OREGON CONVENTION CENTER
SUBMETERING PROJECT

PROJECT INFORMATION

OWNER: OREGON CONVENTION CENTER
777 NE MLK JR BLVD
PORTLAND, OR 97232
OPERATIONS MANAGER:
MATT UCHTMAN
503-731-7841

PROJECT MANAGEMENT: METRO
600 NE GRAND AVE,
PORTLAND, OR 97232
PROJECT MANAGER:
JOSH LIPSCOMB
503-797-1929

ELECTRICAL ENGINEERS: SPARLING
733 SW OAK STREET, SUITE 200
PORTLAND, OR 97205
ELECTRICAL ENGINEER:
DANIEL BOTIEFF, P.E.
503-273-0060

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RFB 12-2055
Electrical Services sub-metering Project - OCC

ATTCHMENT B DRAWINGS
February 23, 2012

SYMBOLS AND ABBREVIATIONS

ELECTRICAL RISER

- FEEDER SIZE IDENTIFICATION
- AVAILABLE FAULT CURRENT IDENTIFICATION
- ARRESTOR, SURGE
- ARRESTOR, LIGHTNING
- AUTOMATIC TRANSFER SWITCH
- SPACE — BUS SPACE
- BUS DUCT
- BUSWAY END TAP BOX
- CABLE TO BUS CONNECTION
- CAPACITOR
- CONTACT, NORMALLY OPEN AND NORMALLY CLOSED
- CIRCUIT BREAKER
- CIRCUIT BREAKER, DRAWOUT
- CIRCUIT BREAKER, DRAWOUT, MEDIUM VOLTAGE
- GF — CIRCUIT BREAKER, GFI
- GF — CIRCUIT BREAKER, GFI WITH DRAWOUT
- CIRCUIT BREAKER, MAGNETIC OVERLOAD
- CIRCUIT BREAKER, NETWORK PROTECTOR
- CIRCUIT BREAKER, THERMAL OVERLOAD
- FUSE OR CURRENT LIMITER
- FUSE (ISOLATING)
- FUSED SWITCH
- GROUND
- PUSHBUTTON
- SPLICE
- STRESS RELIEF, MEDIUM VOLTAGE
- SWITCH, 2-POLE
- H, A, O — SWITCH, 3-POLE
- THERMAL ELEMENT
- TRANSFORMER
- TRANSFORMER, CURRENT
- TRANSFORMER, ELECTROSTATICALLY SHIELDED, MAGNETIC CORE SHOWN
- TRANSFORMER, MAGNETIC CORE SHOWN
- TRANSFORMER, SHIELDED, MAGNETIC CORE SHOWN
- A — AMMETER
- C — CONTACTOR
- G — ENGINE-GENERATOR
- K — KEY INTERLOCK
- M — METER
- PM — POWER METER
- R — RELAY
- G — RELAY, GFI
- SPD — SURGE PROTECTIVE DEVICE
- V — VOLTMETER
- WHM — WATT HOUR METER

CIRCUITS

- RACEWAY CONCEALED IN CEILING OR WALL. HASH MARKS INDICATE NUMBER OF WIRES. #12 AWG WIRE UNLESS OTHERWISE NOTED. THREE WIRES IF NO HASH MARK SHOWN. EXPOSED RACEWAY IS ALLOWED ONLY WHERE NOTED.
- HOT (SHORT HASH MARK)
- NEUTRAL (LONG HASH MARK)
- GROUND WIRE (JOGGED HASH MARK)
- EXISTING RACEWAY (IF HASH MARKS ARE SHOWN, PULL NEW CONDUCTORS)
- RACEWAY BELOW SLAB OR UNDERGROUND
- RACEWAY UP
- RACEWAY DOWN
- RACEWAY STUB-OUT WITH BUSHING
- CIRCUIT CONTINUATION
- HOME RUN TO PANEL OR LOCATION NOTED
- J — JUNCTION BOX
- PB — PULL BOX

CONTROLS

- FUSED DISCONNECT SWITCH (FUSE RATING INDICATED)
- DISCONNECT SWITCH
- MOTOR STARTER
- MANUAL MOTOR STARTER
- COMBINATION MOTOR STARTER DISCONNECT SWITCH
- ENCLOSED CIRCUIT BREAKER
- CONTACTOR
- PUSH BUTTON CONTROL STATION
- AUTO DOOR PUSHPLATE
- EMERGENCY SHUTDOWN
- MOTOR RATED TOGGLE SWITCH
- B — BUSWAY PLUG
- DDC — DIRECT DIGITAL CONTROL PANEL
- R — RELAY, CONTROL TYPE
- T — THERMOSTAT
- TC — TIME CLOCK
- VFD — VARIABLE FREQUENCY DRIVE

EQUIPMENT

- EQUIPMENT CABINET
- E — EQUIPMENT CONNECTION, E = EMERGENCY POWER
- GROUND BAR, LENGTH TO SCALE
- MOTOR CONNECTION, SINGLE PHASE
- MOTOR CONNECTION, 3 PHASE
- POWER BUSWAY
- SPD — SURGE PROTECTIVE DEVICE
- T — TRANSFORMER, <30KVA, NOT TO SCALE
- TRANSFORMER, 30KVA OR GREATER, DRAWN TO SCALE

PANELBOARDS

- 208V SYSTEM PANELBOARD
- 480V SYSTEM PANELBOARD

WORK DEFINITION

- FLAG NOTE
- REVISION IDENTIFICATION
- EQUIPMENT IDENTIFICATION
- EQUIPMENT IDENTIFICATION
- Det# / Sheet# — DETAIL REFERENCE
- Det# / PlanSheet# DetSheet# — DETAIL REFERENCE W/ORIGINATING SHEET REFERENCE
- Sect# / Sheet# — SECTION REFERENCE
- Sect# / PlanSheet# DetSheet# — SECTION REFERENCE W/ORIGINATING SHEET REFERENCE
- Elev# / Sheet# — ELEVATION REFERENCE
- PROJECT NORTH REFERENCE
- True North — PROJECT NORTH REFERENCE W/TRUE NORTH REFERENCE
- NEW WORK
- EXISTING
- FUTURE
- REMOVE EXISTING ELECTRICAL EQUIPMENT

GENERAL NOTES

1. COMPLY WITH THE NATIONAL ELECTRICAL CODE AS ADOPTED AND AMENDED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
2. THE LOCATIONS OF ELECTRICAL DEVICES OR LIGHTING FIXTURES INDICATED ON ARCHITECTURAL PLANS ELEVATIONS OR SECTIONS TAKE PRECEDENCE OVER LOCATIONS INDICATED ON THE ELECTRICAL DRAWINGS.
3. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LIGHTING FIXTURE LOCATIONS.
4. FOR LIGHTING CONTROLS WHICH INCLUDE DAYLIGHT OR OCCUPANT SENSING AUTOMATIC CONTROLS, AUTOMATIC SHUT-OFF CONTROLS, OCCUPANCY SENSORS, OR AUTOMATIC TIME SWITCHES THE LIGHTING CONTROLS SHALL BE TESTED TO ENSURE THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT, AND SYSTEMS ARE CALIBRATED, ADJUSTED, AND OPERATE IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS. SEQUENCE OF OPERATION SHALL ALSO BE FUNCTIONALLY TESTED TO ENSURE IT IS OPERATING IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.

ABBREVIATIONS

ABV	ABOVE
AC	3" ABOVE COUNTER BACKSPLASH
ACH	ABOVE COUNTER HEIGHT
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GRADE
A,AMP	AMPERE
A/V	AUDIO/VISUAL
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
CATV	COMMUNITY ACCESS TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CM	CEILING MOUNTED
COMM	COMMUNICATIONS
C	CONDUIT
CO	CONDUIT ONLY
CTRL	CONTROL
CU	COPPER
D	DATA
DED	DEDICATED
DEV	DEVICE
DN	DOWN
DW	DISHWASHER
EWC	ELECTRIC WATER COOLER
FA	FIRE ALARM
FB	FLOOR BOX
FBOIC	FURNISHED BY OTHERS, INSTALLED BY CONTRACTOR
FI	FILM ILLUMINATOR
FO	FIBER OPTIC(AL)
FOC	FACE OF COLUMN
G,GND	GROUND
GD	GARBAGE DISPOSAL
GFI,GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HAND HOLE
HP	HORSEPOWER
IDF	INTERMEDIATE DISTRIBUTION FRAME/FACILITY
IH	INSTA-HOT WATER DISPENSER
J-BOX	JUNCTION BOX
MAG	MAGNETIC
MCC	MOTOR CONTROL CENTER
MDF	MAIN DISTRIBUTION FRAME/FACILITY
MH	MANHOLE
MM	MULTIMODE
MTD	MOUNTED
MW	MICROWAVE
N	NEUTRAL
NIC	NOT IN CONTRACT
OPER	OPERATER/OPERABLE
OPOI	OWNER PROVIDED OWNER INSTALLED
PB	PULLBOX
PNL	PANEL, PANELBOARD
POS	POSITION/POINT OF SALE
PR	PAIR
PTS	PNEUMATIC TUBE STATION
R	RACEWAY
RO	RACEWAY ONLY
RECEPT	RECEPTACLE
REF	REFRIGERATOR
SLV	SLEEVE
SM	SINGLEMODE
SPECS	SPECIFICATIONS
SW	SWITCH
SWBD	SWITCHBOARD
TELECOM	TELECOMMUNICATIONS
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TSER	TELECOMMUNICATIONS SERVICE ENTRANCE ROOM
TV	TELEVISION
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDER GROUND
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLT OR VOICE
VEL	VERIFY EXACT LOCATION
W	WIRE, WATT, OR WALLPHONE
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF
XFMR	TRANSFORMER
ø	PHASE

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Metro
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STAMP:
REGISTERED PROFESSIONAL ENGINEER — DAVID W. BOWEN — OREGON
2-14-12
EXPIRES 12-31-2013

REVISIONS:

DRAWN: SW
CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
OREGON CONVENTION CENTER
PORTLAND OREGON

TITLE:
SYMBOLS & ABBREVIATIONS

SHEET:
E0.00

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Oregon Convention Center - Submetering Matrix

