

CLIENT :  
  
**Air Selangor**  
PENGURUSAN AIR SELANGOR SDN. BHD.  
(201401006213)  
Pengurusan Air Selangor Sdn. Bhd.  
Level 4, Tower E,  
Bangsar Trade Centre (Plaza Pantai),  
59200 Kuala Lumpur

CLIENT'S STAMP & SIGNATURE

CONSULTANT:  
  
**MINCONSULT SDN. BHD.**  
(Company No. : 58835-P)  
minconsult  
Lot 6, Jalan 51A / 223,  
46100 Petaling Jaya, Selangor, Malaysia.  
Tel : 603-79545757, 79525757  
Fax : 603-79547373, 79547575

PROJECT TITLE :  
SUPPLY, INSTALLATION, TESTING AND  
COMMISSIONING OF STREET LIGHTINGS  
AT SG LANGAT DAM.

APPROVED BY AUTHORITY/UTILITY/SERVICE PROVIDER

CONSULTANTS CHOP & SIGNATURE

REVISION	DESCRIPTION	DATE
T0	TENDER STAGE	FEB 2023

CONTRACT TITLE :

SG LANGAT DAM

DRAWING TITLE :

LIST OF DRAWINGS

DATE	FEB 2023	SCALE	NTS
DRAWN	YMN	CHECKED	UMI KALSON
DESIGNED	GANNA	APPROVED	IR.ZAHROL
DRAWING NUMBER :			REVISION
AIS/2520016/LD/25/LIST/001			T0



for Minconsult Sdn Bhd  
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46100 Petaling Jaya  
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TENDER DRAWING

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CONTRACT TITLE :

SG LANGAT DAM

DRAWING TITLE :

GENERAL NOTES

DATE	FEB 2023	SCALE	N.T.S
DRAWN	YMN	CHECKED	UMI KALSON
DESIGNED	GANNA	APPROVED	IR.ZAHROL
DRAWING NUMBER :	AIS/2520016/GEN/001		
TENDER DRAWING			TO

## GENERAL NOTES:

- THE DRAWINGS ONLY PROVIDE AN OVERVIEW OF THE DESIGN AND IT DOES NOT ILLUSTRATE COMPLETE EXTEND OF WORKS AND DOES NOT COVER COMPLETE COMPONENTS OR EQUIPMENT NEEDED OF THE WORKS ALL PLANTS, EQUIPMENT AND MATERIALS REQUIRED FOR AND MAINTENANCE SHALL BE DEEMED INCLUDED IN THE SCOPE OF CONTRACTOR.
- ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE RELEVANT PROJECT SPECIFICATIONS, ARCHITECTURAL, CIVIL, STRUCTURAL, BUILDING SERVICES ROOM SCHEDULE AND ANY OTHER RELEVANT DOCUMENTS.
- THE LEGEND LABEL AS INDICATED IN THE DRAWINGS DOES NOT REFLECT THE ACTUAL QUANTITY REQUIRED FOR THE COMPLETE RELIABLE AND EFFICIENT FUNCTIONING OF THE SYSTEMS.
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL PLANTS, EQUIPMENT AND MATERIALS TO MEET THE PROJECT SPECIFICATIONS AND REQUIREMENTS OF AUTHORITIES GOVERNMENT AGENCIES AND CLIENT. THE DIMENSION AS INDICATED IN THE DRAWINGS NOT CONSTITUTE AS A CONSTRAINT TO MEET THE ABOVE OBLIGATIONS.
- ALL ELECTRICAL SERVICES DRAWINGS MAY NOT BE TO SCALE.
- THE PROVISIONS OF THE ELECTRICAL SERVICES ARE SUBJECT TO ENERGY COMMISSION (EC) AND ANY OTHER AUTHORITIES APPROVAL.
- WALL AND FLOOR OPENINGS DEDICATED FOR THE WORKS UNDER THIS CONTRACT SHALL BE SEALED BY THE CONTRACTOR. THE SEALING MATERIALS SHALL BE FIRE RATED TO THE SAME RATING AS THE CORRESPONDING WALL AND FLOOR.
- ALL CABLING SHALL BE AS PER DRAWINGS TYPE COMPLYING WITH RELEVANT STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
- CABLE SERVING STATUTORY/FIRE RELATED EMERGENCY CIRCUITS LOADS SHALL BE FIRE RESISTANT (MINERAL INSULATED) TYPE CABLE.
- THE CONTRACTOR SHALL INSTALL COMPLETE CABLE CONTAINMENT INCLUDING CABLE LADDERTRAY TRUNKING CONDUIT UNDER FLOOR TRUNKING DUCT ACCESSORIES THROUGHOUT FOR CABLE RUNNING FOR THE COMPLETION OF BUILDING SERVICES SYSTEM INSTALLATION.
- SURFACE CONDUIT SYSTEM SHALL BE USED IN M&E ROOMS WHERE DOWNFEED PANELS ARE PROVIDED, PLANT ROOMS, EQUIPMENT ROOMS, BEHIND DETACHABLE PANEL AND ABOVE FALSE CEILING AREA WHILE CONCEALED CONDUIT SYSTEM SHALL BE ADOPTED FOR OTHER AREAS UNLESS OTHERWISE SPECIFIED.
- THE EXACT ROUTING AND LEVELS OF ALL CABLE CONTAINMENT SYSTEM SHALL BE FULLY COORDINATED WITH OTHER SERVICES IN FURTHER IN BIM REVIT COLLABORATION BEFORE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE THE CONDUIT, TRUNKING, CABLE TRAY SYSTEM FOR MAIN, SUB-MAIN AND FINAL CIRCUITS INCLUDING SMALL POWER, LIGHTING, CONTROL SIGNAL AND WIRING ACCESSORIES AS PER THE DRAWING AND WHERE NECESSARY.
- HANGERS, BRACKETS AND ANY OTHERS SUPPORTING EQUIPMENT SHALL BE ARRANGED IN SUCH A WAY TO MAXIMIZE FLEXIBILITY FOR FUTURE MODIFICATION AND ADDITION OF FUTURE CONNECTIONS OF SERVICES.
- CONCRETE PLINTHS AND ANY OTHER STRUCTURAL SUPPORT SHALL BE PROVIDED FOR MAJOR ELECTRICAL EQUIPMENT SUCH AS GENERATOR SET, COMPACT SUB-STATION AND ANY OTHER EQUIPMENT AS SPECIFIED IN DRAWING.
- ALL ELECTRICAL INSTALLATIONS SHALL COMPLY WITH THE LATEST IEC STANDARDS AND MALAYSIAN STANDARDS.

## LIGHTING AND SMALL POWER

- EXACT LOCATIONS OF LUMINAIRES AND WIRING ACCESSORIES SHALL BE COORDINATED BY THE MAIN CONTRACTOR.
- FINAL CIRCUIT FOR 13A SWITCH SOCKET OUTLETS SHALL BE IN RADIAL CIRCUIT.
- THE EXACT LOCATION OF POWER POINTS AND LUMINAIRES INSIDE THE BUILDING SHALL BE COORDINATED WITH THE ARCHITECT AND INTERIOR DESIGN REPRESENTATIVES.

## MAIN AND SUB-MAIN DISTRIBUTION

- ALL CIRCUIT BREAKERS SHALL BE SELECTED TO PROVIDE FULL DISCRIMINATION.
- CABLE CHANGE BOX AND SUBSEQUENT CABLE CONNECTION SHALL BE PROVIDED TO ALL ELECTRICAL INSTALLATION WHEN INCOMING OR OUTGOING CABLE CANNOT BE TERMINATED INTO THE EQUIPMENT DUE TO THE CABLE SIZE. THE CABLE BETWEEN CABLE CHANGE BOX AND THE EQUIPMENT SHALL BE HIGHER THAN THE RATED CURRENT OF THE EQUIPMENT. THE CABLE TYPE SHALL BE THE SAME AS THE INCOMING OR OUTGOING CABLE.
- ALL INCOMING AND COUPLER CIRCUIT BREAKERS FOR MSB SHALL BE 4P TYPE.
- SEPARATE PROTECTIVE CONDUCTOR SHALL BE PROVIDED. THE MATERIAL OF THE PROTECTIVE CONDUCTOR SHALL BE AS THAT OF THE PHASE CONDUCTOR. THE TABLE BELOW IS USED AS A GUIDE WHEN THERE IS NON-AVAILABILITY OF (THE OPERATING TIME OF DISCONNECTION DEVICE) CALCULATION OF SEPARATE PROTECTION CONDUCTOR TO BE PROVIDED AS PER TABLE BELOW

CROSS-SECTIONAL AREA OF PHASE CONDUCTOR (S) sq mm	MINIMUM CROSS-SECTIONAL AREA OF THE CORRESPONDING PROTECTIVE CONDUCTOR sq mm
S < 16	S
16 < S < 35	16
S > 35	S/2

5. POWER ENERGY METERS SHALL BE PROVIDED FOR MONITORING OF ENERGY USAGE AT THE INCOMING OF MAIN SWITCHBOARDS, SUB-SWITZBOARDS AND AT LOCATIONS AS SHOWN IN DRAWING.

