

TYPICAL LAYOUT OF JOGGING CUM CYCLING TRACK (4m WIDTH)

SCALE 1:50

NOTES:

- 1) TO BE COMPACTED TO 95% OF DRY DENSITY OBTAINED USING A MODIFIED A.A.S.H.O. COMPACTION TEST MINIMUM C.B.R. 30% (SOAKED).
- 2) TO A DEPTH OF 500 MEASURED FROM THE TOP THE SUBGRADE TO HAVE A MINIMUM SOAKED C.B.R. OF 5% AND SHALL BE COMPACTED TO MINIMUM 90% DRY DENSITY OBTAINABLE USING THE MODIFIED A.A.S.H.O. COMPACTION TEST (HEAVY HAMMER) OR TEST No.13 BS1377 1975 IN ACCORDANCE WITH THE P.W.D. GENERAL SPECIFICATION.

**STANDARD DETAIL**

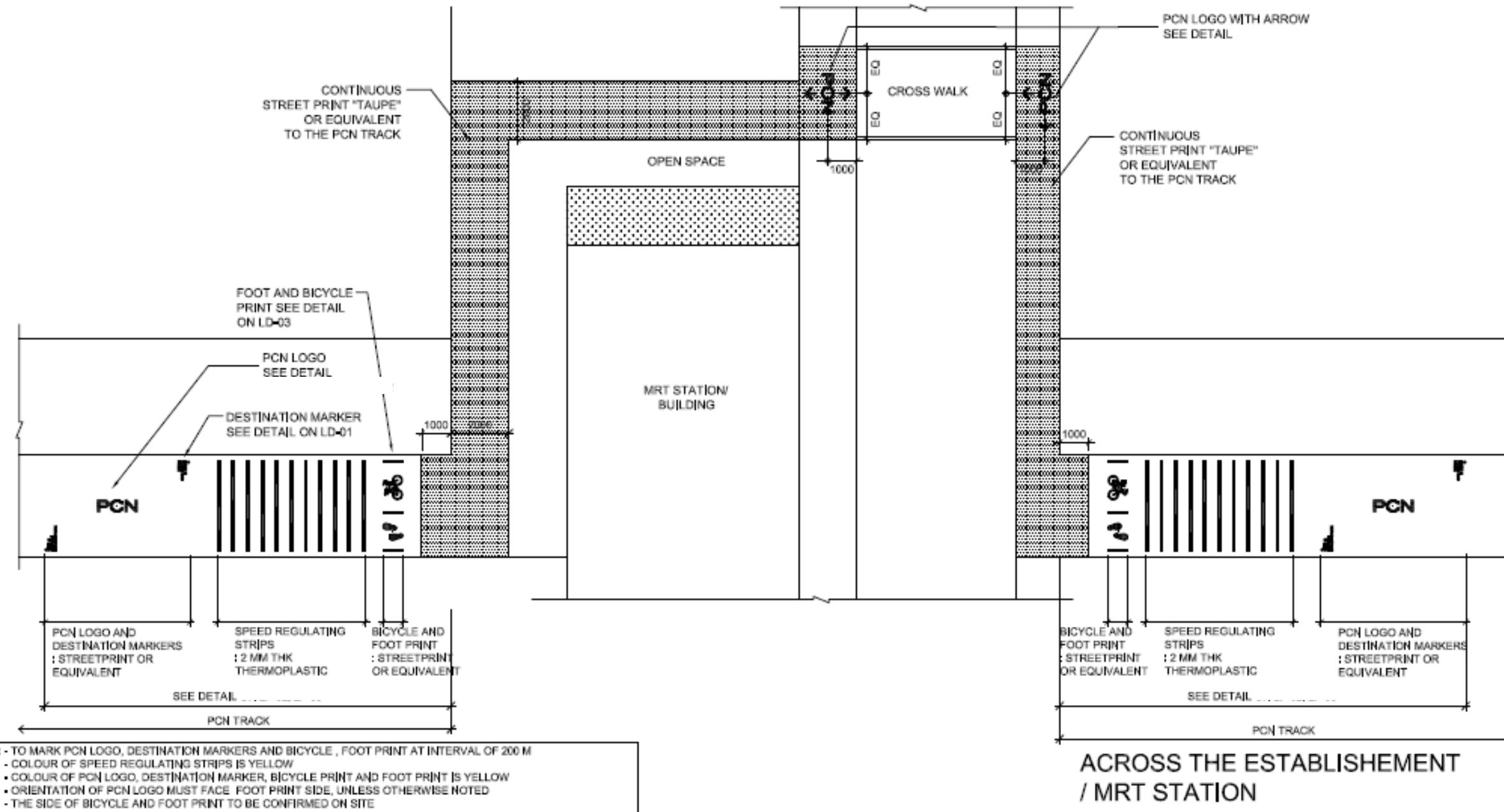
TYPICAL LAYOUT OF JOGGING CUM CYCLING  
TRACK - 4m WIDTH



NATIONAL PARKS BOARD  
PARKS MANAGEMENT  
REPUBLIC OF SINGAPORE

NP DRAWING NO.	NPB/PM/PCO/04
DATE	AUGUST 2004
SCALE	1 : 50

## PAVEMENT MARKING AT ACROSS THE ESTABLISHMENT/ MRT STATION



Notes:

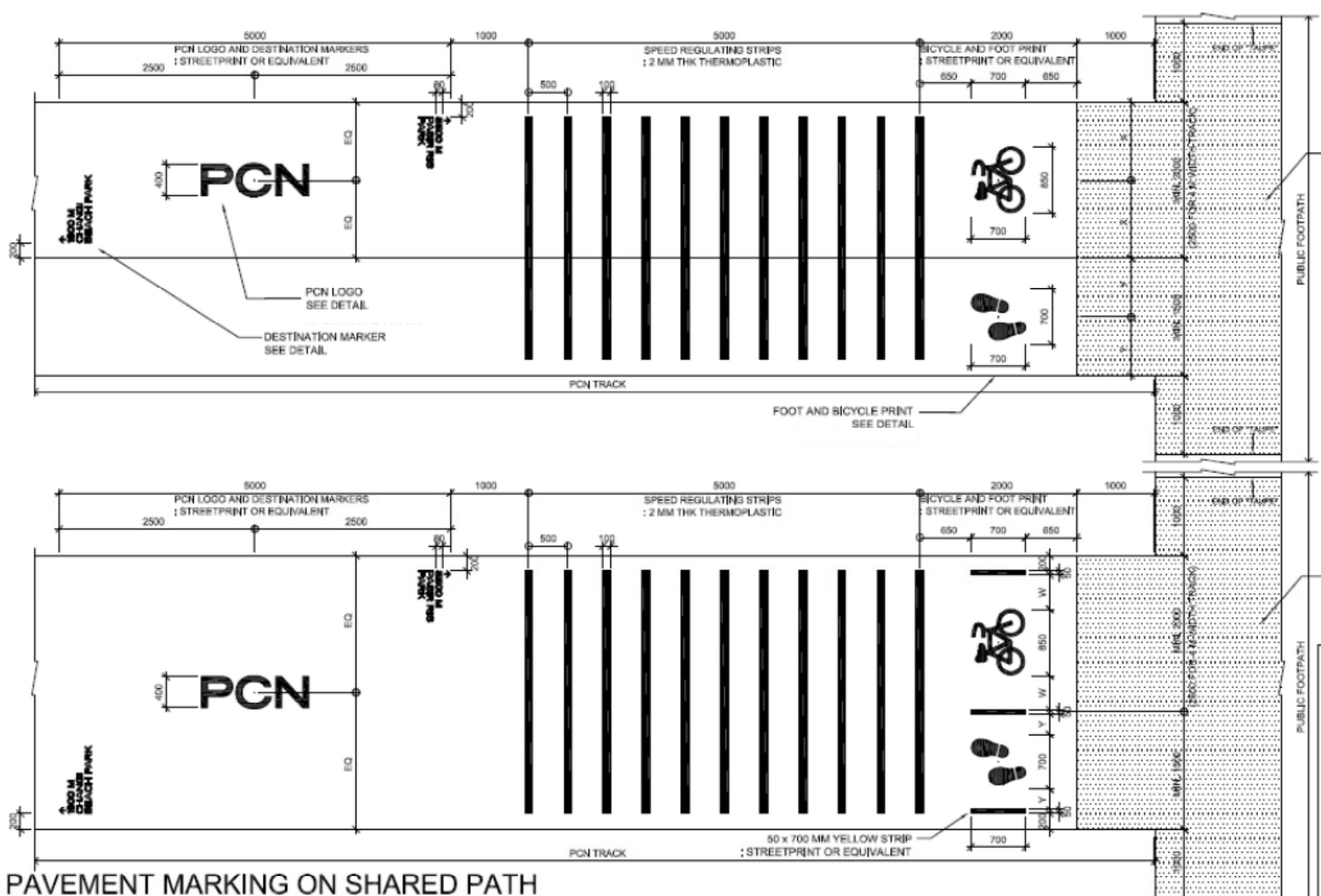
### STANDARD DETAIL

PARK CONNECTORS STD DETAILS  
MRT STATION STREETPRINT – TYPE 1 & 2  
(PAVEMENT MARKINGS AT ACROSS THE ESTABLISHMENT / MRT STATION)



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NP Drawing No:	NPB/PM/PCO/08
Date:	Sep 2012
Scale:	NTS



## PAVEMENT MARKING ON SHARED PATH

Notes:

### STANDARD DETAIL

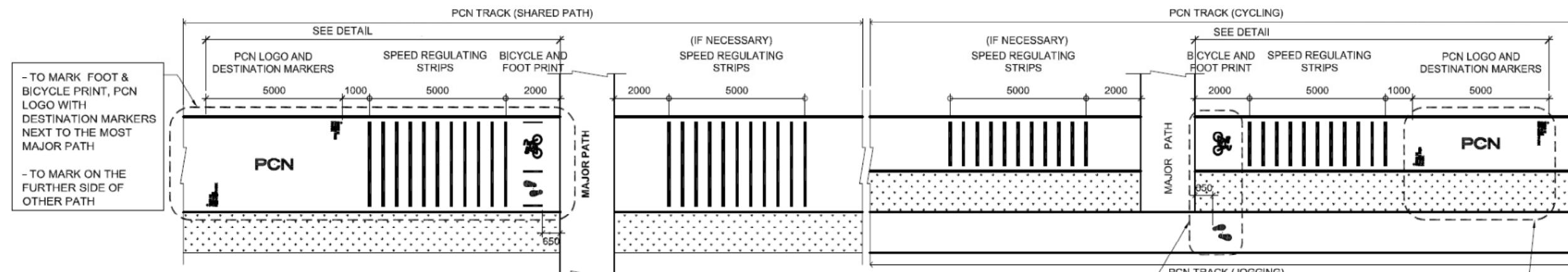
PARK CONNECTORS STD DETAILS  
PATH STREETPRINT – TYPE 2  
(PAVEMENT MARKING ON SHARED PATH WITH SAME & DIFFERENT SURFACE)



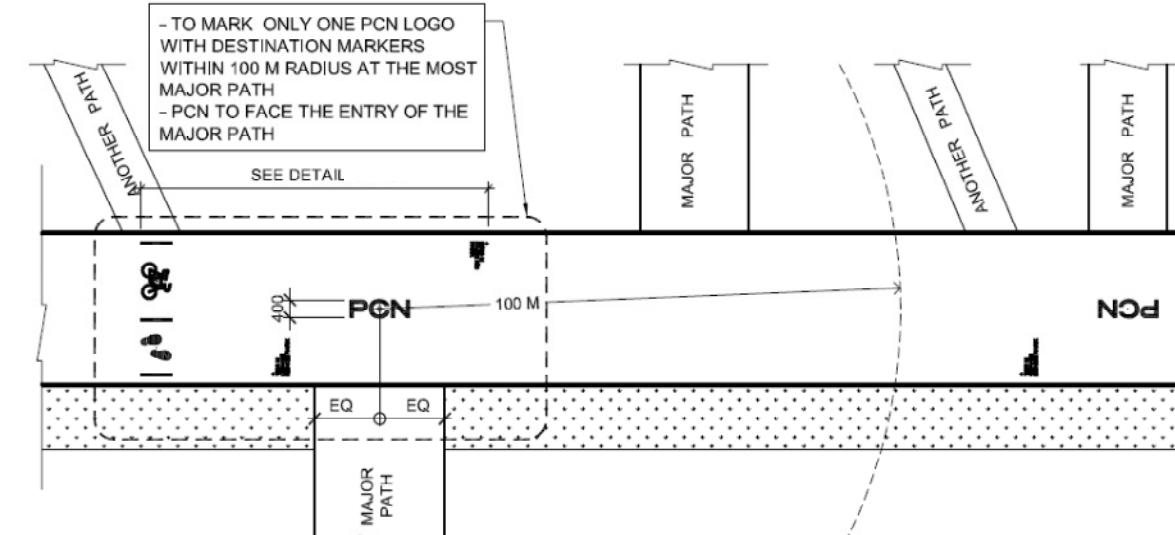
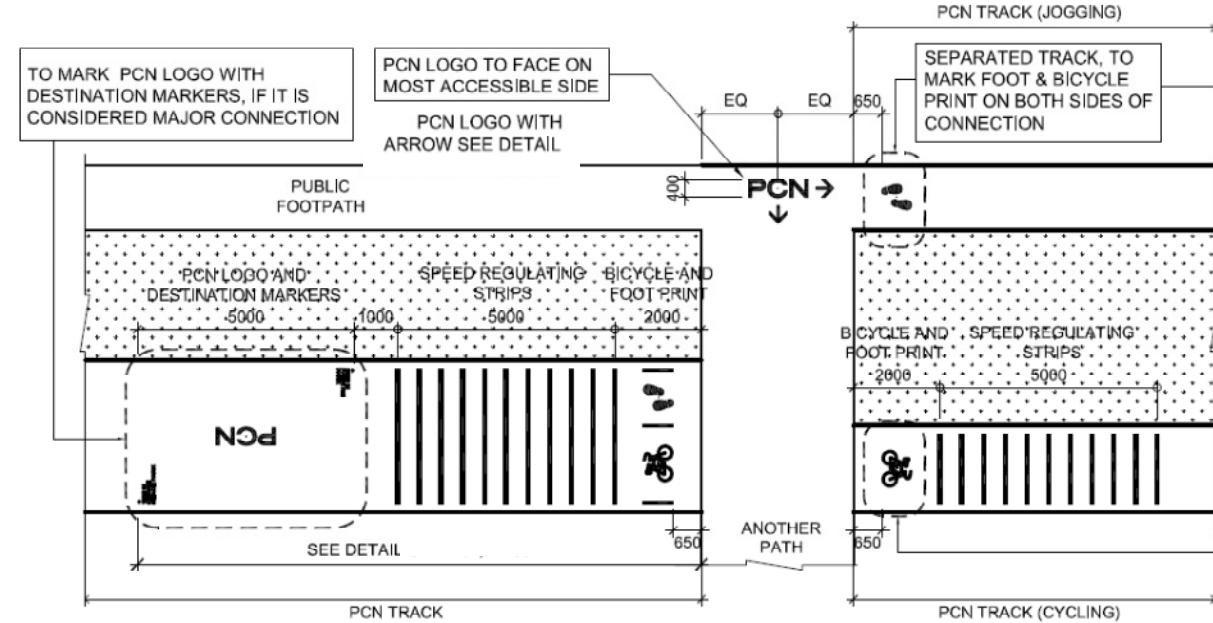
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NP Drawing No:	NPB/PM/PCO/10
Date:	Sep 2012
Scale:	NTS

## PAVEMENT MARKING AT CONNECTION WITH OTHER PATHS



### OTHER PATHS CUT THRU PCN TRACK



### OTHER PATHS CUT THRU PCN TRACK (SEPERATED & SHARED PATH)

SCALE 1:150

### OTHER PATHS CONNECT TO PCN TRACK

NTS

**NOTE :** - TO MARK PCN LOGO, DESTINATION MARKERS AND BICYCLE , FOOT PRINT AT INTERVAL OF 200 M  
- COLOUR OF SPEED REGULATING STRIPS IS YELLOW  
- COLOUR OF PCN LOGO, DESTINATION MARKER, BICYCLE PRINT AND FOOT PRINT IS YELLOW  
- ORIENTATION OF PCN LOGO MUST FACE FOOT PRINT SIDE, UNLESS OTHERWISE NOTED  
- THE SIDE OF BICYCLE AND FOOT PRINT TO BE CONFIRMED ON SITE

Notes:

### STANDARD DETAIL

PARK CONNECTORS STD DETAILS  
PATH STREETPRINT – TYPE 5, 6, 7 & 8  
(PAVEMENT MARKING AT CONNECTION WITH OTHER PATH)



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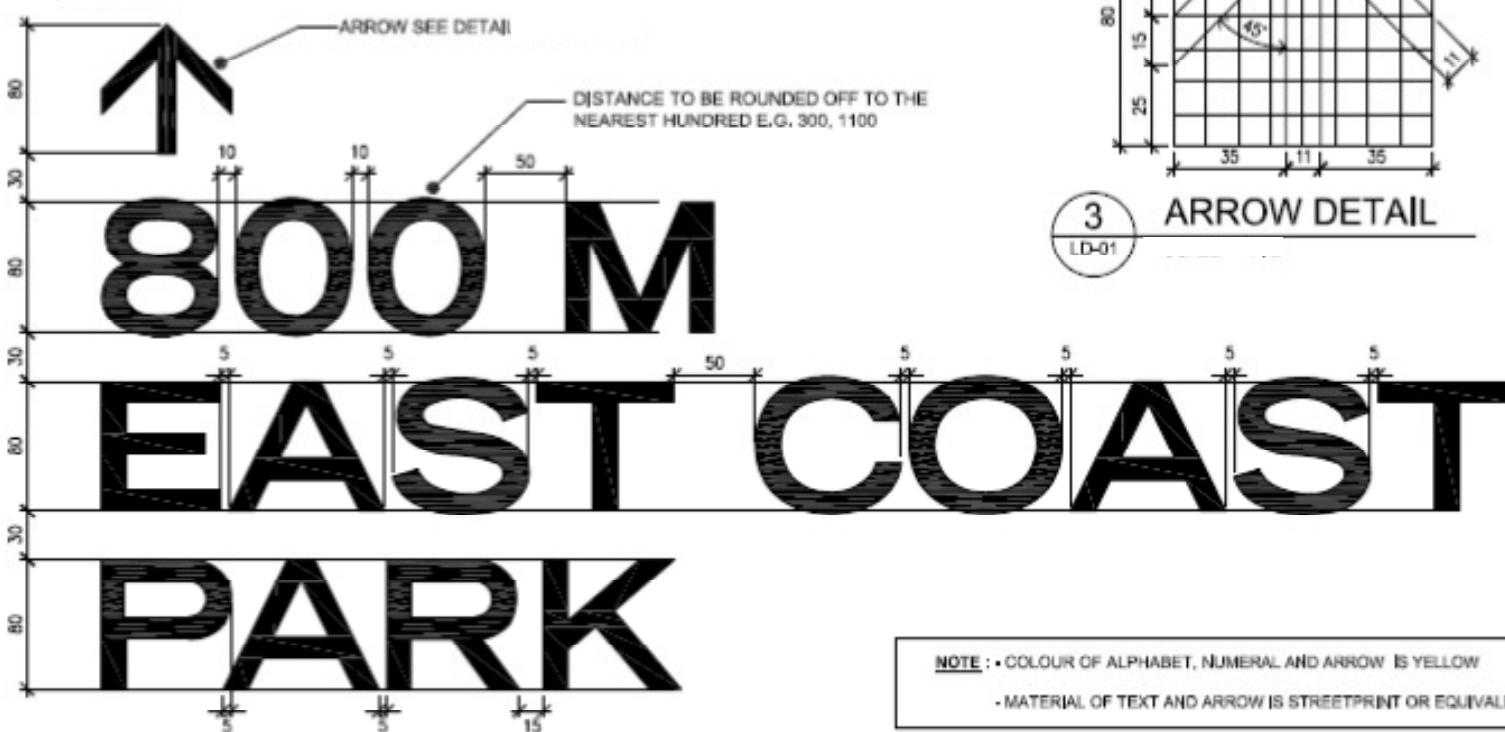
NP Drawing No:	NPB/PM/PCO/12
Date:	Sep 2012
Scale:	NTS

