








































LEGEND

-  ELECTRICAL SERVICES SWITCHBOARD / NBN NTD AS NOTED.
-  LIFT CONNECTION.
-  CONDUIT ROUTE.
-  ELECTRICAL PIT, TYPE AS NOTED.
-  ELECTRICAL EQUIPMENT AS NOTED.
-  FIRE DETECTION EMERGENCY WARNING CIE.
-  FIRE DETECTION EMERGENCY WARNING MIMIC PANEL CIE.
-  FIRE EVACUATION SPEAKER.
-  FIRE ALARM HORN.
-  MANUAL CALL POINT.
-  THERMAL DETECTOR.
-  SMOKE DETECTOR.
-  ASPIRATING SMOKE DETECTOR.
-  VISUAL ALARM DEVICE.
-  AS1786 SMOKE ALARM C/W MAINS SUPPLY 10 YEAR BATTERY BACKUP INTERCONNECTED AS INDICATED.
-  M1 NEW CODE COMPLIANT EMDI MK10A ELECTRICITY RETAIL METER.
-  M2 NOT REQUIRED.
-  M3 ENERGY MONITORING SYSTEM METER AS PER JB.3 OF THE NCC BCA 2019.
-  FUSE.
-  SINGLE PHASE.
-  THREE PHASE.
-  CURRENT TRANSFORMER C/W REMOVABLE LINK.
-  FUSE LINK.
-  CIRCUIT BREAKER.
-  ISOLATOR.
-  NTD NBN NETWORK TERMINATION DEVICE.
-  SDT NBN FIBRE SPLITTER DISTRIBUTION TERMINAL.
-  FDT NBN FIBRE DISTRIBUTION TERMINAL.
-  BUD1M NBN BUILDING DISTRIBUTION ENCLOSURE TYPE M.
-  MSB EXISTING MAIN SWITCHBOARD.
-  MP1 EXISTING RETAIL METER PANEL 1.
-  MP2 EXISTING RETAIL METER PANEL 2.
-  MP3 EXISTING RETAIL METER PANEL 3.

LEGEND

-  REFER TO DETAIL NOTED FOR THE AREA SHOWN HATCHED. ADDITIONAL OUTLETS & FITTINGS MAY BE SHOWN ON DETAIL.
-  E1 GENERAL EMERGENCY LIGHT. RECESSED NON-MAINTAINED EMERGENCY EVACUATION FITTING. AS2293 CLASSIFICATION CO - D25 C90 - D25
-  E2 GENERAL EMERGENCY LIGHT. WALL MOUNTED AT 2400 AFFL. NON-MAINTAINED EMERGENCY EVACUATION FITTING. AS2293 CLASSIFICATION CO - D25 C90 - D25
-  EX EMERGENCY EXIT LIGHT. MAINTAINED EXIT LUMINAIRE AS SHOWN. MOUNT BETWEEN 2100 AND 2700 AFFL OR DIRECTLY ABOVE THE DOOR. AS2293 CLASSIFICATION CO - D3.2 C90 - E3.2
-  L1 1200 LONG BATTEN FITTING C/W NON-MAINTAINED EMERGENCY BATTERY PACK. AS2293 CLASSIFICATION CO - D40 C90 - D40
-  L2 600 LONG BATTEN FITTING C/W NON-MAINTAINED EMERGENCY BATTERY PACK. AS2293 CLASSIFICATION CO - D40 C90 - D40

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.
 - NBN PATHWAYS.
 - 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.
- ENERGEX REQUIREMENTS.
- THE QUEENSLAND ELECTRICITY CONNECTION MANUAL V4 (QECM) AND THE NATIONAL ELECTRICITY METERING STANDARDS (NEM).
- AS/NZS3000.
- AS3008.
- AS1670.1.
- AS3786.
- BUILDING FIRE SAFETY (DOMESTIC SMOKE ALARMS) LEGISLATION AMENDMENT REGULATION 2016
- LOCAL BRIGADE.
- 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 2.5mm² 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 THE PROVISION OF NEW UNDERGROUND SUBMANS FROM THE EXISTING SITE MAIN SWITCHBOARD TO A NEW MAIN DISTRIBUTION BOARD (MDB) TO SERVICE THE TWO TOWERS. THE MDB IS TO CONTAIN A CT METER OF THE COMMUNITY SERVICES AS WELL AS FACILITIES FOR THE METERING OF THE FUTURE STAGE 4 APARTMENTS. EACH ACCOMMODATION LEVEL OF THE TWO TOWERS IS TO BE PROVIDED WITH A METER PANEL.

A QECM V4 DISPENSATION HAS BEEN OBTAINED FROM ENERGEX TO ALLOW THE PROPOSED METERING WITHIN THE TOWERS.

