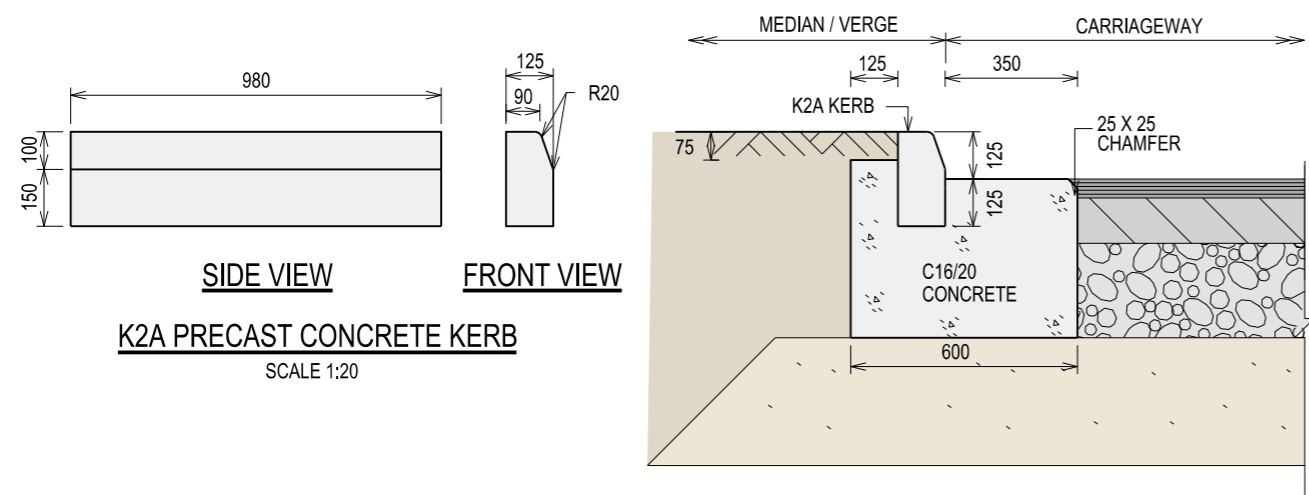


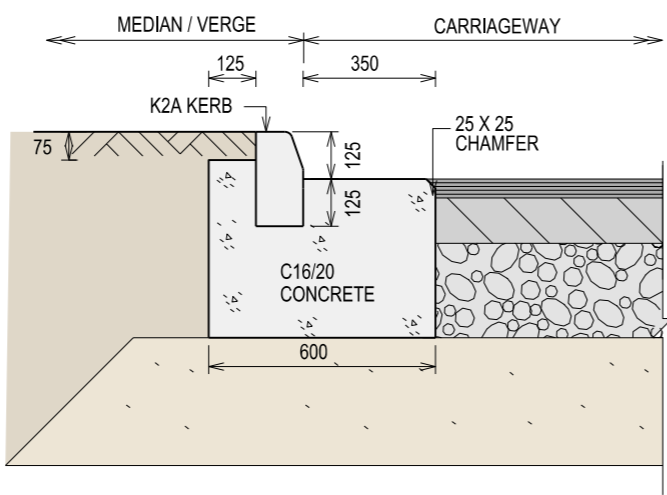
# CHAPTER 3

## KERBS & FOOTPATHS

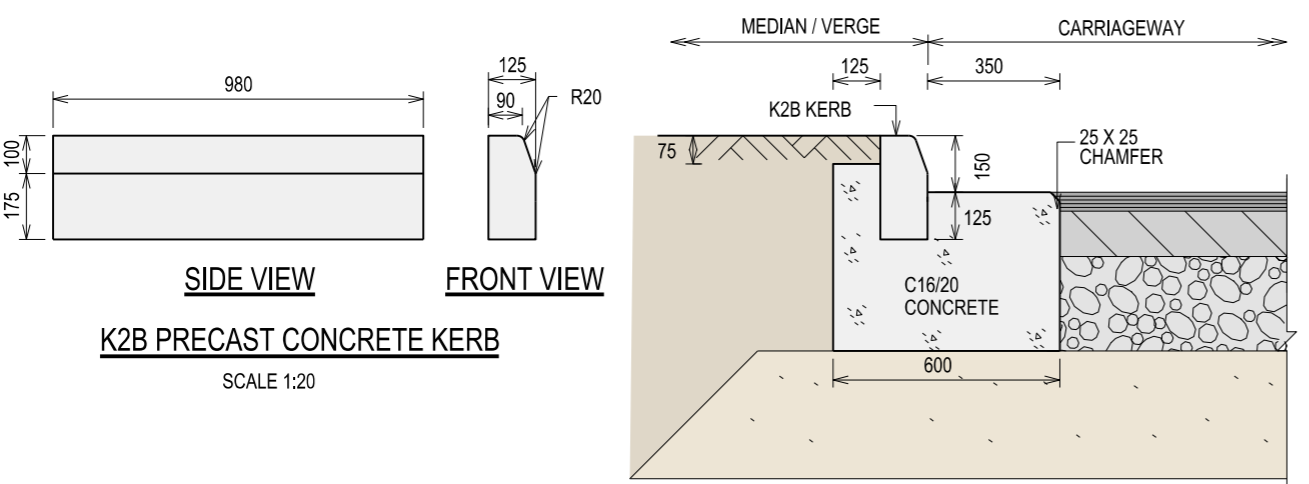
DRAWING TITLE	DRAWING NO.	REVISION
KERBS	LTA/SDRE14/3/KER1	B
KERB PAINTING (SHEET 1 OF 2)	LTA/SDRE14/3/KER2	A
KERB PAINTING (SHEET 2 OF 2)	LTA/SDRE14/3/KER3	-
CIVIC DISTRICT KERB - TYPE C1, C2, C3 & C4	LTA/SDRE14/3/KER4	B
FOOTPATH RAMP - TYPE 1 PEDESTRIAN CROSSING POINTS	LTA/SDRE14/3/KER5	B
FOOTPATH RAMP - TYPE 2 PEDESTRIAN CROSSING POINTS	LTA/SDRE14/3/KER6	B
FOOTPATH RAMP - TRAFFIC ISLAND	LTA/SDRE14/3/KER7	C
FOOTPATH RAMP - SIDE ROAD	LTA/SDRE14/3/KER8	C
FOOTPATH RAMP - DRIVEWAY	LTA/SDRE14/3/KER9	C
FOOTPATH RAMP - FOOTPATH BESIDE OPEN DRAIN	LTA/SDRE14/3/KER10	C
CAST-IN-SITU CONCRETE PAVEMENT	LTA/SDRE14/3/KER11	B
HOMOGENEOUS TACTILE TILES AND ARRANGEMENT OF TACTILE TILES	LTA/SDRE14/3/KER12	B
KERB WITH SLOT HOLES	LTA/SDRE14/3/KER13	-