DETAIL OF ALPHABETS AND NUMERIC

TABLE 1: RECOMMENDED SPACING BETWEEN ALPHABETS AND NUMERALS

RECOMMENDED SPACING BETWEEN UPPER-CASE LETTERS (BASE ON TEXT HEIGHT OF 80 mm)		
LETTERS	WHEN COMBINED WITH LETTERS	LETTERS SPACING (mm)
A, F, K, L, X, Z	ALL	5
P, T, V, W, Y	A	• 5
	ALL OTHERS	5
C, D, O, Q	A, C, G, J, O, Q, T, V, W, X, Y, Z B, D, E, F, H, I, K, L, M, N, P, R, S, U	5 10
B, E, G, H, I, J, M, N, R, S, U	A, J, T, V, W, X, Y, Z	5
	C, G, O, Q	10
	B, D, E, F, H, I, K, L, M, N, P, R, S, U	15
RECOMMENDED SPACING BETWEEN NUMERALS (BASE ON TEXT HEIGHT OF 80 mm)		
NUMERALS	WHEN COMBINED WITH NUMERAL	NUMERAL SPACING (mm)
1	ALL	15
2, 3, 4, 5, 6, 7, 8, 9, 0	1	15
	ALL OTHERS	10

TYPICAL DETAIL OF DESTINATION MARKER



Notes:

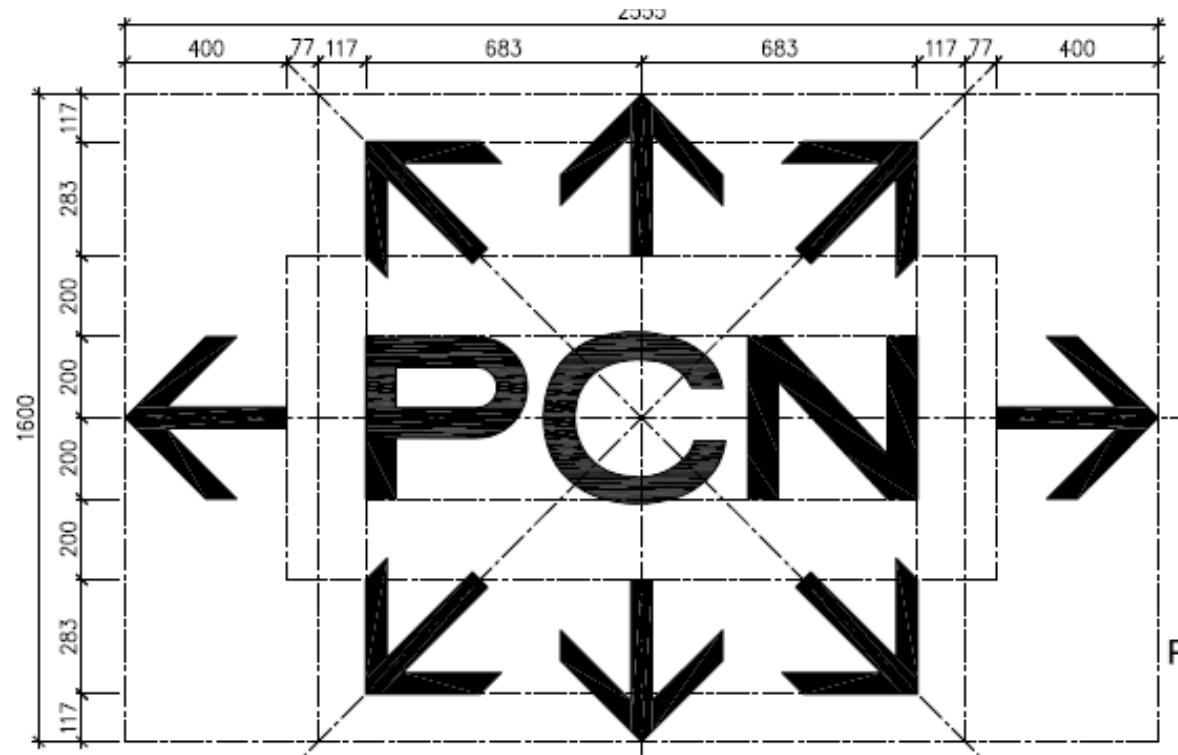
**STANDARD DETAIL**

PARK CONNECTORS STD DETAILS  
STREETPRINT – DETAIL 1

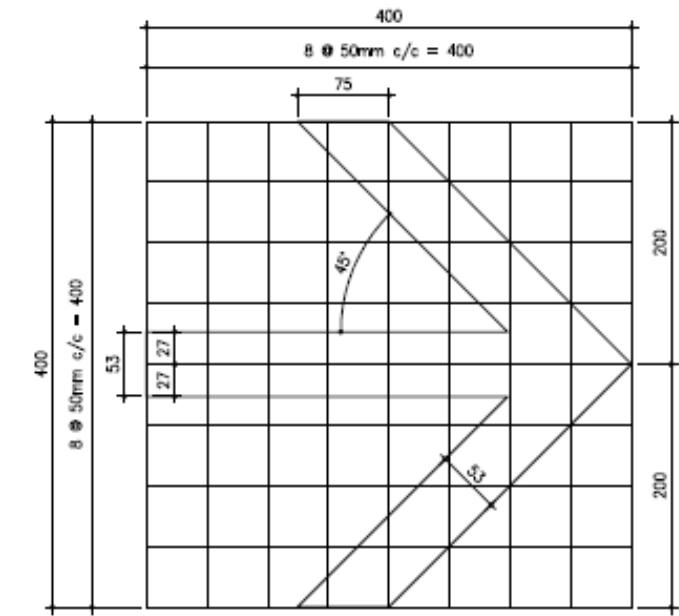


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NP Drawing No:	NPB/PM/PCO/14
Date:	Sep 2012
Scale:	NTS



## PNC LOGO WITH ARROWS

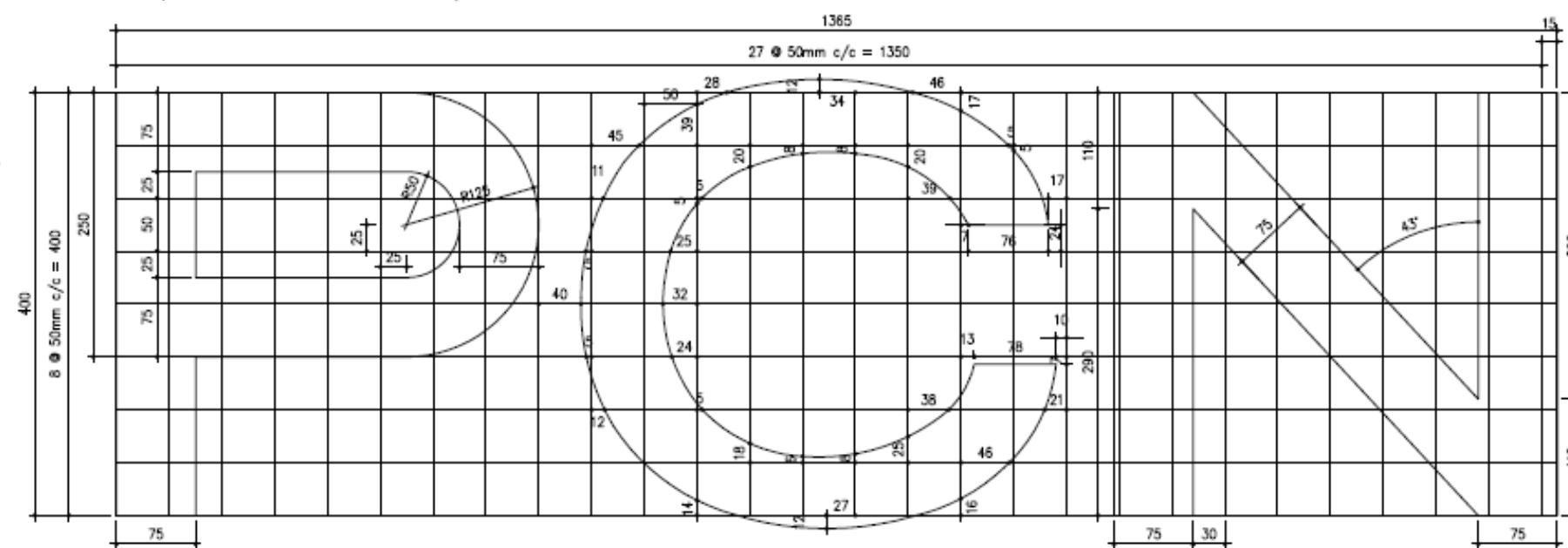


#### ARROW DETAIL

### PNC TEXT DETAIL

NOTE: - COLOUR OF PCN LOGO AND ARROWS  
IS YELLOW

- MATERIAL OF PCN TEXT AND ARROW IS  
STREETPRINT OR EQUIVALENT



## Notes:

## **STANDARD DETAIL**



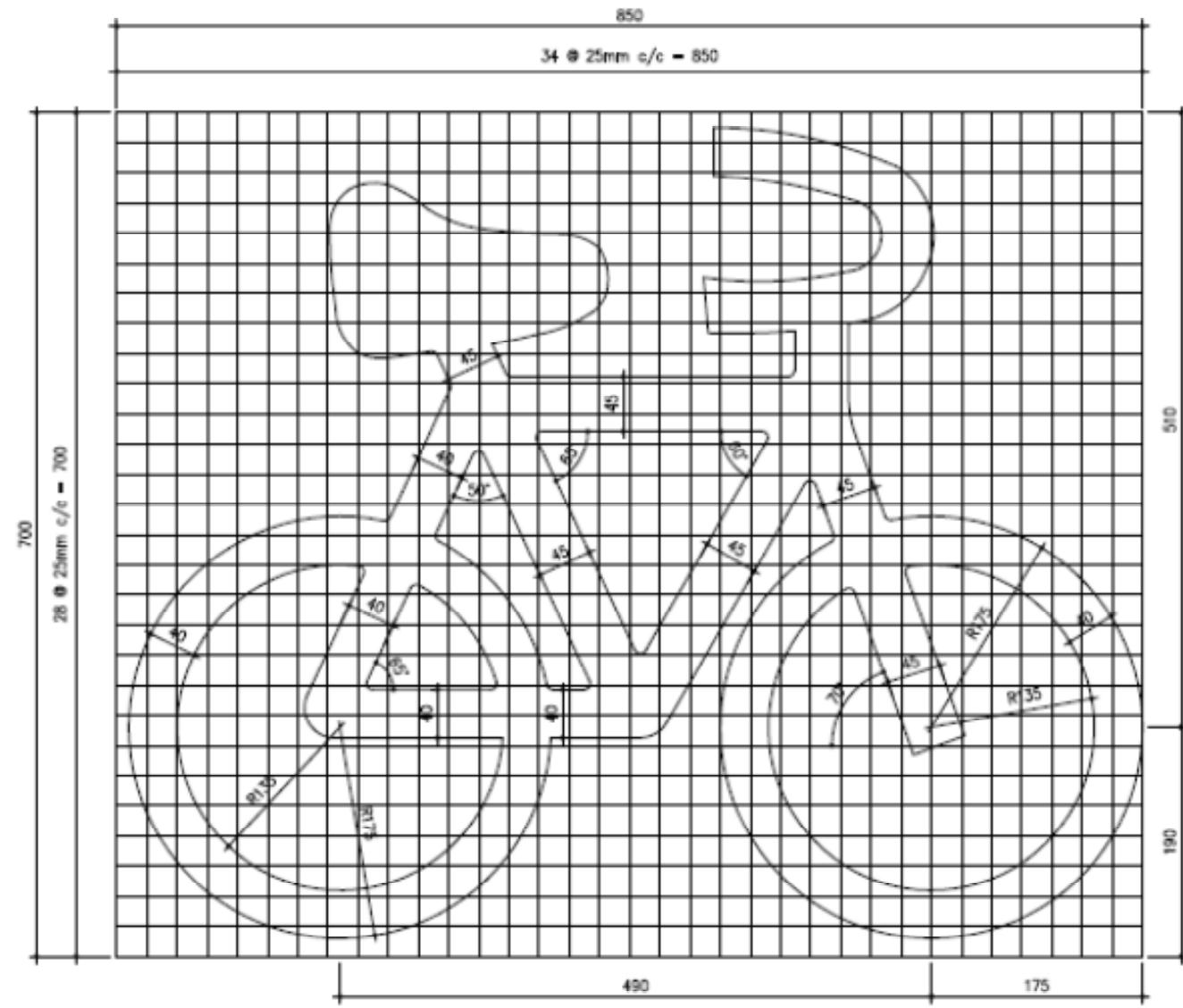
**NATIONAL PARKS BOARD  
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## PARK CONNECTORS STD DETAILS STREETPRINT – DETAIL 2

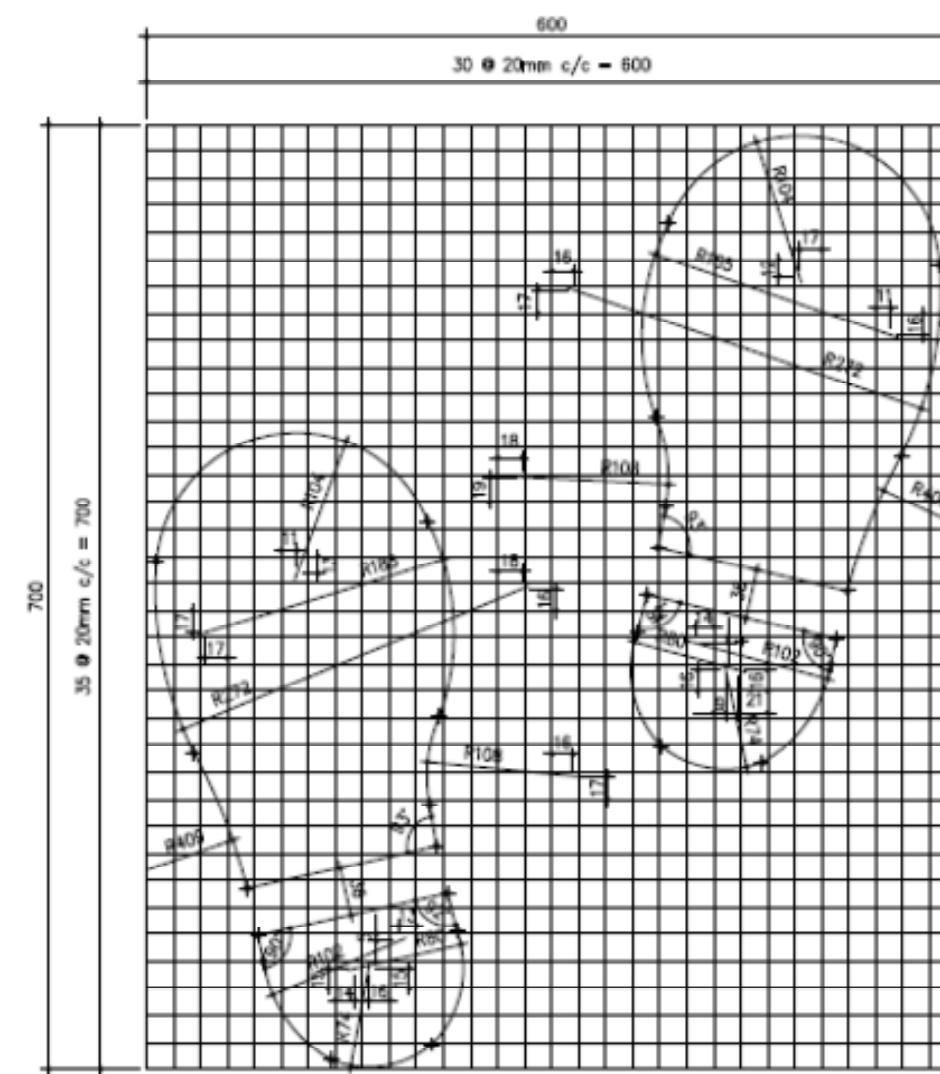
NP Drawing No: NPB/PM/PCO/15

Date: Sep 2012

Scale: NTS



BICYCLE PRINT PLAN



FOOT PRINT PLAN

**NOTE:**  
• COLOUR OF BICYCLE PRINT AND FOOT PRINT IS YELLOW  
• MATERIAL IS STREETPRINT OR EQUIVALENT

Notes:

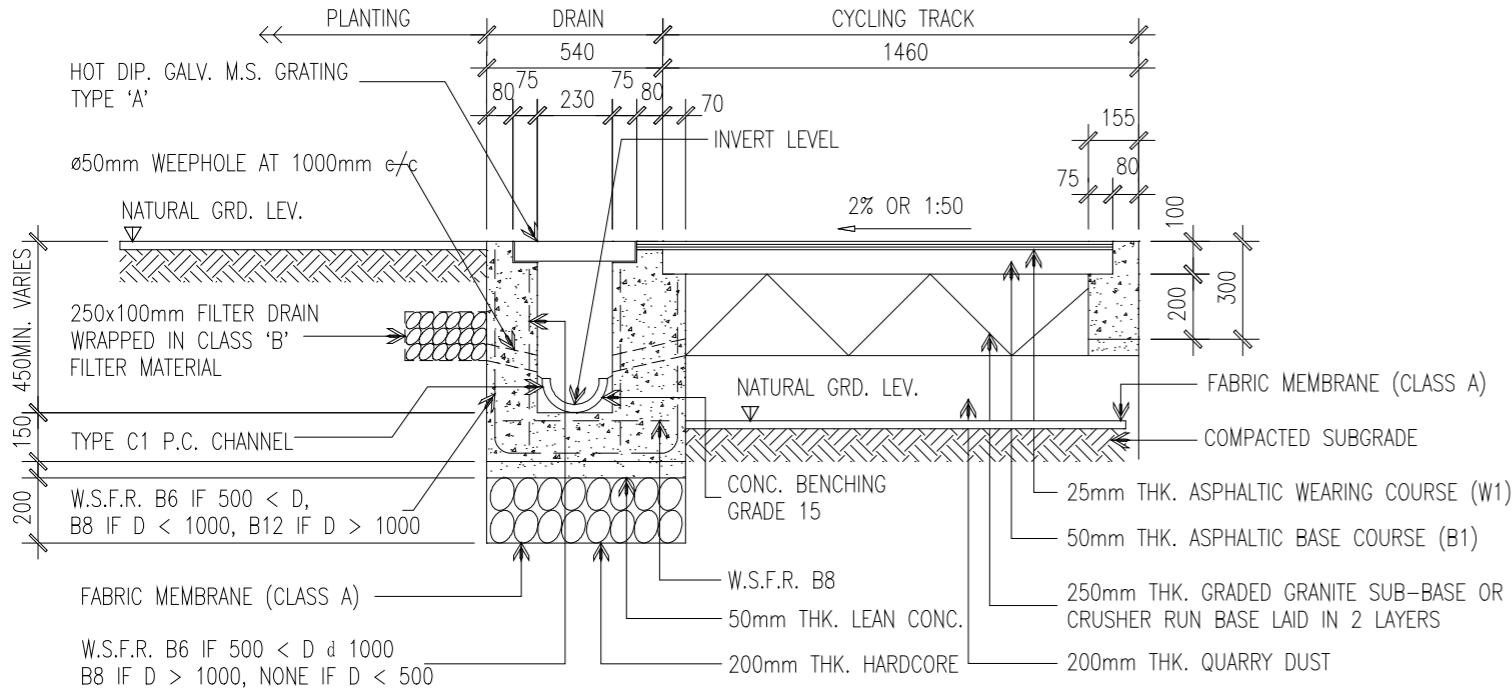
**STANDARD DETAIL**

PARK CONNECTORS STD DETAILS  
STREETPRINT – DETAIL 3



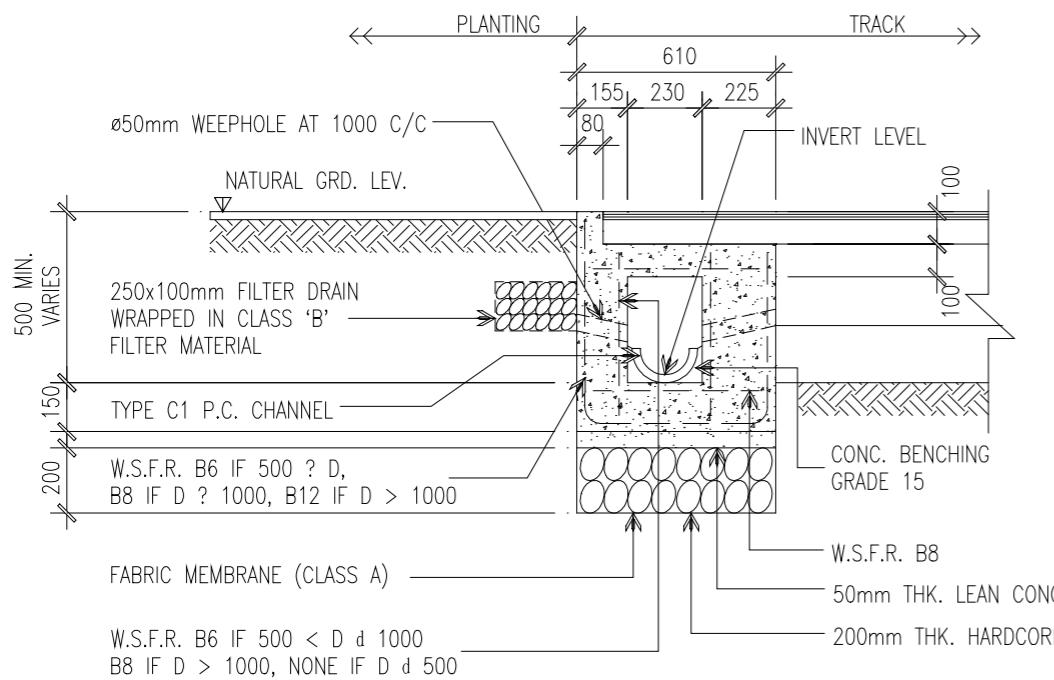
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NP Drawing No:	NPB/PM/PCO/16
Date:	Sep 2012
Scale:	NTS