		Meter	Current Transformers (Sets)		Interface to Alerton System					Category										
Room	Distribution Equipment ID	Quantity	3-phase	1-phase	Alerton HVAC (LAN)	Alerton Field Panel (BacNet)	Location (Room)	Load Add	Load Deduct	Kitchen	Concessions	Mechanical	C Hall	C Meeting Rooms/Lobby	C Prefunction	Oregon Ballroom/ Lobby	Portland Ballroom/ Lobby	Base Bid	Alternate Bid #	Notes
Chiller Room 1214	MCC-H	3	9			X	1214	X				X						X		DB for P-1, P-2, P-3, P-4, P-5, P-8, P-9
			See Notes					X				X						X		Use VFD output data for P-6, P-7
Electrical Room 1831	HO1	1	2			X	1831	X									X		4	Circuits: 32,34,36 (60A); 38,40,42 (60A)
Electrical Room 1682	HO3	1	2			X	1682	X									X		4	Circuits: 32,34,36 (60A); 38,40,42 (60A)
Concessions 1100	LC2B	1	1			X	See Notes	X			X							X		Tie meter to existing Alerton field panel
	LC2BA	-	1			X	See Notes	X			X							X		Tie CT's to meter for LC2B
Concessions Storage	LCS3	-	1			X	See Notes	X			X							X		Tie CT's to meter for LC2B
IDF Room 1131	LQ	1	1	2	X		1131	X		X								X		Circuits: 1,3 (20A)
Electrical Room 1131A	HPJ	1	2		X		1131	X		X								X		DB for Fetco 72, Fetco 72
	LPJ	2	4		X		1131	X		X								X		DB for LKA, LKB, Comp Rack, Tilt Skillet
IDF Room 1158	LR	1	2		X		1158	X								X			3	Circuits: 32,34,36 (100A)
	LR	1	2		X		1158	X						X					1	Circuits: 38,40,42 (100A)
Electrical Room 1160	HPF	1	2		X		1158	X		X								X		DB for Dishwasher, Booster Heater
	LPF	2	5		X		1158	X		X								X		DB for LKC, LKD, LKE, LKF, BCA STYR
	HG	1		5	X		1158	X			X							X		Circuits: 2,8,10,9,11 (20A)
Electrical Room 1179	HPC	1	1		X		1178	X			X							X		DB for Coffee Shop #1
	LPC	1	1		X		1178	X			X							X		DB for LCS2
Electrical Room 1182	LPD	1	3		X		1181	X			X							X		DB for LCB1A, LCB1, LCS1
		1	2		X		1181		X				X					X		DB for LDA, LDB
	HPD	2	5		X		1181	X						X					1	DB for BD, HDI, LPD, HE, HD2
	HE	1	2		X		1181		X					X					1	Circuit: 25,27,29; 32,34,36 (20A)
	HM	1		1	X		1181	X					X					X		Circuit: 3 (20A)
	LDA	1		3	X		1181							X					1	Circuits: 2,4,6 (20A)
	LDB	1	1		X		1181				X							X		Circuits: 8,10,12 (100A)
		1	1		X		1181	X							X				2	Circuits: 19,21,23 (40A)
		2		11	X		1181	X							X				2	Circuits: 7,8,9,10,12,13,15,38 (20A)
	BC STYR	1	1					X			X							X		Feeder breaker in LDA (100A)
Electrical Room 1191	HPE	2	4		X		Telco IDF6	X						X					1	DB for BD, XPE, HI, HEI
	LPE	1	2		X		Telco IDF6		X				X					X		DB for LE15, LEA
	LE12	3	2	8	X		Telco IDF6		X				X					X		Circuits: 2,4,6,8,10,14, 24,26, (20A) 18,20,22 36,38,40 (30A 3P)
	HI	1	1		X		Telco IDF6		X				X					X		Circuits: 37,39,41 (30A)
Main Electrical 1215	MSA	2	4			X	1214	X				X						X		DB for CH-1, CH-2, CH-4, MCC-H
			See Notes				1214	X				X						X		Use VFD output data for CH-3
	MSB	1	1			X	1214	X				X						X		DB for MCC-E
Electrical Room 1843	LPQ	1	1			X	1843	X		X								X		DB for Panel LK5
	LPQ	1	1			X	1843	X			X							X		DB for Panel LK3, A (Coffee Shop #2)
	A	1	1			X	1843	X			X							X		Feeder for Panel A (Coffee Shop #2)/Link to meter for LK3
Electrical Room 1884	LPS	1	1			X	1884	X			X							X		DB for Panel LS3
Mechanical 3007	MCC-A	1	1			X	3006	X			X							X		DB for Orbit Café Exhaust Fan
Electric Room 3028A	LH	1	1	5		X	4001	X								X			3	Circuits: 2,4,31,33,35 (20A); 32,34,36 (30A)
	LHA	2	1	4		X	4001	X								X			3	Circuits: 12,15,16,17 (20A); 11,13,15 (30A)
Electrical Room 3028B	LHB	1		3		X	4001	X								X			3	Circuits: 9,17,19 (20A)
Electrical Room 3050	HPG	1	1		X		1158					X						X		DB for LPG
	HK	1		1	X		1158									X			3	Circuits: 1 (20A)
Electrical Room 3055C	LI	1		5		X	4010	X								X			3	Circuits: 2,4,6,7,40 (20A)
	LIB	1		4		X	4010	X								X			3	Circuits: 9,11,13,15 (20A)
	LIA	1	1	5		X	4010	X								X			3	Circuits: 11,13,15 (30A); 8,10,12,27,29 (20A)
Electrical Room 3069	HPI	1	3			X	4001	X								X			3	DB for Posi-lock OBR (Corridor)
Mechanical 3096	MCC-B	1	2			X	3096	X						X	X				1,2	DB for AH-13
		1	1			X	3096	X			X							X		DB for EF (Dragon Café)
		2	6			X	3096	X					X					X		DB for AH-1, AH-2
Mech Mezz 3106	MCC-E	2	4			X	3106					X						X		DB for CT-1, CT-2, CT-3, CT-4
	MCC-C	2	6			X	3106	X					X					X		DB for AH-3, AH-4
A.V. Room 3545	LAV	1		3		X	3548	X									X		4	Circuits: 13 (20A)
Electrical Room 3548	LPPA	1	2			X	3548	X									X		4	DB for LPA1, LPA2
Electrical Room 3536	ELB1	1		5		X	3536	X									X		4	Circuits: 1,3,5,7,9 (20A)
Electrical Platform 3960	EHPR	1	1			X	3950	X			X							X		DB for AHU-63
	HR4	1	1			X	3950	X									X		4	Circuits: 37,39,41 (40A)
Storage Room 3940	E-Hall South Busway	1	2			X	3941	X									X		4	Feeders for WH-6, TLFAA1
Electrical Room 4001	MCC-G	2	5			X	4001	X								X			3	DB for AH-17, AH-19, AH-21
	LHC	1		3		X	4001	X								X			3	(3) 1P Circuit Breakers TBD
		1		6		X	4001	X							X				2	(6) 3P Circuit Breakers TBD
Mech Room 4010	MCC-F	1	2			X	4010	X						X					1	DB for AH-22
		2	5			X	4010	X								X			3	DB for AH-16, AH-18, AH-20
		2	6			X	4010	X					X					X		DB for AH-26, EF-1, EF-2, EF-3
	LIC	1		3		X	4010	X								X			3	Circuits: 8,10,11 (20A)
		1		6		X	4010	X							X				2	Circuits: 1,3,5,2,4,6 (20A)
Mech Room 4510	EHPQ		See Notes					X			X							X		DB for AHU-55 (Use VFD output data)
Mech Mezz #2 (Mech 5000)	HPPA	1	2			X	5000	X									X		4	DB for TDP3, TLPPA
			1			X	5000	X							X				2	DB for 200A Posi-lock / Link to meter for HPAA
	HPAA	1	2			X	5000	X									X		4	Circuits: 14,16,18 (200A)
	HPPB	1	2			X	5000	X							X				2	DB for 200A Posi-lock
		1	1			X	5000	X									X		4	DB for TLPPB
	HPBA	2	3	1		X	5000	X							X				2	Circuits: 20,22,24 (200A); 26,28,30 (200A)
	HPAB	5		38		X	5000	X									X		4	Circuits: 2,4,6,8,10,12,14,16,20,22,3,5,7,9,11,13,27,33,38 (20A)
	LPAA	2	4	3		X	5000	X									X		4	Circuits: 20-22-24, 26-28-30, 32,-34-36, 38-40-42 (30A); 8,10,12 (20A)
	LPBA	2	4	1		X	5000	X							X				2	Circuits: 20,22,24; 26,28,30; 32,34,36; 38,40,42 (30A)
	EHPA		See Notes					X									X		4	DB for AHU-45, AHU-46, AHU-47, AHU-48 (Use VFD output data)
	EHPB		See Notes					X									X		4	DB for SF-42, AHU-49, AHU-50, AHU-51, AHU-52 (Use VFD output data)
	ELA3	1	1			X	5000	X									X		4	70A/3P breaker for DP4

Abbreviations

DB	Distribution Breaker
MCC	Motor Control Center

Metro
OREGON CONVENTION CENTER
A SERVICE OF METRO

STAMP:

REGISTERED PROFESSIONAL ENGINEER
OREGON
NOV. 8, 2011
WILLIAM D. BOLLES
EXPIRES 12-31-2013
2-14-12

REVISIONS:

DRAWN: SW
CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
OREGON CONVENTION CENTER
PORTLAND OREGON

TITLE:
ELECTRICAL SCHEDULES

SHEET:
E0.01

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733 Oak Street, Suite 200
Portland, Oregon 97205-3710
503.273.0060 800.667.0610
www.sparling.com

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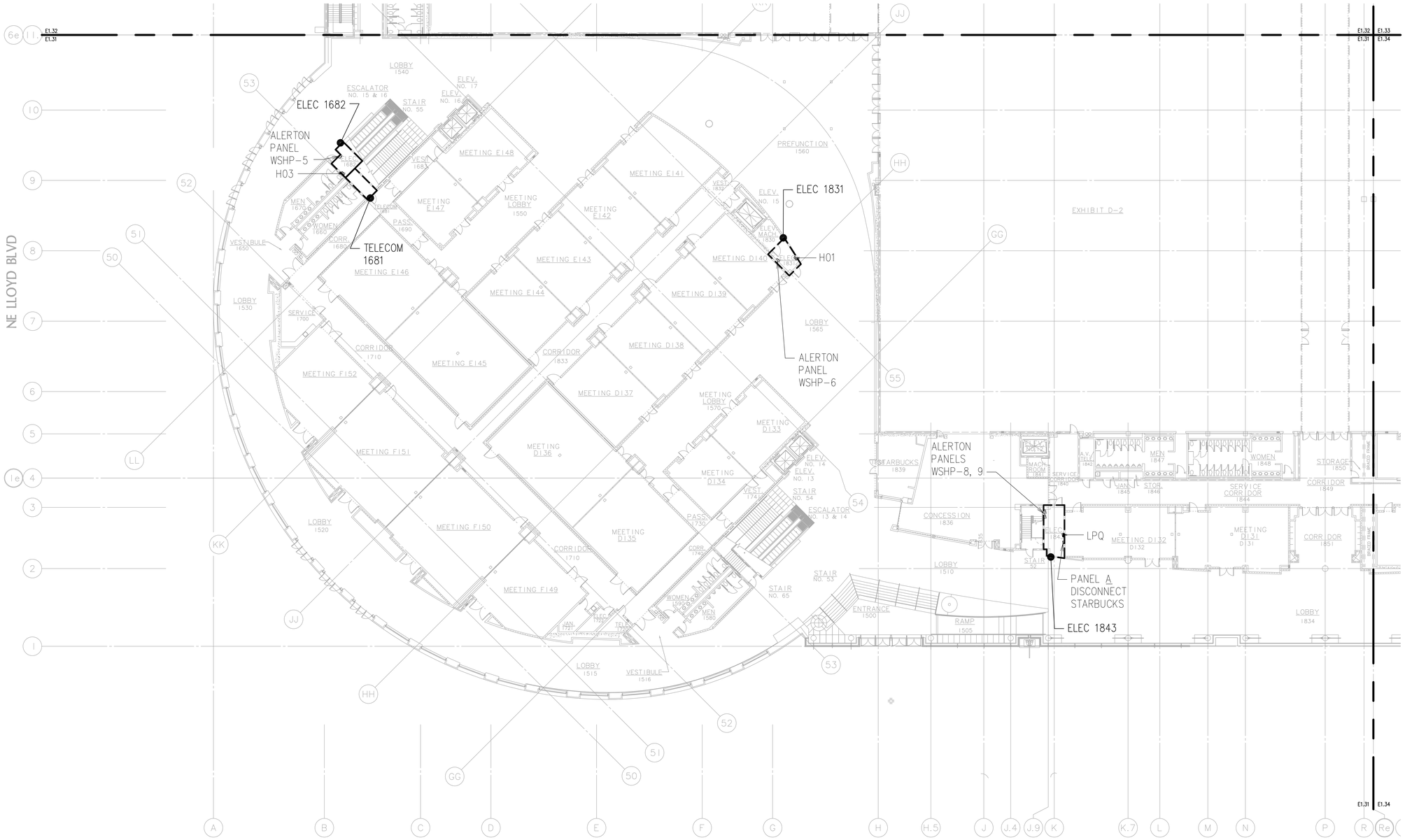

GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 / E1.31 **ELECTRICAL PLAN MAIN LEVEL**
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

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733 Oak Street, Suite 200
Portland, Oregon 97205-3710
503.273.0060 800.667.0610
www.sparling.com

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STAMP:
REGISTERED PROFESSIONAL ENGINEER
STEVEN W. BOYD
OREGON
EXPIRES 12-31-2013
2-14-12

REVISIONS:

DRAWN:	CHECKED:
SW	DB

SUBMITTAL: CONSTRUCTION DOCUMENTS
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PORTLAND OREGON

TITLE:
ELECTRICAL PLAN MAIN LEVEL

SHEET:
E1.31

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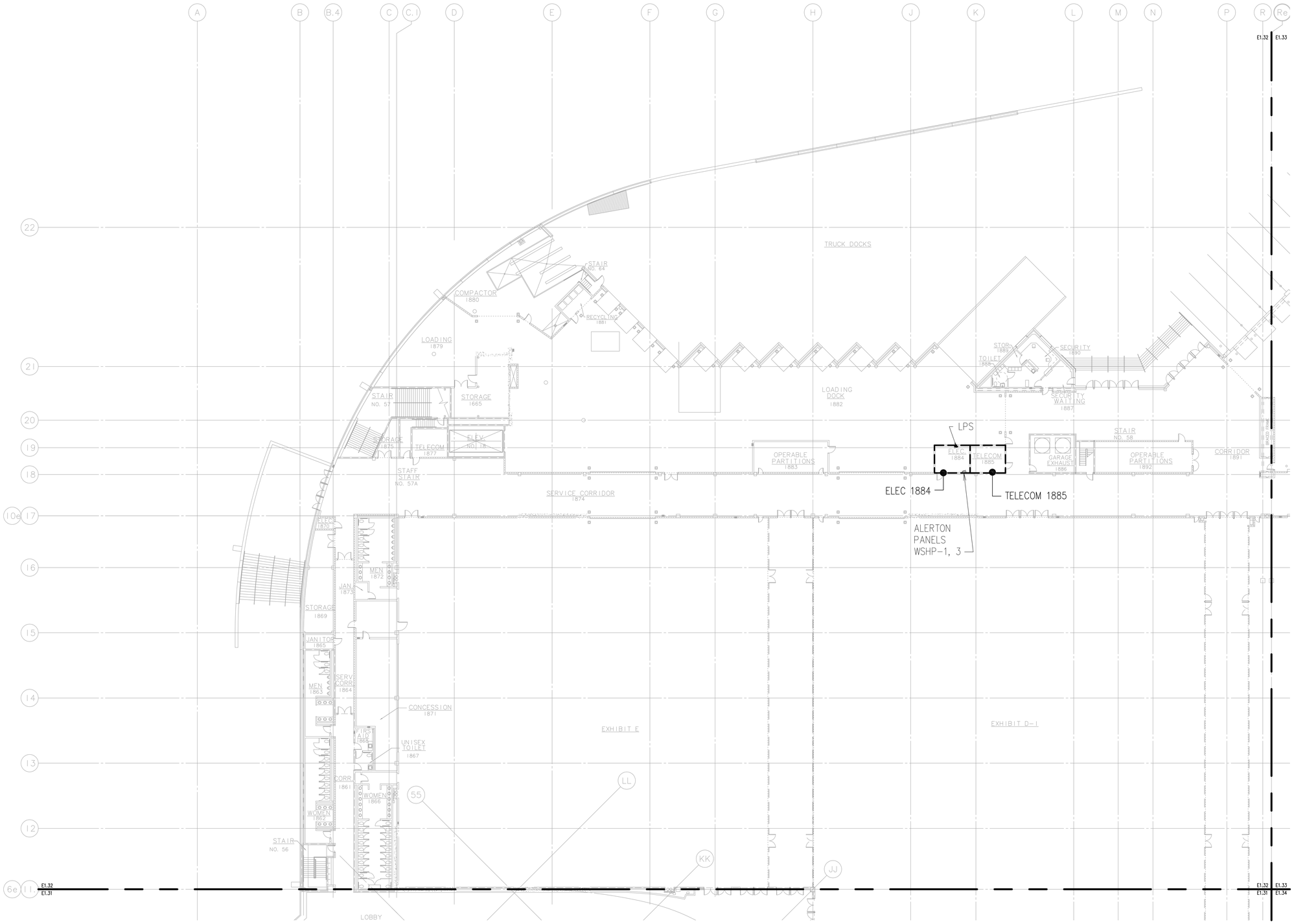