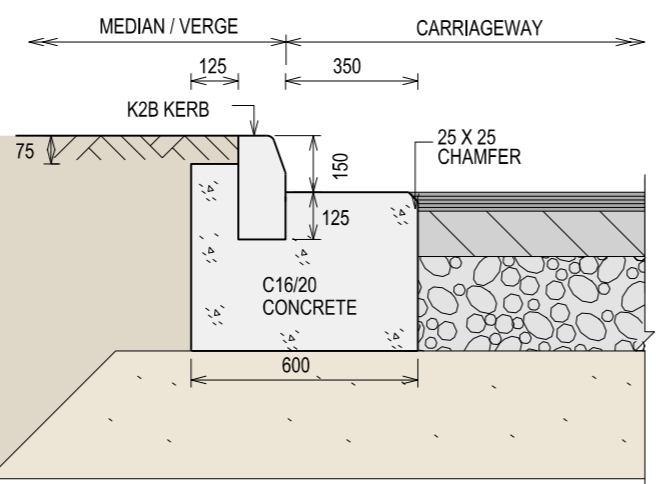
**K2A PRECAST CONCRETE KERB**  
SCALE 1:20



**K2A PRECAST CONCRTE KERB WITH FOUNDATION**  
SCALE 1:20



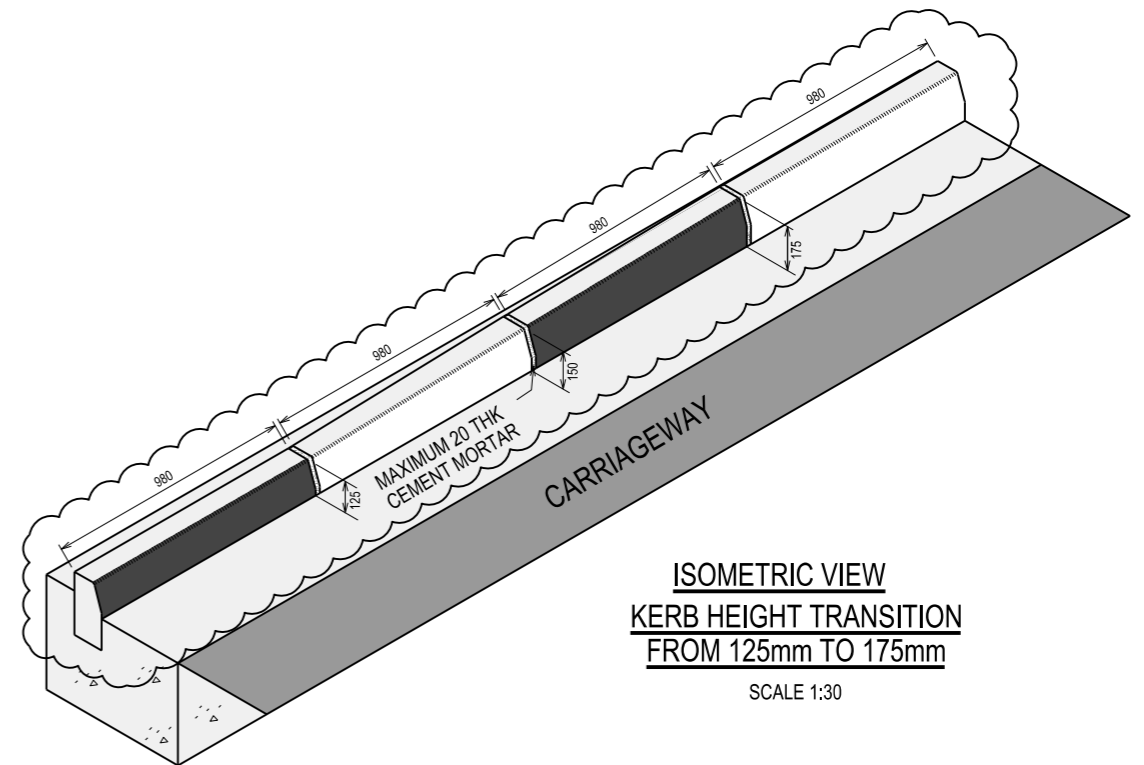
**K2B PRECAST CONCRETE KERB**  
SCALE 1:20



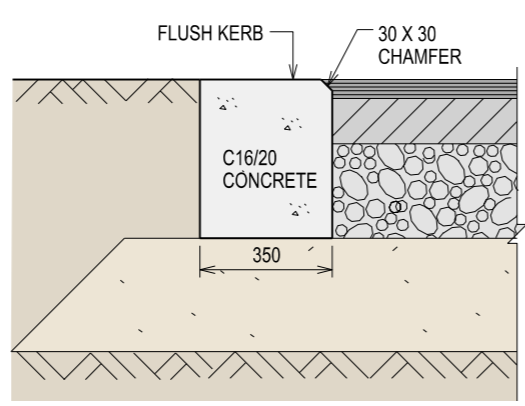
**K2B PRECAST CONCRTE KERB WITH FOUNDATION**  
SCALE 1:20

**LOCATION OF KERBS**

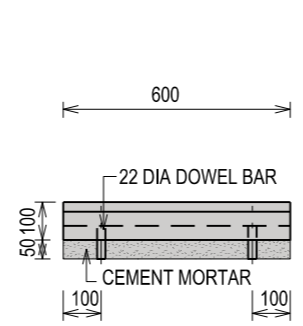
TYPE OF KERB	LOCATION
FLUSH KERB	EXPRESSWAY
K2A	AT OTHER ROAD (NON-EXPRESSWAY)
K2B	AT BUS STOP LOCATIONS
D1 DIVIDER KERB	FOR TEMPORARY TRAFFIC DIVERSION WORKS



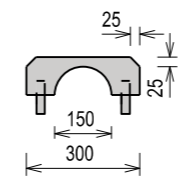
**ISOMETRIC VIEW**  
**KERB HEIGHT TRANSITION**  
**FROM 125mm TO 175mm**  
SCALE 1:30