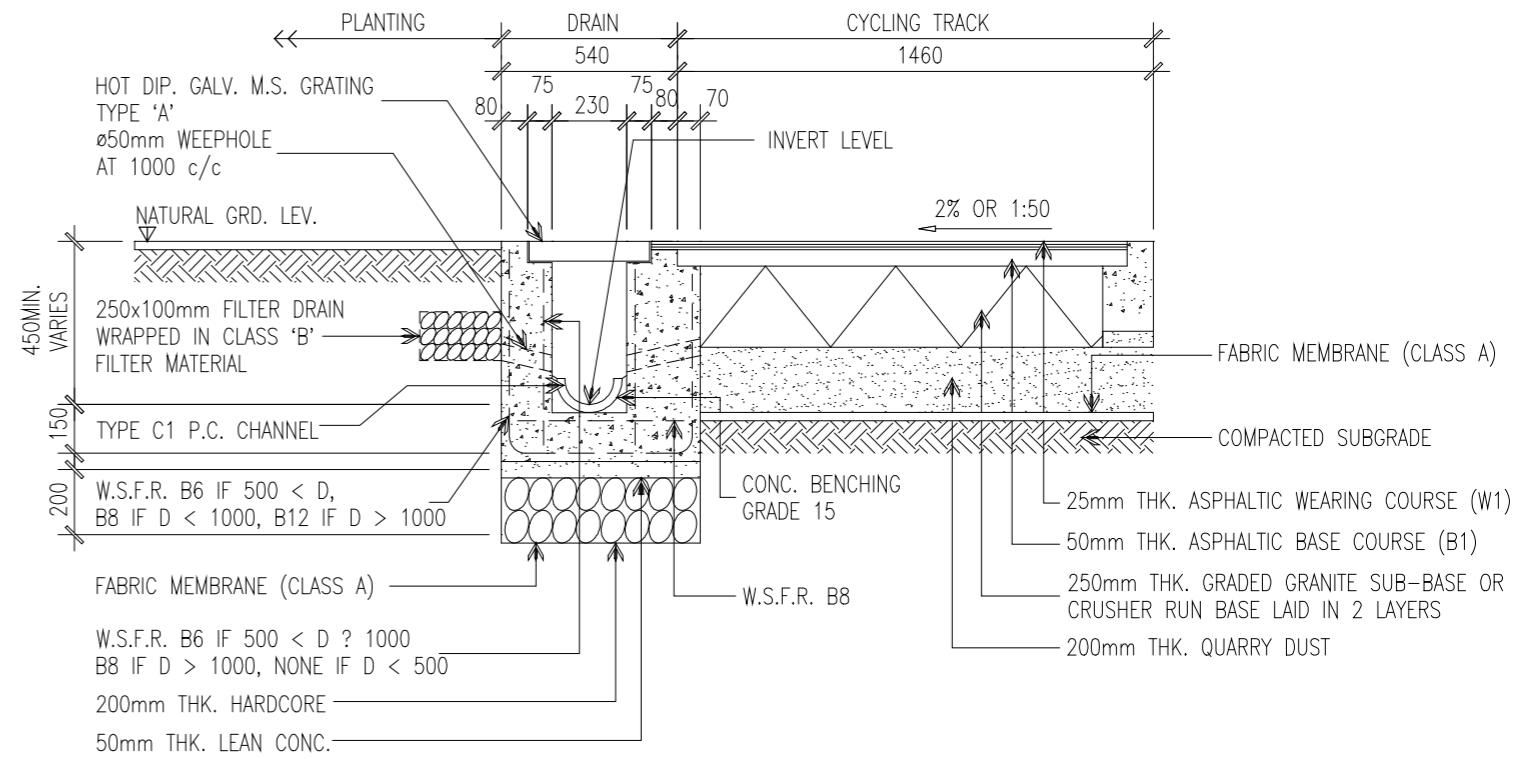
## TYPICAL DETAIL OF CYCLING TRACK

TYPE A (2m WIDTH) & TYPE B (2m WIDTH) SIMILAR U.O.S.  
(GRADE 30 CONC.)  
SCALE 1:25



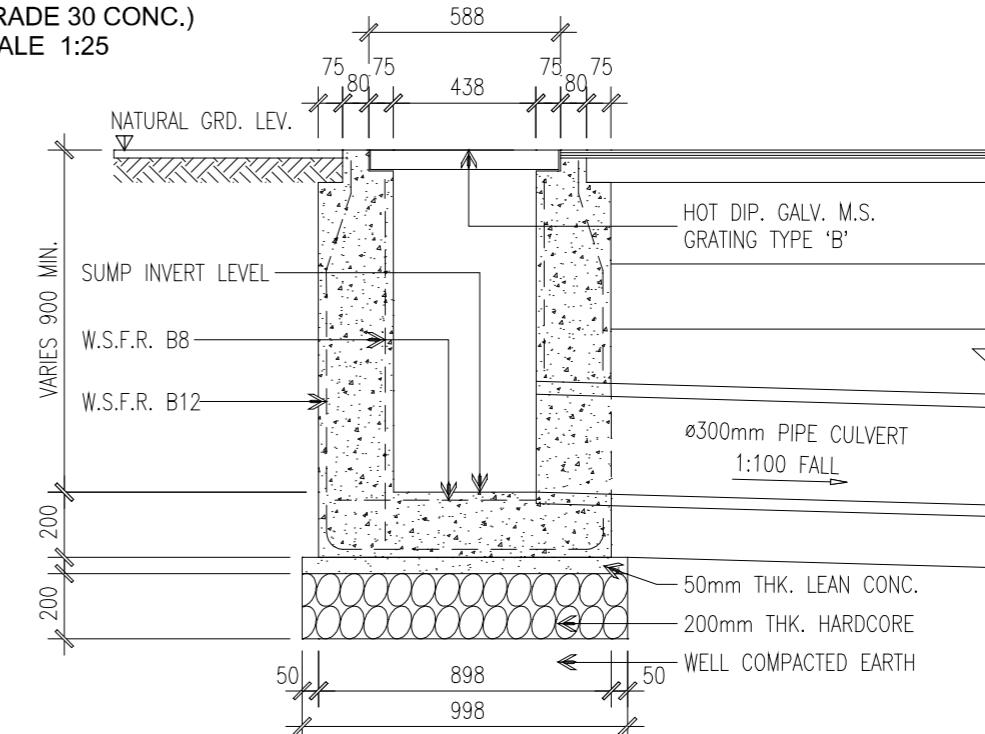
## DRAIN WITH CONC. SLAB

(GRADE 30 CONC.)  
SCALE 1:25



## TYPICAL DETAIL OF CYCLING TRACK

TYPE C (2m WIDTH)  
(GRADE 30 CONC.)  
SCALE 1:25



## TYPICAL SUMP DETAIL

(GRADE 30 CONC.)  
SCALE 1:25

NOTES :

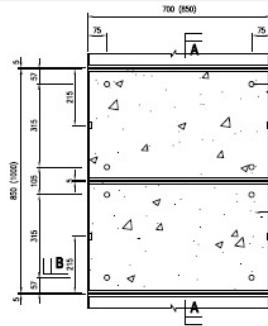
## STANDARD DETAIL

CYCLING TRACK, U-DRAIN, R.C. SUMP &  
BOX CULVERT - 2m WIDTH

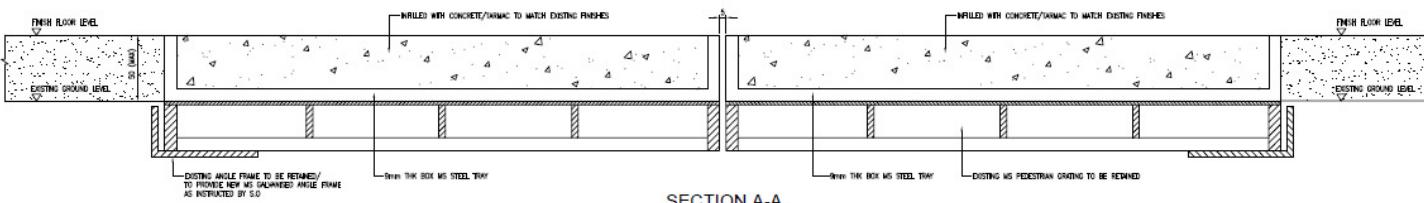


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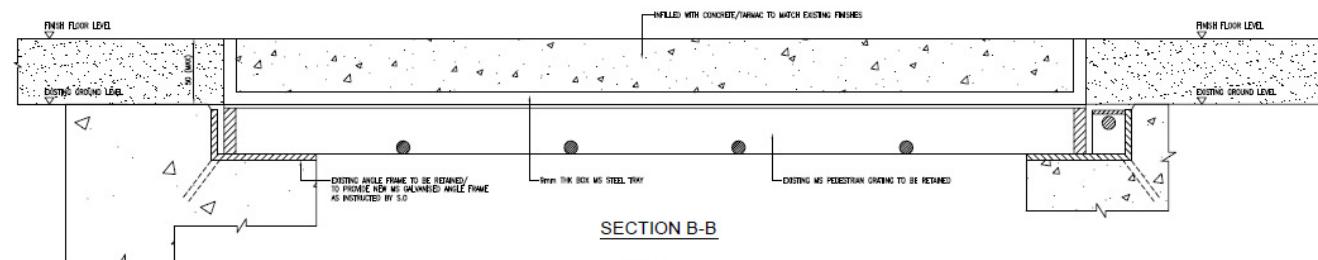
NP DRAWING NO.	NPB/PM/DRA/17
DATE	AUGUST 2004
SCALE	1 : 25



CONCRETE/TARMAC COVER FOR BOX DRAIN



SECTION A-A



SECTION B-B

Notes:

## STANDARD DETAIL

DRAIN COVER WITH CONCRETE / TARMAC INFILL



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NP Drawing No:	NPB/PM/DRA/24
Date:	Jan 2013
Scale:	NTS

### NOTE:

#### 1. GENERAL NOTES

- 1.1 ALL STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- 1.2 ALL DIMENSIONS ARE TO BE VERIFIED ON SITE AND CHECKED BY CONTRACTOR WITH ARCHITECTURAL DRAWINGS.
- 1.3 ECO-CONCRETE IS TO BE USED FOR ALL PLUSH KERB.
- 1.4 ALL HEAVY DUTY GRATING TO LTA'S STANDARD DETAIL.
- 1.5 ALL CROSS-FALL TO FOLLOW ARCHITECT'S DWGS.
- 1.6 ALL EXTR SCUPPER PIPES TO BE UPGRADED/EXTENDED TO JOIN TO NEW DRAIN TO SO APPROVAL.
- 1.7 TO BE COMPACTED TO 95% OF DRY DENSITY OBTAINABLE USING MODIFIED A.A.S.H.O. COMPACTION TEST MIN. C.B.R. 30% (SOAKED).
- 1.8 TO A DEPTH OF 500 MEASURED FROM THE TOP, THE SUBGRADE TO HAVE A M SOAKED C.B.R. OF 5% AND SHALL BE COMPACTED TO MIN. 95% OF DRY DENS OBTAINABLE USING THE MODIFIED A.A.S.H.O. COMPACTION TEST (HEAVY HAMMER TEST NO. 13 BS 1377 1975) IN ACCORDANCE TO CPC GENERAL SPECIFICATION.

#### 2. REINFORCEMENTS

- 2.1 UNLESS OTHERWISE SPECIFIED:

- a) 'T' OR 'Y' DENOTES HIGH TENSILE DEFORMED BARS OF SPECIFIED CHARACTERISTIC STRENGTH OF 460 N/mm<sup>2</sup>.
- b) 'R' DENOTES MILD STEEL BARS OF SPECIFIED CHARACTERISTIC STRENGTH OF 250 N/mm<sup>2</sup>.

- 2.2 ALL BARS USED SHALL CONFORM TO SS 2.

- 2.3 ALL FABRIC REINFORCEMENT SHALL BE WELDED HARD DRAWN STEEL WIRE CONFORMING TO BS 4483 OR SS 32.

- 2.4 WELDING OF REINFORCEMENT WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

- 2.5 WELDING SHALL CONFORM TO BS 5950 PT. 2, BS 5135 & SS CP 8.

- 2.6 ELECTRODES USED SHALL COMPLY WITH BS 539.

- 2.6 ALL STRUCTURAL STEEL SHALL CONFORM TO BS 5160 AND TO BS 449 AND BS 5950 FOR STEEL CONSTRUCTION.

#### 3. CONCRETE

- 3.1 UNLESS OTHERWISE SPECIFIED:

- a) ALL REINFORCED CONCRETE USED SHALL BE OF GRADE C30.
- b) ALL REINFORCED CONCRETE USED FOR CULVERT CROSSING ROAD SHALL BE OF GRADE C40.
- c) ALL LEAN CONCRETE USED SHALL BE OF GRADE C20.
- d) ALL LEAN CONCRETE USED SHALL BE OF GRADE C15.

- e) ALL BENCHING MASS CONCRETE FOR DRAINS SHALL BE OF GRADE C25.

- f) ALL MASS CONCRETE USED FOR ROAD ELEMENT SHALL BE OF GRADE C25.

- g) ALL REINFORCED CONCRETE USED FOR PRECAST RC PILE SHALL BE OF GRADE C35.

- 3.2 UNLESS OTHERWISE SPECIFIED, A LAYER OF 50mm THICK LEAN CONCRETE SHALL BE PROVIDED BELOW ALL REINFORCED CONCRETE STRUCTURES IN CONTACT WITH THE I

- 3.3 UNLESS OTHERWISE SPECIFIED, ALL PRECAST CONCRETE UNITS SHALL SATISFY THE REQUIREMENTS OF BS 340.



Notes:

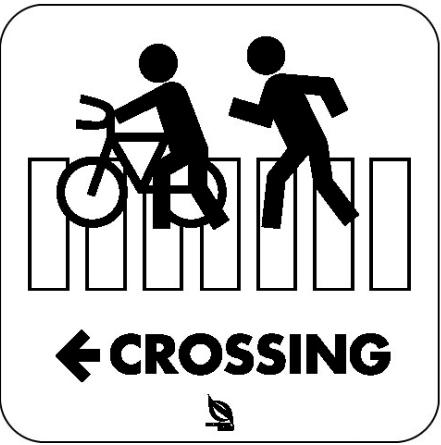
#### STANDARD DETAIL

SIGNAGES  
GROUP 11



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NP Drawing No:	NPB/PM/SIGN/16
Date:	Sep 2012
Scale:	NTS



Notes:

#### STANDARD DETAIL

SIGNAGES  
GROUP 12



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REPUBLIC OF SINGAPORE

NP Drawing No: NPB/PM/SIGN/17

Date: Sep 2012

Scale: NTS



Notes:

#### STANDARD DETAIL

SIGNAGES  
GROUP 13



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REPUBLIC OF SINGAPORE

NP Drawing No:	NPB/PM/SIGN/18
Date:	Sep 2012
Scale:	NTS

## Parking and Vehicle-related



Notes:

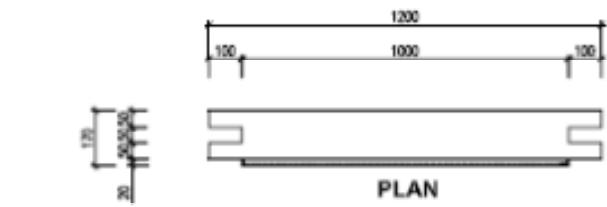
### STANDARD DETAIL

SIGNAGES  
GROUP 20

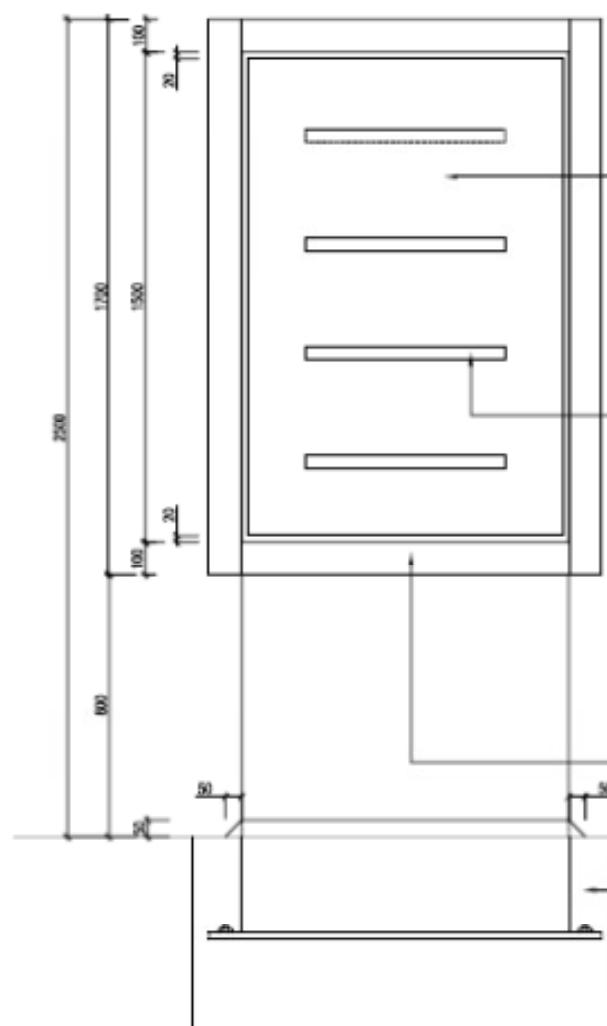
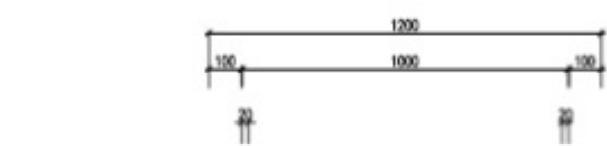


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NP Drawing No:	NPB/PM/SIGN/25
Date:	Sep 2012
Scale:	NTS

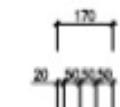


PLAN

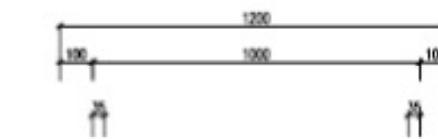


FRONT VIEW

**NOTE:**  
The entire structure to be constructed with 3 Thk AlumInum plate, finished with full welded joints and Internally to use AlumInum Hollow Section Framework for support, finished with Powder Coating (Nut Brown, RAL8011).



