	SYMBOLS LEGEND				
	SVMBOL	DESCRIPTION			
		E AND LINE SYMBOLS			
	A5 E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.			
	A5 E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.			
	A5 E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.			
	ROOM NAME	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.			
	<u></u>	KEYNOTE INDICATOR.			
		REVISION INDICATOR.			
	(CU-1)	EQUIPMENT INDICATOR.			
	X-X XMDP	MECHANICAL EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XMDP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.			
		BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING			
		BREAK, ROUND			
	MATCH LINE SEE XX/X-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.			
		NEW LINE: MEDIUM LINE.			
		HIDDEN FEATURES LINE: HIDDEN, THIN LINE			
		EXISTING TO REMAIN LINE: THIN LINE.			
		DEMOLITION LINE: DASHED, MEDIUM LINE			
		PROPERTY LINE: DASHED, WIDE LINE.			
		CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.			
		ELECTRICAL EQUIPMENT INDICATOR. "XXX" INDICATES TYPE OF			
	XXX EF-X	EQUIPMENT OR EQUIPMENT ID. "EF-X" IDENTIFIES MECHANICAL EQUIPMENT BEING SERVED. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.  EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK			
	X-X 1LA-3	SHOWN ON EQUIPMENT SCHEDULE. "1LA-3" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.			
	WIRING ME	THODS			
		WIRING.			
	<u></u>	WIRING TURNED UP OR TOWARDS OBSERVER.			
	0	WIRING TURNED DOWN OR AWAY FROM OBSERVER.			
	A-1	SINGLE BRANCH CIRCUIT HOME RUN TO PANELBOARD WITH DEDICATED NEUTRAL CONDUCTOR. LETTER AND NUMBER NOTATION IDENTIFY PANEL AND CIRCUIT NUMBER.			
•	A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS.			
	A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE.			
		LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.			
	1	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.  CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.			
	(HC)	ADA ACCESS PUSH PLATE			
	<u> </u>	JUNCTION BOX.			
	Фс	JUNCTION BOX, CEILING.  JUNCTION BOX, SYSTEMS FURNITURE COMMUNICATION			
	⊕ <sub>SC</sub>	CONNECTION.			
	$\Phi_{SP}$	JUNCTION BOX, SYSTEMS FURNITURE POWER CONNECTION.			
	A"xB" +/-C'-D"	PULL BOX.  CABLE TRAY ABOVE ACCESSIBLE CEILING.  "A" DENOTES CABLE TRAY WIDTH, "B" DENOTES CABLETRAY DEPTH. +/-C'-D" DENOTES CABLE TRAY ELEVATION ABOVE OR BELOW FINISHED SURFACE.			
		LADDER RACK.			
	—J—J—	CABLE J-HOOKS ABOVE ACCESSIBLE CEILING.			
	J J	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT			
	<u> </u>	SCHEDULE FOR REQUIREMENTS.			
	EV	ELECTRIC VEHICLE CHARGING STATION.			
	CCTV	GROUND BUSBAR. REFER TO GROUNDING RISER DIAGRAM FOR ADDITIONAL INFORMATION.			
		CCTV CABLE, POWER.			
		CCTV CABLE, VIDEO SIGNAL.			
	CCTV	CCTV HEADEND EQUIPMENT.			
	M	CCTV MONITOR.			
		CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE.			
	PTZ ( )	CCTV CAMERA WITH PAN, TILT AND ZOOM.			
	360° )	PANNING CAMERA TRANSVERSE ANGLE.			

SANDO!	SYMBOLS LEGEND	CVADO:	SYMBOLS LEGEND DESCRIPTION
SYMBOL	DESCRIPTION	SYMBOL	
VIRING DE			AL POWER AND DISTRIBUTION
	RECEPTACLE, DUPLEX: NEMA 5-20R.		FUSE WITH RATING (ONE-LINE DIAGRAM).
	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.		DISCONNECT, FUSED (ONE-LINE DIAGRAM).
	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.  RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT		
∯ <sub>DF</sub>	INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE		DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).
	MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.	,	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.		
<u> </u>	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.  RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY		CIRCUIT BREAKER, MOLDED CASE WITH SHUNT TRIP (ONE-LINE DIAGRAM).
	POWER: NEMA 5-20R.  RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT	<b>▼</b>	
	INTERRUPTER: NEMA 5-20R.  RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT	( MCP	CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTION (ONE-LINE DIAGRAM).
	INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.		
<b>#</b>	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.	(*#AF #AT	CIRCUIT BREAKER, ADJUSTABLE TRIP. "225AF" REPRESENTS THE RATING AND "150AT" REPRESENTS THE TRIP SETTING. (ONE-LINE DIAGRAM).
₩ <sub>WP</sub>	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.		CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM).
₩	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.		
•	RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER: NEMA 5-20R.		CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT
<b>#</b>	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R.	GFP	PROTECTION (ONE-LINE DIAGRAM).
#	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.	<b>✓</b>	MOTOR.
₩	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.	<u> </u>	TRANSFORMER (ONE-LINE DIAGRAM).
<u></u>	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.		
•	RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.	"1DPHA" 	DISTRIBUTION PANELBOARD, MOTOR CONTROL CENTER,
<b>()</b>	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.		PLUG-IN BUSWAY, MEDIUM VOLTAGE SWITCHBOARD (ONE-LINE DIAGRAM).
FB#	FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS		
	FOR CONFIGURATION AND DEVICES.		
Х	SWITCH, DIMMER.		PANELBOARD (ONE-LINE DIAGRAM).
\$	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).		
X \$2 X	SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED).	225/3	DANIEL DOADD WITH MAIN LLICO ONLY, DUO 0175 AND DUACE.
X \$3 ×	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).	"1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE A SHOWN (ONE-LINE DIAGRAM).
X \$4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).		
	RECEPTACLE, DUPLEX, TAMPER RESISTANT: NEMA 5-20R.  RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT	225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHAS
•	INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.		SHOWN (ONE-LINE DIAGRAM).
<b>.</b>	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.	<b>1</b>	
₩.	RECEPTACLE, SINGLE PLEX, WITH USB OUTLET	)225/3 "1H"	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER
NURSE CA	LL		(ONE-LINE DIAGRAM).
0	JUNCTION BOX.	60/3	
	CORRIDOR LIGHT.	225/3 225/3 "1H"	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
B	BATHROOM PULL CORD STATION.		
<u></u>	DUTY STATION.	225/3 "1H" "1H"	PANELBOARD WITH CIRCUIT BREAKER AND SUB FEED LUGS (ONE-LINE DIAGRAM).
Ē	EMERGENCY ASSISTANCE CALL STATION.		(ONE-LINE DIAGRAM).
Есв	EMERGENCY ASSISTANCE CODE BLUE CALL STATION.		
P	PATIENT STATION.		CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRA
Ś	STAFF STATION.		
NCM	TOUCH SCREEN NURSE CALL MASTER STATION.		TRANSFER SWITCH (ONE-LINE DIAGRAM).
ZLC	ZONE LIGHT CONTROLLER.		
SECURITYX_	SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE	DMM]	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
ACC	TYPE.  ACCESS CONTROL HEADEND EQUIPMENT.		EARTH GROUND (ONE-LINE DIAGRAM).
CTR	SECURITY CONTROL PANEL.	<u>+</u>	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRA
SEC	INTRUSION DETECTION HEADEND EQUIPMENT.	— (G)	GENERATOR, ANNUNCIATOR (ONE-LINE DIAGRAM).
#1	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE	EPO EPO	PUSH BUTTON, REMOTE EMERGENCY STOP.
CR >	SCHEDULE.  CARD READER.	(G)	GENERATOR, POWER (ONE-LINE DIAGRAM).
KCR	KEYPAD/CARD READER COMBINATION.	(K)	KIRK-KEY MECHANICAL INTERLOCK (ONE-LINE DIAGRAM)
• ER	EXIT REQUEST.	(M)	METER.
● RL	REMOTE DOOR RELEASE BUTTON.		DISCONNECT SWITCH, FUSED.
<b>(</b> )	SENSOR, GLASS BREAK.		DISCONNECT SWITCH, UNFUSED.
(IC)	INTERCOM STATION.	<u> </u>	STARTER, COMBINATION WITH DISCONNECT SWITCH.
(RU)	DUAL TECHNOLOGY PASSIVE INFRARED SENSOR AND ULTRASONIC MOTION DETECTOR.	<u> </u>	STARTER OR MOTOR CONTROLLER.
(IR)	PASSIVE INFRARED SENSOR.	•	PUSHBUTTON.
(P)	PANIC DURESS SWITCH.	:	PUSHBUTTONS, MOTOR CONTROL.
U	ULTRASONIC MOTION DETECTOR.		PANELBOARD CABINET, FLUSH MOUNTED.
~ /			PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
AP	ANNUNCIATOR PANEL.		TARLEBOARD GABRIET, GORRANGE MOGRATES, TOLOTION.
AP	MASTER STATION, INTERCOM.		PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
			PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.

LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.

SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD

TRANSFORMER (SEE ONE-LINE FOR SIZE)

		0)/140010150510
	0) (1 (7 0)	SYMBOLS LEGEND
	SYMBOL	DESCRIPTION
	(W-3)	
	(۷۷-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
		FIXTURE IDENTIFICATION: EMERGENCY LIGHTING FIXTURE
	(W-3E)	WITH BATTERY PACK AND/ OR GENERATOR AND/ OR CENTRALIZED INVERTER AND/ OR CENTRALIZED UPS
		CONNECTION AS INDICATED IN PLANS. (W-3E) INDICATES FIXTURE TYPE AS SCHEDULED.
	<b>↑</b>	EGRESS DIRECTION ARROW (EXIT SIGNS).
	igstar	EXIT SIGN: SINGLE FACE; CEILING MOUNTED
	፟ 🌣 🔄	EXIT SIGN: SINGLE FACE; WALL MOUNTED
	•	EXIT SIGN: DOUBLE FACE; CEILING MOUNTED
	•	EXIT SIGN: DOUBLE FACE; WALL MOUNTED
ΓS	LIGHTING (	
	*	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	<u> </u>	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
	<b>ॐ</b>	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.
	(P)	PHOTOCELL.
	H(P)	PHOTOCELL, WALL MOUNTED.  VACANCY SENSOR, DUAL TECHNOLOGY,
	*	OMNI-DIRECTIONAL, CEILING.
	*	VACANCY SENSOR, DUAL TECHNOLOGY, WALL.  SWITCH/OCCUPANCY SENSOR COMBO, DUAL TECHNOLOGY, WALL.
	*	SWITCH/VACANCY SENSOR COMBO, DUAL TECHNOLOGY, WALL.
	\$ ** ***	DIMMER SWITCH/OCCUPANCY SENSOR COMBO,
	Ψ ••••	DUAL TECHNOLOGY, WALL.  DIMMER SWITCH/VACANCY SENSOR
	a,b	COMBO, DUAL TECHNOLOGY, WALL.  LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER
	\$	"a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS)
	FIRE ALARI	,
	FAA	FIRE ALARM ANNUNCIATOR PANEL.
E AS	FACP	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
	FATC	FIRE ALARM TERMINAL CABINET: NAC, SLC, SPEAKER CIRCUITS; AMPLIFIERS, BATTERIES
	С	AUTOMATIC DOOR CLOSERS: DOOR CLOSERS SHALL BE FURNISHED WITH DOOR HARDWARE AND CONNECTED
ASE AS		BY FIRE ALARM INSTALLER.
	СМ	CONTROL MODULE.
	ММ	MONITOR MODULE.
3	F	FIRE ALARM MANUAL PULL STATION.
`	R	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A
		FIRE.
	FS	WATER FLOW SWITCH. FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS
		SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.  VALVE SUPERVISORY SWITCH, TAMPER SWITCH. TAMPER
s	VS	SWITCHES SHALL BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO
		LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.  PRESSURE SUPERVISORY SWITCH. PRESSURE SWITCHES SHALL
	PS	BE PROVIDED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS
GRAM).	₽	MAGNETIC DOOR HOLDER.
	(5)	DETECTOR, SMOKE.
		·
	<b>S</b>	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	_ s <sub>D</sub>	SMOKE DAMPER. 120V POWER FROM ELECTRICAL SYSTEM.
RAM).	ļ	COMBINATION FIRE/SMOKE DAMPER. 120V POWER
	@ FSD	FROM ELECTRICAL SYSTEM.
	×	STROBE, WALL MOUNTED.
	75	STROBE, WALL MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.
		ALARM, HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY.
	75	ALARM, HORN/STROBE, WALL MOUNTED, ONE ASSEMBLY. SUBSCRIPT INDICATES CANDELA RATING. ALARM, HORN/STROBE, ONE ASSEMBLY, CEILING MOUNTED.
	75	ALARM, HORN/STROBE, ONE ASSEMBLY, CEILING MOUNTED. SUBSCRIPT INDICATES CANDELA RATING.  ALARM, HORN, CEILING MOUNTED. SUBSCRIPT INDICATES
	75	CANDELA RATING.  SPEAKER/STROBE, CEILING MOUNTED. SUBSCRIPT INDICATES
	© 75	CANDELA RATING.  ALARM, STROBE, CEILING MOUNTED. SUBSCRIPT
	TV DISTRIB	INDICATES CANDELA RATING.
	T	TV DISTRIBUTION CABLE, INDIVIDUAL DROPS.
	—TR.	TV DISTRIBUTION CABLE, INDIVIDUAL DINOFS.  TV DISTRIBUTION CABLE, TRUNK.
	СМВ	COMBINER.
	DC	DIRECTIONAL COUPLER.
	DA	DISTRIBUTION AMPLIFIER (ONE-LINE DIAGRAM).
SURE.		COLUTTED (ONE LINE DIA COLAN)
	SPL	SPLITTER (ONE-LINE DIAGRAM).
	•	TV OUTLET.
		SATELLITE ANTENNA.
	🚄	I

TV ANTENNA (ONE-LINE DIAGRAM).

TERMINATOR, 75 OHM (TV DISTRIBUTION).

	ABBREV	ΊΔΤ	IONS
	NOTE: ALL ABBREVIAT		
1P	SINGLE POLE	kVA	KILOVOLT AMPERE
1PH	SINGLE-PHASE	kVAR	KILOVOLT AMPERE REA
1WAY	ONE-WAY	kW	KILOWATT
2/C	TWO-CONDUCTOR	kWh	KILOWATT HOUR
2WAY 3/C	TWO-WAY THREE-CONDUCTOR	LED LFMC	LIGHT EMITTING DIODE LIQUID TIGHT FLEXIBLE
3WAY	THREE-WAY	LFIVIC	CONDUIT
4OUT	QUADRUPLE RECEPTACLE OUTLET	LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
4PDT	FOUR-POLE DOUBLE THROW	LPS	LOW PRESSURE SODIUM
4PST	FOUR-POLE SINGLE THROW	LRA	LOCKED ROTOR AMPS
4W	FOUR-WIRE	LTG	LIGHTING LOW VOLTAGE
4WAY A	FOUR-WAY ABOVE COUNTER	LV MATV	MASTER ANTENNA TELE
A AC	ARMORED CABLE	100,41	SYSTEM
ADA	AMERICANS WITH DISABILITIES	MAX	MAXIMUM
	ACT	MC	METAL CLAD
ADJ	ADJACENT	MCA	MINIMUM CIRCUIT AMPS
AFF	ABOVE FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER
AFG	ABOVE FINISHED GRADE	MCC	MOTOR CONTROL CENT
AIC	AMPERE INTERRUPTING	MCP	MOTOR CIRCUIT PROTE
A I I I I A	CAPACITY	MDP MG	MAIN DISTRIBUTION PAN MOTOR GENERATOR
ALUM AMP	ALUMINUM AMPERE	MH	MANHOLE
ANN	ANNUNCIATOR	MIN	MINIMUM
ANN AP	ACCESS POINT (WIRELESS	MLO	MAIN LUGS ONLY
	DATA)	MOCP	MAXIMUM OVERCURREN
AR	AS REQUIRED		PROTECTION
ASC	AMPS SHORT CIRCUIT	MTS	MANUAL TRANSFER SW
ATS	AUTOMATIC TRANSFER	NA	NOT APPLICABLE
۸۱/	SWITCH	NC	NORMALLY CLOSED
AV AWG	AUDIO VISUAL AMERICAN WIRE GAGE	NEC	NATIONAL ELECTRICAL
BB XFMR	BUCK-BOOST TRANSFORMER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BFF	BELOW FINISHED FLOOR	NFC	NATIONAL FIRE CODE
BFG	BELOW FINISHED GRADE	NFPA	NATIONAL FIRE PROTEC
С	CEILING MOUNTED		ASSOCIATION
CAT	CATEGORY	NIC	NOT IN CONTRACT
CATV	COMMUNITY ANTENNA TELEVISION	NL NO	NIGHT LIGHT NORMALLY OPEN
СВ	CIRCUIT BREAKER	NTS	NOT TO SCALE
CCBA	CUSTOM COLOR AS SELECTED	OC	ON CENTER
	BY ARCHITECT	OCP	OVER CURRENT PROTE
CCTV	CLOSED CIRCUIT TELEVISION	OE	OWNER ELECTRONICS
CF/CI	CONTRACTOR FURNISHED/	OF/CI	OWNER FURNISHED/
	CONTRACTOR INSTALLED		CONTRACTOR INSTALLE
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED	OF/OI	OWNER FURNISHED/ OV
CFBA	CUSTOM FINISH AS SELECTED	OED	INSTALLED
J. DA	BY ARCHITECT	OFP OH DR	OBTAIN FROM PLANS OVERHEAD (COILING) D
CKT	CIRCUIT	OL	OVERHEAD (COILING) DO
CM	CONSTRUCTION MANAGER	PAIR	PR
CND	CONDUIT	PB	PUSHBUTTON
CO	CONVENIENCE OUTLET	PF	POWER FACTOR
COR	CONTRACTING OFFICER'S REPRESENTATIVE	PH	PHASE
CP	CONTROL PANEL	PNL	PANEL
CT	CURRENT TRANSFORMER	PNM	PLENUM
CTV	CABLE TELEVISION	PS	POWER SUPPLY
CU	COPPER	PT	POTENTIAL TRANSFORM
dBA	UNIT OF SOUND LEVEL	PTZ QTY	PAN/TILT/ZOOM QUANTITY
DPDT	DOUBLE POLE, DOUBLE	R	QUANTITY REMOVE
<b>D</b> C	THROW	RCP	REFLECTED CEILING PL
DS	DISCONNECT SWITCH	RMC	RIGID METAL CONDUIT
E ^	ENHANCED	RNC	RIGID NONMETAL COND
EA EM	EACH EMERGENCY	RPM	REVOLUTIONS PER MINI
EMT	ELECTRICAL METALLIC TUBING	RPP	RISER PATCH PANEL
ENT	ELECTRICAL METALLIC TOBING ELECTRIC NONMETALLIC	RR	REMOVE AND RELOCAT
_1 1 1	TUBING	S/S	START/STOP
EPO	EMERGENCY POWER OFF	SCA	SHORT CIRCUIT AMPS
EQUIP	EQUIPMENT	SCBA	STANDARD COLOR AS
ER	EQUIPMENT ROOM		SELECTED BY ARCHITE
EX	EXISTING	SF	SQUARE FOOT (FEET)
F	FURNITURE MOUNTED	SFBA	STANDARD FINISH AS SELECTED BY ARCHITE
FA	FIRE ALARM	SPD	SURGE PROTECTIVE DE
FCP	FIRE ALARM CONTROL PANEL	SPDT	SINGLE POLE, DOUBLE 1
FLA	FULL LOAD AMPS	SPEC	SPECIFICATION
FMC	FLEXIBLE METAL CONDUIT	SPP	STATION PATCH PANEL
FOB	FREIGHT ON BOARD	JOFF	SIAHONI AIGH AN

SPST SINGLE POLE, SINGLE THROW

ST SINGLE THROW

SWBD SWITCHBOARD

SWGR SWITCHGEAR

TV TELEVISION

UF UNDERFLOOR

UGND UNDERGROUND

SUPPLY

VA VOLT AMPERE

D CONTROLLER

WP WEATHERPROOF

XFMR TRANSFORMER

WPP WIRELESS PATCH PANEL

TYP TYPICAL

V VOLTS

W/ WITH

W/O WITHOUT

TWIST LOCK

TWISTED PAIR

SUPPRESSER

UPS UNINTERRUPTIBLE POWER

VFC/VF VARIABLE FREQUENCY MOTOR

VWM VERTICAL WIRE MANAGEMENT

TELEPHONE POLE

TTB TELEPHONE TERMINAL BOARD

TVSS TRANSIENT VOLTAGE SURGE

TELECOMMUNICATIONS ROOM

FPP FIBER PATCH PANEL

GIGA HERTZ

**HEAVY DUTY** 

HORSE POWER

HIGH VOLTAGE

MANAGEMENT

INPUT/ OUTPUT

ISOLATED GROUND

INTERMEDIATE METAL

HWM HORIZONTAL WIRE

CONDUIT

INFRARED

J-BOX JUNCTION BOX

kV KILOVOLT

IN/IS INSULATED/ ISOLATED

HERTZ

NON-REVERSING

FVR FULL VOLTAGE REVERSING

GFCI GROUND FAULT INTERRUPTER

GFP GROUND FAULT PROTECTION

HIGH INTENSITY DISCHARGE

HAND-OFF-AUTOMATIC

HIGH POWER FACTOR

HIGH PRESSURE SODIUM

FVNR FULL VOLTAGE

GEN GENERATOR

GND GROUND

GIG

HD

HOA

IMC

#### GENERAL ELECTRICAL NOTES

CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.

A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.

B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.

THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

#### ELECTRICAL SHEET INDEX

ļ	
EE001	SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES
EE002	TELECOM SCHEDULES AND NOTES
EE101	LEVEL 1 OVERALL ELECTRICAL PLAN
EE501	ELECTRICAL DETAILS
EE502	ELECTRICAL DETAILS
EE503	ELECTRICAL DETAILS
EE701	TYPICAL MOUNTING HEIGHT DETAILS
EE702	TYPICAL LABELING DETAILS
ED101	LEVEL 1 ELECTRICAL DEMOLITION PLAN
ED102	ROOF ELECTRICAL DEMOLITION PLAN
EP101	LEVEL 1 POWER PLAN
EP102	ROOF POWER PLAN
EP601	ONE-LINE DIAGRAM
EP602	ONE-LINE DIAGRAM
EP603	EQUIPMENT SCHEDULE
EP604	PANEL SCHEDULES
EP605	PANEL SCHEDULES
EP606	PANEL SCHEDULES
EP701	VENDOR DOCUMENTATION
EP702	VENDOR DOCUMENTATION
EL101	LEVEL 1 LIGHTING PLAN
EL601	INTERIOR LIGHTING FIXTURE SCHEDULE
ET101	LEVEL 1 TELECOM PLAN
ET201	LEVEL 1 OVERALL RACEWAY PLAN
ET401	ENLARGED TELECOM PLANS
ET501	TELECOM EQUIPMENT RACK ELEVATIONS
ET502	TELECOM DETAILS
ET503	TELECOM DETAILS
ET504	TELECOM EQUIPMENT RACK GROUNDING DETAIL
ET601	TELECOM RISER DIAGRAMS
EY101	LEVEL 1 AUXILIARY PLAN
EY601	AUXILIARY RISER DIAGRAMS
EY602	AUXILIARY RISER DIAGRAMS
EY603	NURSE CALL DIAGRAMS
EY604	CABLE DIAGRAMS
FA101	LEVEL 1 FIRE ALARM PLAN
FA601	FIRE ALARM RISER

#### **DEFINITIONS**

NOTE: ALL DEFINITIONS MAY NOT BE USED. INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES. APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND

REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS

STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS. FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING,

CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS." PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

**ARCHITECTS** 

NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

<u>X</u> al∓ Zin 

NJRA Project #

Construction Documents

22211.05 Jan. 15, 2024

SHEET INDEX, ABBREVIATIONS, GENERAL NOTES

#### CLINIC/HOSPITAL - CABLE/OUTLET COLOR SCHEDULE

COLOR	TYPE
BLUE	DATA
BLUE	IP SECURITY CAMERAS
YELLOW	WIRELESS

#### COPPER PATCH CORD SCHEDULE

(CATEGORY 6A F/UTP CABLES W/RJ-45 CONNECTORS)					
LENGTH (FEET)	COLOR	QUANTITY	UNIT COST (EACH)		
5'	BLUE	20% OF TOTAL PORTS IN TDR'S			
7'	BLUE	60% OF TOTAL PORTS IN TDR'S			
10'	BLUE	20% OF TOTAL PORTS IN TDR'S			

### COPPER PATCH CORD SCHEDULE (CATEGORY 5E CABLES W/RJ-45 CONNECTORS)

`			,
LENGTH (FEET)	COLOR	QUANTITY	UNIT COST (EACH)
5'	BLUE	10	
7'	BLUE	10	
10'	BLUE	10	

#### FIBER PATCH CORD SCHEDULE

(SINGLE-MODE W/LC CONNECTORS)						
LENGTH (METER) COLOR QUANTITY UNIT COST (EACH)						
3 YELLOW 4 -						
5 YELLOW 4 -						

#### WIRELESS PATCH CORD PATCH CORD SCHEDULE (CATEGORY 6A F/UTP W RJ/45 CONNECTORS

(CATEGORY 6A F/UTP W RJ/45 CONNECTORS					
LENGTH (METER)	COLOR	QUANTITY	UNIT COST (EACH)		
7'	YELLOW	200% OF TOTAL PORTS IN TDR'S			

#### CLINIC/HOSPITAL - EQUIPMENT/CABLE LIST

THE ITEMS INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS OF SIGNIFICANCE USED DURING THE DESIGN OF THE CABLING INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE ENTIRE ASSEMBLY SHALL BE PROVIDED UNLESS SPECIFIED OTHERWISE. PROVIDE ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED HERE, FOR A COMPLETE INSTALLATION. COMPARE CATALOG NUMBERS WITH DESCRIPTIONS AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID. IF CATALOG NUMBERS DO NOT MATCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SYMBOL	ITEM DESCRIPTION	ACCEPTABLE TYPES
	STATION CABLE, DATA - CATEGORY 6A F/UTP RISER, BLUE, DATA	SIEMON 9A6R4-A5-06-R1A
	STATION CABLE, DATA - CATEGORY 6A F/UTP RISER, YELLOW, WIRELESS DATA	SIEMON 9A6R4-A5-05-R1A
	25 PAIR CATEGORY 3 RISER CABLE, GRAY	GENERAL CABLE
	FIBER OPTIC CABLE, SINGLEMODE, 24 STRAND, ARMORED, RISER CABLE, YELLOW	SIEMON 9BC8R024L-E205A
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
$\nabla$	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	BLANK INSERT - WHITE	SIEMON MX-BL-02
Α	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION (A=ABOVE COUNTER)	SIEMON 10GMX-FPS04-02
$\Delta \Delta$	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	BLANK INSERT - WHITE	SIEMON MX-BL-02
<b>4</b> ▼	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02
lacktriangle	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
(((*)))	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON MX-SMZ2-02
((♠)) ♣C	CATEGORY 6A JACK - DATA, YELLOW	SIEMON Z6A-S05
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON MX-SMZ1-02
رر	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON MX-SMZ2-02
∆ C	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06
SPP1	48 PORT, 1RU ANGLED PATCH PANEL, WITH OUTLETS	SIEMON Z6AS-PA-48
	BLANK PATCH PANEL, 1RU ANGLED	SIEMON PNL-BLNKA-1
RPP1	24 PORT, 1RU FLAT PATCH PANEL, WITH OUTLETS	SIEMON UP5-F2-24K-RS
RPP5	WIRING BLOCK, COPPER, S110, WALL MOUNT, 50 PAIR, LEGS, NO COVER	S110AW1-50
	FIBER PATCH PANEL, LIGHTVERSE, 2RU	SIEMON LVE-2U-MD-P01A
FPP2	SIX POSITION, 12 STRAND, FIBER SPLICE MODULE, LC, SINGLE-MODE	SIEMON LVS12-LSUARUAB1A
	BLANK ADAPTER PLATE, LIGHTVERSE, BLACK	SIEMON LVA-BLANK-01A
	FIBER PATCH PANEL, WALL MOUNTED	SIEMON SWIC3G-CC-01
FPP5	SIX POSITION FIBER ADAPTER PANEL, ST	SIEMON RIC-F-LCU12-01C
	BLANNK ADAPTER PLATE	SIEMON RIC-F-BLNK-01
HWM	HORIZONTAL WIRE MANAGERS, 4RU	PANDUIT NCMHAEF4
VWM	VERTICAL WIRE MANAGERS, 10" WIDTH, DOUBLE SIDED, BLACK, 8'	CHATSWORTH 40096-715
	EQUIPMENT RACK 19" x 8', 52 RU, BLACK	CHATSWORTH 55053-715
	CABLE RUNWAY - 24", BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES	CHATSWORTH 10250-724
	CABLE RUNWAY - 18", BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES	CHATSWORTH 10250-718
	BUTT SPLICE KIT, BLACK	CHATSWORTH 11301-701
	JUNCTION SPLICE KIT, BLACK	CHATSWORTH 11302-701
	FOOT KIT, BLACK	CHATSWORTH 11309-701
	6" CHANNEL RACK TO RUNWAY, BLACK	CHATSWORTH 12409-724
	TRIANGLE BRACKETS, BLACK	CHATSWORTH 11746-724
	END CLOSING KIT, CABLE RUNWAY, BLACK	CHATSWORTH 11700-724
	WALL ANGLE SUPPORT KIT, CABLE RUNWAY, BLACK	CHATSWORTH 11421-724
	CABLE RUNWAY ELEVATION KIT, 6"	CHATSWORTH 10506-706
	CABLE RUNWAY RADIUS DROP	CHATSWORTH 12100-712
J-J-J	J-HOOK PATHWAY 4", THREE TIER	CADDY CAT64HPSWM3
U U-U	CABLE BASKET TRAY, GALVANIZED (REFER TO RACEWAY PLANS FOR CABLE TRAY SIZING)	CABLOFIL, LEGRAND, WBT, OR COPPER B-LINE
	ONDEE BROKET TIME, ONEVARIALE (INC. EN TO TROCEVIAT I ENTO FOR CADEL TIME SIZING)	O'ABLOT IL, LEGIVARD, WDT, ON OOF I EN D-LINE
	PLYWOOD BACKBOARD, 3/4"x4'x8', GRADE AC, FIRE-TREATED & PAINTED WHITE (MOUNT AT 6" AFF)	+
	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR	1_
المسلد	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR	-

NOTE: ALL RACKS, LADDER, PATCH PANELS AND ACCESSORIES SHALL BE BLACK IN COLOR.

TELECOMMUNICATIONS GROUNDING BUS BAR

#### CLINIC/HOSPITAL -GENERAL PROJECT NOTES

- UNLESS OTHERWISE NOTED, INSTALL ALL CABLE INSIDE RACEWAY SYSTEMS.
  WHERE RACEWAY SYSTEMS HAVE NOT BEEN PROVIDED OR SPECIFIED,
  INSTALL CABLE THROUGH THE SPECIFIED "CADDY" CLIPS AT THE MINIMUM
  INTERVALS IDENTIFIED IN THE SPECIFICATIONS. SUPPORT "CADDY" CLIPS
  DIRECTLY FROM THE BUILDING STRUCTURE, NOT FROM OTHER BUILDING
  SYSTEM SUPPORT WIRES OR CABLE.
- 2. PROVIDE PLENUM RATED CABLE IN ALL AIR PLENUMS. IF A PLENUM RATED CABLE IS NOT SPECIFIED, PROVIDE THE PLENUM RATED EQUIVALENT TO THE SPECIFIED CABLE.
- 3. LABEL ALL CABLE INSTALLED UNDER THIS CONTRACT REGARDLESS OF
- 4. THE EQUIPMENT LABELING IDENTIFIED ON DETAILS IN THESE DRAWINGS ARE EXAMPLES ONLY OF THE ACTUAL LABELING WHICH IS REQUIRED AS PART OF THIS CONTRACT. PRIOR TO FABRICATION, SUBMIT THE NOMENCLATURE FOR ALL LABELS TO THE OWNER FOR REVIEW. THIS REQUIREMENT INCLUDES BUT IS NOT LIMITED TO ALL CABLE LABELING, AND ALL EQUIPMENT LABELING.
- 5. IF OUTLET IS TERMINATED IN CEILING SPACE, LABEL THE T-BAR GRID WITH THE OUTLET NUMBER FOR EASY LOCATION AND IDENTIFICATION.
- 6. GROUND ALL EQUIPMENT RACKS INSTALLED UNDER THIS CONTRACT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- FOR EVERY CABLE PULL SPECIFIED, COIL 15' OF EXCESS CABLE AT THE STATION END FOR FUTURE USE. NEATLY COIL 15' ABOVE THE CEILING OR BELOW FLOOR WHERE APPLICABLE.
- 8. PROVIDE THE QUANTITY OF PATCH PANELS REQUIRED +20% FOR THE TOTAL DATA OUTLETS SHOWN ON FLOOR PLANS FOR THE PARTICULAR LEVEL.
- 9. RACK SPACE ALLOCATION SHOULD BE FOLLOWED PER DRAWINGS. IF YOU HAVE A SYSTEM THAT HAS NO RACK ALLOCATION PLEASE CALL BOE SAUSEDO AT 801-707-3805.
- 10. COORDINATE WITH ALL SUBS TO ENSURE THAT ALL CABLES ARE PROTECTED FROM ANY DIRECT PAINT, OR INCIDENTAL OVERSPRAY.



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com





rmountain Kidney Servi t Valley Dialvsis

2750 South 5600 West West Valley City, UT 84120

NJRA Project # 22211.05
Construction Documents Jan. 15, 2024

TELECOM SCHEDULES AND NOTES

EE002

GENERAL SHEET NOTES

NJR / ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



#### ○SHEET KEYNOTES

PROVIDE (2) 3" CONDUITS IN CONCRETE ENCASED DUCT BANK FROM GENERATOR DOCKING STATION "GDS" TO GENERATOR.

- 2 CONTRACTOR TO PROVIDE SEPARATE LINE ITEM PRICING FOR GENERATOR DOCKING STATION.
- 3 PROVIDE (2) 3" CONDUITS BELOW CONCRETE FLOOR SLAB FROM GENERATOR DOCKING STATION "GDS" TO AUTOMATIC TRANSFER SWITCH "ATS-E".
- 4 MOUNT REMOVE GENERATOR EMERGENCY SHUT DOWN BUTTON ON EXTERIOR ADJACENT TO "GDS". PROVIDE WEATHER RESISTANT COVER FOR SWITCH AND LABEL.

SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

rmountain Kidney Service st Valley Dialysis

NJRA Project #
Construction Documents

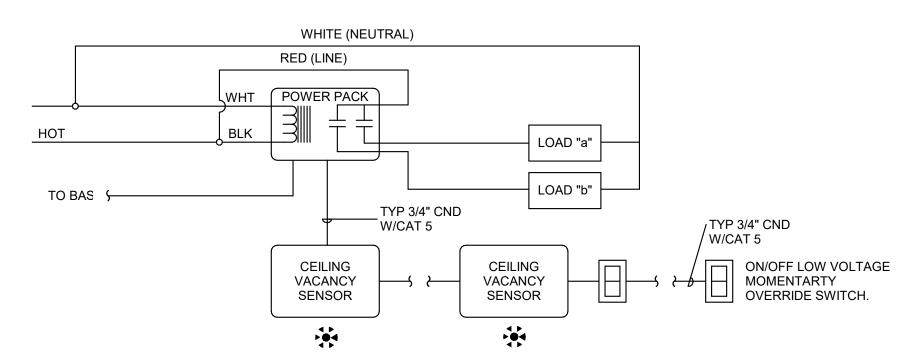
Construction Documents Jan. 15, 2024

LEVEL 1 OVERALL ELECTRICAL PLAN

EE101

\*BASIS OF DESIGN IS NLIGHT OR WATTSTOPPER \*\*PROVIDE ALL COMPONENTS NECESSARY FOR AN EQUIVALENT, FULLY FUNCTIONAL SYSTEM IF PROVIDING OTHER THAN BASIS OF DESIGN SYSTEM.

