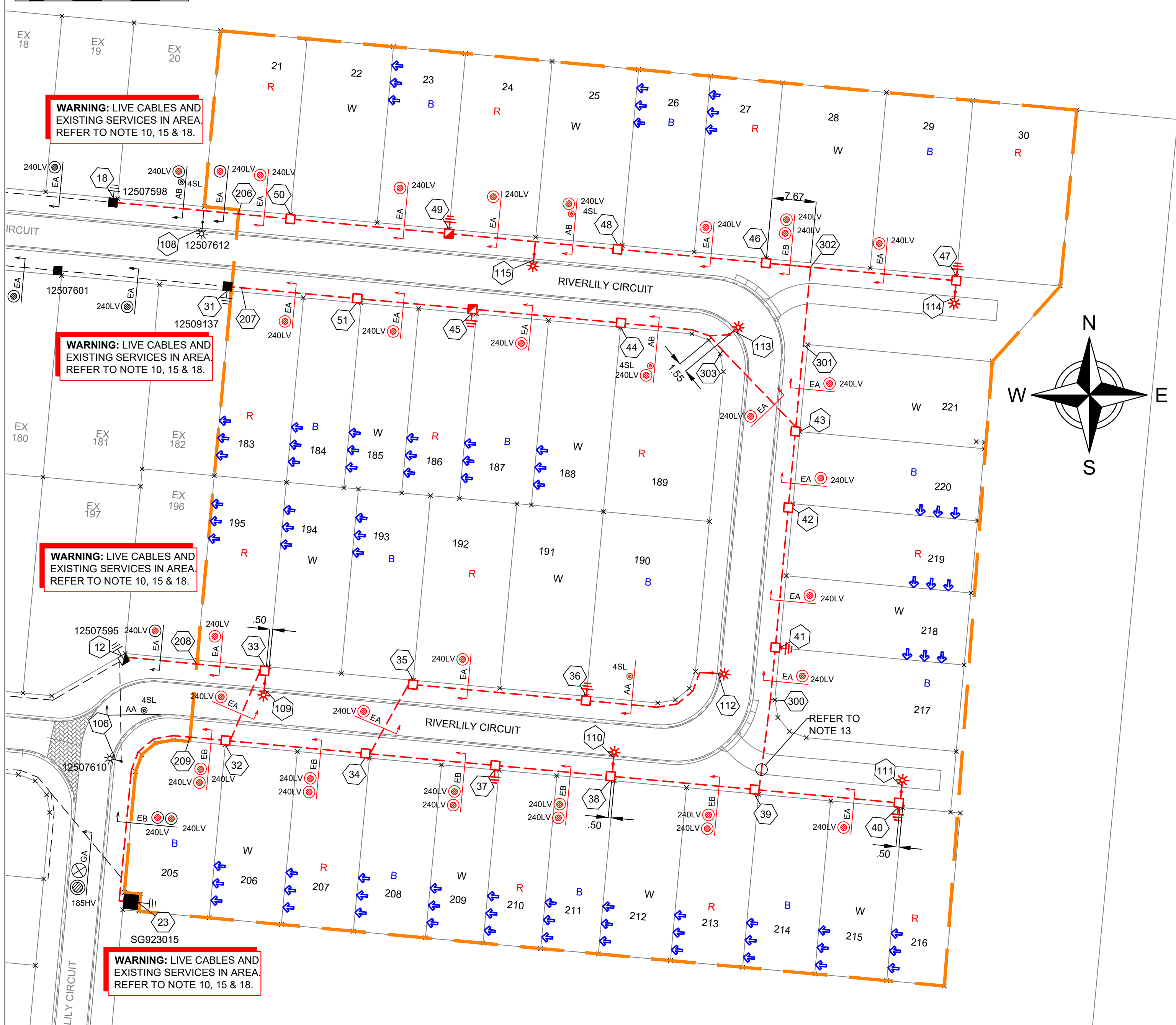
