ELECTRICAL SERVICES

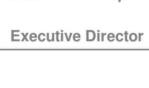


ENDORSED DOCUMENT

Permit No. P33955

09/09/2022

NOTE: Conditions apply.





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UNDERGROUND SERVICES

WORK CREWS WHO WILL BE EXCAVATING AT THIS SITE ARE ADVISED TO

EXISTING UNDERGROUND SERVICES AND THE REQUIREMENTS OF THE

ON SITE TO AVOID ANY DAMAGE DURING EXCAVATION WORKS. WHERE

ONLY AND NO WARRANTY IS INPLIED AS TO THEIR ACCURACY.

DIAL BEFORE YOU DIG SERVE

DAYS BEFORE PLANNED EXCAVATION DATE.

WEB - www.1100.com.au

CONTACT THE "DIAL BEFORE YOU DIG" SERVICE TO DETERMINE THE EXTENT OF

APPROPRIATE SERVICE PROVIDERS. IT IS THE RESPONSIBILITY OF THE WORKS

CREWS TO HAVE ALL EXISTING SERVICES AFFECTED BY THESE WORKS LOCATED

SERVICES HAVE BEEN SHOWN ON THE PLAN, THESE LOCATIONS ARE INDICATIVE

IDENTIFICATION

PHONE - 1100

POWER MP - METER CABINET

SINGLE PHASE ISOLATOR - 240 VOLT (RATING AS SHOWN OR SCHEDULED).

THREE PHASE ISOLATOR - 415 VOLT (RATING AS SHOWN OR SCHEDULED). 10A 240V SINGLE SOCKET OUTLET, 300 AFL UNLESS NOTED

OTHERWISE CLIPSAL ICONIC SERIES.

10A 240V DOUBLE SOCKET OUTLET. 300 AFL UNLESS OTHERWISE NOTED, AB - ABOVE BENCH, CLIPSAL ICONIC SERIES, MAX. 8 DOUBLES PER CIRCUIT, SUBSCRIPT 20A MEANS SEPARATE 20A

10A 240V SINGLE SOCKET OUTLET CLIPSAL IP56 PROTECTED.

10A DOUBLE SOCKET CUTLET WITH INTEGRAL USB

SWITCHING

STANDARD LIGHT SWITCH.

2 WAY LIGHT SWITCH MOUNTED AT 1000AFL.

PHOTO ELECTRIC CELL (DAYLIGHT SENSOR)

LIGHT SWITCH PANEL

360° MOTION SENSOR. INFRARED/ULTRASONIC DUAL TECHNOLOGY. INSTALL MOTION SENSORS A MINIMUM 1200mm AWAY FROM CEILING FAN BLADES AND 300mm

FROM ALL OTHER SURFACE MOUNTED FITTINGS WHERE POSSIBLE.

PHOTO ELECTRIC CELL (DAYLIGHT SENSOR)

ESSENTIAL SWITCH LINE

SWITCH LINE

ABBREVIATIONS ABOVE BENCH BOILING WATER UNIT CLEANERS OUTLET COOK TOP DEL DENOTES DELETED ITEM DENOTES DISHWASHER EXHAUST FAN ELECTRIC HEATER REFRIGERATOR FREEZER HAND DRYER HOT WATER UNIT **GAS HEATER** RELOCATED ITEM UNDER BENCH VIDEO PROJECTION UNIT WEATHERPROOF MICROWAVE

24HR 24 HOUR SECURITY CIRCUIT

U.N.O. UNLESS NOTED OTHERWISE

O.A.E OR APPROVED EQUAL

EXISTING

LIGHTING SCHEDULE						
SYMBOL	LUMINAIRE			DESCRIPTION		
	LAMP	MANUFACTURER	TYPE	DESCRIPTION		
⊕ ^{SL1}	LED 81W, 5460lm, 3000K	LIGMAN - ELECTRICAL LIGHTING DISTRIBUTORS JOHN WALL PH 03 9918 8500 MOB 0404 600 716	MACARON 2 LED [T2] DALI DIMMABLE + ZHARGA BOOK 18 SOCKET & CONNECTIVITY SENSOR	POLE TOP MOUNTED LED LUMINAIRE, DIE-CAST ALUMINIUM BODY, WITH PRIMER CORROSION RESISTANT PROTECTION, POWDER COATED MOSS GREEN RAL 6005 & DIMMABLE ELECTRONIC CONTROL GEAR. TO BE SUPPLIED WITH ZHARGA BOOK 18 SOCKET AND CONNECTIVITY SENSOR. POLE MOUNTING TO BE 3OTTOM ENTRY SPIGOT. SHOP DRAWINGS TO BE PROVIDED FOR APPROVAL.		
	N/A	LIGMAN - ELECTRICAL LIGHTING DISTRIBUTORS (OR APPROVED EQUIVALENT) JOHN WALL PH 03 9918 8500 MOB 0404 600 716	5M CIRCULAR ROUND TAPERED GALVANISED STEEL PO_E. DIMENSIONS: 132mm DIA BASE 60mm DIA TOP 250mm BASEPLATE 85x300mm ACCESS HATCH	POLE TO BE 5m CIRCULAR TAPERED, POWDER COAT MOSS GREEN RAL 6005, SUPPLIED WITH FOUNDATION CAGE TO SUIT SOIL CONDITIONS & BASEPLATE. SHOP DRAWINGS TO BE PROVIDED FOR APPROVAL.		

3.16 ALL CABLING FOR NEW AND RELOCATED EQUIPMENT TO BE CONCEALED FROM VIEW.

3.17 ALL CABLE SHALL BE UNCONDITIONALLY GUARANTEED AND SUCH GUARANTEE SHALL

INVOLVED. UNLESS OTHERWISE SPECIFIED ALL CABLE SHALL HAVE COPPER

CABLE ROUTES, COLOUR CODING SHALL BE IN ACCORDANCE WITH AS 3000.

COVER REPLACEMENT OF FAULTY CABLE AND FULL REIMBURSEMENT OF ALL COSTS

CONDUCTORS AND V75 GRADE PVC INSULATION, AND SHEATHED WHERE REQUIRED.

3.19 CONTRACTOR TO CHECK AND VERIFY ALL FINAL CIRCUIT CABLE SIZES BASED ON ACTUAL

3.20 FIELD CONTROL WIRING FOR EXTRA LOW VOLTAGE (LESS THAN 32 V A.C./110 V D.C.) SHALL

BE NOT LESS THAN 2.5mm² STRANDED COPPER, SUB CIRCUIT CABLING SHALL BE

3.21 JUNCTION BOXES, WITH IDENTIFICATION LABELS SHALL ONLY BE USED AFTER WRITTEN

3.23 DERATING OF SUB CIRCUIT CABLING IN ACCORDANCE WITH AS/NZS 3000:2018 AND AS/NZS

3008.1.1 SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND ALL CABLES SHALL BE

SERVICES IN PARTICULAR PLUMBING AND MECHANICAL SERVICES AND INSTALL ALL

CABLES, CABLE DUCTS, CONDUITS AND ELECTRICAL EQUIPMENT CLEAR OF SAME.

3.26 CONDUIT SADDLES SHALL BE OF THE STAND-OFF TYPE I.E. FULL SADDLE WITH SPACER IN

CONDUITS, UNAVOIDABLY EXPOSED SHALL BE RUN SQUARE AND PLUMB WITH BUILDING

EXPOSED AREAS OR ON PAINTED WALLS. HALF SADDLES ARE NOT ACCEPTABLE.