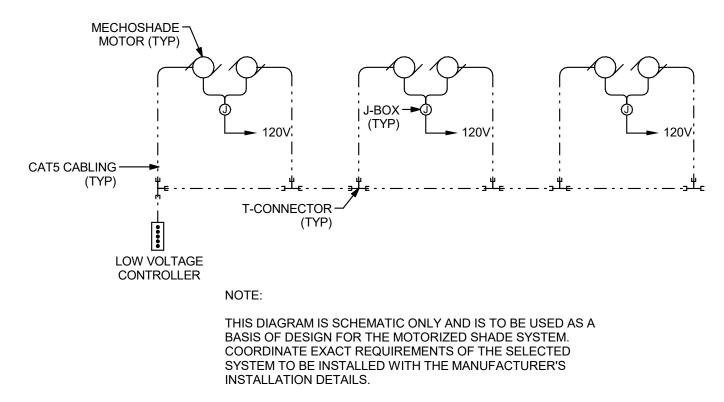
TYPICAL CEILING VACANCY SENSOR WIRING DIAGRAM



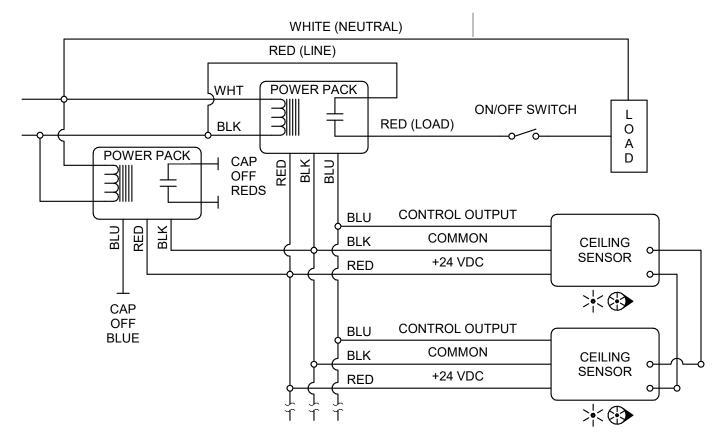
\*BASIS OF DESIGN IS NLIGHT \*\*PROVIDE ALL COMPONENTS NECESSARY FOR AN EQUIVALENT, FULLY FUNCTIONAL SYSTEM IF PROVIDING OTHER

#### TYPICAL MULTIPLE ZONE VACANCY

SENSOR WIRING DIAGRAM

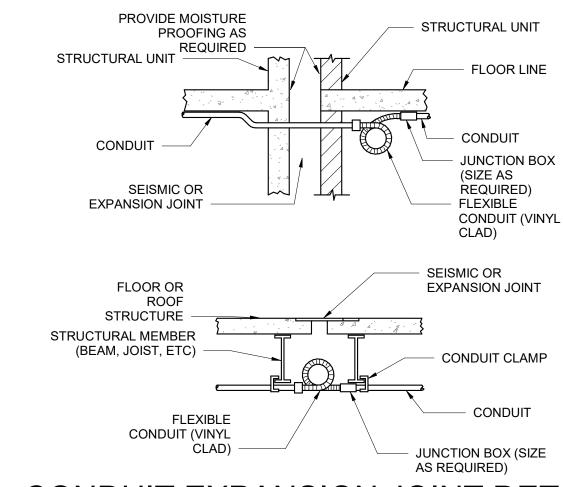


#### (B1) MECHOSHADE CONTROL DIAGRAM SCALE: NTS

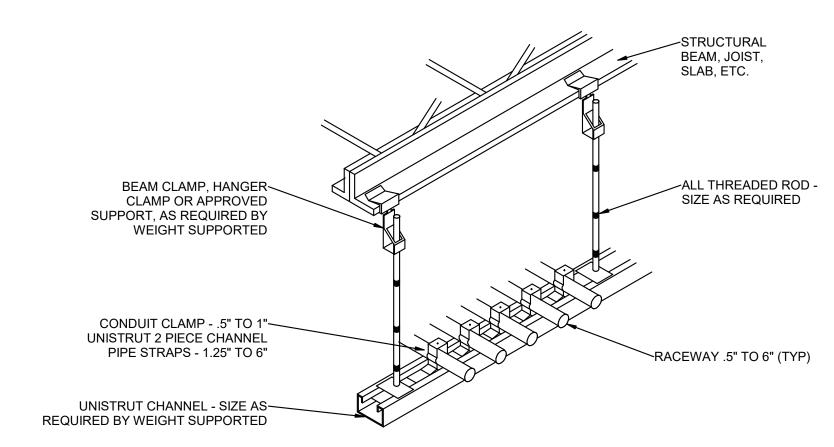


TYPICAL ROOM WITH MULTIPLE CEILING SENSORS
SCALE: NTS

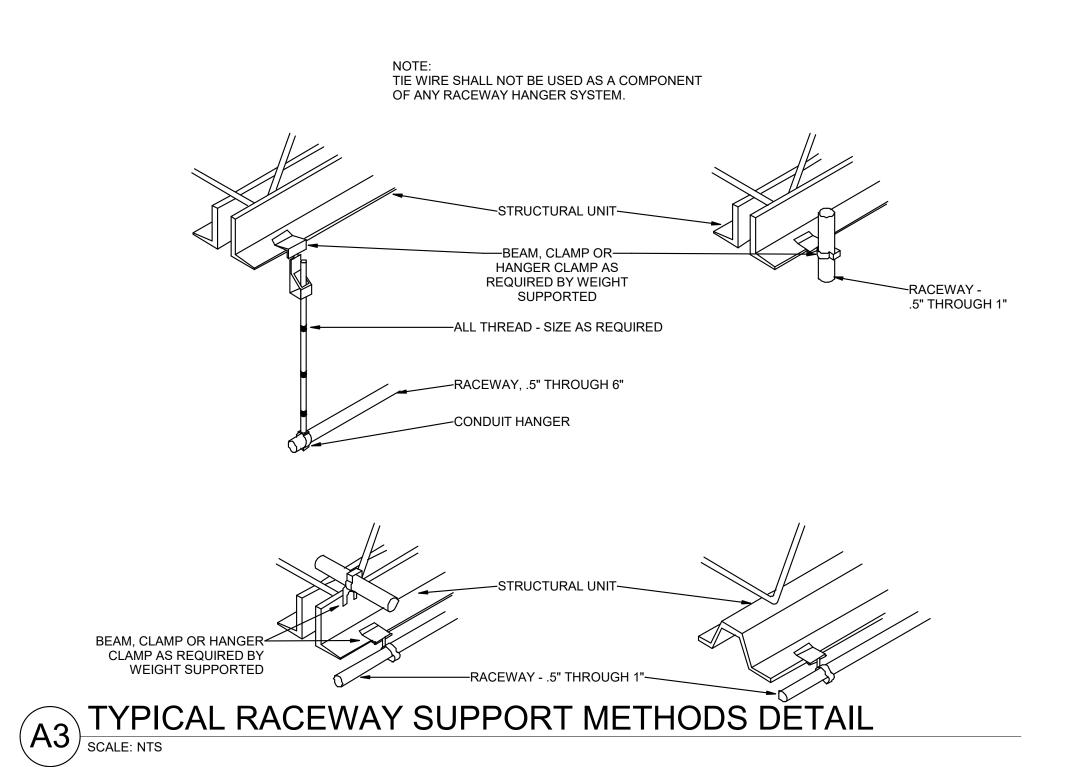
TIE WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGER SYSTEM.



C3 CONDUIT EXPANSION JOINT DETAIL
SCALE: NTS

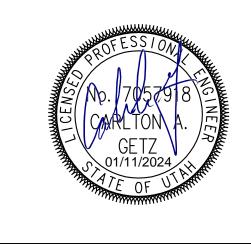


B3 TYPICAL CONDUIT RACK DETAIL
SCALE: NTS





NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

TYPICAL UNDERCABINET LIGHTING C5 FIXTURE MOUNTING DETAIL

SCALE: NTS

MOUNT RECESSED JUNCTION BOX WITH COVER PLATE TIGHT TO

MOUNTING HEIGHT WITH UPPER CABINET MILLWORK.

FLUSH MOUNTING WITH EDGE OF CABINET

FIXTURE SCHEDULE)

CABINET DOOR SIDE.

NOT ACCEPTABLE.

COUNTER TOP

CABINET

UNDERCABINET LIGHTING FIXTURE (REFER TO LIGHTING

MOUNT WITH LENS OF LIGHTING FIXTURE ORIENTED TOWARD

PROVIDE FLEXIBLE CORD CONNECTION TRAINED TO UPPER

CABINET. MATCH CORD COLOR TO COLOR OF UNDERCABINET

FIXTURE. EXPOSED CONDUIT AND/OR METAL CLAD CABLING IS

1) WHERE MORE THAN ONE UNDERCABINET

INTERCONNECTION CORDS BETWEEN EACH

2) UNLESS SPECIFICALLY KEYNOTED OTHERWISE AT A SPECIFIC LOCATION CIRCUIT

UNDERCABINET FIXTURES COINCIDENT WITH

UNDERCABINET LIGHT FIXTURE(S) AFTER

LIGHTING CONTROL RELAY IN RESPECTIVE

SPACE FOR AUTOMATIC CONTROL OF

FIXTURE IS INSTALLED UNDER AN UPPER

CABINET LOCATION PROVIDE FLEXIBLE

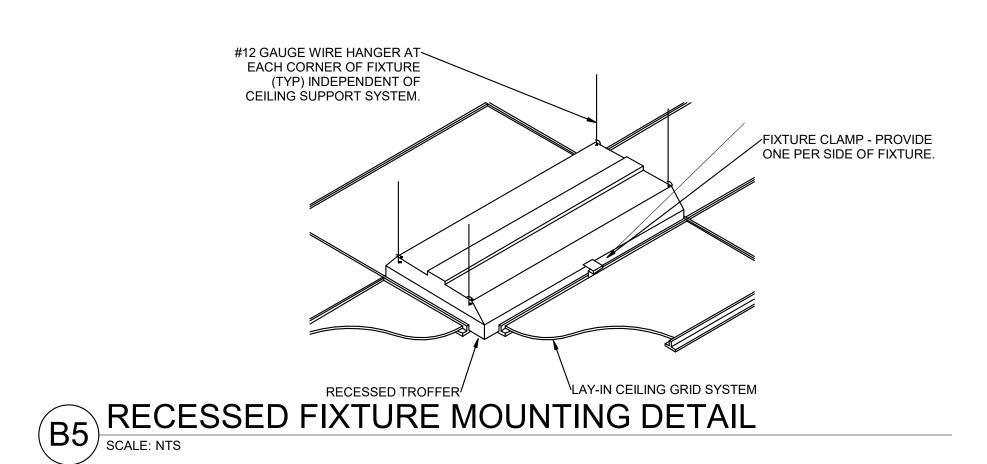
UNDERCABINET FIXTURE

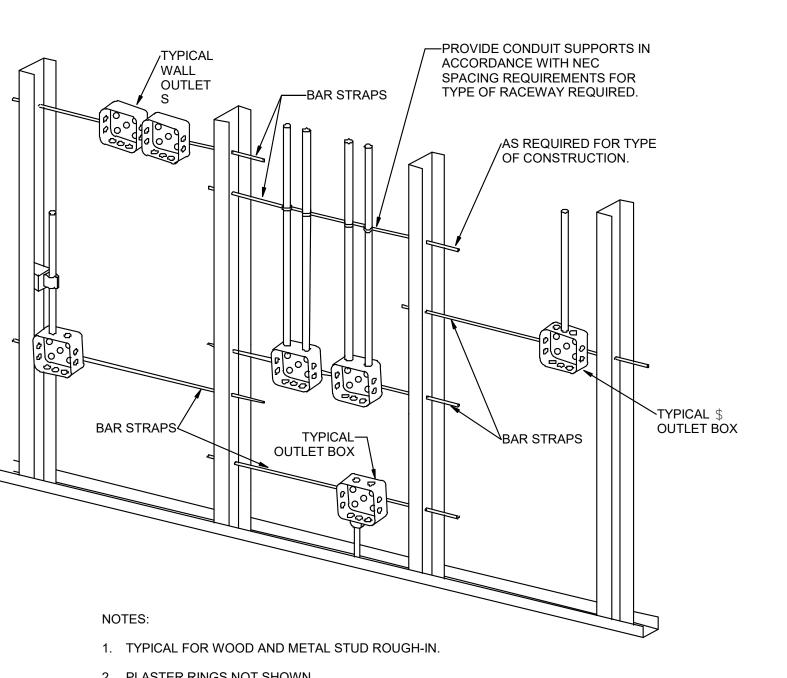
SPACE GENERAL LIGHTING.

NOTES:

UPPER CABINET

UNDERSIDE OF UPPER CABINET EDGE, CAREFULLY COORDINATE





2. PLASTER RINGS NOT SHOWN.

3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.

4. IN ACCORDANCE WITH IBC 714.3.2 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION WALL MUST BE SEPARATED BY A MINIMUN OF 24" HORIZONTAL DISTANCE.

5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS

TYPICAL ROUGH-IN REQUIREMENTS DETAIL

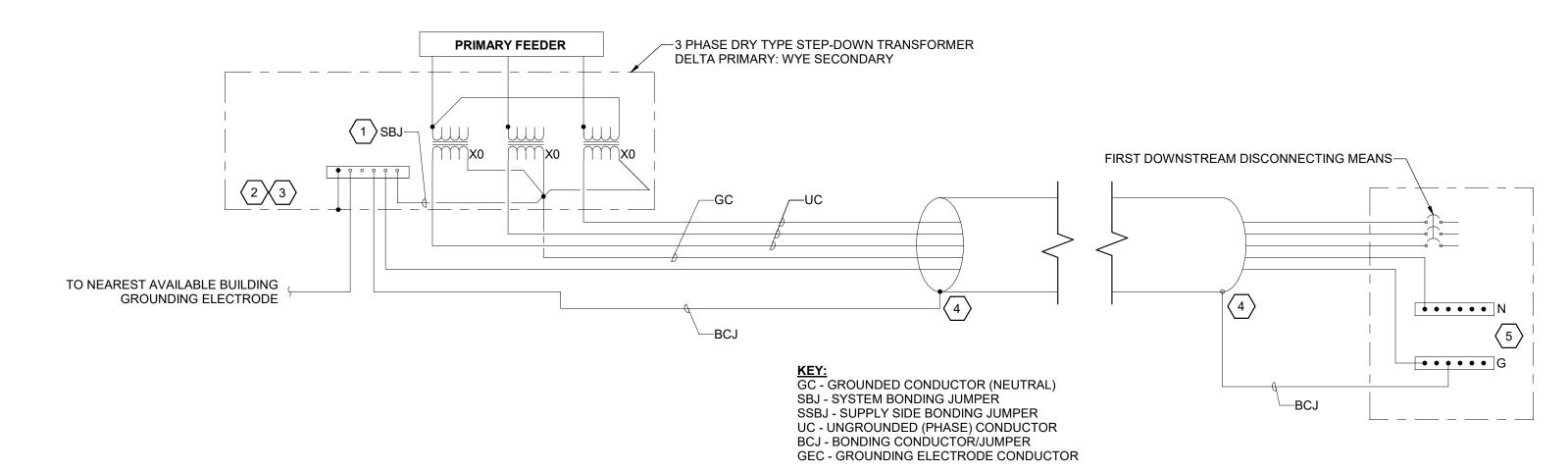
SCALE: NTS

22211.05 NJRA Project # Construction Documents Jan. 15, 2024

> ELECTRICAL DETAILS

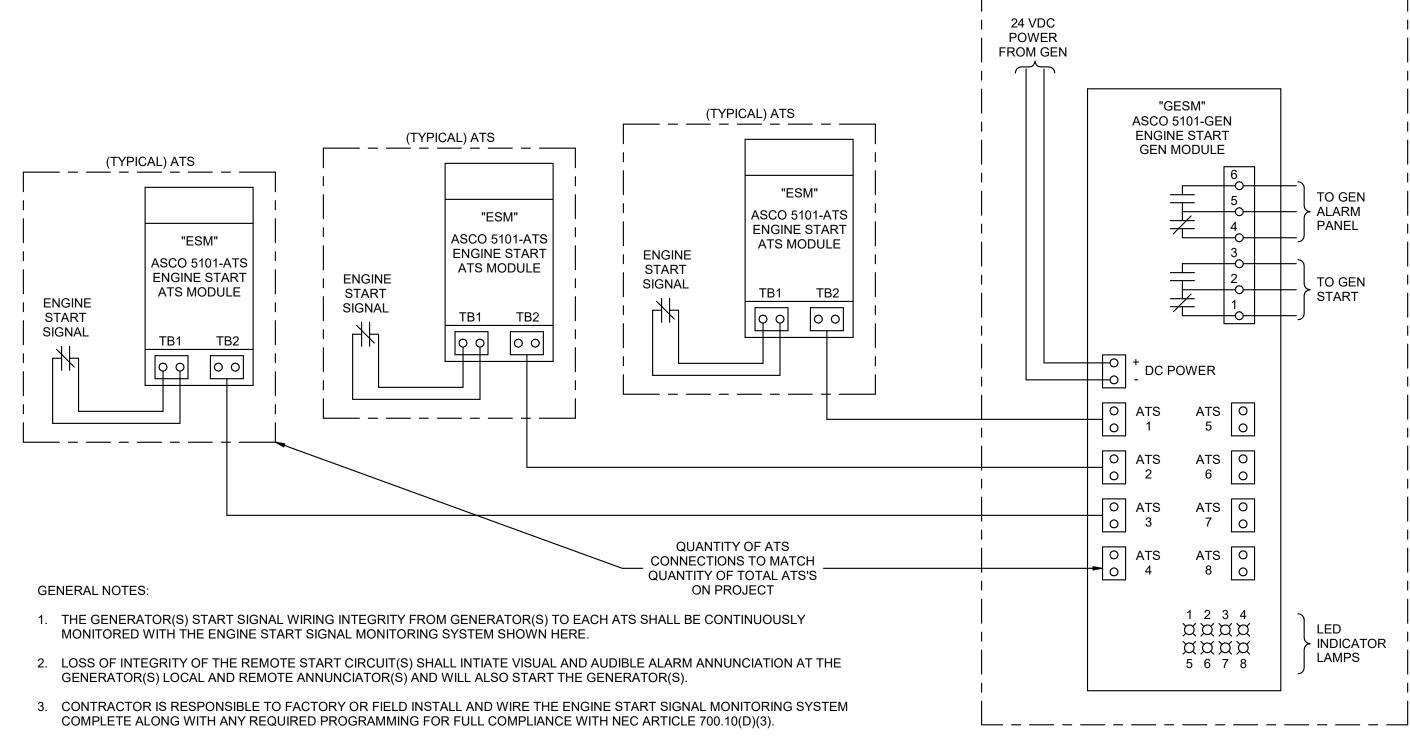
TYPICAL GENERATOR SEPARATELY DERIVED SYSTEM GROUNDING AND

D1 BONDING DETAIL
SCALE: NTS



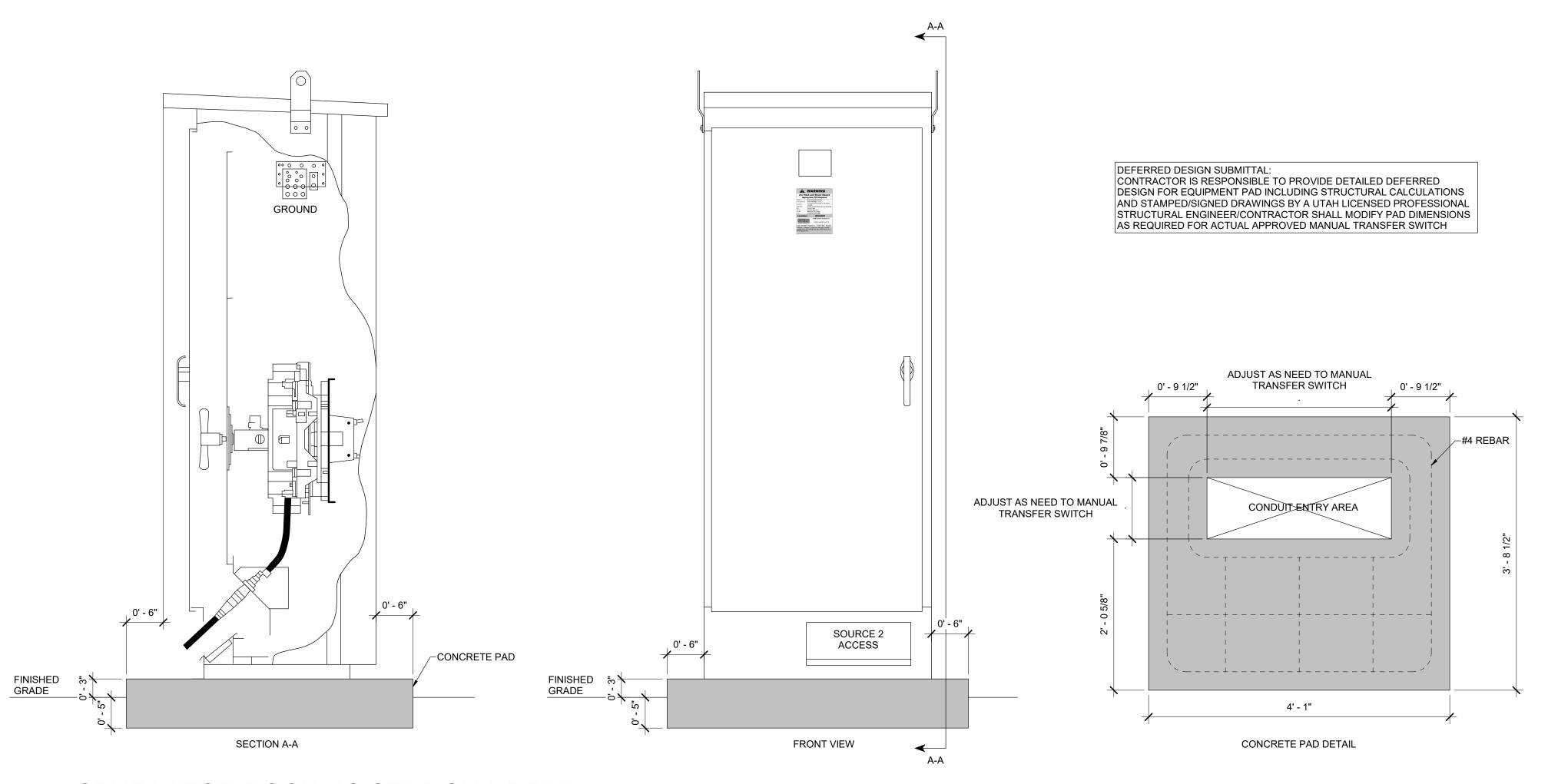
TYPICAL INDOOR STEP-DOWN TRANSFORMER SEPARATELY DERIVED SYSTEM GROUNDING AND BONDING DETAIL

SCALE: 1/8" = 1'-0"



GENERATOR ENGINE START SIGNAL MONITORING SYSTEM WIRING DIAGRAM

SCALE: 1/8" = 1'-0"



GENERATOR DOCKING STATION DETAIL

SCALE: 1" = 1'-0"

ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



SPECTRUM
E N G I N E E R S
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Intain Health Nountain Kidney Services

NJRA Project # 22211.05
Construction Documents Jan. 15, 2024

ELECTRICAL DETAILS

EE502





324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

Kidne ntermountain Health Atermountain Kidne Malley Dialysis

**GROUNDING SCHEDULE** 

ALL CONDUCTORS ARE INSULATED UNLESS INDICATED OTHERWISE

12"X2"X1/4" COPPER BUS WITH G8 | PRE-DRILLED HOLES MOUNTED ON INSULATORS IN ELECTRICAL A TOTAL

G9 GROUNDING CONDUCTOR PER POWER ONE-LINE DIAGRAM

G10 48"x4"X1/4" COPPER BUS WITH PRE-DRILLED HOLES MOUNTED ON

INSULATORS IN ELECTRICAL & TELECOMM

INSULATORS IN MAIN ELECTRICAL ROOM

#250 KCMIL BARE CU BURIED 30" IN DIRECT CONTACT WITH EARTH, ENCIRCLING THE DATA CENTER WITH GROUND RODS EVERY 30' ON CENTER.

SYM SIZE

G2 #4 CU

G3 #1/0 CU

G4) #4/0 CU

G5 #250 KCMIL CU

(G6) #350 KCMIL CU

G7 #500 KCMIL CU

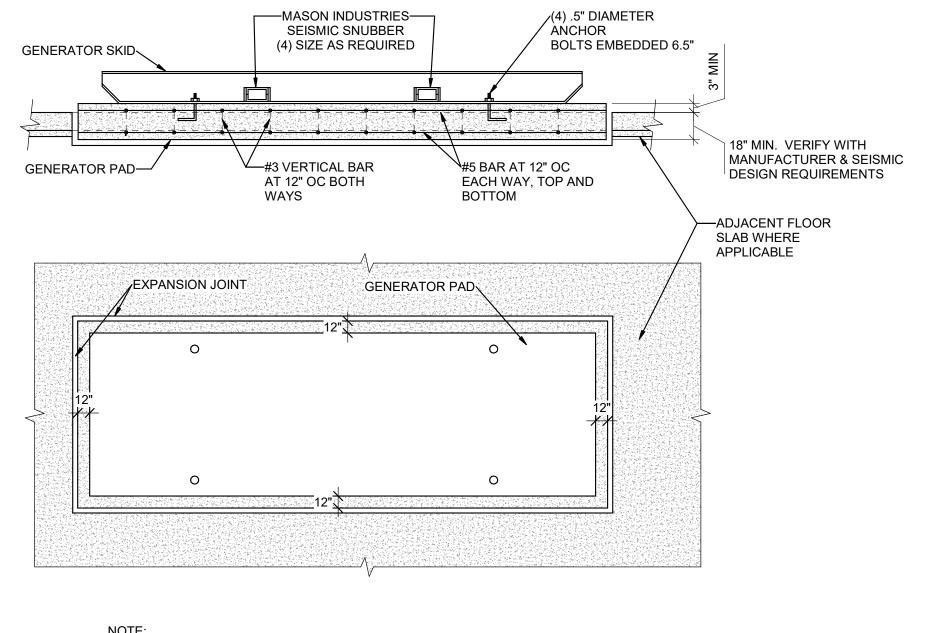
CLOSETS

NJRA Project # Construction Documents Jan. 15, 2024

22211.05

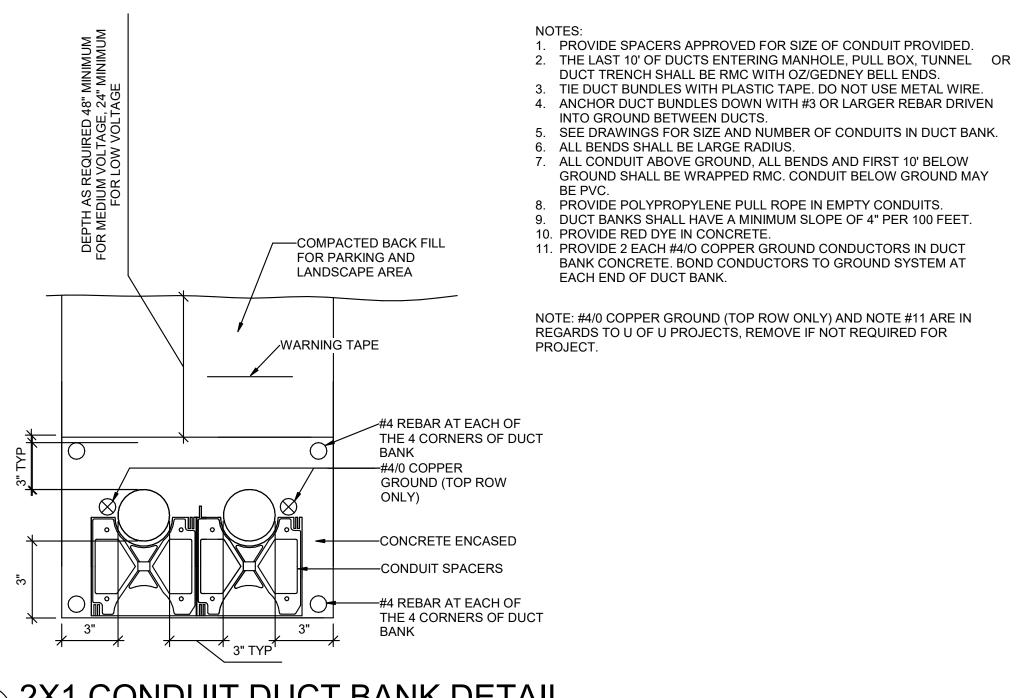
ELECTRICAL DETAILS

EE503

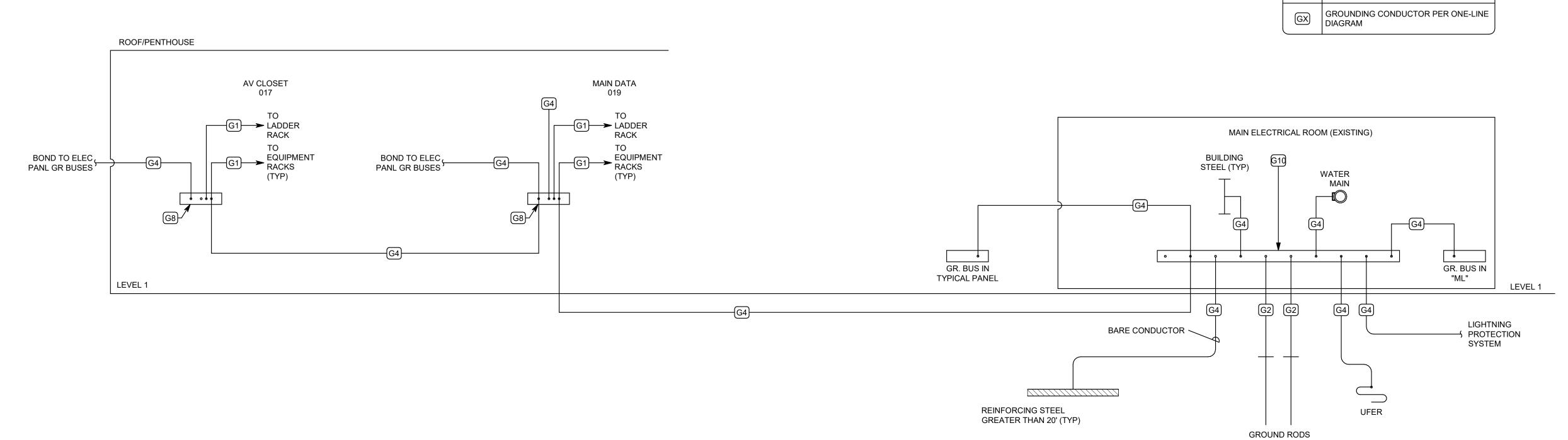


NOTE:
ELECTRICAL CONTRACTOR SHALL FURNISH GENERAL CONTRACTOR WITH
GENERATOR PAD DIMENSIONS SO THAT BLOCK WILL BE MADE FOR GENERATOR PAD. GENERATOR PAD SHALL BE SEPARATE FROM BUILDING FLOOR SLAB TO PROVIDE PROPER VIBRATION ISOLATION.

GENERATOR PAD DETAIL
SCALE: NTS

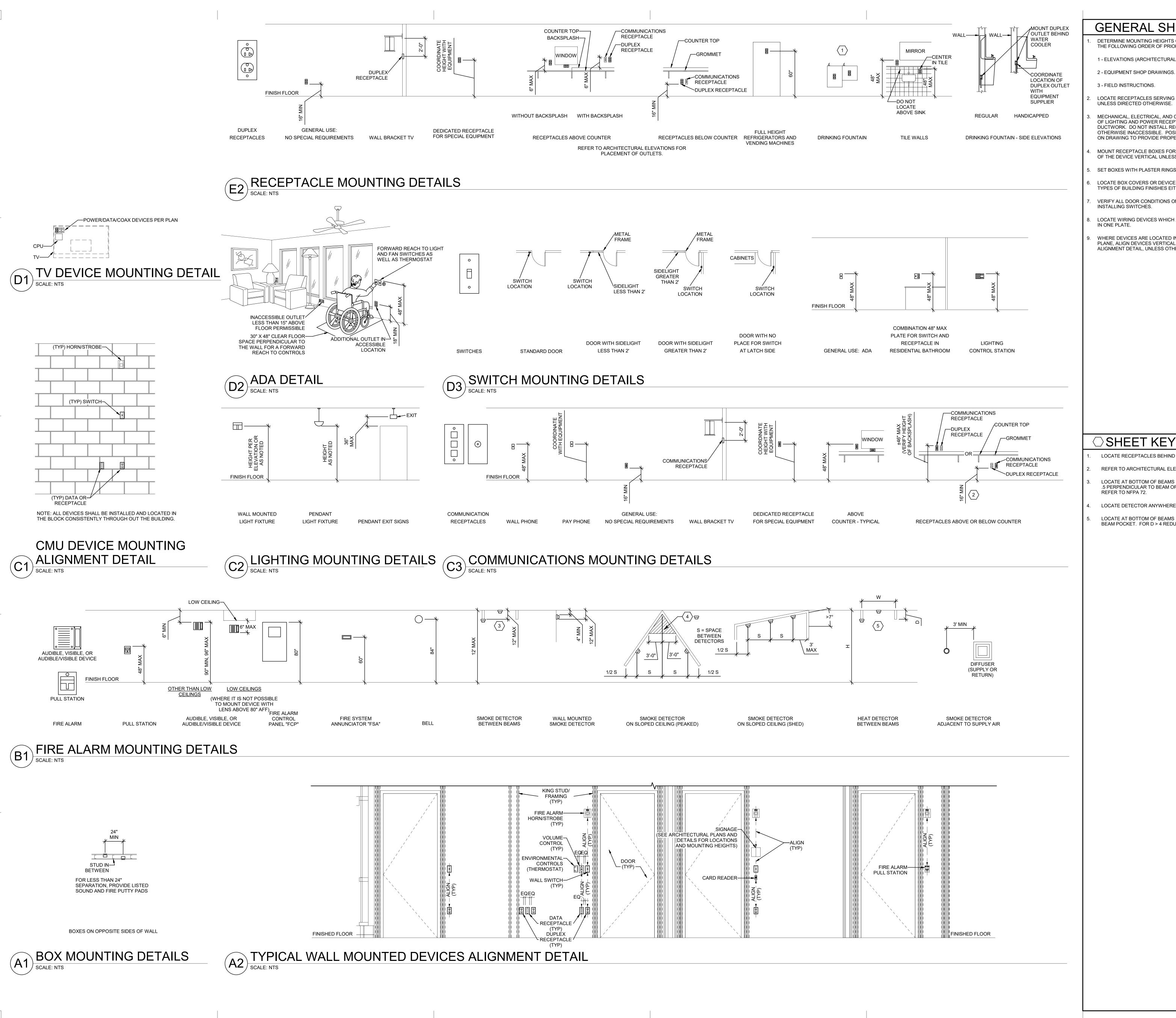


C3 2X1 CONDUIT DUCT BANK DETAIL



GROUNDING RISER

SCALE: 1/8" = 1'-0"



#### **GENERAL SHEET NOTES**

- DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:
- 1 ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).
- 3 FIELD INSTRUCTIONS.
- LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT
- MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.

MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.

- SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
- LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
- VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
- LOCATE WIRING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.
- WHERE DEVICES ARE LOCATED IN CLOSE PROXIMITY OF THE SAME VERTICAL PLANE, ALIGN DEVICES VERTICALLY PER THE TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL, UNLESS OTHERWISE INDICATED.

#### fax: 801-328-5155 www.spectrum-engineers.com

324 S. State St., Suite 400

Salt Lake City, UT 84111

800-678-7077

801-328-5151

**ARCHITECTS** 

Murray, Utah 84123

www.njraarchitects.com

801.364.9259

NJRA Architects, Inc.

5272 S. College Drive, Suite 104

#### SHEET KEYNOTES

- LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
- REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS. LOCATE AT BOTTOM OF BEAMS (OR JOISTS) OR AT CEILING. (REDUCE SPACING BY
- .5 PERPENDICULAR TO BEAM OR JOIST DIRECTION.) FOR OTHER CONDITIONS, REFER TO NFPA 72.
- LOCATE DETECTOR ANYWHERE IN SHADED AREA BUT NOT IN TOP 4" OF PEAK.
- LOCATE AT BOTTOM OF BEAMS IF D/H < .1 OR W/H < .4; OTHERWISE, LOCATE IN BEAM POCKET. FOR D > 4 REDUCE SPACING .33 PERPENDICULAR TO BEAMS.

## S tain Kidne to Dialysis

NJRA Project # Construction Documents Jan. 15, 2024

22211.05

TYPICAL MOUNTING HEIGHT **DETAILS** 

EE701



324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155



www.spectrum-engineers.com

Sis

<u>\( \) \( \) \( \) \( \)</u>

22211.05

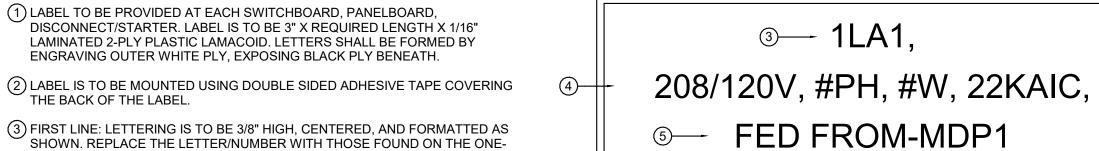
Jan. 15, 2024

Kidr

diff Diff

NJRA Project #

Construction Documents



NOTE: EMERGENCY PANELS SHALL USE LAMACOID WITH RED OUTERPLY,

TO BE 'L' FOR LOW OR 'H' FOR HIGH VOLTAGE (480/277V). LAST '#' TO BE

REPLACED WITH LETTER INDICATING LOCATION OF PANEL.

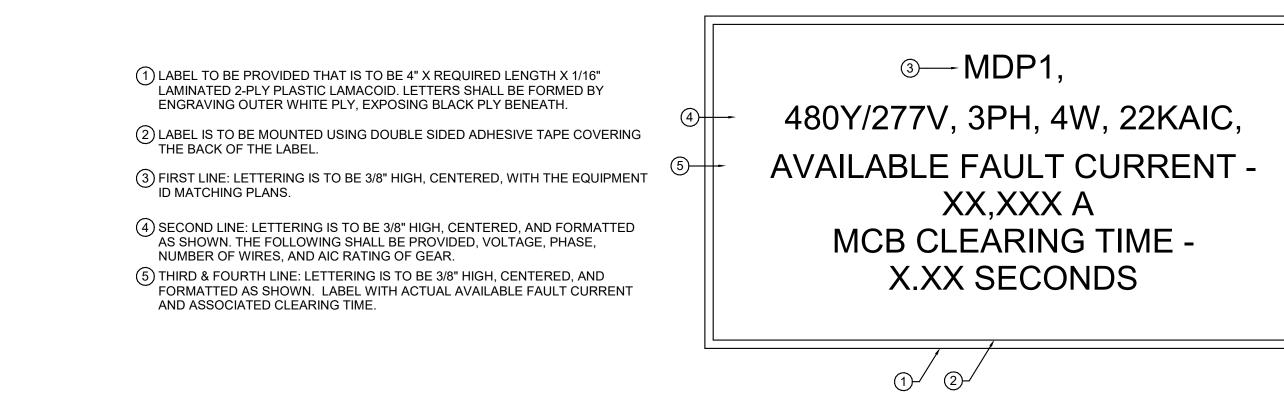
EXPOSING WHITE LETTERING BENEATH. CONTRACTOR TO USE SAME LABEL

SCHEME EXCEPT FIRST 'X' IS REPLACED WITH 'E' FOR EMERGENCY. SECOND 'X'

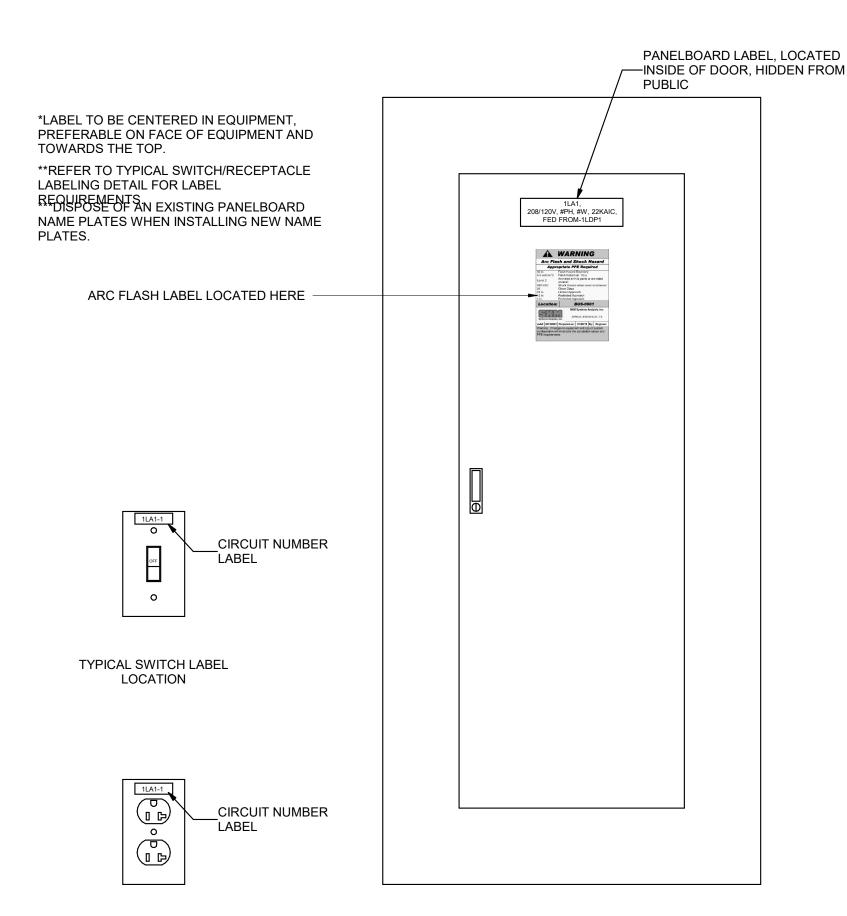
SHOWN. REPLACE THE LETTER/NUMBER WITH THOSE FOUND ON THE ONE-(4) SECOND LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. THE FOLLOWING SHALL BE PROVIDED, VOLTAGE, PHASE,

NUMBER OF WIRES, AND AIC RATING OF DEVICE. (5) THIRD LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. PROVIDE "FED FROM-" AND REPLACE MDP1 WITH THE DEVICES NAME THAT FEEDS THE PANELBOARD.

