

0507 INDUSTRIES LTD.
PROPOSED NEW FACILITY
8 EASY STREET
PORT PERRY, ONTARIO

Electrical Drawing Set

DRAWING INDEX

DWG No.	DRAWING TITLE
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E3	ELECTRICAL LAYOUT – SECOND FLOOR
E4	LIGHTING LAYOUT
E5	ELECTRICAL SITE PLAN

0507 INDUSTRIES LTD.
Electrical Drawing Set

PROJECT #: 21016
DRAWING SET: R5 - ISSUED FOR PERMIT

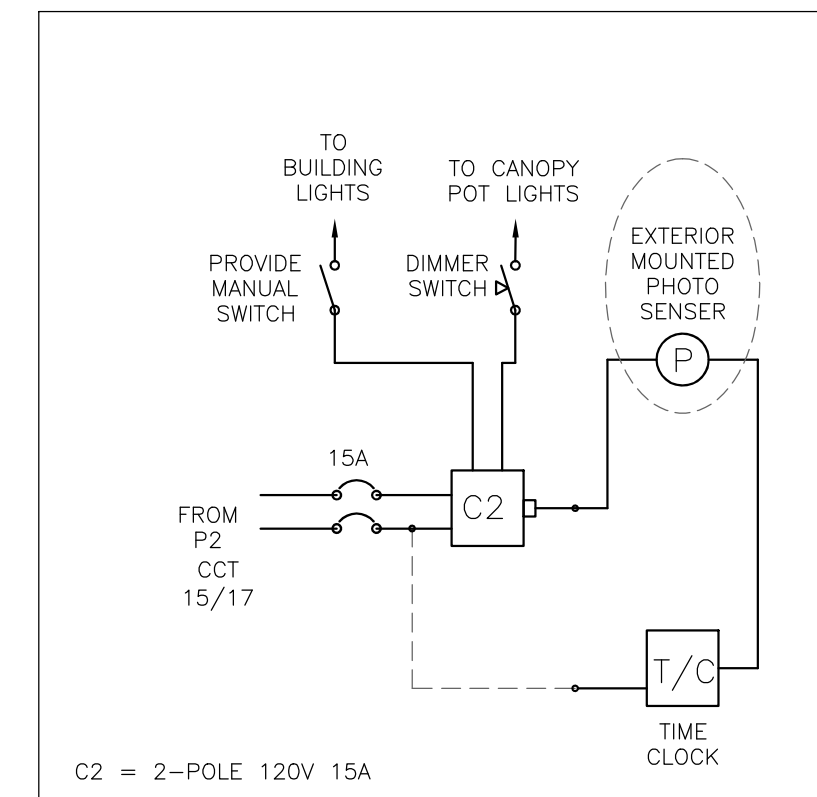
ELECTRICAL GENERAL NOTES

- ALL WIRING AND CONDUCTOR SIZING TO BE ACCORDING TO THE ELECTRICAL SAFETY CODE FOR ONTARIO.
- ELECTRICAL CONTRACTOR TO CONFORM TO GENERAL SPECIFICATIONS, ARCHITECTURAL DRAWINGS, AND THE ONTARIO ELECTRICAL SAFETY CODE.
- ELECTRICAL CONTRACTOR TO VERIFY SITE REQUIREMENTS AND EXISTING CONDITIONS. REQUIRES NEW SERVICE, TRANSFORMER, AND UNDERGROUND SERVICE TO BUILDING. SEE SITE PLAN FOR PROPOSED LOCATION OF TRANSFORMER.
- ELECTRICAL CONTRACTOR TO VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT ON SITE. VERIFY FUSE TYPES, SIZES AND LOCATIONS IN SUB-PANELS.
- WALL RECEPTACLES TO BE MOUNTED AT MINIMUM HEIGHT OF 400mm TO CENTRE UNLESS OTHERWISE LISTED. RECEPTACLES MAY BE SHOWN WITH HEIGHT LISTED IN INCHES ABOVE FLOOR.
- ALL BUILDING CONTROLS AND SWITCHES SHALL BE INSTALLED BETWEEN 900mm AND 1100mm FROM FLOOR FOR BARRIER FREE REQUIREMENTS. THERMOSTATS AND PULL STATIONS TO BE MOUNTED AT MAXIMUM HEIGHT OF 1200mm TO CENTRE.
- ALL WIRING WITHIN GROW ROOMS AND WASH BAY TO BE CONSEALED WITHIN PVC CONDUIT AND FULLY SEALED. ALL CONNECTION AND BOXES TO BE RATED NEMA 4X, IP66/67, OR EQUAL FOR WET LOCATION. REQUIRED AREAS ARE IDENTIFIED ON DRAWING.
- ELECTRICAL CONNECTIONS FOR MECHANICAL EQUIPMENT REQUIRE SUPPLY OF DISCONNECT SWITCH W/ FUSES AS SPECIFIED BY THE MANUFACTURER, TO BE WEATHER-PROOF WHERE REQUIRED. INCLUDE DISCONNECTS FOR EQUIPMENT AS LISTED IN SCHEDULE.
- CEILING CAVITY IN OFFICE AREA IS A RETURN AIR PLENUM. ALL MATERIALS MUST BE NON-COMBUSTIBLE AND SUITABLY RATED FOR F50 OF 25 & SDI 50. ALL DATA CABLES ETC. REQUIRE AN FT6 RATING.
- DATA AND COMMUNICATION REQUIRED TO BE COORDINATED AND INSTALLED BY SUITABLE CONTRACTOR. VERIFY SERVICE REQUIREMENTS AND MAIN FEED POINTS FROM UTILITY AND POSSIBLE TIE-IN WITH EXISTING BUILDING.
- ACCESS CONTROL SYSTEM AND 'SD' READERS SHOWN FOR DOORS ARE NOT PART OF THIS CONTRACT. SHOWN FOR REFERENCE AND DISCUSSION. ELECTRICAL CONTRACTOR MAY BE REQUESTED TO CONNECT HARDWARE FOR DOORS THAT REQUIRE CARD ACCESS OR SECURITY CONTROL. SEE "SD" IN EQUIPMENT SCHEDULE.
- SEPTIC SYSTEM BY OTHERS. ELECTRICIAN REQUIRED TO SUPPLY CONDUCTORS AND ELECTRICAL FEED TO MAIN SEPTIC CONTROL PANEL. CONFIRM PANEL LOCATION AND LOAD REQUIREMENTS WITH SEPTIC CONTRACTOR.
- ELECTRICAL CONTRACTOR TO PROVIDE TYPE WRITTEN DIRECTORY CARDS FOR EACH PANEL.
- ESA INSPECTION CERTIFICATES REQUIRED FOLLOWING COMPLETION OF ALL ELECTRICAL WORK.

LUMINAIRE SCHEDULE

ITEM	DESCRIPTION	VOLT	WATT	BULB	MOUNTING	CATALOGUE OR DESCRIPTION
A	2x2 FLAT PANEL	347V	30W	LED	RECESSED	TUROLIGHT RGD-BLP2 4000K MULTI
B	1'x4' UTILITY STRIP	347V	40W	LED	SURFACE	TUROLIGHT DL-WA5 4' 4000K DIMMABLE
C	4' UTILITY STRIP	347V	40W	LED	SUSPENDED	TUROLIGHT DL-WA5 4' 4000K DIMMABLE
D	2' UTILITY STRIP	347V	20W	LED	SUSPENDED	TUROLIGHT DL-EC2 2' 4000K
E	LED GROW LIGHT	240V	780W	LED	SUSPENDED	FIXTURE BY OWNER. INSTALL AND CONNECT AS REQUIRED.
F	LED STRIP GROW LIGHT	347V	336W	LED	SUSPENDED	HOHLED TOP 2.0. DAYLIGHT SPEC.
G	LED GROW LIGHT 3	240V	800W	LED	SUSPENDED	FIXTURE BY OWNER. INSTALL AND CONNECT AS REQUIRED. (GAVITA PRO RS 2400e)
H	EXTERIOR BUILDING LIGHT	120V	24W	LED	SURFACE	TUROLIGHT SSL-WP2T 4000K W/ PHOTOCCELL
I	EXTERIOR BUILDING LIGHT	120V	40W	LED	SURFACE	TUROLIGHT SSL-WP3T FULL CUTOFF 4000K W/ PHOTOCCELL
J	4" POT LIGHT	347V	12W	LED	RECESSED	TUROLIGHT EDA-SP WET LOCATION RATED 4000K
EXIT	COMBINATION EXIT W/ DIRECTION	120V	6.6W	LED	SURFACE	AIMLITE CSR-2L COMBINATION 6V 36W BATT.
EM1	EMERG. HEADS W/ 12V BATT.	120V	36W	LED	SURFACE	AIMLITE EBST-2L BATTERY PACK W/ TWO PAR18 2W LED HEADS
EM2	EXTRA HEADS (MATCH ABOVE)	12V	3W	LED	SURFACE	PAR18 2W. CONNECT TO EM1

NOTE: ALL FIXTURES AND SWITCHING TO BE DETERMINED AND/OR APPROVED BY OWNER
 1. 36W BATTERY SIZE SUITABLE FOR 24 X 3W HEADS FOR 30 MINUTE RUN TIME.
 2. EXTERIOR LIGHT CIRCUIT TO BE THROUGH SEPARATE PHOTOSENSOR AND MANUAL SWITCHES.
 3. OWNER SUPPLIED. REQUIRES 8-FOOT POWER CONNECTOR. WIRE INTO JUNCTION BOX ON HOIST. CONTROL CIRCUIT IS SEPARATE WIRING WITH RJ45 WIRING BETWEEN ALL DEVICES (LIGHT FIXTURES, DIMMER, AND MAIN CONTROL).