SIDE VIEW



BACK VIEW

3 Thk AlumInum Door with Stainless Steel Lock, Heavy Duty Metal Hinges, 80mm handle (to S.O approval).

With rubber gasket all round (to S.O approval).

4 nos, ventilation holes for circulation (to S.O approval).

Splash proof junction box with conduit and armoured cable, A1 rating to be fitted inside the aluminium structure.

Notes:

## STANDARD DETAIL

MAPBOARDS



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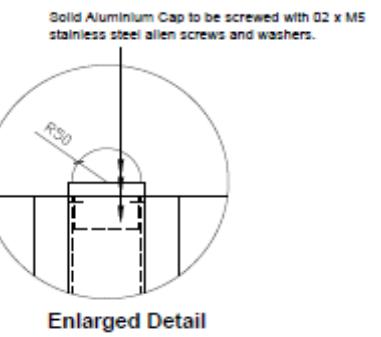
NP Drawing No: NPB/PM/SIGN/26

Date: Sep 2012

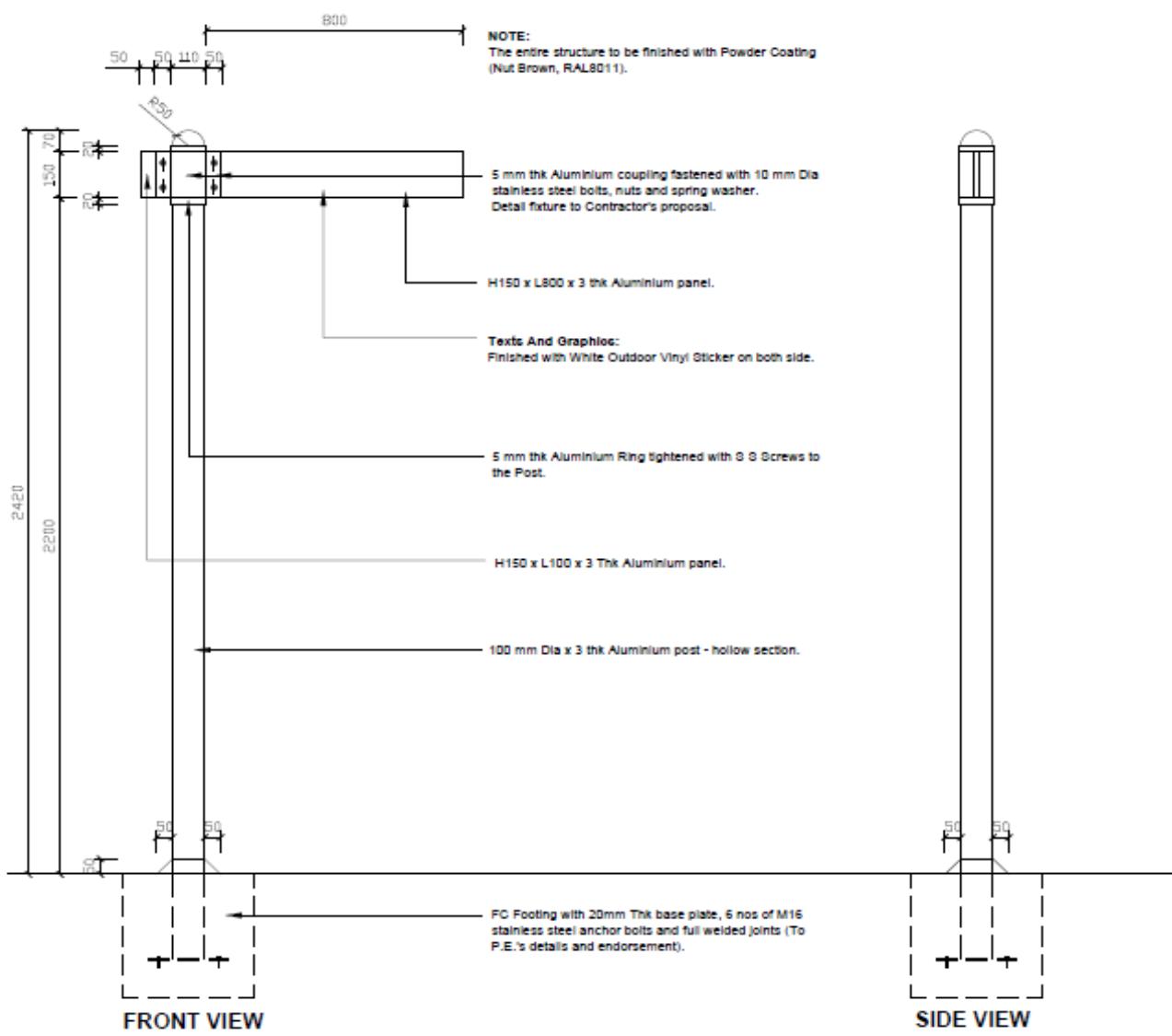
Scale: NTS



PLAN



Enlarged Detail



FRONT VIEW

SIDE VIEW

Notes:

## STANDARD DETAIL

### DIRECTIONAL SIGNS



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NP Drawing No:	NPB/PM/SIGN/27
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Date:	Sep 2012
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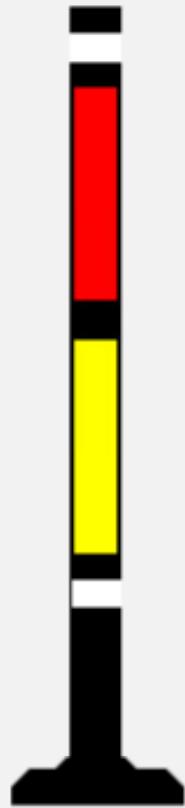
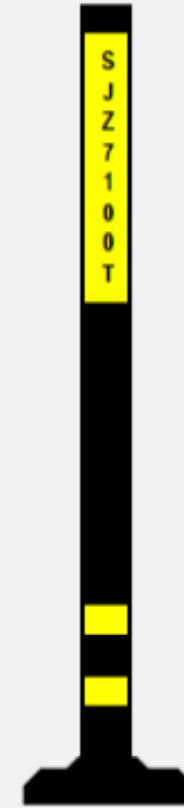
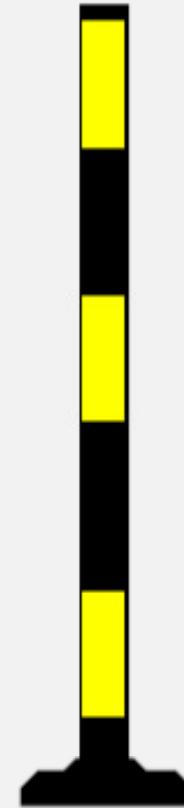
Scale:	NTS
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**- Standard series**  
(without aluminium sign)



**POST – SPECIFICATIONS**

Height : 1050 mm  
Diameter (post) : 60 mm  
Diameter (base) : 200 mm  
Material : Polymer plastic



Notes:

- The above illustration is for reference only.
- Product must able to meet performance specifications for its intended use
- Contractor to propose fixing and installation details for approval

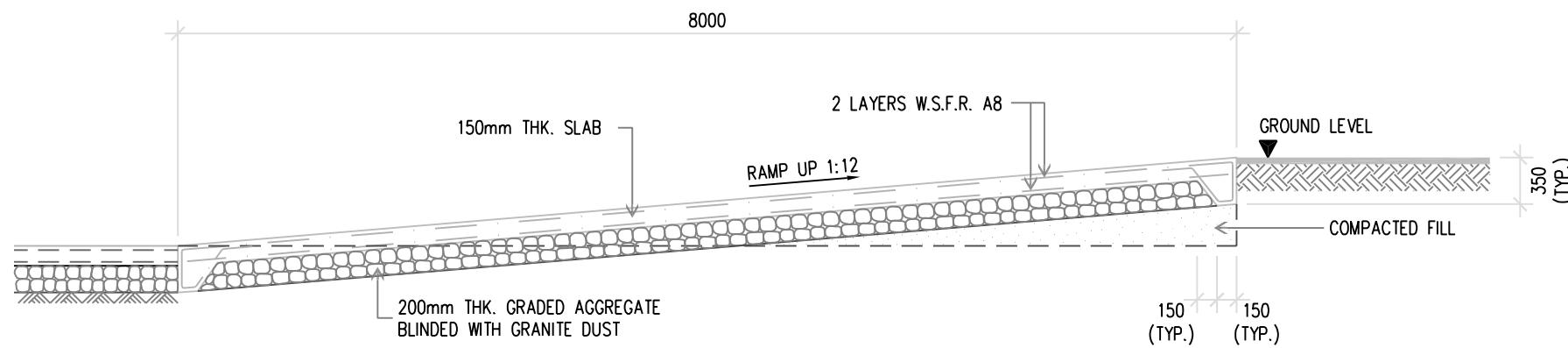
**STANDARD DETAIL**

PROPOSED FIXED & FLEXIBLE BOLLARD



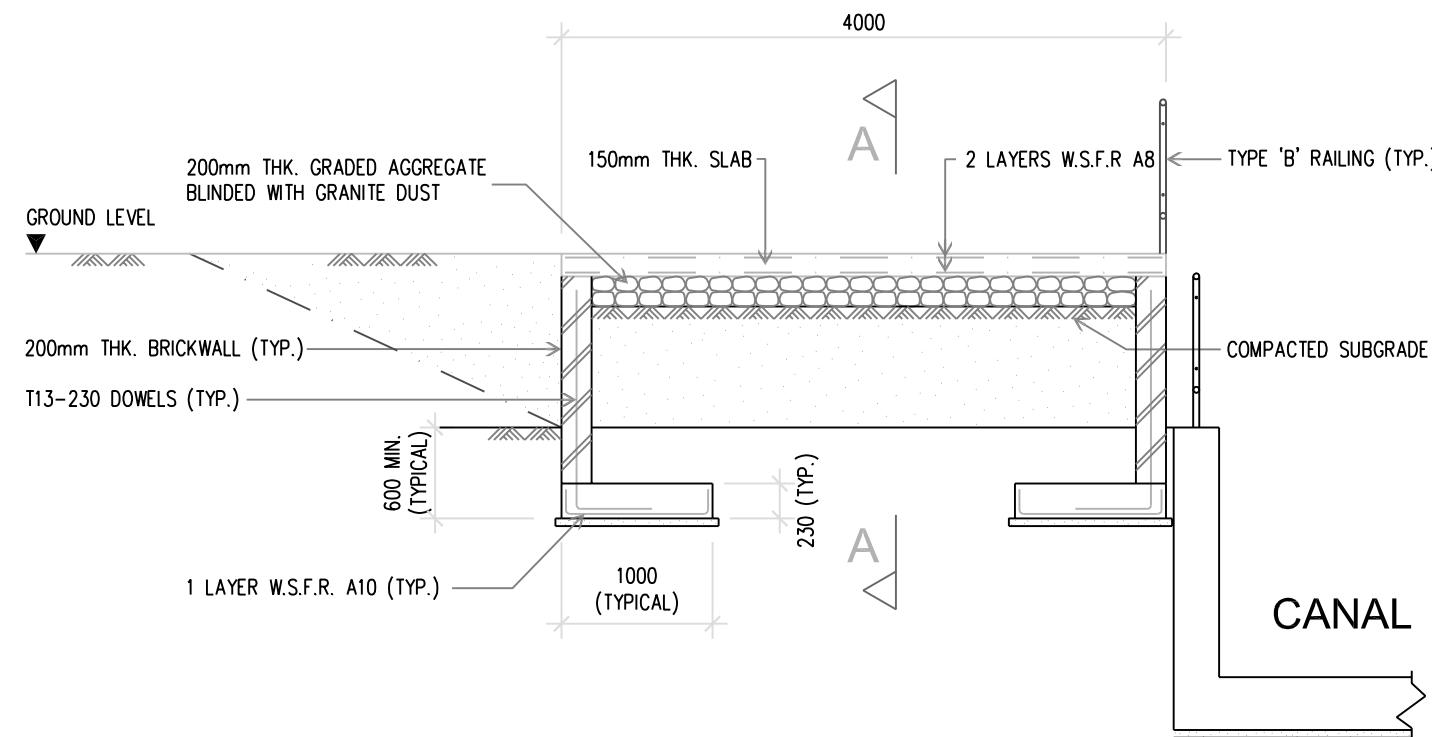
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NP Drawing No:	NPB/PM/MISC/09
Date:	Sep 2012
Scale:	NTS



**SECTION A-A**

SCALE 1:50



**DETAIL OF RAMP**

SCALE 1:50

**NOTES:**

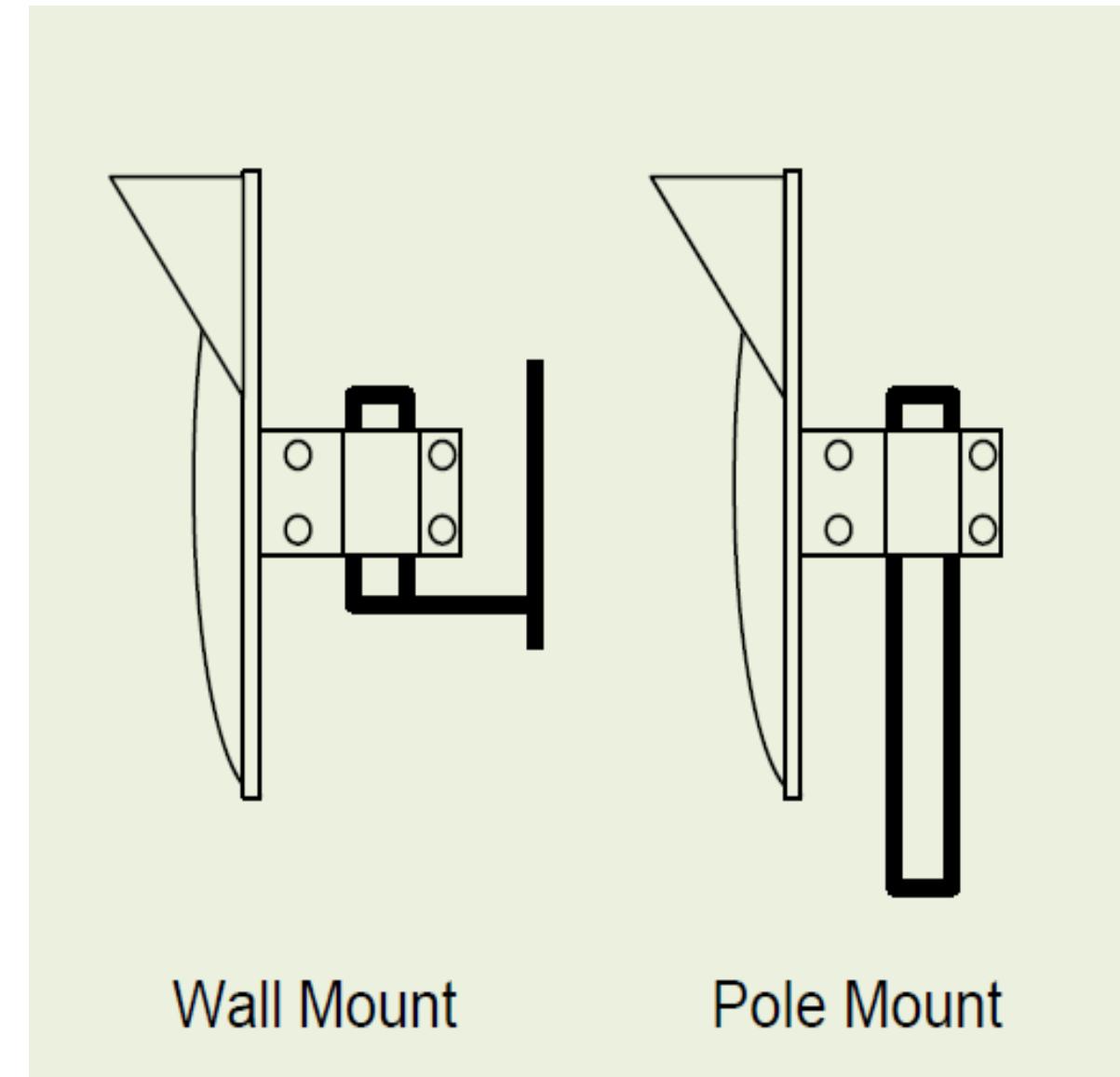
**STANDARD DETAIL**

RAMP



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NP DRAWING NO.	NPB/PM/MISC/05
DATE	AUGUST 2004
SCALE	1 : 50



Wall Mount

Pole Mount

Notes:

**STANDARD DETAIL**

PROPOSED TRAFFIC MIRROR



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NP Drawing No: NPB/PM/MISC/15

Date: Sep 2012

Scale: NTS



**Traffic Calming  
Rubber Road  
Hump Middle  
Section (Yellow)**



**Traffic Calming  
Rubber Road  
Hump Middle  
Section (Black)**



**Traffic Calming  
Rubber Road  
Hump End Section  
(Yellow)**



**Traffic Calming  
Rubber Road  
Hump End Section  
(Black)**

Notes:

Notes:

- The above illustration is for reference only.
- Product must able to meet performance specifications for its intended use only
- Contractor to propose fixing and installation details for approval

**STANDARD DETAIL**

PROPOSED SPEED HUMP



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NP Drawing No: NPB/PM/MISC/16

Date: Sep 2012

Scale: NTS

# Colour Application Guide

## PCN Standard Regulatory Signages (Graphics & Text)

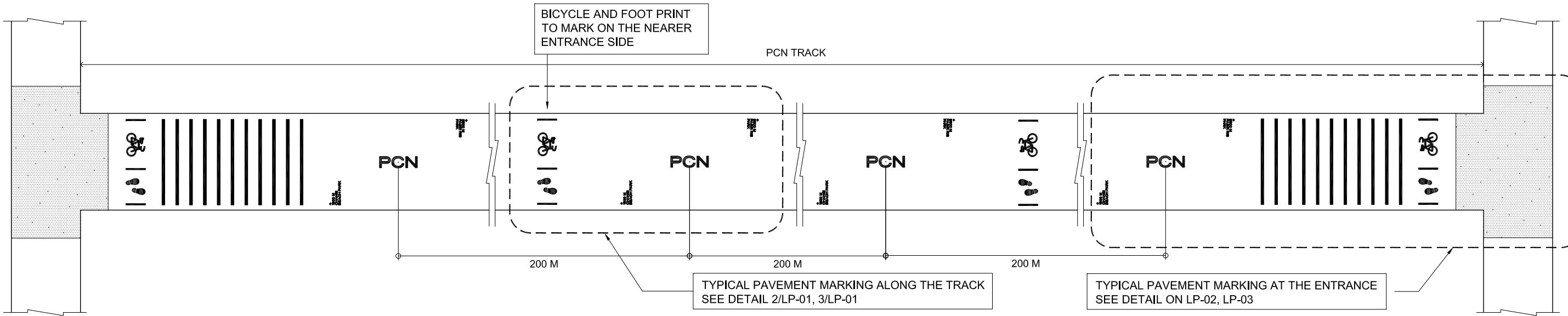


### Colour Code

Aluminium plate = Finished in powder coating (RAL 8011, Nut Brown).