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1 E1.32 ELECTRICAL PLAN MAIN LEVEL
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

ATTCHMENT B DRAWINGS
February 23, 2012

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STATE OF OREGON
2-14-12
EXPIRES 12-31-2013

REVISIONS:

DRAWN: SW
CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
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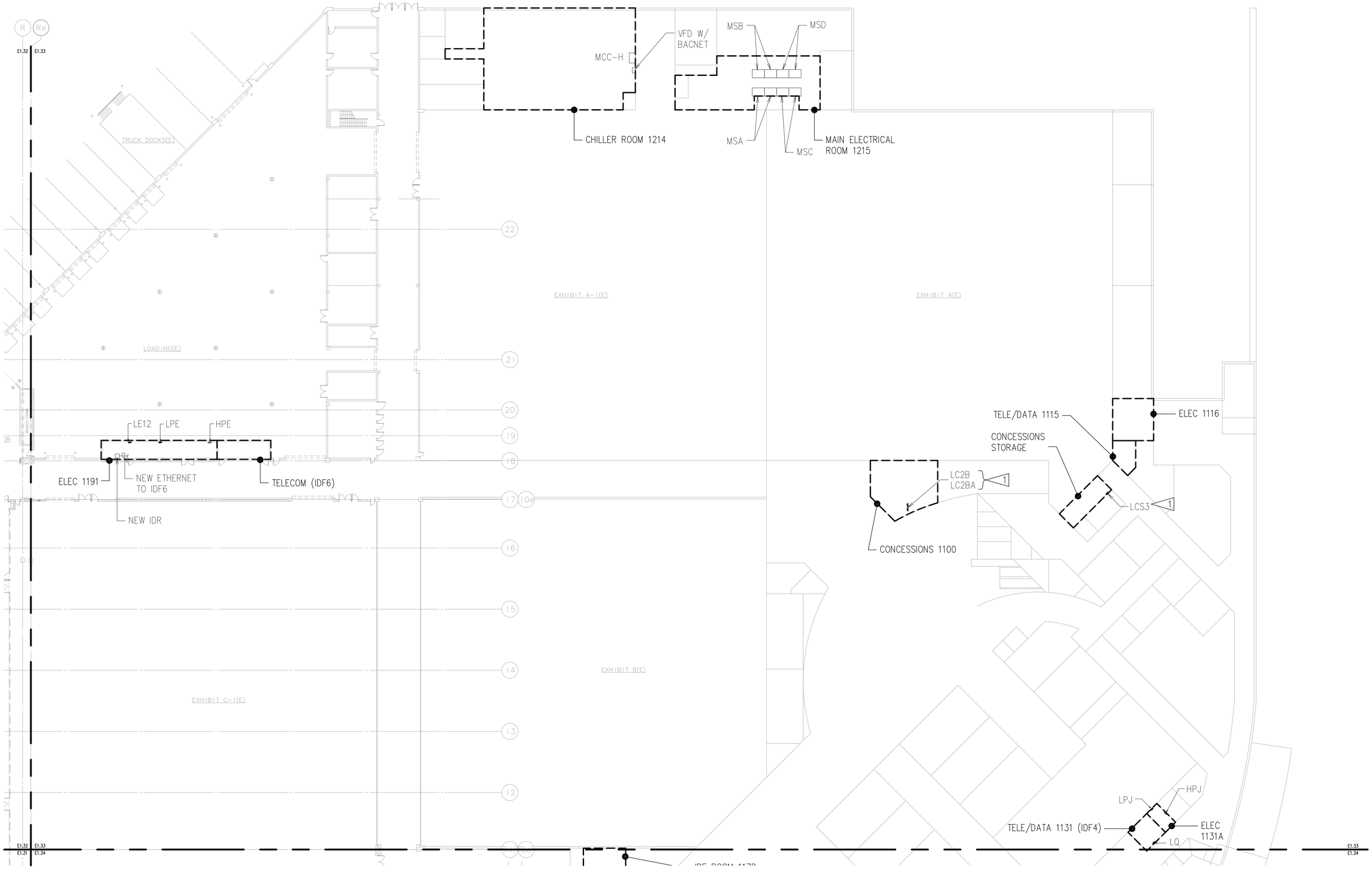
PORTLAND OREGON

TITLE:
ELECTRICAL PLAN MAIN LEVEL

SHEET:
E1.32



FLAG NOTES:

METERING INTERFACE TO THE EXISTING ALERTON SYSTEM REQUIRES A NEW ALERTON CONTROL PANEL. COORDINATE REQUIREMENTS WITH THE ALERTON REPRESENTATIVE.

GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 E1.33 ELECTRICAL PLAN MAIN LEVEL
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

ATTCHMENT B DRAWINGS
February 23, 2012

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OREGON
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TITLE:
ELECTRICAL PLAN MAIN LEVEL

SHEET:
E1.33

RFB 12-2055
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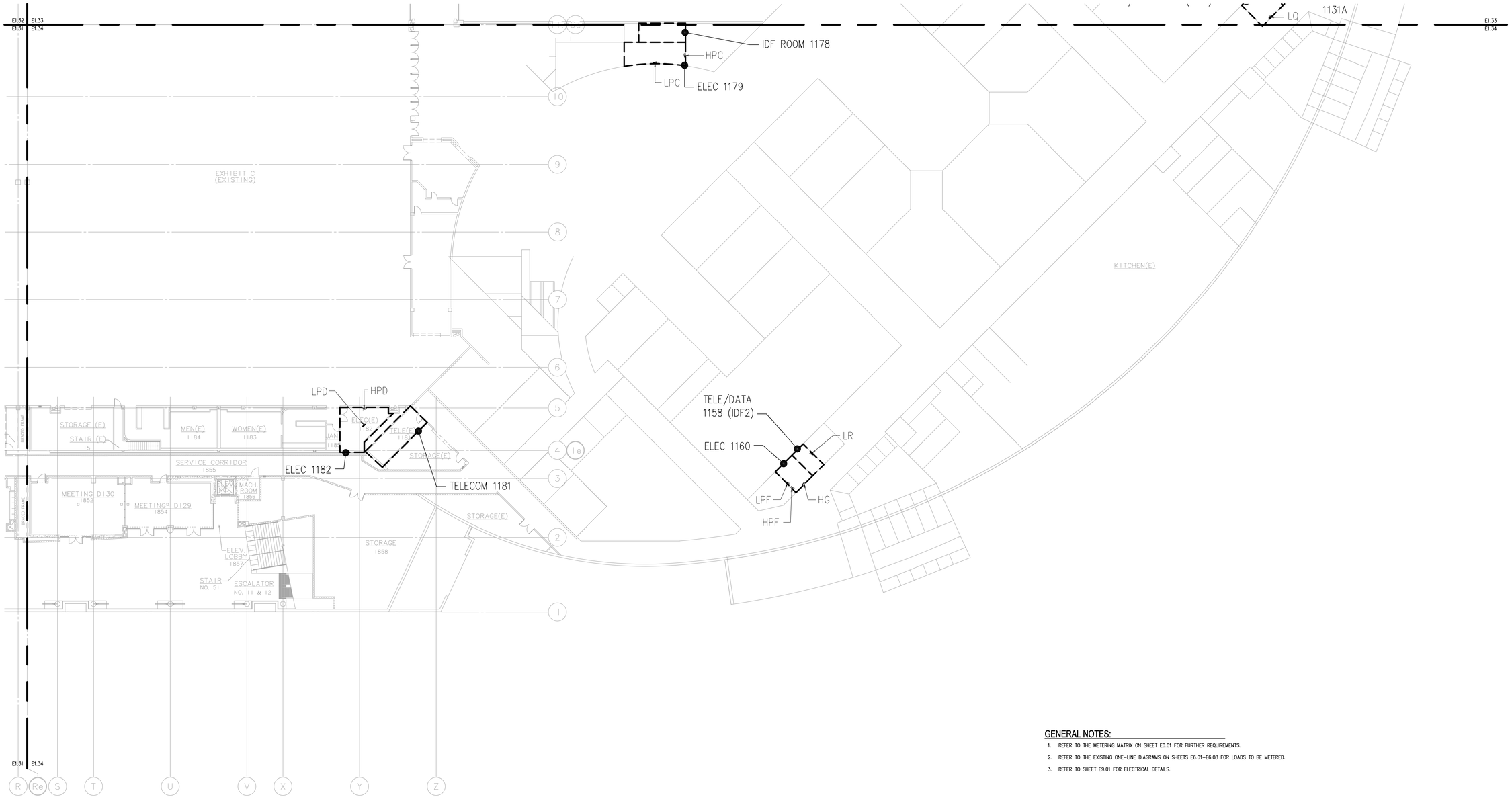
N:\B17190\CAD\08\E133 Feb 14, 2012 3:16 PM By:JUO



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 E1.34 ELECTRICAL PLAN MAIN LEVEL
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

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2-14-12

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SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
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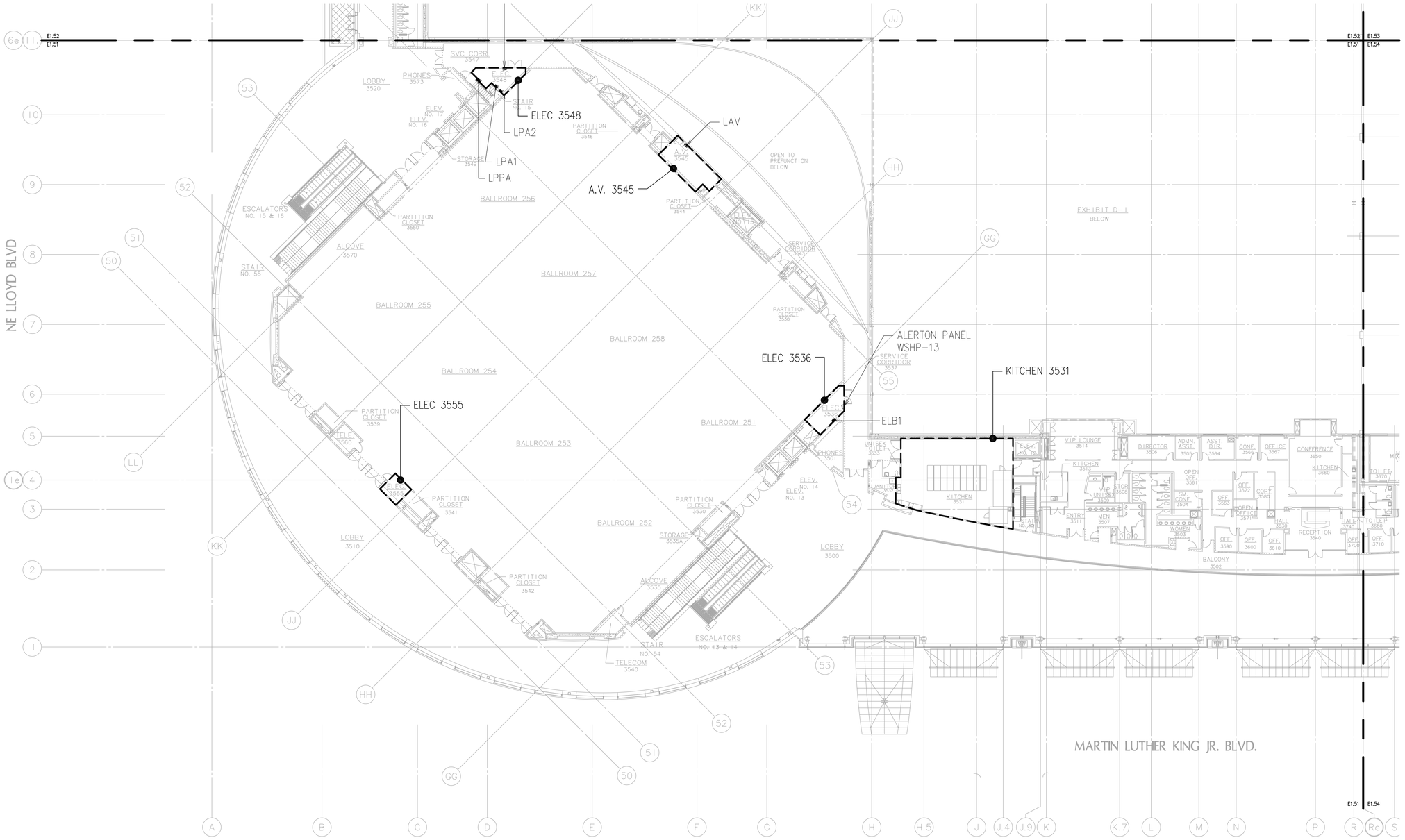
TITLE:
ELECTRICAL PLAN MAIN LEVEL

SHEET:
E1.34

N:\B17190\CADD08\E134 Feb 14, 2012 3:16 PM By:JUO



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 / E1.51 ELECTRICAL PLAN UPPER LEVEL
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

