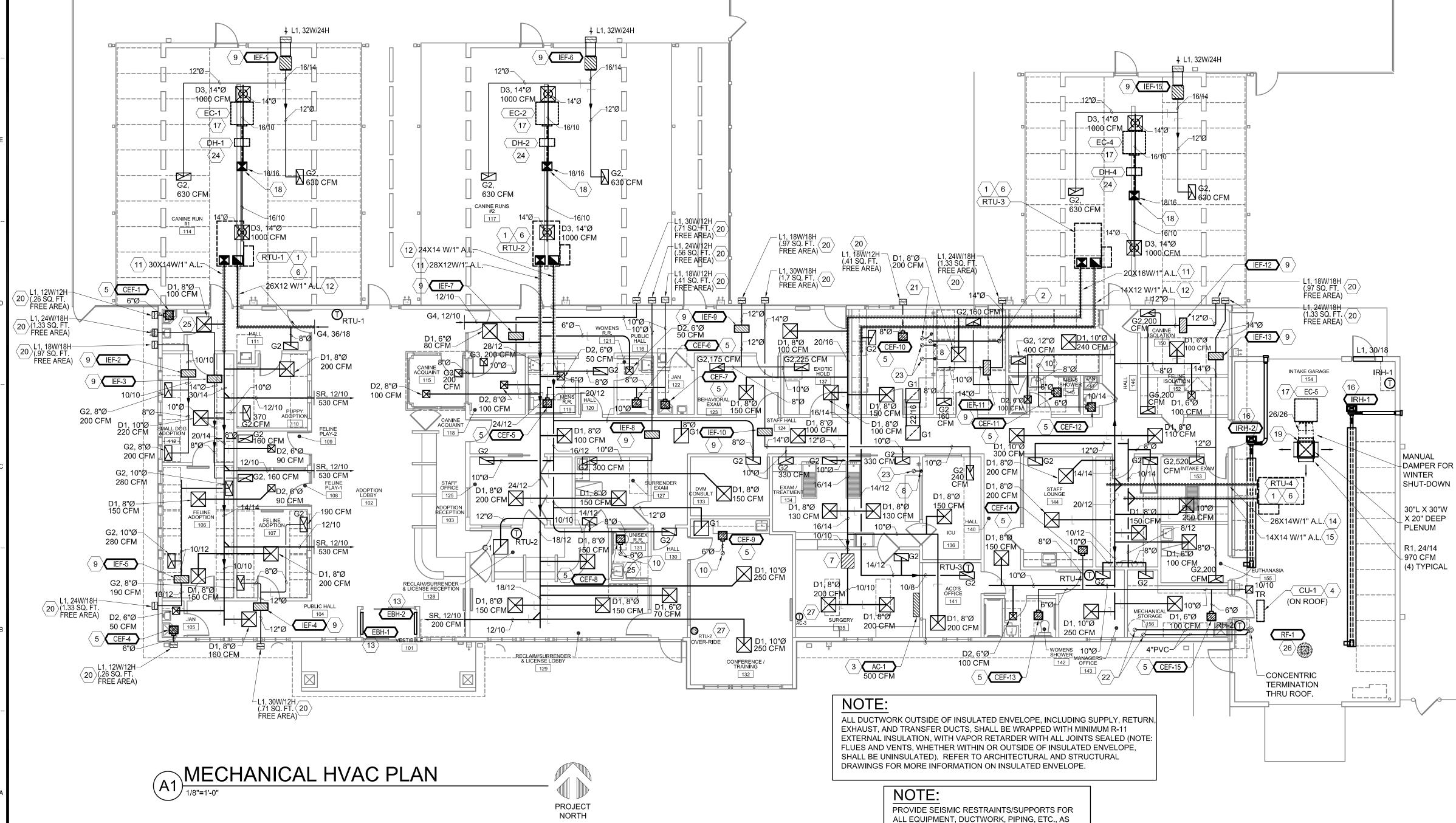
KEYED NOTES CONTINUED

- 18. PROVIDE A ROOF OPENING APPROXIMATELY 2" LARGER ALL-SIDES OF SUPPLY DUCT, EXTEND DUCT AS SIZED ON PLAN DOWN THRU ROOF CURB AND ROUTE AS SHOWN
- 19. PROVIDE A ROOF OPENING APPROXIMATELY 2" LARGER ALL-SIDES OF SUPPLY DUCT, EXTEND DUCT AS SIZED ON PLAN DOWN THRU ROOF CURB AND CONNECT TO TOP OF 30"Lx30"Wx20"D SUPPLY AIR PLENUM. PROVIDE SIDEWALL SUPPLY REGISTERS AS SIZED ON PLAN ON ALL 4 SIDES OF SUPPLY PLENUM.
- 20. EXTEND EXHAUST DUCT TO EXTERIOR SOFFIT LOUVER (TYPE L1, DIMENSIONS AND FREE AREA AS INDICATED). PROVIDE ALL TRANSITIONS AS REQUIRED. INSTALL ABOVE DOG RUN ROOF. COORDINATE EXACT LOCATION AND INSTALLATION HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION. WALL PENETRATION SHALL BE SEALED WEATHERTIGHT AS REQUIRED. REFER TO CEILING MOUNTED EXHAUST FAN W/SOFFIT GRILLE DETAIL.
- 21. EXTEND DRYER VENT FROM FUTURE COMMERCIAL DOUBLE STACKED CLOTHES DRYER UP THRU ROOF. TERMINATE WITH GOOSENECK WITH BIRDSCREEN ELBOWED DOWN TOWARD ROOF. SECURE BIRDSCREEN TO GOOSENECK WITH METAL HOSE CLAMP. PROVIDE SHEET METAL CAP ON END OF DRYER VENT WITHIN SPACE. VERIFY EXACT VENT SIZE REQUIRED WITH DRYER MANUFACTURER EFFECTIVE VENT LENGTH SHALL NOT EXCEED LENGTH ALLOWED BY DRYER MANUFACTURER. PROVIDE ALL REQUIRED CLEARANCES TO COMBUSTIBLES. ROOF PENETRATION SHALL BE SEALED WEATHERTIGHT AS REQUIRED. INSTALL DRYER VENT PER REQUIREMENTS OF THE UNIFORM MECHANICAL CODE.
- 22. CONNECT 4" PVC INTAKE AND VENT PIPING TO DIRECT VENT CONDENSING WATER HEATER. ROUTE 4" PVC PIPING AS SHOWN TO GARAGE AND RISE THRU ROOF WITH CONCENTRIC VENT TERMINATION KIT PER MANUFACTURERS REQUIREMENTS. MAINTAIN 10'-0" FROM ANY MECHANICAL INTAKES. SEAL ROOF PENETRATION WEATHER TIGHT
- 23. EXTEND DRYER VENT FROM CLOTHES DRYER UP THRU ROOF. TERMINATE WITH GOOSENECK WITH BIRDSCREEN ELBOWED DOWN TOWARD ROOF. SECURE BIRDSCREEN TO GOOSENECK WITH METAL HOSE CLAMP. VERIFY EXACT VENT SIZE REQUIRED WITH DRYER MANUFACTURER EFFECTIVE VENT LENGTH SHALL NOT EXCEED LENGTH ALLOWED BY DRYER MANUFACTURER. PROVIDE ALL REQUIRED CLEARANCES TO COMBUSTIBLES. ROOF PENETRATION SHALL BE SEALED WEATHERTIGHT AS REQUIRED. INSTALL DRYER VENT PER REQUIREMENTS OF THE UNIFORM MECHANICAL CODE.
- 24. PROVIDE DUCT MOUNTED GAS FIRED FURNACE UNIT. INSTALL FURNACE UNIT ON EQUIPMENT SUPPORT (THY CURB) SUPPORTS AND PER MANUFACTURE'S REQUIREMENTS. PROVIDE DUCT TRANSITIONS AS REQUIRED TO INLET AND FROM OUTLET OF FURNACE OPENINGS. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
- 25. UNDER CUT DOOR 3/4" FOR TRANSFER AIR. COORDINATE WITH G.C. AND ARCHITECT.

REQUIRED BY LOCAL AND STATE CODES.

- 26. PROVIDE ROOF MOUNTED EXHAUST FAN AND ROOF CURB. PROVIDE DUCT TRANSITION FROM FAN OPENING TO DUCT SIZE SHOWN, TRANSITION IN ROOF CURB. EXTEND DUCT DOWN THRU ROOF. COORDINATE WITH STRUCTURE. REFER TO DETAIL AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION. RELIEF FAN (RF-1) SHALL BE INTERLOCKED WITH EC-5. CONTRACTOR SHALL PROVIDE RELIEF FAN (RF-1) WITH AN OVERRIDE WALL SWITCH.
- 27. PROVIDE A WALL MOUNTED OVER-RIDE TEMPERATURE SENSOR WIRED BACK TO THERMIDISTAT SERVING RTU-2. WHEN ROOM IS OCCUPIED THEN REMOTE



GENERAL NOTES

- A. REFER TO SHEET M501 FOR MECHANICAL DETAILS.
- B. REFER TO SHEET M601 AND M602 MECHANICAL SCHEDULES AND GENERAL NOTES.

KEYED NOTES

- PROVIDE ROOFTOP UNIT AND FACTORY ROOF CURB. ENSURE CURB IS INSTALLED LEVEL FOR PROPER CONDENSATE DRAINAGE FROM UNIT. PROVIDE FLEXIBLE CONNECTORS ON THE SUPPLY AND RETURN AIR DUCT CONNECTIONS AND TRANSITION TO DUCT SIZES SHOWN. EXTEND DUCTS THRU ROOF. COORDINATE WITH STRUCTURE. REFER TO MECHANICAL DETAILS AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
- PROVIDE COMBUSTION AIR DUCT FOR FUTURE COMMERCIAL DRYER INSTALLATION.
 EXTEND DUCT UP THRU ROOF AND TERMINATE WITH ROOF JACK, STORM COLLAR AND
 ALL-WEATHER CAP. VERIFY EXACT COMBUSTION AIR DUCT SIZE REQUIRED WITH
 MANUFACTURER.
- 3. PROVIDE DUCTLESS SPLIT COOLING UNIT. INSTALL UNIT LEVEL ON WALL FOR PROPER CONDENSATE DRAINAGE. COORDINATE WITH ROOM EQUIPMENT AND CONDITIONS. UNIT CONDENSATE LINE SIZED PER MANUFACTURER, PUMPED TO ABOVE CEILING, DROPPING DOWN IN WALL AND TERMINATING ELBOWED DOWN TO DRAIN 18" A.F.G.. ROUTE DRAIN IN COPPER PIPING PROPERLY SECURED TO WALL. COORDINATE WITH PLUMBING CONTRACTOR. PROVIDE LIQUID AND VAPOR PIPING. SIZE PIPING, TRAP, AND SLOPE REFRIGERANT LINES PER MAUNFACTURER'S INSTRUCTIONS. CONTRACTOR TO COORDINATE SHORTEST ROUTING TO ASSOCIATED REMOTE CONDENSING UNIT. PROVIDE ALL VALVES AND ACCESSORIES FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
- 4. PROVIDE REMOTE CONDENSING UNIT AND EQUIPMENT SUPPORT RAILS ON ROOF. INSTALL UNIT LEVEL. PROVIDE LIQUID AND VAPOR PIPING. SIZE PIPING, SUPPORT, TRAP, AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S INSTRUCTIONS. PROVIDE INSULATION WITH UV PROTECTANT ON VAPOR LINE. EXTEND REFRIGERANT PIPING THRU ROOF THRU PORTALS PLUS "ALUM-FLASH" BASE WITH CAP. SEAL ROOF PENETRATION WEATHERTIGHT. CONTRACTOR TO COORDINATE SHORTEST ROUTING TO FAN COIL UNIT BELOW. PROVIDE CONTROL WIRING BETWEEN CONDENSING UNIT AND FAN COIL UNIT AND ALL CONTROL COMPONENTS. PROVIDE ALL VALVES AND ACCESSORIES AS REQUIRED BY MANUFACTURER FOR A COMPLETE AND OPERATIONAL SYSTEM. INSTALL CONDENSING UNIT MAINTAINING MANUFACTURER'S REQUIRED CLEARANCES.
- 5. PROVIDE CEILING MOUNTED EXHAUST FAN. SUPPORT FAN FROM STRUCTURE WITH 1" X 18 GAUGE GALVANIZED SHEET METAL SUPPORT STRAPS. INSTALL STRAPS AT FAN CORNERS AND PERPENDICULAR TO STRUCTURE. CEILING FAN INTALLED IN A LAY-IN TYPE CEILING SHALL BE CENTERED IN TILE AND SUPPORTED FROM STRUCTURE. TRANSITION FROM FAN DISCHARGE TO DUCT SIZE SHOWN AND EXTEND THRU WALL OR UP THRU ROOF.PROVIDE A WALL CAP WITH BAROMETRIC DAMPER AND SCREEN OR FACTORY ROOF CAP. INTERLOCK OPERATION OF EXHAUST FAN PER NOTES ON EQUIPMENT SCHEDULE. REFER TO DETAILS AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
- 6. INSTALL PETAIRAPY PPR-360 DOUBLE LAMP SYSTEM IN UNIT (DESIGNED TO DISINFECT AIR AND SURFACE) AND PPC-16 (ODOR CONTROL TIO2 MESH TUBE-12PCS), SAFETY SWITCH, VIEWPORT. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND INSTALLATION WITH PETAIRAPY INSTRUCTION. PPR-UNITS MUST BE PLACED ON THE SUPPLY SIDE OF THE COOLING COIL.
- 7. FILTER ASSEMBLY EQUAL TO FARR 3P GLIDE/PACK FILTER RACK WITH 12" DEEP, 95% RIGA-FLO 200 FILTER. 24" WIDE, 12" HIGH, 200 FPM FACE VELOCITY AT 650 CFM, 0.25" INITIAL PRESSURE DROP, 0.75" FINAL PRESSURE DROP. PROVIDE ALL DUCT TRANSITIONS AT INLET AND OUTLET OF FILTER ASSEMBLY AS REQUIRED.
- 8. PROVIDE DRYER VENT ENCLOSURE (DRYERBOX MODEL 425) IN WALL AS REQUIRED TO ALLOW SHORT RADIUS VENT CONNECTION TO CLOTHES DRYER. COORDINATE EXACT MOUNTING HEIGHT REQUIRED WITH DRYER VENT OUTLET.
- 9. PROVIDE IN-LINE EXHAUST FAN. SUPPORT FAN FROM STRUCTURE WITH 3/8" ROD AND SPRING ISO PER DETAIL. IN-LINE FAN INTALLED IN A CEILING SPACE AND SUPPORTED FROM STRUCTURE. TRANSITION FROM FAN DISCHARGE TO DUCT SIZE SHOWN AND EXTEND THRU WALL TO WALL LOUVER. COORDINATE WITH STRUCTURE. PROVIDE A STORM COLLAR, AND ALL-WEATHER CAP. INTERLOCK OPERATION OF EXHAUST FAN PER NOTES ON EQUIPMENT SCHEDULE. REFER TO DETAILS AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
- 10.EXTEND EXHAUST DUCT OF SIZE INDICATED UP THROUGH ROOF AND TERMINATE WITH ROOF CAP PER MANUFACTURES REQUIREMENTS. PROVIDE ALL TRANSITIONS AS REQUIRED. SEAL ROOF PENETRATION WEATHER TIGHT.
- 11.EXTEND ACOUSTICALLY LINED SUPPLY DUCT OF SIZE INDICATED UP THROUGH ROOF AND CONNECT TO ROOFTOP UNIT. PROVIDE ALL TRANSITIONS AS REQUIRED. COORDINATE ROUTING WITH STRUCTURAL.
- 12.EXTEND RETURN DUCT OF SIZE INDICATED UP THROUGH ROOF AND CONNECT TO ROOFTOP UNIT. PROVIDE ALL TRANSITIONS AS REQUIRED. COORDINATE ROUTING WITH STRUCTURAL
- WITH STRUCTURAL.

 13.INSTALL FLOOR MOUNTED ELECTRIC BASE BOARD HEATER PER MANUFACTURERS

REQUIREMENTS. COORDINATE WITH ELECTRICAL.

REQUIRED. COORDINATE ROUTING WITH ARCHITECT.

- 14.EXTEND ACOUSTICALLY LINED SUPPLY DUCT OF SIZE INDICATED FROM ROOFTOP UNIT, ON ROOF, THRU WALL AND INTO ATTIC AREA OF BUILDING. ROUTE DUCTWORK IN TRUSS SPACE AND PROVIDE ADDITIONAL DUCT INSULATION FOR DUCTWORK ROUTED IN ATTIC AREA. SUPPORT DUCTWORK ON ROOF AS DETAILED. PROVIDE ALL TRANSITIONS AS
- REQUIRED. COORDINATE ROUTING WITH ARCHITECT.

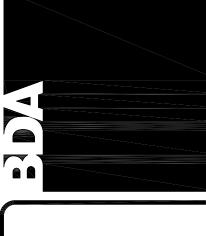
 15.EXTEND ACOUSTICALLY LINED RETURN DUCT OF SIZE INDICATED FROM ROOFTOP UNIT, ON ROOF, THRU WALL AND INTO ATTIC AREA OF BUILDING. ROUTE DUCTWORK IN TRUSS SPACE AND PROVIDE ADDITIONAL DUCT INSULATION FOR DUCTWORK ROUTED IN ATTIC AREA. SUPPORT DUCTWORK ON ROOF AS DETAILED. PROVIDE ALL TRANSITIONS AS
- 16.INSTALL INFRARED TUBE HEATER PER CODE AND MANUFACTURERS REQUIREMENTS.