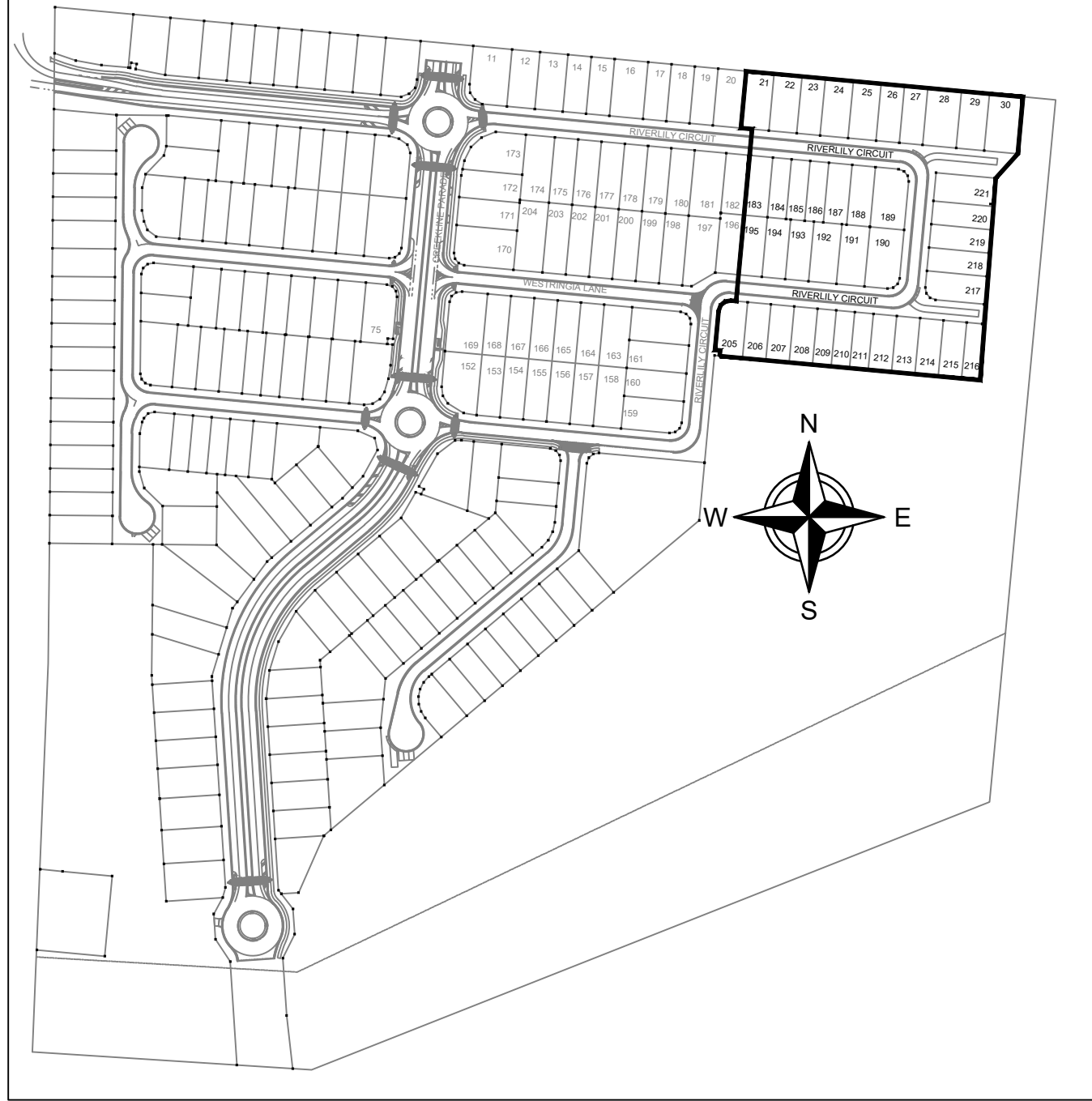