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CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
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OWNER:
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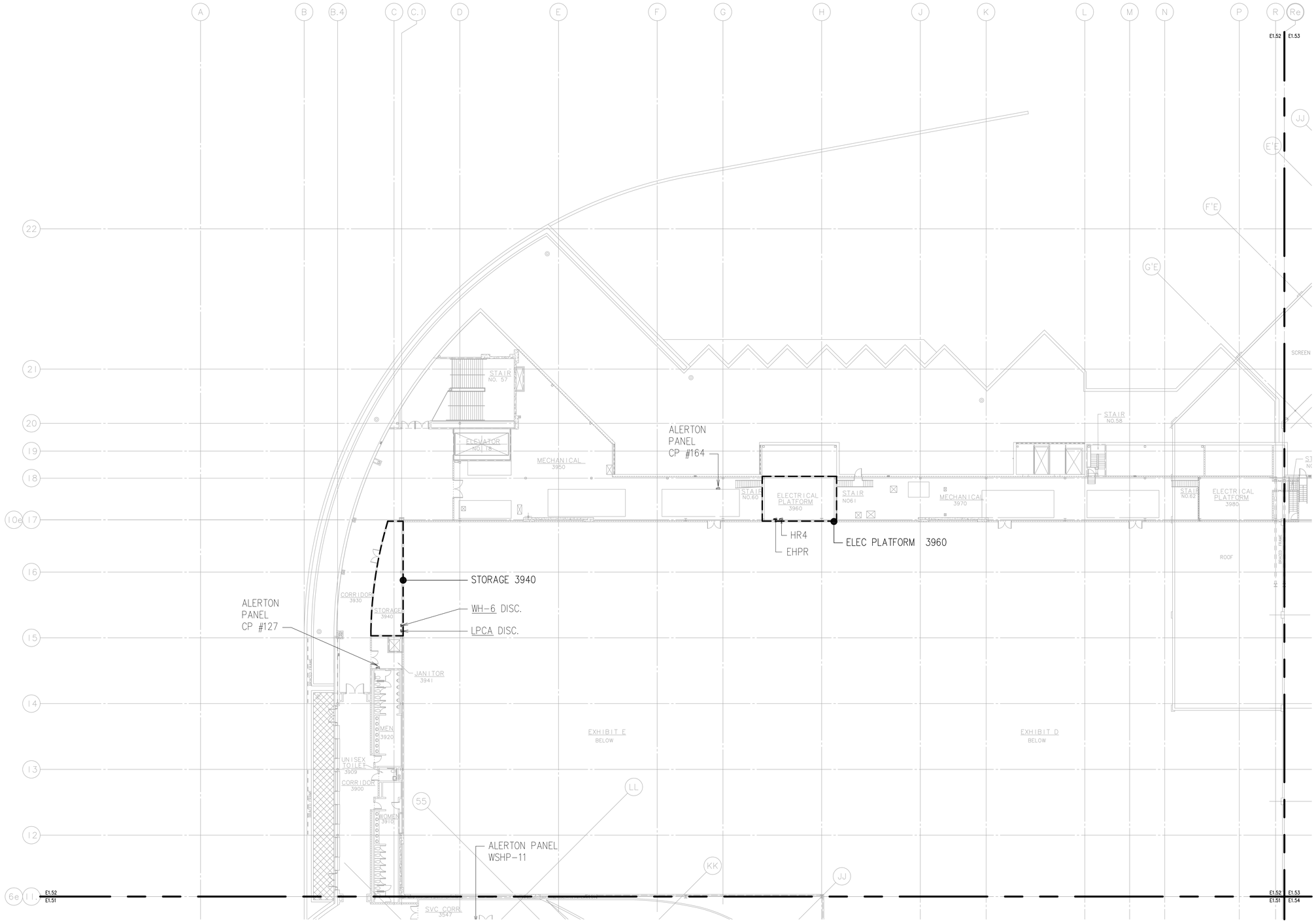
TITLE:
ELECTRICAL PLAN UPPER LEVEL

SHEET:
E1.51

N:\B17190\CAD008\E151 Feb 14, 2012 3:16 PM By:JLUO



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 ELECTRICAL PLAN UPPER LEVEL
E1.52 SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

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REVISIONS:

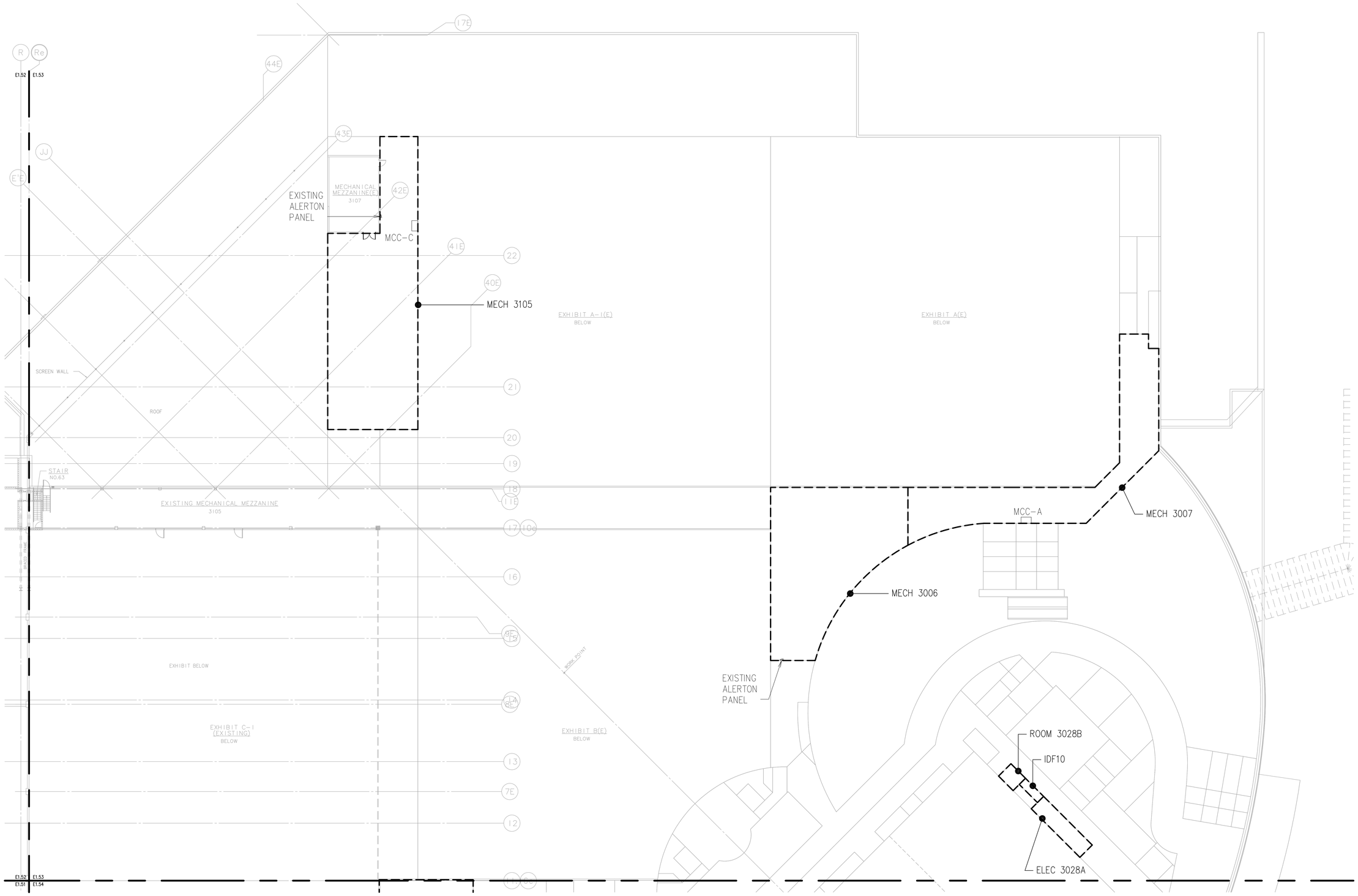
DRAWN: SW
CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER: OREGON CONVENTION CENTER
PORTLAND OREGON

TITLE: ELECTRICAL PLAN UPPER LEVEL

SHEET: E1.52

N:\87190\CADDOR\E152 Feb 14, 2012 3:15 PM By:JLUO



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 / E1.53 ELECTRICAL PLAN UPPER LEVEL
SCALE: AS INDICATED

0 8 16 32 48 Feet
1 inch plotted
If measurement is other than 1 inch then the plot is reduced.

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SUBMITTAL: CONSTRUCTION DOCUMENTS
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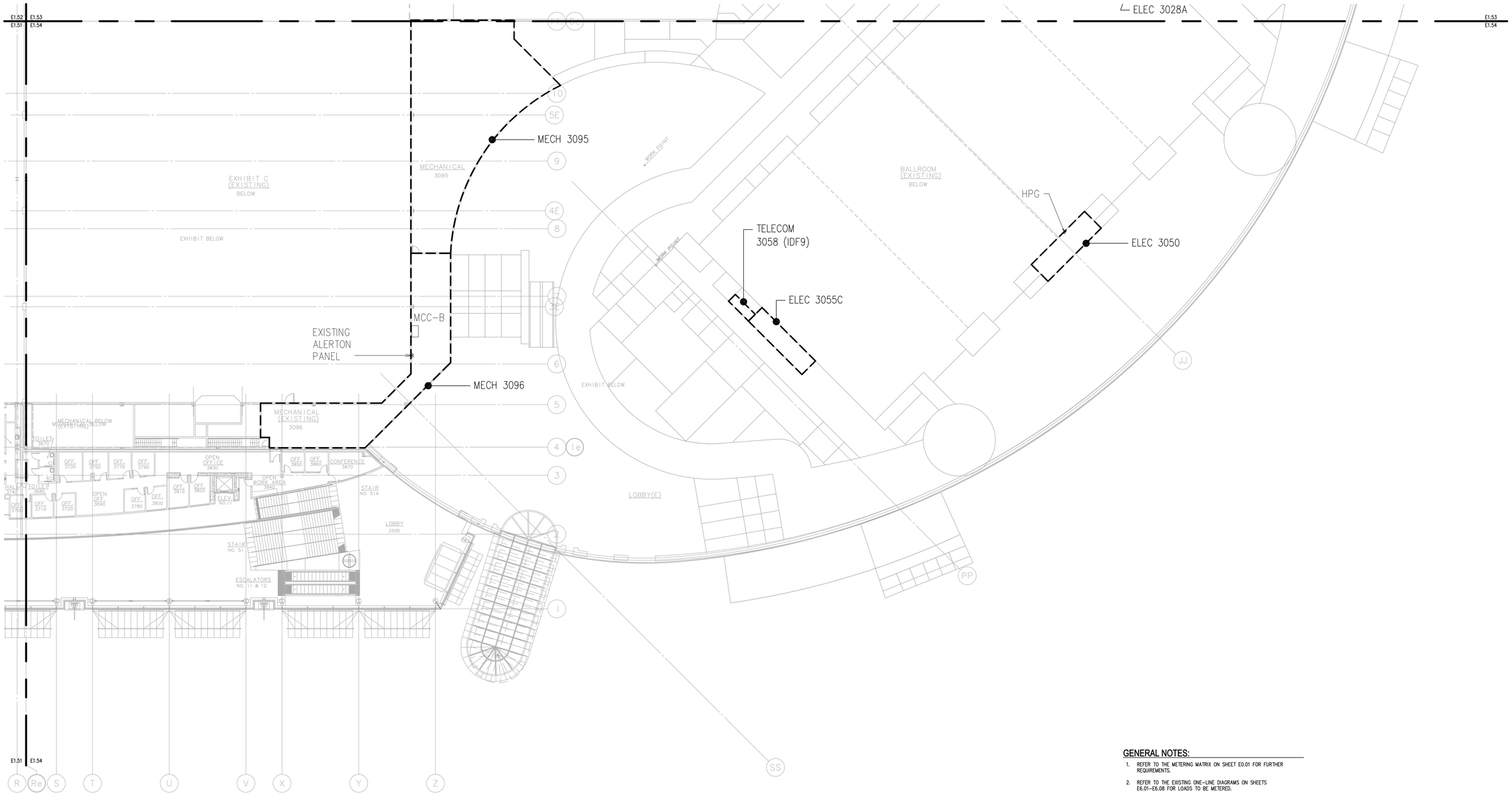
TITLE: ELECTRICAL PLAN UPPER LEVEL

SHEET: E1.53

N:\97195\CAD\08\E153 Feb 14, 2012 3:15 PM By:JUO



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 E1.54 ELECTRICAL PLAN UPPER LEVEL
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted Feet
If measurement is other than 1 inch then the plot is reduced.

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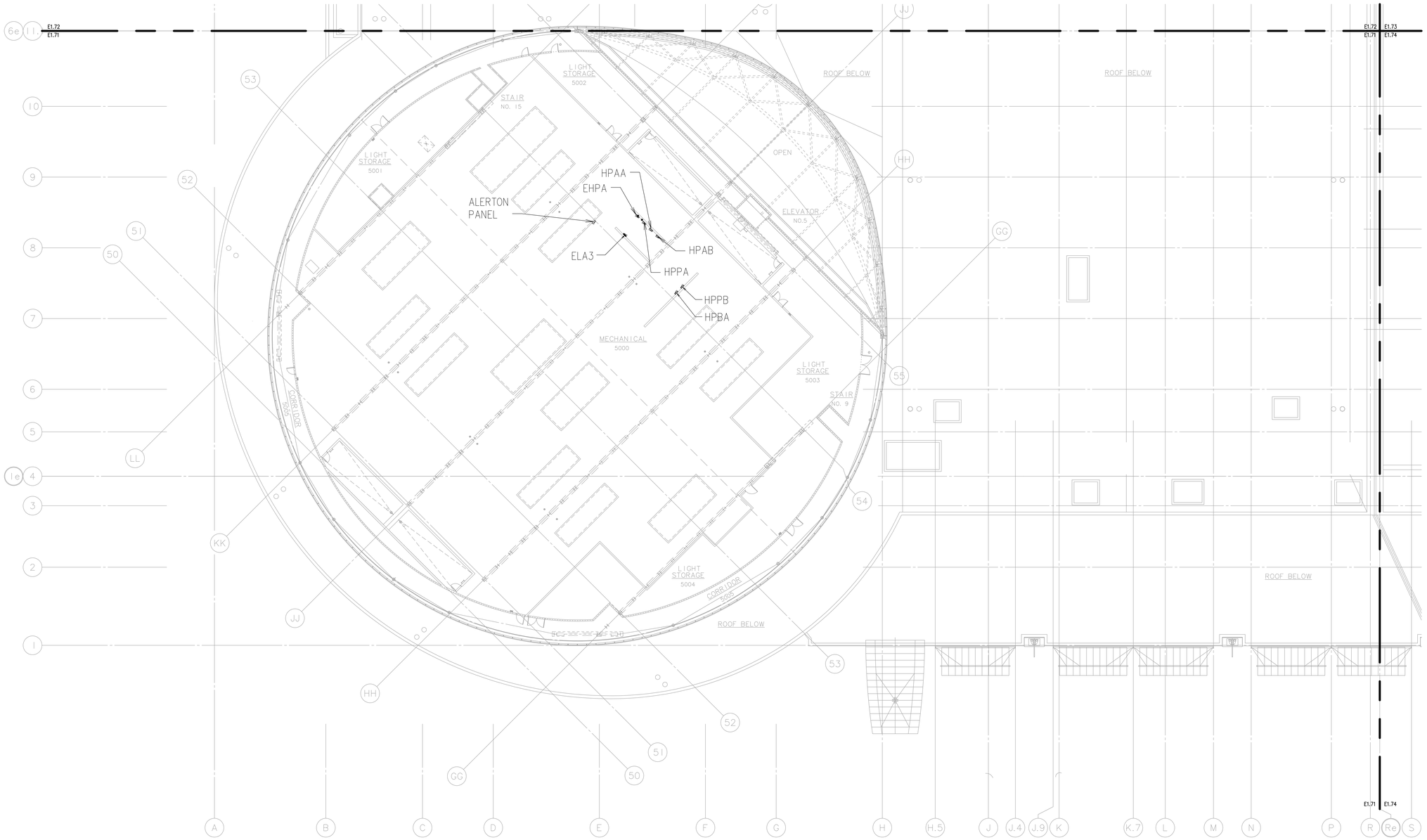
TITLE:
ELECTRICAL PLAN UPPER LEVEL

