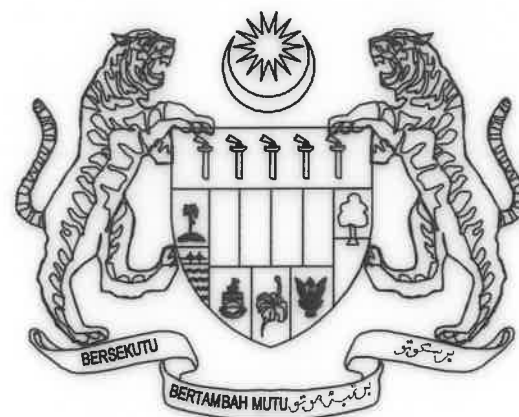
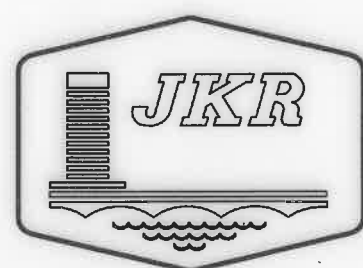




KERAJAAN MALAYSIA

STANDARD DRAWINGS FOR ROAD WORKS

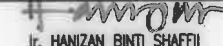
SECTION 8 : TRAFFIC SIGNAL SYSTEM

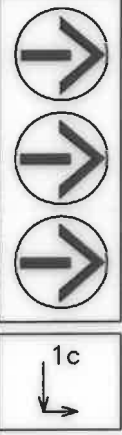
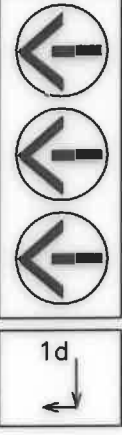
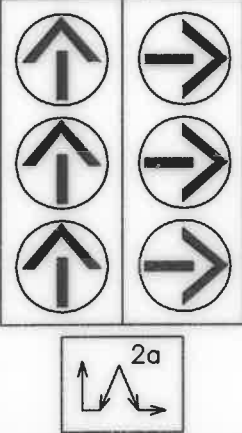
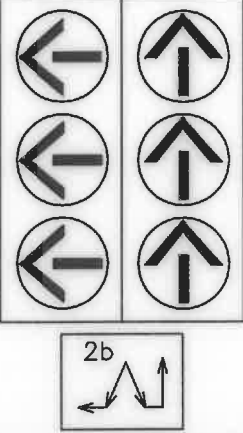
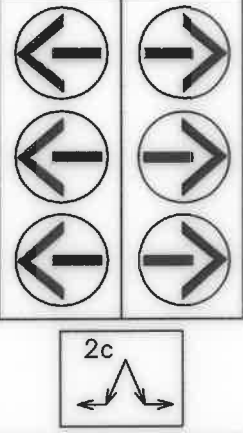
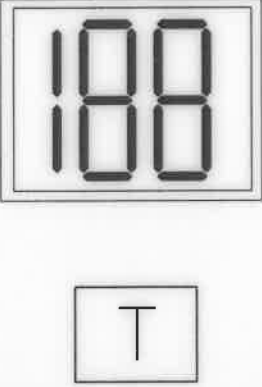
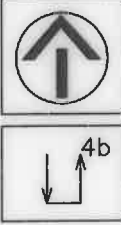
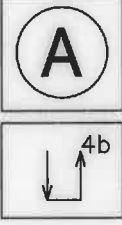


Ketua Pengarah Kerja Raya
Jabatan Kerja Raya Malaysia
Jalan Sultan Salahuddin
50582 Kuala Lumpur

LIST OF DRAWINGS : TRAFFIC SIGNAL SYSTEM

NO.	DRAWING TITLE	DRAWING NO	NO.	DRAWING TITLE	DRAWING NO
1	LIST OF DRAWINGS	KPKR/J/R/STD/S8/01-1	20	TRAFFIC SIGNAL INFORMATION BOARD	KPKR/J/R/STD/S8/06-1
2	TRAFFIC SIGNAL HEAD (ASPECT)	KPKR/J/R/STD/S8/02-1			
3	PEDESTRIAN SIGNAL HEAD AND COUNTDOWN NUMERIC DISPLAY	KPKR/J/R/STD/S8/02-2			
4	SIGNAL HEAD DETAILS	KPKR/J/R/STD/S8/03-1			
5	CONTROLLER HOUSING (WITH METER TNB)	KPKR/J/R/STD/S8/04-1			
6	DETAILS OF CONTROLLER (WITH METER TNB)	KPKR/J/R/STD/S8/04-2			
7	CONTROLLER HOUSING (WITHOUT METER TNB)	KPKR/J/R/STD/S8/04-3			
8	DETAILS OF CONTROLLER (WITHOUT METER TNB)	KPKR/J/R/STD/S8/04-4			
9	TRAFFIC SIGNAL COLUMN (TUBULAR HOLLOW TYPE-SIDE HINGE)	KPKR/J/R/STD/S8/05-1			
10	TRAFFIC SIGNAL COLUMN (TUBULAR HOLLOW TYPE-TOP HINGE)	KPKR/J/R/STD/S8/05-2			
11	TRAFFIC SIGNAL COLUMN (OVERHEAD TYPE)	KPKR/J/R/STD/S8/05-3			
12	OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN (HPSV WITHOUT ARM TYPE)	KPKR/J/R/STD/S8/05-4			
13	OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN (HPSV WITH ARM TYPE)	KPKR/J/R/STD/S8/05-5			
14	TRAFFIC SIGNAL HEAD MOUNTED ON ROAD LIGHTING COLUMN (HPSV WITHOUT ARM TYPE)	KPKR/J/R/STD/S8/05-6			
15	TRAFFIC SIGNAL HEAD MOUNTED ON ROAD LIGHTING COLUMN (HPSV WITH ARM TYPE)	KPKR/J/R/STD/S8/05-7			
16	OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN (LED WITHOUT ARM TYPE)	KPKR/J/R/STD/S8/05-8			
17	OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN (LED WITH ARM TYPE)	KPKR/J/R/STD/S8/05-9			
18	TRAFFIC SIGNAL HEAD MOUNTED ON ROAD LIGHTING COLUMN (LED WITHOUT ARM TYPE)	KPKR/J/R/STD/S8/05-10			
19	TRAFFIC SIGNAL HEAD MOUNTED ON ROAD LIGHTING COLUMN (LED WITH ARM TYPE)	KPKR/J/R/STD/S8/05-11			

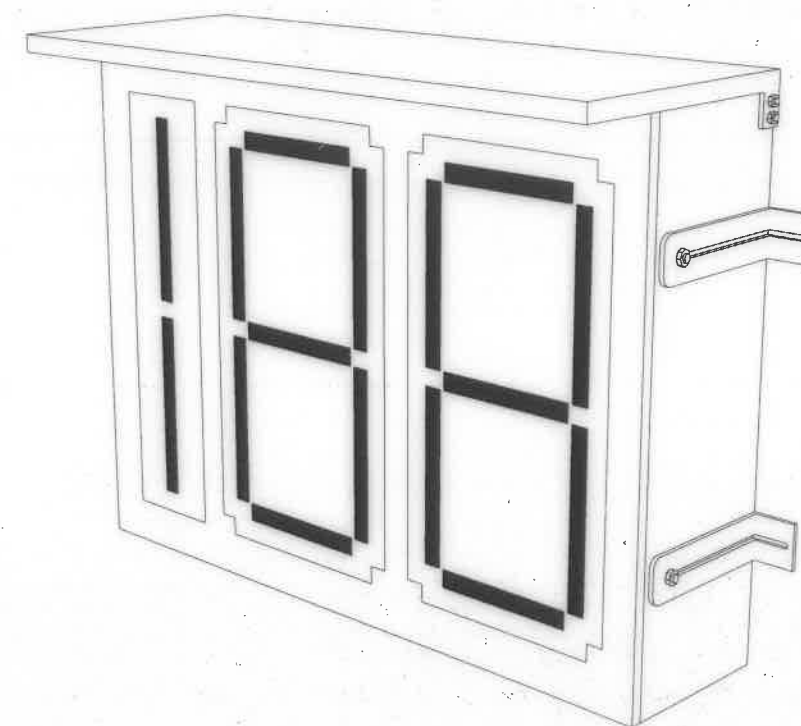
TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK		 Ir. HANIZAN BINTI SHAFFI PENGARAH KAWAN		SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIJAWAI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN		 JABATAN KERJA RAYA MALAYSIA					
			DIREKABENTUK : DZAKIRA BINTI ZAKARIA		DISEMAK : Ir. HANIFF BIN AB HAMID		TANDATANGAN :		LIST OF DRAWINGS					
			DILUKIS : M. YUSRIEZANIE M. YUSOFF		DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI		NAMA :							
			N.T.S UKURAN		Ir. HUSIN BIN MUSTAFA PENGARAH PERUNDING REKABENTUK		JAWATAN :							
PINDAAN							TARIKH: DISEMBER 2020		NO LUKISAN PIJAWAI : KPKR/J/R/STD/S8/01-1		BIL HELAAN PIJAWAI : 1/20		BIL HELAAN : 1/20	

GROUP 1	 TYPE 1a – 3 X 300mm HIGH POWERED LED TYPE WITH FULL RED, FULL AMBER AND FULL GREEN	 TYPE 1b – 3 X 300mm HIGH POWERED LED TYPE WITH STRAIGHT AHEAD RED ARROW, STRAIGHT AHEAD AMBER ARROW AND STRAIGHT AHEAD GREEN ARROW	 TYPE 1c – 3 X 300mm HIGH POWERED LED TYPE WITH RIGHT TURN RED ARROW, RIGHT TURN AMBER ARROW AND RIGHT TURN GREEN ARROW	 TYPE 1d – 3 X 300mm HIGH POWERED LED TYPE WITH LEFT TURN RED ARROW, LEFT TURN AMBER ARROW AND LEFT TURN GREEN ARROW
GROUP 2	 TYPE 2a – 6 X 300mm HIGH POWERED LED TYPE WITH 3X300mm STRAIGHT AHEAD RED ARROW, STRAIGHT AHEAD AMBER ARROW AND STRAIGHT AHEAD GREEN ARROW AND 3X300mm RIGHT TURN RED ARROW, RIGHT TURN AMBER ARROW AND RIGHT TURN GREEN ARROW	 TYPE 2b – 6 X 300mm HIGH POWERED LED TYPE WITH 3 X 300mm LEFT TURN RED ARROW, LEFT TURN AMBER ARROW AND LEFT TURN GREEN ARROW AND 3 X 300mm STRAIGHT AHEAD RED ARROW, STRAIGHT AHEAD AMBER ARROW AND STRAIGHT AHEAD GREEN ARROW	 TYPE 2c – 6 X 300mm HIGH POWERED LED TYPE WITH 3 X 300mm LEFT TURN RED ARROW, LEFT TURN AMBER ARROW AND LEFT TURN GREEN ARROW AND 3 X 300mm RIGHT TURN RED ARROW, RIGHT TURN AMBER ARROW AND RIGHT TURN GREEN ARROW	
GROUP 3	 TYPE 3a – 2 X 300mm HIGH POWERED LED TYPE WITH RED MAN STANDING AND GREEN MAN WALKING (COMPLETE WITH COUNTDOWN NUMERIC DISPLAY AND BUZZER)	 DIGITAL COUNTDOWN NUMERIC DISPLAY TYPE 2 OR 3 DIGIT, COUNTDOWN TIMERS IN SECONDS, COMPLETE WITH RED AND GREEN LIGHTS.		
GROUP 4	 TYPE 4a – 1 X 300mm HIGH POWERED LED TYPE WITH STRAIGHT AHEAD GREEN ARROW FOR FREE FLOW LANE	 TYPE 4b – 1 X 300mm HIGH POWERED LED TYPE WITH FULL AMBER FOR FLASHING AMBER PURPOSE		

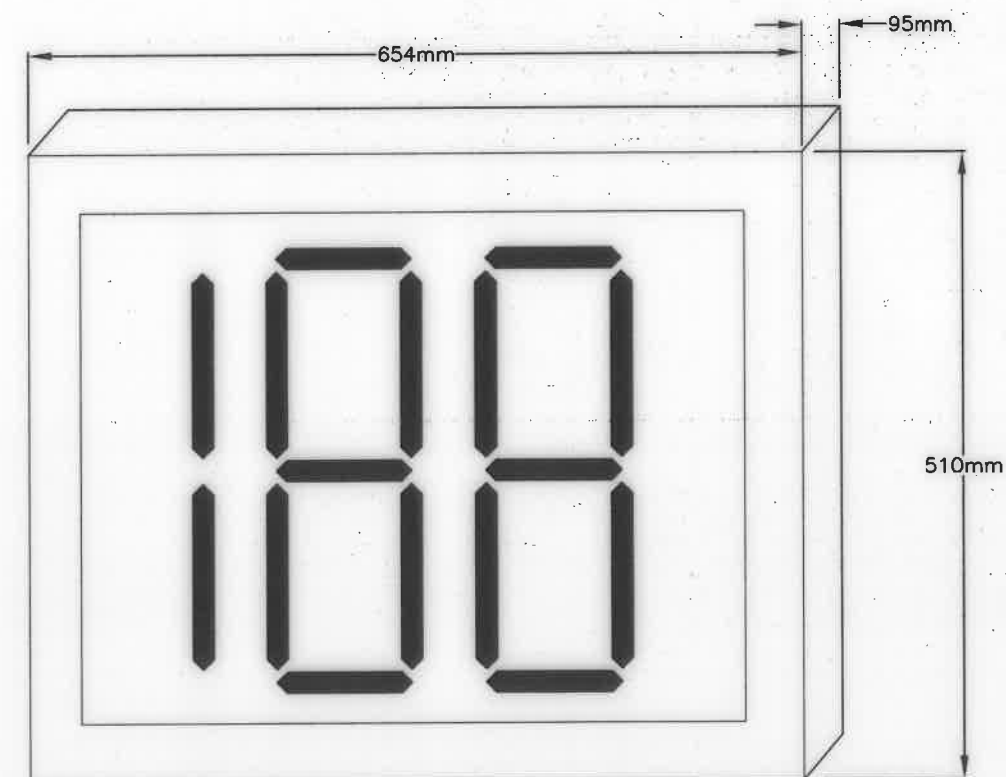
TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK		 Ir. HANIZAN BINTI SHAFFI PENGARAH KANAN	SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIAWAI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN	 JABATAN KERJA RAYA MALAYSIA			
	Lukisan / Rujukan Asal : KPKR/J/R/STD/AM 408		DIREKABENTUK : DZAKIRA BINTI ZAKARIA DILUKIS : M. YUSRIEIZANIE M. YUSOFF DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI	DISEMAK : Ir. HANIFF BIN AB HAMID PENGARAH PERUNDING REKABENTUK				TANDATANGAN : NAMA : JAWATAN :	TRAFFIC SIGNAL HEAD (ASPECT)	
PINDAAN			N.T.S UKURAN				TARIKH: DISEMBER 2020	NO LUKISAN PIAWAI : KPKR/J/R/STD/SB/02-1	BIL HELAAN PIAWAI: 2/20	BIL HELAAN :