Graphics, logo and text = Printed on engineering grade outdoor reflective vinyl sticker  
(min 2 years warranty)

# TYPICAL PAVEMENT MARKING PLAN



1  
LP-01      TYPICAL PLAN  
SCALE 1:150

PRIORITY OF MARKING PCN LOGO WITH DESTINATION MARKERS ALONG THE PCN TRACK

1. BOTH ENTRANCES OF PCN TRACK
  2. AT THE MAJOR CONNECTIONS ALONG THE PCN TRACK
  3. AT THE INTERVAL OF 200 M
    - ACCEPTABLE RANGE IS 100 - 300 M
    - MINIMUM ACCEPTABLE DISTANCE OF MARKING FROM ENTRANCE TO MAJOR CONNECTION IS 50 M
    - MINIMUM ACCEPTABLE DISTANCE OF MARKING BETWEEN 2 MAJOR CONNECTIONS IS 100 M

## NOTE

- TO MARK PCN LOGO, DESTINATION MARKERS AND BICYCLE , FOOT PRINT AT INTERVAL OF 200 M
  - COLOUR OF SPEED REGULATING STRIPS IS YELLOW
  - COLOUR OF PCN LOGO, DESTINATION MARKER, BICYCLE PRINT AND FOOT PRINT IS YELLOW
  - ORIENTATION OF PCN LOGO MUST FACE FOOT PRINT SIDE, UNLESS OTHERWISE NOTED
  - THE SIDE OF BICYCLE AND FOOT PRINT TO BE CONFIRMED ON SITE

**50 x 700 MM YELLOW STRIP : STREETPRINT OR EQUIVALENT**

**BICYCLE AND FOOT PRINT SEE DETAIL ON LD-03**

**PCN LOGO SEE DETAIL ON LD-02**

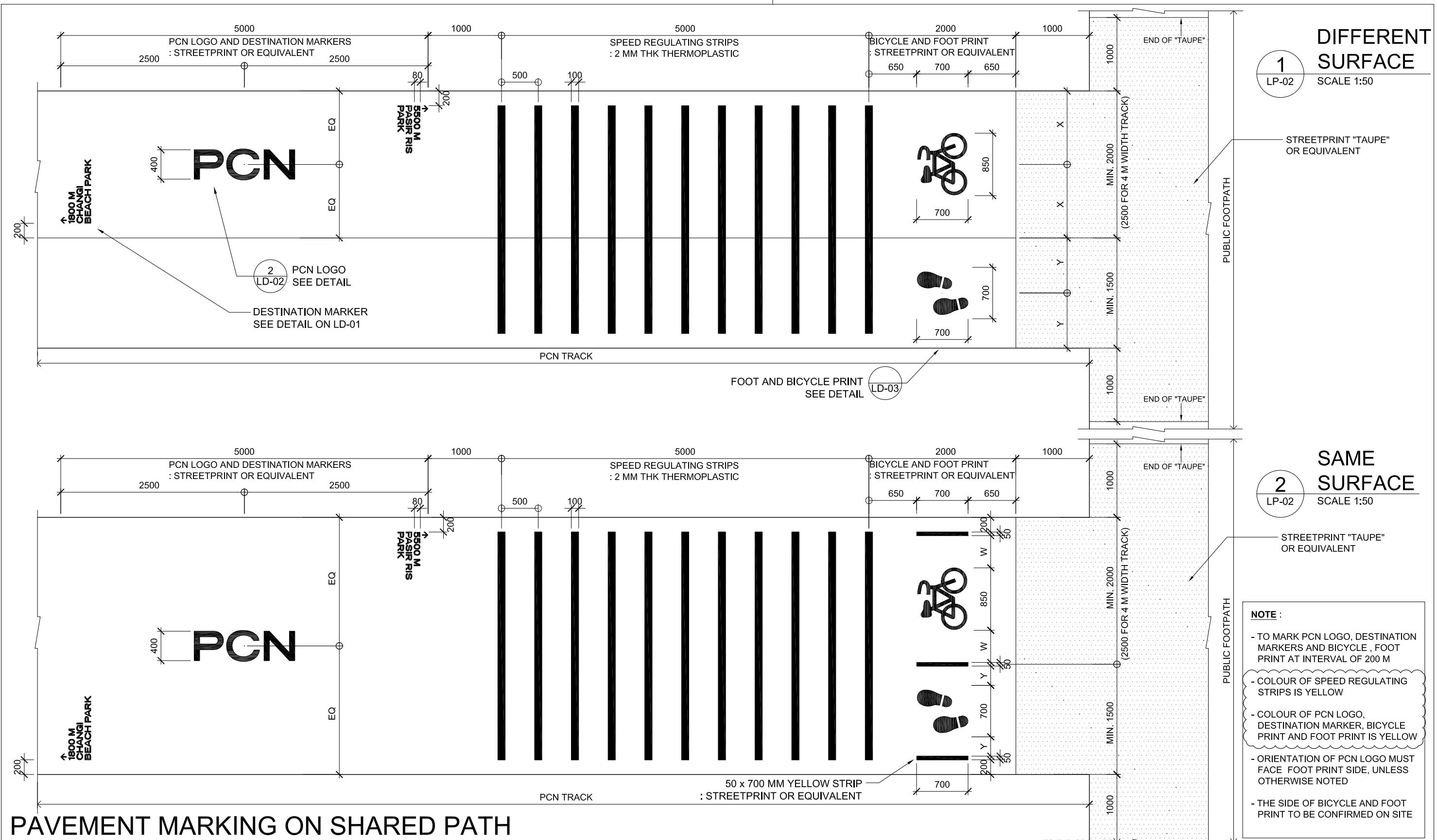
**DESTINATION MARKER SEE DETAIL ON LD-01**

**TYPICAL PAVEMENT MARKING ALONG THE TRACK (SHARED PATH)**  
SCALE 1:75

**TYPICAL PAVEMENT MARKING ALONG THE TRACK (SEPARATED PATH)**  
SCALE 1:75

2000  
(2500 FOR 4 M WIDTH TRACK)  
50  
W  
V  
50  
Y  
700  
200  
Y  
50  
1500  
700  
3000  
700  
200  
2500  
5000  
2500  
2500  
200  
W  
850  
W  
200  
1800 M CHANGI BEACH PARK  
PCN LOGO AND DESTINATION MARKERS : STREETPRINT OR EQUIVALENT  
5000  
2500  
2500  
200  
W  
850  
W  
200  
1800 M CHANGI BEACH PARK  
**PCN**

# TYPICAL PAVEMENT MARKING ALONG THE TRACK (SEPARATED PATH)



#### GENERAL NOTES

- This print and its copyright are the property of National Parks Board and shall remain so under all circumstances.
- These drawings are to be read in conjunction with the specifications in the tender document. Any discrepancies occurring in these drawings or between the Landscape Architectural, Architectural, Structural, M&E and specialist drawings and documents must be highlighted to the S.O. for verification before commencing any works. It is the Contractor's responsibility to cross check all drawings and documents.
- All dimensions are structural dimensions and in millimetres (mm) unless otherwise noted. Do not scale drawings. Figured dimensions are to be followed. The Contractor is to check and verify all dimensions on site. Any discrepancies on drawings or verification of measurements are to be referred to the S.O. before commencing any work or shop drawing.

REF.	AMENDMENT	DATE
1	CORRECTION OF DIMENSION AND ADDITION OF NOTE CHANGE OF COLOUR FROM "IRISH CREAM" TO "TAUPE"	13 MAY 2008
2	CHANGE OF INTERVAL MARKING, ADDITION OF MATERIAL SPECIFICATION	26 MAY 2008
2A	CHANGE OF DRAWING NO. FROM LP-01 TO LP-02	04 JUN 2008
3	CHANGE OF COLOUR FOR SPEED REGULATING STRIPS, PCN LOGO, DESTINATION MARKER FROM WHITE TO YELLOW	19 AUG 2008

**TENDER**

**JOB TITLE  
PROPOSED PAVEMENT MARKING FOR  
PARK CONNECTOR NETWORK**

**DAMIAN TANG**

**ASSISTANT DIRECTOR / DESIGN**

**NATTAPONG THEPSAMARN**

**LANDSCAPE ARCHITECT**

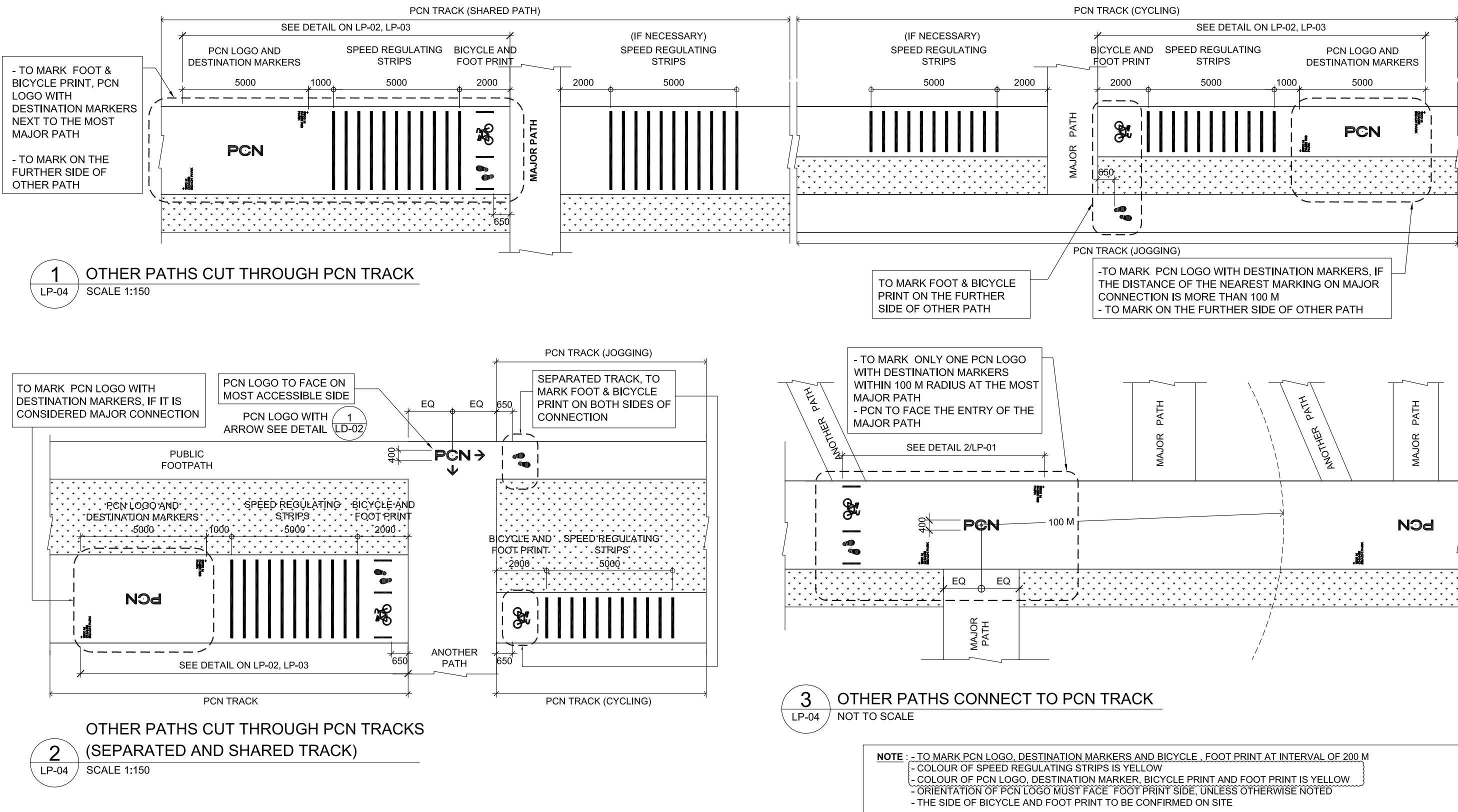
**DRAWING TITLE  
PAVEMENT MARKING ON SHARED PATH WITH  
SAME AND DIFFERENT SURFACE**



**NATIONAL PARKS BOARD  
PARKS DEVELOPMENT DIVISION  
REPUBLIC OF SINGAPORE**

DESIGNED BY	VTK, NT	SCALE	AS SHOWN
DRAWN BY	NT	SHEET NO.	<b>LP-02</b>
CHECKED BY	NT	DATE	25 APR 2008
DRAWING NO.	NP/2008/XXXX/LA/X/XXX		
FILE NO.	XXyyymmdd—.dwg		

# PAVEMENT MARKING AT CONNECTION WITH OTHER PATHS



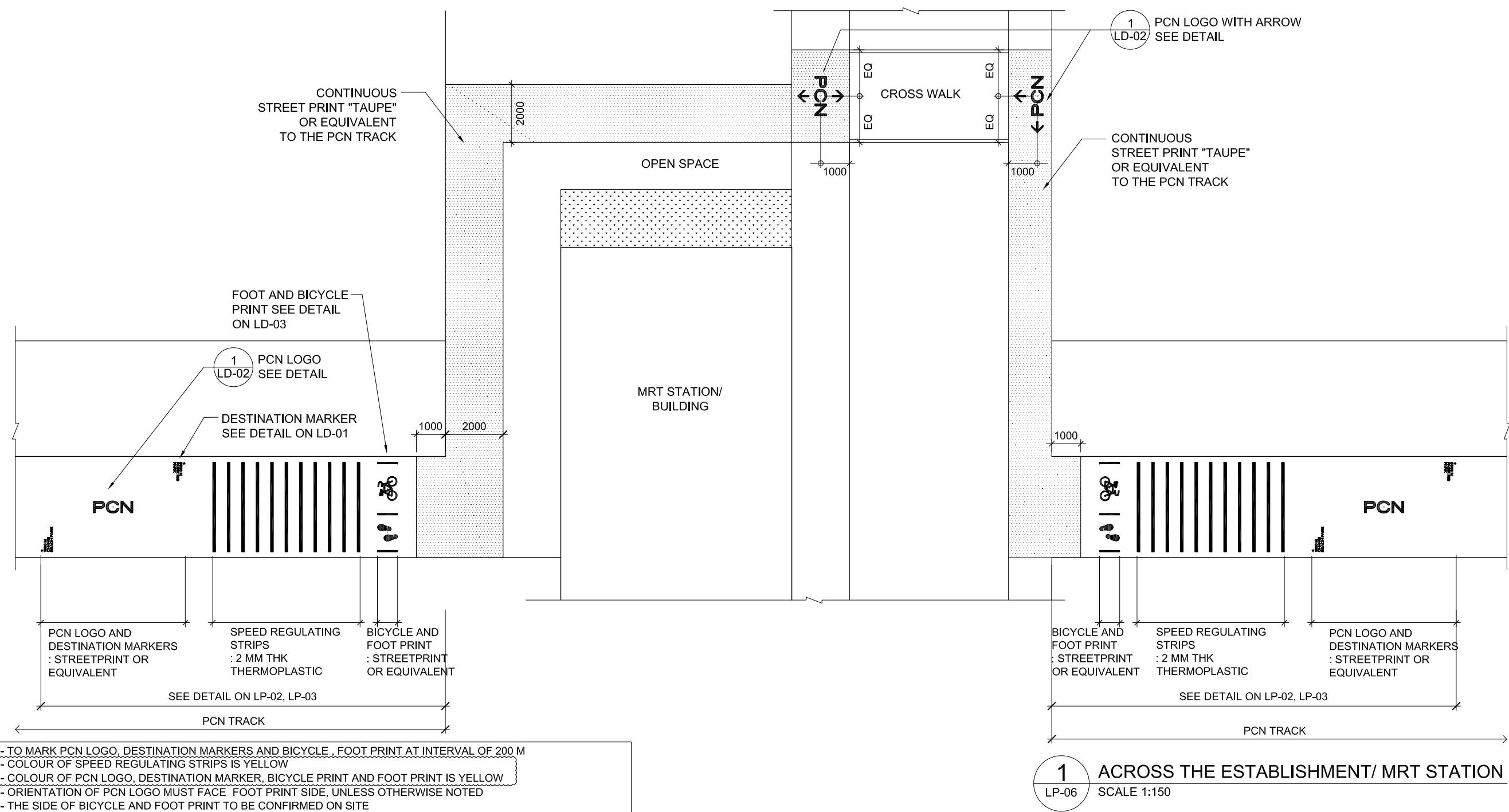
GENERAL NOTES		
1. This print and its copyright are the property of National Parks Board and shall remain so under all circumstances.	REF.	AMENDMENT
2. These drawings are to be read in conjunction with the specifications in the tender document. Any discrepancies occurring in these drawings or between the Landscape Architectural, Architectural, Structural, M&E and specialist drawings and documents must be highlighted to the S.O. for verification before commencing any works. It is the Contractor's responsibility to cross check all drawings and documents.		DATE
3. All dimensions are structural dimensions and in millimetres (mm) unless otherwise noted. Do not scale drawings. Figured dimensions are to be followed. The Contractor is to check and verify all dimensions on site. Any discrepancies on drawings or verification of measurements are to be referred to the S.O. before commencing any work or shop drawing.	1	CHANGE OF COLOUR FOR SPEED REGULATING STRIPS, PCN LOGO, DESTINATION MARKER FROM WHITE TO YELLOW

TENDER		JOB TITLE		DRAWING TITLE									
		PROPOSED PAVEMENT MARKING FOR PARK CONNECTOR NETWORK		PAVEMENT MARKING AT CONNECTION WITH OTHER PATHS									
DAMIAN TANG	ASSISTANT DIRECTOR / DESIGN												
NATTAPONG THEPSAMARN	LANDSCAPE ARCHITECT												
DESIGNED BY	VTK, NT	SCALE	AS SHOWN										
DRAWN BY	NT	SHEET NO.	LP-04										
CHECKED BY	NT	DATE	25 APR 2008										
DRAWING NO.	NP/2008/XXXX/LA/X/XXX												
FILE NO.	XXyyymmddD.dwg												



NATIONAL PARKS BOARD  
PARKS DEVELOPMENT DIVISION  
REPUBLIC OF SINGAPORE

## PAVEMENT MARKING AT ACROSS THE ESTABLISHMENT/ MRT STATION



<b>GENERAL NOTES</b>			<p><b>TENDER</b></p> <p><b>JOB TITLE</b> <b>PROPOSED PAVEMENT MARKING FOR PARK CONNECTOR NETWORK</b></p> <p><b>DRAWING TITLE</b> <b>PAVEMENT MARKING AT ACROSS THE ESTABLISHMENT/ MRT STATION</b></p> <p><b>DESIGNED BY</b> VTK, NT    <b>SCALE</b> AS SHOWN</p> <p><b>DRAWN BY</b> NT    <b> SHEET NO.</b> LP-06</p> <p><b>CHECKED BY</b> NT    <b>DATE</b> 25 APR 2008</p> <p><b>DRAWING NO.</b> NP/2008/XXXX/LA/X/XXX</p> <p><b>FILE NO.</b> XXXyymmddD.dwg</p>		
<p>1. This print and its copyright are the property of National Parks Board and shall remain so under all circumstances.</p> <p>2. These drawings are to be read in conjunction with the specifications in the tender document. Any discrepancies occurring in these drawings or between the Landscape Architectural, Architectural, Structural, M&amp;E and specialist drawings and documents must be highlighted to the S.O. for verification before commencing any works. It is the Contractor's responsibility to cross check all drawings and documents.</p> <p>3. All dimensions are structural dimensions and in millimetres (mm) unless otherwise noted. Do not scale drawings. Figured dimensions are to be followed. The Contractor is to check and verify all dimensions on site. Any discrepancies on drawings or verification of measurements are to be referred to the S.O. before commencing any work or shop drawing.</p>			REF.	AMENDMENT	DATE
	1 CHANGE OF COLOUR FOR SPEED REGULATING STRIPS, PCN LOGO, DESTINATION MARKER FROM WHITE TO YELLOW	19 AUG 2008	DAMIAN TANG ASSISTANT DIRECTOR / DESIGN	NATTAPONG THEPSAMARN LANDSCAPE ARCHITECT	



DETAIL OF ALPHABETS  
AND NUMERALS

1  
LD-01

SCALE 1 : 4

TABLE 1 : RECOMMENDED SPACING BETWEEN  
ALPHABETS AND NUMERALS

RECOMMENDED SPACING BETWEEN UPPER-CASE LETTERS (BASE ON TEXT HEIGHT OF 80 mm)		
LETTERS	WHEN COMBINED WITH LETTERS	LETTERS SPACING (mm)
A, F, K, L, X, Z	ALL	5
P, T, V, W, Y	A	-5
	ALL OTHERS	5
C, D, O, Q	A, C, G, J, O, Q, T, V, W, X, Y, Z	5
	B, D, E, F, H, I, K, L, M, N, P, R, S, U	10
B, E, G, H, I, J, M, N, R, S, U	A, J, T, V, W, X, Y, Z	5
	C, G, O, Q	10
	B, D, E, F, H, I, K, L, M, N, P, R, S, U	15
RECOMMENDED SPACING BETWEEN NUMERALS (BASE ON TEXT HEIGHT OF 80 mm)		
NUMERALS	WHEN COMBINED WITH NUMERAL	NUMERAL SPACING (mm)
1	ALL	15
2, 3, 4, 5, 6, 7, 8, 9, 0	1	15
	ALL OTHERS	10

TYPICAL DETAIL OF DESTINATION MARKER

2  
LD-01

SCALE 1 : 4

ARROW SEE DETAIL

DISTANCE TO BE ROUNDED OFF TO THE NEAREST HUNDRED E.G. 300, 1100

10 10 50

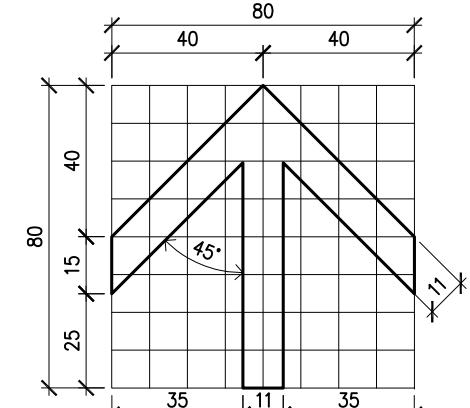
800 M

5 5 5 50 5 5 5

EAST COAST

5 5 5 5 5 5 5

PARK



ARROW DETAIL

3  
LD-01

SCALE 1 : 2

NOTE - COLOUR OF ALPHABET, NUMERAL AND ARROW IS YELLOW  
- MATERIAL OF TEXT AND ARROW IS STREETPRINT OR EQUIVALENT

GENERAL NOTES

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- All dimensions are structural dimensions and in millimetres (mm) unless otherwise noted. Do not scale drawings. Figured dimensions are to be followed. The Contractor is to check and verify all dimensions on site. Any discrepancies on drawings or verification of measurements are to be referred to the S.O. before commencing any work or shop drawing.

