDROO VERAGE UNIT SQUAR	NITS: AREA: DROOM UNITS: SQUARE FOOT T AREA: IEDROOM UNITS DM SQUARE FO TE FOOTAGE:	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFFI	103 ad calculatic	98 ONS	ATIONS	DENTIAL, M 3,5 1,1 2,3 3,5 1,1 1,1 1,1 3,5	L. HID RA . EXISTIN . NEW B NOTES: . ALL IN INSULA 2. LOAD I ELECTR . CIRCUI ELECTR . CIRCUI ELECTR . CIRCUI ELECTR . CIRCUI . CIRC	TED BREAU IG BREAU REAKER. SULATION ON DEMANDS IICAL COU COVER NENT LAI N 110. D'. T IDENTIF RICAL COU T T S T T S T T S S T T T	AKER. (CR. (CN. CON ALL UND (CALCULA DE. SHALL BE BEL AS ILABEL SI ILABEL SI I	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: ROOM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT)	HW. F THE NATION NUTTH A NL CODE POTENTIAL A THE NATIONA 'LOAD C MMON AREA	VAL RC FLASH L CACLUL LOAD)		SIDENTIAL	, MULTI-UI 3,525 SQ 3 UN 1,150 SQ 0 UN 0 SQ 1,175 SQ 3 UN 3,525 SQ 1,163 SQ			
CCUPANCY TYPE: NIT GROSS AREA: OTAL NUMBER OF U WO BEDROOM UNIT UMBER OF TWO BED OTAL TWO BEDROOM HREE BEDROOM UNI UMBER OF THREE B OTAL THREE BEDROO VERAGE UNIT SQUAR LECTRICAL LOADS (F GHTING/RECEPTACLE	NITS: AREA: DROOM UNITS: SQUARE FOOT T AREA: JEDROOM UNITS DM SQUARE FO TA FOOTAGE: PER UNIT)	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFFI	103 ad calculatio	98 ONS	ATIONS RESID	DENTIAL, M 3,5 1,1 2,3 3,5 1,1 1,1 1,1 3,5	E. HID RA F. EXISTIN S. NEW B NOTES: . ALL IN INSULA 2. LOAD I ELECTE ELECTE ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 UNIT 25 SQ F 3 UNIT 25 SQ F 3 UNIT 25 SQ F 3 UNIT	TED BREAUREAUREAUREAUREAUREAUREAUREAUREAUREAU	AKER. (CR. (CN. CON ALL UND (CALCULA DE. SHALL BE BEL AS ILABEL SI ILABEL SI I	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES:	HW. F THE NATION NUTTH A NL CODE POTENTIAL A THE NATIONA 'LOAD C MMON AREA	val rc flash l	RE	SIDENTIAL	3,525 SQ 3 UN 1,150 SQ 0 UN 0 SQ 1,175 SQ 3 UN 3,525 SQ 1,163 SQ			
DECUPANCY TYPE: INIT GROSS AREA: OTAL NUMBER OF U WO BEDROOM UNIT IUMBER OF TWO BED OTAL TWO BEDROOM INTEE BEDROOM UNI IUMBER OF THREE BEDROO VERAGE UNIT SQUAR LECTRICAL LOADS (F IGHTING/RECEPTACLE IGHTING/RECEPTACLES RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER	NITS: AREA: SQUARE FOOT T AREA: JEDROOM UNITS DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO TAGE: DE FOOTAGE: DE UNIT)	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD 3,4 3,0 3,6 8 1,2	98 0NS (CLUL/ D) 488 VA 488 VA 2000 VA 600 VA 600 VA 600 VA 600 VA 600 VA 600 VA	ATIONS RESID	DENTIAL, M 3,5 1,1 2 3 3 4 4 2 3 3 4 4 3,5 1,1	E. HID RA F. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTR ELECTR ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 SQ F 3 UNIT 25 SQ F 3 SQ F	TED BREAUREAUREAUREAUREAUREAUREAUREAUREAUREAU	AKER. KER. ALL UND CALCULA DE. SHALL BE BEL AS I LABEL SI I LABEL SI I CATION S DE. OCCUPANC UNIT GRO: TOTAL NU TWO BEDF NUMBER ( TOTAL NU TWO BEDF NUMBER ( TOTAL THI AVERAGE ELECTRICA LIGHTING/ KITCHEN LI RECEF REFRI DISPO DISHW	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BALL BE AS PER SECTION 408.4 OF WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: LOADS: PTACLES GERATORS (THREE PER UNIT) SAL ASHER	HW. F THE NATION NUTH A NL CODE POTENTIAL A THE NATIONA 'LOAD C MMON AREA	VAL RC FLASH L CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 3,600 VA 828 VA 1,200 VA	RE	SIDENTIAL,	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> <u>3,525 SQ</u> 1,163 SQ <u>NEC 220</u>			
CCUPANCY TYPE: NIT GROSS AREA: DTAL NUMBER OF U WO BEDROOM UNIT UMBER OF TWO BEDROOM INTEL BEDROOM UNI UMBER OF THREE BEDROOM VERAGE UNIT SQUAR LECTRICAL LOADS (F GHTING/RECEPTACLE TICHEN LOADS: RECEPTACLES REFRIGERATORS ( DISPOSAL	NITS: AREA: SQUARE FOOT T AREA: JEDROOM UNITS DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO TAGE: DE FOOTAGE: DE UNIT)	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD 3,4 3,0 3,6 8 1,2	98 0NS (CLUL/ D) 488 VA 488 VA 500 VA 600 VA 828 VA	ATIONS RESID	DENTIAL, M 3 3 0 0 0 0 0 0 0 0 1,1 1,1 1,1 1,1 1,1 1,1	E. HID RA F. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTR ELECTR ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 SQ F 3 UNIT 25 SQ F 3 SQ F	TED BREAUREAUREAUREAUREAUREAUREAUREAUREAUREAU	AKER. KER. ALL UND CALCULA DE. SHALL BE BEL AS I LABEL SI I LABEL SI	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTI REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BALL BE AS PER SECTION 408.4 OF WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: LOADS: PTACLES GERATORS (THREE PER UNIT) SAL ASHER	HW. F THE NATION NUTH A NL CODE POTENTIAL A THE NATIONA 'LOAD C MMON AREA	VAL RC FLASH L CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 828 VA	RE	SIDENTIAL,	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> 3,525 SQ			
CCUPANCY TYPE: NIT GROSS AREA: DTAL NUMBER OF U WO BEDROOM UNIT UMBER OF TWO BEDROOM IREE BEDROOM UNI UMBER OF THREE BEDROOM VERAGE UNIT SQUAR ECTRICAL LOADS (F GHTING/RECEPTACLE TCHEN LOADS: RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE	NITS: AREA: SQUARE FOOT T AREA: JEDROOM UNITS DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO TAGE: DE FOOTAGE: DE UNIT)	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD 3,4 3,0 3,6 8 1,2	98 0NS (CLUL/ D) 488 VA 488 VA 2000 VA 600 VA 600 VA 600 VA 600 VA 600 VA 600 VA	ATIONS RESID	DENTIAL, M 3 3 0 0 0 0 0 0 0 0 1,1 1,1 1,1 1,1 1,1 1,1	E. HID RA F. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTR ELECTR ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 SQ F 3 UNIT 25 SQ F 3 SQ F	TED BREAK IG BREAK REAKER. SULATION ON DEMANDS NENT LAI N 110. T IDENTIF N COVER : NENT LAI N 110. T I S T I S T I S T I S T I S T I S S T I S S T I S S T I S S T I S S T I S S T I S S S S S S S S S S S S S	AKER. KER. ALL UND CALCULA DE. SHALL BE BEL AS I LABEL SI I LABEL SI I CATION S DE. OCCUPANC UNIT GRO: TOTAL NU TWO BEDF NUMBER ( TOTAL NU TWO BEDF NUMBER ( TOTAL THI AVERAGE ELECTRICA LIGHTING/ KITCHEN LI RECEF REFRI DISPO DISHW	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTIN REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF PANELBOARD 'L'S (WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: COADS: PTACLES GERATORS (THREE PER UNIT) SAL ASHER	IHW. F THE NATION ION WITH A L CODE POTENTIAL AI THE NATIONA ' LOAD C MMON AREA	VAL RC FLASH L CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 828 VA 1,200 VA 8,000 VA	RE BAS	Based on Ne	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> <u>3,525 SQ</u> 1,163 SQ NEC 220.52 EC 220.52			
CUPANCY TYPE: IT GROSS AREA: DTAL NUMBER OF U YO BEDROOM UNIT JMBER OF TWO BED TAL TWO BEDROOM IREE BEDROOM UNIT JMBER OF THREE BEDROO TAL THREE BEDROO TAL THREE BEDROO TRAGE UNIT SQUAR ECTRICAL LOADS (F CHTING/RECEPTACLE CHEN LOADS: RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE UNDRY LOADS: WASHER	NITS: AREA: SQUARE FOOT T AREA: JEDROOM UNITS DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO TAGE: DE FOOTAGE: DE UNIT)	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD CE AREA LOAD 3,4 3,0 3,6 8 1,2 8,0 1,2	98 ONS CLUL/ CLUL/ D 488 VA 488 VA 000 VA 600 VA 600 VA 200 VA 200 VA	ATIONS RESID BASED	DENTIAL, M 3 3 0 0 0 0 0 0 0 0 1,1 1,1 1,1 1,1 1,1 1,1	E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTE J. PANEL PERMA SECTIO HAZARI I. CIRCUI ELECTE ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 UNIT 3	TED BREAU IG BREAU REAKER. SULATION ON DEMANDS NEAL COU COVER S NENT LAI N 110. T DENTIF N 110. T S T T T S T T S T T S T T S T T S T T S T T S T T S T S T T S S T T S S T T S S T T S S T T S S T S S T S S T S S S S S S S S S S S S S	AKER. (CR. (CR. ALL UND (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF PANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: RECEPTACLES: LOADS: TACLES GERATORS (THREE PER UNIT) SAL ASHER E	IHW. F THE NATION ION WITH A L CODE POTENTIAL AI THE NATIONA ' LOAD C MMON AREA	VAL RC FLASH L CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 8,28 VA 1,200 VA 8,000 VA 1,200 VA	RE BAS	Based on Ne	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> <u>3,525 SQ</u> 1,163 SQ <u>NEC 220</u>			
