

EXHIBIT G



KERR ADMINISTRATION
0016 [KAd]
1500 SW Jefferson Way

COVER SHEET

SCALE:
NO SCALE



DATE: [blank] QC

REVISION DESCRIPTION

Plot date: March 02, 2020
Orientation: Landscape
Plot scale: 1:1
Paper size: 24X36
Device: KIP 7000
Plot set up: Standard

SHEET # 1
OF 21

GENERAL FIRE ALARM NOTES

- A. PROJECT CONSISTS OF THE INSTALLATION OF A MANUAL AND AUTOMATIC, ADDRESSABLE FIRE ALARM SYSTEM. MANUAL PULL STATIONS ARE PROVIDED AT EXITS. CONTROL OUTPUTS ARE PROVIDED FOR EMERGENCY CONTROL FUNCTIONS SUCH AS AIR HANDLER SHUT DOWN AND ELEVATOR RECALL. OCCUPANT NOTIFICATION IS PROVIDED THROUGHOUT THE BUILDING. SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS ARE MONITORED BY OSU CAMPUS SAFETY.
- B. THE SYSTEM DESIGN AND INSTALLATION IS IN COMPLIANCE WITH THE FOLLOWING CODES AND STANDARDS:
2019 OSSC
2019 OFC
2019 OMSC
2017 OESC
2016 NFPA 72
OSU CONSTRUCTION STANDARDS
- C. REMOVE THE EXISTING FIRE ALARM SYSTEM AFTER COMPLETION AND ACCEPTANCE OF THE NEW FIRE ALARM SYSTEM. REMOVE ALL EQUIPMENT, DEVICES, APPLIANCES, CABLE AND SURFACE RACEWAY. COVER FLUSH APPLIANCE/DEVICE BOXES WITH FINISH COVER PLATE THAT MATCHES ADJACENT FINISHES.
- D. PROVIDE FLUSH MOUNTED CUT-IN BOXES FOR APPLIANCES AND DEVICES IN WALLS AND HARD CEILINGS WHERE POSSIBLE. SINGLE RUNS OF FLEXIBLE CONDUIT ARE ALLOWED BETWEEN THESE BOXES AND THE NEAREST ACCESSIBLE SPACE.
- E. INSTALL NEW HORN/STROBE APPLIANCES AT 96 INCHES TO TOP OF STROBE LENS ABOVE FINISHED FLOOR WHERE POSSIBLE.
- F. OFFICES AND SPACES WITH STROBES ARE PUBLIC OR COMMON USE SPACES.

FIRE ALARM SYMBOL LIST

	SIMPLEX FIRE ALARM CONTROL PANEL - 4100ES
	SIMPLEX TRUEALERT ADDRESSABLE IDNAC REPEATER - 4009-9602
	BOSCH B465 IP COMMUNICATOR WITH B11R ENCLOSURE
	SIMPLEX MANUAL PULL STATION - 4099-9001
	SIMPLEX TRUEALARM SMOKE DETECTOR CEILING MOUNTED - 4098-9714
	SIMPLEX TRUEALARM SMOKE DETECTOR WALL MOUNTED - 4098-9714
	SIMPLEX TRUEALARM DUCT MOUNTED SMOKE DETECTOR - 4098-9756
	SIMPLEX IAM MONITOR MODULE - 4090-9001
	SIMPLEX CIAM CONTROL RELAY MODULE - 4090-9002
	SIMPLEX TRUEALERT ADDRESSABLE HORN/STROBE WALL MOUNT APPLIANCE (# = MINIMUM CANDELA) - 49AV-APPLW (WP = WEATHPROOF - 49AV-WRFO, WG = WITH STI-1210A GUARD)
	SIMPLEX TRUEALERT ADDRESSABLE HORN/STROBE CEILING MOUNT APPLIANCE (# = MINIMUM CANDELA) - 49AV-APPLC
	SIMPLEX TRUEALERT ADDRESSABLE STROBE WALL MOUNT APPLIANCE (# = MINIMUM CANDELA) - 49VO-APPLW
	SIMPLEX TRUEALERT ADDRESSABLE STROBE CEILING MOUNT APPLIANCE (# = MINIMUM CANDELA) - 49VO-APPLC
	SIMPLEX TRUEALERT ISOLATION MODULE - 4905-9929
	FIRE SPRINKLER FLOW SWITCH - PROVIDE IAM 4090-9001
	FIRE SPRINKLER VALVE SUPERVISORY SWITCH - PROVIDE IAM 4090-9001
	FIRE ALARM TERMINATION CABINET
	MAGNETIC DOOR HOLD OPEN
	MECHANICAL EQUIPMENT TAG
	KEYED NOTE
	DETAIL CALLOUT

SHEET INDEX

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- 21 RISER DIAGRAM - FIRE ALARM

PROJECT 2019-0680
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FIRE ALARM SYSTEM OPERATIONAL MATRIX

INPUT		ALARM		SUPERVISORY		TROUBLE		NOTIFICATION		CONTROL		FIRE SAFETY FUNCTIONS						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
MANUAL PULL STATION	1	X	X						X									1
SMOKE DETECTOR	2	X	X						X			X	X					2
WATER FLOW SWITCH	3	X	X						X				X					3
EXTINGUISHING SYSTEM ALARM	4	X	X						X				X					4
VALVE SUPERVISORY SWITCH	5			X	X													5
SUMP PUMP SUPERVISORY	6			X	X													6
ELEVATOR LOBBY SMOKE DETECTOR FIRST FLOOR - BUILDING A	7	X	X						X								X	7
ELEVATOR LOBBY SMOKE DETECTOR ALL OTHER FLOORS - BUILDING A	8	X	X						X							X		8
ELEVATOR MACHINE ROOM SMOKE - BUILDING A	9	X	X						X							X		9
RETURN AIR SMOKE DETECTOR - BUILDING A	10			X	X								X	X				10
RETURN AIR SMOKE DETECTOR - BUILDING B	11			X	X								X		X			11
POWER FAILURE	12					X	X											12
TROUBLE CONDITION	13					X	X											13
EXTINGUISHING SYSTEM TROUBLE	14					X	X											14
SYSTEM SILENCE	15									X								15
SYSTEM RESET	16										X							16

NOTES:
(1) DOORS TO CLOSE ON LOCAL DETECTOR ONLY.

STANDARD WIRE LEGEND:

M# - 1#18 TWISTED SHIELDED PAIR WIRING FOR MAPNET/IDNET ADDRESSABLE DEVICES. PULL STATION, SMOKE DET'R & ETC)	WIRE NOTES: 1. MAINTAIN 40% CONDUIT FILL. 2. OUTDOOR WIRING TO BE LISTED FOR WET LOCATIONS 3. GREEN IS RESERVED FOR GROUND 4. WHITE IS RESERVED FOR NEUTRAL/RETURN ON LOW VOLTAGE 5. RED AND BLUE ARE FOR POSITIVE VOLTAGE. 6. ALL OTHERS ARE FOR NEGATIVE VOLTAGE.
D - 2#14 AWG SOLID COPPER WIRING FOR DOOR HOLDER CIRCUIT.	----- CABLE
F - 1#16 TWISTED SHIELDED PAIR WIRING FOR ANNUNCIATOR COMMUNICATION.	----- IN-SLAB CONDUIT
G - 2#14 AWG SOLID COPPER WIRING FOR ANNUNCIATOR POWER.	Vu - 2#12 AWG TWISTED WIRING FOR ADDRESSABLE HORN/STROBE CIRCUIT. (UNDERGROUND) WESS PENN AQUASEAL OR EQUAL
H - 2#14 TWISTED AWG SOLID COPPER WIRING FOR WEATHERPROOF HORN.	Pu - 2#14 AWG SOLID COPPER WIRING FOR ADDRESSABLE HORN/STROBE CIRCUIT. (UNDERGROUND) WESS PENN OR EQUAL
P - 2#14 AWG SOLID COPPER WIRING FOR 24V MAPNET/IDNET POWER.	
R - 2#16 TWISTED SHIELDED PAIR WIRING FOR RUI COMMUNICATION.	
V - 2#14 AWG TWISTED WIRING FOR ADDRESSABLE HORN/STROBE CIRCUIT.	
Mu - 1#16 TWISTED SHIELDED PAIR WIRING FOR MAPNET/IDNET ADDRESSABLE DEVICES. (UNDERGROUND) WESS PENN AQUASEAL CABLE OR EQUAL	
Ru - 1#16 TWISTED SHIELDED PAIR WIRING FOR RUI COMMUNICATION. (UNDERGROUND) WESS PENN AQUASEAL CABLE OR EQUAL	

OSU FREE ACCESS INFORMATION

SHEET KEYNOTES

- 1 PROVIDE ADDRESSABLE INPUT MODULES TO MONITOR EXTINGUISHING SYSTEM ALARM AND TROUBLE.
- 2 PROVIDE PENDANT MOUNTED SMOKE DETECTORS WITHIN RETURN AIR DUCT. PROVIDE ACCESS HATCHES IN BOTTOM OF DUCT.
- 3 PROVIDE SMOKE DETECTORS MOUNTED ON UNISTRUT BRACKETS WITHIN MECHANICAL RETURN PLENUM.
- 4 PROVIDE ADDRESSABLE RELAYS FOR DIGITAL INPUT TO BAS TO SIGNAL UPON DETECTOR ACTIVATION SEPARATELY IN BUILDING A AND BUILDING B.
- 5 PROVIDE ADDRESSABLE INPUT MODULE TO MONITOR SUMP PUMP ALARM.

Drawing Name

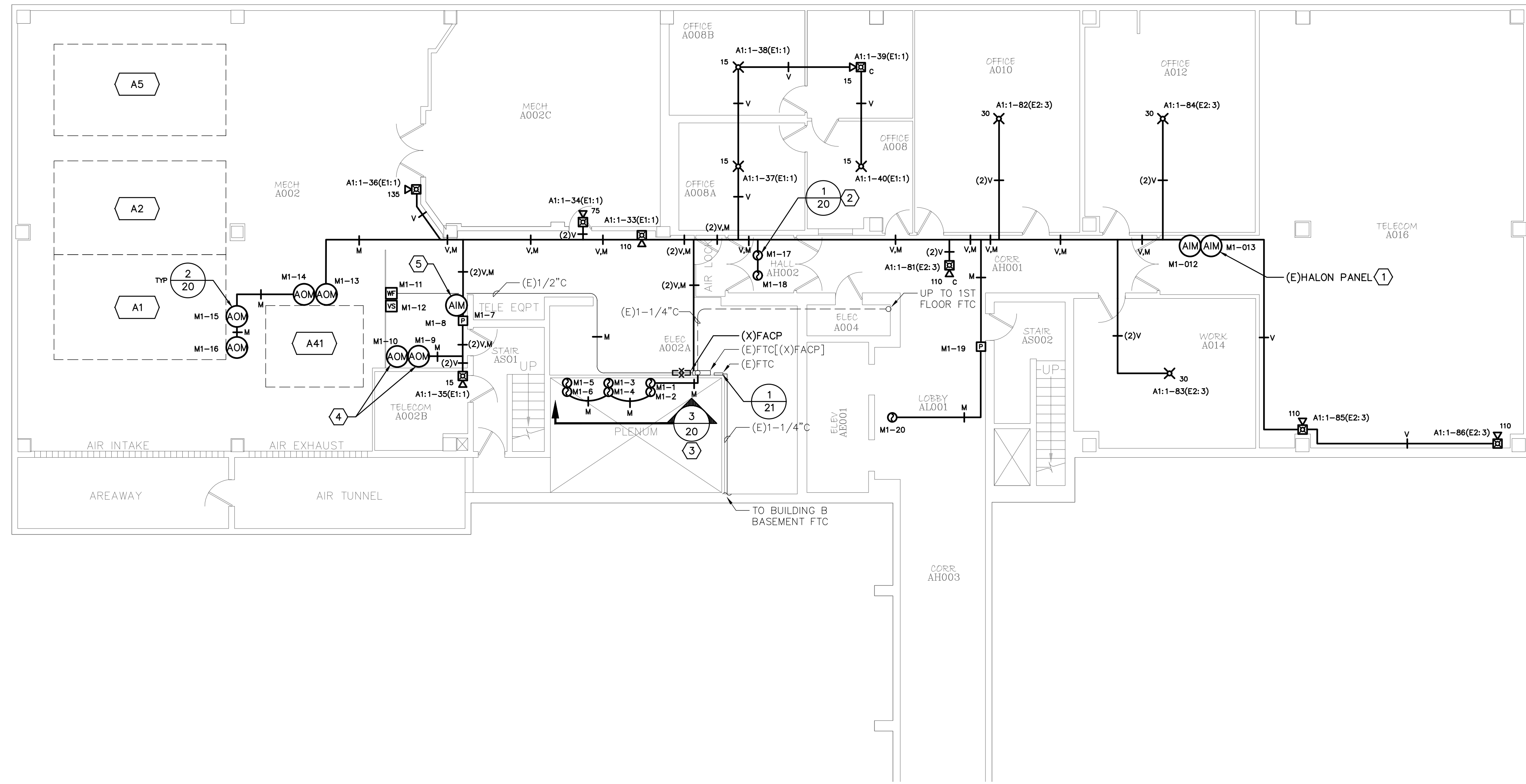
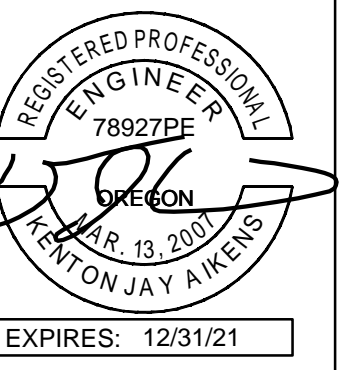


KERR ADMINISTRATION

0016 [KAd]
1500 SW Jefferson Way

BASEMENT FLOOR

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



1 BASEMENT FLOOR PLAN - BUILDING A - FIRE ALARM
SCALE: 1/8"=1'-0"

OSU FREE ACCESS INFORMATION

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SHEET # 2
OF 21

SHEET KEYNOTES

- 1 ADDRESSABLE CONTROL RELAYS FOR ELEVATOR PRIMARY AND ALTERNATE RECALL AND FIRE HAT LIGHT FUNCTIONS.

Drawing Name

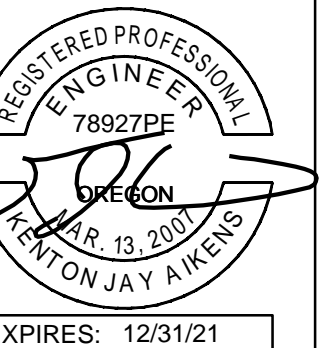


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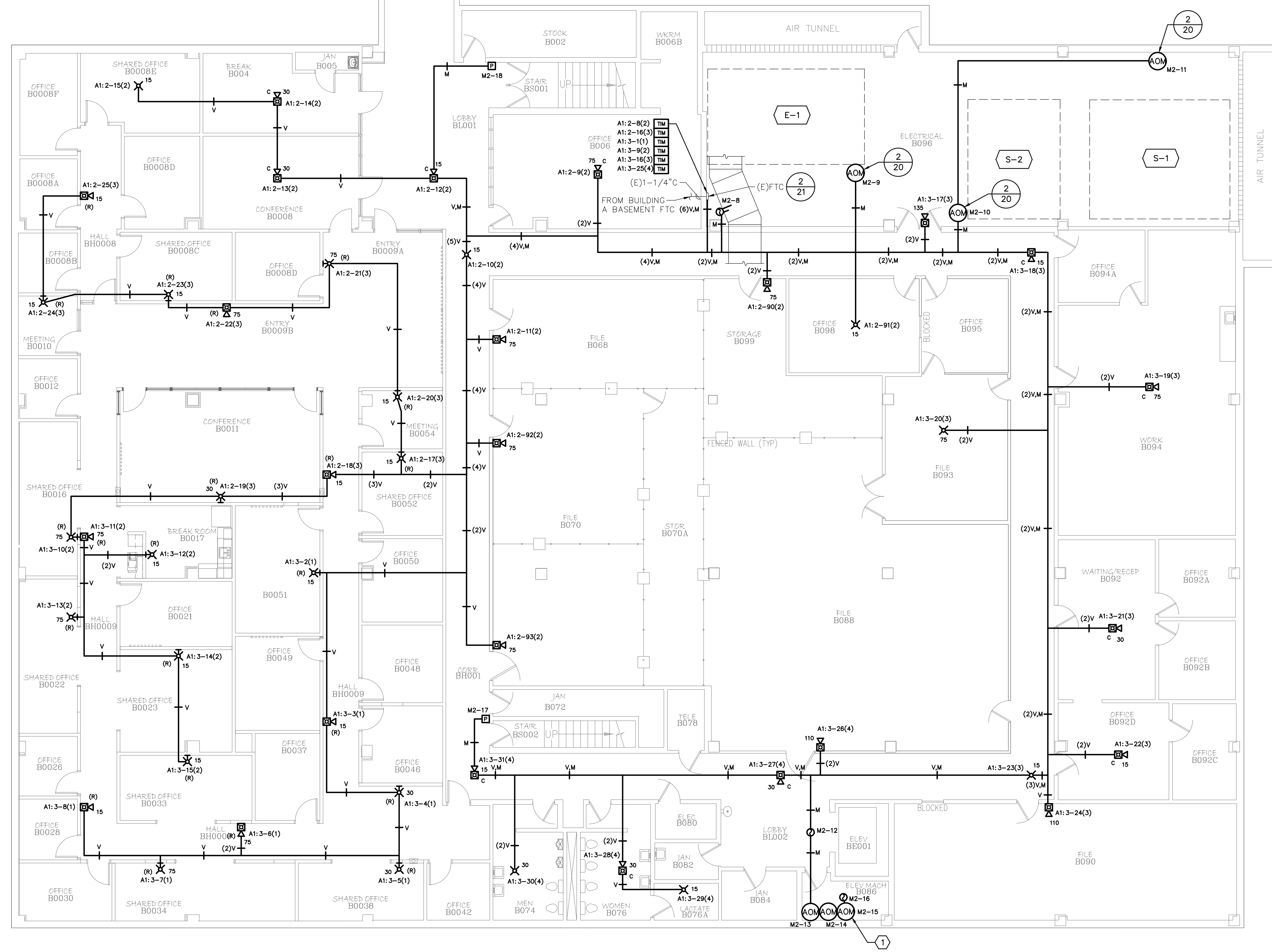
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BASEMENT FLOOR

