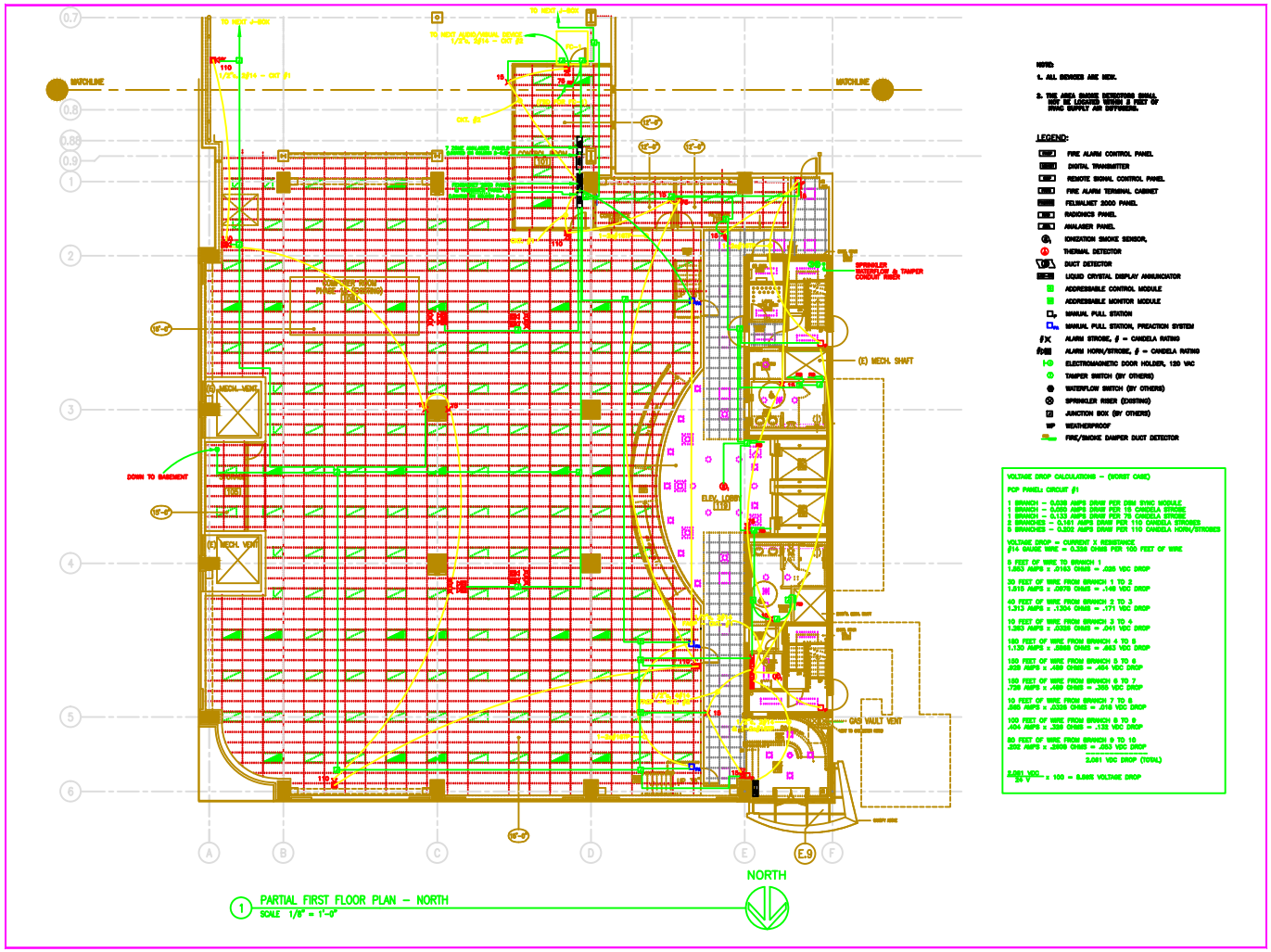

1 PARTIAL FIRST FLOOR PLAN – NORTH
SCALE 1/8" = 1'-0"

NOTES:

1. ALL DEVICES ARE NEW.
2. THE AREA SMOKE DETECTORS SHALL NOT BE LOCATED WITHIN 3 FEET OF HVAC SUPPLY AIR DIFFUSERS.

LEGEND:

