

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.
- AS CONSTRUCTED DRAWINGS.
- OPERATION AND MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- LIGHTING.
- BMS LIGHTING CONTROL.
- EMERGENCY EXIT LIGHTING.
- LIGHT POLES.
- COMMUNICATIONS CABLING.
- SECURITY.
- ACCESS CONTROL.
- SCHOOL BELL.
- FIRE ALARM SYSTEM.
- 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.

PRIOR TO COMMENCING WORK CONSULT SITE MANAGEMENT FOR ANY HAZARDOUS MATERIAL AND OR ASBESTOS REGISTERS AS WELL AS UNDERTAKE A THOROUGH INSPECTION OF THE SITE TO IDENTIFY ANY POTENTIAL HAZARDOUS MATERIALS. ASBESTOS AND HEALTH OR SAFETY RISKS. ADVISE THE CONTRACTOR OF ANY POTENTIAL HAZARDOUS MATERIALS, ASBESTOS AND HEALTH OR SAFETY RISKS IF IDENTIFIED AND DO NOT COMMENCE WORK UNTIL AN APPROPRIATE MANAGEMENT PLAN HAS BEEN DEVELOPED AND AGREED TO BY ALL PARTIES.

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 ALL WORKS THAT HAVE AN EFFECT ON OR WILL BE AFFECTED BY THE ELECTRICAL SERVICES.

REMOVE ALL OF THE EXISTING ELECTRICAL SERVICES THAT BECOME REDUNDANT DUE TO THE 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 CHASING AND REINSTATEMENT WILL BE REQUIRED. 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.
- AS1670.
- 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.
- OLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.
- OLD FIRE AND RESCUE AUTHORITY.

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 PROVIDING A NEW MCCB IN THE EXISTING MSB TO PROTECT A NEW UNDERGROUND SUBMAIN TO THE NEW DISTRIBUTION BOARD DB-4.

REMOVE THE DB-3 SUPPLY FROM THE MSB AND RESUPPLY DB-3 FROM DB-4. UTILISE THE EXISTING UNDERGROUND PIT AND CONDUIT SYSTEM AND PROVIDE NEW UNDERGROUND CONDUITS FROM THE ADJACENT PIT TO DB-4.

ALL SWITCHGEAR TO BE SCHNEIDER.

PROVIDE THE EXISTING DISTRIBUTION BOARD DB-3 WITH NEW SWITCHGEAR AND CONTROLS TO ACCOMMODATE THE NEW CIRCUITS AND BMS LIGHTING CONTROL CONTACTORS.

- PROVIDE THE DISTRIBUTION BOARD DB-4 AS FOLLOWS:
- WALL MOUNTED.
 - IP44 FORM 1.
 - LIGHT GREY ENCLOSURE WHITE ESCUTCHEON.
 - 3 POINT 92268 KEY LOCKABLE FLUSH HANDLES ON ALL DOORS.
 - LIFT OFF HINGES ON ALL DOORS AND ESCUTCHEONS.
 - 1/4 TURN LATCHES AND D HANDLES ON ALL ESCUTCHEONS.
 - PROVIDE SHOP DRAWINGS FOR APPROVAL.
 - 25% SPARE POLES AT PRACTICAL COMPLETION.
 - ALL COMPONENTS ARE TO BE LABELLED WITH NON-STICK LABELS.

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

- POWER DISTRIBUTION.
- EARTHING.
- EQUIPOTENTIAL BONDING TO THE POOL.
- MCCB IN THE EXISTING MSB.
- DB-4 SUBMAIN.
- NEW DISTRIBUTION BOARD DB-4.
- NEW COMPONENTS IN THE EXISTING DISTRIBUTION BOARD DB-3.
- CIRCUITS.
- CABLE ACCESS WAYS.
- ISOLATORS AND OUTLETS.
- TESTING AND COMMISSIONING.

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.
- EMERGENCY AND EXIT LIGHTING AS NOTED BELOW.
- LIGHT POLES AS NOTED BELOW.
- LIGHTING CONTROL.
- BMS LIGHTING CONTROL AS NOTED BELOW.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL.
- LIGHTING SUBCIRCUITS.
- CABLE ACCESS WAYS.
- TESTING AND COMMISSIONING.