 COORDINATE MINIMUM MOUNTING HEIGHTS AND MOUNT AS HIGH AS POSSIBLE.

 MAINTAIN CLEARANCES TO COMBUSTIBLES. ROUTE DIRECT VENT TO EXTERIOR OF
 BUILDING AND PROVIDE WITH TERMINATION WALL KIT PER MANUFACTURERS
 REQUIREMENTS.
- 17. PROVIDE AN EVAPORATIVE COOLER. INSTALL EVAPORATIVE COOLER ON EQUIPMENT SUPPORT STAND. PROVIDE FLEXIBLE CONNECTOR ON COOLER DISCHARGE DUCT CONNECTION AND TRANSITION TO DUCT SIZE SHOWN. EXTEND DUCT THRU ROOF. PROVIDE DUCT THRU ROOF CURB FOR ROOF PENETRATION. COORDINATE WITH STRUCTURE. FOR EVAP COOLER (EC-5) SUPPORT DUCTWORK ON ROOF AND PROVIDE A MANUAL LOCKING QUADRANT TYPE "WINTER" SHUT-OFF DAMPER IN DUCT ON ROOF. PROVIDE SHEET METAL SUN GUARD OVER FLEX CONNECTOR. REFER TO DETAILS AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.



901 Lamberton PI. NE
Albuquerque, NM 87107
Phone: (505) 858-0180
Fax: (505) 858-0111
Email: info@bdaarc.com
The documents transmitted here sole Intellectual Property of BD/Architecture, P.C. Any use, reus reproduction in any form withou express written consent of, and





CARSON CITY
IIMAL SERVICES
549 Airport Road
son City, Nevada 89701
City of Carson City

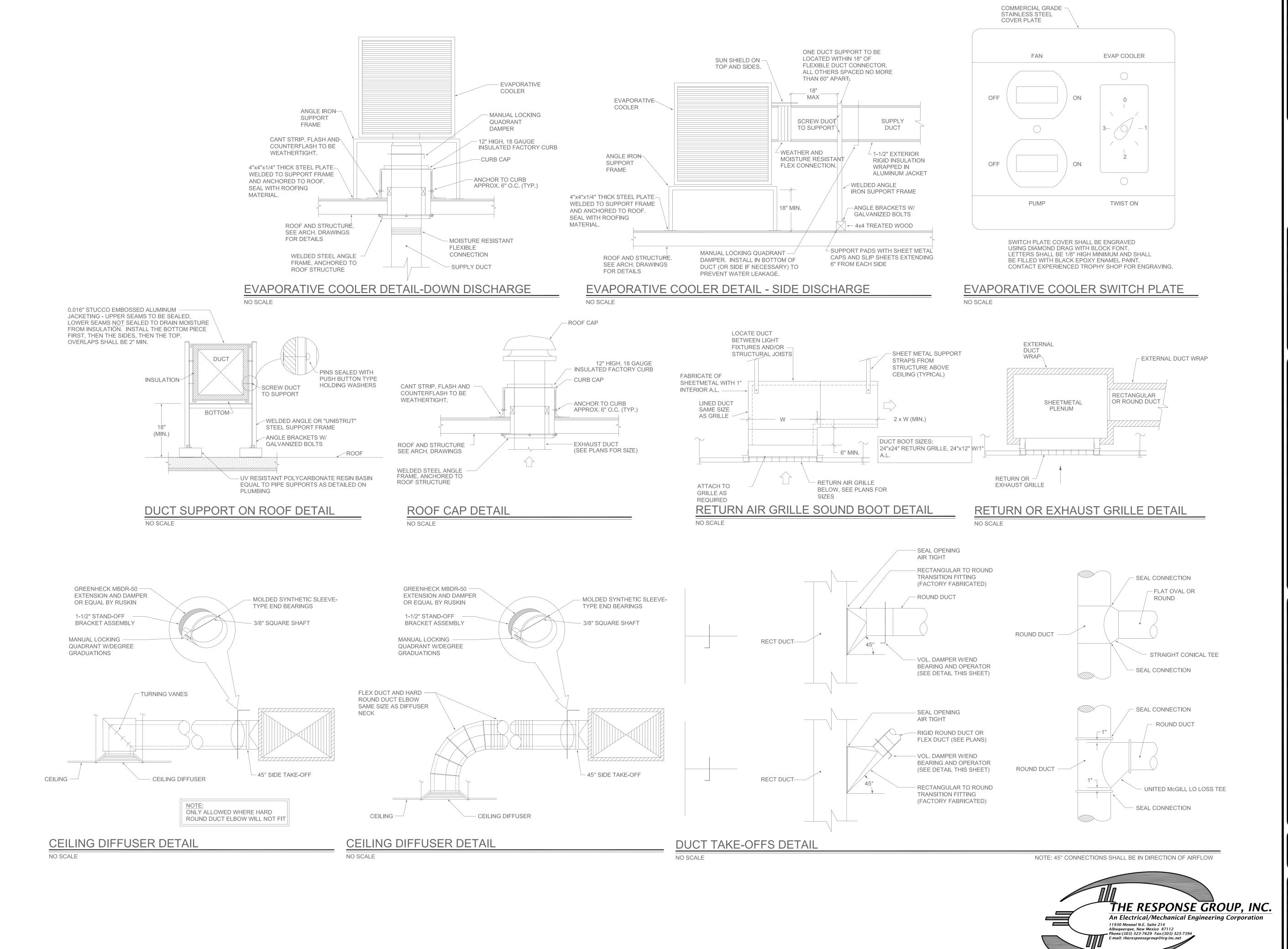
HVAC PLAN

REVIEWS
INITIALS
BDA DSGN. REV.
BDA TECH REV.

CCAS

PROJECT NO.: 1107
DRAWN: MAR/KP
DATE: 7/23/201

M101



Phone: (505) 858-0180
Fax: (505) 858-0111
Email: info@bdaarc.cc
The documents transr sole Intellectual Prope Architecture, P.C. Any reproduction in any fo express written conse compensation to, BDA violation of federal law

NINE C. THE SAHAM SA 23/2015
HANICK LOVEN LAND C. THE AND C. THE A

GRAHAM
GR

CARSON CITY
ANIMAL SERVICES
549 Airport Road
Carson City, Nevada 89701

REVIEWS
INITIALS
BDA DSGN. REV.
BDA TECH REV.

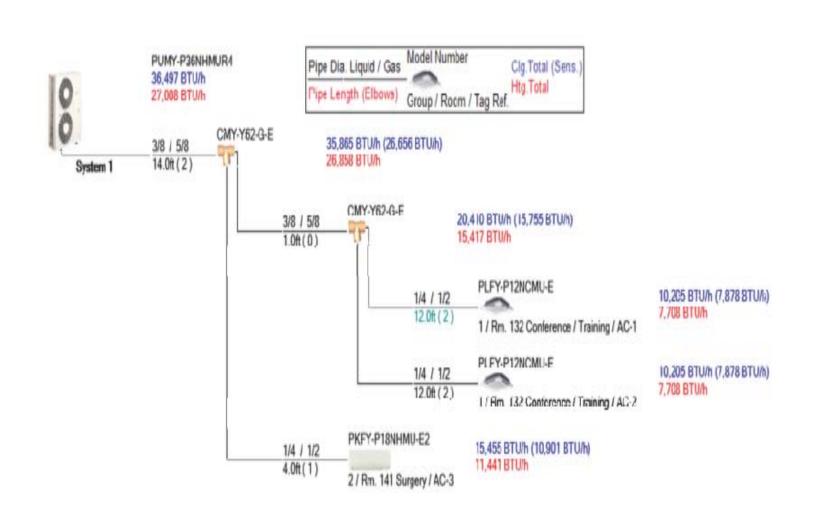
CCAS

PROJECT NO.: 1107

DRAWN: .

DATE: 7/23/2015

1501



CONDENSING UNIT PIPING SCHEMATIC

NO SCALE

THERMAL EXPANSION VALVE _ SIGHT GLASS REFRIG. METERING DEVICE P-TRAP GLOBE VALVES (TYPICAL) GLOBE VALVES COND. DRAIN CONDENSING UNIT REFRIGERANT PIPING SIZED AND ROOF MOUNTED MOUNTING FRAME —— RECOMMENDATIONS. INSULATE LINES WITH ALUMINUM JACKET WHERE OUTSIDE OF CONDENSING UNIT PIPING DETAIL

EQUAL TO INTERMATIC SWITCHED LEG FROM FIELD #FF15M. WALL MOUNT INSTALLED RELAY. ADJACENT TO LIGHT CONNECT TO RELAY AUX SWITCH, LABEL CONTACT IN AHU/RTU OR ``EXHAUST FAN HIGH 24V SOURCE THAT CLOSES SPEED". (ELECTRICAL WHEN FAN IS ENGAGED. DIVISION) (MECHANICAL DIVISION) - 30A/DPDT/120V/1Ø, ELECTRICALLY HELD CONTACTOR/RELAY IN NEMA 1 ENCLOSURE, WITH ONE N.O., ONE N.C. CONTACTS. EQUAL TO SQUARE ``D" #LG-20. MOUNT IN NEAREST ACCESSIBLE CEILING SPACE. SIMILAR TO DELTROL 20241-83 RELAY. (ELECTRICAL DIVISION)

2-SPEED EXHAUST FAN CONTROL DIAGRAM

NO SCALE

NO SCALE

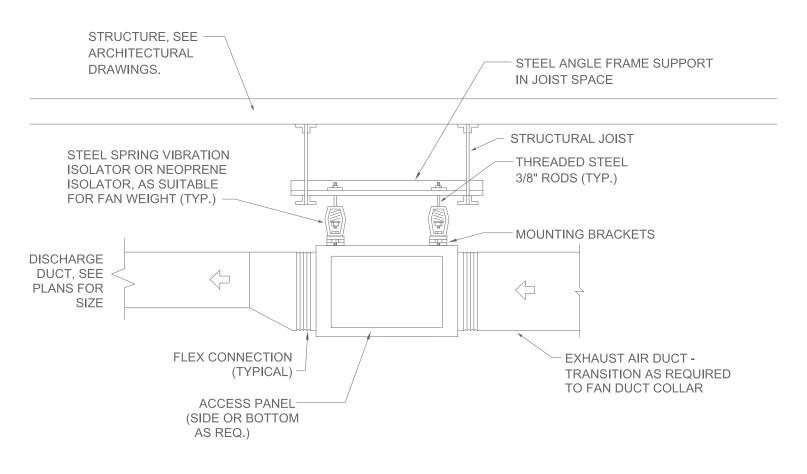
15 MINUTE TIMER SWITCH, -

EXHAUST FAN SHAVE TABS OR ENLARGE
SWITCH OPENING TO ENSURE
PROPER SEATING OF TIME
PLATE INTO SWITCH PLATE
COVER PACKAGE UNIT -— SEALING MATERIAL (DBL. RIBBED NEOPRENE PAN) -COMMERCIAL GRADE STAINLESS STEEL COVER PLATE - MOUNTING FRAME EXTENDS ROOF CURB -AROUND ENTIRE PERIMETER OF UNIT NAILER STRIP 26 GAUGE - OPENING THRU ROOF COUNTER-@ DUCT PENETRATIONS FLASHING MOP W/PITCH TWIST ON FOR EXHAUST ROOF AND STRUCTURE SEE ARCH. DRAWINGS - FLEXIBLE CONNECTION ON BOTH SUPPLY AND RETURN CANT STRIP -SWITCH PLATE COVER SHALL BE ENGRAVED USING DIAMOND DRAG WITH BLOCK FONT. LETTERS SHALL BE 1/8" HIGH MINIMUM AND SHALL RIGID INSULATION -SUPPLY OR RETURN DUCT — (SOUND LINED ON SUPPLY DUCT ONLY) BE FILLED WITH BLACK EPOXY ENAMEL PAINT CONTACT ANY EXPERIENCE TROPHY SHOP FOR ENGRAVING.

ROOF TOP UNIT - SCREW CAP CLEANOUT OPEN AT TOP FOR VENT FLEX METAL HOSE GAS COCK -CONDENSATE DRAIN (FULL SIZE OF UNIT) INTO BUILDING - REFER TO PLUMBING DRAWINGS INCOMING GAS LINE 6" LONG DIRT LEG — CAP -ROOF -

ROOFTOP UNIT DETAIL - VERTICAL DUCTING

NO SCALE



ROOFTOP UNIT PIPING DETAIL (TYPICAL ALL UNITS)

EXTRUDED ALUMINUM LOUVER

EXHAUST FAN SWITCH PLATE DETAIL

— MASONRY, WOOD OR STEEL ANCHOR

BY INSTALLER

-FASTENERS BY

INSTALLER

- ANGLE CLIPS

BY INSTALLER

NO SCALE

STUCCO -

FLANGE MOUNT

FLANGE MOUNT

STUCCO -

NO SCALE

→ FRONT

CAULKING BY INSTALLER

IN-LINE EXHAUST FAN DETAIL

NO SCALE





CARSON (ANIMAL SER 549 Airport Forson City, Neva City of Carson City, Neva City of Carson Copyright, 2015, BDA ARCH

DETAILS MECHANICAL

REVIEWS INITIALS BDA DSGN. REV. BDA TECH REV.

CCAS PROJECT NO.: 1107 DRAWN: DATE: 7/23/2015

M502

NOTES:	

- 1. SUPPORT ALL FANS FROM STRUCTURE AND PROVIDE VIBRATION ISOLATION.
- 2. PROVIDE ALL FANS WITH BACKDRAFT DAMPERS.
- 3. PROVIDE EACH DIRECT DRIVE FAN WITH A SOLID-STATE SPEED CONTROLLER MOUNTED ON FAN HOUSING OR WITH VARI-GREEN TYPE ECM MOTOR (DESIGNATED VG) 4. PROVIDE ALL INLINE FANS WITH INTERNAL SOUND ABSORBING INSULATED HOUSINGS (1/2" THICK).

INTERLOCK LOW SPEED WITH (RTU-1)/ 15 MINUTE TWIST TIMER HIGH SPEED

INTERLOCK LOW SPEED WITH (RTU-2)/ 15 MINUTE TWIST TIMER HIGH SPEED

INTERLOCK LOW SPEED WITH (RTU-2)/ 15 MINUTE TWIST TIMER HIGH SPEED

INTERLOCK LOW SPEED WITH (RTU-3)/ 15 MINUTE TWIST TIMER HIGH SPEED

INTERLOCK LOW SPEED WITH (RTU-3)/ 15 MINUTE TWIST TIMER HIGH SPEED

INTERLOCK LOW SPEED WITH (RTU-4)/ 15 MINUTE TWIST TIMER HIGH SPEED

IEF-13: INTERLOCK LOW SPEED WITH (RTU-4)/ 15 MINUTE TWIST TIMER HIGH SPEED

INTERLOCK WITH EC-5/ 15 MINUTE TWIST TIMER OVERRIDE

INTERLOCK WITH EC-2/ 15 MINUTE TWIST TIMER OVERRIDE

INTERLOCK WITH 15 MINUTE TWIST TIMER.

IEF-15: INTERLOCK EC-4/ 15 MINUTE TWIST TIMER OVERRIDE

- 5. PROVIDE ALL SERVICE AND OPERATIONAL CLEARANCES AS REQUIRED, INCLUDING ALL CLEARANCES REQUIRED BY NEC ARTICLE 110.
- ALL FANS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. 6. PROVIDE ROOF MOUNTED EXHAUST FAN (RF-1) WITH FACTORY ROOF CURB, BIRD SCREEN AND HORIZONTAL MOUNT EXHAUST DAMPER(WD-100)

IEF-7:

IEF-8:

IEF-9:

IEF-10:

IEF-11:

IEF-12:

IEF-14: NOT USED

SEQUENCE OF OPERATION:

- CEF-1: INTERLOCK WITH WALL SWITCH CEF-2: NOT USED
- CEF-3: NOT USED
- CEF-4: INTERLOCK WITH WALL SWITCH CEF-5: INTERLOCK WITH LIGHT SWITCH CEF-6: INTERLOCK WITH LIGHT SWITCH
- CEF-7: INTERLOCK WITH WALL SWITCH CEF-8: INTERLOCK WITH LIGHT SWITCH
- CEF-9: INTERLOCK WITH 15 MINUTE TWIST TIMER. CEF-10: INTERLOCK WITH WALL SWITCH
- CEF-11: INTERLOCK WITH LIGHT SWITCH CEF-12: INTERLOCK WITH WALL SWITCH
- CEF-13: INTERLOCK WITH LIGHT SWITCH CEF-14: INTERLOCK WITH WALL SWITCH
- CEF-15: INTERLOCK WITH WALL SWITCH
- IEF-1: INTERLOCK EC-1
- INTERLOCK LOW SPEED WITH (RTU-1)/ 15 MINUTE TWIST TIMER HIGH SPEED
- IEF-3: INTERLOCK LOW SPEED WITH (RTU-1)/ 15 MINUTE TWIST TIMER HIGH SPEED
- IEF-4: INTERLOCK LOW SPEED WITH (RTU-1)/ 15 MINUTE TWIST TIMER HIGH SPEED
- ELECTRICAL DIVISION SHALL PROVIDE ALL SWITCHES AND TWIST TIMERS. ELECTRICAL DIVISION SHALL BE RESPONSIBLE FOR ALL INTERLOCKS
- WITH LIGHT SWITCHES, TWIST TIMERS, AND WALL SWITCHES. REFER TO ELECTRICAL DRAWINGS.
- MECHANICAL DIVISION SHALL BE RESPONSIBLE FOR ALL INTERLOCKS WITH AC UNITS. PROVIDE LOW VOLTAGE CONTROL RELAYS AS REQUIRED. ALL EXHAUST FANS INTERLOCKED WITH AC UNITS SHALL SHUT OFF WHEN AC UNIT INDOOR FAN SHUTS OFF.