SHEET:
E1.54

N:\B17190\CAD008\E154 Feb 14, 2012 3:15 PM By:JUO



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 E1.71 ELECTRICAL MECHANICAL MEZZANIE LEVEL 2
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

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SUBMITTAL: CONSTRUCTION DOCUMENTS
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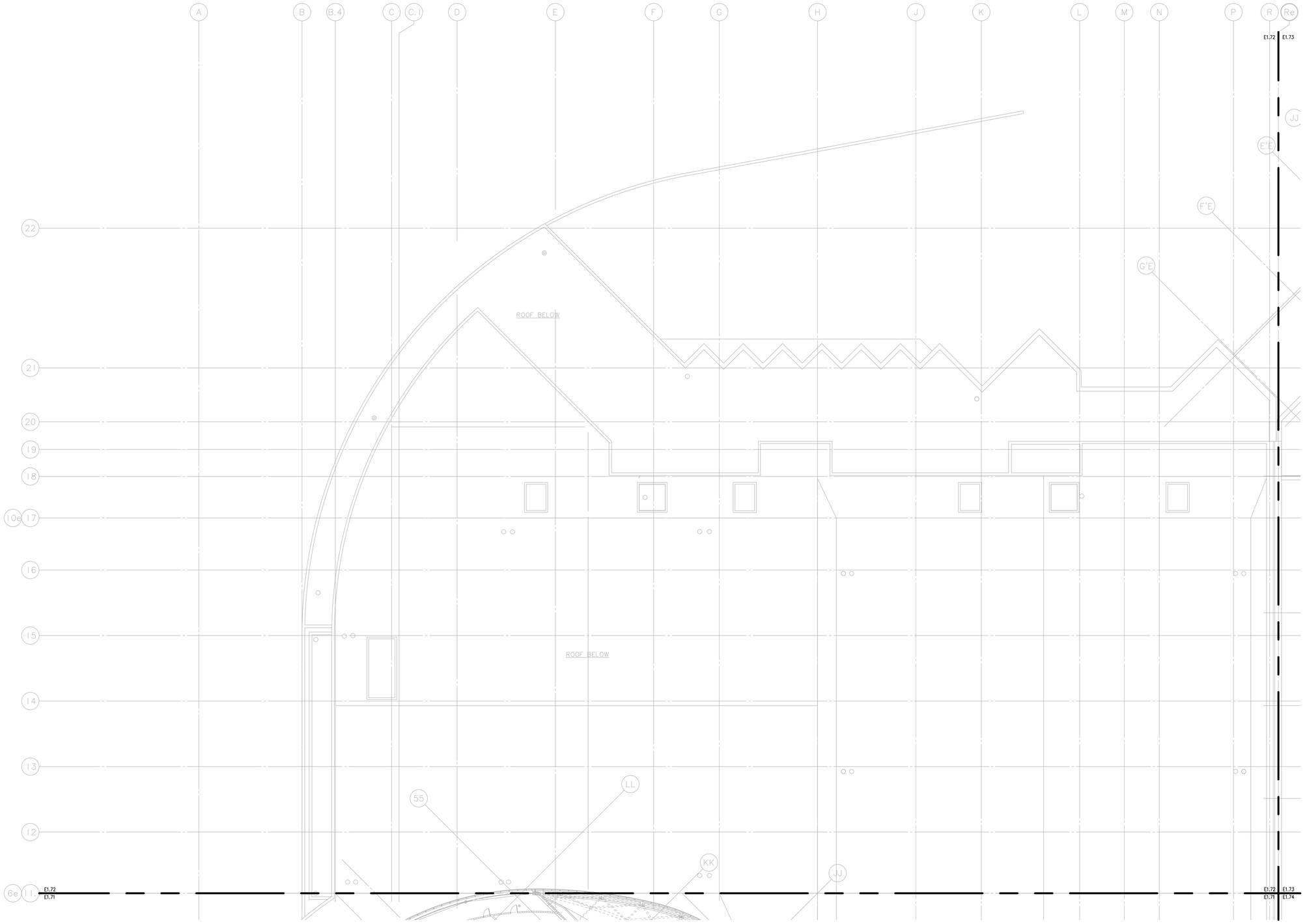
TITLE:
ELECTRICAL MECHANICAL MEZZANIE LEVEL 2

SHEET:
E1.71

N:\B11901\CAD008\E171 Feb 14, 2012 3:15 PM By:AJO



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 ELECTRICAL MECHANICAL MEZZANIE LEVEL 2
E1.72 SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted Feet
If measurement is other than 1 inch then the plot is reduced.

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SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

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TITLE:
ELECTRICAL MECHANICAL MEZZANIE LEVEL 2

SHEET:
E1.72

N:\B17190\CADD08\E172 Feb 14, 2012 3:15 PM By:JLUO

RFB 12-2055
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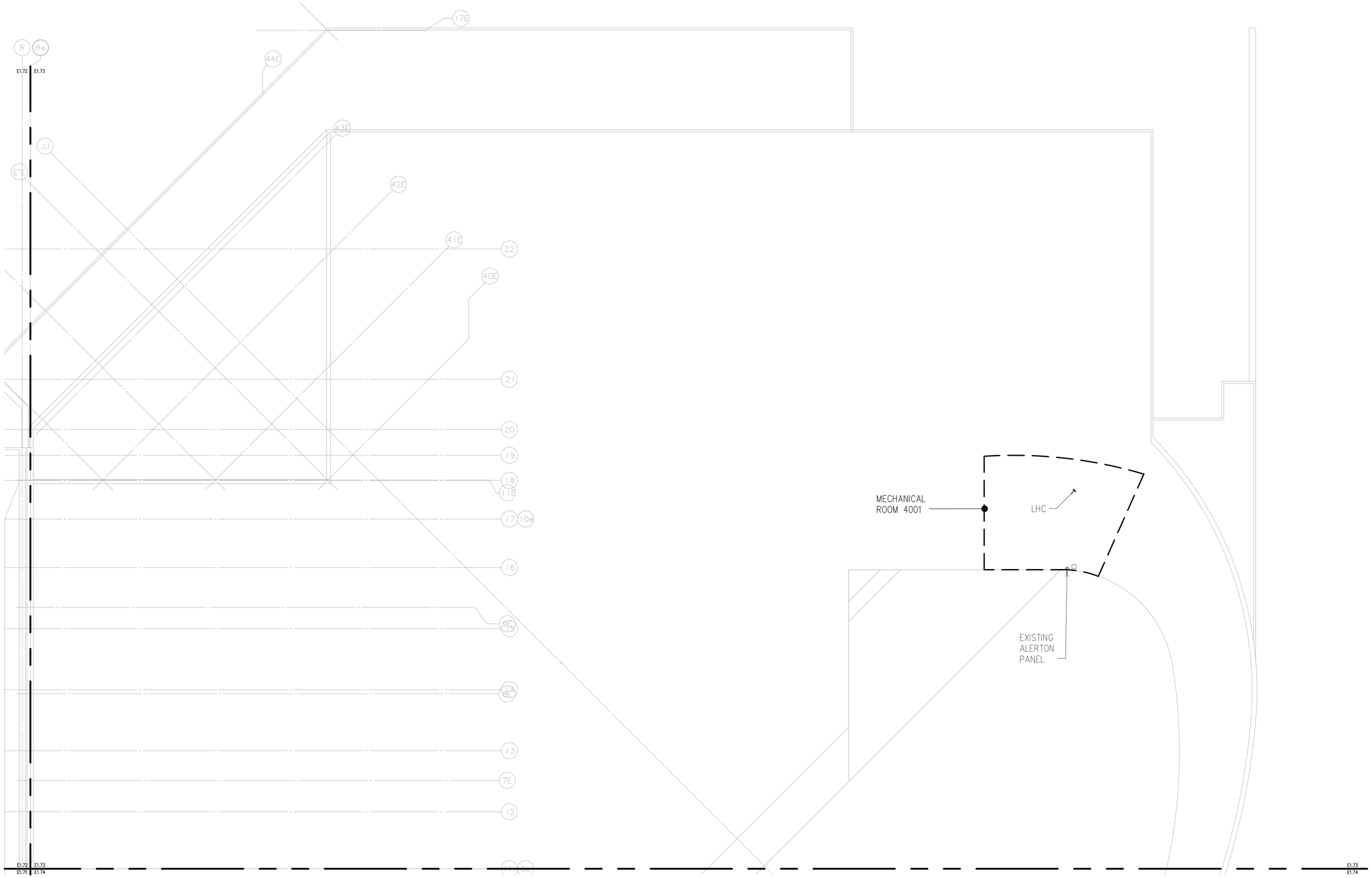
ATTCHMENT B DRAWINGS
February 23, 2012



1 ELECTRICAL MECHANICAL MEZZANIE LEVEL 2
E1.73 SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted Feet
If measurement is other than
1 inch then the plot is reduced.

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OWNER:
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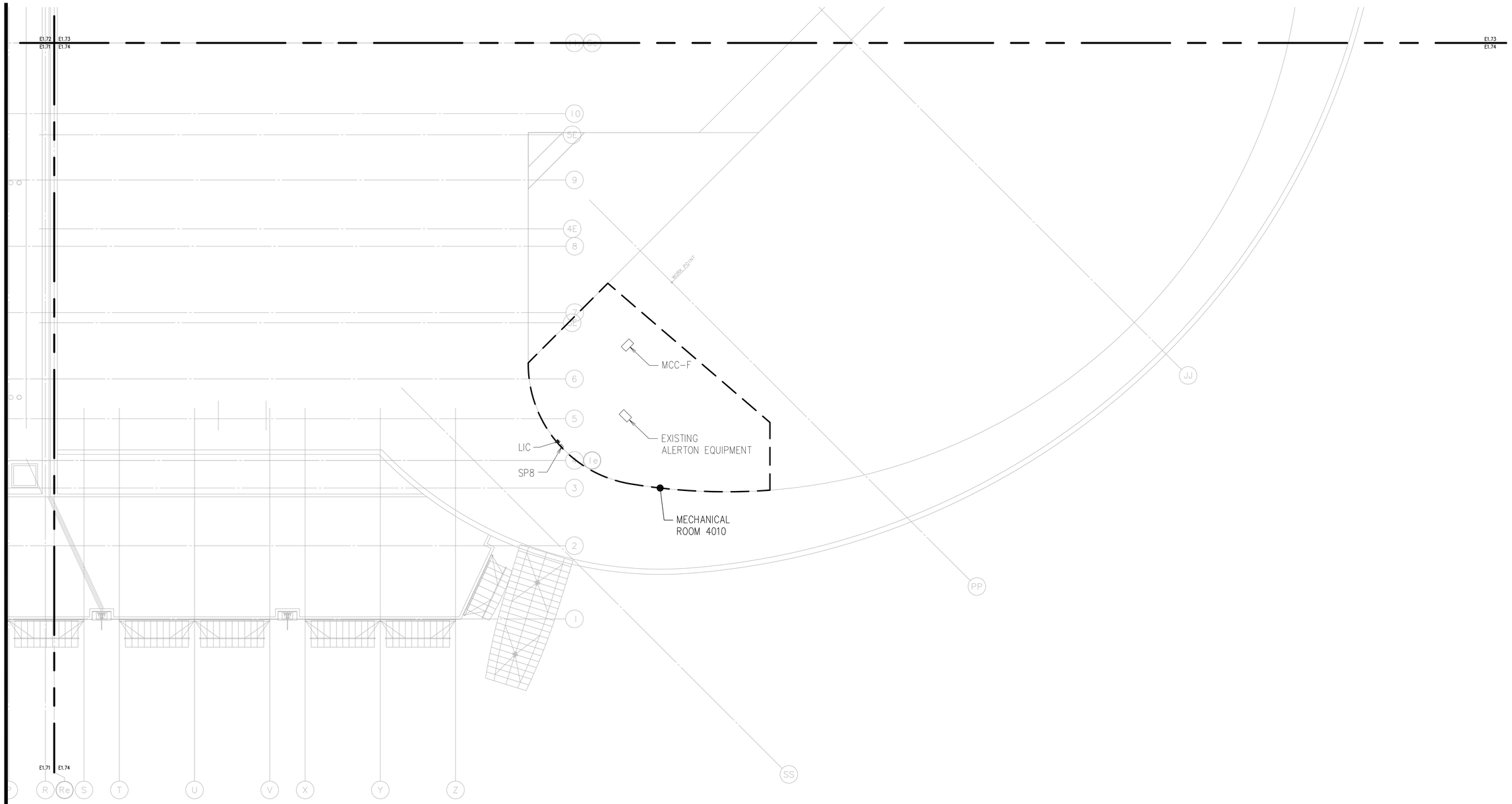
TITLE:
ELECTRICAL
MECHANICAL MEZZANIE LEVEL 2

SHEET:
E1.73



GENERAL NOTES:

1. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
2. REFER TO THE EXISTING ONE-LINE DIAGRAMS ON SHEETS E6.01-E6.08 FOR LOADS TO BE METERED.
3. REFER TO SHEET E9.01 FOR ELECTRICAL DETAILS.