PEDESTRIAN PUSH BUTTON



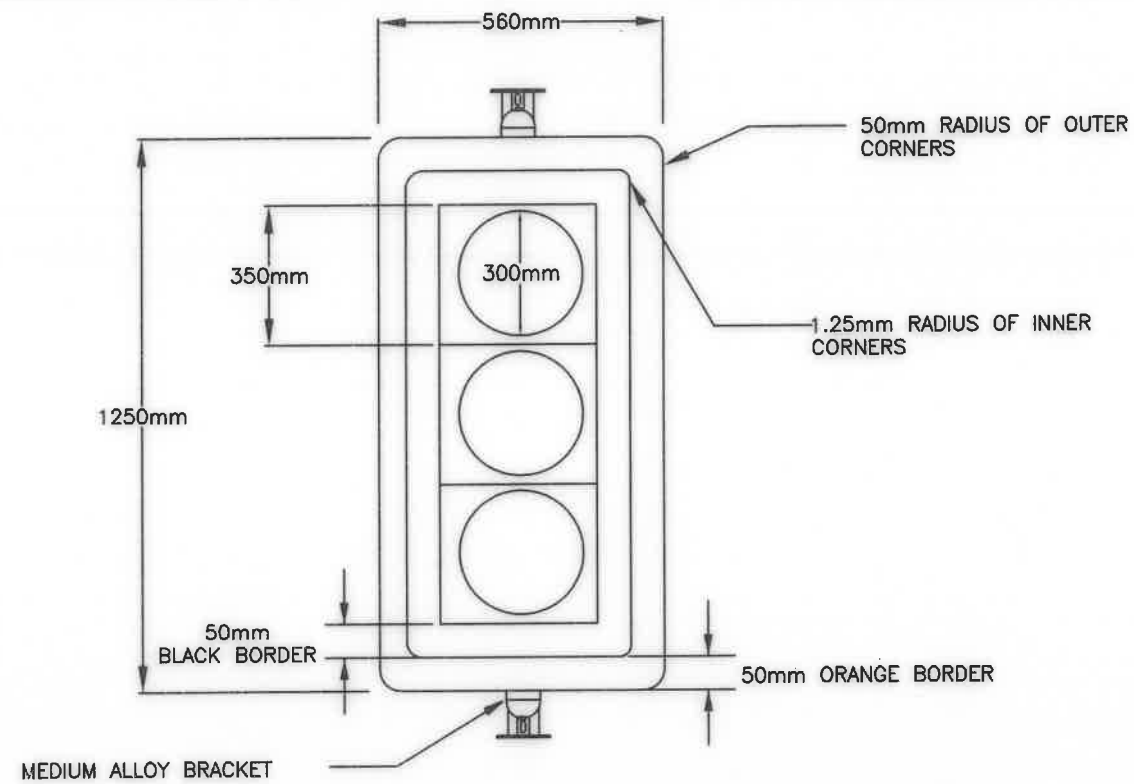
DIGITAL COUNTDOWN NUMERIC DISPLAY MOUNTING BRACKET



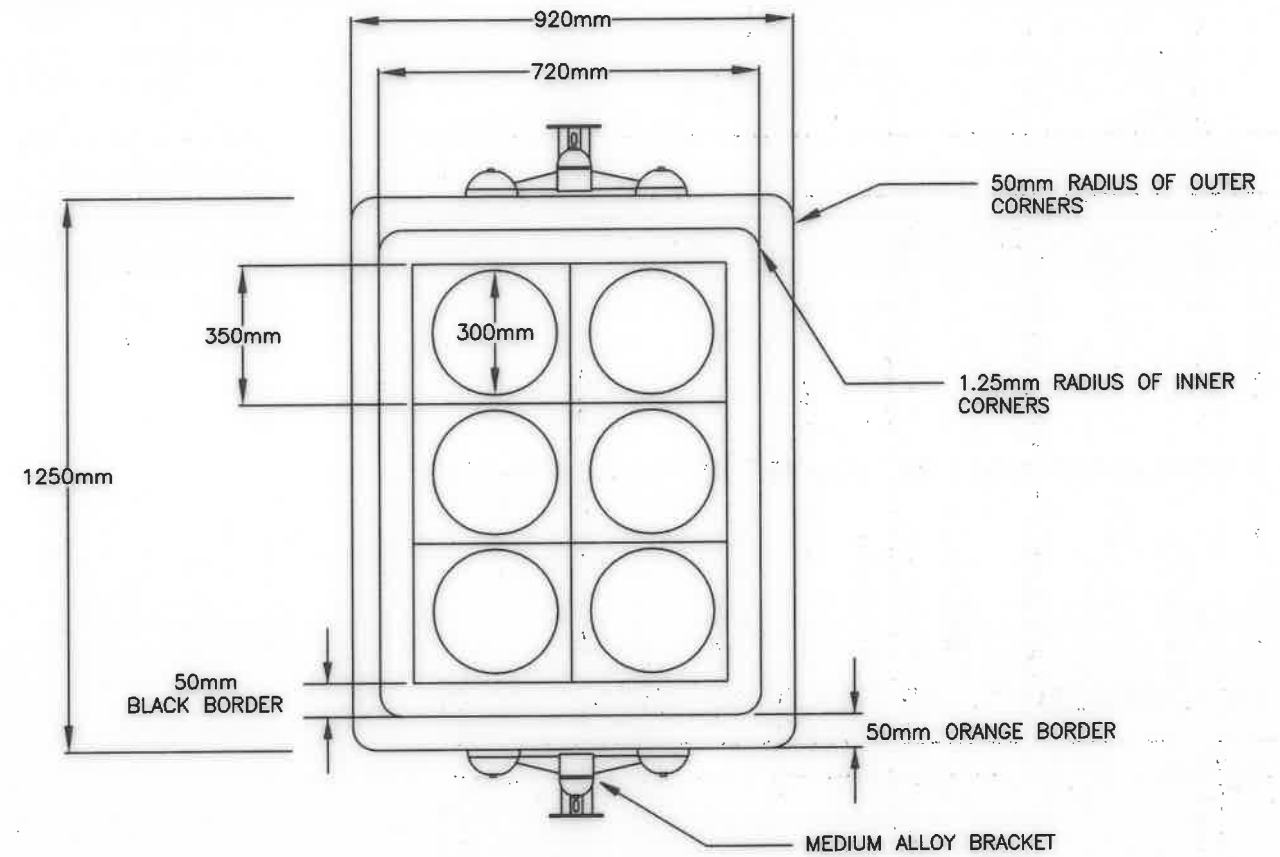
COUNTDOWN NUMERIC DISPLAY (2-TWO DIGIT)

COUNTDOWN NUMERIC DISPLAY (3-THREE DIGIT)

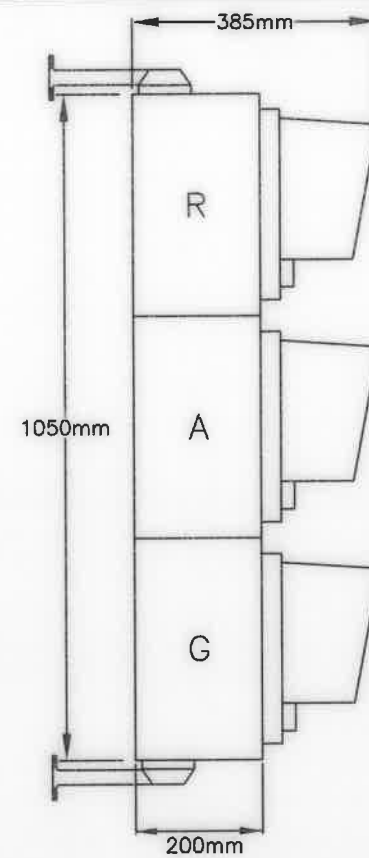
TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK	N.T.S UKURAN	# 11101111 Ir. HANIZAN BINTI SHAFFI PENGARAH KANAN	SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIWAJ INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN	 JABATAN KERJA RAYA MALAYSIA				
								DIREKABENTUK : DZAKIRA BINTI ZAKARIA	DISEMAK : Ir. HANIFF BIN AB HAMID	TANDATANGAN :	PEDESTRIAN SIGNAL HEAD AND COUNTDOWN NUMERIC DISPLAY
	PINDAAN							DILUKIS : M. YUSRIETZANIE M. YUSOFF	DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI	NAMA : JAWATAN :	



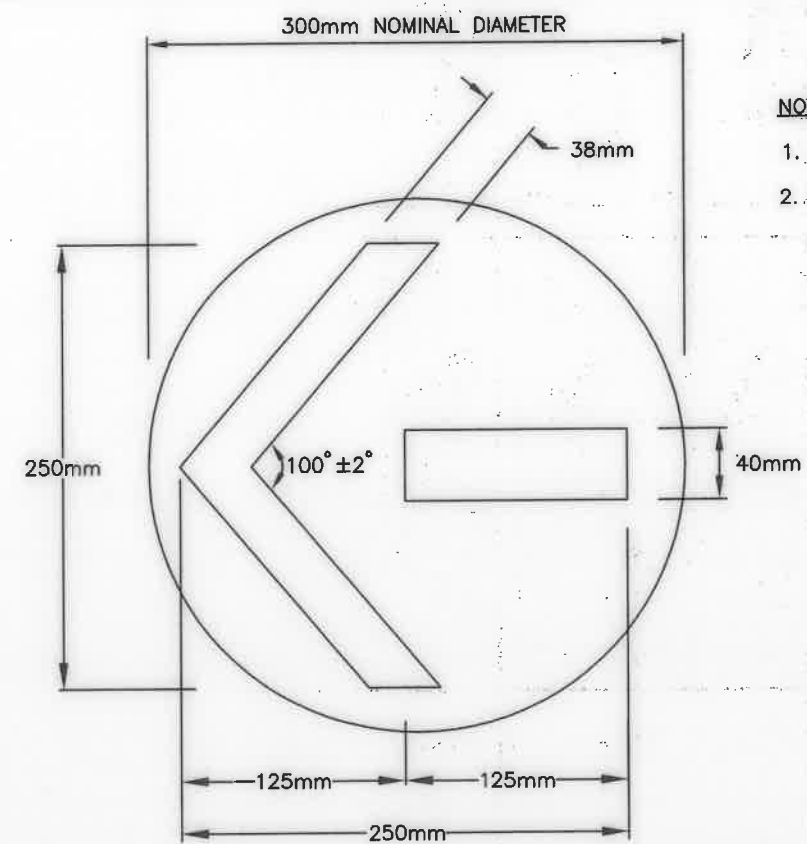
FRONT VIEW (3 X 300mm TYPE)



FRONT VIEW (6 X 300 mm TYPE)



SIDE VIEW



300mm DIRECTIONAL LENS

NOTE :

1. ARROWS MAY BE ORIENTATED IN ANY POSITION
2. TOLERANCE ON ALL DIMENSIONS ± 1.0 mm

TARIKH	BUTIRAN	RUJUKAN
	PINDAAN	

N.T.S
UKURAN

CAWANGAN KEJURUTERAAN ELEKTRIK

DIREKABENTUK :
DZAKIRA BINTI ZAKARIA
DILUKIS :
M. YUSRIETZANIE M. YUSOFF
DILULUSKAN :
Ir. NOOR ASHIKIN BINTI MD TAMIMI

DISEMAK :
Ir. HANIFF BIN AB HAMID

Ir. HANIZAN BINTI SHAFFI
PENGARAH KANAN

Ir. HUSIN BIN MUSTAFA
PENGARAH PERUNDING REKABENTUK

SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN
BAHAWA LUKISAN PIAWAI INI BOLEH DIGUNAPAKAI
KE ATAS PROJEK BERKENAAN

TANDATANGAN :

NAMA :

JAWATAN :



JABATAN KERJA RAYA MALAYSIA

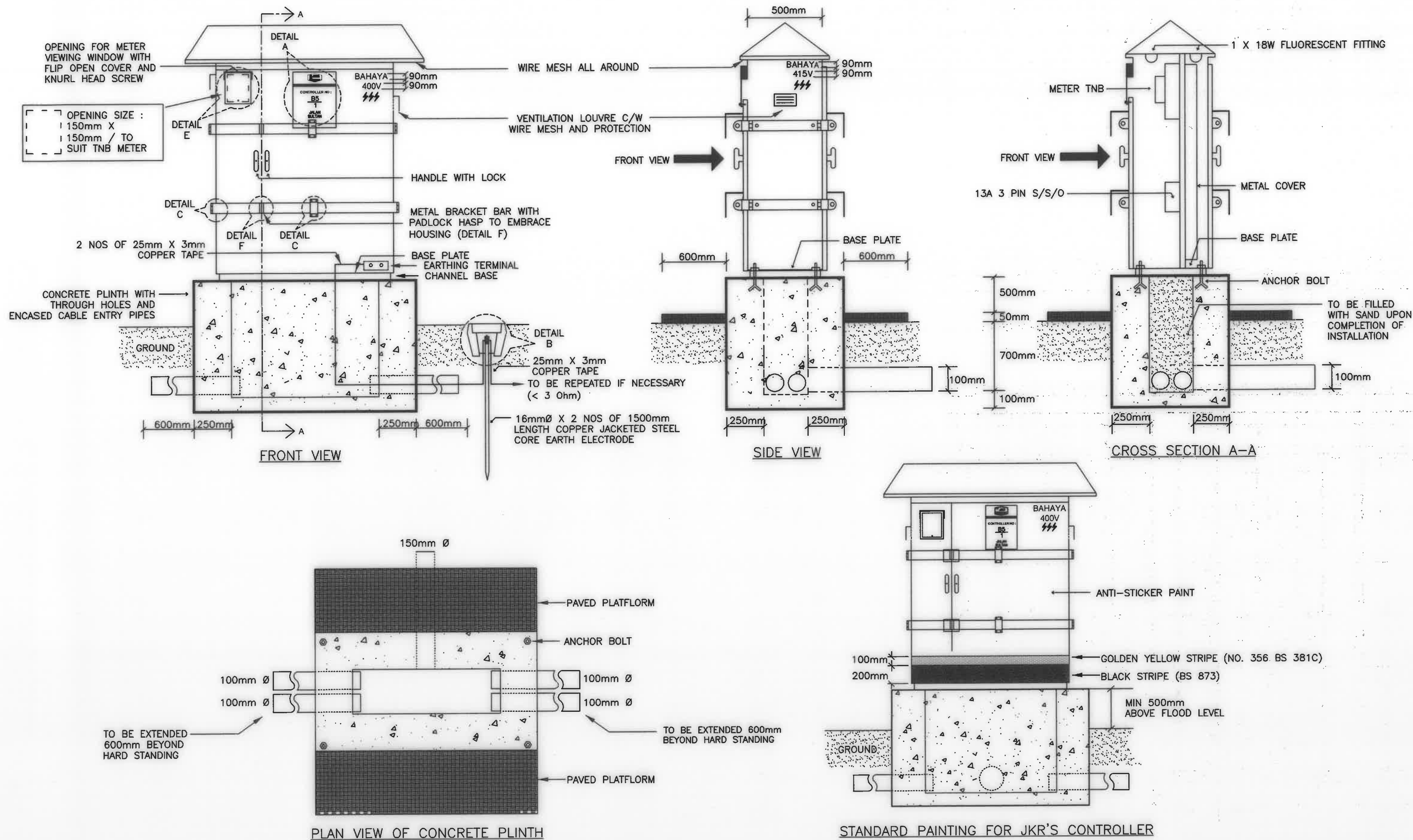
SIGNAL HEAD DETAILS

TARIKH:
DISEMBER 2020

NO LUKISAN PIAWAI :
KPKR/J/R/STD/58/03-1

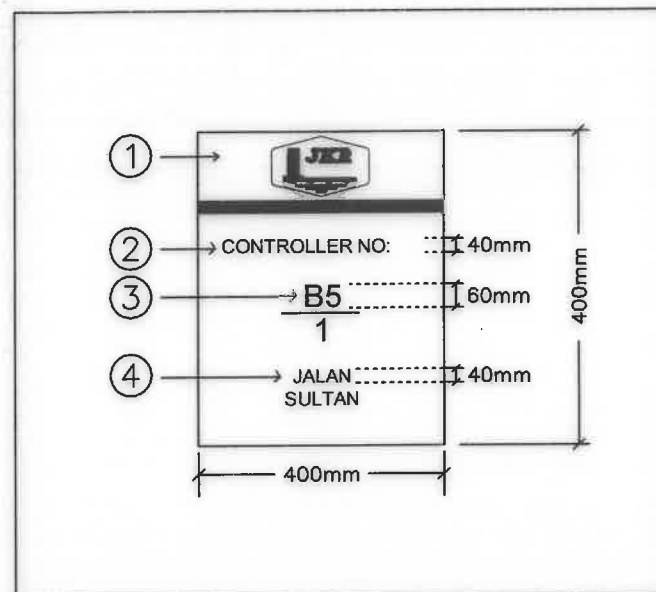
BIL HELAAN
PIAWAI: 4/20

BIL HELAAN :



TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK		SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PAJAWI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN		JABATAN KERJA RAYA MALAYSIA			
			DIREKABENTUK : DZAKIRA BINTI ZAKARIA	PENGARAH KANAN	TANDATANGAN :		CONTROLLER HOUSING (WITH METER TNB)			
			DILUKIS : M. YUSRIEIZANIE M. YUSOFF	DISEMAK : Ir. HANIFF BIN AB HAMID	NAMA :		TARikh: DESEMBER 2020			
			DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI	PENGARAH PERUNDING REKABENTUK	JAWATAN :		NO LUKISAN PAJAWI : KPKR/J/R/STD/SB/04-1			
	PINDAAN		N.T.S UKURAN				BIL HELAIAN PAJAWI: 5/20			

1

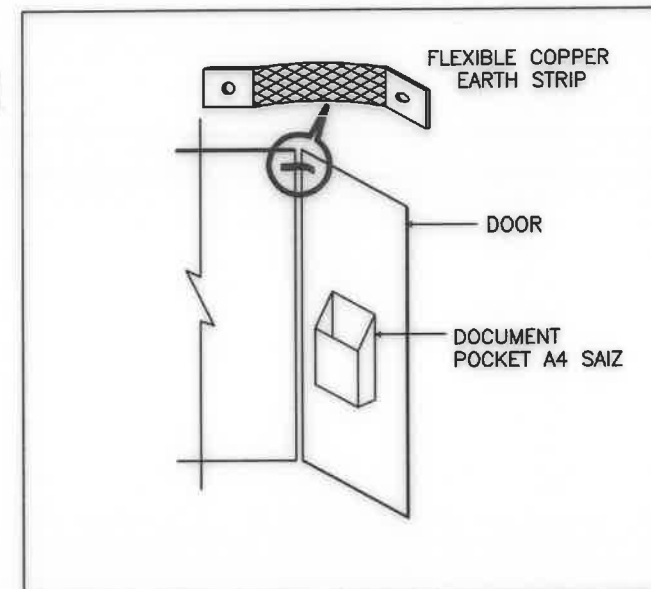


DETAIL A

LABEL FOR CONTROLLER STICKER

- ▷ Using yellow and black colour (JKR).
- ▷ Label to be sprayed on housing before anti-sticker paint coating / label using metal plate and riveted to the housing after anti-sticker coating.
- ① GOLDEN YELLOW - No. 356 British Standard 381C
- ② BLACK - Part 1 clause 1.3.2 and 1.3.3 British Standard 873.
- ▷ Controller
- ③ Label ▷ B/F - State Road (according to state code) / Federal Road.
B5 ▷ 5 - Road No.
1 ▷ 1 - Controller No.
- ④ Road name according to Local Authority.

