

NOTES

1. EXTENT OF WORKS

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.
- UPDATE THE EXISTING AS BUILT DRAWINGS.
- UPDATE THE EXISTING MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- LIGHTING.
- COMMUNICATIONS CABLING.
- PUBLIC ADDRESS SYSTEM.
- FIRE ALARM SYSTEM.
- AS CONSTRUCTED DOCUMENTS.
- CORROSION PROTECTION
- ALL WORKS AND MATERIALS TO CREATE A SAFE WORK SITE INCLUDING RESTRICTING ACCESS TO NON-AUTHORISED PEOPLE.

- ALL MACHINERY REQUIRED TO COMPLETE THE INSTALLATION INCLUDING LIFTING AND HOISTING MACHINERY, TRANSPORTATION MACHINERY, WINCHES, FORKLIFTS, SCISSOR LIFTS, HOISTS, BOOMS, CHERRY PICKERS.
- ALL NECESSARY WASTE MANAGEMENT AND WASTE REMOVAL.
- 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.

CONFIRM THE POSITION OF ALL OUTLETS ON SITE WITH THE COLLEGE PRIOR TO ROUGH-IN.

UPDATE THE COLLEGES EXISTING AS BUILT DOCUMENTS AND MAINTENANCE MANUAL TO INCLUDE THE NEW WORKS.

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. EXPOSED CABLING OR CONDUITS ARE GENERALLY NOT ACCEPTABLE. IT IS NOTED THAT CONDUITS WILL NEED TO BE INCLUDED WITHIN THE PRECAST PANELS. 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.

ALL WORK IS TO BE UNDERTAKEN IN SUCH A MANNER THAT THE OPERATION OF THE REMAINING COLLEGE AREAS ARE NOT UNDULY EFFECTED BY THE WORKS.

3. STANDARDS

IRRESPECTIVE OF INFORMATION CONTAINED IN THE FIRE ALARM SYSTEM DOCUMENTS OR IN INSTRUCTIONS, IT IS THE FIRE ALARM SYSTEM SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL FIRE ALARM SYSTEM WORKS ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE FIRE ALARM SYSTEM 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.
- FIRE ENGINEERING REPORT.
- ELECTRICITY ACT.
- ELECTRICAL SAFETY ACT.
- AS/NZS3000.
- AS3008.
- AS1670. 1.
- AS/NZS 5033: 2021.
- AS/NZS 4777. 1: 2024
- 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 WORKPLACE, HEALTH AND SAFETY AUTHORITY.
- LOCAL FIRE AND RESCUE AUTHORITY.
- SOLAR ACCREDITATION AUSTRALIA.

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.

NOTES

6. POWER DISTRIBUTION

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES REPLACING THE EXISTING SITE MAIN SWITCHBOARD DURING THE SEPTEMBER 2026 SCHOOL HOLIDAYS. THE EXISTING MSB TRENCH AND ADJACENT PITS ARE TO BE REPLACED WITH A LARGER TRENCH. THE EXISTING CONDUITS ARE TO BE CONNECTED TO THE NEW TRENCH AND ALL EXISTING CONSUMERS MAINS AND SUBMAINS RECONNECTED TO THE NEW MSB. THE NEW MSB IS TO CONTAIN A DISTRIBUTION BOARD TO ALLOW THE EXISTING CIRCUITS AND CONTROLS TO BE RECONNECTED AS WELL AS OEM COMPLIANT METERING AND SOLAR GRID PROTECTION. ENSURE THE SOLAR GRID PROTECTION IS COMPATIBLE WITH THE SITES EXISTING SOLAR SYSTEM AND THE NEW PIM21 SOLAR SYSTEM.

NEW UNDERGROUND CONDUITS ARE TO BE PROVIDED FROM THE NEW MSB TRENCH TO A NEW PIT (PIT C) AND ON TO BUILDING PIM21. NEW UNDERGROUND SUBMAINS ARE TO BE PROVIDED FROM THE MSB TO A NEW DISTRIBUTION BOARD DB-21 IN BUILDING PIM21. PROVIDE DB-21 WITH MCCBS TO SUPPLY THE NEW DISTRIBUTION BOARDS DB-21P, DB-21L AND THE MECHANICAL SWITCHBOARD MSSB-21 AS WELL AS THE NEW SOLAR INVERTER.