REF.	AMENDMENT	DATE
1	ADDITION OF ARROW DETAIL AND NOTE	13 MAY 2008
1A	ADDITION OF NOTE 2 CHANGE OF COLOUR FOR ALPHABET, NUMERAL AND ARROW TO YELLOW	4 JUN 2008 19 AUG 2008

TENDER

JOB TITLE  
PROPOSED PAVEMENT MARKING FOR  
PARK CONNECTOR NETWORK

DAMIAN TANG

ASSISTANT DIRECTOR / DESIGN

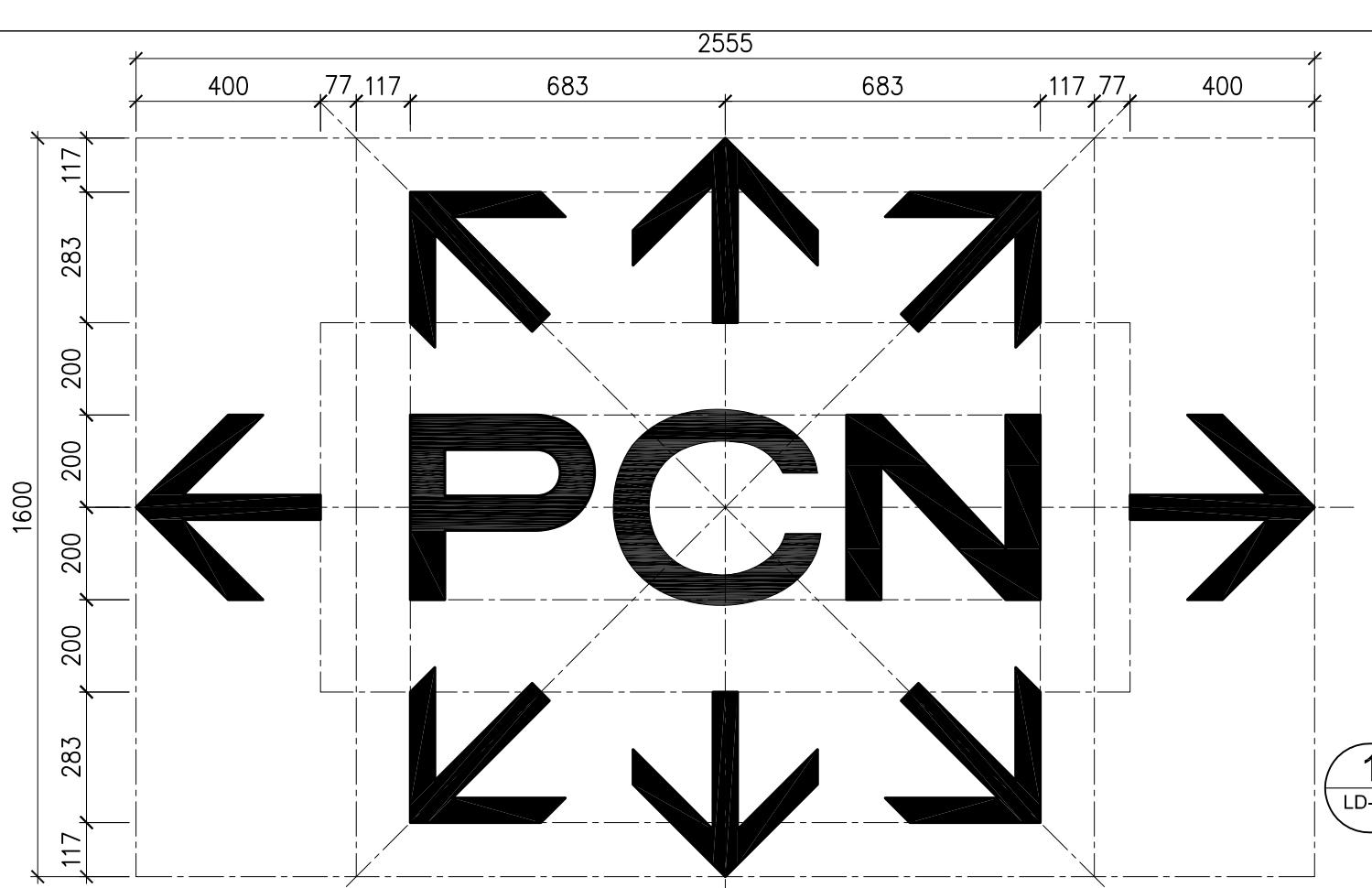
NATTAPONG THEPSAMARN  
LANDSCAPE ARCHITECT

DRAWING TITLE  
DETAIL OF ALPHABETS AND NUMERALS



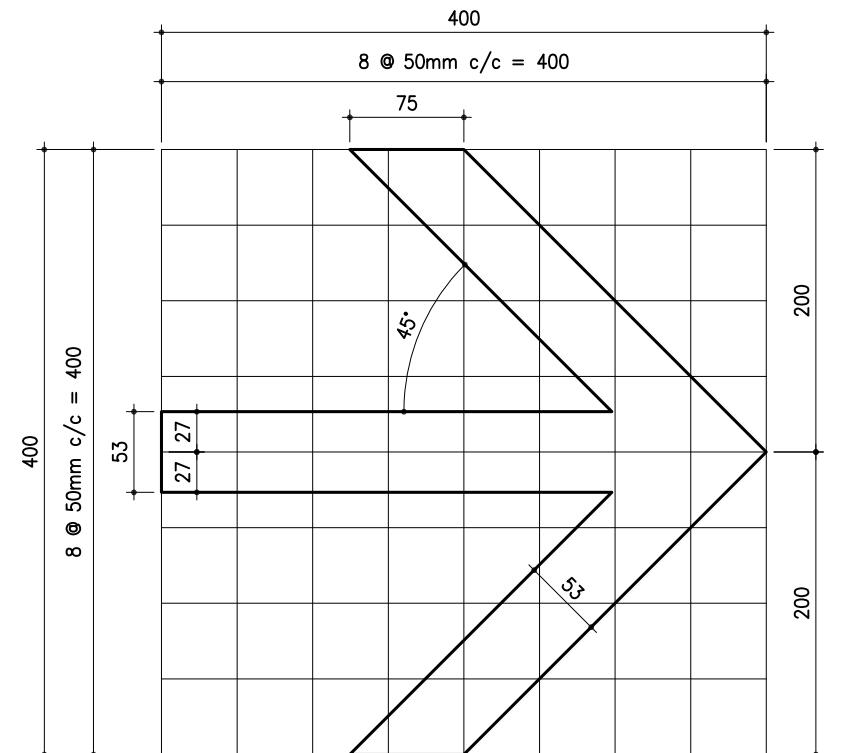
NATIONAL PARKS BOARD  
PARKS DEVELOPMENT DIVISION  
REPUBLIC OF SINGAPORE

DESIGNED BY	VTK	SCALE	AS SHOWN
DRAWN BY	TTS, NT	sheet no.	LD-01
CHECKED BY	NT	DATE	25 APR 2008
DRAWING NO.	NP/2008/XXXX/LA/X/XXX		
FILE NO.	XXyyymmddD.dwg		

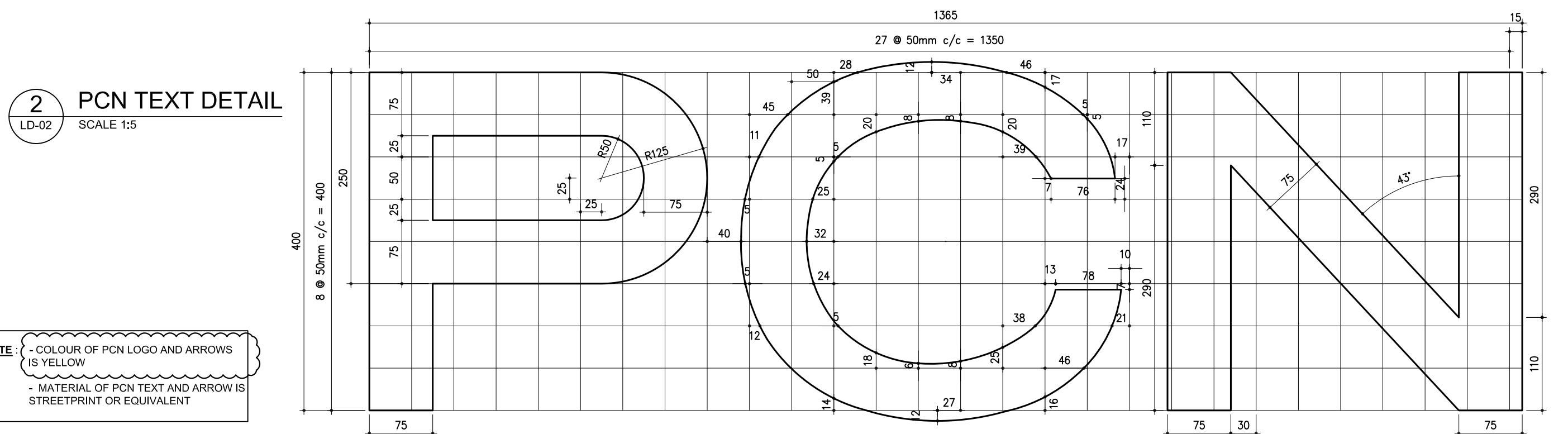


# PCN LOGO WITH ARROWS

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**3** ARROW DETAIL  
LD-02 SCALE 1:5



## **GENERAL NOTES**

1. This print and its copyright are the property of National Parks Board and shall remain so under all circumstances.
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  3. All dimensions are structural dimensions and in millimetres (mm) unless otherwise noted. Do not scale drawings. Figured dimensions are to be followed. The Contractor is to check and verify all dimensions on site. Any discrepancies on drawings or verification of measurements are to be referred to the S.O. before commencing any work shop drawing.

REF.	AMENDMENT	DATE
1	ADDITION OF NOTE	13 MAY 2008
2	CHANGE OF COLOUR PCN FROM BLACK ON "IRISH CREAM" TO WHITE ON "TAUPE"	26 MAY 2008
2A	ADDITIONAL OF MATERIAL NOTE	4 JUN 2008
3	CHANGE OF COLOUR FOR PCN LOGO AND ARROW TO YELLOW	19 AUG 2008

# TENDER

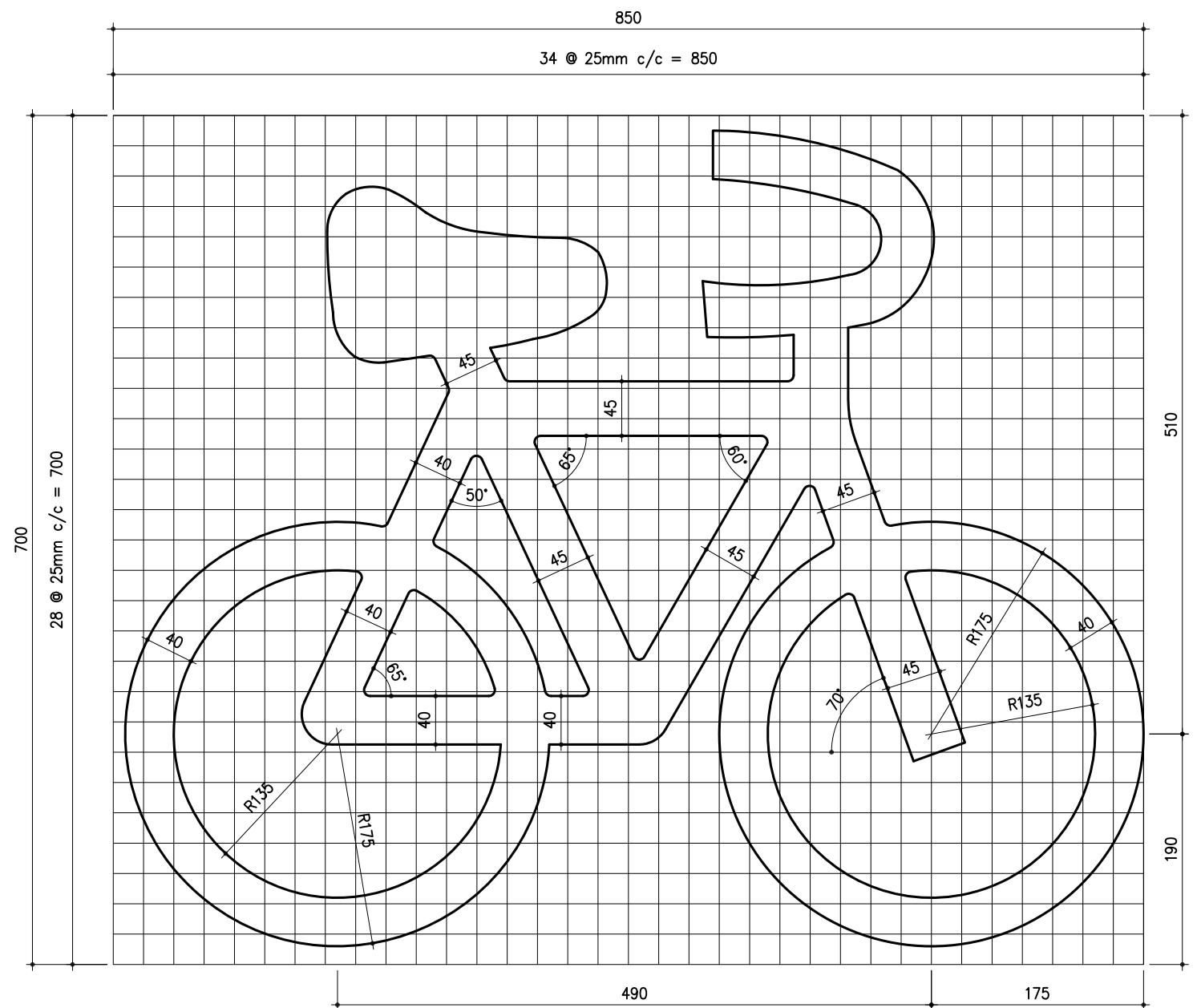
**JOB TITLE**

**PROPOSED PAVEMENT MARKING FOR  
PARK CONNECTOR NETWORK**

The logo for National Parks, featuring a stylized mountain peak or leaf shape above the word "NATIONAL PARKS".

NATIONAL PARKS BOARD  
ARKS DEVELOPMENT DIVISION  
EPUBLIC OF SINGAPORE

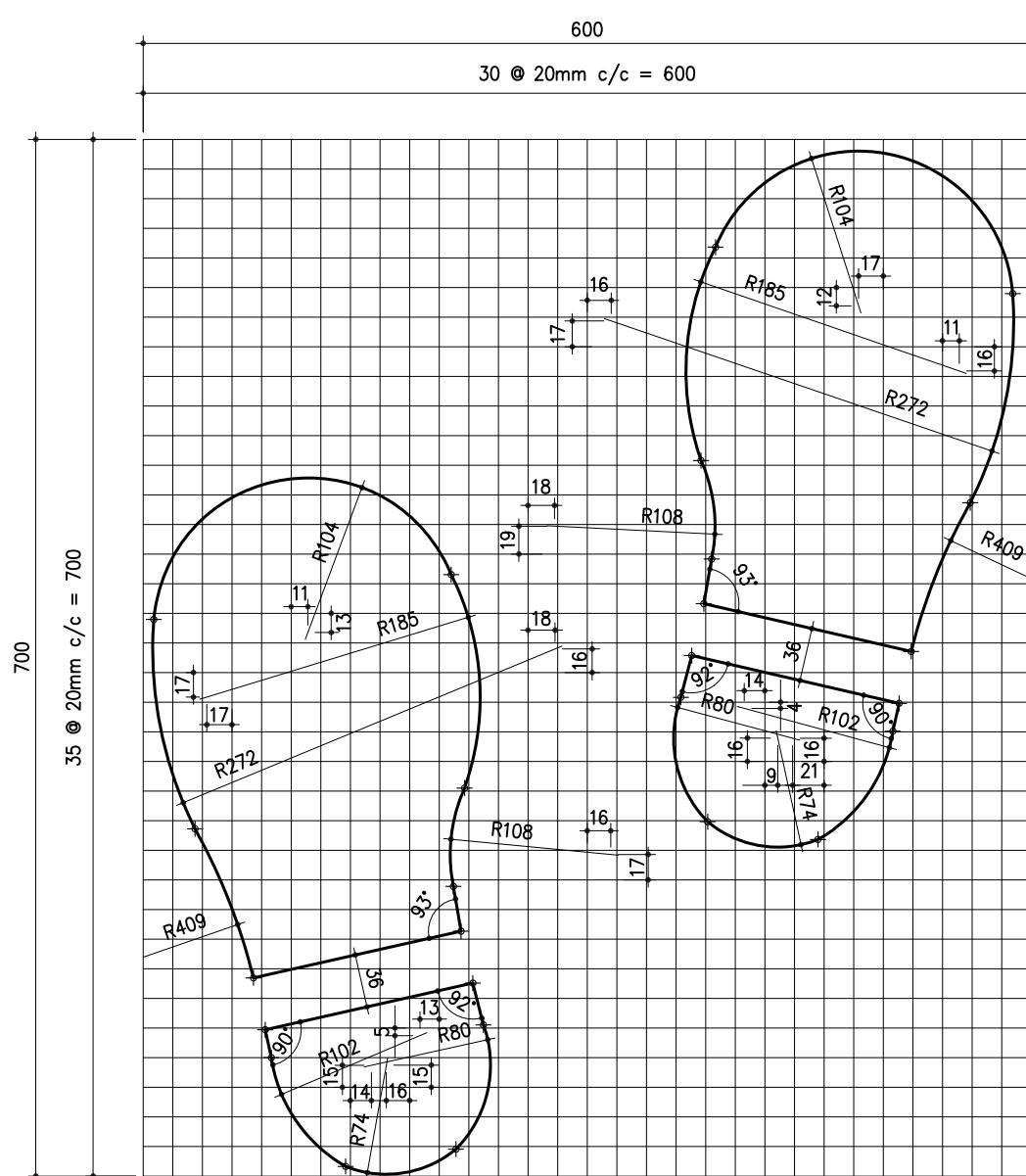
IGNED BY	VTK	SCALE	AS SHOWN
AWN BY	TTS, NT	SHEET NO.	<b>LD-02</b>
ECKED BY	NT	DATE	25 APR 2008
AWING NO.	NP/2008/XXXX/LA/X/XXX		
E NO.	XXxyymmddD—.dwg		