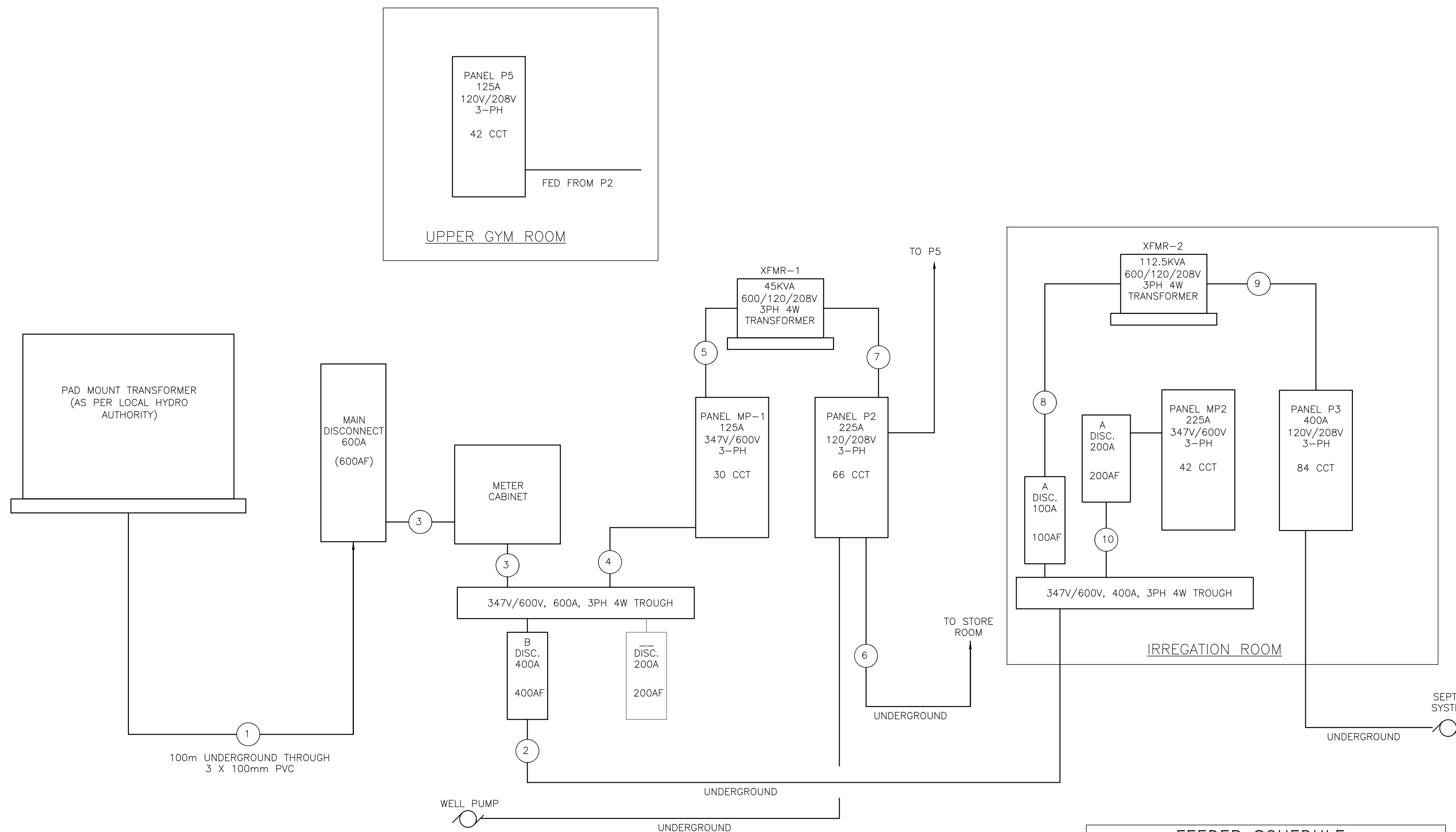


OUTDOOR LIGHTING & SIGN CONTROL

EQUIPMENT SCHEDULE

ITEM (SYM)	DESCRIPTION	SUPPLIED BY: E-ELECTRICIAN M-MECHANICAL O-OWNER	VOLT	PH	WATT	HP	MCA (AMP)	MOCP (AMP)	REMARKS
RTU1	ROOFTOP HVAC UNIT 4-TON W/ CONVENIENCE OUTLET	M	575	3		1	8	15	1
RTU2	ROOFTOP HVAC UNIT 3-TON	M	575	3		1	7	15	1
RTU3	ROOFTOP HVAC UNIT 4-TON	M	575	3		1	18	15	1
RTUX	ROOFTOP HVAC UNIT 7.5-TON	M	575	3		1	18	20	1
AHA	AIR HANDLER	M	208	1			5	15	1
AHB	AIR HANDLER	M	208	1			5	15	1
AH2-AH3	AIR HANDLER	M	208	1			3.1	15	1
AH4-AH5	AIR HANDLER	M	208	1			3.1	15	1
AC	AC CONDENSER HEAT PUMP	M	208	3			71A		1
HP1	WALL MOUNTED AC UNIT	M	208	1	94		0.45A		2
HP2	WALL MOUNTED AC UNIT	M	208	1	94		0.45A		2
DEH	DEHUMIDIFIER - DUCTED	M	120	1			5.2A		1
HRV1	HEAT RECOVERY VENTILATOR	M	208	1		2X 1/2	9.2		1
HRV2	HEAT RECOVERY VENTILATOR	M	120	1			5.5A		1
UV	ODER CONTROL AT HRV2 EXIT	M	120	1	54W				1
UV2	UV DISINFECTANT & ODER CONTROL FOR RTU UNITS	M	120	1	108W				1
EF1	BATHROOM FAN	M	120	1	70				
EF2	ROOF EXHAUST FAN	M	120	1		1/2	5A		1, 4
CO	GAS DETECTOR UNIT W/ VISUAL/AUDIBLE WARNING DEVICES	M	120	1	200				
DO	POWER DOOR OPERATOR DITEC AUTO SWING HA-8	O	115	1			3.0		
SD	SECURITY DOOR. CARD LOCK ACCESS W/ ELECTRIC LATCH OR MAG-LOCK	O	TBD	1					3
OD	OVERHEAD DOOR OPENER LIFTMASTER J-50-1-L5	O	115	1		1/2	9.8		
LIFT	SCISSOR LIFT	O	208	1		1-1/2	10		3
IP1	IRRIGATION PUMP	O	208	1			5		
GWP	GREY WATER PUMP	O	208	1			5		
WP	SUBMERSIBLE WELL PUMP	O	230	1			7.6		5
GL	GROW LIGHT ROUGH-IN	O	347	1			-		6
H1	HOIST SYSTEM ROUGH-IN	O	120	1			-		6
F1	CEILING FAN CIRCUIT ROUGH-IN 1	O	120	1			-		6
F2	CEILING FAN CIRCUIT ROUGH-IN 2	O	120	1			-		6

- REMARKS:
 1 PROVIDE DISCONNECT SWITCH AND CONNECT.
 2 POWERED BY EXTERIOR CONDENSOR UNIT. CONFIRM WIRING ON SITE.
 3 SHOWN FOR DISCUSSION ONLY. MAY REQUIRE WIRING OF POWER SUPPLY IF ADDED AT LATER DATE.
 4 INTERLOCK WITH POWER DAMPER IN SAME ROOM OR AS SHOWN.
 5 NOT SHOWN. SEE SITE PLAN FOR LOCATION OF WELL.
 6 PROVIDE JUNCTION BOX AT CEILING AND WIRING. ROUGH-IN ONLY.



DETAIL 1 - SINGLE LINE DIAGRAM
 SEE DRAWING E1.2 FOR PANEL DIRECTORIES

LOAD SUMMARY

CONNECTED LOAD	
HVAC (100%):	145.5 KW
LIGHTING (100%):	80.0 KW
OTHER (80%):	30.0 KW
TOTAL:	255.5 KW
TOTAL AREA:	1,116 sq-m
WATTS PER sq-m:	25
REQUIRED LOAD:	27.9 KW
TOTAL BUILDING LOAD:	283.4 KW
FUTURE LOAD:	208.0 KW
TOTAL BUILDING LOAD:	491.4 KW

FEEDER SCHEDULE

- 3 RUNS OF 4#500MCM-THWN ALUMINUM IN 100mm PVC
- 2 RUNS OF 4#250MCM-THWN ALUMINUM IN 63mm PVC
- 3 RUNS OF 4#250MCM-THWN ALUMINUM IN 63mm EMT
- 4#2 RW90 IN 1-1/2" EMT
- 4#8 RW90 IN 1-1/2" EMT
- EMPTY 1" PVC CONDUIT - FUTURE USE
- 4#1/0 RW90 IN 2" EMT
- 4#2 RW90 IN 2" EMT
- 2 RUNS OF 4#2/0 RW90 IN 2" EMT
- 2 RUNS 4#2 RW90 IN 1-1/2" EMT

NOTES

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LEGEND

- OCUPANCY SENSOR SWITCH
- OCUPANCY SENSOR - CEILING MOUNTED
1 = CONTROLLED FIXTURE IDENTIFICATION
- MOTION SENSOR - DELAY OFF
LEVITON ODS15-10W 30minute DELAY
- SINGLE POLE SWITCH
o = SWITCH ID
- THREE WAY SWITCH
- TIMER W/ 60/30/20/10 MINUTE SETTINGS
- P1-1a P1 = PANEL NUMBER 1
1 = CIRCUIT NUMBER 1
o = SWITCH ID
- DUPLEX RECEPTACLE
o = W/GROUND FAULT CIRCUIT INTERRUPTER
- POWER FOR SPECIAL EQUIPMENT (AS NOTED)
- DUPLEX (ABOVE BACKSPASH)
- 575/3PH OUTLET
- QUAD RECEPTACLE
- SPECIAL PURPOSE OUTLET - (NOTED)
- JUNCTION BOX/ROUGH-IN FOR POWER
xx = SEE EQUIPMENT SCHEDULE
- SINGLE DATA OUTLET
- DOUBLE DATA OUTLET
- VOICE OUTLET
- COMBINATION VOICE/DATA
- CEILING FAN, SEE MECHANICAL DRAWINGS
- MOTOR OR MECHANICAL EQUIPMENT, TYPE AS NOTED
- ELECTRICAL TRANSFORMER
- ELECTRICAL PANEL OR BOX
- EMERGENCY LIGHTING (DOUBLE HEAD), EM2
- RUNNING MAN SIGN (DIRECTION NOTED) 'EXIT'
- POT LIGHT FIXTURE AS NOTED
- 2' x 2' LIGHT FIXTURE
- 1' x 4' LIGHT FIXTURE
- BUILDING WALL LIGHT
- ALARM SIREN & BEACON
- ACTIVATION BUTTON
- AUTOMATIC DOOR OPERATOR W/ BUTTONS
- SECURITY DOOR - CARD SWIPE ACCESS