CCUPANCY TYPE: NIT GROSS AREA: DTAL NUMBER OF U WO BEDROOM UNIT UMBER OF TWO BED DTAL TWO BEDROOM IREE BEDROOM UNIT UMBER OF THREE BEDROOM VERAGE UNIT SQUAR ECTRICAL LOADS (F GHTING/RECEPTACLE TCHEN LOADS: RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE WASHER DRYER	NITS: AREA: SQUARE FOOT T AREA: JEDROOM UNITS DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO DM SQUARE FO TAGE: DE FOOTAGE: DE UNIT)	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD CE AREA LOAD 3,4 3,0 3,6 8 1,2 8,0 1,2	98 ONS CLUL/ D 488 VA 488 VA 000 VA 600 VA 828 VA 200 VA 000 VA	ATIONS RESID BASED	DENTIAL, M 3,5 1,1 1,1 1,1 1,1 0,1 NEC	E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTE J. PANEL PERMA SECTIO HAZARI I. CIRCUI ELECTE ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 UNIT 3	TED BRE IG BREAK REAKER. SULATION ON DEMANDS NCAL COL COVER : NENT LAI N 110. T DENTIF N 110. T S T T T T S T T S T T S T T S T T S T T S T S T S T S T S S T S S T S S T S S T S S T S S T S S T S S S S S S S S S S S S S	AKER. (CR. (CR. ALL UND (CALCULA DE. SHALL BE BEL AS I LABEL SI I LABEL SI I CATION S DE. OCCUPANC UNIT GRO: TOTAL NU TWO BEDF NUMBER ( TOTAL NU TWO BEDF NUMBER ( TOTAL THI AVERAGE ELECTRICA LIGHTING/ KITCHEN LI RECEF REFRI DISPO DISHW RANGE	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BALL BE AS PER SECTION 408.4 OF COMULT AREA: DE TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: DEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: RECEPTACLES: LOADS: TACLES GERATORS (THREE PER UNIT) SAL ASHER COADS: TR	IHW. F THE NATION ION WITH A L CODE POTENTIAL AI THE NATIONA ' LOAD C MMON AREA	VAL RC FLASH L CACLUL CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 8,000 VA 8,000 VA 1,200 VA 1,200 VA 5,000 VA	RE BAS	Based on Ne	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> <u>3,525 SQ</u> 1,163 SQ NEC 220.52 EC 220.52			
CCUPANCY TYPE: NIT GROSS AREA: DTAL NUMBER OF U YO BEDROOM UNIT JMBER OF TWO BED DTAL TWO BEDROOM IREE BEDROOM UNIT JMBER OF THREE BEDROOM /ERAGE UNIT SQUAR ECTRICAL LOADS (F GHTING/RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE UNDRY LOADS: WASHER DRYER /AC LOADS FURNACE	NITS: AREA: JROOM UNITS: SQUARE FOOT T AREA: LEDROOM UNITS DM SQUARE FOOT LE FOOTAGE: PER UNIT) S: THREE PER UNIT	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD 3,4 3,0 3,6 8 1,2 8,0 1,2 5,0 1,2 1,2	98 ONS (CLUL/ D) 488 VA 488 VA 000 VA 600 VA 600 VA 600 VA 200 VA 200 VA 200 VA	ATIONS RESID BASED	DENTIAL, M 3,5 1,1 1,1 1,1 1,1 0,1 NEC	E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTE J. PANEL PERMA SECTIO HAZARI I. CIRCUI ELECTE ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 UNIT 3	TED BRE IG BREAK REAKER. SULATION ON DEMANDS NCAL COL COVER : NENT LAI N 110. T DENTIF N 110. T S T T T T S T T S T T S T T S T T S T T S T S T S T S T S S T S S T S S T S S T S S T S S T S S T S S S S S S S S S S S S S	AKER. (ER. (CR. ALL UND (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE ILABEL SI (CALCULA DE. (CALCULA DE. (CALCULA (CALCU	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: DADS: TACLES GERATORS (THREE PER UNIT) SAL ASHER E LOADS: FR BEDROOMS AND	IHW. F THE NATION ION WITH A L CODE POTENTIAL AI THE NATIONA ' LOAD C MMON AREA	VAL RC FLASH L CACLUL CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 8,000 VA 8,000 VA 1,200 VA 1,200 VA 1,200 VA	RE BAS	Based on Ne	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> <u>3,525 SQ</u> 1,163 SQ NEC 220.52 EC 220.52			
CCUPANCY TYPE: NIT GROSS AREA: OTAL NUMBER OF U WO BEDROOM UNIT UMBER OF TWO BED OTAL TWO BEDROOM UNIER OF THOE BEDROOM VIERAGE OF THREE BE OTAL THREE BEDROOM VERAGE UNIT SQUAR LECTRICAL LOADS (F IGHTING/RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE AUNDRY LOADS: WASHER DRYER VAC LOADS	NITS: AREA: JROOM UNITS: SQUARE FOOT T AREA: LEDROOM UNITS DM SQUARE FOOT LE FOOTAGE: PER UNIT) S: THREE PER UNIT	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD 3,4 3,0 3,6 8 1,2 8,0 1,2 5,0 1,2 1,2	98 ONS (CLULA D) 488 VA 488 VA 000 VA 600 VA 600 VA 200 VA 200 VA 200 VA	ATIONS RESID BASED	DENTIAL, M 3,5 1,1 1,1 1,1 1,1 0,1 NEC	E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTE J. PANEL PERMA SECTIO HAZARI I. CIRCUI ELECTE ULTI-UNI 25 SQ F 3 UNIT 25 SQ F 3 UNIT 3	TED BRE IG BREAK REAKER. SULATION ON DEMANDS NCAL COL COVER : NENT LAI N 110. T DENTIF N 110. T S T T T T S T T S T T S T T S T T S T T S T S T S T S T S S T S S T S S T S S T S S T S S T S S T S S S S S S S S S S S S S	AKER. (ER. (CR. ALL UND (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE ILABEL SI (CALCULA DE. (CALCULA DE. (CALCULA (CALCU	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: COOM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: DADS: TACLES GERATORS (THREE PER UNIT) SAL ASHER E LOADS: FR 3 DS	IHW. F THE NATION ION WITH A L CODE POTENTIAL AI THE NATIONA ' LOAD C MMON AREA	VAL RC FLASH L CACLUL CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 8,000 VA 8,000 VA 1,200 VA 1,200 VA 5,000 VA	RE BAS	Based on Ne	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> <u>3,525 SQ</u> 1,163 SQ NEC 220.52 EC 220.52			
DCCUPANCY TYPE: UNIT GROSS AREA: TOTAL NUMBER OF U TWO BEDROOM UNIT NUMBER OF TWO BED TOTAL TWO BEDROOM UNIT NUMBER OF THREE BEDROOM NUMBER OF THREE BEDROOM AVERAGE UNIT SUMP ELECTRICAL LOADS (F IGHTING/RECEPTACLES REFRIGERATORS ( DISPOSAL DIS	NITS: AREA: JROOM UNITS: SQUARE FOOT I AREA: JEDROOM UNITS M SQUARE FOOT JER UNIT) S: THREE PER UN THREE PER UN ITT)	89 104,332 -1,840 102,492 216 SEE LO/ SEE LO/ OARD 'L2' I (WITH OFF) TAGE: S: JOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD CE AREA LOAD 3,4 3,0 3,6 8 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 5,0 1,2 1,2 1,2 1,2 1,2 1,2 1,2 1,2	98 ONS (CLUL/ D) 488 VA 488 VA 000 VA 600 VA 600 VA 600 VA 200 VA 200 VA 200 VA	ATIONS RESID BASED BASED	DENTIAL, M 3,5 1,1 1,1 1,1 1,1 0,1 NEC	E. HID RA E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTF 3. PANEL PERMA SECTIO HAZARI 4. CIRCUT ELECTF 3. UNIT 50 SQ F 3. UNIT 50 SQ F 3. UNIT 25 SQ F 3. UNIT 22 SQ F 3. UNIT 3. UN	TED BRE IG BREAK REAKER. SULATION TION ON DEMANDS RICAL COI COVER S NENT LAI N 110. T T T S T T T S T T S T T S T S T S T S T S T S T S S T S S T S S T S S S S S S S S S S S S S	AKER. (CR. (CR. (CR. (CR. (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. (CALCULA DE. (CALCULA DE. (CALCULA (CAL	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BANELBOARD 'L3 (WITH CO CY TYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: OF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: OF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: DADS: TACLES GERATORS (THREE PER UNIT) SAL ASHER E LOADS: ER R CD DS NCE ENSING UNIT	IHW. F THE NATION ION WITH A L CODE POTENTIAL AI THE NATIONA ' LOAD C MMON AREA 	VAL RC FLASH L CACLUL CACLUL LOAD) 3,488 VA 3,000 VA 3,600 VA 8,000 VA 8,000 VA 1,200 VA 1,200 VA 1,200 VA	BAS	BASED ON NE	3,525 SQ 3 UN 1,150 SQ 0 UN 0 SQ 1,175 SQ 3 UN 3,525 SQ 1,163 SQ NEC 220.52 EC 220.52			