8. BMS CONTROL

BAR-TECH AUTOMATION CONTACT ADAM FRANKLIN 0481 096 972 IS TO BE ENGAGED AS A NOMINATED SUB-CONTRACTOR TO UNDERTAKE THE BMS CONTROL COMPONENT OF THE WORKS.

THE POOL AND AMENITY LIGHTING, HOT WATER AND EXHAUST FANS ARE TO BE CONTROLLED VIA AN EXPANSION OF THE SCHOOLS EXISTING BUILDING MANAGEMENT SYSTEM.

THE EXISTING BMS CONTROLLER ADJACENT DB-3 IS TO BE USED TO CONTROL THE DB-3 CIRCUITS.

A NEW BMS PANEL IS TO BE PROVIDED ADJACENT DB-4 TO CONTROL THE DB-4 CIRCUITS.

EACH CHANNEL IS TO BE PROVIDED AS A SEPARATE OUTPUT. MULTIPLE CIRCUITS CONTROLLED VIA A SINGLE CHANNEL ARE TO BE CONTROLLED VIA MULTIPLE CONTRACTORS THAT OPERATE TOGETHER VIA THE SINGLE CHANNEL. THE BMS CONTACTORS ARE TO BE LOCATED WITHIN THE ASSOCIATED DISTRIBUTION BOARDS.

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

- BMS PANEL.
- INTERFACE TO THE CIRCUIT CONTROL CONTACTORS.
- IP NETWORK INTERFACE OF THE NEW BMS PANEL TO THE EXISTING BMS SYSTEM.
- LIGHTING CONTROL.
- BMS INTERFACES.
- PROGRAMMING.
- COMMISSIONING.

9. EMERGENCY AND EXIT LIGHTING

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 WITH THE LAMP 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. PROVIDE THE EMERGENCY LIGHTING SYSTEM WITH A SUPPLY SENSING AND TESTING FACILITY IN ACCORDANCE WITH AS 2293.1.

NOTES

10 LIGHT POLES

PROVIDE POLES WITH AN ACCESS PANEL WITHIN THE POLE BASE AND BASE PLATE THAT INCORPORATE A MINIMUM OF FOUR HOLD DOWN BOLTS. PROVIDE POLES DESIGNED SPECIFICALLY TO SUIT THE PROPOSED STRUCTURAL MOUNTING REQUIREMENTS AND LOCAL CONDITIONS AND BE ABLE TO WITHSTAND WIND GUSTS OF 150KM/H. THE DESIGN OF THE POLE AND THE FOOTING IS TO BE UNDERTAKEN BY A RESISTED STRUCTURAL ENGINEER. PROVIDE A CERTIFICATE FROM THE STRUCTURAL ENGINEER INDICATING THE POLES AND MOUNTINGS MEET THE SPECIFIED DESIGN CRITERIA. PROVIDE DETAILED DRAWINGS OF ALL POLES AND MOUNTINGS FOR APPROVAL. PROVIDE A FUSED CONNECTION WITHIN EACH POLE LOCATED BEHIND THE POLE BASE ACCESS PANEL. CONNECT THE POLE TO THE ELECTRICAL EARTH VIA A LUG FIXED TO A STUD WELDED TO THE POLE LOCATED WITHIN THE POLE LOCATED BEHIND THE POLE BASE ACCESS PANEL. TRIM THE HOLD DOWN BOLTS SUCH THAT THEY DO NOT PROTRUDE MORE THAN 15MM ABOVE THE NUT. TREAT THE TRIMMED HOLD DOWN BOLT AGAINST CORROSION AND ENSURE IT DOES NOT CONTAIN SHARP EDGES THAT REPRESENT A HAZARD. PROVIDE A NEAT SMOOTH FINISHED CONCRETE GROUT FILL UNDER THE BASE PLATE ENSURING ANY SPLATTER IS IMMEDIATELY WASHED OFF THE BASE PLATE AND POLE. EXTEND THE CONDUIT INTO THE POLE 50MM ABOVE THE BASE PLATE.

PROVIDE POLES THAT COMPLY WITH AS/NZS 1170.0 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES - IMPORTANCE LEVEL 1 WITH A DESIGN WORKING LIFE OF 50 YEARS.