SITE PLAN



WORKPLAN NOTES

- FOR STANDARD UNDERGROUND DUCT SECTIONS REFER TO UNDERGROUND CONSTRUCTION MANUAL DRAWING 5168.
- POLYMERIC COVER TO BE INSTALLED OVER CONDUITS OUTSIDE NORMAL ERGON ALIGNMENT AS PER ERGON DRAWING. 5022-1 AND 5124-1 & 2.
- STANDARD TRENCH ALIGNMENT IS 0.3 TO 0.9 METRES OFF PROPERTY ALIGNMENT SUBJECT TO LOCATION OF OTHER SERVICES. REFER TO UNDERGROUND CONSTRUCTION MANUAL DRAWING 5163 AND DRAWING 5228 FOR TRENCHES WITH NBNC CONDUITS.
- STREETLIGHT POLE FOOTINGS SHALL BE LOCATED PERPENDICULAR TO THE KERB, AT THE PROLONGATION OF THE SIDE PROPERTY BOUNDARY, UNLESS DETAILED OTHERWISE. WHERE DIMENSIONS ARE SHOWN, THEY TAKE PRECEDENCE OVER GRID COORDINATES.
- ALL CONDUITS SHALL BE CONTINUOUS UNLESS DETAILED OTHERWISE.
- FOR STANDARD UDC CONSTRUCTION PRACTICES REFER TO UNDERGROUND CONSTRUCTION MANUAL DRAWINGS 5022, 5085 AND 5124.
- MINOR STREETLIGHTS - THE DEVELOPER SHALL SUPPLY AND INSTALL STREETLIGHT BASES. FOUNDATION DEPTH IS 1200mm FOR MINOR STREETLIGHTS. REFER TO LIGHTING CONSTRUCTION MANUAL DRAWING 1-6-4-1 & 2.
- THE LIGHTING DESIGN INCLUDES AN ALLOWANCE FOR CONSTRUCTION TOLERANCE OF LIGHT POLES SUCH THAT ANY STREETLIGHT CAN BE POSITIONED UP TO A MAXIMUM OF ±350mm LONGITUDINALLY FROM THE POSITION SHOWN AND UP TO 100mm MAXIMUM FURTHER AWAY FROM KERB EDGE, INCLUDING POLES WITH GRID COORDINATES, AND STILL MAINTAIN COMPLIANCE.
- CONFIRM ALL CONDUIT AND CABLE LENGTHS PRIOR TO INSTALLATION.
- IN ACCORDANCE WITH ELECTRICAL SAFETY ACT, A SAFETY OBSERVER MUST BE PRESENT AT ALL TIMES WHEN WORKING IN THE VICINITY OF ENERGISED CABLES. CONTACT ERGON ENERGY ON 131046.
- WHERE SHOWN, 35mm sq ANNEALED BARE Cu EARTH SHALL BE INSTALLED AT BOTTOM OF TRENCH IN NATURAL SOIL, BELOW BEDDING SAND, LOCATED A MINIMUM OF 50mm HORIZONTALLY TOWARDS PROPERTY BOUNDARY FROM CONDUITS (HV OR LV) INSTALLED ON PROPERTY BOUNDARY SIDE OF TRENCH. COIL 2m OF CABLE AT SPECIFIED STATIONS IN THE CONDUIT DUCTING SCHEDULE AND ALL REQUIRED JOINTS FOR CONNECTION BY ELECTRICAL CONTRACTOR. THE USE OF THE EARTH ROD CONNECTOR (U-BOLT, IIN. 0719437) IS NOT ACCEPTABLE FOR CONDUCTOR / CABLE TO CONDUCTOR / CABLE CONNECTIONS. IN ADDITION PARALLEL GROOVE CLAMPS ARE NOT ACCEPTABLE FOR JOINTING OR CONNECTING EARTHS BELOW GROUND LEVEL. ACCEPTABLE METHODS SHALL BE EITHER A CRIMP LINK OR A 'C' TYPE COMPRESSION CONNECTOR. CRIMP LINKS AND 'C' TYPE COMPRESSION CONNECTORS ARE AVAILABLE FROM ERGON ENERGY STORES IIN. 0157746 AND IIN. 2406222 RESPECTIVELY.
- ELECTRONIC CABLE MARKERS (ECM'S) ARE TO BE SUPPLIED BY THE ELECTRICAL CONTRACTOR AND ARE REQUIRED AT ENDS OF ALL SPARE CONDUITS AND AT ALL CABLE JOINTS. ECM'S SHALL BE PLACED 150mm ABOVE THE LINE OF CONDUIT FOR CABLE JOINTS AND 150mm ABOVE THE LINE OF CONDUIT FOR SPARE CONDUITS. ECM'S ARE RECOVERABLE AND SHALL BE REMOVED AND RETURNED TO THE ELECTRICAL CONTRACTOR WHEN ALL SPARE CONDUIT ENDS ARE REMOVED FROM A LOCATION.
- WHERE NOTED ON THE DESIGN, ELECTRICAL CONDUITS SHALL BE INSTALLED UNDERNEATH STORMWATER PIPES WHERE CLASHES OCCUR. SEPARATION FROM BOTTOM OF STORMWATER PIPE TO TOP OF ERGON CONDUIT SHALL BE NO LESS THAN 300mm.
- ADDITIONAL CONDUIT BENDS SHALL BE INSTALLED TO ACHIEVE INCREASED BURIAL DEPTH AT ROAD CROSSINGS. REFER TO UNDERGROUND CONSTRUCTION MANUAL DRAWING 5022.
- ALL CONTRACTORS MUST CARRY OUT A DIAL BEFORE YOU DIG ENQUIRY BEFORE COMMENCING ANY EXCAVATION.
- INSTALL PILLAR OFFSET IN ACCORDANCE WITH ERGON DRAWING 5196-2 & DETAIL A.
- CONTRACTOR TO SUPPLY AND INSTALL ENGRAVED LABEL LOCATED ON LIGHTING TERMINAL STATING "LIGHT FED FROM PILLAR ASSET NUMBER _____"
- WARNING: LIVE CABLES AND EXISTING SERVICES IN AREA. CONTRACTOR TO USE POT HOLING, HYDRO-VAC EXCAVATION AND CABLE LOCATION WHEN INSTALLING NEW INFRASTRUCTURE.