DOCCUPANCY TYPE: UNIT GROSS AREA: TOTAL NUMBER OF U TWO BEDROOM UNIT NUMBER OF TWO BED TOTAL TWO BEDROOM ITHREE BEDROOM UNIT NUMBER OF THREE BEDROO AVERAGE UNIT SQUAR ELECTRICAL LOADS (F LIGHTING/RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE LAUNDRY LOADS: WASHER DRYER HVAC LOADS FURNACE CONDENSING UNIT TOTAL LOAD (PER UN TOTAL LOAD (PER UN	NITS: AREA: JROOM UNITS: SQUARE FOOT T AREA: LEDROOM UNITS: DM SQUARE FOOT FER UNIT) S: THREE PER UNIT) ING LOAD	89         104,332         -1,840         102,492         216         SEE LOA         OARD 'L2' I         (WITH OFFN         (WITH OFFN         IAGE:         S:         DOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD CE AREA LOAD 3,4 3,0 3,6 8 1,2 5,0 1,2 5,0 1,2 6,2 3,3,7 101,2 45,5	98 0NS (CLUL/ D) 488 VA 000 VA 488 VA 200 VA	ATIONS RESID BASED BASED	DENTIAL, M 3 3 4 0 0 0 0 1,1 1,1 1,1 1,1 1,1 1,1 0 0 0 0	E. HID RA E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTF 3. PANEL PERMA SECTIO HAZARI 4. CIRCUT ELECTF 3. UNIT 50 SQ F 3. UNIT 50 SQ F 3. UNIT 25 SQ F 3. UNIT 22 SQ F 3. UNIT 3. UN	TED BRE IG BREAU REAKER. SULATION ON DEMANDS RICAL COI COVER IN 110. T IOENTIF RICAL COI T I T I S I S I S I S I S I S I S I S	AKER. (CR. (CR. (CR. (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA (C	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF SHALL BE AS PER SECTION 408.4 OF STYTPE: SS AREA: MBER OF UNITS: COM UNIT AREA: OF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: OF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: COADS: TACLES GERATORS (THREE PER UNIT) SAL ASHER E ENSING UNIT ND (PER UNIT) ILDING LOAD ACTOR VISED BUILDING LOAD NEL LOAD:	HIW. F THE NATION ION WITH A L CODE POTENTIAL A THE NATIONA ' LOAD C MMON AREA 3 10 4	VAL RC FLASH L CACLUL CACL	BAS	BASED ON NE	3,525 SQ 3 UN 1,150 SQ 0 UN 0 SQ 1,175 SQ 3 UN 3,525 SQ 1,163 SQ NEC 220.52 EC 220.52			
DOCCUPANCY TYPE: UNIT GROSS AREA: TOTAL NUMBER OF U TWO BEDROOM UNIT NUMBER OF TWO BED TOTAL TWO BEDROOM THREE BEDROOM UNIT NUMBER OF THREE BEDROOD AVERAGE UNIT SQUAR ELECTRICAL LOADS (F IGHTING/RECEPTACLES RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE LAUNDRY LOADS: WASHER DRYER HVAC LOADS FURNACE CONDENSING UNIT TOTAL LOAD (PER UN TOTAL LOAD (PER UN TOTAL LOAD (PER UN TOTAL REVISED BUILD TOTAL REVISED BUILD TOTAL REVISED BUILD	NITS: AREA: JROOM UNITS: SQUARE FOOT T AREA: LEDROOM UNITS: DM SQUARE FOOT FER UNIT) S: THREE PER UNIT) ING LOAD	89         104,332         -1,840         102,492         216         SEE LOA         OARD 'L2' I         (WITH OFFN         (WITH OFFN         IAGE:         S:         DOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAD CE AREA LOAD 3,4 3,0 3,6 8 1,2 5,0 1,2 5,0 1,2 6,2 3,3,7 101,2 45,5 45,5	98 0NS (CLULA D) 488 VA 488 VA 000 VA 600 VA 600 VA 600 VA 200 VA	ATIONS RESID BASED BASED	DENTIAL, M 3 3 4 0 0 0 0 1,1 1,1 1,1 1,1 1,1 1,1 0 0 0 0	E. HID RA E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTF 3. PANEL PERMA SECTIO HAZARI 4. CIRCUT ELECTF 3. UNIT 50 SQ F 3. UNIT 50 SQ F 3. UNIT 25 SQ F 3. UNIT 22 SQ F 3. UNIT 3. UN	TED BRE IG BREAK REAKER. SULATION ON SUCAL COI COVER S NENT LAI N 110. T I IOENTIF ICAL COI T I S I T I S I S I T I S I S I T I S I T I S I S I S I S I S I S I S I S	AKER. (CR. (CR. (CR. (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA (C	ERGROUND CONDUCTORS SHALL BE THE TED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BALL BE AS PER SECTION 408.4 OF COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: DADS: TACLES GERATORS (THREE PER UNIT) SAL ASHER E LOADS: ER R R DS LOADS: ER R R DS LOADS: ER R R DS LOADS: ER R R R DS LOADS: ER R R R R R R R R R R R R R R R R R R	HIW. F THE NATION ION WITH A L CODE POTENTIAL A THE NATIONA ' LOAD C MMON AREA 3 10 4 4	VAL RC FLASH L CACLUL CACL	BAS	BASED ON NE	3,525 SQ <u>3 UN</u> 1,150 SQ 0 UN <u>0 SQ</u> 1,175 SQ <u>3 UN</u> <u>3,525 SQ</u> 1,163 SQ NEC 220.52 EC 220.52			
OCCUPANCY TYPE: UNIT GROSS AREA: TOTAL NUMBER OF U TWO BEDROOM UNIT NUMBER OF TWO BED TOTAL TWO BEDROOM THREE BEDROOM UNIT NUMBER OF THREE BE TOTAL THREE BEDROO AVERAGE UNIT SQUAR ELECTRICAL LOADS (F LIGHTING/RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE LAUNDRY LOADS: WASHER DRYER HVAC LOADS FURNACE CONDENSING UNIT TOTAL LOAD (PER UN TOTAL LOAD (PER UN TOTAL LOAD (PER UN TOTAL BUILDING LOAD DEMAND FACTOR TOTAL REVISED BUILD TOTAL REVISED BUILD TOTAL RESIDENTIAL C OFFICE AREA LOAD TOTAL PANEL LOAD	NITS: AREA: JROOM UNITS: SQUARE FOOT T AREA: LEDROOM UNITS: DM SQUARE FOOT FER UNIT) S: THREE PER UNIT) ING LOAD	89         104,332         -1,840         102,492         216         SEE LOA         OARD 'L2' I         (WITH OFFN         (WITH OFFN         IAGE:         S:         DOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAT 	98 0NS CLULA 000 VA (CLULA 000 VA 488 VA 000 VA 488 VA 200 VA	ATIONS RESID BASED BASED	DENTIAL, M 3 3 4 0 0 0 0 1,1 1,1 1,1 1,1 1,1 1,1 0 0 0 0	E. HID RA E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTF 3. PANEL PERMA SECTIO HAZARI 4. CIRCUT ELECTF 3. UNIT 50 SQ F 3. UNIT 50 SQ F 3. UNIT 25 SQ F 3. UNIT 22 SQ F 3. UNIT 3. UN	TED BRE IG BREAK REAKER. SULATION TION ON NECAL COI COVER NENT LAI N 110. T T ICAL COI T T S T T T S T T S T T S T T S T S T S T S T S T S T S T S T S T S T S T S T S T S S T S S T S S T S S T S S T S S S S S S S S S S S S S	AKER. (CR. (CR. (CR. (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA (C	ERGROUND CONDUCTORS SHALL BE THEED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF SHALL BE AS PER SECTION 408.4 OF SHALL BE AS PER SECTION 408.4 OF STYPE: SS AREA: MBER OF UNITS: COM UNIT AREA: DF TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: COADS: PTACLES GERATORS (THREE PER UNIT) SAL ASHER E LOADS: CR SC CASS CER CS CASS CER CS CASS COM UNIT AD (PER UNIT) ILDING LOAD CACTOR VISED BUILDING LOAD VEL LOAD: SIDENTIAL COMPUTED LOAD: AREA LOAD	HIW. F THE NATION ION WITH A L CODE POTENTIAL A THE NATIONA ' LOAD C MMON AREA 3 10 4 4 4 10 10 10 10 10 10 10 10 10 10	VAL RC FLASH L CACLUL CACL	BAS	BASED ON NE	3,525 SQ 3 UN 1,150 SQ 0 UN 0 SQ 1,175 SQ 3 UN 3,525 SQ 1,163 SQ NEC 220.52 EC 220.52			
OCCUPANCY TYPE: UNIT GROSS AREA: TOTAL NUMBER OF U TWO BEDROOM UNIT NUMBER OF TWO BED TOTAL TWO BEDROOM UNIT NUMBER OF THREE BE TOTAL THREE BEDROOM AVERAGE UNIT SQUAR ELECTRICAL LOADS (F LIGHTING/RECEPTACLES REFRIGERATORS ( DISPOSAL DISHWASHER RANGE LAUNDRY LOADS: WASHER DRYER HVAC LOADS FURNACE	NITS: AREA: JROOM UNITS: SQUARE FOOT T AREA: LEDROOM UNITS: DM SQUARE FOOT FER UNIT) S: THREE PER UNIT) ING LOAD	89         104,332         -1,840         102,492         216         SEE LOA         OARD 'L2' I         (WITH OFFN         (WITH OFFN         IAGE:         S:         DOTAGE:	103 AD CALCULATIC LOAD CA CE AREA LOAT CE AREA LOAT 3.4 3.0 3.6 8 1.2 5.0 1.2 6.2 3.3,7 101,2 45,5 12.4 57,9 208	98 0NS (CLULA 0) (CLULA 0) 488 VA 000 VA 488 VA 000 VA 200 VA	ATIONS RESID BASED BASED	DENTIAL, M 3 3 4 0 0 0 0 1,1 1,1 1,1 1,1 1,1 1,1 0 0 0 0	E. HID RA E. HID RA E. EXISTIN S. NEW B NOTES: I. ALL IN INSULA 2. LOAD I ELECTF 3. PANEL PERMA SECTIO HAZARI 4. CIRCUT ELECTF 3. UNIT 50 SQ F 3. UNIT 50 SQ F 3. UNIT 25 SQ F 3. UNIT 22 SQ F 3. UNIT 3. UN	TED BRE IG BREAK REAKER. SULATION TION ON RICAL COI COVER NENT LAI N 110. T I I I I I S T I S S T I S S S S S S S S S S S S S	AKER. (CR. (CR. (CR. (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA DE. SHALL BE BEL AS (CALCULA (CALCULA DE. (CALCULA (CALCUL	ERGROUND CONDUCTORS SHALL BE THEED AS PER SECTIONS 210 & 220 OF FIELD MARKED FOR FLASH PROTECTINE REQUIRED BY THE NATIONAL ELECTRICA HALL READ AS FOLLOWS: "DANGER: SHALL BE AS PER SECTION 408.4 OF BEDROOM SPER SECTION 408.4 OF COMMENTAREA: DE TWO BEDROOM UNITS: D BEDROOM SQUARE FOOTAGE: DROOM UNIT AREA: DF THREE BEDROOM UNITS: REE BEDROOM SQUARE FOOTAGE: UNIT SQUARE FOOTAGE: L LOADS (PER UNIT) RECEPTACLES: DADS: PTACLES GERATORS (THREE PER UNIT) SAL ASHER E LOADS: TR BE DE LOADS: TR BE C COADS: TR BE C C C C C C C C C C C C C C C C C C	HIW. F THE NATION ION WITH A L CODE POTENTIAL A THE NATIONA ' LOAD C MMON AREA 3 10 4 4 4 10 10 10 10 10 10 10 10 10 10	VAL RC FLASH L CACLUL CACL	BAS	BASED ON NE	3,525 SQ 3 UN 1,150 SQ 0 UN 0 SQ 1,175 SQ 3 UN 3,525 SQ 1,163 SQ NEC 220.52 EC 220.52			





