



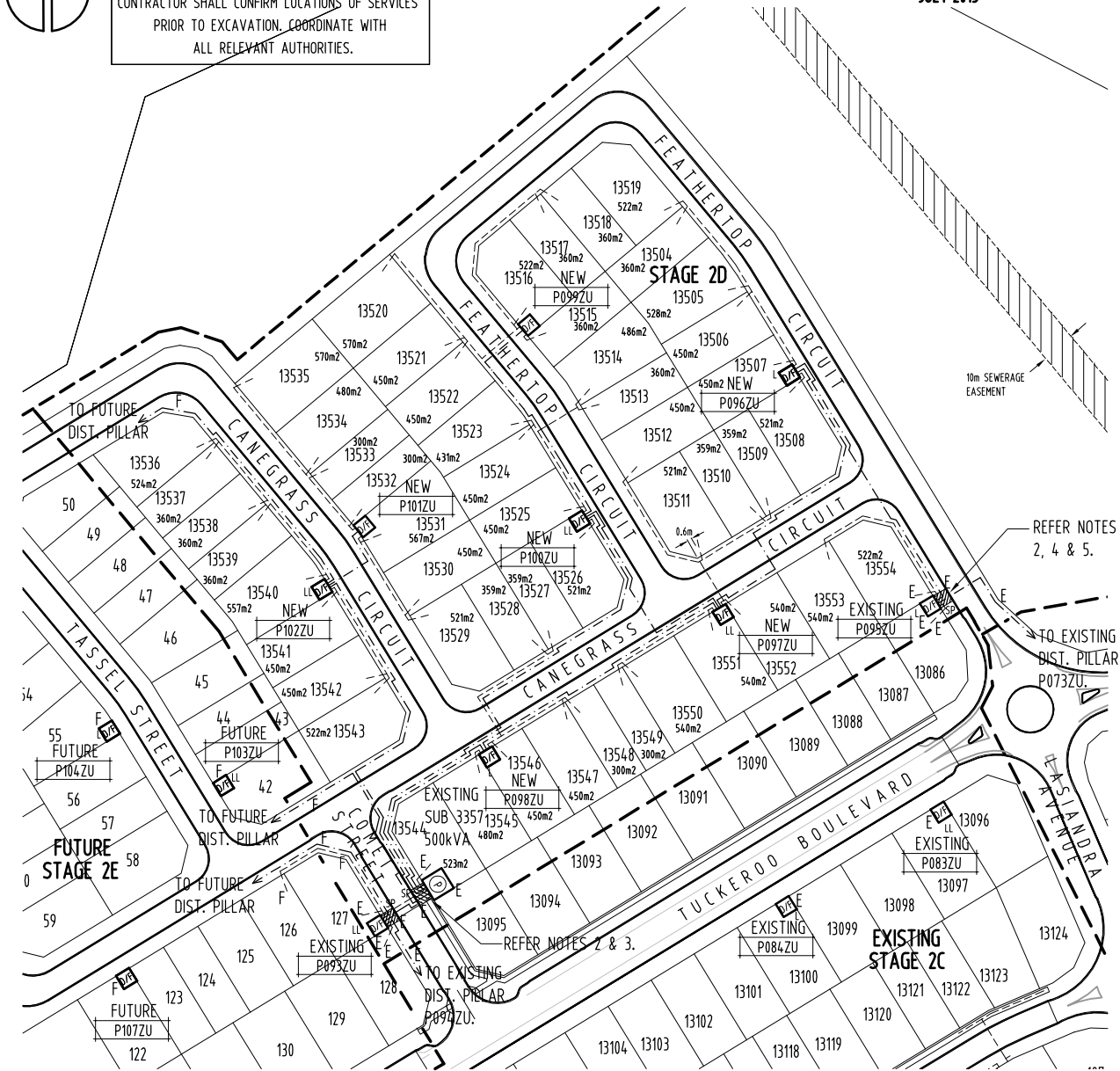
WARNING

BEWARE OF EXISTING UNDERGROUND SERVICES.
CONTRACTOR SHALL CONFIRM LOCATIONS OF SERVICES
PRIOR TO EXCAVATION. COORDINATE WITH
ALL RELEVANT AUTHORITIES.

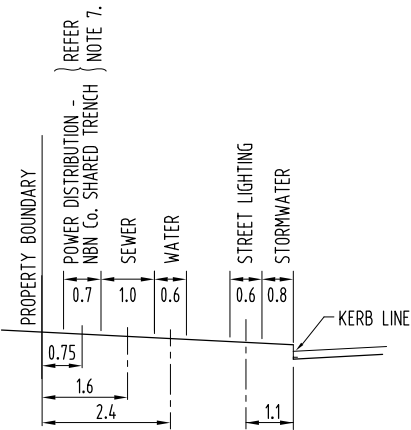
GIFTED ASSETS

ANTICIPATED CONSTRUCTION COMMENCEMENT DATE

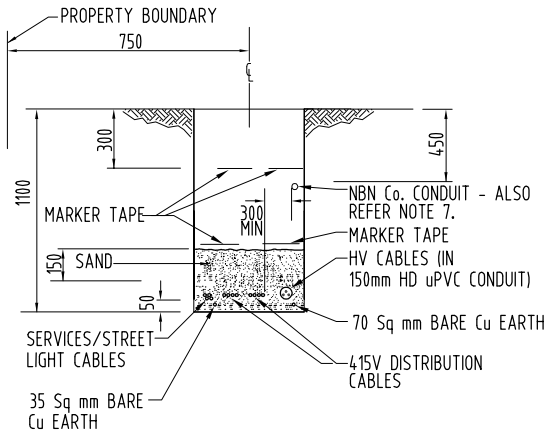
JULY 2015



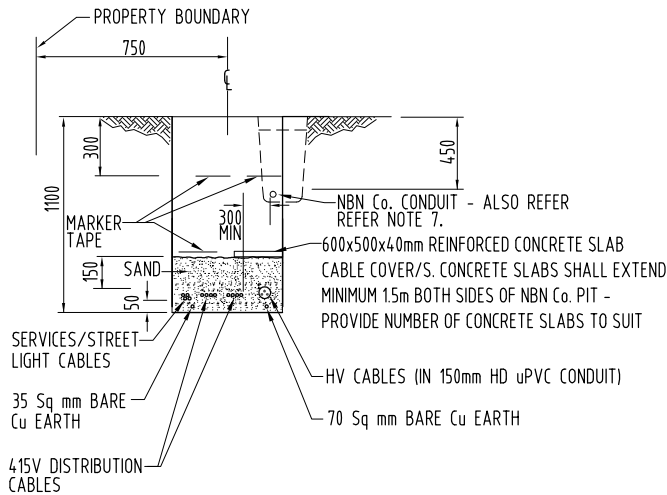
SITE PLAN (1:1000 AT A1)



**DETAIL A -
ALLOCATION FOR SERVICES** N.T.S.
NOTE: DIMENSIONS IN METRES



**DETAIL B -
TYPICAL CABLE TRENCH DETAIL** N.T.S.



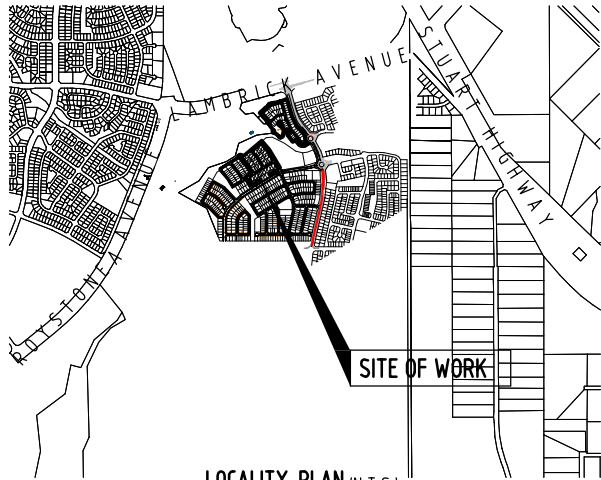
**DETAIL C -
TYPICAL CABLE TRENCH WITH NBN Co. PIT** N.T.S.