LOCALITY PLAN
N.T.S

ERGON WORKS SCHEDULE

Rev Date	ERGON WORKS SCHEDULE								
STN NO	SITE LABEL	POLE ALIGNMENT	POLE SETTING DEPTH	ACTION	CONSTRUCTION CLASS	CONSTRUCTION CODE	DRAWING NUMBER	POSITION ON POLE	REMARKS
12	12507595			INSTALL - ERGON	LV CABLE TERMINATION				ERGON ENERGY TO INSTALL LV CABLE TERMINATION FOR CABLE STN 12-33
18	12507598			INSTALL - ERGON	PILLAR UPGRADE	LV PNU1-2/240/N	5074		ERGON ENERGY TO UPGRADE PILLAR TO 2-WAY & TERMINATE CABLE FROM STN 18-50
23	SG923015			INSTALL - ERGON	LV CABLE TERMINATION	LV CT PM11/240	5087		ERGON ENERGY TO INSTALL LV CABLE TERMINATION FOR CABLE STN 23-41.
23	SG923015			INSTALL - ERGON	LV CABLE TERMINATION	LV CT PM11/240	5087		ERGON ENERGY TO INSTALL LV CABLE TERMINATION FOR CABLE STN 23-32.
31	12509137			INSTALL - ERGON	PILLAR UPGRADE	LV PNU1-2/240/N	5074		ERGON ENERGY TO UPGRADE PILLAR TO 2-WAY & TERMINATE CABLE FROM STN 31-51

SPA LIGHTING DESIGN COMPLIANCE CERTIFICATE



THIS LIGHTING DESIGN COMPLIES GENERALLY WITH THE NOMINATED CATEGORIES OF AS1158 FOR RATE 1 AND RATE 2 LUMINAIRES.

NAME: MICHAEL DAYOT TITLE: ENGINEER
RPEQ: 29435

LIGHTING CATEGORIES: CATEGORY PR5
LOCAL COUNCIL: TOWNSVILLE CITY COUNCIL
LUMINAIRE UPCAST: 0 DEGREES UPCAST ANGLE
MAINTENANCE FACTOR 0.75

THE DESIGN ASSUMES MAINTENANCE FACTORS OF 0.75 FOR MINOR ROAD LIGHTING AND 0.75 FOR MAJOR ROAD LIGHTING. THESE MAINTENANCE FACTORS ARE BASED ON THE FOLLOWING MAINTENANCE SCHEDULE, WHICH MIGHT NOT NECESSARILY BE ADOPTED BY ERGON.

- LAMPS SHALL BE REPLACED AT 36- MONTH INTERVALS.
- ALL THAT TIME, LUMINARIES SHALL BE CLEANED, INSPECTED AND MAINTAINED.
- VEGETATION SHALL BE KEPT CLEAR OF STREET LIGHTS.
- INSPECTION PATROLS AND SPOT LAMP REPLACEMENT SHALL MAINTAIN SERVICE AVAILABILITY AT NO LESS THAN 95%.
- LUMINAIRES AND LAMPS SHALL BE REPLACED WITH EXACT EQUIVALENTS.