**1 BICYCLE PRINT PLAN**

LD-03

SCALE 1:5



**2 FOOT PRINT PLAN**

LD-03

SCALE 1:5

**NOTE :**  
 - COLOUR OF BICYCLE PRINT AND FOOT PRINT IS YELLOW  
 - MATERIAL IS STREETPRINT OR EQUIVALENT

GENERAL NOTES		
1. This print and its copyright are the property of National Parks Board and shall remain so under all circumstances.	REF.	AMENDMENT
2. These drawings are to be read in conjunction with the specifications in the tender document. Any discrepancies occurring in these drawings or between the Landscape Architectural, Architectural, Structural, M&E and specialist drawings and documents must be highlighted to the S.O. for verification before commencing any works. It is the Contractor's responsibility to cross check all drawings and documents.	1 1A	ADDITION OF NOTE ADDITION OF MATERIAL NOTE
3. All dimensions are structural dimensions and in millimetres (mm) unless otherwise noted. Do not scale drawings. Figured dimensions are to be followed. The Contractor is to check and verify all dimensions on site. Any discrepancies on drawings or verification of measurements are to be referred to the S.O. before commencing any work or shop drawing.		13 MAY 2008 4 JUN 2008

REF.	AMENDMENT	DATE
1 1A	ADDITION OF NOTE ADDITION OF MATERIAL NOTE	13 MAY 2008 4 JUN 2008

## TENDER

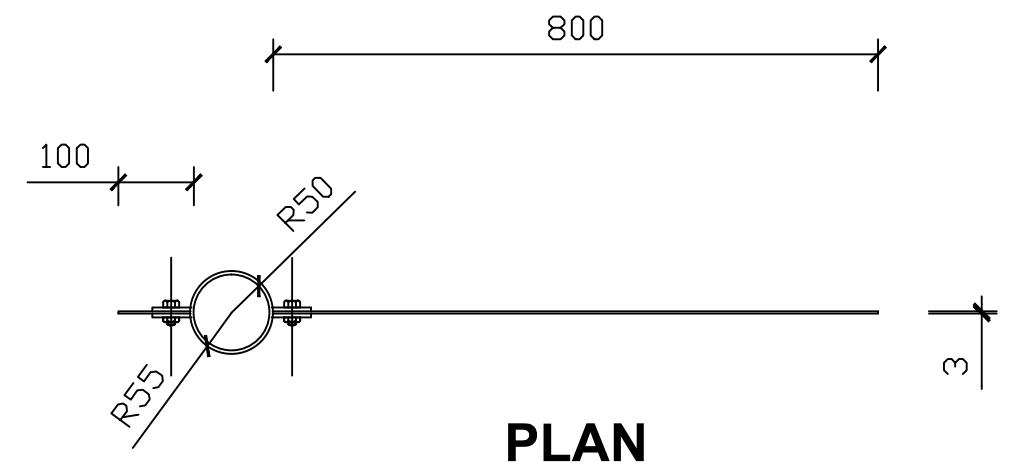
JOB TITLE  
**PROPOSED PAVEMENT MARKING FOR PARK CONNECTOR NETWORK**

DAMIAN TANG  
 ASSISTANT DIRECTOR / DESIGN  
  
 NATTAPONG THEPSAMARN  
 LANDSCAPE ARCHITECT

DRAWING TITLE  
**DETAIL OF BICYCLE PRINT AND FOOT PRINT**

NATIONAL PARKS BOARD PARKS DEVELOPMENT DIVISION REPUBLIC OF SINGAPORE	DESIGNED BY	VTK	SCALE	AS SHOWN
	DRAWN BY	TTS	SHEET NO.	<b>LD-03</b>
	CHECKED BY	NT	DATE	25 APR 2008
	DRAWING NO.	NP/2008/XXXX/LA/X/XXX		
	FILE NO.	XXyyymmddD.dwg		

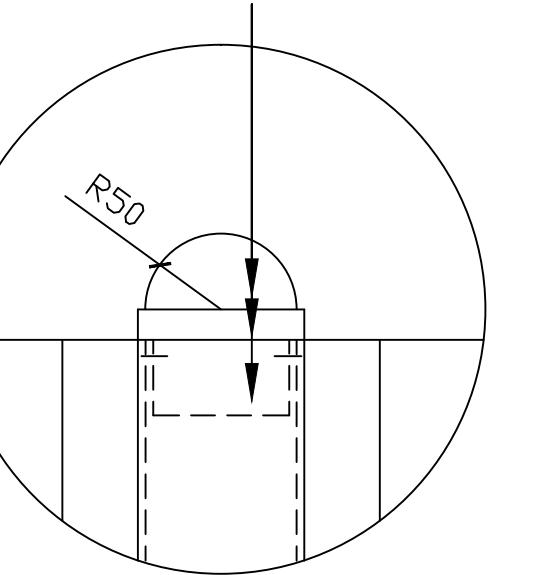
**GENERAL NOTE :**  
 Contractor is to engage a qualified Professional Engineer (P.E.) for the complete design and endorsement of all structures including of footing, foundation and the 3D signage structure above ground level.  
 This drawing indicates the Design Intention. Contractor is to submit Shopdrawing to illustrate how the Design Intention can be achieved, for our approval.  
 Contractor is to submit Visuals and Finished Artwork (F.A.) for approval. Editable master copy of F.A. to be burnt into CD and handed over to NParks upon completion of project.  
 All sharp corners to be rounded off.



**PLAN**

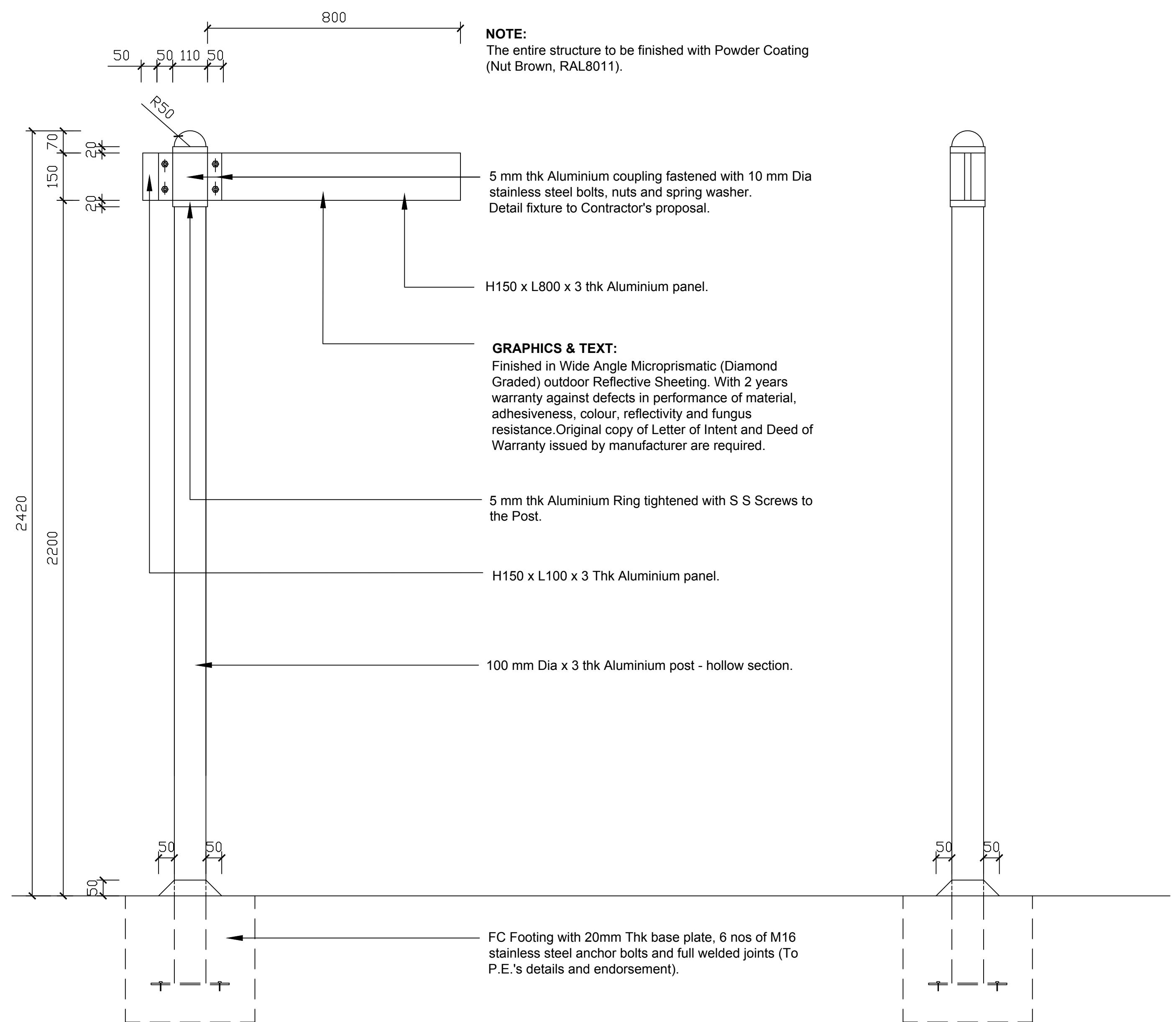
Scale 1:10

Solid Aluminium Cap to be screwed with 02 x M5 stainless steel allen screws and washers.



**Enlarged Detail**

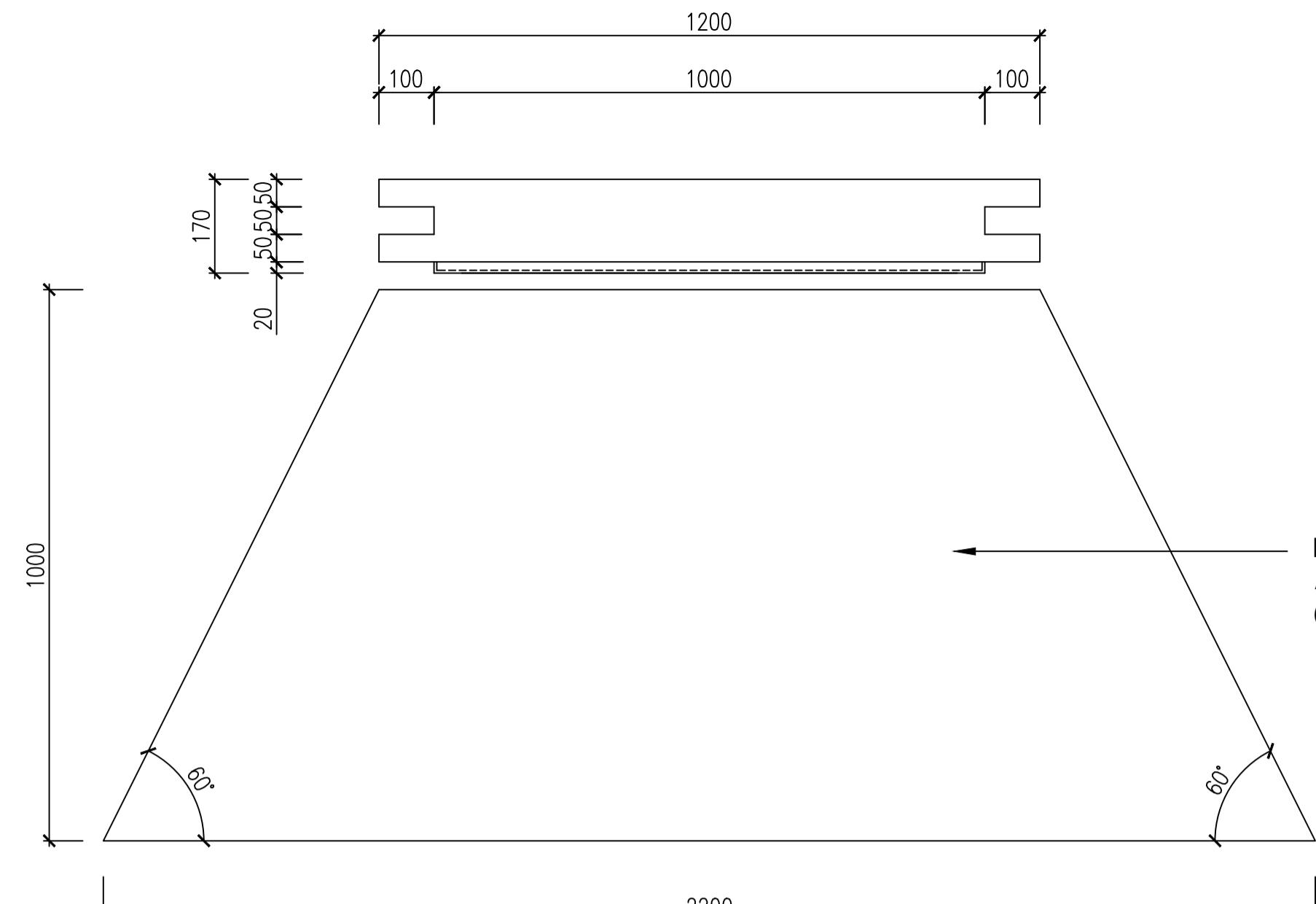
Scale 1 : 5



**SIDE VIEW**

Scale 1:10

REF.	AMENDMENT	DATE
MR DAMIAN TANG ASST. DIRECTOR / DESIGN		
JOB TITLE		
<b>STANDARD PARK CONNECTOR SIGNAGES (ZONE 4)</b>		
DRAWING TITLE		
<b>DIRECTIONAL SIGN 2</b>		
<b>NATIONAL PARKS</b>	<b>NATIONAL PARKS BOARD</b>	<b>PARKS DEVELOPMENT DIVISION</b>
		<b>REPUBLIC OF SINGAPORE</b>
DESIGNED BY	ENG SIAK LOY	SCALE
DRAWN BY	VOON TIN KEAT	AS SHOWN
TRACED BY		
DATE	15 JAN 2010	



**PLAN**

Scale 1:10

**NOTE:**

The entire structure to be constructed with 3 Thk Aluminium plate, finished with full welded joints and Aluminium Hollow Section Framework for internal structure support. Finished with Powder Coating (Nut Brown, RAL8011).

**Level concrete screed platform:**  
Actual size to Contractor's detail  
(subject to site constraint and S.O. approval).

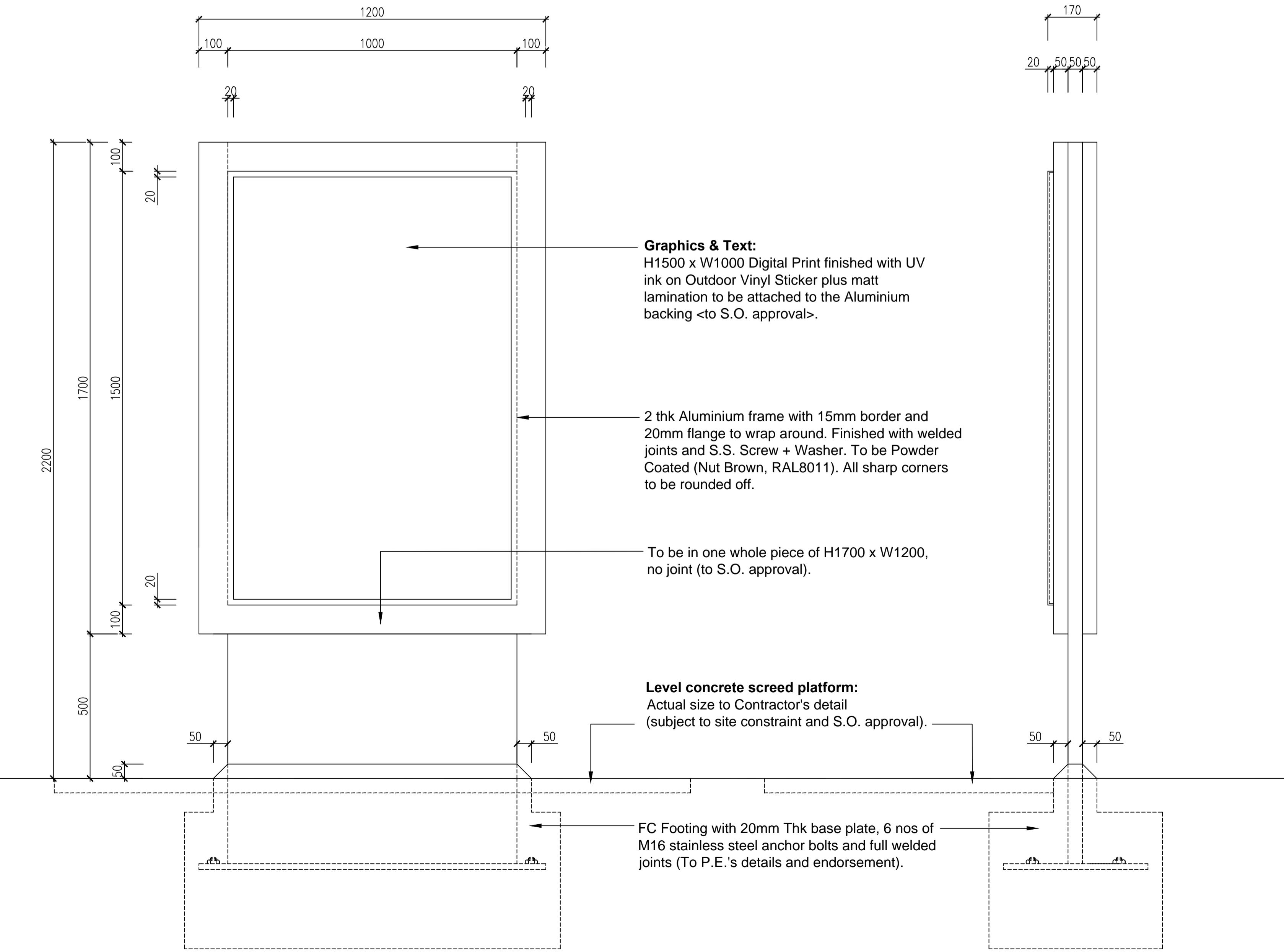
**GENERAL NOTE:**  
Contractor is to fabricate, deliver and install the structure shown in this drawing.

Contractor is to engage a qualified Professional Engineer (P.E.) for the complete design and endorsement of all structures including of footings, foundation and the 3D signage structure above ground level.

This drawing indicates the Design Intention. Contractor is to submit Shopdrawing to illustrate how the Design Intention can be achieved, for our approval.

Contractor is to submit Visuals and Finished Artwork (F.A.) for approval. Editable master copy of F.A. to be burnt into CD and handed over to NParks upon completion of project.

All sharp corners to be rounded off.



