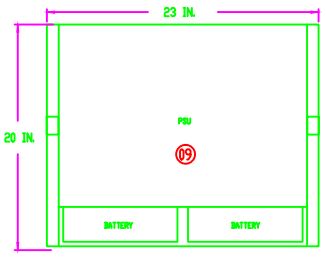
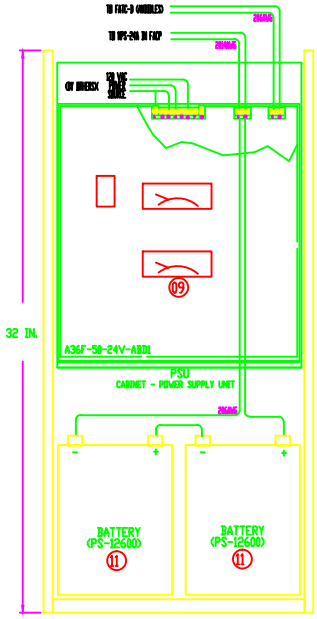
VOLTAGE DROP CALCULATIONS

CIRCUIT 001 1 - STROBE (CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 50 FT VD = 1250 A x 50 FT x 245 (GAUGE) / 2000 FT = .256 VOLTS % VD = .256 VOLTS x 100 / 24V = 1.06 % L.M.025	CIRCUIT 004 2 - BELLS x 0.030 A = 0.030 AMPS TOTAL DISTANCE = 50 FT VD = .030 A x 50 FT x 245 (GAUGE) / 2000 FT = .02 VOLTS % VD = .02 VOLTS x 100 / 24V = .09 % L.M.034	CIRCUIT 007 1 - STROBE (CP) x .100 A = .100 AMPS TOTAL DISTANCE = 250 FT VD = .100 A x 250 FT x 245 (GAUGE) / 2000 FT = .05 VOLTS % VD = .05 VOLTS x 100 / 24V = .20 % L.M.039
CIRCUIT 002 1 - BELLS (CP) x 0.030 A = 0.030 AMPS TOTAL DISTANCE = 100 FT VD = .030 A x 100 FT x 245 (GAUGE) / 2000 FT = .040 VOLTS % VD = .040 VOLTS x 100 / 24V = .167 % L.M.026	CIRCUIT 005 2 - STROBES(WHITE)(CP) x 1250 A = 0.500 AMPS TOTAL DISTANCE = 50 FT VD = 0.500 A x 50 FT x 245 (GAUGE) / 2000 FT = .06 VOLTS % VD = .06 VOLTS x 100 / 24V = .250 % L.M.035	CIRCUIT 008 1 - STROBE (CP) x .100 A = .100 AMPS TOTAL DISTANCE = 250 FT VD = .100 A x 250 FT x 245 (GAUGE) / 2000 FT = .07 VOLTS % VD = .07 VOLTS x 100 / 24V = .29 % L.M.040
CIRCUIT 003 2 - STROBES (WHITE) 0.030 A = 0.006 AMPS TOTAL DISTANCE = 125 FT VD = .006 A x 125 FT x 245 (GAUGE) / 2000 FT = .03 VOLTS % VD = .03 VOLTS x 100 / 24V = .012 % L.M.027	CIRCUIT 006 1 - STROBE(WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 50 FT VD = 1250 A x 50 FT x 245 (GAUGE) / 2000 FT = .25 VOLTS % VD = .25 VOLTS x 100 / 24V = .104 %	CIRCUIT 009 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 175 FT VD = 1250 A x 175 FT x 245 (GAUGE) / 2000 FT = .87 VOLTS % VD = .87 VOLTS x 100 / 24V = .362 %
CIRCUIT 004 2 - BELLS x 0.030 A = 0.060 AMPS TOTAL DISTANCE = 125 FT VD = .060 A x 125 FT x 245 (GAUGE) / 2000 FT = .09 VOLTS % VD = .09 VOLTS x 100 / 24V = .036 %	CIRCUIT 007 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 150 FT VD = 1250 A x 150 FT x 245 (GAUGE) / 2000 FT = .38 VOLTS % VD = .38 VOLTS x 100 / 24V = .158 %	CIRCUIT 010 1 - STROBE (WHITE)(CP) x .100 A = .100 AMPS TOTAL DISTANCE = 100 FT VD = .100 A x 100 FT x 245 (GAUGE) / 2000 FT = .12 VOLTS % VD = .12 VOLTS x 100 / 24V = .050 %
CIRCUIT 005 4 - BELLS x 0.030 A = 0.120 AMPS TOTAL DISTANCE = 150 FT VD = .120 A x 150 FT x 245 (GAUGE) / 2000 FT = .23 VOLTS % VD = .23 VOLTS x 100 / 24V = .096 %	CIRCUIT 008 2 - STROBE (WHITE)(CP) x 1250 A = 2.500 AMPS TOTAL DISTANCE = 150 FT VD = 2.500 A x 150 FT x 245 (GAUGE) / 2000 FT = .76 VOLTS % VD = .76 VOLTS x 100 / 24V = .316 %	CIRCUIT 011 1 - STROBE (WHITE) x .100 A = .100 AMPS TOTAL DISTANCE = 150 FT VD = .100 A x 150 FT x 245 (GAUGE) / 2000 FT = .18 VOLTS % VD = .18 VOLTS x 100 / 24V = .075 %
CIRCUIT 006 4 - BELLS x 0.030 A = 0.120 AMPS TOTAL DISTANCE = 150 FT VD = .120 A x 150 FT x 245 (GAUGE) / 2000 FT = .23 VOLTS % VD = .23 VOLTS x 100 / 24V = .096 %	CIRCUIT 009 2 - STROBE (WHITE)(CP) x 1250 A = 2.500 AMPS TOTAL DISTANCE = 150 FT VD = 2.500 A x 150 FT x 245 (GAUGE) / 2000 FT = .76 VOLTS % VD = .76 VOLTS x 100 / 24V = .317 %	CIRCUIT 012 1 - STROBE (WHITE) x .100 A = .100 AMPS TOTAL DISTANCE = 150 FT VD = .100 A x 150 FT x 245 (GAUGE) / 2000 FT = .18 VOLTS % VD = .18 VOLTS x 100 / 24V = .075 %