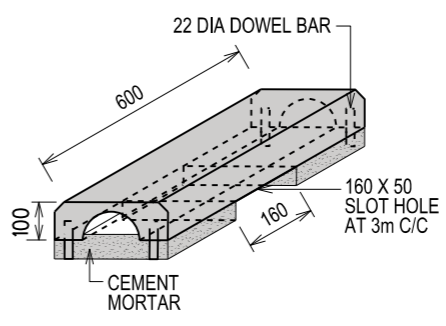
**FLUSH KERB**  
SCALE 1:20



**SIDE VIEW**

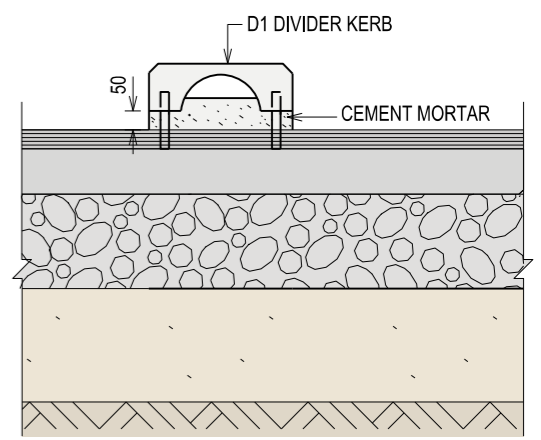


**FRONT VIEW**



**ISOMETRIC VIEW**

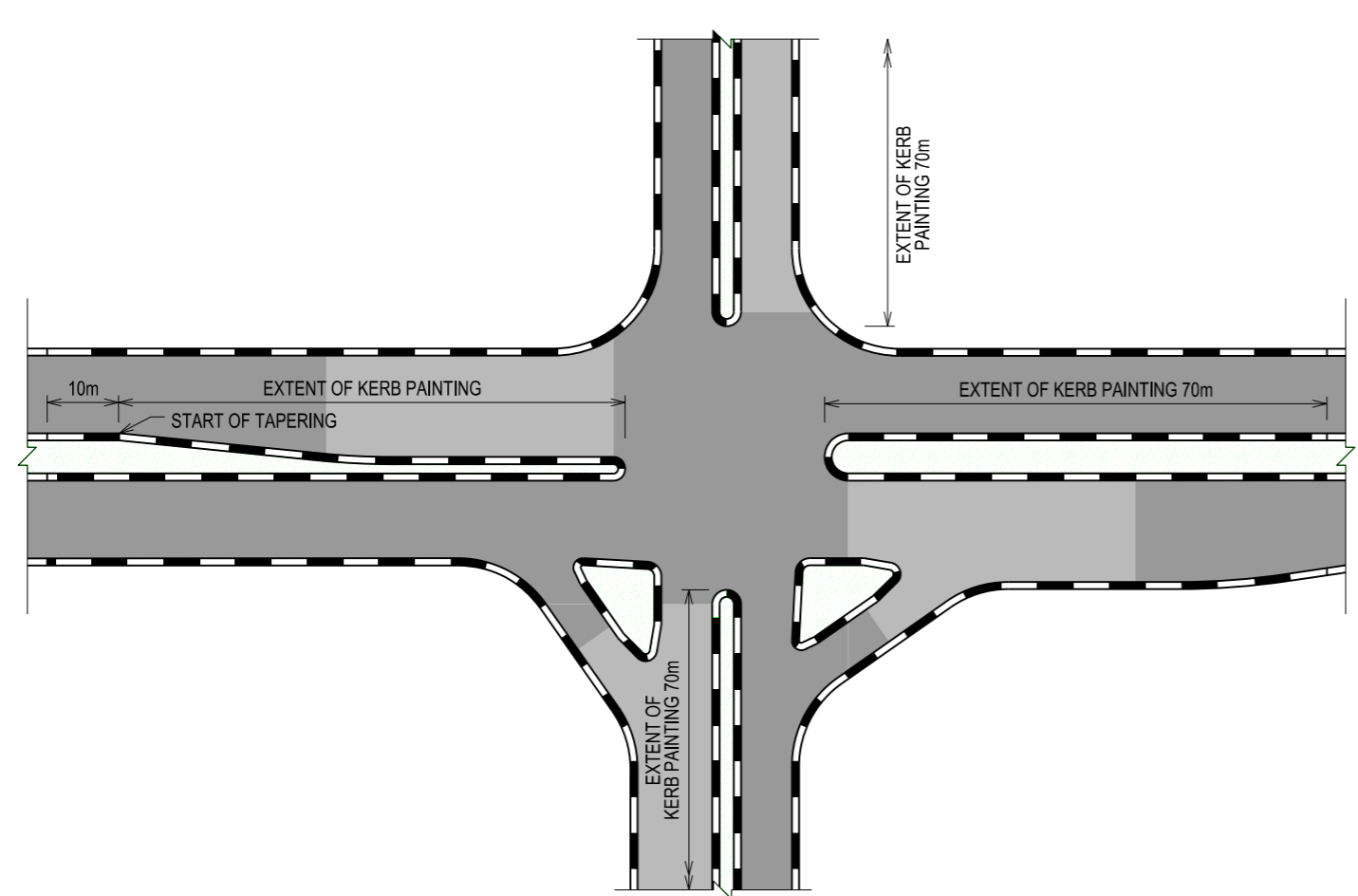
**TEMPORARY D1 DIVIDER KERB**  
SCALE 1:20



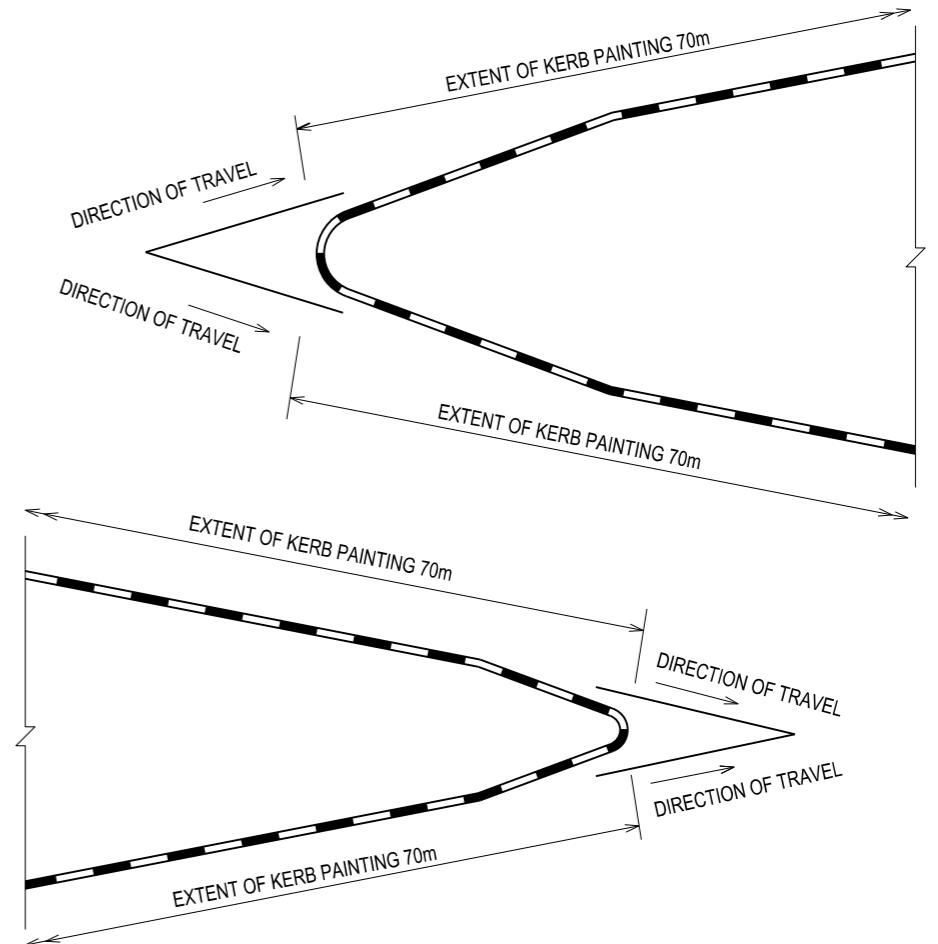
**NOTES:**  
1. Concrete for all precast kerbs and dividers shall be C20/25.  
2. Shorter length of 150mm or 300mm precast concrete kerbs shall be used on sharp radius.