6.  $I_{cu}$  &  $I_{cs}$  FOR INCOMING MCCB

$I_{cu} = 50kA @ 400V$

$I_{cs} = 100$  of  $I_{cu}$

7.  $I_{cu}$  &  $I_{cs}$  FOR OUTGOING MCCB

$I_{cu} = 50kA @ 400V$

$I_{cs} = 50$  of  $I_{cu}$

8. SWITCHBOARD CONSTRUCTION:-

8.1. CUBICLE FRONT AND REAR ACCESS (Minimum)

- FORM OF SEPARATION : FORM 2B
- THICKNESS of FRAME : 2.5mm
- THICKNESS of PANEL : 2.0mm
- INDEX of PROTECTION : IP 41

8.2. CUBICLE FRONT ACCESS (Minimum)

- FORM OF SEPARATION : FORM 2B
- THICKNESS of FRAME : 2.5mm
- THICKNESS of PANEL : 2.0mm
- INDEX of PROTECTION : IP 41

8.3. WALL MOUNTED (Minimum)

- FORM of SEPARATION : FORM 1
- THICKNESS of PANEL : 2.0mm
- INDEX of PROTECTION : IP 41
- MOUNTING HEIGHT : 900mm from F.F.L. (BOTTOM OF PANEL)

9. OTHERS

9.1. SWITCHBOARD LABELING SHALL BE OF MINIMUM 10mm IN HEIGHT AND INCLUDE :-

9.1.1. SWITCHBOARD MANUFACTURER

9.1.2. NAME AND LOCATION OF THE OUT-GOINGS AND INCOMING SUPPLY

9.2. ALL INDICATORS LIGHT SHALL BE OF LED TYPE

9.3. ALL SWITHBOARDS SHALL BE FABRICATED TO SUIT THE ROOM SIZE

10. EARTHING

10.1. CONNECTION OF THE EARTHING CONDUCTORS TO THE EARTH ELECTRODES SHALL BE BY EXOTHERMIC WELDED CONNECTIONS

10.2. EARTH ELECTRODES SHALL HAVE PURE COPPER UNIFORMLY MOLECULARLY BONDED ONTO A HIGH TENSILE STEEL CORE TO A MINIMUM OF THICKNESS OF 0.25mm.

10.3. TABLE 4 - DIMENSIONS OF THE MAIN EARTHING BARS AND EARTHING CONDUCTORS (L-S1 - Page S14 - 3 of 5)

PROSPECTIVE EARTH FAULT CURRENT (I) FOR 1 sec DURATION	MAIN EARTHING BAR (width x thickness)	EARTHING CONDUCTORS (No. x Copper Tape Size)
$I \leq 10 kA$	25 mm x 3 mm	2 SETS OF 1 x 25mm x 3mm
$10 kA < I \leq 25 kA$	25 mm x 6 mm	2 SETS OF 1 x 25mm x 3mm
$25 kA < I \leq 30 kA$	30 mm x 6 mm	2 SETS OF 2 x 25mm x 3mm
$30 kA < I \leq 40 kA$	40 mm x 6 mm	2 SETS OF 2 x 25mm x 3mm
$40 kA < I \leq 50 kA$	50 mm x 6 mm	2 SETS OF 2 x 25mm x 3mm

## STREET LIGHTING

- ALL WORKS WITHIN R.O.W TO BE COORDINATED AND AGREED BY THE CLIENT AUTHORITY.
- THE CONTRACTOR SHALL SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION OF THE STREET LIGHTING IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENT.
- THE CONTRACTOR SHALL DISMANTLE, REMOVE AND RETURN TO LOCAL AUTHORITY STORAGE AREA FOR ALL EXISTING ROAD LIGHTING AND MAKE GOOD FOR ALL AFFECTED AREA.
- ALL EXISTING FEEDER PILLAR, DUCTS, CABLES OF ROAD LIGHTING SHALL BE PROTECTED DURING CONSTRUCTION.
- THE INTERVAL BETWEEN STREET LIGHTS SHALL BE AS PER AUTHORITY REQUIREMENT.
- ALL ROAD CROSSING SHALL BE 150mm DIA HDPE PN10 DUCT.
- THE LIGHTING LEVELS SHALL BE AS FOLLOWS.

TYPE	$I_{b_{av}}$ (cd/m sq)	$U_p$	$U_L$	$T_i$	MAINTENANCE FACTOR	AVERAGE (lux)	UNIFORMITY $E_{min}/E_{avg}$
SECONDARY ROAD	2.0 cd/m sq	>0.4	>0.7	<12.5	>0.8	30	>0.4

## CABLE CONTAINMENT

- ALL CABLE CONTAINMENT SHALL BE IMPLEMENTED TO GO FROM MSB ROOM, RESPECTIVE RISER & METER ROOM.
- CONTRACTOR CONTRACTOR SHALL PROVIDE DUCTING AND JUNCTION BOX FOR LANDSCAPE LIGHTING, INTERNAL & COMMON AREA.

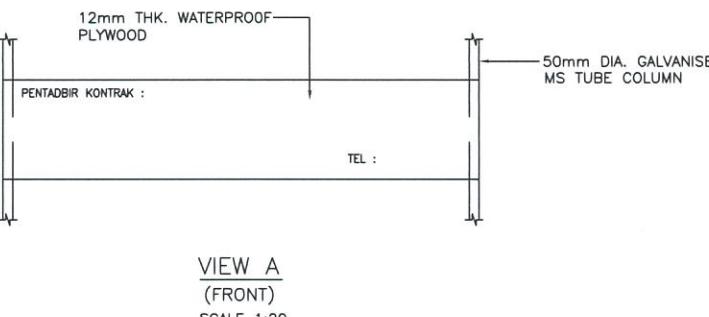
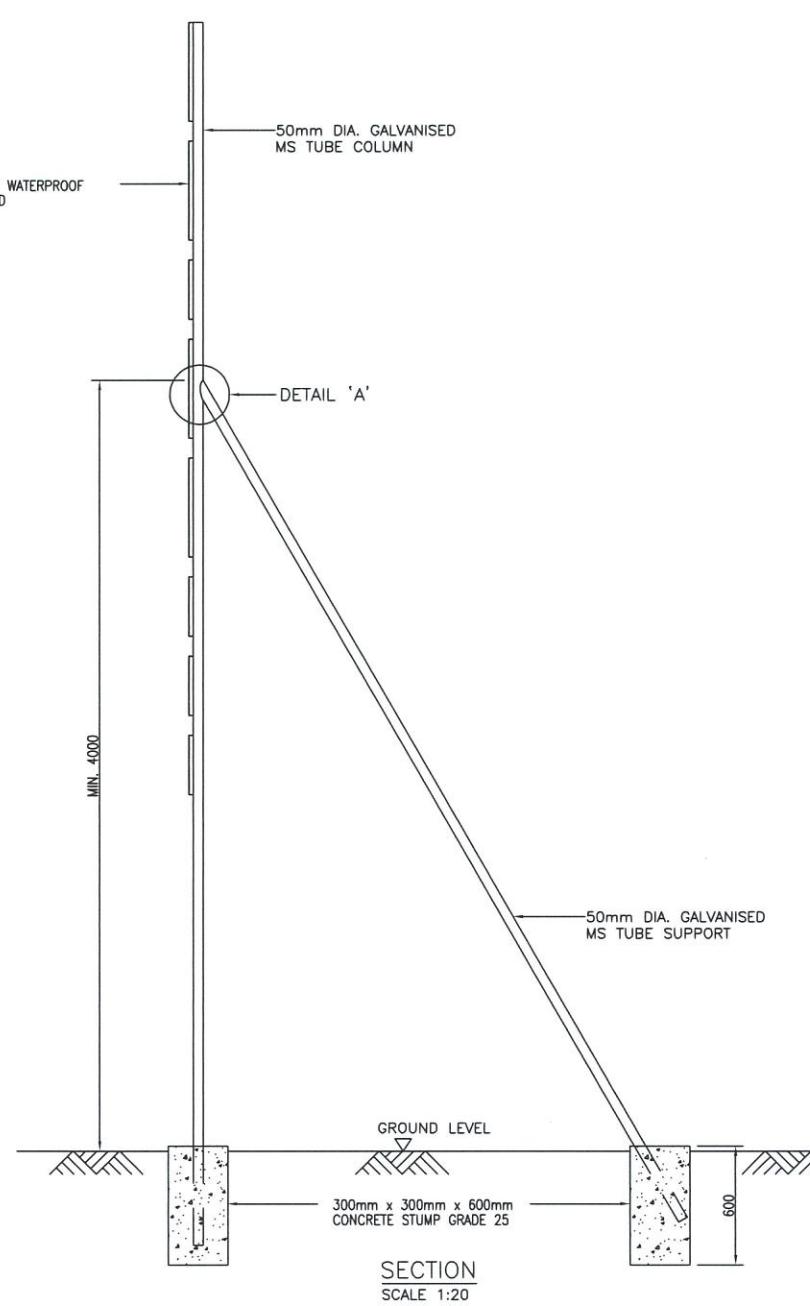
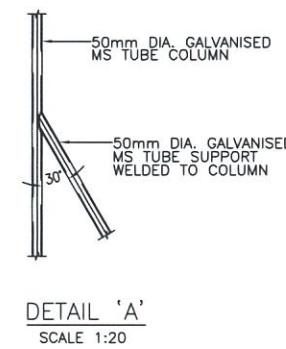
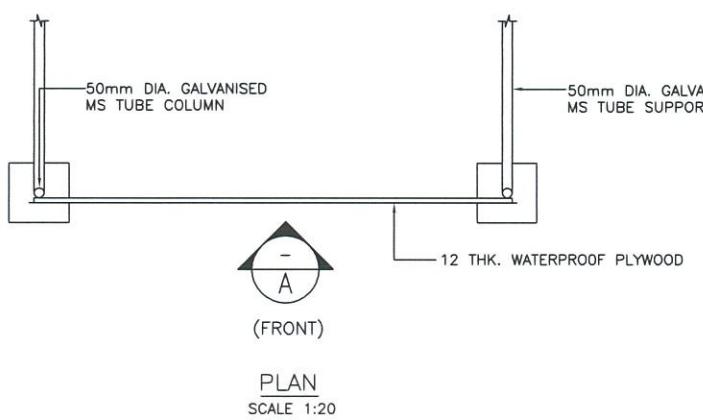
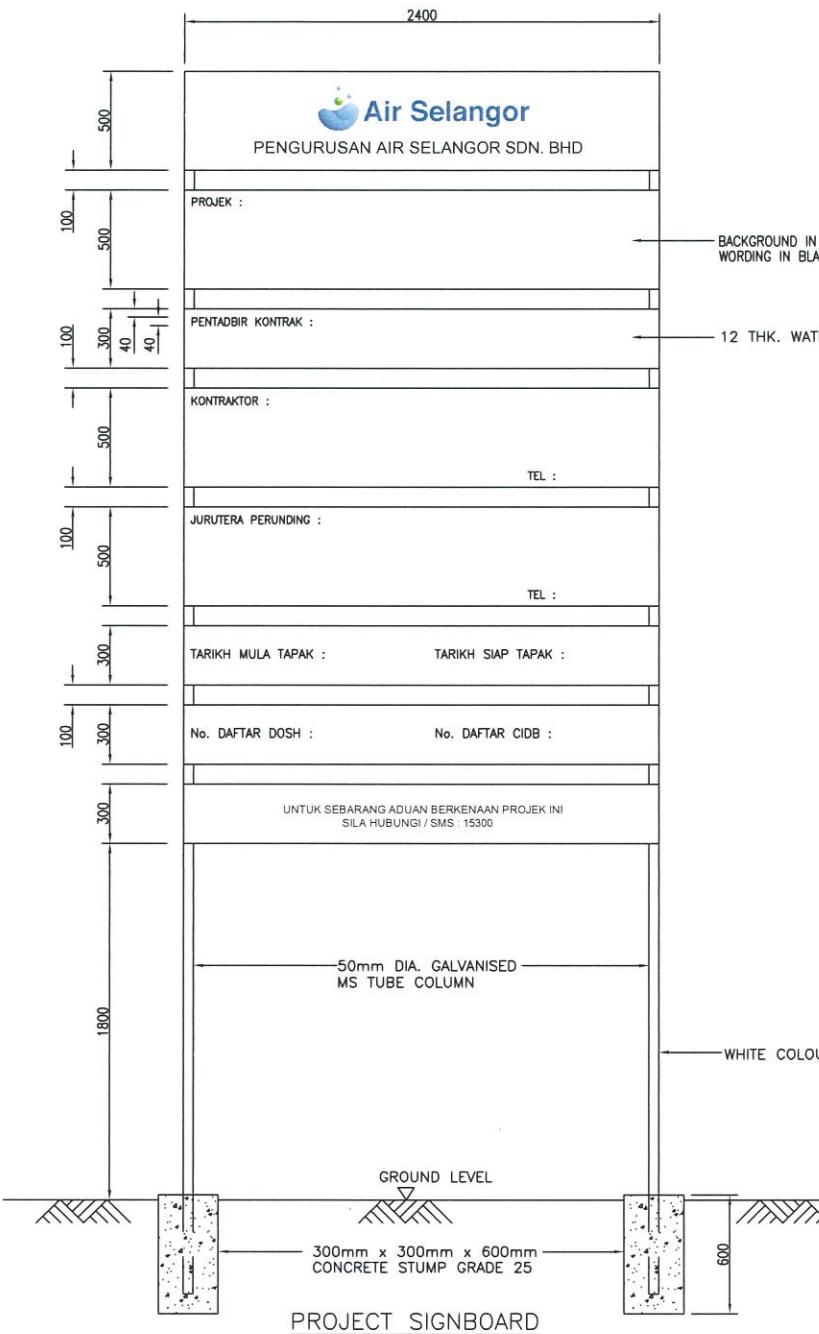
## DIVERSITY FACTOR