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



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1 BASEMENT FLOOR PLAN - BUILDING B - FIRE ALARM
 SCALE: 1/8"=1'-0"

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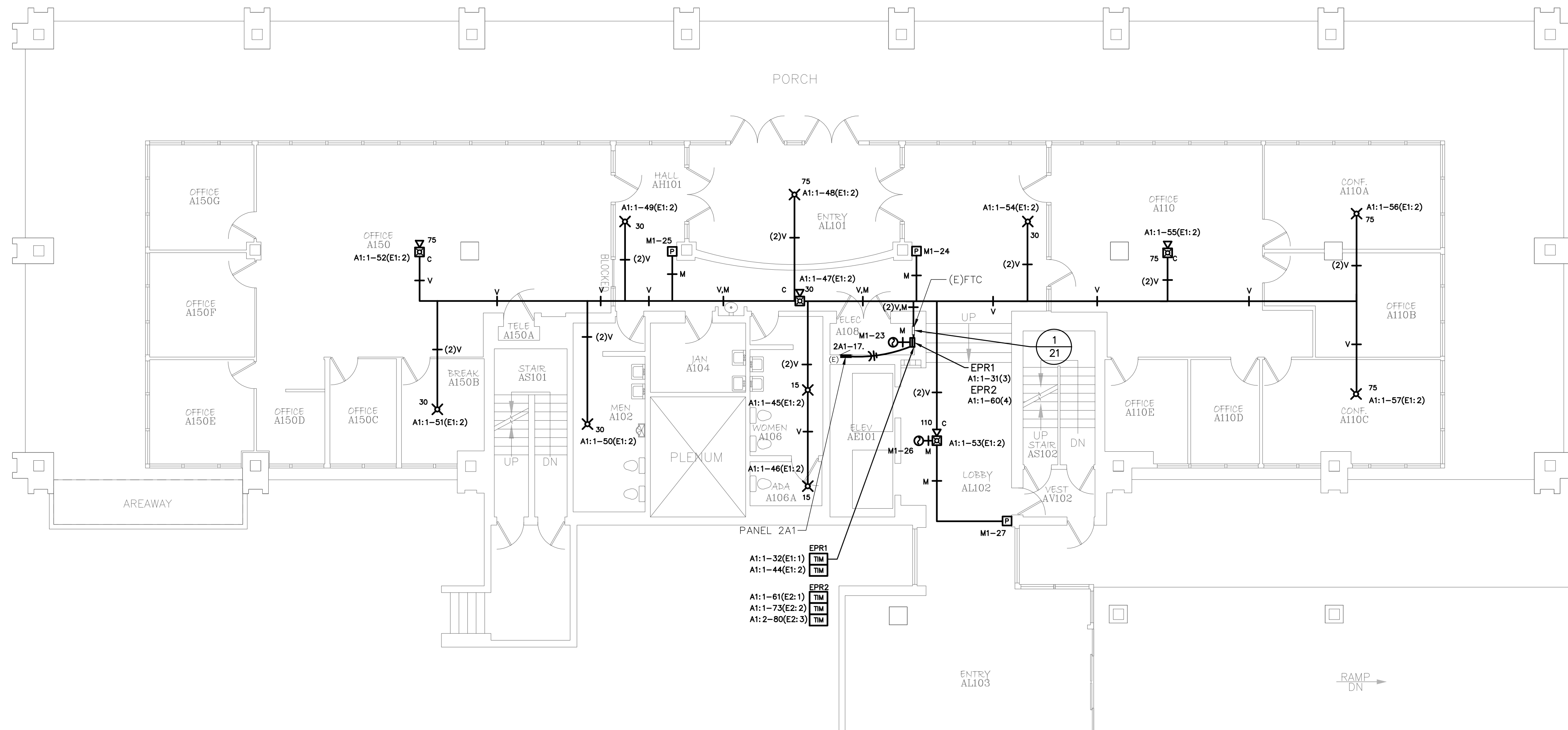
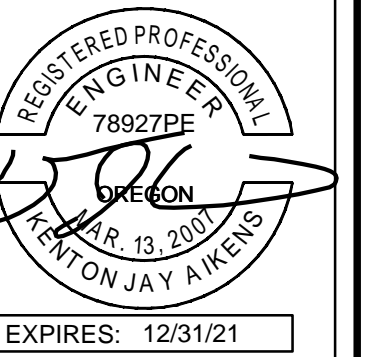
SHEET # **3**
 OF **21**



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FIRST FLOOR

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



1 FIRST FLOOR PLAN - BUILDING A - FIRE ALARM
SCALE: 1/8"=1'-0"

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Plot set up: Standard

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FIRST FLOOR

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



EXPIRES: 12/31/21

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DATE

REVISION DESCRIPTION

DATE

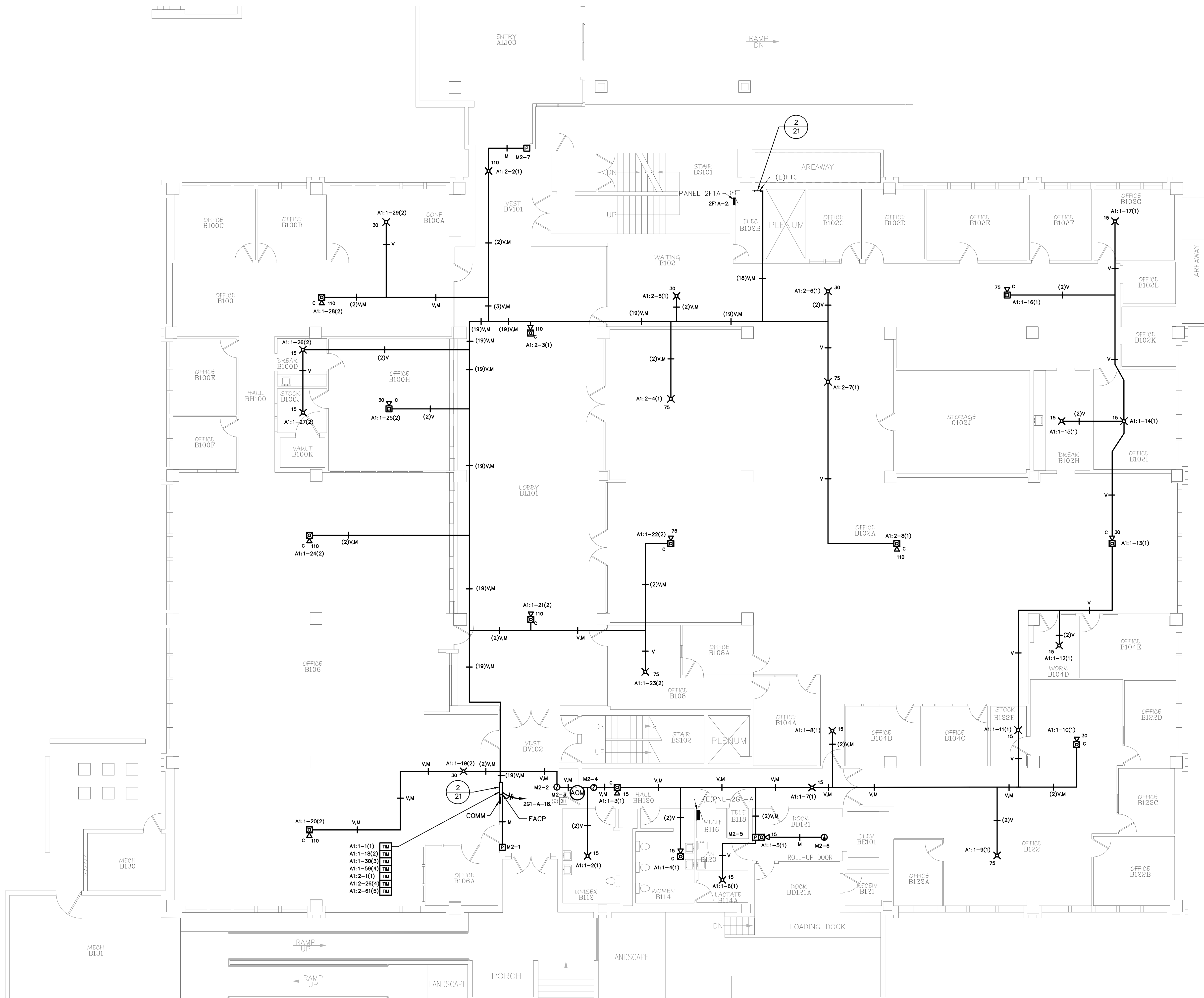
REVISION DESCRIPTION

DATE

REVISION DESCRIPTION

DATE

REVISION DESCRIPTION



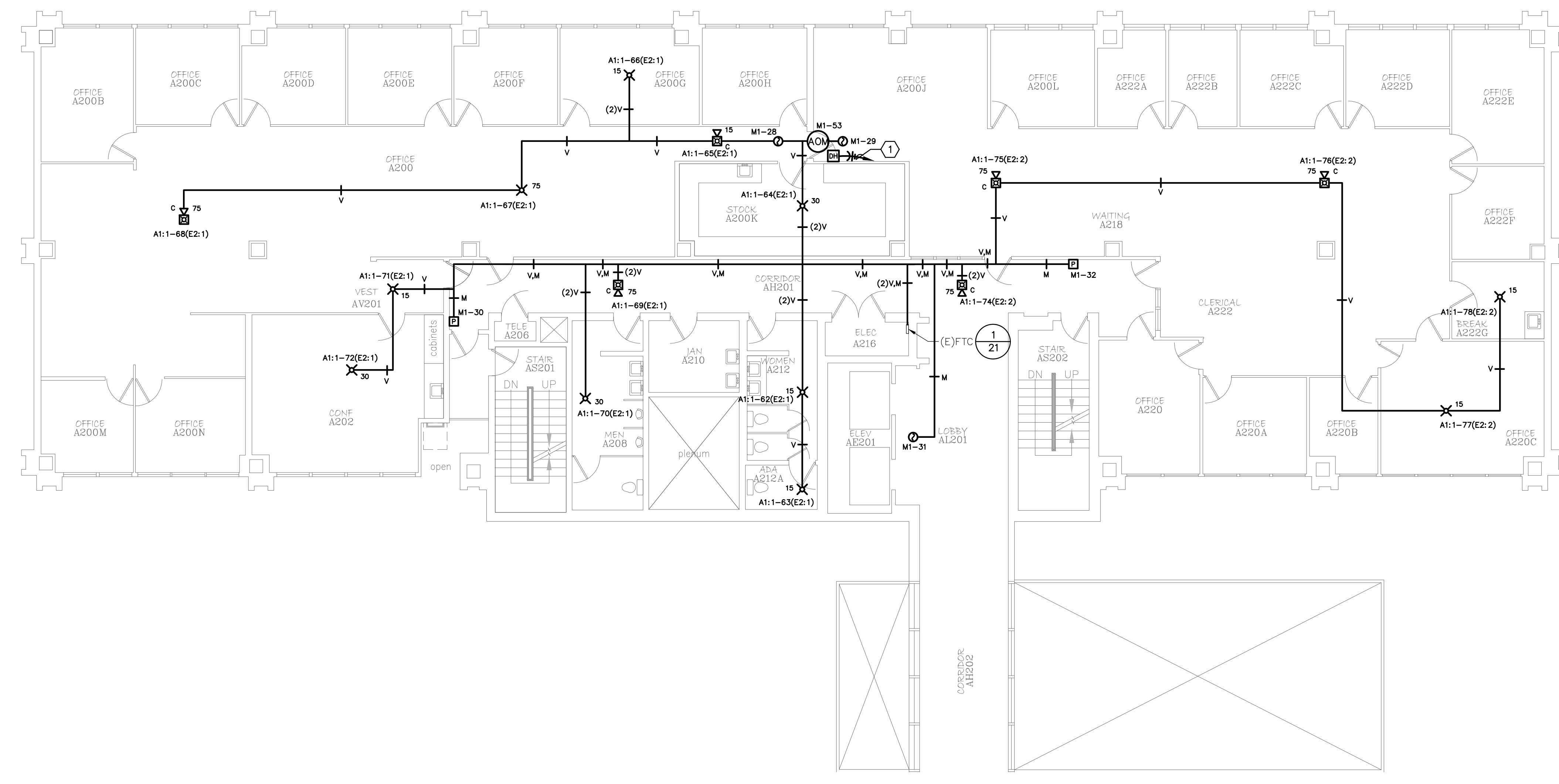
1 FIRST FLOOR PLAN - BUILDING B - FIRE ALARM
SCALE: 1/8"=1'-0"

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SHEET KEYNOTES

- 1 PROVIDE 120VAC CIRCUIT FOR NEW DOOR HOLDER. UTILIZE SPARE CIRCUIT FROM PANEL IN ELECTRICAL ROOM OR LOCAL UNSWITCHED RECEPTACLE CIRCUIT.



1 SECOND FLOOR PLAN - BUILDING A - FIRE ALARM
 SCALE: 1/8"=1'-0"

OSU FREE ACCESS INFORMATION

DATE	REVISION	DESCRIPTION

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SHEET KEYNOTES

- 1 PROVIDE ADDRESSABLE INPUT MODULES TO MONITOR EXTINGUISHING SYSTEM ALARM AND TROUBLE.
- 2 DOOR HOLDER WITH INTEGRATED SMOKE DETECTOR.

