DAN MURPHY'S MAIN SWITCH BOARD

INDOOR FORM 2b
RATED SHORTED CIRCUIT WITHSTAND CURRENT 25kA FOR 1 SECOND
IP42 FLOOR MOUNTED
LOCATED IN PLANT ROOM OR ELECTRICAL SWITCH ROOM

METERED SUPPLY FROM THE SITE MSB

400A LOAD BREAK MAIN SWITCH

MINIMUM 400AMP THREE PHASE & NEUTRAL BUSBARS

160A L - LIGHTS | 160A P - POWER | 160A G - GENERATOR | 160A MSSB | 160A REFRIGERATION DB | 160A SPARE SPACE FOR SOLAR PV | 160A SPARE SPACE | 160A SPARE SPACE

L - LIGHTING DISTRUBUTION SECTION

42 POLE CHASSIS
REFER EMS CONTROL SCHEMATIC

EMS CONTROLLED CONTACTOR CONTACTS (REFER EMS CONTROL SCHEMATIC)

TRADING TRACK LIGHTS CB1	2C+N+E 2.5mm2	LC121
TRADING TRACK LIGHTS CB2	2C+N+E 2.5mm2	LC221
TRADING TRACK LIGHTS CB3	2C+N+E 2.5mm2	LC321
SPARE	2C+N+E 2.5mm2	LC421
		LC122
		LC222
		LC322
		LC422

ENTRANCE AND CHECKOUT LIGHTS CB6	LC623	LC721
LED CABINET LIGHTS CB7	LC724	LC2624
LED CABINET LIGHTS CB8	LC824	LC2626
LED CABINET LIGHTS CB9	LC924	LC3626
INTERNAL ILLUMINATED SIGNAGE CB10	LC1024	LC3126
		LC3326
TRADING TRACK LIGHTS CB11	2C+N+E 2.5mm2	LC1121
TRADING TRACK LIGHTS CB12	2C+N+E 2.5mm2	LC1321
TRADING TRACK LIGHTS CB13	2C+N+E 2.5mm2	LC1321
TRADING TRACK LIGHTS CB14	2C+N+E 2.5mm2	LC1421
		LC1122
		LC1322
		LC1422

ENTRY TOWER PORTAL PELMET LIGHTS CB16	L1625	L3727
PICKUP CANOPY CB17	L1725	L3827
PICKUP CANOPY SIGNAGE LIGHTS CB18	L1825	L3927
ENTRY AND AWNING LIGHTS CB19	L1925	L4027

LIGHTING CONTACTOR CONTROL CB41

EMS CONTROLLED CONTACTOR CONTACTS (REFER EMS CONTROL SCHEMATIC)

TRADING TRACK LIGHTS CB22	2C+N+E 2.5mm2	LC2221
SPARE	2C+N+E 2.5mm2	LC2321
SPARE	2C+N+E 2.5mm2	LC2421
SPARE	2C+N+E 2.5mm2	LC2521
		LC2122
		LC2322
		LC2422
		LC2522

COOLROOM LIGHTS CB27	LC2721	C521
FESTOON LIGHTS CB28	LC2824	C224
PYLON 10mm CIRCUIT CB29	LC2926	
EXTERNAL ILLUMINATED SIGNAGE CB30	LC3026	
EXTERNAL ILLUMINATED SIGNAGE CB31	LC3126	
EXTERNAL ILLUMINATED SIGNAGE CB32	LC3226	C129
CARPARK CB33 10mm CIRCUIT	LC3326	
CARPARK CB34 10mm CIRCUIT	LC3426	
OFFICE AND PICKUP AREA LIGHTS CB37	L3727	
STOCKROOM AND SECURE STORAGE LIGHTS CB38	L3827	
SPARE	L3927	
SPARE	L4027	C127