NOTES

- 1 - REFER DWG No. B15-3296 FOR DETAILS OF ITEMS LISTED IN LEGEND.
- 2 - CONTRACTOR SHALL LOCATE EXISTING EARTH CABLING IN LOCATIONS SHOWN, JOINT NEW 1x1C 70 Sq mm Cu, BARE EARTH CABLING & EXTEND TO AND CONNECT TO NEW DIST. PILLARS P096ZU/P098ZU/P100ZU/P102ZU.
- 3 - CONTRACTOR SHALL LEAVE SUFFICIENT LENGTHS NEW LV DIST. CABLING COILED WITHIN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3357 & ARRANGE FOR POWER AND WATER TO PULL NEW LV DIST. CABLING THROUGH EXISTING SPARE 3x100mm SWEEP BENDS INTO EXISTING SUB 3357 LV SECTION & CONNECT/TERMINATE.
- 4 - CONTRACTOR SHALL LEAVE SUFFICIENT LENGTHS NEW LV DIST. CABLING COILED WITHIN EXISTING SAND PIT IN FRONT OF EXISTING DIST. PILLAR P095ZU & ARRANGE FOR POWER AND WATER TO PULL NEW LV DIST. CABLING THROUGH EXISTING SPARE 1x100mm SWEEP BEND INTO EXISTING DIST. PILLAR P095ZU & CONNECT/TERMINATE.
- 5 - CONTRACTOR SHALL LEAVE SUFFICIENT LENGTHS NEW LV SERVICE CABLING COILED WITHIN EXISTING SAND PIT IN FRONT OF EXISTING DIST. PILLAR P095ZU & ARRANGE FOR POWER AND WATER TO PULL NEW LV SERVICE CABLING THROUGH EXISTING SPARE 1x100mm SWEEP BEND INTO EXISTING DIST. PILLAR P095ZU & CONNECT/TERMINATE.
- 6 - LV CABLING SHALL BE RUN BELOW (DEEPER THAN STANDARD ELECTRICAL TRENCH DEPTH/COVER) SEWER AND/OR STORMWATER MAINS WITH A MINIMUM OF 300mm CLEARANCE AT CROSSOVER LOCATIONS. COORDINATE ON SITE WITH CIVIL CONTRACTOR.
- 7 - MINIMUM 300mm HORIZONTAL SEPARATION REQUIRED BETWEEN EDGE OF NBN Co. CONDUIT/S & LV CABLING. TRENCH WIDTH MAYBE EXTENDED BY 200mm TOWARDS PROPERTY BOUNDARY TO ENSURE 300mm HORIZONTAL SEPARATION PROVIDED. WHERE 300mm SEPARATION NOT PROVIDED, LV CABLING SHALL BE INSTALLED IN 100mm HD uPVC CONDUIT. ALSO REFER DETAILS B & C.

LEGEND

- EXISTING PACKAGE SUBSTATION (RATING AS SHOWN).
- DISTRIBUTION DOUBLE LINK PILLAR - FUSED TYPE.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION LINK PILLAR - FUSED TYPE.
'E' INDICATES EXISTING.
- DISTRIBUTION PILLAR - FUSED TYPE.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- LV DISTRIBUTION CABLE - 0.6/1kV 4 x 1C 240 Sq mm AL, XLPE/NJ/PVC - DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING) & 1 x 1C 70 Sq mm Cu, BARE EARTH - DIRECT BURIED. ALSO REFER NOTE 7.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- LV SERVICE CABLE - 0.6/1kV 2 x 1C 25 Sq mm Cu, XLPE/NJ/PVC - DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING). ALSO REFER NOTE 7.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- EXISTING SAND PIT.
- EXISTING SAND PIT.



LOCALITY PLAN (N.T.S.)

CONTRACTOR:

**NORTHERN POWER
SERVICES**

PO BOX 1844
PALMERSTON NT 0831

PHONE: 8932 9317
FACSIMILE: 8932 9346

DEVELOPER:

TERRITORY LIFE

GPO Box 1782
DARWIN NT 0801

PHONE: 8943 0641
FACSIMILE: 8941 0848
EMAIL: nlouw@nspn.com.au

CONTACT: HERMANUS LOUW



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ENGINEERS PTY LTD
ELECTRICAL & MECHANICAL**
ACN 070 242 296

GPO BOX 3097
DARWIN NT 0801

TELEPHONE: 08 89416582
FACSIMILE: 08 89421400
EMAIL: alekg@agaeng.com.au

D
C
B
A

AS CONSTRUCTED
ISSUED FOR CONSTRUCTION
ISSUED FOR POWER AND WATER APPROVAL
ISSUED FOR POWER AND WATER REVIEW

NO

DESCRIPTION

K.T.
K.T.
K.T.

22-10-15
14-4-15
30-3-15
19-3-15

A.G.
A.G.
A.G.

B15-3297
B15-3296
B15-3295
B15-3294
B15-3293

SINGLE LINE DIAGRAM & LEGEND
NOTES & POLE SCHEDULE
MASTER SERVICES PLAN
CONDUIT/DUCT LAYOUT
STREET LIGHTING RETICULATION

TITLE

DRAWING STATUS

P PRELIMINARY/PROPOSED
T TENDERING PURPOSES ONLY
AC APP. FOR CONSTRUCTION
AI AS INSTALLED
C CANCELLED/SUPERSEDED

APPD DATE

PowerWater

NORTHERN TERRITORY

DES A.GANGUR

DRN K.TAVENER

CKD A.GANGUR

APPD

SCALE 1:1000 AT A1

ISSUED 22-10-15

ALL DIM. IN mm

DRAFTING STANDARD TO A.S.1100

**POWER NETWORKS - PALMERSTON DISTRIBUTION
SUBDIVISION OF LOT 12087
ZUCCOLI SUBDIVISION - STAGE 2 : STAGE 2D
LV ELECTRICAL RETICULATION**