ITEM	DIVERSITY FACTOR
1. LIGHTINGFAN - OFFICE, HALL, SCHOOL, QUARTERS	0.8
2. LIGHTINGFAN - MOSQUE	0.9
3. 13A SWITCH SOCKET OUTLET - MOSQUE, HALL, OFFICE	0.4
4. 13A SWITCH SOCKET OUTLET - QUARTERS	0.5
5. 15A SWITCH SOCKET OUTLET	1
6. AC MOTOR PUMP	1
7. OUTDOOR LIGHTING	1
8. WATER HEATER	1
9. COOKER UNIT	1
10. ISOLATOR	1



for Minconsult Sdn Bhd  
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TENDER DRAWING



NOTES :

1. CONTRACTOR TO SUBMIT SHOP DRAWING FOR APPROVAL BEFORE CONSTRUCT.

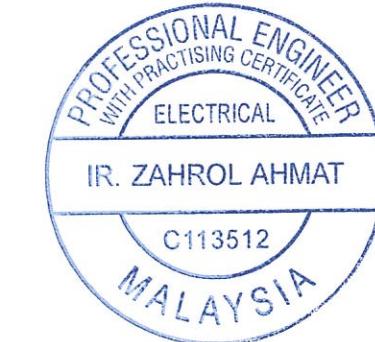
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REVISION	DESCRIPTION	DATE
TO	TENDER STAGE	FEB 2023

CONTRACT TITLE :

SG LANGAT DAM

DRAWING TITLE :

SIGNBOARD DETAILS

DATE	FEB 2023	SCALE	N.T.S
DRAWN	YMN	CHECKED	UMI KALSOM
DESIGNED	GANNA	APPROVED	IR ZAHROL
DRAWING NUMBER : AIS/2520016/GEN/002			REVISION TO

TENDER DRAWING

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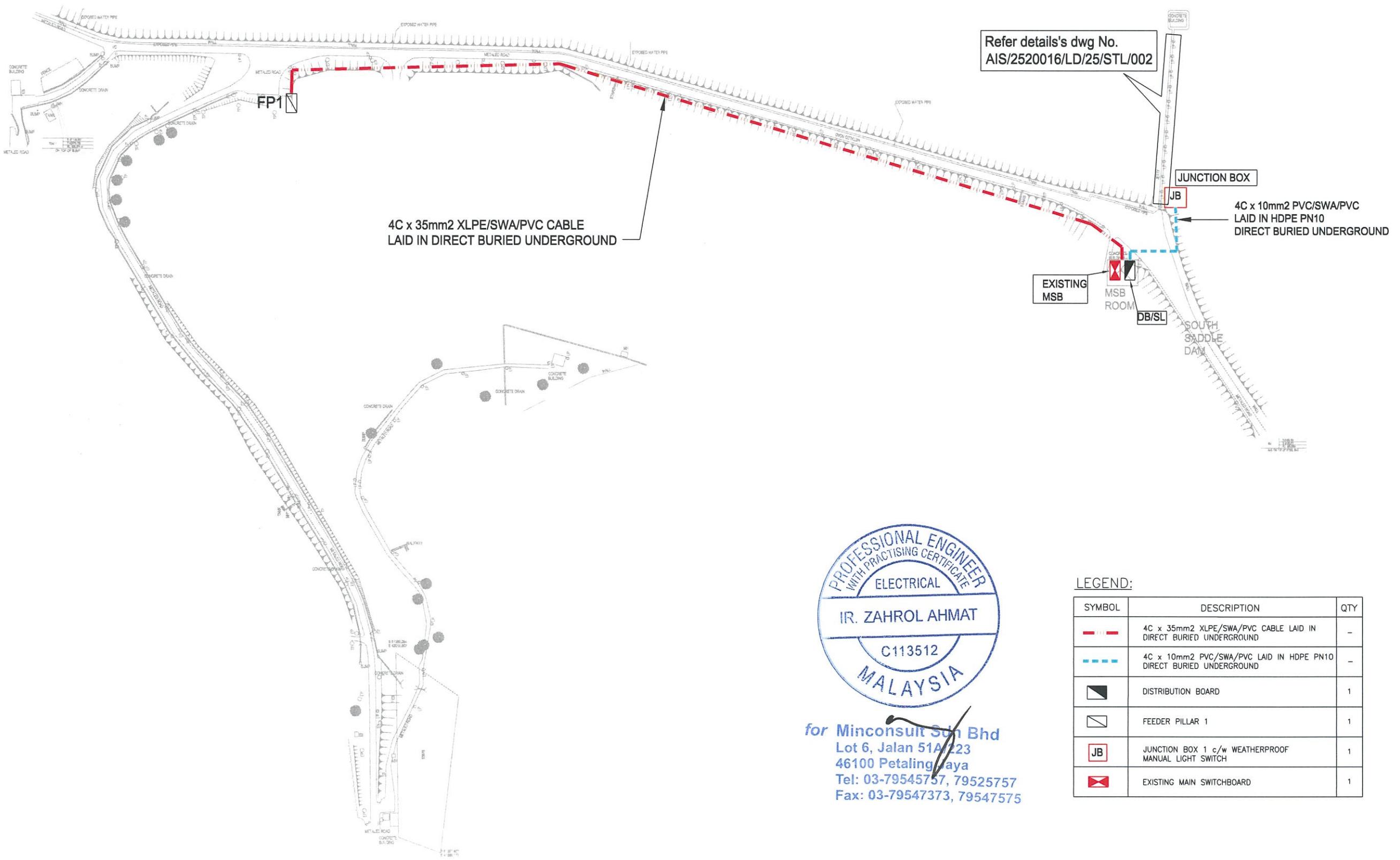
SG LANGAT DAM

DRAWING TITLE :

POWER CABLE ROUTE

DATE	SCALE	NTS
FEB 2023		
DRAWN : YMN	CHECKED : UMI KALSON	
DESIGNED : GANNA	APPROVED : IR ZAHROL	
DRAWING NUMBER : AIS/2520016/LD/25/EXT/001	REVISION	
	T0	

