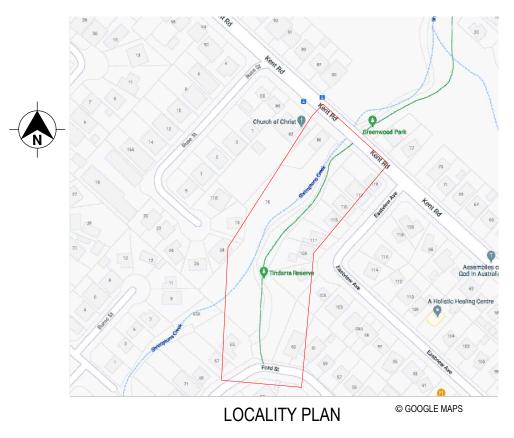


# PUBLIC LIGHTING DESIGN SHRIMPTONS CREEK BETWEEN FORD STREET AND KENT ROAD DETAILED LIGHTING DESIGN



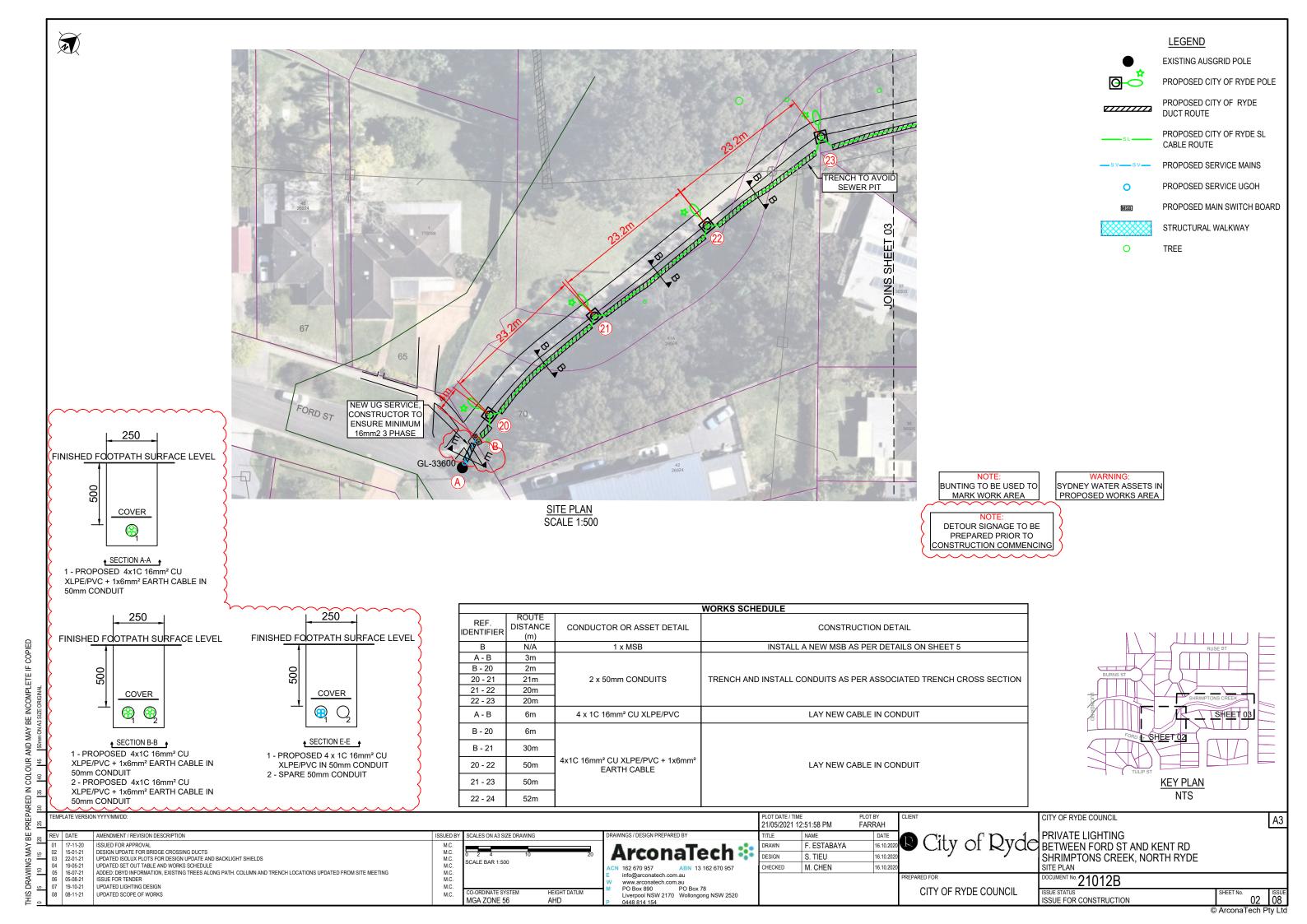
SHEET INDEX								
SHEET NUMBER	DESCRIPTION	REV						
1	COVER SHEET	08						
2	SITE PLAN 01	08						
3	SITE PLAN 02	08						
4	COLUMN & FOUNDATION DETAILS	08						
5	SINGLE LINE DIAGRAM & MSB DETAILS	08						
6	GENERAL NOTES	08						
7	GENERAL NOTES	08						
8	LIGHTING CERTIFICATION - LUX DIAGRAM	08						
9	LIGHTING CERTIFICATION - LUX DIAGRAM	08						
10	LIGHTING CERTIFICATION - SOFTWARE OUT PUT	08						
11	LIGHTING CERTIFICATION - SOFTWARE OUT PUT	08						

# FOR CONSTRUCTION

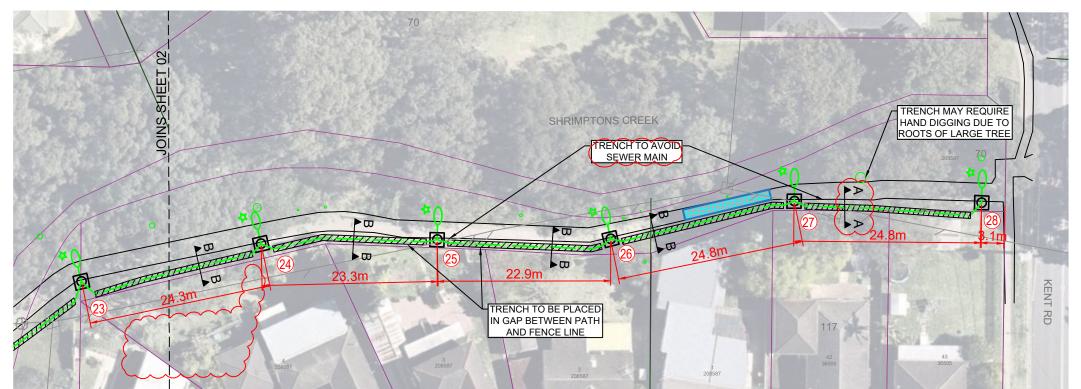
PLOT BY FARRAH 21/05/2021 12:51:43 PM PRIVATE LIGHTING
BETWEEN FORD ST AND KENT RD
SHRIMPTONS CREEK, NORTH RYDE
COVER SHEET 16.10.202 ISSUED FOR APPROVAL F. ESTABAYA M.C. M.C. M.C. M.C. M.C. M.C. M.C. ArconaTech 🤻 DESIGN LIPDATE FOR BRIDGE CROSSING DUCTS. S. TIEU DESIGN OPDATE FOR BRIDGE CRUSSING DUCI'S LUPPATE SOLUX PLOTS FOR DESIGN UPPATE SOLUX PLOTS FOR DESIGN UPPATE AND BACKLIGHT SHIELDS