	MECHANICAI	L	SYMBOL	LEGEND
SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION
	NEW SUPPLY/RETURN/EXHAUST CEILING GRILLE			NEW FLEX DUCT (TYPICAL FOR ALL RUN-OUT DUCTS TO DIFFUSERS)
	NEW SUPPLY/RETURN FLOOR GRILLE		<u> </u>	NEW MANUAL BALANCING DAMPER WITH OFFSET BRACKET AND EXTENDED PIN (OPPOSED BLADE DAMPER IN RECTANGULAR DUCT, BUTTERFLY DAMPER IN ROUND DUCT)
_	NEW SIDEWALL SUPPLY GRILLE			DAMPER SHALL BE INSTALLED IN ACCESSIBLE LOCATION.
D1, 8"Ø 200 CFM	DIFFUSER TYPE, NECK SIZE, AND CFM			NEW BACKDRAFT DAMPER. AIRFLOW SHALL ONLY BE PERMITTED IN DIRECTION INDICATED BY AIRFLOW ARROW. DAMPER SHALL BE INSTALLED IN ACCESSIBLE LOCATION.
$- \boxtimes -$	DIFFUSER THROW PATTERN (4-WAY THROW IF NO PATTERN SHOWN)			45-DEGREE DUCT TAP WITH BALANCE DAMPER, TYPICAL FOR ALL LOW PRESSURE DUCT CONNECTIONS (TAP SHALL BE FACTORY FABRICATED FOR ALL ROUND RUNOUT BRANCH DUCTS TO DIFFUSERS AND
	CEILING-MOUNTED ACCESS DOOR		, 	GRILLES). 45-DEGREE CONNECTION SHALL BE IN DIRECTION OF AIRFLOW. DAMPER SHALL BE INSTALLED IN ACCESSIBLE LOCATION.
PPP	SUPPLY/RETURN/EXHAUST DUCTWORK RISER UP		, - ,	DUCT TRANSITION (DOES NOT INDICATE DIRECTION OF FLOW)
			, 12/10 ,	DUCT WIDTH BY DUCT HEIGHT
777	SUPPLY/RETURN/EXHAUST DUCTWORK RISER DOWN		ſ	NEW 90 DEGREE ELBOW W/ SINGLE WIDTH TURNING VANES OR
\$	NEW SUPPLY/RETURN/EXHAUST DUCT			NEW LONG RADIUS ELBOW (r/D = 1.5) OR
	NEW DUCT WITH ACOUSTICAL LINING		77777773	NEW SHORT RADIUS ELBOW W/ SINGLE WIDTH TURNING VANES
<u>\(1 \)</u>	KEYED NOTE SYMBOL DESIGNATION			NEW MECHANICAL EQUIPMENT
RTU-1	NEW EQUIPMENT SYMBOL DESIGNATION		D -	— NEW ROOM THERMOSTAT
			RTU-1	ASSOCIATED EQUIPMENT

		AIR I	DISTRIBUTION	ON DEVI	CE SCHEDU	JLE
MARK	DESCRIPTION	MOUNTING	MANUFACTURER AND MODEL#	MATERIAL	FINISH	REMARKS
D1	ADJUSTABLE CEILING SUPPLY DIFFUSER	LAY-IN CEILING	TITUS TMSA-AA	ALUMINUM	WHITE BAKED ENAMEL	24/24 FULLY LOUVERED FACE, ADJUSTABLE HOR/VERT DISCHARGE, 4-WAY THROW OR AS SHOWN, AND NECK SIZE AS INDICATED
D2	ADJUSTABLE CEILING SUPPLY DIFFUSER	SURFACE CLG. WITH RAPID MOUNT FRAME	TITUS TMSA-AA	ALUMINUM	WHITE BAKED ENAMEL	12/12 FULLY LOUVERED FACE, ADJUSTABLE HOR/VERT DISCHARGE, 4-WAY THROW OR AS SHOWN, AND NECK SIZE AS INDICATED
D3	SIDEWALL SUPPLY REGISTER	DUCT MOUNT	TITUS 300FL	ALUMINUM	COLOR BY ARCHITECT	DOUBLE DEFLECTION, 3/4" BLADE SPACING, FRONT BLADES PARALLEL TO LONG DIMENSION, NECK SIZE AS INDICATED ON PLAN. FURNISH W/OBD ADJ. THRU FACE.
G1	CEILING EXHAUST/ RETURN GRILLE	LAY-IN CEILING	TITUS 50F	ALUMINUM	WHITE BAKED ENAMEL	24/24 PANEL 1/2"x1/2"x1/2" EGG CRATE CORE
G2	CEILING EXHAUST/ RETURN GRILLE	LAY-IN CEILING	TITUS 50F	ALUMINUM	WHITE BAKED ENAMEL	24/12 PANEL 1/2"x1/2"x1/2" EGG CRATE CORE
G3	CEILING EXHAUST/ RETURN GRILLE	LAY-IN CEILING	TITUS 50F	ALUMINUM	WHITE BAKED ENAMEL	12/12 PANEL 1/2"x1/2"x1/2" EGG CRATE CORE
G4	SIDEWALL RETURN REGISTER	SURFACE SIDEWALL	TITUS 350ZFL	ALUMINUM	WHITE BAKED ENAMEL	3/4" BLADE SPACING WITH 0 DEG. DEFLECTION WITH FRONT BLADES PARALLEL TO LONG DIMENSION AND NECK SIZED ON DRAWING.
G5	CEILING EXHAUST/ RETURN GRILLE	SURFACE CLG. WITH RAPID MOUNT FRAME	TITUS 50F	ALUMINUM	WHITE BAKED ENAMEL	24/12 PANEL 1/2"x1/2"x1/2" EGG CRATE CORE
SR	SIDEWALL SUPPLY AIR REGISTER	SURFACE SIDEWALL	300FL ALUMINUM ENAMEL BLADES PARALLEL TO LONG D		DOUBLE DEFLECTION, 3/4" BLADE SPACING, FRONT BLADES PARALLEL TO LONG DIMENSION AND NECK SIZED ON DRAWING. FURNISH WITH OPPOSED BLADE DAMPERS ADJUSTABLE THRU FACE.	
L1	EXTERIOR WALL LOUVER	SURFACE MOUNTED	RUSTKIN ELF-375DX	ALUMINUM	KYNAR 500, COLOR BY ARCHITECT	LOUVER SIZE AS INDICATED. FLANGE MOUNT. PROVIDE WITH BIRDSCREEN.

1. AIR DISTRIBUTION DEVICES SERVING WAREHOUSE AREA SHALL BE CONSTRUCTED WITH MATERIALS AND FINISHES SUITABLE FOR USE WITH EVAPORATIVE COOLING. 2. PROVIDE TAPERED TRANSITIONS FOR ALL SUPPLY DIFFUSERS WITH NECK SIZES DIFFERENT THAN SUPPLY DUCT RUN-OUT SIZES.

3. PROVIDE UNIT WITH OPPOSED BLADE DAMPERS WHEN INSTALLED IN GYP BOARD CEILINGS WHERE MANUAL BALANCING DAMPERS ARE NOT INSTALLED FOR BALANCING AIRFLOWS.

	GAS FIRED INFRA-RED TUBE HEATER SCHEDULE												
MARK	SERVICE	LENGTH (FEET)	REFLECTOR ANGLE	AMPS	POWER SUPPLY	HEA INPUT (MBH)	ATING OUTPUT (MBH)	MANUFACTURER AND MODEL #					
(IRH-1)	INTAKE GARAGE	30	0°	2.6	120/1	50	31.5	SPACE-RAY LTS-50-30					
(IRH-2)	INTAKE GARAGE	15	0°	2.6	120/1	40	25	SPACE-RAY LTS-40-15					

- 1. PROVIDE PROPER BURNERS AND ORIFICES FOR SITE ELEVATION. 2. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH OWNER. DO NOT INSTALL ABOVE OR BELOW MOUNTING HEIGHTS REQUIRED BY MANUFACTURER.
- 3. INSTALL VENT AND COMBUSTION AIR DUCT PER MANUFACTURER'S REQUIREMENTS. PROVIDE VENT WITH ALL REQUIRED CLEARANCES TO COMBUSTIBLES. 4. INSTALL UNITS PER MANUFACTURER'S REQUIREMENTS. PROVIDE UNITS WITH ALL REQUIRED SERVICE AND OPERATIONAL CLEARANCES,
- INCLUDING ALL REQUIRED CLEARANCES TO COMBUSTIBLES.

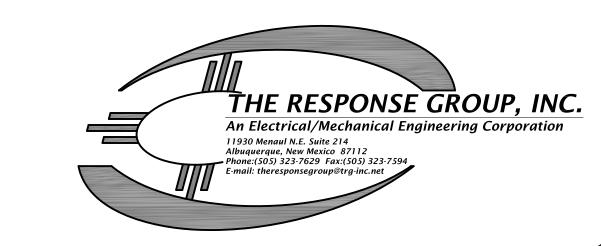
INCLUDING	ALL NEGOTIED CLEANANCES TO COMBOSTIBLES.	
CCESSORIES:	HIGH ALTITUDE CONVERSION KIT, HANGER KIT, END CAP, (COMBUSTION AIR INLET KIT, DRAFT INDUCER, WALL-MOUNTED THERMOSTAT.

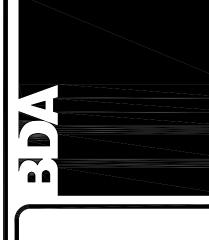
	EVAPORATIVE COOLER SCHEDULE											
MARK	AREA SERVED	FAN DATA CFM EXT. SP FAN HP SPE				POWER SUPPLY	APPROX. WEIGHT (LBS)	MANUFACTURER AND MODEL #	REMARKS			
EC-1	CANINE RUN #1 117	HI=2,000 LOW=1,340	0.8"	3/4	1	115V/1Ø	480	PHOENIX MANUFACTURING EVAPCOOL FRIGIKING FS 650	PROVIDE WITH 115V/1Ø INTEGRAL CIRC. PUMP			
EC-2	CANINE RUN #2 120	HI=2,000 LOW=1,340	0.8"	3/4	1	115V/1Ø	480	PHOENIX MANUFACTURING EVAPCOOL FRIGIKING FS 650	PROVIDE WITH 115V/1Ø INTEGRAL CIRC. PUMP			
EC-3	NOT USED											
EC-4	CANINE HOLD/ QUARANTINE HI=2,000 LOW=1,340		0.8"	3/4 1		115V/1Ø	480	PHOENIX MANUFACTURING EVAPCOOL FRIGIKING FS 650	PROVIDE WITH 115V/1Ø INTEGRAL CIRC. PUMP			
EC-5	INTAKE GARAGE 158	3,890	0.5"	3/4	1	115V/1Ø	480	PHOENIX MANUFACTURING EVAPCOOL FRIGIKING FS 650	PROVIDE WITH 115V/1Ø INTEGRAL CIRC. PUMP			

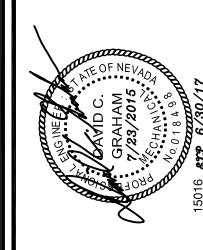
- 1. UNITS ARE SELECTED AT AN ELEVATION OF 4,500 FT ABOVE SEA LEVEL. 2. PROVIDE UNITS WITH ASPEN PAD MEDIA.
- 3. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF/HI/LOW FAN SWITCH AND A PUMP ON/OFF SWITCH.
- 4. PROVIDE ALL SERVICE AND OPERATIONAL CLEARANCES AS REQUIRED, INCLUDING ALL CLEARANCES REQUIRED BY NEC ARTICLE 110. 5. PROVIDE WITH FLOAT AND OVER FLOW CONNECTIONS.

GENERAL MECHANICAL NOTES

- A. ALL DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. INSTALL WORK AS HIGH AS POSSIBLE AND CAREFULLY COORDINATE ALL WORK WITH STRUCTURAL, ELECTRICAL, PLUMBING, ETC.
- B. ALL FLEXIBLE DUCT SHALL BE FULLY EXTENDED AND SUPPORTED, FREE OF KINKS, NO LONGER THAN 5'-0" AND SAME SIZE AS DIFFUSER NECK. USE RIGID ELBOW AT CONNECTION TO DIFFUSER.
- C. PROVIDE FLEXIBLE CONNECTIONS AT ALL EXHAUST FANS AND ANY OTHER EQUIPMENT WITH VIBRATION-PRODUCING COMPONENTS.
- D. ALL DIFFUSERS AND GRILLES SMALLER THAN THE CEILING T-BAR SPACING SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE ABOVE WITH CEILING TIE WIRES AND SHALL HAVE CONCEALED FASTENERS.
- E. ALL EXHAUST TERMINATIONS, FLUES, AND PLUMBING VENTS SHALL BE LOCATED AT LEAST 10'-0" FROM ANY OUTSIDE AIR INTAKES.
- F. ALL LOW VOLTAGE CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY MECHANICAL DIVISION UNLESS NOTED OTHERWISE.
- G. LOCATION OF THERMOSTATS AND ACCESS DOORS SHALL BE VERIFIED WITH ARCHITECT BEFORE INSTALLATION.
- H. LINE TRANSFER DUCTS WITH 1" INTERNAL INSULATION WHERE NOTED ON PLANS, ALL DUCTWORK OUTSIDE OF INSULATED ENVELOPE, INCLUDING SUPPLY, RETURN, EXHAUST, AND TRANSFER DUCTS, SHALL BE WRAPPED WITH MINIMUM R-11 EXTERNAL INSULATION, WITH VAPOR RETARDER WITH ALL JOINTS SEALED. ALL OTHER DUCTWORK SHALL BE WRAPPED WITH MINIMUM R-5 EXTERNAL INSULATION. ALL INSULATION SHALL MEET LOCAL ENERGY CODE REQUIREMENTS. (NOTE: FLUES AND VENTS, WHETHER WITHIN OR OUTSIDE OF INSULATED ENVELOPE, SHALL BE UNINSULATED)
- COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF WALL CAP WITH ARCHITECT BEFORE INSTALLATION.
- J. PROVIDE INLET AND OUTLET TRANSITIONS AS REQUIRED AT EACH EXHAUST FAN, WALL CAP, ROOF CAP, AIR DISTRIBUTION DEVICE, ETC.
- K. CLEAR SPACE ALLOWANCE FOR ALL DUCTWORK IS VERY MINIMAL AND WILL REQUIRE CAREFUL COORDINATION WITH OTHER TRADES. VERIFY ALL DIMENSIONS BOTH ON THE DRAWINGS AND ON SITE BEFORE LAYING OUT, CUTTING, AND FABRICATING THE WORK. MECHANICAL DIVISION SHALL BE RESPONSIBLE FOR ALL SHEET METAL WORK THAT IS CUT AND FABRICATED FROM THE CONTRACT DRAWINGS WITHOUT DIMENSIONAL VERIFICATION. MECHANICAL DIVISION SHALL ALSO BE RESPONSIBLE FOR ALL DUCT AND PIPE OFFSETS REQUIRED TO AVOID STRUCTURAL ELEMENTS. CHANGES IN CEILING HEIGHTS, AND ALL WORK BY OTHER TRADES.
- L. PROVIDE ALL EQUIPMENT WITH ALL REQUIRED SERVICE AND OPERATIONAL CLEARANCES, INCLUDING ALL REQUIRED CLEARANCES TO COMBUSTIBLES (WHERE APPLICABLE) AND ALL CLEARANCES REQUIRED BY NEC ARTICLE 110.
- M. COORDINATE WORK WITH OTHER TRADES TO MINIMIZE CONFLICTS AND "DOWN TIME".
- N. ALL EQUIPMENT CAPACITIES ARE SCHEDULED AT SEA LEVEL.
- O. ALL WORK SHALL COMPLY WITH ALL LOCAL AND NATIONAL CODES.
- P. MECHANICAL DIVISION SHALL KEEP UPDATED AS-BUILT DRAWINGS ON SITE FOR REVIEW DURING CONSTRUCTION. PROVIDE AS-BUILT DRAWINGS TO OWNER AFTER CONSTRUCTION HAS BEEN COMPLETED.
- Q. CONSTRUCT LOW VELOCITY/LOW PRESSURE DUCT WORK AS SPECIFIED IN THE CURRENT SMACNA HVAC CONSTRUCTION STANDARDS, FOR 2" wg PRESSURE
- R. ALL DUCT ROUTING IS SHOWN IN APPROXIMATE LOCATIONS. ALL EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE. MECHANICAL DIVISION SHALL COORDINATE ROUTING OF DUCTWORK AND LOCATION OF EQUIPMENT WITH ALL OTHER TRADES TO ENSURE PROPER INSTALLATION AND TO AVOID CONFLICTS.
- S. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND FINISHING SURFACES (WALLS, FLOORS, CEILINGS) DAMAGED DURING REMOVAL OF EQUIPMENT UNLESS REMOVAL OR RENOVATION OF SURFACE IS COVERED UNDER ANOTHER SECTION OF THIS CONTRACT.
- T. DUCT ROUTING IS APPROXIMATE ONLY. EACH BIDDER SHALL SATISFY HIMSELF AS TO EXISTING BUILDING CONDITIONS BEFORE SUBMITTING HIS BID. NO ALLOWANCE SHALL BE MADE AFTER CONTRACT IS AWARDED TO ALLOW FOR LACK OF PRE-BID INSPECTION OF BUILDING BY SUCCESSFUL BIDDER.
- U. CONTROLS PRICE SHALL BE INCLUDED IN MECHANICAL DIVISION PRICE.







yad la 89701 City 00

 \circ ME

BDA TECH REV.