3.28 FLEXIBLE JOINTS SHALL BE MADE AT RIGHT ANGLES ACROSS CONCRETE EXPANSION

JOINTS. THE ENDS OF THE CONDUIT SHALL BE KEPT 19mm APART (ACROSS THE JOINTS)

AND BELLED TO FORM A FIRM SLIDING FIT INSIDE A LARGER SIZE CONDUIT SLEEVE

ALL SPARE CONDUITS SHALL BE PROVIDED WITH A SUITABLE, DURABLE DRAW-WIRE

3.30 ALL UNDERGROUND ELECTRICAL SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH

3.31 ENSURE THE BOTTOM OF TRENCHES ARE FLAT AND CLEAR OF PROTRUSIONS SUCH AS

IDENTIFICATION TAPE, 150mm ABOVE THE CONDUIT ALONG THE ENTIRE LENGTH OF THE

3.33 TRENCHES SHALL BE BACKFILLED ONLY WITH SELECTED CLEAN FILL AND COMPACTED IN

SHALL BE IN ACCORDANCE WITH AS 3000 AND NOT LESS THAN 600mm TO THE TOP OF

3.34 THE MINIMUM SIZE OF UNDERGROUND CONDUIT SHALL BE 32mm DIAMETER. EXCEPT

WHERE CONDUIT SIZE IS SPECIFIED, CONDUITS SHALL HAVE CAPACITY FOR ONE

ADDITIONAL CIRCUIT. ALL IN-GROUND CONDUITS SHALL BE FITTED WITH A 2.5mm² TPI

3.35 ALL UNDERGROUND CABLE SHALL BE DOUBLE INSULATED CABLE, NOT LESS THAN 2.5mm². JOINTING OF UNDERGROUND CABLES IS NOT ACCEPTABLE. SEPARATION DISTANCES TO

OTHER SERVICES IN THE SAME TRENCH SHALL BE IN ACCORDANCE WITH THE

3.36 ALL CONDUITS TO BE BORED BETWEEN PILLARS AND LIGHT POSTS AND BETWEEN LIGHT

3.37 INSTALL CABLE PITS AT LOCATIONS AS SHOWN ON THE DRAWINGS. PITS SHALL BE ACO

3.38 PROVIDE CABLE PITS WITH LIDS SUITABLE FOR THE TRAFFICABLE SERVICE IN THE

3.40 BRASS MARKER PLATES WITH LETTERING NOT LESS THAN 10mm HIGH SHALL BE

CABLEMATE OR APPROVED EQUIVALENT FITTED WITH A CONCRETE LID UNLESS NOTED

RESPECTIVE INSTALLATION LOCATIONS. WHERE INSTALLED IN ROADWAYS, THE LIDS

3.39 ENSURE LIDS ARE LABELLED WITH THE WORDS "ELECTRIC CABLE" OR "COMMUNICATIONS

INSTALLED ON THE BUILDING EXTERNAL WALL AT ENTRY/EXIT POINTS, AT KERBS AND

SHALL BE SET IN A CONCRETE PAD NOT LESS THAN 300mm SQUARE x 200mm DEEP.

3.41 NEAT FITTING HOLES SHALL BE DRILLED IN THE PIT WALLS FOR CONDUIT / PIPE ENTRIES

AND 4 x 50mm HOLES SHALL BE DRILLED IN THE BOTTOM OF THE PITS FOR DRAINAGE.

ROAD CROSSINGS AND ANY CHANGES IN DIRECTION. IN UNPAVED AREAS, THE MARKER

LAYERS NOT EXCEEDING 150mm TO A RELATIVE DENSITY OF 95%. THE MINIMUM COVER

ARRANGE CONDUITS SO THAT THE MAKER'S IDENTIFICATION AND THE CONDUIT

ROCKS. TREE ROOTS AND THE LIKE, PRIOR TO INSTALLATION OF CONDUITS.

3.32 COVER CONDUITS WITH 150mm DEPTH OF RUBBLE FREE SAND AND PLACE AN

THE REQUIREMENTS OF AS 3000 AND SHALL BE LAID IN SAND WITH 75mm BELOW AND

3.27 A GAP OF AT LEAST 40mm SHALL BE PROVIDED BETWEEN PARALLEL CONDUITS.

3.29 UNLESS OTHERWISE SPECIFIED ALL JOINTS IN PVC CONDUIT SHALL BE WELDED.

ONE MAKE OF CONDUIT, FITTINGS AND WELDING SOLUTION SHALL BE USED

APPROPRIATELY SIZED AND DERATED TO SUIT THE METHOD OF INSTALLATION.

3.24 AT ALL TIMES REFER TO DRAWINGS AND REQUIREMENTS OF OTHER TRADES AND

3.25 WHERE CONDUITS AND CONDUIT SADDLES ARE IN PUBLIC AREAS, THEY SHOULD BE

3.22 CABLE EXPOSED TO SUNLIGHT IN EXTERNAL LOCATIONS MUST BE UV RATED.

WITH THE ARCHITECT AND CLIENT PRIOR TO INSTALLATION.

INSTALLED USING THE 'LOOP IN - LOOP OUT' PRINCIPLE.

APPROVAL FROM THE SUPERINTENDENT.

CABLE ENCLOSURES AND MATERIALS

PAINTED TO MATCH BACKGROUND COLOURING.

LINES AND AS DIRECTED BY THE CONSULTING ENGINEER.

TO CHANGE DIRECTION CONDUITS SHALL BE SET.

THROUGHOUT.

150mm ABOVE AND TO SIDES.

CABLE AS A DRAW WIRE.

REQUIREMENTS OF AS 3000 AND AS 3500.

OTHERWISE, MINIMUM DIMENSIONS 450mm x 600mm.

SHALL BE SUITABLE FOR HEAVY TRUCK TRAFFIC.

CABLES", OR "AUXILIARY CABLES" AS APPROPRIATE.

CATEGORY ARE UPPERMOST IN CLEAR VIEW.

LOW VOLTAGE (LV) INSTALLATION

3.18 NOT USED.

ALLOW TO MAKE GOOD THE CEILING AS REQUIRED. WHERE CONCEALED CABLING IS NOT

POSSIBLE, SURFACE MOUNTED CONDUIT SHALL BE USED. ANY AREAS PROPOSED TO

BE CABLED WITH SURFACE MOUNTED CONDUIT SHALL HAVE THEIR ROUTE CONFIRMED

SPECIFICATION NOTES

THIS SPECIFICATION, UNLESS SPECIFICALLY STATED OTHERWISE, CALLS FOR THE PROVISION OF SYSTEMS COMPLETE IN EVERY RESPECT, FIT AND READY FOR CONTINUOUS, SAFE, EFFICIENT OPERATION. THE CONTRACTOR SHALL THEREFORE SUPPLY, DELIVER, INSTALL TEST, COMMISSION AND SET TO WORK THE SYSTEMS AND THEY SHALL COMPLETE WITH ALL NECESSARY ANCILLARY AND MINOR ITEMS, WHETHER EXPRESSLY INDICATED ON THE DRAWINGS OR SPECIFICATION OR NOT.

CONTRACTORS ARE TO PROVIDE A BREAKDOWN OF PRICES FOR EACH OF THE INDICATED STAGING PRECINCTS AS PER THE PRICING SCHEDULE PROVIDED, THE CITY OF BALLARAT RESERVES THE RIGHT TO AWARD THE TENDER ACCORDING TO THESE PRECINCTS, EITHER IN PART, OR FOR THE WHOLE SCOPE OF WORKS AS INDICATED IN THE DRAWINGS.

1. <u>PROJECT DESCRIPTION</u>
THE PROJECT CONSISTS OF PILLAR BOXES UPGRADE AND NEW PILLAR BOXES PROVISION OF NEW PATHWAY LIGHTING AND ASSOCIATED POWER FOR STEVE MONEGHETTI TRACK PUBLIC LIGHTING, LAKE WENDOUREE, BALLARAT. THE ELECTRICAL DRAWINGS PROVIDED SHOW THE INTENT OF THE PROPOSED WORKS. HOWEVER THE FINAL DESIGN AND INSTALLATION TO THE RELEVANT STANDARDS & CODES AND TO COMPLETE A WORKING SYSTEM REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.