CIRCUIT 007 2 - STROBES (WHITE) x 0.030 A = 0.060 AMPS TOTAL DISTANCE = 150 FT VD = .060 A x 150 FT x 245 (GAUGE) / 2000 FT = .27 VOLTS % VD = .27 VOLTS x 100 / 24V = .112 %	CIRCUIT 010 2 - BELLS (CP) x 0.030 A = 0.060 AMPS TOTAL DISTANCE = 150 FT VD = .060 A x 150 FT x 245 (GAUGE) / 2000 FT = .20 VOLTS % VD = .20 VOLTS x 100 / 24V = .075 %	CIRCUIT 013 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 175 FT VD = 1250 A x 175 FT x 245 (GAUGE) / 2000 FT = .38 VOLTS % VD = .38 VOLTS x 100 / 24V = .160 %
CIRCUIT 008 3 - BELLS x 0.030 A = 0.090 AMPS TOTAL DISTANCE = 150 FT VD = .090 A x 150 FT x 245 (GAUGE) / 2000 FT = .40 VOLTS % VD = .40 VOLTS x 100 / 24V = .168 %	CIRCUIT 011 2 - BELLS (CP) x .030 A = .060 AMPS TOTAL DISTANCE = 150 FT VD = .060 A x 150 FT x 245 (GAUGE) / 2000 FT = .25 VOLTS % VD = .25 VOLTS x 100 / 24V = .105 %	CIRCUIT 014 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 125 FT VD = 1250 A x 125 FT x 245 (GAUGE) / 2000 FT = .32 VOLTS % VD = .32 VOLTS x 100 / 24V = .134 %
CIRCUIT 009 1 - STROBE (RED) x .100 A = .100 AMPS TOTAL DISTANCE = 240 FT VD = .100 A x 240 FT x 245 (GAUGE) / 2000 FT = .12 VOLTS % VD = .12 VOLTS x 100 / 24V = .050 %	CIRCUIT 012 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 150 FT VD = 1250 A x 150 FT x 245 (GAUGE) / 2000 FT = .38 VOLTS % VD = .38 VOLTS x 100 / 24V = .160 %	CIRCUIT 015 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 100 FT VD = 1250 A x 100 FT x 245 (GAUGE) / 2000 FT = .25 VOLTS % VD = .25 VOLTS x 100 / 24V = .107 %
CIRCUIT 010 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 175 FT VD = 1250 A x 175 FT x 245 (GAUGE) / 2000 FT = .43 VOLTS % VD = .43 VOLTS x 100 / 24V = .180 %	CIRCUIT 013 1 - STROBE (RED) (CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 150 FT VD = 1250 A x 150 FT x 245 (GAUGE) / 2000 FT = .38 VOLTS % VD = .38 VOLTS x 100 / 24V = .159 %	CIRCUIT 016 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 40 FT VD = 1250 A x 40 FT x 245 (GAUGE) / 2000 FT = .10 VOLTS % VD = .10 VOLTS x 100 / 24V = .04 %
CIRCUIT 011 1 - BELL (CP) x 0.030 A = 0.030 AMPS TOTAL DISTANCE = 175 FT VD = .030 A x 175 FT x 245 (GAUGE) / 2000 FT = .13 VOLTS % VD = .13 VOLTS x 100 / 24V = .055 %	CIRCUIT 014 2 - STROBE (WHITE)(CP) x 1250 A = 2.500 AMPS TOTAL DISTANCE = 150 FT VD = 2.500 A x 150 FT x 245 (GAUGE) / 2000 FT = .76 VOLTS % VD = .76 VOLTS x 100 / 24V = .319 %	VOLTAGE DROP CALCULATION FORMULA VD = Amps x (FEET) x 2X DISTANCE / 2000 FT = VOLTS % VD = VD VOLTS x 100 / 24V = %
CIRCUIT 012 1 - STROBE (WHITE)(CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 150 FT VD = 1250 A x 150 FT x 245 (GAUGE) / 2000 FT = .46 VOLTS % VD = .46 VOLTS x 100 / 24V = .191 %	CIRCUIT 015 1 - STROBE (RED) (CP) x 1250 A = 1250 AMPS TOTAL DISTANCE = 150 FT VD = 1250 A x 150 FT x 245 (GAUGE) / 2000 FT = .38 VOLTS % VD = .38 VOLTS x 100 / 24V = .159 %	
CIRCUIT 013 2 - STROBES (WHITE) x 0.030 A = 0.006 AMPS TOTAL DISTANCE = 125 FT VD = .006 A x 125 FT x 245 (GAUGE) / 2000 FT = .030 VOLTS % VD = .030 VOLTS x 100 / 24V = .013 %	CIRCUIT 016 1 - BELL (CP) x 0.030 A = 0.030 AMPS TOTAL DISTANCE = 175 FT VD = .030 A x 175 FT x 245 (GAUGE) / 2000 FT = .13 VOLTS % VD = .13 VOLTS x 100 / 24V = .055 %	