- FIRE ALARM CONTROL PANEL
- DIGITAL TRANSMITTER
- REMOTE SIGNAL CONTROL PANEL
- FIRE ALARM TERMINAL CABINET
- FETWANET 2000 PANEL
- RADIONICS PANEL
- ANALYSER PANEL
- IONIZATION SMOKE SENSOR,
- THERMAL DETECTOR
- DUCT DETECTOR
- LIQUID CRYSTAL DISPLAY ANNUNCIATOR
- ADDRESSABLE CONTROL MODULE
- ADDRESSABLE MONITOR MODULE
- MANUAL PULL STATION
- MANUAL PULL STATION, PREACTION SYSTEM
- ALARM STROBE, ƒ = CANDELA RATING
- ALARM HORN/STROBE, ƒ = CANDELA RATING
- ELECTROMAGNETIC DOOR HOLDER, 120 VAC
- TAMPER SWITCH (BY OTHERS)
- WATERFLOW SWITCH (BY OTHERS)
- SPRINKLER RISER (EXISTING)
- JUNCTION BOX (BY OTHERS)
- WP WEATHERPROOF
- FIRE/SMOKE DAMPER DUCT DETECTOR

VOLTAGE DROP CALCULATIONS – (WORST CASE)

PCP PANEL: CIRCUIT #1

1 BRANCH = 0.038 AMPS DRAW PER DRM SYNC MODULE
1 BRANCH = 0.033 AMPS DRAW PER 15 CANDELA STROBE
1 BRANCH = 0.133 AMPS DRAW PER 75 CANDELA STROBE
2 BRANCHES = 0.161 AMPS DRAW PER 110 CANDELA STROBES
5 BRANCHES = 0.202 AMPS DRAW PER 110 CANDELA HORN/STROBES

VOLTAGE DROP = CURRENT X RESISTANCE
#14 GAUGE WIRE = 0.328 OHMS PER 100 FEET OF WIRE

5 FEET OF WIRE TO BRANCH 1
1.653 AMPS x .0163 OHMS = .026 VDC DROP

30 FEET OF WIRE FROM BRANCH 1 TO 2
1.615 AMPS x .0978 OHMS = .148 VDC DROP

40 FEET OF WIRE FROM BRANCH 2 TO 3
1.313 AMPS x .1304 OHMS = .171 VDC DROP

10 FEET OF WIRE FROM BRANCH 3 TO 4
1.283 AMPS x .0328 OHMS = .041 VDC DROP

180 FEET OF WIRE FROM BRANCH 4 TO 5
1.130 AMPS x .5568 OHMS = .563 VDC DROP

160 FEET OF WIRE FROM BRANCH 5 TO 6
.939 AMPS x .492 OHMS = .464 VDC DROP

160 FEET OF WIRE FROM BRANCH 6 TO 7
.739 AMPS x .492 OHMS = .363 VDC DROP

10 FEET OF WIRE FROM BRANCH 7 TO 8
.595 AMPS x .0328 OHMS = .016 VDC DROP

100 FEET OF WIRE FROM BRANCH 8 TO 9
.404 AMPS x .328 OHMS = .132 VDC DROP

50 FEET OF WIRE FROM BRANCH 9 TO 10
.202 AMPS x .3608 OHMS = .053 VDC DROP

2.051 VDC (TOTAL)

2.051 VDC / 24 V = 100 = 8.548% VOLTAGE DROP

G:\Eng\AutoCAD\Support Files\GREY.tif

3605 MYA MAR AVENUE
LONG BEACH, CA. 90815
P 562 494 3567
F 562 426 6444

TITLE OF DRAWING
FIRE ALARM SYSTEM

OWNER
SIERRA ELECTRIC
1901 RESEARCH DRIVE
SANTA CLARA, CALIFORNIA 95050-5042

NO.	ISSUE DATE	DESCRIPTION	BY
1	4-26-2000	FOR REVIEW	RDA
2	4-28-2000	FOR BIDDING	RDA
3	6-6-2000	RDA FOR PLAN CHECK CORRECTIONS	RDA
4	6-23-2000	REVISED FOR CHANGE ORDER #2	RDA
5	10-10-00	AS BUILT	HN

AS BUILT BY
ELECTRICAL: NAME DATE BY
MECHANICAL: NAME DATE BY
PLUMBING AND SUPPLEMENTAL: NAME DATE BY

PROJECT NAME
LAWRENCE BERKELEY
NATIONAL LABORATORY
COMPUTING CENTER
415 20th STREET
OAKLAND, CALIFORNIA 94612

SHEET DESCRIPTION
PARTIAL FIRST FLOOR – NORTH

ENGINEER'S SEAL
STATE OF CALIFORNIA
R.D. 01/31/2000
REGISTERED ENGINEER

PROJECT ENGINEER AL-00026
FILE NAME AL-0003402.DWG
APPROVED BY BY
DESIGNED BY HNG
DRAWN BY RDA
SCALE 1/8" = 1'-0"
PROJECT NUMBER
6111

SHEET NUMBER
FP 3.0
FILE: 00012423
4N943E041

PROJ. NO. FH0113