PROVIDE DB-21 WITH SPACE FOR SOLAR PROTECTION EQUIPMENT, THE ENERGY MONITORING EQUIPMENT AND 24 SPARE DIN RAIL POLES FOR THE FUTURE CONNECTION SOLAR / BATTERIES AS PER J9D5 OF THE NCC BCA 2022. LABEL ONE OF THE SPARE CIRCUIT BREAKER POSITIONS AND TWELVE OF THE DIN RAIL SPACES (RESERVED FOR SOLAR / BATTERIES).

PROVIDE AN ENERGY MONITORING SYSTEM AS PER J9D3 OF THE NCC BCA 2022 THAT COLLECTS THE TIME-OF-USE ENERGY DATA TO A SINGLE INTERFACE WHERE IT CAN BE STORED, ANALYSED AND REVIEWED. SUBMIT DETAILS OF THE ENERGY MONITORING SYSTEM FOR APPROVAL.

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

- POWER DISTRIBUTION.
- EARTHING.
- NEW MAIN SWITCHBOARD (MSB).
- NEW MSB TRENCH.
- PROVIDE A NEW MCCB IN THE MSB.
- NEW UNDERGROUND CONDUITS AND SUBMAINS FROM THE MSB TO DB-21.
- ENERGY MONITORING SYSTEM.
- DISTRIBUTION BOARDS DB-21, DB-21P AND DB-21L.
- SUBMAINS FROM DB-21 TO DB-21P, DB-21L AND MSSB-21.
- PROVIDE AN INFRARED SCAN OF THE MSB AND ALL DISTRIBUTION BOARDS PROVIDED AS PART OF THE WORKS ONE WEEK AFTER PRACTICAL COMPLETION. PROVIDE A LOGGING CHART RECORDING OF THE MAINS CURRENT, VOLTAGE, FREQUENCY FOR THE FIRST 14 DAYS FOLLOWING PRACTICAL COMPLETION AND SUBMIT THE THERMOSCAN AND CHART RECORDING AND FOR APPROVAL.
- CIRCUITS.
- ISOLATORS AND OUTLETS.
- TESTING AND COMMISSIONING.
- SWITCHBOARD SHOP DRAWING.

PROVIDE THE SITE MAIN SWITCHBOARD (MSB) AS FOLLOWS:

- REFER TO THE POWER SCHEMATIC.
- PLINTH MOUNTED FREE STANDING.
- OEM COMPLIANT RETAIL METERING. NMI 3120216238
- 92268 KEY LOCKABLE IP66 (316 STAINLESS STEEL OR ALUMINIUM) POWDER COATED COLOURBOND SURF MIST C/W INTERNAL TEMPERATURE CONTROLLED ANTI CONDENSATION HEATERS IN EACH CUBICAL.
- ENSURE THE MSB IS DESIGNED TO OPERATE IN DIRECT SUNLIGHT WITH AN AMBIENT TEMPERATURE OF 40 DEGREES.
- WHITE ESCUTCHEON.
- BOTTOM ENTRY CABLE ACCESS ONLY.
- SUN / RAIN HOOD.
- TEMPERATURE CONTROLLED ANTI CONDENSATION HEATERS IN EACH CUBICAL.
- 36 POLE 250A 3 PHASE VERTICAL DIN STYLE CHASSIS DISTRIBUTION BOARD DB-M INTEGRAL TO THE MSB.
- TWO 600 WIDE HORIZONTAL DIN RAILS.
- RESUPPLY ALL OF THE EXISTING DB-M CIRCUITS FROM THE NEW DB-M WITH NEW SWITCHGEAR AND CONTROLS REFLECTING THE EXISTING IN CAPACITY AND FUNCTION.
- DOORS ON ALL CUBICLES WITH 3 POINT 92268 KEY LOCKABLE HANDLES OTHER THAN THE METER CUBICAL DOOR WHICH IS TO HAVE AN ENERGEX PADLOCK.
- LIFT OFF HINGES ON ALL DOORS AND ESCUTCHEONS.
- 1/4 TURN LATCHES AND D HANDLES ON ALL ESCUTCHEONS.
- ALL SWITCHGEAR TO BE NHP/TERASAKI.
- PROVIDE SHOP DRAWINGS FOR APPROVAL.
- ENERGEX PADLOCK ON THE METER CUBICAL.
- TWO ENERGEX PADLOCK KEYS AND TWO 92268 KEYS.
- OBTAIN APPROVAL FROM ENERGEX OF THE NEW MSB SHOP DRAWINGS.
- PROVIDE A COPY OF THE ENERGEX APPROVAL OF THE MSB.