STANDARD DETAIL		Land Transport Authority	
KERBS	REV. B	DRAWING NO.	LTA/SDRE14/3/KER1
	REV. A	DATE OF ISSUE	1st APR 2014
	REV. B	SCALE	AS SHOWN
		SHEET NO.	1 OF 1

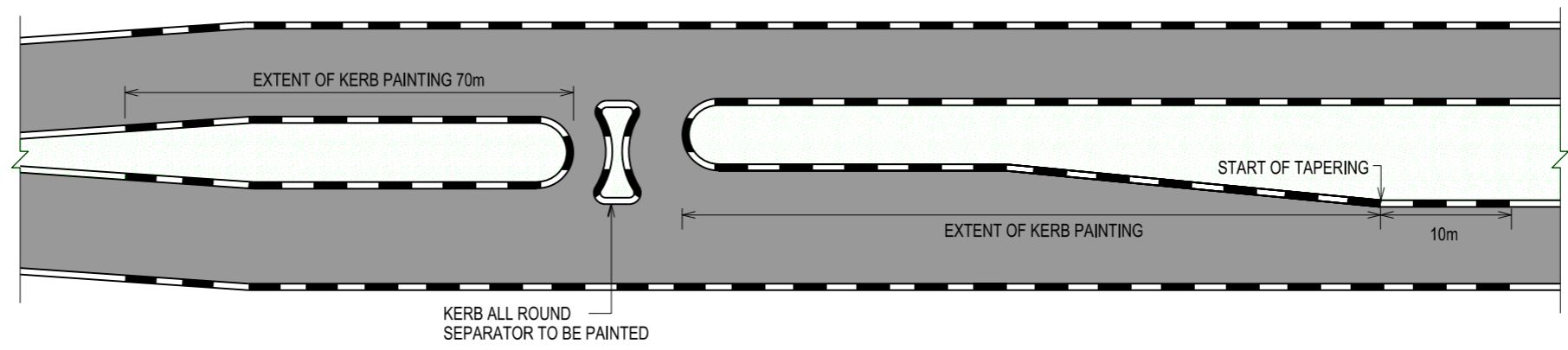




KERB PAINTING AT SIGNALISED JUNCTION

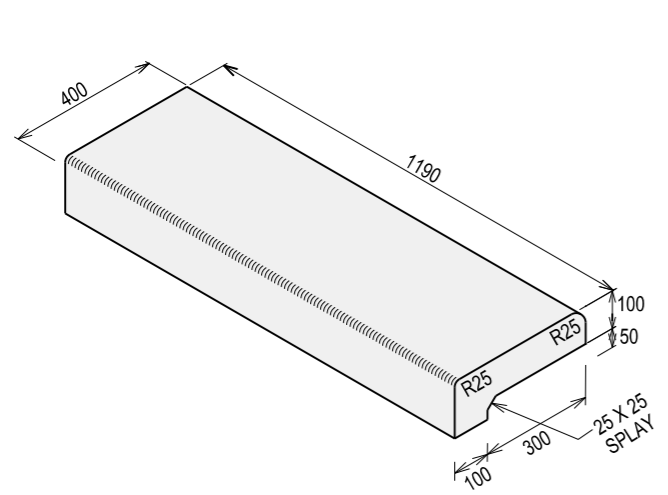


KERB PAINTING AT NOSING OF SLIP ROAD

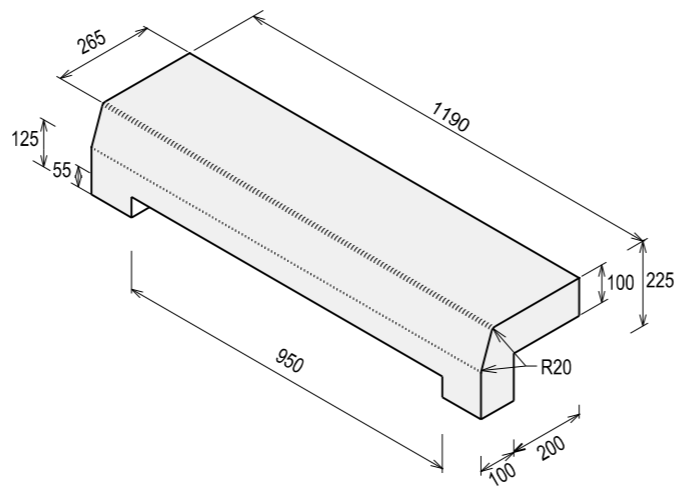


KERB PAINTING AT U-TURN

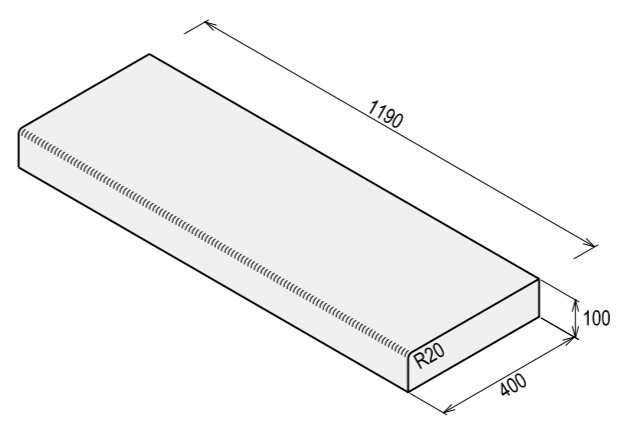
		STANDARD DETAIL			
REV.	DATE	DRAWING NO.	LTA/SDRE14/3/KER3	REV.	-
		DATE OF ISSUE	1st APR 2014	SCALE	NTS
		SHEET NO.	2 OF 2		



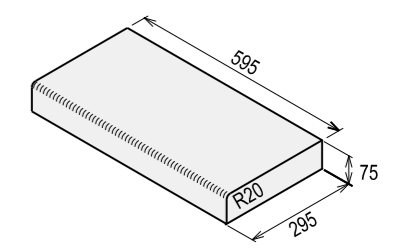
**C1 PRECAST CONCRETE KERB**  
SCALE 1:20