Drawing Name



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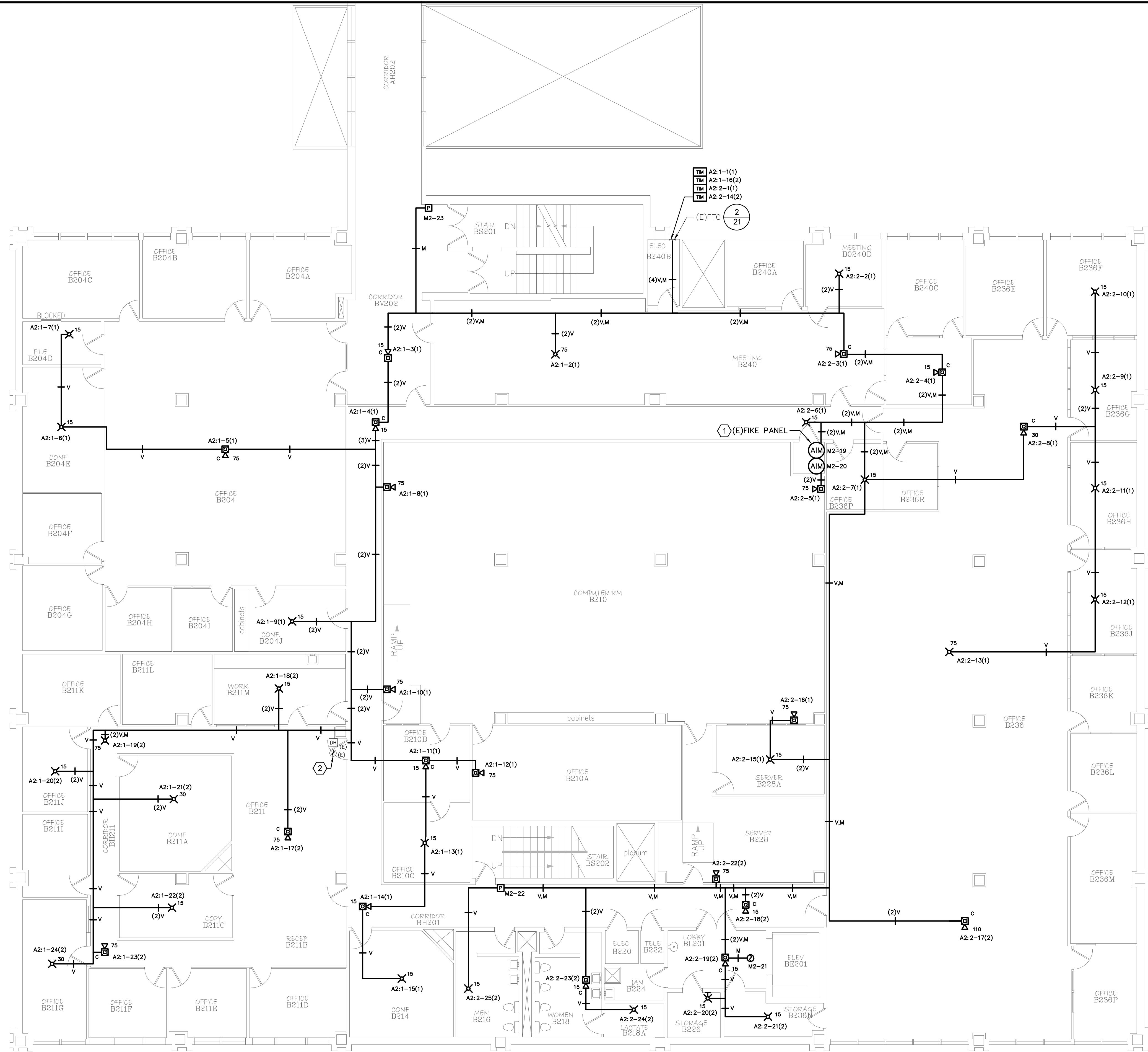
SECOND FLOOR

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



EXPIRES: 12/31/21

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1 SECOND FLOOR PLAN - BUILDING B - FIRE ALARM
 SCALE: 1/8"=1'-0"

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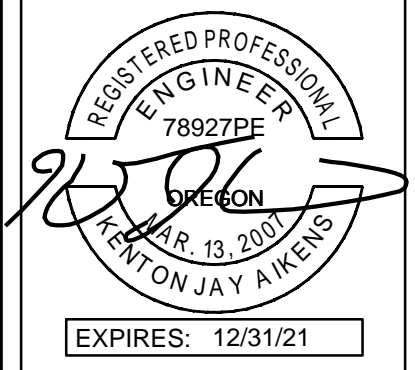
SHEET # 7
 OF 21



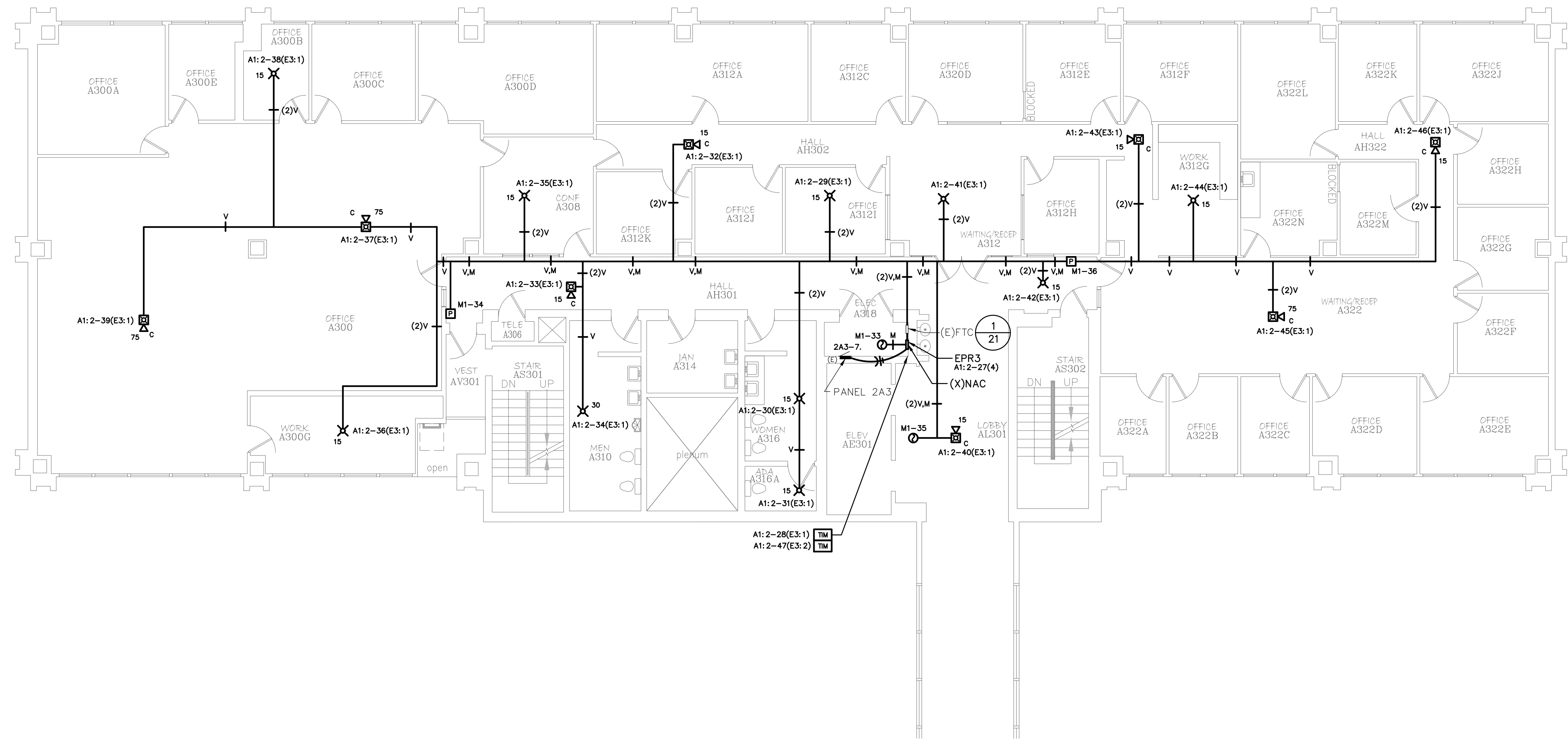
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THIRD FLOOR

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



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1 THIRD FLOOR PLAN - BUILDING A - FIRE ALARM
SCALE: 1/8"=1'-0"

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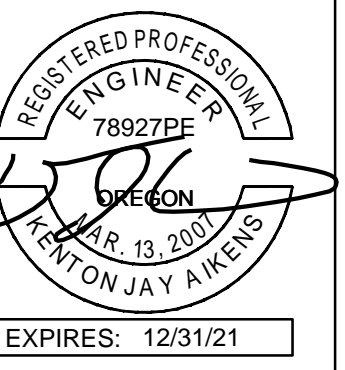
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OF 21



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THIRD FLOOR

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

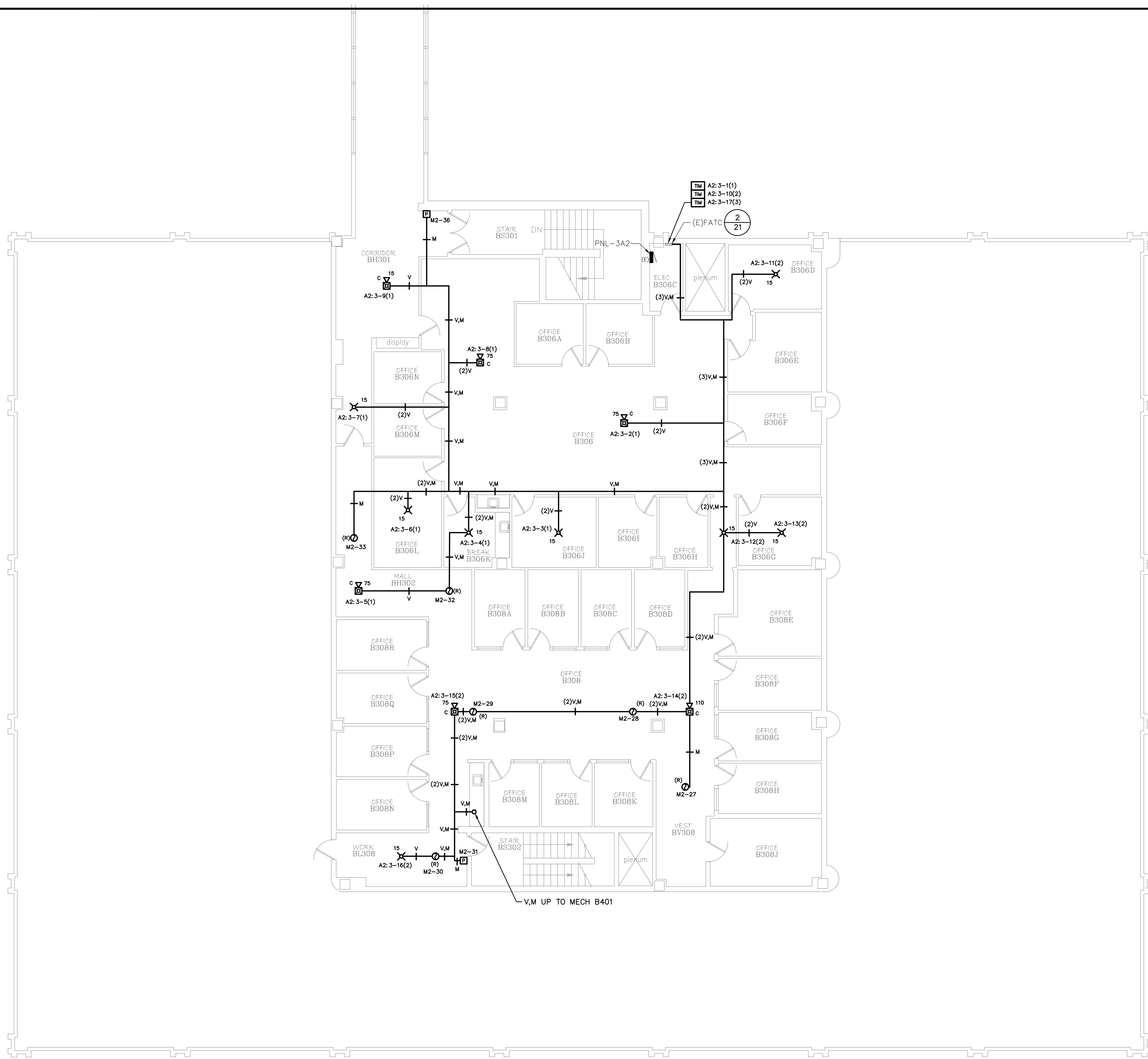


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DATE	REVISION	DESCRIPTION

Plot date: March 02, 2020
Orientation: Landscape
Plot scale: 1:1
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Device: KIP 7000
Plot set up: Standard

SHEET # 9
OF 21



1 THIRD FLOOR PLAN - BUILDING B - FIRE ALARM

0 4' 8' 16'

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

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CONTACT Joe Ripp

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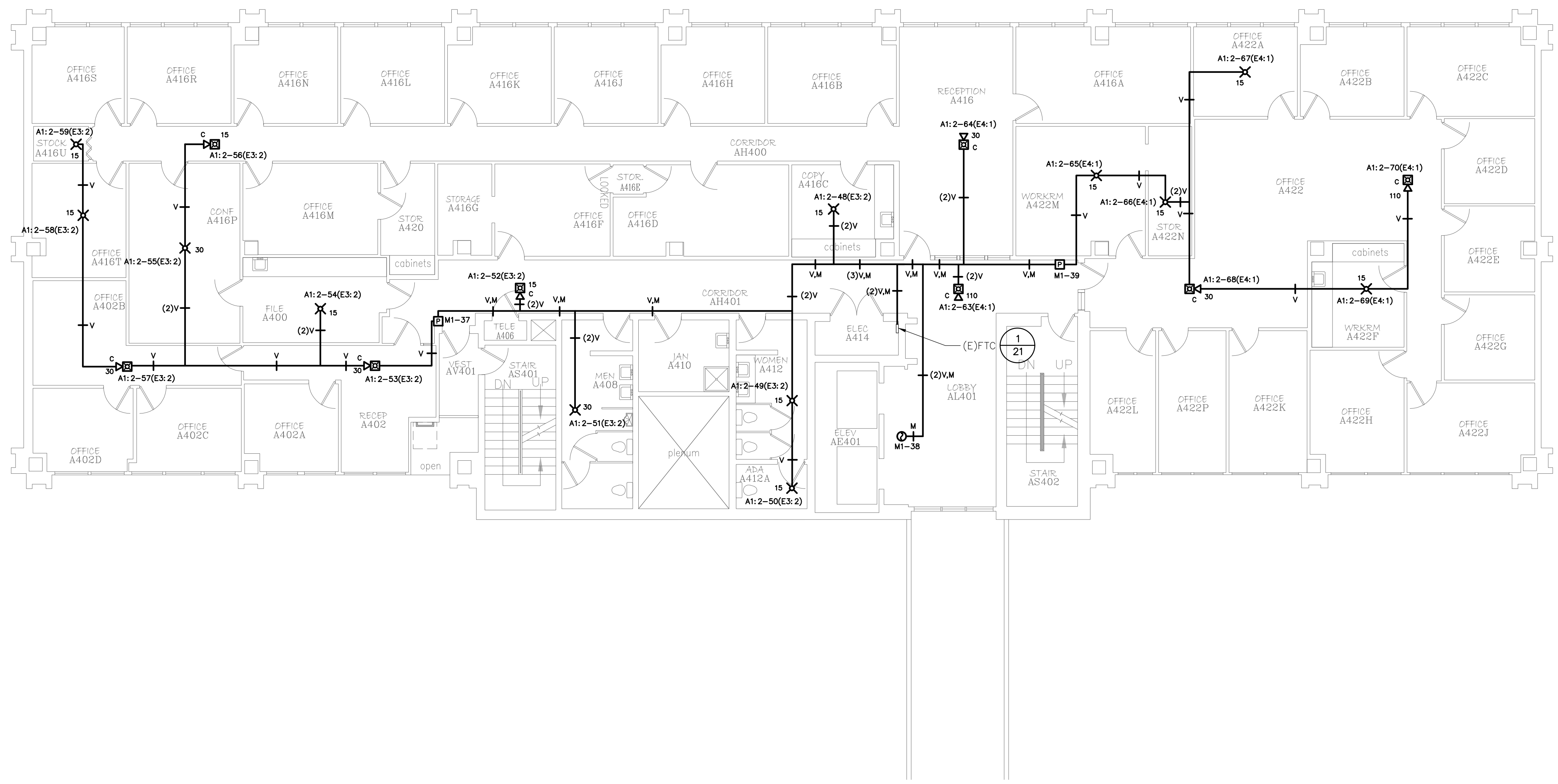
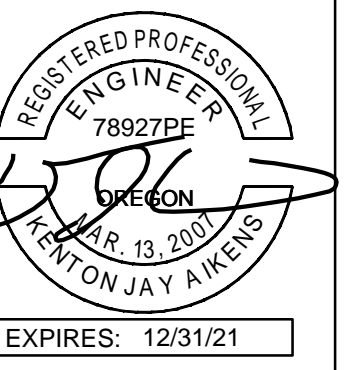
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FOURTH FLOOR

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



1 FOURTH FLOOR PLAN - BUILDING A - FIRE ALARM
0 4' 8' 16'
SCALE: 1/8"=1'-0"

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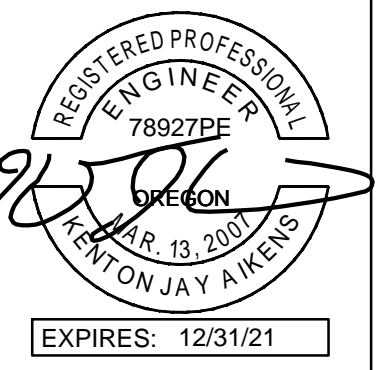
SHEET # 10
OF 21



