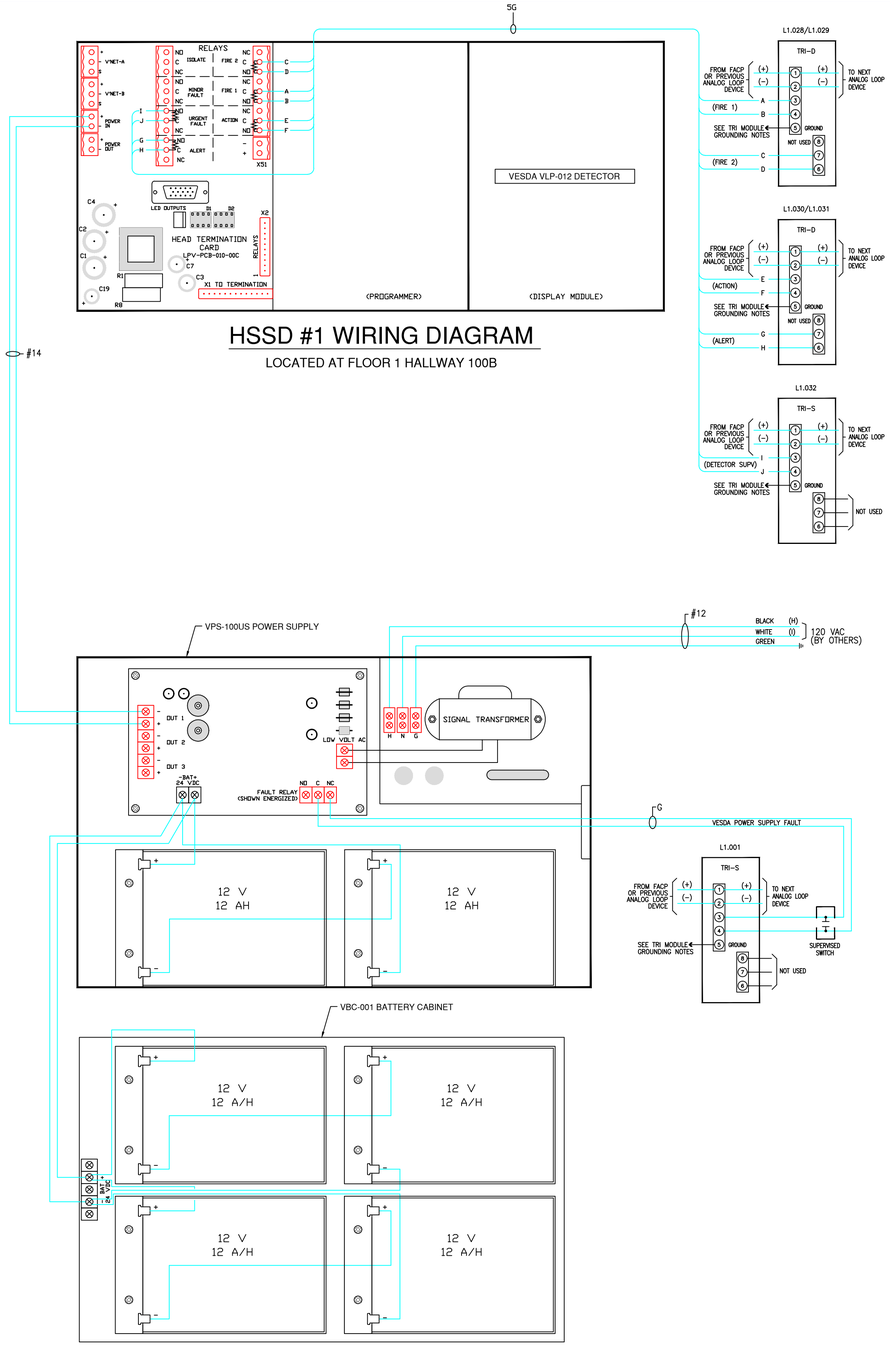
VPS-300US-120 #1 BATTERY CALCULATIONS

EQUIPMENT	NORMAL LOAD @ 24 VDC LOAD (mA)	QTY.	TOTAL (ma)	FULL ALARM LOAD @ 24 VDC LOAD (ma)	QTY.	TOTAL (ma)
Laser Plus Detector (No Display & Programmer)	350 ma	1	350 ma	400 ma	1	400 ma
Laser SCANNER (No Display & Programmer)	400 ma	0	--- ma	470 ma	0	--- ma
DISPLAY MODULE	90 ma	1	90 ma	110 ma	1	110 ma
PROGRAMMER MODULE	50 ma	1	50 ma	110 ma	1	110 ma
REMOTE DISPLAY						
OTHER 24V LOADS						

TOTAL (mA)	490 ma	TOTAL (mA)	620 ma
	X		X
STANDBY HOURS	24	ALARM HOURS	5 MIN. (.083)
			X 1.06
STANDBY CAPACITY (mAH)	11760 ma	ALARM CAPACITY (mAH)	54.55 ma
TOTAL CAPACITY = STANDBY + ALARM (mAH)	11814.55 ma		
DIVIDE BY 1000	11.82 A/H		
MULTIPLY BY BATTERY FACTOR 1.25	14.77 A/H		
BATTERY NEEDED (12VDC VBT-012 x 3)	36 A/H		
BATTERY RESERVED	21.23 A/H		