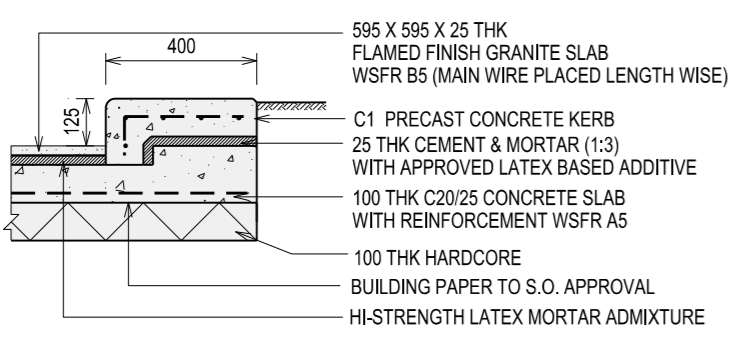
**C2 PRECAST CONCRETE KERB WITH DROP-INLET CHAMBER**  
SCALE 1:20



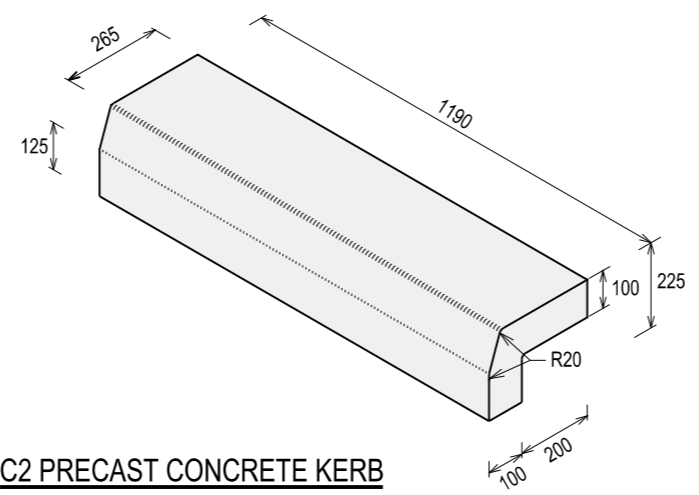
**C3 PRECAST CONCRETE KERB**  
SCALE 1:20



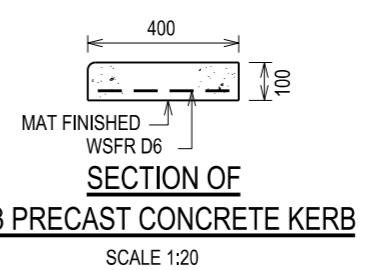
**C4 PRECAST CONCRETE KERB**  
SCALE 1:20



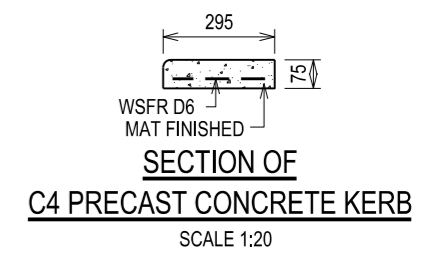
**DETAIL OF C1 PRECAST CONCRETE KERB**  
SCALE 1:20



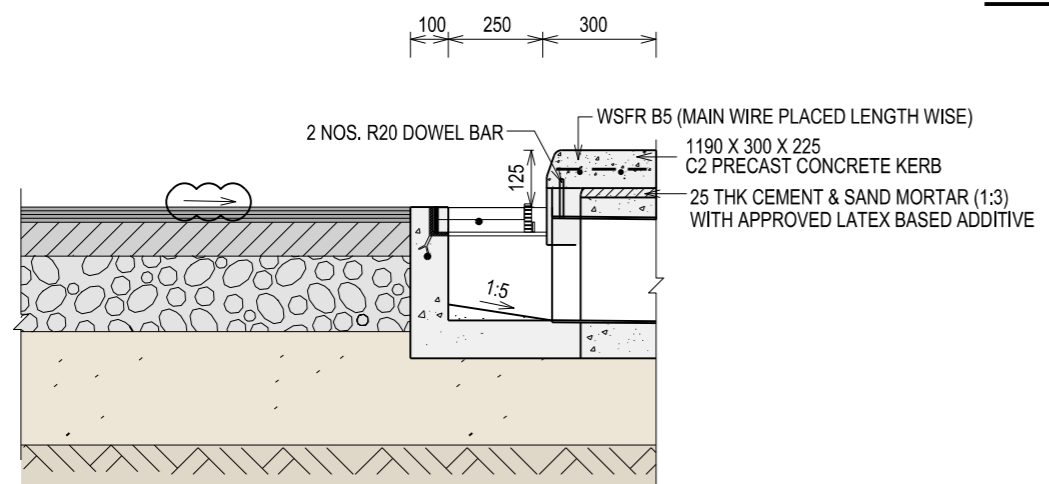
**C2 PRECAST CONCRETE KERB**  
SCALE 1:20



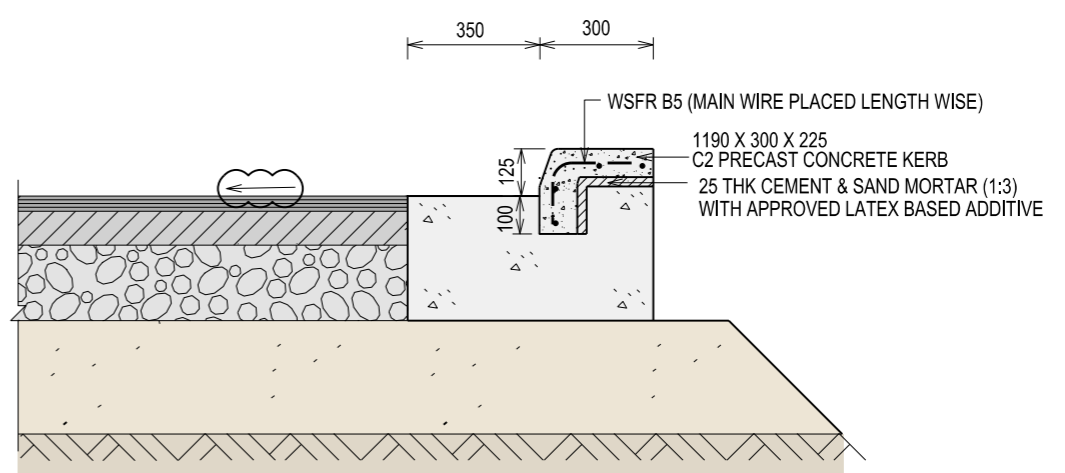
**SECTION OF C3 PRECAST CONCRETE KERB**  
SCALE 1:20