TENDER DRAWING



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SG LANGAT DAM

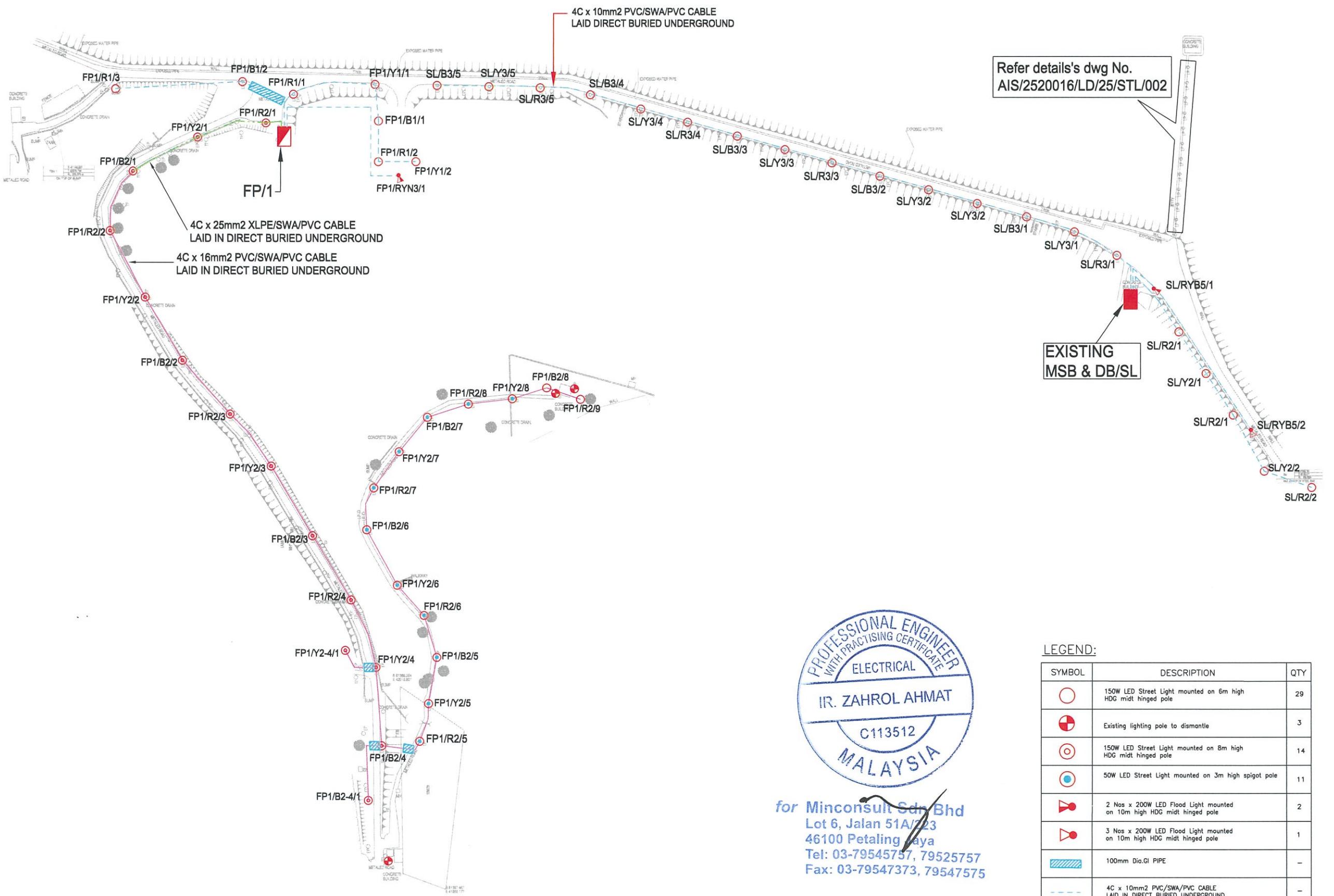
DRAWING TITLE :

STREET LIGHTING LAYOUT

DATE	SCALE	NTS
FEB 2023		
DRAWN : YMN	CHECKED	UMI KALSON
DESIGNED : GANNA	APPROVED	IR ZAHROL
DRAWING NUMBER : AIS/2520016/LD/25/STL/001	REVISION	T0

Refer details's dwg No.  
AIS/2520016/LD/25/STL/002

EXISTING  
MSB & DB/SL



LEGEND:

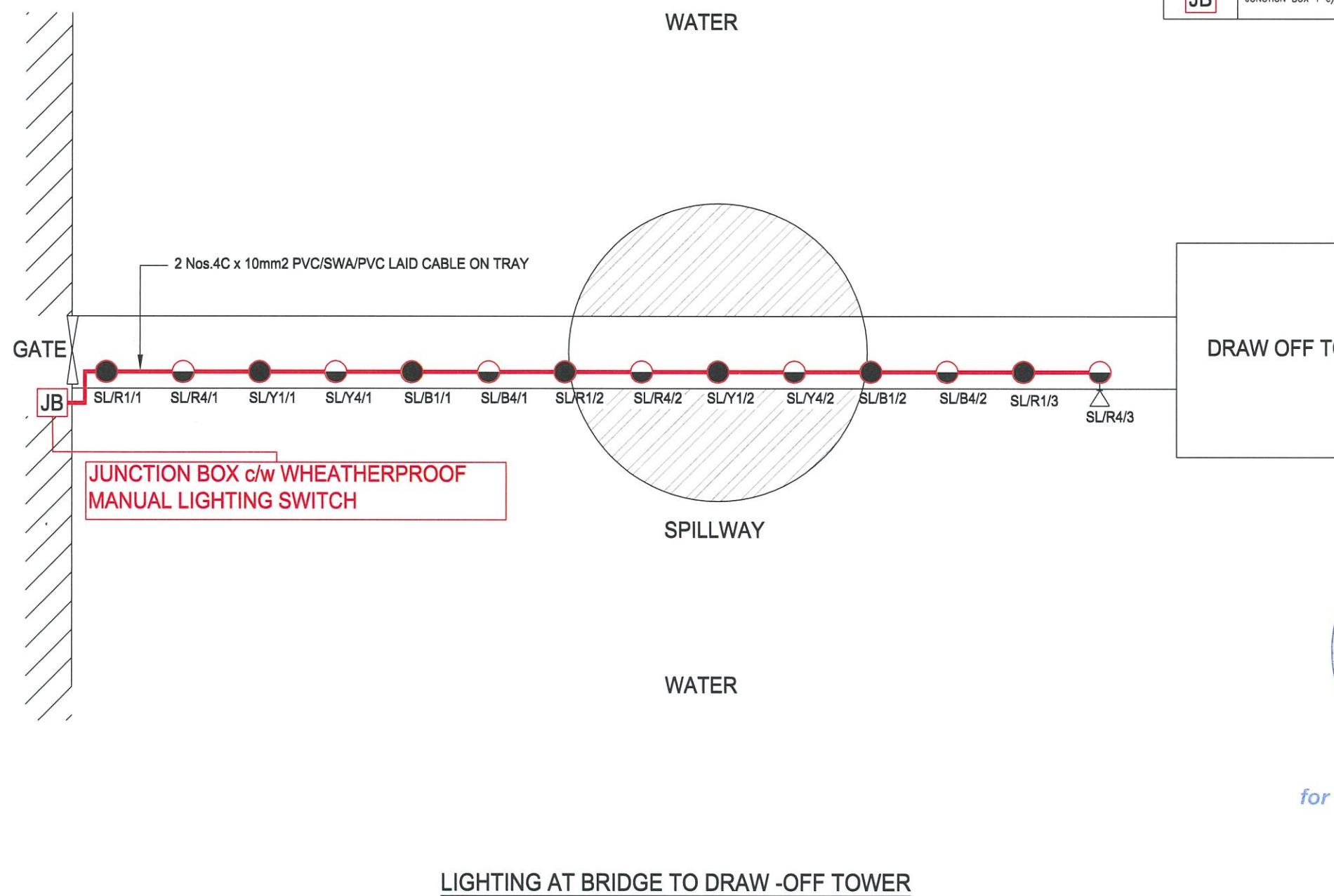
SYMBOL	DESCRIPTION	QTY
○	150W LED Street Light mounted on 6m high HDG mid hinged pole	29
●	Existing lighting pole to dismantle	3
○	150W LED Street Light mounted on 8m high HDG mid hinged pole	14
○	50W LED Street Light mounted on 3m high spigot pole	11
●	2 Nos x 200W LED Flood Light mounted on 10m high HDG mid hinged pole	2
●	3 Nos x 200W LED Flood Light mounted on 10m high HDG mid hinged pole	1
---	100mm Dia.GI PIPE	-
---	4C x 10mm² PVC/SWA/PVC CABLE LAID IN DIRECT BURIED UNDERGROUND	-
---	4C x 16mm² PVC/SWA/PVC CABLE LAID IN DIRECT BURIED UNDERGROUND	-
---	4C x 25mm² XLPE/SWA/PVC CABLE LAID IN DIRECT BURIED UNDERGROUND	-

TENDER DRAWING

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LEGEND:

SYMBOL	DESCRIPTION	QTY
●	50W LED STREET LIGHTING MOUNTED ON 2.00m high HDG POLE CONTROL BY TIMER (FLANGE TYPE)	7
○	50W LED STREET LIGHTING MOUNTED ON 2.0m high POLE CONTROL BY MANUAL SWITCH (FLANGE TYPE)	7
△	200W LED FLOODLIGHT MOUNTED ON 2.0m high HDG POLE	1
—	4C x 10mm <sup>2</sup> PVC/SWA/PVC LAID CABLE ON TRAY	—
JB	JUNCTION BOX 1 c/w WEATHERPROOF MANUAL LIGHT SWITCH	1



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SG LANGAT DAM

DRAWING TITLE :