4

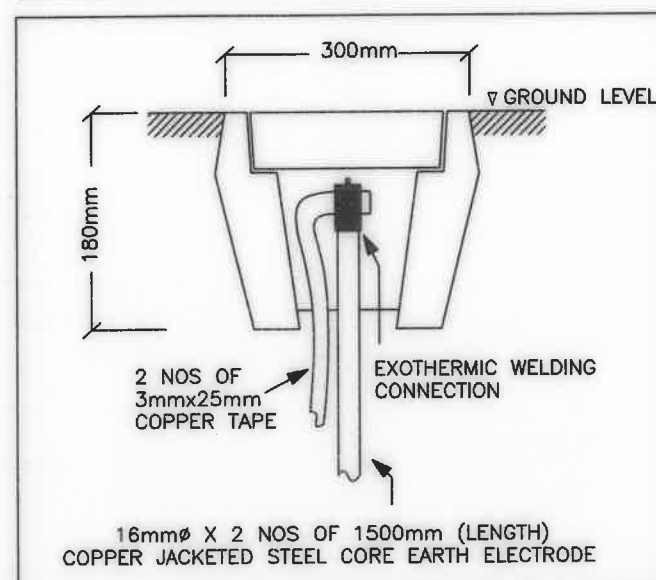


DETAIL D

CONTROLLER DOOR

- ▷ Bonding of controller door using flexible copper earth bonding strip.

2

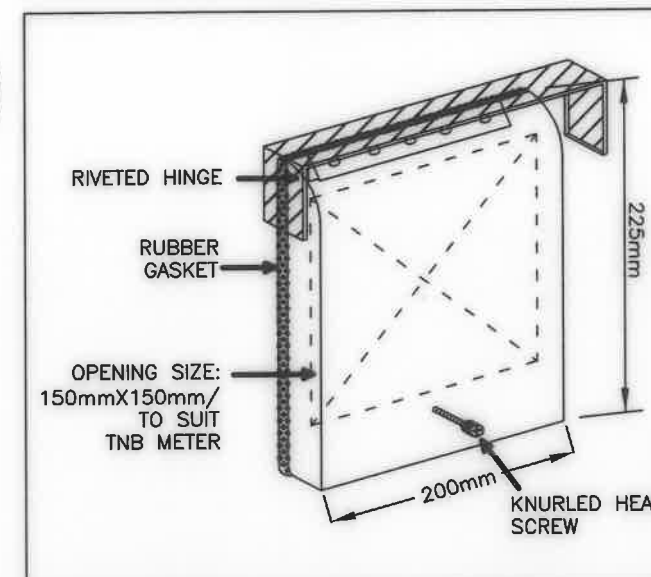


DETAIL B

CONCRETE EARTH INSPECTION CHAMBER

- ▷ 300 mm(W) X 300 mm(L) X 180 mm(D)
- ▷ Heavy duty precast concrete earth chamber with removable concrete cover.
- ▷ To be repeated if necessary

5

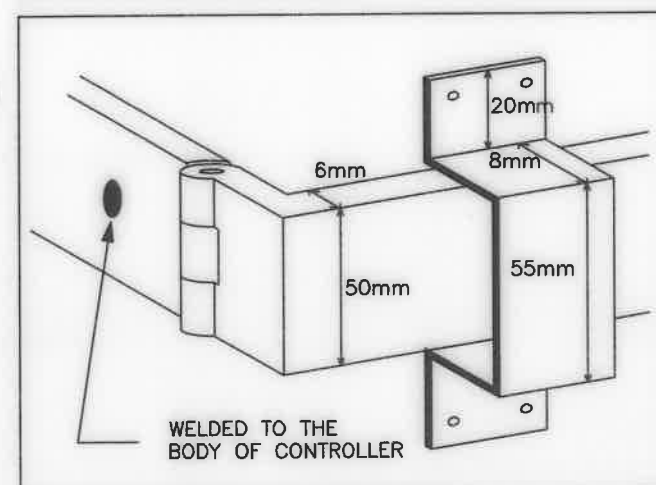


DETAIL E

COVER FOR TNB METER

- ▷ Flip open cover with gasket, knurled head screw for TNB meter.
- ▷ Material for Flip-open Cover shall be made of Fibreglass.

3

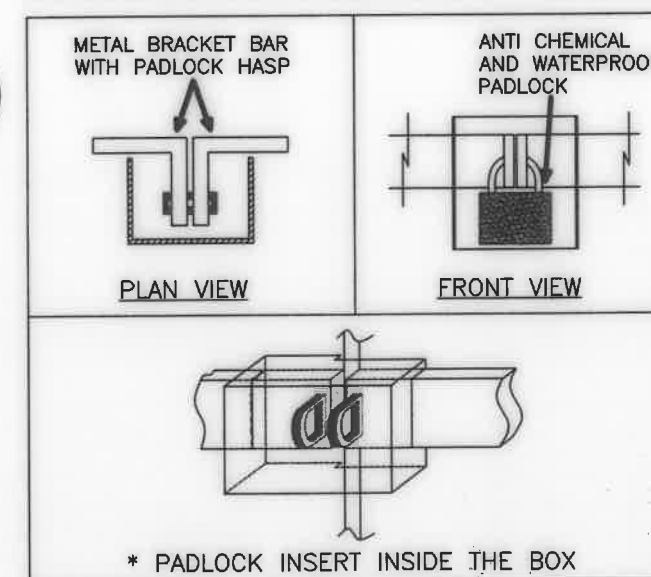


DETAIL C

METAL BAR AND HINGE

- ▷ Metal bar and hinge is fixed to the body of controller
- ▷ Support bracket for metal bar

6



DETAIL F

COVERED PADLOCK HASP

- ▷ Covered hasp c/w anti chemical, weatherproof padlock.

TARIKH

BUTIRAN

RUJUKAN

PINDAAN

CAWANGAN KEJURUTERAAN ELEKTRIK

DIREKABENTUK :

DZAKIRA BINTI ZAKARIA

DILUKIS :

M. YUSRIEIZANIE M. YUSOFF

DILULUSKAN :

Ir. NOOR ASHIKIN BINTI MD TAMIMI

N.T.S
UKURAN

DISEMAK :

Ir. HANIFF BIN AB HAMID

PENGARAH KANAN

Ir. HUSIN BIN MUSTAFA
PENGARAH PERUNDING REKABENTUKSAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN
BAHAWA LUKISAN PIJAWI INI BOLEH DIGUNAPAKAI
KE ATAS PROJEK BERKENAAN

TANDATANGAN :

NAMA :

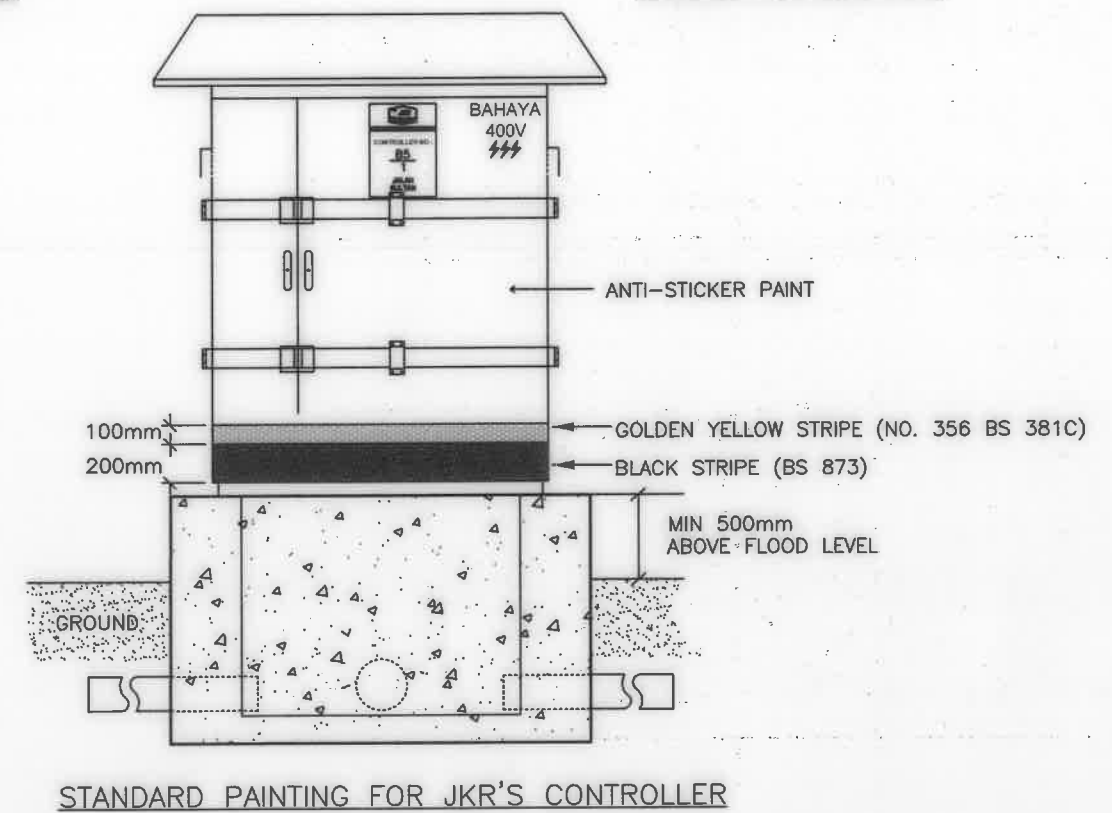
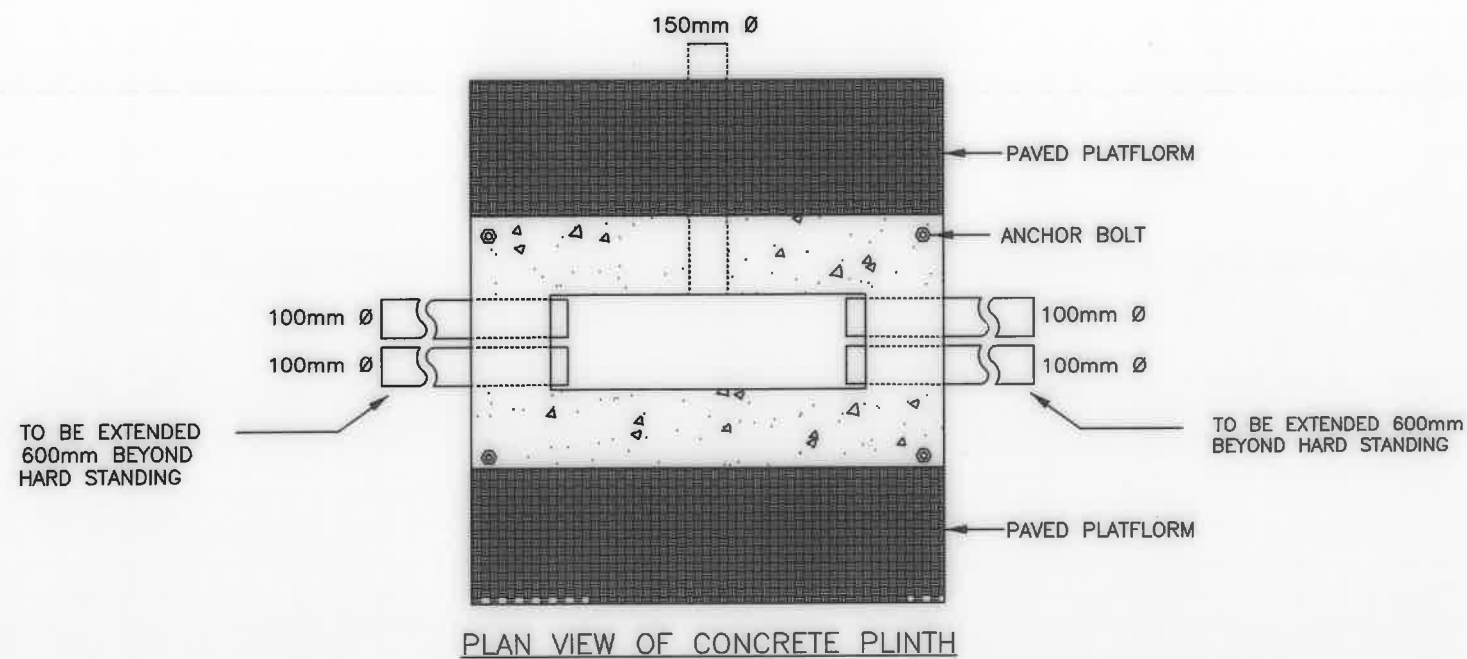
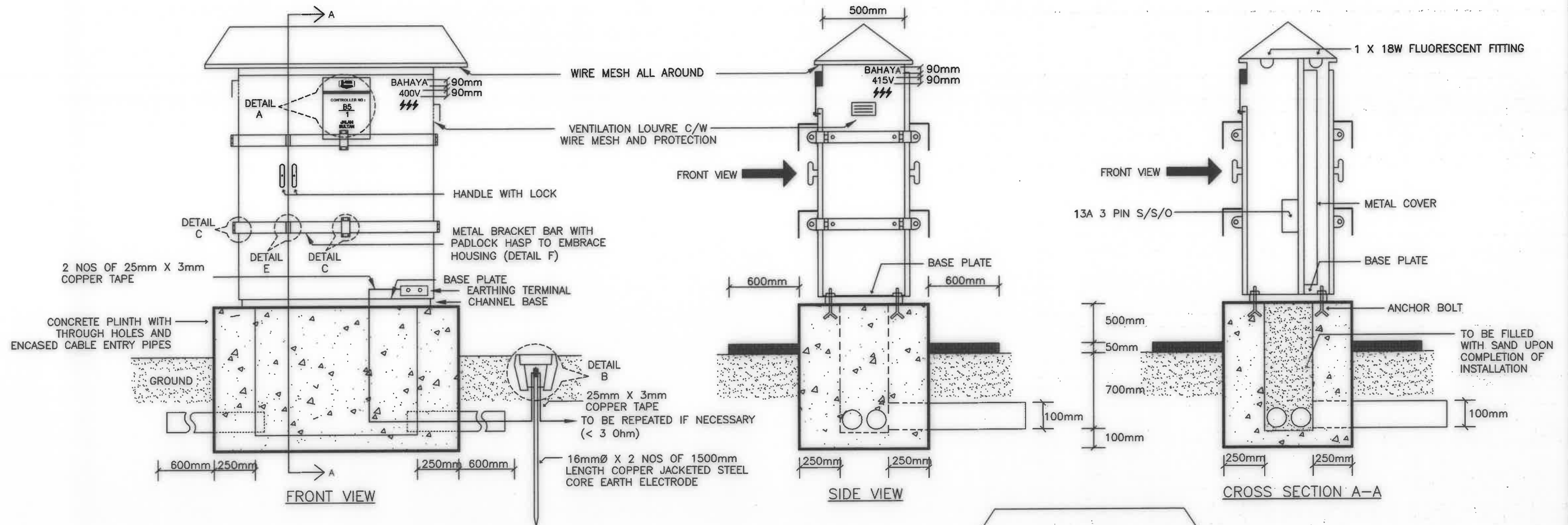
JAWATAN :



JABATAN KERJA RAYA MALAYSIA

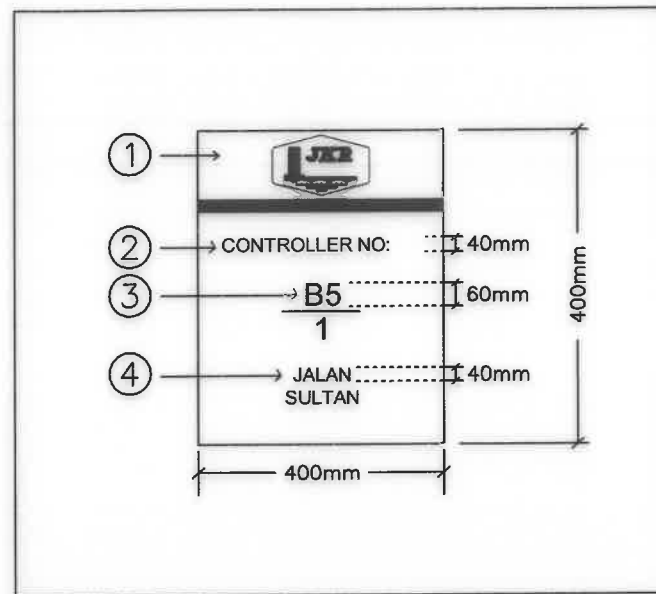
DETAIL OF CONTROLLER HOUSING (WITH METER TNB)

TARIKH:
DISEMBER 2020NO LUKISAN PIJAWI :
KPKR/J/R/STD/SB/04-2BIL HELAIAN
PIJAWI: 6/20BIL
HELAIAN :



TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK		SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIJAWI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN		JABATAN KERJA RAYA MALAYSIA			
			DIREKABENTUK : DZAKIRA BINTI ZAKARIA	PENGARAH KANAN			CONTROLLER HOUSING (WITHOUT METER TNB)			
			DILUKIS : M. YUSRIEIZANIE M. YUSOFF	DISEMAK : Ir. HANIFF BIN AB HAMID						
			DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI	PENGARAH PERUNDING REKABENTUK						
	PINDAAN		N.T.S UKURAN							
							TANDATANGAN :			
							NAMA :			
							JAWATAN :			
							TARIKH:	NO LUKISAN PIJAWI :	BIL HELAIAN PIJAWI :	BIL HELAIAN :
							DESEMBER 2020	KPKR/J/R/STD/SB/04-3	7/20	

1

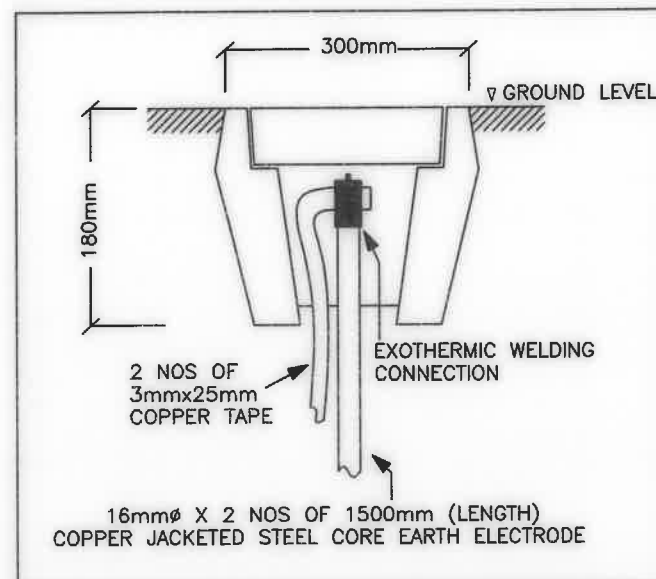


DETAIL A

LABEL FOR CONTROLLER STICKER

- ▷ Using yellow and black colour (JKR).
- ▷ Label to be sprayed on housing before anti-sticker point coating / label using metal plate and riveted to the housing after anti-sticker coating.
- ① GOLDEN YELLOW - No. 356 British Standard 381C
- ② BLACK - Part 1 clause 1.3.2 and 1.3.3 British Standard 873.
- ▷ Controller
- ③ Label ▷ B/F - State Road (according to state code) / Federal Road.
B5 ▷ 5 - Road No.
1 ▷ 1 - Controller No.
- ④ Road name according to Local Authority.