Architecture Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

The designs shown and described herein including all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc.





RECOVERY WAYS CHATHAM HOUSE 385 WEST 4800 SOUTH STREET MURRAY, UTAH 84123

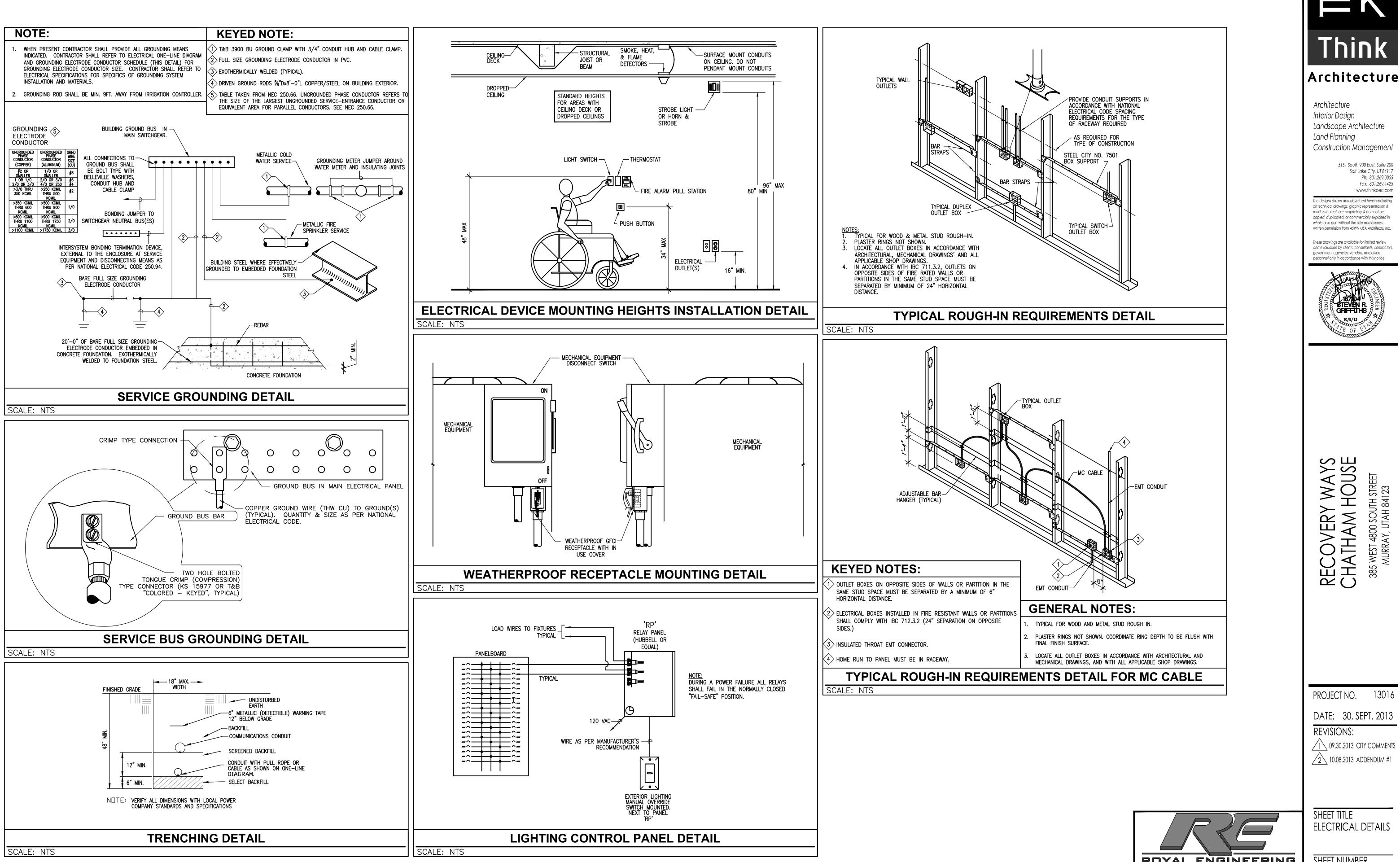
PROJECT NO. 13016

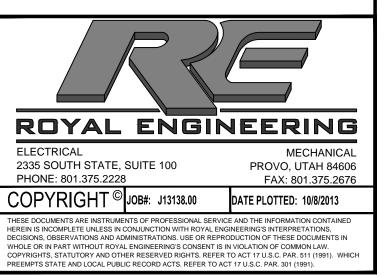
DATE: 30, SEPT. 2013

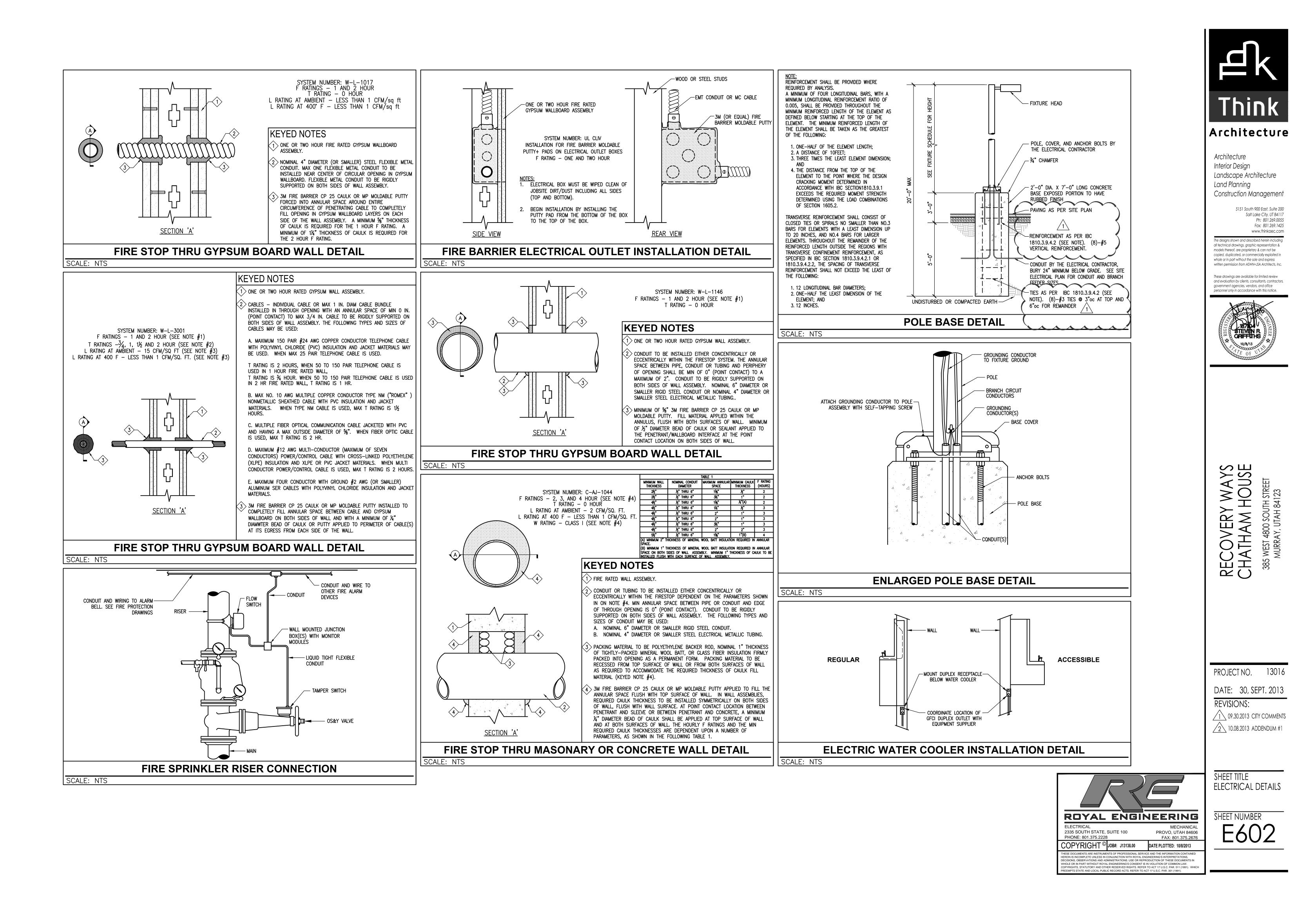
**REVISIONS:** 

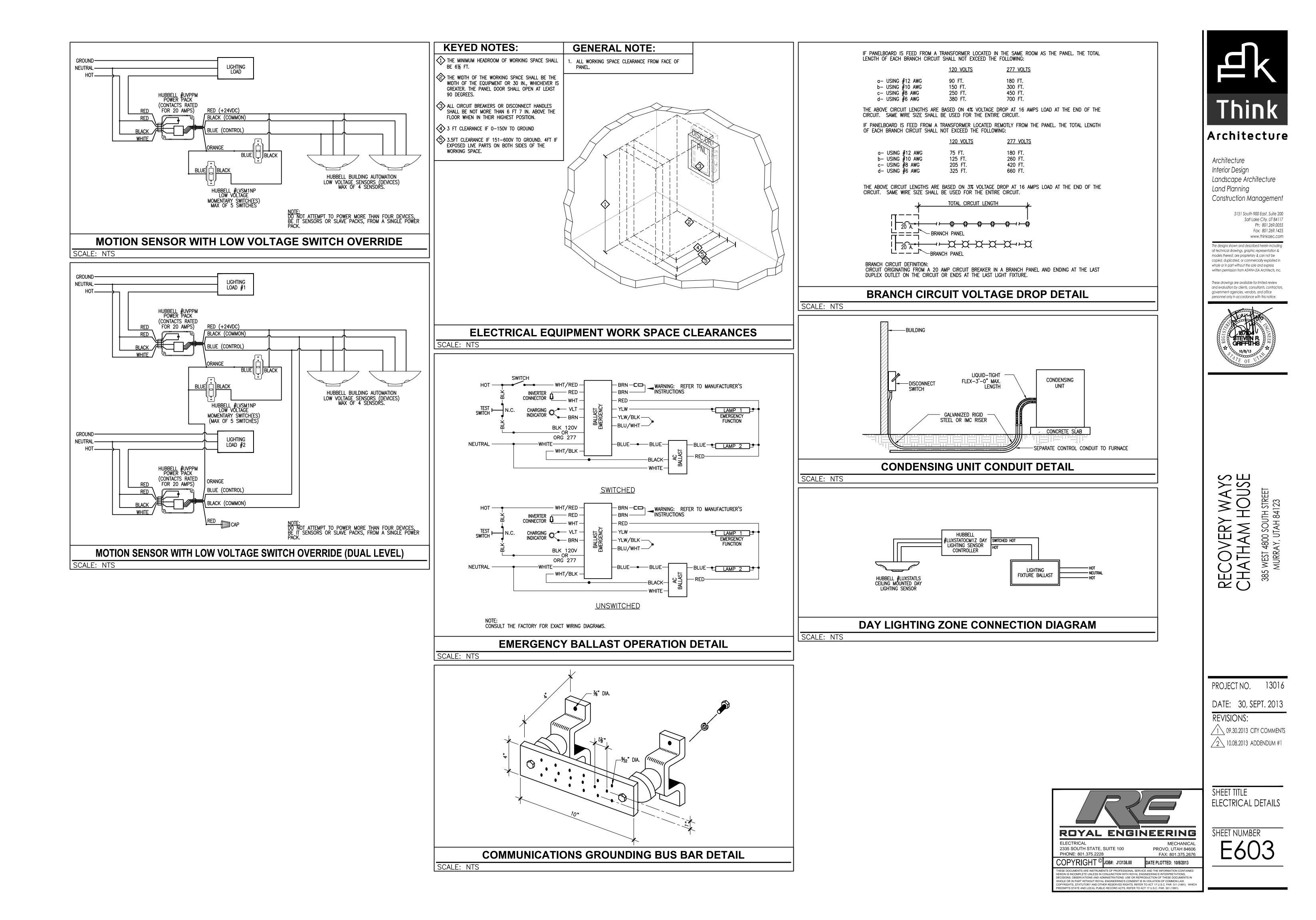
1 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

Sheet title electrical schedules









## **ELECTRICAL SPECIFICATIONS**

#### GENERAL PROVISION A. REFERENCE

- THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF E ELECTRICAL CONTRACTOR, UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, "ELECTRICAL CONTRACTOR" IS INFERRED AND INTENDED.
- B. CONTRACT DRAWINGS THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
- OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK. C. JOB-SITE COPY OF DOCUMENTS MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP
- DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST. D. MANUFACTURER'S DRAWINGS
- THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW. (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR: APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW: TYPE SUBMITTALS REQUESTED SHOP DRAWINGS

#### ITEMS LIGHTING AND POWER PANELS LIGHTING FIXTURES GUARANTEES

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

CATALOG CUTS

#### A. INSTALLATION, MATERIALS, AND WORKMANSHIP

- FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF HF RUIIDING THE ELECTRICAL CONTRACTOR. INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP
- THE PREMISES IN A NEAT AND ORDERLY CONDITION. AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSED DISPOSAL AS REQUIRED FOR ELECTRICAL WORK. 3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE
- MINIMUM SPECIFIED. B. COORDINATION OF PLANS AND SPECIFICATIONS
- CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS. C. CUTTING AND PATCHING
- ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM
- COVERS ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY
- CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE

#### CODES AND FEES

THOROUGHLY CLEANED.

- ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL D. FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.