STREET LIGHTING LAYOUT  
DETAIL A

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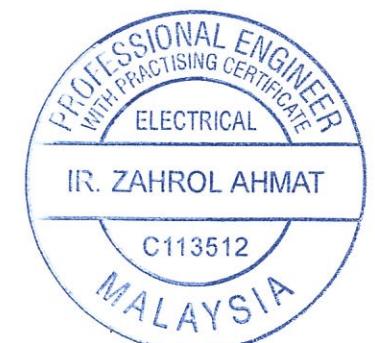
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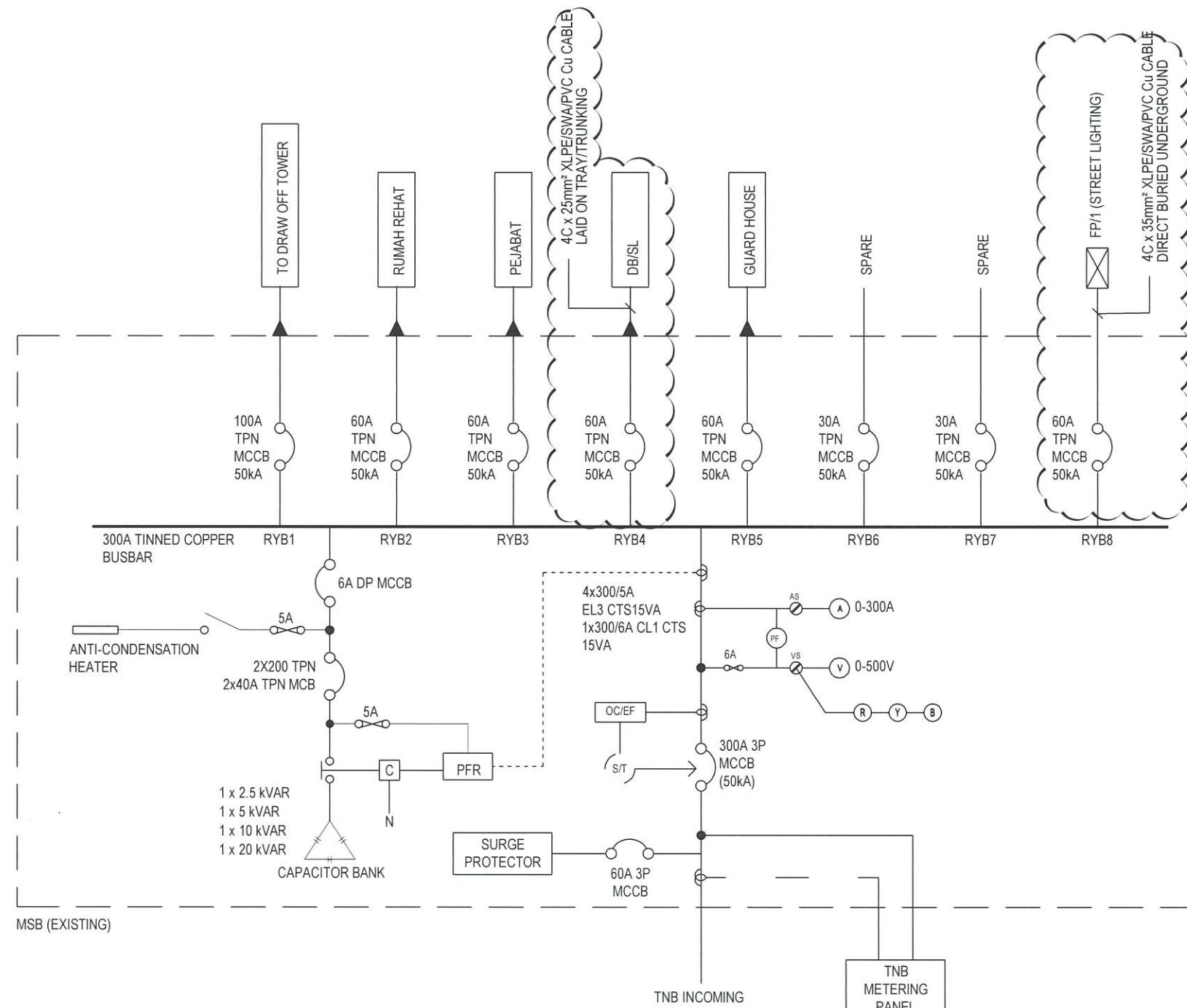
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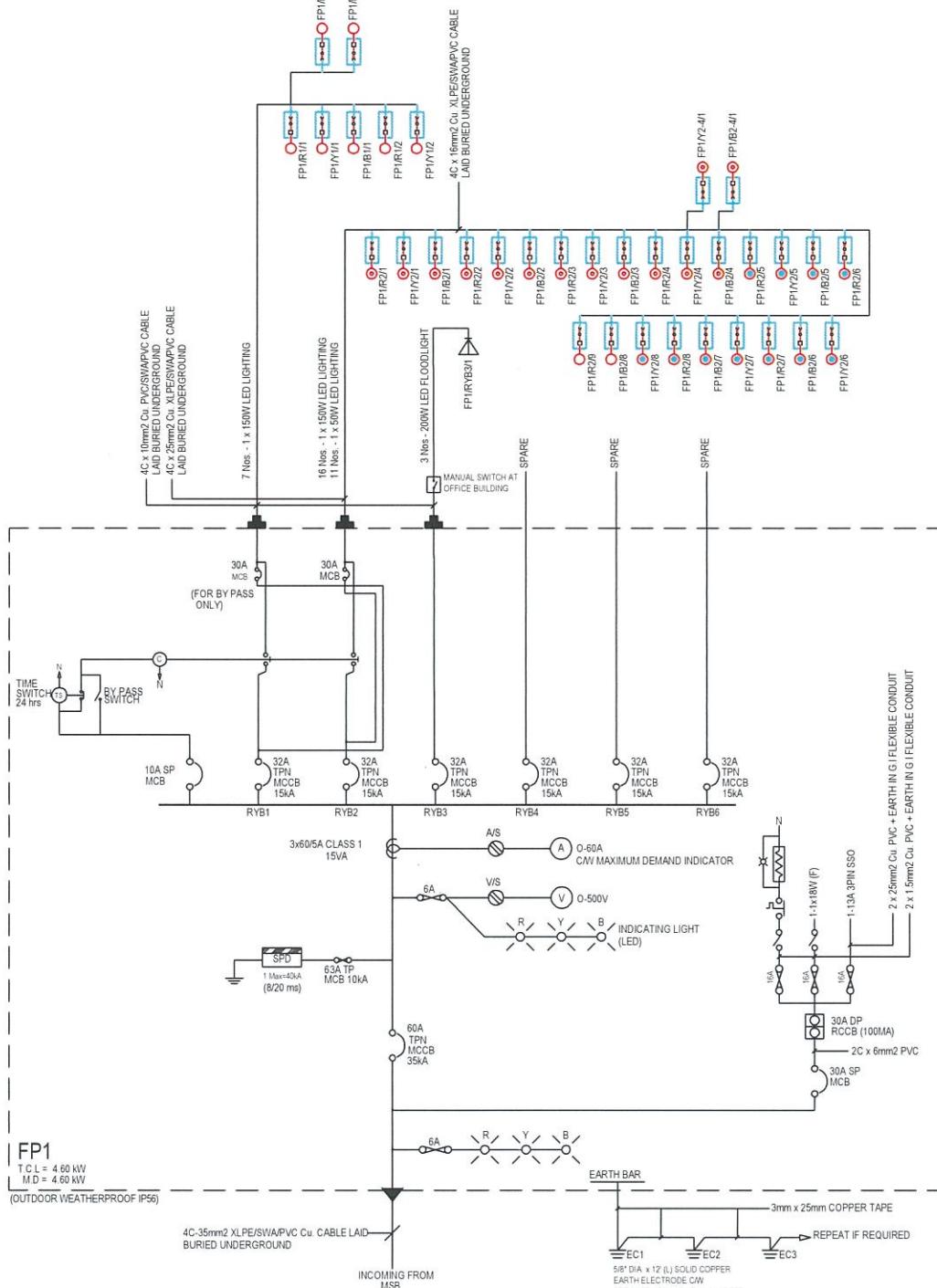
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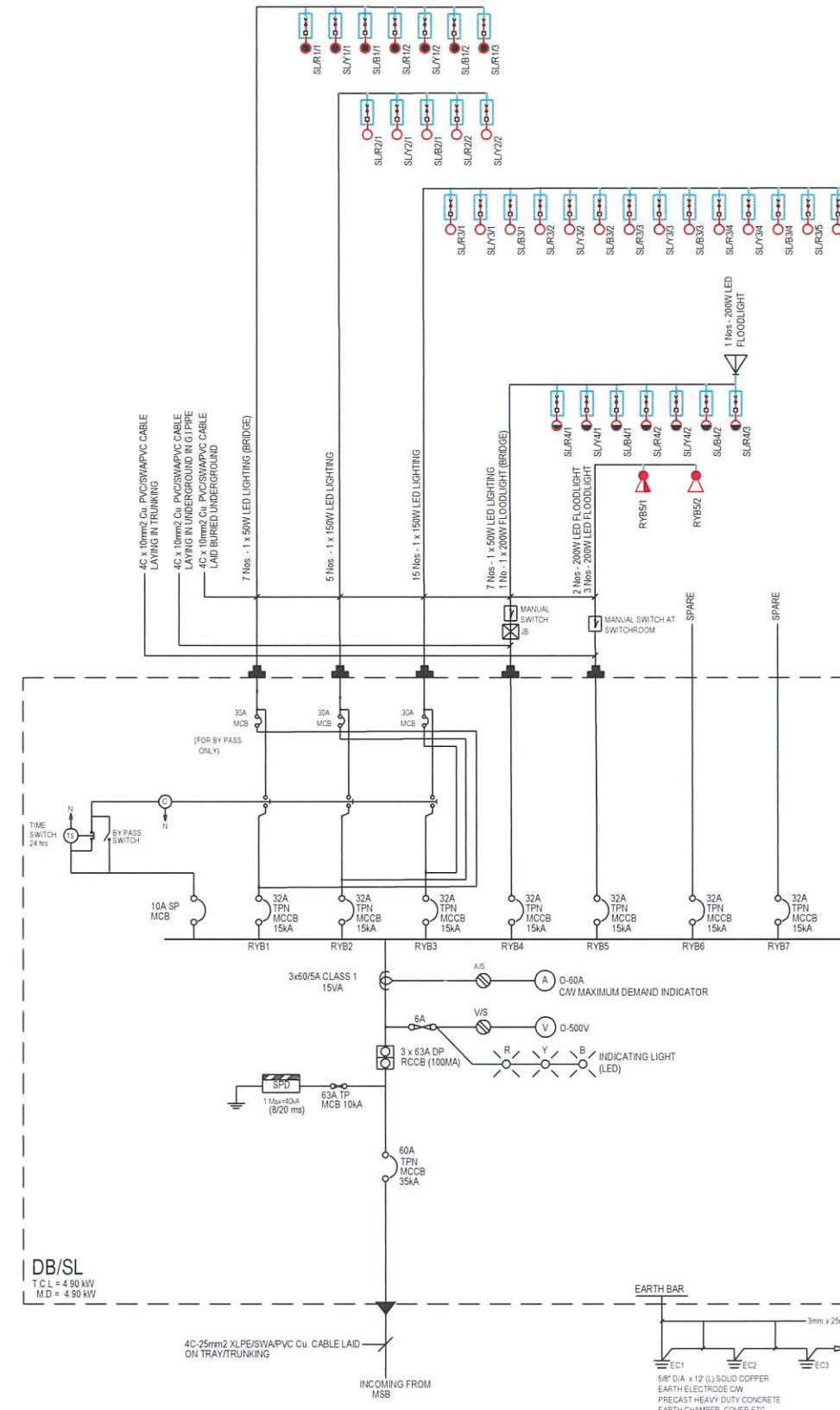