ALL LIGHTING CALCULATIONS ARE AVAILABLE UPON REQUEST.

FOR LIGHTING ARRANGEMENT, SPACINGS, MOUNTING HEIGHTS, OUTREACH DETAILS AND SIGNIFICANT ROAD FEATURES, REFER TO DRAWING.

FOR CONSTRUCTION

ON COMPLETION, MARK UP THIS. PRINT CLEARLY WITH ALL FINAL CHANGES AND RETURN TO PROJECT MANAGER.

CHANGES: YES/NO

ELECTRICAL CONTRACTOR

NAME: _____
SIGNATURE: _____
DATE: _____

CIVIL CONTRACTOR

NAME: BMD Constructions
SIGNATURE: *Michael Dayot*
DATE: 17 October 2024

Code	Date	Description	Revised
A	13/6/24	FOR CONSTRUCTION	SW

CLIENT:
Urbex Pty Ltd (Townsville)
PO BOX 6008,
TOWNSVILLE, QLD. 4810
Ph. 07 4750 7007 Fax
CIVIL ENGINEER
Empower Engineers and Project Managers
(Townsville)
PO BOX 6008,
TOWNSVILLE, QLD. 4810
Ph. 07 4750 7007 Fax



Tel: (07) 4032 3311 or (07) 4728 3026
PO Box 664 North Cairns QLD 4870
Email Address - admin@spaconsulting.com.au
A business unit of SPA Consulting Engineers (QLD) Pty Ltd a.b.n. 91 515 944 418

TRENCH SECTIONS-LEGEND

- ⊗ SPARE HV CONDUIT - EXISTING
- ⊗ SPARE HV CONDUIT - PLANNED
- CABLE - PLANNED
- ⊙ CABLE - EXISTING
- AB → CONDUITS - EXISTING
- AB → CONDUITS - PLANNED

LEGEND

- ZERO LOT BOUNDARY
- 150mm HV DUCT
- 125mm HV DUCT
- 100mm LV DUCT
- LIGHTING DUCT
- 35mm sq ANNEALED BARE COPPER EARTH

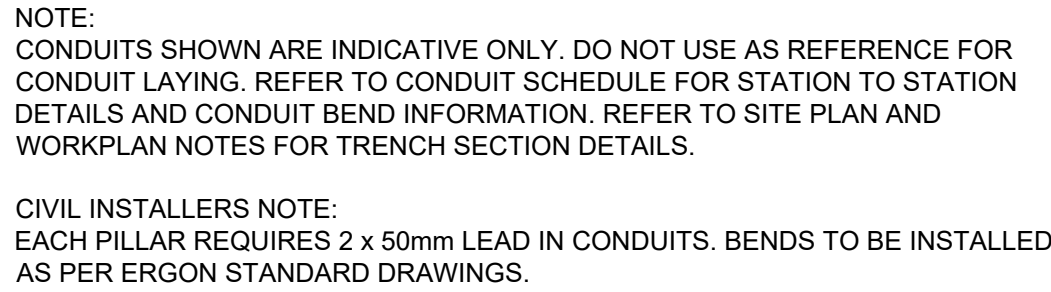
- CABLE EXISTING
- CABLE PLANNED
- CABLE RECOVER
- EQUIPMENT EXISTING
- EQUIPMENT RECOVER
- EQUIPMENT PLANNED

- ☐ SUBSTATION
- ☐ RING MAIN UNIT
- ☐ CROSS ROAD PILLAR
- ☐ LINKING PILLAR
- ☐ LIGHTING PIT
- ☐ CABLE JOINT

- ☐ N1, N2, N3, CIA1 & CIA2 PILLARS
- ☐ DISTRIBUTION CABINET
- ☐ STREETLIGHT
- ☐ EARTH
- ☐ HV/LV POLE
- ☐ HV/LV POLE
- ☐ POLE MOUNTED TRANSFORMER

Drawing Title
THE RESERVE STAGE 14B
UDC UG ELECTRICAL RETICULATION
SITE PLAN & ERGON WORKS SCHEDULE
Project Description
THE RESERVE,
BOHLE PLAINS.

Date	MAY 2024
Scale	AS SHOWN
Drawn	SW
RPEQ Design Certification	Michael Dayot 29435
Sheet	1 OF 3
ERGON Project Number	1795966
SPA Drawing Number	3395-E01
Revision	A



FOR CONSTRUCTION

ON COMPLETION, MARK UP THIS. PRINT
CLEARLY WITH ALL FINAL CHANGES AND
RETURN TO PROJECT MANAGER.

