

**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.  
 - CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.  
 - POWER DISTRIBUTION.  
 - LIGHTING.  
 - COMMUNICATIONS CABLING.  
 - INTRUDER DETECTION.  
 - SCHOOL BELL SYSTEM.  
 - RADIO MICROPHONE PA 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.

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.

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 ON SITE 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.  
 - QLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.  
 - QLD 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 2.5mm<sup>2</sup> TWIN & EARTH STRANDED COPPER CONDUCTORS, PVC INSULATED 0.6/1kV V75 GRADE TO AS174, 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 THE PROVISION OF A NEW CIRCUIT BREAKER IN THE EXISTING DB-14 TO SUPPLY A NEW DB-B VIA A NEW UNDERGROUND SUBMAIN. A UNDERGROUND PIT AND CONDUIT SYSTEM IS TO BE PROVIDED ALONG WITH HAT SECTION IN THE EXISTING MECHANICAL SERVICES PLANT ENCLOSURE TO FACILITATE CABLE ACCESS FOR THE NEW SUBMAIN FROM DB-14 TO DB-B.

THE POWER DISTRIBUTION COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:  
 - POWER DISTRIBUTION.  
 - EARTHING.  
 - UNDERGROUND PITS AND CONDUITS.  
 - HAT SECTIONS.  
 - SUBMAIN.  
 - DB-14 UPGRADE.  
 - NEW DISTRIBUTION BOARD DB-B.  
 - CIRCUITS.  
 - INSTALLATION OF THE BACKBOARD CONTROL SYSTEM.  
 - TV SHUTTER CONTROL SYSTEM.  
 - ISOLATORS AND OUTLETS.  
 - TESTING AND COMMISSIONING.

ENSURE THAT POWER IS MAINTAINED TO THE EXISTING SCIENCE BUILDING BETWEEN 6.00AM AND 1.00AM. ANY INTERRUPTIONS TO THE POWER SUPPLY MUST BE LIMITED TO LESS THAN TWO HOURS BETWEEN 1.00AM AND 6.00AM AND THE SCHOOL MUST BE PROVIDED WITH TWO WEEKS NOTICE PRIOR TO THE INTERRUPTION.

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.  
 - LAMPS.  
 - EARTHING OF THE LIGHTING INSTALLATION.  
 - LIGHTING CONTROL.  
 - SWITCH PANEL ENCLOSURE.  
 - LIGHTING SUBCIRCUITS.  
 - TESTING AND COMMISSIONING.

8. COMMUNICATIONS

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES AN INTEGRATED TELEPHONE AND DATA EIA/TIA 568-A CATEGORY 6A SHIELDED TWISTED PAIR COMMSCOPE CERTIFIED RJ45 CABLING SOLUTION WITH A 25 YEAR COMMSCOPE WARRANTY. PROVIDE A 6 CORE SINGLE MODE OSM FIBRE CABLE FULLY TERMINATED WITH LC CONNECTORS BETWEEN THE NEW COMMUNICATIONS RACK CR-B AND THE EXISTING ADMINISTRATION BUILDING COMMUNICATIONS RACK CR-1.

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:  
 - UPGRADING OF CR-1 TO ACCOMMODATE THE NEW FIBRE.  
 - NEW UNDERGROUND FIBRE CABLES FROM CR-1 TO AND CR-B.  
 - COMMUNICATIONS RACK CR-B.  
 - EXTENSION OF THE EXISTING UNDERGROUND CONDUIT SYSTEM FROM THE EXISTING COMMUNICATIONS PIT TO CR-B.  
 - COMMUNICATIONS OUTLETS.  
 - FIBER, PATCH PANELS WITHIN CR-B AS REQUIRED.  
 - HDMI OUTLETS AND CABLES.  
 - TESTING AND COMMISSIONING.

9. INTRUDER DETECTION

THE SECURITY SYSTEM COMPONENT OF THIS CONTRACT INCLUDES THE EXPANSION OF THE SCHOOLS EXISTING SECURITY SYSTEM WITH ALL NEW INTER BUILDING (SECURITY NETWORK) CONNECTIONS VIA THE COMMUNICATIONS SYSTEM OPTICAL FIBRE CABLING. UPGRADE THE EXISTING EQUIPMENT AS REQUIRED TO ACCOMMODATE THE OPTICAL FIBRE CONNECTIONS.

PROVIDE NEW DATA GATHERING PANELS / SECURITY PANEL ADJACENT COMMUNICATION RACK CR-B. PROVIDE A ARMING / DISARMING KEY PANEL WITHIN THE SP ENCLOSURE.

THE INTRUDER DETECTION COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:  
 - FIBRE MODEMS.  
 - DATA GATHERING PANEL.  
 - KEY PANEL.  
 - MOVEMENT SENSORS.  
 - PIEZO SIREN.  
 - TESTING AND COMMISSIONING.