BDA DSGN. REV.

PROJECT NO.: 1107

DRAWN MAR/CMB

DATE: 7/23/2015

GENERAL: MITSUBISHI AND LG ARE CONSIDERED EQUIVALENT UNITS

1. SIZE AND INSTALL REFRIGERANT PIPING BETWEEN CONDENSING UNITS AND ASSOCIATED AIR CONDITIONING UNITS ACCORDING

TO MANUFACTURER'S REQUIREMENTS. PIPING SHALL NOT EXCEED LENGTH ALLOWED BY MANUFACTURER.

2. ACCESSORIES: HIGH AND LOW AMBIENT CONTROLS, WINTER START CONTROL, WIND BAFFLES, TIME DELAY RELAY, CYCLE PROTECTOR,

TXV, LOW AND HIGH PRESSURE SWITCHES.

3. PROVIDE CRANKCASE HEATER AND/OR FILTER DRIER IF RECOMMENDED BY MANUFACTURER. 4. ALL CONDENSING UNIT CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY MECHANICAL DIVISION.

5. EER RATING LISTED IS FOR CONDENSING UNIT PAIRED WITH ASSOCIATED AIR CONDITIONING OR AIR HANDLING UNIT.

6. PROVIDE ALL SERVICE AND OPERATIONAL CLEARANCES AS REQUIRED, INCLUDING ALL CLEARANCES REQUIRED BY NEC ARTICLE 110.

7. LOW AMBINET CONTROLS DOWN TO ZERO DEGREES F.

8. FURNISH 7 YEAR COMPRESSOR AND 1 YEAR PARTS AND SERVICE WARRANTY

			DUC	CTLESS SF	PLIT INDOO	R AC UN	IIT SC	HEDULE	
MARK	SERVES	MAX. CFM	ENT. DB/WB (°F)	TOTAL COOLING CAPACITY (BTUH)	SENSIBLE COOLING CAPACITY (BTUH)	ELECTRICAL VOLT/PHASE	DATA MCA	APPROX. WT. (LBS.)	MANUFACTURER AND MODEL #
AC-1	TELECOM 104	640	80/67	21,500	19,000	208/1	0.57	46	DAIKIN FTXS24LVJU

NOTES:
1. PROVIDE ALL SERVICE AND OPERATIONAL CLEARANCES AS REQUIRED, INCLUDING ALL CLEARANCES REQUIRED BY NEC ARTICLE 110.
2. ELECTRICAL CONTRACTOR SHALL EXTEND LINE VOLTAGE ELECTRICAL SERVICE TO AC UNIT FROM CONDENSING UNIT. INDOOR AC UNIT POWERED THRU OUTDOOR UNIT.

ACCESSORIES:

1. WALL MOUNTED ELECTRONIC PROGRAMMABLE THERMOSTAT.

2. CLEANABLE FACTORY FILTERS. 3. CONDENSATE PUMP.

	ELECTRIC BASEBOARD HEATER SCHEDULE											
MARK	MARK SERVICE POWER SUPPLY LENGTH WATTS BTU/HR. MANUFACTURER AND MODEL # REMARKS											
(EBH-1)	VESTIBULE 101	120V/1Ø	3'-0"	750	2,560	BERKO BKOC2513W	PROVIDE INTEGRAL, TAMPER-PROOF THERMOSTAT. INSTALL PER MANUFACTURER'S INSTRUCTIONS.					
(EBH-2)	VESTIBULE 101	120V/1Ø	3'-0"	750	2,560	BERKO BKOC2513W	PROVIDE INTEGRAL, TAMPER-PROOF THERMOSTAT. INSTALL PER MANUFACTURER'S INSTRUCTIONS.					

Tags	Model Number	Nominal Size (Ton)	_	Outside Air (cfm)	1	Gross Total) Capacity (MBH)	Gross Sensible Capacity (MBH)	_	Cooling Entering WB (F)	Cooling Leaving Unit DB (F)			Reheat Capacity (MBH)			Output Heating Capacity @ 4500 ft (MBH)	Heating EAT (F)			MCA MC			it Operating Ele	evation (ft)
RTU-1	OADD096A	7.5	3000	2000	0.9	5 100.3	100.3	90	65	55.7	52.2	95	39.4	67.8	300	192	15	86.1	208/60/3	59.8	70	11.2	2100	4500
RTU-2	YHC060E	5	2200	550	0.9	5 61.24	45.01	80	65	59.77	56.31	95	40.43	74.3	130	85	50	94	208/60/3	27.4	40	14.2	950	4500
RTU-3	OADD072A	6	2000	1500	0.9	5 66	66	90	65	56.2	52.4	95	51.9	80.1	200	128	15	86.1	208/60/3	36.4	50	11	2000	4500
RTU-4	YHC060E	5	2500	550	0.5	5 61.24	45.01	80	65	59.77	56.31	95	40.43	74.3	130	85	50	94	1 208/60/3	27.4	40	14.2	950	4500

NOTES:

1. ROOFTOP UNIT INDOOR FANS SHALL BE STANDARD MOTOR AND DRIVE WITH BELT DRIVE AND SHALL RUN CONTINUOUSLY DURING BUILDING OPERATION. 2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE ANY PRESSURE DROP ASSOCIATED WITH ROOFTOP UNIT ACCESSORIES.

3. PROVIDE ALL SERVICE AND OPERATIONAL CLEARANCES AS REQUIRED, INCLUDING ALL CLEARANCES REQUIRED BY NEC ARTICLE 110.

4. SET MINIMUM OUTSIDE AIR AS SPECIFIED ABOVE. OUTSIDE AIR DAMPER SHALL FULLY CLOSE ON UNIT SHUTDOWN.

5. SMOKE DETECTORS SHALL BE INSTALLED IN SUPPLY AND RETURN SIDES OF RTU-1 THRU RTU-4 BY MECHANICAL DIVISION. DETECTORS TO BE PROVIDED BY ELECTRICAL DIVISION, WIRED TO BUILDING FIRE ALARM SYSTEM BY ELECTRICAL DIVISION, AND WIRED TO UNIT BY ELECTRICAL DIVISION TO SHUT UNIT DOWN UPON SENSING SMOKE. COORDINATE INSTALLATION IN UNIT WITH UNIT MANUFACTURER.

6. PROVIDE ALL UNITS WITH STAINLESS STEEL HEAT EXCHANGER

7. PROVIDE ALL UNITS WITH DRY BULB ECONOMIZER 8. PROVIDE ALL UNITS WITH HIGH AITTUDE KIT

ACCESSORIES:

1. 14" HIGH FACTORY-FABRICATED MICROMETL INSULATED ROOF CURB, SLOPED TO MATCH PITCH OF ROOF TO ALLOW UNIT TO SIT LEVEL.

2. MICROMETL ECONOMIZER WITH FULLY MODULATING CENTRIFUGAL POWER EXHAUST, FACTORY-WIRED TO ALLOW SINGLE-POINT POWER CONNECTION TO ROOFTOP UNIT. MCA/MOCP LISTED IN SCHEDULE DOES NOT INCLUDE POWER EXHAUST ELECTRICAL LOAD. PROVIDE WITH DUCT PRESSURE SENSOR.

3. COMPRESSOR SHORT CYCLE PROTECTION. 4. ELECTRONIC PROGRAMMABLE THERMIDISTAT (COMBINATION THERMOSTAT/HUMIDISTAT) WITH AUTO HEAT/COOL SWITCHOVER, HUMIDITY SENSOR, HUMIDI-MIZER CONTROL,

AND KEYPAD LOCKOUT CAPABILITY. ALL CONTROL WIRING SHALL BE PROVIDED AND INSTALLED BY MECHANICAL DIVISION. 5. 2" 30% EFFICIENT FILTERS EQUAL TO FARR 30/30. (2 SETS)

6. CONDENSER COIL HAIL GUARD ASSEMBLY.

7. HUMIDI-MIZER DEHUMIDIFICATION/SUB-COOLING SYSTEM.

	DUCT FURNACE SCHEDULE													
MARK	SERVICE	CFM	SP (IN WC)	POWER SUPPLY	FLA		HEATING DATA S/L INPUT (MBH) SITE OUTPUT (MBH) EFFICIENCY (LBS) MANUFACTURER AND MODEL #							
DH-1	EC-1	1,340	0.2	115V/1Ø	1.9	150	98.4	80%	260	MODINE HFP-150				
DH-2	EC-2	1,340	0.2	115V/1Ø	1.9	150	98.4	80%	260	MODINE HFP-150				
(DH-3)	NOT USED													
(DH-4)	EC-4	1,340	0.2	115V/1Ø	1.9	150	98.4	80%	260	MODINE HFP-150				

1. INSTALL UNITS ON THY CURBS. INSTALL PER MANUFACTURER'S REQUIREMENTS. PROVIDE DUCT TRANSITIONS AS REQUIRED.

2. PROVIDE ALL REQUIRED SERVICE AND OPERATIONAL CLEARANCES, INCLUDING ALL REQUIRED CLEARANCES TO COMBUSTIBLES AND

ALL CLEARANCES REQUIRED BY NEC ARTICLE 110. 3. PROVIDE ALL CONTROL WIRING BETWEEN DUCT FURNACES AND ASSOCIATED CONTROL COMPONENTS (THERMOSTATS, HUMIDISTATS, SENSORS, ETC.) CONTROLS SHALL BE THE RESPONSIBILITY OF MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE INSTALLATION INCLUDING ALL REQUIRED COMPONENTS NECESSARY TO ACHIEVE AN OPERATIONAL SYSTEM.

ACCESSORIES:

1. ELECTRONIC SPARK IGNITED SAFETY PILOT.

2. ELECTRONIC GAS MODULATION (20%-100%) 3. CONTROL RELAYS AS REQUIRED TO ALLOW HEATING CONTROL BY THERMOSTAT.

4. TWO SEPARATELY ADJUSTABLE DISCHARGE TEMPERATURE SENSORS.

5. 24-VOLT TRANSFORMER.

6. COMBUSTION AIR/VENT RAIN HOODS.

7. DRAIN FLANGE, STAINLESS STEEL HEAT EXCHANGER, AND STAINLESS STEEL BURNERS.

THE RESPONSE GROUP, INC. An Electrical/Mechanical Engineering Corporation 11930 Menaul N.E. Suite 214 Albuquerque, New Mexico 87112 Phone:(505) 323-7629 Fax:(505) 323-7594 E-mail: theresponsegroup@trg-inc.net



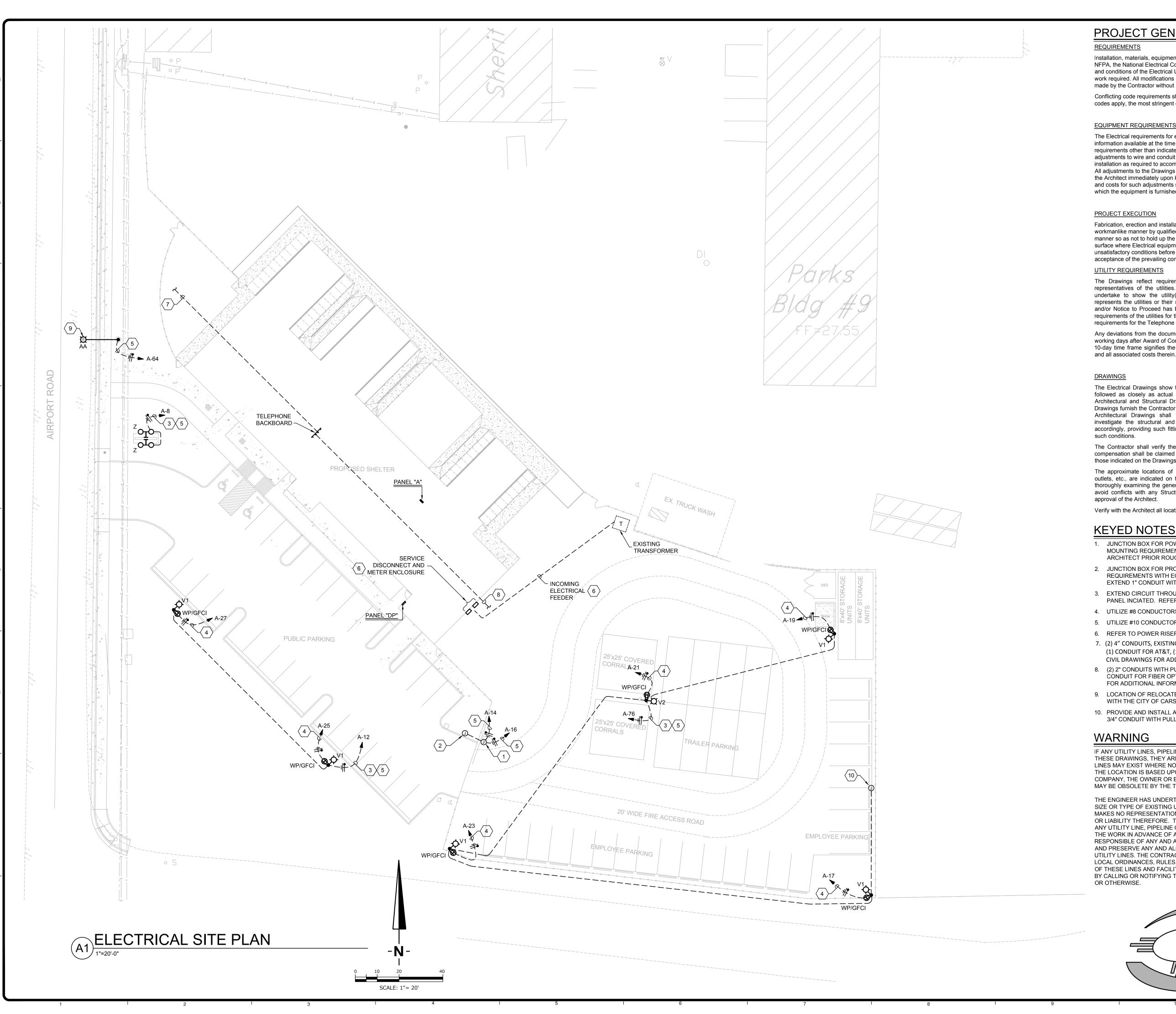
CHEDUL **CHANIC**

BDA DSGN. REV. BDA TECH REV.

PROJECT NO.: 1107 DRAWN: MAR/CMB

ME

DATE: 7/23/2015



PROJECT GENERAL NOTES

Installation, materials, equipment and workmanship shall conform to the applicable provisions of the NFPA, the National Electrical Code (NEC), the National Electrical Safety Code (NESC) and the terms and conditions of the Electrical Utility and other authorities having lawful jurisdiction pertaining to the work required. All modifications required by these codes, rules, regulations and authorities shall be made by the Contractor without additional cost.

Conflicting code requirements shall be brought to the attention of the Architect. Where two or more codes apply, the most stringent of the codes shall govern.

The Electrical requirements for equipment specified or indicated on the Drawings are based on information available at the time of design. If equipment furnished for installation has Electrical requirements other than indicated on the Electrical Drawings, the Contractor shall make all adjustments to wire and conduit size, controls, disconnecting means, overcurrent protection and installation as required to accommodate the equipment supplied, without additional cost to the Owner. All adjustments to the Drawings reflecting the Electrical System shall be delineated in a submittal to the Architect immediately upon knowledge of the required adjustments. The complete responsibility and costs for such adjustments shall be assigned to the respective section of these Specifications in which the equipment is furnished.

Fabrication, erection and installation of the complete Electrical System shall be done in a first class workmanlike manner by qualified personnel experienced in such work and shall proceed in an orderly manner so as not to hold up the progress of the project. The Contractor shall check all areas and surface where Electrical equipment or material is to be installed, removed or relocated and report any unsatisfactory conditions before starting work. Commencement of work signifies this Contractor's acceptance of the prevailing conditions.

The Drawings reflect requirements of the serving utilities based on information derived from representatives of the utilities. During the project design phase, the fact that the Architect may undertake to show the utility(s) requirements, does not necessarily indicate that the Architect represents the utilities or their requirements; therefore, within 10 working days after Contract Award and/or Notice to Proceed has been issued, the Contractor shall be responsible for coordinating the requirements of the utilities for the Power System. The Owner shall be responsible for coordinating the requirements for the Telephone and Television Systems.

Any deviations from the documents shall be brought to the attention of the Architect no later than 10 working days after Award of Contract and/or Notice to Proceed. Failure to notify the Architect within the 10-day time frame signifies the acceptance of documents and utility requirements by the Contractor and all associated costs therein.