CHANGES: YES/NO

ELECTRICAL CONTRACTOR

NAME: _____

SIGNATURE: _____

DATE: _____

CIVIL CONTRACTOR

NAME: BMD Constructions

SIGNATURE: AE Burke

DATE: 17 October 2024



spa
Simon Perkins & Associates
consulting engineers

Tel: (07) 4032 3311 or (07) 4728 3026
PO Box 664 North Cairns QLD 4870
Email Address - admin@spaconsulting.com.au
A business unit of SPA Consulting Engineers (QLD) Pty Ltd a.b.n. 91 010 844 4

TRENCH SECTIONS-LEGEND

-  SPARE HV CONDUIT - EXISTING
 SPARE HV CONDUIT - PLANNED
 CABLE - PLANNED
 CABLE - EXISTING
 CONDUITS - EXISTING
 CONDUITS - PLANNED

LEGEND

- | | | | |
|---------|-------------------|-------|--------------------|
| LEGEN | ZERO LOT BOUNDARY | ----- | CABLE EXISTING |
| ---+--- | 150mm HV DUCT | ---- | CABLE PLANNED |
| --- | 125mm HV DUCT | ---- | CABLE RECOVER |
| ---- | 100mm LV DUCT | ----- | EQUIPMENT EXISTING |
| ---- | LIGHTING DUCT | ----- | EQUIPMENT RECOVER |
| ---- | 35mm sq ANNEALED | ----- | EQUIPMENT PLANNED |
| ---- | BARE COPPER EARTH | ----- | |

- ☒ SUBSTATION
- ☒ RING MAIN UNIT
- ☐ CROSS ROAD PILLAR
- ☒ LINKING PILLAR
- ☒ LIGHTING PIT
- ☐ CABLE JOINT

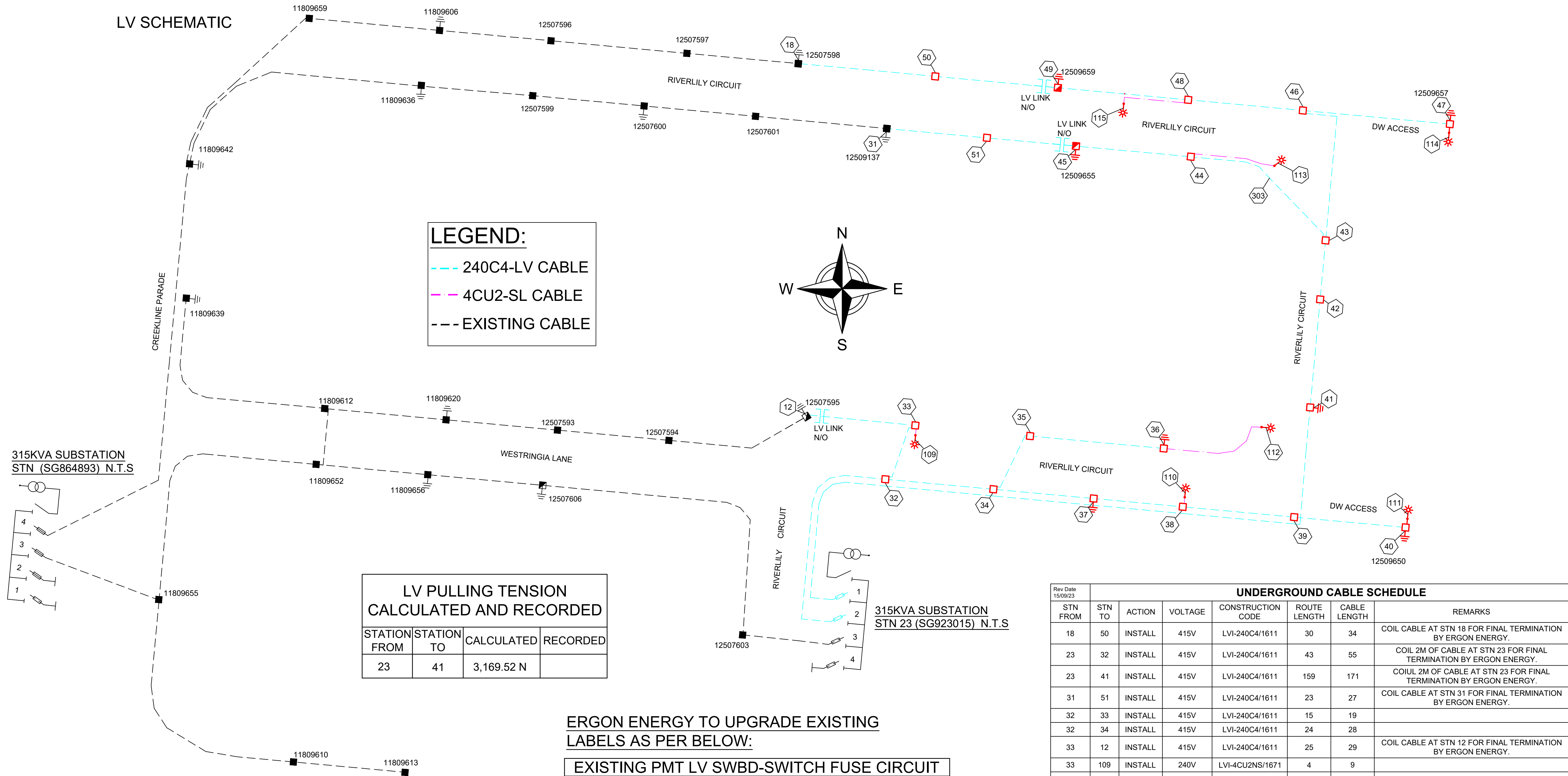
-  N1, N2, N3, CIA1 & CIA2 PILLARS
-  DISTRIBUTION CABINET
-  STREETLIGHT
-  EARTH
-  HV POLE
-  HV/LV POLE
-  LV POLE
-  POLE MOUNTED TRANSFORMER

