## **NOTES**

#### EXTENT OF WORKS

LEVEL 3 IS TO BE FULLY REFURBISHED WITH ALL OF THE EXISTING ELECTRICAL SERVICES REMOVED UNLESS NOTED OTHERWISE. THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE ELECTRICAL SERVICES.
- CO-ORDINATION.
- INSPECTIONS. - TESTING AND COMMISSIONING.
- MAINTENANCE. - CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- LIGHTING.
- COMMUNICATIONS CABLING.
- FIRE ALARM SYSTEM
- MAINTENANCE MANUAL DETAILING ALL COMPONENTS OF THE WORKS AND INCLUDING AS CONSTRUCTED DOCUMENTS.

- ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE ELECTRICAL SERVICES INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

SUPPLY ALL LABOUR, MATERIALS, EQUIPMENT, AND ALL OTHER ITEMS, WHETHER MENTIONED IN DETAIL OR NOT, REQUIRED FOR THE SATISFACTORY COMPLETION OF THE ELECTRICAL SERVICES INSTALLATION, LEAVING IN FULL WORKING ORDER TO THE SATISFACTION OF THE PROJECT MANAGER.

ACCEPT FULL RESPONSIBILITY FOR LIASING, ARRANGING AND CO-ORDINATION OF ALL WORKS THAT HAVE AN EFFECT ON OR WILL BE AFFECTED BY THE ELECTRICAL SERVICES.

REFER TO THE EQUIPMENT SCHEDULE FOR ADDITIONAL REQUIREMENTS.

REMOVE ALL EXISTING ELECTRICAL SERVICES MADE REDUNDANT BY THE WORKS. ALL EXISTING ELECTRICAL SERVICES THAT ARE NOT REDUNDANT WITHIN THE AREA OF THE WORKS THAT WILL BE REMAIN EXPOSED UPON COMPLETION ARE TO BE RELOCATED SUCH THAT THEY ARE CONCEALED OR MODIFIED / RERUN SUCH THAT THEY ARE VISUALLY NEAT AND TIDY AND RUN TRUE AND SQUARE WITH THE BUILDING STRUCTURE.

#### 2. WORKMANSHIP

ENSURE THAT THE WORK IS PERFORMED BY THE HOLDER OF A CURRENT ELECTRICAL SUB CONTRACTOR LICENSE. ENSURE THE INSTALLATION AND ALL COMPONENTS. FIXTURES. FITTINGS. OUTLETS AND CABLES ARE SUPPLIED AND INSTALLED TO A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS. ENSURE ALL MATERIALS AND COMPONENTS OF A SIMILAR TYPE ARE OF THE SAME MANUFACTURER AND INSTALLED IN A UNIFORM MANNER.

IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE INSTALLATION IS FIT FOR PURPOSE AND IS PROVIDED AS A COMPLETE WORKING INSTALLATION. IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL COMPONENTS, FITTINGS. FIXTURES. SYSTEMS. PROGRAMMING ETC IRRESPECTIVE OF THE LEVEL DETAILED IN THE DOCUMENTS SUCH THAT THE INSTALLATION IS PROVIDED AS A COMPLETE WORKING INSTALLATION.

CONCEAL ALL WIRING AND CONDUITS WERE POSSIBLE. EXPOSED CABLING OR CONDUITS MUST BE APPROVED BY THE PROJECT MANAGER AND BE VISUALLY NEAT AND TIDY AND RUN TRUE AND SQUARE WITH THE BUILDING STRUCTURE. ENSURE ALL COMPONENTS, EQUIPMENT AND MATERIALS SUPPLIED ARE NEW, UNUSED, DESIGNED AND SELECTED TO ENSURE SATISFACTORY OPERATION UNDER VARYING ATMOSPHERIC, CLIMATIC, HUMID TROPICAL CONDITIONS WITHOUT DISTORTION AND DETERIORATION IN ANY PART AFFECTING EFFICIENCY AND RELIABILITY OF THE SYSTEMS. DESIGN AND SELECT ALL EQUIPMENT TO PROVIDE THE NECESSARY SAFETY TO HUMAN LIFE AND PROPERTY DURING OPERATION AND MAINTENANCE WITH PARTICULAR ATTENTION GIVEN TO ELECTRICAL SAFETY AND SEGREGATION PRECAUTIONS.

CHECK THE FINISHED PAINTWORK AROUND THE AREA OF EACH INSTALLATION AND TOUCH UP ALL DAMAGED PARTS AND FINISHES AFTER THE INSTALLATION OF THE ELECTRICAL SERVICES.