LIGHTING CONTACTOR CONTROL CB41

P - POWER DISTRIBUTION SECTION

60 POLE CHASSIS

ENTRANCE ROLLER SHUTTER CB2 (REFER DOOR SCHEDULE - MAY BE SUPPLIED AS SINGLE PHASE ADJUST ACCORDINGLY)	20A RCD	SPACE
SPACE FOR RCD UNIT		SPACE
DOCK ROLLER SHUTTER CB8 (REFER DOOR SCHEDULE - MAY BE SUPPLIED AS SINGLE PHASE - ADJUST ACCORDINGLY)	20A RCD	SPARE
		SPARE
SPACE FOR RCD UNIT		SPARE
		A/C PICKUP CB49
		PICKUP WORKSTATION OUTLETS CB42
CLEANERS HOT WATER CB14	20A RCD	AUTO GATES & MEDIA SCREEN CB43
		EAS CB44
SPACE FOR RCD UNIT		SERVICE HUB OUTLETS CB45
		CHECKOUTS CB46
		CLEANER OUTLETS CB47
		TASTING TABLE OUTLET CB48
BALE PRESS CB35	20A RCD	A/C SECURE STORAGE CB49
		PLANTROOM & CONDENSER DECK OUTLETS CB50
SPACE FOR RCD UNIT		PICKUP AREA FRIDGES CB51
		GENERAL OFFICE OUTLETS CB52
		GENERAL OFFICE COPIER OUTLET CB53
		LOADING DOCK & BELL PRESS OUTLETS CB54
		BATTERY CHARGER GPO CB55
		STOCKROOM GLASS WASHER CB56
		MSB PUMP CB57
		HOT / COLD WATER UNIT REFER EMS CONTROL SCHEMATIC CB58
		TEAM ROOM & AMENITIES OUTLETS CB59
		TEAM ROOM OUTLETS CB60

G - GENERATOR

1 PHASE & N+E 160A PVC/PVC Cu CABLES

POWER FAILURE SENSOR AND CONTROLS

GENERATOR CONTROL PANEL

AUTOMATIC 20kVA 1PH DIESEL STANDBY GENERATOR

GENERATOR SKID
LOCATED IN PLANT ROOM

1 PHASE & N+E 160A PVC/PVC Cu CABLES

100A GENERATOR DISTRIBUTION SECTION

63A UPS

MINIMUM 100A BUS BAR

EMS CONTROLLED CONTACTOR CONTACTS (REFER EMS CONTROL SCHEMATIC)

16mm2 1 PHASE & N+E 63A PVC/PVC Cu CABLES - SUBJECT TO VOLTAGE DROP

		GENC2121
		GENC2221
		GENC2321
		GENC2421
		GENC2122
		GENC2222
		GENC2322
		GENC2422
		GENC2521
		GENC2621
		GENC2522
		GENC2622

TRADING TRACK LIGHTS CB21	3C+N+E 2.5mm2	GENC2121
TRADING TRACK LIGHTS CB22	3C+N+E 2.5mm2	GENC2221
TRADING TRACK LIGHTS CB23	3C+N+E 2.5mm2	GENC2321
TRADING TRACK LIGHTS CB24	3C+N+E 2.5mm2	GENC2421
TRADING TRACK LIGHTS CB25	3C+N+E 2.5mm2	GENC2122
TRADING TRACK LIGHTS CB26	3C+N+E 2.5mm2	GENC2222

GENC21-24hr
GENC22-24hr
GENC23-24hr
GENC24-24hr
GENC25-24hr
GENC26-24hr

ICON TEMPERATURE CONTROLLED CABINETS CB29		
ICE CABINET CB30		
CCTV MONITORS CB31		
FIRE INDICATOR PANEL CB32		
STORE ENTRY & PICKUP AREA AUTO DOORS CB33		
COOLROOM AUTO DOORS CB34		

COOLROOM LIGHTS CB9	G922	C522
COOLROOM LIGHTS CB10	G1022	C522
ENTRANCE AND CHECKOUT LIGHTS CB12	G1223	C123
TEAMROOM & AMENITIES LIGHTS CB13	G1327	
STOCKROOM, LOADING DOCK & AWNING LIGHTS CB14	G1427	C127
PLANTROOM & STAIRWELL LIGHTS CB15		