Drawing Title

THE RESERVE STAGE 14B
UDC UG ELECTRICAL RETICULATION
CONDUIT SCHEMATIC & SCHEDULE,
LIGHTING & CONSTRUCTION SCHEDULES

Project Description
**THE RESERVE,
BOHLE PLAINS.**

Date	MAY 2024	
Scale	N.T.S	
Drawn	SW	
RPEQ Design Certification Michael Dayot 29435		
Sheet	2 OF 3	
ERGON Project Number	SPA Drawing Number	Revision
1795966	3395-E02	A



CONTRACTOR TO INSTALL LABELS AS PER BELOW:

NEW LINK PILLAR					
LOCATION:	RIVERLILY CCT			STATION: 45 LP12509655	
CIRCUIT No.	LABEL SIZE LABEL	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION	
1 (LHS)	150 x 50	WB	5	TO RIVERLILY CCT SG923015 FS1/ LP12509659/12509657 & SERVICES.	
2 (RHS)	150 x 50	WB	5	TO CREEKLINE PRD SG864893 FS1/ LP12509659 & SERVICES.	

NEW LINK PILLAR					
LOCATION:	RIVERLILY CCT			STATION: 49 LP12509659	
CIRCUIT No.	LABEL SIZE LABEL	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION	
1 (LHS)	150 x 50	WB	5	TO CREEKLINE PRD SG864893 FS1/ LP12509655 & SERVICES.	
2 (RHS)	150 x 50	WB	5	TO RIVERLILY CCT SG923015 FS1/ LP12509655/12509657 & SERVICES.	