- B. FEES: OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

#### TESTS AND INSPECTIONS A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO AUTHORITY HAVING JURISDICTION THERE AND OTHER FYPENSES IN CONNECTION THEREIN. THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL

- OCCUPANCY PERMIT IS OBTAINED WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.
- THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

#### FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM. B. ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC CABLE WITH GROUND CONDUCTOR UNLESS

- OTHERWISE NOTED ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO
- LESS THAN 1/2" UNLESS OTHERWISE NOTED. D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

#### WIRE AND CABLE A. ALL CONDUCTORS SHALL BE COPPER AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE, IS SHOWN. CONDUCTORS SHALL NOT BE LESS THAN #14 TYPE XHHW, THHN, OR THWN. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED COPPER AND HAVE 600 VOLT

- INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS. THE FOLLOWING COLOR CODE SHALL BE USED:
- 277/480 VOLT BROWN <u>120/240 VOLT</u> BLACK 120/208 VOLT PHASE PHASE ORANGE YELLOW PHASE NFI ITRAI CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE. CONDUCTORS NO. 8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED
- TAPE, MINIMUM SIZE  $\frac{1}{2}$ ", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS: AT EACH TERMINAL AT EACH CABLE ENTRANCE AT INTERVALS NOT MORE THAN 12 INCHES APART IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC F. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANEL BOARD GUTTERS. MARKERS SHALL INDICATE
- CORRESPONDING BRANCH——CIRCUIT NUMBERS. G. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL

#### NEUTRAL CONDUCTOR.

- BOXES AND PLATES A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULL BOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.
- PULL BOXES AND JUNCTION BOXES SHALL BE PLASTIC AND OF THE CORRECT SIZE AND GAUGE, SIZED IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED. BOXES AT EXTERIOR AREAS TO BE WATERTIGHT AND DUST-TIGHT WITH GASKETED COVERS ). ALL BOXES SHALL BE RIGIDLY SUPPORTED INDEPENDENT OF THE CABLE SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.