WHERE THE FOLLOWING TERMS ARE USED THROUGHOUT THE CONTRACT DOCUMENTS, THE TERMS BELOW SHALL BE DEFINED AS FOLLOWS:

PROVIDE: SUPPLY, INSTALL, PROVIDE CONNECTIONS TO, PROVIDE SUPPORTS AND ANCILLARY SYSTEMS TEST, COMMISSION AND WARRANTY.

INCLUDES: INCLUDES BUT MAY NOT BE LIMITED TO.

THE CURRENT EDITIONS OF ALL RELEVANT AND GOVERNING CODES, STANDARDS, REGULATIONS, GUIDELINES AND BYLAWS

CONSULTANT STANTEC

APPROVED EQUAL: A PRODUCT OR METHOD OTHER THAN SPECIFIED, WITH WRITTEN APPROVAL FROM THE CONSULTANT FOR USE INSTEAD OF THE SPECIFIED PRODUCT OR METHOD. TO GAIN WRITTEN APPROVAL, THE CONTRACTOR MAY BE REQUIRED TO SUBMIT SUPPORTING DOCUMENTATION, PRODUCT SAMPLES AND/OR CALCULATIONS.

ELECTRICAL SCOPE:

3.1 THE ELECTRICAL SERVICES INSTALLATION SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

INVESTIGATION OF EXISTING SITE CONDITIONS & INSTALLATIONS

SWITCHBOARDS

LIGHTING CIRCUITS

 LIGHTING INSTALLATION CONDUIT BORING

3.2 THE BUILDER SHALL ENGAGE THE SERVICES OF A LICENSED ELECTRICAL CONTRACTOR TO UNDERTAKE THE ELECTRICAL SERVICES AND ASSOCIATED WORKS PRIOR TO WORKS COMMENCING ON SITE

3.3 ALL EQUIPMENT TO BE SUPPLIED AS PART OF THESE WORKS SHALL BE NEW UNLES. INDICATED OTHERWISE. ALTERNATIVE EQUIPMENT SHALL NOT BE INSTALLED UNLESS PRIOR WRITTEN APPROVAL HAS BEEN GRANTED BY THE CLIENT OR PROJECT MANAGER. SUCH APPROVAL SHALL BE TO THE DISCRETION OF THE CONSULTING ENGINEER, CLIENT OR PROJECT MANAGER.

3.4 THE EXTENT OF WORKS INDICATED ON THE DRAWINGS CALL FOR THE PROVISION OF SYSTEMS COMPLETE IN EVERY RESPECT, FIT AND READY FOR CONTINUOUS SAFE EFFICIENT OPERATION. THE ELECTRICAL CONTRACTOR SHALL THEREFORE SUPPLY. DELIVER, INSTALL, TEST, COMMISSION AND SET TO WORK THE SYSTEMS INDICATED ON THE DRAWINGS. THE FINISHED INSTALLATION SHALL BE COMPLETED WITH ALL NECESSARY ANCILLARY AND MINOR ITEMS, WHETHER EXPRESSLY INDICATED ON THE

3.5 THE ELECTRICAL CONTRACTOR SHALL FULLY CO-ORDINATE ALL WORKS WITH THE OTHER TRADES PRIOR TO INSTALLATION, NO EXTRA COSTS WILL BE PAID FOR VARIATIONS IF CO-ORDINATION WAS NOT CARRIED OUT PRIOR TO INSTALLATION.

3.6 THE ELECTRICAL CONTRACTOR SHALL INSPECT THE SITE PRIOR TO SUBMITTING A PRICE AND ENSURE THAT ALL SUNDRY ASSOCIATED WORKS ARE INCLUDED, WHETHER INDICATED ON THE DRAWINGS OR NOT.

3.7 LOCATIONS OF EXISTING SERVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE EXACT LOCATIONS AND EXTENT OF EXISTING EQUIPMENT SHALL BE VERIFIED ON SITE BY THE ELECTRICAL CONTRACTOR PRIOR TO WORK COMMENCING.

3.8 WHERE EXISTING EQUIPMENT IS INDICATED TO BE REMOVED, REMOVAL SHALL INCLUDE MAKING SAFE. DISCONNECTION OF SUBCIRCUIT WIRING, REMOVAL OF CABLING, CABLE SUPPORTS AND EQUIPMENT AND MAKING GOOD.

3.9 THE PROVISION OF NEW CABLE SUPPORT SYSTEMS AND ANY MODIFICATIONS TO EXISTING CABLE SUPPORT SYSTEMS SHALL BE UNDERTAKEN BY THE ELECTRICAL CONTRACTOR AS

3.10 PRIOR TO COMMENCEMENT OF DEMOLITION IN ANY AREA ISOLATE AND MAKE SAFE THE EXISTING ELECTRICAL AND FIRE DETECTION INSTALLATION AND CLEARLY IDENTIFY EQUIPMENT TO BE RETAINED.

3.11 REMOVE ALL REDUNDANT ELECTRICAL EQUIPMENT AS DENOTED ON THE LAYOUTS INCLUDING CABLING, CONDUITS AND ACCESSORIES AS REQUIRED TO FACILITATE THE DEMOLITION PROCESS

3.12 ALLOW TO TRACE EXISTING CABLING AS NECESSARY AND RETAIN A TRADESMAN ON SITE DURING ALL DEMOLITION WORK TO IMMEDIATELY REINSTATE ANY SERVICES REQUIRED THAT ARE ACCIDENTALLY DAMAGED.

3.13 PARTICULAR CARE SHALL BE TAKEN TO PREVENT THE OCCURRENCE OF FALSE FIRE ALARMS. ANY COSTS ASSOCIATED WITH FALSE FIRE ALARMS OCCURRING DUE TO BUILDING WORKS WILL BE CHARGED TO THE CONTRACTOR.

3.15 PROVIDE NEW TIME CLOCK CONTROLS TO THE EXTERNAL LIGHTING TO THE NEW

ADJACENT THE DB IF THEY CANNOT BE INCORPORATED WITHIN.

3.14 ALL MODIFICATIONS TO EXISTING SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL BE

SWITCHBOARDS:

UNDERTAKEN TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3000 AND AS/NZS 61439. LIGHTING INSTALLATION:

PATHWAY FROM THE NOMINATED DB. TIME CLOCK CONTROLS TO BE SURFACE MOUNTED

LAKE WENDOUREE, BALLARAT,

WHERE POSSIBLE PITS SHALL BE DRAINED TO STORMWATER.

LEGEND AND GENERAL

3.42 ALL CABLE PITS AND LIDS SHALL COMPLY WITH AS 3996 TO SUIT THE LOAD CLASS OF THE

3.43 ALL CABLE PITS LOCATED EXTERNALLY OR IN AREAS SUSCEPTIBLE TO WET CONDITIONS SHALL BE SUITABLY SEALED TO PREVENT THE INGRESS OF WATER. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY DRAINAGE FROM PITS TO ENSURE THAT THEY REMAIN DRY

GENERAL REQUIREMENTS OF CONTRACT

INSTALLED LOCATION.

4.1 PRIOR TO COMMENCING WORKS ON SITE, REVIEW THE EXISTING SITE CONDITIONS TO ESTABLISH BUILDING ACCESS PROVISIONS AND RESTRICTIONS WHICH WILL IMPACT ON THE DESIGN OF THE WORKS, CAPACITY OF EXISTING POWER SUPPLY FOR ELECTRICAL SERVICES PLANT WHICH WILL BE RETAINED AND FOR ANY NEW PLANT TO BE INSTALLED.