2

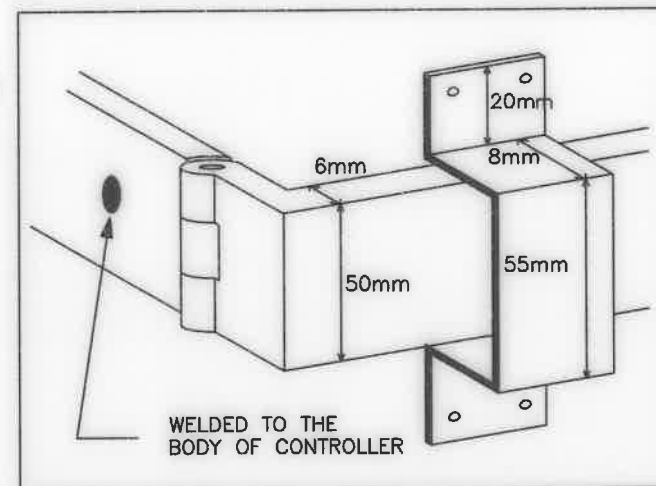


DETAIL B

CONCRETE EARTH INSPECTION CHAMBER

- ▷ 300 mm(W) X 300 mm(L) X 180 mm(D)
- ▷ Heavy duty precast concrete earth chamber with removable concrete cover.
- ▷ To be repeated if necessary

3

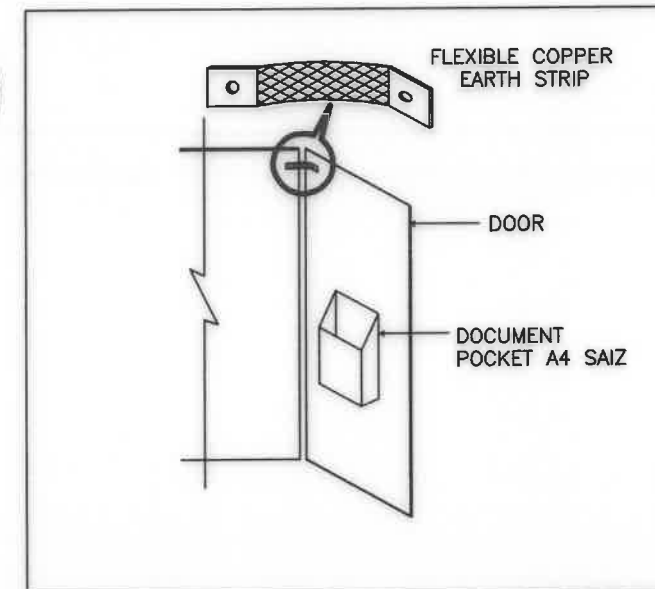


DETAIL C

METAL BAR AND HINGE

- ▷ Metal bar and hinge is fixed to the body of controller
- ▷ Support bracket for metal bar

4

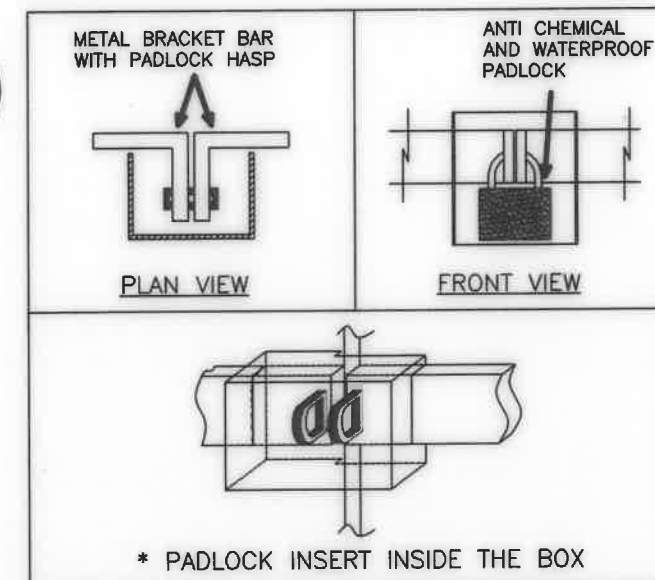


DETAIL D

CONTROLLER DOOR

- ▷ Bonding of controller door using flexible copper earth bonding strip.

5



DETAIL E

COVERED PADLOCK HASP

- ▷ Covered hasp c/w anti chemical, weather proof padlock.

TARIKH

BUTIRAN

RUJUKAN

CAWANGAN KEJURUTERAAN ELEKTRIK

DIREKABENTUK :

DZAKIRA BINTI ZAKARIA

DILUKIS :

M. YUSRIEZHANIE M. YUSOFF

DISEMAK :

Ir. HANIFF BIN AB HAMID

DILULUSKAN :

Ir. NOOR ASHIKIN BINTI MD TAMIMI

N.T.S
UKURANIr. WANIZAN BINTI SHAFFI
PENGARAH KANANIr. HUSIN BIN MUSTAFA
PENGARAH PERUNDING REKABENTUKSAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN
BAHAWA LUKISAN PIJAWI INI BOLEH DIGUNAPAKAI
KE ATAS PROJEK BERKENAAN

TANDATANGAN :

NAMA :

JAWATAN :

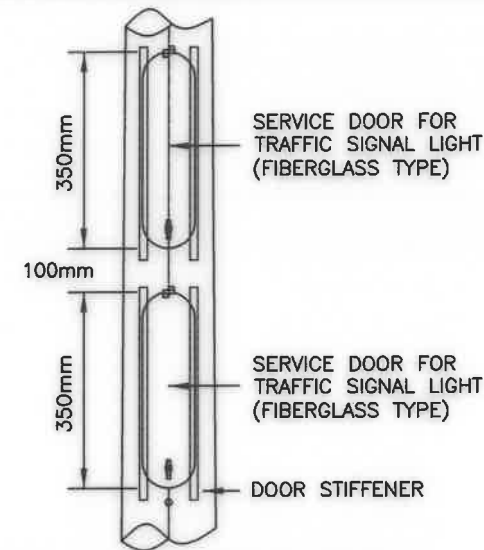
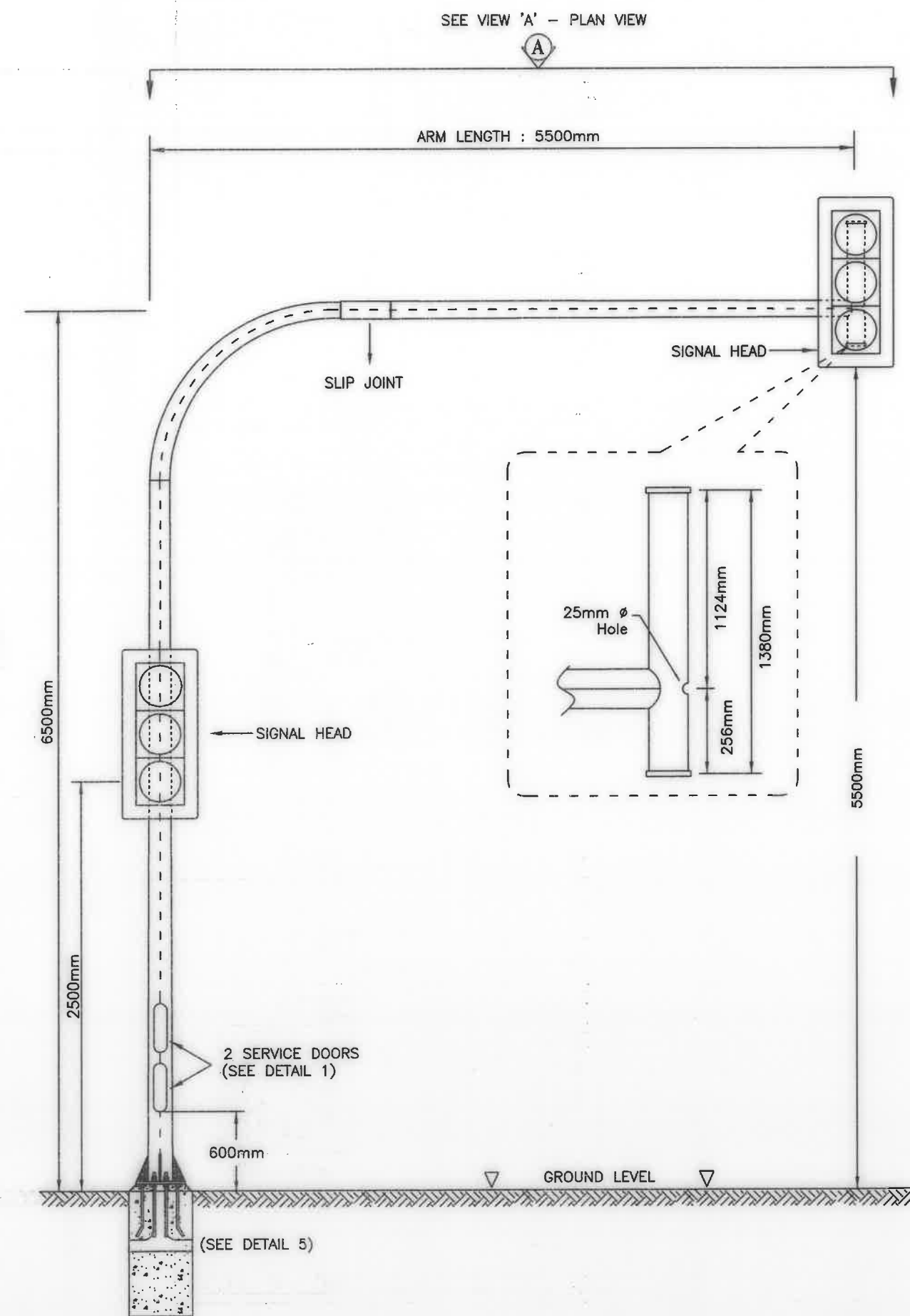


JABATAN KERJA RAYA MALAYSIA

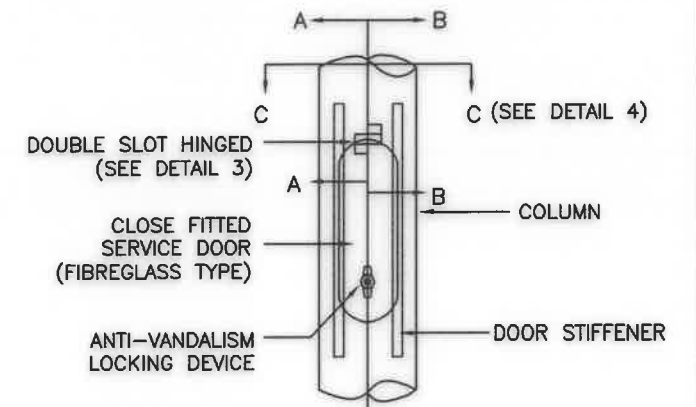
DETAIL OF CONTROLLER HOUSING (WITHOUT METER TNB)

TARIKH:
DISEMBER 2020NO LUKISAN PIJAWI :
KPKR/J/R/STD/S8/04-4BIL HELAAN
PIJAWI: 8/20BIL
HELAAN :

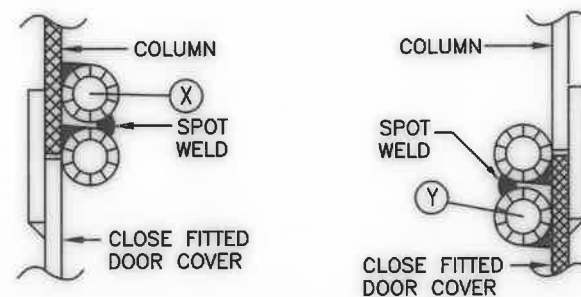
PINDAAN



DETAIL 1 : 2 SERVICE DOOR



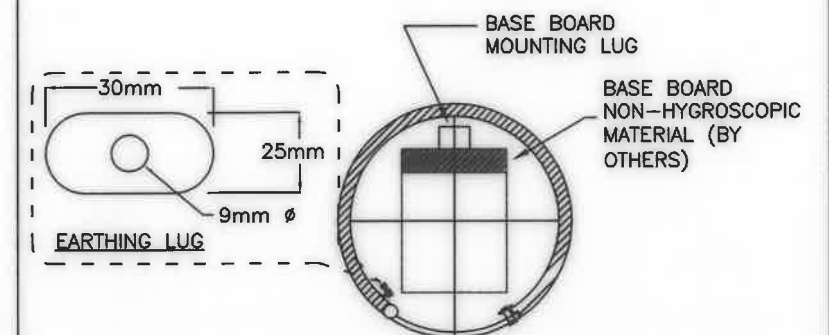
DETAIL 2 :
DOUBLE SLOT HINGE SERVICE DOOR



SECT A-A

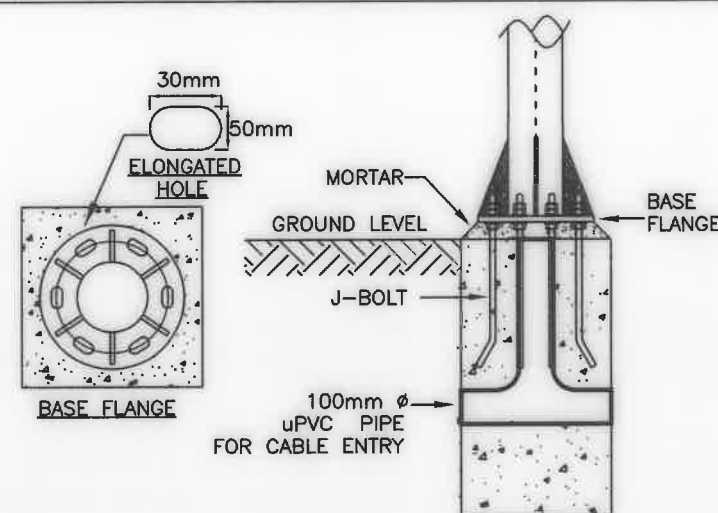
SECT B-B

DETAIL 3 : DOUBLE SLOT HINGE

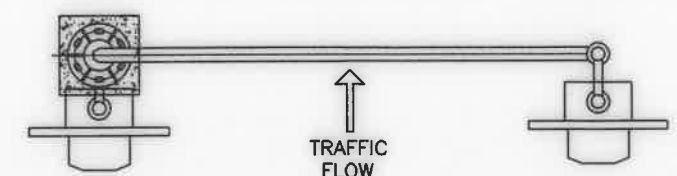


SECT C-C

DETAIL 4 :
BASE BOARD FOR TERMINATION PANEL



DETAIL 5 : BASE FLANGE & CONCRETE FOUNDATION



VIEW 'A' - PLAN VIEW

TARIKH

BUTIRAN

RUJUKAN

CAWANGAN KEJURUTERAAN ELEKTRIK

DIREKABENTUK :

DZAKIRA BINTI ZAKARIA

DILUKIS :

M. YUSRIE ZANIE M. YUSOFF

DILULUSKAN :

Ir. NOOR ASHIKIN BINTI MD TAMIMI

DISEMAK :

Ir. HANIFF BIN AB HAMID

N.T.S
UKURAN

PINDAAN

Ir. HANIZAN BINTI SHAFFI

PENGARAH KANAN

Ir. HUSIN BIN MUSTAFA

PENGARAH PERUNDING REKABENTUK

SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIJAWI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN

TANDATANGAN :