#### <u>WIRING DEVICES</u> A. WIRING DEVICES SHALL BE SIMILAR TO THOSE LISTED BELOW AND OF SPECIFIED AMPERAGE. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS. DUPLEX GROUNDING TYPE RECEPTACLE--15 AMP, 125 VOLT--

SINGLE POLE SWITCHES - 15 AMP, 120 VOLT WEATHERPROOF RECEPTACLES - 15 AMP, 125 VOLT--NEMA 5--15R WITH IN-USE COVER

E. G.F.C.I. RECEPTACLE- 15 AMP, 125 VOLT--NEMA 5-15R HUBBELL- GF 5262 WITH MATCHING NYLON COVER PLATE OR WO-26 W.P. COVER GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250-146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

- IDENTIFICATION A. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL EXHAUST FAN MANUAL STARTING SWITCHES. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK RACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM ¼" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT. NO "DYMO" OR SIMILAR TYPE LABELS WILL BE PANEL BOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDED INDICATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT.
- ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER SECTION 16120, "WIRE AND CABLE". ALL GROUND CLAMPS SHALL BE PENN-UNION "GPL" TYPE OR SIMILAR BY O.Z. OR BURNDY. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON- METALLIC
- ELECTRICAL CONDUIT WITH U.L. LABEL SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS -ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC-250-24 AND ON SEPARATELY DERIVED
- SYSTEMS PER NEC 250-30. CONNECTOR. TO: 1
- AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING ) THE GROUND PIGTAIL TO RECEPTACLE AND THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE. MOUNTED BOXES OR FLUSH TYPE SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE GROUNDING SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.
- NTERRUPTION OF SERVICE AND OWNER'S OPERATION A. THE ELECTRICAL CONTRACTOR SHALL ORGANIZE HIS WORK SO THAT THESE ALTERATIONS AND ADDITIONS SHALL CAUSE A MINIMUM OF INTERFERENCE AND DISTURBANCE TO THE OWNER. <u>ARRANGEMENTS SHALL BE</u> MADE WITH THE OWNER AND ENGINEER BEFORE INTERRUPTING SERVICE IN ANY AREA. A WRITTEN DETAILED METHOD OF INTERRUPTION PROCEDURE INDICATING ELAPSED TIME REQUIRED AND THE OWNER FOR APPROVAL SHALL BE PREPARED BY THE ELECTRICAL CONTRACTOR AND SUBMITTED TO THE OWNER FOR APPROVAL. ALL INTERRUPTIONS OF SERVICE SHALL BE MADE WHEN THE LOAD IS AT A MINIMUM AND SHALL SCHEDULED AT THE OWNER'S CONVENIENCE. (SERVICE INTERRUPTIONS WILL BE SCHEDULED FOR OTHER THAN NORMAL DAYTIME WORKING HOURS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE NECESSARY
- COST FOR OVERTIME LABOR IN ALL BIDS.) AT NO TIME SHALL THE ELECTRICAL CONTRACTOR OR HIS EMPLOYEES NORMALLY WORKING ON THE PROJECT LEAVE THE FACILITY DURING A TIME WHEN ANY NORMALLY LIVE CIRCUITS OR FEEDERS ARE DISCONNECTED, WITHOUT PERMISSION OF THE ENGINEER. ALL MATERIALS, CONNECTIONS AND EQUIPMENT FOR TEMPORARY CONTROL OR POWER WIRING TO MAINTAIN CONTINUITY OF SERVICE DURING CONSTRUCTION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

UN VULIAGES INDIGATED.
ALL TERMINATIONS SHALL BE MAR
CONDUCTORS AT FULL 75' C AMP
ALL BUS BARS SHALL BE SILVER
CABINETS SHALL BE OF COMMERC
RECESSED MOUNTED AS CALLED F
NEUTRAL ASSEMBLY SHALL HAVE I
TYPE PK. FOR CONNECTION OF U
AND CONNECTIONS WILL BE REJECT
PANEL SHALL HAVE A COPPER GR
ANTI-TURN SOLDERLESS LUGS. TH

- SCREWDRIVER SLOTS FACING THE FRONT OF THE PANEL. QUALITY STANDARD: HOMELINE AND NQOD.
- LIGHTING FIXTURES A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AND LAMPS AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D YPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED. ALL LAMP HOLDERS INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH NEW LAMPS OF THE SIZE INDICATING ON THE FIXTURE SCHEDULE. LAMP CURRENT CREST FACTOR SHALL NOT EXCEED 1.8 AND SHALL BE COMPATIBLE WITH BALLAST BEING ANY FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE. ALL LAMPS SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER FLUORESCENT FIXTURES SHALL COMPLY WITH 2008 NEC 410.73G (BALLAST DISCONNECT MEANS FOR

DOUBLE ENDED LAMPS). PACKAGED BATTERY SYSTEMS

LIGHTING PACKS RECHARGE IN 24

> APPROVED MANUFACTURERS AND MODELS-BODINE – B70A CHLORIDE – CFP841 LITHONIA - PS-500 10TA - 1-48

INSTALLÁTION FMFRGFNCY

<u>TELEPHONE/DATA/TV\_SYSTEMS</u> A. SUMMARY INCLUDES BUT NOT LIMITED TO

SYSTEM AS MODULAR JACKS

ROUNDING AND COMPLY WITH TELEPHONE COMPANY REQUIREMENTS.

COMPONENTS TELEPHONE OUTLET BOX SHALL BE SINGLE DEVICE BOX. BUILDING TELEPHONE AND COMPUTER NETWORK SYSTEM CABLE

TELEPHONE TERMINATION BLOCKS UL VERIFIED CATEGORY

66 TERMINATION WITH TIN LEAD PLATED IDC NETWORK PATCH PANELS a. UL VERIFIED CATEGORY 58

48 PORTS 5. TELEPHONE/NETWORK JACKS

a. WALL JACKS PERFORMANCE STANDARD. 2)

- STANDARD. b. PLATES HUBBELL - IFP SERIES (PORT QUANTITY AS REQUIRED, COLOR BY ARCHITECT) BACKBOARDS: INTERIOR GRADE PLYWOOD WITHOUT VOIDS, 34 INCH THICK; UL-LABELED FIRE RFTARDANT SIZE: 48 INCHES WIDE 96 INCHES HIGH.
- DO NOT PAINT OVER UL LABEL. PROVIDE ONE 48" MULTI-OUTLET POWER STRIP WITH INTEGRAL SURGE PROTECTION AND OUTLETS (MINIMUM 7 OUTLETS) MOUNTED AT CENTER OF TERMINAL BOARD.
- EQUIPMENT RACKS AND CABINETS: CEA-310 STANDARD 19 INCH WIDE COMPONENT RACKS.

- POWER AND LIGHTING PANELS A. FURNISH AND INSTALL, AS SCHEDULED AND SHOWN ON THE DRAWINGS, POWER PANELS FOR OPERATION KED "75'C ONLY", "60/75' C" OR LISTED FOR USE OF 75' C INSULATED OR TIN PLATED COPPER
- AL GALVANIZED SHEET STEEL, CODE GAUGE AND SIZE, SURFACE OR OR IN THE DRAWINGS INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D LTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS ROUND BAR SIMILAR TO NEUTRAL BAR IN NUMBER, SIZE, AND TYPE OF ANTI-TURN SOLDERLESS LUGS. THIS GROUND BAR SHALL BE FACTORY BONDED TO THE PANEL TUB IN THE GUTTER SPACE OPPOSITE THE MAINS AND THE NEUTRAL ASSEMBLY AND SHALL HAVE THE

- a. BATTERY SHALL BE LONG LIFE NICKEL CADMIUM TYPE. CHARGER SHALL BE CAPABLE FULL
- b. UNIT SHALL BE COMPLETE WITH CHARGING INDICATOR LIGHT AND TEST SWITCH.
- WIRE SO UNIT CAN BE TESTED WITH LIGHTS ON. WIRE SO LAMPS IN NORMAL MODE ARE SWITCHED OFF WITH OTHER LIGHTING IN AREA. CONNECT LIGHTING UNIT TO UNSWITCHED CONDUCTOR OF NORMAL LIGHTING CIRCUIT.
- a. FURNISH AND INSTALL BUILDING TELEPHONE AND COMPUTER NETWORK RACEWAY AND CABLE DESCRIBED IN CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, RACEWAY, OUTLETS, DEVICE PLATES, CABLES, PUNCH DOWN BLOCKS, BACKBOARDS, CABINETS, PATCH PANELS,
- OTHER MISCELLANEOUS ITEMS REQUIRED FOR A COMPLETE SYSTEM. FURNISH AND INSTALL MAIN SERVICE RACEWAY AS DESCRIBED IN CONTRACT DOCUMENTS AND TO
- 23 GAUGE, SOLID TINNED COPPER, FOUR TWISTED PAIRS. CATEGORY 5E USE PLENUM-RATED CABLE IN CEILINGS AND AREAS USED FOR PLENUM AIR RETURN
- 110 TERMINATION WITH TIN LEAD PLATED IDC 19" RACK MOUNT WITH BACKBOARD MOUNTING FRAME.
  - CAT5E HUBBELL HXJ6GYG OR ALTERNATE MANUFACTURER WITH EQUIVALENT CAT3 - HUBBELL HXJ3W OR ALTERNATE MANUFACTURER WITH EQUIVALENT PERFORMANCE