		GENC321
		GENC421
		GENC521
		GENC222
		GENC322
		GENC422
		GENC522

TRADING TRACK LIGHTS CB2	3C+N+E 2.5mm2	GENC221
TRADING TRACK LIGHTS CB3	3C+N+E 2.5mm2	GENC321
TRADING TRACK LIGHTS CB4	3C+N+E 2.5mm2	GENC421
TRADING TRACK LIGHTS CB5	3C+N+E 2.5mm2	GENC521
TRADING TRACK LIGHTS CB6	3C+N+E 2.5mm2	GENC222
TRADING TRACK LIGHTS CB7	3C+N+E 2.5mm2	GENC322

GENC2-24hr
GENC3-24hr
GENC4-24hr
GENC5-24hr
GENC6-24hr
GENC7-24hr

SECURITY LIGHTS COOLROOM CB40		
SECURITY LIGHTS STOCKROOM, OFFICE, PLANTROOM AND POLUP AREA CB41		
PE CELL CONTROL CB42		
EXIT SIGNS CB43		
EMERGENCY LIGHTS TRADING AREAS CB44		
EMERGENCY LIGHTS BACK OF HOUSE CB45		
EMERGENCY LIGHTING TEST STORE AND AMENITIES		
SECURITY LIGHT EXTERNAL DOORWAYS AND CONDENSER PLATFORM CB47		
LIGHTING CONTACTOR CONTROL CB48		

MECHANICAL SERVICES BOARD
(BY OTHERS)

3 PHASE & N+E 160A PVC/PVC Cu

REFRIGERATION SWITCHBOARD
(BY OTHERS)

3 PHASE & N+E 160A PVC/PVC Cu

DB GEN
LOCATED IN PLANT ROOM OR ELECTRICAL SWITCH ROOM

CENTRALISED MODULAR 1 PHASE UPS

UPS
5kVA

5kVA UPS
LOCATED IN OFFICES

UPS & BYPASS SWITCH SUPPLIED AND INSTALLED BY WW IT

DB UPS
LOCATED IN OFFICES

40A UPS DISTRIBUTION SECTION

MINIMUM 100A BUS BAR

SCS BD SUPPLY 1 UPS1	NOTE 1	1
SCS BD SUPPLY 2 UPS2	NOTE 1	2
CHECKOUTS 1 & SERVICE DESK UPS3		3
CHECKOUTS 2 & 4 UPS4		4
CHECKOUTS 3 & 5 UPS5		5
GENERAL OFFICE OUTLETS UPS6		6
FINGER SCANNER & TEAM ROOM OUTLETS UPS7		7
RF CHARGERS (GENERAL OFFICE) UPS8		8
NBN OPTICAL CABLE CONVERTERS (GENERAL OFFICE) UPS9		9
PICKUP WORKSTATION OUTLET UPS10		10
SECURITY PANELS UPS11	NOTE 1	11
SPARE		12
EMS CONTROL PANEL UPS13		13
		16