NAMA :

JAWATAN :



JABATAN KERJA RAYA MALAYSIA

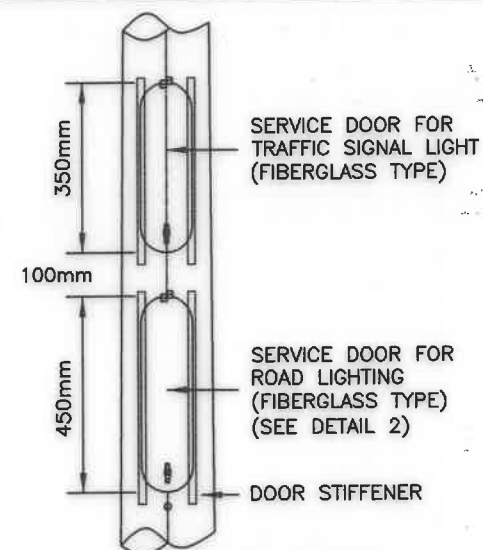
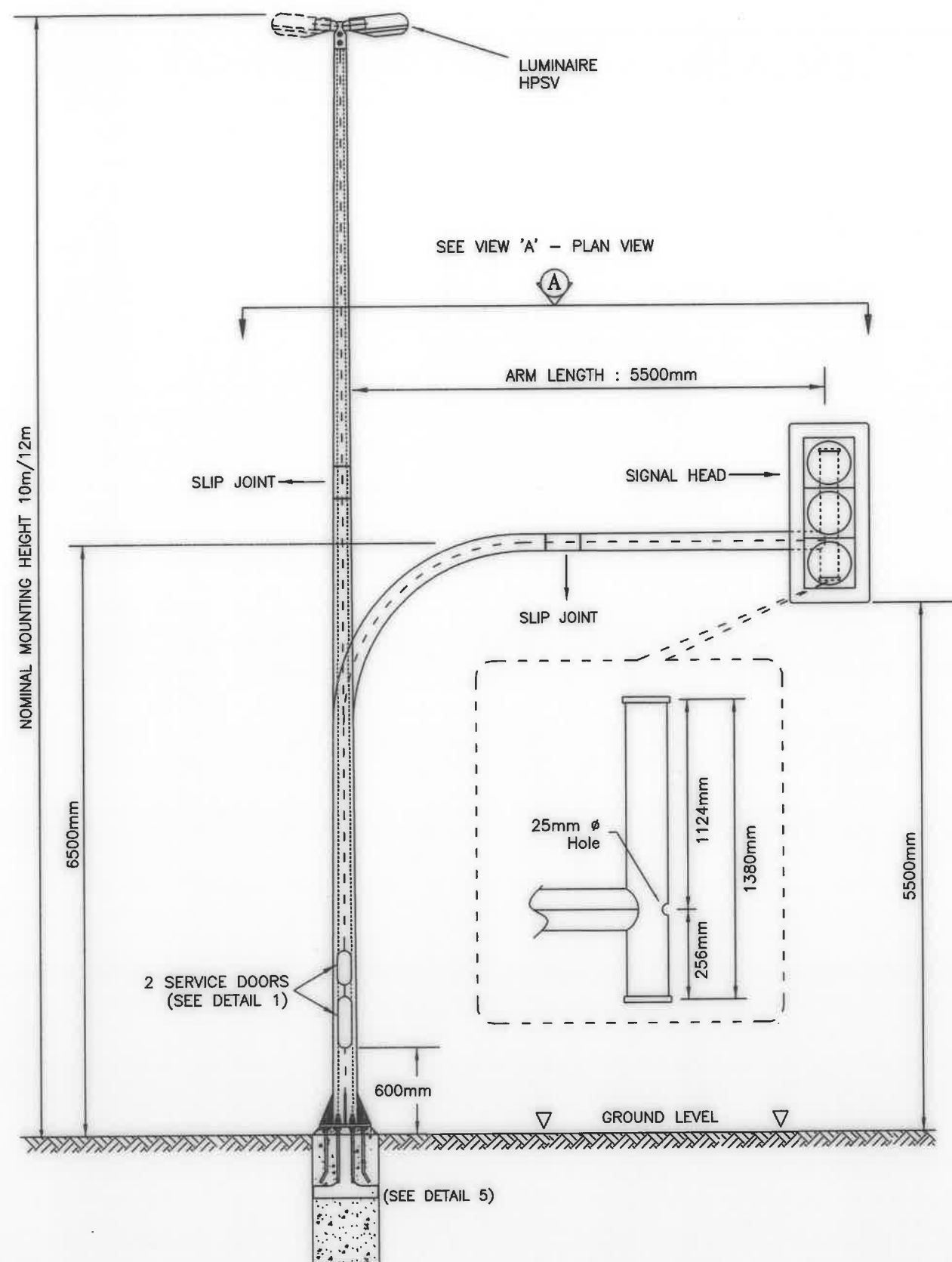
TRAFFIC SIGNAL COLUMN (OVERHEAD TYPE)

TARIKH:
DESEMBER 2020

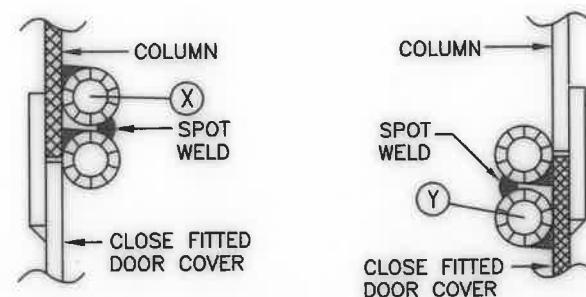
NO LUKISAN PIJAWI :
KPKR/J/R/STD/SB/05-3

BIL HELAJAN
PIJAWI: 11/20

BIL HELAJAN :



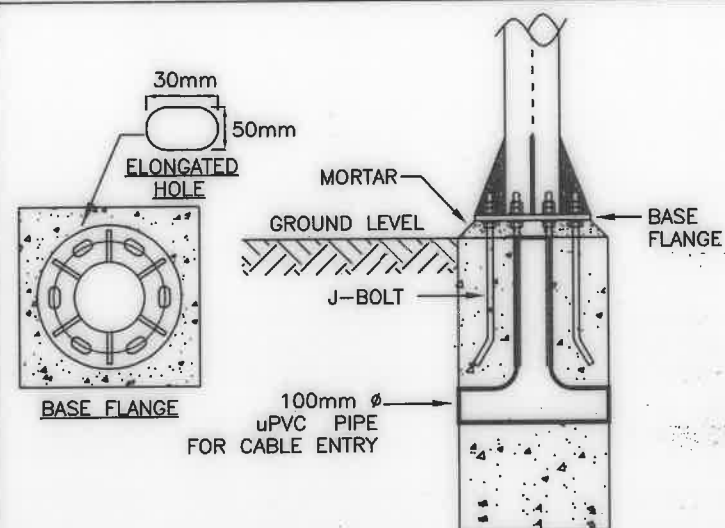
DETAIL 1 : 2 SERVICE DOORS



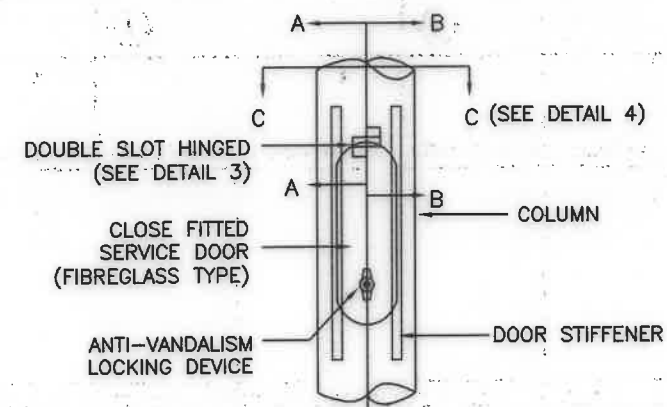
SECT A-A

SECT B-B

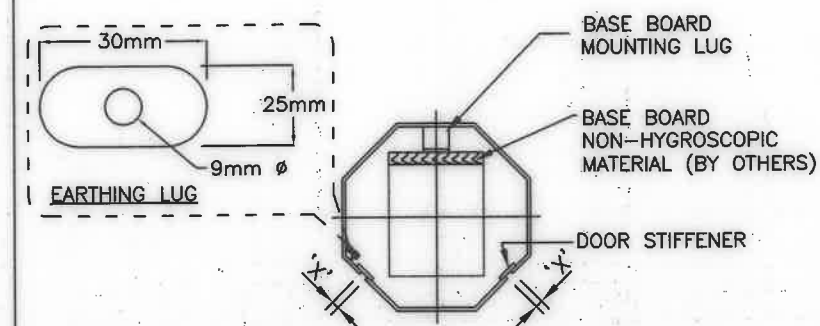
DETAIL 3 : DOUBLE SLOT HINGE



DETAIL 5 : BASE FLANGE & CONCRETE FOUNDATION



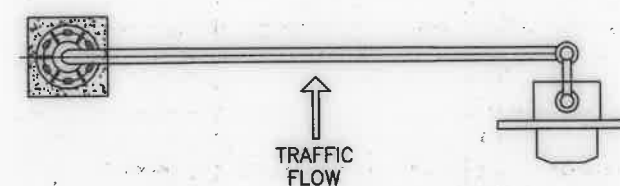
DETAIL 2 :
DOUBLE SLOT HINGE SERVICE DOOR



SECT C-C

DOOR COVER TO BE MECHANICALLY PUNCH AND THE CLEARANCE - 'X' - AROUND DOOR SHOULD NOT EXCEED 1mm

DETAIL 4 :
BASE BOARD FOR TERMINATION PANEL



VIEW 'A' - PLAN VIEW

TARIKH

BUTIRAN

RUJUKAN

CAWANGAN KEJURUTERAAN ELEKTRIK

DIREKABENTUK :
DZAKIRA BINTI ZAKARIA

DILUKIS :

DILULUSKAN :

Ir. NOOR ASHIKIN BINTI MD TAMIMI

DISEMAK :

Ir. HANIFF BIN AB HAMID

N.T.S
UKURAN

PINDAAN

Ir. HANIZAN BINTI SHAFFI

PENGARAH KANAN

Ir. HUSIN BIN MUSTAFA

PENGARAH PERUNDING REKABENTUK

SAYA DENGAN INI TELAH MENYEMAK DAN MENGESahkan
 BAHAWA LUKISAN PIWAI INI BOLEH DIGUNAPAKAI
 KE ATAS PROJEK BERKENAAN

TANDATANGAN :

NAMA :

JAWATAN :



JABATAN KERJA RAYA MALAYSIA

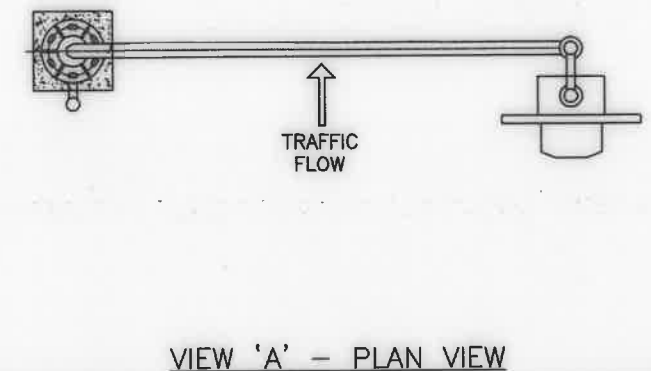
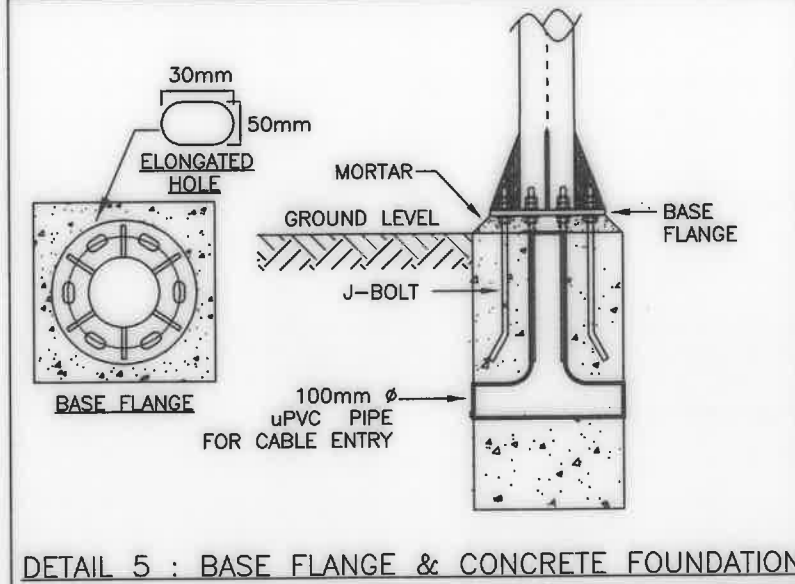
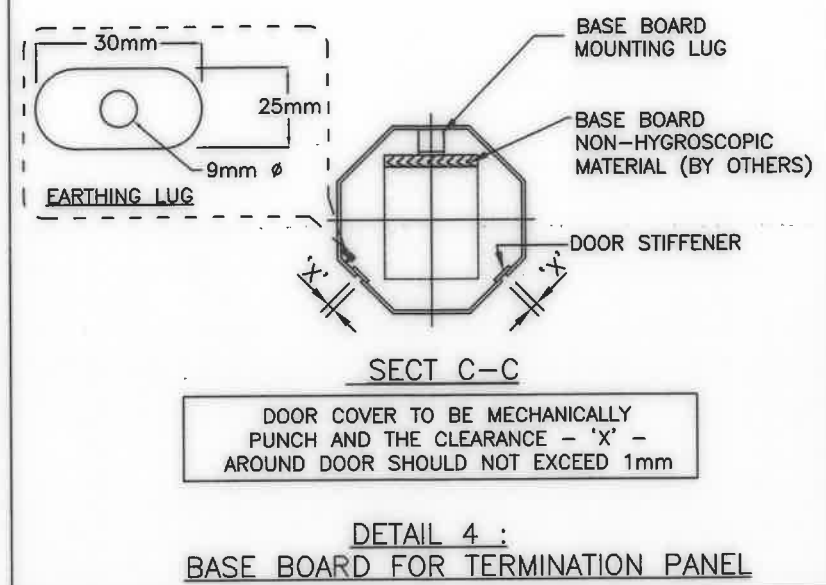
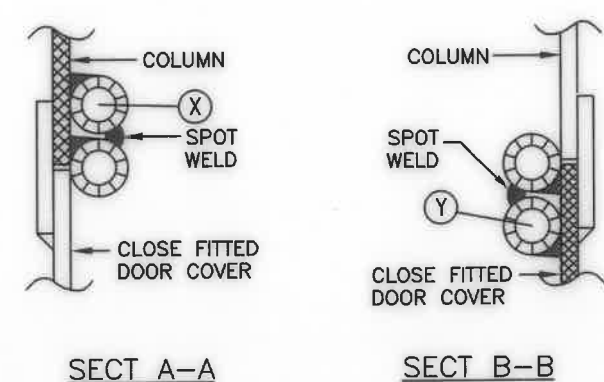
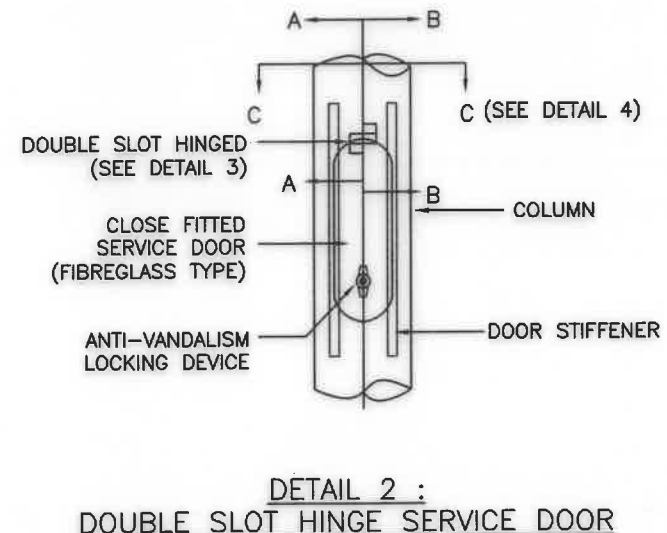
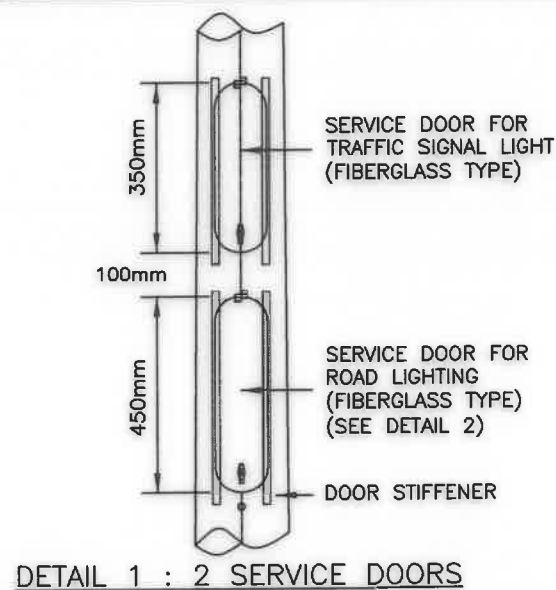
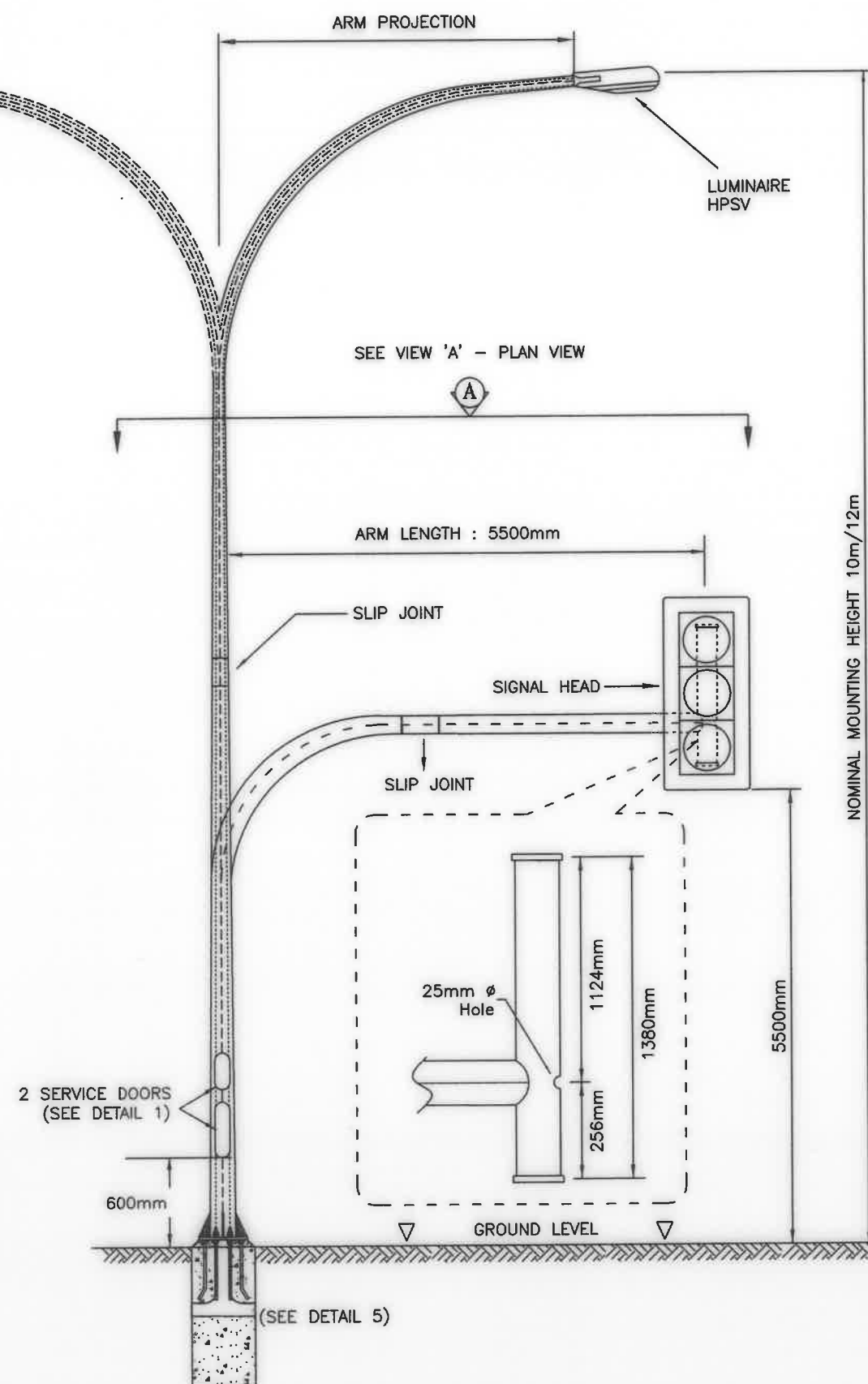
OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN
 FOR HPSV (WITHOUT ARM TYPE)