HSSD #1 WIRING DIAGRAM

LOCATED AT FLOOR 1 HALLWAY 100B

VESDA POWER SUPPLY#1

LOCATED AT FLOOR 1 ELECTRICAL ROOM 118A

VESDA EQUIPMENT LIST

69							
70							
71	VESD	3	VLP-012	VESDA LASER PLUS DETECTOR	SIEMENS	1173	7259-1491:0105
72	VPS	2	VPS-300US-120	VESDA POWER SUPPLY WITH BATTERY CABINET (VBC-001)	SIEMENS	1170	7315-1491:0106
73		8	VBT-012	12 VDC BATTERY (12 AMP-HOUR)	SIEMENS	1170	---
74		3	VP-P-420	PIPE-3/4" (QTY-28 OF 15FT LENGTHS)	SIEMENS	---	---
75		2	VP-COUP	COUPLINGS-3/4" (15 PER BOX)	SIEMENS	---	---
76		5	VP-ELB-90	90 DEGREES ELBOW-3/4" (20 PER BOX)	SIEMENS	---	---
77		1	VP-UNION	UNIONS-3/4" (10 PER BOX)	SIEMENS	---	---
78		3	VP-TEE	TEE (QTY-15)	SIEMENS	---	---
79		2	VP-EC	END CAP-3/4" (25 PER BOX)	SIEMENS	---	---
80		2	VP-CEMENT	SOLVENT CEMENT (1 PINT)	SIEMENS	---	---
81		38	E-700-CAP	CONNECTOR KIT	SIEMENS	---	---
82		38	E-700-SP	CAPILLARY (MINIATURE) SAMPLING POINT	SIEMENS	---	---
83		1	TUBING-250	CAPILLARY TUBING 3/8"ID, FPE RATED (250FT ROLL)	SIEMENS	---	---
84		4	E-700-SPLG	CAPILLARY MINI SAMPLING TUBE LABELS (RED) 12	SIEMENS	---	---
85		1	E-700-SP-DCL-PT	SAMPLING POINT DECAL (WRAP AROUND STYLE-50 PER ROLL)	SIEMENS	---	---
86		4	VP-TEE-FPT	CAPILLARY TUBING TEE (QTY-10)	SIEMENS	---	---
87		1	CSD2020BW	VESDA ENCLOSURE	HOFFMAN	---	---
88		1	CMHK	KEYLOCK HANDLE	HOFFMAN	---	---
89		1	CP2020	MOUNTING PLATE	HOFFMAN	---	---
MISCELLANEOUS SYMBOLS NOT LABELED ON PLAN							
90	J	---	---	JUNCTION BOX	BY OTHERS		
91		---	---	WATERFLOW SWITCH	BY OTHERS		
92		---	---	VALVE POSITION SUPERVISORY SWITCH	BY OTHERS		
93		---	---	END-OF-LINE DEVICE (VALUE AS SPECIFIED)	BY OTHERS		
94	FSD	---	---	FIRE SMOKE DAMPER	BY OTHERS		

HSSD FUNCTION CHART

SYSTEM EVENT / RESPONSE	ANNUNCIATE EVENT AT FACU	FIRE SIGNAL TO LBNL RECEIVER	TROUBLE SIGNAL TO LBNL	SUPERVISORY SIGNAL TO LBNL	OPERATE NOTIFICATION APPLIANCES
HSSD ALERT ALARM	●			●	
HSSD ACTION ALARM	●			●	
HSSD FIRE ALARM 1	●			●	
HSSD FIRE ALARM 2	●	●			●
HSSD POWER SUPPLY FAULT	●		●		
HSSD DETECTOR FAULT	●		●		
SYSTEM FAULT	●		●		

PROFESSIONAL SEAL (IF REVISION, APPLIES ONLY TO REVISED WORK)

ISSUE (PROGRESS, ESTIMATE, BID, CONSTRUCTION, CONFORMED, REVISION, RECORD): AS BUILT — 08/28/13

REVISION NUMBER	DRAWN BY	CHECKED BY	APPR'D BY	DATE	REMARKS
–	DSV	LDD	MCD	08/28/13	AS BUILT FROM A/E RECORD DWGS

74 FIRE ALARM SYSTEM
HSSD FUNCTION CHART,CALCULATIONS,
VESDA PWR SUPPLY #1, DETECTOR WRG

UNIVERSITY OF CALIFORNIA
LAWRENCE BERKELEY NATIONAL LABORATORY
FACILITIES DIVISION

DRAWN BY	DSV	DATE	08/28/13
CHECKED BY	LDD		09/03/2013
APPROVED BY	MCD		09/03/2013
SCALE	AS NOTED		
DRAWING NO.	4B74E314	SHEET	13 OF 20
PROJECT NO.	FN9200		