UPPATED SOLUX PLOTS FOR DESIGN UPPATE AND BACKLIGHT SHIELDS

UPPATED SOLUX PLOTS FOR SOLUTION OF THE SOLUT NOT TO SCALE M. CHEN 16.10.202 www.arconatech.com.au PO Box 890 PO Box 78 CITY OF RYDE COUNCIL O Box 890 PO Box 70 Liverpool NSW 2170 Wollongong NSW 2520







SITE PLAN SCALE 1:500 **LEGEND** 

EXISTING AUSGRID POLE

PROPOSED CITY OF RYDE DUCT ROUTE

PROPOSED CITY OF RYDE POLE

PROPOSED CITY OF RYDE SL CABLE ROUTE

PROPOSED SERVICE MAINS

PROPOSED SERVICE UGOH 0

PROPOSED MAIN SWITCH BOARD STRUCTURAL WALKWAY

0 TREE

BUNTING TO BE USED TO MARK WORK AREA

SYDNEY WATER ASSETS IN PROPOSED WORKS AREA

DETOUR SIGNAGE TO BE PREPARED PRIOR TO CONSTRUCTION COMMENCING

	WORKS SCHEDULE										
REF. IDENTIFIER	ROUTE DISTANCE (m)	CONDUCTOR OR ASSET DETAIL	CONSTRUCTION DETAIL								
23 - 24	22m										
24 - 25	21m	2 x 50mm CONDUITS	TRENCH AND INSTALL CONDUITS AS PER ASSOCIATED TRENCH CROSS SECTION								
25 - 26	20m	2 X OOM IN CONDOING									
26 - 27	22m										
27 - 28	22m	1 x 50mm CONDUITS	TRENCH AND INSTALL CONDUITS AS PER ASSOCIATED TRENCH CROSS SECTION								
23 - 25	52m										
24 - 26 25 - 27	49m	4x1C 16mm² CU XLPE/PVC + 1x6mm²	LAY NEW CABLE IN CONDUIT								
	50m	EARTH CABLE									
26 - 28	53m										



NTS

HIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED	0 35 40 45 50mm ON A3 SIZE ORIGINAL		
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BE		REV	DATE 17-11-
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	I CIVIF	LATE VERSIO	VIII I/MINUUD.		
	REV	DATE	AMENDMENT / REVISION DESCRIPTION	ISSUED BY	ſ
-	01	17-11-20	ISSUED FOR APPROVAL	M.C.	ĺ
	02	15-01-21	DESIGN UPDATE FOR BRIDGE CROSSING DUCTS	M.C.	ľ
4	03	22-01-21	UPDATED ISOLUX PLOTS FOR DESIGN UPDATE AND BACKLIGHT SHIELDS	M.C.	ľ
	04	19-05-21	UPDATED SET OUT TABLE AND WORKS SCHEDULE	M.C.	ľ
	05	16-07-21	ADDED: DBYD INFORMATION, EXISTING TREES ALONG PATH. COLUMN AND TRENCH LOCATIONS UPDATED FROM SITE MEETING	M.C.	ı
	06	05-08-21	ISSUE FOR TENDER	M.C.	ı
	07	19-10-21	UPDATED LIGHTING DESIGN	M.C.	L
	08	08-11-21	UPDATED SCOPE OF WORKS	M.C.	ı
		1			4

CALES ON A3 SIZE DRAWING CALE BAR 1:500 CO-ORDINATE SYSTEM HEIGHT DATUM AHD MGA ZONE 56

ArconaTech \* CN 162 670 957 ABI info@arconatech.com.au www.arconatech.com.au
PO Box 890 PO Box 78
Liverpool NSW 2170 Wollongong NSW 2520
0448 814 154

PLOT BY FARRAH 21/05/2021 12:52:22 PM F. ESTABAYA 16.10.2020 DRAWN DESIGN S. TIEU 16.10.2020 CHECKED M. CHEN 16.10.2020

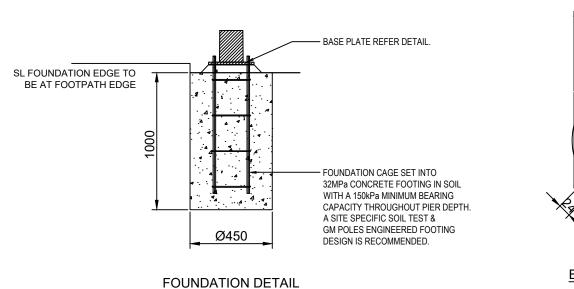
CITY OF RYDE COUNCIL

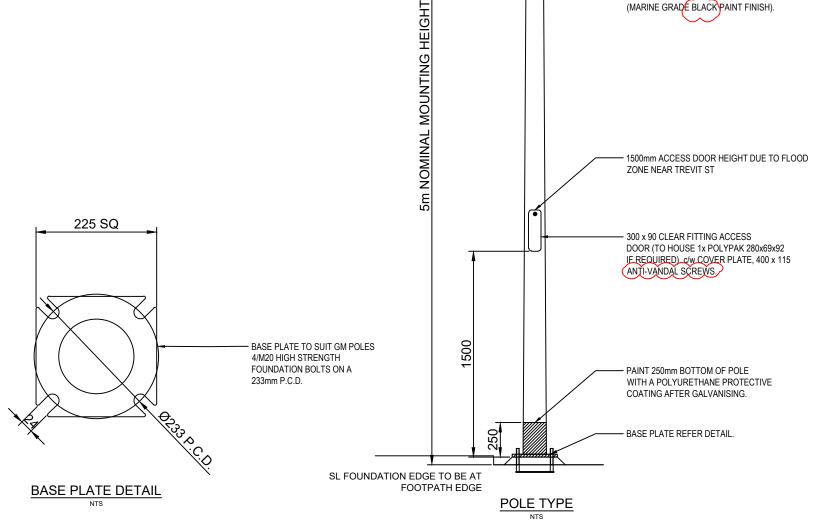
CITY OF RYDE COUNCIL PRIVATE LIGHTING
BETWEEN FORD ST AND KENT RD
SHRIMPTONS CREEK, NORTH RYDE
SITE PLAN

OCCUMENT No. 21012B

SSUE FOR CONSTRUCTION

POLE LOCATIONS TO BE SET OUT IN ACCORDANCE WITH THE COORDINATES IN THIS SET OUT TABLE. REFER TO GENERAL NOTE 16 ON SHEET 06. REFER TO LIGHT AND FOUNDATION NOTE 2 ON SHEET 07.