TARIKH:
 12/20/2020

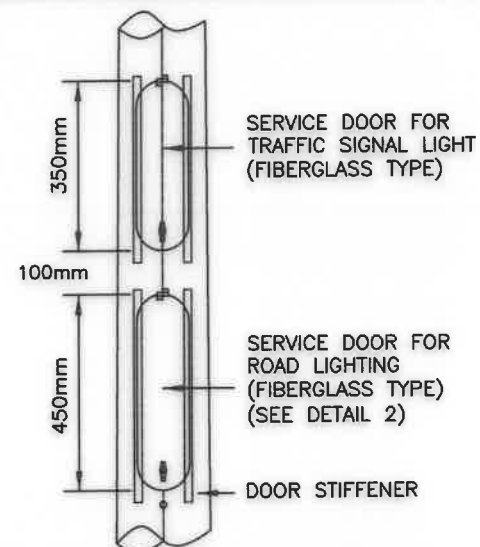
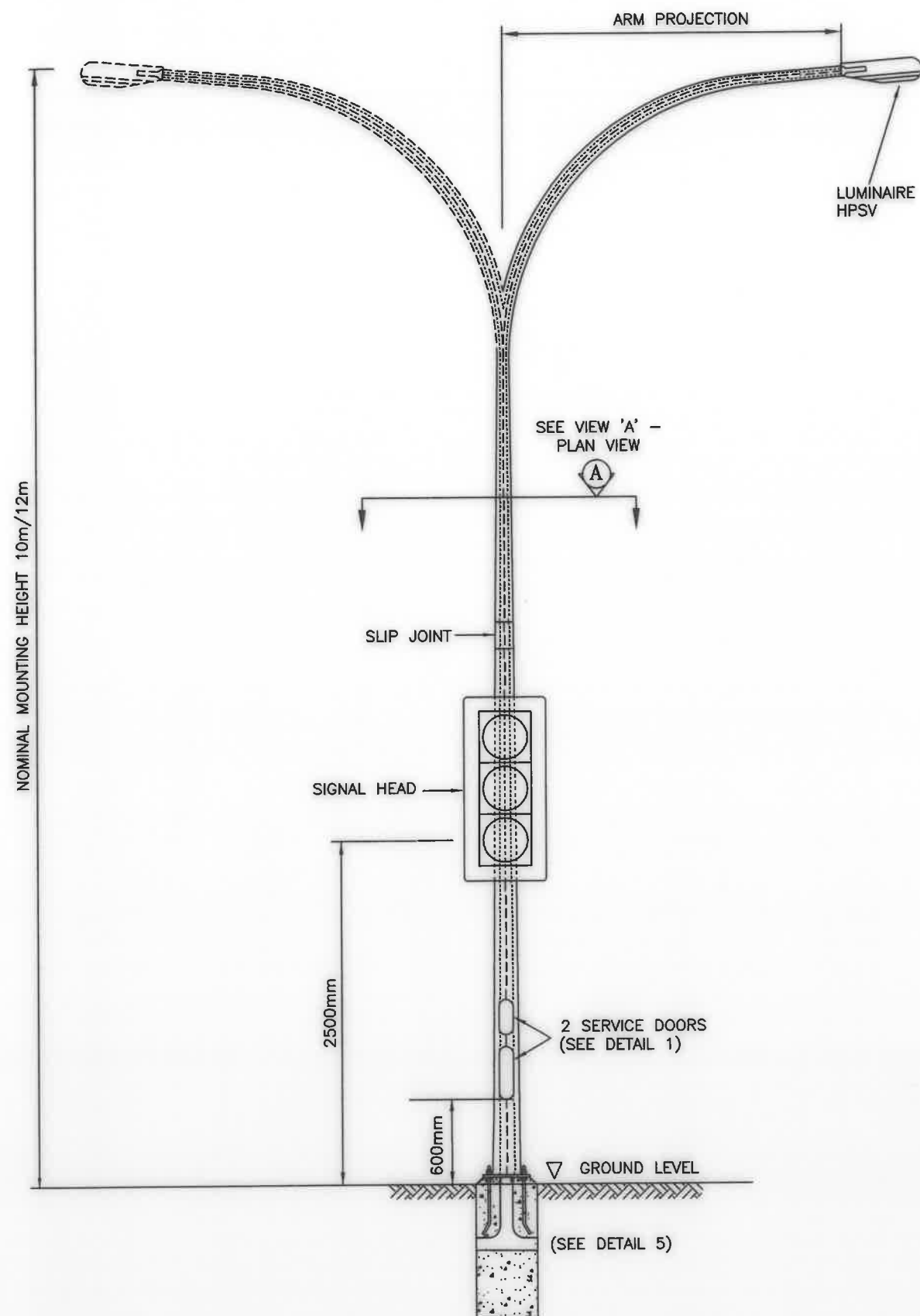
NO LUKISAN PIWAI :
 KPKR/J/R/STD/58/05-4

BIL. HELAJAN
 PIWAI: 12/20

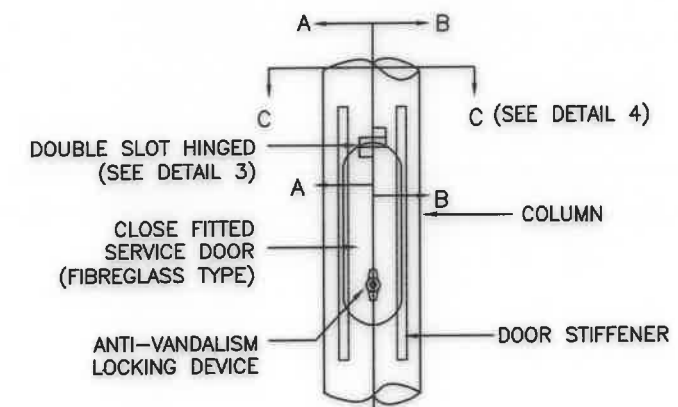
BIL.
 HELAJAN :



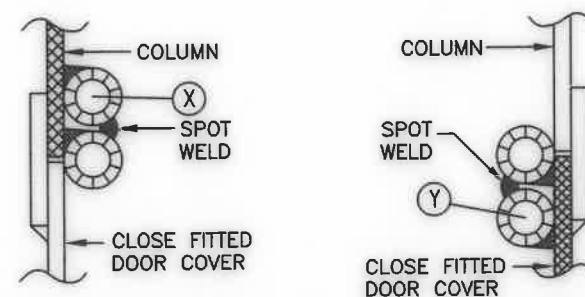
TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK		SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIAWAI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN		JABATAN KERJA RAYA MALAYSIA			
			DIREKABENTUK : DZAKIRA BINTI ZAKARIA	DISEMAK : M. YUSRIEIZANIE M. YUSOFF	Ir. HANIZAN BINTI SHAFFI PENGARAH KAWAN	TANDATANGAN :	OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN FOR HPSV (WITH ARM TYPE)			
			DILUKIS : M. YUSRIEIZANIE M. YUSOFF	Ir. HANIFF BIN AB HAMID	Ir. MUSIN BIN MUSTAFA PENGARAH PERUNDING REKABENTUK	NAMA :	TARIKH: DESEMBER 2020			
			DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI			JAWATAN :	NO LUKISAN PIAWAI : KPKR/J/R/STD/SB/05-5			
	PINDAAN		N.T.S UKURAN				BIL HELAJAN PIAWAI: 13/20			



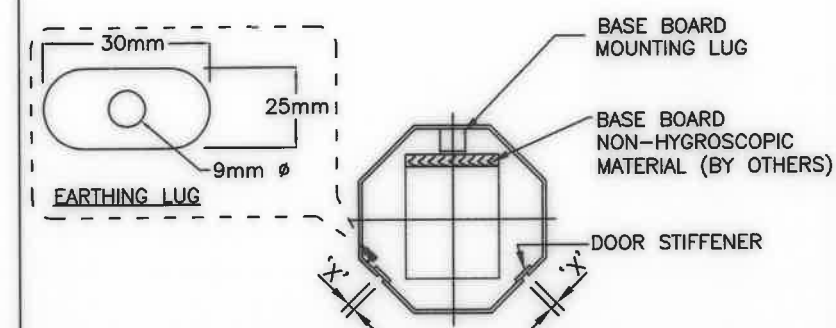
DETAIL 1 : 2 SERVICE DOORS



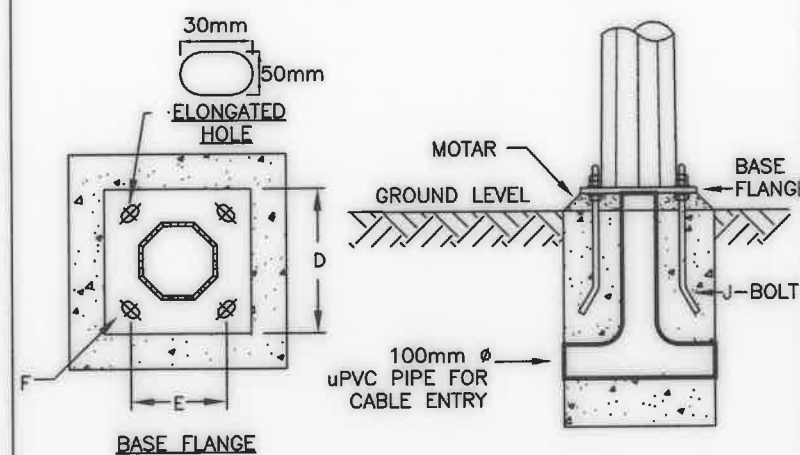
DETAIL 2 :
DOUBLE SLOT HINGE SERVICE DOOR



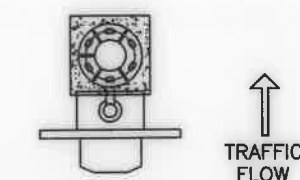
DETAIL 3 : DOUBLE SLOT HINGE



DETAIL 4 :
BASE BOARD FOR TERMINATION PANEL



DETAIL 5 : BASE FLANGE & CONCRETE FOUNDATION



VIEW 'A' - PLAN VIEW

TARIKH

BUTIRAN

RUJUKAN

N.T.S
UKURAN

CAWANGAN KEJURUTERAAN ELEKTRIK

DIREKABENTUK :
DZAKIRA BINTI ZAKARIA

DILUKIS :
M. YUSRIEIZANIE M. YUSOFF

DILULUSKAN :
Ir. NOOR ASHIKIN BINTI MD TAMIMI

DISEMAK :
Ir. HANIFF BIN AB HAMID

DILULUSKAN :
Ir. HANIFF BIN AB HAMID

Ir. HANIFAN BINTI SHAFFI
PENGARAH KANAN

Ir. HUSIN BIN MUSTAFI
PENGARAH PERUNDING REKABENTUK

SAYA DENGAN INI TELAH MENYEMAK DAN MENGENSAHAKAN
BAHAWA LUKISAN PIJAL INI BOLEH DIGUNAPAKAI
KE ATAS PROJEK BERKENAAN

TANDATANGAN :

NAMA :

JAWATAN :