**NOTES**

10. SCHOOL BELL SYSTEM

PETER STEPHENS OF STEPHENS COMPUTER & ELECTRONIC SERVICES, UNIT 16, 58 KENT STREET CURRAJONG 4812 IS TO BE ENGAGED AS A NOMINATED SUB-CONTRACTOR TO SUPPLY AND INSTALL THE PA SYSTEM. PHONE (07) 4775 5924 MOBILE 0417 144 834 e-mail peter@scses.net.au

THE SCHOOL BELL PA SYSTEM COMPONENT OF THIS CONTRACT INCLUDES THE EXPANSION OF THE SCHOOLS EXISTING SCHOOL BELL PA SYSTEM IN THE ADMINISTRATION BUILDING WITH THE AUDIO SIGNAL DISTRIBUTED AS AN IP SIGNAL OVER THE SCHOOLS ETHERNET NETWORK.

WITHIN THE COMMUNICATIONS RACK CR-B PROVIDE A NEW ETHERNET TO AUDIO INTERFACE UNIT AND A NEW AMPLIFIER TO POWER THE SPEAKERS WITHIN THE BUILDING. THE AMPLIFIER/S IS TO BE SIZED AT 200% OF THE INITIAL NOMINAL SPEAKER LOAD.

THE SCHOOL BELL COMPONENT OF THIS CONTRACT IS TO INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:  
 - ETHERNET TO AUDIO INTERFACE UNIT.  
 - AMPLIFIER.  
 - SPEAKERS.  
 - TESTING AND COMMISSIONING.

11. RADIO MICROPHONE PA SYSTEM

PETER STEPHENS OF STEPHENS COMPUTER & ELECTRONIC SERVICES, UNIT 16, 58 KENT STREET CURRAJONG 4812 IS TO BE ENGAGED AS A NOMINATED SUB-CONTRACTOR TO SUPPLY AND INSTALL THE LOCAL RADIO MICROPHONE PA SYSTEM. PHONE (07) 4775 5924 MOBILE 0417 144 834 e-mail peter@scses.net.au

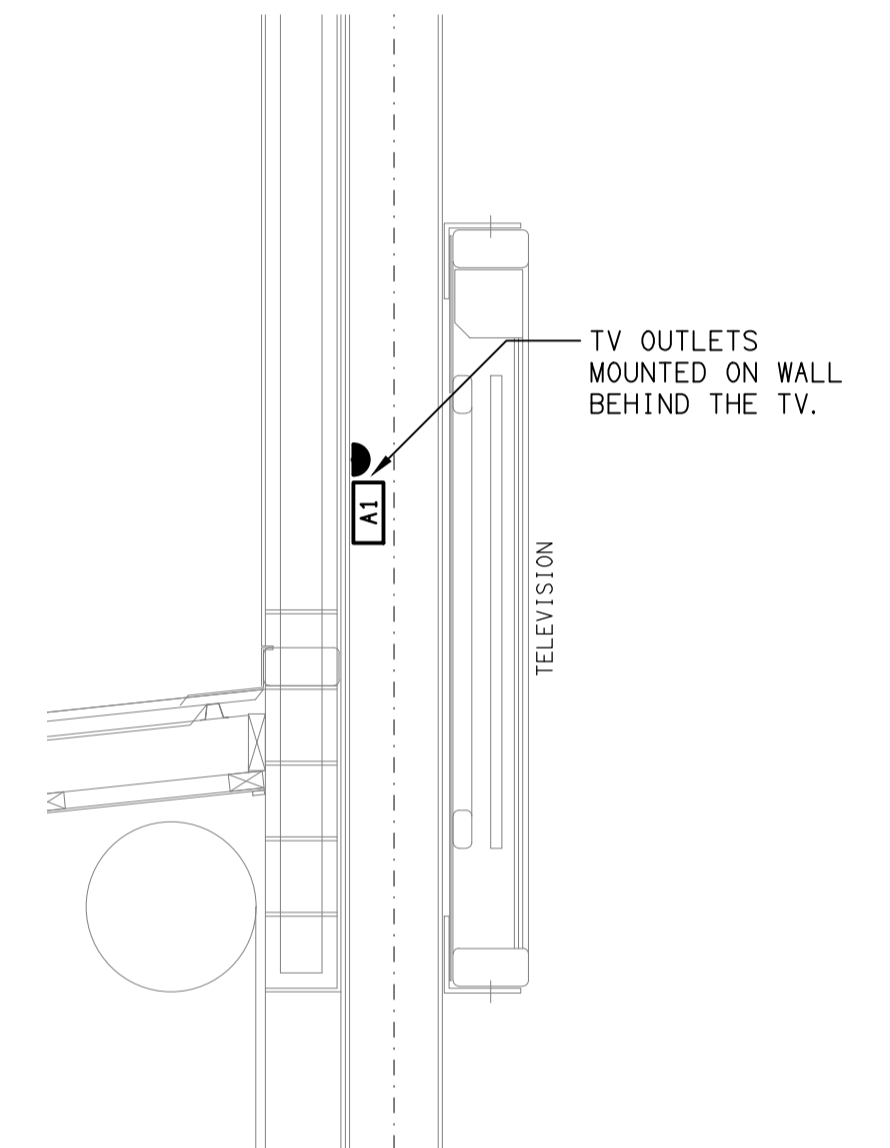
THE LOCAL RADIO MICROPHONE PA SYSTEM COMPONENT OF THIS CONTRACT INCLUDES THE PROVISION OF A STANDALONE RADIO MICROPHONE PA SYSTEM INCLUDING A REMOTE RADIO MICROPHONE ANTENNA SYSTEM AND AN AUDIO INPUT FROM THE LARGE SCREEN TV (A1).