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FOURTH FLOOR

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

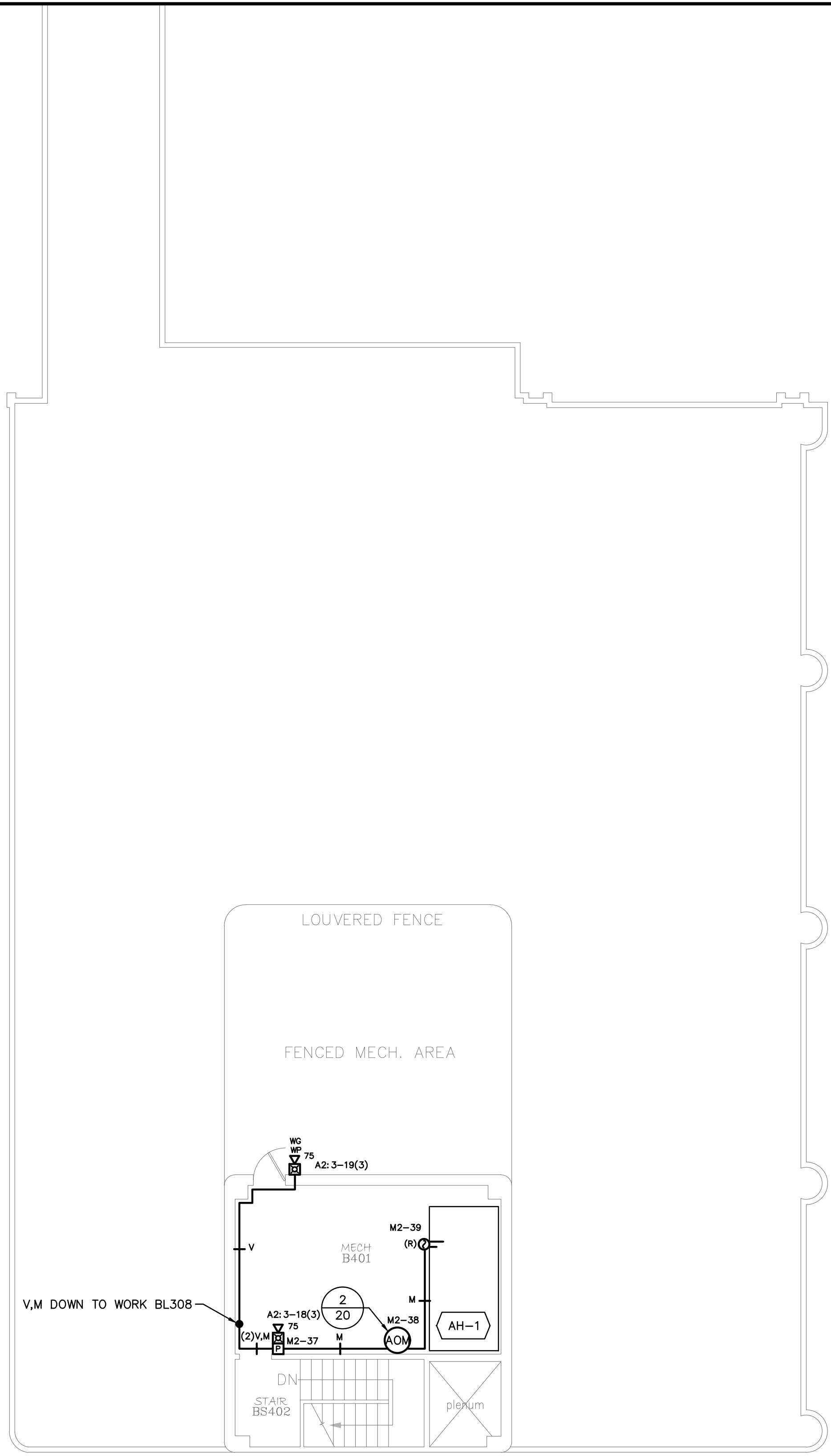


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SHEET # 11
OF 21



1 FOURTH FLOOR PLAN - BUILDING B - FIRE ALARM

0 4' 8' 16'

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

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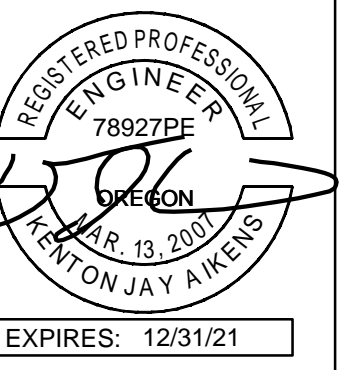


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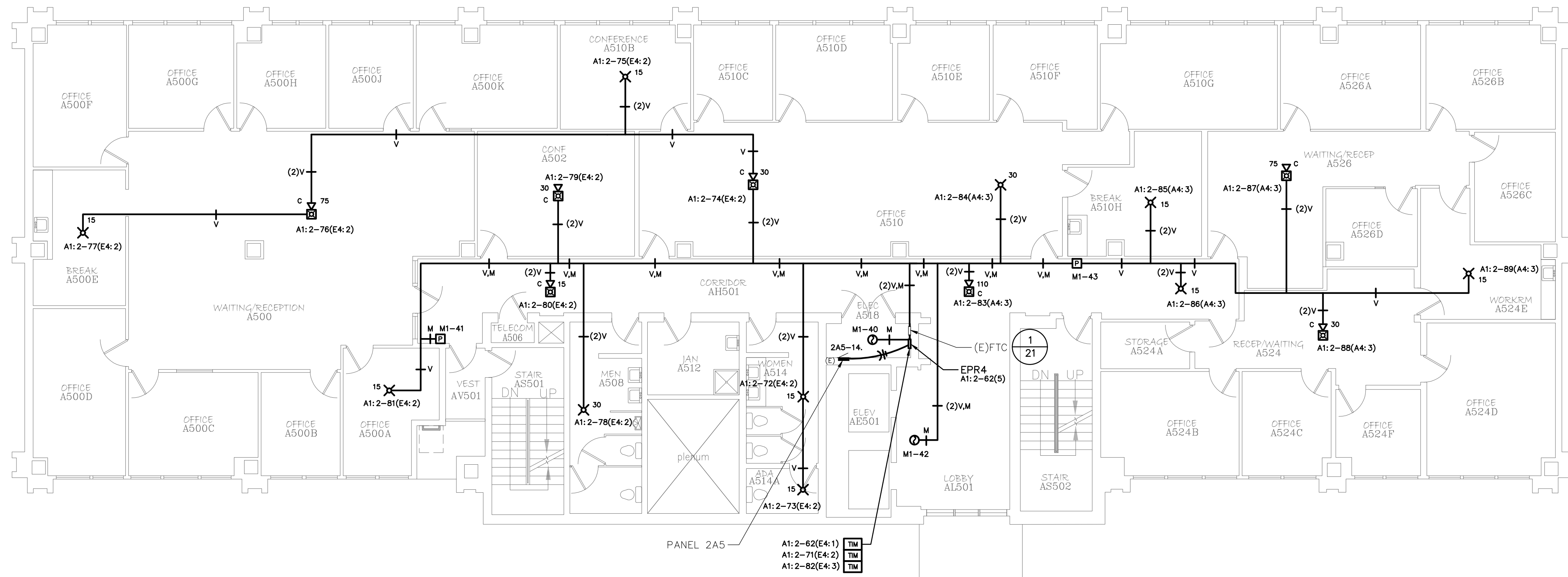
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FIFTH FLOOR

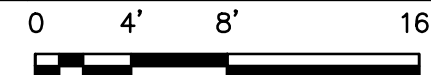
SCALE:
1/8"=1'-0"



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1 FIFTH FLOOR PLAN - BUILDING A - FIRE ALARM



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

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SHEET # 12
OF 21

○ SHEET KEYNOTES

- 1 PROVIDE 120VAC DEDICATED CIRCUIT FROM NEAREST AVAILABLE ELECTRICAL PANEL FOR REPEATER. PROVIDE LOCKED BREAKER.

Drawing Name



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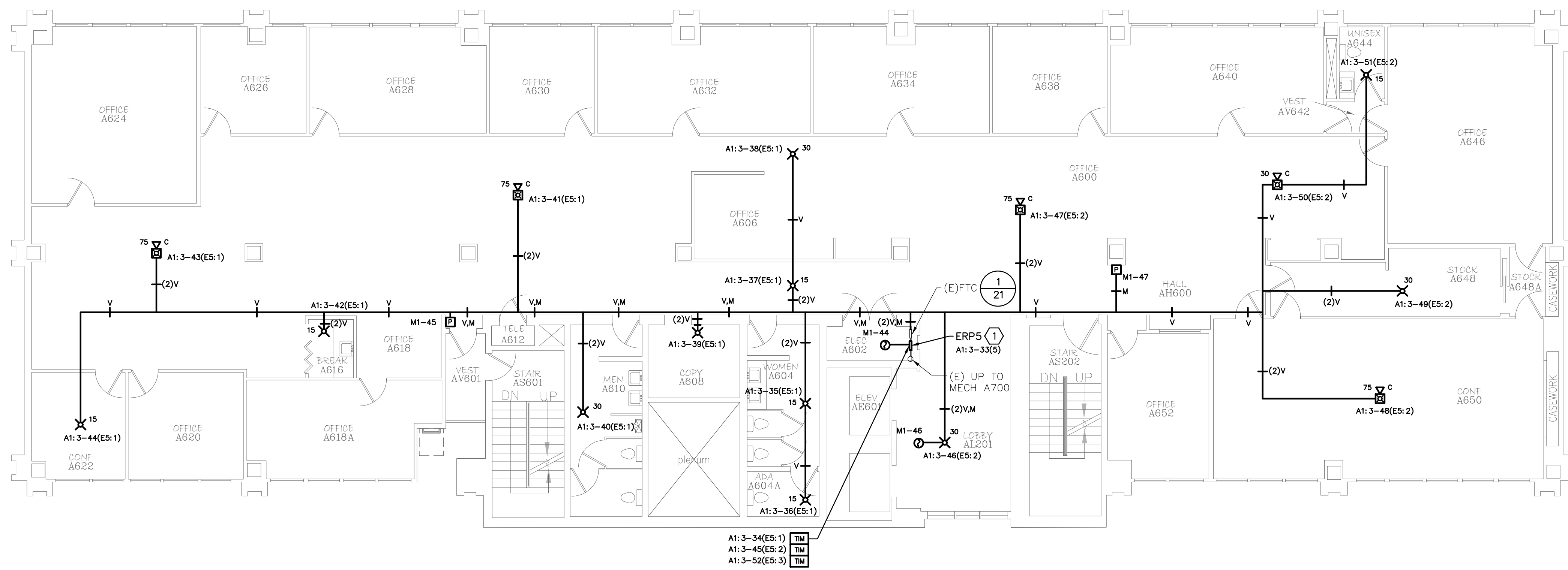
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SIXTH FLOOR

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



EXPIRES: 12/31/21



1 SIXTH FLOOR PLAN - BUILDING A - FIRE ALARM
SCALE: 1/8"=1'-0"

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SHEET # 13
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SHEET KEYNOTES

- 1 ADDRESSABLE CONTROL RELAYS FOR ELEVATOR PRIMARY AND ALTERNATE RECALL AND FIRE HAT LIGHT FUNCTIONS.

Drawing Name



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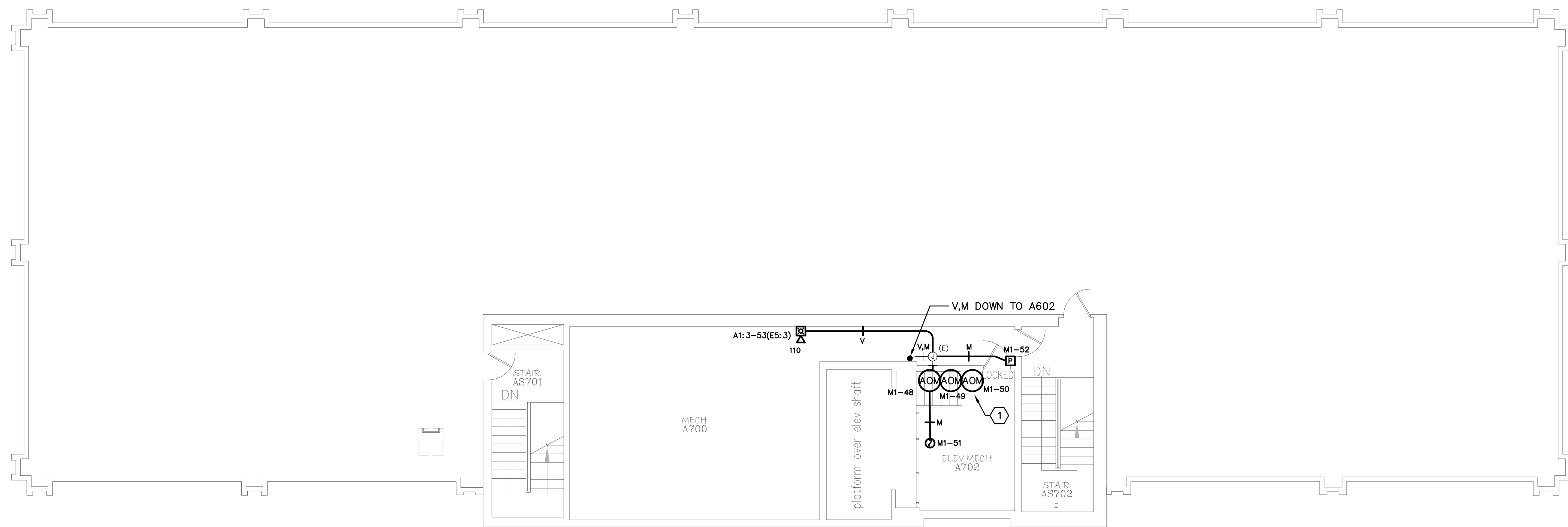
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PENTHOUSE FLOOR

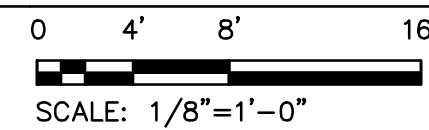
SCALE:
1/8"=1'-0"



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1 PENTHOUSE FLOOR PLAN - BUILDING A - FIRE ALARM



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

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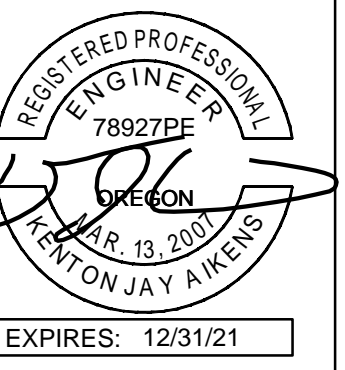
SHEET # 14
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CALCULATIONS SHEET

SCALE: NO SCALE



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DATE: [blank] TIME: [blank]

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SHEET # 15
OF 21

IDNET CHANNEL M1 table with columns: Address, Device Type, Point Type, Location Description, and SWITCH SETTINGS (1-8).

IDNET CHANNEL M2 table with columns: Address, Device Type, Point Type, Location Description, and SWITCH SETTINGS (1-8).

OSU KERR BUILDING 4100es FACP table with columns: Module, Qty, Description, Standby Current, Total Standby, Alarm Current, Total Alarm.

Battery Set #1 (Cabinet/Charger #1) table with columns: Standby Current, Standby Total, Alarm Current, Alarm Total.

Repeater Power Supply Battery Set calculations for EPR-1, EPR-2, EPR-3, EPR-4, and EPR-5.

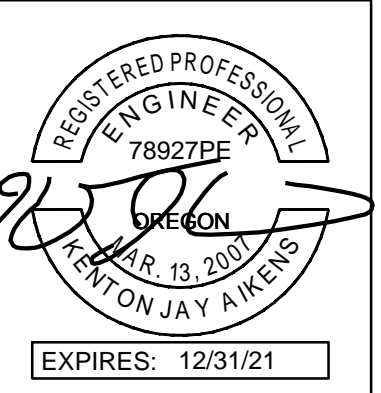
PROJECT 2019-0680
CONTACT Joe Ripp
INTERFACE ENGINEERING
708 SW Third Avenue
Suite 400
Portland, OR 97204
TEL 503.382.2266
FAX 503.382.2262
www.interfaceengineering.com



KERR ADMINISTRATION
0016 [Kad]
1500 SW Jefferson Way

CALCULATIONS SHEET

SCALE: NO SCALE



DATE: [blank] QC

OSU FREE ACCESS INFORMATION

REVISION DESCRIPTION

Plot date: March 02, 2020
Orientation: Landscape
Plot scale: 1:1
Paper size: 24x36
Device: KIP 7000
Plot set up: Standard