The Electrical Drawings show the general arrangement of all conduit, equipment, etc. and shall be followed as closely as actual building construction and the work of other trades will permit. The Architectural and Structural Drawings shall be considered as a part of the work insofar as these Drawings furnish the Contractor with information relating to the design and construction of the building. Architectural Drawings shall take precedence over Electrical Drawings. The Contractor shall investigate the structural and finish conditions affecting the work and shall arrange his work accordingly, providing such fittings, elbows, pullboxes and accessories as may be required to meet

The Contractor shall verify the dimensions governing the Electrical work at the building. No extra compensation shall be claimed or allowed on account of differences between actual dimensions and those indicated on the Drawings.

The approximate locations of cabinets, panelboards, wiring gutters, switches, light outlets, power outlets, etc., are indicated on the Drawings; however, the exact location shall be determined after thoroughly examining the general building plans and by actual measurements during construction to avoid conflicts with any Structural, Architectural, or other trades, with all locations subject to the approval of the Architect.

Verify with the Architect all locations of conduit, boxes, etc., stubbed in the floor prior to installation.

KEYED NOTES

- JUNCTION BOX FOR POWER CONNECTION TO AUTOMATIC GATE. COORDINATE MOUNTING REQUIREMENTS WITH EQUIPMENT SUPPLIER, AND LOCATION WITH ARCHITECT PRIOR ROUGH-IN.
- 2. JUNCTION BOX FOR PROXIMITY CARD READER. COORDINATE MOUNTING REQUIREMENTS WITH EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO ROUGH-IN. EXTEND 1" CONDUIT WITH PULLWIRE TO AUTOMATIC GATE CONTROLLER.
- 3. EXTEND CIRCUIT THROUGH TIME CLOCK/PHOTO-CELL CONTROLLER AND THEN TO PANEL INCIATED. REFER TO DETAIL ON SHEET E202.
- 4. UTILIZE #8 CONDUCTORS THROUGHOUT CIRCUIT.
- 5. UTILIZE #10 CONDUCTORS THROUGHOUT CIRCUIT.
- 6. REFER TO POWER RISER DIAGRAM ON SHEET E201 FOR ADDITIONAL INFORMATION.
- 7. (2) 4" CONDUITS, EXISTING, PROVIDE PULLWIRE & EXTEND TO SERVICE LOCATION. (1) CONDUIT FOR AT&T, (1) CONDUIT FOR CHARTER COMMUNICATIONS. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- 8. (2) 2" CONDUITS WITH PULLWIRE FOR INCOMING COMMUNICATIONS SERVICE (1) CONDUIT FOR FIBER OPTIC AND (1) CONDUIT FOR SPARE. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- 9. LOCATION OF RELOCATED LIGHT POLE AND FIXTURE. COORDINATE RELOCATION WITH THE CITY OF CARSON CITY.
- 10. PROVIDE AND INSTALL A JUNCTION BOX FLUSH IN-GRADE FOR FUTURE USE. EXTEND 3/4" CONDUIT WITH PULLWIRE FROM LIGHT POLE TO JUNCTION BOX LOCATION.

IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OR PIPELINE COMPANY, THE OWNER OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES.

THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF TO THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE OF ANY AND ALL DAMAGE CAUSED BY IT'S FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES, AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "NM ONE CALL" PROCEDURES,

> THE RESPONSE GROUP, INC. An Electrical/Mechanical Engineering Corporation Albuquerque, New Mexico 87112





 $\overline{\mathbb{Z}}$

BDA DSGN. REV. BDA TECH REV.

CCAS

PROJECT NO.: 1107

RP / RW / JKD

KEYED NOTES 🔾

ALL LIGHT FIXTURES AND ELECTRICAL DEVICES LOCATED IN ROOM SHALL BE WEATHER-PROOF OR WET LISTED.

2. JUNCTION BOX FOR CONNECTION OF CEILING MOUNTED EXAM LIGHT. VERIFY EXACT

3. JUNCTION BOX FOR CONNECTION OF CEILING MOUNTED SURGICAL LIGHT. VERIFY

4. EXTEND TO FIXTURE TYPE "F". REFER TO DETAIL A1/E101 FOR CONTINUATION.

5. EXTEND TO LIGHT SWITCH IN ROOM.

6. EXTEND LIGHTING CIRCUIT TO "CANINE ACQUAINT 121".

7. EXTEND LIGHTING CIRCUIT TO "CANINE ACQUAINT 118." REFER TO DETAIL A1/E101 FOR

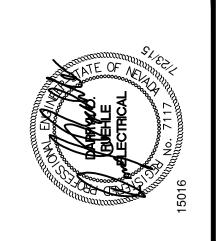
8. EXTEND LIGHTING CIRCUIT TO FIXTURE TYPE "K" LOCATED IN "ADOPTION LOBBY 107."

9. EXTEND LIGHTING CIRCUIT TO FIXTURE TYPE "F" IN "VESTIBULE 101." REFER TO DETAIL A6/E101 FOR CONTINUATION.

10. EXTEND CIRCUIT THROUGH TIME CLOCK / PHOTO-CELL CONTROLLER AND THEN TO PANEL INDICATED. REFER TO DETAIL ON SHEET E202.

11. TIME CLOCK / PHOTO-CELL CONTROLLER. REFER TO DETAIL ON SHEET E202.

12. PROVIDE AND INSTALL A DIMMER SWITCH, 0-10V, SLIDE TO OFF. DIMMER SWITCH SHALL BE EQUAL TO LUTRON.



PLAN LIGHTING

BDA DSGN. REV. BDA TECH REV.

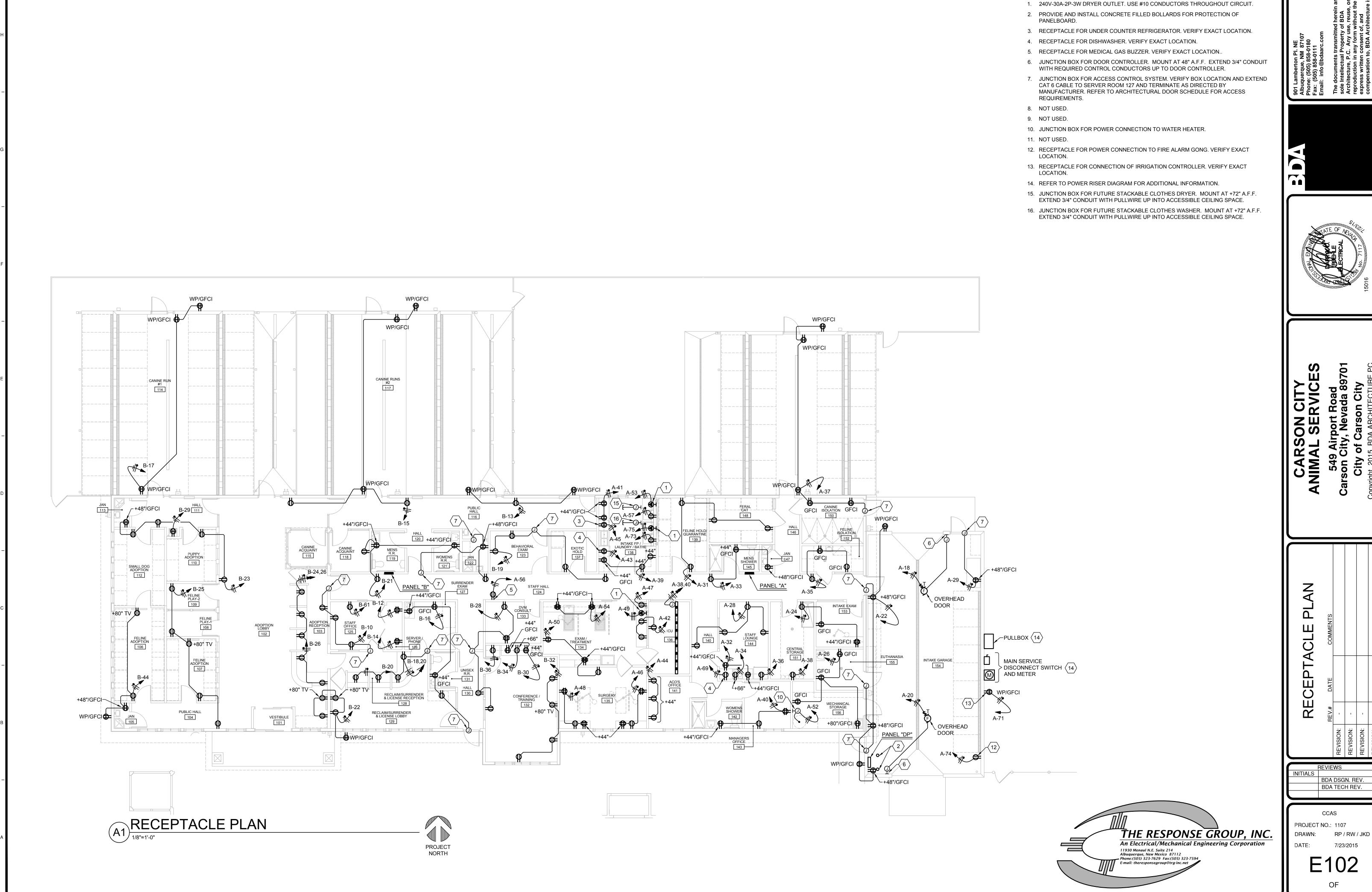
THE RESPONSE GROUP, INC.

An Electrical/Mechanical Engineering Corporation

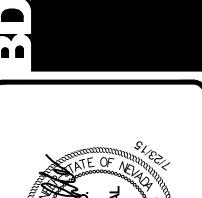
11930 Menaul N.E. Suite 214
Albuquerque, New Mexico 87112
Phone: (505) 323-7629 Fax: (505) 323-7594
E-mail: theresponsearoup@tra-inc.net

PROJECT NO.: 1107

E101

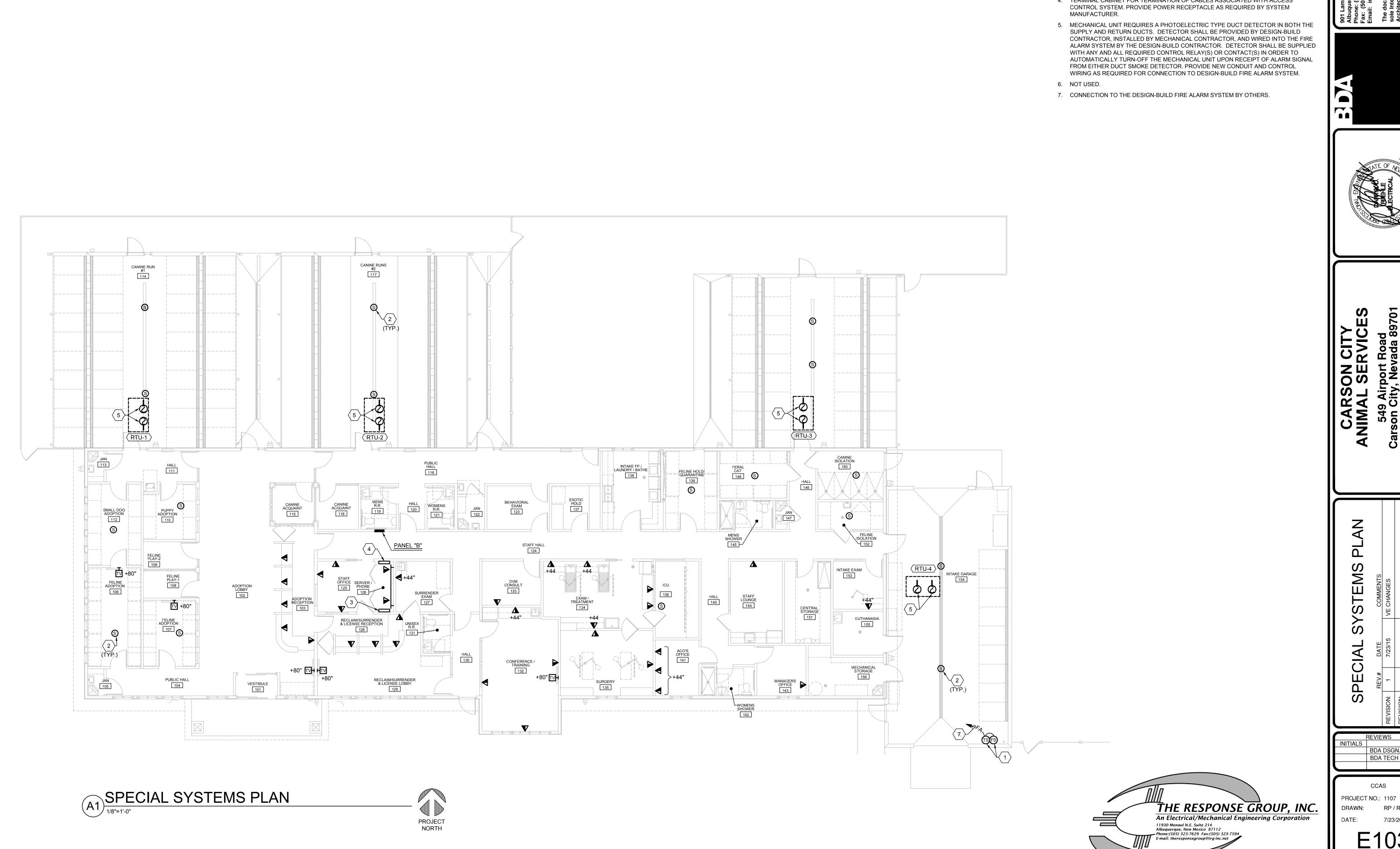


KEYED NOTES 🔾





BDA DSGN. REV. BDA TECH REV.



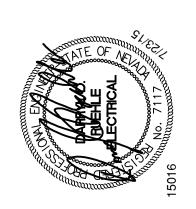
KEYED NOTES

1. CONNECTION OF FIRE ALARM TAMPER AND FLOW SWITCHES TO THE DESIGN-BUILD FIRE ALARM SYSTEM, BY OTHERS.

2. FLUSH 8" CEILING MOUNTED SPEAKER WITH BACKBOX CAPABLE OF INSTALLING IN DRYWALL, PLASTER OR SUSPENDED LAY-IN CEILING, WITH ALL COMPONENTS, DRIVER, TRANSFORMERS, ETC, FOR A COMPLETE WORKABLE SYSTEM. EXTEND WIRING BACK TO ROOM 127 AND TERMINATE IN A TERMINAL CABINET. REFER TO ARCHITECTURAL RCP FOR EXACT LOCATION.

3. SOUND SYSTEM TERMINAL CABINET. PROVIDE POWER RECEPTACLE AS REQUIRED BY SYSTEM MANUFACTURER.

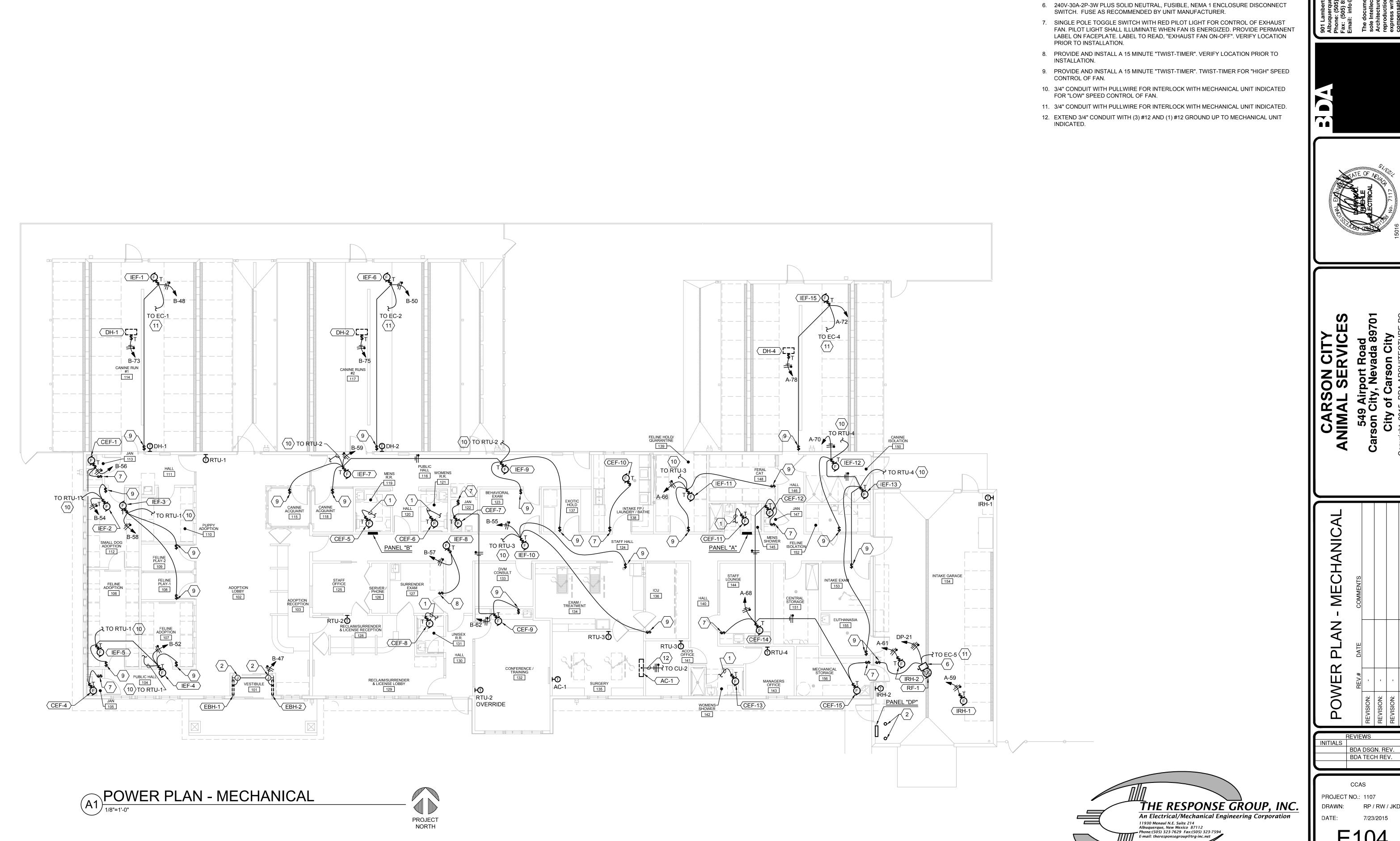
4. TERMINAL CABINET FOR TERMINATION OF CABLES ASSOCIATED WITH ACCESS



BDA DSGN. REV. BDA TECH REV.