DESIGN THE POLES TO A WIND LOADING AS PER AS/NZS 1170.0 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES. THE FRACTION OF CRITICAL DAMPING IS TO BE TAKEN AS 0.05 (ULTIMATE) AND 0.01 (SERVICEABILITY) FOR POLES WITH MORE THAN TWO- (2) OVERLAPS AND 0.02 (ULTIMATE) AND 0.005 (SERVICEABILITY) FOR ALL OTHERS. THE NATURAL FREQUENCY OF THE POLE IS TO BE CALCULATED CONSIDERING VARYING DIAMETERS AND THICKNESS OVER THE HEIGHT OF THE POLE AND USING A 1.1 SAFETY FACTOR FOR THE MASS AT THE TOP OF THE POLE. ENSURE POLE DEFLECTION AT SERVICEABILITY WIND SPEEDS HAVE A DEFLECTION LESS THAN 6.7%.

ENSURE ALL WELDS ARE BY A CONTINUOUS AUTOMATIC GAS SHIELDED ELECTRIC ARC PROCESS COMPLYING WITH THE RELEVANT PARTS OF AS/NZS 1554 STRUCTURAL STEEL WELDING. ENSURE THE LONGITUDINAL SEAM WELDS ON POLE SECTIONS CONFORMS TO GP STANDARDS WHILE BASEPLATE AND SPIGOT WELDS MUST CONFORM TO SP STANDARDS AS MENTIONED IN AS/NZS 1554. WELD SIZES ARE TO BE VERIFIED BY A QUALIFIED STRUCTURAL ENGINEER AND SPECIFIED IN THE ENGINEERING REPORT AND ON WORKSHOP DRAWINGS.

PROVIDE ALL POLES WITH A GALVANISED FOUNDATION BOLT ASSEMBLY COMPLETE WITH POSITIONING TEMPLATE AND TWO- (2) NUTS AND WASHERS PER BOLT PROVIDED TO SUIT THE POLE BASEPLATE. FOUNDATION BOLTS MUST BE MANUFACTURED FROM DEFORMED REINFORCING BARS WITH A NOMINAL YIELD STRESS OF 500 MPA. PROVIDE BOLTS THREADED IN ACCORDANCE WITH AS1275-1985 METRIC SCREW THREADS FOR FASTENERS AND FITTED WITH CLASS 5 NUTS IN ACCORDANCE WITH AS/NZS 1112 ISO METRIC HEXAGON NUTS. FOUNDATION BOLTS MUST BE TIED TO A SUITABLE REINFORCING CAGE. THE LENGTH OF EACH FOUNDATION BOLT MUST ALLOW FOR THE LENGTH OF THE THREAD ABOVE GROUND, A MINIMUM OF 100MM COVER AND A DEVELOPMENT LENGTH IN ACCORDANCE WITH AS3600-1994 CONCRETE STRUCTURES, TABLE 13.1.2.2(A). THE UNDERSIDE OF THE BASEPLATE IS TO BE GROUTED.

THE SECTION CAPACITY OF THE POLE IS TO BE ANALYSED OVER A MINIMUM OF 100 INCREMENTS ACCORDING TO AS4100 STEEL STRUCTURES AND AS/NZS 4600 COLD-FORMED STEEL STRUCTURES. LUMINARIES ARE TO BE ACCESSED BY EXTERNAL MACHINERY E.G. CHERRY PICKERS. LUMINAIRE CROSSARMS SHALL BE DESIGNED TO ENSURE EASY ACCESS OF FITTINGS FOR REPLACEMENT AND AIMING. CLIMBING RUNGS AND MAINTENANCE PLATFORMS ARE NOT REQUIRED.

THE POLE AND ALL STEEL ACCESSORIES ARE TO BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AS/NZS 4680 HOT-DIP GALVANIZED (ZINC) COATINGS ON FABRICATED FERROUS ARTICLES.

ASSEMBLY AND ERECTION ARE TO BE CARRIED OUT ONLY BY QUALIFIED RIGGING PERSONNEL. GROUT THE UNDERSIDE OF ALL POLE BASEPLATES WITHIN SEVEN- (7) DAYS OF INSTALLING THE POLE.