A1

**DRAWING
NUMBER B15-3292**

FILE No: NE590/12087

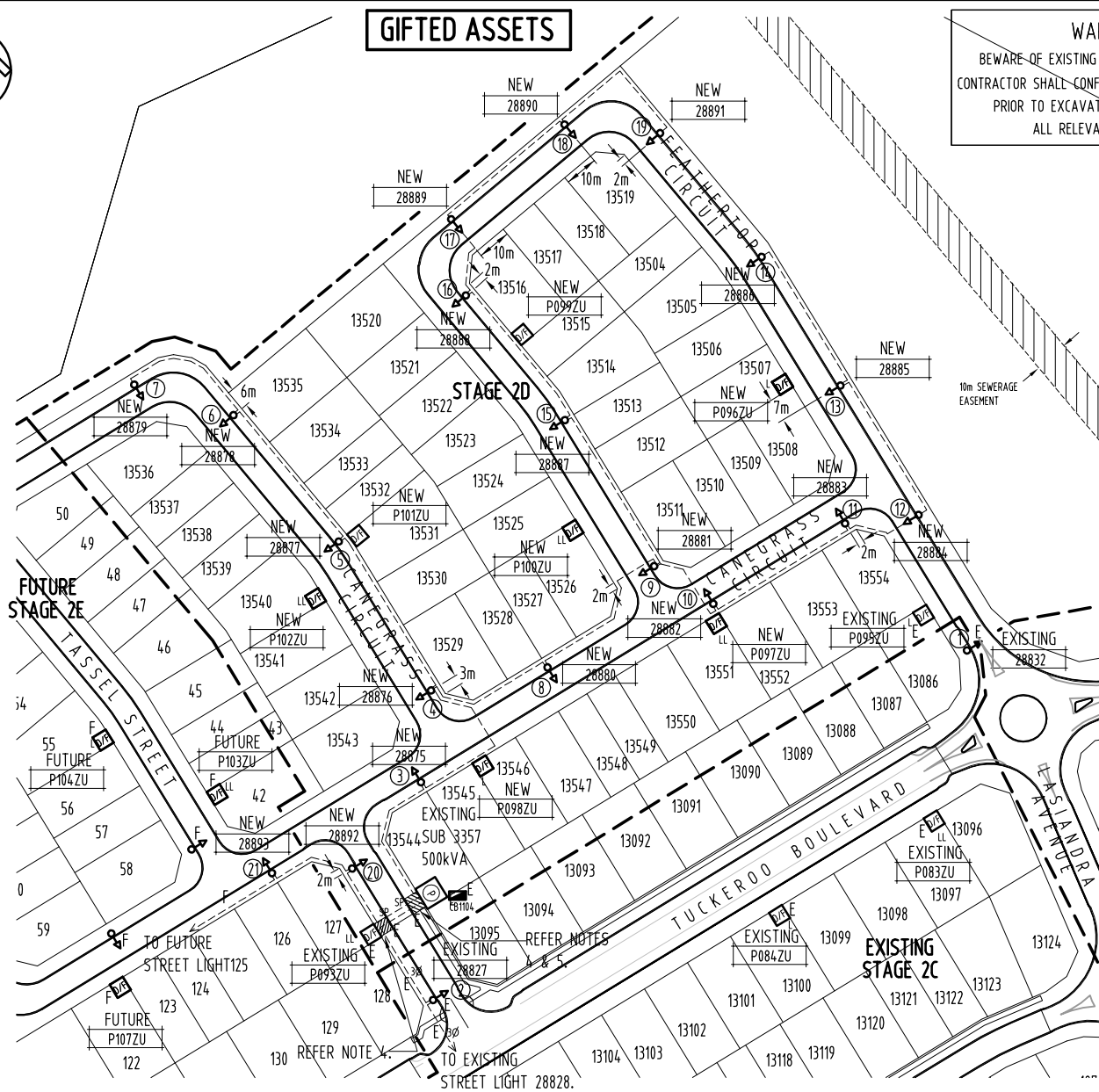




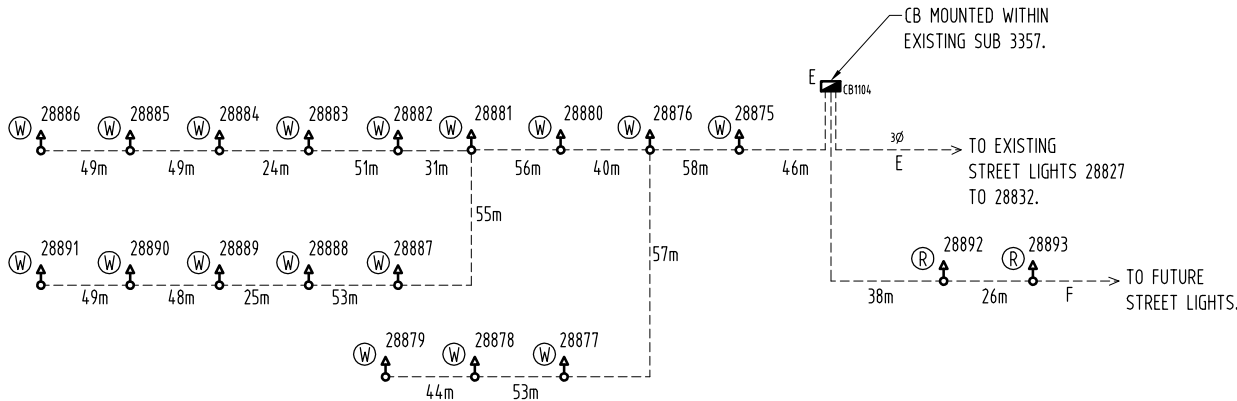
GIFTED ASSETS

WARNING

BEWARE OF EXISTING UNDERGROUND SERVICES.
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SITE PLAN (1:1000 AT A1)



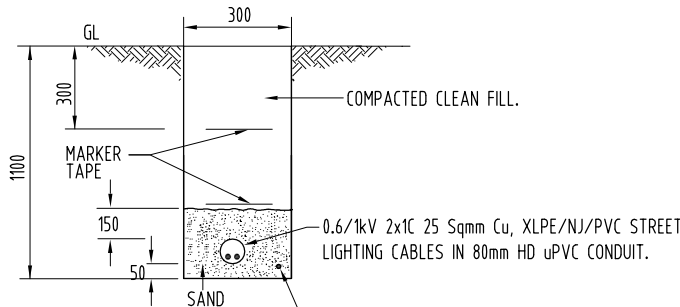
STREET LIGHT SINGLE LINE DIAGRAM (N.T.S.)

NOTES

- 1 - REFER DWG No. B15-3296 FOR DETAILS OF ITEMS LISTED IN LEGEND.
- 2 - EXTEND CONDUIT FROM STREET LIGHT ELBOW TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION.
- 3 - STREET LIGHTING SHALL BE CONNECTED TO EXISTING SUB 3357 (SUB INCORPORATES TIME CLOCK CONTROL PANEL).
- 4 - CONTRACTOR SHALL LOCATE EXISTING EARTH CABLING IN LOCATION SHOWN, JOINT NEW 1x1C 35 Sq mm Cu, BARE EARTH CABLING AND EXTEND TO & CONNECT TO NEW STREET LIGHTS 28875 & 28892.
- 5 - CONTRACTOR SHALL LEAVE SUFFICIENT LENGTHS NEW STREET LIGHT CABLING COILED WITHIN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3357 & ARRANGE FOR POWER AND WATER TO PULL NEW STREET LIGHT CABLING THROUGH EXISTING SPARE 2x80mm SWEEP BENDS INTO EXISTING SUB 3357 LV SECTION/CB1104 & CONNECT/TERMINATE.
- 6 - STREET LIGHTING CABLING SHALL BE RUN BELOW (DEEPER THAN STANDARD ELECTRICAL TRENCH DEPTH/COVER) SEWER AND/OR STORMWATER MAIN WITH A MINIMUM OF 300mm CLEARANCE AT CROSSOVER LOCATIONS. COORDINATE ON SITE WITH CIVIL CONTRACTOR.
- 7 - MINIMUM 300mm HORIZONTAL SEPARATION REQUIRED BETWEEN EDGE OF NBN Co. CONDUIT/S & LV CABLING. TRENCH WIDTH MAYBE EXTENDED BY 200mm TOWARDS PROPERTY BOUNDARY TO ENSURE 300mm HORIZONTAL SEPARATION PROVIDED. WHERE 300mm SEPARATION NOT PROVIDED, STREET LIGHTING CABLING SHALL BE INSTALLED IN 80mm HD uPVC CONDUIT. ALSO REFER DWG No. B15-3292, DETAILS B & C.

LEGEND

- EXISTING PACKAGE SUBSTATION (RATING AS SHOWN).
- DISTRIBUTION DOUBLE LINK PILLAR - FUSED TYPE.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- DISTRIBUTION LINK PILLAR - FUSED TYPE.
'E' INDICATES EXISTING.
- DISTRIBUTION PILLAR - FUSED TYPE.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- SINGLE PHASE STREET LIGHT CABLE - 0.6/1kV 2x1C 25 Sq mm Cu, XLPE/NJ/PVC - DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSINGS/INTO STREET LIGHT POLE).
NOTE: STREET LIGHT CIRCUITS INCLUDE 1x1C 35 Sq mm Cu BARE EARTH CONNECTED TO STREET LIGHTING CIRCUITS ON SUBSTATION. ALSO REFER NOTE 7.
'F' INDICATES FUTURE.
- EXISTING 3 PHASE STREET LIGHT CABLE - 0.6/1kV 4x1C 25 Sq mm Cu, XLPE/NJ/PVC - DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSINGS/INTO STREET LIGHT POLE).
NOTE: STREET LIGHT CIRCUITS INCLUDE 1x1C 35 Sq mm Cu BARE EARTH CONNECTED TO STREET LIGHTING CIRCUITS ON SUBSTATION.
- EXISTING STREET LIGHT - 250W HPS 'REXEL' OPTISPAN LUMINAIRE MOUNTED ON 9m POLE WITH 1.5m OUTREACH.
- STREET LIGHT - 70W HPS 'REXEL' OPTIMA LUMINAIRE MOUNTED ON 6.5m POLE WITH 1.5m CURVED OUTREACH. SET BACK 1.1m FROM KERB.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- EXISTING STREET LIGHT CONTROL PANEL (MOUNTED WITHIN SUB SHOWN).