TYPICAL PANELBOARD/SWITCHBOARD LABEL



TYPICAL MAIN SERVICE EQUIPMENT/GEAR LABEL
SCALE: NTS



SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE

CONDUCTOR OR BONDING JUMPER CONNECTION IN

THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE(S) IS ENERGIZED.

(1) LABEL TO BE PROVIDED THAT IS TO BE 4" X REQUIRED LENGTH X 1/16"

ENGRAVING OUTER WHITE PLY, EXPOSING BLACK PLY BENEATH.

LABEL SHALL BE INSTALLED AT THE NORMAL POWER SOURCE

(2) LABEL IS TO BE MOUNTED USING DOUBLE SIDED ADHESIVE TAPE

(4) SECOND SET OF LINES: LETTERING IS TO BE 1/4" HIGH, CENTERED,

(3) FIRST LINE: LETTERING IS TO BE 1/2" HIGH, CENTERED.

LOCATION

COVERING THE BACK OF THE LABEL.

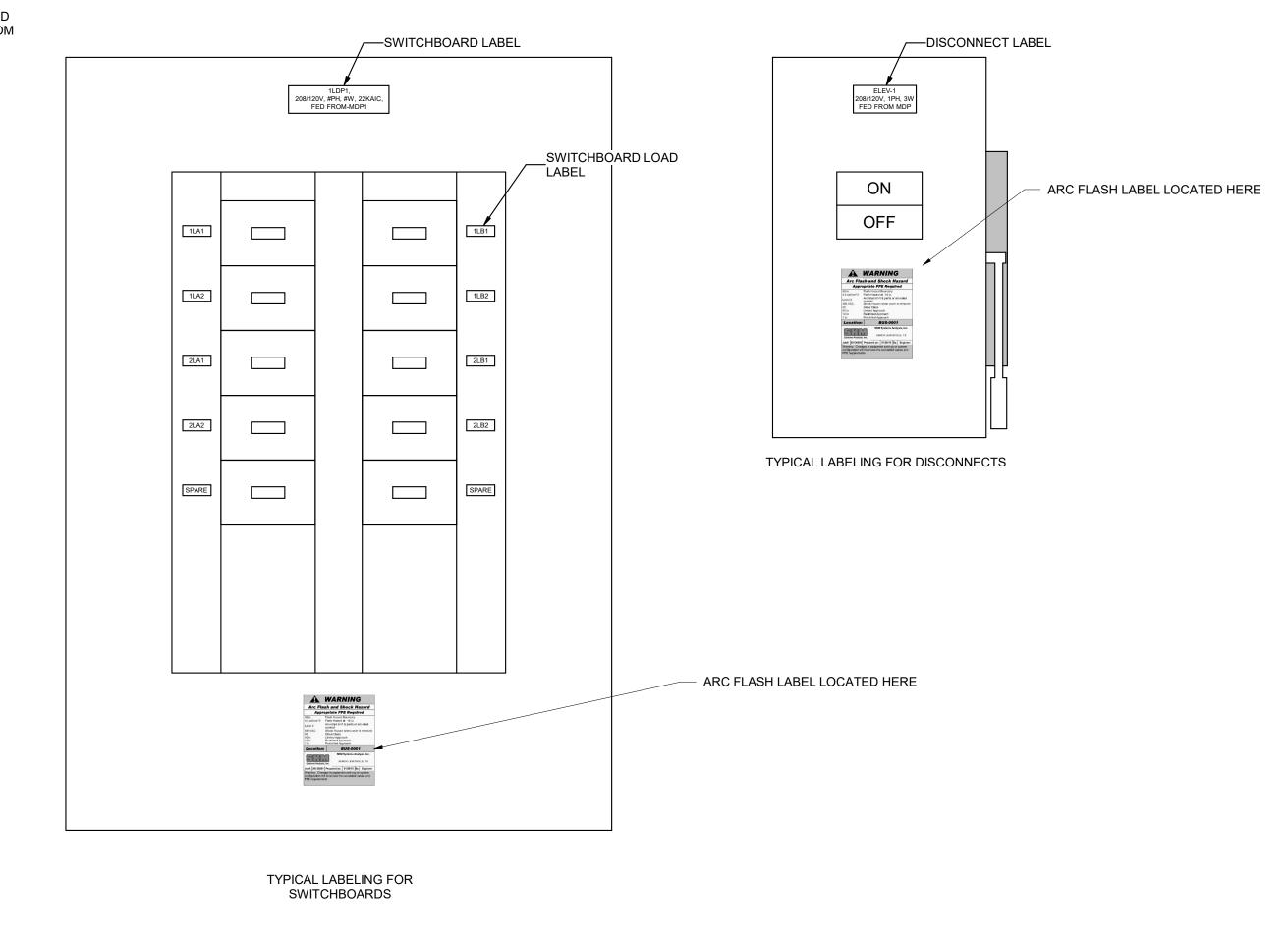
AND FORMATTED AS SHOWN.

**GENERATOR** 

GROUNDING LABEL
SCALE: NTS

EQUIPMENT.

LAMINATED 2-PLY PLASTIC LAMACOID. LETTERS SHALL BE FORMED BY



(2) LABEL IS TO BE MOUNTED USING DOUBLE SIDED ADHESIVE TAPE COVERING TYPICAL RECEPTACLE LABEL

**O-CLOCKWISE**  ⊕ PHASE ROTATION SYSTEM BONDING NEUTRAL TO GROUND BOND AT TEMPORARY GENERATOR REQUIRED - YES

**WARNING** 

coverall

Glove Class

Limited Approach

Restricted Approach

Prohibited Approach

Job#: 20130591 Prepared on: 01/20/15 By: Engineer

Warning: Changes in equipment settings or system

configuration will invalidate the calculated values and

GENERATOR DOCKING

⑤—480/277V, #PH, #W

C1 TYPICAL ARC FLASH LABEL

SCALE: 1/8" = 1'-0"

4.5 cal/cm^2

Location:

PPE requirements

Level 2

480 VAC

Arc Flash and Shock Hazard

**Appropriate PPE Required** 

Flash Hazard Boundary

Flash Hazard at 18 in -

Arc-rated shirt & pants or arc-rated

Shock Hazard when cover is removed

BUS-0001-

SKM Systems Analysis, Inc.

XEROX LEWISVILLE, TX -

(3) FIRST LINE: LETTERING IS TO BE 1/4" HIGH, CENTERED, AND FORMATTED AS SHOWN. REPLACE THE LETTER/NUMBER WITH THOSE FOUND ON THE ONE-(4) SECOND LINE: LETTERING IS TO BE 1/4" HIGH, CENTERED, AND FORMATTED AS SHOWN. THE FOLLOWING SHALL BE PROVIDED, AMPACITY OF GENERATOR DOCKING STATION. (5) THIRD LINE: LETTERING IS TO BE 1/4" HIGH, CENTERED, AND FORMATTED AS SHOWN. THE FOLLOWING SHALL BE PROVIDED, VOLTAGE, PHASE, NUMBER (6) FOURTH LINE: ARROW SHOULD BE SIZED APPROPRIATELY AND CENTERED. LETTERING SHALL BE 1/2" HIGH, FORMATTED AS SHOWN.

1) LABEL IS TO BE SIZED APPROPRIATELY 1/16" LAMINATED 2-PLY PLASTIC LAMACOID. LETTERS SHALL BE FORMED BY ENGRAVING

OUTER RED PLY, EXPOSING WHITE PLY BENEATH.

THE BACK OF THE LABEL.

-SHADED AREAS TO BE ORANGE ALL OTHER TO BE

—COORDINATE VOLTAGE VALUES WITH ONE-LINE

---MATCH NAME OF EQUIPMENT WITH NAMES ON ONE-LINE

-PROVIDE ADDRESS WHERE SKM ANALYTICS IS PERFORMED

-PROVIDE JOB NUMBER "#######", DATE OF ANALYSIS

AND ENGINEER WHO PERFORMED STUDY

\*PROVIDE ARC FLASH LABEL FOR ALL

AND REQUIRED BY NEC

ELECTRICAL EQUIPMENT PER SPECIFICATIONS

WHITE BACKGROUND

—(TYP) DISTANCES IN INCHES

(7) FIFTH LINE: LETTERING IS TO BE 1/4" HIGH, CENTERED, AND FORMATTED AS (8) SIXTH LINE: LETTERING IS TO BE 1/4" HIGH, CENTERED, AND FORMATTED AS

(9) SYSTEM BONDING REQUIREMENTS LIST: YES = FOR SEPARATELY DERIVED GENERATOR SYSTEM NO = FOR NON-SEPARATELY DERIVED GENERATOR SYSTEM

 CONTRACTOR SHALL FIELD VERIFY PHASE ROTATION AND APPLY APPROPRIATE LABEL FOR ROTATION.

 LABEL TO BE PERMANENTLY AFFIXED TO EQUIPMENT LABEL VALUES TO BE UPDATED FOR ACTUAL EQUIPMENT INSTALLED.

GENERATOR DOCKING STATION LABEL (A1) SCALE: NTS

TYPICAL SWITCH, RECEPTACLE AND PANELBOARD/SWITCHBOARD LABELING LOCATION DETAIL

SCALE: NTS

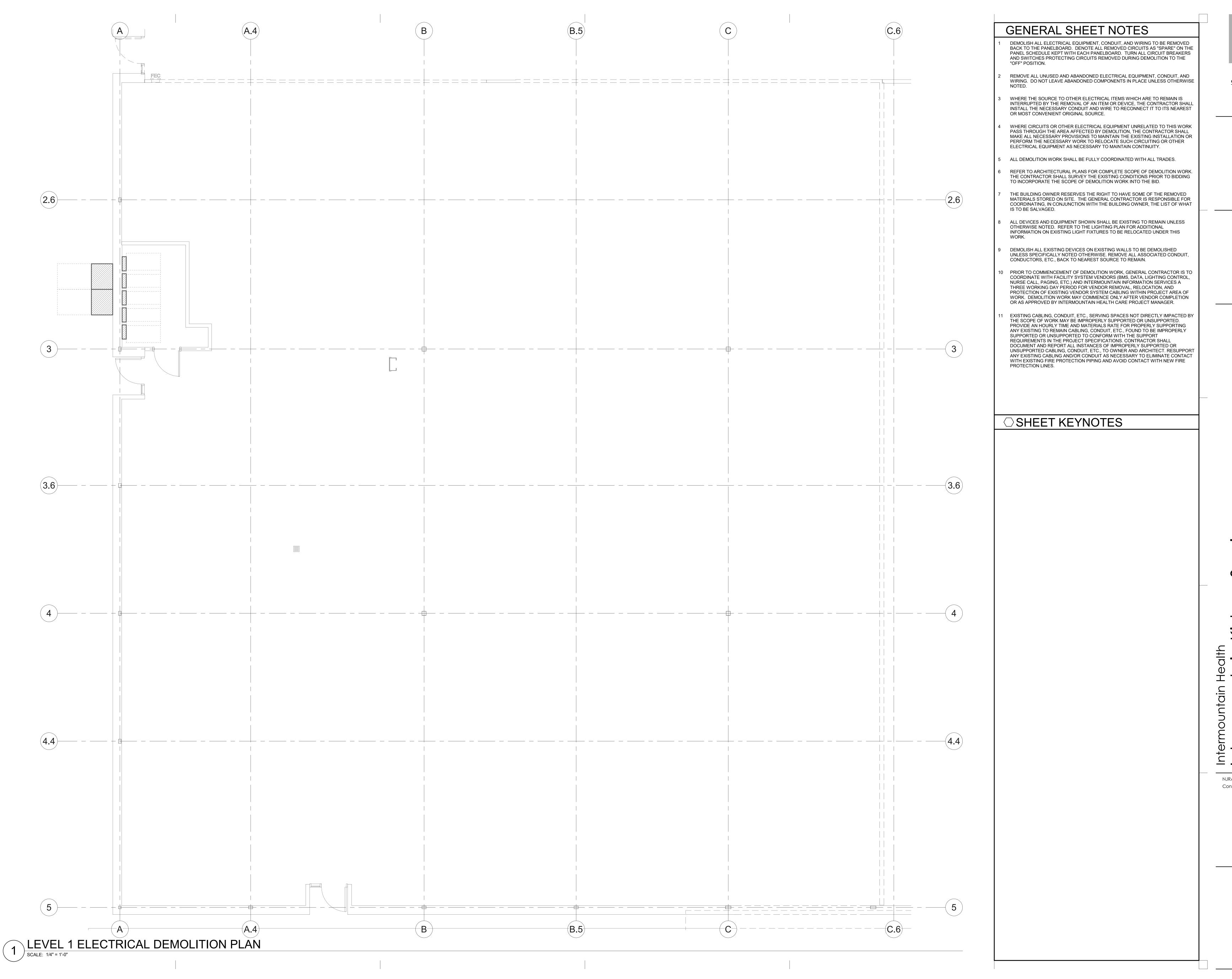
TYPICAL LABELING FOR PANELBOARDS

IN NON-PUBLIC LOCATIONS

TYPICAL

LABELING

**DETAILS** 



ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



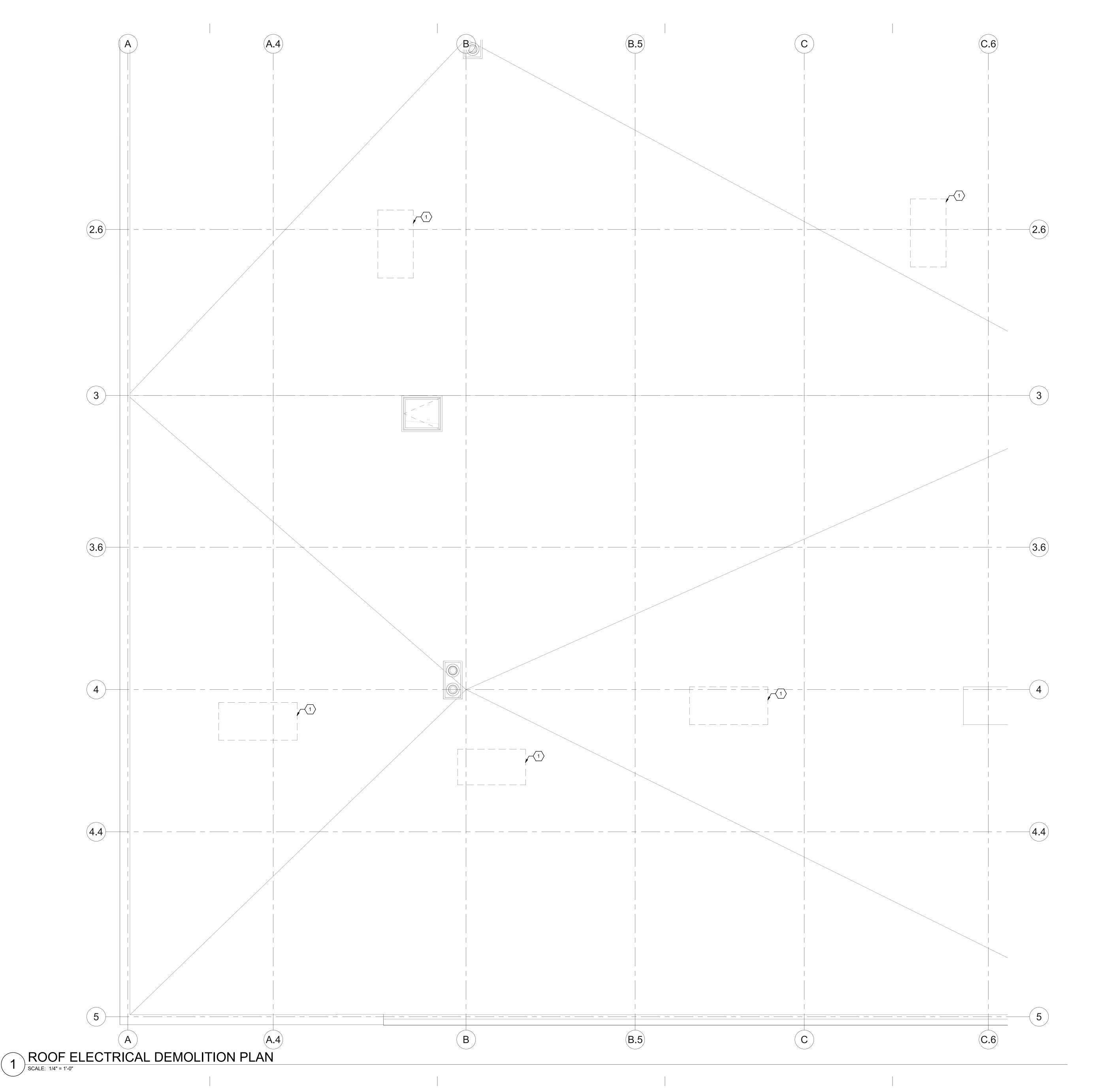
SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

Intermountain Health Intermountain Kidney Servic West Valley Dialysis

NJRA Project # 22211.05
Construction Documents Jan. 15, 2024

LEVEL 1
ELECTRICAL
DEMOLITION
PLAN

ED101



#### GENERAL SHEET NOTES

DEMOLISH ALL ELECTRICAL EQUIPMENT, CONDUIT, AND WIRING TO BE REMOVED BACK TO THE PANELBOARD. DENOTE ALL REMOVED CIRCUITS AS "SPARE" ON THE PANEL SCHEDULE KEPT WITH EACH PANELBOARD. TURN ALL CIRCUIT BREAKERS AND SWITCHES PROTECTING CIRCUITS REMOVED DURING DEMOLITION TO THE "OFF" POSITION.

REMOVE ALL UNUSED AND ABANDONED ELECTRICAL EQUIPMENT, CONDUIT, AND WIRING. DO NOT LEAVE ABANDONED COMPONENTS IN PLACE UNLESS OTHERWISE

WHERE THE SOURCE TO OTHER ELECTRICAL ITEMS WHICH ARE TO REMAIN IS INTERRUPTED BY THE REMOVAL OF AN ITEM OR DEVICE, THE CONTRACTOR SHALL INSTALL THE NECESSARY CONDUIT AND WIRE TO RECONNECT IT TO ITS NEAREST OR MOST CONVENIENT ORIGINAL SOURCE.

WHERE CIRCUITS OR OTHER ELECTRICAL EQUIPMENT UNRELATED TO THIS WORK PASS THROUGH THE AREA AFFECTED BY DEMOLITION, THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO MAINTAIN THE EXISTING INSTALLATION OR PERFORM THE NECESSARY WORK TO RELOCATE SUCH CIRCUITING OR OTHER ELECTRICAL EQUIPMENT AS NECESSARY TO MAINTAIN CONTINUITY.

ALL DEMOLITION WORK SHALL BE FULLY COORDINATED WITH ALL TRADES.

REFER TO ARCHITECTURAL PLANS FOR COMPLETE SCOPE OF DEMOLITION WORK. THE CONTRACTOR SHALL SURVEY THE EXISTING CONDITIONS PRIOR TO BIDDING TO INCORPORATE THE SCOPE OF DEMOLITION WORK INTO THE BID.

THE BUILDING OWNER RESERVES THE RIGHT TO HAVE SOME OF THE REMOVED MATERIALS STORED ON SITE. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING, IN CONJUNCTION WITH THE BUILDING OWNER, THE LIST OF WHAT IS TO BE SALVAGED.

8 ALL DEVICES AND EQUIPMENT SHOWN SHALL BE EXISTING TO REMAIN UNLESS OTHERWISE NOTED. REFER TO THE LIGHTING PLAN FOR ADDITIONAL INFORMATION ON EXISTING LIGHT FIXTURES TO BE RELOCATED UNDER THIS WORK.

DEMOLISH ALL EXISTING DEVICES ON EXISTING WALLS TO BE DEMOLISHED UNLESS SPECIFICALLY NOTED OTHERWISE. REMOVE ALL ASSOCIATED CONDUIT, CONDUCTORS, ETC., BACK TO NEAREST SOURCE TO REMAIN.

PRIOR TO COMMENCEMENT OF DEMOLITION WORK, GENERAL CONTRACTOR IS TO COORDINATE WITH FACILITY SYSTEM VENDORS (BMS, DATA, LIGHTING CONTROL, NURSE CALL, PAGING, ETC.) AND INTERMOUNTAIN INFORMATION SERVICES A THREE WORKING DAY PERIOD FOR VENDOR REMOVAL, RELOCATION, AND PROTECTION OF EXISTING VENDOR SYSTEM CABLING WITHIN PROJECT AREA OF WORK. DEMOLITION WORK MAY COMMENCE ONLY AFTER VENDOR COMPLETION OR AS APPROVED BY INTERMOUNTAIN HEALTH CARE PROJECT MANAGER.

EXISTING CABLING, CONDUIT, ETC., SERVING SPACES NOT DIRECTLY IMPACTED BY THE SCOPE OF WORK MAY BE IMPROPERLY SUPPORTED OR UNSUPPORTED. PROVIDE AN HOURLY TIME AND MATERIALS RATE FOR PROPERLY SUPPORTING ANY EXISTING TO REMAIN CABLING, CONDUIT, ETC., FOUND TO BE IMPROPERLY SUPPORTED OR UNSUPPORTED TO CONFORM WITH THE SUPPORT REQUIREMENTS IN THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL DOCUMENT AND REPORT ALL INSTANCES OF IMPROPERLY SUPPORTED OR UNSUPPORTED CABLING, CONDUIT, ETC., TO OWNER AND ARCHITECT. RESUPPORT ANY EXISTING CABLING AND/OR CONDUIT AS NECESSARY TO ELIMINATE CONTACT WITH EXISTING FIRE PROTECTION PIPING AND AVOID CONTACT WITH NEW FIRE PROTECTION LINES.

#### ○ SHEET KEYNOTES

EXISTING ROOFTOP UNIT TO BE DEMOLISHED. REMOVE EXISTING BRANCH CIRCUIT CONDUCTORS AND CONDUIT BACK TO NEAREST SOURCE. REFER TO MECHANICAL DEMOLITION DRAWINGS FOR MORE INFORMATION.

ARCHITECTS

NJRA Architects, Inc.
5272 S. College Drive, Suite104
Murray, Utah 84123
801.364.9259
www.njraarchitects.com



SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

The solution of the solution o

NJRA Project # 22211.05
Construction Documents Jan. 15, 2024

ROOF ELECTRICAL DEMOLITION PLAN

ED102

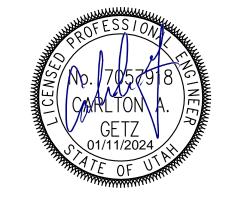
#### **GENERAL SHEET NOTES**

PROVIDE LABELS ON ALL NEW DEVICES PER PROJECT SPECIFICATIONS CONFORMING WITH DIVISION 26 SPECIFICATIONS FOR IDENTIFICATION OF ELECTRICAL EQUIPMENT AND INTERMOUNTAIN'S DIVISION 27 SPECIFICATIONS PRIOR TO SUBSTANTIAL COMPLETION.

EXISTING CABLING, CONDUIT, ETC., SERVING SPACES NOT DIRECTLY IMPACTED BY THE SCOPE OF WORK MAY BE IMPROPERLY SUPPORTED OR UNSUPPORTED. PROVIDE AN HOURLY TIME AND MATERIALS RATE FOR PROPERLY SUPPORTING ANY EXISTING TO REMAIN CABLING, CONDUIT, ETC., FOUND TO BE IMPROPERLY SUPPORTED OR UNSUPPORTED TO CONFORM WITH THE SUPPORT REQUIREMENTS IN THE PROJECT SPECIFICATIONS, CONTRACTOR SHALL DOCUMENT AND REPORT ALL INSTANCES OF IMPROPERLY SUPPORTED OR UNSUPPORTED CABLING, CONDUIT, ETC., TO OWNER AND ARCHITECT. RESUPPORT ANY EXISTING CABLING AND/OR CONDUIT AS NECESSARY TO ELIMINATE CONTACT WITH EXISTING FIRE PROTECTION PIPING AND AVOID CONTACT WITH NEW FIRE PROTECTION LINES.



NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



324 S. State St., Suite 400 Salt Lake City, UT 84111

800-678-7077

801-328-5151

fax: 801-328-5155

www.spectrum-engineers.com

#### SHEET KEYNOTES

PROVIDE POWER FOR DOOR AUTO OPENER. EXTEND AND CONNECT POWER PER MANUFACTURER INSTALLATION INSTRUCTIONS. PROVIDE (1) 3/4" CONDUIT WITH CONTROL WIRING TO EACH ACTUATOR PUSH PLATE/HAND WAVE OPERATOR

- PROVIDE (1) 3/4" CONDUIT BETWEEN IN-FLOOR SCALE BACKBOX STUBBED TO SLAB RECESS UNDER SCALE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MORE INFORMATION. COORDINATE CONDUIT WITH SCALE TERMINAL BACK BOX PROVIDED WITH SCALE.
- PROVIDE (1) 1-1/2" CONDUIT WITH HDMI CABLE BETWEEN CONNECTION PANELS. PROVIDE FÉMALE CONNECTIONS ON EACH END OF CABLE IN COVER PLATES. PROVIDE (1) 1-1/2" CONDUIT WITH HDMI CABLE FROM JUNCTION BOX BELOW TO JUNCTION BOX MOUNTED BEHIND WALL-MOUNTED MONITOR. PROVIDE COVER PLATE WITH GROMMET AT MONITOR LOCATION.
- PROVIDE SINGLE CHANNEL METAL WIREWAY WITH REMOVABLE COVER (LEGRAND WIREMOLD 4000 SERIES OR EQUIVALENT) MOUNTED AT 72" A.F.F.. PROVIDE DUPLEX RECEPTACLES AT 36" O.C.
- ELECTRICAL CONNECTION TO ECO RO DIA II WATER TREATMENT EQUIPMENT. REFER TO VENDOR DOCUMENTATION FOR MORE INFORMATION. PROVIDE (1) 60 AMPERE FUSED SAFETY DISCONNECT SWITCH FOR WATER
- TREATMENT EQUIPMENT. PROVIDE 45A FUSE. REFER TO VENDOR DOCUMENTATION FOR MORE INFORMATION.
- PROVIDE (1) 60 AMPERE SAFETY DISCONNECT SWITCH FOR WATER TREATMENT EQUIPMENT. REFER TO VENDOR DOCUMENTATION FOR MORE INFORMATION.
- ELECTRICAL CONNECTION TO HOT RINSE CONTROLLER. REFER TO VENDOR DOCUMENTATION FOR MORE INFORMATION.

0 JUNCTION BOX FOR REMOTE ALARM CONNECTION. REFER TO VENDOR

- DOCUMENTATION FOR MORE INFORMATION. JUNCTION BOX FOR VRF TOUCH CONTROL PANEL. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
- 12 UPS-A MAINTENANCE BYPASS (EATON BYPASS POWER MODULE OFCI 18" WIDE X 5"
- 3 PROVIDE (1) 1-1/2" CONDUIT WITH HDMI CABLE FROM FLOOR BOX TO JUNCTION BOX MOUNTED BEHIND WALL-MOUNTED MONITOR. PROVIDE COVER PLATE WITH

#### 14 MOTORIZED SHADE CONTROL SWITCH. MOUNT CONTROL HUB IN ACCESSIBLE LOCATION ABOVE CEILING IN ADJACENT SPACE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR SPECIFIC SYSTEM INSTALLATION DETAILS.

- 15 EXTEND CAT 5E CONTROL CABLE TO MOTORIZED SHADE CONTROL HUB.
- 16 JUNCTION BOX FOR POWER CONNECTION TO MOTORIZED SHADES. 7 PROVIDE (1) 30 AMPERE TWIST LOCK DISCONNECT SWITCH FOR WATER TREATMENT
- 8 VENDOR PROVIDED 22.5KVA STEP-UP TRANSFORMER 208V 3PH PRIMARY, 400V SECONDARY. REFER TO VENDOR DOCUMENTATION FOR MORE INFORMATION.

EQUIPMENT. REFER TO VENDOR DOCUMENTATION FOR MORE INFORMATION.

- 19 EXTEND AND CONNECT CIRCUIT TO OTHER MECHANICAL CONNECTIONS WITH IDENTICAL CIRCUIT TAG.
- 20 EXTEND POWER FROM OUTDOOR UNIT CIRCUIT TO PER MANUFACTURER INSTRUCTIONS. REFER TO EQUIPMENT SCHEDULE FOR ASSOCIATED OUTDOOR UNIT 1 JUNCTION BOXES FOR POWER CONNECTIONS TO EXTERIOR WALL MOUNTED
- ILLUMINATED SIGNAGE. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS ABOVE FINISHED FLOOR WITH ARCHITECTURAL ELEVATIONS AND ILLUMINATED SIGNAGE VENDOR PRIOR TO ROUGH-IN.

22 MOUNT DEVICE HORIZONTALLY. 3 PROVIDE POWER CONNECTION TO HEAT TRACE FOR (2) DOWNSPOUTS ON EACH SIDE OF CANOPY.

24 GENERATOR REMOTE ANNUNCIATOR PANEL.

S

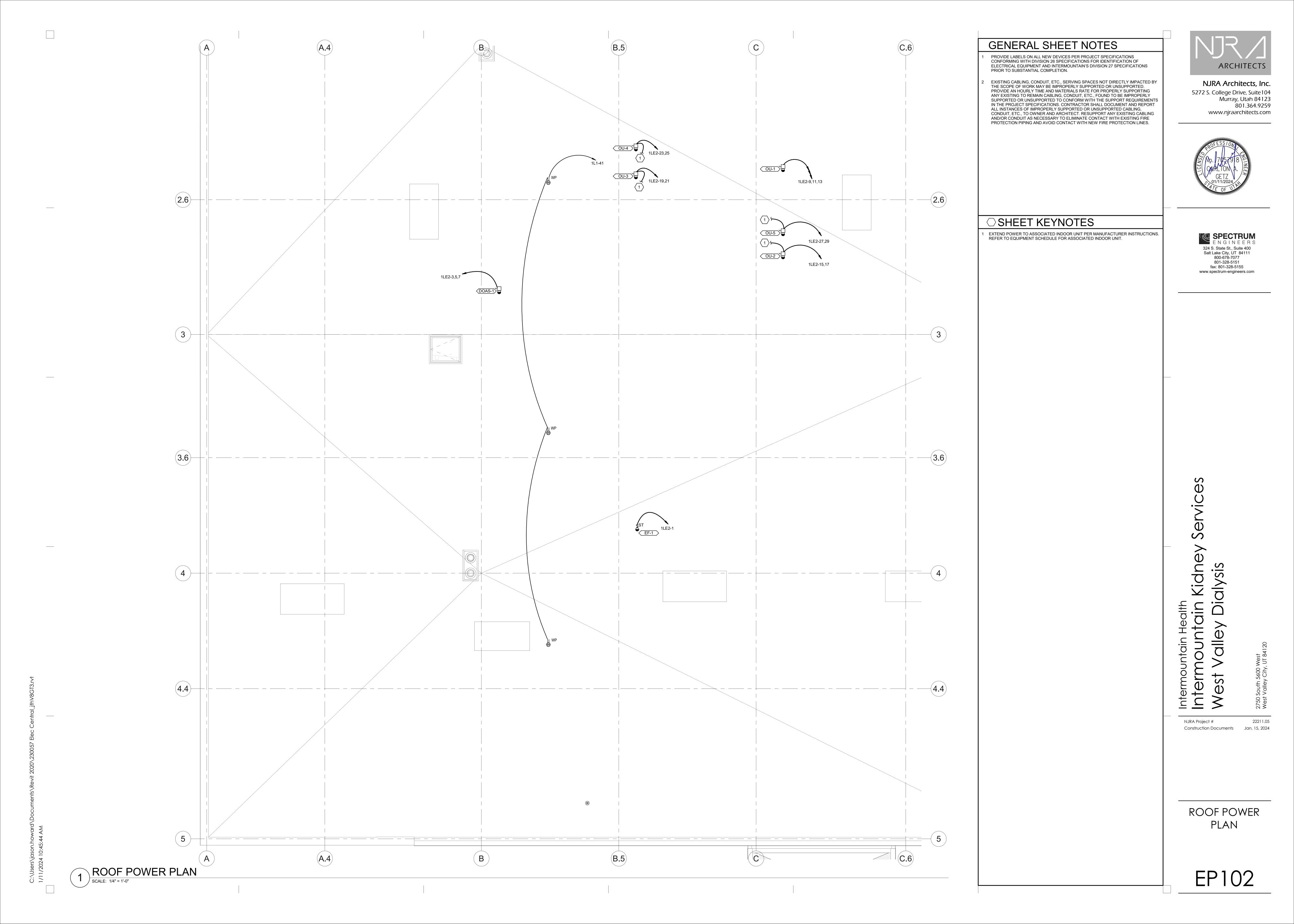
N V

NJRA Project # Construction Documents Jan. 15, 2024

22211.05

alysis

LEVEL 1 POWER PLAN



BRANCH CIRCUIT CONDUCTOR AND CONDUIT SIZING TABLE

AND CC		I SIZINO IA	VDLL
CIRCUIT MPACITY/VOLTAGE	CIRCUIT LENGTH	CONDUCTOR SIZE (PHASE, NEUTRAL AND GR)	CONDUIT SIZ
20A/120V	0' - 60'	#12 AWG	0.75" Ø
20A/120V	60' - 95'	#10 AWG	0.75" Ø
20A/120V	95' - 150'	#8 AWG	1" Ø
20A/120V	150' - 240'	#6 AWG	1.25" Ø
20A/277V	0' - 140'	#12 AWG	0.75" Ø
20A/277V	140' - 220'	#10 AWG	0.75" Ø
20A/277V	220' - 350'	#8 AWG	1" Ø
20A/277V	350' - 550'	#6 AWG	1.25" Ø

- NOTES:
- 1. WIRE SIZING IS BASED ON COPPER CONDUCTORS SUPPLYING A 20A, 120V CIRCUIT AT THE INDICATED VOLTAGE, ASSUMED TO BE 80% LOADED (16A), WITH MAXIMUM VOLTAGE DROP OF 3% AT THE LOAD.
- DOWN-SIZED WIRE AT DEVICE/LOAD AS REQUIRED AND TERMINATE CONDUCTORS IN A SAFE AND CODE COMPLIANT MANNER.
- 3. CONDUIT SIZE IS BASED ON A MAXIMUM OF 3 CIRCUITS PER CONDUIT. EACH WITH A SEPARATE NEUTRAL CONDUCTOR.

#### **EQUIPMENT NAMEPLATE** CCHEDITE

	SCHEDULE
EQUIPMENT ID SCHEME	FIRST DIGIT - BUILDING LEVEL (0, 1, 2, ETC) SECOND DIGIT - PANEL TYPE  M - MECHANICAL  H - (277/480)  L - (120/208)  E - EMERGENCY  S - STANDBY  Q - EQUIPMENT  U - UPS  K - KITCHEN (120/208)  THIRD DIGIT - BUILDING AREA (A, B, C, ETC) FOURTH DIGIT - SEQUENCE # (1,2,3,)
LABEL FORMAT	[NAME] [SYSTEM] [VOLTAGE] [FED FROM] [SOURCE(S)]
LABEL EXAMPLE	PANEL "4LA1" STANDBY POWER 120/208V FED FROM BUS-A / XFMR 4TA
BUSWAY	LABEL BUSWAY EVERY 6' WHERE EXPOSED TO VIEW AND EVERY 15' WHERE NOT EXPOSED TO VIEW
OTHER	

#### COLOR SCHEME

		NAMEPL	ATE COLOR
SYSTEM	EQUIPMENT	TEXT	BACKGROUND
NORMAL POWER	ALL GEAR NOT INCLUDED BELOW	WHITE	BLACK
STANDBY POWER	MDPS1 AND ALL DOWNSTREAM GEAR EXCEPT UPS GEAR AS NOTED	R, WHITE	ORANGE
EMERGENCY POWER	GDP1, GDP2, ATS-E AND ALL DOWNSTREAM GEAR	WHITE	RED
LEGALLY-REQUIRED STANDBY POWER	ATS-S AND ALL DOWNSTREAM GEAR	RED	WHITE
UPS "A" POWER	UPSA AND ALL DOWNSTREAM GEAR	WHITE	BLUE
UPS "B" POWER	UPSB AND ALL DOWNSTREAM GEAR	BLACK	YELLOW

#### ALUMINUM CONDUCTOR AND CONDUIT SCHEDULE

	,	•		•	<i>-</i>	<u> </u>		<b>-</b>
		-SCHEDULI	E NUMB	BER				
**						(E.G.)	5	
<u></u> ,	*-	SUBSCRIP	TON) T	E 5)		(=.0.)	ع) <sub>اG</sub>	
		CONDUIT	CONDI	JCTOR (1	NOTF 1)			1
SYM	AMP	SIZE	QTY	SIZE	G G	IG	SE	NOTES
$\mathbb{Q}_{A}$								
2)A								
$3_A$								
$4_A$								
$\overline{5}_{A}$								
$6_{A}$								
$\overline{\mathcal{D}}_{A}$								
<u>8</u> A								
<u>9</u> A								
10 <sub>A</sub>					$\times$			
11 <sub>A</sub>						<u> </u>		
12 <sub>A</sub>						$\vdash$		
13 <sub>A</sub>			_/			$\vdash$		
(14) <sub>A</sub>			/					
15 <sub>A</sub> 16 <sub>A</sub>								
$\frac{100A}{17A}$								
18 <sub>A</sub>								
19A								
$20_{A}$								
$\frac{21}{A}$	130	2	3	2/0	4	1/0	4	2,7
$\frac{\underline{\underline{\underline{Q}}_{A}}}{2\underline{\underline{Q}}_{A}}$	130	2	4	2/0	4	1/0	4	2,7
$\frac{\overline{23}_{A}}{23}$	150	2	3	3/0	4	1/0	4	2,7
24 <sub>A</sub>	150	2	4	3/0	4	1/0	4	2,7
25 <sub>A</sub>	175	2	3	4/0	4	1/0	2	2,7
$26_A$	175	2.50	4	4/0	4	1/0	2	2,7
$27_A$	200	2.50	3	250	4	1/0	2	2,7
$28_A$	200	3	4	250	4	1/0	2	2,7
<u> 29</u> A		2.50	3	300	2	1/0	1/0	2,7
<u>30</u> A	230	3	4	300	2	1/0	1/0	2,7
(31) <sub>A</sub>	250	3	3	350	2	2/0	1/0	2,7
<u>32<sub>A</sub></u>	250	3	4	350	2	2/0	1/0	2,7
33 <sub>A</sub>	310	3	3	500	1	3/0	1/0	2,7
<u>34</u> A	310	4	4	500	1	3/0	1/0	2,7
<u>35</u> A	380	2 EA 2.50	3	250	1	4/0	3/0	2,7
36 <sub>A</sub>	380	2 EA 3	3	250	1/0	4/0	3/0	2,7
37 <sub>A</sub> 38 <sub>A</sub>	400 400	2 EA 2.50 2 EA 2.50	4	250 250	1/0 1/0	4/0 4/0	3/0 3/0	2,7
39 <sub>A</sub>	500	2 EA 2.30	3	350	1/0	300	3/0	2,4,7
$\frac{69A}{40}$	500	2 EA 3	4	350	1/0	300	3/0	2,4,7
$\frac{40}{A}$	620	2 EA 3	3	500	3/0	300	3/0	2,4,7
$\frac{42}{A}$	620	2 EA 4	4	500	3/0	300	3/0	2,4,7
43 <sub>A</sub>	750	3 EA 3	3	350	3/0	300	4/0	2,4,7
44 <sub>A</sub>	750	3 EA 3	4	350	3/0	300	4/0	2,4,7
$\frac{45}{A}$	810	3 EA 3	3	400	4/0	300	250	2,4,7
46 <sub>A</sub>	810	3 EA 4	4	400	4/0	300	250	2,4,7
47 <sub>A</sub>	1000	4 EA 3	3	350	4/0	300	250	4,7
48 <sub>A</sub>		4 EA 3	4	350	4/0	300	250	4,7
49 <sub>A</sub>	-	-	-	-	-	-	-	-
50,	1140	4 F A 4	4	500	250	300	250	4 7

#### \$\overline{57}\_{A}\$ \$4235\$ \$11 \text{ EA 4}\$ \$4\$ \$750\$ \$800\$ \$750\$ \$4,7\$ \$\overline{58}\_{A}\$ 5 \text{ EA 4}\$ 6 \$\overline{59}\_{A}\$ 5 6 \$\overline{60}\_{A}\$ \$10 \text{ EA 4}\$ 6

CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH

 1620
 6 EA 4
 4
 400
 400
 350
 250
 4,7

 2170
 7 EA 4
 4
 500
 400
 400
 500
 4,7

2695 7 EA 4 4 750 600 750 750 4,7 56<sub>A</sub> 3080 8 EA 4 4 750 600 750 750 4,7

- - - - - - - 1140 4 EA 4 4 500 250 300 1240 4 EA 4 3 500 350 300

MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN

CONDUCTOR AND CONDUIT SCHEDULE NOTES

- PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING 4 GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE
- CONDUCTORS. 5 SYMBOL SUBSCRIPTS: "2N": INCLUDE TWO NEUTRAL CONDUCTORS, SIZED AS SCHEDULED FOR PHASED AND NEUTRAL CONDUCTORS.
- "CI": PROVIDE CIRCUIT INTEGRITY CABLE; TYPE TWO-HOUR FIRE RESISTIVE CABLES IN CONDUIT OR PROVIDE FEEDER ENCASED IN
- "FG" FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE SAME SIZE AS THE PHASE CONDUCTORS.
- "HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY.
- SCHEDULED ALONG WITH THE GROUND OF EQUIPMENT GROUND

"IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR)

- "MC": PROVIDE FEEDER IN METAL-CLAD CABLE; TYPE MC IN PLACE OF SINGLE CONDUCTORS IN CONDUIT.
- "SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.
- "SER": PROVIDE SERVICE-ENTRANCE CABLE; TYPE SE OR SER IN PLACE OF SINGLE CONDUCTORS IN CONDUIT.
- RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY. ALUMINUM CONDUCTORS NOT TO BE USED FOR CONNECTION TO MOTORS OR MOTOR DRIVEN EQUIPMENT.