PROVIDE DISTRIBUTION BOARDS DB-21, DB-21P AND DB-21L AS FOLLOWS:

- REFER TO THE POWER SCHEMATIC.
- REFER TO THE DISTRIBUTION BOARD SCHEDULES.
- WALL MOUNTED.
- 92268 KEY LOCKABLE.
- IP44 MILD STEEL LIGHT GRAY ENCLOSURE.
- WHITE ESCUTCHEON.
- LIFT OFF HINGES ON ALL DOORS AND ESCUTCHEONS.
- 1/4 TURN LATCHES AND D HANDLES ON ALL ESCUTCHEONS.
- ALL SWITCHGEAR TO BE NHP/TERASAKI.
- PROVIDE SHOP DRAWINGS FOR APPROVAL.

THE POWER SUPPLY TO THE REMAINDER OF THE COLLEGE MUST BE MAINTAINED AT ALL TIMES THE COLLEGE IS OPEN INCLUDING THE AFTER HOURS CARE. ANY INTERRUPTION TO THE POWER SUPPLY MUST BE ADVISED TO THE COLLEGE IN WRITING TWO WEEKS PRIOR.

REFER TO THE POWER SCHEMATIC AND DISTRIBUTION BOARD SCHEDULES FOR ADDITIONAL REQUIREMENTS AND CIRCUIT DETAILS.

ENSURE ALL OUTLETS AND ISOLATORS ARE POSITIONED SUCH THAT THEY ARE NOT COVERED BY THE EQUIPMENT. THE FINAL POSITION OF ALL OUTLETS AND ISOLATORS ARE TO BE CONFIRMED ON SITE BY THE COLLEGE.

7. SOLAR PV SYSTEM

PROVIDE BUILDING PIM 21 WITH A 100KW SOLAR PV INSTALLATION AS AN EXTENSION TO THE SITES EXISTING PV SYSTEM AS FOLLOWS:

- UNDERTAKEN BY AN INSTALLER WITH SOLAR ACCREDITATION AUSTRALIA (SAA) DESIGN AND INSTALLATION ACCREDITATION.
- ENERGEX APPROVALS, FEES AND CHARGES.
- RPEQ ENGINEERING AND DESIGN.
- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE SOLAR SYSTEM INSTALLATION.
- ALL CABLING MUST BE COPPER.
- PROVIDE A ALUMINIUM OR HOT DIPPED GALVANIZED PV PANEL SUPPORT SYSTEM.
- PROVIDE THE SOLAR SYSTEM DC AND AC CABLING THAT HAS A LESS THAN COMBINED LOSS LESS THAN 3%.
- PROVIDE SHOP DRAWINGS AND TECHNICAL DETAILS OF EACH SOLAR SYSTEM INCLUDING ALL COMPONENTS AND THE PV PANEL LAYOUTS FOR APPROVAL.
- PROVIDE A HARD COPY OF THE ENTIRE SYSTEM DESIGN AND ALL INFORMATION ASSOCIATED WITH EACH SOLAR SYSTEM IN A PERMANENT DOCUMENT HOLDER ADJACENT EACH SYSTEM INVERTER.
- SIGNAGE AND LABELS.
- AC AND DC CABLING.
- AC AND DC ISOLATORS.
- PROVIDE THE INVERTER WITH NETWORK PROTECTION INTERFACED TO THE SITES EXISTING WIRELESS NETWORK PROTECTION SYSTEM.