**SECTION OF C4 PRECAST CONCRETE KERB**  
SCALE 1:20



**DETAIL OF C2 PRECAST CONCRETE KERB WITH DROP-INLET CHAMBER**  
SCALE 1:20



**DETAIL OF C2 PRECAST CONCRETE KERB**  
SCALE 1:20

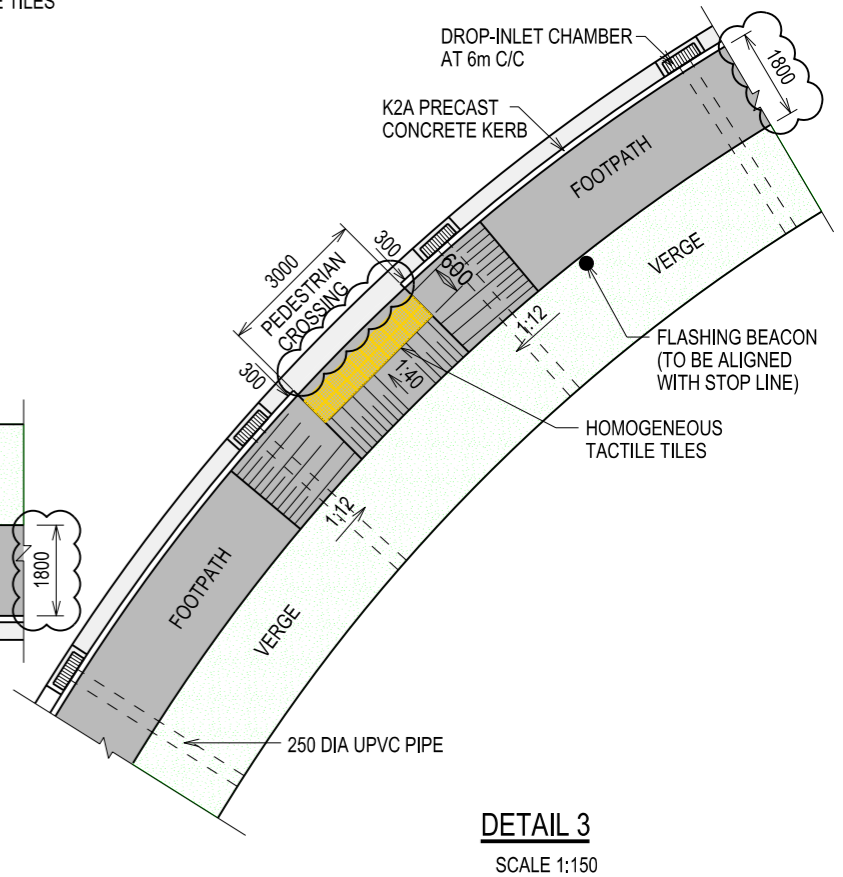
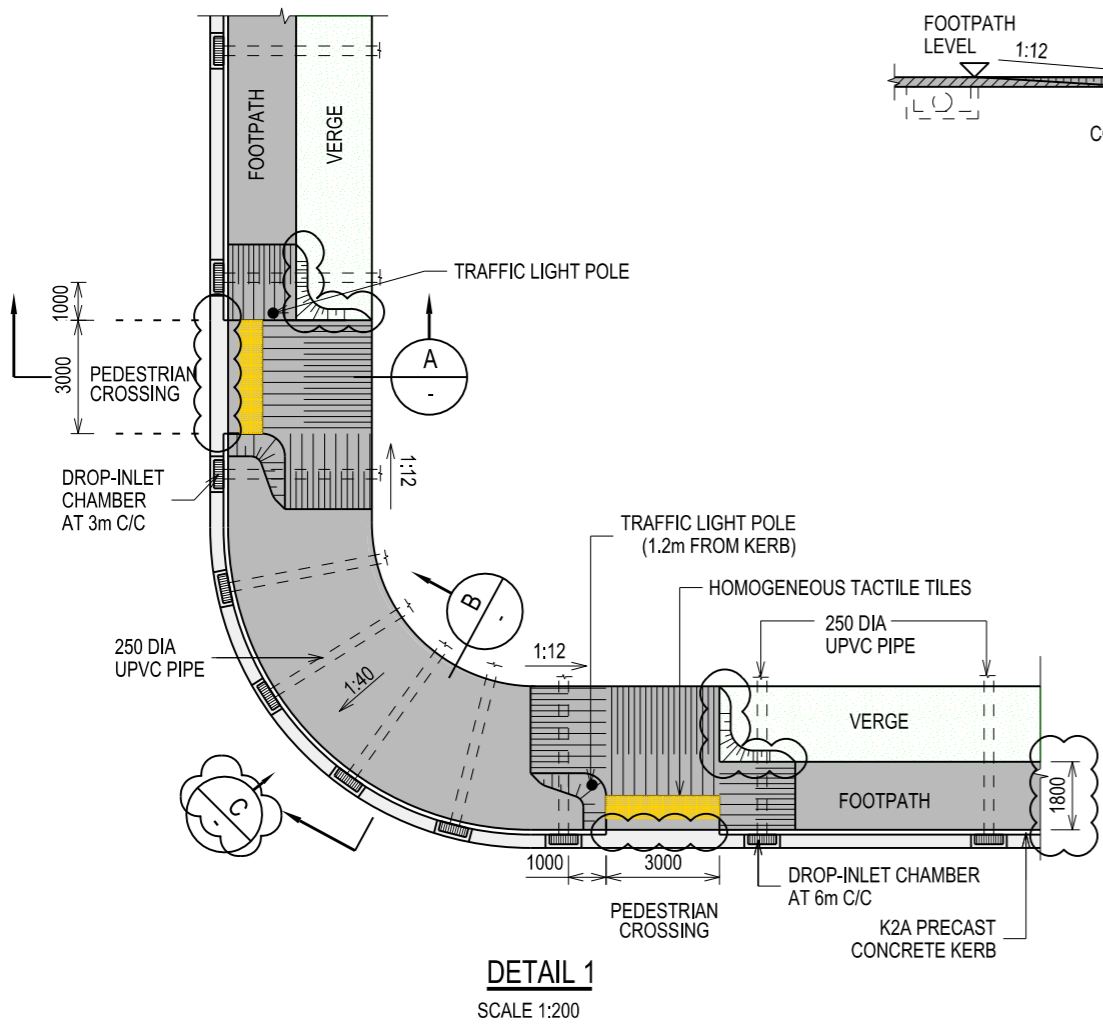
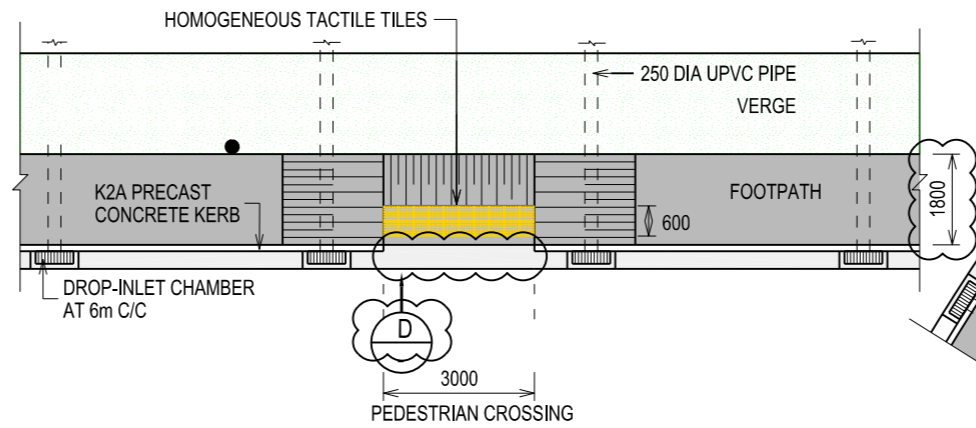
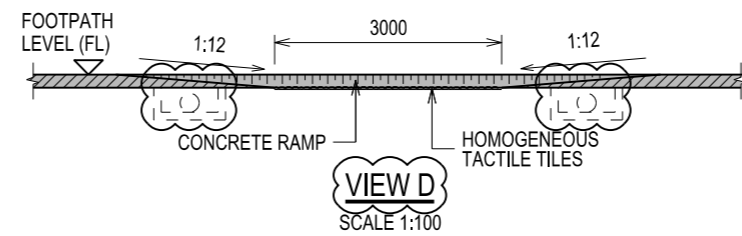
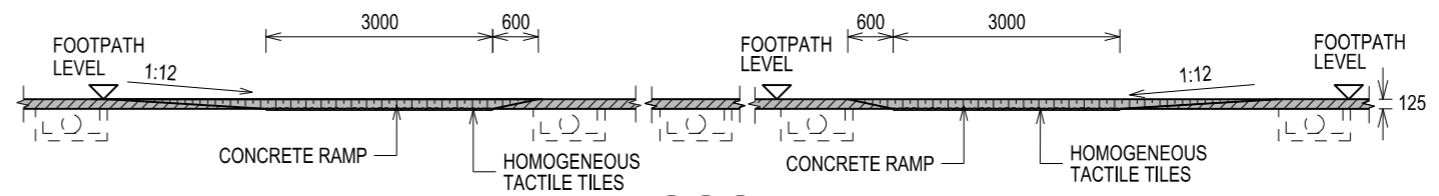
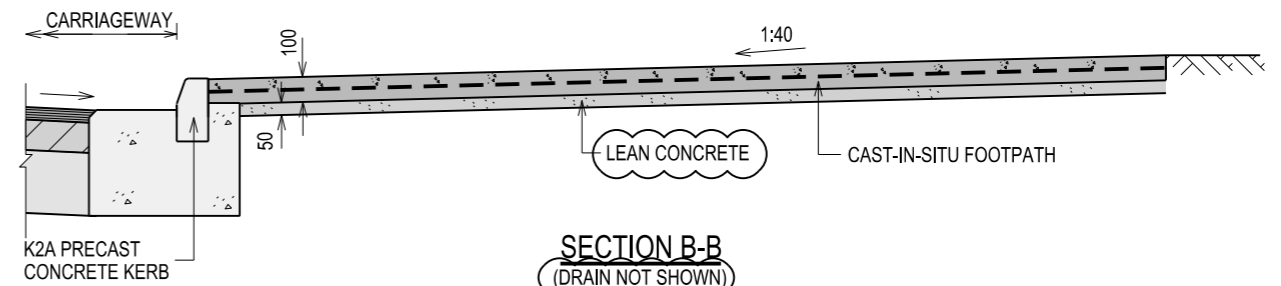
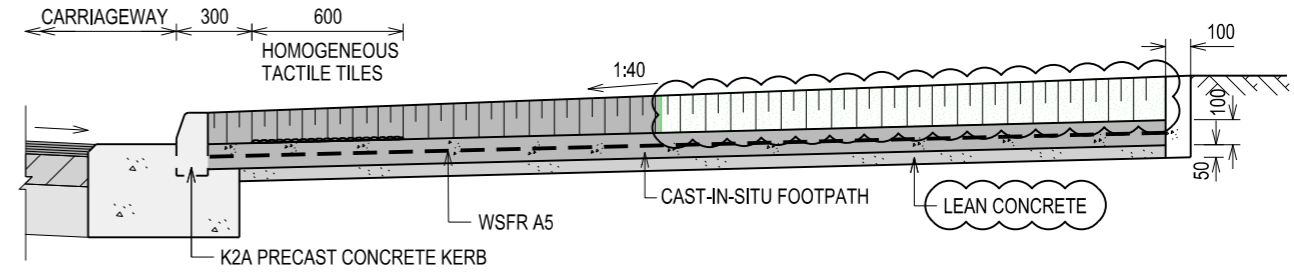
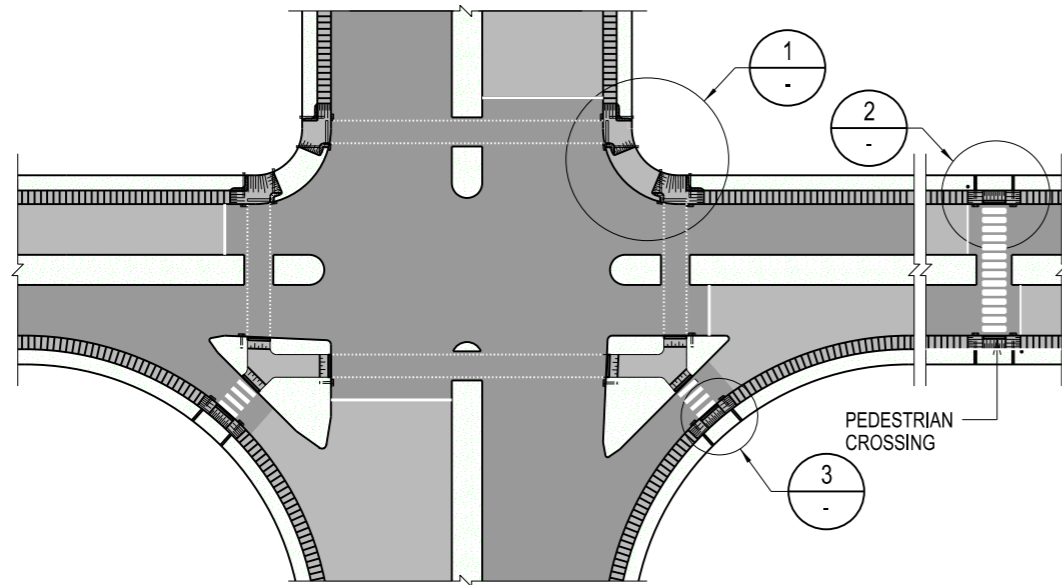
- NOTES:**
1. All precast concrete kerb shall be C20/25 concrete.
  2. For kerb at curve and corner of radius less than 15m, the precast kerb shall be formed at curve of the same radius.
  3. All kerb foundation shall be C16/20.
  4. Gratings and frames are to be shop fabricated.
  5. All M.S. flats and plates are to be fillet welded throughout.
  6. The M.S. assembly is to be hot-dipped galvanised to ISO 1461:2009. The zinc coating shall not be less than 26gm/m<sup>2</sup> of metal surface.