#### **GENERAL SHEET NOTES**

TO PLANS FOR EQUIPMENT LOCATIONS. REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.

PROVIDE NEMA 3R ENCLOSURES FOR EQUIPMENT LOCATED OUTDOORS. REFER

ALL EQUIPMENT SHALL BE CONSTRUCTED AND BRACED FOR THE SEISMIC CONDITIONS OF THE PROJECT. REFER TO ELECTRICAL SPECIFICATIONS FOR

PROVIDE PERFORMANCE TESTING FOR GROUND-FAULT PROTECTION SYSTEMS ON SITE WITH A WRITTEN RECORD OF THIS TEST SUBMITTED TO THE AUTHORITY HAVING JURISDICTION PER NEC 230.95(C).

COPPER CONDUCTOR AND

CONDUIT SCHEDULE

#### SHEET KEYNOTES

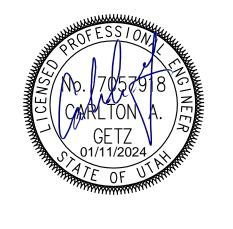
SCHEDULE NUMBER

SUBSCRIPT (NOTE 5)

HH CONDUIT CONDUCTOR (NOTE 1)



5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com





#### (4) 30 .75 2 10 10 10 8 5 30 - 75 3 10 10 10 8 6 30 32 .75 4 10 10 10 8 11 55 - 1 3 6 10 8 4 12 | 55 | 60 | 1.25 | 4 | 6 | 10 | 8 | 4 20 95 104 1.50 4 2 8 2 2 2 21 130 1.50 3 1 6 2 2 2 22 130 116 1.50 4 1 6 2 2 2 23 150 2 3 1/0 6 2 1/0 2 24 150 136 2 4 1/0 6 2 1/0 2 25 175 2 3 2/0 6 2 2/0 3 26 175 156 2 4 2/0 6 2 2/0 2 27 200 2 3 3/0 6 2 2/0 2 28 200 180 2.50 4 3/0 6 2 2/0 2 29 230 2.50 3 4/0 4 2 2/0 2 20 20 2 2 2 2 2 2 230 2.50 3 4/0 4 2 2/0 2 230 208 2.50 4 4/0 4 2 2/0 2 1 255 2.50 3 250 4 1 2/0 2 2 255 232 2.50 4 250 4 1 2/0 2 3 310 3 3 350 3 1/0 3/0 2 4 310 280 3 4 350 3 1/0 3/0 2 3 380 3.50 3 500 3 3/0 3/0 2 3 380 344 4 4 500 3 3/0 3/0 3/0 380 344 4 4 500 3 3/0 3/0 2 400 - 2 EA 2 3 3/0 3 3/0 3/0 2 400 360 2 EA 2.50 4 3/0 3 3/0 2 510 - 2 EA 2.50 3 250 1 4/0 3/0 2 510 464 2 EA 3 4 250 1 4/0 3/0 2 620 - 2 EA 3 3 350 1/0 4/0 3/0 2,4 42 | 620 | 560 | 2 EA 3 | 4 | 350 | 1/0 | 4/0 | 3/0 | 2,4 43 | 760 | - |2 EA 3.50 | 3 | 500 | 1/0 | 4/0 | 3/0 |2,4 760 | 688 | 2 EA 4 | 4 | 500 | 1/0 | 4/0 | 3/0 | 2,4 449 760 668 2 EA 4 4 600 10 10 3/0 2,4 45 855 3 EA 3 3 300 2/0 4/0 3/0 2,4 46 855 768 3 EA 3 4 300 2/0 4/0 3/0 2,4 47 1000 3 EA 3.50 3 400 2/0 4/0 3/0 4 48 1000 912 3 EA 3.50 4 400 2/0 4/0 3/0 4 49 1140 - 3 EA 4 3 500 3/0 4/0 3/0 4 | 1140 | 1032 | 3 EA 4 | 4 | 500 | 3/0 | 4/0 | 3/0 | 4 1240 - 4 EA 3 3 350 3/0 4/0 3/0 4 51 1240 4 EA 3 350 3/0 4/0 3/0 4 52 1240 1120 4 EA 3 4 350 3/0 4/0 3/0 4 53 1675 1520 5 EA 4 4 400 4/0 4/0 4/0 4 54 2010 1824 6 EA 4 4 400 250 250 250 4 55 2660 2408 7 EA 4 4 500 350 350 350 4 56 3040 2752 8 EA 4 4 500 500 500 500 4 57 4180 3784 11 EA 4 4 500 500 500 500 4 58 - - 5 EA 4 - - - - -59 - 5 - - - - -60 - - 10 EA 4 - - - - - ( CONDUCTOR AND CONDUIT SCHEDULE NOTES

- CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
- PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING
- COMPUTERS. GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS. SYMBOL SUBSCRIPTS:
- "2N": INCLUDE TWO NEUTRAL CONDUCTORS SIZED AS SCHEDULED FOR PHASE AND NEUTRAL CONDUCTORS WHERE THE CONDUCTOR IS #1/0 OR LARGER. INCLUDE A SINGLE 200% RATED CONDUCTOR THAT IS TWICE THE AMPACITY OF THE SCHEDULED PHASE AND NEUTRAL CONDUCTOR WHERE THE CONDUCTOR IS BELOW #1/0 IN SIZE.
- "CI": PROVIDE CIRCUIT INTEGRITY CABLE; TYPE TWO-HOUR FIRE RESISTIVE CABLES IN CONDUIT OR PROVIDE FEEDER ENCASED IN CONCRETE.
- "FG" FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE SAME SIZE AS THE PHASE CONDUCTORS. "HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY
- PROVIDE THE IG/HH SIZE FOR THE EQUIPMENT GROUNDING CONDUCTOR. "IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH THE GROUND OF EQUIPMENT GROUND CONDUCTOR.
- "MC": PROVIDE FEEDER IN METAL-CLAD CABLE; TYPE MC IN PLACE OF SINGLE CONDUCTORS IN CONDUIT.
- "SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.
- "SER": PROVIDE SERVICE-ENTRANCE CABLE; TYPE SE OR SER IN PLACE OF SINGLE CONDUCTORS IN CONDUIT.

RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.

ONE-LINE DIAGRAM

22211.05

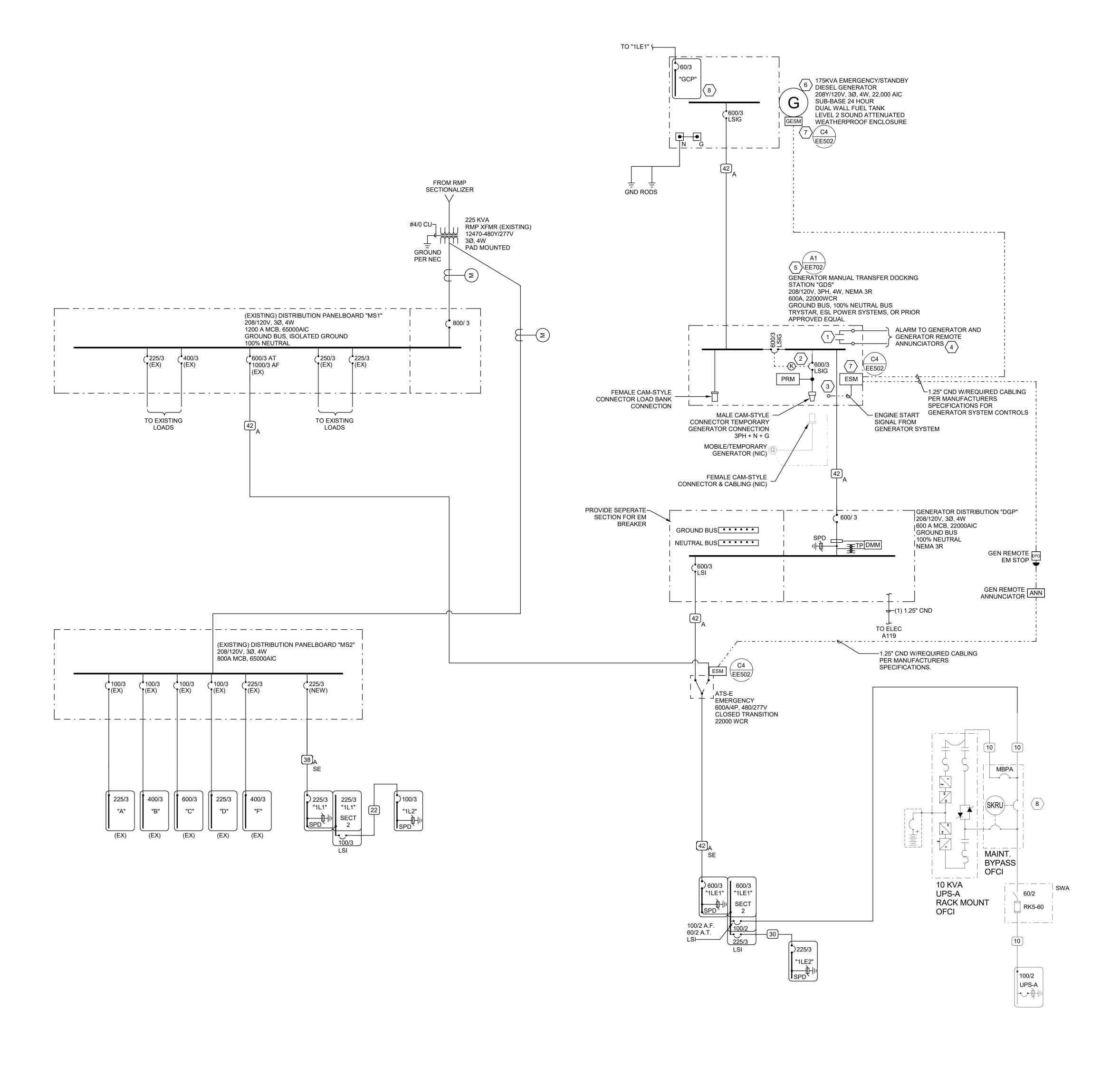
Jan. 15, 2024

 $\frac{1}{2}$ 

 $\overline{Z}$ 

NJRA Project #

Construction Documents



PARTIAL ONE-LINE DIAGRAM

SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

PROVIDE NEMA 3R ENCLOSURES FOR EQUIPMENT LOCATED OUTDOORS. REFER TO PLANS FOR EQUIPMENT LOCATIONS.

REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL

WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION. ALL EQUIPMENT SHALL BE CONSTRUCTED AND BRACED FOR THE SEISMIC

CONDITIONS OF THE PROJECT. REFER TO ELECTRICAL SPECIFICATIONS FOR

PROVIDE PERFORMANCE TESTING FOR GROUND-FAULT PROTECTION SYSTEMS ON SITE WITH A WRITTEN RECORD OF THIS TEST SUBMITTED TO THE AUTHORITY HAVING JURISDICTION PER NEC 230.95(C).

ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



#### SHEET KEYNOTES

SIGNAL WIRING.

POWER, LIGHTING, ETC.

PERMANENT EMERGENCY GENERATOR CIRCUIT BREAKER POSITION INDICATION, N.O. RELAY TO CLOSE INDICATING BREAKER IS IN OPEN POSITION FOR ALARM

- PROVIDE KIRK-KEY MECHANICAL INTERLOCK SCHEME #11 TO PREVENT PARALLELING OF GENERATOR AND TEMPORARY GENERATOR LINES; SINGLE LOAD FED FROM EITHER SOURCE, BUT NEVER BOTH SOURCES.
- TEMPORARY GENERATOR START SIGNAL WIRING TERMINAL BLOCK, TO BE LOCATED IN DEADFRONT CONTROL SECTION OF GEAR.
- VISUAL AND AUDIBLE ALARM TO INDICATE PERMANENT GENERATOR CIRCUIT BREAKER IS IN THE OPEN POSITION AND THE PERMANENT EMERGENCY SOURCE HAS BEEN DISCONNECTED FROM THE EMERGENCY SYSTEM.
- PROVIDE PERMANENT LABEL INDICATING PHASE ROTATION AND SYSTEM BONDING REQUIREMENTS PER NEC 700.3(F)(3).

MAXIMUM COMBINED OVERALL DIMENSION OF GENERATOR SOUND ATTENUATED

GENERATOR ENGINE START SIGNAL MONITORING SYSTEM MODULE INSTALLED

WITHIN GENERATOR AND ATS(S) TO MONITOR INTEGRITY OF GENERATOR START

- ENCLOSURE PLUS SUB-BASE FUEL TANK SHALL NOT EXCEED ##'-##" LONG X ##'-##" WIDE X ##'-##" TALL.
- PROVIDE A FACTORY MOUNTED GENERATOR POWER PANEL WITH ALL POWERED GENERATOR COMPONENTS FACTORY WIRED. THIS INCLUDES. BUT IS NOT LIMITED TO, BLOCK HEATERS, BATTERY CHARGERS, CONVENIENCE OUTLETS, CONTROL



Kidn

NJRA Project # Construction Documents Jan. 15, 2024

22211.05

ONE-LINE DIAGRAM





SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

NJRA Project #

Construction Documents Jan. 15, 2024

22211.05

EQUIPMENT SCHEDULE

EP603

												E	JUIPM	ENT SC	JHED	ULE													
ARK QTY	ITEM DESCRIPTION		LOAD D	)ATA				WIRE AND CONDUIT SIZE		OVERCURRE PROTECTIO			DISCONNEC	Т							STARTER DA	TA						NOTES	MAR
		HP kW	MCA	FLA	VOLT	PH	Hz		FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	SIZE SPEE	O CTRL VOLT	SELECTOR SWITCH	PUSH BUTTON	PILOT LAMP	NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	PHASE FAILURE RELAY	SCHEMATIC REFERENCE	REMOTE CTRL		
3-1 1	BASEBOARD HEATER	1.5	9.0	7.2	208	1	60	CC #1	E	15A C/B	PANEL	Q																	BE
3-2 1	BASEBOARD HEATER	1.5	9.0	7.2	208	1	60	CC #1	E	15A C/B	PANEL	Q																	ВІ
C-1 1	VRF BRANCH CIRCUIT CONTROLLER	0.2	1.3	1.0	208	1	60	CC #1	E	20A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT															ВС
C-2 1	VRF BRANCH	0.2	1.3	1.0	208	1	60	CC #1	E	20A	PANEL	E	TOGGLE	ADJ. TO															ВС
P-1 1	CIRCUIT CONTROLLER RECIRCULATION	1/20 0.1	0.8	0.3	120	1	60	CC #1	E	C/B 15A	PANEL	E	SWITCH TOGGLE	UNIT ADJ. TO															DC
1V-1 1	PUMP DOMESTIC MIXING	0.5	5.2	4.2	120	1	60	CC #1	E	C/B 20A	PANEL	E	SWITCH TOGGLE	UNIT ADJ. TO															DM
AS-1 1	STATION DEDICATED OUTSIDE		24.4		208	3	60	CC #11	E	C/B 45A	PANEL	E	SWITCH 60A	UNIT ADJ. TO															DO
F-1 1	AIR HANDLER EXHAUST FAN	1/4	7.25	5.8	120	1	60	CC #1	E	C/B 15A	PANEL	E	D/S TOGGLE	UNIT ADJ. TO															E
C-1 1	VRF INDOOR	0.1	2.13					CC #1	F	C/B 15A	PANEL	F	SWITCH TOGGLE	UNIT ADJ. TO															F
	UNIT VRF INDOOR									C/B			SWITCH	UNIT															
C-2 1	UNIT	0.1	2.13		208		60	CC #1		15A C/B	PANEL		TOGGLE	ADJ. TO UNIT															F
C-3 1	VRF INDOOR UNIT	0.0	2.13		208	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT															F
C-4 1	VRF INDOOR UNIT	0.1	2.13		208	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT															F
C-5 1	VRF INDOOR UNIT	0.0	1.75		208	1	60	CC #1	E	15A C/B	PANEL	Е	TOGGLE SWITCH	ADJ. TO UNIT															F
C-6 1	VRF INDOOR UNIT	0.1	2.88		208	1	60	CC #1	E	15A C/B	PANEL	Е	TOGGLE SWITCH	ADJ. TO UNIT															F
C-7 1	VRF INDOOR UNIT	0.1	2.88		208	1	60	CC #1	E	15A C/B	PANEL	Е	TOGGLE SWITCH	ADJ. TO UNIT															F
C-8 1	VRF INDOOR	0.1	2.88		208	1	60	CC #1	E	15A	PANEL	E	TOGGLE	ADJ. TO															F
C-9 1	UNIT VRF INDOOR	0.1	2.13		208	1	60	CC #1	E	C/B 15A	PANEL	E	SWITCH TOGGLE	UNIT ADJ. TO															F
C-10 1	UNIT VRF INDOOR	0.1	2.88		208	1	60	CC #1	E	C/B 15A	PANEL	E	SWITCH TOGGLE	UNIT ADJ. TO															F
C-11 1	UNIT VRF INDOOR	0.1	2.88		208	1	60	CC #1	E	C/B 15A	PANEL	E	SWITCH TOGGLE	UNIT ADJ. TO															F
C-14 1	UNIT VRF INDOOR	0.0	2.88		208	1	60	CC #1	E	C/B 15A	PANEL	E	SWITCH TOGGLE	UNIT ADJ. TO															F
C-15 1	UNIT VRF INDOOR	0.1	1.75			1		CC #1	F	C/B 15A	PANEL	F	SWITCH TOGGLE	UNIT ADJ. TO															FC
	UNIT VRF INDOOR	0.1	2.94				60	CC #1		C/B 15A			SWITCH	UNIT ADJ. TO															FC
C-16 1	UNIT				208					C/B	PANEL		TOGGLE	UNIT															
-17 1	VRF INDOOR UNIT	0.1	2.88		208		60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT															FC
-18 1	VRF INDOOR UNIT	0.1	0.24		208	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT															FC
1 1	VRF INDOOR UNIT	0.1	0.35		208	1	60	CC #1	E	15A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT															FC
J-1 1	VRF OUTDOOR UNIT		41.0		208	3	60	CC #14	E	60A C/B	PANEL	Е	60A D/S	ADJ. TO UNIT															0
J-2 1 C-13	VRF OUTDOOR UNIT		11.0		208	1	60	CC #4	E	15A C/B	PANEL	Е	30A D/S	ADJ. TO UNIT															С
J-3 1	VRF OUTDOOR		11.0		208	1	60	CC #4	E	15A	PANEL	E	30A	ADJ. TO															С
D-12 J-4 1	UNIT VRF OUTDOOR		19.0		208	1	60	CC #4	E	C/B 25A	PANEL	E	D/S 30A	UNIT ADJ. TO															0
C-20 J-5 1	UNIT VRF OUTDOOR		19.0		208	1	60	CC #4	E	C/B 25A	PANEL	E	D/S 30A	UNIT ADJ. TO															С
C-21 H-1 1	UNIT WATER HEATER	0.6	6.25	5.0	120	1	60	CC #1	E	C/B 20A	PANEL	E	D/S TOGGLE	UNIT ADJ. TO															W
H-2 1	WATER HEATER		6.25					CC #1	F	C/B 20A	PANEL	F	SWITCH	UNIT ADJ. TO															W
'S-1 1	WATER SOFTENER		3.125					CC #1		C/B			SWITCH	UNIT															W
U-1 T	WATER SUFTENER	0.3	3.125	2.5	120	1	00	CC #1		20A C/B	PANEL	E	TOGGLE SWITCH	ADJ. TO UNIT															

#### EQUIPMENT SCHEDULE KEY

DIVISION 16 FURNISHED WITH THE EQUIPMENT
COORDINATE WITH THE DIVISION 15 TEMPERATURE

CONTROL INSTALLER

\*\* AUTOMATIC CONTROL WIRING BY DIVISION 15

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:

- 100% CONNECTED LOAD PLUS 25%

DIVERSIFIED TOTAL kVA = 0 AVERAGE AMPS PER PHASE = 0

RECEPTACLES: - FIRST 10kVA @ 100%, REMAINDER @ 50% MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH ALL OTHER LOADS @ 100%: 0.0 kVA LARGEST MOTOR CALCULATED @ 125% PER NEC

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

							P	A۱	<b>JE</b>	L:	"E	3"	(E	XISTING)							
VOLT	S/PHAS	SE/WIF	RE:		PAN	IEL SIZ	ZE & TYPE: MAIN SIZE AND	TYPE			FED	FROI	VI:	CABINET: LOCATION:		NC	TES:				
120/20	8V, 3 F	PH 4 W	/IRE		22" \	W x 6"	D, BOLT-ON 400 AMPERE MA	AIN LU	GS					SURFACE ELEC. ROOM A109	)						
ACCE	SSORII	ES:			PAN	IEL DIF	RECTORY, IDENTIFICATION, GROU	NDIN	3 BAR	₹				AIC	RATIN	NG: (E)	XISTIN	NG)			
СКТ		OCP		LO	)AD (k	VA)			Р	HASE	LOA	AD.			LC	OAD (k\	/A)		ОСР		СКТ
NO	AMP	POLE	BKR	LTG	PWR	СО	DESCRIPTION	1	A	Е	3	(	2	DESCRIPTION	СО	PWR	LTG	BKR	POLE	AMP	NO
1	20	1					(EX) SPARE	0.0	0.0					(EX) SPARE					1	20	2
3	20	1					(EX) SPARE			0.0	0.0			(EX) SPARE					1	20	4
5	20	1					(EX) SPARE					0.0	0.0	(EX) SPARE					1	20	6
7	20	1					(EX) SPARE	0.0	0.0					(EX) SPARE					1	20	8
9	20	1					(EX) SPARE			0.0	0.0			(EX) SPARE					1	20	10
11	20	1					(EX) SPARE					0.0	0.0	(EX) SPARE					1	20	12
13	20	1					(EX) SPARE	0.0	0.0					(EX) SPARE					1	20	14
15	20	1					(EX) SPARE			0.0	0.0			(EX) SPARE					1	20	16
17	20	1					(EX) SPARE					0.0	0.0	(EX) SPARE					1	20	18
19	20	1					(EX) SPARE	0.0	0.0					(EX) ZONE BOX 31 ENTRY					1	20	20
21	20	1					(EX) SPARE			0.0	0.0			(EX) ZONE BOX 31 ENTRY					1	20	22
23	20	1					(EX) SPARE					0.0	0.0	(EX) ZONE BOX 31 ENTRY					1	20	24
25	20	1					(EX) SPARE	0.0	0.0					(EX) MAIL ROOM COPY MACHINE					2	20	26
27	20	1					(EX) SPARE			0.0	0.0			<del></del>							28
29	20	1					(EX) SPARE					0.0	0.0	(EX) NE EXTERIOR SIGN					2	20	30
31	20	1					(EX) SPARE	0.0	0.0												32
33	20	1					(EX) SPARE			0.0	0.0			(EXISTING)					1	20	34
35	20	1					(EX) SPARE					0.0	0.0	(EXISTING)					1	20	36
37	20	1					(EX) SPARE	0.0	0.0					(EX) ZONE BOX 28, 29, 30					1	20	38
39	20	1					(EX) SPARE			0.0	0.0			(EX) INTERVIEW RM FLOOR					1	20	40
41	20	1					(EX) SPARE					0.0	0.0	(EX) INTERVIEW ROOM FLOOR BOX					1	20	42
TOTA	LS:						CONNECTED kVA PER PHASI	Ξ	0	(	)	(	)	CONNEC	TED T	OTAL I	κVA =		0		
							CONNECTED AMPS PER PHASI	Ē	0	(	)	(	)	AVERAGE CONNECTED AN	/IPS PE	ER PHA	ASE =		0		
NEC I	WEDS	IEIED	LOAD	CALC	TA III	CIONIC															

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS: - 100% CONNECTED LOAD PLUS 25% RECEPTACLES: - FIRST 10kVA @ 100%, REMAINDER @ 50%

DIVERSIFIED TOTAL kVA = 0 AVERAGE AMPS PER PHASE = 0

MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH ALL OTHER LOADS @ 100% : 0.0 kVA LARGEST MOTOR CALCULATED @ 125% PER NEC

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

								P/	11	ΙE	L:	"(	<u> </u>	(E	XISTIN	G)							
VOLT	S/PHA	SE/WIF	RE:		PAN	NEL SIZ	ZE & TYPE:	MAIN SIZE AND T	YPE	:		FED	FRO	VI:	CABINET:	LOCATION:		NC	TES:				
120/20	)8V, 3 I	PH 4 W	/IRE		22"	W x 6"	D, BOLT-ON	600 AMPERE MAIN	N LU	GS					SURFACE	ELEC. ROOM A109							
ACCE	SSORI	IES:			PAN	NEL DIF	RECTORY, IDENT	TIFICATION, GROUN	DINC	3 BAR					'	AIC	RATIN	IG: (E)	KISTIN	NG)			
СКТ		ОСР		LC	OAD (k	(VA)				Р	HASE	LOA	ND.				LO	AD (k\	/A)	ĺ	ОСР		СКТ
NO	AMP	POLE	BKR				DESC	RIPTION		A		В			DESC	RIPTION	СО	PWR		BKR	POLE	AMP	NO
1	60	3						SPARE	0.0	0.0						RTU 8					3	80	2
3				<b> </b>			,				0.0	0.0			`			<b> </b>					4
5													0.0	0.0									6
7	60	3					(EX)	SPARE	0.0	0.0					(EX	RTU 9					3	80	8
9											0.0	0.0											10
11													0.0	0.0									12
13	60	3					(EX)	SPARE	0.0	0.0					(EX)	RTU 10		-			3	80	14
15											0.0	0.0											16
17													0.0	0.0									18
19	60	3					(EX)	SPARE	0.0	0.0					(EX)	RTU 11					3	60	20
21											0.0	0.0											22
23													0.0	0.0									24
25	60	3					(EX)	SPARE	0.0	0.0					(EX)	RTU 12					3	60	26
27											0.0	0.0											28
29													0.0	0.0									30
31	60	3					(EX)	SPARE	0.0	0.0					(EX)	RTU 13		-			3	60	32
33											0.0	0.0											34
35													0.0	0.0									36
37	60	3					(EX)	SPARE	0.0	0.0						PACE							38
39											0.0	0.0				PACE							40
41													0.0	0.0	SI	PACE							42
TOTA	LS:							D kVA PER PHASE		0	(	0	(	0		CONNEC					0		
							CONNECTED	AMPS PER PHASE		0	(	0	(	0	AVERA	AGE CONNECTED AM	1PS PE	ER PHA	\SE =		0		

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS: 100% CONNECTED LOAD PLUS 25% RECEPTACLES: - FIRST 10kVA @ 100%, REMAINDER @ 50%

DIVERSIFIED TOTAL kVA = 0 AVERAGE AMPS PER PHASE = 0

MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH ALL OTHER LOADS @ 100% : 0.0 kVA LARGEST MOTOR CALCULATED @ 125% PER NEC

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI



PANEL: "D"(EXISTING)

PHASE LOAD

A B C

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

100% CONNECTED LOAD PLUS 25%

- FIRST 10kVA @ 100%, REMAINDER @ 50%

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER,

PHASE LOAD

A B C

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

0.0 0.0

- 100% CONNECTED LOAD PLUS 25%

- FIRST 10kVA @ 100%, REMAINDER @ 50%

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER,

AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

**DISTRIBUTION PANEL "MAIN" (EXISTING)** 

MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH

LARGEST MOTOR CALCULATED @ 125% PER NEC

LOCATION:

PANEL / EQUIPMENT

SPACE

SPACE

SPACE

SPACE

SPACE

SPACE SPACE

(EX) SERVICE DISCONNECT

(EX) SERVICE DISCONNECT

(EX) SERVICE DISCONNECT

- 100% CONNECTED LOAD PLUS 25%

- FIRST 10kVA @ 100%, REMAINDER @ 50%

MOTOR TOTALS INCLUDED IN ALL OTHER LOADS

WITH LARGEST MOTOR CALCULATED @ 125% PER...

(EX) SERVICE DISCONNECT

(EX) SERVICE DISCONNECT

0.0 | 0.0 |

0.0 | 0.0 |

CONNECTED KVA PER PHASE 0 0 0

0.0 | 0.0 |

AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

0.0 | 0.0 |

0.0 0.0

0.0 | 0.0 |

0.0 | 0.0 |

0.0 0.0

0.0 0.0

0.0 | 0.0 |

MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH

PANEL: "F"(EXISTING)

0.0 0.0

0.0 | 0.0 |

0.0 | 0.0

0.0 0.0

0.0 | 0.0 |

SURFACE

LARGEST MOTOR CALCULATED @ 125% PER NEC

0.0 | 0.0 |

0.0 | 0.0 |

0.0 | 0.0 |

SURFACE

ELEC. ROOM A109

**DESCRIPTION** 

(EX) ITS AC

(EX) ITS AC

(EX) WEST IT

(EX) SPARE

(EX) SPARE

(EX) BREAK RM WEST WALL

(EX) BREAK RM WEST WALL

(EX) PHOTO CELL/ROOF OUTLET

(EX) SPARE

(EX) SPARE

(EX) SMOKE DAMPERS

(EX) SPARE

(EX) BREAK ROOM VENDING

(EX) SPARE

NOTES:

OCP

CO PWR LTG BKR POLE AMP

-- -- 1 20

-- -- 2 30 -- -- -- -- -- -- --

-- -- 1 20

-- -- 1 20 -- -- 1 20

-- | -- | -- | 1 | 20

-- -- 1 20 -- -- 1 20

-- -- 1 20

-- | -- | -- | 1 | 20

-- -- 1 20

-- -- 1 20 -- -- 1 20

-- | -- | -- | 1 | 20 |

-- -- 1 20 3 -- -- 1 20 4

| -- | -- | -- | 42

CONNECTED TOTAL kVA = 0

DIVERSIFIED TOTAL kVA = 0

NOTES:

OCP

CO PWR LTG BKR POLE AMP

-- | -- | -- | 1 | 20

-- | -- | -- | 1 | 20

-- -- 1 20

-- -- 1 20 -- -- 1 20 -- 1 20

| -- | -- | -- | 1 | 20

-- -- 1 20

| -- | -- | -- | 1 | 20

| -- | -- | -- | 1 | 20

CONNECTED TOTAL kVA = 0

DIVERSIFIED TOTAL kVA = 0

AVERAGE AMPS PER PHASE = 0

AIC RATING: (EXISTING)

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

CONNECTED kVA PER PHASE 0.0 0.0 0.0 CONNECTED AMPS PER PHASE 0 0 0

TOTAL DIVERSIFIED kVA = 0.0

AVERAGE AMPS PER PHASE = 0

TOTAL CONNECTED kVA = 0.0

AVERAGE CONNECTED AMPS PER PHASE = 0

PHASE LOAD (kVA)

A B C

0.0

0.0

0.0 | 0.0 | 0.0

0.0

| -- | -- | -- | 1 | 20 | 40 -- -- 1 20 42

**AIC RATING:** (EXISTING)

LOAD (kVA)

AVERAGE AMPS PER PHASE = 0

AVERAGE CONNECTED AMPS PER PHASE = 0

ELEC. ROOM A109

**DESCRIPTION** 

(EX) ZONE BOX P-46,47

(EX) ZONE BOX P-46,47

(EX) ZONE BOX P-46,47

(EX) ZONE BOX P-52,53

(EX) ZONE BOX P-52,53

(EX) ZONE BOX P-52,53

(EX) ZONE BOX P-41

(EX) ZONE BOX P-41

(EX) ZONE BOX P-41

(EX) SPARE

(EX) SPARE

(EX) SPARE

(EX) ZONE BOX P-32

(EX) ZONE BOX P-32

(EX) ZONE BOX P-32

(EX) ZONE BOX P-28,30

(EX) ZONE BOX P-28,30

(EX) SPARE

(EX) SPARE

(EX) SPARE

0.0 0.0 (EX) ZONE BOX P-28,30 (DWS COUNT) -- -- 1 20

AVERAGE CONNECTED AMPS PER PHASE =

-- -- 1 20

**AIC RATING**: (EXISTING)

LOAD (kVA)

PANEL SIZE & TYPE: MAIN SIZE AND TYPE:

22" W x 6" D, BOLT-ON 225 AMPERE MAIN LUGS

PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR

DESCRIPTION

(EX) ITS OUTLETS

(EX) ITS OUTLETS

(EX) ITS OUTLETS

(EX) SPARE

(EX) PHONE

(EX) SECURITY

(EX) FACP (FIRE PANEL)

(EX) LIGHTING OUTSIDE

(EX) LIGHTING OUTSIDE

(EX) BREAK RM WEST WALL

(EX) BREAK RM WEST WALL

(EX) BREAK RM VENDING

(EX) BREAK RM FRIDGE

(EX) BREAK RM COFFEE OUTLET

(EX) BREAK RM MICROWAVE

(EX) SPARE

(EX) COMPUTER TRAINING RM

CONNECTED kVA PER PHASE

MAIN SIZE AND TYPE:

PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR

DESCRIPTION

(EX) ZONE BOX P-35,36

(EX) ZONE BOX P-35,36

(EX) ZONE BOX P-35,36

(EX) ZONE BOX P-42,43

(EX) ZONE BOX P-42,43

(EX) ZONE BOX P-42,43

(EX) ZONE BOX P-45

(EX) ZONE BOX P-45

(EX) ZONE BOX P-45

(EX) ZONE BOX P-49,50,51

(EX) ZONE BOX P-49,50,51

(EX) ZONE BOX P-49,50,51

(EX) ZONE BOX P-44,45

(EX) ZONE BOX P-44,45

(EX) ZONE BOX P-44,45

(EX) ZONE BOX P-38

(EX) ZONE BOX P-38

(EX) ZONE BOX P-38

(EX) ZONE BOX P-40

(EX) ZONE BOX P-40

(EX) ZONE BOX P-40

1200 AMPERE MAIN

CONNECTED AMPS PER PHASE 0

400 AMPERE MAIN LUGS

CONNECTED AMPS PER PHASE

(EX) LIGHTING OUTSIDE..