SHEET # 16
OF 21

PROJECT 2019-0680
CONTACT Joe Ripp
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A1:1 Notification SLC Distributed Load Voltage Drop											
Class B Calculations											
Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device	% Vdrop	Wire Length
1	A1:1-1	PANEL	5	4905-9929		0.0100	1.338	0.121	28.879		Branch 1: 9.3%
1	A1:1-2	A1:1-1	40	49VO-APPLC	15cd	0.0550	1.328	0.326	28.552		Length: 570
1	A1:1-3	A1:1-2	25	49AV-APPLC	15cd	0.0670	1.273	0.195	28.357		
1	A1:1-4	A1:1-3	35	49AV-APPLC	15cd	0.0670	1.206	0.259	28.098		
1	A1:1-5	A1:1-4	45	49AV-APPLW	15cd	0.0590	1.139	0.315	27.783		
1	A1:1-6	A1:1-5	25	49VO-APPLC	15cd	0.0550	1.080	0.166	27.617		
1	A1:1-7	A1:1-6	30	49VO-APPLC	15cd	0.0550	1.025	0.189	27.429		
1	A1:1-8	A1:1-7	25	49VO-APPLC	15cd	0.0550	0.970	0.149	27.280		
1	A1:1-9	A1:1-8	45	49VO-APPLC	75cd	0.1530	0.915	0.253	27.027		
1	A1:1-10	A1:1-9	35	49AV-APPLC	30cd	0.0920	0.762	0.164	26.863		
1	A1:1-11	A1:1-10	40	49VO-APPLC	110cd	0.1990	0.670	0.165	26.699		
1	A1:1-12	A1:1-11	45	49VO-APPLC	15cd	0.0550	0.471	0.130	26.568		
1	A1:1-13	A1:1-12	35	49VO-APPLC	15cd	0.0550	0.416	0.089	26.479		
1	A1:1-14	A1:1-13	30	49AV-APPLC	30cd	0.0920	0.361	0.066	26.413		
1	A1:1-15	A1:1-14	15	49VO-APPLC	15cd	0.0550	0.269	0.025	26.388		
1	A1:1-16	A1:1-15	55	49AV-APPLC	75cd	0.1590	0.214	0.072	26.316		
1	A1:1-17	A1:1-16	40	49VO-APPLC	15cd	0.0550	0.055	0.014	26.302		
						0.0000	0.000	0.000	0.000		
2	A1:1-18	PANEL	5	4905-9929		0.0100	1.550	0.141	28.859		Branch 2: 8.89%
2	A1:1-19	A1:1-18	20	49VO-APPLC	30cd	0.0830	1.540	0.189	28.670		Length: 555
2	A1:1-20	A1:1-19	45	49AV-APPLC	110cd	0.2150	1.457	0.403	28.268		
2	A1:1-21	A1:1-20	60	49AV-APPLC	110cd	0.2150	1.242	0.458	27.810		
2	A1:1-22	A1:1-21	50	49AV-APPLC	75cd	0.1590	1.027	0.315	27.495		
2	A1:1-23	A1:1-22	35	49VO-APPLC	75cd	0.1530	0.868	0.187	27.308		
2	A1:1-24	A1:1-23	65	49AV-APPLC	110cd	0.2150	0.715	0.285	27.023		
2	A1:1-25	A1:1-24	75	49AV-APPLC	30cd	0.0920	0.500	0.230	26.793		
2	A1:1-26	A1:1-25	65	49VO-APPLC	15cd	0.0550	0.408	0.163	26.630		
2	A1:1-27	A1:1-26	20	49VO-APPLC	15cd	0.0550	0.353	0.043	26.587		
2	A1:1-28	A1:1-27	80	49AV-APPLC	110cd	0.2150	0.298	0.146	26.440		
2	A1:1-29	A1:1-28	35	49VO-APPLC	30cd	0.0830	0.083	0.018	26.422		
						0.0000	0.000	0.000	0.000		
3	A1:1-30	PANEL	5	4905-9929		0.0100	0.013	0.001	28.999		Branch 3: 0.02%
3	A1:1-31	A1:1-30	200	4009-9602		0.0032	0.003	0.004	28.995		Length: 205
E1:1	A1:1-32	EPR1	5	4905-9929		0.0100	0.713	0.065	28.935		Branch E1:1: 1.31%
E1:1	A1:1-33	A1:1-32	40	49AV-APPLW	110cd	0.1390	0.703	0.173	28.763		Length: 280
E1:1	A1:1-34	A1:1-33	20	49AV-APPLW	75cd	0.1070	0.332	0.041	28.722		
E1:1	A1:1-35	A1:1-34	45	49AV-APPLW	15cd	0.0590	0.225	0.062	28.660		
E1:1	A1:1-36	A1:1-35	40	49AV-APPLW	135cd	0.1660	0.166	0.041	28.619		
E1:1	A1:1-37	A1:1-36	40	49VO-APPLC	15cd	0.0550	0.232	0.057	28.706		
E1:1	A1:1-38	A1:1-37	30	49VO-APPLC	15cd	0.0550	0.177	0.033	28.673		
E1:1	A1:1-39	A1:1-38	30	49AV-APPLC	15cd	0.0670	0.122	0.022	28.651		
E1:1	A1:1-40	A1:1-39	30	49VO-APPLC	15cd	0.0550	0.055	0.010	28.640		
						0.0000	0.000	0.000	0.000		
E1:2	A1:1-44	EPR1	5	4905-9929		0.0100	1.619	0.147	28.853		Branch E1:2: 5.41%
E1:2	A1:1-45	A1:1-44	40	49VO-APPLC	15cd	0.0550	1.609	0.395	28.458		Length: 505
E1:2	A1:1-46	A1:1-45	15	49VO-APPLC	15cd	0.0550	1.554	0.143	28.315		
E1:2	A1:1-47	A1:1-46	20	49AV-APPLC	30cd	0.0920	1.499	0.184	28.131		
E1:2	A1:1-48	A1:1-47	25	49VO-APPLC	75cd	0.1530	0.561	0.086	28.045		
E1:2	A1:1-49	A1:1-48	50	49VO-APPLC	30cd	0.0830	0.408	0.125	27.919		
E1:2	A1:1-50	A1:1-49	35	49VO-APPLC	30cd	0.0830	0.325	0.070	27.850		
E1:2	A1:1-51	A1:1-50	55	49VO-APPLC	30cd	0.0830	0.242	0.082	27.768		
E1:2	A1:1-52	A1:1-51	30	49AV-APPLC	75cd	0.1590	0.159	0.029	27.739		
E1:2	A1:1-53	A1:1-52	40	49AV-APPLC	110cd	0.2150	0.846	0.208	27.923		
E1:2	A1:1-54	A1:1-53	45	49VO-APPLC	30cd	0.0830	0.631	0.174	27.749		
E1:2	A1:1-55	A1:1-54	40	49AV-APPLC	75cd	0.1590	0.548	0.135	27.614		
E1:2	A1:1-56	A1:1-55	25	49VO-APPLC	30cd	0.0830	0.389	0.060	27.554		
E1:2	A1:1-57	A1:1-56	50	49VO-APPLC	75cd	0.1530	0.306	0.094	27.460		
E1:2	A1:1-58	A1:1-57	30	49VO-APPLC	75cd	0.1530	0.153	0.028	27.432		
						0.0000	0.000	0.000	0.000		
4	A1:1-59	PANEL	5	4905-9929		0.0100	0.013	0.001	28.999		Branch 4: 0.02%
4	A1:1-60	A1:1-59	200	4009-9602		0.0032	0.003	0.004	28.995		Length: 205
E2:1	A1:1-61	EPR2	5	4905-9929		0.0100	1.009	0.092	28.908		Branch E2:1: 2.97%
E2:1	A1:1-62	A1:1-61	60	49VO-APPLC	15cd	0.0550	0.999	0.368	28.540		Length: 385
E2:1	A1:1-63	A1:1-62	15	49VO-APPLC	15cd	0.0550	0.055	0.005	28.535		
E2:1	A1:1-64	A1:1-63	30	49VO-APPLC	30cd	0.0830	0.889	0.164	28.377		
E2:1	A1:1-65	A1:1-64	25	49AV-APPLW	15cd	0.0590	0.426	0.065	28.311		
E2:1	A1:1-66	A1:1-65	25	49VO-APPLC	15cd	0.0550	0.367	0.056	28.255		
E2:1	A1:1-67	A1:1-66	35	49VO-APPLC	75cd	0.1530	0.312	0.067	28.188		
E2:1	A1:1-68	A1:1-67	50	49AV-APPLC	75cd	0.1590	0.159	0.049	28.139		
E2:1	A1:1-69	A1:1-68	40	49AV-APPLC	75cd	0.1590	0.380	0.093	28.283		
E2:1	A1:1-70	A1:1-69	30	49VO-APPLC	30cd	0.0830	0.221	0.041	28.243		
E2:1	A1:1-71	A1:1-70	50	49VO-APPLC	15cd	0.0550	0.138	0.042	28.200		
E2:1	A1:1-72	A1:1-71	20	49VO-APPLC	30cd	0.0830	0.083	0.010	28.190		
						0.0000	0.000	0.000	0.000		
E2:2	A1:1-73	EPR2	5	4905-9929		0.0100	0.652	0.059	28.941		Branch E2:2: 1.65%
E2:2	A1:1-74	A1:1-73	50	49AV-APPLC	75cd	0.1590	0.642	0.197	28.744		Length: 200
E2:2	A1:1-75	A1:1-74	25	49AV-APPLC	75cd	0.1590	0.483	0.074	28.670		
E2:2	A1:1-76	A1:1-75	45	49AV-APPLC	75cd	0.1590	0.324	0.090	28.580		
E2:2	A1:1-77	A1:1-76	35	49VO-APPLC	15cd	0.0550	0.165	0.035	28.545		
E2:2	A1:1-78	A1:1-77	25	49VO-APPLC	15cd	0.0550	0.110	0.017	28.528		
E2:2	A1:1-79	A1:1-78	15	49VO-APPLC	15cd	0.0550	0.055	0.005	28.523		
						0.0000	0.000	0.000	0.000		
E2:3	A1:1-80	EPR2	5	4905-9929		0.0100	0.752	0.068	28.932		Branch E2:3: 3.24%
E2:3	A1:1-81	A1:1-80	75	49AV-APPLC	110cd	0.2150	0.742	0.342	28.590		Length: 330
E2:3	A1:1-82	A1:1-81	30	49VO-APPLC	30cd	0.0830	0.527	0.097	28.493		
E2:3	A1:1-83	A1:1-82	65	49VO-APPLC	30cd	0.0830	0.444	0.177	28.316		
E2:3	A1:1-84	A1:1-83	50	49VO-APPLC	30cd	0.0830	0.361	0.111	28.205		
E2:3	A1:1-85	A1:1-84	65	49AV-APPLW	110cd	0.1390	0.278	0.111	28.094		
E2:3	A1:1-86	A1:1-85	40	49AV-APPLW	110cd	0.1390	0.139	0.034	28.060		

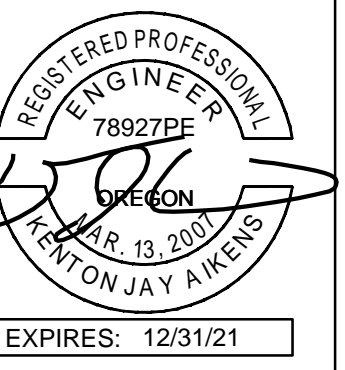
A1:1 ENHANCED POWER SUPPLY - CHANNEL 1 SWITCH SETTINGS											
IDNac Address	Device Type	PID	Setting	1	2	3	4	5	6	7	8
A1:1-1	ISO	4905-9929		X	X						ON
A1:1-2	VO	49VO-APPLC	15cd	X	X						ON
A1:1-3	AV	49AV-APPLC	15cd	X	X						ON
A1:1-4	AV	49AV-APPLC	15cd	X	X						



KERR ADMINISTRATION
0016 [Kad]
1500 SW Jefferson Way

CALCULATIONS SHEET

SCALE:
NO SCALE



OSU FREE ACCESS INFORMATION

A1: ENHANCED POWER SUPPLY - CHANNEL 2			SWITCH SETTINGS								
ID/Nac Address	Device Type	PID	Setting	1	2	3	4	5	6	7	8
A1:2-1	ISO	4905-9929	X								ON
A1:2-2	VO	49VO-APPLC	110cd	X							ON
A1:2-3	AV	49AV-APPLC	110cd	X							ON
A1:2-4	VO	49VO-APPLC	75cd		X						ON
A1:2-5	VO	49VO-APPLC	30cd	X	X						ON
A1:2-6	VO	49VO-APPLC	75cd	X	X						ON
A1:2-7	AV	49AV-APPLC	110cd	X	X						ON
A1:2-8	ISO	4905-9929				X					ON
A1:2-9	AV	49AV-APPLC	75cd	X		X					ON
A1:2-10	VO	49VO-APPLC	15cd	X	X						ON
A1:2-11	AV	49AV-APPLW	75cd	X	X	X					ON
A1:2-12	AV	49AV-APPLC	15cd		X	X					ON
A1:2-13	AV	49AV-APPLC	30cd	X	X	X					ON
A1:2-14	AV	49AV-APPLC	30cd	X	X	X					ON
A1:2-15	VO	49VO-APPLC	15cd	X	X	X					ON
A1:2-16	ISO	4905-9929					X				ON
A1:2-17	VO	49VO-APPLW	15cd	X		X					ON
A1:2-18	AV	49AV-APPLW	15cd	X		X					ON
A1:2-19	VO	49VO-APPLW	30cd	X	X	X					ON
A1:2-20	VO	49VO-APPLW	15cd		X	X					ON
A1:2-21	VO	49VO-APPLW	75cd	X	X	X					ON
A1:2-22	AV	49AV-APPLW	75cd	X	X	X					ON
A1:2-23	VO	49VO-APPLW	15cd	X	X	X					ON
A1:2-24	VO	49VO-APPLW	15cd		X	X					ON
A1:2-25	AV	49AV-APPLW	15cd	X	X	X					ON
A1:2-26	ISO	4905-9929			X	X	X				ON
A1:2-27	REPEATER	4009-9602		X	X	X	X				ON
A1:2-28	ISO	4905-9929			X	X	X				ON
A1:2-29	VO	49VO-APPLC	15cd	X	X	X					ON
A1:2-30	VO	49VO-APPLC	15cd	X	X	X					ON
A1:2-31	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-32	AV	49AV-APPLC	15cd				X				ON
A1:2-33	AV	49AV-APPLC	15cd	X			X				ON
A1:2-34	VO	49VO-APPLC	30cd	X			X				ON
A1:2-35	VO	49VO-APPLC	15cd	X	X		X				ON
A1:2-36	AV	49AV-APPLC	75cd		X	X	X				ON
A1:2-37	AV	49AV-APPLC	75cd	X	X	X	X				ON
A1:2-38	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-39	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-40	AV	49AV-APPLC	15cd			X	X				ON
A1:2-41	VO	49VO-APPLC	30cd	X		X	X				ON
A1:2-42	VO	49VO-APPLC	15cd	X		X	X				ON
A1:2-43	AV	49AV-APPLC	15cd	X	X	X	X				ON
A1:2-44	VO	49VO-APPLC	15cd		X	X	X				ON
A1:2-45	AV	49AV-APPLC	75cd	X	X	X	X				ON
A1:2-46	AV	49AV-APPLC	15cd	X	X	X	X				ON
A1:2-47	ISO	4905-9929		X	X	X	X				ON
A1:2-48	VO	49VO-APPLC	15cd		X	X	X				ON
A1:2-49	VO	49VO-APPLC	15cd	X		X	X				ON
A1:2-50	VO	49VO-APPLC	15cd	X		X	X				ON
A1:2-51	VO	49VO-APPLC	30cd	X	X	X	X				ON
A1:2-52	AV	49AV-APPLC	15cd		X	X	X				ON
A1:2-53	AV	49AV-APPLC	30cd	X	X	X	X				ON
A1:2-54	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-55	VO	49VO-APPLC	30cd	X	X	X	X				ON
A1:2-56	AV	49AV-APPLC	15cd		X	X	X				ON
A1:2-57	AV	49AV-APPLC	30cd	X	X	X	X				ON
A1:2-58	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-59	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-60	ISO	4905-9929			X	X	X	X			ON
A1:2-61	REPEATER	4009-9602		X	X	X	X				ON
A1:2-62	ISO	4905-9929			X	X	X	X			ON
A1:2-63	AV	49AV-APPLC	110cd	X	X	X	X				ON
A1:2-64	AV	49AV-APPLC	30cd				X				ON
A1:2-65	VO	49VO-APPLC	15cd	X			X				ON
A1:2-66	VO	49VO-APPLC	15cd	X			X				ON
A1:2-67	VO	49VO-APPLC	15cd	X	X		X				ON
A1:2-68	AV	49AV-APPLC	30cd		X	X	X				ON
A1:2-69	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-70	AV	49AV-APPLC	110cd	X	X	X	X				ON
A1:2-71	ISO	4905-9929		X	X	X	X				ON
A1:2-72	VO	49VO-APPLC	15cd			X	X				ON
A1:2-73	VO	49VO-APPLC	15cd	X		X	X				ON
A1:2-74	AV	49AV-APPLC	30cd	X	X	X	X				ON
A1:2-75	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-76	AV	49AV-APPLC	75cd		X	X	X				ON
A1:2-77	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-78	VO	49VO-APPLC	30cd	X	X	X	X				ON
A1:2-79	AV	49AV-APPLC	30cd	X	X	X	X				ON
A1:2-80	AV	49AV-APPLC	15cd		X	X	X				ON
A1:2-81	VO	49VO-APPLC	15cd	X		X	X				ON
A1:2-82	ISO	4905-9929			X	X	X				ON
A1:2-83	AV	49AV-APPLC	110cd	X	X	X	X				ON
A1:2-84	VO	49VO-APPLC	30cd		X	X	X				ON
A1:2-85	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-86	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-87	AV	49AV-APPLC	75cd	X	X	X	X				ON
A1:2-88	AV	49AV-APPLC	30cd		X	X	X				ON
A1:2-89	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-90	AV	49AV-APPLW	75cd	X	X	X	X				ON
A1:2-91	VO	49VO-APPLC	15cd	X	X	X	X				ON
A1:2-92	AV	49AV-APPLW	75cd		X	X	X				ON
A1:2-93	AV	49AV-APPLW	75cd	X	X	X	X				ON
A1:2-94				X	X	X	X				ON
A1:2-95				X	X	X	X				ON
A1:2-96					X	X	X				ON
A1:2-97				X		X	X				ON
A1:2-98				X		X	X				ON
A1:2-99				X	X	X	X				ON
A1:2-100					X	X	X				ON