7/23/2015

E103 OF



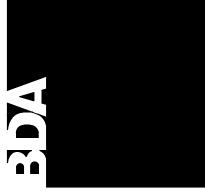
KEYED NOTES 🔾

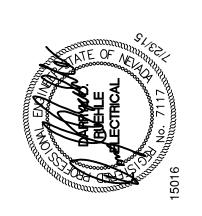
1. EXHAUST FAN SHALL CONNECT TO LIGHTING CIRCUIT AND BE CONTROLLED BY RELATED ROOM LIGHT SWITCH.

2. JUNCTION BOX FOR POWER CONNECTION TO BASEBOARD HEATER. CONTRACTOR SHALL MAKE FINAL TERMINATION AT UNIT.

NOT USED.

4. NOT USED. NOT USED..





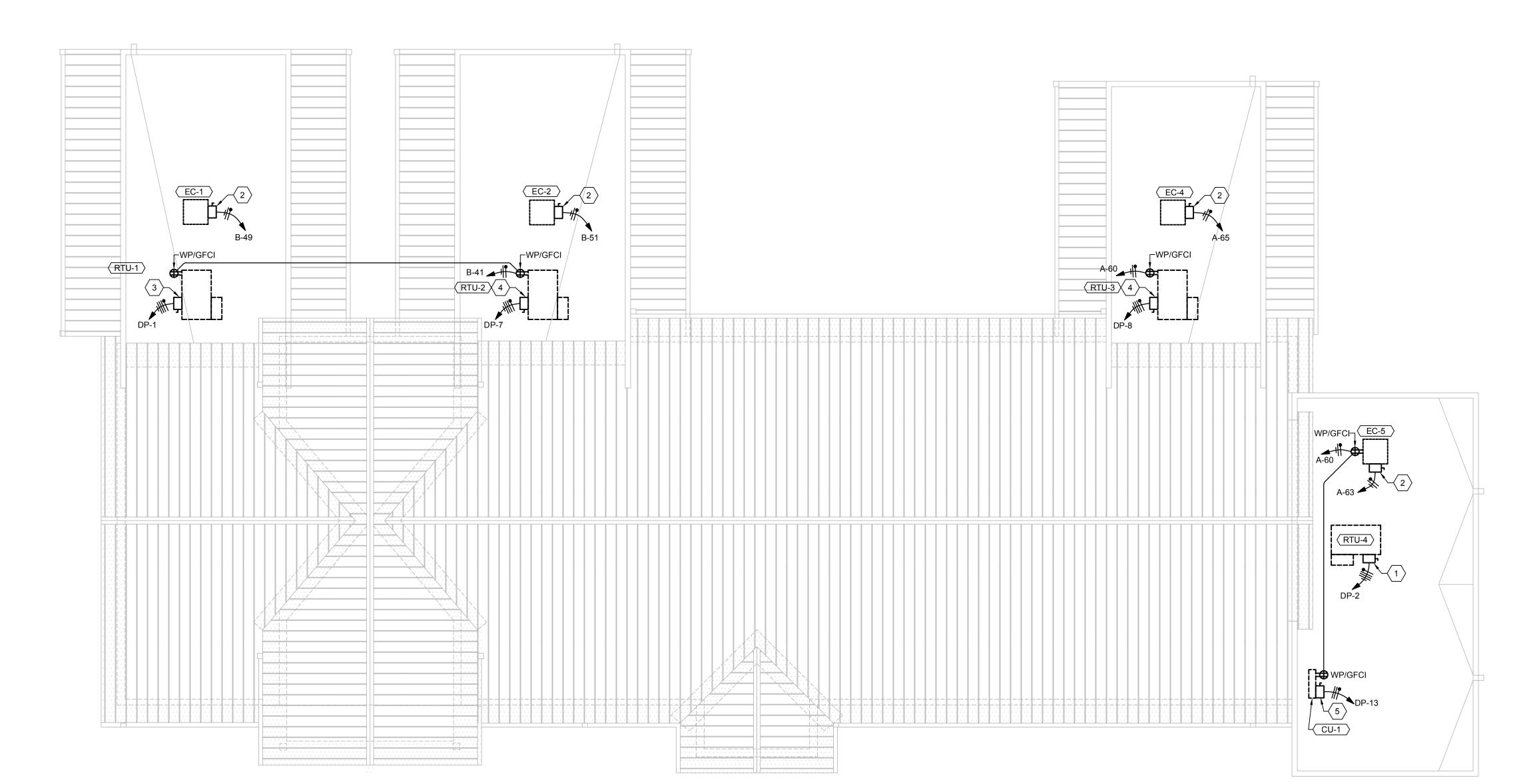
E104

240V-30A-2P-3W PLUS SOLID NEUTRAL, FUSIBLE, RAINTIGHT DISCONNECT SWITCH. FUSE AS RECOMMENDED BY UNIT MANUFACTURER. (3) #10 AND (1) #10 GROUND IN

3. 240V-100A-3P-4W PLUS SOLID NEUTRAL, FUSIBLE, RAINTIGHT DISCONNECT SWITCH. FUSE AS RECOMMENDED BY UNIT MANUFACTURER. (4) #4 AND (1) #8 GROUND IN 1 1/4"

240V-60A-3P-4W PLUS SOLID NEUTRAL, FUSIBLE, RAINTIGHT DISCONNECT SWITCH.
FUSE AS RECOMMENDED BY UNIT MANUFACTURER. (4) #8 AND (1) #10 GROUND IN 3/4"
CONDUIT.

5. 240V-30A-2P-3W PLUS SOLID NEUTRAL, FUSIBLE, RAINTIGHT DISCONNECT SWITCH. FUSE AS RECOMMENDED BY UNIT MANUFACTURER. (3) #10 AND (1) #10 GROUND IN 3/4" CONDUIT.



ELECTRICAL ROOF PLAN

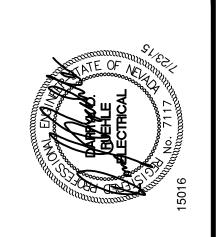
1/8"=1'-0"



THE RESPONSE GROUP, INC.

An Electrical/Mechanical Engineering Corporation

11930 Menaul N.E. Suite 214
Albuquerque, New Mexico 87112
Phone: (505) 323-7629 Fax: (505) 323-7594
E-mail: theresponsegroup@trg-inc.net



ROOF ELECTRICAL

BDA DSGN. REV. BDA TECH REV.

PROJECT NO.: 1107

E105

PANEL: "DP"

DESCRIPTION

SOURCE:.

UNIT RTU-1

UNIT RTU-2

SPARE

SPARE

SPACE ONLY

SPACE ONLY SPACE ONLY

PANEL "A"

UNIT RF-1

UNIT CU-1 / AC-1

VOLTAGE: <u>120/208V-3Ø-4W</u>

80A | 7176 | 1 | 11,544

40A 3288 7 6576

30A 1820 13 1820

/ 7176 3

3P 7176 5

/ 3288 9

3P 3288 11

2P 1820 1

20A 1144 2⁻

2P 1144 23

1P | · |31|

/ 21,977 39

TOTAL CONNECTED (KVA): 220.0 ESTIMATED DEMAND (KVA):

3P 20,483 41

225A 22,114 37 44077

TOTAL LOAD (VA) 73,581 76,551 69,890

BRKR LOAD CCT LOAD (VA) CCT LOAD (VA) BRKR

11,544

KEYED NOTES

_____ MAINS: <u>800A</u>

SKIRTS: N/A FEED: BOTTOM MAIN BREAKER: MOUNTING: SURFACE

11,544 6 4368 3P

6576 12 3288 3P

1144 | 24 |

42016 42 21,533 3P

2 | 4368 | 50A

8 3288 40A

4 4368 / \>UNIT RTU-3

10 3288 / \ UNIT RTU-4

20A

. 36 · 1P SPACE ONLY

38 21,933 225A

48369 40 26,392 / PANEL "B"

|}SPARE

- 1. 4" CONDUIT WITH PULLCORD. VERIFY EXACT SIZE AND TERMINATION REQUIREMENTS WITH NEVADA ENERGY UTILITY PRIOR TO INSTALLATION.
- CONCRETE PAD AND METER ENCLOSURE PER NEVADA ENERGY UTILITY REQUIREMENTS.
- 3. RAINTIGHT PULLBOX FOR FUTURE DISCONNECT SWITCH ASSOCIATED WITH PORTABLE ENGINE GENERATOR.
- 4. (2) 4" CONDUITS EACH WITH (4) #600 KCMIL AND (1) #2/0 GROUND.
- 5. (4) #4/0 AND (1) #2 GROUND IN 2 1/2" CONDUIT.
- 6. PAD MOUNT TRANSFORMER BY UTILITY COMPANY.
- 7. PROVIDE AND INSTALL A 24" X 36" X 8" PULLBOX FOR INSTALLATION OF A FUTURE AUTOMATIC TRANSFER SWITCH. EXTEND CONDUCTORS THROUGH PULLBOX TO PANEL "DP" AND STUB CONDUIT PER NOTE 9 TO AN EXTERIOR PULLBOX FOR FUTURE EXTENSION TO PORTABLE ENGINE-GENERATOR.
- 8. PORTABLE ENGINE GENERATOR BY OWNER.
- 9. (2)4" CONDUITS WITH PULLCORD FROM INTERIOR PULLBOX TO EXTERIOR PULLBOX PER NOTE 3.

AIC: 22,000

DESCRIPTION

DOOR-IN-DOOR

GROUND BUS

10. (2) 4" CONDUITS EACH WITH (4) #600 KCMIL AND (1) #2/0 GROUND, PLUS (2) 4" EMPTY CONDUITS WITH PULLCORDS.

_
T
• •

BUEHLE SON TITTON TO THE SON T	
MALE ENTREMENTAL E	
15016	

POWER RISER DIAGRAM AND PANEL SCHEDULES	COMMENTS				
ER RIS PANEL	DATE				
	REV.#	ı	1	1	
ΔÃ	·	REVISION:	REVISION:	REVISION:	

		REV
	INITIALS	
		BD
		BE
		C
	PROJEC ⁻	T NC
THE RESPONSE GROUP, INC.	DRAWN:	
An Electrical/Mechanical Engineering Corporation	DATE:	
11930 Menaul N.E. Suite 214 Albuquerque, New Mexico 87112		
— Phone:(505) 323-7629 Fax:(505) 323-7594_		- /
E-mail: theresponsegroup@trg-inc.net	│ │	

1	
-	
_ '	
' =	
 	
· 🖴 🙈	
1	
	The second secon
	*
	^
	2525 ((((((((((((((((((((((((((((((((((
	ATE OF NO NINN
	AND WON
i I	000000000000000000000000000000000000000
	≈_ 7 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

ע ב <u>ר</u>	, ,	89701
	Road	
	j	
RS(	100	
<b>₹</b>	549	on :

POWER RISER DIAGRAM AND PANFI SCHEDIJI ES	COMMENTS				
ER RIS PANFI	DATE				
	REV.#	•	ı	1	
P A	•	EVISION:	EVISION:	EVISION:	

IN				֓֞֜֜֜֜֜֜֟֜֜֜֜֟֜֜֓֓֓֓֓֓֓֟֜֟֜֟֓֓֓֓֓֓֓֟֜֟֜֟֓֓֓֓֓֓
VITIALS	ŢĄ	<b>≥</b>	FOWER KISER AND PANFL SO	L L L L L L L L L L L L L L L L L L L
REVIE		REV.#	DATE	COMME
WS	REVISION:	1		
	REVISION:	1		
	REVISION:	1		

INITIALS	
	BDA DSGN. REV.
	BDA TECH REV.
	CCAS

CCAS NO.: 1107 RP / RW / JKD 7/23/2015

POWER RISER DIAGRAM NOT TO SCALE

PANEL: "A" SOURCE:PANEL "DP"					08V-3Ø-4W MAINS: 225A MAIN BREAKER: 225A/3P					
				ı	.OAD (VA)				T T	
DESCRIPTION	BRKR	LOAD (VA)	CCT NO.	ØA	ØB	ØC	CCT NO.	LOAD (VA)	BRKR	DESCRIPTION
LIGHTS	20A/1P	633	1	991			2	358	20A/1P	LIGHTS - BLDG EXTERIOR
LIGHTS	20A/1P	470	3		1460		4	990	20A/1P	LIGHTS - BLDG EXTERIOR
LIGHTS	20A/1P	686	5			886	6	200	20A/1P	LIGHTS - BLDS SIGN
LIGHTS	20A/1P	470	7	870			8	400	20A/1P	LIGHTS - MONUMENT SIGN
SPARE	20A/1P		9				10	•	20A/1P	SPARE
SPARE	20A/1P	•	11			526	12	526	20A/1P	LIGHTS - PARKING LOT
SPARE	20A/1P	•	13	1008			14	1008	20A/1P	GATE CONTROLLER
SPARE	20A/1P	•	15		1008		16	1008	20A/1P	GATE CONTROLLER
RECEPTACLES - PARKING	20A/1P	600	17			1776	18	1176	20A/1P	OVERHEAD DOOR
RECEPTACLES - PARKING	20A/1P	600	19	1776			20	1176	20A/1P	OVERHEAD DOOR
RECEPTACLES - PARKING	20A/1P	600	21		1500		22	900	20A/1P	RECEPTACLES
RECEPTACLES - PARKING	20A/1P	600	23			1320	24	720	20A/1P	RECEPTACLES
RECEPTACLES - PARKING	20A/1P	600	25	1320			26	720	20A/1P	RECEPTACLES
RECEPTACLES - PARKING	20A/1P	600	27		1320		28	720	20A/1P	RECEPTACLES
FREEZER	20A/1P	1200	29			1920	30	720	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	720	31	2220			32	1500	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	540	33		2040		34	1500	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	540	35			1740	36	1200	20A/1P	REFRIGERATOR
RECEPTACLES	20A/1P	900	37	1980			38	1080	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	1500	39		2580		40	1080	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	1500	41			2040	42	540	20A/1P	RECEPTACLES
DISHWASHER	20A/1P	1000	43	1540			44	540	20A/1P	RECEPTACLES
U.C. REFRIGERATOR	20A/1P	500	45		1400		46	900	20A/1P	RECEPTACLES
CLOTHES WASHER	20A/1P	800	47			1700	48	900	20A/1P	RECEPTACLES
CLOTHES DRYER {	30A	2375	49	3095			50	720	20A/1P	RECEPTACLES
CEOTTIES DIVIER	2P	2375	51		2915		52	540	20A/1P	WATER HEATER
CLOTHES DRYER {	30A	2375	53			3095	54	720	20A/1P	RECEPTACLES
CEOTTIES DIVIER	2P	2375	55	2875			56	500	20A/1P	MEDICAL GAS BUZZER
CLOTHES WASHER	20A/1P	800	57		1000		58	200	20A/1P	TIME CLOCK
UNIT IRH-1	20A/1P	312	59			852	60	540	20A/1P	RECEPTACLES - ON ROOF
UNIT IRH-2	20A/1P	312	61	312			62	•	20A/1P	SPARE
UNIT EC-5	20A/1P	1656	63		1928		64	272	20A/1P	LIGHTS - STREET
UNIT EC-4	20A/1P	1656	65			2352	66	696	20A/1P	UNIT IEF-11
SPARE	20A/1P	•	67	291			68	291	20A/1P	EXHAUST FANS
DISHWASHER	20A/1P	1000	69		2224		70	1224	20A/1P	UNITS IEF-12 & IEF-13
IRRIGATION CONTROLLER	20A/1P	500	71			1676	-	1176	20A/1P	UNIT IEF-15
CLOTHES WASHER	20A/1P	800	73	1000			74	200	20A/1P	RECEPTACLES
CLOTHES DRYER {	30A	2375	75		3427		76	1052	20A/1P	LIGHTS - PARKING LOT
	2P	2375	77			2603	78	228	20A/1P	UNIT DH-4
SPACE ONLY	1P		73				74		1P	SPACE ONLY
SPACE ONLY	1P	-	75				76		1P	SPACE ONLY
SPACE ONLY	1P	•	77				78	•	1P	SPACE ONLY
TOTAL LOAD (VA) 22,114 21,977 20,483  TOTAL CONNECTED (KVA): 64.6 ESTIMATED DEMAND (KVA): . GROUND BUS										