660 O/D VERTICAL SPIGOT TO SUIT 1x HBW I-TRON ZERO LIGHT FITTING.

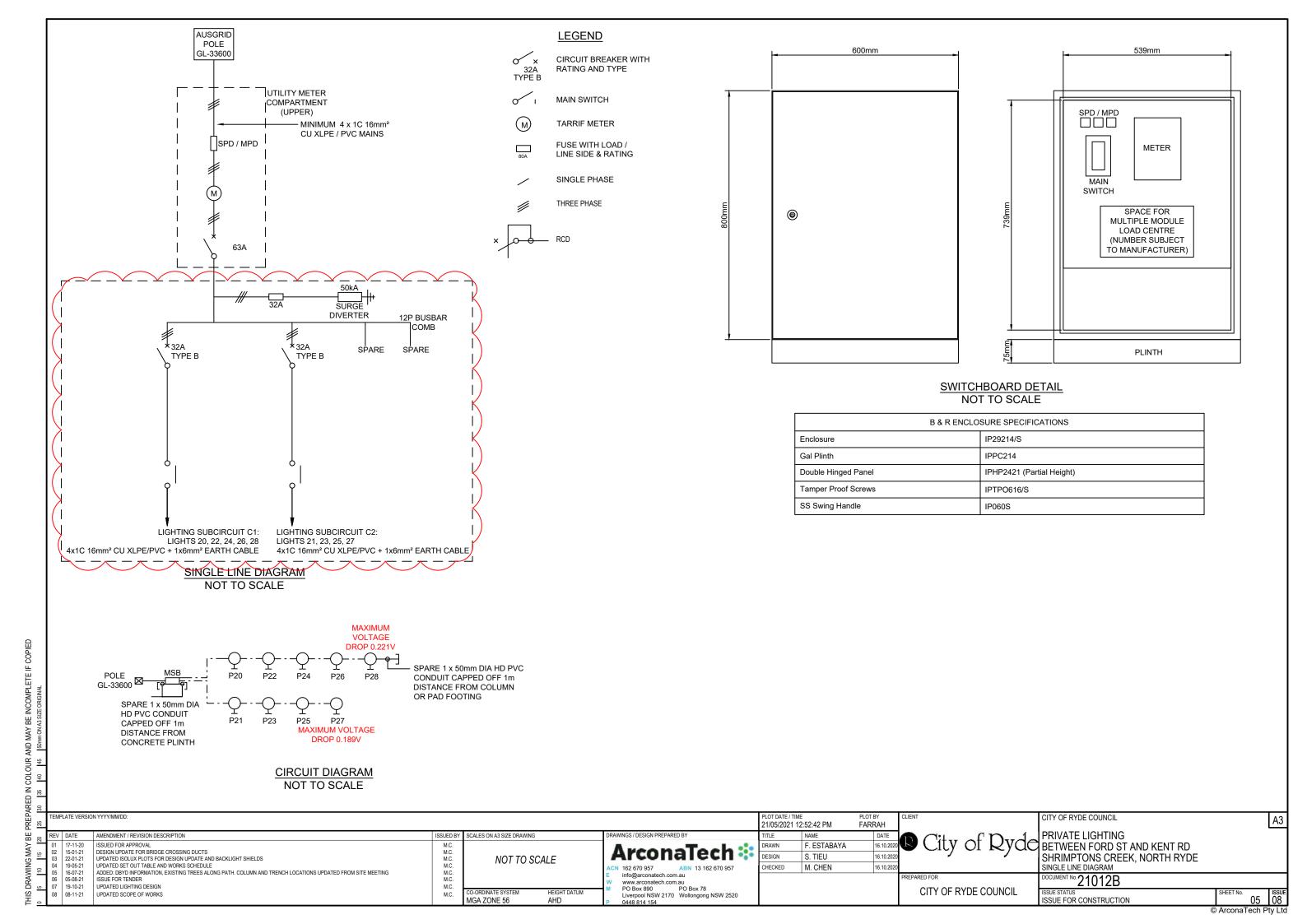
> GMP ID: BR08-CB5-K-PC GM POLES MANUFACTURED TAPERED ROUND POLE. POLE AND ACCESSORIES HOT DIP GALVANISED AFTER FABRICATION.

(MARINE GRADE BLACK PAINT FINISH).

1500mm ACCESS DOOR HEIGHT DUE TO FLOOD

LIGHT FITTING BY OTHERS.

PLOT BY FARRAH CITY OF RYDE COUNCIL А3 21/05/2021 12:52:33 PM D City of Rydd BETWEEN FORD ST AND KENT RD SHPIMPTONS CREEK, NORTH RYD AMENDMENT / REVISION DESCRIPTION CALES ON A3 SIZE DRAWING ISSUED BY ISSUED FOR APPROVAL F. ESTABAYA 16.10.202 RAWN ArconaTech 🤃 M.C. M.C. M.C. M.C. M.C. DESIGN LIPDATE FOR BRIDGE CROSSING DUCTS SHRIMPTONS CREEK, NORTH RYDE COLUMN & FOUNDATION DETAILS DESIGN S. TIEU 16.10.2020 UPDATED ISOLUX PLOTS FOR DESIGN UPDATE AND BACKLIGHT SHIELDS
UPDATED SET OUT TABLE AND WORKS SCHEDULE NOT TO SCALE N 162 670 957 CHECKED M. CHEN 16.10.202 ADDED: DBYD INFORMATION, EXISTING TREES ALONG PATH. COLUMN AND TRENCH LOCATIONS UPDATED FROM SITE MEETING 16-07-21 05-08-21 OCUMENT No. 21012B ISSUE FOR TENDER www.arconatech.com.au PO Box 890 PO Box 78 Liverpool NSW 2170 Wollongong NSW 2520 19-10-21 UPDATED LIGHTING DESIGN M.C. CITY OF RYDE COUNCIL O-ORDINATE SYSTEM HEIGHT DATUM 08-11-21 UPDATED SCOPE OF WORKS MGA ZONE 56 SSUE FOR CONSTRUCTION 04 AHD © ArconaTech Pty Ltd