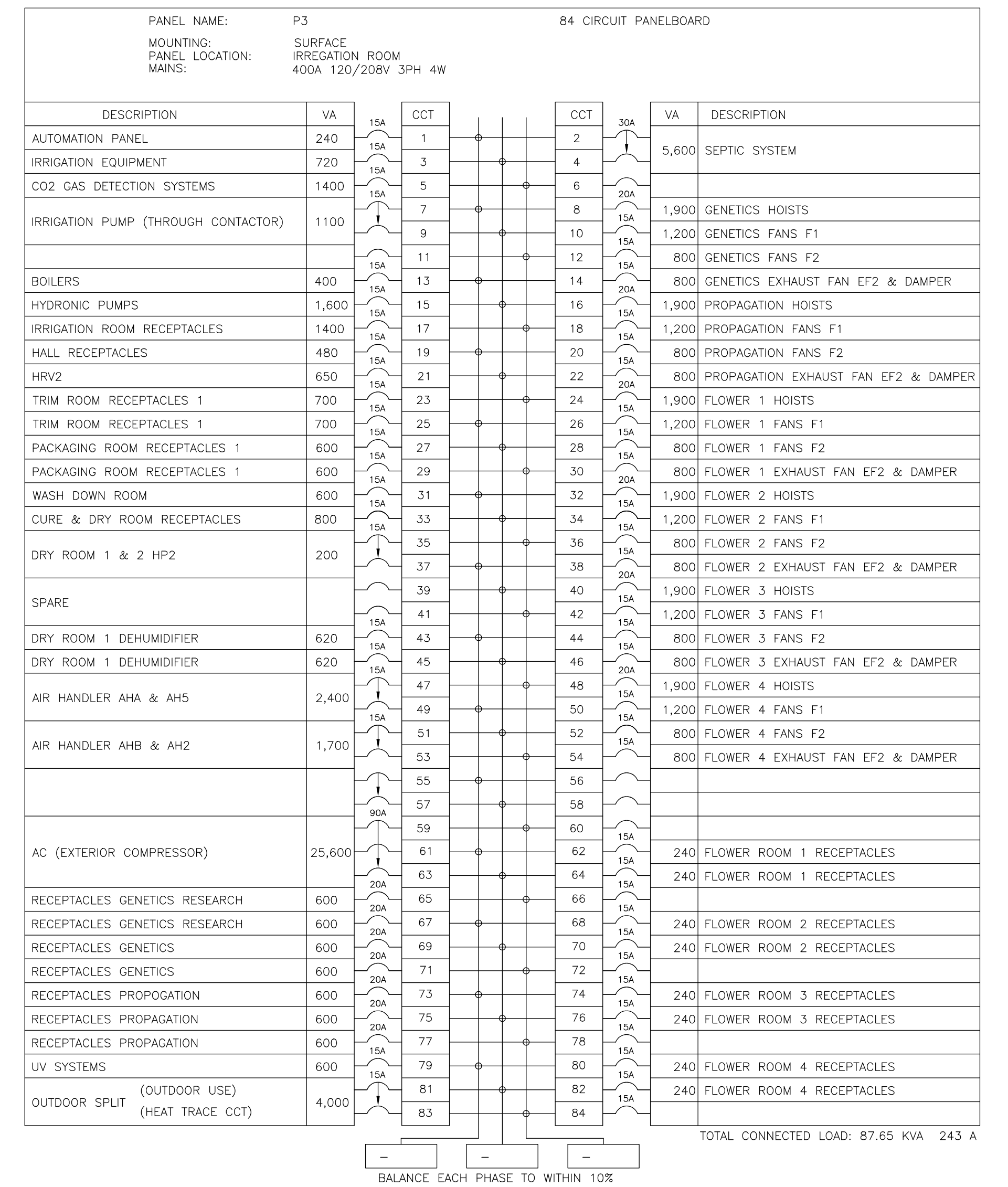
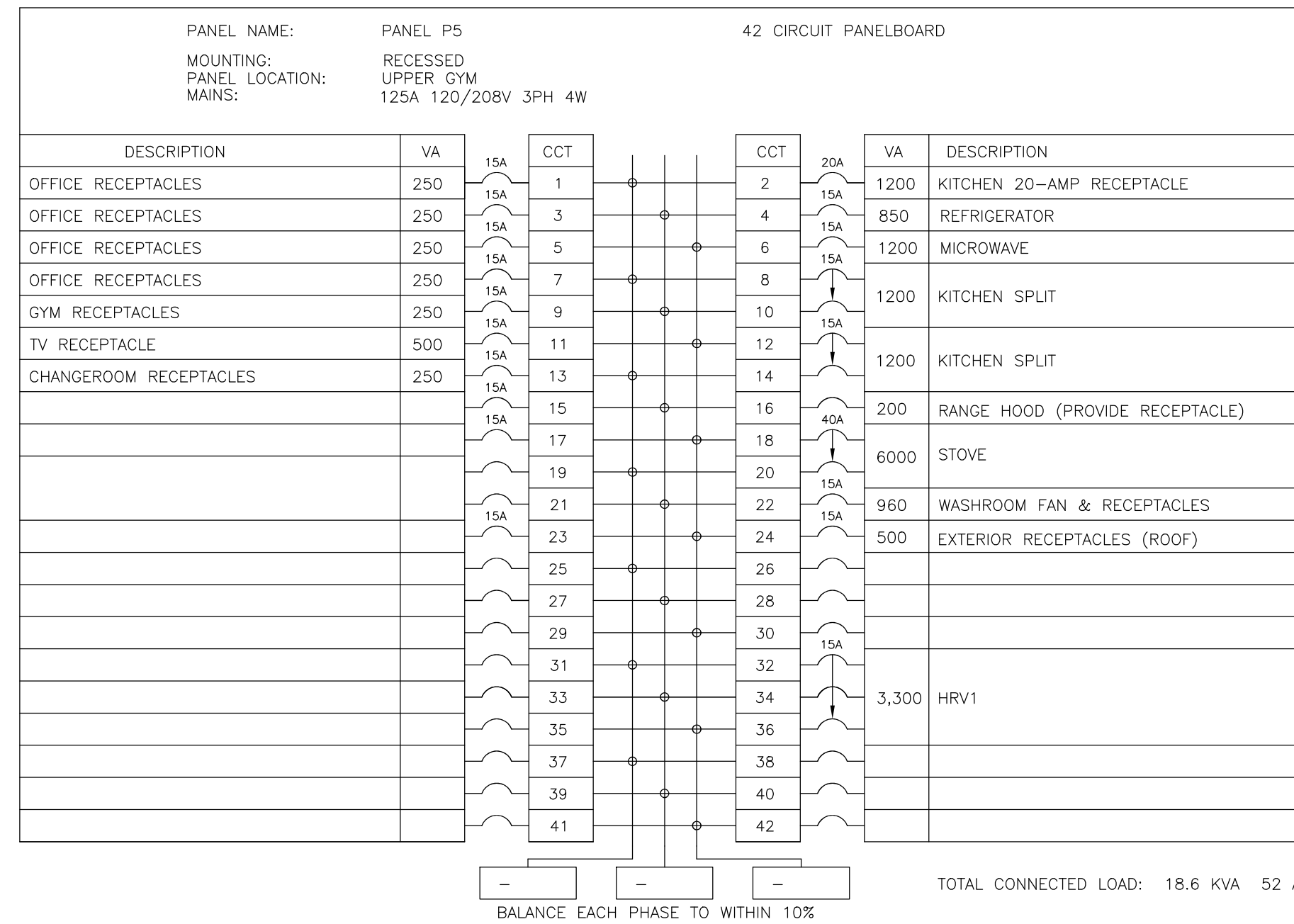
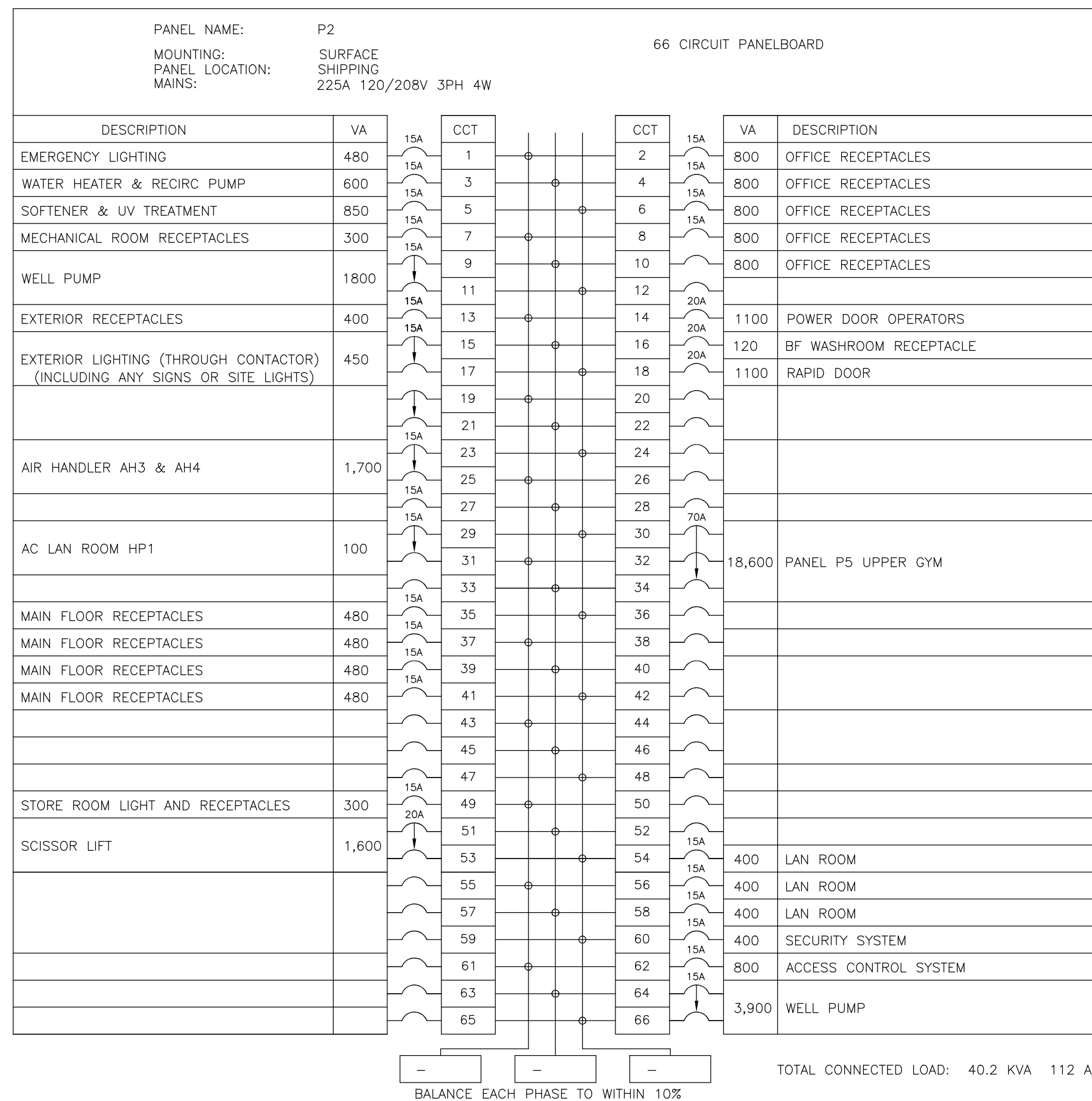
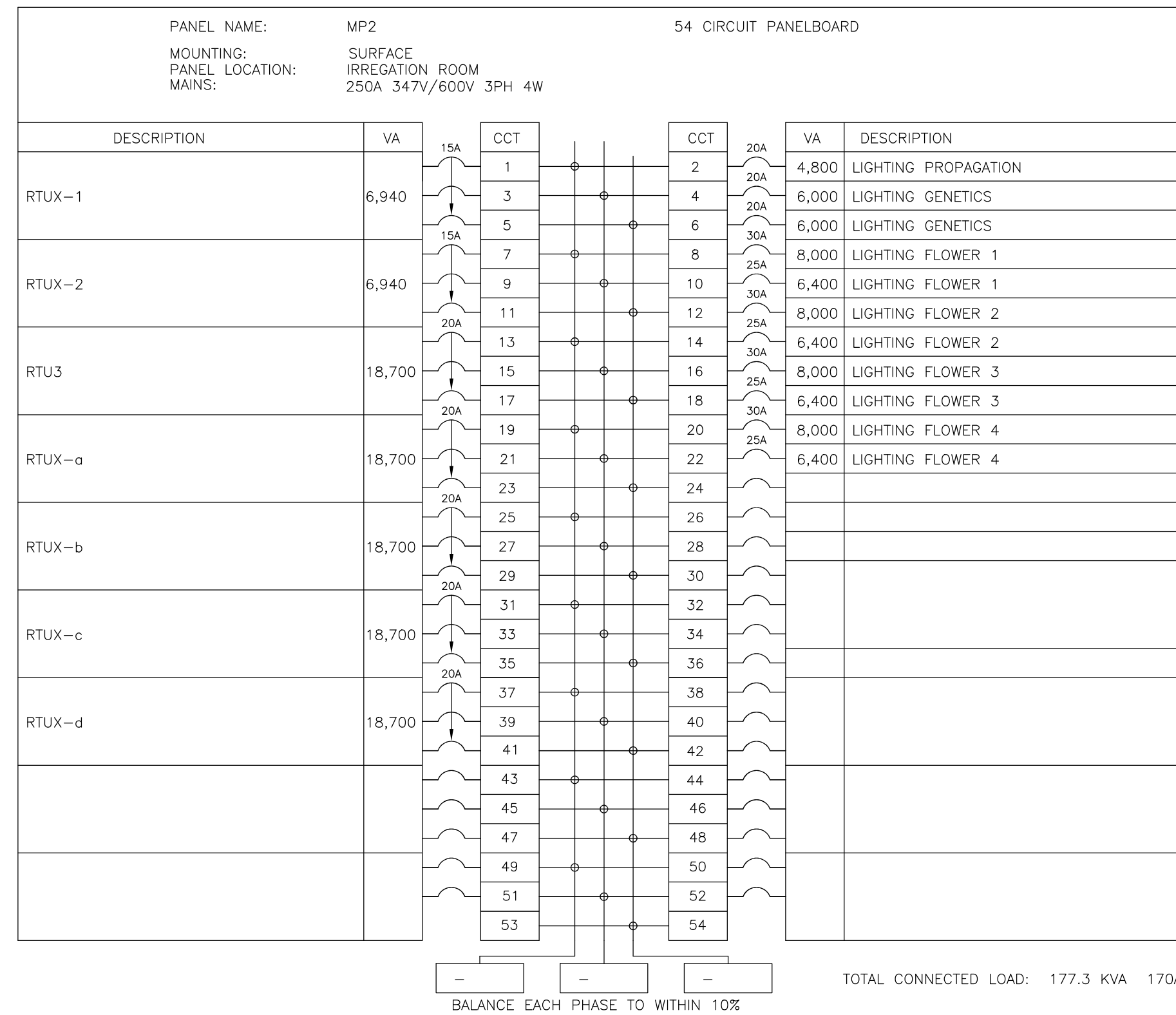
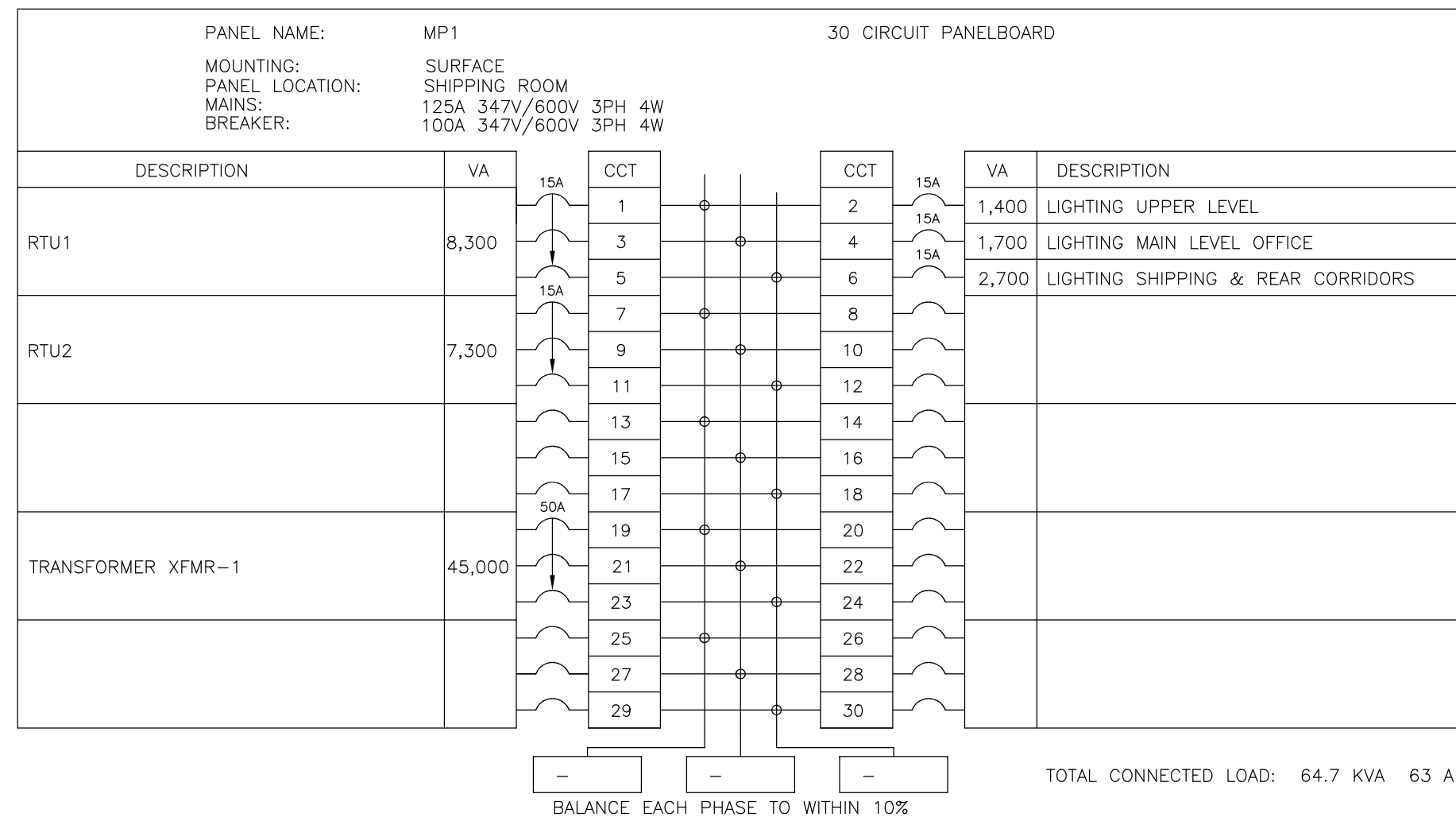
NO.	REVISIONS	DATE
5	ISSUED FOR PERMIT	APR 15/24
4	REVISE FOR STEEL STRUCTURE	AUG 11/23
3	REVISE ELEVATION VIEW FOR SITE PLAN	MAY 5/23
2	ISSUED FOR PRICING	DEC 10/21
1	ISSUED FOR REVIEW	NOV 12/21