DETAIL D - TYPICAL STREET LIGHTING CABLE (BETWEEN COLUMN & ELECTRICAL SERVICE TRENCH) DETAIL N.T.S.

CONTRACTOR:

NORTHERN POWER SERVICES

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DEVELOPER:

TERRITORY LIFE

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DARWIN NT 0801

PHONE: 8943 0641
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EMAIL: nlouw@nspn.com.au
CONTACT: HERMANUS LOUW



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ACN 070 242 296

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DARWIN NT 0801

TELEPHONE: 08 89416582
FACSIMILE: 08 89421400
EMAIL: aleky@agaeng.com.au

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ISSUED FOR POWER AND WATER REVIEW

NO

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B15-3292

SINGLE LINE DIAGRAM & LEGEND
NOTES & POLE SCHEDULE
MASTER SERVICES PLAN
CONDUIT/DUCT LAYOUT
LV ELECTRICAL RETICULATION

TITLE

AMENDMENTS

ASSOCIATED DRAWINGS

DRAWING STATUS

| | |
|----|-------------------------|
| P | PRELIMINARY/PROPOSED |
| T | TENDERING PURPOSES ONLY |
| AC | APP. FOR CONSTRUCTION |
| AI | AS INSTALLED |
| C | CANCELLED/SUPERSEDED |

APPD

DATE

PowerWater

NORTHERN TERRITORY

DES A.GANGUR
DRN K.TAVENER
CKD A.GANGUR

APPD

SCALE 1:1000 AT A1

ISSUED 22-10-15

ALL DIM. IN mm

DRAFTING STANDARD TO A.S.1100

POWER NETWORKS - PALMERSTON DISTRIBUTION
SUBDIVISION OF LOT 12087
ZUCCOLI SUBDIVISION - STAGE 2 : STAGE 2D
STREET LIGHTING RETICULATION

A1

DRAWING NUMBER B15-3293

FILE No: NE590/12087

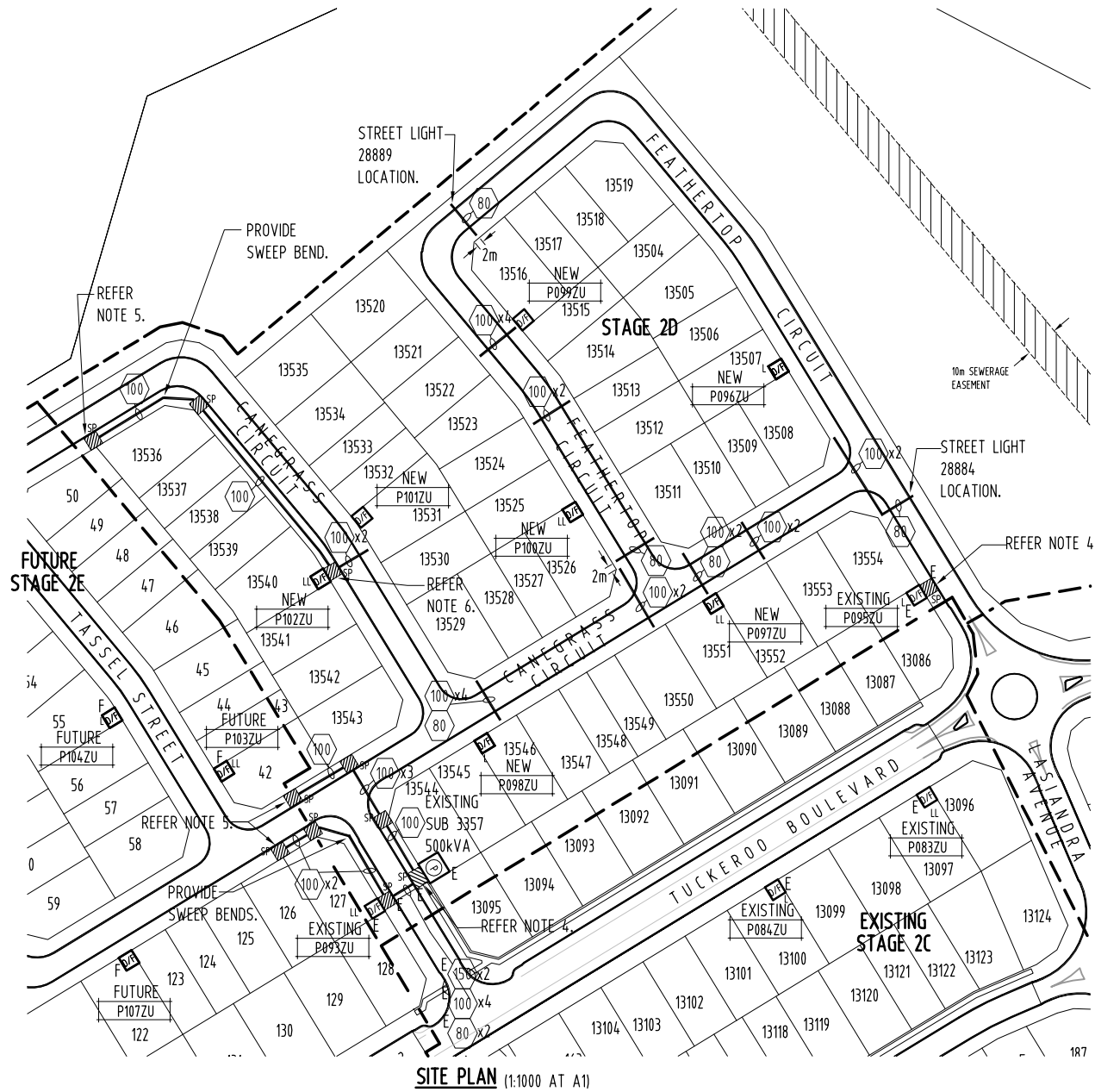




WARNING

BEWARE OF EXISTING UNDERGROUND SERVICES.
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ALL RELEVANT AUTHORITIES.

GIFTED ASSETS



NOTES

- 1 - REFER DWG No. B15-3296 FOR DETAILS OF ITEMS LISTED IN LEGEND.
- 2 - ALL SPARE CONDUITS SHALL INCLUDE DRAW WIRES/FITTED WITH END CAPS.
- 3 - PROVIDE CONTINUOUS SWEEP BENDS IN ALL CHANGES IN CONDUIT ROUTE DIRECTIONS.
- 4 - CONTRACTOR SHALL LOCATE EXISTING EARTH CABLING IN LOCATIONS SHOWN, JOINT NEW 1x1C 70 Sq mm Cu, BARE EARTH CABLING & EXTEND TO AND CONNECT TO NEW DIST. PILLARS P096ZU/P098ZU/P100ZU/P102ZU.
- 5 - CONTRACTOR SHALL SUPPLY & INSTALL 1x1C 70 Sq mm Cu, BARE EARTH TO SAND PIT SHOWN & LEAVE 3m COILED IN SAND PIT FOR FUTURE STAGE CONNECTION.
- 6 - CONTRACTOR SHALL SUPPLY & INSTALL 1x100mm HD uPVC SWEEP BEND CONDUIT TO WITHIN NEW DIST. PILLAR P102ZU AND EXTEND TO WITHIN NEW SAND PIT IN ROAD RESERVE IN FRONT OF NEW DIST. PILLAR P102ZU - FOR FUTURE STAGE LV DIST. CABLING.
- 7 - EXTEND ALL CONDUITS AT ROAD CROSSINGS TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION.
- 8 - CONDUITS SHALL BE INSTALLED IN A CONTINUOUS SWEEP CURVE.
- 9 - MINIMUM 300mm HORIZONTAL SEPARATION REQUIRED BETWEEN EDGE OF NBN Co. CONDUIT/S & LV CABLING. TRENCH WIDTH MAYBE EXTENDED BY 200mm TOWARDS PROPERTY BOUNDARY TO ENSURE 300mm HORIZONTAL SEPARATION PROVIDED. WHERE 300mm SEPARATION NOT PROVIDED, LV CABLING SHALL BE INSTALLED IN 100mm HD uPVC CONDUIT/STREET LIGHTING CABLING IN 80mm HD uPVC CONDUIT. ALSO REFER DWG No. B15-3292, DETAILS B & C.