NOTE

1. CONTRACTOR SCOPE OF WORKS ARE SHOWN AS CLOUDED.



SCHEMATIC DIAGRAM FOR FEEDER PILLAR FP



SCHEMATIC DIAGRAM FOR DB/SL

LEGEND	SYMBOL	DESCRIPTION
	1x150W LED STREET LIGHT MOUNTED ON 6M HIGH HDG MDIT HINGED POLE	
	1x150W LED STREET LIGHT MOUNTED ON 8M HIGH HDG MDIT HINGED POLE	
	1x50W LED STREET LIGHT MOUNTED ON 3M HIGH HDG MDIT	
	1x50W LED STREET LIGHTING MOUNTED ON 2.0m HIGH POLE CONTROL BY MANUAL SWITCH (FLANGE TYPE)	
	1x50W LED STREET LIGHTING MOUNTED ON 2.00m HIGH HDG POLE CONTROL BY TIMER (FLANGE TYPE)	
	1x200W LED FLOODLIGHT	
	2 NOS x 200W LED FLOOD LIGHT MOUNTED ON 10M HIGH HDG MDIT HINGED POLE	
	3 NOS x 200W LED FLOOD LIGHT MOUNTED ON 10M HIGH HDG MDIT HINGED POLE	
	DIGITAL PHOTOCELL	
	TNB KWh METER	
	TIME SWITCH	
	SELECTOR SWITCH	
	CUT-OUT FUSE & NEUTRAL LINK	
	HEAT SHRINKABLE TERMINATION	
	CABLE GLAND	

NOTES

- 1) TIME SWITCH . ORBIS
- 2) STANDARD FEEDER PILLAR
  - VOLTAGE = 400V
  - PROTECTION = IP56
  - STANDARD EN60998 - 2 - 1 : 2004

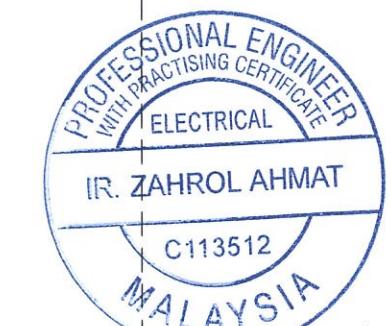
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ISION	DESCRIPTION	DATE
0	TENDER STAGE	FEB 2023

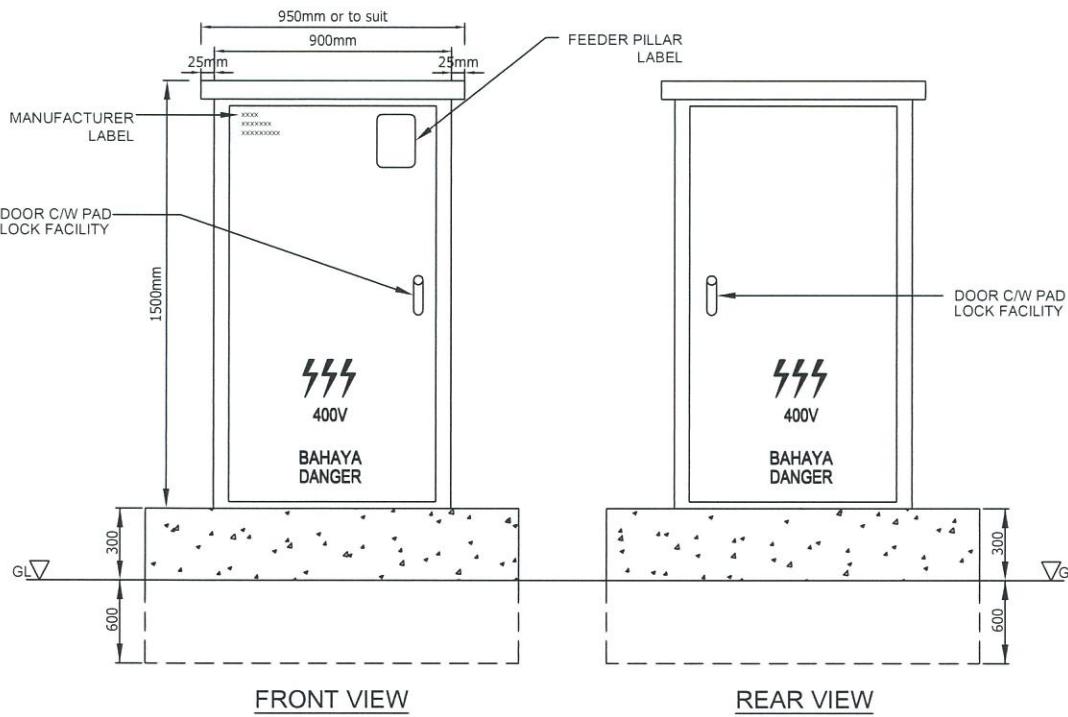
**ABSTRACT TITLE :**

SG LANGAT DAM

**WING TITLE:**

SCHEMATIC DIAGRAM  
FOR FP/1 & DB/SL

FEB 2023		SCALE	NTS
YMN		CHECKED	UMI KALSON
GNA	GANNA	APPROVED	MR.ZAHROL
WING NUMBER : /2520016/LD/25/SLD/001			REVISION TO



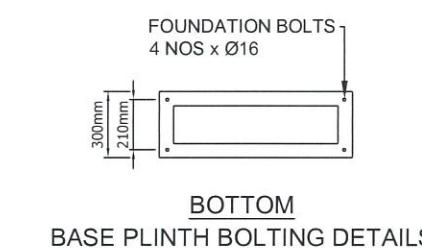
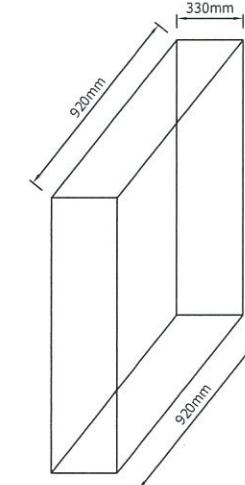
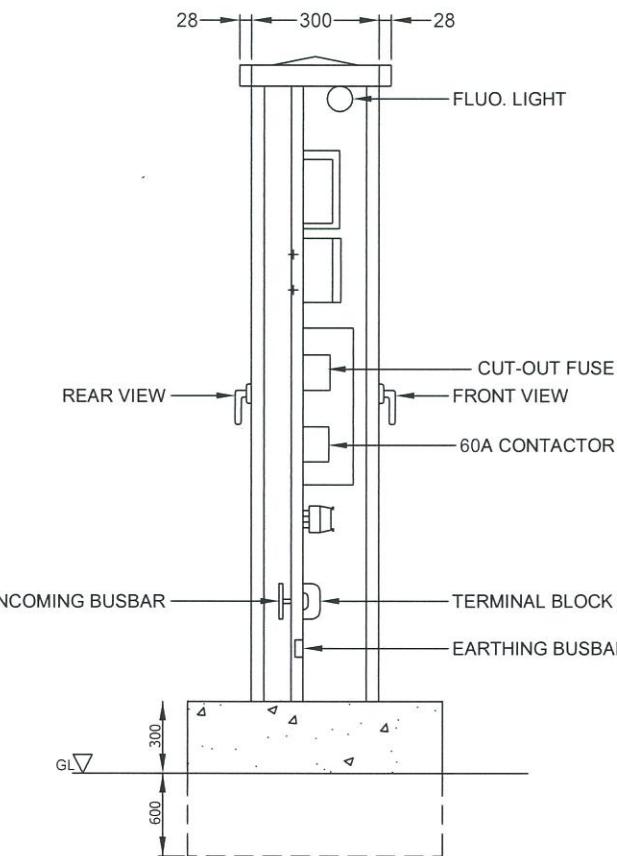
LEGEND	DESCRIPTION	BRAND
FAL	18-WATT FLUO LIGHT	SJ LITE
MCB	MINIATURE CIRCUIT BREAKER	ABB
SW	ON/OFF SWITCH	B LINE
ELCB + MMAR	EARTH LEAKAGE C BREAKER TYPE A SURGE IMMUNITY 3KA C/W MOTORISED. MULTI AUTO RECLOSER	DUVAL

LEGEND	DESCRIPTION	BRAND
TS	24-HOUR TIME SWITCH	ORBIS
PS	0 - 3 POSITION SELECTOR SWITCH	B LINE
C	TP ACI CONTACTOR	TOGAMI/SEIMENS
S/SIO	13A SWITCH SOCKET OUTLET	MK

MATERIAL : 3.0 MM G I SHEET STEEL

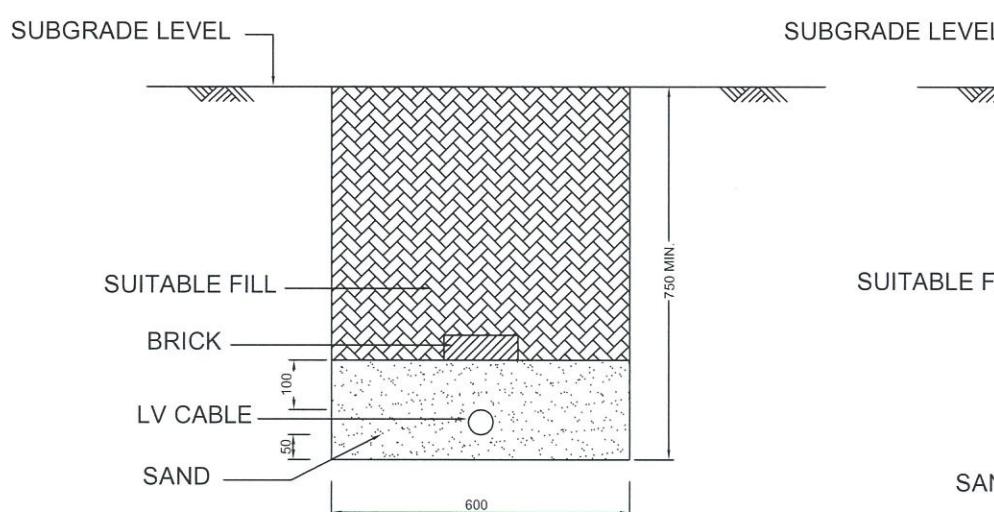
NOTE:

- 1) DIMENSION SHOWN IS INDICATIVE ONLY SUBJECT TO DETAIL BY THE MANUFACTURER OF THE FEEDER PILLAR
- 2) FEEDER PILLAR TO BE APPLIED ANTI STICK COATING AND SHOULD HAVE MIN 3 YEARS MANUFACTURER WARRANTY FOR THE ANTI STICK COATING PAINT



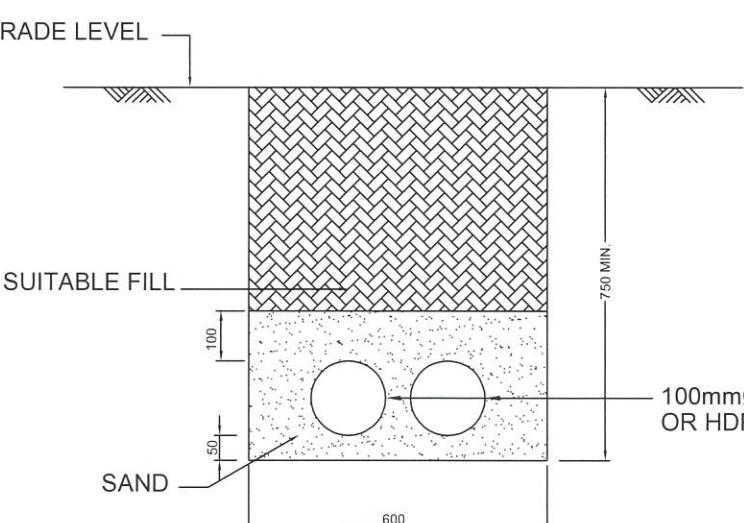
**BOTTOM  
BASE PLINTH BOLTING DETAILS**

**EXTERNAL SIDE VIEW  
NOT TO SCALE**



**DETAIL 'A'**  
SCALE 1:10

**TRENCHING FOR LV  
CABLES AT SHOULDER  
& VERGE**



**DETAIL 'B'**  
SCALE 1:10

**G.I DUCTS FOR LV  
CABLES ACROSS  
ROADS**

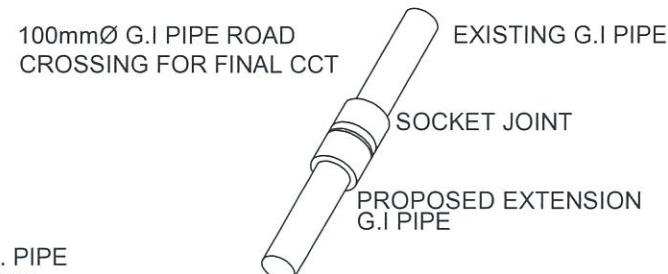


for Minconsult Sdn Bhd  
Lot 6, Jalan 51A/223  
46100 Petaling Jaya  
Tel: 03-79545757, 79525757  
Fax: 03-79547373, 79547575

**DETAIL 1**

**TYPICAL DETAIL OF THE  
PROPOSED EXTENSION**

**G.I PIPE**



CLIENT :  
**Air Selangor**  
PENGURUSAN AIR SELANGOR SDN. BHD.  
(201401006213)  
Pengurusan Air Selangor Sdn. Bhd.  
Level 4, Tower E,  
Bangsar Trade Centre (Plaza Pantai),  
59200 Kuala Lumpur

CLIENT'S STAMP & SIGNATURE

CONSULTANT:  
**MINCONSULT SDN. BHD.**  
(Company No. : 58835-P)  
minconsult  
Lot 6, Jalan 51A / 223,  
46100 Petaling Jaya, Selangor, Malaysia.  
Tel : 603-79545757, 79525757  
Fax : 603-79547373, 79547575

PROJECT TITLE :  
SUPPLY, INSTALLATION, TESTING AND  
COMMISSIONING OF STREET LIGHTINGS  
AT SG LANGAT DAM.

APPROVED BY AUTHORITY/UTILITY/SERVICE PROVIDER

CONSULTANTS CHOP & SIGNATURE

REVISION	DESCRIPTION	DATE
T0	TENDER STAGE	FEB 2023

CONTRACT TITLE :

SG LANGAT DAM

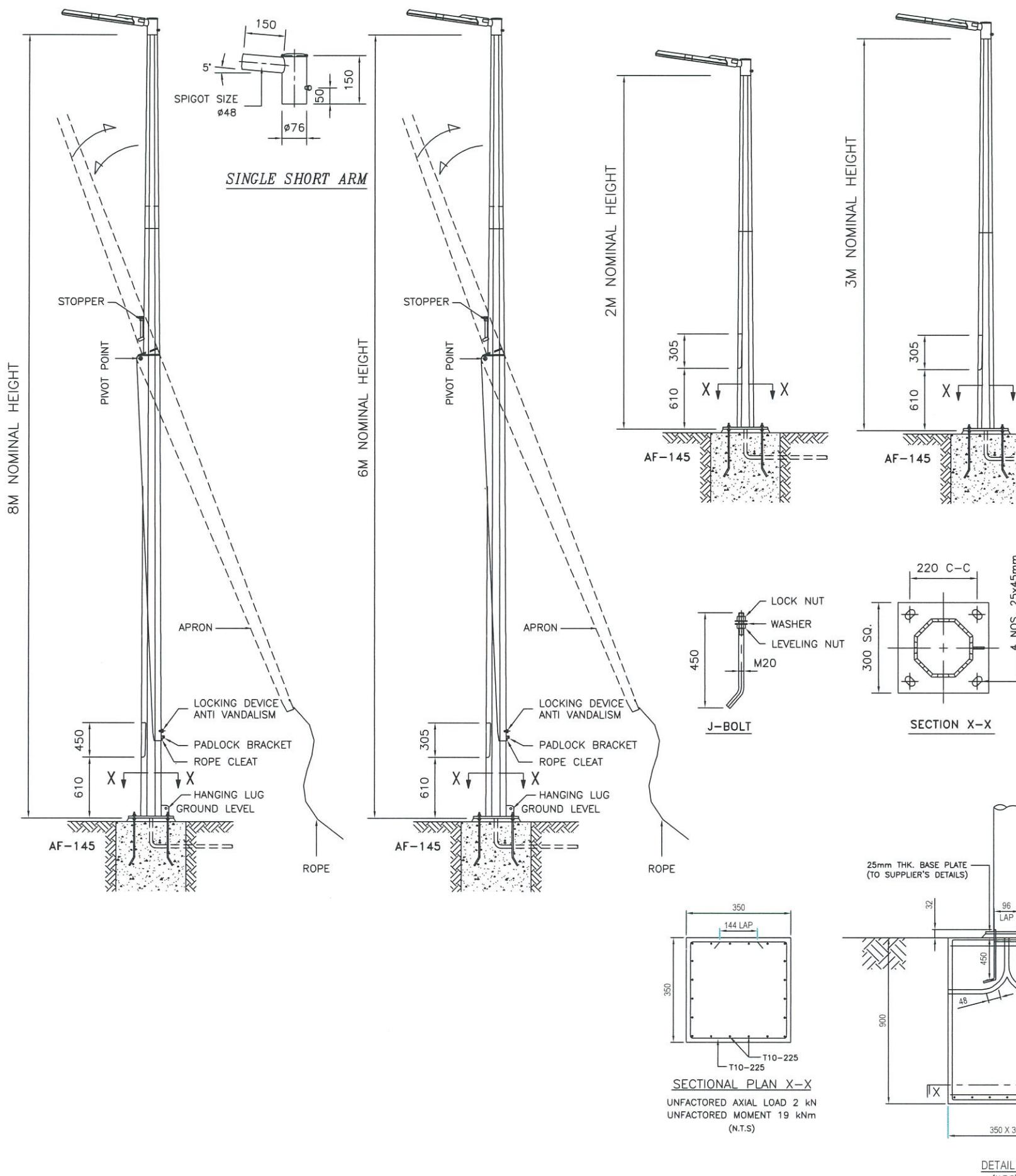
DRAWING TITLE :

FEEDER PILLAR DETAIL AND  
TRENCHING DETAIL

DATE	SCALE	NTS
DRAWN : YMN	CHECKED : UMI KALSON	
DESIGNED : GANNA	APPROVED : IR.ZAHROL	
DRAWING NUMBER : AIS/2520016/LD/25/DTL/001	REVISION	
TENDER DRAWING		T0