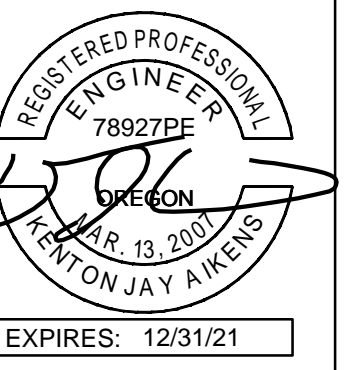
A1:2 Distributed Load Voltage Drop											
Starting Voltage: 29vdc		Primary Wire Gauge: 14ga		Wire Res. Per Ft. 0.003070 @ 75° Celsius							
Min. Device Voltage: 27_vdc		Home Run Wire Gauge: 14ga		Wire Res. Per Ft. 0.003070 @ 75° Celsius							
Allowable % Drop: 6.9%											
Class B Calculations											
Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device	% Vdrop	Wire Length
1	A1:2-1	PANEL	5	4905-9929		0.0100	1.028	0.093	28.907	Branch 1: 5.39%	Length: 360
1	A1:2-2	A1:2-1	125	49VO-APPLC	110cd	0.1990	1.018	0.781	28.125		
1	A1:2-3	A1:2-2	45	49AV-APPLC	110cd	0.2150	0.819	0.226	27.899		
1	A1:2-4	A1:2-3	50	49VO-APPLC	75cd	0.1530	0.604	0.185	27.714		
1	A1:2-5	A1:2-4	35	49VO-APPLC	30cd	0.0830	0.451	0.097	27.617		
1	A1:2-6	A1:2-5	50	49VO-APPLC	75cd	0.1530	0.368	0.113	27.504		
1	A1:2-7	A1:2-6	50	49AV-APPLC	110cd	0.2150	0.215	0.066	27.438		
						0.0000	0.000	0.000	0.000		
2	A1:2-8	PANEL	175	4905-9929		0.0100	1.013	1.149	27.851	Branch 2: 6.48%	Length: 535
2	A1:2-90	A1:2-8	30	49AV-APPLW	75cd	0.1070	1.003	0.185	27.666		
2	A1:2-91	A1:2-90	35	49VO-APPLC	15cd	0.0550	0.055	0.012	27.654		
2	A1:2-9	A1:2-90	50	49AV-APPLC	75cd	0.1590	0.841	0.258	27.408		
2	A1:2-10	A1:2-9	40	49VO-APPLC	15cd	0.0550	0.682	0.167	27.240		
2	A1:2-11	A1:2-10	25	49AV-APPLW	75cd	0.1070	0.321	0.049	27.191		
2	A1:2-92	A1:2-11	30	49AV-APPLW	75cd	0.1070	0.214	0.039	27.152		
2	A1:2-93	A1:2-92	45	49AV-APPLW	75cd	0.1070	0.107	0.030	27.122		
2	A1:2-12	A1:2-10	25	49AV-APPLC	15cd	0.0670	0.306	0.047	27.193		
2	A1:2-13	A1:2-12	30	49AV-APPLC	30cd	0.0920	0.239	0.044	27.149		
2	A1:2-14	A1:2-13	20	49AV-APPLC	30cd	0.0920	0.147	0.018	27.131		
2	A1:2-15	A1:2-14	30	49VO-APPLC	15cd	0.0550	0.055	0.010	27.121		
						0.0000	0.000	0.000	0.000		
3	A1:2-16	PANEL	175	4905-9929		0.0100	0.580	0.658	28.342	Branch 3: 4.42%	Length: 465
3	A1:2-17	A1:2-16	65	49VO-APPLW	15cd	0.0470	0.570	0.227	28.115		
3	A1:2-18	A1:2-17	25	49AV-APPLW	15cd	0.0590	0.523	0.080	28.034		
3	A1:2-19	A1:2-18	25	49VO-APPLW	30cd	0.0570	0.464	0.071	27.963		
3	A1:2-20	A1:2-19	20	49VO-APPLW	15cd	0.0470	0.407	0.050	27.913		
3	A1:2-21	A1:2-20	40	49VO-APPLW	75cd	0.1000	0.360	0.088	27.825		
3	A1:2-22	A1:2-21	35	49AV-APPLW	75cd	0.1070	0.260	0.056	27.769		
3	A1:2-23	A1:2-22	20	49VO-APPLW	15cd	0.0470	0.153	0.019	27.750		
3	A1:2-24	A1:2-23	30	49VO-APPLW	15cd	0.0470	0.106	0.020	27.730		
3	A1:2-25	A1:2-24	30	49AV-APPLW	15cd	0.0590	0.059	0.011	27.720		
						0.0000	0.000	0.000	0.000		
4	A1:2-26	PANEL	5	4905-9929		0.0100	0.013	0.001	28.999	Branch 4: 0.02%	Length: 235
4	A1:2-27	A1:2-26	230	4009-9602		0.0032	0.003	0.005	28.994		
E3:1	A1:2-28										



KERR ADMINISTRATION
0016 [Kad]
1500 SW Jefferson Way

CALCULATIONS SHEET

SCALE: NO SCALE



OSU FREE ACCESS INFORMATION

A1: ENHANCED POWER SUPPLY - CHANNEL 3			SWITCH SETTINGS									
IDNac Address	Device Type	PID	Setting	1	2	3	4	5	6	7	8	ON
A1:3-1	ISO	4905-9929	15cd	X								ON
A1:3-2	VO	49VO-APPLW	15cd	X	X							ON
A1:3-3	AV	48AV-APPLW	15cd	X	X							ON
A1:3-4	VO	49VO-APPLW	30cd		X							ON
A1:3-5	VO	49VO-APPLW	30cd	X	X							ON
A1:3-6	AV	48AV-APPLW	75cd	X	X							ON
A1:3-7	VO	49VO-APPLW	75cd	X	X	X						ON
A1:3-8	AV	48AV-APPLW	15cd			X						ON
A1:3-9	ISO	4905-9929		X		X						ON
A1:3-10	VO	49VO-APPLW	75cd	X	X							ON
A1:3-11	AV	48AV-APPLW	75cd	X	X	X						ON
A1:3-12	VO	49VO-APPLW	15cd		X	X						ON
A1:3-13	VO	49VO-APPLW	75cd	X	X	X						ON
A1:3-14	VO	49VO-APPLW	15cd	X	X	X						ON
A1:3-15	VO	49VO-APPLW	15cd	X	X	X						ON
A1:3-16	ISO	4905-9929				X						ON
A1:3-17	AV	48AV-APPLW	135cd	X			X					ON
A1:3-18	AV	48AV-APPLC	15cd	X	X							ON
A1:3-19	AV	48AV-APPLC	75cd	X	X							ON
A1:3-20	VO	49VO-APPLC	75cd		X	X						ON
A1:3-21	AV	48AV-APPLC	30cd	X	X	X						ON
A1:3-22	AV	48AV-APPLC	15cd	X	X	X						ON
A1:3-23	VO	49VO-APPLC	15cd	X	X	X						ON
A1:3-24	AV	48AV-APPLC	110cd		X	X						ON
A1:3-25	ISO	4905-9929		X		X	X					ON
A1:3-26	AV	48AV-APPLW	110cd	X	X	X						ON
A1:3-27	AV	48AV-APPLC	30cd	X	X	X						ON
A1:3-28	AV	48AV-APPLC	30cd		X	X	X					ON
A1:3-29	VO	49VO-APPLC	15cd	X	X	X						ON
A1:3-30	VO	49VO-APPLC	30cd	X	X	X	X					ON
A1:3-31	AV	48AV-APPLC	15cd	X	X	X	X					ON
A1:3-32	ISO	4905-9929								X		ON
A1:3-33	REPEATER	4009-9602		X								ON
A1:3-34	ISO	4905-9929		X								ON
A1:3-35	VO	49VO-APPLC	15cd	X	X							ON
A1:3-36	VO	49VO-APPLC	15cd		X							ON
A1:3-37	VO	49VO-APPLC	15cd	X	X							ON
A1:3-38	VO	49VO-APPLC	30cd	X	X	X						ON
A1:3-39	VO	49VO-APPLC	15cd	X	X	X						ON
A1:3-40	VO	49VO-APPLC	30cd		X	X						ON
A1:3-41	AV	48AV-APPLC	75cd	X	X	X						ON
A1:3-42	VO	49VO-APPLC	15cd	X	X	X						ON
A1:3-43	AV	48AV-APPLC	75cd	X	X	X						ON
A1:3-44	VO	49VO-APPLC	15cd	X	X	X						ON
A1:3-45	ISO	4905-9929		X	X	X						ON
A1:3-46	VO	49VO-APPLC	30cd	X	X	X						ON
A1:3-47	AV	48AV-APPLC	75cd	X	X	X	X					ON
A1:3-48	AV	48AV-APPLC	75cd				X	X				ON
A1:3-49	VO	49VO-APPLC	30cd	X				X	X			ON
A1:3-50	AV	48AV-APPLC	30cd	X				X	X			ON
A1:3-51	VO	49VO-APPLC	15cd	X	X			X	X			ON
A1:3-52	ISO	4905-9929			X	X	X					ON
A1:3-53	AV	48AV-APPLW	110cd	X	X	X	X					ON

A1:3 Distributed Load Voltage Drop												
Starting Voltage: 29vdc Min. Device Voltage: 24.9vdc Allowable % Drop: 13.9%												
Primary Wire Gauge: 14ga Home Run Wire Gauge: 14ga												
Wire Res. Per Ft. 0.003070 @ 75° Celsius Wire Res. Per Ft. 0.003070 @ 75° Celsius												
Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Class B Calculations			% Vdrop	Wire Length	
							Current at Device	Voltage Drop	Voltage at Device			
1	A1:3-1	PANEL	175	4905-9929		0.0100	0.496	0.563	28.437	Branch 1: 4.16%		
1	A1:3-2	A1:3-1	110	49VO-APPLW	15cd	0.0470	0.486	0.328	28.109	Length: 470		
1	A1:3-3	A1:3-2	35	48AV-APPLW	15cd	0.0590	0.439	0.094	28.015			
1	A1:3-4	A1:3-3	30	49VO-APPLW	30cd	0.0570	0.380	0.070	27.945			
1	A1:3-5	A1:3-4	25	49VO-APPLW	30cd	0.0570	0.323	0.050	27.895			
1	A1:3-6	A1:3-5	40	48AV-APPLW	75cd	0.1070	0.266	0.065	27.830			
1	A1:3-7	A1:3-6	25	49VO-APPLW	75cd	0.1000	0.159	0.024	27.805			
1	A1:3-8	A1:3-7	30	48AV-APPLW	15cd	0.0590	0.059	0.011	27.795			
2	A1:3-9	PANEL	175	4905-9929		0.0000	0.000	0.000	0.000	Branch 2: 3.53%		
2	A1:3-10	A1:3-9	140	49VO-APPLW	75cd	0.1000	0.458	0.520	28.480	Length: 435		
2	A1:3-11	A1:3-10	10	48AV-APPLW	75cd	0.1070	0.348	0.021	28.074			
2	A1:3-12	A1:3-11	25	49VO-APPLW	15cd	0.0470	0.241	0.037	28.037			
2	A1:3-13	A1:3-12	30	49VO-APPLW	75cd	0.1000	0.194	0.036	28.001			
2	A1:3-14	A1:3-13	30	49VO-APPLW	15cd	0.0470	0.094	0.017	27.984			
2	A1:3-15	A1:3-14	25	49VO-APPLW	15cd	0.0470	0.047	0.007	27.977			
3	A1:3-16	PANEL	175	4905-9929		0.0000	0.000	0.000	0.000	Branch 3: 7.87%		
3	A1:3-17	A1:3-16	50	48AV-APPLW	135cd	0.1660	0.974	0.299	27.585	Length: 515		
3	A1:3-18	A1:3-17	30	48AV-APPLC	15cd	0.0670	0.808	0.149	27.436			
3	A1:3-19	A1:3-18	45	48AV-APPLC	75cd	0.1590	0.741	0.205	27.231			
3	A1:3-20	A1:3-19	45	49VO-APPLC	75cd	0.1530	0.582	0.161	27.070			
3	A1:3-21	A1:3-20	60	48AV-APPLC	30cd	0.0920	0.429	0.158	26.912			
3	A1:3-22	A1:3-21	50	48AV-APPLC	15cd	0.0670	0.337	0.103	26.809			
3	A1:3-23	A1:3-22	35	49VO-APPLC	15cd	0.0550	0.270	0.058	26.751			
3	A1:3-24	A1:3-23	25	48AV-APPLC	110cd	0.2150	0.215	0.033	26.718			
4	A1:3-25	PANEL	175	4905-9929		0.0000	0.000	0.000	0.000	Branch 4: 4.37%		
4	A1:3-26	A1:3-25	165	48AV-APPLW	110cd	0.1390	0.528	0.535	27.855	Length: 520		
4	A1:3-27	A1:3-26	25	48AV-APPLC	30cd	0.0920	0.389	0.060	27.795			
4	A1:3-28	A1:3-27	45	48AV-APPLC	30cd	0.0920	0.147	0.041	27.754			
4	A1:3-29	A1:3-28	25	49VO-APPLC	15cd	0.0550	0.055	0.008	27.746			
4	A1:3-30	A1:3-29	55	49VO-APPLC	30cd	0.0830	0.150	0.051	27.744			
4	A1:3-31	A1:3-30	30	48AV-APPLC	15cd	0.0670	0.067	0.012	27.732			
5	A1:3-32	PANEL	5	4905-9929		0.0000	0.000	0.000	0.000	Branch 5: 0.02%		
5	A1:3-33	A1:3-32	280	4009-9602		0.0100	0.013	0.001	28.999	Length: 285		
E5:1	A1:3-34	EPR5	5	4905-9929		0.0032	0.003	0.006	28.993	Branch E5:1: 3.33%		
E5:1	A1:3-35	A1:3-34	40	49VO-APPLC	15cd	0.0100	0.824	0.075	28.925	Length: 355		
E5:1	A1:3-36	A1:3-35	20	49VO-APPLC	15cd	0.0550	0.814	0.200	28.725			
E5:1	A1:3-37	A1:3-36	25	49VO-APPLC	15cd	0.0550	0.759	0.093	28.632			
E5:1	A1:3-38	A1:3-37	25	49VO-APPLC	15cd	0.0550	0.704	0.108	28.524			
E5:1	A1:3-39	A1:3-38	30	49VO-APPLC	30cd	0.0830	0.083	0.013	28.511			
E5:1	A1:3-40	A1:3-39	40	49VO-APPLC	15cd	0.0550	0.566	0.104	28.420			
E5:1	A1:3-41	A1:3-40	45	48AV-APPLC	30cd	0.0830	0.511	0.126	28.294			
E5:1	A1:3-42	A1:3-41	45	48AV-APPLC	75cd	0.1590	0.428	0.118	28.176			
E5:1	A1:3-43	A1:3-42	45	49VO-APPLC	15cd	0.0550	0.269	0.074	28.102			
E5:1	A1:3-44	A1:3-43	40	48AV-APPLC	75cd	0.1590	0.214	0.053	28.049			
E5:1	A1:3-44	A1:3-43	40	49VO-APPLC	15cd	0.0550	0.055	0.014	28.036			
E5:2	A1:3-45	EPR5	5	4905-9929		0.0000	0.000	0.000	0.000	Branch E5:2: 2.22%		
E5:2	A1:3-46	A1:3-45	35	49VO-APPLC	30cd	0.0100	0.641	0.058	28.942	Length: 285		
E5:2	A1:3-47	A1:3-46	45	48AV-APPLC	75cd	0.0830	0.631	0.136	28.806			
E5:2	A1:3-48	A1:3-47	75	48AV-APPLC	75cd	0.1590	0.548	0.151	28.655			
E5:2	A1:3-49	A1:3-48	50	48AV-APPLC	75cd	0.1590	0.389	0.179	28.476			
E5:2	A1:3-50	A1:3-49	40	49VO-APPLC	30cd	0.0830	0.230	0.071	28.405			
E5:2	A1:3-51	A1:3-50	35	48AV-APPLC	30cd	0.0920	0.147	0.036	28.369			
E5:2	A1:3-51	A1:3-50	35	49VO-APPLC	15cd	0.0550	0.055	0.012	28.357			
E5:3	A1:3-52	EPR5	5	4905-9929		0.0000	0.000	0.000	0.000	Branch E5:3: 0.22%		
E5:3	A1:3-53	A1:3-52	60	48AV-APPLW	110cd	0.1390	0.139	0.051	28.935	Length: 65		

PROJECT 2019-0680
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Plot date: March 02, 2020
Orientation: Landscape
Plot scale: 1:1
Paper size: 24X36
Device: KIP 7000
Plot set up: Standard