#### **GENERAL NOTES**

- THE ELECTRICAL CONTRACTOR IS TO VISIT SITE PRIOR TO PRICING TO SATISFY THEMSELVES OF THE SCOPE OF WORKS.
- PLANS HAVE BEEN PREPARED BASED ON SITE INVESTIGATION. DETAILED SURVEY HAS NOT BEEN UNDERTAKEN.
- UPON COMPLETION OF THE WORKS, THE CONTRACTOR IS TO SUPPLY COUNCIL WITH A COPY OF THE WORKS
  AS EXECUTED (WAE) DRAWINGS. IN PROGRESS WAE DRAWINGS MAY ALSO BE REQUESTED FROM TIME TO
  TIME BY RYDE COUNCIL FOR CO-ORDINATION PURPOSES.
- 4. ALL REMOVED & REDUNDANT MATERIALS TO BE APPROPRIATELY DISPOSED OF BY THE CONTRACTOR.
- 5. WHILE NO RECORDS EXIST TO THE CONTRARY, THE CONTRACTOR SHALL ENSURE APPROPRIATE WORKPLACE SAFETY MEASURES ARE UTILISED IN REGARDS TO WORKING WITH ASBESTOS AND/OR ASBESTOS CONTAINING MATERIALS.
- 6. ALL WORK IS TO BE COMPLETED IN A PROFESSIONAL AND TRADESMAN LIKE QUALITY.
- 7. ELECTRICAL AUTHORITY IS AUSGRID.
- ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT REVISIONS OF THE BCA/NCC, AS/NZS 3000. AS/ACIF S009. NSW SERVICE AND INSTALLATION RULES. AUSTRALIAN STANDARDS.
- ). THE CONTRACTOR SHALL UNDERTAKE A "DIAL BEFORE YOU DIG" SEARCH FOR EXISTING IN-GROUND SERVICES NO MORE THAN 20 BUSINESS DAYS PRIOR TO EXCAVATION ON SITE. ANY DAMAGE TO EXISTING IN-GROUND SERVICES SHALL BE THE CONTRACTOR'S RESPONSIBILITY
- 10. THE EXISTING SERVICES SHOWN IN THE DRAWING PACKAGE HAVE BEEN DOCUMENTED FROM THE SUPPLIED DATA BY THE COUNCIL. ARCONATECH DOES NOT GUARANTEE OR TAKE RESPONSIBILITY OF THE ACCURACY OF THIS INFORMATION.
- 11. DESIGNER IS TO BE CONTACTED REGARDING ISSUES RAISED WITH THIS DESIGN.
- 12. THE DESIGN CANNOT BE USED FOR CONSTRUCTION PURPOSES UNTIL THE LOCATION OF ALL EXISTING SERVICES IS VERIFIED.
- 13. THE INFORMATION PROVIDED IN THIS DESIGN MUST BE CHECKED ON SITE AND THE MOST CURRENT INFORMATION ON THE CONFIGURATION OF ALL SERVICES, INCLUDING AUSGRID'S NETWORK, MUST BE VERIFIED IMMEDIATELY BEFORE CONSTRUCTION COMMENCED BY CONTACTING DIAL-BEFORE-YOU-DIG BY TELEPHONE ON 1100 OR www.1100.com.au
- 14. FOR DETAILS PLEASE REFER TO CITY OF RYDE DESIGN GUIDE, COUNCIL-OWNED STREET LIGHTING.
- 15. THE CONTRACTOR TO DISCUSS WITH COUNCIL'S MAINTENANCE CONTRACTOR BEFORE INSTALLATION.
- 16. ALL CO-ORDINATES PROVIDED ON THIS DESIGN ARE BASED ON AUSGRID'S GIS WHICH IS BASED ON DATA FROM THE LPI. EXACT CO-ORDINATES TO BE CONFIRMED WITH THE CIVIL DRAWINGS AND SITE SURVEY. CADASTRAL SURVEYS MAY BE REQUIRED TO CONFIRM EXACT ASSET LOCATIONS.
- INCLUDED SERVICE PLANS ARE QL-D. INFORMATION IS THE MOST BASIC LEVEL OF UTILITY LOCATIONS USING ONLY INFORMATION BASED ON EXISTING DIAL-BEFORE-YOU DIG PLANS.

#### TRENCHING & CABLING

- ELECTRICAL CONTRACTOR SHALL SAW CUT & EXCAVATE THE EXISTING SURFACE TO INSTALL NEW POLE LUMINAIRES. REINSTATE TRENCH WITH APPROPRIATE BACK FILL & COMPACTION, INCLUDING FINISHING OF TRENCH WITH COLD MIX ASPHALT OR TO MATCH WITH EXISTING FINISH. ALLOW FOR SLIGHT OVER FILL TO AVOID SAGGING, ALLOW FOR THESE WORKS TO BE UNDERTAKEN TO AVOID DISRUPTION DURING NORMAL WORKING DAYS/HOURS.
- 2. STREET LIGHT MAINS TO HAVE 500mm COVER IN FOOTWAY, 750mm IN ROADWAY.
- B. CONTRACTOR TO LIAISE WITH COUNCIL AND AUTHORITIES ON THE UNDERGROUNDING PLACEMENT OF FLECTRICAL CONDUIT
- 4. ALL CONDUITS MUST COMPLY WITH RELEVANT SECTIONS OF AS/NZS 2053 AND COUNCIL REQUIREMENT.
- ALL THE CABLE LAYING TO BE RECORDED IN COMPLIANCE WITH AS/NZS 3000.
- 6. RADIUS OF BEND OF CABLE TO COMPLY WITH CABLE MANUFACTURE AND COUNCIL REQUIREMENTS.
- IF ANY EXCAVATION OR U/G WORKS ARE TO BE DONE ALL SURFACES MUST RESTORED TO ORIGINAL STATE UPON COMPLETION OF THE PROJECT.
- 8. LOCATION OF CONDUITS ON FOOTPATH IS AS PER COUNCIL REQUIREMENT.
- 9. CONTRACTOR TO LOCATE COMMS CONDUITS AS PER AUSTRALIAN STANDARD AND CITY OF RYDE COUNCIL'S REQUIREMENT
- ANY TRENCHING WITHIN 3m OF TREES WILL NEED SITE LIAISON WITH COUNCIL'S TREE MANAGEMENT OFFICERS BEFORE ANY WORKS COMMENCES.
- TRENCHING ROUTE AND COLUMN LOCATIONS HAS BEEN DETERMINED WITH MULTIPLE SITE WALKS WITH COUNCIL, ARBORIST, AND IN CONJUNCTION OF COMMUNITY CONSULTATIONS.
- 12. CONTRACTOR TO CONTACT RYDE COUNCIL REGARDING ATTACHMENT METHODOLOGY TO EXISTING STRUCTURAL WALKWAYS.
- 13. WHERE EXISTING FOOTPATH TRENCHING IS REQUIRED, FOOTPATH TO BE RE-MADE TO RYDE COUNCIL STANDARD CONCRETE FOOTPATH (CIV.5.1)

# FORD STREET Public Lighting Switchboard

Ocity of Ryde

PROPERTY OF CITY OF RYDE ENQUIRIES: 9952 8222

STREET NAME (13mm)

ASSET LABEL (13mm)

COUNCIL LOGO (10mm) AND CONTACT & NUMBER (5mm)

THE FOLLOWING SHALL BE PROVIDED TO COUNCIL PRIOR TO THE HANDOVER OF THE STREET LIGHTING
INSTALLATION AND TRANSFER OF ENERGY ACCOUNT FROM THE DEVELOPER TO COUNCIL:

- CERTIFICATION FROM A CHARTERED STRUCTURAL ENGINEER (REGISTERED ON THE NER OF ENGINEERS, AUSTRALIA) CONFIRMING THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH COUNCIL-APPROVED DRAWINGS AND CITY OF RYDE'S STANDARDS AND SPECIFICATIONS. THE CERTIFICATE SHALL CONTAIN PHOTOGRAPHS OF THE WORKS IN PROGRESS AND A COMMENTARY OF THE INSPECTED WORKS, INCLUDING ANY DEFICIENCIES AND RECTIFICATIONS THAT WERE UNDERTAKEN;
- WORKS AS EXECUTED DRAWINGS;
- A SET OF ACCESS KEYS:

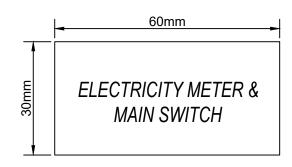
ASSET HANDOVER

- . MANUFACTURER'S WARRANTIES AND CERTIFICATES;
- ASSET TAGS ON POLES AND METER BOX AS PER COUNCIL REQUIREMENTS;
- METER INFORMATION (NMI FROM AUSGRID) AND RELEVANT DETAILS FOR THE TRANSFER OF THE ENERGY ACCOUNT TO COUNCIL NEEDS TO BE COMPLETED ON CCEW.