JABATAN KERJA RAYA MALAYSIA

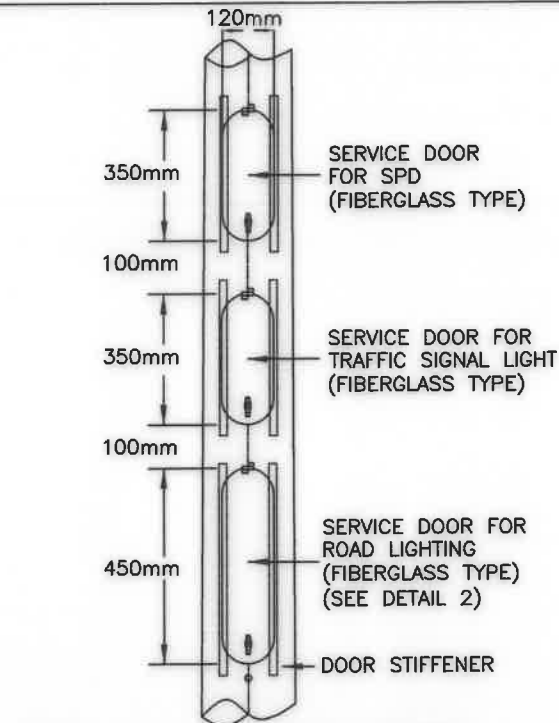
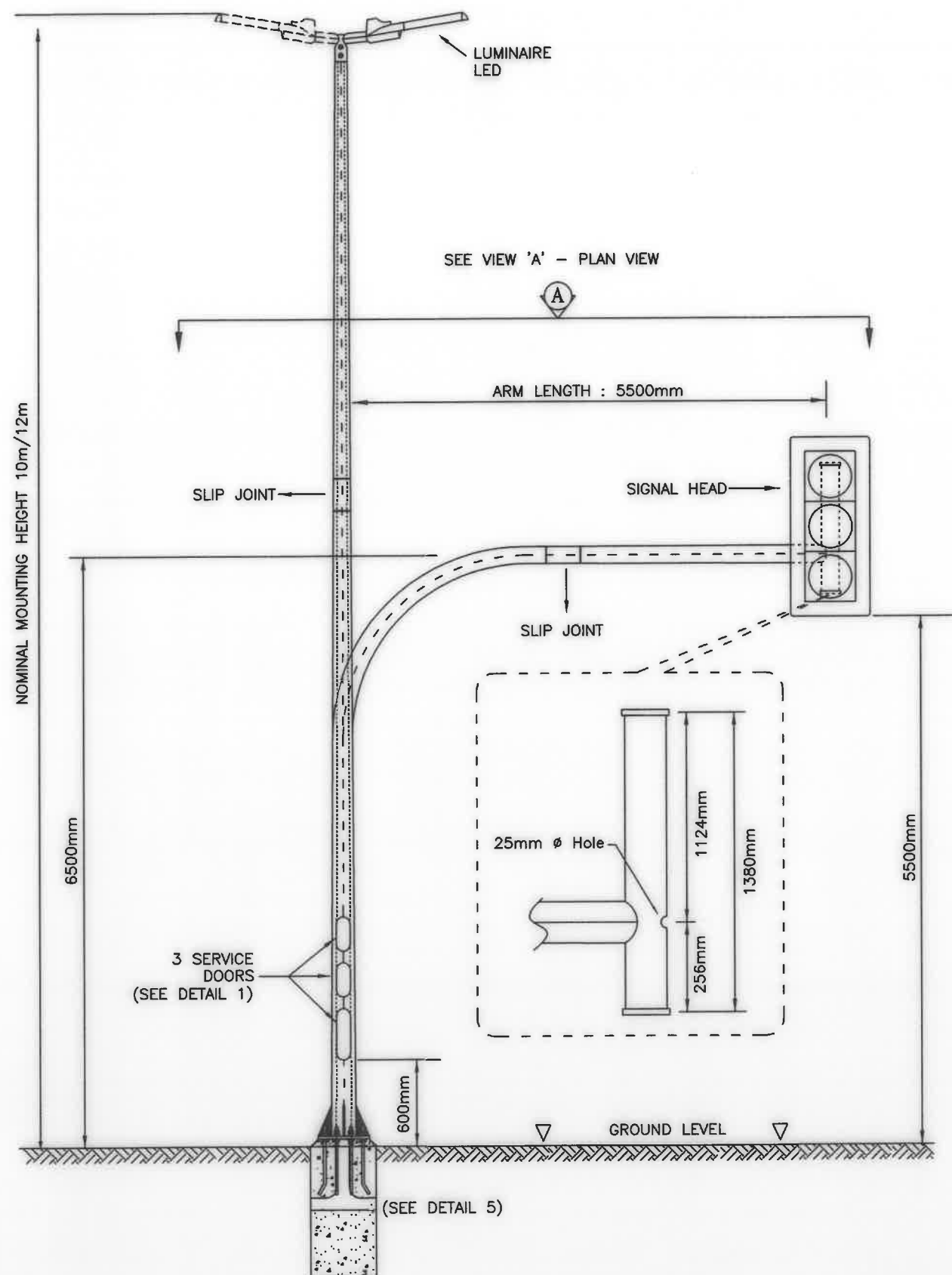
TRAFFIC SIGNAL HEAD MOUNTED ON HPSV ROAD LIGHTING COLUMN
(WITH ARM TYPE)

TARIKH:
DISEMBER 2020

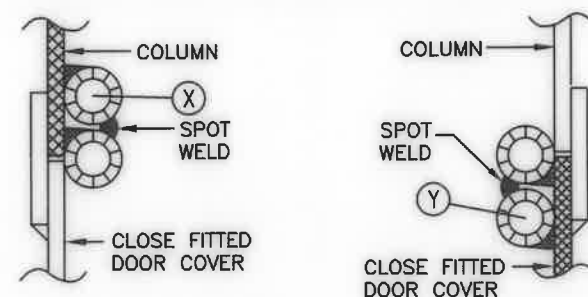
NO LUKISAN PIJAL :
KPKR/J/R/STD/SB/05-7

BIL HELAAN
PIJAL: 15/20

BIL
HELAAAN :



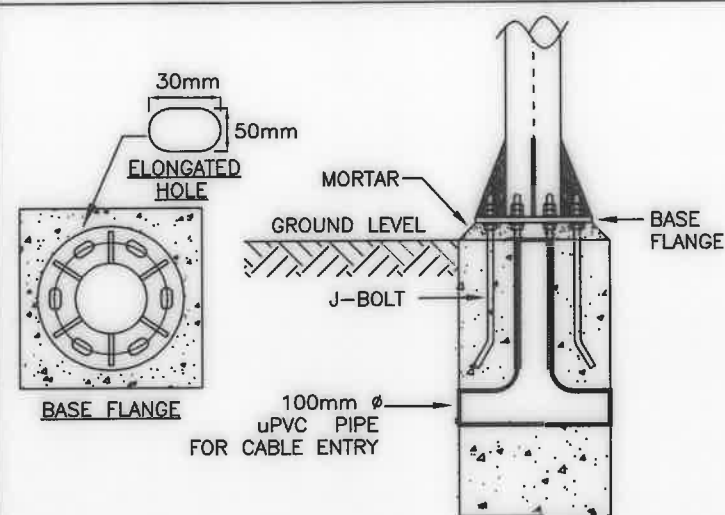
DETAIL 1 : 3 SERVICE DOORS



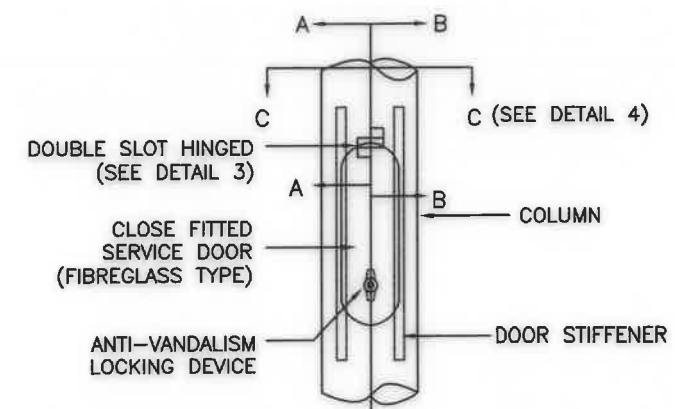
SECT A-A

SECT B-B

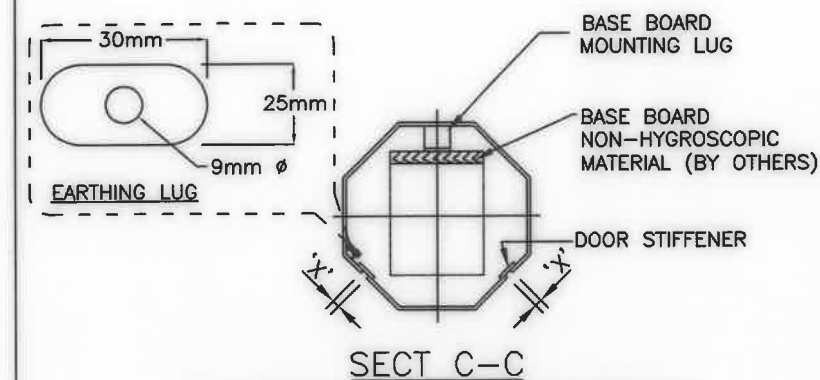
DETAIL 3 : DOUBLE SLOT HINGE



DETAIL 5 : BASE FLANGE & CONCRETE FOUNDATION



DETAIL 2 :
DOUBLE SLOT HINGE SERVICE DOOR



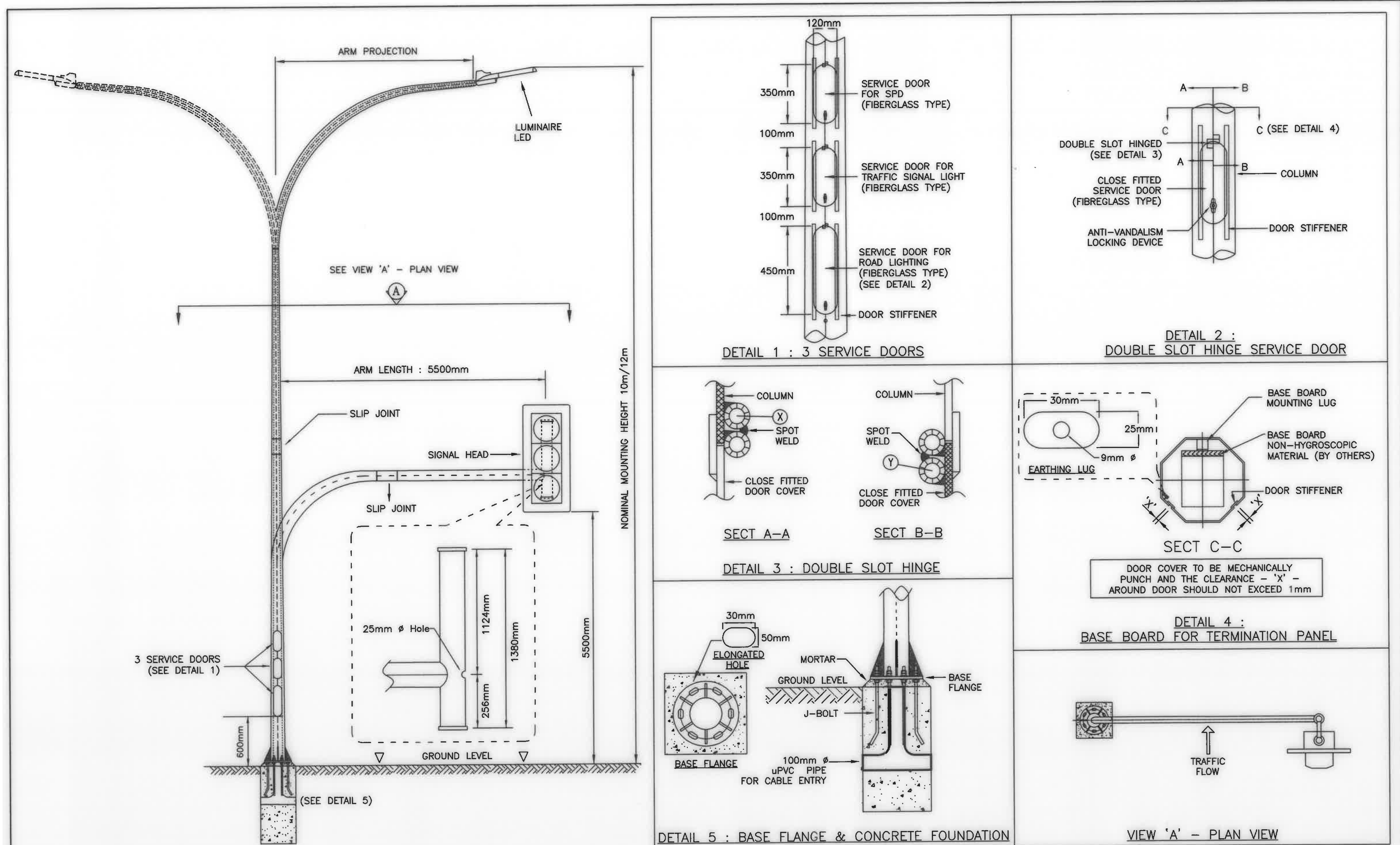
SECT C-C
DOOR COVER TO BE MECHANICALLY
PUNCH AND THE CLEARANCE - 'X' -
AROUND DOOR SHOULD NOT EXCEED 1mm

DETAIL 4 :
BASE BOARD FOR TERMINATION PANEL

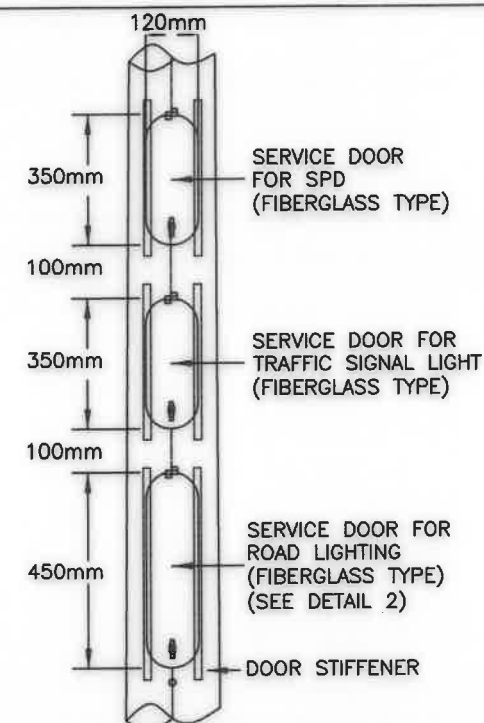
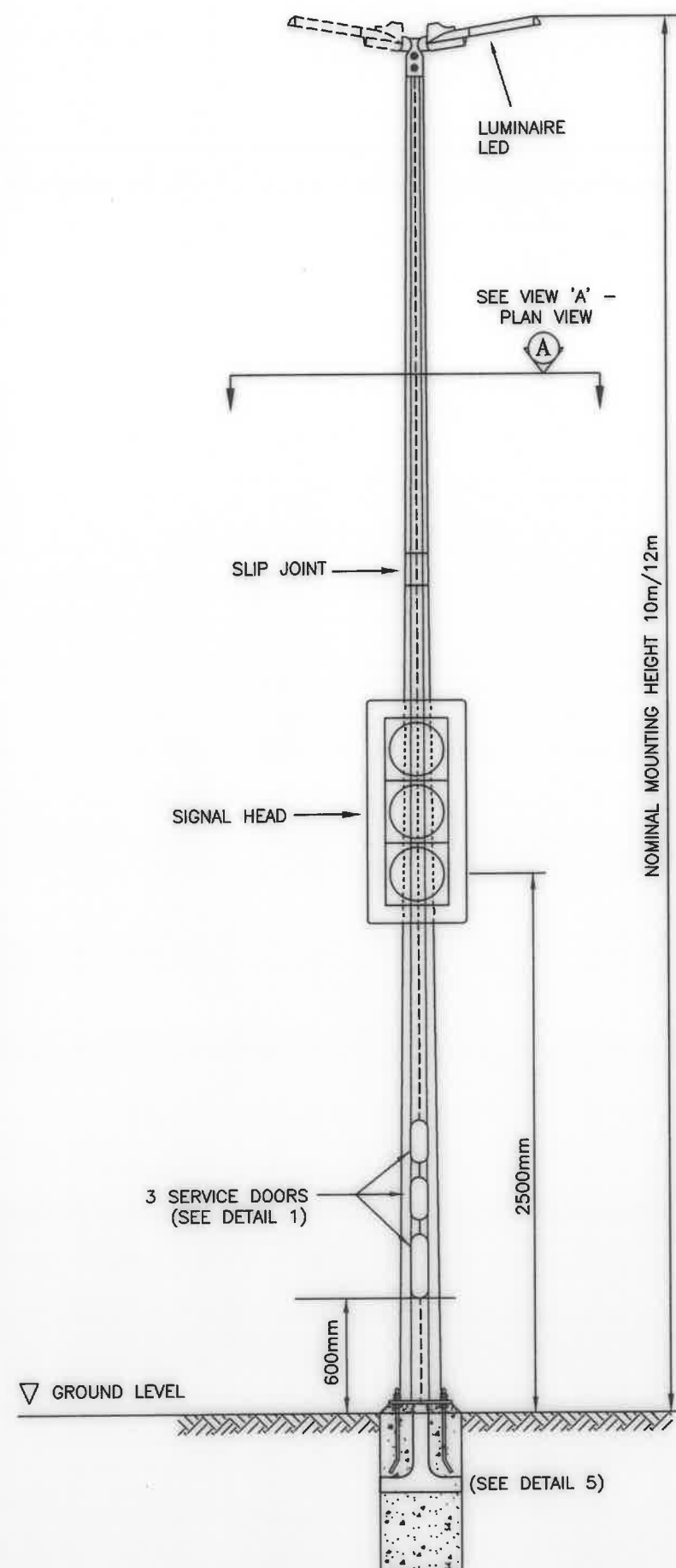


VIEW 'A' - PLAN VIEW

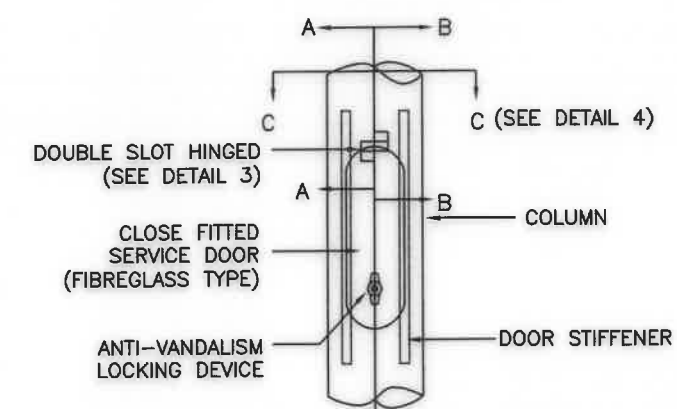
TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK		SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIAMAI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN		JABATAN KERJA RAYA MALAYSIA	
			DIREKABENTUK : DZAKIRA BINTI ZAKARIA	PENGARAH KANAN	TANDATANGAN :		OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN FOR LED (WITHOUT ARM TYPE)	
			DILUKIS : M. YUSRIEZWAN M. YUSOFF	DISEMAK : Ir. HANIFF BIN AB HAMID	NAMA :		TARIKH:	
			DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI	PENGARAH PERUNDING REKABENTUK	JAWATAN :		NO LUKISAN PIAMAI : KPKR/J/R/STD/58/05-8	
	PINDAAN		N.T.S UKURAN				BIL HELAAN PIAMAI: 16/20	
							BIL HELAAN :	