18 POLE SINGLE PHASE CHASSIS

UPS NOTES

1. SOCKET OUTLETS TO BE FLAT EARTH TYPE. ALL OTHER UPS OUTLETS TO BE ROUND EARTH TYPE.

EMS CONTROL SCHEMATIC

EMS PANEL 240VAC SUPPLY IS FROM UPS DB CB13

EARTH SCREEN AT THIS END ONLY

240V AC 24VAC

50% TRADING FLOOR LIGHTS — ZONE 1 / CARD 1 OUT 1

OTHER 50% TRADING FLOOR LIGHTS — ZONE 2 / CARD 1 OUT 2

ENTRANCE / CASHIER LIGHTS — ZONE 3 / CARD 1 OUT 3

REFRIG & NON-REFRIG CABINET LIGHTS & INTERNAL SIGNAGE — ZONE 4 / CARD 1 OUT 4

ENTRY AWNING & EXTERNAL LIGHTS — ZONE 5 / CARD 1 OUT 4

EXTERNAL SIGNAGE & PICKUP AWNING — ZONE 6 / CARD 1 OUT 4

BACK OF HOUSE LIGHTS — ZONE 7 / CARD 1 OUT 4

DINING ROOM HOT/COLD WATER UNIT — ZONE 8 / CARD 1 OUT 5

LIGHTS CONTROL POWER ON — LIGHTS CP ON / CARD 1 IN 4

LOCATED IN EMS PANEL

EMS1 MSB LIGHTS | 10 PAIR INSTROLEX | LCB48 20A

TIME CLOCK TO TURN OFF C126 AT 10.00PM UNTIL 8.00AM.

LOCATED IN MSB LIGHTING DISTRIBUTION SECTION

EMS1 DBGEN | 4 PAIR INSTROLEX | LCB42 20A

LOCATED IN DBGEN

EMS2 SEC | 1 PAIR INSTROLEX

SECURITY 100% LIGHTING — ALL LIGHTS ON / CARD 1 IN 1

CABLE AND TERMINATION BY ELECTRICAL CONTRACTOR. SECURITY CONTRACTOR TO TERMINATE AT SECURITY ALARM PANEL

LOCATED IN SECURITY ALARM PANEL

EMS3 PE CELL | 2 PAIR INSTROLEX

DAYLIGHT SWITCH — PE CELL / CARD 1 IN 3

LOCATED HIGH ON NORTHER FACE OF BUILDING

LOCATED IN DBGEN

EMS4 DIR CP | 2 PAIR INSTROLEX

EMS TRADE OVERRIDE ON — TRADE OVERRIDE / CARD 1 OUT 6

TRADE OVERRIDE ON

REMAINS IN OVERRIDE FOR 1 HOUR

EMS TRADE OVERRIDE — TRADE OVERRIDE / CARD 1 IN 2

BMS TRADE OVERRIDE

HOLD DOWN FOR 5 SECONDS SPRING RETURN

LOCATED IN OFFICE AREA - OVER RIDE CONTROL PANEL

GENERAL NOTES

1. REFER TO SPECIFICATION FOR DETAIL CONSTRUCTION REQUIREMENTS.
2. ALLOW FOR RELOCATING THE MAIN CIRCUIT BREAKER TO THE LOAD SIDE OF SUPPLY AUTHORITY C.T.'S AS AND IF REQUIRED BY SUPPLY AUTHORITY.
3. PROVIDE RCD PROTECTION TO ALL POWER OUTLET CIRCUITS, LIGHT CIRCUITS AND OTHER CIRCUITS AS INDICATED ON THE SCHEMATICS.
4. THE SELECTION OF CIRCUIT BREAKERS IN MSB AND DB'S SHALL PROVIDE CASCADING BACKUP PROTECTION AND ENHANCED DISCRIMINATION SELECTIVITY AT 415 VOLTS.

EMS LIGHTING OVERRIDE CONTROL PANEL ARRANGEMENT - NTS

PRESS AND HOLD FOR 5 SECONDS TO OVERRIDE EMS LIGHTING

TRADE OVERRIDE

OVERRIDE LIGHTING PERIOD 1 HOUR

SHOWING LABELS AND SPRING RETURN ILLUMINATED PUSH BUTTONS - PANEL TO BE SUPPLIED WITH EMS AND BE MOUNTED IN OFFICE AREA AS SHOWN ON DRAWING DB501