4.2 THE SUB-TRADE CONTRACTOR SHALL FORWARD ALL RELEVANT NOTICES, ARRANGE FOR INSPECTIONS AND PAY ALL FEES TO THE ELECTRICAL INSPECTORS AS REQUIRED IN CONNECTION WITH THIS CONTRACT

4.3 THE INSTALLATION SHALL COMPLY WITH THE FOLLOWING STANDARDS:

AS/NZS 3000 - WIRING RULES AS 3008.1 -CABLES FOR ALTERNATING VOLTAGES AS 61439 - LOW VOLTAGE SWITCH GEAR AND CONTROL GEAR ASSEMBLIES AS 1158: LIGHTING FOR ROADS AND PUBLIC SPACES BUILDING CODE OF AUSTRALIA (INCLUSIVE OF VICTORIA BCA APPENDIX) VICTORIAN SERVICE & INSTALLATION RULES

4.4 NOISY WORKS ARE TO BE UNDERTAKEN OUT OF NORMAL WORKING HOURS TO AVOID DISRUPTION TO OTHER AREAS.

4.5 TESTING, COMMISSIONING, MAINTENANCE AND DEFECTS LIABILITY FOR THE COMPLETED DEFECTS LIABILITY FOR 52 WEEKS FROM DATE OF PRACTICAL COMPLETION FULL MAINTENANCE DURING THE DEFECTS LIABILITY PERIOD.

4.6 AT THE COMPLETION OF THE PROJECT THE ELECTRICAL CONTRACTOR SHALL ENGAGE AN INDEPENDENT ELECTRICAL INSPECTOR TO CARRY OUT A DETAILED INSPECTION OF THE INSTALLATION TO ENSURE COMPLIANCE WITH THE REGULATIONS.

THE INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 6 OF AS/NZS 3000: 2018 AND SHALL INCLUDE THE FOLLOWING:

VISUAL INSPECTION CONTINUITY AND RESISTANCE OF THE EARTHING SYSTEM

CONTINUITY OF CONDUCTORS INSULATION RESISTANCE POLARITY

CORRECT CIRCUIT CONNECTIONS SWITCHING LOADING OF CIRCUITS

RCD TEST AS APPLICABLE

A REPORT INCLUDING ALL TEST RESULTS. IN AN APPROVED FORMAT, SHALL BE SUBMITTED TO THE SUPERINTENDENT/CONSULTING ENGINEER BEFORE PRACTICAL COMPLETION.

ALLOW ALL COSTS ASSOCIATED WITH THIS INSPECTION AND REPORT.

4.7 ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS. THIS SPECIFICATION AND OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.

4.8 IF ANY DISCREPANCY OCCURS ON THE CONSULTANTS DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATION, THE CONTRACTOR DURING TENDER SHALL ASSUME LARGER/GREATER QUANTITY/COST. ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORKS.

4.9 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CURRENT AUSTRALIAN STANDARDS AND CODES INCLUDING ALL REVISIONS, AND THE BYLAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES.

4.10 ALL DIMENSIONS SHOWN SHALL BE VERIFIED ON SITE. CONSULTANTS DRAWINGS MUST NOT BE SCALED.

4.11 THE CONTRACTOR SHALL VISIT THE SITE TO ASCERTAIN THE TRUE NATURE OF WORKS. ANY UNCLEAR ISSUES SHALL BE CLARIFIED WITH THE CONSULTANTS. NO CLAIM SHALL BE ALLOWED FOR EXTRAS WHICH MAY ARISE THROUGH NEGLECT OF THIS ADVICE.

4.12 THE CONTRACTOR SHALL PAY ANY/ALL ASSOCIATED AUTHORITY FEES FOR THIS PROJECT.

4.13 THE WORKS SHALL BE CAREFULLY EXECUTED TO MINIMISE DISRUPTION TO OPERATION OF THE PREMISE. ALL PROPOSED INTERRUPTION OF POWER SHALL BE FULLY CO-ORDINATED WITH THE PROJECT MANAGER IN ADVANCE WITH A MINIMUM ONE-WEEK

4.14 ALL EQUIPMENT SHALL BE ORDERED IN ADEQUATE TIME TO MEET THE CONSTRUCTION

4.15 PROVIDE OF 2 SETS OPERATION AND MAINTENANCE MANUALS INCLUDING "AS INSTALLED" DRAWINGS IN HARD COPIES AND AUTOCAD FORMAT.

5.1 PROVIDE SHOP DRAWINGS FOR ALL NEW LUMINAIRES, MOTION DETECTORS, PE CELLS

5.2 SHOP DRAWINGS SHALL BE PROVIDED IN A TIMELY MANNER WITH ADEQUATE TIME ALLOWED IN THE OVERALL PROGRAM FOR SHOP DRAWINGS REJECTED FOR

6.1 TO ENSURE THAT THE PRINCIPAL'S REQUIREMENTS ARE ACHIEVED, A DEDICATED SET OF WORKING DRAWINGS SHALL BE KEPT ON SITE FOR PROGRESSIVE MARKING UP OF "AS INSTALLED" DETAILS BY THE CONTRACTOR'S SITE PERSONNEL. THE SUPERINTENDENT OR CONSULTANT MAY INSPECT THESE DRAWINGS DURING THE PROGRESS OF THE WORKS TO ENSURE THAT ON-SITE MODIFICATIONS ARE BEING ACCURATELY RECORDED.

6.2 DURING THE PROGRESS OF THE WORK, THE CONTRACTOR SHALL EMPLOY A COMPETENT DRAFTPERSON TO PROGRESSIVELY RECORD THE MODIFICATIONS ON THE WORKING DRAWINGS IN THE APPROVED ELECTRONIC FORMAT

6.3 INFORMATION ON "AS INSTALLED" DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO

LAYOUTS, SINGLE LINE AND WIRING DIAGRAMS, EQUIPMENT SCHEDULES, CABLE TRAY AND CONDUIT RUNS REGARDING THE ACTUAL INSTALLATION.

VICTORIA

HERITAGE

SIGNED

Executive Director

6.4 PRIOR TO OR WITHIN ONE CALENDAR WEEK OF "PRACTICAL COMPLETION" BEING ACHIEVED, THE CONTRACTOR SHALL PROVIDE "AS INSTALLED" DRAWINGS FOR THE WORKS FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PROVIDE FOUR SETS OF HARD COPIES AND ELECTRONIC FILES ON CD-ROM TO THE PRINCIPAL WITHIN TWO WEEKS OF RECEIVING APPROVAL FROM THE SUPERINTENDENT OR THE CONSULTANT. FINAL PAYMENT OF THE CONTRACT SUM WILL NOT OCCUR UNTIL THIS REQUIREMENT IS FULFILLED.

6.5 THE CONTRACTOR SHALL RETAIN ONE SET OF THE "AS INSTALLED" DOCUMENT FOR USE BY THEM DURING THE DEFECT LIABILITY PERIOD

7.1 ALLOW WITHIN THE TENDER SUM THE COMPLETE PROCESS OF ORDERING, PROCUREMENT, STORAGE, ASSEMBLY, FIXING, TESTING, AIMING, COMMISSIONING AND PROTECTING THE LUMINAIRES FROM DAMAGE UNTIL PRACTICAL COMPLETION.