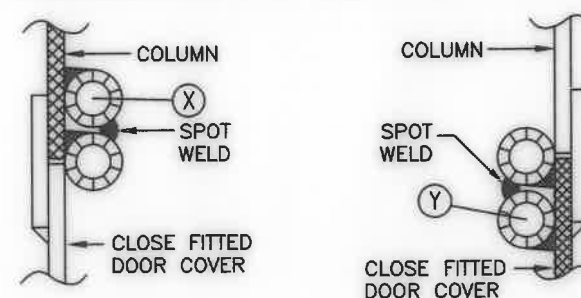
TARIKH	BUTIRAN		RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK	 Ir. HANIZAN BINTI SHAFFII PENGARAH KANAN  Ir. HUSIN BIN MUSTAFA PENGARAH PERUNDING REKABENTUK	SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIAWAI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN	JABATAN KERJA RAYA MALAYSIA OCTAGONAL TAPERED JOINT USED MAST ARM COLUMN FOR LED (WITH ARM TYPE)					
	PINDAAN		N.T.S UKURAN	DIREKABENTUK : DZAKIRA BINTI ZAKARIA DILUKIS : M. YUSRIEIZANIE M. YUSOFF DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI	DISEMAK : Ir. HANIFF BIN AB HAMID			TANDATANGAN : NAMA : JAWATAN :	TARIKH: DISEMBER 2020	NO LUKISAN PIAWAI : KPKR/J/R/STD/SB/05-9	BIL HELAJAN PIAWAI: 17/20	BIL HELAJAN :



DETAIL 1 : 3 SERVICE DOORS



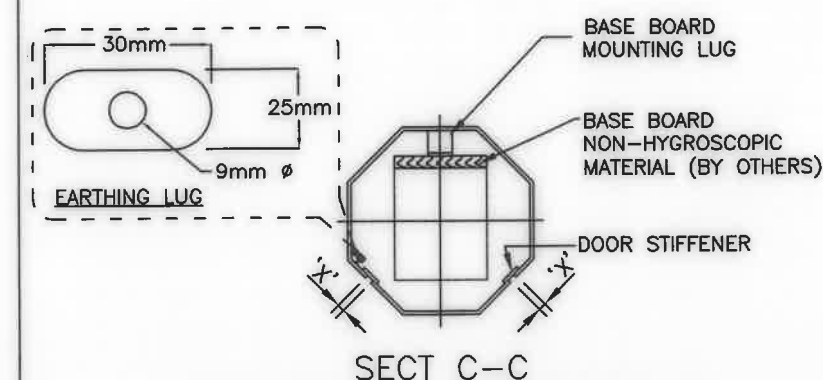
DETAIL 2 :
DOUBLE SLOT HINGE SERVICE DOOR



SECT A-A

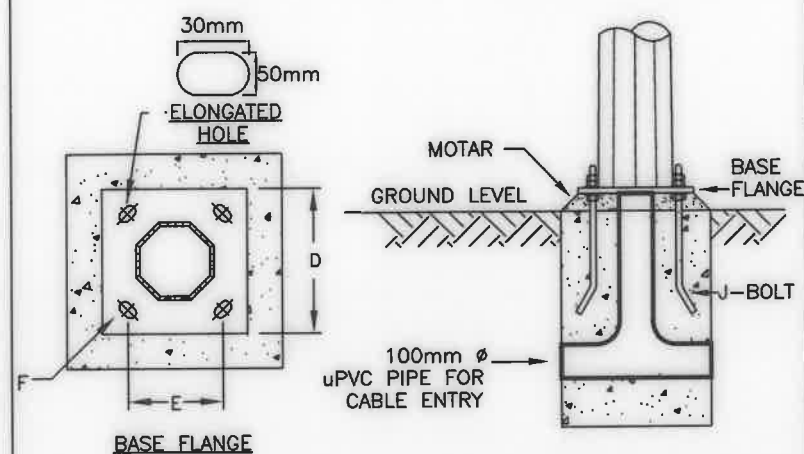
SECT B-B

DETAIL 3 : DOUBLE SLOT HINGE

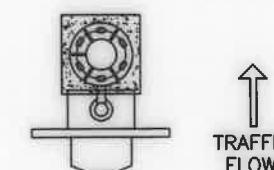


DOOR COVER TO BE MECHANICALLY PUNCH AND THE CLEARANCE - 'X' - AROUND DOOR SHOULD NOT EXCEED 1mm

DETAIL 4 :
BASE BOARD FOR TERMINATION PANEL



DETAIL 5 : BASE FLANGE & CONCRETE FOUNDATION



VIEW 'A' - PLAN VIEW

TARIKH

BUTIRAN

RUJUKAN

CAWANGAN KEJURUTERAAN ELEKTRIK

DIREKABENTUK :
DZAKIRA BINTI ZAKARIA

DILUKIS : M. YUSRIEIZANIE M. YUSOFF

DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI

N.T.S
UKURAN

PINDAAN

Ir. HANIZAN BINTI SHAFFI
PENGARAH KANAN

Ir. HUSIN BIN MUSTAFA
PENGARAH PERUNDING REKABENTUK

SAYA DENGAN INI TELAH MENYEMAK DAN MENGENSAHKAN BAHAWA LUKISAN PIJAL INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN

TANDATANGAN :

NAMA :

JAWATAN :



JABATAN KERJA RAYA MALAYSIA

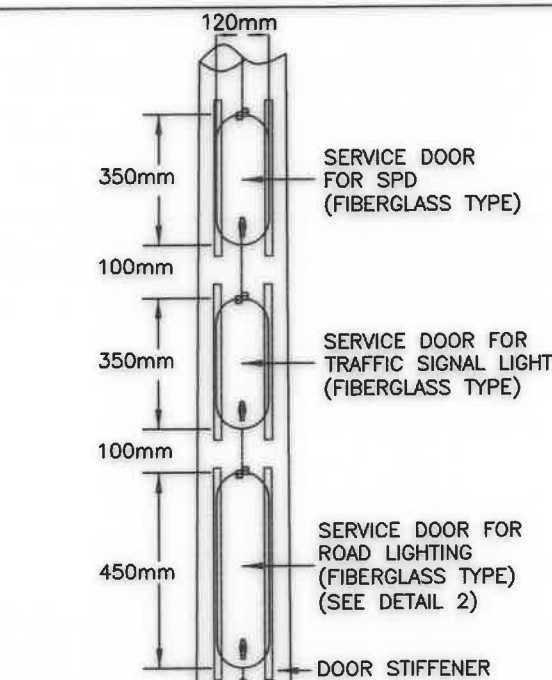
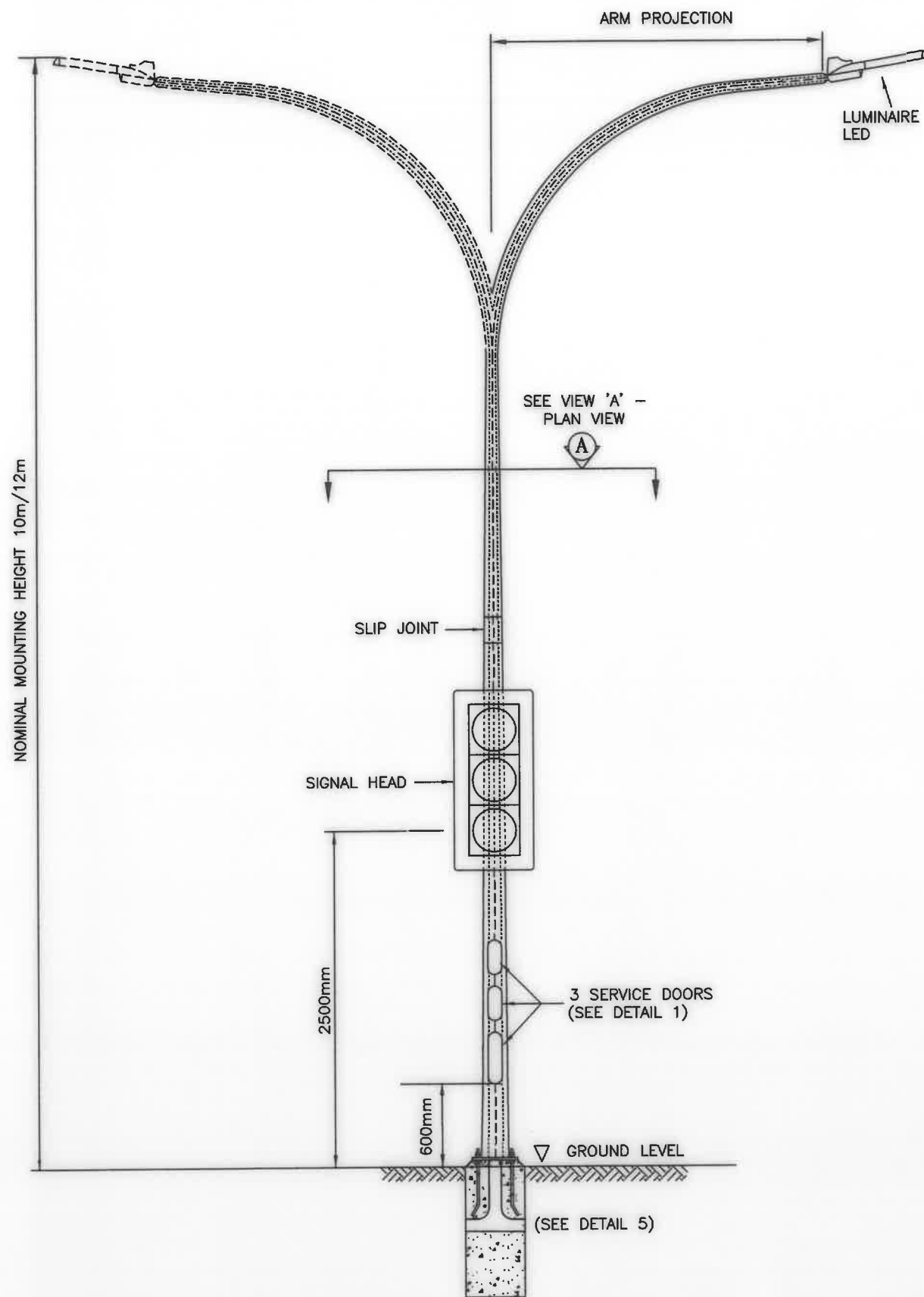
TRAFFIC SIGNAL HEAD MOUNTED ON LED ROAD LIGHTING COLUMN (WITHOUT ARM TYPE)

TARIKH:
DISEMBER 2020

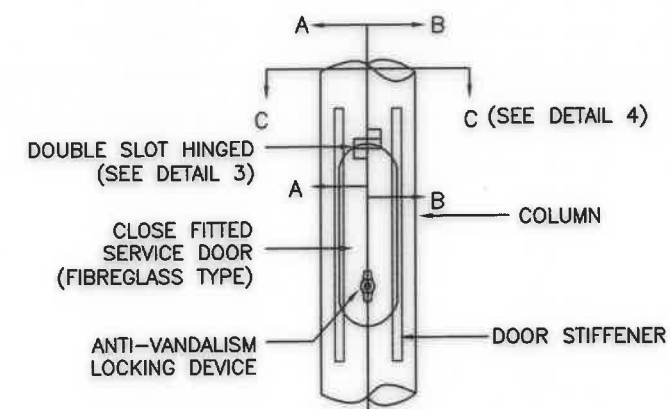
NO LUKISAN PIJAL :
KPKR/J/R/STD/S8/05-10

BIL HELAJAN
PIJAL: 18/20

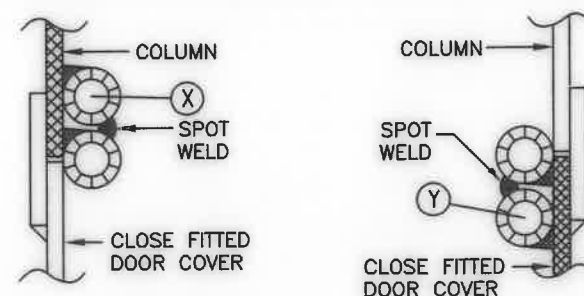
BIL HELAJAN :



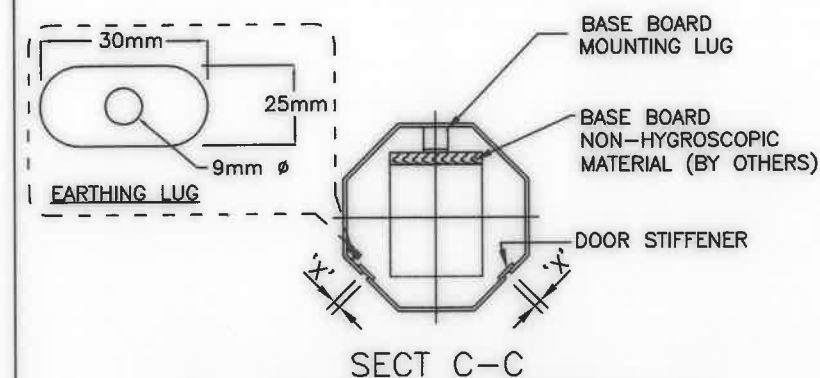
DETAIL 1 : 3 SERVICE DOORS



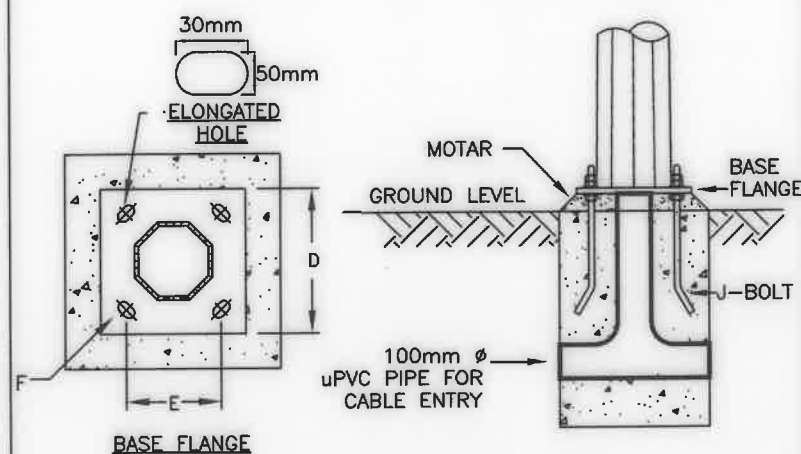
DETAIL 2 :
DOUBLE SLOT HINGE SERVICE DOOR



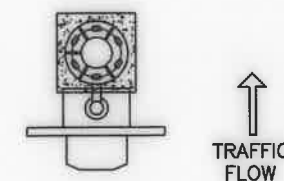
SECT A-A SECT B-B
DETAIL 3 : DOUBLE SLOT HINGE



DETAIL 4 :
BASE BOARD FOR TERMINATION PANEL



DETAIL 5 : BASE FLANGE & CONCRETE FOUNDATION



VIEW 'A' - PLAN VIEW

TARIKH	BUTIRAN	RUJUKAN	N.T.S UKURAN	CAWANGAN KEJURUTERAAN ELEKTRIK		Ir. HANIZAN BINTI SHAFFI PENGARAH KANAN		SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIJAWI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN		 JABATAN KERJA RAYA MALAYSIA			
				DIREKABENTUK : DZAKIRA BINTI ZAKARIA					TANDATANGAN :	TRAFFIC SIGNAL HEAD MOUNTED ON LED ROAD LIGHTING COLUMN (WITH ARM TYPE)			
				DILUKIS : M. YUSRIEZANIE M. YUSOFF	DISEMAK : Ir. HANIFF BIN AB HAMID		Ir. HUSIN BIN MUSTAFA		NAMA :	TARIKH: DISEMBER 2020	NO LUKISAN PIJAWI : KPKR/J/R/STD/S8/05-11	BIL HELAJAN PIJAWI: 19/20	BIL HELAJAN :
	PINDAAN			DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI			PENGARAH PERUNDING REKABENTUK		JAWATAN :				



TECHNICAL INFORMATION

1. ADUAN KEROSAKAN : SIZE 30mm
2. NOMBOR SIMPANG : SIZE 50mm
3. NO. ADUAN : SIZE 25mm
4. JARAK ANTARA NO. ADUAN : SIZE 10mm
5. NO. JKR DAERAH : SIZE 25mm

TARIKH	BUTIRAN	RUJUKAN	CAWANGAN KEJURUTERAAN ELEKTRIK		 Ir. HANIZAN BINTI SHAFFI PENGARAH KANAN	SAYA DENGAN INI TELAH MENYEMAK DAN MENGESAHKAN BAHAWA LUKISAN PIAWAI INI BOLEH DIGUNAPAKAI KE ATAS PROJEK BERKENAAN	 JABATAN KERJA RAYA MALAYSIA		
			DIREKABENTUK : DZAKIRA BINTI ZAKARIA DILUKIS : M. YUSRIEZANIE M. YUSOFF DILULUSKAN : Ir. NOOR ASHIKIN BINTI MD TAMIMI	DISEMAK : Ir. HANIFF BIN AB HAMID PENGARAH PERUNDING REKABENTUK				TANDATANGAN : NAMA : JAWATAN :	TRAFFIC SIGNAL INFORMATION BOARD TARIKH: DISEMBER 2020