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDER'S PROGRAM. ENSURE ALL FINAL LOCATIONS OF OUTLETS AND FITTINGS ARE CO-ORDINATED ONSITE WITH THE ARCHITECT AND ALL OTHER SERVICES, TO THE APPROVAL OF THE PROJECT MANAGER. ALLOW TO CO-ORDINATE THE FINAL LOCATION OF ALL EQUIPMENT, FITTINGS, & OUTLETS, SUCH THAT THEY ARE INSTALLED IN ACCORDANCE WITH THE AS3000 RESTRICTED ZONES, AND ARE NOT COVERED INAPPROPRIATELY.

ENSURE THAT ALL METAL SURFACES ARE SUITABLY PROTECTED AGAINST CORROSION, AND THAT ALL PLASTIC MATERIALS ARE UV STABILISED.

PROVIDE ALL MATERIALS AS NEW. AND OF THE HIGHEST CLASS AVAILABLE FOR THEIR RESPECTIVE TYPES. ENSURE ALL ASPECTS OF THE WORK ARE OF A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER. TO THE CURRENT INDUSTRY STANDARDS.

# 3. STANDARDS

IRRESPECTIVE OF INFORMATION CONTAINED IN THE ELECTRICAL SERVICES DOCUMENTS OR IN INSTRUCTIONS, IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL ELECTRICAL SERVICES WORKS ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE ELECTRICAL SERVICES DOCUMENTS AND INSTRUCTIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO THE PLACING OF ORDERS, FABRICATION OR INSTALLATION OF THE ITEMS/METHODS IN DISCREPANCY.

- NCC BUILDING CODE OF AUSTRALIA.
- ELECTRICITY ACT. - ELECTRICAL SAFETY ACT
- AS/NZS3000. - AS3008.
- AS 1670.1
- AS 1170.4. - WORKPLACE HEALTH AND SAFETY ACT.
- TELECOMMUNICATIONS ACT.
- ACMA REQUIREMENTS.

## 4. AUTHORITIES

ENSURE ALL OF THE ELECTRICAL SERVICES COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AUTHORITIES HAVING JURISDICTION OVER THE SITE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- ACMA. LOCAL COUNCIL.
- LOCAL SUPPLY AUTHORITY.
- STATE GOVERNMENT DEPARTMENT OF ENVIRONMENT AND HERITAGE.
- QLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.
- QLD FIRE AND EMERGENCY SERVICES.

## **NOTES**

#### 5. CABLES

UNLESS OTHERWISE SPECIFIED, INSTALL AND TERMINATE CABLES IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. DETERMINE THE FINAL ROUTES TO SUIT THE BUILDING STRUCTURE AND SITE CONDITIONS. UNLESS NOTED OTHERWISE, PROVIDE ALL 240 VOLT POWER AND LIGHTING WIRING AS 2.5mm² TWIN & EARTH STRANDED COPPER CONDUCTORS, PVC INSULATED 0.6/1kV V75 GRADE TO AS3174, PROTECTED BY A 20 AMP CIRCUIT BREAKER. ALL CONDUIT AND FITTINGS TO BE RIGID UPVC TO AS2053, UNLESS NOTED OTHERWISE.

### 6. POWER DISTRIBUTION

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES THE REMOVAL AND REPLACEMENT OF THE MSSB AND THE DB-E INCORPORATING DB-3. NEW DISTRIBUTION BOARDS DB-3A AND DB-3B. ALL NEW CIRCUITS, OUTLETS AND CONNECTIONS ARE TO BE PROVIDED THROUGHOUT THE AREAS BEING RENOVATED.

THE MSSB. DB-E AND DB-3 IS TO MATCH THE LEVEL DISTRIBUTION BOARD IN STYLE. LAYOUT AND APPEARANCE.

THE POWER SUPPLY TO THE REMAINDER OF THE BUILDING THAT IS NOT BEING RENOVATED IS TO BE MAINTAINED AT ALL TIMES BETWEEN 10.00PM AND 5.00AM. ANY INTERRUPTION TO THE POWER SUPPLY MUST BE ADVISED TO THE BUILDING OPERATOR IN WRITING TWO WEEKS PRIOR.

PROVIDE PRIVATE METERS WITHIN DB-3A AND DB-3B. CONNECT THE PRIVATE METERS TO THE EXISTING BARTEC BMS SO THE OPERATOR CAN REMOTELY READ THE METERS. ENGAGE BAR-TEC AUTOMATION (07) 3245 5255 AS A NOMINATED SUB CONTRACTOR TO CONNECT THE PRIVATE METERS AND CONFIGURE THE BMS. COORDINATE THE MODULAR WORKSTATION OUTLETS / CONNECTION / CABLE ACCESS WITH THE WORKSTATION SUPPLIER.