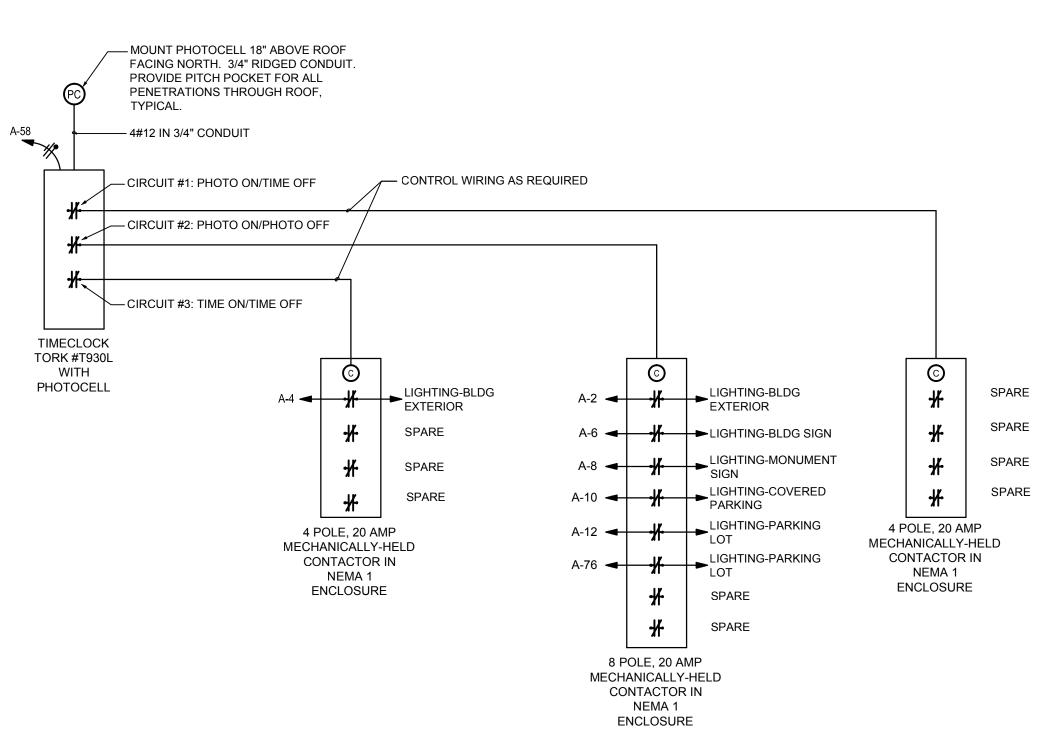
PANEL: "B"	VOLTAGE: 120/208V-3Ø-4W							S: <u>225A</u>		
SOURCE:PANEL "DP"	S	FEI	ED: <u>TOP</u>	M	AIN E	BREAKER	P MOUNTING: RECES			
DESCRIPTION	BRKR	LOAD (VA)	CCT NO.	ØA L	OAD (VA) ØB	ØС	CCT NO.	LOAD (VA)	BRKR	DESCRIPTION
LIGHTS	20A/1P	520	1	1494			2	974	20A/1P	LIGHTS
LIGHTS	20A/1P	520	3		1389		4	869	20A/1P	LIGHTS
LIGHTS	20A/1P	520	5			1290	6	770	20A/1P	LIGHTS
LIGHTS	20A/1P	473	7	1505			8	1032	20A/1P	LIGHTS
EXAM LIGHTS	20A/1P	1000	9		1900		10	900	20A/1P	RECEPTACLES
EXAM LIGHTS	20A/1P	1000	11			1360	12	360	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	720	13	1080			14	360	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	720	15		1620		16	900	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	720	17			1080	18	360	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	720	19	1080			20	360	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	900	21		1800		22	900	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	720	23			1260	4	540	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	1080	25	1440			26	360	20A/1P	RECEPTACLES
SPARE	20A/1P		27		900		28	900	20A/1P	RECEPTACLES
RECEPTACLES	20A/1P	360	29			1860	4	1500	20A/1P	RECEPTACLES
SPARE	20A/1P		31	720			32	720	20A/1P	RECEPTACLES
SPARE	20A/1P		33		1500		34	1500	20A/1P	RECEPTACLES
SPARE	20A/1P	•	35			1200	4	1200	20A/1P	RECEPTACLES
SPARE	20A/1P	•	37				38		20A/1P	SPARE
SPARE	20A/1P		39				40	•	20A/1P	SPARE
RECEPTACLES - ON ROOF	20A/1P	360	41			360	4	•	20A/1P	SPARE
		2375	43	3095			44	700	20A/1P	RECEPTACLES
CLOTHES DRYER {	30A 2P	2375	45	3093	2375		46	720	20A/1P	SPARE
UNIT EBH-1	20A/1P	1512	47			2688	4	1176	20A/1P	UNIT IEF-1
UNIT EC-1	20A/1P	1656	49	2832		2000	50	1176	20A/1P	UNIT IEF-6
UNIT EC-2	20A/1P	1656	51	2032	2880		52	1224	20A/1P	UNITS IEF-4 / IEF-5
SPARE	20A/1P	1000			2000 8		54	696	20A/1P	UNIT IEF-2
	20A/1P	1176	55	1 1 2 1		090	56	258	20A/1P	EXHAUST FANS
UNIT IEF-10 UNIT IEF-8	20A/1P	1176 528	1 2	1434	1224		58	696	20A/1P	UNIT IEF-3
	+		57		1224 8		4	090		
UNIT IEF-7 / IEF-9 COPIER	20A/1P 20A/1P	1056 1500	59 61	1629		1056	62	129	20A/1P 20A/1P	SPARE EVHALIST FAMS
COPIER	4	1440	<del>                                     </del>	1029	2880		62 64			EXHAUST FANS
CLOTHES WASHER	20A /	1440	63		200U ()	2880	4	1440 1440	20A	CLOTHES WASHER
(FUTURE)	1		<del></del>	2000		2000 //////////////////////////////////	+		/ 2D	(FUTURE)
CLOTUE O DOVED	3P	1440	67	2880 //////////			68	1440	3P	) OLOTUEO DOVED
CLOTHES DRYER	20A	1248	69		2496		70	1248	20A	CLOTHES DRYER
(FUTURE)	2P	1248	71			2496	<del>d  </del>	1248	2P	(FUTURE)
UNIT DH-1	20A-1P	228	73	228			74	•	1P	SPACE ONLY
UNIT DH-2	20A-1P	228	75		228		76	•	1P	SPACE ONLY
SPACE ONLY	1P	•	77				78		1P	SPACE ONLY
SPACE ONLY	1P	•	79				80	•	1P	SPACE ONLY
SPACE ONLY	1P	•	81				82	•	1P	SPACE ONLY
SPACE ONLY	1P	•	83			•	84	•	1P	SPACE ONLY
	TOTA	L LOAD (	(VA) [	21,933	26,392	21,533	]			
TOTAL LOAD (VA)   21,933   26,392   21,533   DOOR-IN-DOOR										

LOAD SUMMARY - PANEL A				LOAD SUMMARY - PANEI
ESCRIPTION				DESCRIPTION
ANELBOARD "A" STIMATED DEMAND PER NEC 220  MECHANICAL UNITS (10.6 KVA CONN)  DRYER (9.5 KVA CONN) AT 100%  RECEPTACLES (38.1 KVA CONN)  FIRST 10 KVA AT 100%  REMAINING AT 50%	10.6 9.5 10.0 14.1	KVA		PANELBOARD "B" ESTIMATED DEMAND PER NEC 220  MECHANICAL UNITS (15.0 KVA CONN)  DRYER (9.8 KVA CONN) AT 100%  RECEPTACLES (37.5 KVA CONN)  FIRST 10 KVA AT 100%  REMAINING AT 50%
LIGHTING (6.4 KVA CONN) AT 100%	6.4	KVA		LIGHTING (7.6 KVA CONN) AT 100%
OTAL ESTIMATED LOAD:	50.6	KVA		TOTAL ESTIMATED LOAD:
140 AMPERES AT 208Y/120V-3Ø-4W				156 AMPERES AT 208Y/120V-3Ø-4W
IINIMUM SERVICE CAPACITY 125% x TOTAL ESTIMATED LOAD	63.2	KVA		MINIMUM SERVICE CAPACITY =125% x TOTAL ESTIMATED LOAD
175 AMPERES AT 208Y/120V-3Ø-4W				194 AMPERES AT 208Y/120V-3Ø-4W
. MINIMUM RECOMMENDED SERVICE SIZE =	225	AMPS		∴ MINIMUM RECOMMENDED SERVICE SIZE =
			_	

LOAD SUMMARY - PANEL DP						
DESCRIPTION						
PANELBOARD "DP" ESTIMATED DEMAND PER NEC 220						
MECHANICAL UNITS (83.0 KVA CONN)	83.0	KVA				
PANEL "A"	50.6	KVA				
PANEL "B"	56.2	KVA				
TOTAL ESTIMATED LOAD:	189.8	KVA				
527 AMPERES AT 208Y/120V-3Ø-4W						
MINIMUM SERVICE CAPACITY =125% x TOTAL ESTIMATED LOAD	237.3	KVA				
659 AMPERES AT 208Y/120V-3Ø-4W						
∴ MINIMUM RECOMMENDED SERVICE SIZE =	800	AMPS				

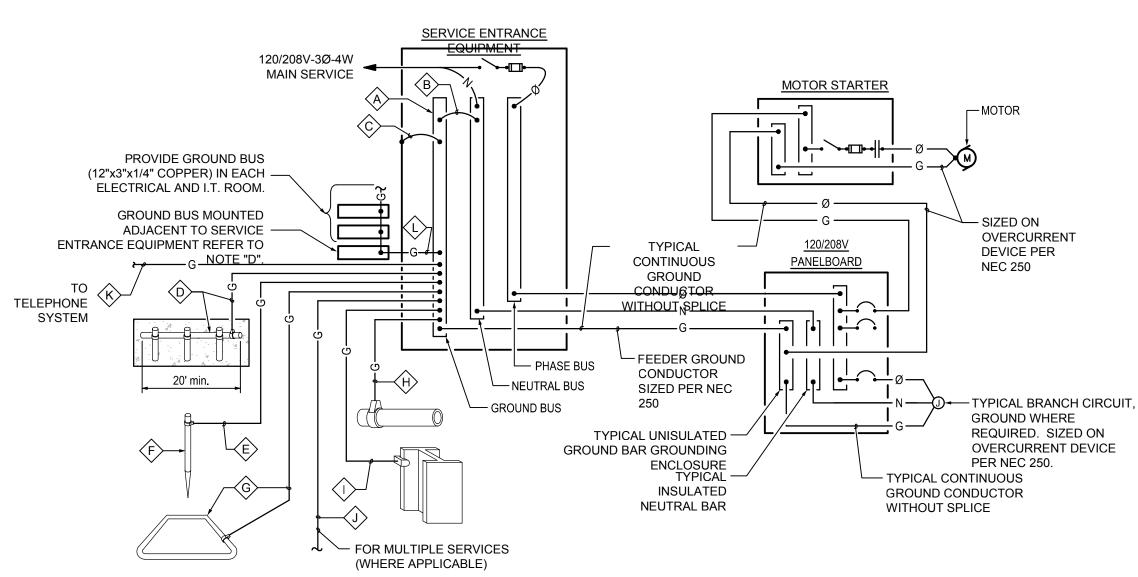
	LOAD SUMMARY -
	DESCRIPTION
	PANELBOARD "DP" ESTIMATED DEMAND PER NEC 220
	MECHANICAL UNITS (83.0 KVA CONN)
	PANEL "A"
	PANEL "B"
	TOTAL ESTIMATED LOAD:
	527 AMPERES AT 208Y/12
	MINIMUM SERVICE CAPACITY =125% x TOTAL ESTIMATED LOAD
	659 AMPERES AT 208Y/12
	MINIMUM RECOMMENDED SERVICE SIZ

		DESCRIPTION									
		PANELBOARD "B" ESTIMATED DEMAND PER NEC 220									
		MECHANICAL UNITS (15.0 KVA CONN)	15.0	KVA							
		DRYER (9.8 KVA CONN) AT 100%	9.8	KVA							
		RECEPTACLES (37.5 KVA CONN)									
		FIRST 10 KVA AT 100%		KVA							
		REMAINING AT 50%	13.8	KVA							
		LIGHTING (7.6 KVA CONN) AT 100%	7.6	KVA							
		TOTAL ESTIMATED LOAD:	56.2	KVA							
		156 AMPERES AT 208Y/120V-3Ø-4W									
		MINIMUM SERVICE CAPACITY =125% x TOTAL ESTIMATED LOAD	70	KVA							
		194 AMPERES AT 208Y/120V-3Ø-4W									
		∴ MINIMUM RECOMMENDED SERVICE SIZE =	225	AMPS							
_	ı L										



# EXTERIOR BUILDING LIGHTING CONTROL DIAGRAM

TIME ON AND/OR TIME OFF SETTINGS SHALL BE SET TO OWNER'S REQUIREMENTS.



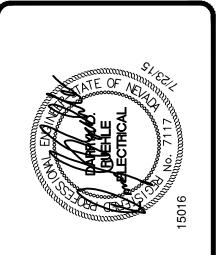
# **GROUNDING SYSTEM DIAGRAM**

# GROUNDING SYSTEM GENERAL NOTES

- A. THE GROUNDING ELECTRODE SYSTEM SHALL CONSIST OF ITEMS (A) (B) (C) (D) (E) (F) AND (G), WHERE APPLICABLE.
- B. ITEMS(H) (I) AND (J) MUST BE BONDED TOGETHER AND TO THE GROUNDING ELECTRODE SYSTEM WHEN THEY ARE PRESENT.
- C. ITEM (D), CONCRETE ENCASED ELECTRODE (UFER) SHALL HAVE UFER SUPPORT CONSISTING OF 5/8" x 10' COPPER GROUND ROD CUT INTO 2' SECTIONS AND DRIVEN FOR SUPPORT OF UFER CONDUCTOR. ONLY COPPER TO COPPER CONNECTIONS ARE ACCEPTABLE. DO NOT USE RE-BAR FOR UFER SUPPORT. (THIS IS TO AVOID THE HARMFUL EFFECTS OF DISSIMILAR METALS IN CONTACT.) A U.L. LISTED COPPER TO RE-BAR CLAMP (SUCH AS GRAVES "JONES BOND" SYSTEM) IS AN APPROVED ALTERNATIVE.
- D. ITEM 🗘 , PER NEC 250.94, PROVIDE AND INSTALL A LISTED INTERSYSTEM BONDING TERMINATION FOR CONNECTING BONDING CONDÚCTORS REQUIRED FOR OTHER SYSTEMS EXTERNAL TO ADJACENT SERVICE EQUIPMENT OR METERING EQUIPMENT ENCLOSURE INTERSYSTEM BONDING TERMINATION SHALL CONSIST O SET OF TERMINALS WITH CAPACITY FOR CONNECITON OF NOT LESS THAN THREE INTERSYSTEM BONDING CONDUCTORS.
- E. THIS DETAIL IS PROVIDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, ARTICLE 250, PERTAINING TO THE "GROUNDING ELECTRODE SYSTEM".
- F. ALL SPLICING SHALL BE ACCOMPLISHED VIA EXOTHERMIC WELD (CAD-WELD) ONLY.
- G. ALL CONDUCTOR SIZING INDICATED ON THE GROUNDING SCHEDULE ARE FOR COPPER CONDUCTORS. ALUMINUM IS NOT PERMITTED.
- H. ANY VARIANCES FROM THIS DIAGRAM AND ASSOCIATED SCHEDULE AND NOTES MUST BE REQUESTED AND APPROVED IN WRITING PRIOR TO INSTALLATION.
- ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF N.E.C. ARTICLE 250 (ALL SUBPARAGRAPHS) AND ALL STATE
- THE GROUNDING SYSTEM SHALL PROVIDE LESS THAN (4) FOUR OHMS RESISTANCE TO GROUND AT THE SERVICE CONNECTION. THE RESULTS SHALL BE VERIFIED BY AN INDEPENDENT TESTING AGENCY VIA GROUND TEST (FALL-OF-POTENTIAL) AND SUBMITTED TO ELECTRICAL ENGINEER UPON COMPLETION OF PROJECT.