NOTES

8. LIGHTING

THE LIGHTING COMPONENT OF THIS CONTRACT INCLUDES INTERNAL LIGHTING TO ALL AREAS OF THE BUILDING, EXTERNAL LIGHTING, GENERAL LIGHTING CONTROL, EMERGENCY AND EVACUATION LIGHTING AND THE LIGHTING SUB CIRCUIT WIRING. ALL OF THE LIGHT FITTINGS AND ACCESSORIES ARE TO BE PROVIDED AS PART OF THIS CONTRACT. ALL LIGHT SOURCES ARE TO BE SOLID STATE LED WITH A 5-YEAR MANUFACTURERS WARRANTY. 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:

- INTERNAL AND EXTERNAL LIGHTING.
- EMERGENCY AND EXIT LIGHTING.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL.
- INTERFACE THE INTERNAL LIGHTING TO THE SECURITY SYSTEM SUCH THAT WHEN THE SECURITY SYSTEM IS ARMED THE INTERNAL LIGHTS ARE DISABLED / OFF.
- LIGHTING SUBCIRCUITS.
- TESTING AND COMMISSIONING.

PROVIDE A SINGLE POINT EMERGENCY LIGHTING SYSTEM 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: -

WARNING
INTERRUPTING SUPPLY WILL DISCHARGE
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.

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.

9. COMMUNICATIONS CABLING

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES A NEW COMMUNICATION RACK CR-21, OPTICAL FIBRE CABLING AS WELL AS CAT 6A STP OUTLETS, CAT 6 UTP OUTLETS AND CAT 6 PLUGS FOR VAPE SENSORS AND CCTV CAMERAS.

PROVIDE DEDICATED CAT 6A STP PATCH PANELS IN CR-21 TO ACCOMMODATE THE CAT 6A OUTLETS, DEDICATED CAT 6 UTP PATCH PANELS IN CR-21 TO ACCOMMODATE THE CAT 6 OUTLETS AND VAPE SENSOR PORTS. PROVIDE DEDICATED CAT 6 UTP PATCH PANELS IN CR-21 TO ACCOMMODATE THE CAT 6 CCTV CAMERA PORTS.

PROVIDE 12 CORE OS2 GEL FILLED UNDERGROUND LC TERMINATED OPTICAL FIBRE CABLE FROM THE NEW COMMUNICATIONS RACK CR-21 TO THE FOLLOWING EXISTING COMMUNICATIONS RACKS UTILISING THE EXISTING UNDERGROUND PIT AND CONDUIT SYSTEM. UPGRADE THE FIBOTS IN THE FOLLOWING RACKS AS REQUIRED TO ACCOMMODATE THE NEW CABLING:

- CR-H.
- CR-11.
- CR-23.
- CR-A.
- CR-ELC.

THE COMMUNICATIONS CABLING IS TO BE OF THE SAME EXISTING STRUCTURED CABLING SOLUTION USED IN BUILDING PIM23 AND BE PROVIDED WITH A MANUFACTURERS 15 YEAR WARRANTY.

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- COMMUNICATIONS RACK CR-21.
- CAT 6A STP COMMUNICATIONS OUTLETS, CABLING AND PATCH PANELS.
- CAT 6 UTP COMMUNICATIONS OUTLETS, CABLING AND PATCH PANELS.
- CAT 6 UTP VAPE PLUGS, CABLING AND PATCH PANELS.
- CAT 6 UTP CCTV PLUGS, CABLING AND PATCH PANELS.
- FIBOT.
- OPTICAL FIBRE CABLES.
- LABELLING.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- TESTING AND COMMISSIONING.

THE PA EQUIPMENT IS TO BE MOUNTED IN THE TOP OF THE COMMUNICATIONS RACK CR-21.