PROVIDE ALL EXISTING AND NEW METER POSITIONS WITH A PERMANENT MECHANICALLY ATTACHED SIGN IDENTIFYING THE LOCATIONS OF THE OTHER METER POSITIONS ACROSS THE SITE. ENSURE ALL ACCESS WAYS INCLUDING GATES / DOORS ETC TO THE EXISTING AND NEW METER POSITIONS ARE PROVIDED WITH ENERGEX METERING LOCKS PRIOR TO ANY UNIT METERING BEING INSTALLED. PROVIDE A COPY OF THE ENERGEX IS DISPENSATION WITHIN EACH METER PANEL. AN ELECTRONIC COPY OF THE DISPENSATION WILL BE PROVIDED BY THE ELECTRICAL DESIGN GROUP WHEN REQUESTED BY EMAIL.

EXTEND THE EXISTING UNDERGROUND CONDUIT SYSTEM TO THE BASEMENT TO FACILITATE THE INSTALLATION OF THE NEW SUBMANS FROM THE SITE MSB. UTILISE THE EXISTING SPARE 630 AMP MCCB IN THE SITE MSB TO SUPPLY THE NEW SUBMANS.

PROVIDE THE NEW MDB WITH AN INTEGRAL COMMUNITY DISTRIBUTION BOARD (DB-E) TO SUPPLY THE STAGE 3 COMMUNAL SERVICES.

PROVIDE A COMMUNAL LIGHTING DISTRIBUTION BOARD DB-EL AND A COMMUNAL POWER DISTRIBUTION BOARD DB-EP TO SUPPLY THE STAGE 3 LIGHTING CIRCUITS AND POWER CIRCUITS RESPECTIVELY. SIZE DB-EL AND DB-EP TO ACCOMMODATE THE STAGE 3 COMMUNITY CIRCUITS AND HAVE 20% SPARE POLES AT PRACTICAL COMPLETION.

PROVIDE AN ENERGY MONITORING SYSTEM AS PER JB.3 OF THE NCC BCA 2019 THAT COLLATES THE TIME-OF-USE ENERGY DATA TO A SINGLE INTERFACE WHERE IT CAN BE STORED, ANALYSED AND REVIEWED FOR THE FOLLOWING SUPPLIES:

- DB-EL
- DB-EP

7. NBN

PROVIDE A NBN COMPLIANT CABLE PATHWAY SYSTEM FROM A COMMON BUDI-M LOCATED IN THE BASEMENT 1 MDB ROOM TO ALLOW THE NBN CO TO PROVIDE A FIBRE SERVICE TO A NTD WITHIN EACH APARTMENT. THE CABLE PATHWAY SYSTEM IS TO INCLUDE:

- NEW UNDERGROUND LEADIN CONDUIT.
- BASEMENT 1 CABLE TRAYS.
- NBN COMMUNICATIONS RISER WITHIN EACH TOWER FROM BASEMENT 1 TO THE ROOF.
- NBN COMPLIANT DROP CONDUITS FROM THE RISER ON EACH LEVEL TO THE NTD IN EACH APARTMENT.

8. FIRE ALARM SYSTEM

PROVIDE EACH SOLE OCCUPANCY UNIT WITH A STANDALONE AS3786-2014 SMOKE ALARM SYSTEM CONTAINING MAINS POWERED INTERCONNECTED PHOTOELECTRIC SMOKE ALARMS.

PROVIDE THE COMMUNAL NON SOLE OCCUPANCY UNIT SPACE WITH AN ADDRESSABLE AS1670.1-2018 SMOKE DETECTION AND ALARM SYSTEM. DETECTION IS NOT REQUIRED TO AREAS PROTECTED BY FIRE SPRINKLERS. INTERFACE THE FIRE SPRINKLER SYSTEM TO THE AS1670.1-2018 SMOKE DETECTION AND ALARM SYSTEM TO GENERATE AN ALARM UPON OPERATION OF THE SPRINKLER SYSTEM. THE ADDRESSABLE DETECTORS ARE TO BE WIRED IN A LOOP.

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

- SOLE OCCUPANCY UNIT SMOKE ALARMS.
- AS1670.1 SMOKE DETECTION AND ALARM SYSTEM.
- FIRE INDICATOR PANEL (FDCIE).
- BUILDING 1 FIRE INDICATOR MIMIC PANEL (MPCIE).
- BUILDING 2 FIRE INDICATOR MIMIC PANEL (MPCIE).
- ADDRESSABLE SMOKE DETECTORS.
- MANUAL CALL POINTS.
- ALERT AND EVACUATION SPEAKERS AND HORNS.
- VISUAL ALARM DEVICES.
- SPRINKLER INTERFACE.
- CABLING.
- TESTING AND COMMISSIONING.
- AS1670.1 DESIGNERS STATEMENT.
- AS1670.1 INSTALLERS STATEMENT.

ELECTRICAL DESIGN GROUP BRISBANE
 PTY LTD
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PROJECT:
19 GOVERNOR TERRACE - STAGE 3
 19 GOVERNOR TERRACE, MURARRIE, QUEENSLAND

B	TENDER	03/09/2024
REV:	DESCRIPTION:	DATE:
DRAWING: ELECTRICAL SERVICES LEGEND		
SCALE: NOT TO SCALE AT A1	PROJECT NO: C3252a	DRAWING NO: E01
		REVISION: B