NOTE: A FINAL INSPECTION FOR THE PURPOSE OF THE HANDOVER TO COUNCIL SHALL BE CONDUCTED IN CONJUNCTION WITH COUNCIL'S ENGINEER, FOLLOWING THE COMPLETION OF THE WORKS. ADDITIONAL INSPECTIONS, IF REQUIRED, ARE SUBJECT TO ADDITIONAL FEES PAYABLE IN ACCORDANCE WITH COUNCIL'S CURRENT SCHEDULE OF FEES AND CHARGES

#### PUBLIC LIGHTING SWITCHBOARD TAG SPECIFICATION

- THE SIZE OF THE PLATE SHALL BE 200mm (LENGTH) X 60mm (HEIGHT).
- THE TEXT SIZE FOR THE STREET NAME AND FOR "PUBLIC LIGHTING SWITCHBOARD" IS TO BE 13mm TALL AND THE TEXT SIZE FOR "PROPERTY OF CITY OF RYDE, ENQUIRIES: 9952 822" IS TO BE 5mm. THE "CITY OF RYDE LOGO" IS TO BE 10mm TALL.
- 3. THE PLATE IS TO HAVE A SILVER (STAINLESS STEEL) BACKGROUND WITH BLACK TEXT AND LOGO PRINT.
- 4. THE LOGO AND TEXT ARE NOT TO BE STICKER LETTERING.
- THE MATERIAL OF THE PLATE AND THE ADHESIVE BACKING SHALL COMPLY WITH THE REQUIREMENTS OF THE DISTRIBUTION BOARD (GENERALLY STAINLESS STEEL).
- THE STREET NAME SHALL BE PRINTED WITHOUT ANY ABBREVIATIONS. IF THE STREET NAME IS TOO LONG IT CAN BE PRINTED IN TWO LINES.
- "PUBLIC LIGHTING SWITCHBOARD" IS TO BE PRINTED IN THE CENTRE OF THE TAG.
- 8. THE TAG BELOW WITH DIMENSIONS 60mm (LENGTH) X 30mm (HEIGHT) WITH "ELECTRICITY METER & MAIN SWITCH" IS TO BE PLACED ON THE DOOR WITH THE METER WITHIN (THERE MAY BE TWO SEPARATE DOORS ONE FOR THE METER AND THE OTHER FOR THE DISTRIBUTION BOARD).



#### LIGHTING POLE TAG SPECIFICATION

#### GENERAL:

- 1. THE SIZE OF THE PLATE SHALL BE 200mm (LENGTH MEASURED ALONG THE CURVATURE OF THE POLE)  $\,$  x 60mm (HEIGHT).
- THE PLATE IS TO HAVE A SILVER (ALUMINIUM) BACKGROUND WITH BLACK TEXT AND LOGO PRINT.
  - THE LOGO AND TEXT ARE NOT TO BE STICKER LETTERING.
- 4. THE PLATE SHALL BE CURVED TO SUITE THE CURVATURE OF THE POLE.
- 5. THE MATERIAL OF THE PLATE AND RIVETS SHALL COMPLY WITH THE REQUIREMENTS OF THE POLE MANUFACTURER (GENERALLY ANODISED ALUMINIUM).
- 6. THE STREET NAME SHALL BE PRINTED WITHOUT ANY ABBREVIATIONS. IF THE STREET NAME IS TOO LONG, IT CAN BE PRINTED IN TWO LINES.
- 7. THE TEXT SIZE FOR THE STREET NAME AND FOR "POLE/ASSET NUMBER" IS TO BE 13mm TALL. THE TEXT SIZE FOR "PROPERTY OF CITY OF RYDE AND ENQUIRIES: 9952 8222" IS TO BE 5mm.
- THE "CITY OF RYDE LOGO" IS TO BE 10mm TALL.
- THE ASSET INDEX IS COMPILED VIA THE FOLLOWING RULES: STREET LIGHTS

ASSET INDEX (STREET INDEX - 000) IS MADE UP BY COMBINING THE FOLLOWING TWO:

1. STREET INDEX - IS A FOUR-DIGIT NUMBER GIVEN TO EACH STREET BY COUNCIL'S ASSET
SYSTEMS DEPARTMENT.

2. 000 - A THREE-DIGIT SEQUENTIAL NUMBER PROVIDED BY COUNCIL'S ASSET SYSTEMS DEPARTMENT.

25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL

AAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOME

SHRIMPTON CREEK

AXXXX-001

PROPERTY OF CITY OF RYDE ENQUIRIES: 9952 8222

STREET NAME (13mm)
ASSET LABEL (13mm)

COUNCIL LOGO (10mm) AND CONTACT NUMBER (5mm)

₹ ∞											
PREP,	TEMPLATE VERS	SION YYYY/MM/DD:				PLOT DATE / TIM 21/05/2021 1		PLOT BY FARRAH	CLIENT		A3
H &	REV DATE	AMENDMENT / REVISION DESCRIPTION	ISSUED BY	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE		PRIVATE LIGHTING	
á	00 45 04 04	ISSUED FOR APPROVAL	M.C.		A was ma Task :	DRAWN	F. ESTABAYA	16.10.2020	UCITY OF RYCE	BETWEEN FORD ST AND KENT RD	
∑ <del>Σ</del>	02   15-01-21	DESIGN UPDATE FOR BRIDGE CROSSING DUCTS UPDATED ISOLUX PLOTS FOR DESIGN UPDATE AND BACKLIGHT SHIELDS	M.C.	NOT TO SCALE	ArconaTech **	DESIGN	S. TIEU	16.10.2020	/ /	SHRIMPTONS CREEK, NORTH RYDE	
Ž ∘	04 19-05-21 05 16-07-21	UPDATED SET OUT TABLE AND WORKS SCHEDULE  ADDED: DBYD INFORMATION, EXISTING TREES ALONG PATH, COLUMN AND TRENCH LOCATIONS UPDATED FROM SITE MEETING	M.C.	NOT TO SCALE	ACN 162 670 957 ABN 13 162 670 957	CHECKED	M. CHEN	16.10.2020		NOTES	
<u></u> ₹	06 05-08-21	ISSUE FOR TENDER	M.C.		E info@arconatech.com.au W www.arconatech.com.au		•		PREPARED FOR	DOCUMENT No. 21012B	
S D	07 19-10-21	UPDATED LIGHTING DESIGN	M.C.	CO-ORDINATE SYSTEM HEIGHT DATUM	M PO Box 890 PO Box 78				CITY OF RYDE COUNCIL	ISSUE STATUS	SHEET No. ISSUE
置。	08 08-11-21	UPDATED SCOPE OF WORKS	M.C.	MGA ZONE 56 AHD	Liverpool NSW 2170 Wollongong NSW 2520 P 0448 814 154				OTT OF REDE COCKOLE	ISSUE FOR CONSTRUCTION	06 08
. –			·								© ArconaTech Pty Ltd