ALL COMMUNICATIONS CABLING IS TO BE UNDERTAKEN BY AN ACMA LICENCE HOLDER. THE PATCH LEADS, FLY LEADS, UPS, VAPE SENSORS, CCTV CAMERAS AND ACTIVE COMMUNICATIONS EQUIPMENT WILL BE PROVIDED BY THE COLLEGE.

NOTES

10. PUBLIC ADDRESS SYSTEM

THE PUBLIC ADDRESS SYSTEM COMPONENT OF THIS CONTRACT INCLUDES MULTI TAP 100V SPEAKERS AND HORNS CABLED TO POWER AMPLIFIERS MOUNTED WITH IN THE TOP OF COMMUNICATIONS RACK CR-21. PROVIDE AMPLIFIERS CONFIGURED AS FOUR ZONES BEING EXTERNAL, GROUND LEVEL, FIRST FLOOR AND SECOND FLOOR. PRIOR TO PRACTICAL COMPLETION, PROVIDE A TEMPORARY MUSIC SOURCE TO AIM / BALANCE THE SPEAKERS AND HORNS ON SITE AS DIRECTED BY THE COLLEGE.

THE PUBLIC ADDRESS SYSTEM COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- SPEAKERS AND HORNS.
- RACK MOUNTED AMPLIFIERS.
- CO-ORDINATION.
- TESTING, COMMISSIONING AND BALANCING.
- MAINTENANCE.
- AS CONSTRUCTED DOCUMENTS INCLUDING DRAWINGS DETAILING THE LOOP PATH OF EACH SPEAKER CABLE.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.

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

ALL PUBLIC ADDRESS SYSTEM WORKS MUST BE UNDERTAKEN BY AN ACMA LICENCE HOLDER. THE AUDIO / IP CONVERTERS, THE CONNECTION OF THE AMPLIFIERS TO THE AUDIO / IP CONVERTERS AND PATCH LEADS WILL BE PROVIDED BY THE COLLEGE.

11. FIRE ALARM

THE FIRE ALARM COMPONENT OF THIS CONTRACT INCLUDES A STANDALONE NON BRIGADE MONITORED FIRE ALARM SYSTEM WITH SPACE AND CAPACITY TO DOUBLE THE QUANTITY OF DETECTORS, SPEAKERS AND INTERFACES PROVIDED AS PART OF THE INITIAL CONSTRUCTION AS THE FIP WILL BE USED TO ACCOMMODATE THE FUTURE EXPANSION OF BUILDING 21.

THE FIRE ALARM COMPONENT OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- THE PROVISION OF A STAND ALONE AS1670.1 2018 FIRE DETECTION AND ALARM SYSTEM.
- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE FIRE ALARM SERVICES.
- CO-ORDINATION.
- INSPECTIONS.
- LOG BOOK.
- TESTING AND COMMISSIONING.
- MAINTENANCE.
- AS CONSTRUCTED DOCUMENTS INCLUDING DRAWINGS DETAILING THE LOOP PATH AND EACH COMPONENT ADDRESS.
- OPERATION AND MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- FIP INCORPORATING THE FDCIE AND EWCIE.
- SYSTEM INTERFACE DIAGRAM.
- MANUAL CALL POINT ON THE FDCIE.
- DETECTORS.
- SPEAKERS AND HORNS.
- INTERFACE TO THE SECURITY SYSTEM.
- DOOR HOLDERS AND DOOR RELEASE PUSH BUTTONS.
- ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE FIRE ALARM SYSTEM INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

ALL COMPONENTS PROVIDED AS PART OF THE FIRE ALARM SYSTEM MUST BE GENERIC IN THAT THEY CAN BE EXPANDED UPON AND MAINTAINED BY ANY CONTRACTOR WHO HOLDS THE REQUIRED QBCC AND FIRE PROTECTION CONTRACTORS REGISTRATION BOARD OF QUEENSLAND INC REGISTRATIONS. ALL SUCH COMPONENTS MUST NOT BE LOCKED INTO A SINGLE MANUFACTURER OR LIMITED BY A LICENSING AGREEMENT.