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APPROVED BY:
 LICENSED PROFESSIONAL ENGINEER
 APR 15/24
 N.F.R. CURRY
 100192021
 PROVINCE OF ONTARIO

PROJECT:
0507 INDUSTRIES LTD. PROPOSED NEW FACILITY
 8 EASY STREET
 PORT PERRY, ONTARIO

DRAWING TITLE:
ELECTRICAL NOTES AND SCHEDULES
 SCALE: - PROJECT NO.: 21016
 DRAWING: NC DRAWING: E1.1
 CHECKED: NC



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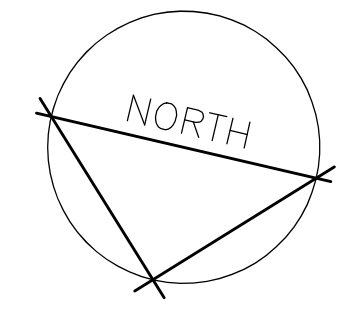
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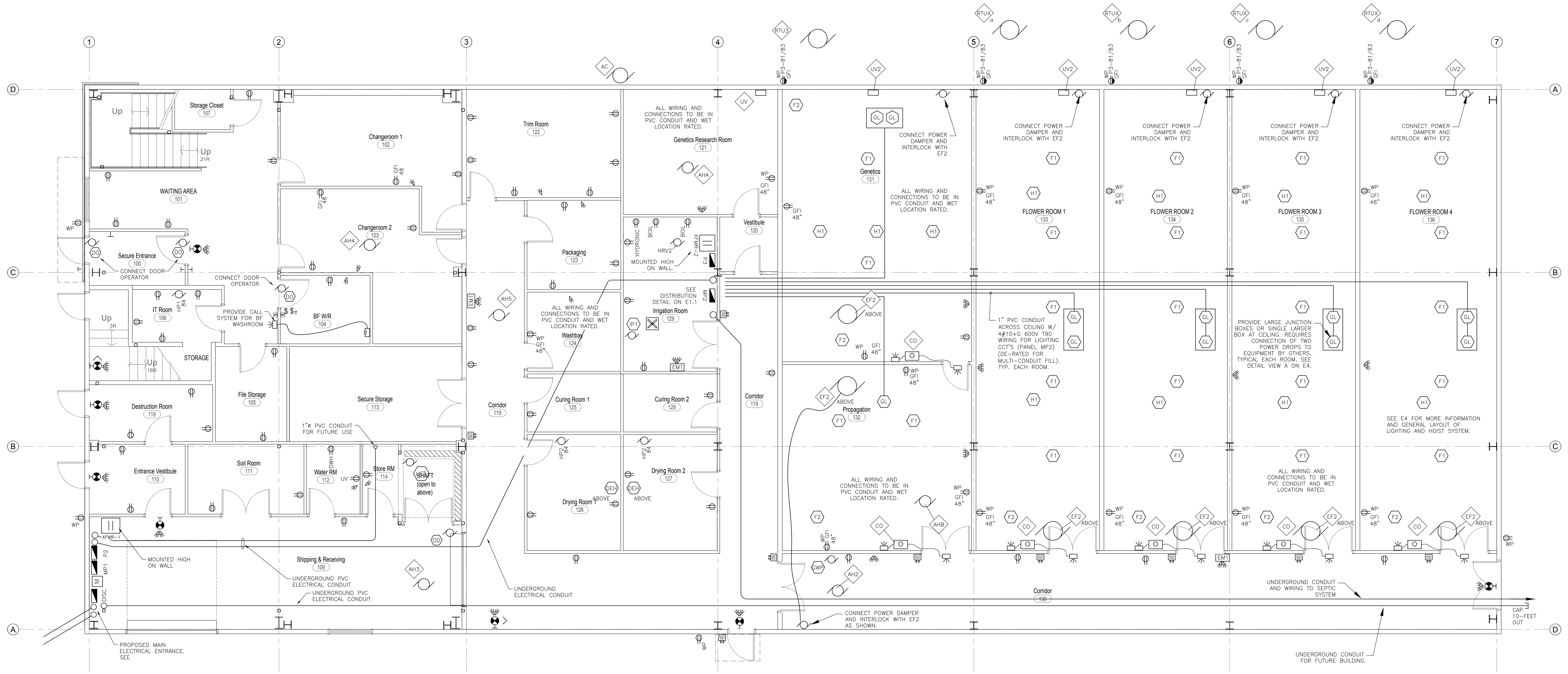
DRAWING TITLE:
ELECTRICAL PANELS
SCALE: -
PROJECT NO.: 21016
DRAWN: NC
CHECKED: NC
DRAWING: E1.2

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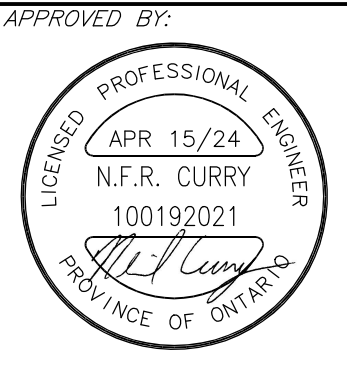


SEE E4 FOR ALL LIGHT SWITCHES

Main Floor Plan

NO.	REVISIONS	DATE
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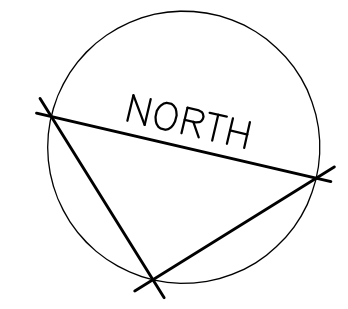
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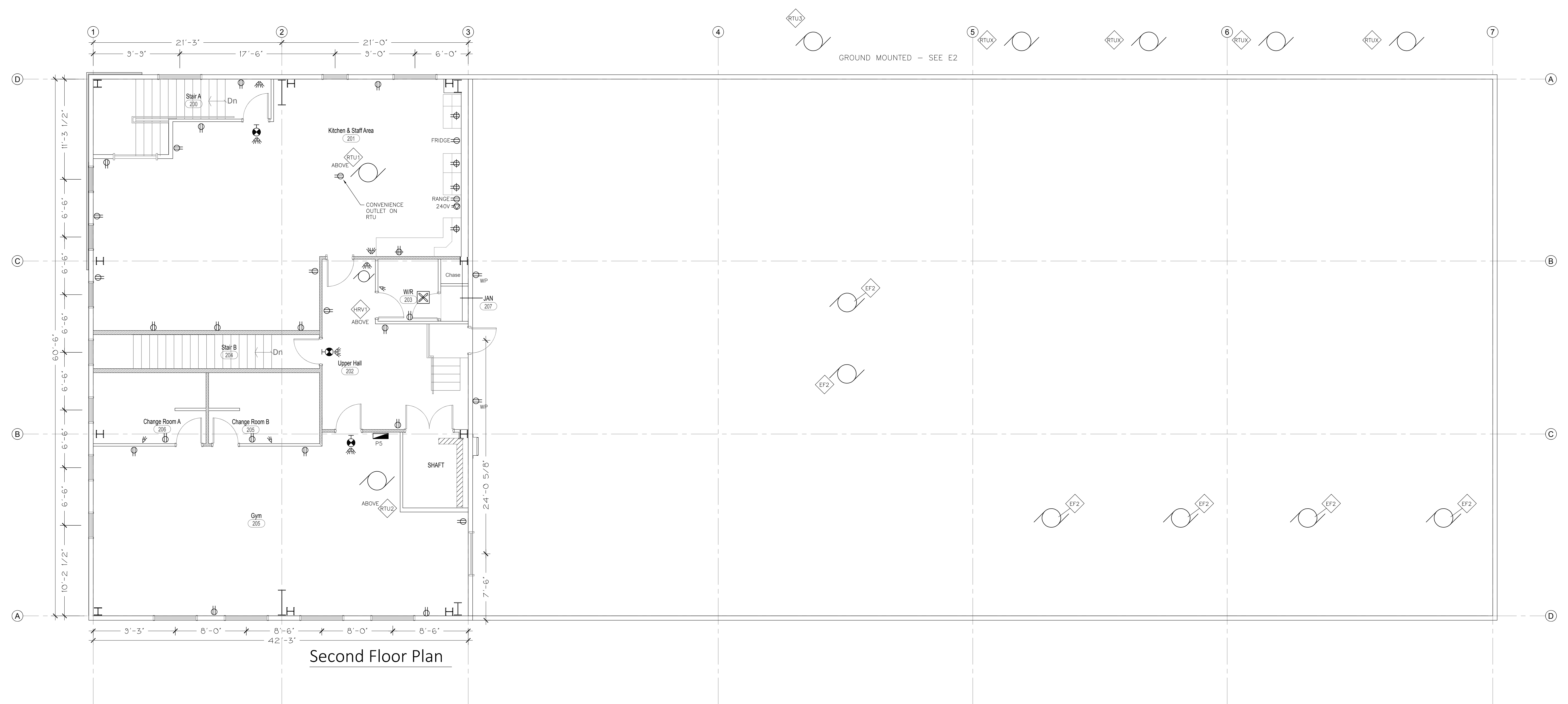
DRAWING TITLE: ELECTRICAL LAYOUT MAIN FLOOR	
SCALE: 3/16" = 1'-0"	PROJECT NO.: 21016
DRAWN: NC	DRAWING: E2
CHECKED: NC	