Rev Date	UNDERGROUND CABLE SCHEDULE							
15/09/23	STN FROM	STN TO	ACTION	VOLTAGE	CONSTRUCTION CODE	ROUTE LENGTH	CABLE LENGTH	REMARKS
	18	50	INSTALL	415V	LVI-240C4/1611	30	34	COIL CABLE AT STN 18 FOR FINAL TERMINATION BY ERGON ENERGY.
	23	32	INSTALL	415V	LVI-240C4/1611	43	55	COIL 2M OF CABLE AT STN 23 FOR FINAL TERMINATION BY ERGON ENERGY.
	23	41	INSTALL	415V	LVI-240C4/1611	159	171	COIL 2M OF CABLE AT STN 23 FOR FINAL TERMINATION BY ERGON ENERGY.
	31	51	INSTALL	415V	LVI-240C4/1611	23	27	COIL CABLE AT STN 31 FOR FINAL TERMINATION BY ERGON ENERGY.
	32	33	INSTALL	415V	LVI-240C4/1611	15	19	
	32	34	INSTALL	415V	LVI-240C4/1611	24	28	
	33	12	INSTALL	415V	LVI-240C4/1611	25	29	COIL CABLE AT STN 12 FOR FINAL TERMINATION BY ERGON ENERGY.
	33	109	INSTALL	240V	LVI-4CU2NS/1671	4	9	
	34	35	INSTALL	415V	LVI-240C4/1611	15	19	
	34	37	INSTALL	415V	LVI-240C4/1611	22	26	
	35	36	INSTALL	415V	LVI-240C4/1611	30	34	
	36	112	INSTALL	240V	LVI-4CU2NS/1671	25	30	
	37	38	INSTALL	415V	LVI-240C4/1611	21	25	
	38	39	INSTALL	415V	LVI-240C4/1611	24	28	
	38	110	INSTALL	240V	LVI-4CU2NS/1671	4	9	
	39	40	INSTALL	415V	LVI-240C4/1611	25	29	
	40	111	INSTALL	240V	LVI-4CU2NS/1671	4	9	
	41	42	INSTALL	415V	LVI-240C4/1611	25	29	
	42	43	INSTALL	415V	LVI-240C4/1611	12	16	
	43	44	INSTALL	415V	LVI-240C4/1611	38	42	
	43	46	INSTALL	415V	LVI-240C4/1611	36	40	
	44	45	INSTALL	415V	LVI-240C4/1611	25	29	
	44	113	INSTALL	240V	LVI-4CU2NS/1671	18	23	
	45	51	INSTALL	415V	LVI-240C4/1611	20	24	LV LINK
	46	47	INSTALL	415V	LVI-240C4/1611	33	37	
	46	48	INSTALL	415V	LVI-240C4/1611	25	29	
	47	114	INSTALL	240V	LVI-4CU2NS/1671	4	9	
	48	49	INSTALL	415V	LVI-240C4/1611	29	33	
	48	115	INSTALL	240V	LVI-4CU2NS/1671	18	23	
	49	50	INSTALL	415V	LVI-240C4/1611	27	31	LV LINK

				CLIENT: Urbex Pty Ltd (Townsville)		spaconsulting engineers Tel: (07) 4032 3311 or (07) 4728 3026 PO Box 664 North Cairns QLD 4870 Email Address - admin@spaconsulting.com.au A business unit of SPA Consulting Engineers (QLD) Pty Ltd a.b.n. 91 519 844 418	TRENCH SECTIONS-LEGEND ⊗ SPARE HV CONDUIT - EXISTING ⊗ SPARE HV CONDUIT - PLANNED ● CABLE - PLANNED ⊙ CABLE - EXISTING ○AB CONDUITS - EXISTING ○AB CONDUITS - PLANNED
--	--	--	--	------------------------------------	--	--	--

LEGEND

---+---

 ZERO LOT BOUNDARY

 150mm HV DUCT

 125mm HV DUCT

 100mm LV DUCT

 LIGHTING DUCT

 35mm sq ANNEALED BARE COPPER EARTH

 CABLE EXISTING

 CABLE PLANNED

 CABLE RECOVER

 EQUIPMENT EXISTING

 EQUIPMENT RECOVER

 EQUIPMENT PLANNED

⊠

 SUBSTATION

⊠

 RING MAIN UNIT

⊠

 CROSS ROAD PILLAR

⊠

 LINKING PILLAR

⊠

 LIGHTING PIT

⊠

 CABLE JOINT

⊠

 N1, N2, N3, CIA1 & CIA2 PILLARS

⊠

 DISTRIBUTION CABINET

⊠

 STREETLIGHT

⊠

 EARTH

⊠

 HV POLE

⊠

 HV/LV POLE

⊠

 LV POLE

⊠

 POLE MOUNTED TRANSFORMER

Drawing Title

THE RESERVE STAGE 14B

UDC UG ELECTRICAL RETICULATION

LV SCHEMATIC & CABLE SCHEDULE

Project Description

THE RESERVE, BOHLE PLAINS.

Date

MAY 2024

Scale

N.T.S

Drawn

SW

RPEQ Design Certification

Michael Dayot 29435

Sheet

3 OF 3

ERGON Project Number

1795966

SPA Drawing Number

3395-E03

Revision

A