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES. BUT IS NOT LIMITED TO THE

- FOLLOWING EXTENT OF WORK: - POWER DISTRIBUTION.
- EARTHING.
- REPLACEMENT OF THE MSSB, DB-E INCORPORATING DB-3.
- NEW DB-3A AND DB-3B. - SUBMAINS TO DB-3A, AND DB-3B.
- BMS REMOTELY MONITORED PRIVATE METERING. CABLE TRAYS.
- SEGREGATED SERVICES DROPPERS FROM THE CABLE TRAYS TO THE WORKSTATIONS.
- CIRCUITS.
- ISOLATORS AND OUTLETS. TESTING AND COMMISSIONING.
- REMOVAL OF ALL EXISTING POWER SERVICES.

REFER TO THE DISTRIBUTION BOARD SCHEDULE FOR ADDITIONAL REQUIREMENTS AND CIRCUIT DETAILS.

PROVIDE THE DB-3A AND DB-3B AS FOLLOW:

- IP44. - LIGHT GREY ENCLOSURE WHITE ESCUTCHEON.
- 3 POINT LOCKABLE HANDLES ON ALL DOORS.
- LIFT OFF HINGES ON ALL DOORS AND ESCUTCHEONS
- 1/4 TURN LATCHES AND D HANDLES ON ALL ESCUTCHEONS.
- ALL SWITCHGEAR TO BE SCHNEIDER OR TERASAKI.
- PROVIDE SHOP DRAWINGS FOR APPROVAL.

#### 7. LIGHTING

ALL OF THE LIGHT FITTINGS, LAMPS AND ACCESSORIES ARE TO BE PROVIDED AS PART OF THIS CONTRACT. THE LIGHTING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- LIGHTING.
- LIGHT FITTINGS AND ACCESSORIES.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL LIGHTING SUBCIRCUITS.

PROVIDE DB-3. DB-3A AND DB-3B EACH WITH A SINGLE POINT EMERGENCY LIGHTING SYSTEMS THAT COMPLIES WITH THE LATEST ISSUE OF ALL PARTS AS2293 AND THE RELEVANT PARTS OF THE NCC BCA. INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS MAINTAINED WITH THE LAMP PERMANENTLY ON SUPPLIED VIA AN UNSWITCHED ACTIVE MAINS SUPPLY WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE, THE LAMP IS TO REMAIN ON SUPPLIED BY THE EMERGENCY PACK. SINGLE LAMP MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ALWAYS ON.)

INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS NON-MAINTAINED AS FOLLOWS: - IF THE FITTING IS NOT BEING SWITCHED, THE LAMP IS TO REMAIN OFF WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON SUPPLIED BY THE EMERGENCY PACK. UNSWITCHED SINGLE LAMP NON-MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ON ONLY WHEN THE MAINS SUPPLY IS NOT

AVAILABLE.) - IF THE FITTING IS BEING SWITCHED. THE LAMP IS TO BE SUPPLIED AND CONTROLLED WITH THE LOCAL GENERAL AREA LIGHTING WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON, SUPPLIED BY THE EMERGENCY PACK. (THE LAMP IS ON WHEN TURNED ON WITH THE LOCAL GENERAL LIGHTING OR THE MAIN SUPPLY IS NOT AVAILABLE.)

INSTALL EMERGENCY LIGHTS SUCH THAT THE STATUS INDICATOR L.E.D. IS CLEARLY VISIBLE AND THE TEST BUTTONS ARE READILY ACCESSIBLE. LABEL EACH CIRCUIT BREAKER WHICH CONTROLS THE UNSWITCHED ACTIVE TO EXIT LIGHTS WITH A LABEL FIXED ADJACENT; ENGRAVED PLASTIC LAMINATE, GREEN BACKGROUND WITH WHITE CHARACTERS: -

INTERRUPTING SUPPLY WILL DISCHARGE

Phone: (07) 3278 4375

Web: www.edg.net.au

Email: brisbane@edg.net.au

EMERGENCY LIGHTING BATTERIES

PROVIDE WRITTEN EVIDENCE OF THE INITIAL COMMISSIONING AND TESTING AND TESTING FOR THE DURATION OF THE MAINTENANCE PERIOD IN ACCORDANCE WITH AS 2293.2.