#### LIGHTING DESIGN

- ALL LUMINAIRES TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS AND
- LIGHTING EQUIPMENT, LOCATION AND TYPES MAY NOT BE SUBSTITUTED WITHOUT PRIOR CONSENT AND APPROVAL OF THE DESIGNER. REFER IMAGE OF PROPOSED LUMINAIRE BELOW
- COLOUR/FINISH OF ALL LIGHT FITTINGS, TRIMS, LENSES AND ACCESSORIES TO BE APPROVED BY THE COUNCIL. CONTRACTOR SHALL PROVIDE SAMPLES OF LIGHT FITTINGS PRIOR TO PROCUREMENT.
- NEW POLE LUMINAIRES ARE TO BE LOCATED TO AVOID CLASHES WITH EXISTING TREES. CONFIRM LOCATION WITH LIGHTING DESIGNER PRIOR TO INSTALLATION. WHERE TREE BRANCHES ARE REQUIRED TO BE TRIMMED, THE AUTHORIZED PERSON IS TO BE ADVISED PRIOR TO ANY WORKS.



#### **LOCKING**

ALL STREET LIGHT SWITCHBOARDS SHALL BE LOCKED WITH A UNIQUE ABLOY KEY PADLOCK, AS DETAILED BELOW:

> Integrity ABLOY Key for all Street Lighting Switchboards

W/ BACK SHIELD, NEMA ON TOP, ZHAGA ON BOTTOM

Master Key number associated with Registration Card 26060520 AUVG

INTEGRITY LOCKSMITHS AND **SECURITY** Utilities Security Key System

> Phone: 1300 664 582 1300 366 488

> Fax: 1300 664 682

#### **SWITCHBOARD**

#### CUBICLE:

- 1. 2.0mm FOLDED AND WELDED STAINLESS STEEL SHEET CONSTRUCTION. SWITCHBOARD CABINET IS TO BE BASE MOUNTED VIA HOT DIPPED GALVANISED CHANNEL IRON PLINTH.
- ESCUTCHEON SECURED TO CABINET WITH DOME NUTS.
- 3. DOORS ARE SWUNG ON CHROME PLATED PINTLE HINGES AND FIXED WITH SWING HANDLES.
- 4. 3mm ALUMINUM GLAND PLATES FITTED TO BASE OF SWITCHBOARD.

#### FINISH:

SHEETMETAL TO BE DEGREASED WITH SOLVENT, PHOSPHORIC ACID WASHED, AND CLEANED WITH 180 GRIT PAPER. ELECTROSTATIC POLYESTER POWDER TO BE APPLIED AS FOLLOWS;

CABINET EXTERIOR - ORBITAL FINISH CABINET INTERIOR - GLOSS WHITE ESCUTCHEONS - GLOSS WHITE PLINTH - 75mm HOT DIPPED GALVANISED

1. LABELS ARE TO BE MACHINE ENGRAVED FROM 'GRAVOPLY' LAMINATE AND FIXED TO THE SWITCHBOARD METALWORK USING M3 SCREWS.

#### BUSBARS:

- 1. NEUTRAL AND EARTH BARS TO BE LOCATED IN A POSITION WHERE THEY WILL NOT BE OBSTRUCTED BY SUBMAIN CABLES.
- 2. NEUTRAL BAR TO BE FULL RATING OF ACTIVES.
- NEUTRAL AND EARTH TERMINATIONS TO BE NUMBERED TO CORRESPOND WITH RESPECTIVE SUBCIRCUIT NUMBERS THAT APPEAR ON LABELS.

#### SPECIFICATIONS:

- SWITCHBOARD MANUFACTURED TO AS 61439.2
- 2. FORM 2B SEPARATION TO AS 61439.2.
- IP66 CONSTRUCTION TO AS 60529.
- 4. FAULT LEVEL 10kA FOR 1 SEC COMMERCIAL & INDUSTRIAL AREAS REQUIRE 25kA AS PER NSW SIR.
- 5. 415 VOLT, 50Hz M.E.N. LINK SYSTEM.
- MAINS CABLES BOTTOM ENTRY VIA 3mm ALUMINUM GLAND PLATE.
- 7. SUBMAINS CABLES BOTTOM EXIT VIA 3mm ALUMINUM GLAND PLATE.

#### **SUBCIRCUITS**

1. 3-PHASE CB OR LINKED 1-PHASE CBS MUST BE UTILISED. THE USE OF UNLINKED 1-PH CBS IS NOT PERMITTED BY

#### **FOUNDATION & COLUMN**

- STRAIGHT PILE IS STANDARD. CANTILEVERED IF SITE CONSTRAINTS REQUIRE IT SUBMIT PROOF THIS FOOTING IS REQUIRED. THIS FOOTING MUST BE PREPARED BY A QUALIFIED STRUCTURAL ENGINEER REFERRED ON THE NER OF AUSTRALIA AND PROVIDED TO COUNCIL FOR REVIEW AND APPROVAL PRIOR TO THE INSTALLATION.
- CENTER OF ALL LIGHTS TO SIT 225mm BEHIND THE FOOTPATH UNLESS OTHER STATED ON THE SITE PLAN. ALL POLES TO BE BLACK WITH MARINE GRADE PAINT FINISH.

08-11-21

AMENDMENT / REVISION DESCRIPTION ISSUED FOR APPROVAL DESIGN LIPDATE FOR BRIDGE CROSSING DUCTS DESIGN UPDATE FOR BRIDGE CROSSING DUCI'S UPPOATE AND BACKLIGHT SHIELDS

UPDATED ISOLUX PLOTS FOR DESIGN UPDATE AND BACKLIGHT SHIELDS

UPDATED SET OUT TABLE AND WORKS SCHEDULE

ADDED: DBYD INFORMATION, EXISTING TREES ALONG PATH. COLUMN AND TRENCH LOCATIONS UPDATED FROM SITE MEETING 16-07-21 05-08-21 ISSUE FOR TENDER 19-10-21 UPDATED LIGHTING DESIGN UPDATED SCOPE OF WORKS

CALES ON A3 SIZE DRAWING ISSUED BY M.C. M.C. M.C. M.C. M.C. NOT TO SCALE M.C. O-ORDINATE SYSTEM MGA ZONE 56

HEIGHT DATUM

ArconaTech : N 162 670 957 Info@artomatech.com.au
PO Box 890 PO Box 78
Liverpool NSW 2170 Wollongong NSW 2520

F. ESTABAYA 16.10.202 RAWN ESIGN S. TIEU 16.10.2020 CHECKED M. CHEN 16.10.2020

21/05/2021 12:53:03 PM

PLOT BY FARRAH

CITY OF RYDE COUNCIL

City of Rydo PRIVATE LIGHTING
BETWEEN FORD ST AND KENT RD SHRIMPTONS CREEK, NORTH RYDE NOTES

CUMENT No. 21012B

SSUE FOR CONSTRUCTION 07

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А3

## LEGEND

2.0 LUX MAINTAINED

1.0 LUX MAINTAINED

Shrimpton Creek lighting is designed to Australian Standard AS1158:2020 Lighting for Roads and Public Spaces, with pedestrian illuminance category PP2.