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Second Floor Plan

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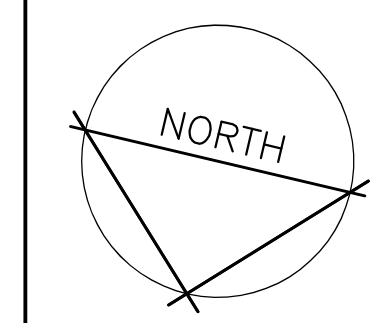
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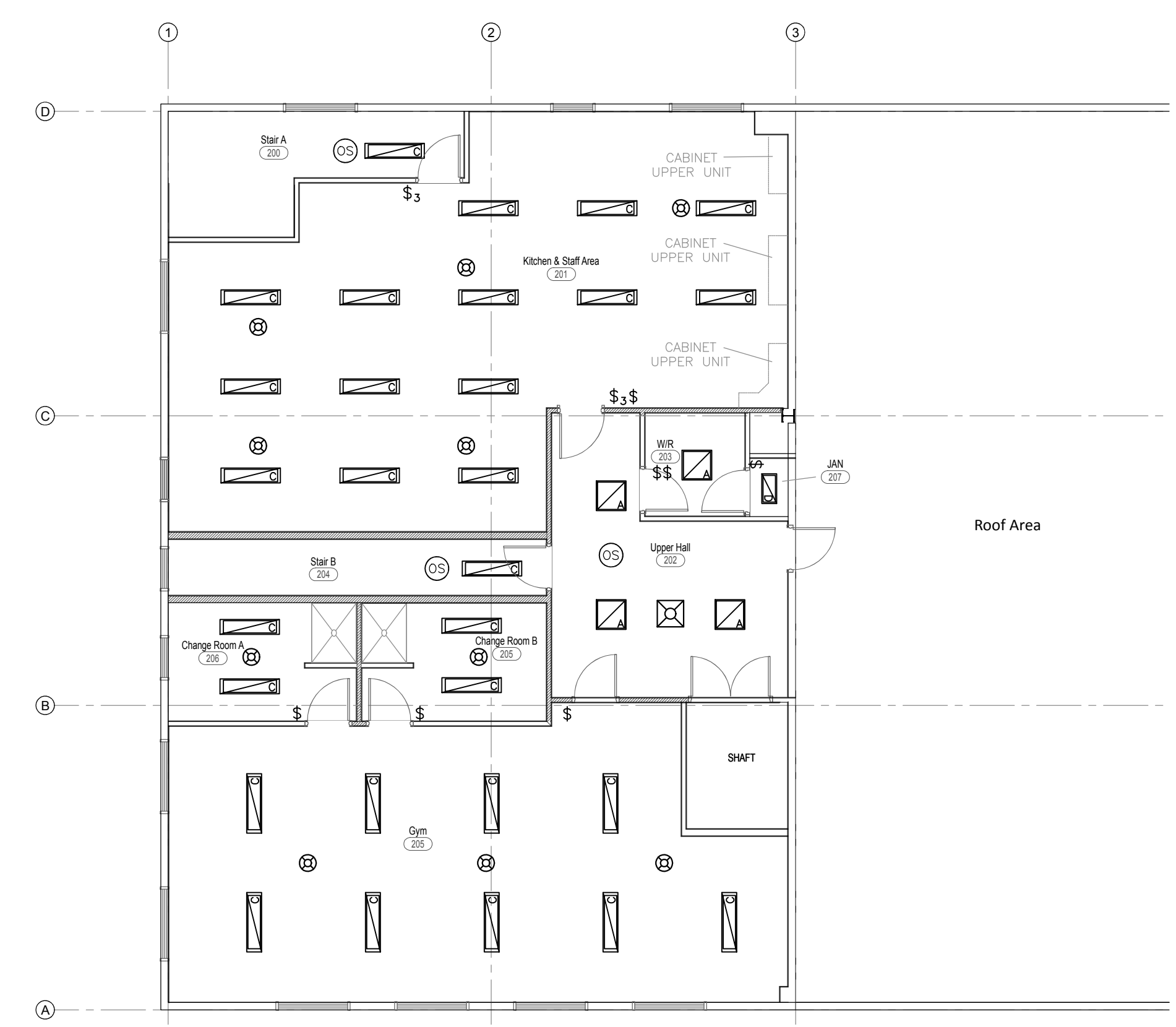
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DRAWING TITLE:
**ELECTRICAL LAYOUT
 SECOND FLOOR**
 SCALE: 3/16" = 1'-0"
 PROJECT NO.: 21016
 DRAWN: NC
 CHECKED: NC
E3

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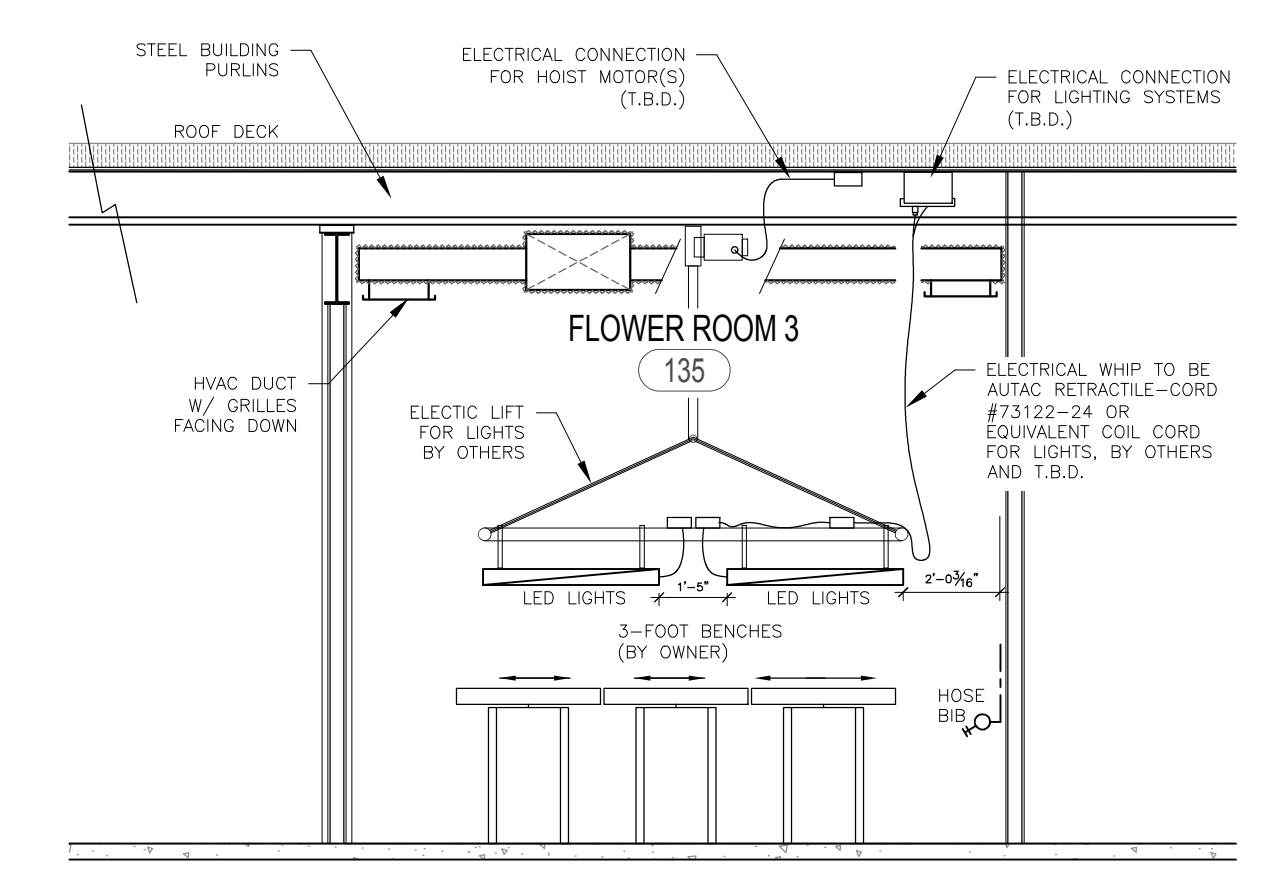
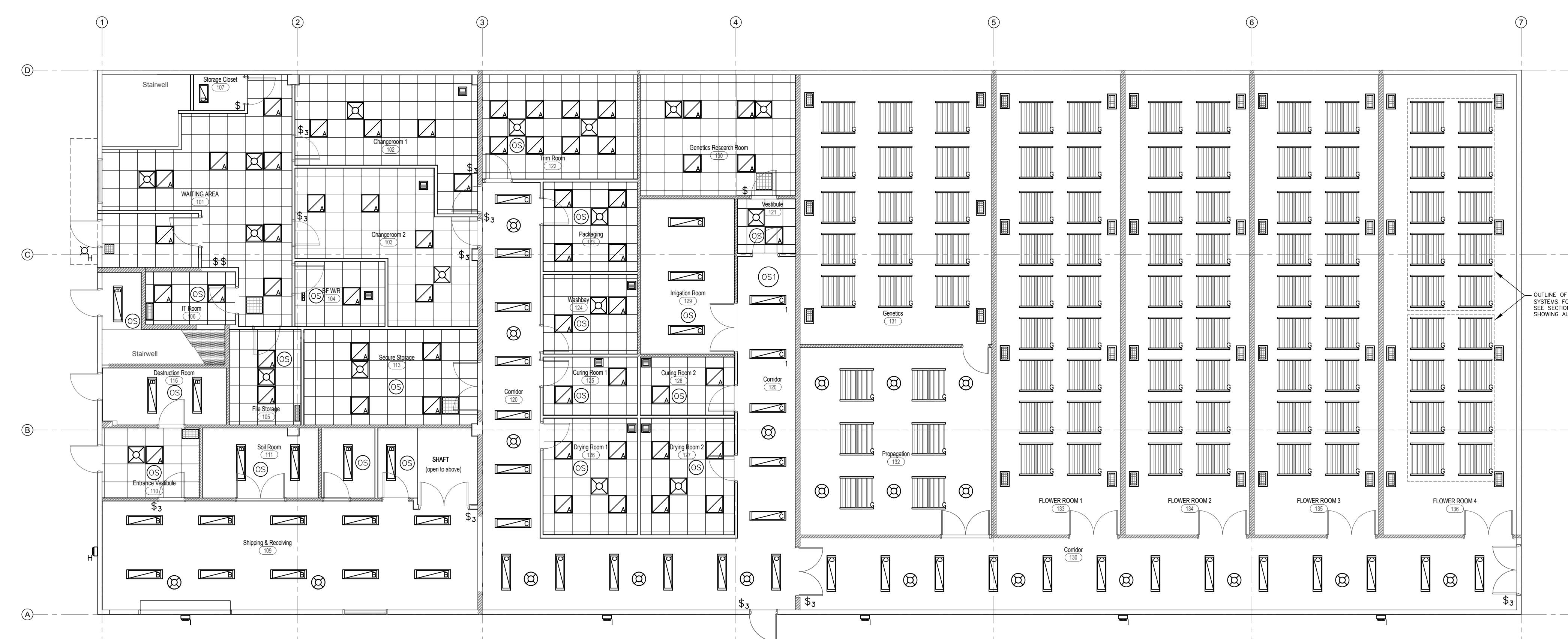