LEGEND

- EXISTING PACKAGE SUBSTATION (RATING AS SHOWN).
- DISTRIBUTION DOUBLE LINK PILLAR - FUSED TYPE.
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- DISTRIBUTION LINK PILLAR - FUSED TYPE.
'E' INDICATES EXISTING.
- DISTRIBUTION PILLAR - FUSED TYPE.
'E' INDICATES FUTURE.
- ELECTRICAL CONDUIT/DUCT. CONDUIT/DUCT TYPE AS FOLLOWS:
 - HD uPVC FOR ALL HV CABLING.
 - HD uPVC FOR LV DIST./SERVICE/STREET LIGHT CABLING FOR ROAD CROSSINGS/RESERVE.
 - 'E' INDICATES EXISTING.
- NUMBER INSIDE INDICATES CONDUIT/DUCT SIZE.
- NUMBER SHOWN/DRAWN INDICATES NUMBER OF CONDUITS REQUIRED.
'E' INDICATES EXISTING.
- SAND PIT - 1000x1000x600D WITH A MINIMUM COVER OF 0.9m TO TOP OF CONDUITS.
'E' INDICATES EXISTING.
- SAND PIT - 1500x1000x600D WITH A MINIMUM COVER OF 0.9m TO TOP OF CONDUITS.
'E' INDICATES EXISTING.

CONTRACTOR:

NORTHERN POWER SERVICES
PO BOX 1844
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PHONE: 8932 9317
FACSIMILE: 8932 9346

DEVELOPER:

TERRITORY LIFE
GPO Box 1782
DARWIN NT 0801

PHONE: 8943 0641
FACSIMILE: 8941 0848
EMAIL: hlouw@nspn.com.au
CONTACT: HERMANUS LOUW



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EMAIL: aleky@agaeng.com.au

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SINGLE LINE DIAGRAM & LEGEND
NOTES & POLE SCHEDULE
MASTER SERVICES PLAN
STREET LIGHTING RETICULATION
LV ELECTRICAL RETICULATION


| NO | DESCRIPTION | DRN | DATE | APPD | DRG NO | TITLE |
|------------|-------------|-----|---------------------|------|--------|-------|
| AMENDMENTS | | | ASSOCIATED DRAWINGS | | | |

DRAWING STATUS

| | | | |
|----|-------------------------|------|------|
| P | PRELIMINARY/PROPOSED | APPD | DATE |
| T | TENDERING PURPOSES ONLY | | |
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| AI | AS INSTALLED | | |
| C | CANCELLED/SUPERSEDED | | |

AGA406-7

PowerWater
NORTHERN TERRITORY

| | | | | |
|-------------------------------|--------------|---|-------------------|--|
| DES | A.GANGUR | POWER NETWORKS – PALMERSTON DISTRIBUTION SUBDIVISION OF LOT 12087 ZUCCOLI SUBDIVISION – STAGE 2 : STAGE 2D CONDUIT/DUCT LAYOUT | | |
| DRN | K.TAVENER | | | |
| CKD | A.GANGUR | | | |
| APPD | | | | |
| SCALE | 1:1000 AT A1 | | | |
| ISSUED | 22-10-15 | A1 | DRAWING NUMBER | B15-3294 |
| ALL DIM. | IN mm | | | |
| DRAFTING STANDARD TO A.S.1100 | | FILE No: NE590/12087 | |  AMD |



WARNING

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GIFTED ASSETS



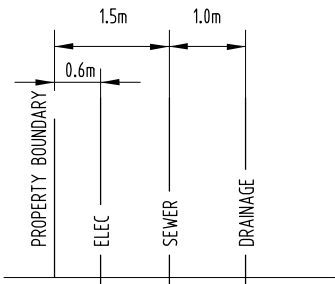
SITE PLAN (1:1000 AT A1)

LEGEND

- E
- EXISTING PACKAGE SUBSTATION (RATING AS SHOWN).
 - DISTRIBUTION DOUBLE LINK PILLAR - FUSED TYPE.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
 - DISTRIBUTION LINK PILLAR - FUSED TYPE.
'E' INDICATES EXISTING.
 - DISTRIBUTION PILLAR - FUSED TYPE.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
 - LV SERVICE CABLE/CONNECTION.
'E' INDICATES EXISTING/'F' INDICATES FUTURE.
 - WATER CONNECTION.
 - SEWER CONNECTION.
 - DRAINAGE CONNECTION.

NOTES

1 - REFER DWG No. B15-3296 FOR DETAILS OF ITEMS LISTED
IN LEGEND (EXCLUDING WATER/SEWER/DRAINAGE
CONNECTION).



DETAIL E - TYPICAL SERVICE CONNECTION WHERE
ELEC/SEWER/DRAINAGE IN SAME LOT CORNER (N.T.S.)

CONTRACTOR:

NORTHERN POWER
SERVICES

PO BOX 1844
PALMERSTON NT 0831

PHONE: 8932 9317
FACSIMILE: 8932 9346

DEVELOPER:

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GPO Box 1782
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SINGLE LINE DIAGRAM & LEGEND
NOTES & POLE SCHEDULE
CONDUIT/DUCT LAYOUT
STREET LIGHTING RETICULATION
LV ELECTRICAL RETICULATION

| NO | DESCRIPTION | DRN | DATE | APPD | DRG NO | TITLE |
|------------|-------------|-----|---------------------|------|--------|-------|
| AMENDMENTS | | | ASSOCIATED DRAWINGS | | | |

DRAWING STATUS

| | | | |
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| P | PRELIMINARY/PROPOSED | APPD | DATE |
| T | TENDERING PURPOSES ONLY | | |
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| AI | AS INSTALLED | | |
| C | CANCELLED/SUPERSEDED | | |
| AGA406-7 | | | |

PowerWater
NORTHERN TERRITORY

| | | | | |
|-------------------------------|--------------|--|----------------------|--|
| DES | A.GANGUR | POWER NETWORKS – PALMERSTON DISTRIBUTION SUBDIVISION OF LOT 12087 ZUCCOLI SUBDIVISION – STAGE 2 : STAGE 2D MASTER SERVICES PLAN | | |
| DRN | K.TAVENER | | | |
| CKD | A.GANGUR | | | |
| APPD | | | | |
| SCALE | 1:1000 AT A1 | | | |
| ISSUED | 22–10–15 | A1 | DRAWING NUMBER | B15–3295 |
| ALL DIM. | IN mm | | | |
| DRAFTING STANDARD TO A.S.1100 | | | FILE No: NE590/12087 | <div><div><div></div><div>D</div></div></div> <div>AMD</div> |

GIFTED ASSETS

NOTES - WORKS BY DEVELOPERS CONTRACTOR

1- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH CURRENT POWER AND WATER CONSTRUCTION METHODS, REQUIREMENTS & STANDARDS AS DETAILED IN POWER AND WATER DESIGN AND CONSTRUCTION GUIDELINES, STREET LIGHTING/UNDERGROUND MANUALS & ACCESS TO APPARATUS RULES. ROAD OWNER IS RESPONSIBLE FOR APPROVING SPECIFIC STREET LIGHTING CATEGORY COMPLIANCE AND DESIGNATED STREET LIGHTING LOCATIONS. POWER AND WATER'S APPROVAL FOR STREET LIGHTING IS ONLY FOR COMPLIANCE WITH ELECTRICAL INSTALLATION AND AUTHORISED STANDARD STREET LIGHTING COMPONENTS AS PER POWER AND WATER STANDARD MANUALS.