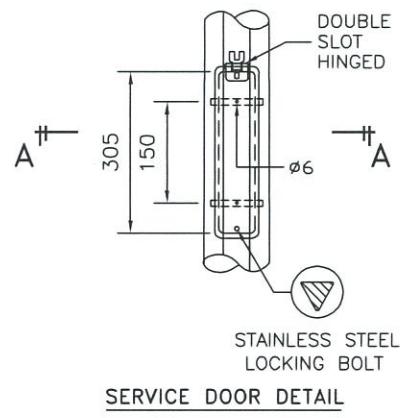
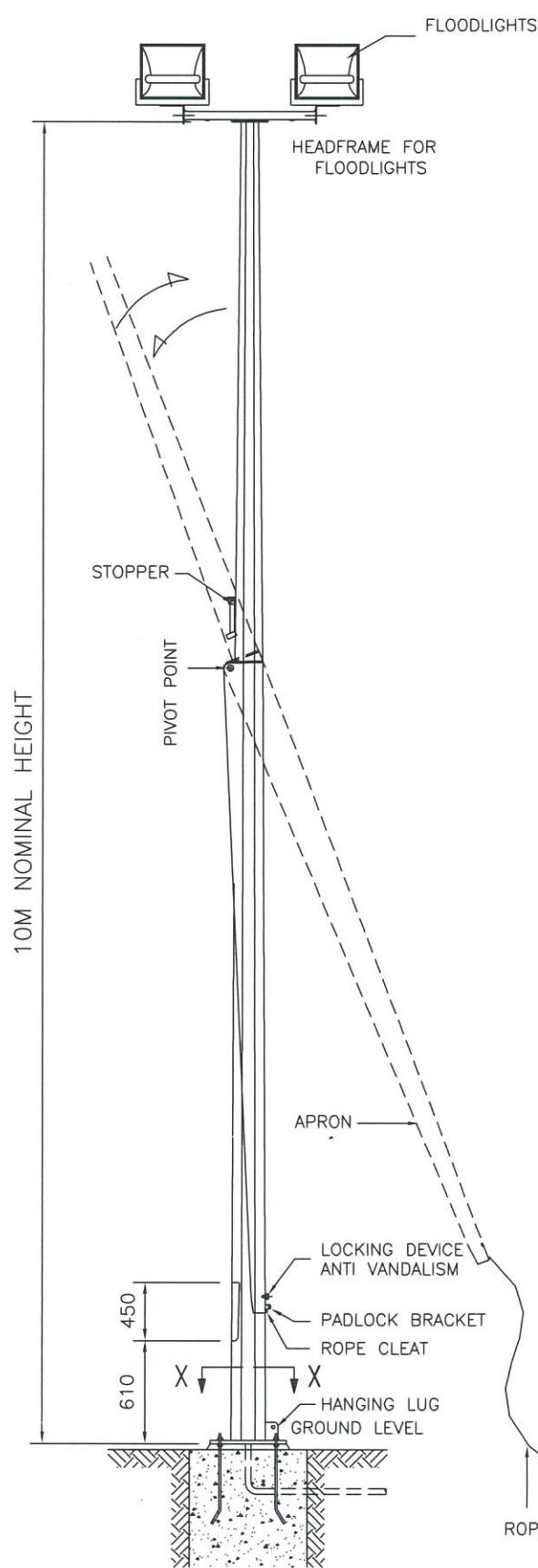
### TECHNICAL SPECIFICATIONS

- THE COLUMNS SHALL BE DESIGNED TO WITHSTAND WIND SPEED OF 35M PER SECOND, TOPOGRAPHY, GROUND ROUGHNESS & STATISTICAL FACTOR OF 1.0.
- COLUMNS SHALL BE MANUFACTURED IN COMPLIANCE TO BRITISH STANDARD BS EN 40.
- MATERIALS USED FOR LIGHTING COLUMNS SHALL COMPLY WITH BS EN 10025 S275 / JIS G3101 SS400.
- LIGHTING COLUMNS SHALL BE LONGITUDINALLY SEAM WELDED CONFORM TO BS 5135 BY AUTOMATIC CONTINUOUS METAL INERT GAS (MIG) PROCESS.
- COLUMNS SHALL BE ANTI-CORRODED BY HOT-DIP GALVANISED, COMPLIANCE WITH GALVANIZING STANDARD BS EN ISO 1461.
- SERVICES DOOR DIMENSIONS ARE GIVEN AS A GUIDE ONLY. THE ENGINEER MUST SATISFY HIMSELF THAT DIMENSIONS GIVEN ARE ADEQUATE FOR THE INSTALLATION OF THE REQUIRED CONTROL GEAR.
- ALL DIMENSION SHALL BE IN(MM), UNLESS OTHERWISE SPECIFIED.
- MATERIAL TOLERANCE: UNLESS OTHERWISE SPECIFIED, ALL MATERIAL TOLERANCES SHALL BE IN ACCORDANCE TO:  
BS EN 10029 (STEEL PLATE)  
BS EN 10255 (STEEL TUBE / HOLLOW SQUARE)  
BS EN 10056 (STEEL ANGLE)



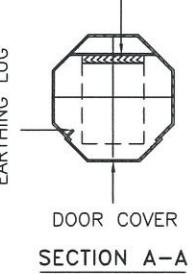
for Minconsult Sdn Bhd  
Lot 6, Jalan 51A/223  
46100 Petaling Jaya  
Tel: 03-79545757, 79525757  
Fax: 03-79547373, 79547575

MAX. FITTING LOAD : 30KG

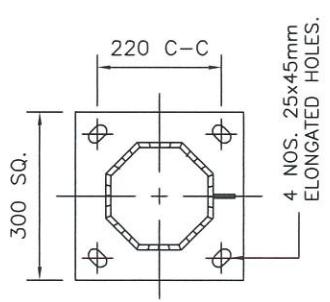


SERVICE DOOR DETAIL

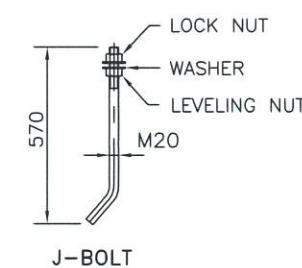
BASE BOARD  
NON-HYDROSCOPIC  
MATERIAL (BY BUYER)



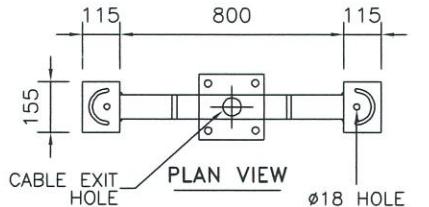
SECTION A-A



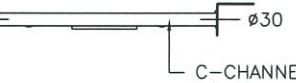
SECTION X-X



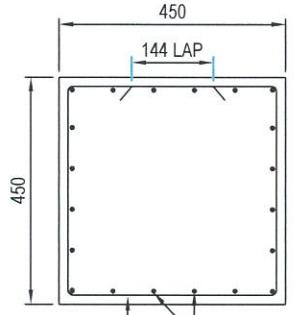
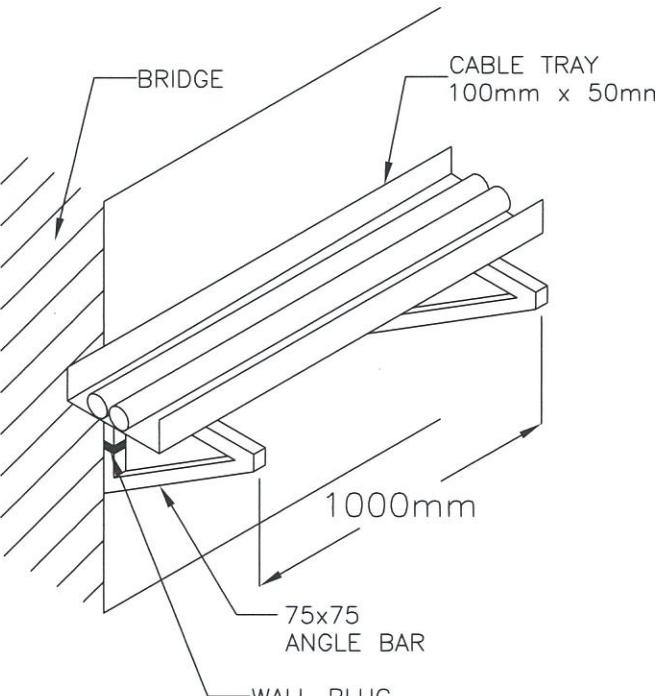
J-BOLT



PLAN VIEW

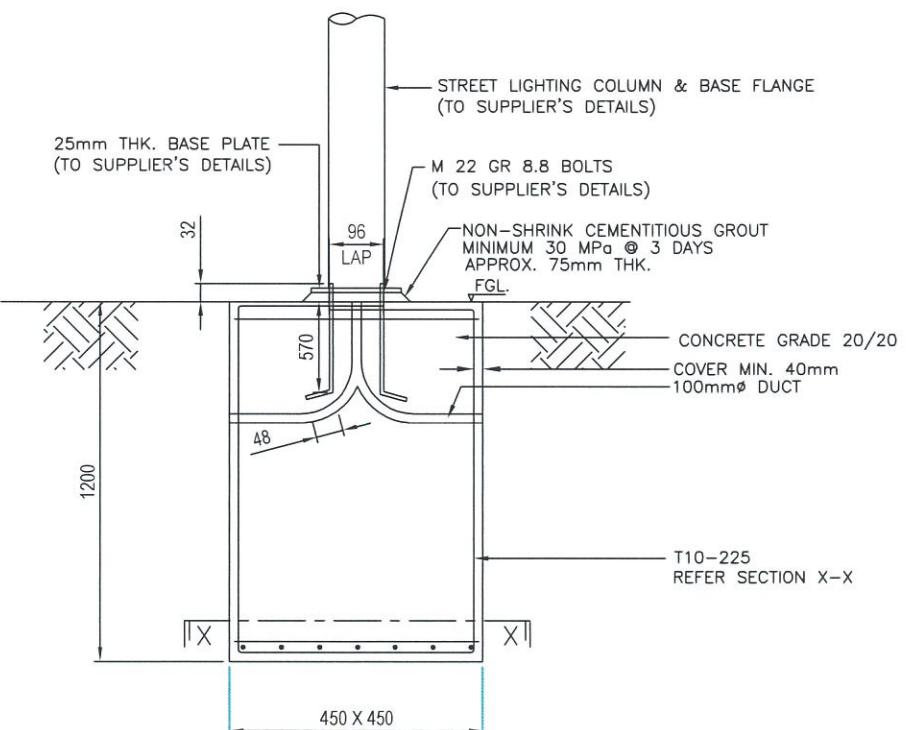


FRONT VIEW  
HEADFRAME DETAIL



SECTIONAL PLAN X-X

UNFACTORED AXIAL LOAD 2 kN  
UNFACTORED MOMENT 19 kNm  
(N.T.S.)



DETAIL 'A'  
(N.T.S.)

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CONSULTANTS CHOP & SIGNATURE

REVISION	DESCRIPTION	DATE
T0	TENDER STAGE	FEB 2023

CONTRACT TITLE :

SG LANGAT DAM

DRAWING TITLE :

FLOODLIGHT POLE DETAIL

DATE	SCALE	NTS
DRAWN : YMN	CHECKED : UMI KALSON	
DESIGNED : GANNA	APPROVED : IR.ZAHROL	
DRAWING NUMBER : AIS/2520016/LD/25/DTL/003	REVISION	T0

TENDER DRAWING