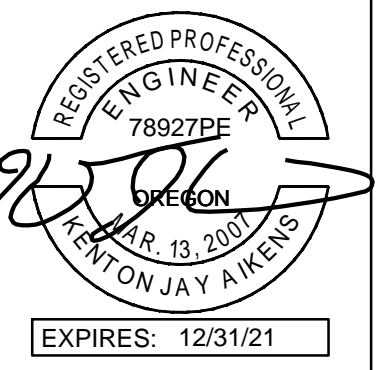
SHEET # 18
OF 21



KERR ADMINISTRATION
0016 [KAd]
1500 SW Jefferson Way

CALCULATIONS SHEET

SCALE: NO SCALE



OSU FREE ACCESS INFORMATION

Channel	Description	Alarm Current	% Drop	Unit Load*	Wire Length	Spare Current	Spare Voltage Drop
A2:1	BLDG B - SECOND FLOOR	1.993A	8.37%	31	1,115	34%	58%
A2:2	BLDG B - SECOND FLOOR	1.900A	9.16%	31	1,225	37%	54%
A2:3	BLDG B - THIRD AND FOURTH FLOOR	1.660A	6.04%	28	1,320	45%	69%

A2: ENHANCED POWER SUPPLY - CHANNEL 1				SWITCH SETTINGS								
IDNac Address	Device Type	PID	Setting	1	2	3	4	5	6	7	8	ON
A2:1-1	ISO	4905-9929		X								ON
A2:1-2	VO	49VO-APPLC	75cd	X								ON
A2:1-3	AV	49AV-APPLC	15cd	X	X							ON
A2:1-4	AV	49AV-APPLC	15cd	X	X							ON
A2:1-5	AV	49AV-APPLC	75cd	X	X							ON
A2:1-6	VO	49VO-APPLC	15cd	X	X							ON
A2:1-7	VO	49VO-APPLC	15cd	X	X							ON
A2:1-8	AV	49AV-APPLW	75cd	X	X							ON
A2:1-9	VO	49VO-APPLC	15cd	X	X							ON
A2:1-10	AV	49AV-APPLW	75cd	X	X							ON
A2:1-11	AV	49AV-APPLC	15cd	X	X							ON
A2:1-12	VO	49VO-APPLC	15cd	X	X							ON
A2:1-13	VO	49VO-APPLC	15cd	X	X							ON
A2:1-14	AV	49AV-APPLW	15cd	X	X							ON
A2:1-15	VO	49VO-APPLC	15cd	X	X							ON
A2:1-16				X	X							ON
A2:1-17	ISO	4905-9929		X								ON
A2:1-18	AV	49AV-APPLC	75cd	X	X							ON
A2:1-19	VO	49VO-APPLC	15cd	X	X							ON
A2:1-20	VO	49VO-APPLC	75cd	X	X							ON
A2:1-21	VO	49VO-APPLC	15cd	X	X							ON
A2:1-22	VO	49VO-APPLC	30cd	X	X							ON
A2:1-23	VO	49VO-APPLC	15cd	X	X							ON
A2:1-24	VO	49VO-APPLC	15cd	X	X							ON
A2:1-25	AV	49AV-APPLC	75cd	X	X							ON
A2:1-26	VO	49VO-APPLC	30cd	X	X							ON

A2:1 Notification SLC Distributed Load Voltage Drop											
Starting Voltage:		29vdc		Primary Wire Gauge:		14ga		Wire Res. Per Ft.:		0.003070 @ 75° Celsius	
Min. Device Voltage:		23.239vdc		Home Run Wire Gauge:		14ga		Wire Res. Per Ft.:		0.003070 @ 75° Celsius	
Allowable % Drop:		19.9%									
Class B Calculations											
Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length	
1	A2:1-1	PANEL	190	4905-9929		0.0100	1.126	1.381	27.619	Branch 1: 8.37% Length: 605	
1	A2:1-2	A2:1-1	45	49VO-APPLC	75cd	0.1530	1.116	0.308	27.310		
1	A2:1-3	A2:1-2	45	49AV-APPLC	15cd	0.0670	0.963	0.266	27.044		
1	A2:1-4	A2:1-3	15	49AV-APPLC	15cd	0.0670	0.896	0.083	26.962		
1	A2:1-5	A2:1-4	35	49AV-APPLC	75cd	0.1590	0.269	0.058	26.904		
1	A2:1-6	A2:1-5	35	49VO-APPLC	15cd	0.0550	0.110	0.024	26.880		
1	A2:1-7	A2:1-6	20	49VO-APPLC	15cd	0.0550	0.055	0.007	26.874		
1	A2:1-8	A2:1-4	20	49AV-APPLW	75cd	0.1070	0.560	0.069	26.893		
1	A2:1-9	A2:1-8	45	49VO-APPLC	15cd	0.0550	0.453	0.125	26.768		
1	A2:1-10	A2:1-9	35	49AV-APPLW	75cd	0.1070	0.398	0.086	26.682		
1	A2:1-11	A2:1-10	35	49AV-APPLC	15cd	0.0670	0.291	0.063	26.620		
1	A2:1-12	A2:1-11	15	49VO-APPLC	15cd	0.0550	0.055	0.005	26.615		
1	A2:1-13	A2:1-11	20	49VO-APPLC	15cd	0.0550	0.169	0.021	26.599		
1	A2:1-14	A2:1-13	25	49AV-APPLW	15cd	0.0590	0.114	0.017	26.582		
1	A2:1-15	A2:1-14	25	49VO-APPLC	15cd	0.0550	0.055	0.008	26.573		
2	A2:1-17	PANEL	190	4905-9929		0.0100	0.867	1.063	27.937	Branch 2: 6.94% Length: 510	
2	A2:1-18	A2:1-17	50	49AV-APPLC	75cd	0.1590	0.857	0.263	27.673		
2	A2:1-19	A2:1-18	35	49VO-APPLC	15cd	0.0550	0.698	0.150	27.523		
2	A2:1-20	A2:1-19	40	49VO-APPLC	75cd	0.1530	0.643	0.158	27.366		
2	A2:1-21	A2:1-20	30	49VO-APPLC	15cd	0.0550	0.490	0.090	27.275		
2	A2:1-22	A2:1-21	30	49VO-APPLC	30cd	0.0830	0.435	0.080	27.195		
2	A2:1-23	A2:1-22	35	49VO-APPLC	15cd	0.0550	0.352	0.076	27.119		
2	A2:1-24	A2:1-23	35	49VO-APPLC	15cd	0.0550	0.297	0.064	27.056		
2	A2:1-25	A2:1-24	35	49AV-APPLC	75cd	0.1590	0.242	0.052	27.004		
2	A2:1-26	A2:1-25	30	49VO-APPLC	30cd	0.0830	0.083	0.015	26.988		

A2: ENHANCED POWER SUPPLY - CHANNEL 2				SWITCH SETTINGS								
IDNac Address	Device Type	PID	Setting	1	2	3	4	5	6	7	8	ON
A2:2-1	ISO	4905-9929		X								ON
A2:2-2	VO	49VO-APPLC	15cd	X								ON
A2:2-3	AV	49AV-APPLC	75cd	X	X							ON
A2:2-4	AV	49AV-APPLC	15cd	X	X							ON
A2:2-5	AV	49AV-APPLW	75cd	X	X							ON
A2:2-6	VO	49VO-APPLC	15cd	X	X							ON
A2:2-7	VO	49VO-APPLC	30cd	X	X							ON
A2:2-8	AV	49AV-APPLC	30cd	X	X							ON
A2:2-9	VO	49VO-APPLC	15cd	X	X							ON
A2:2-10	VO	49VO-APPLC	15cd	X	X							ON
A2:2-11	VO	49VO-APPLC	15cd	X	X							ON
A2:2-12	VO	49VO-APPLC	15cd	X	X							ON
A2:2-13	VO	49VO-APPLC	75cd	X	X							ON
A2:2-14	ISO	4905-9929		X	X							ON
A2:2-15	VO	49VO-APPLC	15cd	X	X							ON
A2:2-16	AV	49AV-APPLW	75cd	X	X							ON
A2:2-17	AV	49AV-APPLC	110cd	X	X							ON
A2:2-18	AV	49AV-APPLC	15cd	X	X							ON
A2:2-19	AV	49AV-APPLC	15cd	X	X							ON
A2:2-20	VO	49VO-APPLW	15cd	X	X							ON
A2:2-21	VO	49VO-APPLC	15cd	X	X							ON
A2:2-22	AV	49AV-APPLW	75cd	X	X							ON
A2:2-23	AV	49AV-APPLW	15cd	X	X							ON
A2:2-24	VO	49VO-APPLC	15cd	X	X							ON
A2:2-25	VO	49VO-APPLC	15cd	X	X							ON

A2:2 Distributed Load Voltage Drop											
Starting Voltage:		29vdc		Primary Wire Gauge:		14ga		Wire Res. Per Ft.:		0.003070 @ 75° Celsius	
Min. Device Voltage:		23.228vdc		Home Run Wire Gauge:		14ga		Wire Res. Per Ft.:		0.003070 @ 75° Celsius	
Allowable % Drop:		19.9%									
Class B Calculations											
Branch	Device #	From	Distance (Feet)	PID	Setting	Device Draw	Current at Device	Voltage Drop	Voltage at Device	% Vdrop Wire Length	
1	A2:2-1	PANEL	190	4905-9929		0.0100	1.001	1.228	27.772	Branch 1: 8.37% Length: 555	
1	A2:2-2	A2:2-1	50	49VO-APPLC	15cd	0.0550	0.991	0.304	27.468		
1	A2:2-3	A2:2-2	25	49AV-APPLC	75cd	0.1590	0.936	0.144	27.324		
1	A2:2-4	A2:2-3	25	49AV-APPLC	15cd	0.0670	0.777	0.119	27.205		
1	A2:2-5	A2:2-4	45	49AV-APPLW	75cd	0.1070	0.710	0.196	27.009		
1	A2:2-6	A2:2-5	20	49VO-APPLC	15cd	0.0550	0.603	0.074	26.935		
1	A2:2-7	A2:2-6	30	49VO-APPLC	30cd	0.0830	0.548	0.101	26.834		
1	A2:2-8	A2:2-7	35	49AV-APPLC	30cd	0.0920	0.465	0.100	26.734		
1	A2:2-9	A2:2-8	25	49VO-APPLC	15cd	0.0550	0.373	0.057	26.677		
1	A2:2-10	A2:2-9	25	49VO-APPLC	15cd	0.0550	0.055	0.008	26.668		
1	A2:2-11	A2:2-9	25	49VO-APPLC	15cd	0.0550	0.263	0.040	26.636		
1	A2:2-12	A2:2-11	25	49VO-APPLC	15cd	0.0550	0.208	0.032	26.604		
1	A2:2-13	A2:2-12	35	49VO-APPLC	75cd	0.1530	0.153	0.033	26.571		
2	A2:2-14	PANEL	190	4905-9929		0.0100	0.899	1.103	27.897	Branch 2: 9.16% Length: 670	
2	A2:2-15	A2:2-14	155	49VO-APPLC	15cd	0.0550	0.889	0.846	27.051		
2	A2:2-16	A2:2-15	20	49AV-APPLW	75cd	0.1070	0.834	0.102	26.949		
2	A2:2-17	A2:2-16	60	49AV-APPLC	110cd	0.2150	0.727	0.268	26.681		
2	A2:2-18	A2:2-17	50	49AV-APPLC	15cd	0.0670	0.512	0.157	26.524		
2	A2:2-19	A2:2-18	25	49AV-APPLC	15cd	0.0670	0.445	0.068	26.455		
2	A2:2-20	A2:2-19	15	49VO-APPLW	15cd	0.0470	0.102	0.009	26.446		
2	A2:2-21	A2:2-20	15	49VO-APPLC	15cd	0.0550	0.055	0.005	26.441		
2	A2:2-22	A2:2-19	20	49AV-APPLW	75cd	0.1070	0.276	0.034	26.422		
2	A2:2-23	A2:2-22	45	49AV-APPLW	15cd	0.0590	0.169	0.047	26.375		
2	A2:2-24	A2:2-23	20	49VO-APPLC	15cd	0.0550	0.110	0.014	26.361		
2	A2:2-25	A2:2-24	55	49VO-APPLC	15cd	0.0550	0.055	0.019	26.343		

A2: ENHANCED POWER SUPPLY - CHANNEL 3				SWITCH SETTINGS								
IDNac Address	Device Type	PID	Setting	1	2	3	4	5	6	7	8	ON
A2:3-1	ISO	4905-9929		X								ON
A2:3-2	AV	49AV-APPLC	75cd	X								ON
A2:3-3	VO	49VO-APPLC	15cd	X	X							ON
A2:3-4	VO	49VO-APPLC	15cd	X	X							ON
A2:3-5	AV	49AV-APPLC	75cd	X	X							ON
A2:3-6	VO	49VO-APPLC	15cd	X	X							ON
A2:3-7	VO	49VO-APPLC	15cd	X	X							ON
A2:3-8	AV	49AV-APPLC	75cd	X	X							ON
A2:3-9	AV	49AV-APPLC	15cd	X	X							ON
A2:3-10	ISO	4905-9929		X	X							ON
A2:3-11	VO	49VO-APPLC	15cd	X	X							ON
A2:3-12	VO	49VO-APPLC	15cd	X	X							



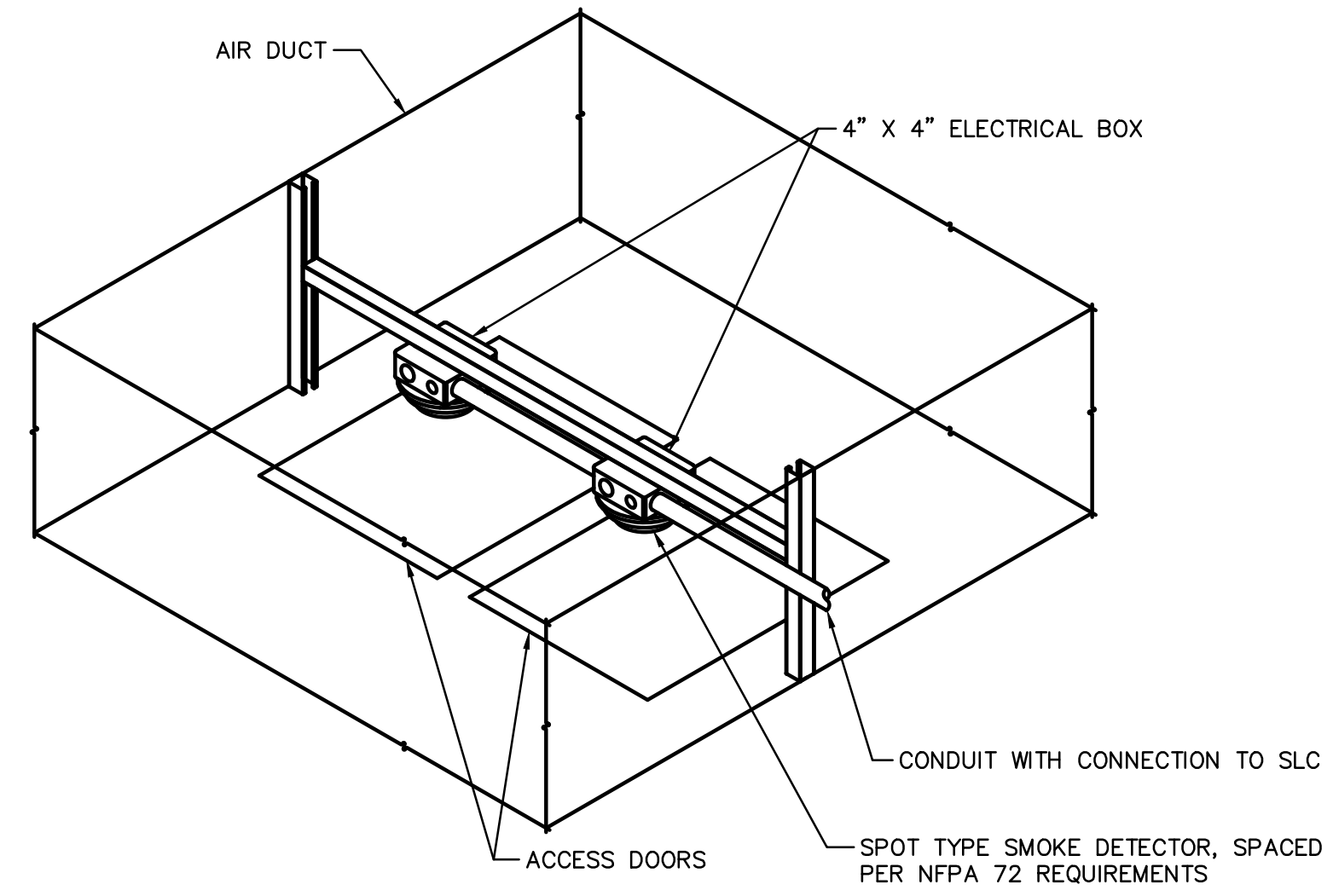
KERR ADMINISTRATION
0016 [KAd]
1500 SW Jefferson Way