ALL COMPONENTS PROVIDED AS PART OF THE FIRE ALARM SYSTEM MUST BE LISTED ON THE CSIRO.AU/ACTIVEFIRE WEB SITE AND BE PROVIDED WITH A CURRENT CERTIFICATE OF CONFORMITY. INCLUDE A COPY OF EACH CERTIFICATE OF CONFORMITY IN THE MANUAL.

ENSURE ALL AS1670.1:2018 WORKS ARE UNDERTAKEN BY, OR UNDER THE DIRECTION OF A SUITABLY QUALIFIED AND EXPERIENCED FIRE ALARM SYSTEM INSTALLER WHO HOLD THE REQUIRED QBCC AND FIRE PROTECTION CONTRACTORS REGISTRATION BOARD OF QUEENSLAND INC REGISTRATIONS. INCLUDE A COPY OF ALL THE ABOVE REGISTRATIONS AND LICENCES IN THE MANUAL.

PRIOR TO PRACTICAL COMPLETION CERTIFY THE INSTALLATION ON A FORM 12 AS COMPLYING WITH THE RELEVANT CODES AND STANDARDS AND INCLUDE A COPY OF THE CERTIFICATION IN THE MANUAL.

IN ADDITION TO THE DETECTORS DETAILED ON THE DRAWINGS, ALLOW FOR THE FOLLOWING PROVISIONAL ADDITIONAL DETECTORS TO BE LOCATED ON SITE:

- 6 SMOKE DETECTORS.
- 2 THERMAL DETECTORS.
- 8 CONCEALED SPACE DETECTORS INCLUDING ACCESS BRACKETS.

12. ABBREVIATIONS

- A - AMP CURRENT RATING
- AB - MOUNT ABOVE BENCH.
- AFFL - ABOVE FINISHED FLOOR LEVEL.
- BB - MOUNT BELOW BENCH.
- BH - MOUNT ON BULKHEAD.
- CEIL - MOUNT ON CEILING.
- CS - MOUNT WITHIN CEILING SPACE.
- C/W - COMPLETE WITH.
- DW - DISHWASHER.
- HP - HOT PLATE.
- MCB - MINIATURE CIRCUIT BREAKER.
- MCCB - MOUNDED CASE CIRCUIT BREAKER.
- MSB - MAIN SWITCHBOARD.
- MSSB - MECHANICAL SERVICES SWITCHBOARD.
- MW - MICROWAVE.
- N - NEON / LED INDICATOR WHEN ON.
- NTS - NOT TO SCALE.
- OV - OVEN.
- RCBO - CIRCUIT PROTECTED VIA A 30mA RESIDUAL CURRENT DEVICE INTEGRAL TO THE CIRCUIT BREAKER.
- REF - REFRIGERATOR.
- SM - SURFACE MOUNTED.
- UNO - UNLESS NOTED OTHERWISE.
- WP - WEATHERPROOF TO IP56 UNO.
- 500 - NUMBER DENOTES MOUNTING HEIGHT AFFL.

D	CONSTRUCTION	29/04/2026	
REV:	DESCRIPTION:	DATE:	
DRAWING: ELECTRICAL SERVICES NOTES			
SCALE: NOT TO SCALE AT A1	PROJECT NO: C3475a	DRAWING NO: E02	REVISION: D

ELECTRICAL DESIGN GROUP BRISBANE PTY LTD ACN 092 710 793	THE COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF THE ELECTRICAL DESIGN GROUP.
TRADING AS: ELECTRICAL DESIGN GROUP	USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.
	ALL DIMENSIONS TO BE VERIFIED ONSITE.

 ELECTRICAL DESIGN GROUP ELECTRICAL BUILDING SERVICES CONSULTANTS BRISBANE GOLD COAST	PROJECT: KINGS CHRISTIAN COLLEGE PIMPAMA SENIOR SCHOOL ADMINISTRATION - PIM21
P.O.Box 15, Sherwood Q.4075 Phone: (07) 3278 4375 Email: brisbane@edg.net.au Web: www.edg.net.au	198 PIMPAMA JACOBS WELL ROAD, PIMPAMA, QUEENSLAND