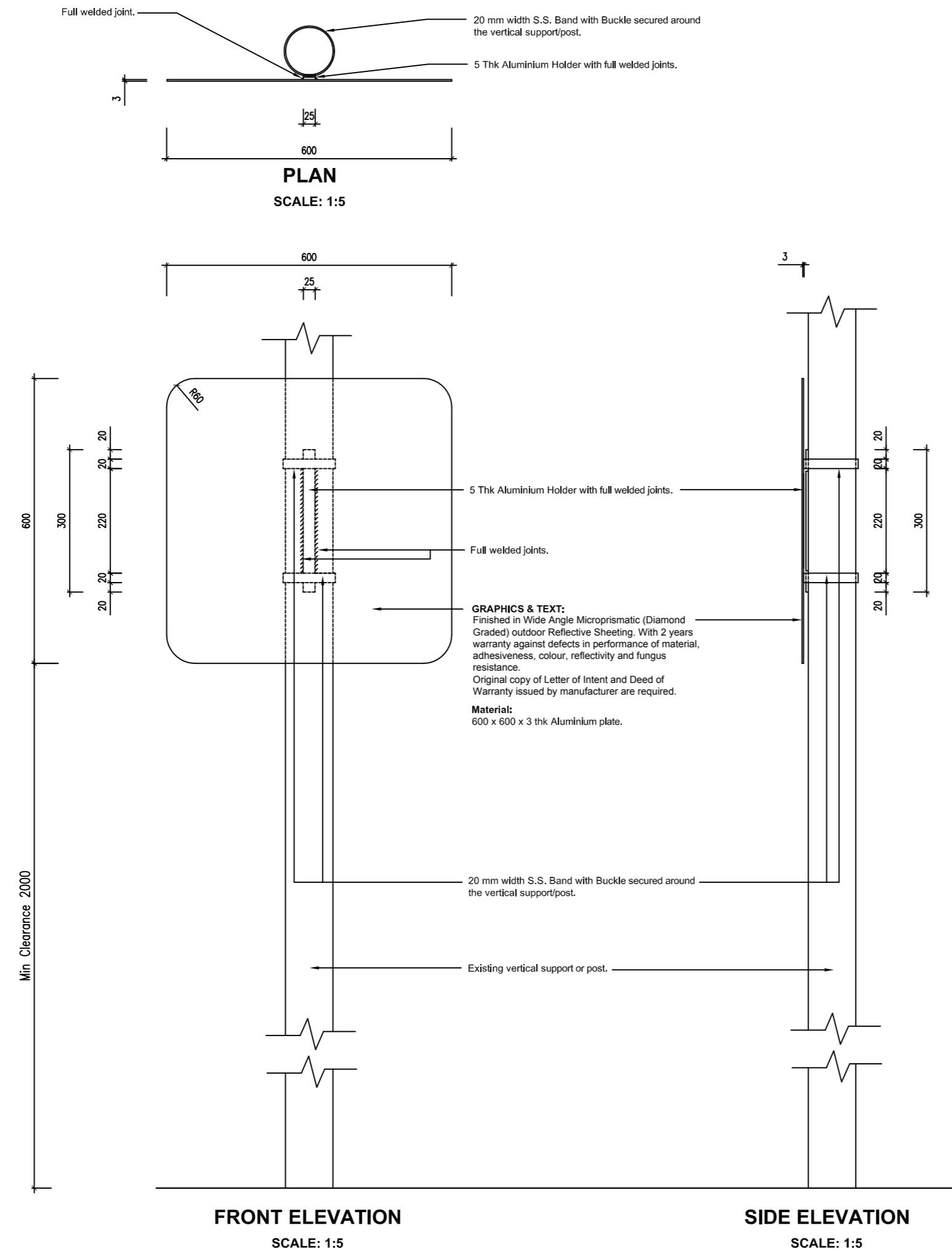
**FRONT VIEW**

Scale 1:10

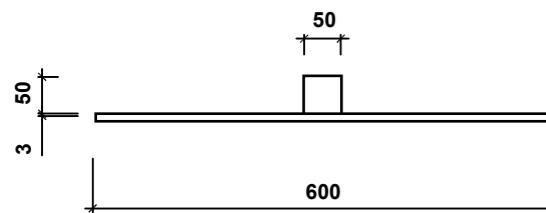
**SIDE VIEW**

Scale 1:10

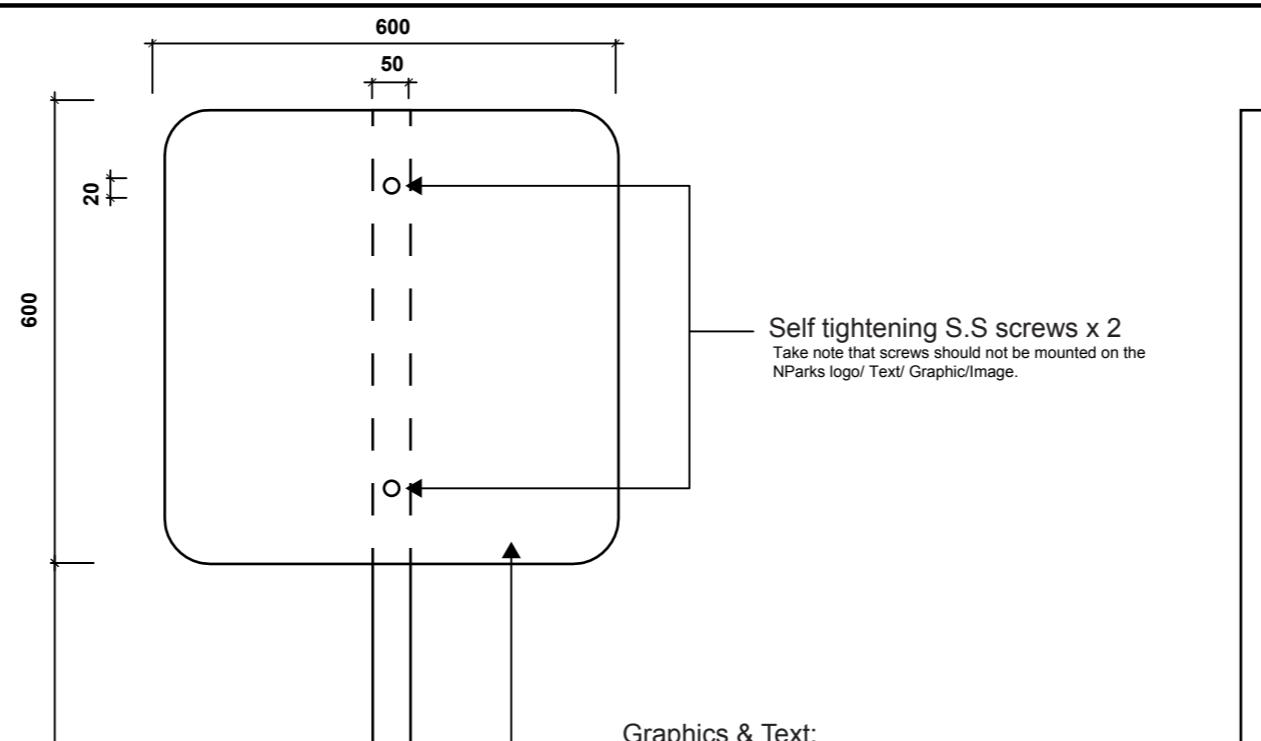
REF.	AMENDMENT	DATE
MR DAMIAN TANG	ASST. DIRECTOR / DESIGN	
JOB TITLE		
<b>STANDARD PARK CONNECTOR SIGNAGES</b>		
DRAWING TITLE		
<b>MAPBOARD</b>		
NATIONAL PARKS BOARD		
PARKS DEVELOPMENT DIVISION		
REPUBLIC OF SINGAPORE		
DESIGNED BY	ENG SIAK LOY	SCALE
DRAWN BY	VOON TIN KEAT	AS SHOWN
TRACED BY		
DATE	15 JAN 2010	



REF.	AMENDMENT	DATE
JOB TITLE		
<b>STANDARD PARK SIGNAGES</b>		
DRAWING TITLE		
<h2 style="text-align: center;"><b>REGULATORY SIGN (EXISTING POLE)</b></h2>		
 <p><b>NATIONAL PARKS BOARD</b> PARKS DEVELOPMENT DIVISION REPUBLIC OF SINGAPORE</p>		
DESIGNED BY	DESIGN BRANCH	SCALE <b>AS SHOWN</b>
DRAWN BY	DESIGN BRANCH	
TRACED BY		
DATE	AUGUST 2012	



PLAN  
SCALE 1:10



- Self tightening S.S screws x 2  
Take note that screws should not be mounted on the NParks logo/ Text/ Graphic/Image.

**NOTE THAT LOGO/ TEXT/ IMAGE MUST BE MOUNTED ON THE NParks logo/ Text/ Graphic/Image.**

## Graphics & Text:

Finished in Wide Angle Microprismatic (Diamond Graded) outdoor Reflective Sheeting. With 2 years warranty against defects in performance of material, adhesiveness, colour, reflectivity and fungus resistance.

#### Material:

600 x600 x 3 thk Aluminium plate.

Min Clearance 2000

## **FRONT ELEVATION**

SCALE 1:10

## SIDE ELEVATION

SCALE 1:10

**GENERAL NOTE :**

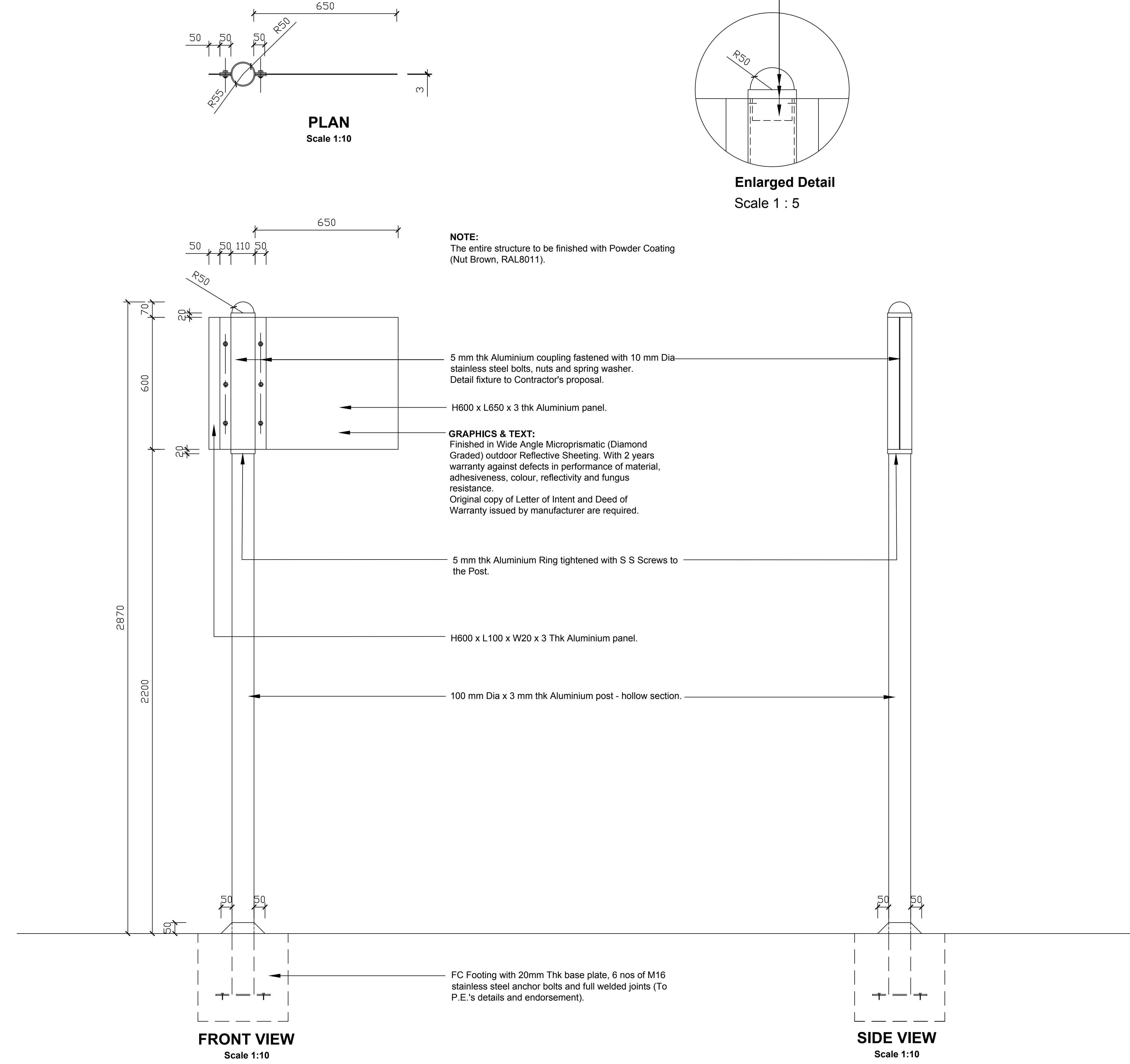
**Contractor is to engage a qualified Professional Engineer (P.E.) for the complete design and endorsement of all structures including of footing, foundation and the 3D signage structure above ground level.**

**This drawing indicates the Design Intention. Contractor is to submit Shopdrawing to illustrate how the Design Intention can be achieved, for our approval.**

**Npark will provide design concept.  
Contractor to submit Finished  
Artwork (F.A.) for approval.**

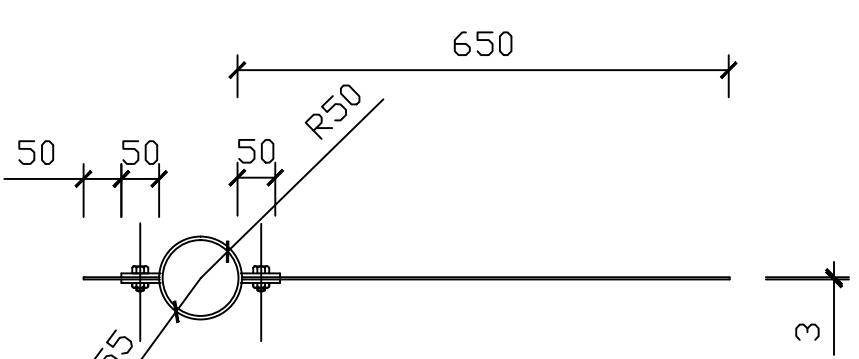
**All sharp corners to be rounded off.**

**GENERAL NOTE :**  
 Contractor is to engage a qualified Professional Engineer (P.E) for the complete design and endorsement of all structures including of footing, foundation and the 3D signage structure above ground level.  
 This drawing indicates the Design Intention. Contractor is to submit Shopdrawing to illustrate how the Design Intention can be achieved, for our approval.  
 Contractor is to submit Visuals and Finished Artwork (F.A.) for approval. Editable master copy of F.A. to be burnt into CD and handed over to NParks upon completion of project.  
 All sharp corners to be rounded off.



REF.	AMENDMENT	DATE
MR DAMIAN TANG ASST. DIRECTOR / DESIGN		
JOB TITLE		
<b>STANDARD PARK CONNECTOR SIGNAGES (ZONE 4)</b>		
DRAWING TITLE		
<b>WARNING SIGN</b>		
NATIONAL PARKS BOARD PARKS DEVELOPMENT DIVISION REPUBLIC OF SINGAPORE		
DESIGNED BY <b>ENG SIAK LOY</b>	SCALE	
DRAVEN BY <b>VOON TIN KEAT</b>	AS SHOWN	
TRACED BY		
DATE <b>15 JAN 2010</b>		

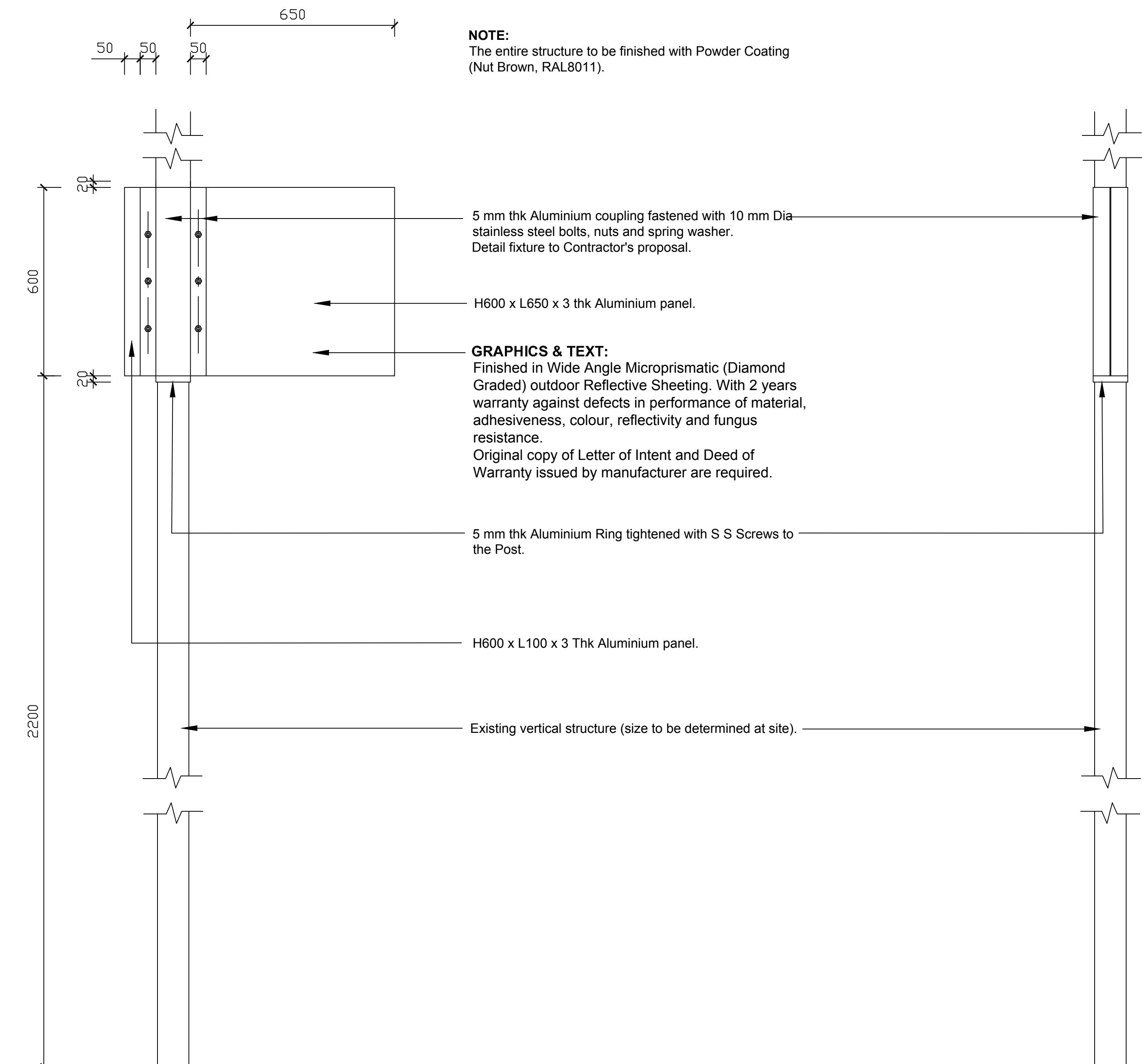
**GENERAL NOTE :**  
 Contractor is to engage a qualified Professional Engineer (P.E) for the complete design and endorsement of all structures including of footing, foundation and the 3D signage structure above ground level.  
 This drawing indicates the Design Intention. Contractor is to submit Shopdrawing to illustrate how the Design Intention can be achieved, for our approval.  
 Contractor is to submit Visuals and Finished Artwork (F.A.) for approval. Editable master copy of F.A. to be burnt into CD and handed over to NParks upon completion of project.  
 All sharp corners to be rounded off.



**PLAN**

Scale 1:10

**NOTE:**  
 The entire structure to be finished with Powder Coating (Nut Brown, RAL8011).



**FRONT VIEW**

Scale 1:10

**SIDE VIEW**

Scale 1:10

REF.	AMENDMENT	DATE
MR DAMIAN TANG ASST. DIRECTOR / DESIGN		
JOB TITLE		
<b>STANDARD PARK CONNECTOR SIGNAGES</b>		
DRAWING TITLE		
<b>WARNING SIGN (ON POST)</b>		
NATIONAL PARKS BOARD PARKS DEVELOPMENT DIVISION REPUBLIC OF SINGAPORE		
DESIGNED BY <b>ENG SIAK LOY</b>	SCALE	
DRAWN BY <b>VOON TIN KEAT</b>	AS SHOWN	
TRACED BY		
DATE <b>15 JAN 2010</b>		