(EX) CONFERENCE ROOM TV REC | 0.0 | 0.0

VOLTS/PHASE/WIRE:

ACCESSORIES:

20/208V, 3 PH 4 WIRE

OCP

NO AMP POLE BKR LTG PWR CO

5 20 1 -- -- --

13 | 20 | 1 | -- | -- | --

15 | 20 | 1 | -- | -- | -- | --

19 | 20 | 1 | -- | -- | -- | --

21 | 20 | 1 | -- | -- | -- | --

23 | 20 | 1 | -- | -- | -- | --

29 | 20 | 1 | -- | -- | --

35 | 20 | 1 | -- | -- | -- | --

39 20 1 -- -- --

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:

RECEPTACLES:

ALL OTHER LOADS @ 100% : 0.0 kVA

TOTALS:

**VOLTS/PHASE/WIRE:** 

**ACCESSORIES:** 

120/208V. 3 PH 4 WIRE

20 | 1

OCP

NO AMP POLE BKR LTG PWR CO

7 | 20 | 1 | -- | -- | -- | --

35 20 1 -- -- --

39 | 20 | 1 | -- | -- | -- | --

41 20 1 -- -- -- --

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:

VOLTS/PHASE/WIRE:

120/208V .3 PH. 4 WIRE

OCP

NO AMP POLE

RECEPTACLES:

ALL OTHER LOADS @ 100% : 0.0 kVA

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR

LOAD (kVA)

LTG PWR CO

-- | -- | --

2 | -- | -- | -- | --

4 | -- | -- | -- | -- | --

1000 3 -- - - --

12 225 3 -- -- --

RECEPTACLES:

ALL OTHER LOADS @ 100%: 0.0 kVA

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:

7 | 20 | 1 | -- | -- | -- | --

37 | 20 | 1 | -- | -- | -- | --

11 20 1 -- -- (EX) CONFERENCE ROOM TV REC

41 | 20 | 1 | -- | -- | -- | (EX) COMPUTER TRAINING RM

PANEL SIZE & TYPE:

22" W x 6" D, BOLT-ON

LOAD (kVA)

NJRA Architects, Inc 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

ä ∃ H T

22211.05 NJRA Project # Construction Documents Jan. 15, 2024

Sis

 $\frac{\lambda}{Q}$ 

N O N

PANEL

OLTS	/PHA	SE/WIF	RE:		PAN	IEL SIZ	ZE & TYPE: MAIN SIZE AND	TYPE	:		FED	FROI	VI:	CABINET: LOCATION:		NC	OTES:			
20/20	8V, 3 F	PH 4 W	/IRE		22" \	W x 6"	D, BOLT-ON 225 AMPERE MA	IN LU	IGS					SURFACE ELECTRICAL A106						
CCE	SSORI	IES:			PAN	IEL DIF	RECTORY, IDENTIFICATION, GROU	NDIN	G BAF	₹				AIC	RATIN	<b>IG</b> : 22	,000			
кт		OCP		LO	AD (k	VA)			Р	HASE	LOA	\D			LO	AD (k)	VA)		OCP	
NO	AMP	POLE	BKR	LTG	PWR	СО	DESCRIPTION		A	Е	3		<u> </u>	DESCRIPTION	СО	PWR	LTG	BKR	POLE	AMP
1	20	1		0.0	0.0	0.9	CO - TOILET A155, WAITING A156	0.9	1.3					CO - TOIL A148, HOME TRAIN A142	1.3	0.0	0.0		1	20
3	20	1		0.0	0.0	1.4	CO - CLEAN A119, OFFICE A129			1.4	1.1			CO - HOME TRAIN A134	1.1	0.0	0.0		1	20
5	20	1		0.0	1.0	0.0	VENDING - NOURISHMENT A146					1.0	1.1	CO - BAY #1 A151	1.1	0.0	0.0		1	20
7	20	1		0.0	1.1	0.0	ICE MAKER - NOURISHMENT A146	1.1	1.1					CO - BAY #2 A144	1.1	0.0	0.0		1	20
9	20	1		0.0	0.7	0.0	COFFEE - NOURISHMENT A146			0.7	1.1			CO - BAY #3 A135	1.1	0.0	0.0		1	20
11	20	1		0.0	1.3	0.0	MICROWAVE - NOURISHMENT					1.3	1.1	CO - BAY #4 A130	1.1	0.0	0.0		1	20
13	20	1		0.0	0.4	0.5	CO - NOURISH A146, SCALES A14	7 0.9	1.1					CO - BAY #5 A127	1.1	0.0	0.0		1	20
15	20	1		0.0	0.0	1.4	CO - CORRIDORS			1.4	1.1			CO - BAY #6 A120	1.1	0.0	0.0		1	20
17	20	1		0.0	0.0	1.3	CO - TOIL A132, A133, OFFICE					1.3	1.1	CO - BAY #7 A121	1.1	0.0	0.0		1	20
19	20	1		0.0	0.0	0.9	CO - TOIL, MED, A124, HSKP A125	0.9	1.1					CO - BAY #8 A122	1.1	0.0	0.0		1	20
21	20	1		0.0	0.0	1.3	CO - CONFERENCE ROOM A115			1.3	1.1	1.0	4.4	CO - BAY #9 A123	1.1	0.0	0.0		1	20
23	20	1		0.0	1.1	0.8	CO - STAFF BREAKROOM A114	0.7	1 4 4			1.9	1.1	CO - BAY #10 A131	1.1	0.0	0.0		1	20
5	20	1		0.0	0.7	0.0	COFFEE - STAFF BREAKROOM	0.7	1.1	4.0	4.4			CO - BAY #11 A139	1.1	0.0	0.0		1	20
7	20	1		0.0	1.3	0.0	MICROWAVE - STAFF BREAK A114	ŀ		1.3	1.1	4.4	4.4	CO - BAY #12 A145	1.1	0.0	0.0		1	20
9	20	1		0.0	0.0	1.1	CO - PRIVACY ROOM A112	0.7	1 1			1.1	1.1	CO - PRIVATE ISOLATION A154	1.1	0.0	0.0		1	20
1	20	1		0.0	0.0	0.7	CO - SHARED OFFICE A102	0.7	1.1	0.7	0.7			CO ROOM A105, A104, A103	1.1	0.0	0.0		1	20
3 5	20	1		0.0	0.0	0.7	CO - NURSE STATION A137  MECHOSHADE			0.7	0.7	0.5	1 2	CO WATER TREATMENT A107 WATER TREATMENT A107 WIREWAY	0.7	0.0	0.0		1	20
) 7	20	1		0.0	0.5	0.0	MECHOSHADE MECHOSHADE	0.7	0.7			0.5	1.3	DF WAITING A156	1.3	0.0	0.0		1	20
/ Э	20	1		0.0	0.7	0.0	MECHOSHADE	0.7	0.7	0.7	0.0			SPARE	0.0				1	20
	20	1		0.0	0.0	0.5	CO - ROOF			0.7	0.0	0.5	0.0						1	20
3	20	1		0.8	0.0	0.0	LIGHTING	0.8	0.7			0.5	0.0	POWER TDR A118	0.0	1.5	0.0		2	30
	20	1		1.4	0.0	0.0	LIGHTING	0.0	0.7	1 /	0.7			FOWEK IDIKATIO	0.0	1.5	0.0			
,	20	1		1.0	0.0	0.0	CORRIDOR LIGHTING (LCP-1)			1.4	0.7	1.0	0.5	POWER TDR A118	0.0	0.5	0.0		1	20
)	20	1		0.7	0.0	0.0	CORRIDOR LIGHTING (LCP-5)	0.7	0.7			1.0	0.0	POWER TDR A118	0.0	1.5	0.0		2	30
	20	1					SPARE	0.7	0.7	0.0	0.7									
	20	1		<b>+</b>			SPARE			0.0	0.7	0.0	0.0	SPARE			<b>-</b>		1	20
	20	1		<b>-</b>			SPARE	0.0	0.0			0.0	0.0	SPARE			<b>-</b>		1	20
	20	1					SPARE			0.0	0.0			SPARE					1	20
)	20	1					SPARE					0.0	0.0	SPARE					1	20
	20	1		<b></b>			SPARE	0.0	0.0					SPARE					1	20
	20	1			-		SPARE			0.0	0.0			SPARE					1	20
	20	1					SPARE					0.0	0.0	SPARE					1	20
	20	1					SPARE	0.0	0.0					SPARE					1	20
	20	1					SPARE			0.0	0.0			SPARE					1	20
	20	1					SPARE					0.0	0.0	SPARE					1	20
	20	1					SPARE	0.0	0.0					SPARE					1	20
	20	1			ı		SPARE			0.0	0.0			SPARE					1	20
	20	1			ŀ		SPARE					0.0	0.0	SPARE					1	20
	20	1					SPARE	0.0	0.0					"1L2"	0.0	0.0	0.0		3	100
	20	1			-		SPARE			0.0	0.0									
	20	1					SPARE					0.0	0.0							
Αl	.S:						CONNECTED kVA PER PHASE	•	16	1	7	1	6	CONNEC	TED T	OTAL I	kVA =		49	
							CONNECTED AMPS PER PHASE	1	36	13	39	13	32	AVERAGE CONNECTED AM	IPS PE	R PH	ASE =		135	
	SHTING	G & CC	NTIN RI	JOUS ECEPT	LOAD	S: <b>3.9</b> S: <b>31.</b> ′	MO	ST 10I FOR T	kVA @	) 100% S INC	%, RE	MAIN ED IN	DER ALL	% DIVE @ 50% AVERAGE OTHER LOADS WITH 125% PER NEC		ED TOT				

LO LTG	PAN AD (k' PWR	<u> </u>	RY, IDENTIFICATION, GROU  DESCRIPTION  SPARE  SPARE	INDING	BAR P			D C	<b>-</b>	SURFACE ELECTRICAL  DESCRIPTION	AIC RATIN	AD (k		BKR	OCP POLE	ΔΜΡ	CKT
    	AD (k) PWR	CO	DESCRIPTION  SPARE  SPARE		P A	HASE			;	DESCRIPTION	LO	AD (k	/A)	BKR		ΔΜΡ	-
    	PWR   	CO	SPARE SPARE		A				<b>:</b>	DESCRIPTION				BKR		ΔΜΡ	-
    	PWR   	CO	SPARE SPARE		A				•	DESCRIPTION				BKR		ΔΜΡ	-
  	  		SPARE SPARE														l NO
										SPARE					1	20	2
						0.0	0.0			SPARE					1	20	4
			SPARE					0.0	0.0	SPARE					1	20	6
			SPARE	0.0	0.0					SPARE					1	20	8
			SPARE			0.0	0.0			SPARE					1	20	10
			SPARE					0.0	0.0	SPARE					1	20	12
			SPARE	0.0	0.0					SPARE					1	20	14
			SPARE			0.0	0.0			SPARE					1	20	16
			SPARE					0.0	0.0	SPARE					1	20	18
			SPARE	0.0	0.0					SPARE					1	20	20
			SPARE			0.0	0.0			SPARE					1	20	22
			SPARE					0.0	0.0	SPARE					1	20	24
			SPARE	0.0	0.0					SPARE					1	20	26
			SPARE			0.0	0.0			SPARE					1	20	28
			SPARE					0.0	0.0	SPARE					1	20	30
			SPARE	0.0	0.0					SPARE					1	20	32
			SPARE			0.0	0.0			SPARE					1	20	34
			SPARE					0.0	0.0	SPARE					1	20	36
			SPARE	0.0	0.0					SPARE					1	20	38
			SPARE			0.0	0.0			SPARE					1	20	40
			SPARE					0.0	0.0	SPARE					1	20	42
		С	ONNECTED KVA PER PHASE	Ξ	0	(	)	0	)	CON	NECTED TO	I JATC	kVA =		0		
			NECTED AMPS PER PHASE	Ξ	0		)	0	)	AVERAGE CONNECTE	D AMPS PE	R PH	ASE =		0		
	     			SPARE CONNECTED KVA PER PHASE CONNECTED AMPS PER PHASE	SPARE 0.0 SPARE	SPARE 0.0 0.0 SPARE CONNECTED kVA PER PHASE CONNECTED AMPS PER PHASE ONNECTED AMPS PER PHASE	SPARE 0.0 0.0 0.0 SPARE 0.0 0.0	SPARE	SPARE         0.0         0.0         0.0             SPARE         0.0         0.0         0.0 </td <td>           SPARE         0.0         0.0         0.0         0.0              SPARE         0.0         0.0         0.0         0.0         0.0               SPARE         0.0         0.0         &lt;</td> <td> SPARE</td> <td> SPARE</td> <td> SPARE</td> <td>  SPARE</td> <td> SPARE</td> <td> SPARE 0.0 0.0 0.0 SPARE 1 SPARE 0.0 SPARE 1</td> <td>  SPARE</td>	SPARE         0.0         0.0         0.0         0.0              SPARE         0.0         0.0         0.0         0.0         0.0               SPARE         0.0         0.0         <	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE 0.0 0.0 0.0 SPARE 1 SPARE 0.0 SPARE 1	SPARE

OLT	S/PHA	SE/WIF	RE:		PAN	IEL SIZ	E & TYPE:	MAIN SIZE AND T	YPE:			FED	FRO	<b>/</b> 1:	CABINET:	LOCATION:		NC	TES:				
20/20	)8V, 3 I	PH 4 W	'IRE		22" \	W x 6"	D, BOLT-ON	600 AMPERE MAI	N LU	GS					SURFACE	ELECTRICAL A106							
CCE	SSORI	IES:			PAN	IEL DIF	RECTORY, IDENT	FICATION, GROUN	IDING	BAR						AIC I	RATIN	<b>IG</b> : 22	,000				
KT		ОСР		LO	AD (k	VA)				P	HASE	LOA	D				LO	AD (k\	/A)		ОСР		T
NO	AMP	POLE	BKR				DESC	RIPTION		4	E	3	(	;	DESCR	RIPTION	СО	`		BKR	POLE	AMP	
1	20	1		0.0	1.2	0.0		DOORS	1.2		_					NG ROOM #2 A142	0.9	0.0	0.0		1	20	+
3	20	1		0.0	1.2	0.0	AUTO	DOORS			1.2	0.6			DIALYSIS - HOME	TRAIN ROOM #2	0.0	0.6	0.0		1	20	Ť
5	20	1		0.0	0.8	0.0	AUTO	DOORS					0.8	0.9	CO - HOME TRAINI	NG ROOM #1 A134	0.9	0.0	0.0		1	20	+
7	20	1		0.0	1.2	0.0	COPIER - SHAF	ED OFFICE A129	1.2	0.6					DIALYISIS - HOME	TRAIN ROOM #1	0.0	0.6	0.0		1	20	t
9	20	1		0.0	0.0	1.1	CO - SHAREI	OFFICE A129			1.1	0.6			DIALYSIS - CC		0.0	0.6	0.0		1	20	Ť
11	20	1		0.0	0.0	0.7	CO - SHAREI	OFFICE A129					0.7	0.5	CO - BAY	′ #1 A151	0.5	0.0	0.0		1	20	Ť
13	20	1		0.0	1.0	0.0	WARMER - CLE	AN SUPPLY A119	1.0	0.6					DIALYSIS - E	BAY #1 A151	0.0	0.6	0.0		1	20	†
15	20	1		0.0	0.0	0.9		DR A118			0.9	0.7			CO - BAY		0.7	0.0	0.0		1	20	†
17	20	1		0.0	0.7	0.0		RISHMENT A146					0.7	0.6	DIALYSIS - E	BAY #2 A144	0.0	0.6	0.0		1	20	$\dagger$
19	20	1		0.0	1.2	0.0		ED OFFICE A140	12	0.5			0.7	0.0	CO - BAY		0.5	0.0	0.0		1	20	$\dagger$
21	20	1		0.0	0.0	1.4		O OFFICE A140		0.0	1.4	0.6			DIALYSIS - E		0.0	0.6	0.0		1	20	$\dagger$
23	20	1		0.0	0.0	0.4		ROOM A124				0.0	0.4	0.7	CO - BAY		0.7	0.0	0.0		1	20	+
25	20	1		0.0	0.7	0.0		D ROOM A124	0.7	0.6			0.4	0.7	DIALYSIS - E		0.0	0.6	0.0		1	20	+
.5 :7	20	1		0.0	0.7	0.0		F BREAKROOM	0.7	0.0	0.7	0.5			CO - BAY		0.0	0.0	0.0		1	20	$\frac{1}{2}$
9	20	1		0.0	0.7	0.0		F BREAKROOM			0.7	0.5	0.7	0.6	DIALYSIS - E		0.0	0.6	0.0		1	20	+
		-						AB A113	0.0	0.7			0.7	0.6	CO - BAY								-
1	20	1		0.0	0.0	0.9			0.9	0.7	0.7	0.0					0.7	0.0	0.0		1	20	4
3	20	1		0.0	0.7	0.0		LAB A113			0.7	0.6	0.7	0.4	DIALYSIS - E		0.0	0.6	0.0		1	20	_
5	20	1		0.0	0.0	ļ		05, TREATMENT	0.0				0.7	0.4	CO - BAY		0.4	0.0	0.0		1	20	_
7	20	1		0.0	0.6	0.0		IO MED A105	0.6	0.6					DIALYSIS - E		0.0	0.6	0.0		1	20	_
9	20	1		0.0	0.6	0.0		IO MED A105			0.6	0.9			CO - BAY		0.9	0.0	0.0		1	20	_
1	20	1		0.0	1.2	0.0		RED OFFICE A102					1.2	0.6	DIALYSIS - E		0.0	0.6	0.0		1	20	_
3	20	1		0.0	0.0	1.1		OFFICE A102	1.1	0.9					CO - BAY		0.9	0.0	0.0		1	20	_
5	20	1		0.0	0.0	1.1		STATION A137			1.1	0.6			DIALYSIS - E		0.0	0.6	0.0		1	20	_
7	20	1		0.0	0.0	1.1		STATION A137					1.1	0.9	CO - BAY	#10 A131	0.9	0.0	0.0		1	20	_
9	20	1		0.0	1.5	0.0	CRASH CART -	CORRIDOR A136	1.5	0.6					DIALYSIS - B	SAY #10 A131	0.0	0.6	0.0		1	20	
1	100	3		0.0	22.7	0.0	HOT RINSE	CONTROLLER			7.6	0.4				#11 A139	0.4	0.0	0.0		1	20	
3													7.6	0.6	DIALYSIS - B	SAY #11 A139	0.0	0.6	0.0		1	20	
5									7.6	0.9					CO - BAY	#11 A139	0.9	0.0	0.0		1	20	
7	30	2		0.0	5.0	0.0	BVA MUNIC	IPAL BOOST			2.5	0.6			DIALYSIS - B	SAY #12 A145	0.0	0.6	0.0		1	20	
9													2.5	1.3	CO - PRIVATE I	SOLATION A154	1.3	0.0	0.0		1	20	
1	45	3		0.0	11.5	0.0	ECO RO DIA	II HT POWER	3.8	0.6					DIALYSIS - PRIVAT	E ISOLATION A154	0.0	0.6	0.0		1	20	
3											3.8	0.5			CO MED R	OOM A124	0.5	0.0	0.0		1	20	
5													3.8	0.0	"G(	CP"			'		3	60	
7	20	1		0.0	0.2	0.0	POWER WATE	R TREATMENT/	0.2	0.0					-	-							
9	20	1		0.9	0.0	0.0	CRITICAL	. LIGHTING			0.9	0.0			-	-							
1	20	1		1.0	0.0	0.0	LIFE SAFE	ΓY LIGHTING					1.0	17.6	"1L	E2"	0.0	52.3	0.0		3	225	
3	20	1		0.7	0.0	0.0	LIFE SAFE	ΓY LIGHTING	0.7	16.8					_	-							-
5	20	1		0.7	0.0	0.0	CORRIDOR LI	GHTING (LCP-2)			0.7	17.8			-	-							7
7	20	1		0.4	0.0	0.0		ING (LCP-4)					0.4	2.0	UP	S-A	0.0	3.5	0.0		2	100	-
9	20	1		0.0	0.0	0.4		TMENT A107 CO	0.4	1.5					_	_							-
1	20	1		0.0	0.5	0.0		CNTRL			0.5	0.0			SPA	ARE					1	20	-
3	20	1		0.0	1.0	0.0		PANEL					1.0	0.0		ARE			<b> </b>		1	20	_
	LS:							D kVA PER PHASE	Δ	8	4	 8	4			CONNECT	TFD T	OTAL I	\\\A =		144		-
	_0.							AMPS PER PHASE	_	99		03	- 41		Δ\/ΕΡΔ(	GE CONNECTED AM					401		
СГ	)IVER!	SIFIED	LOAD	CALC	ULΔT	IONS	CONTROLLO	WI OT LIVETIAGE							AVEIVAC	JE GOINNEGTED AIN	. U I L	-1 \ 1   1/					-
LI			RE	CEPT	ACLE	S: <b>21.</b> 4	kVA @ 125% = 4. 4 kVA @ 73% = 15	<b>5.7 kVA</b> - FIRS <sup>3</sup>	T 10k OR T	VA @	1009 S INC	%, RE	main Ed in	DER ALL (	@ 50% OTHER LOADS WITH	AVERAGE				/A = <b>14</b> SE = <b>38</b>			
	ALI	LOIH	K LUA	4D9 @	, 100%	0: 11	19.5 kVA								125% PER NEC								_

OLTS	S/PHA	SE/WIF	RE:		PAN	IEL SIZ	E & TYPE:	MAIN SIZE AND T	YPE:			FED	FROI	VI:	CABINET:	LOCATION:		NC	TES:				
20/20	8V, 3 I	PH 4 W	'IRE		22" \	N x 6"	D, BOLT-ON	225 AMPERE MA	IN LU	GS		1LE1			SURFACE	ELECTRICAL A106							
CCES	SSOR	IES:			PAN	EL DIF	RECTORY, IDENTI	FICATION, GROUN	NDING	BAR						AIC	RATIN	<b>G</b> : 14	,000				
кт		ОСР		LC	AD (k	VA)				Pł	HASE	LOA	ND				LO	AD (k\	/A)		ОСР		СКТ
	AMP	POLE	BKR		`		DESCR	RIPTION		4	Е	3		<u> </u>	DESCR	RIPTION				BKR	POLE	AMP	NO
1	15	1		0.0	0.7	0.0	EXHAUST	FAN (EF-1)	0.7	0.6					WATER HEA	ATER (WH-1)	0.0	0.6	0.0		1	20	2
3	45	3		0.0	8.8	0.0		YSTEM (DOAS-1)			2.9	0.6			WATER HEA	ATER (WH-2)	0.0	0.6	0.0		1	20	4
5													2.9	0.5	MIXING VAI	LVE (DMV-1)	0.0	0.5	0.0		1	20	6
7									2.9	0.8					CANOPY H	EAT TRACE	0.0	0.8	0.0		1	20	8
9	60	3		0.0	14.8	0.0	VRF OUTDOO	R UNIT (OU-1)			4.9	0.1			CIRCULATING	PUMP (DCP-1)	0.0	0.1	0.0		1	15	10
11													4.9	0.3	WATER SOF	TENER (WS-1)	0.0	0.3	0.0		1	20	12
13									4.9	0.7					VRF REMINAL F	C UNIT POWER	0.0	1.4	0.0		2	15	14
15	15	2		0.0	2.3	0.0	VRF OUTDOO	R UNIT (OU-2)			1.1	0.7			-								16
17							•						1.1	0.9	VRF REMINAL F	FC UNIT POWER	0.0	1.7	0.0		2	15	18
19	15	2		0.0	2.3	0.0	VRF OUTDOO	R UNIT (OU-3)	1.1	0.9					-	<b></b>							20
21								<b></b>			1.1	1.0			VRF REMINAL F	C UNIT POWER	0.0	2.0	0.0		2	15	22
23	25	2		0.0	4.0	0.0	VRF OUTDOO	R UNIT (OU-4)					2.0	1.0	-	<b></b>							24
25								<b></b>	2.0	0.8					VRF REMINAL F	C UNIT POWER	0.0	1.6	0.0		2	15	26
27	25	2		0.0	4.0	0.0	VRF OUTDOO	PR UNIT (OU-5)			2.0	0.8			-	<b></b>							28
29								<b></b>					2.0	0.7	VRF REMINAL F	C UNIT POWER	0.0	1.5	0.0		2	15	30
31	15	2		0.0	1.5	0.0	BASEBOARD	HEATER (BB-2)	8.0	0.7					-	<b></b>							32
33								<b></b>			8.0	0.0			SPA	ARE					1	20	34
35	15	2		0.0	1.5	0.0	BASEBOARD	HEATER (BB-2)					0.8	0.0	SPA	ARE					1	20	36
37									8.0	0.0						ARE					1	20	38
39	15	2		0.0	1.5	0.0	BASEBOARD	HEATER (BB-1)			8.0	0.0				ARE					1	20	40
41								<u>-</u>					8.0	0.0	SPA	ARE					1	20	42
DTAL	.S:						CONNECTED	) kVA PER PHASE	1	8	1	7	1	8		CONNEC	TED TO	TAL I	<va =<="" td=""><td></td><td>52</td><td></td><td></td></va>		52		
							CONNECTED A	AMPS PER PHASE	14	48	14	<del>1</del> 0	1	50	AVERA	GE CONNECTED AM	IPS PE	R PHA	SE =		145		
EC D	IVERS	SIFIED	LOAD	CALC	CULAT	IONS																	
LIG	HTIN	G & CC	NTINU	JOUS	LOAD	S:		- 100%	6 CON	NEC	TED L	OAD	PLU	S 25%	6	DIVE	RSIFIE	D TO	AL kV	/A = <b>5</b> 3	3		
			RE	CEPT	ACLE	S:		- FIRS	T 10k	VA @	100%	%, RE	MAIN	DER	@ 50%	AVERAGE	E AMPS	SPER	PHAS	SE = <b>1</b> 4	16		
										_					OTHER LOADS WITH	Н							
	AL	L OTHE	ER LOA	ADS @	0 100%	6 : <b>3</b>	52.5 kVA								125% PER NEC	•							







ermouniain neallin ermountain Kidney Service est Valley Dialysis

2750 South 5600 West West Valley City, UT 8

NJRA Project # 22211.05

Construction Documents Jan. 15, 2024

PANEL SCHEDULES

C:\Users\jason.howard\Documents\Revit 2020\230057 Elec Central\_jthV8GT3.rvt 1/11/2024 10:46:13 AM

VOLT:	S/PHA	SE/WIF	RE:			PANE	L SIZE & TYPE: MAIN SIZE	AND T	YPE:	FE	D FR	OM:	CABINET:	LOCATION:		NOTE	ES:				
120/20	8V, 1Ø	ΰV, 1 ΡΙ	H 3 WI	RE		22" W	x 6" D, BOLT-ON 100 AMPE	RE MAII	N LUG	S 1L	.E1		SURFACE	TDR A118							
ACCE	SSORI	ES:				PANE	L DIRECTORY, IDENTIFICATION,	GROUI	NDING	BAR				AIC I	RATING:	14,00	0				
СКТ		OCF	<u> </u>		ΙΟΔΟ	(kVA)				HASE		.D		T		(kVA)			OCP		CK.
NO	AMD	POLE				<u>`</u>	DESCRIPTION		Α .		3		<u> </u>	DESCRIPTION				BKR		AMP	NC
1	30	2	Ditit	0.0	1.5	0.0	POWER TDR A118	0.7		-				POWER TDR A118	0.0	1.5	0.0	Dixix	2	30	2
3		-						0.7	0.7	0.7	0.7										4
5	20	1					SPARE			• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	0.0	0.0	SPARE			<b></b>		1	20	6
7	20	1		0.0	0.5	0.0	POWER TDR A118	0.5	0.0					SPARE					1	20	8
9	20	1					SPARE			0.0	0.0			SPARE					1	20	10
11	20	1					SPARE					0.0	0.0	SPARE					1	20	12
13	20	1					SPARE	0.0	0.0					SPARE					1	20	14
15	20	1					SPARE			0.0	0.0			SPARE					1	20	16
17	20	1					SPARE					0.0	0.0	SPARE					1	20	18
19	20	1					SPARE	0.0	0.0					SPARE					1	20	20
21	20	1					SPARE			0.0	0.0			SPARE					1	20	22
23	20	1					SPARE					0.0	0.0	SPARE					1	20	24
25	20	1					SPARE	0.0	0.0					SPARE					1	20	26
27	20	1					SPARE			0.0	0.0			SPARE					1	20	28
29	20	1					SPARE					0.0	0.0	SPARE					1	20	30
31	20	1					SPARE	0.0	0.0					SPARE					1	20	32
33	20	1					SPARE			0.0	0.0			SPARE					1	20	34
35	20	1					SPARE					0.0	0.0	SPARE					1	20	36
37	20	1					SPARE	0.0	0.0					SPARE					1	20	38
39	20	1					SPARE			0.0	0.0			SPARE					1	20	40
41	20	1					SPARE					0.0	0.0	SPARE					1	20	42
TOTAI	_S:						CONNECTED kVA PER PHA	SE	2	1	1	(	)	CONNE	ECTED T	OTAL	kVA =		3		
							CONNECTED AMPS PER PHA	SE	19	1	4	(	)	AVERAGE CONNECTED /	AMPS PE	R PH	ASE =		17		
IEC D	IVERS	SIFIED	LOAD	CALC	ULAT	IONS															
LIC	HTIN	G & CC	DNTINU	JOUS	LOAD	S:	- 10	0% CO	NNEC	TED L	OAD	PLUS	S 25%	DIV	/ERSIFIE	D TO	TAL k\	/A = <b>3</b>			
			RE	CEPT	ACLE	S:	- FI	RST 10	kVA @	100%	%, RE	MAIN	DER @ 50%	AVERA	GE AMP	S PER	PHAS	SE = <b>1</b> :	7		
	ALI	_ OTHE	ER LOA	NDS @	) 100%	<b>6</b> :	2 5 13/A M	OTOR 1	ΓΟΤΑL	SINC	LUDE	ED IN	_	LOADS WITH							



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



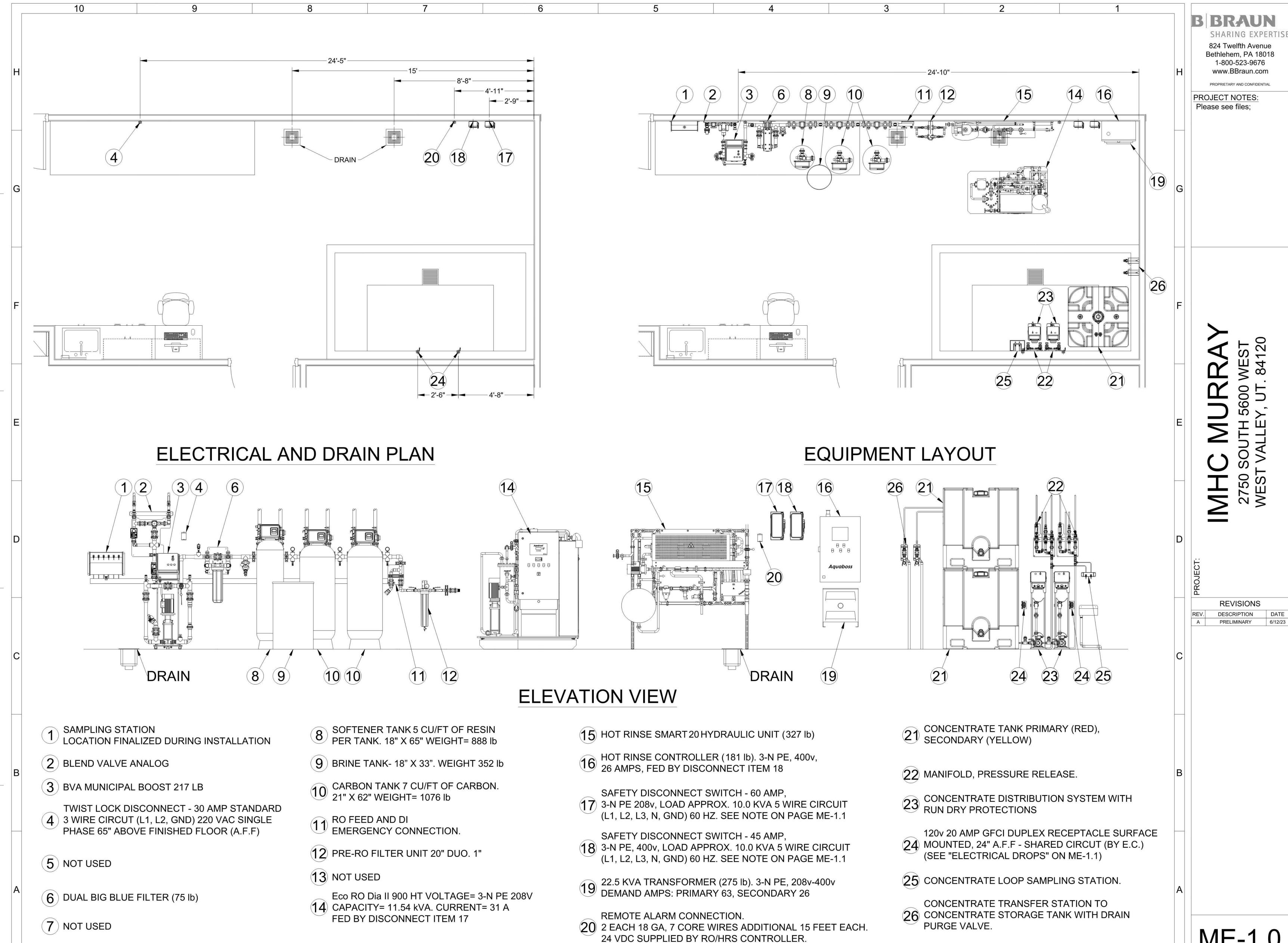


ountain Health Mountain Kidney Service F Valley Dialvois

NJRA Project # 22211.05

Construction Documents Jan. 15, 2024

PANEL SCHEDULES



ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com

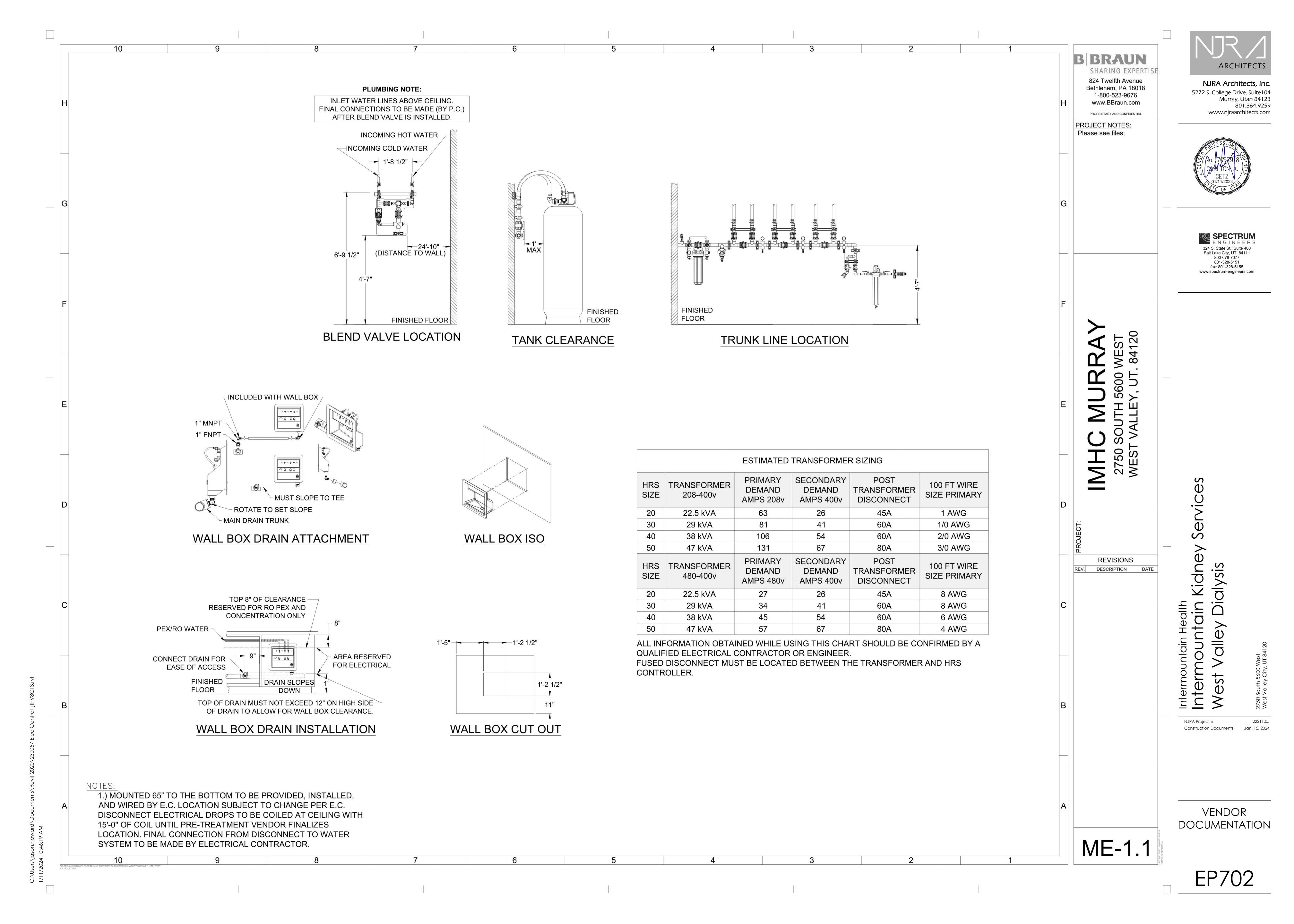


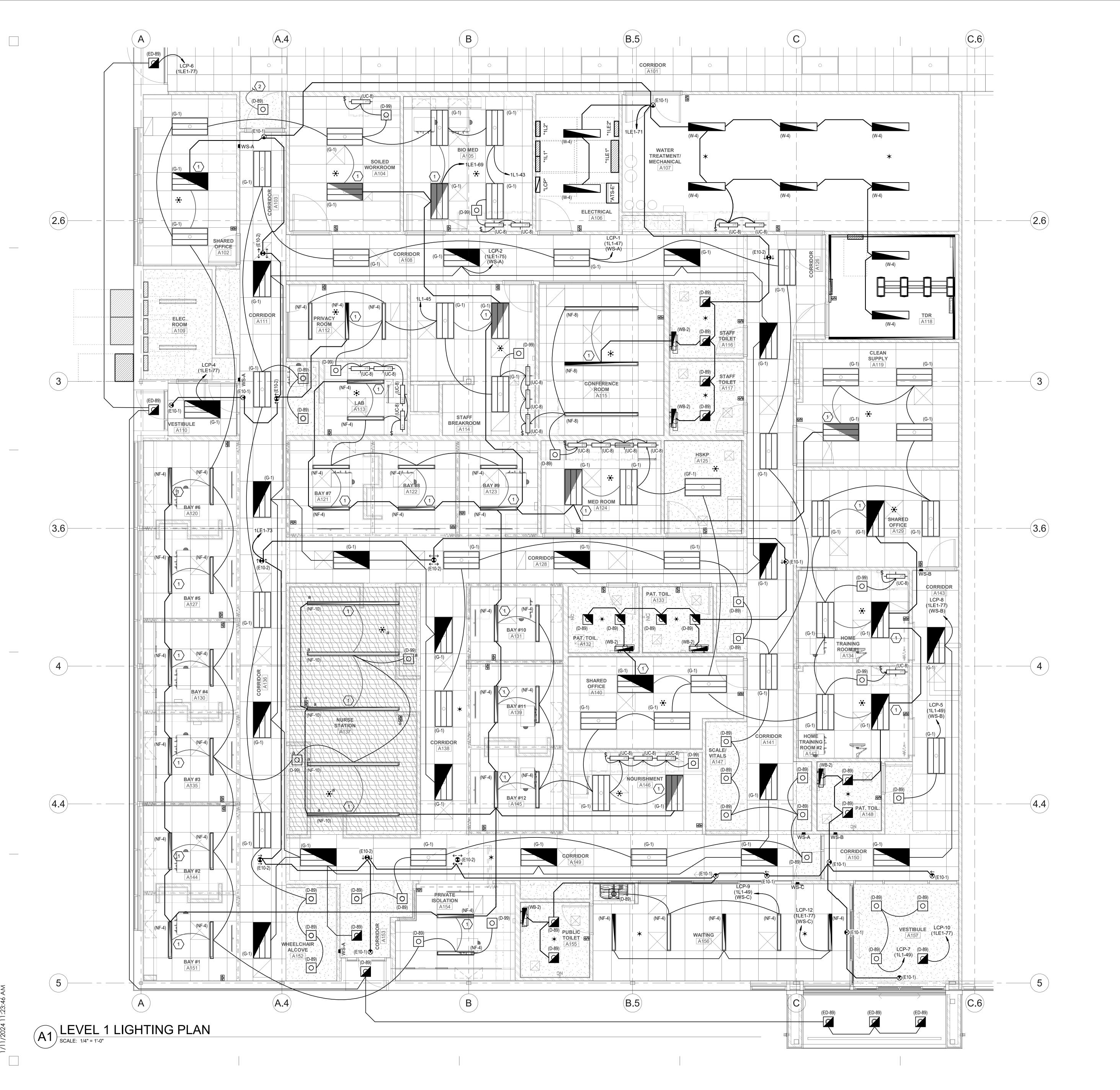
324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

Construction Documents

VENDOR DOCUMENTATION

ME-1.0





#### GENERAL SHEET NOTES

PROVIDE LABELS ON ALL NEW DEVICES PER PROJECT SPECIFICATIONS CONFORMING WITH DIVISION 26 SPECIFICATIONS FOR IDENTIFICATION OF ELECTRICAL EQUIPMENT AND INTERMOUNTAIN'S DIVISION 27 SPECIFICATIONS PRIOR TO SUBSTANTIAL COMPLETION.