DETAILS SHEET

SCALE:
NO SCALE



OSU FREE ACCESS INFORMATION

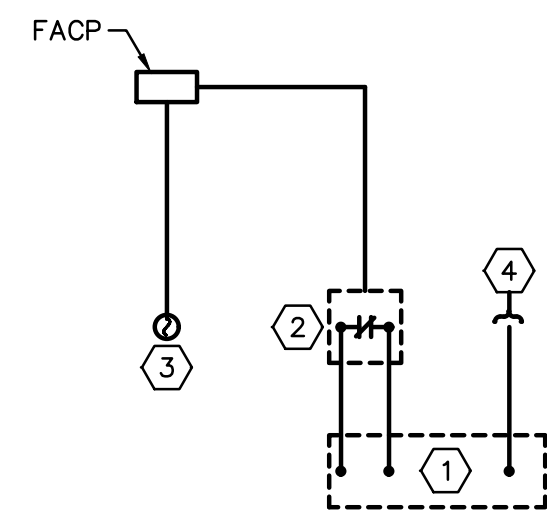


1 DUAL IN-DUCT SMOKE DETECTOR MOUNTING

NO SCALE

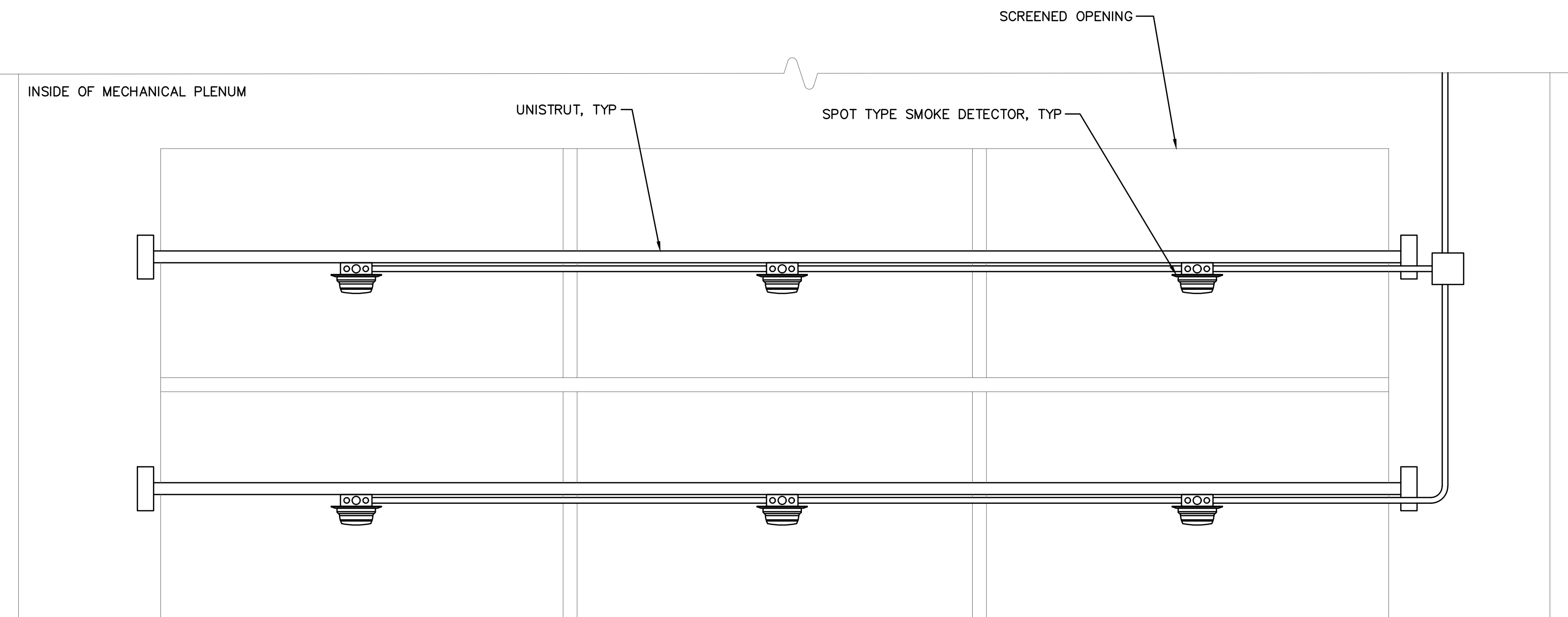
DETAIL KEYNOTES

- 1 AIR HANDLING UNIT (AHU) STARTER/VFD.
- 2 FIRE ALARM ADDRESSABLE RELAY. CONNECT TO EMERGENCY STOP INPUT ON FAN CONTROLLER. PROGRAM TO STOP FAN ON ACTIVATION OF ASSOCIATED SMOKE DETECTION. PROVIDE RELAY FOR EACH FAN CONTROLLER.
- 3 FIRE ALARM ADDRESSABLE DUCT/PLENUM MOUNTED SMOKE DETECTOR.
- 4 BAS CONNECTION TO FAN UNIT CONTROLLER



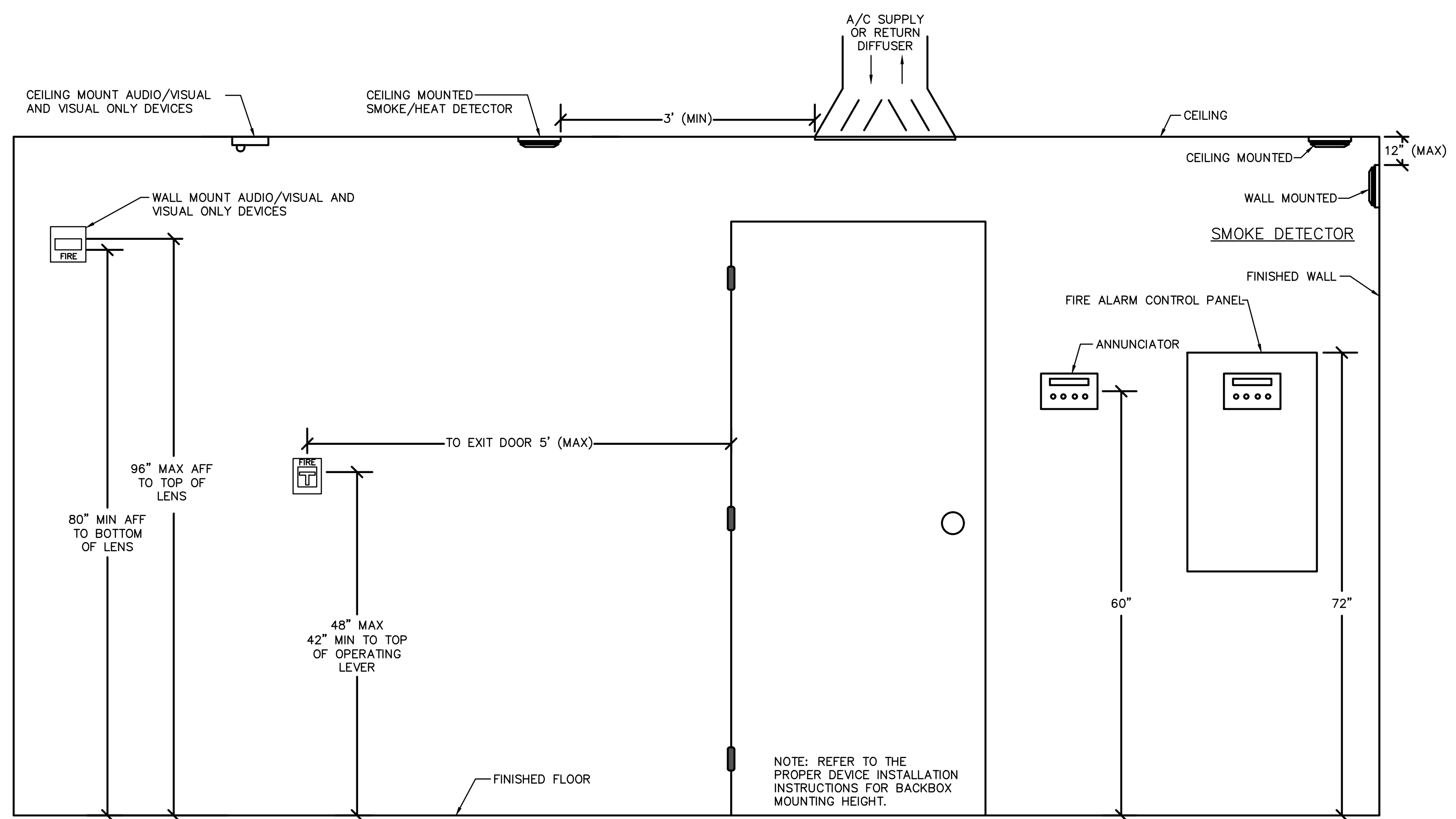
2 HVAC FAN SHUT DOWN DIAGRAM

NO SCALE



3 RETURN AIR PLENUM DETECTION

NO SCALE



4 DEVICE MOUNTING HEIGHTS

NO SCALE

PROJECT 2019-0680
CONTACT Joe Ripp



708 SW Third Avenue
Suite 400
Portland, OR 97204
TEL 503.382.2266
FAX 503.382.2262
www.interfaceengineering.com

Plot date: March 02, 2020
Orientation: Landscape
Plot scale: 1:1
Paper size: 24X36
Device: KIP 7000
Plot set up: Standard

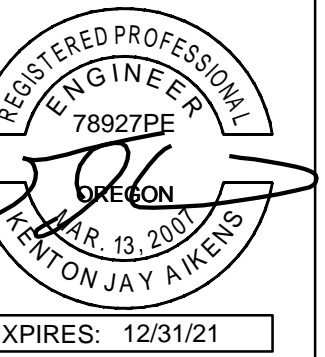
SHEET # 20
OF 21



KERR ADMINISTRATION
0016 [KAd]
1500 SW Jefferson Way

RISER
DIAGRAM

SCALE:
NO SCALE



OSU FREE ACCESS INFORMATION

DATE	REVISION	DESCRIPTION

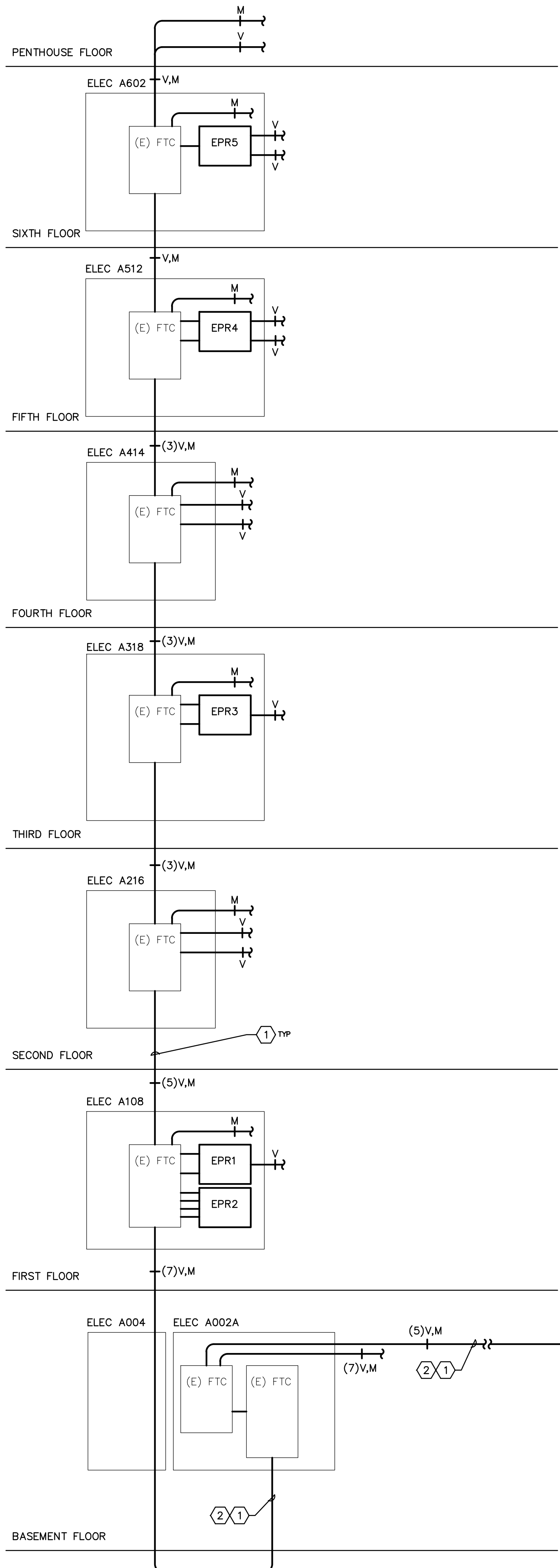
Plot date: March 02, 2020
Operator: Landscape
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Paper size: 24X36
Device: KIP 7000
Plot set up: Standard

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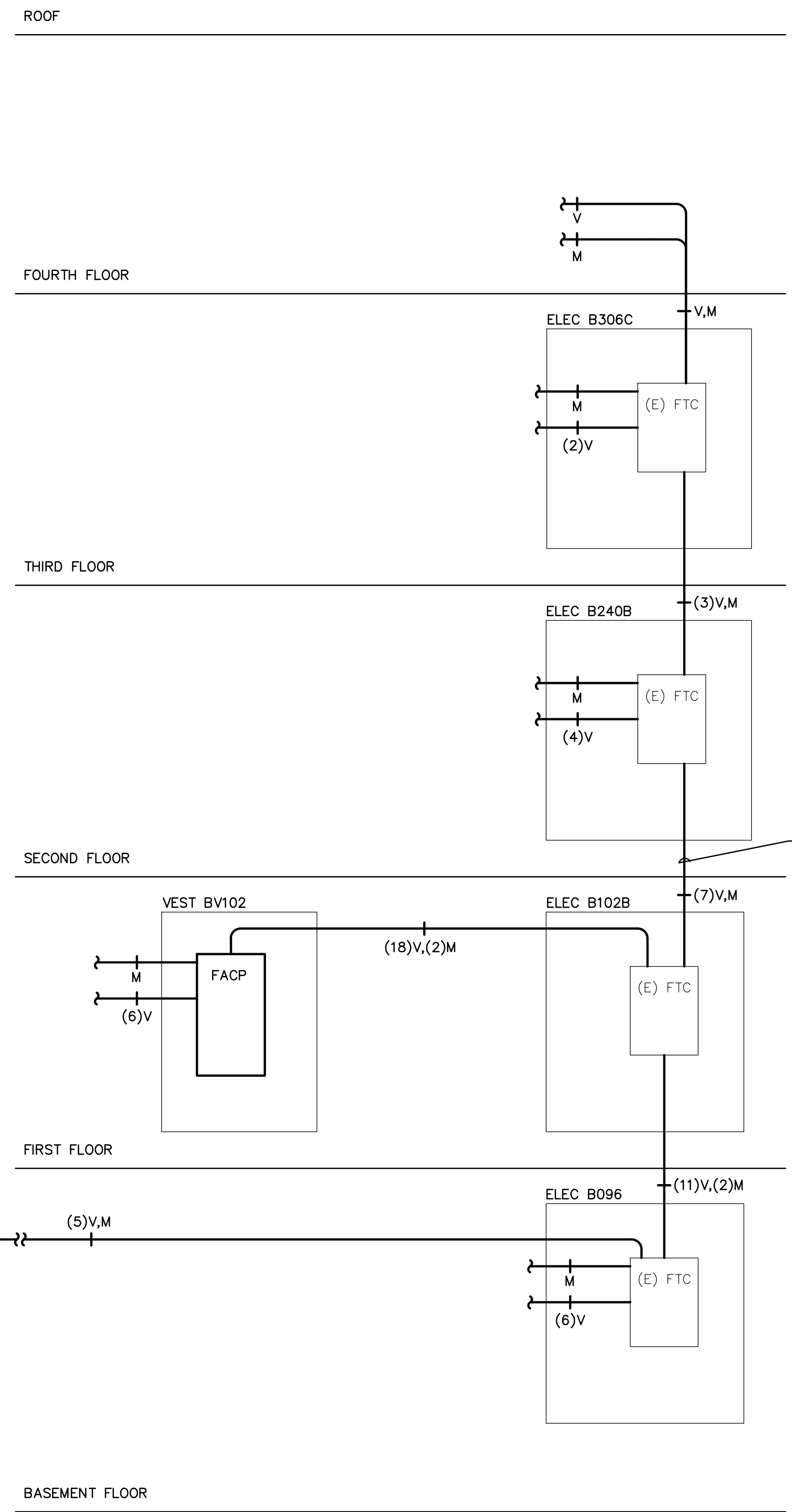
SHEET # 21
OF 21

SHEET KEYNOTES

- IT IS ACCEPTABLE TO REUSE EXISTING RISER CONDUITS WHERE POSSIBLE. WHERE NEW RISER CONDUITS ARE REQUIRED, PROVIDE X-RAY SERVICE TO SELECT CORE DRILL LOCATIONS.
- WHERE RISER CONDUITS RUN IN SLAB AND BETWEEN BUILDINGS, CONSIDER REUSE WHERE POSSIBLE. ALTERNATE PATHS WILL BE NEEDED IF NOT REUSED.



1 BUILDING 'A' ONE-LINE DIAGRAM
NO SCALE



2 BUILDING 'B' ONE-LINE DIAGRAM
NO SCALE