- a. FLOOR MOUNTED RACKS: 16 GAGE STEEL CONSTRUCTION WITH CORROSION RESISTANT FINISH; VERTICAL AND HORIZONTAL CABLE MANAGEMENT CHANNELS, TOP AND BOTTOM CABLE TROUGHS, AND
- Grounding Lug. CONNECTOR BLOCKS FOR CATEGORY 5E AND UP CABLING: TYPE 110 INSULATION DISPLACEMENT CONNECTORS; CAPACITY SUFFICIENT FOR CABLES TO BE TERMINATED PLUS 25 PERCENT SPARE. PATCH PANELS FOR COPPER CABLING: SIZED TO FIT EIA STANDARD 19 INCH WIDE EQUIPMENT RACKS; 0.09 INCH THICK ALUMINUM; CABLING TERMINATED ON TYPE 110 INSULATION DISPLACEMENT CONNECTORS: PRINTED CIRCUIT BOARD INTERFACE
- a. JACKS: NON-KEYED RJ-45, SUITABLE FOR AND COMPLYING WITH SAME STANDARDS CABLE TO F TERMINATED: MAXIMUM 48 PORTS PER STANDARD WIDTH PANEL
- CAPACITY: PROVIDE PORTS SUFFICIENT FOR CABLES TO BE TERMINATED PLUS 25 PERCENT MOUNTING SPACE FOR ALL ACTIVE COMPONENTS/EQUIPMENT REQUIRED TO CROSS-CONNECT TO MODULAR JACK PORTS ON THE PATCH PANELS.
- LABELS: FACTORY INSTALLED LAMINATED PLASTIC NAMEPLATES ABOVE EACH PORT, NUMBERED CONSECUTIVELY
- COMPLY WITH TIA/EIA-606 USING ENCODED IDENTIFIERS. PROVIDE INCOMING CABLE STRAIN RELIEF AND ROUTING GUIDES ON BACK OF PANEL. PATCH CORDS: PROVIDE ONE PATCH CORD FOR EACH PAIR OF PATCH PANEL PORTS. 5. TV SYSTEM
- a. RG-6/U COAXIAL CABLE. CABINETS
- a. PROVIDE ONE 48" MULTI-OUTLET RECEPTACLE WITH INTEGRAL SURGE PROTECTION. (MINIMUM 7 OUTLETS) MOUNTED AT CENTER OF TERMINAL BOARD.
- INSTALLATION INSTALL CABLE FROM TERMINAL CABINET TO EACH TELEPHONE OUTLET. TERMINATE CABLES AT EACH OUTLET WITH SPECIFIED MODULAR JACK ASSEMBLY.
- TERMINATE CABLES ON PUNCH DOWN BLOCKS OR PATCH PANELS AT TERMINAL BOARD. PROVIDE TYPED LABELS AT ALL JACKS CORRESPONDING TO TYPED NUMBERING SYSTEM AT PATCH PANEL OR TERMINAL STRIP.
- QUALITY ASSURANCE COMPLY WITH APPLICABLE PORTIONS OF NEC ANSI/EIA/TIA 568 AS TO TYPE PRODUCTS USED AND INSTALLATION OF COMPONENTS. PROVIDE PRODUCTS AND MATERIALS WHICH HAVE BEEN UL-LISTED AND LABELED.
- ALARM & DETECTION SYSTEMS A. SUMMARY
- INCLUDES BUT NOT LIMITED TO: FURNISH AND INSTALL MICROPROCESSOR-CONTROLLED, INTELLIGENT REPORTING FIRE ALARM EQUIPMENT REQUIRED TO FORM A COMPLETE COORDINATED SYSTEM THAT IS READY FOR OPERATION. SYSTEM DESCRIPTION
- THE FIRE ALARM SYSTEM SHALL COMPLY WITH REQUIREMENTS OF NFPA STANDARD NO. 72 FOR PROTECTED PREMISES SIGNALING SYSTEMS EXCEPT AS MODIFIED AND SUPPLEMENTED BY THIS SPECIFICATION. THE SYSTEM SHALL BE ELECTRICALLY SUPERVISED AND MONITOR THE INTEGRITY OF LL CONDUCTORS
- THE SYSTEM SHALL BE AN ACTIVE/INTERROGATIVE TYPE SYSTEM WHERE EACH DEVICE IS REPETITIVELY SCANNED, CAUSING A SIGNAL TO BE TRANSMITTED TO THE MAIN FIRE ALARM CONTROL PANEL (FACP) INDICATING THAT THE ASSOCIATED INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUIT WIRING IS FUNCTIONAL. LOSS OF SUCH A SIGNAL AT THE MAIN FACP SHALL RESULT IN A TROUBLE INDICATION S SPECIFIED HEREINAFTER FOR THE PARTICULAR INPUT SYSTEM OPERATION: OPERATION OF MANUAL STATION OR AUTOMATIC ACTIVATION OF ANY SMOKE
- DETECTOR OR HEAT DETECTOR SHALL -CAUSE SYSTEM EVACUATION HORNS TO SOUND AND LAMPS TO FLASH. THE 80 CHARACTER LCD DISPLAY SHALL INDICATE ALL INFORMATION ASSOCIATED WITH THE FIRE CONDITION, INCLUDING THE TYPE OF ALARM POINT AND ITS LOCATION WITHIN THE PROTECTED
- PRFMISFS. INITIATE OFF-SITE ALARM NOTIFICATION. WITH STANDARD NEC 760 COMPLIANT WORLDA'LON. WITH STANDARD NEC 760 COMPLIANT WIRING. ALL FACP SCREW TERMINALS SHALL BE WIRED ACCEPTING 14 AWG (1.8 MM) TO 18 AWG (1.2 MM) WIRE. ALL SYSTEM WIRING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 70, THE NATIONAL ELECTRICAL CODE (NEC) AND
- ALSO COMPLY WITH ARTICLE 760 OF THE NEC. QUALITY ASSURANCE REGULATORY REQUIREMENTS -
- a. SYSTEM SHALL MEET APPROVAL OF AUTHORITY HAVING JURISDICTION (AHJ). CHANGES OR ADDITIONS SHALL BE MADE TO THE SYSTEM AS REQUIRED WITHOUT ADDITIONAL COST TO OWNER.
- EQUIPMENT, DEVICES, AND CABLE SHALL BE UL OR FACTORY MUTUAL LISTED FOR USE IN FIRE ALARM SYSTEMS. FACP COMPONENTS:
- EQUIPMENT AND ACCESSORIES FURNISHED UNDER TERMS OF THIS SPECIFICATION SHALL BE STANDARD PRODUCTS OF SINGLE MANUFACTURER, OR INCLUDE WRITTEN STATEMENT BY CONTROL PANE MANUFACTURER CONFIRMING COMPATIBILITY OF COMPONENTS AND INCLUSION OF THESE COMPONENTS
- THE MAIN FACP CENTRAL CONSOLE SHALL CONTAIN A MICROPROCESSOR BASED CENTRAL PROCESSING UNIT (CPU). THE FACP SHALL COMMUNICATE WITH AND CONTROL THE FOLLOWING TYPES OF EQUIPMENT USED TO MAKE UP THE SYSTEM: ADDRESSABLE DETECTORS, ADDRESSABLE MODULES, LOCAL AND REMOTE OPERATOR TERMINALS, ANNUNCIATORS, AND OTHER SYSTEM CONTROLLED
- THE MAIN FACP AND CENTRAL CONSOLE SHALL PERFORM THE FOLLOWING FUNCTIONS: SUPERVISE AND MONITOR ALL ADDRESSABLE DETECTORS AND MONITOR MODULES CONNECTED TO THE SYSTEM FOR NORMAL, TROUBLE AND ALARM CONDITIONS.
- SUPERVISE ALL NOTIFICATION CIRCUITS THROUGHOUT THE FACILITY. VISUALLY AND AUDIBLY ANNUNCIATE ANY TROUBLE, SUPERVISORY OR ALARM CONDITION ON OPFRATOR'S TERMINAL, PANEL DISPLAY, AND ANNUNCIATORS.
- THE FIRE ALARM CONTROL PANEL SHALL INCLUDE A FULL FEATURED OPERATOR INTERFACE CONTROL AND ANNUNCIATION PANEL WHICH SHALL INCLUDE A BACKLIT LIQUID CRYSTAL DISPLAY, INDIVIDUAL, COLOR CODED SYSTEM STATUS LEDS, AND AN ALPHA-NUMERIC KEYPAD FOR FIELD PROGRAMMING
- AND CONTROL OF THE FIRE ALARM SYSTEM. 4. THE SYSTEM SHALL INCLUDE EMERGENCY EVACUATION SIGNAL UTILIZING INTELLIGENCE SUCH THAT OSS OF OPERATION BY THE MAIN FACP WILL NOT RESULT IN THE LOSS OF EVACUATION SIGNAL
- THROUGHOUT THE BALANCE OF THE BUILDING. THE MAIN COMMUNICATION BUS (OPTIONS BUS) SHALL BE CAPABLE OF CLASS A OR CLASS B CONFIGURATION WITH A TOTAL BUS LENGTH OF 5,900 FEET (1,798 M).
- 6. OFF-SITE ALARM NOTIFICATION SYSTEM
- PROVIDE TELEPHONE LINE CONNECTION FROM TELEPHONE TERMINAL BOARD TO FIRE ALARM CONTROL PANE PROVIDE DIALER DEVICE TO NOTIFY OFF-SITE PERSONNEL OF ALARM OR ABNORMAL CONDITIONS. CONNECT TO FIRE ALARM CONTROL PANEL SO SPECIFIED CONDITIONS INITIATE OFF-SITE CALL.
- USE ONE ALARM CODE FOR ALARM AND SECOND CODE FOR SUPERVISORY/TROUBLE ALARM.
- AUDIBLE HORN ALARM ANNUNCIATION -PROVIDE SEPARATE AND DISTINCT ALARM SIGNALS FOR ALARM AND TROUBLE CONDITIONS.
- ALARM SIGNAL SHALL ALSO OPERATE STROBE LIGHTS, IF SPECIFIED. PROVIDE ALARM SILENCE SWITCHES AT CONTROL PANEL
- TROUBLE ALARM SHALL BE HORN INTEGRAL TO CONTROL PANEL SUPERVISORY ALARM MAY BE SAME AUDIBLE ALARM AS TROUBLE ALARM, BUT WITH SEPARATE ANNUNCIATION
- E. FIELD MOUNTED SYSTEM COMPONENTS FIRE ALARM INITIATING DEVICES
  - a. ADDRESSABLE SMOKE DETECTORS CEILING MOUNTED, ADDRESSABLE PHOTOELECTRIC
  - UL LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL. SHALL HAVE A FLASHING STATUS LED FOR VISUAL SUPERVISION. WHEN THE DETECTOR IS ACTUATED. FLASHING LED WILL LATCH ON SOLID. THE LED SHALL FLASH AT A 1/SEC RATE IF THE CHAMBER IS OUT OF CALIBRATION RANGE. THE DETECTOR MAY BE RESET BY ACTUATING THE CONTROL
  - PANEL'S RESET SWITCH SMOKE DETECTOR GUARDS UNDERWRITERS LABORATORIES TESTED AND LISTED BY FOR USE WITH THE SMOKE DETECTORS THEY
  - 2) GUARD DESIGN SHALL NOT AFFECT THE DETECTOR OPERATING SENSITIVITY AND SHALL NOT REDUCE THE LISTED DETECTOR SPACING
  - CONSTRUCTED OF 16-GAUGE STEEL WITH A BAKED WHITE FINISH TO MATCH THE
  - DETECTORS. TAMPERPROOF MOUNTING HARDWARE SHALL BE PROVIDED.DETECTOR BASES: STANDARD DETECTOR MOUNTING BASES SUITABLE FOR MOUNTING ON EITHER NORTH
  - AMERICAN 1-GANG, 3½ OR 4 INCH OCTAGON BOX AND 4 INCH SQUARE BOX, OR EUROPEAN BESA OR 1-GANG BO E BASE SHALL, CONTAIN NO ELECTRONICS AND SUPPORT ALL SERIES DETECTOR TYPES.
  - d. ADDRESSABLE MANUAL STATION ADDRESSABLE DOUBLE ACTION, SINGLE STAGE
  - POLYCARBONATE CONSTRUCTION WITH INTERNAL TOGGLE SWITCH. FINISHED IN RED WITH SILVER "PULL IN CASE OF FIRE" LETTERING SUITABLE FOR MOUNTING ON NORTH AMERICAN 2 ½ (64MM) DEEP 1-GANG BOXES AND
  - 1/2 (38MM) DEEP 4 SQUARE BOXES WITH 1-GANG COVERS.
- 2. FIRE ALARM ACTUATING DEVICES a. NOTIFICATION APPLIANCES