2 - ALL PURCHASED MATERIALS/EQUIPMENT TO CONSTRUCT ELECTRICAL RETICULATION SHALL BE IN ACCORDANCE WITH POWER AND WATER'S RELEVANT STANDARDS/TECHNICAL REQUIREMENTS AND FROM A POWER AND WATER AUTHORISED MANUFACTURER, SPECIFICALLY FOR HIGH VOLTAGE AND LOW VOLTAGE DISTRIBUTION NETWORKS. ANY NON-STANDARD MATERIALS/EQUIPMENT USED WITHOUT OBTAINING PRIOR APPROVAL IN WRITING FROM POWER NETWORKS, ASSET MANAGEMENT QUALITY GROUP CAN BE REJECTED AND REPLACED BY THE APPROVED STANDARD ITEM BEFORE POWER AND WATER ACCEPTS THE HANDOVER OF ELECTRICAL ASSETS AND ISSUING POWER CLEARANCE FOR THE CONSTRUCTION/DEVELOPMENT. IF UNSURE, CONTACT POWER AND WATER POWER NETWORK ASSET MANAGEMENT QUALITY GROUP ON standardsengineers@powerwater.com.au.

3 - CONTRACTOR SHALL CONTACT & SUBMIT AN UNDERGROUND INSTALLATION PROGRAM" TO POWER AND WATER'S PROGRAM DELIVERY VIA E-MAIL (programdelivery.pw@powerwater.com.au) THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS. THE UNDERGROUND INSTALLATION IS SUBJECT TO APPROVAL BY PROGRAM DELIVERY 7 DAYS PRIOR TO WORK COMMENCING.

4 - FUSED DISTRIBUTION PILLARS SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR AND LABELLED IN ACCORDANCE WITH POWER AND WATER REQUIREMENTS. LABELS SHALL BE PROVIDED BY CONTRACTOR. PILLARS SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S02-2-3-08 & INSTALLATION IN ACCORDANCE WITH POWER AND WATER STD DWG S02-2-3-12.

5 - STREET LIGHTS SHALL BE SUPPLIED & INSTALLED BY CONTRACTOR IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S3-1-1-6, S3-1-2-1, S3-1-2-3, S3-1-2-6 & S3-1-4-1. SWITCHPACK WITHIN EACH POLE SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG S3-1-5-7 & S3-1-5-12. LABEL IN ACCORDANCE WITH POWER AND WATER REQUIREMENTS. COLUMNS SHALL BE GALVANISED.

6 - UNLESS OTHERWISE INDICATED, ALL SERVICE CABLES ARE LOCATED AS FOLLOWS:

- GENERAL: 300mm FROM FRONT BOUNDARY/600mm FROM SIDE BOUNDARY/600mm FROM EASEMENT
- CABLES ADJACENT TO PILLARS: 300mm FROM FRONT BOUNDARY/600mm FROM PILLAR EASEMENT.
- CABLES ADJACENT TO SEWERAGE SERVICES, LOCATED 600mm FROM EASEMENT/SIDE BOUNDARY/300mm FROM FRONT BOUNDARY.

7 - SERVICE ALLOCATIONS SHALL BE AS PER DWG No. B15-3292, DETAIL A AND SHALL BE INSTALLED IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S2-2-6-2 AND S2-2-6-3 (TRENCH DETAILS). ALSO REFER DWG No. B15-3292, DETAILS B & C.

8 - ELECTRICITY EASEMENTS SHALL BE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S2-2-6-17.
- FUSED PILLARS: 1m x 1m FOR 3 & 5 SLOT FUSED PILLAR.
WHERE FRONT/SIDE OF PILLARS EASEMENTS DO NOT ALIGN WITH FRONT OF SIDE LOT BOUNDARIES, ELECTRICITY EASEMENTS SHALL EXTEND TO FRONT OR SIDE LOT BOUNDARY. DEVELOPER SHALL SURVEY & REGISTER ELECTRICITY EASEMENTS REQUIRED IN FAVOUR OF POWER AND WATER (AT NO COST TO POWER AND WATER).

9 - LV & STREET LIGHT CABLES SUPPLIED AND INSTALLED BY CONTRACTOR SHALL BE TYPE IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S2-1-1-19 AND S2-1-1-20.

10 - 22 METRES OF SERVICE CABLE SHALL BE LEFT BURIED WITHIN EACH PROPERTY BOUNDARY SHOWN IN ACCORDANCE WITH POWER AND WATER STANDARD DWG'S S2-2-1-3.

11 - EXTEND CONDUIT FROM STREET LIGHT ELBOW TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION. ALSO
EXTEND CONDUITS AT ROAD CROSSINGS TO WITHIN ELECTRICAL SERVICES TRENCH ALLOCATION.

12 - CONTRACTOR SHALL LIAISE WITH NBN Co. CONTRACTOR TO ENABLE CONDUITS AND COMMUNICATIONS PITS TO BE INSTALLED BY NBN Co. CONTRACTOR AT THE APPROPRIATE CONSTRUCTION STAGE (INCLUDING CONDUITS AT ROAD CROSSINGS). THE CONTRACTOR SHALL BACKFILL/COMPACT TRENCHES, UPON INSTALLATION OF ELECTRICAL SERVICES CABLEING, TO A LEVEL IN ACCORDANCE WITH STANDARD POWER AND WATER DWG'S S2-2-6-2 TO ENABLE NBN Co. CONTRACTOR TO INSTALL COMMUNICATIONS CONDUITS AND PITS. THE CONTRACTOR SHALL THEN COMPLETE BACKFILL/COMPACTION OF TRENCHES.

13 - CONTRACTOR SHALL INSTALL ALL NUMBER PLATES (LABELS) REQUIRED BY POWER AND WATER IE PILLARS & STREET LIGHTS. NOTE - STREET LIGHT NUMBER PLATES WILL BE PROVIDED BY POWER AND WATER TO CONTRACTOR. CONTRACTOR SHALL LABEL ALL CABLE DESTINATIONS IN ACCORDANCE WITH POWER AND WATER STANDARD DRAWING S02-1-8-25.

14 - ALL WORKS REQUIRED ON EXISTING ENERGISED RETICULATION SHALL ONLY BE CARRIED OUT BY POWER AND WATER PERSONNEL. DEVELOPER/CONTRACTOR SHALL LIAISE WITH POWER AND WATER TO COORDINATE CONNECTION OF THE WORK INTO EXISTING UNDERGROUND RETICULATION. ALL COSTS ASSOCIATED SHALL BE PAID BY DEVELOPER.

15 - DEVELOPER SHALL ENSURE THAT ONLY POWER AND WATER ACREDITED ELECTRICAL CONTRACTOR IS EMPLOYED TO CARRY OUT WORK ON THIS ELECTRICAL SYSTEM (CONTACT MANAGER NETWORK ENGINEERING - 8924 5191).

16 - DEVELOPER SHALL LIAISE WITH POWER AND WATER TO OBTAIN "HANDOVER OF WORK BY DEVELOPER". CONTRACTOR SHALL SUBMIT TO POWER AND WATER ON COMPLETION OF WORK, SIGNED COPY OF "CONTRACTOR'S CERTIFICATE OF COMPLETION & HANDOVER - POWER NETWORK ASSETS" & SIGNED COPY OF "ELECTRICAL CERTIFICATE OF COMPLIANCE".