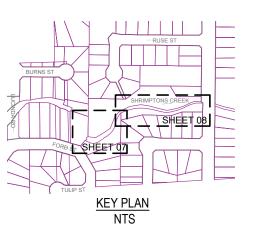
NOTE: INSTALL A PIR5 ST Zhaga Sensor AND esave SLC-Move MODULE ON EACH

LIGHTING CALCULATION RESULTS HAS BEEN PROVIDED BY HBW LIGHTING

POLE LUMINAIRE.

SITE PLAN SCALE 1:500

	STREET LIGHTING DESIGN DETAILS										
REF. ASSET SL POLE COLUMN MOUNTING OUTREA IDENTIFIER NUMBER TYPE SIZE (m) METHOD (m)				HEIGHT OF LUMINAIRE (m)	LUMINAIRE TYPE	LUMINAIRE SIZE (W)	LUMENS (1m)	ADDITIONAL DESIGN DETAIL			
<b>☆</b>		5m GM POLE	5	RAGBOLT	0	5	I-TRON ZERO 0C6 STA1 3.54-2M VEX 3000K W/ BACK SHIELD, NEMA ON TOP, ZHAGA ON BOTTOM	21.5	1860		



## FOR CONSTRUCTION

PLOT DATE / TIME 21/05/2021 12:53:13 PM PLOT BY FARRAH CITY OF RYDE COUNCIL PRIVATE LIGHTING
BETWEEN FORD ST AND KENT RD
SHRIMPTONS CREEK, NORTH RYDE
LIGHTING CERTIFICATION - LUX DIAGRAM AMENDMENT / REVISION DESCRIPTION ISSUED FOR APPROVAL

DESIGN UPDATE FOR BRIDGE CROSSING DUCTS

UPDATED ISOLUX PLOTS FOR DESIGN UPDATE AND BACKLIGHT SHIELDS

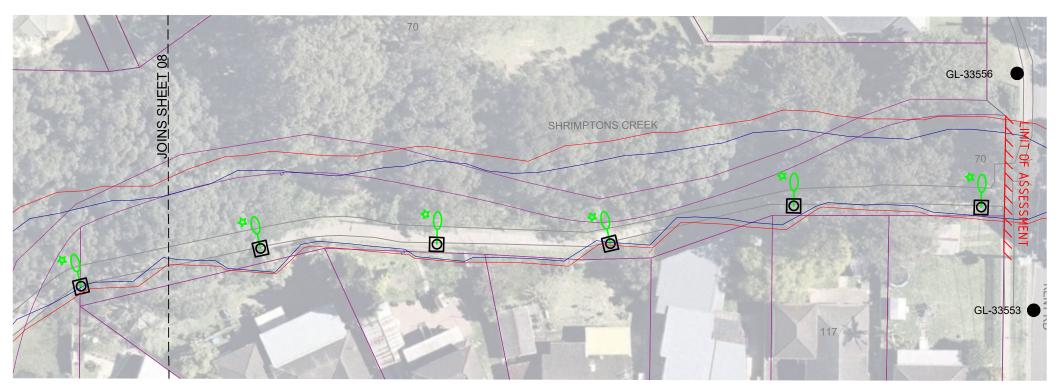
UPDATED ISOLUX PLOTS FOR DESIGN UPDATE AND BACKLIGHT SHIELDS

UPDATED SET OUT TABLE AND WORKS SCHEDULE

ADDED: DBYD INFORMATION, EXISTING TREES ALONG PATH. COLUMN AND TRENCH LOCATIONS UPDATED FROM SITE MEETING F. ESTABAYA 16.10.2020 DRAWN M.C. M.C. M.C. M.C. M.C. M.C. M.C. ArconaTech # DESIGN S. TIEU 16.10.2020 03 22-01-21 04 19-05-21 05 16-07-21 06 05-08-21 CALE BAR 1:500 N 162 670 957 CHECKED M. CHEN 16.10.2020 OCUMENT No. 21012B ISSUE FOR TENDER www.arconatech.com.au
PO Box 890 PO Box 78
Liverpool NSW 2170 Wollongong NSW 2520
0448 814 154 UPDATED LIGHTING DESIGN UPDATED SCOPE OF WORKS 07 | 19-10-21 08 | 08-11-21 CITY OF RYDE COUNCIL CO-ORDINATE SYSTEM HEIGHT DATUM AHD MGA ZONE 56 SSUE FOR CONSTRUCTION © ArconaTech Pty Ltd

10 MAT DE FREFANCE IN COLOON AND MAT DE INOCOMPLETE IF COFTED 150 125 130 135 140 145 150mm ON A3 SIZE ORIGINAL





SITE PLAN SCALE 1:500

S DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE

15 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mmon A3 SIZE ORIGINAL

25 3	TEMPLATE VERSIO	YYYY/MM/DD:				PLOT DATE / TI 21/05/2021		PLOT BY FARRAH	CLIENT	CITY OF RYDE COUNCIL	А3
e F	REV DATE	AMENDMENT / REVISION DESCRIPTION	ISSUED BY	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	1 Cit C D 1-	PRIVATE LIGHTING	
15	01 17-11-20 02 15-01-21 03 22-01-21 04 19-05-21	ISSUED FOR APPROVAL  DESIGN UPDATE FOR BRIDGE CROSSING DUCTS  UPDATED ISOLUX PLOTS FOR DESIGN UPDATE AND BACKLIGHT SHIELDS  UPDATED SET OUT TABLE AND WORKS SCHEDULE  ADDED. DRYD INFORMATION. PISITING TREFS ALONG PATH. COLUMN AND TRENCH LOCATIONS UPDATED FROM SITE MEFTING	M.C.	0 2 4 10 20 SCALE BAR 1:500	ArconaTech	DRAWN DESIGN CHECKED	F. ESTABAYA S. TIEU M. CHEN	16.10.2020 16.10.2020 16.10.2020		BETWEEN FORD ST AND KENT RD SHRIMPTONS CREEK, NORTH RYDE LIGHTING CERTIFICATION - LUX DIAGRAM	
22		ADDED: DBYD INFORMATION, EXISTING TREES ALONG PATH. COLUMN AND TRENCH LOCATIONS UPDATED FROM SITE MEETING ISSUE FOR TENDER UPDATED LIGHTING DESIGN UPDATED SCOPE OF WORKS	M.C. M.C. M.C. M.C.	CO-ORDINATE SYSTEM HEIGHT DATUM MGA ZONE 56 AHD	E info@arconatech.com.au  W www.arconatech.com.au  M PO Box 890 PO Box 78 Liverpool NSW 2170 Wollongong NSW 2520  P 0448 814 154			'	PREPARED FOR  CITY OF RYDE COUNCIL	DOCUMENT NO. 21012B ISSUE STATUS ISSUE FOR CONSTRUCTION	SHEET No. ISSUE 09 08
											© ArconaTech Pty Ltd