2 EXISTING CABLING, CONDUIT, ETC., SERVING SPACES NOT DIRECTLY IMPACTED BY THE SCOPE OF WORK MAY BE IMPROPERLY SUPPORTED OR UNSUPPORTED. PROVIDE AN HOURLY TIME AND MATERIALS RATE FOR PROPERLY SUPPORTING ANY EXISTING TO REMAIN CABLING, CONDUIT, ETC., FOUND TO BE IMPROPERLY SUPPORTED OR UNSUPPORTED TO CONFORM WITH THE SUPPORT REQUIREMENTS IN THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL DOCUMENT AND REPORT ALL INSTANCES OF IMPROPERLY SUPPORTED OR UNSUPPORTED CABLING, CONDUIT, ETC., TO OWNER AND ARCHITECT. RESUPPORT ANY EXISTING CABLING AND/OR CONDUIT AS NECESSARY TO ELIMINATE CONTACT WITH EXISTING FIRE PROTECTION PIPING AND AVOID CONTACT WITH NEW FIRE PROTECTION LINES.



NJRA Architects, Inc. 5272 S. College Drive, Suite 104 Murray, Utah 84123 801.364.9259

www.njraarchitects.com



#### ○ SHEET KEYNOTES

PROVIDE LIGHT FIXTURE WITH GENERATOR TRANSFER DEVICE (BODINE GTD OR EQUIVALENT). DRIVE FIXTURE TO 100% UPON LOSS OF NORMAL POWER. PROVIDE NORMAL POWER CIRCUIT CONNECTION TO GTD DEVICE AHEAD OF SWITCHING FOR DETECTION OF LOSS OF POWER ONLY.

2 CONNECT TO EXISTING NORMAL POWER LIGHTING BRANCH CIRCUIT SERVING EXISTING CORRIDOR LIGHT FIXTURES.

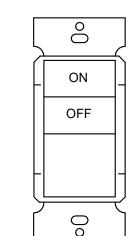


nountain Health Tountain Kidney Service

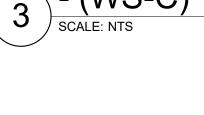
NJRA Project # 22211.05
Construction Documents Jan. 15, 2024

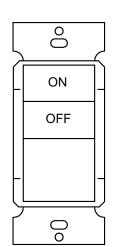
LEVEL 1 LIGHTING PLAN

EL101

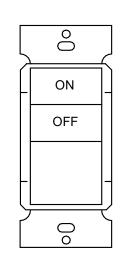


#### WALL STATION ENGRAVING DETAIL





## WALL STATION ENGRAVING DETAIL - (WS-B) SCALE: NTS



## WALL STATION ENGRAVING DETAIL - (WS-A) SCALE: NTS

			LIGH1	ΓING	R	Εl	_A	Y	P	A	NEL	"LCP"			
	LOCAT	ION: ELEC	CTRICAL A106								MOUNTIN	G: SURFACE ENCLOSU	IR NEMA	1	
RELAY	DIMMING	PANEL CIRCUIT	DESCRIPTION	CONTROL CHANNEL		LC	AD (	WAT	TS)		CONTROL CHANNEL	DESCRIPTION	PANEL CIRCUIT	DIMMING	RELA
1		1L1-47	CORRIDOR LIGHTING		10	670						CORRIDOR LIGHTING	1LE1-75		2
3			SPARE				0	40				LCP LIGHTING	1LE1-77		4
5		1L1-49	LIGHTING CORRIDOR A143						70	180		OUTDOOR LIGHTING	1LE1-77		6
7		1L1-49	LIGHTING VESTIBULE A157		90	80						LIGHTING ROOM A150, A143	1LE1-77		8
9		1L1-49	LIGHTING WAITING A156				94	30				LIGHTING VESTIBULE A157	1LE1-77		10
11		1L1-49	SIGNAGE LIGHTING						400	96		LIGHTING WAITING A156	1LE1-77		12
13			SPARE		0	0						SPARE			14
15			SPARE				0	0				SPARE			16
17			SPARE						0	0		SPARE			18
19			SPARE		0	0						SPARE			20
21			SPARE				0	0				SPARE			22
23			SPARE						0	0		SPARE			24
25			SPARE		0	0						SPARE			26
27			SPARE				0	0				SPARE			28
29			SPARE						0	0		SPARE			30

1) PROVIDE TIME CLOCK PROGRAMMING OF INTERIOR LIGHTING PER OWNER DIRECTION.
2) PROVIDE TIME CLOCK PROGRAMMING AND PHOTOCELL OVERRIDE OF EXTERIOR LIGHTING PER OWNER DIRECTION.



DRIVER; LENS; WHITE FLANGE.

(FINAL COLOR BY ARCHITECT)

SERIAL MOUNTED INSTALLATIONS

NOTE TO BIDDERS: COMPLY WITH THE SPECIFICATIONS.

REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT, HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID.

		E MAY OR MAY NOT INCLUDE LAMP(S) OR FR RED UNLESS NOTED OTHERWISE. DIMENSION					,	
B7 (22) (01)	<u> </u>	FIXTURE CHARACTERISTICS		_ (	<u> </u>	<u> </u>	·	
		BODY / AIR / MOUNTING / DOOR						
SYMBOL		LENS/LOUVER/REFLECTOR/OTHER	LAMP	WATTS	VOLTS	MANUFACTURE		NOTE
	D	RECESSED LED: SOLID STATE LED LIGHT E	•				•	
		SYSTEM RATED LIFE 50,000 HOURS AT 70%	6 OUTPUT; l	JL LISTED FO	OR THROUG	SH-BRANCH WIRIN	G AND DAMP LOCATION; LIGHT ENGINE,	
		DRIVER, AND JUNCTION BOX ACCESSIBLE	FROM ABO	VE OR BELO	W CEILING;	SELF-FLANGING T	RIM.	
	D-89	6" APERTURE: COMFORT CLEAR	LED	20W	UNV	LIGHTOLIER	6-RN/P6R-DL-15-835-CD-Z10-U	
		DIFFUSER; 3500 K COLOR TEMP LED;				PRESCOLITE	LTR-6RD-H-SL15L-DM1 / LTR-6RD-T-SL-35K-8-MD-SS-WT	
		~1500 LUMENS; 20 INPUT WATTS;				HALO	HC6-15-D010-HM6-12-835-61-MD-H-WF	
		0-10V SOLID STATE DIMMING				LITHONIA	LDN6-35/15-L06-AR-LSS-MVOLT-GZ10-TRW	
		DRIVER; LENS; WHITE FLANGE.				LITON	CH618-UED10/CR622-SW-T35-UE-D10P1	
						GOTHAM		
	ED-89	(INCLUDE EMERGENCY BATTERY PACK)				PORTFOLIO		
	D-89S	6" APERTURE: COMFORT CLEAR	LED	20W	UNV	LIGHTOLIER	6-RN/P6R-DL-15-835-CD-P-Z10-U	
		DIFFUSER; 3500 K COLOR TEMP LED;				PRESCOLITE	LTR-6RD-H-SL15L-DM1 / LTR-6RD-T-SL-35K-8-MD-SS-LW-V	VT
		~1500 LUMENS; 20 INPUT WATTS;				HALO	HC6-15-D010-HM6-12-835-61-MD-H	
		0-10V SOLID STATE DIMMING				LITHONIA	LDN6-35/15-L06-AR-LSS-MVOLT-GZ10-TRW	
		DRIVER; LENS; CUSTOM COLOR TRIM				LITON	CH618-UED10/CR622-SS-T35	
		(BY ARCHITECT)				GOTHAM		
	D-99	6" APERTURE: COMFORT CLEAR	LED	30W	UNV	LIGHTOLIER	6-RN/P6R-DL-30-835-CD-Z10-U	
		DIFFUSER; 3500 K COLOR TEMP LED;				PRESCOLITE	LTR-6RD-H-SL30L-DM1 / LTR-6RD-T-SL-35K-8-MD-SS-WT	
		3000 LUMENS; ~30 INPUT WATTS;				HALO	HC6-30-D010-HM6-12-835-61-MD-H-WF	
		0-10V SOLID STATE DIMMING				LITHONIA	LDN6-35/30-L06-AR-LSS-MVOLT-GZ10-TRW	

	LENS; GREEN LETTERS ON CLEAR BACKGROUND. MUST MEET NFPA ILLUMINATION STANDARDS. UNITS SHOWN ARE CEILING										
	MOUNT MODELS. CONTRACTOR TO PROVI	DE MATCH	ING LOW LE	VEL WALL MO	UNTED UNITS WE	IERE REQUIRED.					
E10-1	SINGLE FACE:	LED	3W	120/277V	SURELIGHTS	EUX6-1-G					
					DUAL-LITE	LE-C-S-G-(ARROWS PER PLANS)-N-A					
					ISOLITE	UEL-AC-G-1C2M-MTEBR					
E10-2	DUAL FACE:	LED	3W	120/277V	SURELIGHTS	EUX6-2-G					
					DUAL-LITE	LE-C-D-G-(ARROWS PER PLANS)-N-A					
					ISOLITE	UEL-AC-G-1C2M-MTEBR					
	0-10 VOLT DIMINING DRIVER WHERE INDICA	AILD IN I	CODOCT NO	VIBER.							
	0-10 VOLT DIMMING DRIVER WHERE INDICATED IN PRODUCT NUMBER.										
G-1		LED	35W	UNV	DAY-BRITE	2EVG48L835-4-D-UNV-DIM-AG					
G-1	RECESSED LED FIXTURE, 2X4, ACRYLIC				DAY-BRITE METALUX	2EVG48L835-4-D-UNV-DIM-AG 24CZ2-50-UNV-L835-CD-1-AM-U					
G-1											
G-1	RECESSED LED FIXTURE, 2X4, ACRYLIC DIFFUSER, ~4800 LUMENS, MULTI				METALUX	24CZ2-50-UNV-L835-CD-1-AM-U					
G-1	RECESSED LED FIXTURE, 2X4, ACRYLIC DIFFUSER, ~4800 LUMENS, MULTI VOLT, 3500K, GRID MOUNTED,				METALUX LITHONIA	24CZ2-50-UNV-L835-CD-1-AM-U 2VTL4-48L-ADP-EZ1-LP835					
G-1	RECESSED LED FIXTURE, 2X4, ACRYLIC DIFFUSER, ~4800 LUMENS, MULTI VOLT, 3500K, GRID MOUNTED, MINIMUM 82 CRI (~7" WIDE LENS);				METALUX LITHONIA LITETRONICS	24CZ2-50-UNV-L835-CD-1-AM-U 2VTL4-48L-ADP-EZ1-LP835 VLT43540					
	RECESSED LED FIXTURE, 2X4, ACRYLIC DIFFUSER, ~4800 LUMENS, MULTI VOLT, 3500K, GRID MOUNTED, MINIMUM 82 CRI (~7" WIDE LENS); ANTIMICROBIAL FINISH	LED	35W	UNV	METALUX LITHONIA LITETRONICS VISCOR	24CZ2-50-UNV-L835-CD-1-AM-U 2VTL4-48L-ADP-EZ1-LP835 VLT43540 LRT-F-2X4-LED-8-35K-052LC-F37					
	RECESSED LED FIXTURE, 2X4, ACRYLIC DIFFUSER, ~4800 LUMENS, MULTI VOLT, 3500K, GRID MOUNTED, MINIMUM 82 CRI (~7" WIDE LENS); ANTIMICROBIAL FINISH  RECESSED LED FIXTURE, 2X2, ACRYLIC	LED	35W	UNV	METALUX LITHONIA LITETRONICS VISCOR  DAY-BRITE	24CZ2-50-UNV-L835-CD-1-AM-U 2VTL4-48L-ADP-EZ1-LP835 VLT43540 LRT-F-2X4-LED-8-35K-052LC-F37 2EVG40L835-4-D-UNV-DIM-AG					
	RECESSED LED FIXTURE, 2X4, ACRYLIC DIFFUSER, ~4800 LUMENS, MULTI VOLT, 3500K, GRID MOUNTED, MINIMUM 82 CRI (~7" WIDE LENS); ANTIMICROBIAL FINISH  RECESSED LED FIXTURE, 2X2, ACRYLIC DIFFUSER, ~4000 LUMENS, MULTI	LED	35W	UNV	METALUX LITHONIA LITETRONICS VISCOR  DAY-BRITE METALUX	24CZ2-50-UNV-L835-CD-1-AM-U 2VTL4-48L-ADP-EZ1-LP835 VLT43540 LRT-F-2X4-LED-8-35K-052LC-F37  2EVG40L835-4-D-UNV-DIM-AG 22CZ2-35-UNV-L840-CD-1-AM-U					

GOTHAM PORTFOLIO

	ANTIMICROBIAL FINISH				VISCOR	LRT-F-2X2-LED-8-35K-038L-UNV-F37
GF			•			H LATCH; EARTHQUAKE CLIPS, SOLID STATE LED IM SYSTEM RATED LIFE 50,000 HOURS AT 70%
	OUTPUT; LISTED FOR THROUGH-BRANCH				•	•
GF-1	RECESSED TROFFER, 2X4; STATIC;	LED	40W	UNV	METALUX	24FP4735C / DF-24W-U
	ACRYLIC PRISMATIC LENS				DAYBRITE	2FPZ-48L-835-4-DS-UNV-DIM / FMA24
	~4800 LUMENS; MULTI VOLT, 3500K;				TRULY GREEN	882440-35-S-F / 8824-FMK
	MINIMUM 82 CRI; DRYWALL FRAME KIT				COLUMBIA	CFP24-55/41/3435-FK24
					LITHONIA	EPANL-2x4-4800LM-80CRI-35K-MIN1-ZT-MVOLT

NF-4	4" X 48" GRID MOUNTED: FLUSH SATIN LENS, LED, 0-10V DIMMING; ~1000 LUMENS PER LINEAR FOOT; 3500K; ~8W/LF	LED	32W	UNV	PINNACLE AXIS MARK ARCH NEORAY	EV4D-A-835VHO-4-XX(X)-U-PL2-1-0-W BMRLED-1000-80-35-FL-4-W-UNV-DP-1-XXX SL4L-LOP-4FT-FLP-XX-80CRI-35K-1000LMF-MIN1-277-ZT S124DR-S-1020D-8-35-XXX-4F-1-U-DD-F-W
NF-8	4" X 96" GRID MOUNTED: FLUSH SATIN LENS, LED, 0-10V DIMMING; ~1000 LUMENS PER LINEAR FOOT; 3500K; ~8W/LF	LED	64W	UNV	PINNACLE AXIS MARK ARCH NEORAY	EV4D-A-835VHO-8-XX(X)-U-PL2-1-0-W BMRLED-1000-80-35-FL-8-W-UNV-DP-1-XXX SL4L-LOP-8FT-FLP-XX-80CRI-35K-1000LMF-MIN1-277-ZT S124DR-S-1020D-8-35-XXX-8F-1-U-DD-F-W
NF-10	4" X 120" GRID MOUNTED: FLUSH SATIN LENS, LED, 0-10V DIMMING; ~1000 LUMENS PER LINEAR FOOT; 3500K; ~8W/LF	LED	80W	UNV	PINNACLE AXIS MARK ARCH NEORAY	EV4D-A-835VHO-10-XX(X)-U-PL2-1-0-W BMRLED-1000-80-35-FL-10-W-UNV-DP-1-XXX SL4L-LOP-10FT-FLP-XX-80CRI-35K-1000LMF-MIN1-277-ZT S124DR-S-1020D-8-35-XXX-10F-1-U-DD-F-W

NARROW APPERTURE LED FIXTURES: RECESSED LINEAR FIXTURE; STATIC; EARTHQUAKE CLIPS INSTALLED ON GRID FIXTURES; OPAQUE ACRYLIC LENS

	occort, ovvier	11201011	0121010 10200 0
UC	LED UNDERCABINET LIGHT: LOW PROFILE 1" HIGH X 1-3/4"DEEP X LENGTH AS N	IOTED; EXTRUDED	ALUMINUM BODY;
	EXTRUDED CLEAR, POLYCARBONATE LENS; INTERNAL LED DRIVER; EFFICACY	GREATER THAN 40	LUMENS PER WATT
	50,000 HOUR RATED LAMP LIFE; 2700 - 3000 DEG KELVIN COLOR TEMPERATURE	, WIRING COMPAR	TMENT; FLUSH END.
	CONNECTORS FOR ROW INSTALLATION (CONNECTORS ARE NOT INCLUDED IN	THE FIXTURE SCHE	DULE CATALOG
	NUMBERS - CONNECTOR CONFIGURATION TO BE FIELD DETERMINED BY CONT	RACTOR PRIOR TO	PURCHASE).

SURFACE MOUNTED UNDERCABINET	LED	5W	UNV	DAY-BRITE	LINCS100E-L19-935-UNV-SWH-DIM-LINCS100ICSW
LIGHT FIXTURE, LED, 19" NOMINAL				AIREY THOMP	SON13HC-N-35K-18-2-3-D11
LENGTH, WHITE ANTIMICROBIAL				FAILSAFE	UCL-2-LD4-35-A12125-ED1D1-UNV-AM
FIINISH, UNIVERSAL VOLTAGE, ~400				KELVIX	UC22-3035-010V-120277-WHM / UC-HW / UC-JP-6-SET
LUMENS, PROVIDE INTERCONNECT					
CORDS BETWEEN FIXTURES FOR					

URVED ACRYLIC PRISMATIC
J

W-4	WIDE BODY WRAPAROUND;	LED	45W	UNV	KENALL	MLRS12-48-F-MW-PP-1-45L35K-DCC-1-DV
	LED; ~5000 LUMENS				CERTOLUX	VRSE-3556-48-LED-8-35K-048L-UNV
					NEWSTAR	VIC-4-W-L2-35-1C-RW-UN-WH-DM
					LITHONIA	VPF12-4FT-MIN1-50W-35K-MVOLT-OP-WHT

WB	WALL MOUNTED FIXTURE: AS INDICATED	ON DRAWIN	GS; WITH A	CRYLIC DIFF	FUSER; LED WITH IN	NTEGRAL DRIVER;
WB-2	WALL MOUNTED LED LINEAR FIXTURE;	LED	30W	UNV	MARK ARCH	S2LWID-LCB-2FT-80CRI-35K-800LMF-I80CRI-I40K-
	2" WIDE x 24" LONG; UP AND DOWN					-I800LMF-AS-MIN1-SCT-MVOLT-WHT-ZT
	LIGHTING (~800 LPF/~800 LPF);				PINNACLE	EX2DI-A-WHE-835HO-835HO-2-WA-U-PL2-1-0-W
	DUST COVER				STARTEK	SLIMDI-2-750-750-SD-CL-35K-80-PW-MW-U
	MOUNT FIXTURE MINIMUM 12"				FINELITE	HP2WM-ID-2-H-V-835-TG-F-96LG-277-SC-FC-10%-
	BELOW CEILING					MB-FE-SW

RW2-4-B-09-L35-UNV-D-11-FRF-WH-2-DG

ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

ntain Health Iountain Kidney Servic

NJRA Project # 22211.05

Construction Documents Jan. 15, 2024

INTERIOR LIGHTING FIXTURE SCHEDULE

L601



PRINT AND VIEW SHEET IN COLOR FOR CLARITY

ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com









Intermountain Health Intermountain Kidney Services West Valley Dialysis

NJRA Project #

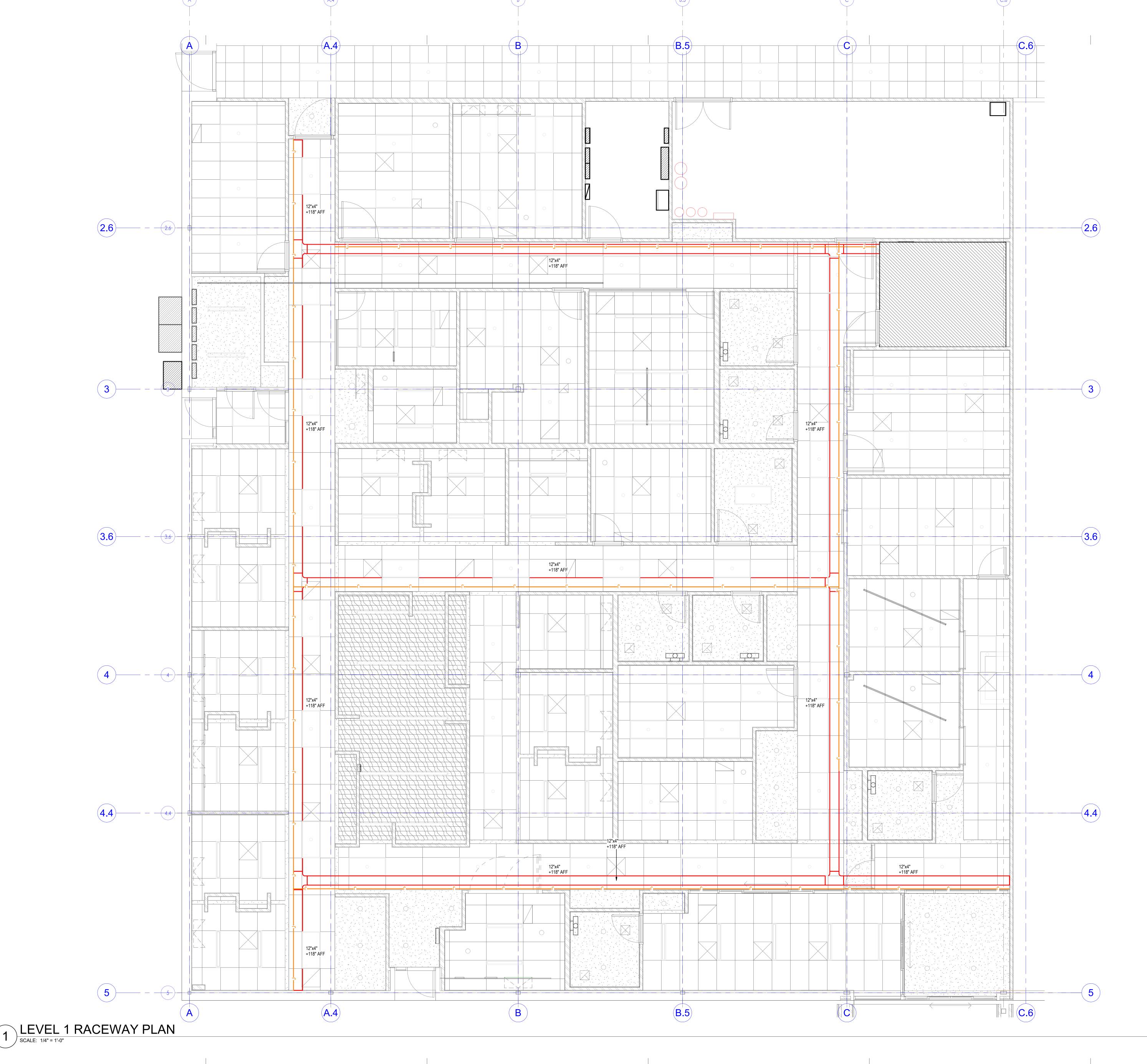
LEVEL 1 OVERALL RACEWAY

Construction Documents Jan. 15, 2024

22211.05

ET201

PLAN





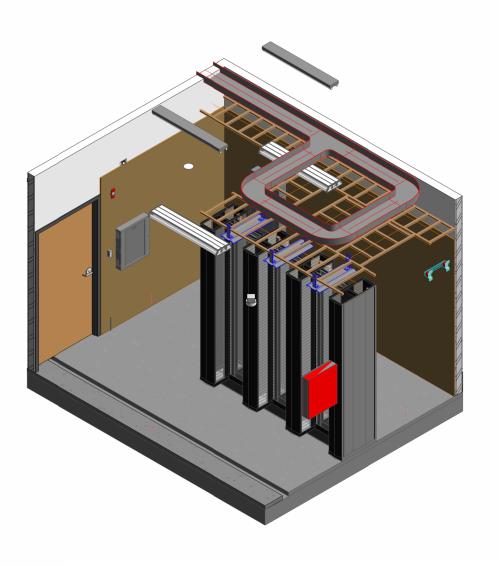




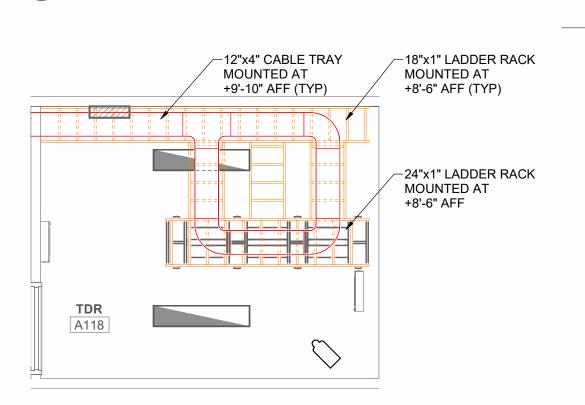
Services

untain Health nountain Kidne Valley Dialysis

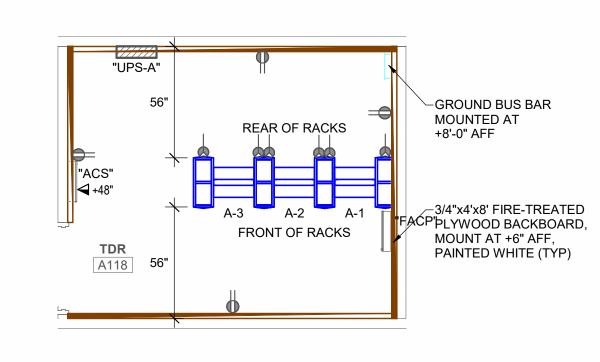
NJRA Project #



3 TDR A118 ISOMETRIC PLAN SCALE:



**ENLARGED TDR A118** 2 LADDER RACK PLAN
SCALE: 1/4" = 1'-0"



**ENLARGED TDR A118** 

ENLARGED TELECOM PLANS

Construction Documents Jan. 15, 2024

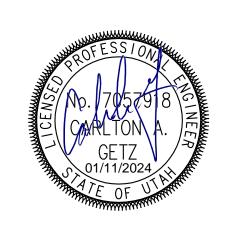
22211.05

ET401

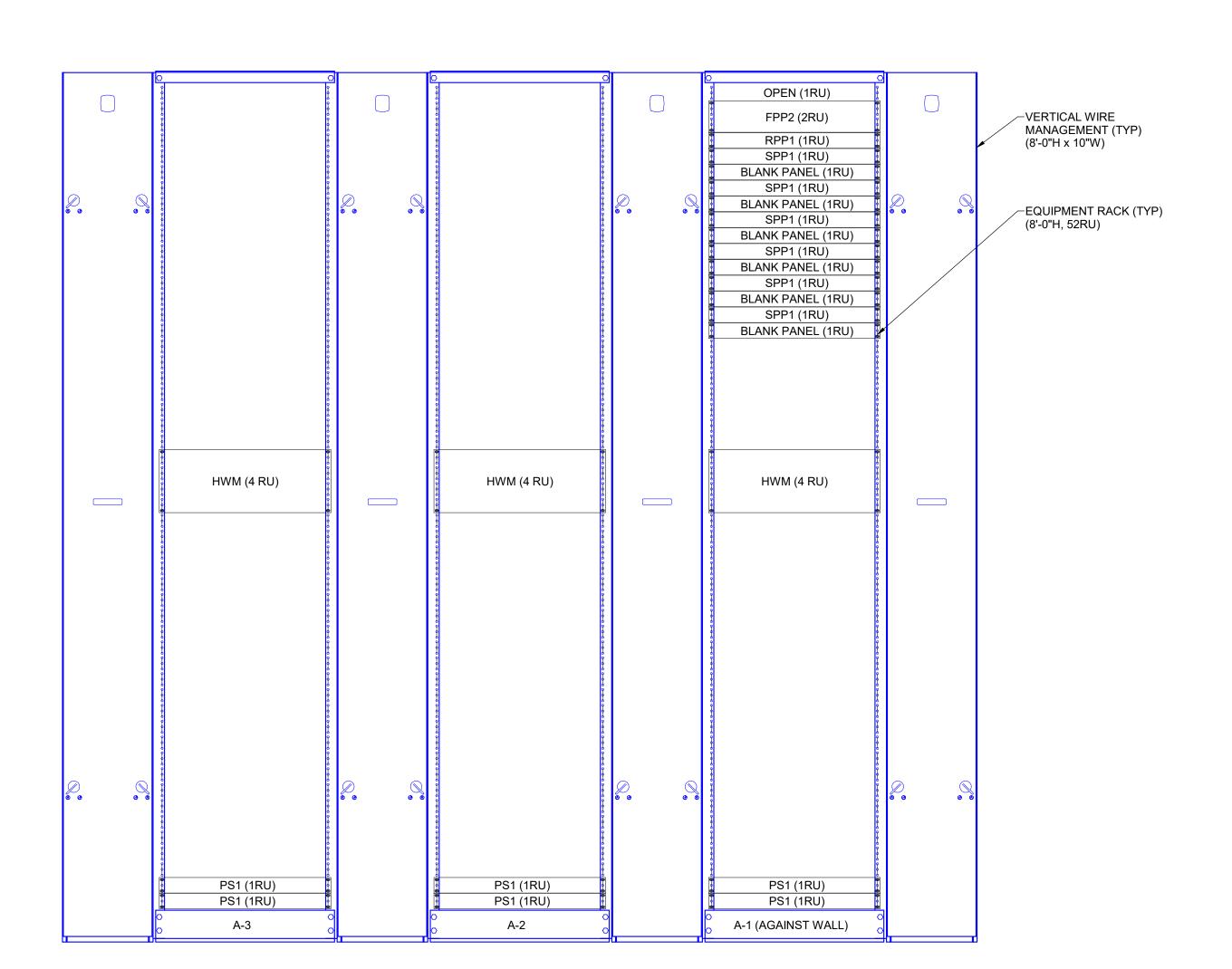
1 EQUIPMENT RACK PLAN
SCALE: 1/4" = 1'-0"

DATA DEVIC			_	
	DETAIL	COMM ROOM	TOTAL BY	
DATA DEVICE TYPE	LOCATION	LOCATION	FLOOR	Num of Drops
Level 1			1	1
CEILING DATA (2-DROP)	SEE DETAIL 7/ET502	TDR A118	15	30
CEILING DATA - CAMERA (1-DROP)	SEE DETAIL 5/ET502	TDR A118	15	15
CEILING WIRELESS ACCESS POINT (2-DROP)	SEE DETAIL 6/ET502	TDR A118	10	20
FLOOR DATA (2-DROP)	SEE DETAIL 3/ET502	TDR A118	1	2
WALL DATA (1-DROP)	SEE DETAIL 2/ET502	TDR A118	3	3
WALL DATA (2-DROP)	SEE DETAIL 3/ET502	TDR A118	62	124
WALL DATA (4-DROP)	SEE DETAIL 4/ET502	TDR A118	7	28
WALL DATA - ABOVE COUNTER (2-DROP)	SEE DETAIL 3/ET502	TDR A118	8	16
WALL DATA - ALERTUS (1-DROP)	SEE DETAIL 2/ET502	TDR A118	1	1
WALL DATA - KRONOS (1-DROP)	SEE DETAIL 2/ET502	TDR A118	1	1
Grand total	•		123	240









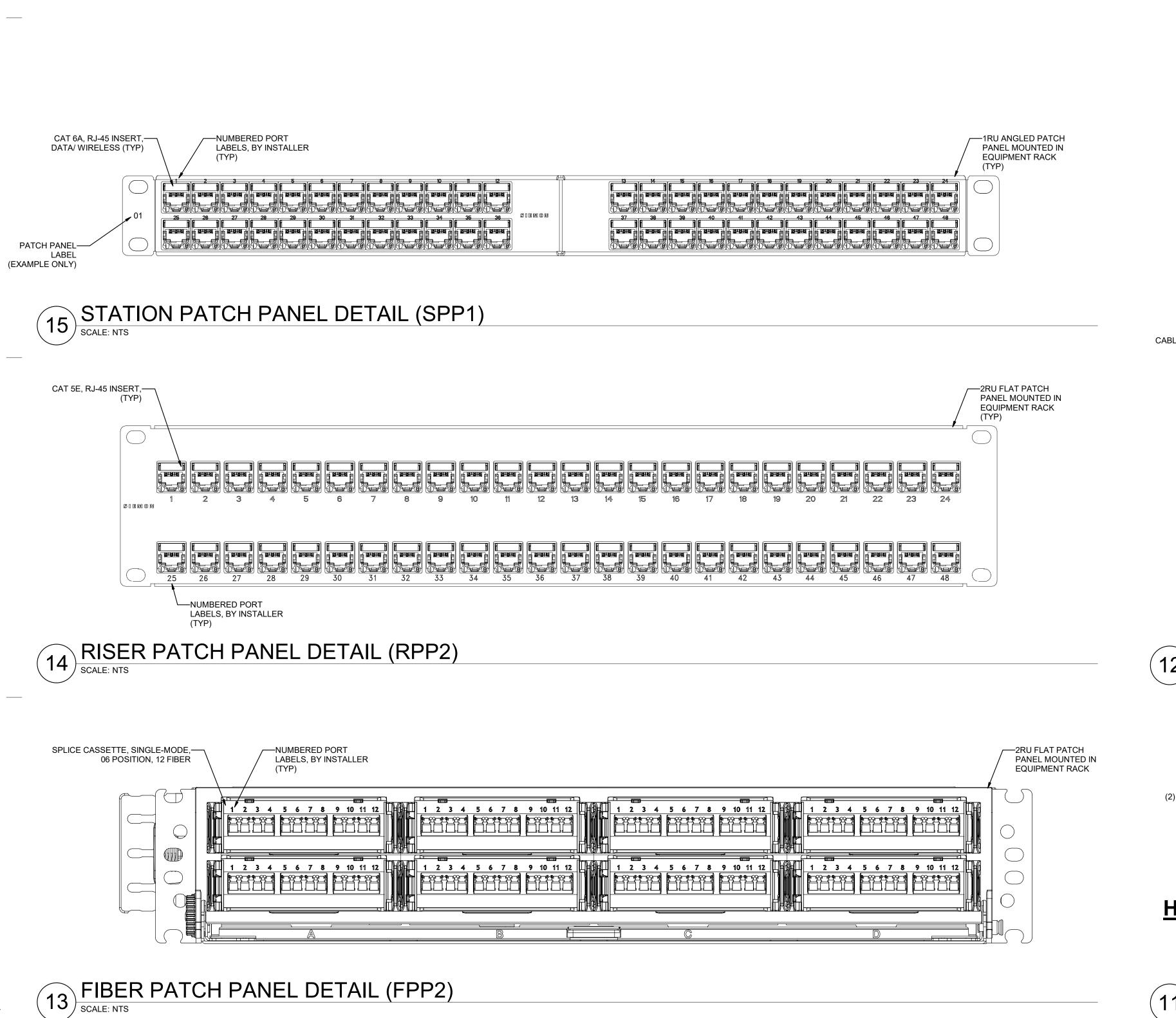
Intermountain Health
Intermountain Kidney S
West Valley Dialysis NJRA Project # Construction Documents Jan. 15, 2024

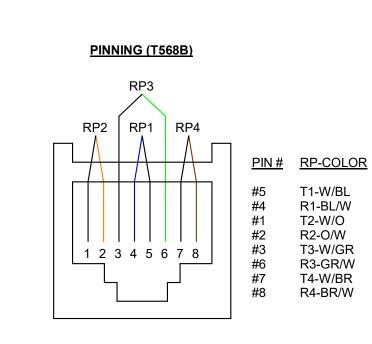
Services

TELECOM EQUIPMENT RACK ELEVATIONS

22211.05

ET501





**ARCHITECTS** 

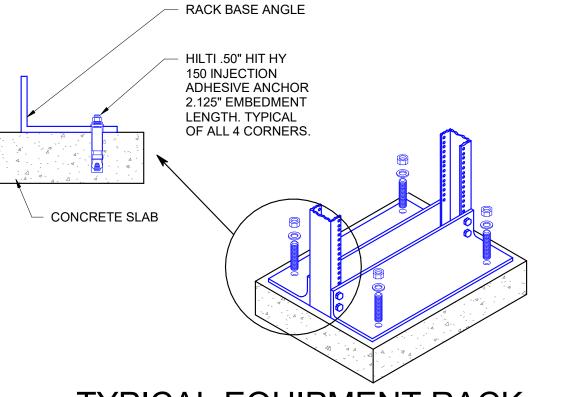


SPECTRUM ENGINEERS

324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077

801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

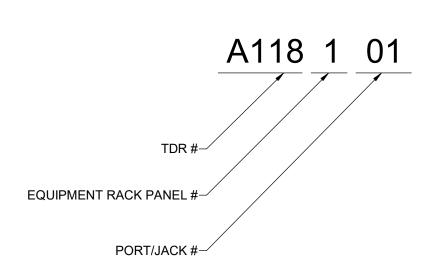
TYPICAL VOICE/DATA OUTLET PINNING DETAIL SCALE: NTS



TYPICAL EQUIPMENT RACK SUPPORT DETAIL

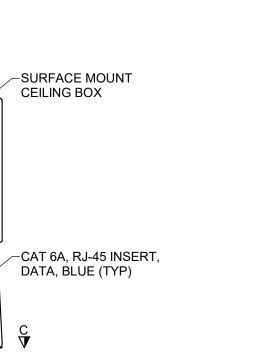
SCALE: 1/8" = 1'-0"

A118-1-01 A118-1-02

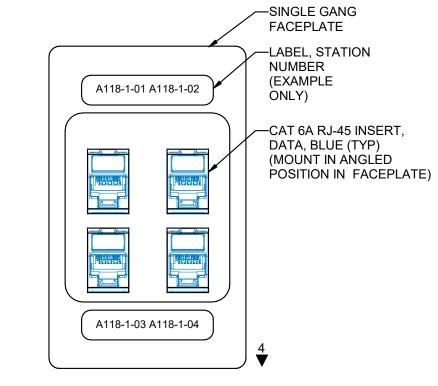


TYPICAL CABLE **IDENTIFICATION DETAIL** (EXAMPLE)