7.2 THE LIGHT FITTINGS SHALL BE INSTALLED COMPLETE WITH POLES, LUMINAIRES, LAMPS, DIFFUSERS, REFLECTORS, LENSES, OPTICS, CONTROL GEAR, CIRCUIT PROTECTION (INCLUDING RESIDUAL CURRENT PROTECTION AS REQUIRED), TERMINALS AND ALL WIRING, GENERALLY AS DETAILED HEREIN AND ON THE DRAWINGS. ALL FINAL FIXING ITEMS, SUCH AS SCREWS, BATTENS, ROSES, SOCKETS, SPIGOTS OR BRACKETS. NECESSARY FOR A PROPER INSTALLATION SHALL BE PROVIDED WHETHER SPECIFICALLY INCLUDED WITHIN THE DOCUMENTATION OR NOT.

7.3 INSTALLATION OF THE LUMINAIRES SHALL BE COORDINATED ON SITE PRIOR TO INSTALLATION WITH ALL OTHER SERVICES. UNLESS SHOWN EXPLICITLY ON THE ELECTRICAL DRAWINGS. THE SET OUT OF LUMINAIRES SHALL BE AS PER THE CO-ORDINATED LANDSCAPE ARCHITECTURAL PLANS AND DETAILS. FOLLOW ALL INSTRUCTIONS FOR THE INSTALLATION OF LUMINAIRES AS INSTRUCTED BY THE LUMINAIRE SUPPLIER.

7.4 ANY ADDITIONAL SUPPORTS OR FIXING SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED AS PART OF THE TENDER SUBMISSION.

7.5 ANY REMOTE DRIVERS MUST BE HOUSED AND/OR FIXED IN A SECURE AND MECHANICALLY PROTECTED LOCATION SUITABLE FOR THE MANUFACTURER'S RECOMMENDATION. DRIVERS SHALL NOT BE LEFT RESTING ON CEILING SURFACE. DRIVERS SHALL BE INSTALLED IN A LOCATION WHERE ACCESS IS AVAILABLE FOR REPLACEMENT.

7.6 ALL LED LUMINAIRES SHALL ACHIEVE A LIGHT OUTPUT MINIMUM COLOUR RENDERING IMDEX (CRI) OF 80 FOR ILLUMIMATION LIGHTING. LEDS FOR ILLUMINATION MUST BE RGB MIXED OR PHOSPHOR CONVERTED LIGHT OUTPUT, EACH LED LUMINAIRE MUST BE WITHIN A MINIMUM OF 3-STEP MACADAM ELLIPSE FOR LED COLOUR MATCHING, UNLESS OTHERWISE NOTED.

7.7 ALLOW TO CARRY OUT NIGHT TESTING OF THE LIGHT FITTINGS LOCATIONS PRIOR TO FINAL FIXING OF FITTINGS. THIS SHALL BE CARRIED OUT ON SITE, AFTER NORMAL WORKING HOURS, IN CONJUNCTION WITH THE SUPERINTENDENT. PROVIDE ALL NECESSARY POWER SUPPLIES AND ACCESS TO FOR OPERATION, TESTING AND ADJUSTMENT OF THE LIGHT FITTINGS.

7.8 ALL LED LUMINAIRES TO BE PROVIDED WITH A MINIMUM 10 YEAR WARRANTY.

LIGHTING CONTROL

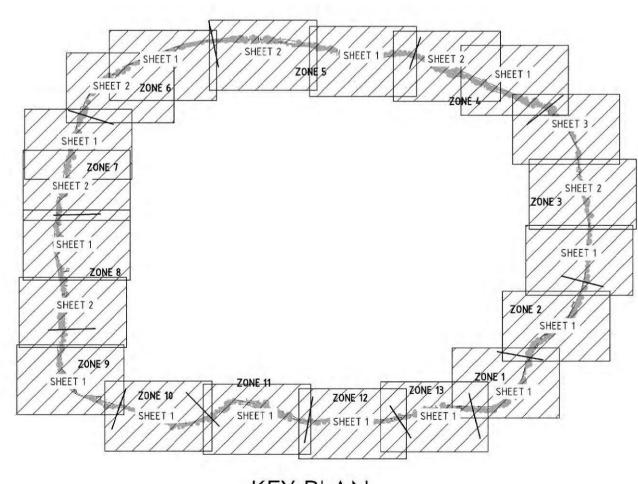
& COUNCIL.

8.1 CONTRACTOR TO PROVIDE ZHARGA BOOK 18 WIRELESS LIGHTING CONTROL SYSTEM TO ACHIEVE THE BELOW DESIGN PHILOSOPHY.

8.2 LIGHTING TO BE PE CELL & TIMECLOCK CONTROLLED. TO BE LOCATED IN SUITABLE ON SITE PILLAR SWITCHBOARD. MORNING ON = 5AM TO DAWN EVENING ON = DUSK TO 10PM

8.3 CONTRACTOR TO ALLOW 1 EVENING COMMISSIONING SESSION WITH LIGHTING DESIGNER

COUNCIL TO CONFIRM TIMING DURING FINAL COMMISSIONING.



KEY PLAN

TRS JPK 07.06.22 ISSUED FOR CONSTRUCTION ISSUED FOR CONSTRUCTION JPK 13.04.22

YOUR REQUEST SHOULD BE FORWARDED 5 WORKING

REPRODUCTION OF DRAWINGS THE DRAWINGS HAVE BEEN DOCUMENTED IN COLOUR.

AS SUCH, THE DRAWINGS ARE REQUIRED TO BE PRINTED IN COLOUR. FAILURE TO DO SO MAY RESULT IN LOSS OF INFORMATION. BLACK & WHITE PRINTING MAY BE USED IF SPECIFIC BLACK & WHITE DOCUMENTS HAVE BEEN OBTAINED FROM WGE.





STEVE MONEGHETTI TRACK PUBLIC LIGHTING





45683 EL-0-01 SCALE @ A1

NOTE: Conditions apply.

VHR No. H2252

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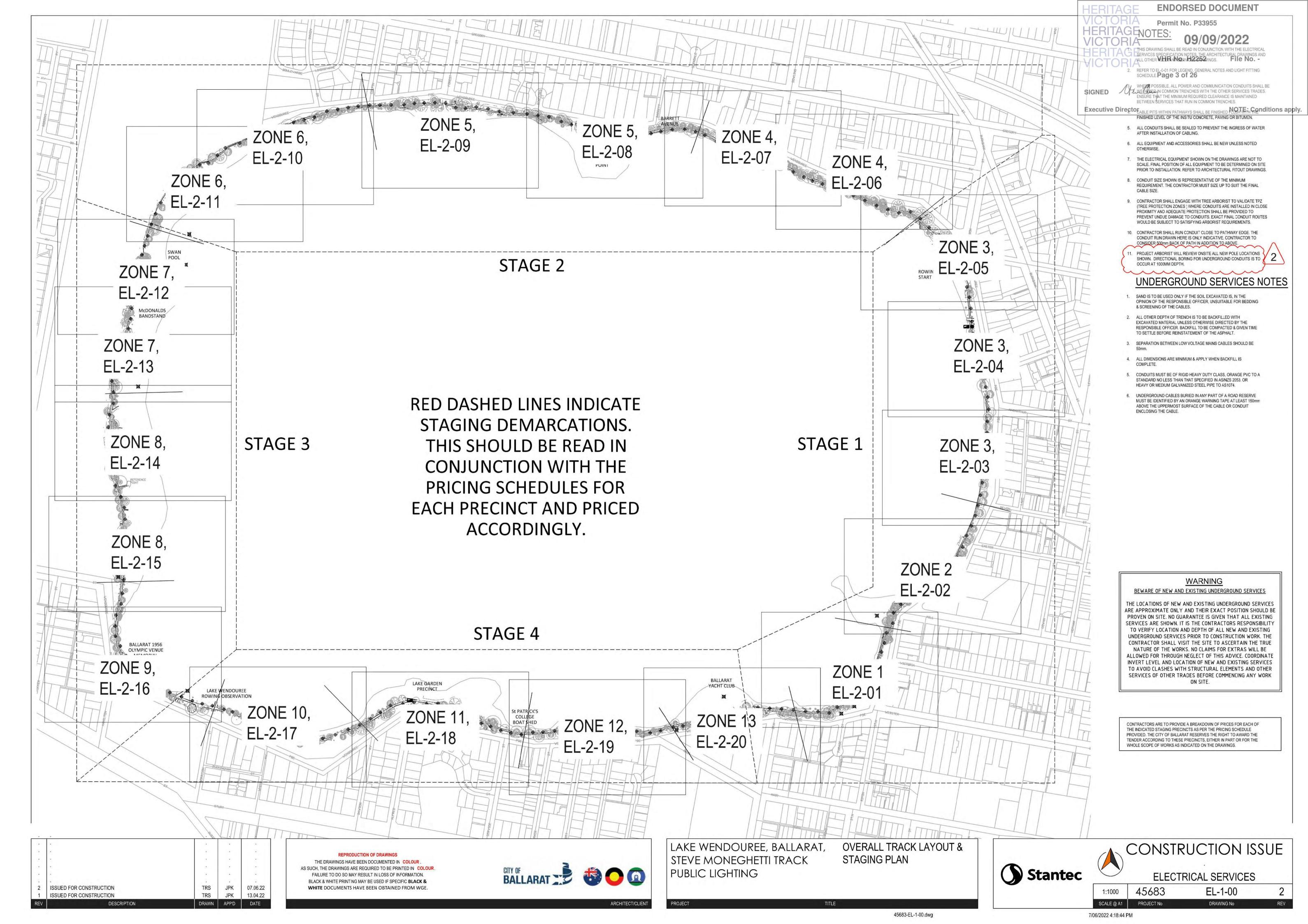
Permit No. P33955