1 E1.74 ELECTRICAL MECHANICAL MEZZANIE LEVEL 2
SCALE: AS INDICATED

0 8 16 32 48
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

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2-14-12

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CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
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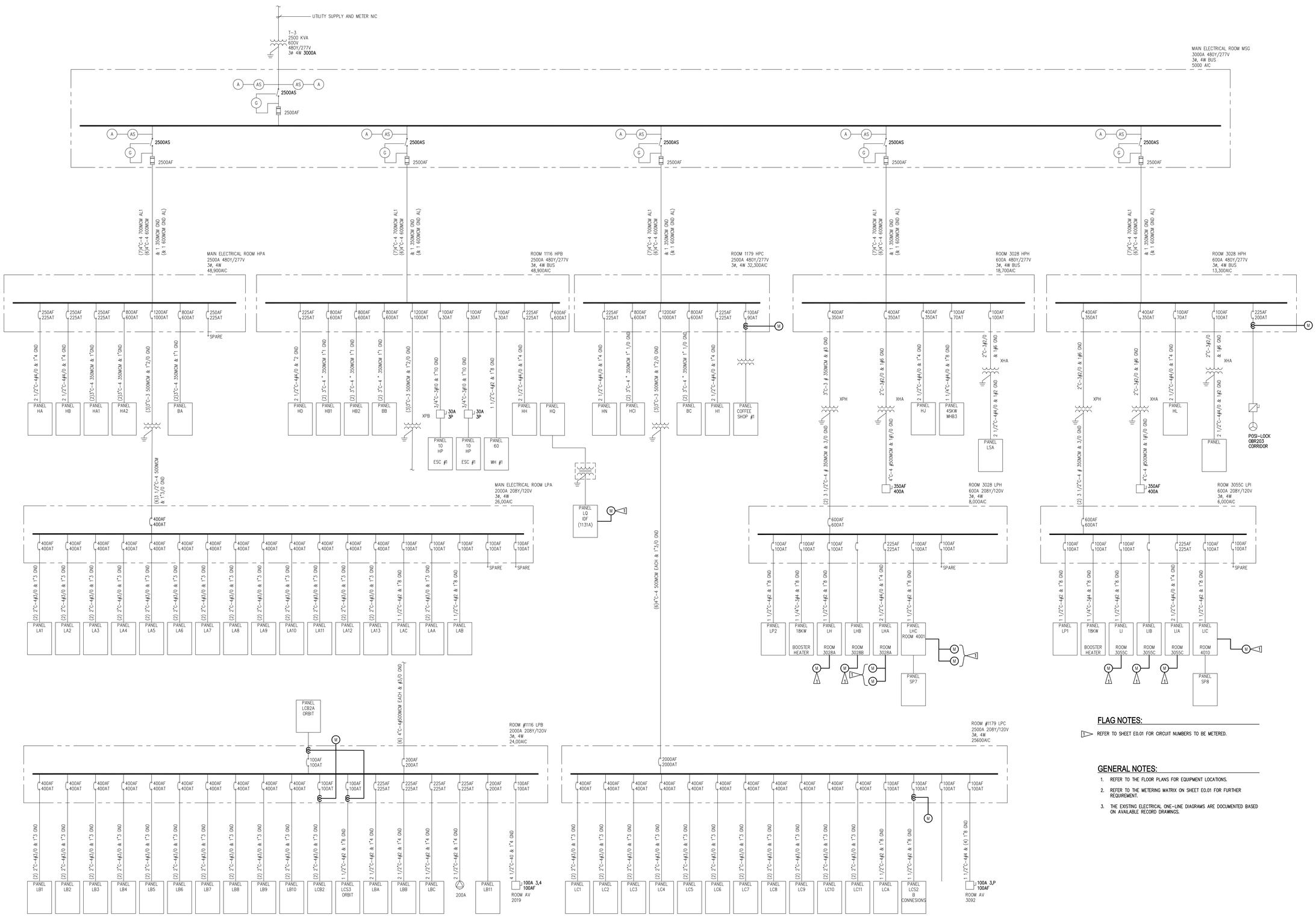
TITLE:
ELECTRICAL
MECHANICAL MEZZANIE LEVEL 2

SHEET:
E1.74

N:\B17190\CADD08\E174 Feb 14, 2012 3:14 PM By:JLUO

RFB 12-2055
Electrical Services sub-metering Project - OCC

ATTCHMENT B DRAWINGS
February 23, 2012



FLAG NOTES:

1. REFER TO SHEET E0.01 FOR CIRCUIT NUMBERS TO BE METERED.

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENT.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

1 E6.01 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

ATTCHMENT B DRAWINGS
February 23, 2012

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N:\B1719\CADDB\E601 Feb 14, 2012 3:14 PM By:JUO

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2-14-12
EXPIRES 12-31-2013

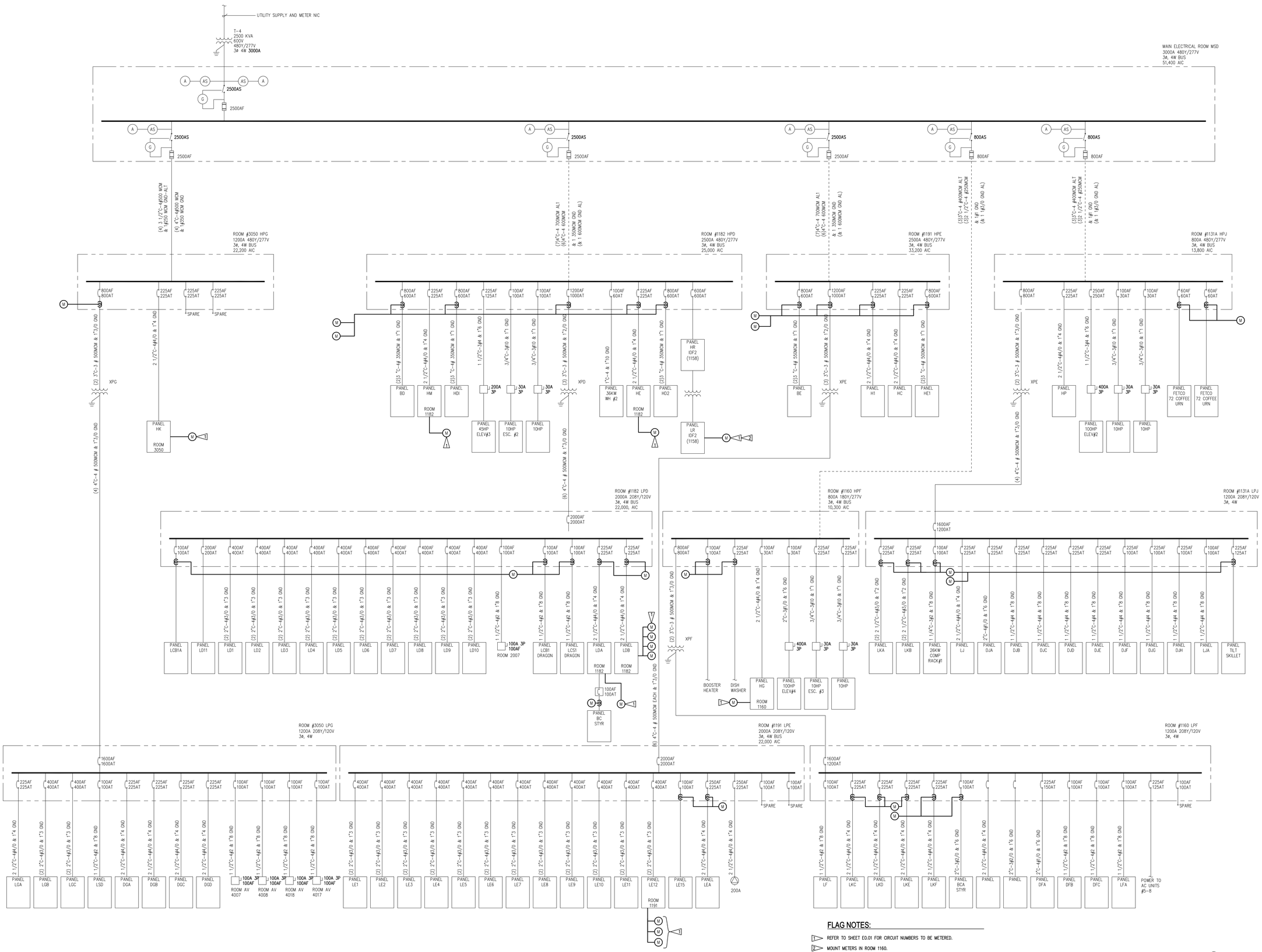
REVISIONS:

DRAWN: SW
CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
OREGON CONVENTION CENTER
PORTLAND OREGON

TITLE:
EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET:
E6.01



FLAG NOTES:

1. REFER TO SHEET E0.01 FOR CIRCUIT NUMBERS TO BE METERED.
2. MOUNT METERS IN ROOM 1160.

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

1 E6.02 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

ATTCHMENT B DRAWINGS
February 23, 2012

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REVISIONS:

DRAWN: SW
CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
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TITLE:
EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET:
E6.02

N:\B17190\CADD08\E602 Feb 14, 2012 3:14 PM By:JLUO

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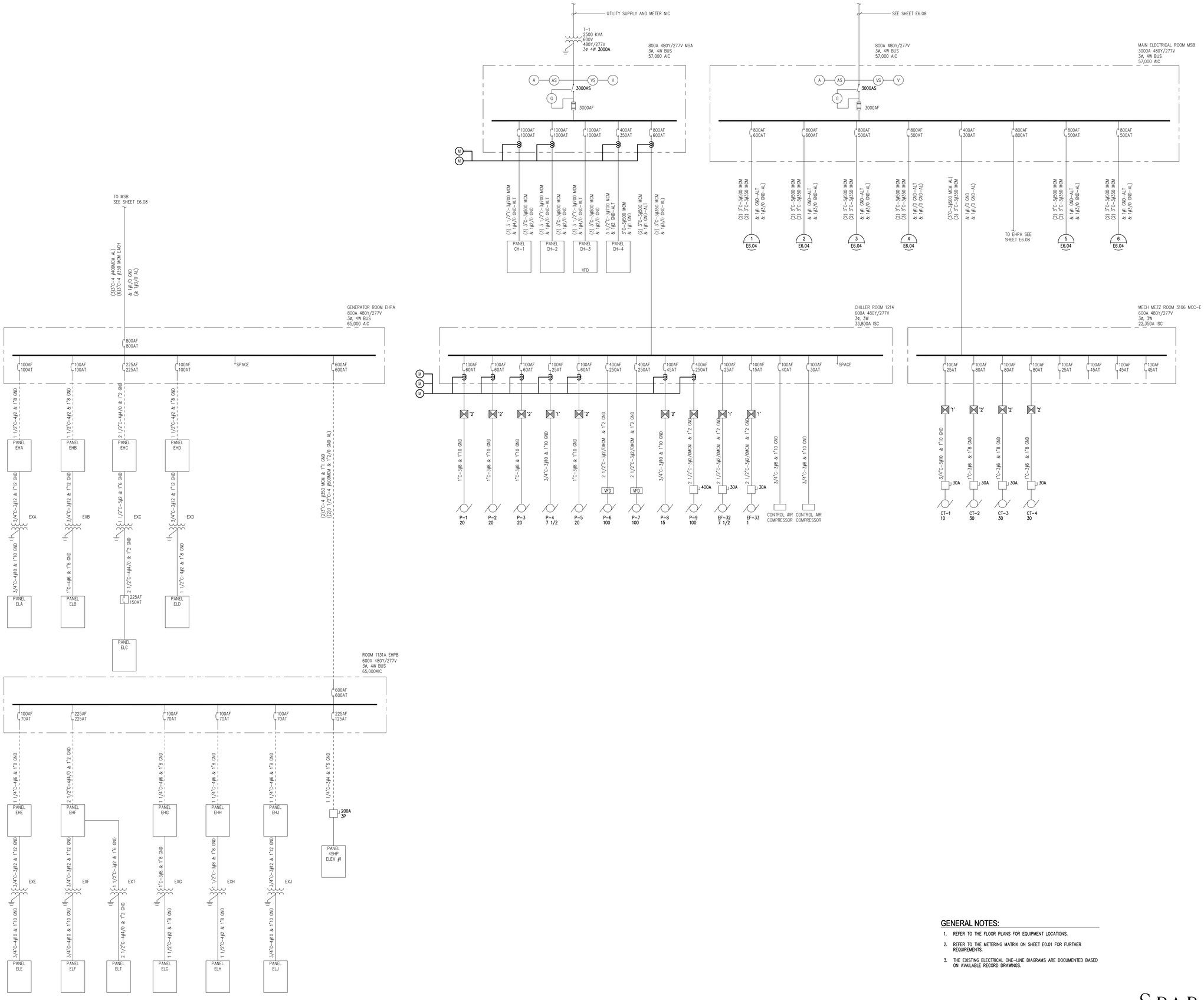

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

1 E6.03 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

ATTCHMENT B DRAWINGS
February 23, 2012

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N:\B1719\CADDB\E603 Feb 14, 2012 3:13 PM By:AUO