# **NOTES**

#### 7. LIGHTING CONT'

THIS EVIDENCE IS TO BE IN THE FORM OF A LOG BOOK SIMILAR TO THE GENERAL LIGHTING SERVICE PTY LTD "EMERGENCY LIGHTING MAINTENANCE LOG BOOK AND MANUAL" WHICH IS TO BE PROVIDED BY THE ELECTRICAL SUB-CONTRACTOR AND HAVE ALL ENTRIES FULLY COMPLETED AND BE PRESENTED FOR INSPECTION AT PRACTICAL COMPLETION. THE LOG BOOK IS TO BE RETAINED BY THE ELECTRICAL SUB-CONTRACTOR FOR THE DURATION OF THE MAINTENANCE PERIOD, AND THE SIX-MONTHLY TEST AND MAINTENANCE RESULTS ENTERED. THE LOG BOOK IS TO BE PRESENTED FOR APPROVAL AT FINAL COMPLETION (EXPIRY OF THE MAINTENANCE PERIOD) AND WILL BE FORWARDED TO THE OPERATOR FOR THEIR USE.

PROVIDE MAINTENANCE OF THE EMERGENCY AND EXIT LIGHTING INSTALLATION INCLUDING RECORDS IN ACCORDANCE WITH THE LATEST ISSUE OF ALL PARTS AS2293 AND THE RELEVANT PARTS OF THE NCC BCA. PROVIDE THE EMERGENCY LIGHTING SYSTEM WITH A SUPPLY SENSING AND TESTING FACILITY IN ACCORDANCE WITH AS 2293. 1.

#### 8. COMMUNICATIONS CABLING

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES NEW COMMUNICATIONS RACKS CR-3A AND CR-3B AND ALL NEW COMMUNICATIONS OUTLETS / CABLES THROUGHOUT LEVEL 3. PROVIDE THE COMMUNICATIONS CABLING WITH A MOLEX OR COMMSCOPE 15 YEAR MANUFACTURERS

REMOVE ALL OF THE EXISTING LEVEL 3 COMMUNICATIONS CABLING.

- THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:
- COMMUNICATIONS RACKS CR-3A AND CR-3B. PATCH PANELS.
- CAT 6 OUTLETS AND CABLING.
- EARTHING.
- TESTING AND COMMISSIONING.
- 9. FIRE ALARM SYSTEM

THE FIRE ALARM SYSTEM COMPONENT OF THIS CONTRACT INCLUDES ALL NEW DETECTORS TO AS1670.1 AND BELLS THROUGHOUT LEVEL 3 TO REFLECT THE NEW LAYOUT. THE FIRE ALARM SYSTEM WORK MUST BE PERFORMED BY A CONTRACTOR REGISTERED BY THE QBCC AND FIRE PROTECTION CONTRACTORS REGISTRATION BOARD OF QUEENSLAND INC. PROVIDE A COPY OF THE CONTRACTORS REGISTRATIONS FOR APPROVAL PRIOR TO COMMENCING WORK AND INCLUDE A COPY IN THE OPERATIONS AND MAINTENANCE MANUAL.

REMOVE ALL EXISTING LEVEL 3 FIRE ALARM SERVICES THAT BECOME REDUNDANT DUE TO THE WORKS.

IN ADDITION TO THE DETECTORS SHOWN PROVIDE CONCEALED SPACE DETECTORS THROUGHOUT LEVEL 3 AS REQUIRED BY AS1670.1.

THE FIRE ALARM SYSTEM COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- BELLS.
- DETECTORS. CONCEALED SPACE DETECTORS.
- FIP WORKS. DOOR FIP INTERFACES.
- TESTING AND COMMISSIONING.
- 10. ABBREVIATIONS
- A AMP CURRENT RATING
- AB MOUNT ABOVE BENCH. AFFL - ABOVE FINISHED FLOOR LEVEL.
- BB MOUNT BELOW BENCH.
- MOUNT ON BULKHEAD. BMS - BUILDING MANAGEMENT SYSTEM.
- CEIL MOUNT ON CEILING. CS - MOUNT WITHIN CEILING SPACE.
- C/W COMPLETE WITH.
- DISHWASHER
- MCB MINIATURE CIRCUIT BREAKER. MSB - MAIN SWITCHBOARD.
- MSSB MECHANICAL SERVICES SWITCHBOARD. MW - MICROWAVE.
- N NEON / LED INDICATOR WHEN ON.
- NTS NOT TO SCALE. RCBO - CIRCUIT PROTECTED VIA A 30MA RESIDUAL CURRENT DEVICE INTEGRAL TO THE CIRCUIT BREAKER.
- REF REFRIGERATOR.
- UNO UNLESS NOTED OTHERWISE. WP - WEATHERPROOF TO IP56 UNO.
- 500 NUMBER DENOTES MOUNTING HEIGHT AFFL.

A | TENDER REV: DESCRIPTION:

**ELECTRICAL SERVICES NOTES** 

C3037a E02

13/06/2023

REVISION:

DATE:

ALL DIMENSIONS TO BE VERIFIED ONSITE.

**ELECTRICAL DESIGN GROUP BRISBANE** 

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