11. COMMUNICATIONS CABLING

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES THE PROVISION OF A NEW FULLY TERMINATED 12 CORE FIBRE CABLE FROM THE EXISTING COMMUNICATIONS RACK CR-3 TO A NEW COMMUNICATIONS RACK CR-4.

PROVIDE THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT IS TO MATCH THE BRAND USED IN THE EXISTING AQUATIC CENTRE STAGE 1 WORKS.

THE COMMUNICATIONS CAT 6 CABLING IS TO BE RUN TO PATCH PANELS WITHIN THE RACK ASSOCIATED WITH THAT AREA. THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- COMMUNICATIONS RACK CR-4.
- FIBERS.
- FIBRE CABLING.
- PATCH PANELS.
- CAT 6 COMMUNICATIONS OUTLETS AND CABLING.
- CABLE ACCESS WAYS.
- TESTING AND COMMISSIONING.

THIS CONTRACT INCLUDES CAT 6 OUTLETS / CABLING PROVIDED AS PART OF THE COMMUNICATIONS WORKS FOR IP POE CCTV CAMERAS. THE CAMERAS ARE NOT PART OF THE BUILDING WORKS CONTRACT AND WILL BE PROVIDED BY THE COLLEGE OUTSIDE OF THE CONTRACT.

THE COLLEGE WILL PROVIDE ALL ACTIVE EQUIPMENT, PATCH LEADS AND FLY LEADS.

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.
- HWS - HOT WATER SYSTEM.
- MCB - MINIATURE CIRCUIT BREAKER.
- MCCB - MOULDED CASE CIRCUIT BREAKER.
- MSB - MAIN 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. 3-PHASE RCBO TO BE 4-POLE.
- REF - REFRIGERATOR.
- SUS - MOUNT SUSPENDED FROM CEILING.
- UNO - UNLESS NOTED OTHERWISE.
- WP - WEATHERPROOF TO IP56 UNO.
- 500 - NUMBER DENOTES MOUNTING HEIGHT AFFL.

NOTES

13. SECURITY

THE PACIFIC SECURITY GROUP CONTACT KYLIE BUTCHARD 0410 535 324 IS TO BE ENGAGED AS A NOMINATED SUB-CONTRACTOR TO UNDERTAKE THE SECURITY COMPONENT OF THE WORKS.

THE SECURITY SYSTEM COMPONENT OF THIS CONTRACT INCLUDES THE EXPANSION / UPGRADE OF THE SCHOOLS EXISTING INNER RANGE INTEGRITY ACCESS CONTROL / SECURITY SYSTEM TO PROVIDE INTRUDER DETECTION AND ACCESS CONTROL. THE NEW SECURITY PANELS ARE TO BE MOUNTED ADJACENT CR-4

THIS CONTRACT INCLUDES CAT 6 OUTLETS / CABLING PROVIDED AS PART OF THE COMMUNICATIONS WORKS FOR IP POE CCTV CAMERAS. THE CAMERAS ARE NOT PART OF THE BUILDING WORKS CONTRACT AND WILL BE PROVIDED BY THE COLLEGE OUTSIDE OF THE CONTRACT.

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

- SECURITY SYSTEM POWER SUPPLY AND DISTRIBUTION.
- EARTHING.
- MOVEMENT DETECTORS.
- PIEZO ALARMS.
- KEY PANELS.
- ZONE EXPANDERS.
- SECURITY NETWORK.
- CABLING.
- PROGRAMMING.
- COMMISSIONING.
- CABLE ACCESS WAYS.

14. ACCESS CONTROL

THE A.B.C. ALARMS PTY. LTD. DIANNE SCALES dianne.scales@abcalarms.com.au PH (07) 3849 1939 IS TO BE ENGAGED AS A NOMINATED SUBCONTRACTOR TO UNDERTAKE THE ACCESS CONTROL COMPONENT OF THE WORKS.

THE ACCESS CONTROL COMPONENT OF THIS CONTRACT INCLUDES THE EXPANSION / UPGRADE OF THE SCHOOLS EXISTING SALTO WIRELESS DOOR CONTROL SYSTEM. ALL OF THE SALTO COMPONENTS, CABLING AND ACCESSORIES ARE TO BE SUPPLIED, INSTALLED AND COMMISSIONED AS PART OF THE ACCESS CONTROL COMPONENT OF THIS CONTRACT.