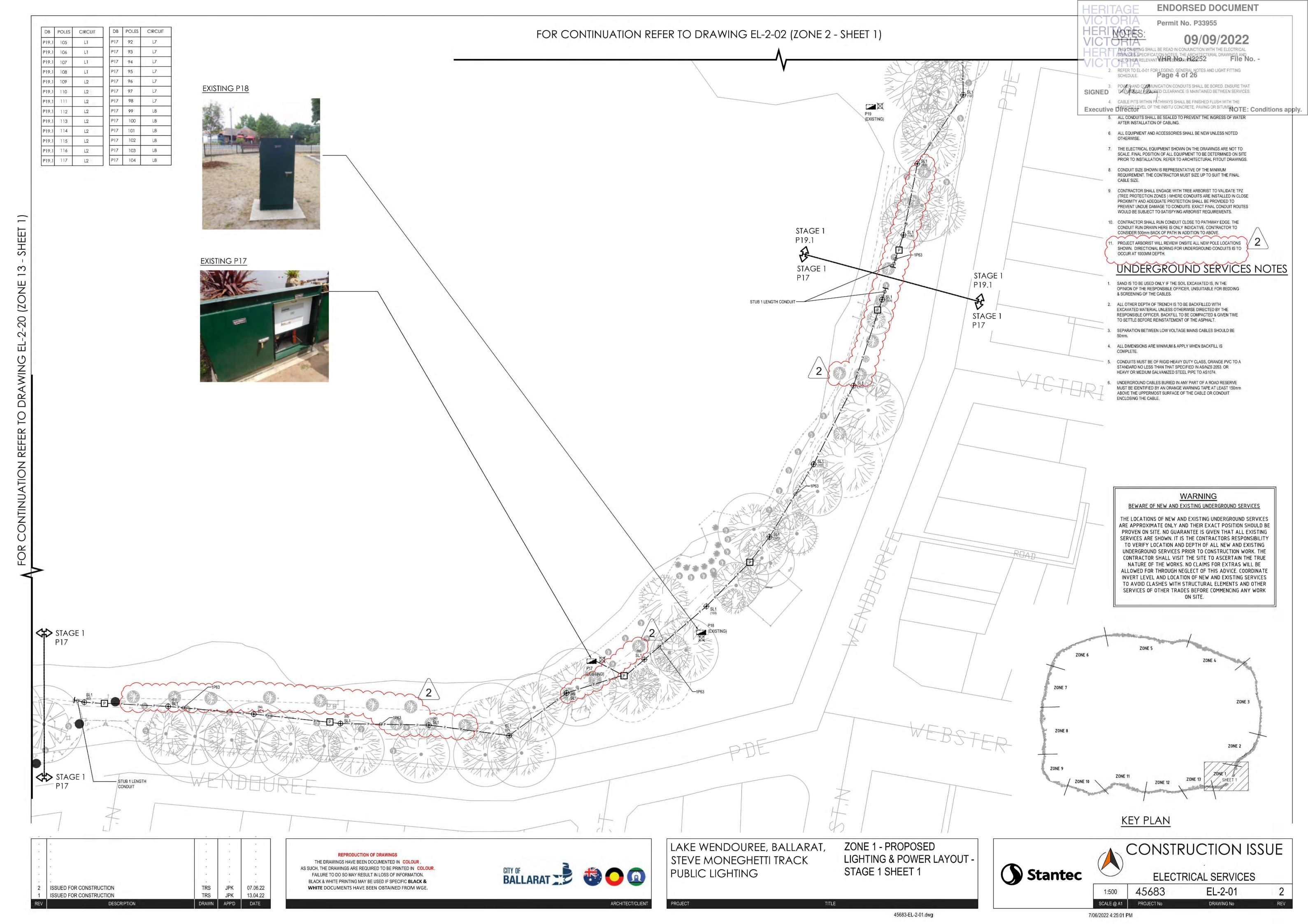
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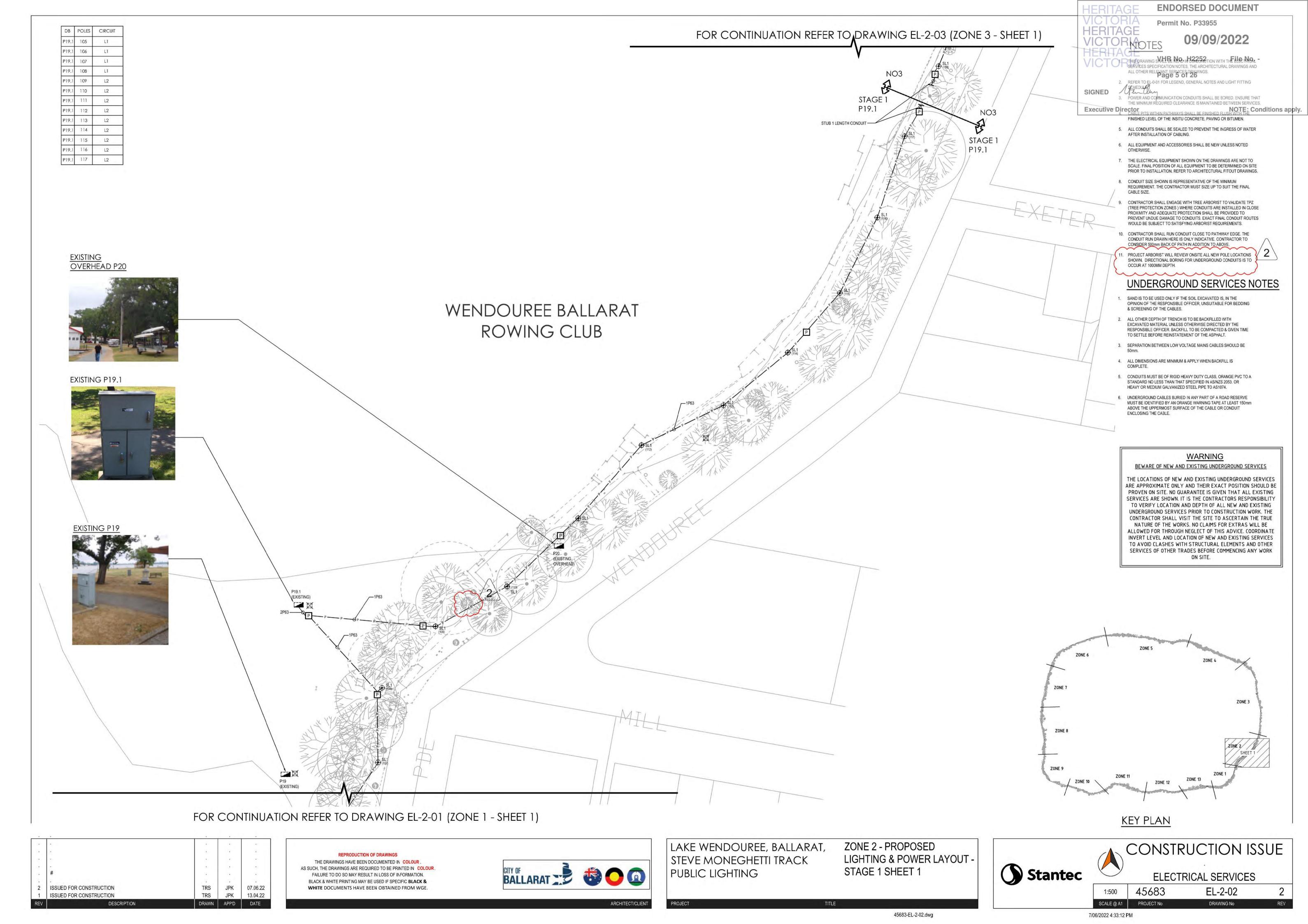
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