				GR	OUNDING	3 SCHED	ULE					
	Â	B		(D)	(E)	⟨F⟩	Ġ	H	$\Diamond$	⟨Ĵ⟩	⟨ <b>K</b> ⟩	$\Diamond$
	FACTORY INSTALLED GROUND BUS BAR	INTEGRATED BUS BAR MAIN BOND JUMPER	INTEGRATED BUS BAR CASE BOND JUMPER	CONCRETE ENCASED ELECTRODE (UFER)	GROUNDING ELECTRODE CONDUCTOR TO ROD, PIPE OR PLATE	CU OR CU-CLAD STEEL GROUND ROD	COPPER GROUND RING CONDUCTOR	METALLIC PIPING BONDING CONDUCTOR	BUILDING STEEL BONDING CONDUCTOR	MULTIPLE SERVICE BONDING CONDUCTOR	TELEPHONE SYSTEM GROUNDING CONDUCTOR	INTERSYSTEM BONDING
AND ACITY CE		N.E.C. 250.102(C)	N.E.C. 250.102(C)	N.E.C. 250.52(A)(3) 250.66(B)	N.E.C. 250.52(A)(5) 250.52(A)(7) 250.66(A)	N.E.C. 250.52(A)(5)	N.E.C. 250.52(A)(4) 250.66(C)	N.E.C. 250.52(A)(1) 250.66	N.E.C. 250.50(A)(2) 250.66	N.E.C. 250.66		N.E.C. 250.94
200 AMP	C: S:	#4	#4	#4	#6	5/8"x8'	#2	#4	#4	#4	#6	#6
225 AMP	ALL ON TION	#2	#2	#4	#6	5/8"x8'	#2	#2	#2	#2	#6	#6
400 AMP	ATE TED FERI	#1/0	#1/0	#4	#6	5/8"x8'	#1/0	#1/0	#1/0	#1/0	#6	#6
600 AMP	MOD DICA R RE	#2/0	#2/0	#4	#6	5/8"x8'	#2/0	#2/0	#2/0	#2/0	#6	#6
800 AMP	COM S IN ID/OF	#3/0	#3/0	#4	#6	5/8"x8'	#2/0	#2/0	#2/0	#2/0	#6	#6
1000 AMP	SHALL BE SIZED TO ACCOMMODATE ALL GROUND WIRE LUGS AS INDICATED ON GROUNDING DIAGRAM AND/OR REFERENCED ELSEWHERE ON PLANS OR SPECIFICATIONS	#3/0	#3/0	#4	#6	5/8"x8'	#3/0	#3/0	#3/0	#3/0	#6	#6
1200 AMP	E LU SRAI PLAI	250kcMIL	250kcMIL	#4	#6	5/8"x8'	#3/0	#3/0	#3/0	#3/0	#6	#6
1600 AMP	SIZE WIRI DIA(	350kcMIL	350kcMIL	#4	#6	5/8"x8'	#3/0	#3/0	#3/0	#3/0	#6	#6
2000 AMP	BE JND JND JNG HERE	400kcMIL	400kcMIL	#4	#6	5/8"x8'	#3/0	#3/0	#3/0	#3/0	#6	#6
2500 AMP	HALI SROI SUNE	500kcMIL	500kcMIL	#4	#6	5/8"x8'	#3/0	#3/0	#3/0	#3/0	#6	#6
3000 AMP	S GRC GRC ELS	500kcMIL	500kcM <b>I</b> L	#4	#6	5/8"x8'	#3/0	#3/0	#3/0	#3/0	#6	#6





BDA DSGN. REV. BDA TECH REV.

CCAS

DATE:

PROJECT NO.: 1107 RP / RW / JKD DRAWN:

7/23/2015

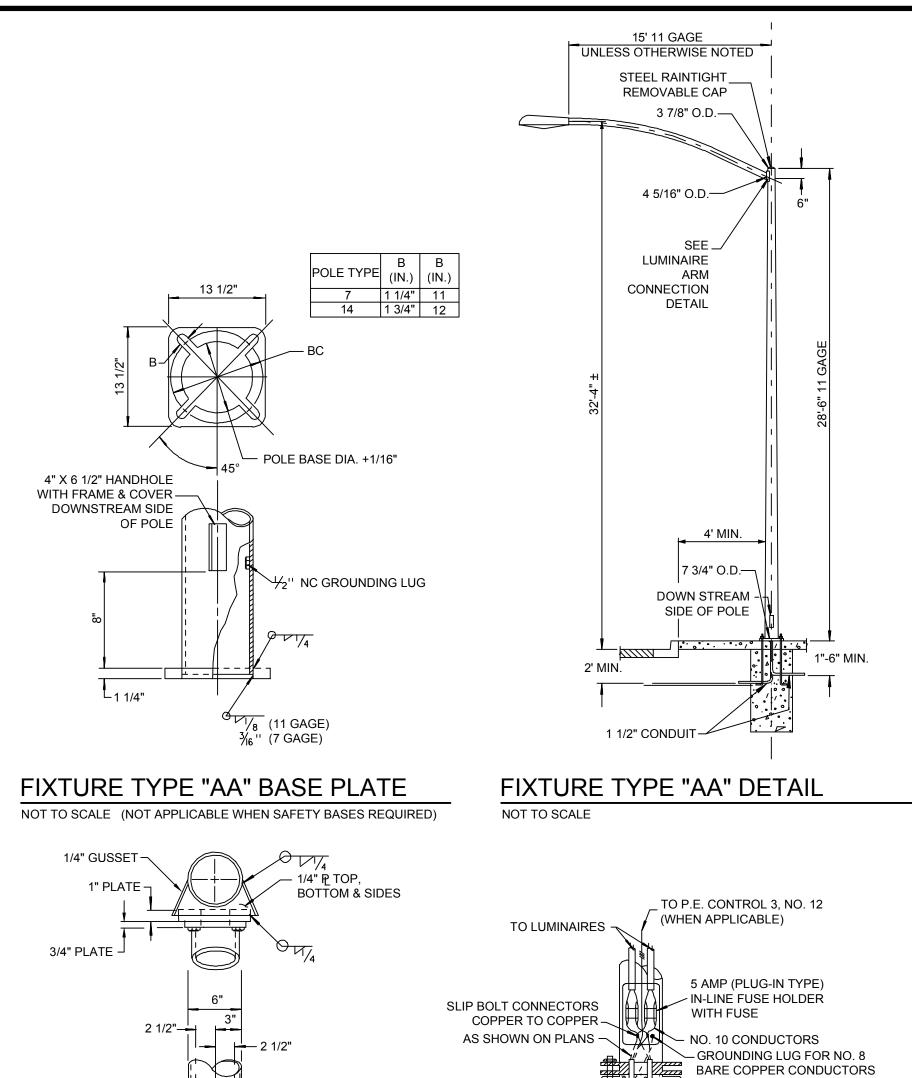
ANY SPECIFIC DETAILS ABOVE (MOUNTING HEIGHTS, PART NUMBERS, CONNECTION

SCHEDULES, DETAILS, RISERS, ETC. DETAILS NOT SPECIFICALLY MODIFIED REMAIN AS

METHODS, ETC.) MAY BE MODIFIED OR REPLACED BY INFORMATION ON PLANS,

GIVEN ABOVE.

TYPE	LIGHT FIXTURE SCHEDULE  FIXTURE DESCRIPTION	LAMPS	MOUNTI
	2'x4' RECESSED STATIC TROFFER, LED, 4000 LUMENS, ACRYLIC LENS,	1-44W	
Α	120 VOLT  CREE #ZR24-40L-35K-10V	LED 3500°K	RECESS T-GRII
В	2'x4' RECESSED STATIC TROFFER, LED, 5000 LUMENS, ACRYLIC LENS, TRIPLE GASKETING, 120 VOLT  CREE #ZR24-50L-35K-10V	1-45W LED 3500°K	RECESS T-GRII
С	1'x4' RECESSED STATIC TROFFER, LED, 4000 LUMENS, ACRYLIC LENS, TRIPLE GASKETING, 120 VOLT  CREE #ZR14-40L-35K-10V	1-44W LED 3500°K	RECESS T-GRII
D	4FT SURFACE FIXTURE, LED, 4700 LUMENS, WET LISTED, 120 VOLT  COLUMBIA #LXEP4-35-ML-DCA-E-U	1-47W LED 3500°K	CEILIN SURFA
E	2FT WALL BRACKET, LED, 800 LUMENS PER FOOT, 120 VOLT  AXIS LIGHTING #PRWWLED-B2-800-35-S-2-AP-120-D-1	1-21W LED	WALL ABOVI MIRRO
F	RECESSED DOWNLIGHT, LED, 1000 LUMENS, 120 VOLT  CREE #LR6-10L-35K-120V-A	1-11W LED 3000°K	RECESS
G	RECESSED DOWNLIGHT, LED, DIMMING, 1800 LUMENS, 120 VOLT	1-20W LED 3500°K	RECESS
Н	CREE #LR6-18L-35K-120V-A CEILING SURFACE DRUM, LED, 900 LUMENS, 120 VOLT	1-16W LED	CEILIN SURFA
K	PRESCOLITE #LBSLEDA10L-35K-8-WH PENDANT LIGHT, LED, 120 VOLT	4000°K 1-72W LED	PENDAI SEE
L	BARBICAN #16-0424-LF1075-10"-SM-HTO-T7206-BA-LED72-120V PENDANT LIGHT, LED (100W EQUIVALENT) WET LISTED, 120 VOLT	3500°K 	PENDAI SEE
M	PROGRESS LIGHTING #P6514-31  INTERIOR WALL SCONCE, LED, 120 VOLT	3500°K 	WALL MOUN
N	BARBICAN #16-3813-WM-OA-LF1075-T7206-WHT-LED20-120V  EXTERIOR WALL PACK, LED, 960 LUMENS, BRONZE FINISH, WET LISTED, 120 VOLT	3500°K 	SEE ARCH WALL MOUN
	TERON LIGHTING #CRNW-L133.6-120-CGL-TB-51K  EXTERIOR WALL PACK, LED, 960 LUMENS, BLACK FINISH, EMERGENCY BATTERY, WET LISTED, 120 VOLT	5100°K	SEE ARCH WALL MOUN
N2	TERON LIGHTING #CRNW-L133.6-120-CGL-TB-51K-EB  EXTERIOR DECORATIVE LIGHT, LED, (100W EQUIVALENT), WET	LED 5100°K 	SEE ARCH WALL
N3	PROGRESS #P6064-31  RECESSED DOWNLIGHT, LED, 1100 LUMENS, LENS, WET LISTED,	LED 3500°K	MOUN SEE ARCH
Р	EMERGENCY BATTERY, 120 VOLT  FOCAL POINT #FL6D-RO-11LED-40K-120-LD1-T-EM/L6-RD-RL-CD-NP	1-16W LED 4000°K	RECESS
R	EXHAUST FAN WITH LIGHT, 120 VOLT  REFER TO MECHANICAL SCHEDULE FOR DESCRIPTION	XXX	RECESS
V1	POLE MOUNTED FIXTURE, LED, SINGLE HEAD, TYPE IV DISTRIBUTION, 23FT SQUARE STRAIGHT STEEL POLE, WP/GFCI DUPLEX RECEPTACLE, BRONZE FINISH, UNIVERSAL VOLTAGE  OWNER FURNISHED, CONTRACTOR INSTALLED	1-263W LED 5700°K	REFER POLE BA DETAIL T SHEE
V2	POLE MOUNTED FIXTURE, LED, SINGLE HEAD, TYPE V DISTRIBUTION, 23FT SQUARE STRAIGHT STEEL POLE, WP/GFCI DUPLEX RECEPTACLE, BRONZE FINISH, UNIVERSAL VOLTAGE	1-263W LED	REFER POLE BA
W	OWNER FURNISHED, CONTRACTOR INSTALLED  NOT USED	5700°K	SHEE
z	SURFACE MOUNT SIGN LIGHT, LED, TWO HEADS, 120 VOLT	1-10W LED 5000°K	SURFA MOUN SEE
AA	BASELITE #2K2-41-E33-10WLED-5K  POLE MOUNTED FIXTURE, LED, SINGLE HEAD, TYPE III DISTRIBUTION, 28'-6" SQUARE STRAIGHT STEEL POLE, 15 FT ARM, BLACK FINISH, UNIVERSAL VOLTAGE (EXISTING)  CITY OWNED, CONTRACTOR INSTALLED	1-272W LED 6000°K	REFER POLE BADETAIL
4	EMERGENCY EGRESS LIGHT FIXTURE WITH BATTERY BACK-UP, 120 VOLT  DUAL-LITE #LZ2-03L	WITH UNIT	WALL MOUN
<b>⊗                                    </b>	EXIT SIGN WITH BATTERY BACK-UP, 120 VOLT  DUAL-LITE #LXURWE	WITH UNIT	UNIVERS
<b>⊗</b> X	EXIT SIGN WITH BATTERY BACK-UP, WET LISTED, 120 VOLT  DUAL-LITE #LN4XRWE	WITH UNIT	UNIVERS
❤	COMBINATION EXIT SIGN / EMERGENCY EGRESS LIGHT FIXTURE WITH BATTERY BACK-UP, 120 VOLT	WITH	WALL



STANDARD GROUND PLATE TYPE 1 FELT (2 LAYERS) OR TYPE 2 FELT (1 LAYER) OVER GROUND PLATE **LUMINAIRE ARM CONNECTION** FIXTURE TYPE "AA" WIRING DIAGRAM

~2" DIA. HOLE

(3) 5/8" DIA. II NCX 1 3/4"

HEX HEAD BOLT ~

FIXTURE TYPE "AA"

ASTM A-325

NOT TO SCALE

ANCHOR BOLT —

CONDUCTOR

GROUND —

_1 1/2" CONDUIT

(UNLESS OTHERWISE NOTED)

BOND TO POLE AND BRANCH —DUPLEX RECEPTACLE WIRING GROUND CONDUCTOR WP/GFCI FIXTURE POLE AND BASE PLATE --HANDHOLE FURNISHED AS INTEGRAL PART OF FIXTURE. REFER TO LIGHT FIXTURE BUSH CONDUIT ENDS SCHEDULE CHAMFER EDGE 1" MINIMUM -CONTINUOUS AROUND BASE. FINISH TO 6" BELOW FINISH GRADE AS DIRECTED BY ARCHITECT. FINISH GRADE 1#6 BARE CONDUCTOR, THERMAL WELD CONNECTION TO 5/8" X 8'-0" COPPER CLAD **GROUND ROD** (4) GALVANIZED BOLTS FURNISHED AS PART OF FIXTURE. INSTALL BOLTS PER FIXTURE MANUFACTURER'S BOLT CONDUIT FEEDERS, PATTERN. REFER TO UTILITY/SITE PLAN FOR ROUTING. ROUTE ADDITIONAL **CONDUITS FOR POWER** TO DUPLEX RECEPTACLE TRANSITION FROM #5 VERTICAL WITH #4 HORIZONTAL REBAR. TIE AT 12" GALVANIZED RIGID CONDUIT TO PVC O.C., WITH FIRST TIE AT 6" FROM (TYPICAL) -3000 PSI CONCRETE MINIMUM 24" DIA (MINIMUM)

FIXTURE TYPES "V1" AND "V2" MOUNTING DETAIL

See Dimension Above

FIXTURE TYPE "AA" NOTES

**DESIGN CRITERIA** 

AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, 4TH EDITION DATED 2001 AND CURRENT INTERIMS (EXCLUDING SECTION 11: FATIGUE DESIGN).

BASIC WIND SPEED = 90 MPH

#### **GALVANIZING**

1. POLES SHALL BE GALVANIZED AS PER ASTM A-123. HARDWARE SHALL BE GALVANIZED AS PER ASTM A-153.

### STEEL SIGNAL AND LUMINAIRE ARMS

- 1. THE LAST 3" OF THE LUMINAIRE ARM SHALL BE STRAIGHT AND HORIZONTAL WITH
- 2. CONNECTION BETWEEN ARMS AND POLES SHALL BE MADE BY MEANS OF A RAINTIGHT SOCKET OR A DESIGN PERMITTING SIMPLE REMOVAL OF THE ARMS.

#### ANCHOR BOLTS 1. PROVIDE (4) ASTM A-307 ANCHOR BOLTS, (8) ASTM A-563 HEAVY HEX NUTS, AND (8)

- ASTM F-436 HARDENED STEEL WASHERS FOR EACH POLE. 2. THREADS MAY BE CUT OR ROLLED, BOLTS SHALL BE GALVANIZED OR PLATED AFTER THREADS ARE FORMED. EACH BOLT SHALL BE PROVIDED WITH 6" OF THREADS.
- 3. WHEN USING A SAFETY BASE, ANCHOR BOLTS SHALL NOT EXTEND ABOVE THE SLIP BOLT GASKET.

## STEEL POLES

# 1. BASE COVERS ARE REQUIRED ON ALL POLES EXCEPT WHERE SAFETY BASE IS

- 2. A REDUCED GAGE FOR SHAFT OF POLE WILL BE ACCEPTABLE ABOVE SIGNAL ARM ATTACHMENT.
- 1. LONGITUDINAL WELDS BY SUBMERGED ARC OR ERW CIRCUMFERENTIAL BUTT WELDS SHALL HAVE PERMANENT BACKUP RINGS. ALL EXPOSED BUTT WELDS SHALL BE
- 2. FOR WELD SIZES NOT SHOWN, USE MINIMUM SIZE WELD AS SPECIFIED BY THE LATEST WELDING CODE.
- 3. BREAK ALL SHARP EDGES FOR WIRE PROTECTION.

#### **FOUNDATIONS**

- 1. AT LOCATIONS BEHIND CURB, ALL SIGNAL AND LIGHTING POLES SHALL BE LOCATED AT THE BACK EDGE OF SIDEWALK OR AT THE R/W LINE, TO OBTAIN A MINIMUM SETBACK DISTANCE OF 5' BEHIND THE BACK EDGE OF CURB TO CENTER OF POLE.
- AT LOCATIONS WITHOUT CURB, POLES SHALL BE PLACED A MINIMUM DISTANCE OF 6' FROM SHOULDER OR A MINIMUM OF 10' FROM TRAVEL WAY, WHICHEVER IS GREATER. SAFETY BASES
- 1. FIXTURE TYPE "AA" POLES SHALL REQUIRE SAFETY BASE ASSEMBLIES.

### POLE AND ARM

1. BOTH POLE AND ARM SHALL MATCH CARSON CITY APPROVED STANDARDS.

BDA DSGN. REV. BDA TECH REV.

CCAS

PROJECT NO.: 1107 RP / RW / JKD DRAWN: 7/23/2015

THE RESPONSE GROUP, INC.

An Electrical/Mechanical Engineering Corporation

11930 Menaul N.E. Suite 214 Albuquerque, New Mexico 87112