POWER SUPPLY UNIT (PSU) DETAIL LAYOUT

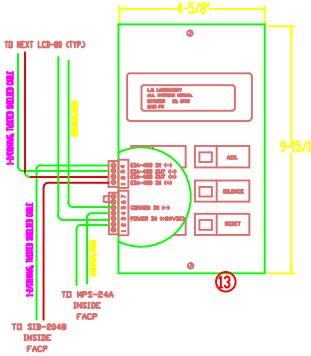


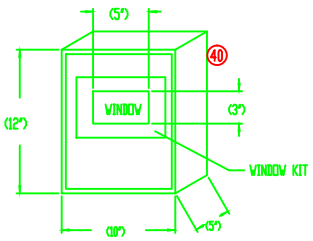
TOP VIEW



MOUNTING RACK
(FOR REFERENCE ONLY)

FIRE ALARM ANNUNCIATOR DETAIL (FAA)





LCD-80 MOUNTED INSIDE ENCOSURE

NEMA 4X WEATHER PROOF ENCLOSURE
FIRE ALARM ANNUNCIATOR ENCLOSURE (FAA)

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HAZARDOUS WASTE HANDLING FACILITY
BERKELEY, CA
DETAIL LAYOUTS & VOLTAGE
DROP CALCULATIONS
BUILDING FIRE ALARM DETECTION &
AUTO FIRE SUPPRESSION SYSTEM

94-171-011 4N85E04BD
NONE 15 OF 16

REVISIONS