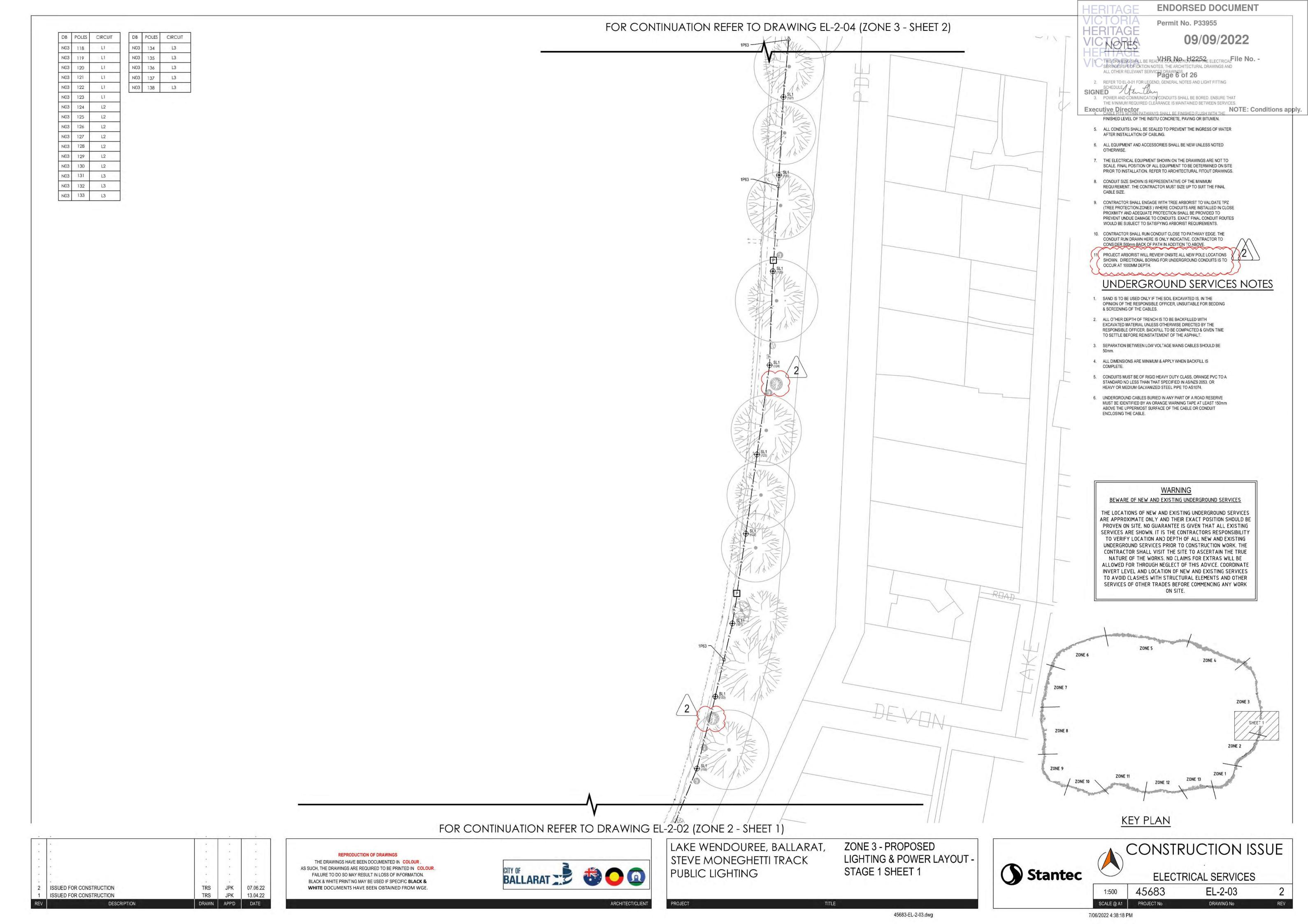
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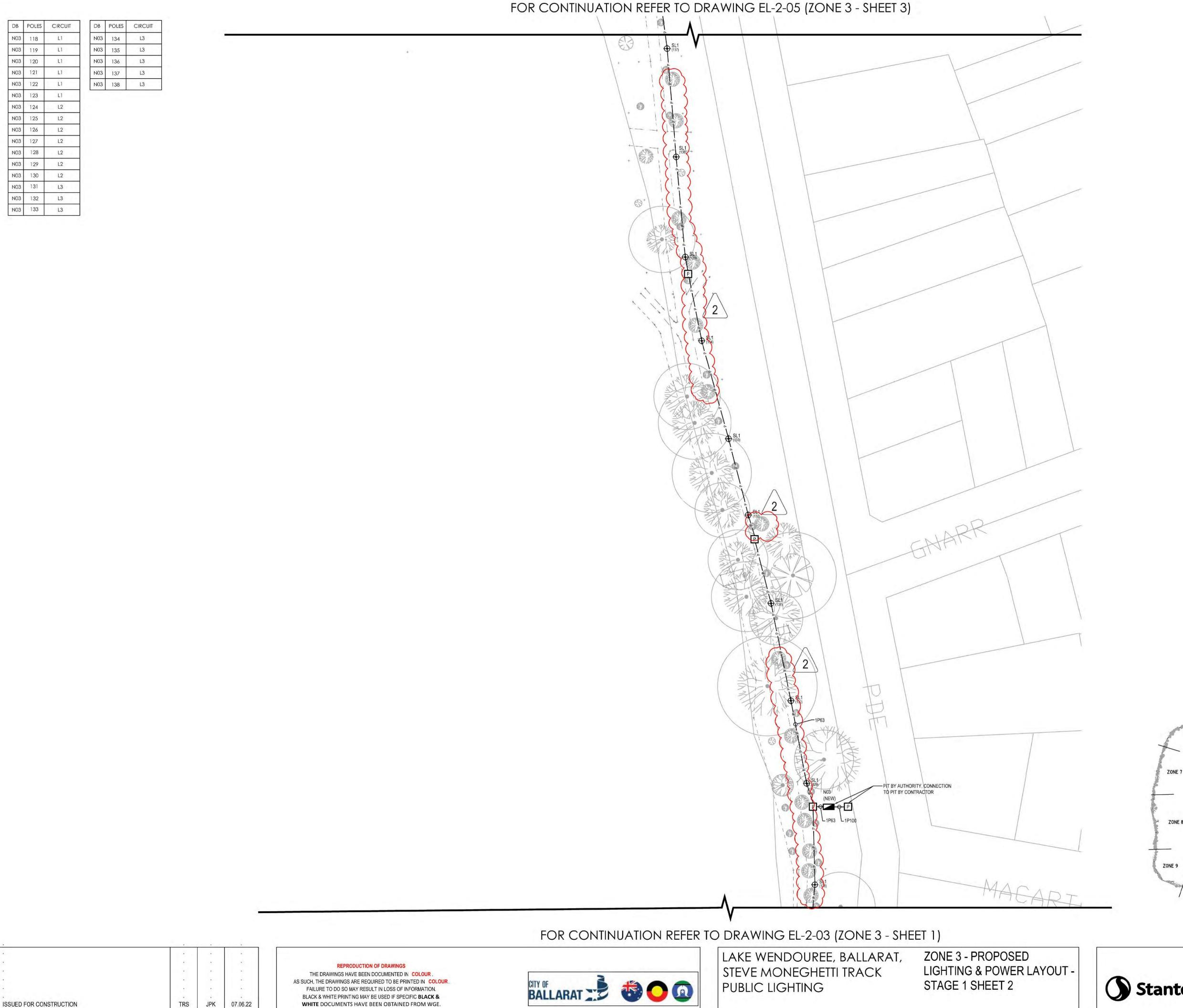
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ARCHITECT/CLIENT