THE DEDICATED MIXER AMPLIFIER AND RADIO MICROPHONE RECEIVERS ARE TO BE MOUNTED WITHIN COMMUNICATIONS RACK CR-B. THE AMPLIFIER/S IS TO BE SIZED AT 200% OF THE INITIAL NOMINAL SPEAKER LOAD.

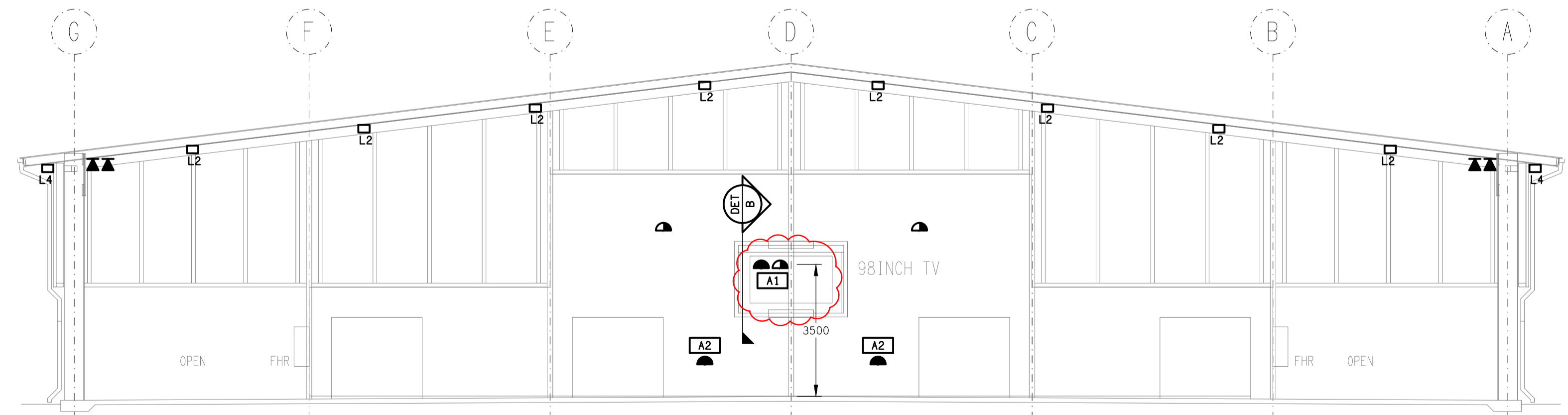
THE LOCAL RADIO MICROPHONE PA SYSTEM COMPONENT OF THIS CONTRACT IS TO INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:  
 - TWO RECHARGEABLE HAND HELD RADIO MICROPHONES THAT MATCH THE EXISTING USED THROUGHOUT THE SCHOOL.  
 - RADIO MICROPHONE RECEIVER/S.  
 - RADIO MICROPHONE ANTENNA SYSTEM.  
 - MIXER AMPLIFIER/S.  
 - TV AUDIO INPUT.  
 - SPEAKERS.  
 - TESTING AND COMMISSIONING.

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.
- N - NEON / LED INDICATOR WHEN ON.
- NTS - NOT TO SCALE.
- RCBO - CIRCUIT PROTECTED VIA A 30mA RESIDUAL CURRENT DEVICE INTEGRAL TO THE CIRCUIT BREAKER. 3-PHASE RCBO TO BE 4-POLE.
- RSD - ROLLER SHUTTER DOOR.
- SUS - MOUNT SUSPENDED FROM CEILING.
- UNO - UNLESS NOTED OTHERWISE.
- WP - WEATHERPROOF TO IP56 UNO.
- 500 - NUMBER DENOTES MOUNTING HEIGHT AFFL.



**DETAIL B**  
TV OUTLET MOUNTING  
NOT TO SCALE



**DETAIL A**  
SOUTHERN WALL ELEVATION  
SCALE 1:100

| REV | DATE       | DESCRIPTION  |
|-----|------------|--------------|
| C   | 12/12/2022 | TENDER       |
| D   | 13/12/2022 | TENDER       |
| E   | 26/05/2023 | CONSTRUCTION |

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CLIENT

THE ROMAN CATHOLIC TRUST CORPORATION FOR THE DIOCESE OF TOWNSVILLE

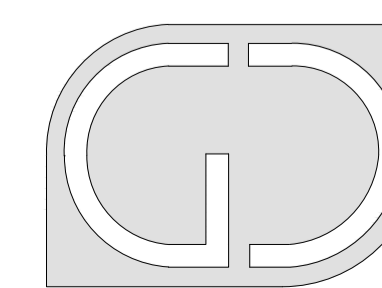
PROJECT

RYAN CATHOLIC COLLEGE, COVERED AREA BALL COURTS

DRAWING TITLE

ELECTRICAL SERVICES NOTES & ELEVATION

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