THE ACCESS CONTROL INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- SALTO WIRELESS LOCKS.
- SALTO GATEWAYS.
- CABLING.
- PROGRAMMING.
- COMMISSIONING.
- CABLE ACCESS WAYS.

15. SCHOOL BELL

THE SCHOOL BELL PA SYSTEM COMPONENT OF THIS CONTRACT INCLUDES THE EXPANSION OF THE SCHOOLS EXISTING IP SCHOOL BELL PA SYSTEM.

THE PA COMPONENT OF THIS CONTRACT INCLUDES THE PROVISION OF A CONVENTIONAL 100-VOLT SPEAKER / HORN SYSTEM THROUGHOUT THE INTERNAL AND EXTERNAL WORKS AREA WITH EACH SPEAKER / HORN CABLED IN STAR CONFIGURATION BACK TO A LEA CONNECT 354D AMPLIFIER MOUNTED IN THE TOP RU OF THE COMMUNICATIONS RACK CR-4.

PROVIDE A DUPLEX RADIO MICROPHONE ANTENNA SYSTEM WITH A SENNHEISER EW-DX EM 2 R1-9 RADIO MICROPHONE RECEIVER MOUNTED IN CR-4.

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

- SPEAKERS AND HORNS.
- AMPLIFIER.
- CABLING.
- LOCKABLE CABINET, OUTLETS AND XLR CABLING.
- PROGRAMMING.
- COMMISSIONING.
- RADIO MICROPHONE ANTENNA SYSTEM.

PROVIDE AN AUDIO INPUT FOR TESTING. BALANCE AND SET THE VOLUME OF THE PA SYSTEM TO THE SATISFACTION OF THE SCHOOL. ALLOW TO ATTEND SITE TWICE DURING THE DEFECTS AND LIABILITY PERIOD TO ADJUST THE BALANCING AND VOLUME AS DIRECTED BY THE SCHOOL.

16. FIRE ALARM SYSTEM

EVERSAFE FIRE CONTACT CAMPBELL MCDOWALL 0432 394 240 (07) 3399 8988 IS TO BE ENGAGED AS NOMINATED SUB-CONTRACTOR TO UNDERTAKE ALL FIRE ALARM WORKS.

PROVIDE A FIRE MIMIC PANEL (FMP) TO ALLOW FULL ACCESS TO ALL OF THE MAIN ADMINISTRATION BUILDING SITE FIRE INDICATOR PANELS EVENTS AND CONTROLS TO ALLOW ALL ALARMS TO BE ASSESSED FROM THE FMP AND ALL OF THE EVACUATION CONTROLS FOR THE ENTIRE SITE TO BE UNDERTAKEN FROM THE FMP.

PROVIDE SPEAKERS AND HORNS THROUGH OUT THE WORKS AREA TO PROVIDE OCCUPANT WARNING WHICH IS TO BE CONTROLLED BY BOTH THE EXISTING MAIN ADMINISTRATION BUILDING SITE FIRE INDICATOR PANEL AND THE NEW FIRE MIMIC PANEL.

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

- FIRE MIMIC PANEL.
- SPEAKERS AND HORNS.
- AMPLIFIERS.
- CABLING.
- PROGRAMMING.
- COMMISSIONING.
- INTERFACE TO THE MAIN ADMINISTRATION BUILDING SITE FIRE INDICATOR PANEL.
- UPGRADING THE MAIN ADMINISTRATION BUILDING SITE FIRE INDICATOR PANEL AS NECESSARY TO FACILITATE THE WORKS.

ELECTRICAL DESIGN GROUP BRISBANE PTY LTD ACN 092 710 793		THE COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF THE ELECTRICAL DESIGN GROUP.		PROJECT: ST JOHN'S ANGLICAN COLLEGE FOREST LAKE AQUATIC CENTRE STAGE 2 COLLEGE AVENUE, FOREST LAKE	
TRADING AS: ELECTRICAL DESIGN GROUP		USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.		DRAWING: ELECTRICAL SERVICES NOTES	
ALL DIMENSIONS TO BE VERIFIED ONSITE.		SCALE: NOT TO SCALE AT A1		PROJECT NO: C3230a	DRAWING NO: E02
				REVISION: F	



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