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EXPIRES 12-31-2013
2-14-12

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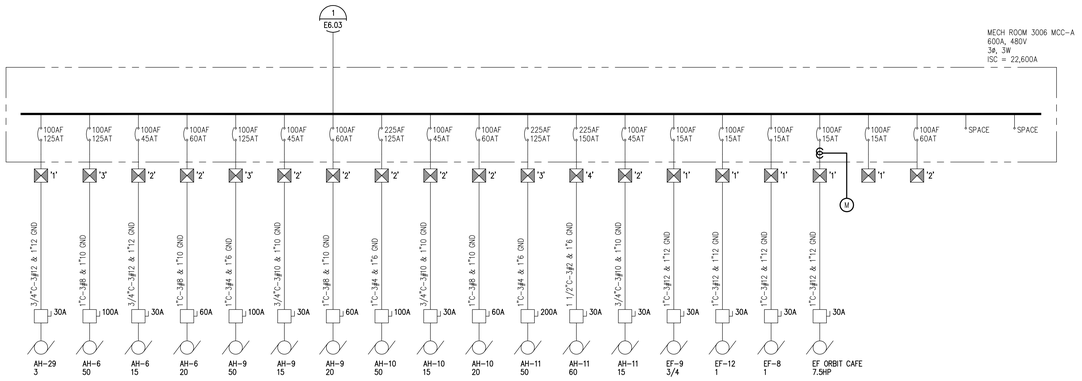
DATE: FEB. 15,2012

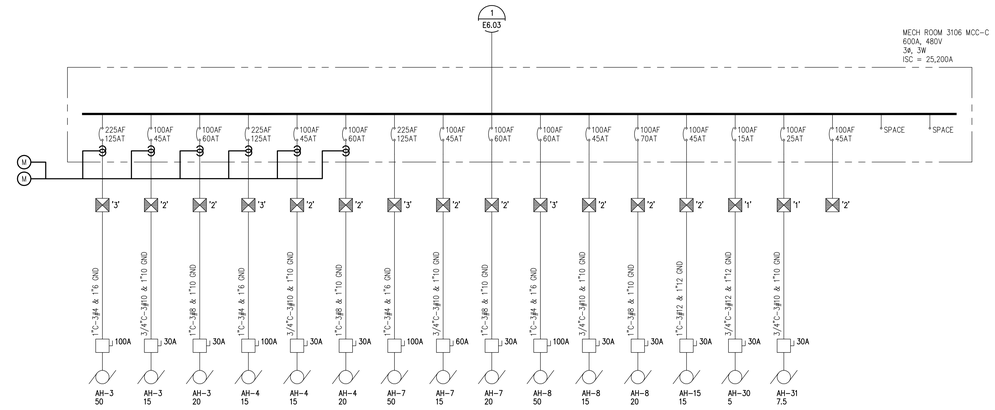
OWNER: OREGON CONVENTION CENTER
PORTLAND OREGON

TITLE: EXISTING ELECTRICAL ONE-LINE DIAGRAM

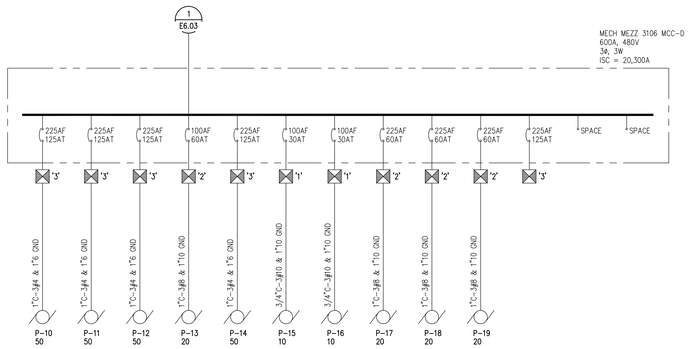
SHEET: E6.03



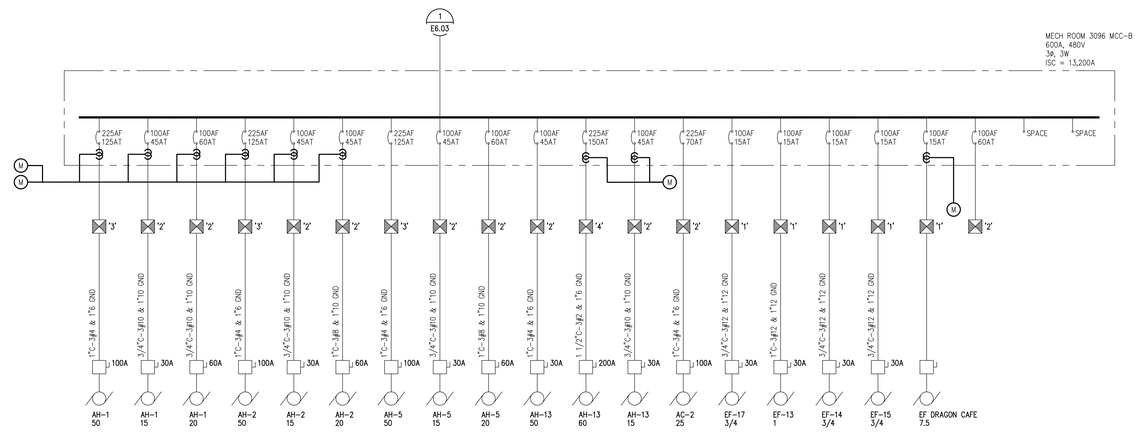
1 E6.04 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE



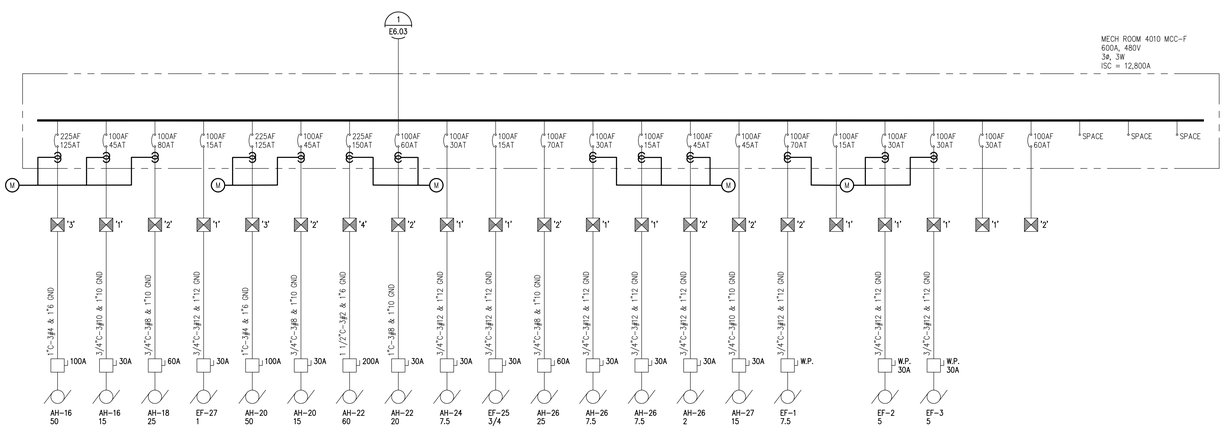
2 E6.04 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE



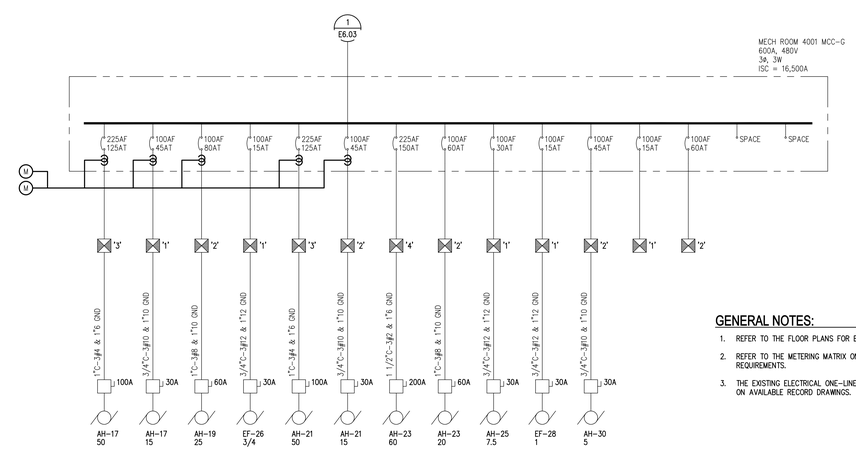
3 E6.04 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE



4 E6.04 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE



5 E6.04 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE



6 E6.04 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

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STAMP:
REGISTERED PROFESSIONAL ENGINEER
STATE OF OREGON
2-14-12
EXPIRES 12-31-2013

REVISIONS:

DRAWN: SW
CHECKED: DB
SUBMITTAL: CONSTRUCTION DOCUMENTS
DATE: FEB. 15,2012

OWNER:
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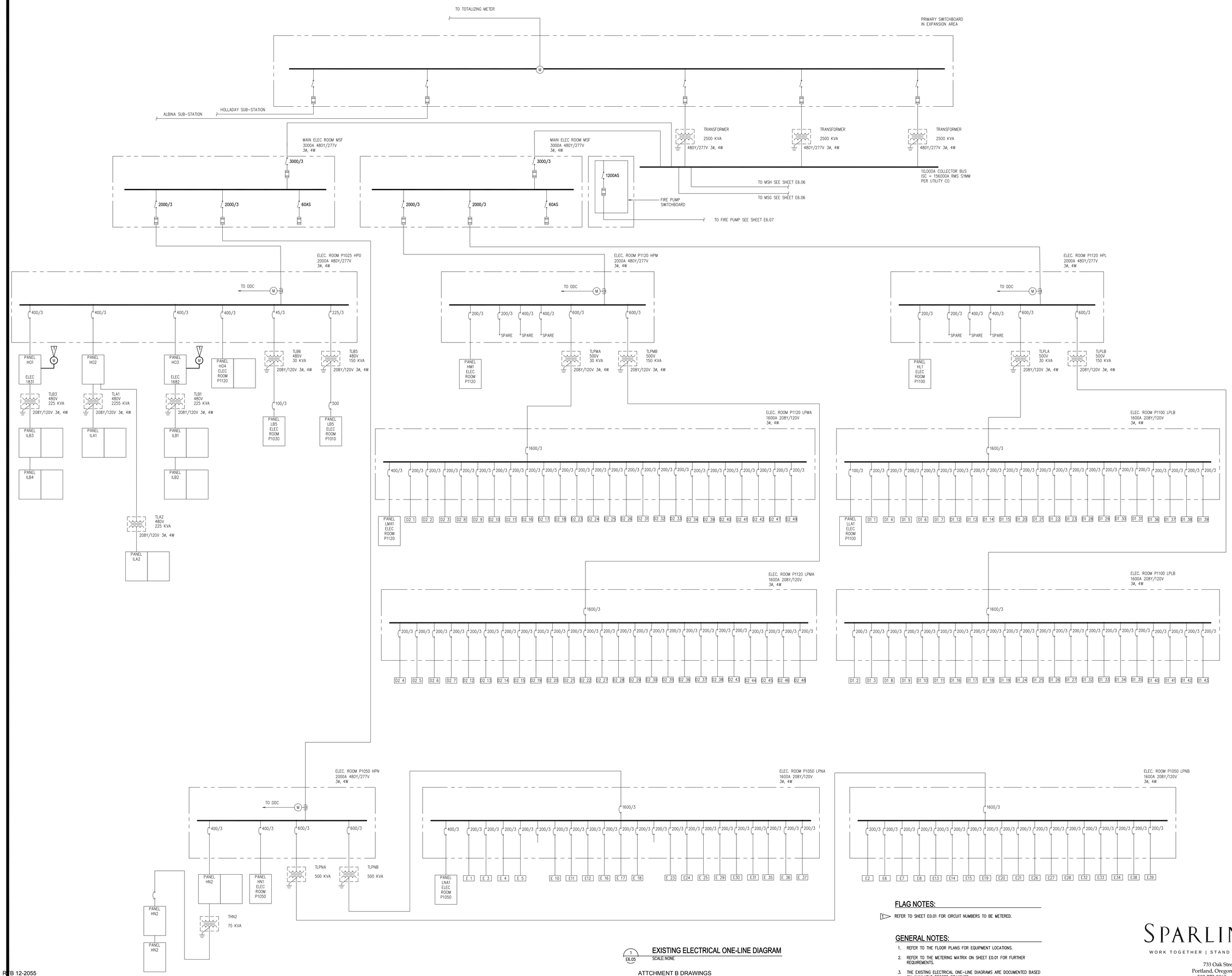
PORTLAND OREGON

TITLE:
EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET:
E6.04

N:\91790\CAD008\E604 Feb 14, 2012 3:13 PM By:AJJO



1 E6.05 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE:NONE

FLAG NOTES:

REFER TO SHEET E0.01 FOR CIRCUIT NUMBERS TO BE METERED.