EMS LEGEND

DESCRIPTION — ZONE / MODULE ID POINT — TERMS — PAIR — CORE

CABLE ID — CABLE TYPE — CORE — WIRE NO

TERMINAL NUMBERS TO BE SUPPLIED BY EMERSON

RELAY — CORE — WIRE NO — NO — RELAY CONTACT

C12XX — = 240V 4 POLE NORMALLY CLOSED CONTACTOR TELEMECANIQUE GC2504

RX — = 240V CONTROL RELAY OMRON G2R 240VAC

RXX — = 24VAC CONTROL RELAY WEIDMULLER 9921SB 24VAC

EMS NOTES

1. 12 PAIR SCREENED INSTRUMENT CABLES TO BE SUPPLIED, INSTALLED AND TERMINATED BY THE ELECTRICAL CONTRACTOR. ALL WIRES ARE TO BE PINNED AND NUMBERED AT BOTH ENDS. THE ENDS OF SPARE CORES ARE TO BE TAPED AND THE SCREEN EARTHED AT ONE END ONLY. SPARE CORES AT THE OPPOSITE END ARE TO BE CUT OFF AND TAPED. CABLE TYPE IS 12 OR 4 PAIR 7/.21-4mm2 DARKUS T.A.W.C. POLYPROPYLENE - INSULATED, ALUMINIUM LAMINATED TAPE SCREENED, TWISTED PAIR, PVC SHEATHED.
2. IF COOLROOM LIGHTS AND REFRIG CABINET LIGHTS HAVE CONNECTION POINTS IN SEPARATE CONTROL PANELS, THEN AN INDIVIDUAL MINIMUM FOUR PAIR CABLE IS TO BE INSTALLED FOR EACH. IN ANY CASE CO-ORDINATE THE INSTALLATION WITH THE REFRIG CONTRACTOR. INTERNAL COMPONENTS AT THE REFRIG CONTROL PANELS ARE PROVIDED BY THE REFRIG CONTRACTOR/PANEL MANUFACTURER.
3. AT THE MSB - 240V NORMALLY CLOSED CONTACTORS, ELV INTERPOSING RELAYS, 240VAC RELAYS, DIN RAIL, INTERNAL PANEL WIRING, LABELS AND MISCELLANEOUS ITEMS ARE ALL TO BE PROVIDED AND INSTALLED BY THE SWITCHBOARD MANUFACTURER.
4. THE ELECTRICAL CONTRACTOR IS TO PROVIDE CABLE MARKERS AT EACH END OF THE ELV CONTROL CABLES AT PANEL ENTRY POINTS. ELV CABLES ARE TO BE SEGREGATED FROM POWER CABLES AS PER AS3000 AND WHERE INSTALLED ON POWER CABLE TRAY, DUCT OR LADDER, ENCLOSED IN A DEDICATED INSULATING CONDUIT. ELV WIRING IN INTERNAL PANEL DUCTS SHALL BE PROTECTED WITH INSULATION OF THE SAME RATING AS THE HIGHEST RATED CIRCUIT WIRING WITHIN THE DUCT OR RUN IN A SEPARATE DEDICATED DUCT.
5. THE REFRIGERATION CONTRACTOR IS TO SUPPLY AND INSTALL THE EMS PANEL. THEY WILL ALSO ENGAGE EMERSON TO CARRY OUT TESTING AND COMMISSIONING. THE ELECTRICAL CONTRACTOR IS TO WIRE ALL ELV CONTROL CABLES TO THE DESIGNATED I/O POINTS AND ASSIST EMERSON WITH THE COMMISSIONING OF THE LIGHTING SYSTEM.
6. THE ELECTRICAL CONTRACTOR IS TO CO-ORDINATE THE INSTALLATION WITH THE EMS SUPPLIER / EMERSON AND THE SWITCHBOARD MANUFACTURER.
7. EMERSON IS TO NOMINATE THE ELV CONTROL VOLTAGE AND I/O TERMINALS.

REV:	DESCRIPTION:	DATE:
E	CONSTRUCTION	06/12/2022

ELECTRICAL DESIGN GROUP BRISBANE PTY LTD
ACN 092 710 793

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USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.

ALL DIMENSIONS TO BE VERIFIED ONSITE.

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167 OSBORNE ROAD, MITCHELTON

DRAWING:
ELECTRICAL SERVICES
DAN MURPHY'S SCHEMATICS

SCALE: NOT TO SCALE AT A1

PROJECT NO:	DRAWING NO:	REVISION:
C2499a	E25	E