17 - CABLE ROUTE LENGTHS NOMINATED ON SINGLE LINE DIAGRAM ARE FOR POWER AND WATER INFORMATION ONLY & SHALL NOT BE USED FOR TENDERING PURPOSES.

18 - COORDINATE WITH CIVIL SERVICES FOR LOCATION OF WATER, SEWERAGE AND STORMWATER SERVICES.

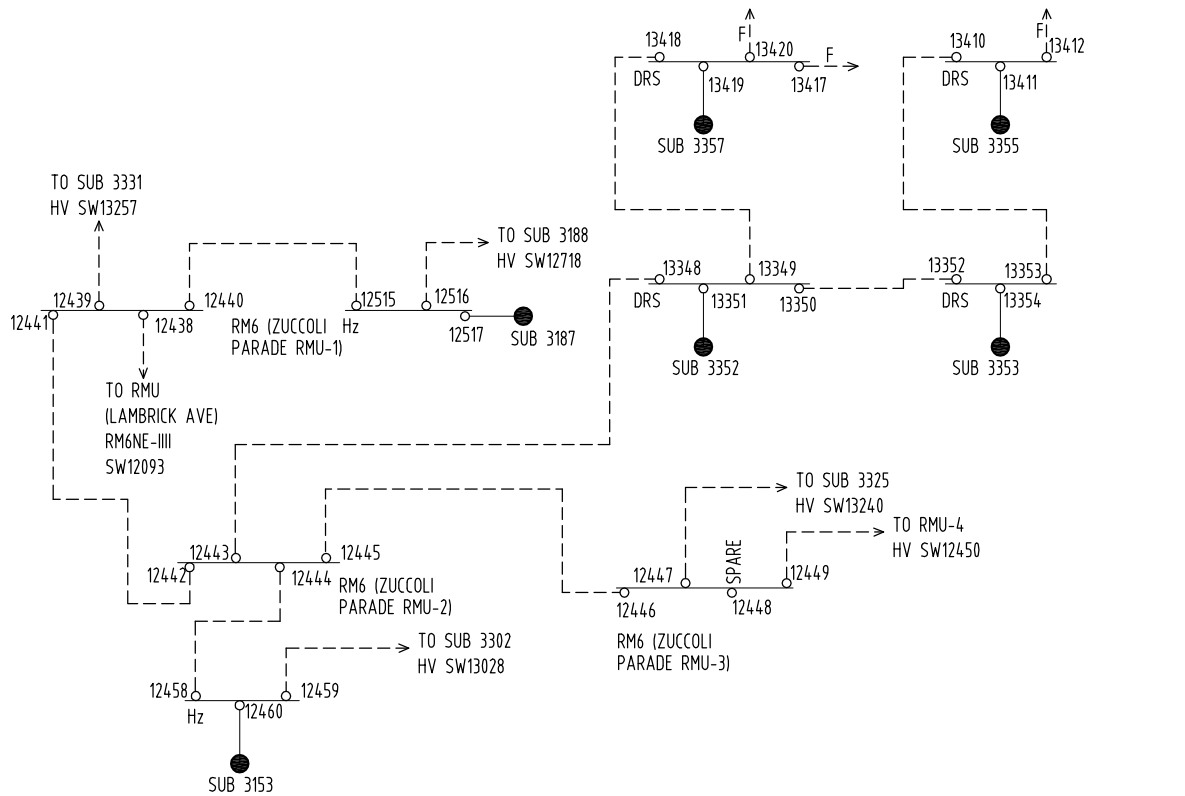
19 - CONTRACTOR SHALL PROVIDE "AS CONSTRUCTED" DRAWINGS IN ACCORDANCE WITH POWER AND WATER'S "POWER NETWORKS DESIGN AND CONSTRUCTION GUIDELINES", INCLUDING A COPY OF THE FINAL SURVEY PLAN. THE "AS CONSTRUCTED" DRAWINGS SHALL INCLUDE:

- 1 x A1 PAPER PRINT INDICATING "AS INSTALLED" (OF ALL DRAWINGS).
- 1 x A3 PAPER PRINT INDICATING "AS INSTALLED" (OF ALL DRAWINGS).
- 1 DIGITAL (CD) COPY OF ALL DRAWINGS (MICROSTATION .DGN FILES).

NOTES - WORKS BY POWER AND WATER (AT DEVELOPERS COST)

- CONTRACTOR SHALL ARRANGE FOR POWER AND WATER TO CARRY OUT THE FOLLOWING WORKS:
- PULL THROUGH NEW LV DIST. CABLING (FROM NEW DIST. PILLARS P098ZU/P100ZU/P102ZU) LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3357 & CONNECT/TERMINATE TO EXISTING SUB 3357 3 OFF SPARE LV STRIPPLE FUSE UNITS.
- PULL THROUGH NEW LV DIST. CABLING (FROM NEW DIST. PILLAR P096ZU) & NEW LV SERVICE CABLING (FROM LOT 142) LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING DIST. PILLAR P095ZU & CONNECT/TERMINATE TO EXISTING DIST. PILLAR P095ZU.
- PULL THROUGH NEW STREET LIGHT CABLING (FROM NEW STREET LIGHT 28875 & FROM NEW STREET LIGHT 28892 LEFT COILED IN EXISTING SAND PIT IN FRONT OF EXISTING SUB 3357 & CONNECT/TERMINATE TO EXISTING SUB 3357/CB1104.
- CARRY OUT EARTH TESTS.
- COMPLETE FINAL CONNECTION, TESTING & COMMISSIONING OF NEW DISTRIBUTION PILLARS, STREET LIGHTING & ASSOCIATED CABLING/WORKS.

2 - DEVELOPER SHALL PAY ALL ASSOCIATED COSTS FOR POWER AND WATER TO CARRY OUT ABOVE WORKS.



EXISTING HV SCHEMATIC DIAGRAM (11AR07 MITCHELL CREEK) (N.T.S.)

CONTRACTOR:

NORTHERN POWER SERVICES

PO BOX 1844
PALMERSTON NT 0831

PHONE: 8932 9317
FACSIMILE: 8932 9346

DEVELOPER:

TERRITORY LIFE

GPO Box 1782
DARWIN NT 0801

PHONE: 8943 0641
FACSIMILE: 8941 0848
EMAIL: hlouw@ntspm.com.au
CONTACT: HERMANUS LOUW

AGA CONSULTING ENGINEERS PTY LTD
ELECTRICAL & MECHANICAL
ACN 070 242 296

GPO BOX 3097
DARWIN NT 0801

TELEPHONE: 08 89416582
FACSIMILE : 08 89421400
EMAIL: alek@agangeng.com.au

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AS CONSTRUCTED
ISSUED FOR CONSTRUCTION
ISSUED FOR POWER AND WATER APPROVAL
ISSUED FOR POWER AND WATER REVIEW

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14-4-15
30-3-15
19-3-15

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A.G.

B15-3297
B15-3295
B15-3294
B15-3293
B15-3292

SINGLE LINE DIAGRAM & LEGEND
MASTER SERVICES PLAN
CONDUIT/DUCT LAYOUT
STREET LIGHTING RETICULATION
LV ELECTRICAL RETICULATION

DRG NO

TITLE

AGA406-7

DRAWING STATUS

APPD

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TENDERING PURPOSES ONLY

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DRAFTING STANDARD TO A.S.1100

A.GANGUR

K.TAVENER

A.GANGUR

N.T.S.