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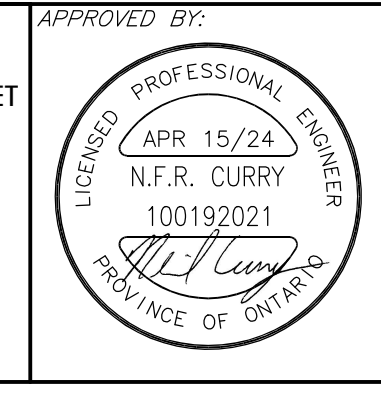
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 8 EASY STREET
 PORT PERRY, ONTARIO

DRAWING TITLE:
LIGHTING LAYOUT

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

DRAWN: NC
 CHECKED: NC

PROJECT NO.: 21016
 DRAWING: E4

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ELECTRICAL NOTES

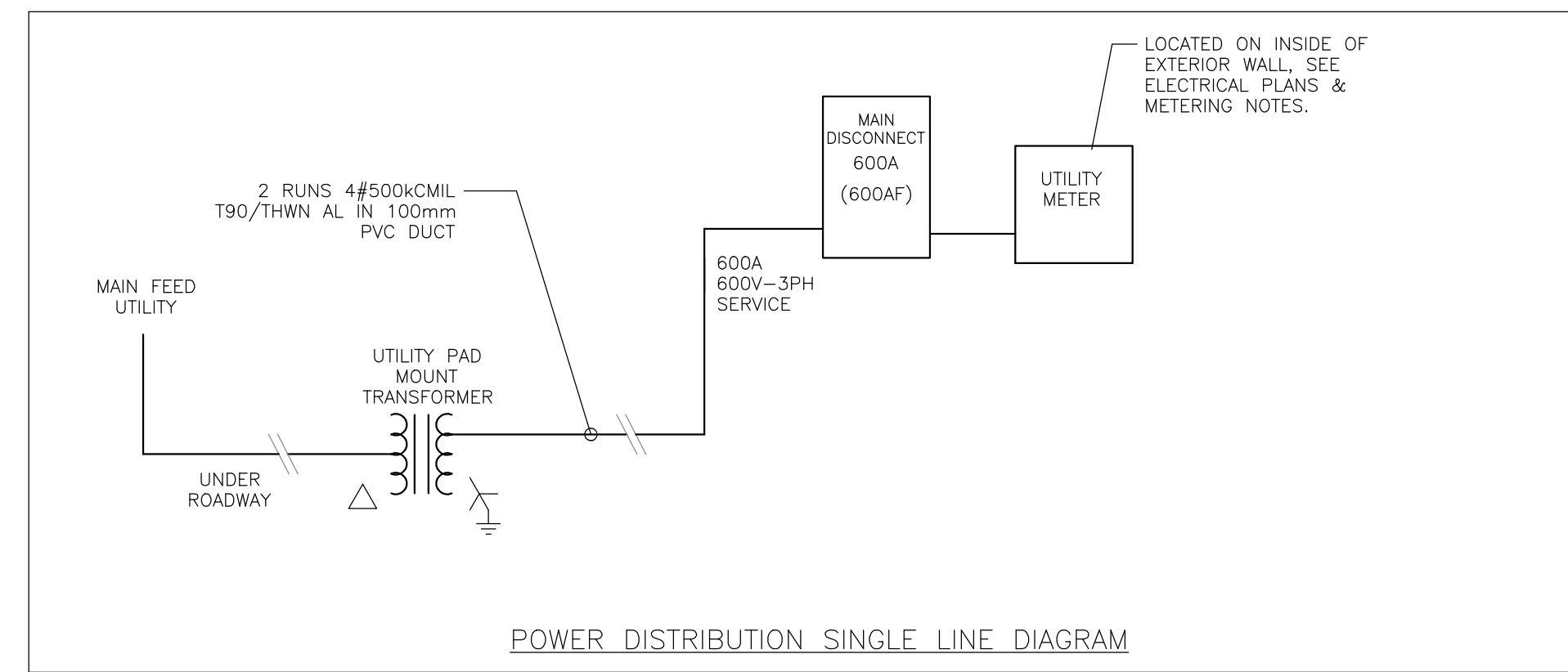
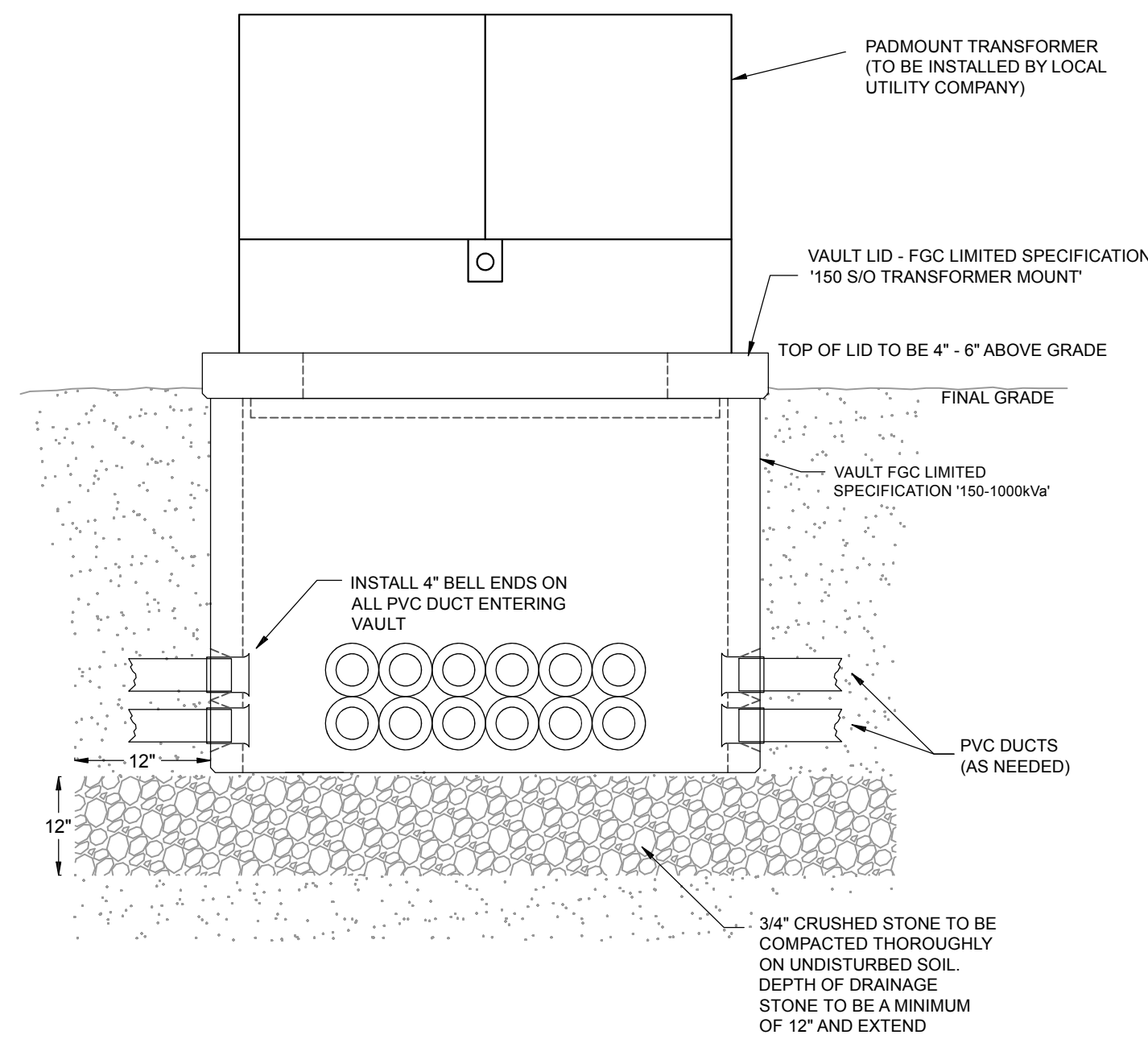
- 1 ELECTRICAL CONTRACTOR TO INSTALL DUCTS COMPLETE WITH 9mm (3/8") PULL ROPE. REFER TO SERVICING STANDARDS.
- 2 A MINIMUM VERTICAL CLEARANCE OF 0.3m MUST BE MAINTAINED WHEN CROSSING OTHER UTILITIES.
- 3 ALL DUCT SWEEPS TO BE TYPE DB2 AND HAVE A 60° RADIUS.
- 4 BELL ENDS ARE TO BE INSTALLED ON ALL DUCTS ENTERING THE VAULT AND SHALL BE INSTALLED FLUSH TO THE INSIDE OF THE VAULT WALL.
- 5 CONTACT LOCAL UTILITY COMPANY TO VERIFY VAULT AND DUCT INSTALLATION FOR ESA REQUIREMENTS.

METERING NOTES

- 1 METER CABINET TO BE MOUNTED INSIDE BUILDING AND ON AN EXTERIOR FACING WALL. METER TO BE PLACED BY LOCAL UTILITY COMPANY AT TIME OF SERVICE INSTALLATION.
- 2 METERING CABINET (48x48x10) TO BE HINGED DOUBLE DOOR, C/W DOOR HANDLE THAT IS LOCKABLE BY PADLOCK. DOORS TO BE BONDED TO CABINET, C/W BACKPLATE TO BE SENT TO LOCAL UTILITY AT LEAST 3 WEEKS PRIOR TO IN-SERVICE DATE. BACKPLATE MUST ILLUSTRATE CABLE ENTRY AND EXIT, HAVE CONTRACTOR'S CONTACT INFORMATION PROVIDED AND INCLUDE SERVICE SIZE AND VOLTAGE (I.E. 600A 347/600V).
- 3 THE MAXIMUM SERVICE CONDUCTOR SIZE ENTERING THE METERING CABINET MAY BE UP TO AND INCLUDING 500MCM OR PARALLEL 3/0.
- 4 NOTE THAT INCOMING CONDUITS TERMINATING AT THE TOP OF THE MAIN DISCONNECT SHOULD BE SEALED.
- 5 METER SHALL BE CONNECTED 'COLD LOAD'.