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

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ATTCHMENT B DRAWINGS
February 23, 2012

RFB 12-2055
Electrical Services sub-metering Project - OCC

N:\97790\CAD008\E605 Feb 14, 2012 3:13 PM By:AJJO

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NOEL B. SPARLING
OREGON
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2-14-12

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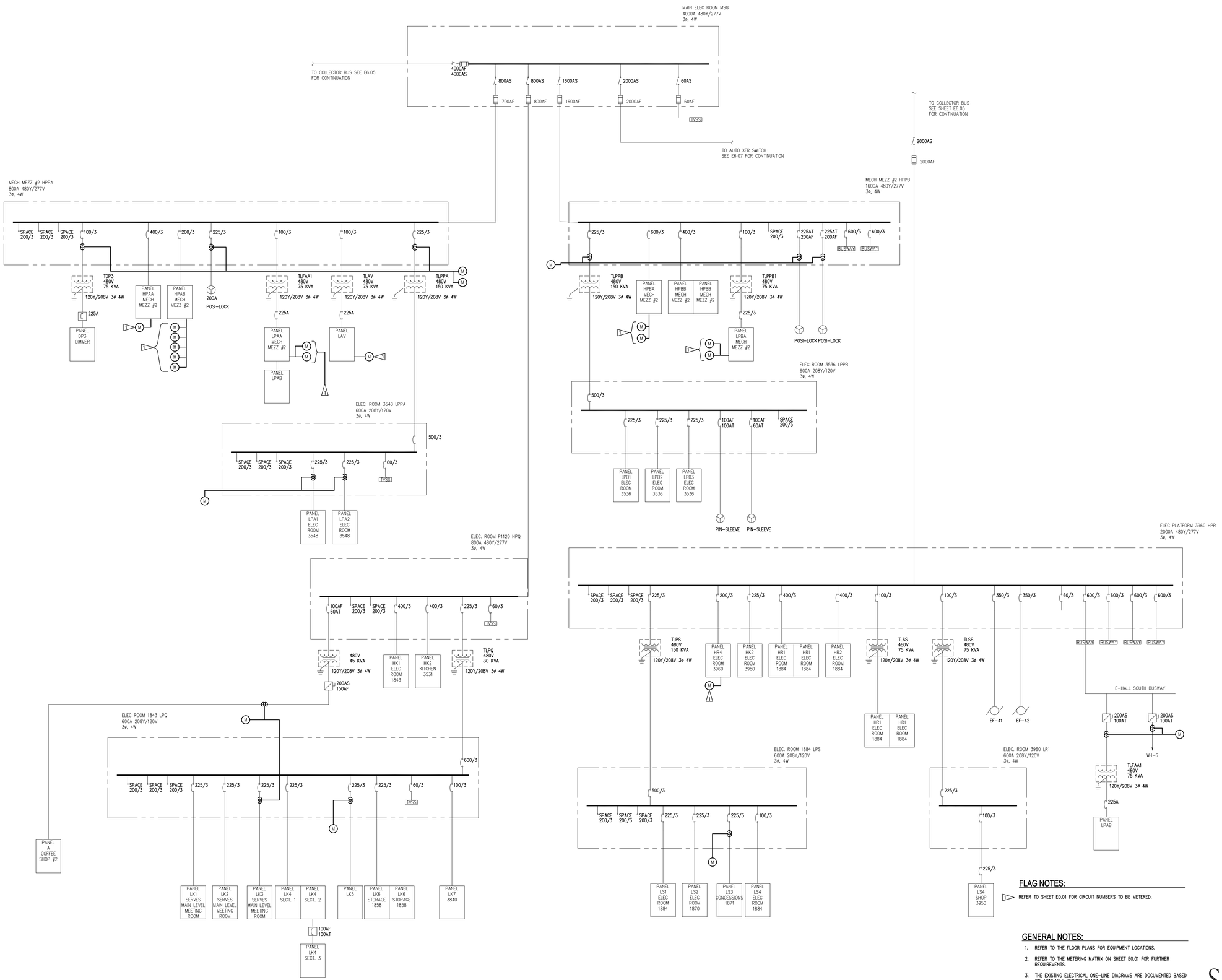
DATE: FEB. 15,2012

OWNER:
OREGON CONVENTION CENTER
PORTLAND OREGON

TITLE:
EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET:
E6.05



FLAG NOTES:

1. REFER TO SHEET E0.01 FOR CIRCUIT NUMBERS TO BE METERED.

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

1 E6.06 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

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February 23, 2012

RFB 12-2055
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N:\B17190\CADD08\E606 Feb 14, 2012 3:13 PM By:JLUO

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MAR. 8, 2012
DANIEL W. BOTTOM
EXPIRES 12-31-2013

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SUBMITTAL: CONSTRUCTION DOCUMENTS
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OWNER:
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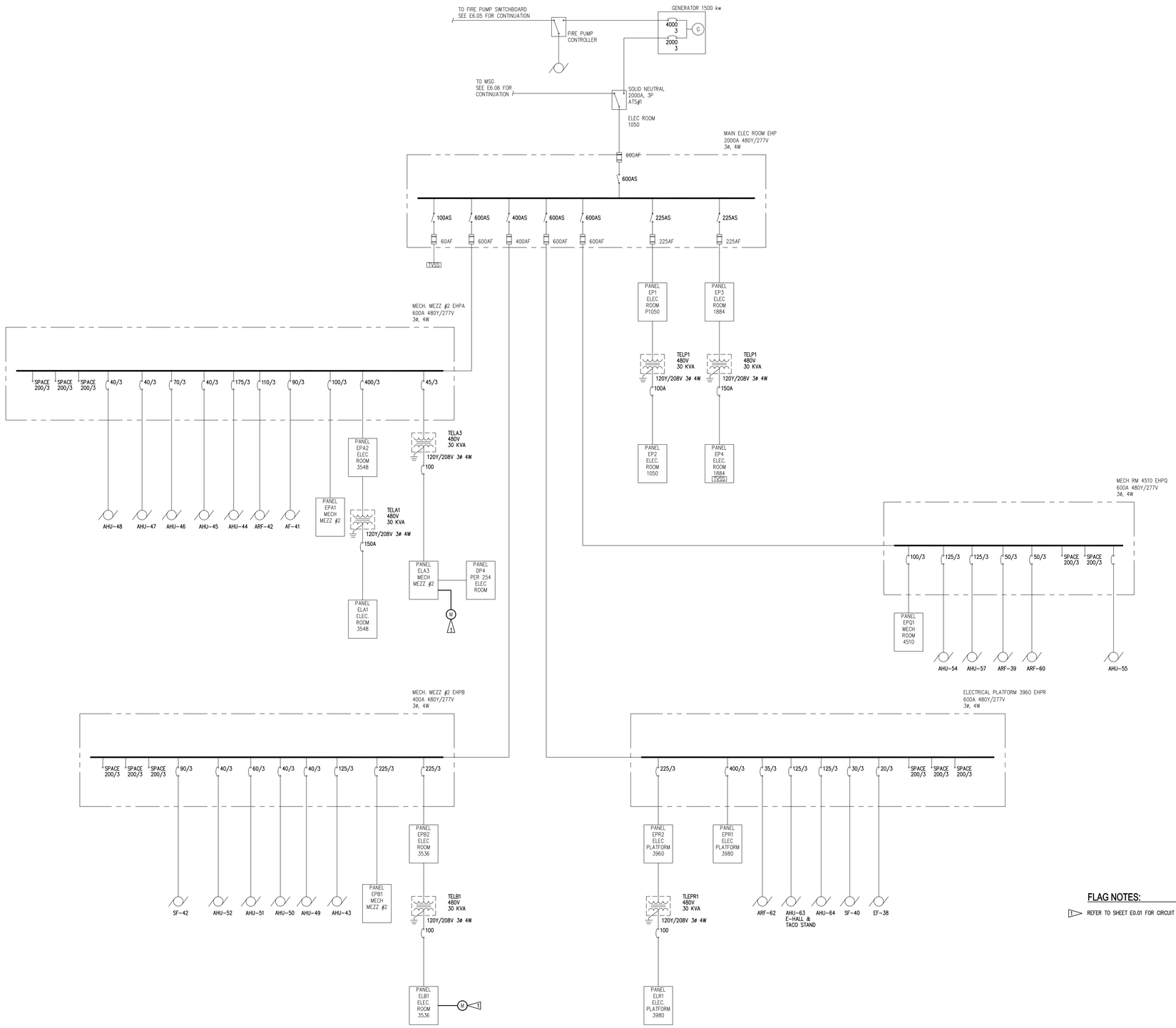
PORTLAND OREGON

TITLE:
EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET:
E6.06



FLAG NOTES:

1. REFER TO SHEET E0.01 FOR CIRCUIT NUMBERS TO BE METERED.

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

1 / E6.07 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

ATTCHMENT B DRAWINGS
February 23, 2012

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DAVID W. BOWLES
STATE OF OREGON
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EXPIRES 12-31-2013

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SUBMITTAL: CONSTRUCTION DOCUMENTS
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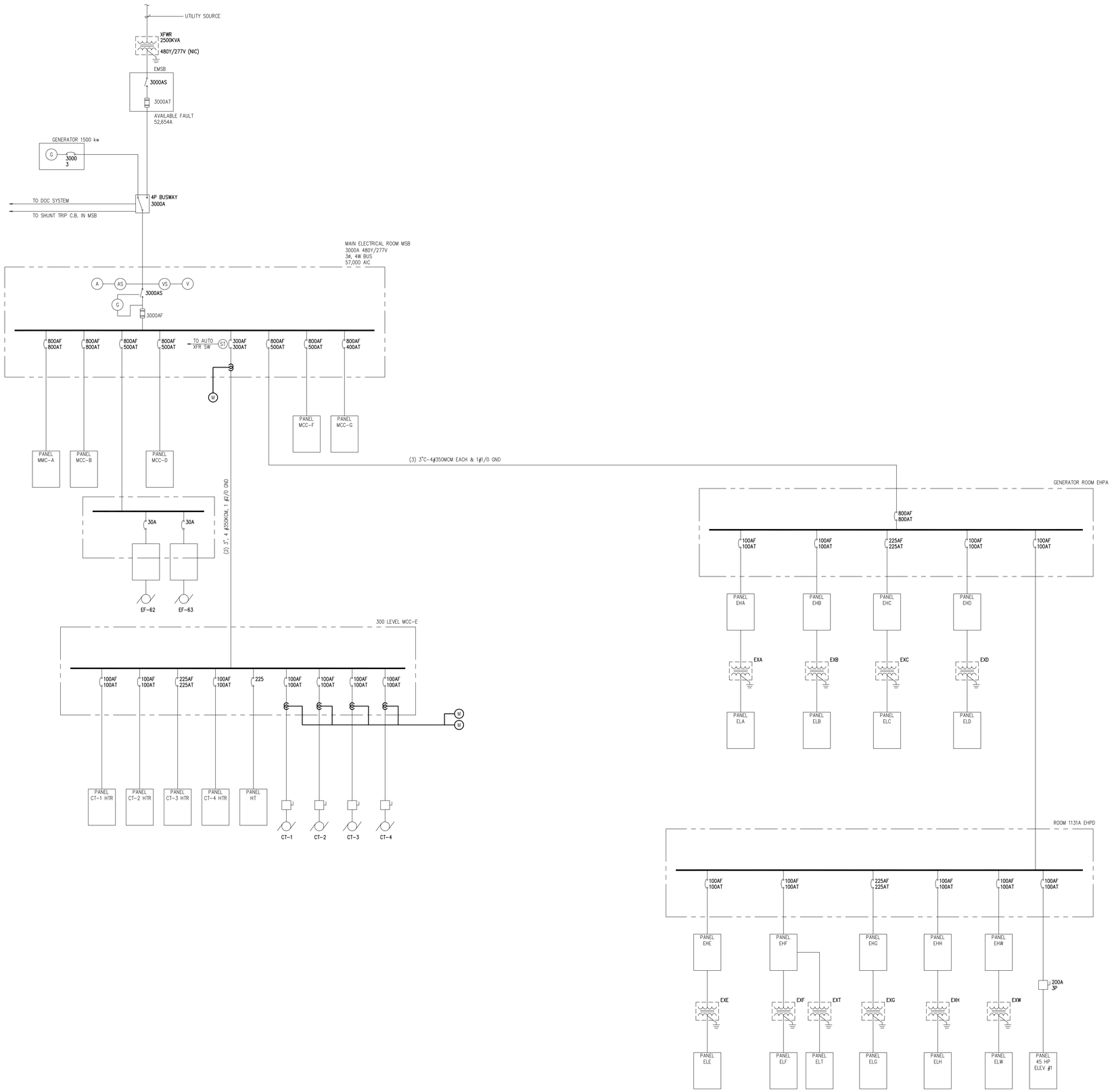
TITLE:
EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET:
E6.07

N:\917190\CAD008\E607 Feb 14, 2012 3:13 PM By:AJO



1 E6.08 EXISTING ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

GENERAL NOTES:

1. REFER TO THE FLOOR PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO THE METERING MATRIX ON SHEET E0.01 FOR FURTHER REQUIREMENTS.
3. THE EXISTING ELECTRICAL ONE-LINE DIAGRAMS ARE DOCUMENTED BASED ON AVAILABLE RECORD DRAWINGS.

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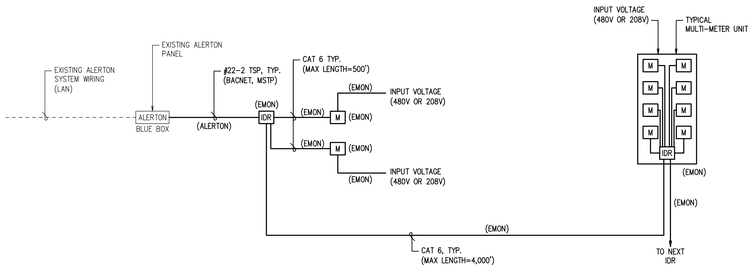
OWNER: OREGON CONVENTION CENTER
PORTLAND OREGON

TITLE: EXISTING ELECTRICAL ONE-LINE DIAGRAM

SHEET: E6.08

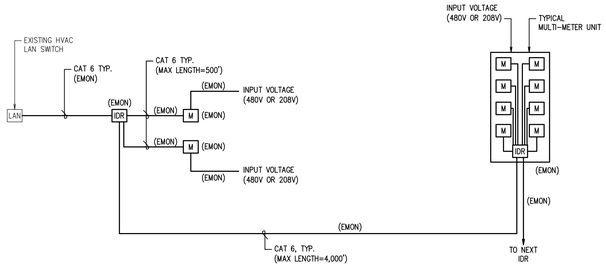
N:\97190\CADDS\E608 Feb 14, 2012 3:12 PM By:JJJO



1
E9.01

METERING SYSTEM - STANDARD DIAGRAM - BACNET INTERFACE

SCALE: NONE



2
E9.01

METERING SYSTEM - STANDARD DIAGRAM - HVAC LAN INTERFACE

SCALE: NONE

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OREGON
NOV. 6, 2012
EXPIRES 12-31-2013

REVISIONS:

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DATE: FEB. 15,2012

OWNER:
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PORTLAND OREGON

TITLE:
ELECTRICAL DETAILS

SHEET:
E9.01

N:\91790\CADDB\E901 Feb 14, 2012 3:12 PM By:JLIO