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10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL
```

#### P Category Lighting - AS/NZS 1158.3.1:2005 \*\*\*\*\*\*\*\*\*\*\*\*\* HBW Lighting I-table Filename: C:\Users\steve\Desktop\I-TRON Zero 0C6 STA1 3.54-2 M VEX AEP.cie Job Name: Shrimptons Creek Luminaire Description: I-TRON Zero 0C6 STA1 1860 lms Initial Lamp Flux: 1860 lms Maintenance Factor: 0.8 Stores Code: Upcast Angle: 0 degrees Arrangement: Staggered Offset Distance: 0 m Upward Waste Light Ratio: .0 % Light Source: LED - Light Emitting Diode Luminaire Classification: Not specified Lighting Category: User Defined Illuminance Criteria: Average Illuminance (Eav) >= 7.00 lx (Maintained values) Minimum Illuminance (Eph) >= 1.00 lxIlluminance Uniformity (Up) <= 5 Vertical Illuminance (Epv) >= 0.30 lx (Epv calculated on plane 1.5m above ground and contribution from luminaire in adjacent span used in calculations) Calculation Grid: Dependant on Path width (refer Figure 3.8 of AS/NZS 1158.2) Maximum Spacing for different Mounting Height Path Widths 2.5 +----+ 5.0 | 26.0 | +----+ Value/s in above table are all in metres. The table contains maximum spacings which, for the specified luminaire and lamp combination, provide compliance with the User Defined light technical parameters (LTPs) nominated above. Refer next page for list of LTP's at compliant maximum spacings. Refer following page/s for illuminance values at grid points.

```
Light Technical Parameters at Maximum Spacing
           *************
    Mounting Path
                   Maximum Eav
                                    Eph
                                                   Emax
    Height Width
                   Spacing
                                       (Emax/Eav)
                                    (1x)
                                                         (1x)
     (m)
            (m)
                    (m)
                           (1x)
                                                  (1x)
                           7.59
    5.0
            2.5
                   26.0
                                   4.32
                                                  20.74
                                                         0.3
         Horizontal Illuminance Values over Calculation Grid
         *****************
    Mounting Height = 5.0m Path Width = 2.5m
                                           Spacing = 26.0m
    ______
                   <---- Grid across path ---->
  (Luminaire 1)
    13.44 13.86
    6.95 7.56
    5.24 5.07
    5.14 4.96
    4.42 4.48
    4.32 4.38
    4.38 4.32
    4.48 4.42
    4.96 5.14
    5.07 5.24
    7.56 6.95
   13.86 13.44
    20.74 16.85
  (Luminaire 2)
          Vertical Illuminance Values over Calculation Grid
          ****************
  (Luminaire 1)
   11.16 12.38
   11.49 10.74
    14.93 12.93
    12.08 12.36
    9.94 10.91
    7.41 7.83
    5.05 5.09
    3.29 3.17
    2.04 1.89
    1.27 1.12
      .84
          .73
      .55
          .47
      .35
          .30
 (Luminaire 2)
NOTE:
       Values in above table are in Lux (rounded to 2 decimal places).
           Line of grid points across path, at Luminaire 1, not
           included in determining compliance (refer Figure 3.8
           AS/NZS 1158.2.
```

```
AAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED 10 115 120 125 130 135 140 145 ISORMON AS SZEORIGINAL
```

```
P Category Lighting - AS/NZS 1158.3.1:2005
                  *************
                                 HBW Lighting
        I-table Filename: C:\Users\steve\Desktop\I-TRON Zero 0C6 STA1 3.54-2
                         M VEX AEP.cie
                Job Name: Shrimptons Creek
   Luminaire Description: I-TRON Zero 0C6 STA1 1860 lms
       Initial Lamp Flux: 1860 lms
      Maintenance Factor: 0.8
             Stores Code:
            Upcast Angle: 0 degrees
             Arrangement: Single Side
         Offset Distance: 0 m
Upward Waste Light Ratio: .0 %
            Light Source: LED - Light Emitting Diode
Luminaire Classification: Not specified
       Lighting Category: User Defined
    Illuminance Criteria:
                            Average Illuminance (Eav) >= 7.00 lx
                            Minimum Illuminance (Eph) >= 1.00 lx
    (Maintained values)
                          Illuminance Uniformity (Up) <= 5</pre>
                           Vertical Illuminance (Epv) >= 0.30 lx
                              (Epv calculated on plane 1.5m above ground
                              and contribution from luminaire in adjacent
                              span used in calculations)
        Calculation Grid: Dependant on Path width (refer Figure 3.8
                                                     of AS/NZS 1158.2)
                         Maximum Spacing for different
 Mounting
Height
                                  Path Widths
         2.5
      +----+
  5.0 | 25.9 |
      +----+
  Value/s in above table are all in metres.
  The table contains maximum spacings which, for the specified luminaire
  and lamp combination, provide compliance with the User Defined
  light technical parameters (LTPs) nominated above.
  Refer next page for list of LTP's at compliant maximum spacings.
  Refer following page/s for illuminance values at grid points.
```

```
Light Technical Parameters at Maximum Spacing
         *************
  Mounting Path
                 Maximum Eav
                                                        Εv
                                                Emax
  Height Width
                                     (Emax/Eav)
                 Spacing
                  (m)
                                                       (1x)
 (m)
          (m)
                         (1x)
                                 (1x)
                                                (1x)
          2.5
                 25.9
 5.0
                         7.59
                                 4.21
                                                20.73
                                                      0.3
       Horizontal Illuminance Values over Calculation Grid
       ******************
 Mounting Height = 5.0m Path Width = 2.5m
                                           Spacing = 25.9m
 -----Grid
             <---- Grid across path ---->
(Luminaire 1)
 13.47 13.85
  6.99 7.54
  5.26 5.05
  5.15 4.96
  4.38 4.53
  4.21 4.50
  4.21 4.50
  4.38 4.53
  5.15 4.96
  5.26 5.05
  6.99 7.54
 13.47 13.85
 16.86 20.73
(Luminaire 2)
        Vertical Illuminance Values over Calculation Grid
        *****************
(Luminaire 1)
       .
 11.20 12.34
 11.51 10.71
 14.96 12.91
 12.10 12.34
  9.96 10.91
  7.43 7.84
  5.06 5.10
  3.31 3.17
  2.05 1.89
  1.28 1.12
   .85
       .73
   .55
        .47
   .35 .30
(Luminaire 2)
     Values in above table are in Lux (rounded to 2 decimal places).
         Line of grid points across path, at Luminaire 1, not
         included in determining compliance (refer Figure 3.8
         AS/NZS 1158.2.
```