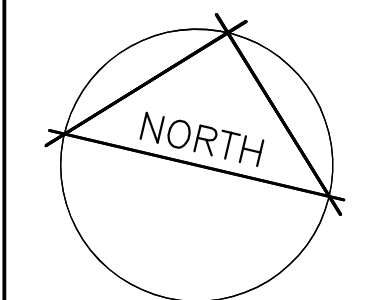
GROUND NOTES

- 1 GROUND WIRE LOOP REQUIRED AS SHOWN AND TO BE 1m (40") OUT AROUND PERIMETER. WIRE TO BE 2/0 BARE COPPER WITH GROUND ROD CONNECTORS.
- 2 GROUND RODS TO BE 3/4" X 10' COPPER GROUND RODS.
- 3 GROUND WIRE TO BE CONTINUOUS AROUND PERIMETER WITH TAIL ENTERING VAULT. PROVIDE SECOND TAIL ENTERING VAULT AT OPPOSITE SIDE OF FIRST TAIL. LEAVE 2m (6'-8") OF TAIL WITHIN VAULT FLOOR.



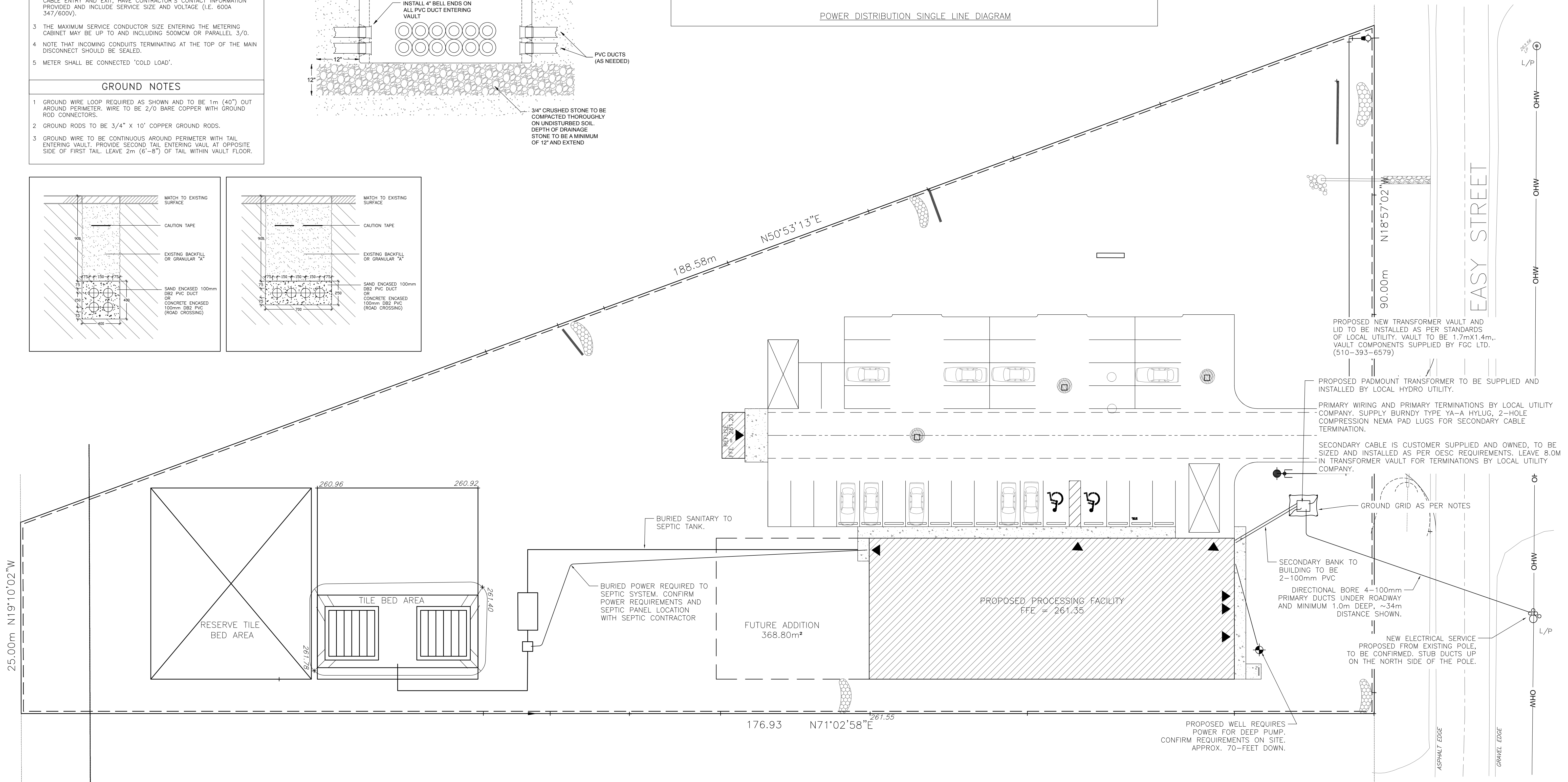
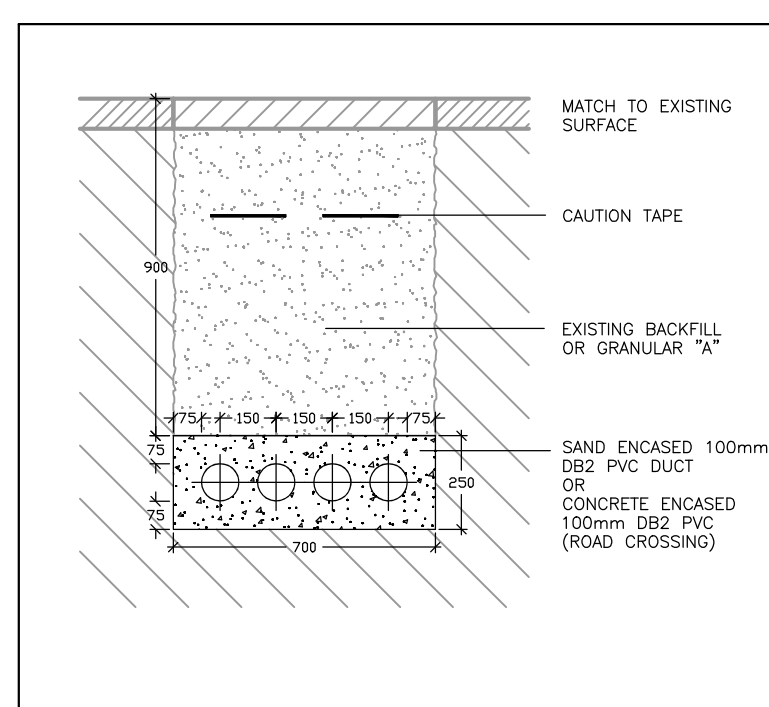
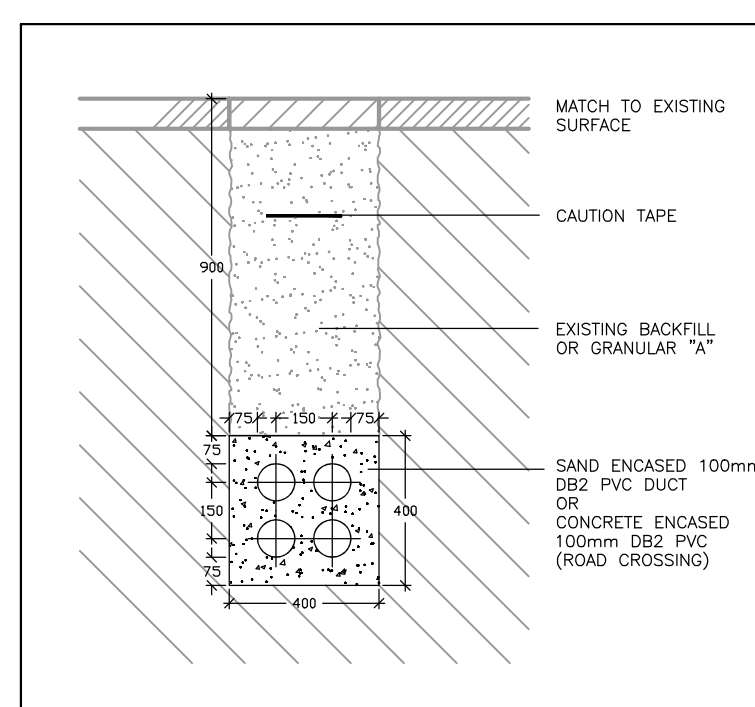
LOAD CALCULATIONS:

CONNECTED LOAD	145.5 KW
HVAC (100%)	80.0 KW
LIGHTING (100%)	30.0 KW
OTHER (80%)	255.5 KW
TOTAL:	255.5 KW
TOTAL AREA:	1,116 sq-m
WATTS PER sq-m	25
REQUIRED LOAD:	27.9 KW
TOTAL BUILDING LOAD:	283.4 KW
FUTURE LOAD:	208.0 KW
TOTAL BUILDING LOAD:	491.4 KW



NOTES

1. THIS DRAWING IS 24X36. CAUTION WHEN SCALING FROM PRINTED DRAWINGS.
2. ALL DIMENSIONS ARE TO BE CHECKED ON SITE.
3. ALL DRAWINGS REMAIN THE PROPERTY OF NFR ENGINEERING LTD. AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT WRITTEN PERMISSION.



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1	ISSUED FOR PERMIT	APR 15/24
	REVISIONS	DATE

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APPROVED BY:
 APR 15/24
 N.F.R. CURRY
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 PROVINCE OF ONTARIO

PROJECT:
0507 INDUSTRIES LTD. PROPOSED NEW FACILITY
 8 EASY STREET
 PORT PERRY, ONTARIO

DRAWING TITLE:
ELECTRICAL SITE LAYOUT
 SCALE: 1:250
 PROJECT NO.: 21016
 DRAWN: NC
 CHECKED: NC
E5