22-10-15

IN mm

A.S.1100

POWER NETWORKS – PALMERSTON DISTRIBUTION
SUBDIVISION OF LOT 12087
ZUCCOLI SUBDIVISION – STAGE 2 : STAGE 2D
NOTES, HV SCHEMATICS & POLE SCHEDULE

A1

DRAWING NUMBER
B15-3296

FILE NO: NE590/12087

AMDT

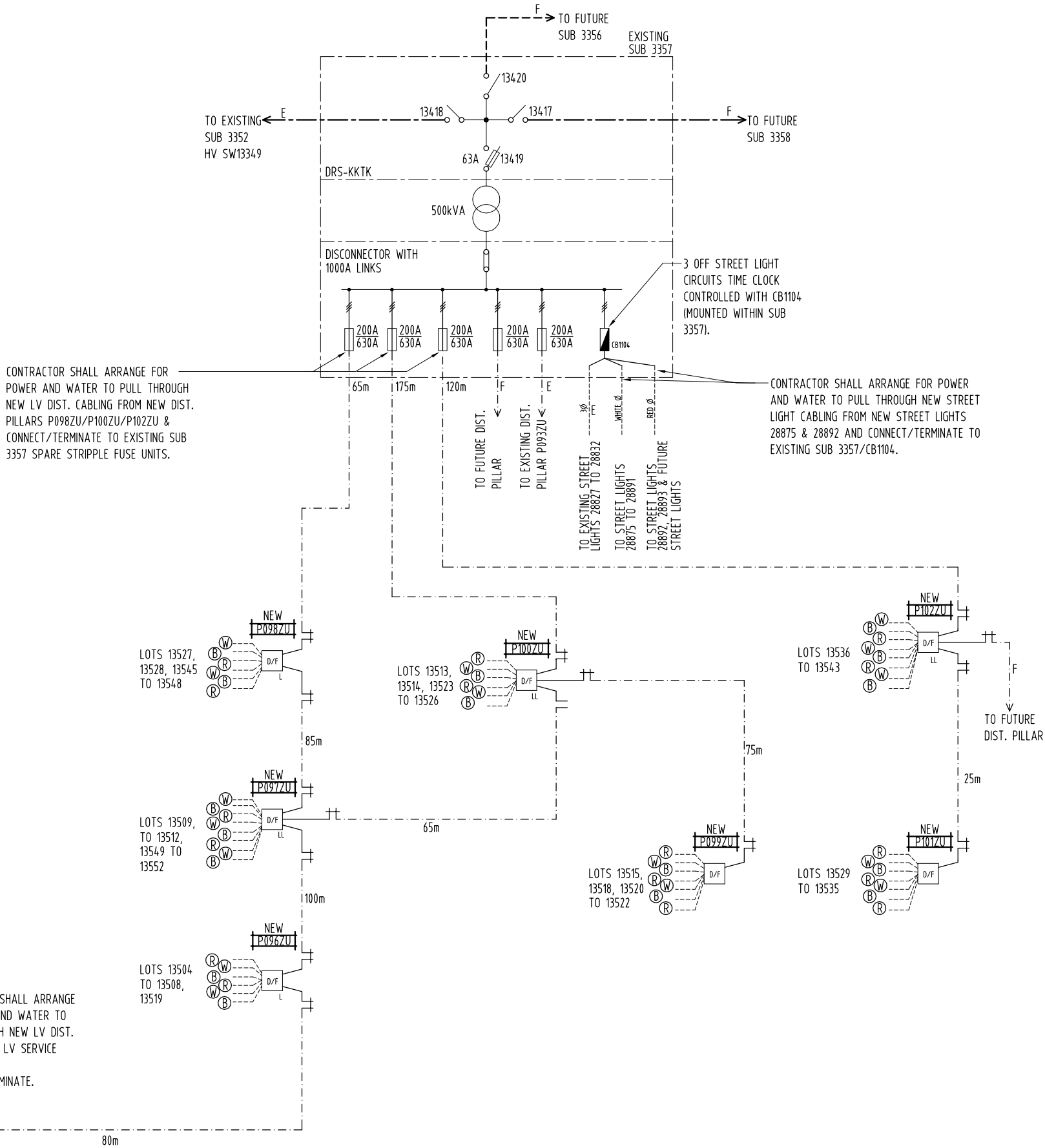
PowerWater

NORTHERN TERRITORY

EXISTING HV SCHEMATIC DIAGRAM (11AR07 MITCHELL CREEK)(N.T.S.)

GIFTED ASSETS

NOTE - REFER TO DWG
No. B15-3292 FOR
PILLAR SCHEDULE.



LEGEND

- HV SWITCH.
- HV FUSED SWITCH.
- LV STRIPLE FUSES.
- SUB DISCONNECTOR WITH LINKS.
- DIST. LINK PILLAR OPEN LINKS.
- DIST. LINK PILLAR CLOSED LINKS.
- EXISTING STREET LIGHT CONTROL PANEL (MOUNTED WITHIN SUBSTATION SHOWN).
- EXISTING HV CABLE - 6.35/11kV 3x1C 400 Sq mm AL (WATER BLOCKED), XLPE/WBT/SCN/HDPE/NJ/PVC (IN HD uPVC CONDUIT) & 1x1C 70 Sq mm Cu, BARE EARTH DIRECT BURIED. 'F' INDICATES FUTURE.
- FUTURE HV CABLE - 6.35/11kV 3x1C 240 Sq mm AL (WATER BLOCKED), XLPE/WBT/SCN/HDPE/NJ/PVC (IN HD uPVC CONDUIT) & 1x1C 70 Sq mm Cu, BARE EARTH DIRECT BURIED.
- LV DISTRIBUTION CABLE - 0.6/1kV 4x1C 240 Sq mm AL, XLPE/NJ/PVC - DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING) & 1x1C 70 Sq mm Cu, BARE EARTH - DIRECT BURIED. NOTE: WHERE COMMON HV/LV TRENCH USED; ONLY ONE OFF 1x1C 70 Sq mm Cu, BARE EARTH SHALL BE USED. ALSO REFER DWG No. B15-3292, NOTE 7. 'E' INDICATES EXISTING/'F' INDICATES FUTURE.
- LV SERVICE/STREET LIGHT CABLE - 0.6/1kV 2x1C 25 Sq mm Cu, XLPE/NJ/PVC - DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING/INTO STREET LIGHT POLE). ALSO REFER DWG No. B15-3292, NOTE 7/DWG No. B15-3293, NOTE 7. NOTE: STREET LIGHT CIRCUITS INCLUDE 1x1C 35 Sq mm Cu BARE EARTH CONNECTED TO STREET LIGHTING CIRCUITS ON EXISTING SUB 3357. 'E' INDICATES EXISTING.
- EXISTING 3 PHASE STREET LIGHT CABLE - 0.6/1kV 4x1C 25 Sq mm Cu, XLPE/NJ/PVC - DIRECT BURIED (OR WITHIN CONDUIT AT ROAD CROSSING/INTO STREET LIGHT POLE).

CONTRACTOR:

NORTHERN POWER
SERVICES

PO BOX 1844
PALMERSTON NT 0831

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FACSIMILE: 8932 9346

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EMAIL: aleky@agaeng.com.au

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B15-3292

NOTES & POLE SCHEDULE
MASTER SERVICES PLAN
CONDUIT/DUCT LAYOUT
STREET LIGHTING RETICULATION
LV ELECTRICAL RETICULATION

NO

DESCRIPTION

DRN

DATE

APPD

DRG NO

TITLE

AMENDMENTS

ASSOCIATED DRAWINGS

DRAWING STATUS

APPD

DATE

P

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TENDERING PURPOSES ONLY

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PowerWater

NORTHERN TERRITORY

DES A.GANGUR

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CKD A.GANGUR

APPD

SCALE N.T.S.

ISSUED 22-10-15

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DRAFTING STANDARD TO A.S.1100

POWER NETWORKS - PALMERSTON DISTRIBUTION
SUBDIVISION OF LOT 12087
ZUCCOLI SUBDIVISION - STAGE 2 : STAGE 2D
SINGLE LINE DIAGRAM & LEGEND

A1

DRAWING
NUMBER B15-3297

FILE No: NE590/12087