 LOW PROFILE HORN-STROBES AUDIBLE OUTPUT OF 92 DBA AT 10 FT. WHEN MEASURED IN REVERBERATION INTEGRALLY MOUNTED FLASHING LIGHT UNIT WITH BLOCK LETTERS 'FIRE'. MULTI-CANDELA WITH FIELD-SELECTABLE SETTINGS OF 15CD, 30CD, 60CD, 75CD & 110CD, AND FLASH AND THREE HERTZ. ALL UNITS SHALL FLASH IN SYNCHRONIZATION WITH EACH THE HORN SHALL HAVE A SELECTABLE STEADY OR SYNCHRONIZED TEMPORAL

ROOM PER UI -464

RATE BETWEEN ON

. INITIATION & CONTROL MODULES

CONTROL EXTERNAL

CONFIRMED BY THE

SYSTEM FIRMWARE.

SHALL BE 12 VOLT, GELL-CELL TYPE.

a. RELAY MODULF

EVEL CHECKS

. FIFLD QUALITY CONTROL

ACTIVATED

– 2002, CHAPTER 10. MANUFACTURER'S FIELD SERVICE

DEFINED MESSAGE

12. TEST & INSPECTION

BATTERIES

INSTALLATION

IN AND OUT SCREW TERMINALS SHALL BE PROVIDED FOR WIRING. LOW PROFILE HORN/STROBES SHALL MOUNT IN A NORTH AMERICAN 1-GANG BOX.

PROVIDE ADDRESSABLE CONTROL RELAY CIRCUIT MODULES AS REQUIRED. THE MODULE SHALL PROVIDE ONE (1) FORM C DRY RELAY CONTACTS RATED AT 24VDC @ 2 AMPS (PILOT DUTY) TO APPLIANCES OR EQUIPMENT. THE POSITION OF THE RELAY CONTACT SHALL BE

BATTERY SHALL HAVE SUFFICIENT CAPACITY TO POWER THE FIRE ALARM SYSTEM FOR NOT LESS THAN TWENTY-FOUR HOURS PLUS 5 MINUTES OF ALARM UPON A NORMAL AC POWER FAILURE. THE BATTERIES ARE TO BE COMPLETELY MAINTENANCE FREE. NO LIQUIDS ARE REQUIRED. FLUID REFILLING, SPILLS AND LEAKAGE SHALL NOT BE REQUIRED.

INSTALL FIRE ALARM AND DETECTION SYSTEMS AS INDICATED, IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS, AND COMPLYING WITH APPLICABLE PORTIONS OF NEC, NFPA AND NECA'S "STANDARD OF INSTALLATION". INSTALL WIRING, RACEWAYS, CONDUCTORS, ELECTRICAL BOXES AND FITTINGS IN ACCORDANCE WITH

SECTION 16 050 - BASIC MATERIALS AND METHODS. LABEL PULL AND JUNCTION BOXES "FIRE ALARM" WITH RED INDELIBLE INK. LOOP WIRES THROUGH EACH DEVICE ON ZONE FOR PROPER SUPERVISION. TEE-TAPS NOT PROVIDE DUST PROTECTION FOR INSTALLED SMOKE DETECTORS UNTIL FINISH WORK IS COMPLETED

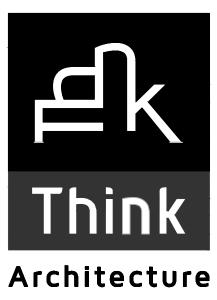
AND BUILDING IS READY FOR OCCUPANCY. PROTECT CONDUCTORS FROM CUTS, ABRASION AND OTHER DAMAGE DURING CONSTRUCTION. MINIMUM CONDUCTOR SIZE SHALL BE 14 AWG UNLESS OTHERWISE SPECIFIED. DO NOT INSTALL CEILING MOUNTED DETECTORS WITHIN 3 FEET OF AIR DISCHARGE GRILLS.

COORDINATE WITH OTHER TRADES AS REQUIRED POST COPY OF WIRE IDENTIFICATION LIST INSIDE FIRE ALARM PANEL DOOR OR OTHER AREA ACCESSIBLE TO FIRE ALARM SERVICE PERSONNEL 10. INSTALL CONDUCTORS AND MAKE CONNECTIONS TO ALL, WATER FLOW SWITCHES, VALVE TAMPER SWITCHES, LOW AIR PRESSURE SWITCHES, AND DOOR HOLDING DEVICES.

a. ALL INTELLIGENT ADDRESSABLE DEVICES SHALL BE TESTED FOR CURRENT ADDRESS AND USER b. ALL WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, AND GROUNDS BEFORE THE SYSTEM IS ALL TEST EQUIPMENT, INSTRUMENTS, TOOLS AND LABOR REQUIRED TO CONDUCT THE TESTS SHALL BE MADE AVAILABLE BY THE INSTALLING CONTRACTOR. THE SYSTEM INCLUDING ALL ITS SEQUENCE OF OPERATIONS SHALL BE DEMONSTRATED TO THE OWNER, HIS REPRESENTATIVE, AND THE LOCAL FIRE INSPECTOR. IN THE EVENT THE SYSTEM DOES NOT OPERATE PROPERLY, THE TEST SHALL BE TERMINATED. CORRECTIONS SHALL BE MADE AND THE TESTING PROCÉDURE SHALL BE REPEATED UNTIL IT IS ACCEPTABLE TO THE OWNER, HIS REPRESENTATIVES AND THE FIRE INSPECTOR

e. ALL FIRE ALARM TESTING SHALL BE IN ACCORDANCE WITH NATIONAL FIRE ALARM CODE, NFPA 72

INSTRUCT OWNER'S REPRESENTATIVE IN PROPER OPERATION AND MAINTENANCE PROCEDURES. PROVIDE A MINIMUM OF 4 HOURS TRAINING



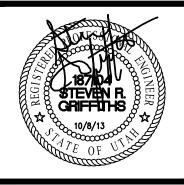
Architecture Interior Design Landscape Architecture Land Planning Construction Management

> 5151 South 900 East, Suite 200 Salt Lake City, UT 84117 Ph: 801.269.0055 Fax: 801.269.1425 www.thinkaec.com

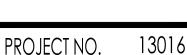
all technical drawings, graphic representation & models thereof, are proprietary & can not be copied, duplicated, or commercially exploited in whole or in part without the sole and express written permission from ASWN+JSA Architects, Inc

e designs shown and described herein includin





#### SШ $\sim \sim$ Ϋ́́ ₹ M H O H STR 123 H 8 $\succ$ 4800 SOU AY, UTAH AM $\sim$ ш >O ⊨ west Murr, $\triangleleft$ ЩŢ 385 Γ Ν



DATE: 30, SEPT. 2013

**REVISIONS**:

✓ 1 \ 09.30.2013 CITY COMMENTS 2 10.08.2013 ADDENDUM #1

SHEET TITLE ELECTRICAL SPECIFICATIONS