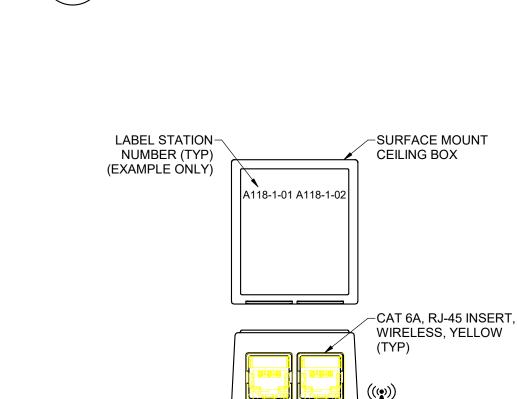
SCALE: NTS



TYPICAL 2-DROP CEILING DATA 7 DETAIL
SCALE: NTS



TYPICAL 4-PORT WALL DATA OUTLET SCALE: NTS



STATION NUMBER

(EXAMPLE ONLY)

LABEL STATION-

NUMBER (TYP)

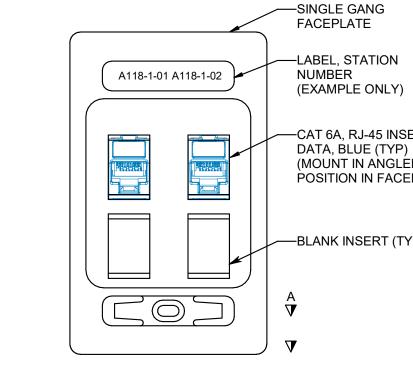
(EXAMPLE ONLY)

TYPICAL 2-DROP WIRELESS ACCESS POINT DETAIL (6) SCALE: NTS

∼SURFACE MOUNT

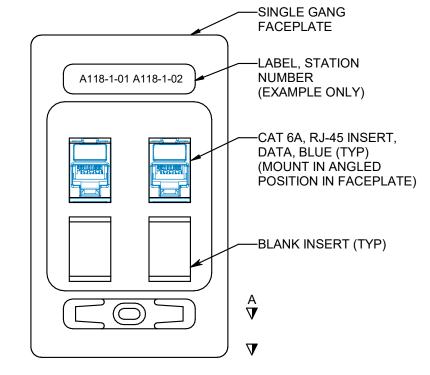
CAT 6A, RJ-45 INSERT, SECURITY, BLUE

\_\_\_\_\_CEILING BOX

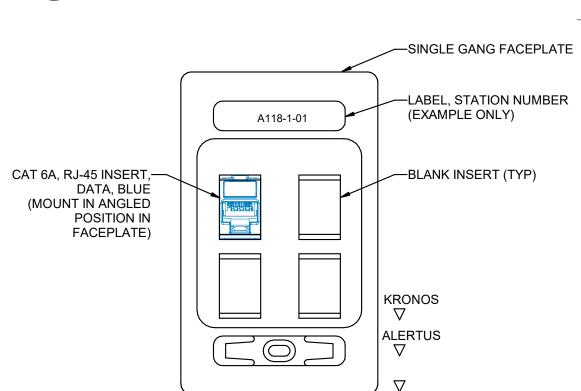


TYPICAL 2-PORT WALL DATA OUTLET

SCALE: NTS



NJRA Project # -SINGLE GANG FACEPLATE Construction Documents



TYPICAL 1-PORT WALL DATA 2 OUTLET SCALE: NTS

TELECOM DETAILS

S

Kidr

aff Zin

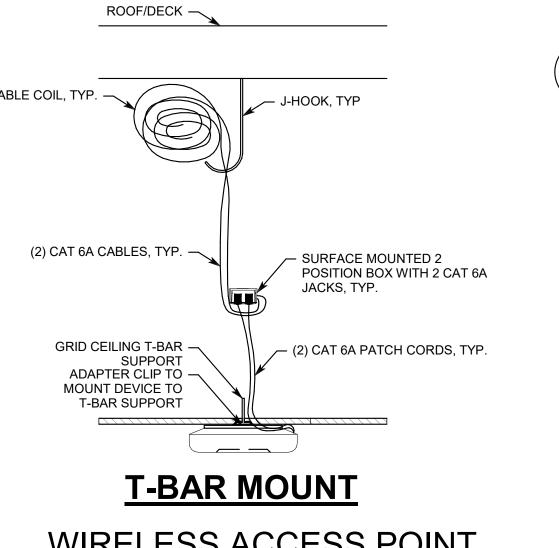
**Dialysis** 

22211.05

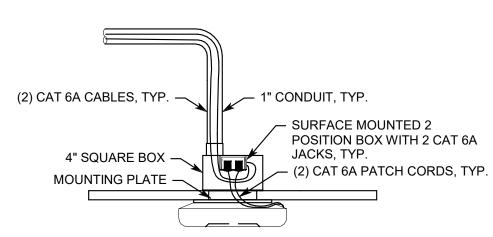
Jan. 15, 2024

ET502

PRINT AND VIEW SHEET IN COLOR FOR CLARITY

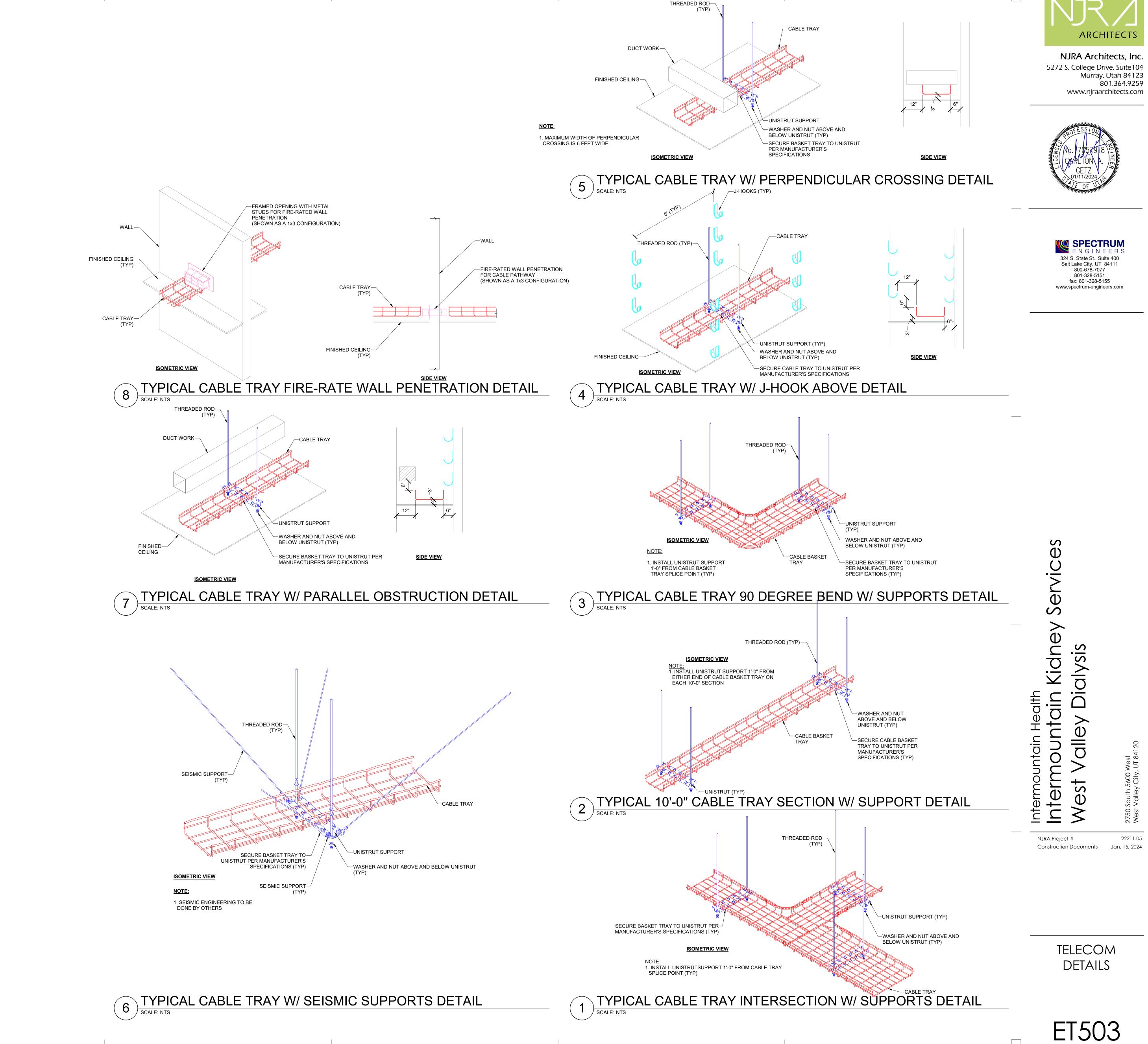


**WIRELESS ACCESS POINT** MOUNTING DETAIL (T-BAR) (12) IVIOUN I

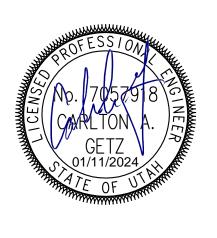


#### **HARD-LID CEILING MOUNT**

WIRELESS ACCESS POINT MOUNTING DETAIL (HARD-LID CEILING) (11) (SCALE: 1/8" = 1'-0"



22211.05



324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

NJRA Project #

22211.05

Construction Documents Jan. 15, 2024

TELECOM EQUIPMENT RACK GROUNDING

DETAIL ET504

1 TYPICAL TELECOM EQUIPMENT RACK GROUNDING DETAIL
SCALE: NTS

\_\_\_\_\_1 EA., #6 CABLE, GREEN

**GENERAL NOTES:** 

1. ALL LOW VOLTAGE COMMUNICATIONS CONDUIT SHALL BE GROUNDED TO BASKET TRAY OR TELECOMMUNICATIONS GROUNDING BUS BAR.

4. EMT CONDUIT GROUNDING CLAMP SHOULD BE ELECTROLYTIC CAST BRONZE (PANDUIT PART

RIGID CONDUIT GROUND CLAMP SHOULD BE PART NUMBER O-Z/GEDNEY BLG-XXXX, OR

6. GROUNDING LUGS SHOULD BE TWO-HOLE LONG BARREL LUGS (PANDUIT PART NUMBER

> BEAM CLAMP, TYPICAL

> > — 1 EA., #6 CABLE, GREEN

— TMGB/TGB, TYPICAL

1 EA., #6 CABLE, GREEN

OSP COPPER FUSE

PROTECTION (WALL MOUNTED)

GROUNDING ELECTRODE
TO BUILDING ELECTRODE
SYSTEM (OVERHEAD OR

ENTRANCE CONDUITS
 OR METALLIC SLEEVES

UNDERGROUND)

LADDER RACK -JUNCTION SPLICE, TYPICAL

1 EA., #6 GROUNDING —— STRAP, TYPICAL

— CONDUIT, TYPICAL

CABLE BASKET TRAY.
 FOLLOW MANUFACTURER'S GROUNDING INSTRUCTIONS.

LADDER RACK,
 TYPICAL

COMMUNICATION -

OUTLET, TYPICAL

FLOOR BOX/POKE THRU BOX, TYPICAL

NUMBER GPL-"X"-"X", OR EQUAL).

2. "TMGB" SHOULD BE 1/4"x4"x24".

3. "TGB" SHOULD BE 1/4"x2"x24".

HBLG-XXXX, OR EQUAL.

LCC6, OR EQUÀL).

TO ELECTRICAL -PANEL, TYPICAL

1 CONTRACTOR TO PROVIDE SLEEVES THROUGH ALL WALLS FOR CABLE PATHWAYS. ALL FIRE-RATED WALLS REQUIRE A FIRE-RATED SLEEVE. SEE SPECS FOR MORE INFORMATION. ALL SMOKE/ NON-RATED WALLS REQUIRE A CONDUIT SLEEVE WITH BUSHINGS AND ARE REQUIRED TO BE SEALED WITH FIRE-RATED CAULK AND PUTTY. CONTRACTOR TO DETERMINE FINAL NUMBER OF SLEEVES FOR PENETRATIONS THROUGH WALLS.

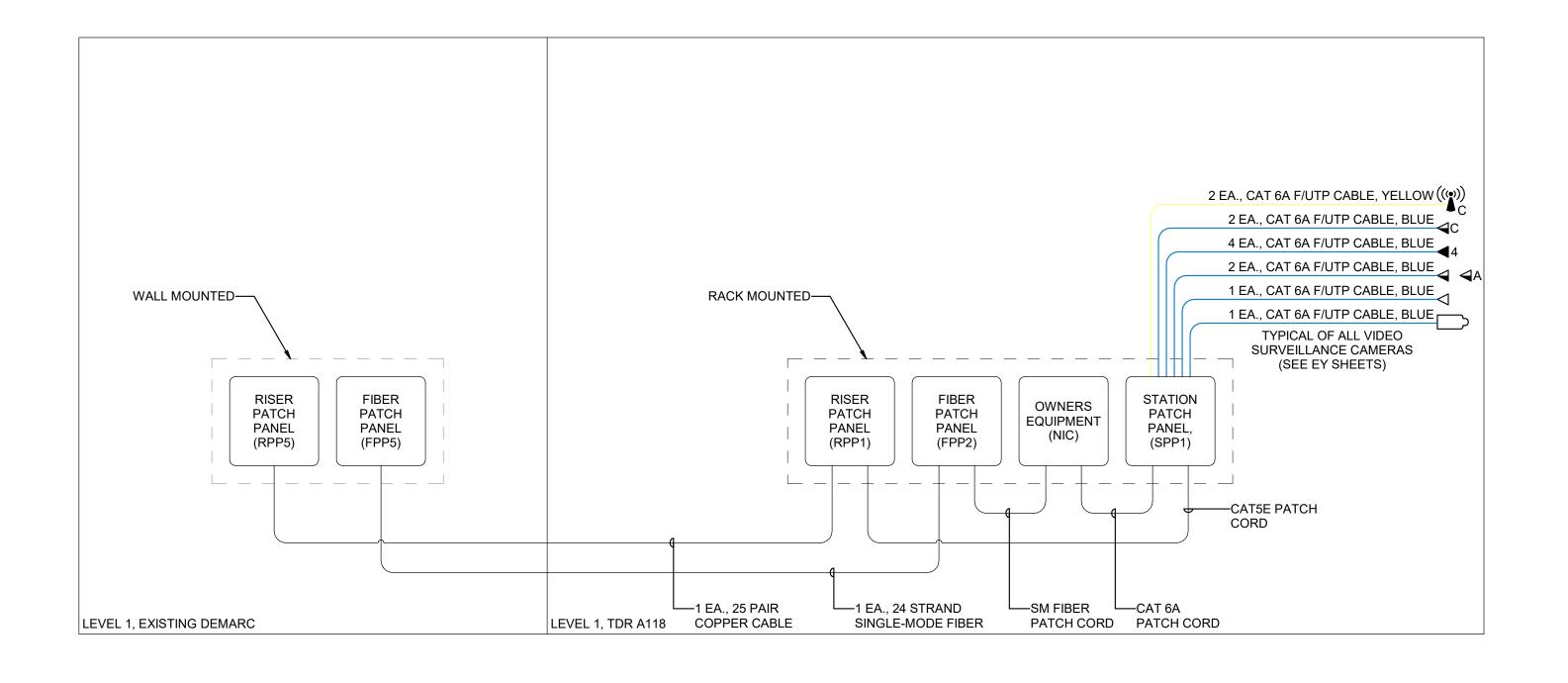
2 CONTRACTOR TO COORDINATE PATHWAY TO EXISTING DEMARC PRIOR TO BID.



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com

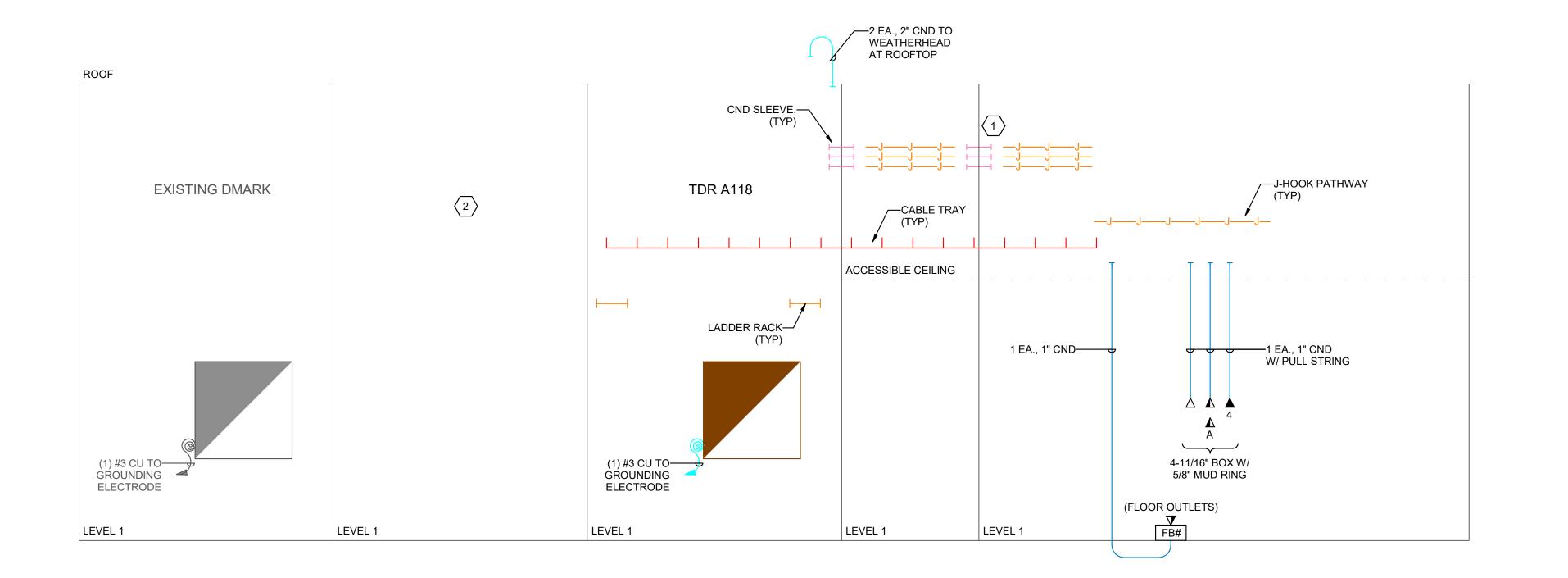


SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com



TELECOM CABLE RISER DIAGRAM

SCALE: NTS



TELECOM RISER DIAGRAMS

Construction Documents Jan. 15, 2024

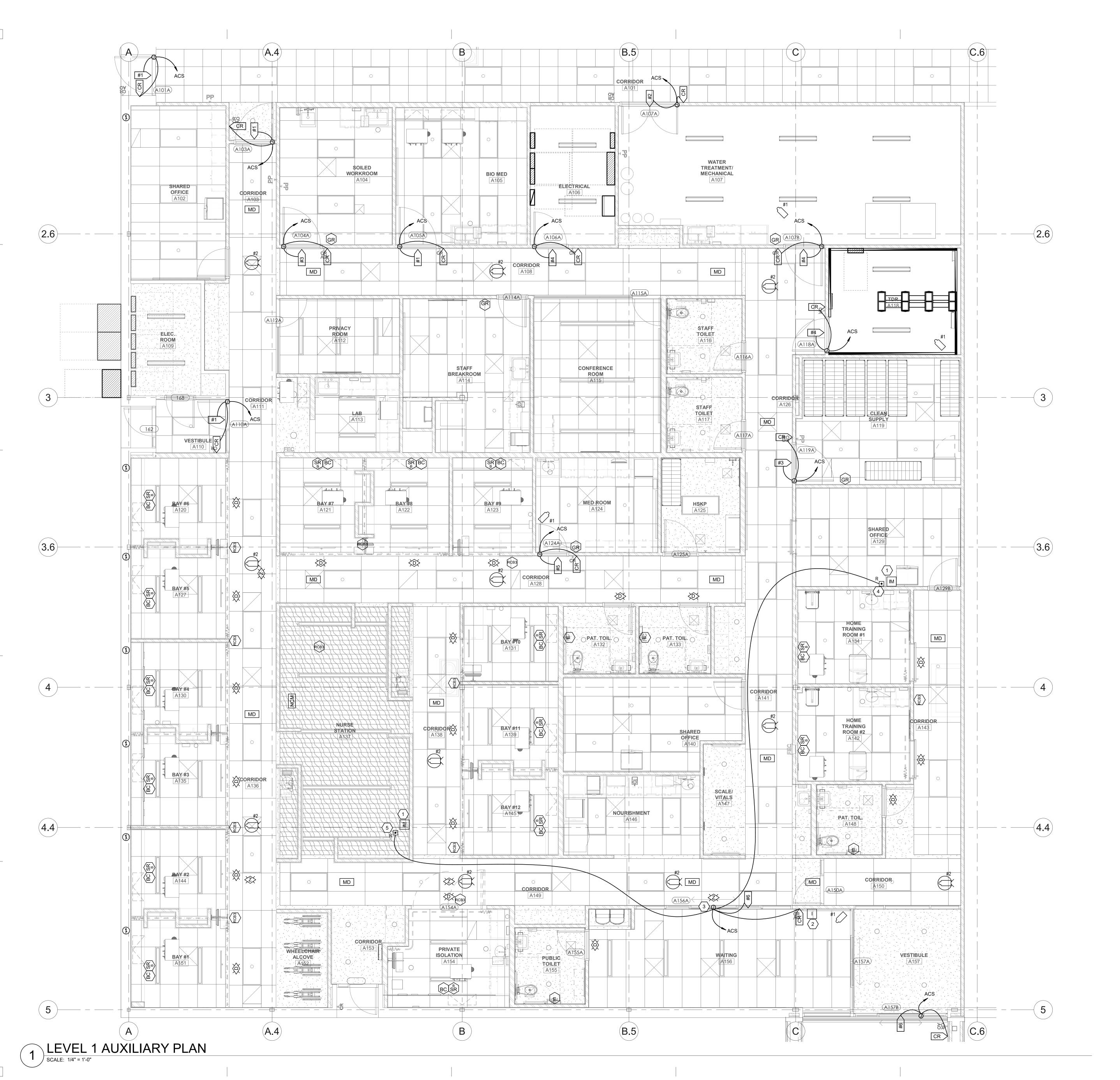
22211.05

Intermountain Health Intermountain Kidney S West Valley Dialysis

NJRA Project #

1 TELECOM CONDUIT RISER DIAGRAM
SCALE: NTS

ET601



#### GENERAL SHEET NOTES

1 PROVIDE LABELS ON ALL NEW DEVICES PER PROJECT SPECIFICATIONS CONFORMING WITH DIVISION 26 SPECIFICATIONS FOR IDENTIFICATION OF ELECTRICAL EQUIPMENT AND INTERMOUNTAIN'S DIVISION 27 SPECIFICATIONS PRIOR TO SUBSTANTIAL COMPLETION.

2 EXISTING CABLING, CONDUIT, ETC., SERVING SPACES NOT DIRECTLY IMPACTED BY THE SCOPE OF WORK MAY BE IMPROPERLY SUPPORTED OR UNSUPPORTED. PROVIDE AN HOURLY TIME AND MATERIALS RATE FOR PROPERLY SUPPORTING ANY EXISTING TO REMAIN CABLING, CONDUIT, ETC., FOUND TO BE IMPROPERLY SUPPORTED OR UNSUPPORTED TO CONFORM WITH THE SUPPORT REQUIREMENTS IN THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL DOCUMENT AND REPORT ALL INSTANCES OF IMPROPERLY SUPPORTED OR UNSUPPORTED CABLING, CONDUIT, ETC., TO OWNER AND ARCHITECT. RESUPPORT ANY EXISTING CABLING AND/OR CONDUIT AS NECESSARY TO ELIMINATE CONTACT WITH EXISTING FIRE PROTECTION PIPING AND AVOID CONTACT WITH NEW FIRE PROTECTION LINES.



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



#### ○SHEET KEYNOTES

LOCATION WITH ARCHITECTURAL PRIOR TO INSTALLATION.

- VIDEO INTERCOM SYSTEM NOTIFICATION LOCATION VIA NETWORK. COORDINATE INSTALLATION AND PROGRAMMING WITH OWNER.

  VIDEO INTERCOM STATION (NETWORK CONNECTED) FOR UNIT ACCESS (AXIS 1807-LVE OR EQUIVALENT WITH PRIOR APPROVAL). COORDINATE EXACT
- 3 SLIDING DOOR TO BE CONTROLLED BY REMOTE RELEASE DEVICES. REFER TO POWER PLAN FOR CIRCUITING INFORMATION.
- 4 PROVIDE WALL MOUNTED REMOTE RELEASE DEVICE FOR SLIDING DOOR
- 5 PROVIDE UNDER DESK MOUNTED REMOTE RELEASE DEVICE DESK FOR SLIDING DOOR CONTROL.



# tain Health Suntain Kidney Service

750 South 5600 West /est Valley City, UT 84120

NJRA Project # 22211.05

Construction Documents Jan. 15, 2024

LEVEL 1 AUXILIARY PLAN

EY101

**ABBREVIATIONS** 

1G = 1-GANG OR SINGLE GANG
4SQ = FOUR SQUARE JUNCTION BOX
AO = AUTO OPENER
A/R = AS REQUIRED
ACC = ACCESSIBLE
ACS = ACCESS CONTROL SYSTEM CONTROLLER

ADA = ASSISTED DISABILITY OPENER

AED = ELECTRIC EXIT DEVICE/CR COMBO ON DOOR

AEL = ELECTRIC LOCK/CR COMBO ON DOOR

C = CONDUIT

CI = DOOR CONTACT INDICATOR SWITCH

CR = CARD READER

DH = DOOR HARNESS

DBL = DOUBLE

FIRE ALARM SYSTEM

FRAME HARNESS

DED = DELAYED EXIT DEVICE
DIR = DIRECTION

ED = EXIT DEVICE
EH = ELECTRIC HINGE

EL = ELECTRIC STRIKE

EDL = ELECTRIC DEADLATCH

EED = ELECTRIFIED EXIT DEVICE

ELC = EMERGENCY LOCK CONTROL

EPT = ELECTRIC POWER TRANSFER

FA =

#### **ABBREVIATIONS**

HDWR = HARDWARE

IDS = INTRUSION DETECTION SYSTEM

KS = KEY SWITCH

LS = LOCK INDICATOR SWITCH IN HARDWARE

LX = PANIC HARDWARE LATCH POSITION SWITCH

L/PS = LOCK POWER SUPPLY

MD = MOTION DETECTOR

ML = ELECTROMAGNETIC LOCK

OCC = OCCUPANCY

OFP = OBTAIN FROM PLANS

PB = PUSH BUTTON RELEASE

PH = PANIC HARDWARE

PP = PUSH PAD ACTUATOR
PS = POWER SUPPLY
PED = POE EXIT DEVICE
PEL = POE ELECTRIC LOCKSET
PIB = INTERFACE BOARD FOR COMBO LOCKING HARDWARE
PWR = POWER
QTY = QUANTITY
RS = REMOTE OPEN SWITCH
REX = REQUEST TO EXIT SWITCH/FUNCTION

TLC = TIME/SYSTEM LOCK CONTROL
TYP = TYPICAL
W/ = WITH

#### NOTES

- 1. PROVIDE RACEWAY AND EQUIPMENT AS INDICATED FOR CARD ACCESS DOOR TYPE INDICATED. REFER TO SECTION 281300 AND CARD ACCESS LOCK CONTROL DETAILS FOR ADDITIONAL REQUIREMENTS.
- 2. PROVIDE CONCEALED .75" C TYPICAL FOR LINES SHOWN TO DEVICE BOXES ON PROTECTED SIDE AND UNPROTECTED SIDE ELEVATIONS.
- 3. CONFIRM CORRECT CARD ACCESS DOOR RACEWAY, LOCK VOLTAGE, AND EXIT SWITCH CURRENT RATING (2 AMPS MIN.) WITH DIV. 8 FURNISHED CARD ACCESS DOOR HARDWARE PER DIV. 8 DOOR HARDWARE SPECIFICATIONS.
- 4. LOCATE CARD READER BOX AS INDICATED ON FLOOR PLANS. RACEWAY AND BOXES BY DIV. 26. REFER TO 281300 FOR CARD ACCESS SYSTEM REQUIREMENTS.
- DOUBLE 4SQ J-BOX ON PROTECTED SIDE OF DOORWAY (SIDE OPPOSITE OF CARD READER) ABOVE ACCESSIBLE CEILING OR IN OTHER ACCESSIBLE LOCATION. PROVIDE COVER FOR J-BOX.
- 6. ELECTRIC LOCKING HARDWARE (MAG LOCKS, ELECTRIC STRIKES, POWER TRANSFER HINGES, ETC.) BY DIV 8. REVIEW DOOR HARDWARE FURNISHED AND VERIFY LOCK VOLTAGES AND OPERATIONAL FUNCTIONALITY OF LOCKS. CONTACT ENGINEER WITH QUESTIONS OR CONCERNS.

			CARD ACCESS DOOR	TYPE SCHEDULE		
DOOR TYPE#	SYMBOL	DESCRIPTION	PROTECTED SIDE ELEVATION	UNPROTECTED SIDE ELEVATION	LOCK TYPE(S)	DIVISION OF WORK AND COMMENTS
TYPE 1	TO ACS  #1  HARDWARE SET(S):	SINGLE DOOR, 1 CARD READER FREE EGRESS	4SQ J-BOX ABOVE ACC CEILING  FRAME HARNESS IN .75" C (TYP)  DOOR HARNESS ELECTRIC EXIT DEVICE  EXIT CONTINUOUS HINGE	4SQ J-BOX ABOVE ACC CEILING  .75" C (TYP)  CARD READER 4SQ BOX W/ 1G RING	ELECTRIC EXIT DEVICE	SECURITY CONTRACTOR PROVIDES:  CR HARDWARE CONTRACTOR PROVIDES: EH, FH, DH, EED, L/PS LOCK CONTROLLED BY: CR
TYPE 2	1.0, 2.0, 5.0  TO ACS  #2  HARDWARE SET(S): 6.0	DOUBLE DOOR, 1 CARD READER FREE EGRESS	4SQ J-BOX ABOVE ACC CEILING  ELECTRIC STRIKE WITH ELECTROLYNX ADAPTER  (EGRESS SIDE)  ELECTRIFIED CONTINUOUS HINGE	4SQ J-BOX ABOVE ACC CEILING  .75" C (TYP)  CARD READER 4SQ BOX W/ 1G RING	ELECTRIC STRIKE	SECURITY CONTRACTOR PROVIDES:  CR HARDWARE CONTRACTOR PROVIDES: ES, FH, L/PS LOCK CONTROLLED BY: CR
TYPE 3	TO ACS  #3  HARDWARE SET(S):	SINGLE DOOR, 1 CARD READER FREE EGRESS	4SQ J-BOX ABOVE ACC CEILING  ELECTRIC STRIKE WITH ELECTROLYNX ADAPTER  FRAME HARNESS IN .75" C (TYP)	4SQ J-BOX ABOVE ACC CEILING  .75" C (TYP)  CARD READER 4SQ BOX W/ 1G RING	ELECTRIC STRIKE	SECURITY CONTRACTOR PROVIDES:  CR HARDWARE CONTRACTOR PROVIDES: ES, FH, L/PS LOCK CONTROLLED BY: CR
TYPE 4	TO ACS  #4  HARDWARE SET(S):	SINGLE DOOR, 1 CARD READER FREE EGRESS	4SQ J-BOX ABOVE ACC CEILING FRAME HARNESS IN .75" C (TYP)  ELECTRIC CONTINUOUS HINGE DOOR HARNESS	4SQ J-BOX ABOVE ACC CEILING  .75" C (TYP)  CARD READER 4SQ BOX W/ 1G RING	ELECTRIC LOCKSET	SECURITY CONTRACTOR PROVIDES:  CR HARDWARE CONTRACTOR PROVIDES:  EL, EH, FH, DH, L/PS LOCK CONTROLLED BY:  CR
TYPE 5	HARDWARE SET(S):	SINGLE DOOR, 1 CARD READER FREE EGRESS	4SQ J-BOX ABOVE ACC CEILING FRAME HARNESS IN .75" C (TYP)  PIVOT HINGE 1G BOX IN FRAME DOOR HARNESS	4SQ J-BOX ABOVE ACC CEILING .75" C (TYP) CARD READER 4SQ BOX W/ 1G RING	ELECTRIC LOCKSET	SECURITY CONTRACTOR PROVIDES:  CR HARDWARE CONTRACTOR PROVIDES:  CI, EL, EH, FH, DH, L/PS LOCK CONTROLLED BY:  CR
TYPE 6	9.0  #6  TO ACS  HARDWARE SET(S): N/A	DOUBLE SLIDING DOOR, 1 CARD READER	4SQ J-BOX ABOVE ACC CEILING  POWER SUPPLY (1G BOX)	4SQ J-BOX ABOVE ACC CEILING  CARD READER 4SQ BOX W/ 1G RING	LOCKING HARDWARE PROVIDED WITH SLIDING DOOR  COORDINATE ROUGH-IN REQUIREMENTS WITH SLIDING DOOR PROVIDER	SECURITY CONTRACTOR PROVIDES:  CR, L/PS HARDWARE CONTRACTOR PROVIDES:  NONE LOCK CONTROLLED BY:  CR



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

ermountain Kidney Service est Valley Dialysis

> AUXILIARY RISER DIAGRAMS

NJRA Project # 22211.05

Construction Documents Jan. 15, 2024

EY601

SYMBOL DESCRIPTION

CR CARD READER

CARD READER FOR FRIDGE AND/OR FREEZER

CAMERA/ENCLOSURE ROUGH-IN SCHEDULE									
DESCRIPTION INCLUDES									
INTERIOR CAMERA - FIXED DOME (CEILING MOUNTED)	* JUNCTION BOX ABOVE ACCESSIBLE CEILING WITH 1" CONDUIT TO VSS								
INTERIOR CAMERA - FIXED DOME (WALL MOUNTED)	* JUNCTION BOX AT +90" ABOVE FINISHED FLOOR, WITH 1" CONDUIT BACK TO VSS								
EXTERIOR CAMERA - FIXED DOME (WALL MOUNTED)	* JUNCTION BOX AT +120" ABOVE FINISHED FLOOR, WITH 1" CONDUIT BACK TO VSS								

SECURITY EQUIPMENT SCHEDULE

40"

4SQ W/ 1G RING 4SQ W/ 1G QTY ACCEPTABLE TYPES

OFP SEE SECTION 281300

OFP SEE SECTION 281300

STATION

SCHEDULE

OFP SEE SECTION 281600

A/R SEE SECTION 281300

OFP

A/R

OFP PROVIDE HID READER WITH HES 660 SERIES

PROVIDE APERIO HUB MODEL AH-40-IN2-NNNN

PROVIDE HES K100 WIRELESS READER/LOCKSET

OFP PROVIDE AXIS A8004-VE NETWORK VIDEO DOOR

SEE VSS CAMERA/ENCLOSURE TYPE

COORDINATE WITH OWNER

REFER TO CARD ACCESS DOOR TYPE SCHEDULE & SECTION 281300

	CAMERA SCHEDULE									
TYPE	INTERIOR (INT)/ EXTERIOR (EXT)	DESCRIPTION	AXIS MODEL#							
1	INT	FIXED DOME, VARIFOCAL, CEILING MOUNT	P-3265-V							
2	INT	FIXED DOME, VARIFOCAL, WALL MOUNT	P-3265-V							
3	EXT	FIXED DOME, VARIFOCAL, WALL MOUNT	Q-3536-LVE							
4	INT/EXT	FIXED DOME, MULTI-CAMERA, CEILING MOUNT (270/360°)	P-3727-PLE							
5	INT/EXT	FIXED DOME, DOUBLE-CAMERA, CEILING MOUNT (180°)	P-4705							
6	INT	FIXED DOME, FISHEYE, CEILING MOUNT (360°)	M-3068-P							
7	EXT	FIXED DOME, VARIFOCAL, CEILING MOUNT	P-3265-LVE							
8	EXT	FIXED DOME, FISHEYE, CEILING MOUNT (360°)	P-3727-PLE							
9	EXT	FIXED DOME, VARIFOCAL, PARKING LOT POLE MOUNT	P-3727-PLE							



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

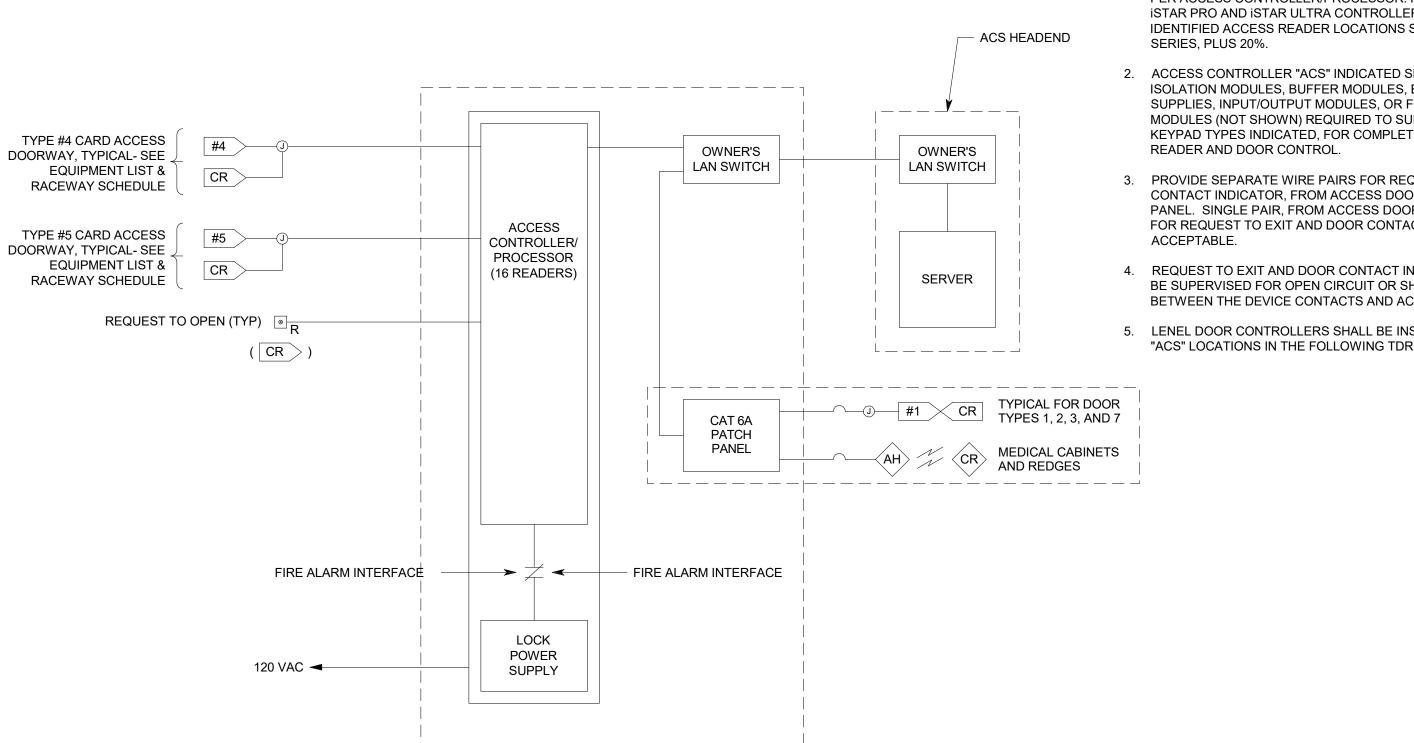
taith tain Kidne y Dialysis alley

22211.05

Construction Documents Jan. 15, 2024

AUXILIARY RISER

DIAGRAMS



NOTES:

1. ACCESS CONTROL SYSTEM BASED UPON MULTIPLE CARD READERS PER ACCESS CONTROLLER/PROCESSOR. PROVIDE QUANTITY OF ISTAR PRO AND ISTAR ULTRA CONTROLLER'S PER ACS BASED ON IDENTIFIED ACCESS READER LOCATIONS SHOWN IN THE EY SHEET

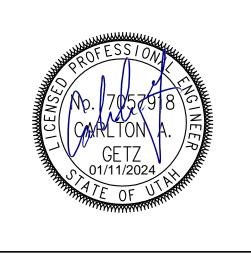
2. ACCESS CONTROLLER "ACS" INDICATED SHALL INCLUDE ANY ISOLATION MODULES, BUFFER MODULES, EXTERNAL POWER SUPPLIES, INPUT/OUTPUT MODULES, OR FORMAT CONVERTER MODULES (NOT SHOWN) REQUIRED TO SUPPORT CARD READER OR KEYPAD TYPES INDICATED, FOR COMPLETE AND FUNCTIONING CARD

3. PROVIDE SEPARATE WIRE PAIRS FOR REQUEST TO EXIT AND DOOR CONTACT INDICATOR, FROM ACCESS DOOR TO ACCESS CONTROLLER PANEL. SINGLE PAIR, FROM ACCESS DOOR TO CONTROLLER PANEL, FOR REQUEST TO EXIT AND DOOR CONTACT INDICATOR, NOT

4. REQUEST TO EXIT AND DOOR CONTACT INDICATOR CIRCUITS SHALL BE SUPERVISED FOR OPEN CIRCUIT OR SHORT CIRCUIT FAULTS BETWEEN THE DEVICE CONTACTS AND ACCESS CONTROLLER.