ISSUED FOR CONSTRUCTION

13.04.22

ENDORSED DOCUMENT

Permit No. P33955

09/09/2022

1 THIS DRAWING SHALL BE READ IN COUNTRICH THE ELECTRICAL FILE NO. -

SERVICES SPECIFICATION NOTES, THE ARCHITECTURAL DRAWINGS AND ALL OTHER RELEVANT SERVICES DRAWINGS.
Page / of 26

2. REFER TO EL-0-01 FOR LEGEND, GENERAL NOTES AND LIGHT FITTING SCHEDULE SIGNED

 POWER AND COMMUNICATION CONDUITS SHALL BE BORED. ENSURE THAT THE MINIMUM REQUIRED CLEARANCE IS MAINTAINED BETWEEN SERVICES. NOTE: Conditions apply.

FINISHED LEVEL OF THE INSITU CONCRETE, PAVING OR BITUMEN.

ALL CONDUITS SHALL BE SEALED TO PREVENT THE INGRESS OF WATER AFTER INSTALLATION OF CABLING.

6. ALL EQUIPMENT AND ACCESSORIES SHALL BE NEW UNLESS NOTED

THE ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS ARE NOT TO SCALE. FINAL POSITION OF ALL EQUIPMENT TO BE DETERMINED ON SITE

PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL FITOUT DRAWINGS. 8. CONDUIT SIZE SHOWN IS REPRESENTATIVE OF THE MINIMUM REQUIREMENT. THE CONTRACTOR MUST SIZE UP TO SUIT THE FINAL

9. CONTRACTOR SHALL ENGAGE WITH TREE ARBORIST TO VALIDATE TPZ (TREE PROTECTION ZONES) WHERE CONDUITS ARE INSTALLED IN CLOSE PROXIMITY AND ADEQUATE PROTECTION SHALL BE PROVIDED TO PREVENT UNDUE DAMAGE TO CONDUITS. EXACT FINAL CONDUIT ROUTES

WOULD BE SUBJECT TO SATISFYING ARBORIST REQUIREMENTS. 10. CONTRACTOR SHALL RUN CONDUIT CLOSE TO PATHWAY EDGE. THE CONDUIT RUN DRAWN HERE IS ONLY INDICATIVE. CONTRACTOR TO

CONSIDER 500mm BACK OF PATH IN ADDITION TO ABOVE. PROJECT ARBORIST WILL REVIEW ONSITE ALL NEW POLE LOCATIONS 🐰 SHOWN. DIRECTIONAL BORING FOR UNDERGROUND CONDUITS IS TO OCCUR AT 1000MM DEPTH.

CABLE SIZE.

UNDERGROUND SERVICES NOTES

1. SAND IS TO BE USED ONLY IF THE SOIL EXCAVATED IS, IN THE OPINION OF THE RESPONSIBLE OFFICER, UNSUITABLE FOR BEDDING & SCREENING OF THE CABLES.

2. ALL OTHER DEPTH OF TRENCH IS TO BE BACKFILLED WITH EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED BY THE RESPONSIBLE OFFICER. BACKFILL TO BE COMPACTED & GIVEN TIME TO SETTLE BEFORE REINSTATEMENT OF THE ASPHALT.

3. SEPARATION BETWEEN LOW VOLTAGE MAINS CABLES SHOULD BE

4. ALL DIMENSIONS ARE MINIMUM & APPLY WHEN BACKFILL IS

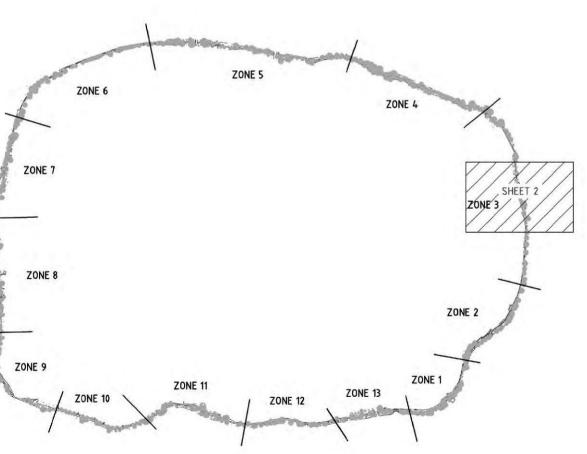
5. CONDUITS MUST BE OF RIGID HEAVY DUTY CLASS, ORANGE PVC TO A STANDARD NO LESS THAN THAT SPECIFIED IN AS/NZS 2053. OR HEAVY OR MEDIUM GALVANIZED STEEL PIPE TO AS1074.

6. UNDERGROUND CABLES BURIED IN ANY PART OF A ROAD RESERVE MUST BE IDENTIFIED BY AN ORANGE WARNING TAPE AT LEAST 150mm ABOVE THE UPPERMOST SURFACE OF THE CABLE OR CONDUIT ENCLOSING THE CABLE.

WARNING

BEWARE OF NEW AND EXISTING UNDERGROUND SERVICES

THE LOCATIONS OF NEW AND EXISTING UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY LOCATION AND DEPTH OF ALL NEW AND EXISTING UNDERGROUND SERVICES PRIOR TO CONSTRUCTION WORK. THE CONTRACTOR SHALL VISIT THE SITE TO ASCERTAIN THE TRUE NATURE OF THE WORKS. NO CLAIMS FOR EXTRAS WILL BE ALLOWED FOR THROUGH NEGLECT OF THIS ADVICE. COORDINATE INVERT LEVEL AND LOCATION OF NEW AND EXISTING SERVICES TO AVOID CLASHES WITH STRUCTURAL ELEMENTS AND OTHER SERVICES OF OTHER TRADES BEFORE COMMENCING ANY WORK ON SITE.



KEY PLAN

Stantec



ELECTRICAL SERVICES 45683 EL-2-04

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