5. LENEL DOOR CONTROLLERS SHALL BE INSTALLED AT THE IDENTIFIED "ACS" LOCATIONS IN THE FOLLOWING TDR ROOMS:

NJRA Project #



324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

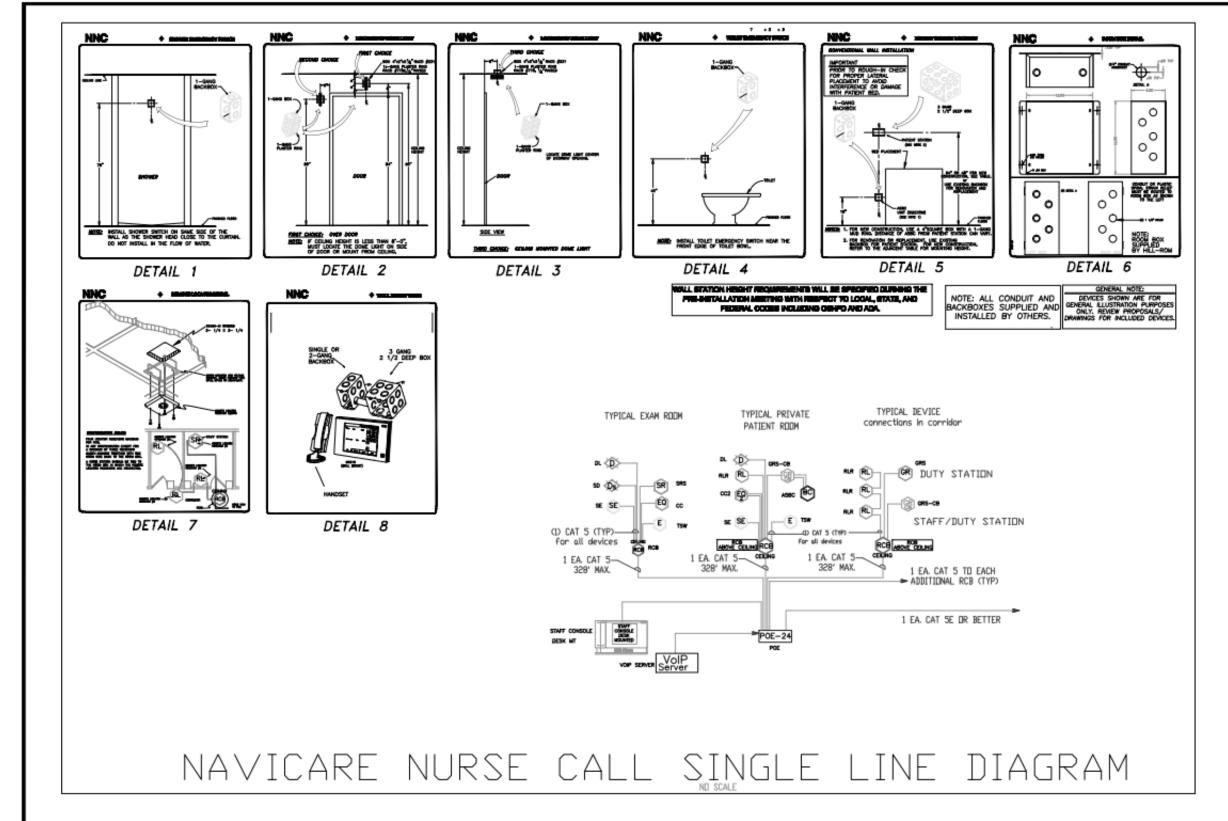
S alysis Kidr lealth **'ain**  $\overline{\overline{\phantom{a}}}$ 

22211.05

NJRA Project # Construction Documents Jan. 15, 2024

NURSE CALL DIAGRAMS





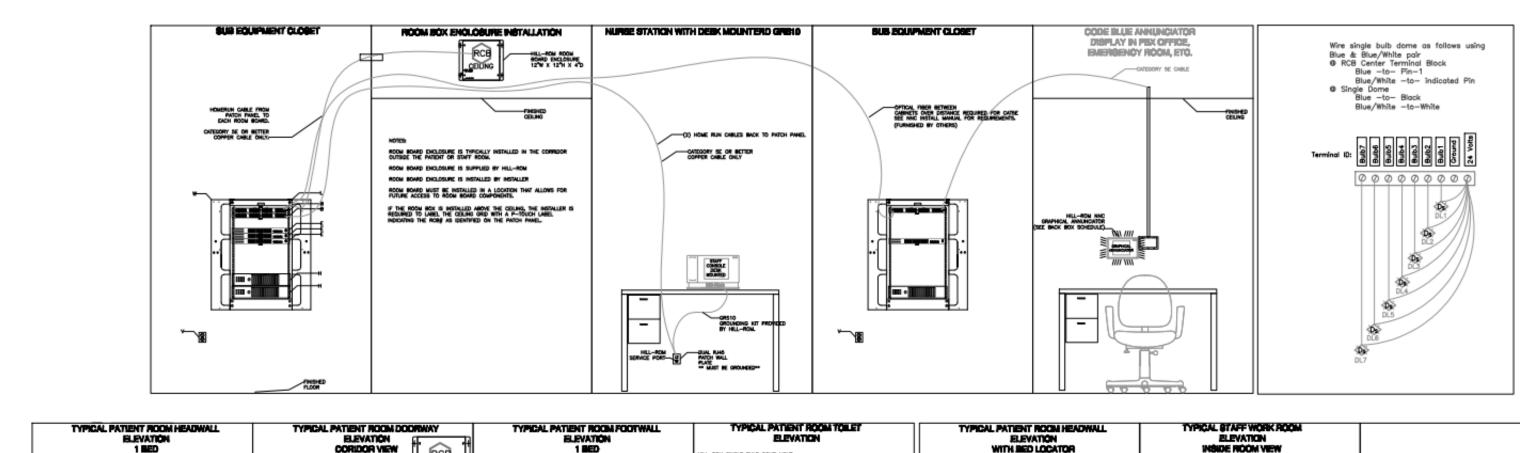
#### REQUIREMENTS FOR POE -120-240 VAC 15 AMP MAX EMERGENCY POWER -1 ET CONNECTION BETWEEN THE POEs For connections between POE switches greatr than the requirements for Cat5e, the switches accept SFP fiber transceivers (also known as mini-GBIC). See the NNC Install Manual for further information. REQUIREMENTS FOR THE UPC REQUIREMENTS FOR THE SERVERS -115 VAC 15 AMP MAX EMERGENCY POWER -MAX-1 CEOSEC TEMPAMP5 MASS EMERGENCY POWER -1 CAT5 WIRES BETWEEN POE AND THE SERVER COMMUNICATION NOTES: All cabling must be plenum rated category 5e or better, 24AWG, 4 twisted pair communication cable. Belden 1585A or equivalent is required. Preferred jacket color for nurse call cabling is Seafcam Green. All cabling to be field terminated by installing contractor. Location of rough-in for all ASBC must avoid interference or damage from the patient bed.

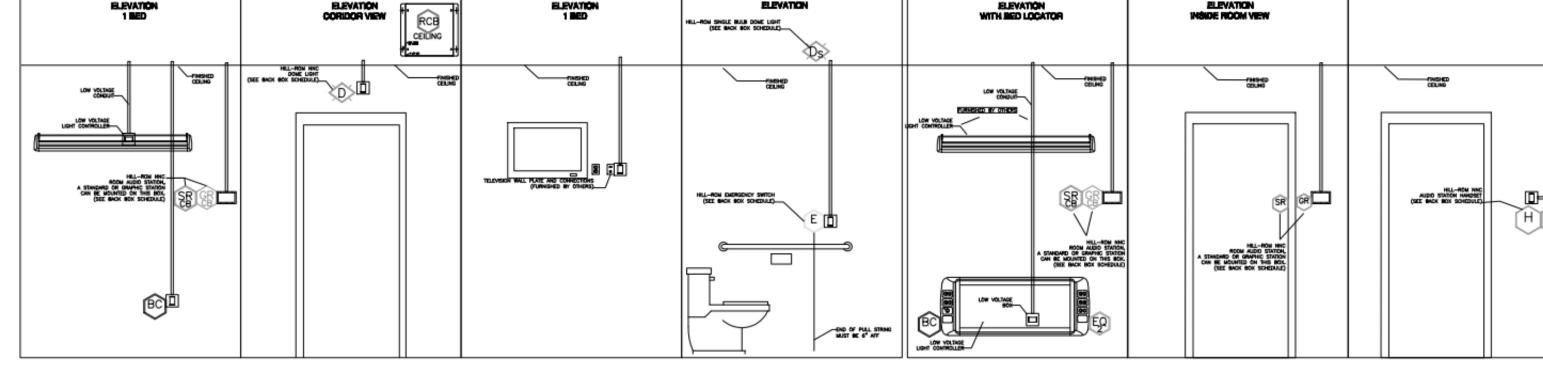
 All device locations shown are for illustration purposes only, actual locations to be field determined. Hill-Rom requires AMP High Performance (Category 5e or better) RJ45 connectors for all nurse call wiring. Cable must be terminated with approved AMP termination tool and compatible die-set for the RJ45 connector selected. Since Cat5e and Cat6 dies are not cross-compatible, it is critical that the correct die be used for the chosen connector. Refer to the TE Connectivity website at www.te.com for current part numbers and compatibility lists.

All termination tools are to be supplied by installing contractor. 7. All glass walls, glass doors, and interior windows must be 8. Any special requirements/interfaces not explicitly defined in

proposal are not included. Unless otherwise noted, all non-standard products are not UL approved.

#### TYPICAL PLACEMENT & WIRING ELEVATION DIAGRAMS





EST/HG CEIT/HG	TYPICAL PATIENT HEADWALL  1 AUDIO STATION PER PATIENT ELEVATION  RCB CELING	TYPICAL PATIENT HEADY SHARED AUGIO STATIC PLEVATION PLEVATION	FALL IN RCB CEDING	TYPICAL PATIENT ROOM HEAD ELEVATION 2 BED WRING	RCB CELLING	TYPICAL PATIENT ROOM REMOTE LOCATOR PLAN VIEW	TYPICAL PATIENT ROOM SMOKE DETECTOR INTERFACE ELEVATION VIEW
NOTEL EVISION OR LIGHT	EQ SR EQ	FURNISHED BY CONTINUED BY CONTI	TURNSHED BY OTHERS  POTENTIAMENT AND LIGHTING CARLE  CB BC  CB BC  TURNSHED BY OTHERS  DITENTIAMENT AND LIGHTING WALL PLATE  FURNISHED BY  TURNSHED BY  TURNSHED BY  TURNSHED BY  TURNSHED BY  TURNSHED BY  TURNSHED BY	ONDES TELEVIS		RL ROY OR MOUNTING FRANCE OF CONTROL OF MOUNTING FRANCE OF CONTROL OF MOUNTING FRANCE OF CONTROL OF	MADULE - 12" BETWEEN SMOKE MED AND ALAMA INTERFACE.  SACKE AND RECOVERED AND ALAMA INTERFACE.  SACKE HAVE ALAMA INTERFACE BOX OPENING  FRISHED ALAMA INTERFACE BOX OPENING  WHE TO HORMALLY CLOSED CONTACTS
			NOTICE The drawings and of information Ferrors is properly of: HELFROM COMPANY, INC. BATTERVELE, MICHANA	HILL-ROM IT SOLUTIONS 1225 CRESENT GREEN		Custo	omer Information

		Cust
en En	Enhancing Outcomes for Patients and their Caregivers	HI 12 C

**IILL-ROM IT SOLUTIONS** 225 CRESCENT GREE, STE 300 27518

Project Information NNC - Centrak-Details/Backbox Rev 1

CENTRAK STAR

"Poly - community

NURSE CALL SYMBOL LIST

P2500NNC1B00 STAFF CONSOLE, DESK MOUNT

P2594NNC3A00 | STAFF CONSOLE, WALL MOUNT

P2505NNC1B00 AUDIO STATION BED CONNECTOR (ASBC)

P2506NNC8A00-D ICON BASED-LIGHT LED DOME LIGHT

P2506NNC8A00-7 ICON BASED-LIGHT LED ZONE LIGHT

EQUIPMENT RECEPTACLE, WITH CALL CORD

CODE BLUE PUSH BUTTON SWITCH

CODE PINK PUSH BUTTON SWITCH

PUSH FOR ASSISTANCE PUSH BUTTON SWITCH

STAFF EMERGENCY PUSH BUTTON SWITCH

BATH SWITCH, W/CANCEL, SUPERVISED

BATH SWITCH, W/O CANCEL, SUPERVISED

UPS, RACK MOUNTABLE, 2U - NON-SEISMIC

| P2594NNC1B11 | STAFF STATION - STANDARD ROOM STATION W/ CODE

P2594NNC2C00 GRAPHICAL ROOM STATION (GRS) - STAFF

P2594NNC2C11 GRAPHICAL ROOM STATION (GRS) - PATIENT

RTLS-CLOSED RTLS - STAFF LOCATING LOCATION-CLOSED AREA

RTLS - STAFF LOCATING LOCATION-BAY

PILLOW SPEAKEKER, REQUIRES ASBC.

REMOTE ENTERTAINMENT STATION

SWITCH, KEY SWITCH, ENABLE/DISABLE

RTLS - STAFF LOCATING LOCATION-GLASS/OPEN AREA

BRACKETS

ITA-361 9/16" ITA-362 15/16"

ITA-363 5/16"

ITA-371 9/16"

ITA-372 15/16"

ENHANCED LOCATING - CENTRAK

arm.

P2594NNC4A10 REMOTE AUDIO DEVICE

PART #

CENTIX-101

CENTK-125

CENTIK-363

CENTIX-373

CENITA-359

CENTRAK ROOM MONITOR

P2599NNC3A00 RCB3 ROOM CONTROL BOARD

P2594NNC3B00 | GRAPHICAL ANNUNCIATOR

P2506NNC1B00 DOME LIGHT, SINGLE LED

P2519NNC1A24 POE SWITCH

HILL-ROM

HILL-ROM

HILL-ROM

HILL-ROM

HILL-ROM

HILL-ROM

CURBELL

HILL-ROM

CENTRAK NAME

CenTrak Star

Star—Timing

Centrak Room Monitor

Virtual Wall Monitor (Single)

Monitor Drop Box

Hygiene Monitor (Dim)

IR Regenerator

Rackmount Non-Seismic

STEEL CITY 58371 3/4R, RACO 561,

RACO 231, WITH RACO 778 RING,

STEEL CITY CYLE-3/4, RACO 591,

RACO 561 BACK BOX,

P2594NNC1B01 STAFF STATION - STANDARD ROOM STATION W/O CODE OR ANY OTHER 2.5" DEEP, TWO OR THREE GANG BACK BOX.

NaviCare Nurse Call RTLS

WORKING LOCATION

Ceiling

Equipment Closet

Ceiling / Wall

Ceiling / Wall

Mounts to soap dispenser

pump, and or sink.

Ceiling / Wall

STEEL CITY GW-225G, RACO 691

STEEL CITY GW-235G, RACO 696

STEEL CITY GW-225G, RACO 691

STEEL CITY GW-225G, RACO 691

STEEL CITY GW-225C, RACO 691

STEEL CITY CYLE-3/4, RACO 591,

OR ANY OTHER TWO GANG BACK BOX

OR ANY OTHER 3.5" DEEP SINGLE GANG BACK BOX.

POWER

POE.

to ethernet.

One needed per sub net

Battery Powered

Battery Powered

Battery Powered

Battery Powered

NOTE - ALL METAL BOXES MUST BE GROUNDED.

BOXES ARE REQUIRED TO BE METAL.

IF THE CONDUIT SYSTEM IS NOT GROUNDED, THE

BOXES MUST BE GROUNDED BACK TO THE BUILDING STEEL. MASONERY BOXES ARE NOT REQUIRED, ALL

THIS PLAN IS FOR REFERENCE

ONLY. THIS IS DESIGNED TO

SHOW DIAGRAMS THAT MAY

OR ANY OTHER TWO GANG BACK BOX

OR ANY OTHER TWO GANG BACK BOX.

OR ANY OTHER TWO GANG BACK BOX.

OR ANY OTHER SINGLE GANG BACK BOX.

OR ANY OTHER 4" SQUARE 2 1/8" DEEP BACK BOX.

OR ANY OTHER 3.5" DEEP SINGLE GANG BACK BOX.

OR ANY OTHER 3.5" DEEP SINGLE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP SINGLE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP SINGLE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP SINGLE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP SINGLE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP, TWO OR THREE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP, TWO OR THREE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP, TWO OR THREE GANG BACK BOX.

OR ANY OTHER 2.5" DEEP, TWO OR THREE GANG BACK BOX.

OR ANY OTHER 3.5" DEEP, TWO OR THREE GANG BACK BOX.

GARVIN 52181-3/4, WITH GARVIN 52C13 RING, OR ANY OTHER REFER TO ARCHITECTURAL

4" SQUARE 3.5" DEEP BACK BOX WITH SINGLE GANG MUD RING. | ELEVATION DRAWINGS

<u>Drawing Information</u> Lab01040 Rev1.dwg <u>Drawing Scale</u>

Total Sheets

BOX MOUNTING HEIGHT

18" AFF (UNDER DESK)

W/ OSHPD AND ADA

54" AFF OR 48" TO COMPLY

REFER TO ARCHITECTURAL

REFER TO ARCHITECTURAL

CLG / WALL CENTER ABOVE

CLG / WALL CENTER ABOVE

CLG / WALL CENTER ABOVE

REFER TO ARCHITECTURAL

REFER TO ARCHITECTURAL

REFER TO ARCHITECTURAL

ELEVATION DRAWINGS

PATIENT DOOR 90" AFF

PATIENT DOOR 90" AFF

PATIENT DOOR 90" AFF

ELEVATION DRAWINGS

ELEVATION DRAWINGS

ELEVATION DRAWINGS REFER TO ARCHITECTURAL

ELEVATION DRAWINGS

ELEVATION DRAWINGS

42" AFF

REFER TO ARCHITECTURAL

**ELEVATION DRAWINGS** 

ELEVATION DRAWINGS

ELEVATION DRAWINGS

ELEVATION DRAWINGS

ELEVATION DRAWINGS

ELEVATION DRAWINGS

SURFACE MOUNT ABOVE

**ELEVATION DRAWINGS** 

ELEVATION DRAWINGS

ELEVATION DRAWINGS

REFER TO ARCHITECTURAL

REFER TO ARCHITECTURAL

REFER TO ARCHITECTURAL

REFER TO ARCHITECTURAL

ELEVATION DRAWINGS

ELEVATION DRAWINGS

WORKING FUNCTION

Used to interface the tags and

monitors to the IT network.

Keeps everyone from talking

at once.

Required to gain visibility to tags

and keep a very accurate local location accuracy using IR signaling.

Locating tagged assets or people

that are geared to semi-private rooms and bays typically found in ED or OR

units. The area of coverage is not effected by physical walls.

Automatically tracks hand hygiene, 24/7

t the caregivers level. Collects data on all events at hand washing stations.

ELEVATION DRAWINGS

HELP IN THE CONSTRUCTION

1/24/2014

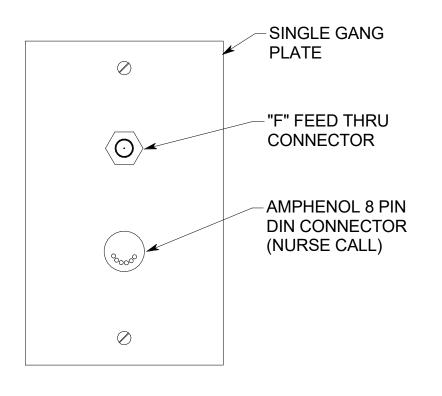
SUITE 200 CARY, NC 27518

www.hill-rom.com

Revision History

Revision Revised Comments

EY603



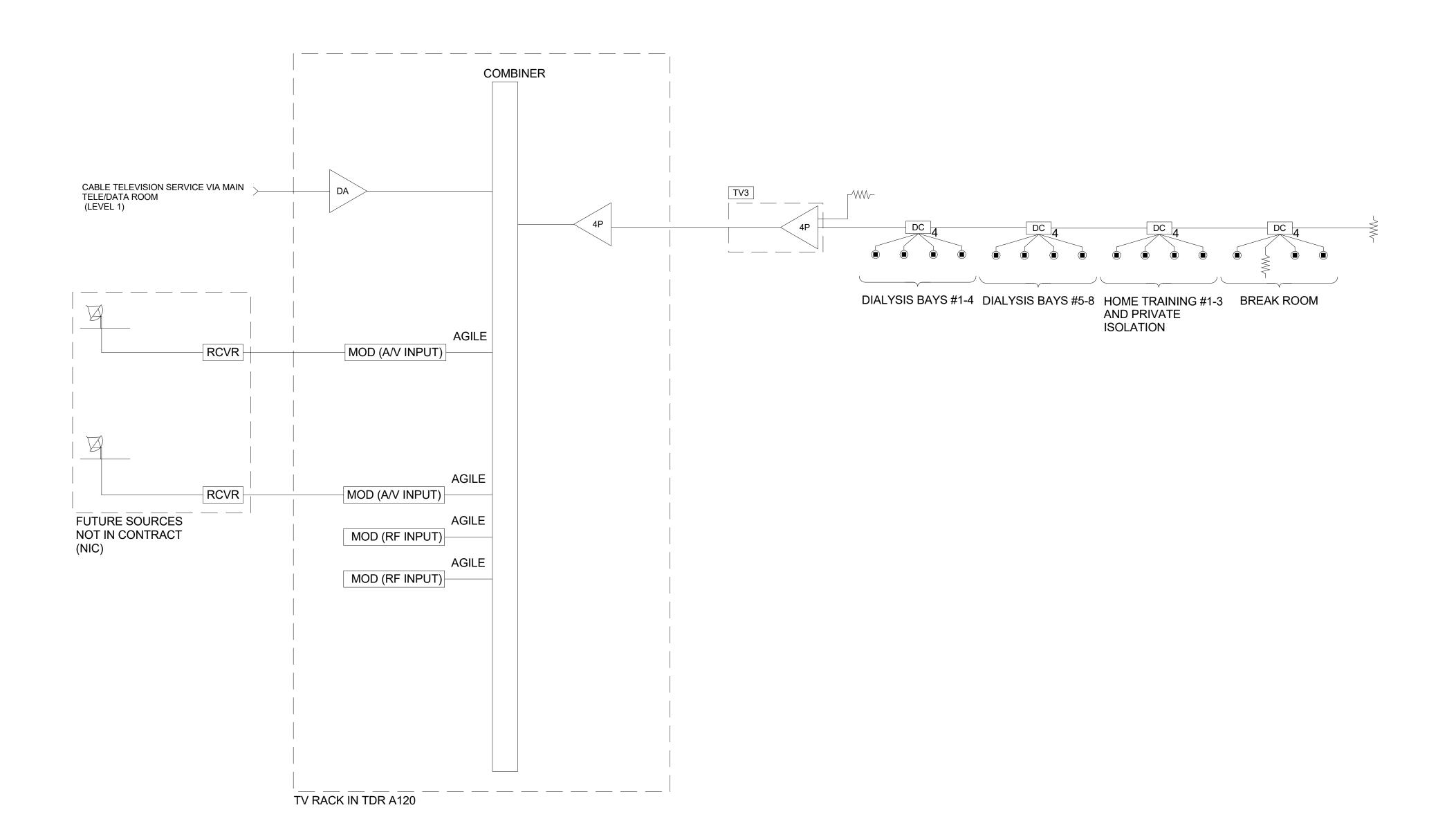
4'x8"x.75" PLYWOOD ON NOTE: DO NOT PROVIDE BLANK PANELS. LEAVE EXTRA RACK SPACES OPEN. COMBINER MOD (RF) MOD (RF) HEADEND MODS (A/V) PROVIDE 2 EA 3 RU SHELVES -SHELVES <--- FRONT OF **RACK GROUNDING BUS** BAR (BY ELECTRICAL) TV RACK HEADEND

(FRONT VIEW)

1. PROVIDE AMPHENOL CONNECTOR ON TV PLATES IN PATIENT ROOMS. NON-PATIENT LOCATIONS HAVE THE "F" CONNECTOR ONLY. CABLE TERMINATION TO AMPHENOL CONNECTOR WILL BE BY NURSE CALL INSTALLER.

TV OUTLET PLATE DETAIL

D2 TV SYSTEM RACK ELEVATION NO SCALE



**ARCHITECTS** 

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com

SYMBOL SCHEDULE

DISTRIBUTION: LOCATIONS.

DESCRIPTION

BROADBAND DISTRIBUTION AMPLIFIER

TRANSIENT VOLTAGE SURGE SUPPRESSER

EQUIPMENT RACK SYSTEMS

TV - TV DISTRIBUTION

MULTI PORT SPLITTER

2 PORT, 4 PORT

DIRECTIONAL COUPLER (MULTI PORT)

RF TERMINATOR

ATTENUATOR

COMBINER CHANNEL COMBINER

MODULATOR (RF INPUT)

MODULATOR (A/V INPUT)

TV OUTLET

SYMBOL

MOD

PAD

REFER TO RELATED SPECIFICATIONS, AND ARCHITECTURAL ELEVATIONS, FOR ACTUAL

QTY

ACCEPTABLE TYPES

OFP BLONDER TONGUE RACK - RR2180

OFP BLONDER TONGUE XRS SERIES

SRT, SRT-2A, SRT-4A, SRT-8A

OFP | BLONDER TONGUE AP 60-860A

OFP | BLONDER TONGUE AM-60-550

OFP | BLONDER TONGUE FAF/FAM SERIES

OFP BLONDER TONGUE OC SERIES (PASSIVE)

OFP BLONDER TONGUE

BIDA 75A-43

OFP BLONDER TONGUE

OFP 75 OHM TERMINATOR

OFP SEE DETAIL

OFP EFI PT-2000

A/R = AS REQUIRED

OFP = OBTAIN FROM PLANS



SPECTRUM ENGINEERS 324 S. State St., Suite 400 Salt Lake City, UT 84111 800-678-7077 801-328-5151 fax: 801-328-5155 www.spectrum-engineers.com

22211.05

NJRA Project # Construction Documents Jan. 15, 2024

> CABLE DIAGRAMS

EY604

TV DISTRIBUTION SINGLE LINE DIAGRAM



PROVIDE LABELS ON ALL NEW DEVICES PER PROJECT SPECIFICATIONS CONFORMING WITH DIVISION 26 SPECIFICATIONS FOR IDENTIFICATION OF ELECTRICAL EQUIPMENT AND INTERMOUNTAIN'S DIVISION 27 SPECIFICATIONS

EXISTING CABLING, CONDUIT, ETC., SERVING SPACES NOT DIRECTLY IMPACTED BY THE SCOPE OF WORK MAY BE IMPROPERLY SUPPORTED OR UNSUPPORTED. PROVIDE AN HOURLY TIME AND MATERIALS RATE FOR PROPERLY SUPPORTING ANY EXISTING TO REMAIN CABLING, CONDUIT, ETC., FOUND TO BE IMPROPERLY SUPPORTED OR UNSUPPORTED TO CONFORM WITH THE SUPPORT REQUIREMENTS IN THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL DOCUMENT AND REPORT ALL INSTANCES OF IMPROPERLY SUPPORTED OR UNSUPPORTED CABLING, CONDUIT, ETC., TO OWNER AND ARCHITECT. RESUPPORT ANY EXISTING CABLING AND/OR CONDUIT AS NECESSARY TO ELIMINATE CONTACT WITH EXISTING FIRE PROTECTION PIPING AND AVOID



NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com





Kidne

NJRA Project # Construction Documents Jan. 15, 2024 1 DOH COMMENTS

LEVEL 1 FIRE

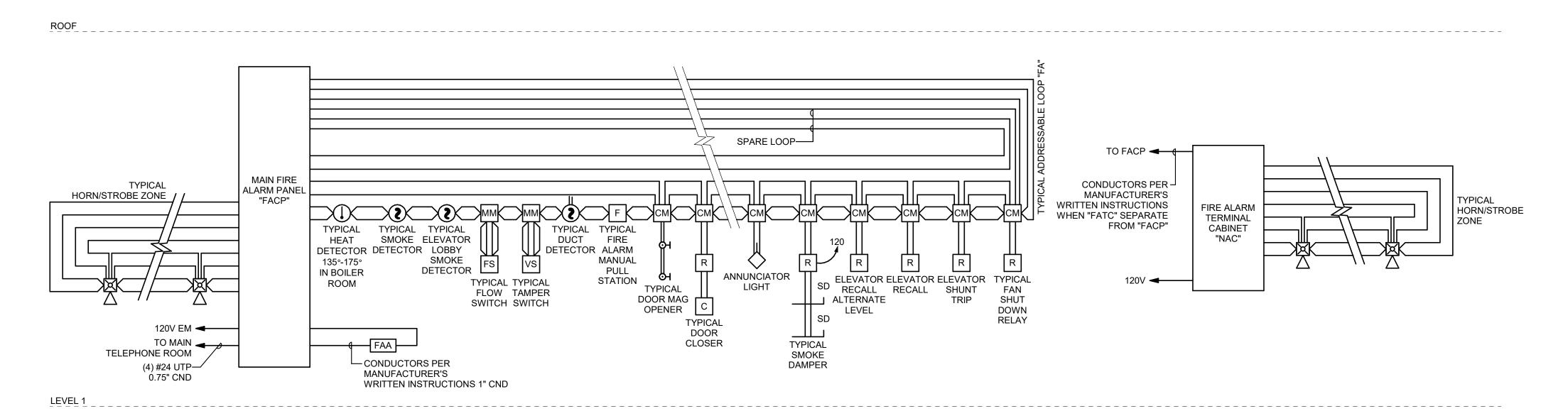
ALARM PLAN

FA101

WIRING SCHEDULE									
FUNCTION	< 500'	< 1000'	1000'-3000'	> 3000'					
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 HORNS	#14 THWN	#14 THWN	#12 THWN	#10 THWN					
MAGNETIC DOOR HOLDER	#12 THWN	#10 THWN							
SPEAKERS	#16 TSP	#16 TSP	#14 TSP	#14 TSP					

NOTIFICATION SCHEDULE													
SYMBOL	STROBE SIZE	COVERAGE	AVERAGE CURRENT	MAXIMUM PER CIRCUIT ALO									
<b>⊠</b> < 15	15 CD	20'x20'	.085A	17									
30	30 CD	30'x30'	.135A	11									
75	75 CD	40'x40'	.200A	7									
110	110 CD	50'x50'	.225A	6									

MAIN FLOW		OUTPUT DEVICES														
MAN FLOW	ALARM INPUT/OUTPUT		IERAL ALARM	OR HOLDER/CLOSERS	SHUTDOWN	E DAMPERS	SE SMOKE DAMPERS	ERVISORY SIGNAL	UBLE SIGNAL							NOTES
AMAN LEVEL FLOWY			GEN	000	FAN	FIRE	CLO	SUP	TRC							
A	1 MA	MAIN FLOW	0													
A MANIEVEL INTRIPRIES O O O O O O O O O O O O O O O O O O O	2 MA	MAIN TAMPER						0								
AMAN LEVEL INITIATING LOOP O O O O O O O O O O O O O O O O O	3 MA	MAIN LEVEL FLOW	0													
Name   Part   Name	4 MA	MAIN LEVEL TAMPER						0								
SOURCE   S	5 MA	MAIN LEVEL INITIATING LOOP	0													
The content of the	6 MA	MAIN LEVEL SMOKE	0	0												
8 SYSTEM FAULT 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M/		0		0	0										
10	SV	SYSTEM FAULT														
THE TOTAL PARTIES AND																
THE TOTAL PARTIES AND																
12																
13	11															
THAT IS TO THE TOTAL PART OF T	12															
15	13															
16	14															
TO SULTUIN  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  33	15															
21       22       23       24       25       26       27       28       29       30       31       32       33	16															
21	17															
21	18															
21       22       23       24       25       26       27       28       29       30       31       32       33	19															
22       23       24       25       26       27       28       29       30       31       32       33	20															
23         24         25         26         27         28         29         30         31         32         33	21															
23         24         25         26         27         28         29         30         31         32         33	22															
24       25       26       27       28       29       30       31       32       33																
25       26       27       28       29       30       31       32       33																
26       27       28       29       30       31       32       33																
27       28       29       30       31       32       33						-										
28       29       30       31       32       33																
29       30       31       32       33	27															
30       31       32       33	28															
31       32       33	29															
32 33	30													_		
33	31															
	32															
	33															
	34															
35	35															
36	36															



FIRE ALARM RISEI

#### GENERAL SHEET NOTES

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

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

3 PLANS ARE BASED UPON 2 AMPS AT 24 VDC, NOT TO EXCEED 75% (1.50 AMPS AVAILABLE), POWER SUPPLY CAPACITY PER NOTIFICATION CIRCUIT. NOTIFICATION DEVICE LOADS ARE BASED UPON NOTIFICATION DEVICE SCHEDULE SHOWN. INCLUDE ADDITIONAL ASSOCIATED COSTS FOR INCREASED WIRING AND POWER SUPPLY CAPACITY IF LOADS OF ACTUAL DEVICES PROVIDED EXCEED CIRCUIT CAPACITY, OR IF LOAD OUTPUT OF ACTUAL POWER SUPPLIES PROVIDED IS SIZED DIFFERENTLY. PROVIDE SUBMITTAL DRAWINGS SHOWING NEW WIRING CONFIGURATION.

FLOW AND TAMPER CONFIGURATION BASED UPON FIRE SPRINKLER DESIGN CONCEPT. FIELD VERIFY ACTUAL REQUIREMENTS. INCLUDE ANY ADDITIONAL MONITOR MODULES REQUIRED BY ACTUAL DESIGN REQUIREMENTS.

5 HEAT DETECTORS WHEN INSTALLED IN ELEVATOR SHAFTS OR MECHANICAL ROOMS FOR ELEVATOR SHUT DOWN SHALL HAVE HEAT DETECTOR WITH LOWER RESPONSE TIME INDEX THAN SPRINKLER HEAD.

6 PROVIDE POWER SUPPLY CAPACITY AS REQUIRED FOR DOOR HOLD OPENS SHOWN.
7 BATTERY CAPACITY TO BE ADEQUATE TO OPERATE 15 MINUTES AFTER 24 HOURS PLUS 25% SPARE CAPACITY.

8 VFD REQUIRES TWO RELAYS, ONE FOR SMOKE CONTROL, ONE SPARE.

9 RUN SPARE LOOPS IN SAME CONDUIT. DO NOT EXCEED 40% AREA FILL OF CONDUITS.

10 PROVIDE DUCT DETECTORS FOR SUPPLY AND RETURN AIR SYSTEMS OVER 2000 CFM. INSTALL DUCT DETECTORS PER NFPA 72 REQUIREMENTS AND PROVIDE ADDITIONAL DUCT DETECTORS DEPENDING UPON FINAL DUCT ARRANGEMENT.

PROVIDE DUCT DETECTOR AT EACH FLOOR, PRIOR TO CONNECTION TO A COMMON RETURN AND PRIOR TO RECIRCULATING OR FRESH AIR INLET IN AIR RETURN SYSTEMS OVER 15,000 CFM CAPACITY AND SERVING MORE THAN ONE STORY.

12 PROVIDE MANUAL PULL STATIONS IN BOILER ROOMS AND KITCHENS.

13 PROVIDE ONE YEAR OFF SITE MONITORING INCLUDING ALL INTERFACE DEVICES AND MONITORING CHARGES. COORDINATE WITH BUILDING OWNER'S OFF SITE MONITORING COMPANY.

LOCATE SMOKE DETECTORS MINIMUM 3' FROM AIR SUPPLY AND RETURN LOUVERS.
 PROVIDE SYNCHRONIZED STROBES THROUGHOUT FACILITY. PROVIDE

SYNCHRONIZATION MODULES PER MANUFACTURER'S REQUIREMENTS. INCLUDE ADDITIONAL WIRING, IF REQUIRED.

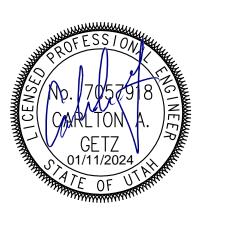
16 INITIATING AND INDICATING LOOPS SHALL NOT SERVE AN AREA OF GREATER THAN

22,500 SQUARE FEET. PROVIDE ADDITIONAL LOOPS FOR AREAS LARGER THAN THIS.17 ALL OUTPUT DEVICES ARE DESIGNED ON SYSTEMS WITH 2 AMP POWER SUPPLY.

18 HORN/STROBE BASED ON 120 MILLIAMPS, DOOR HOLDERS BASED ON 70 MILLIAMPS.

ARCHITECTS

NJRA Architects, Inc. 5272 S. College Drive, Suite104 Murray, Utah 84123 801.364.9259 www.njraarchitects.com



SPECTRUM
ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

nountain Kidney Servic Vallev Dialvsis

2750 South 5600 West West Valley City, UT 8

NJRA Project # 22211.05

Construction Documents Jan. 15, 2024

FIRE ALARM RISER

A601