7. For definition of civic district, refer to URA's website for details.

STANDARD DETAIL	
CIVIC DISTRICT KERB - TYPE C1, C2, C3 & C4	
B	SEP 2017
A	OCT 2015
REV.	DATE

**Land Transport Authority**

DRAWING NO. LTA/SDRE14/3/KER4		REV. B
DATE OF ISSUE 1st APR 2014	SCALE AS SHOWN	SHEET NO. 1 OF 1



NOTES:

1. Gradient of ramps shown in the details shall not be exceeded.
2. All concrete shall be C25/30, unless otherwise stated.
3. Details to be used when footpath is next to the kerbs.
4. Homogeneous tactile tiles for tactile warning indicator requirements to refer to LTA/SDRE14/3/KER12.
5. Yellow coloured tactile tiles shall be provided on the concrete footpath ramp.
6. No obstruction shall be placed within the pedestrian crossing zone.
7. No drop-inlet chamber shall be placed within the pedestrian crossing zone.

8. The ramps shall be broom brushed.

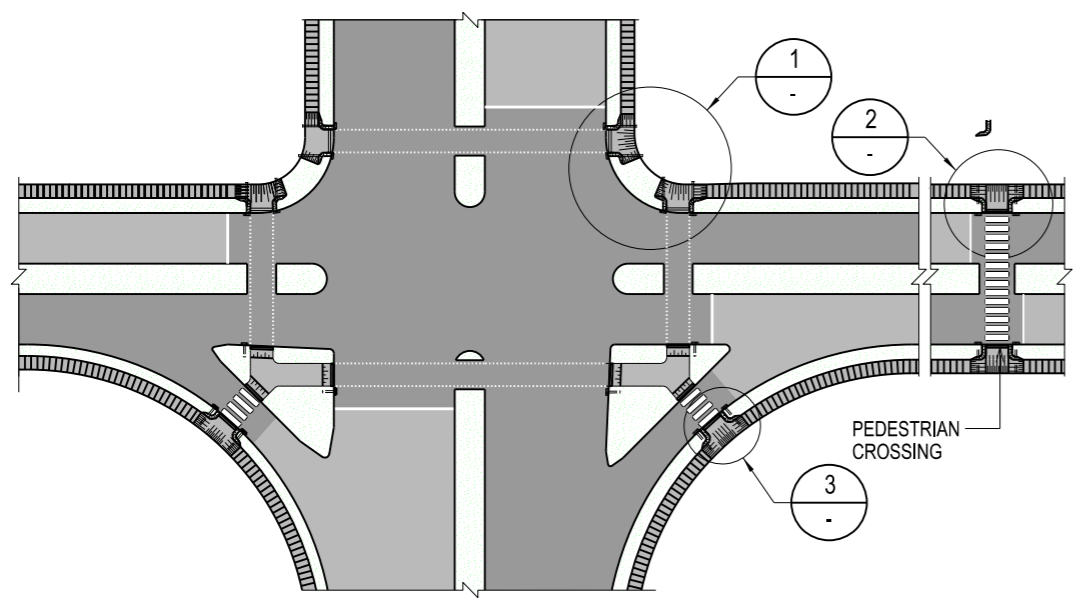
STANDARD DETAIL

FOOTPATH RAMP - TYPE 1 PEDESTRIAN CROSSING POINTS

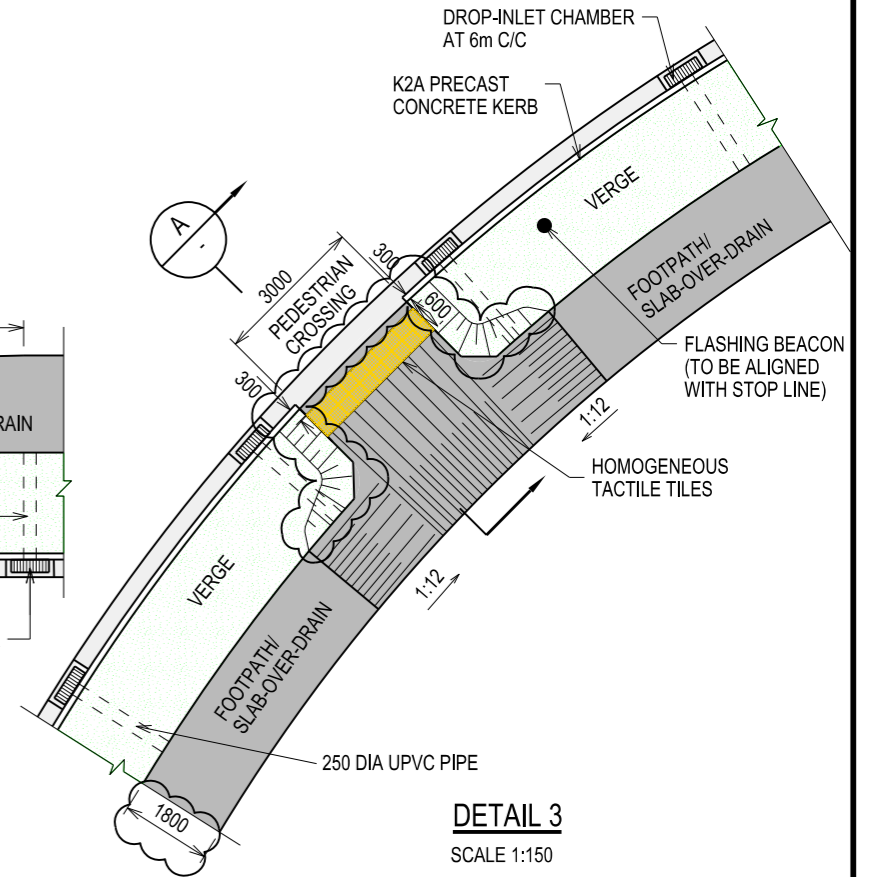
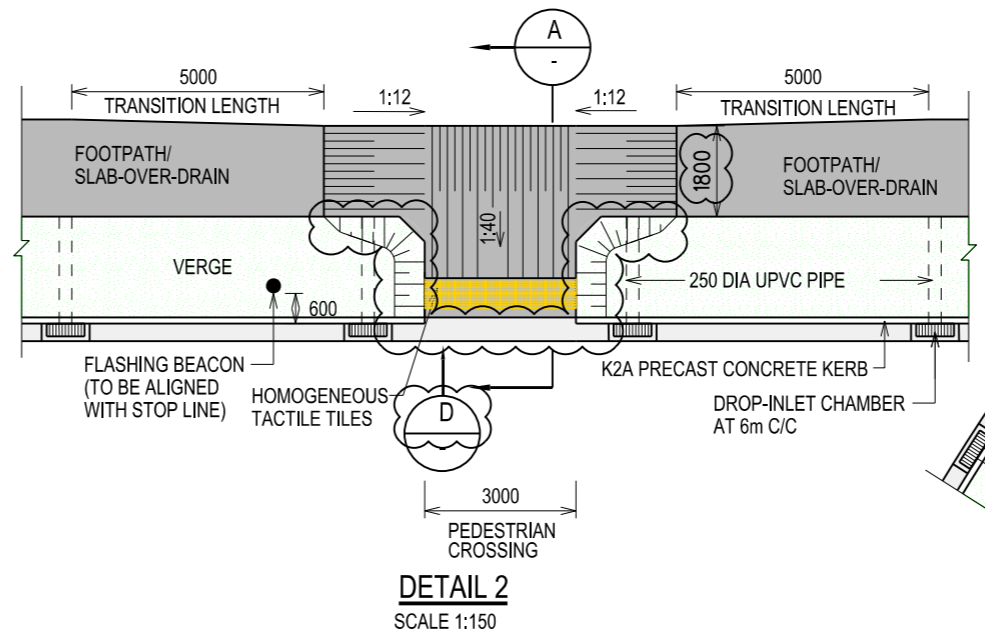
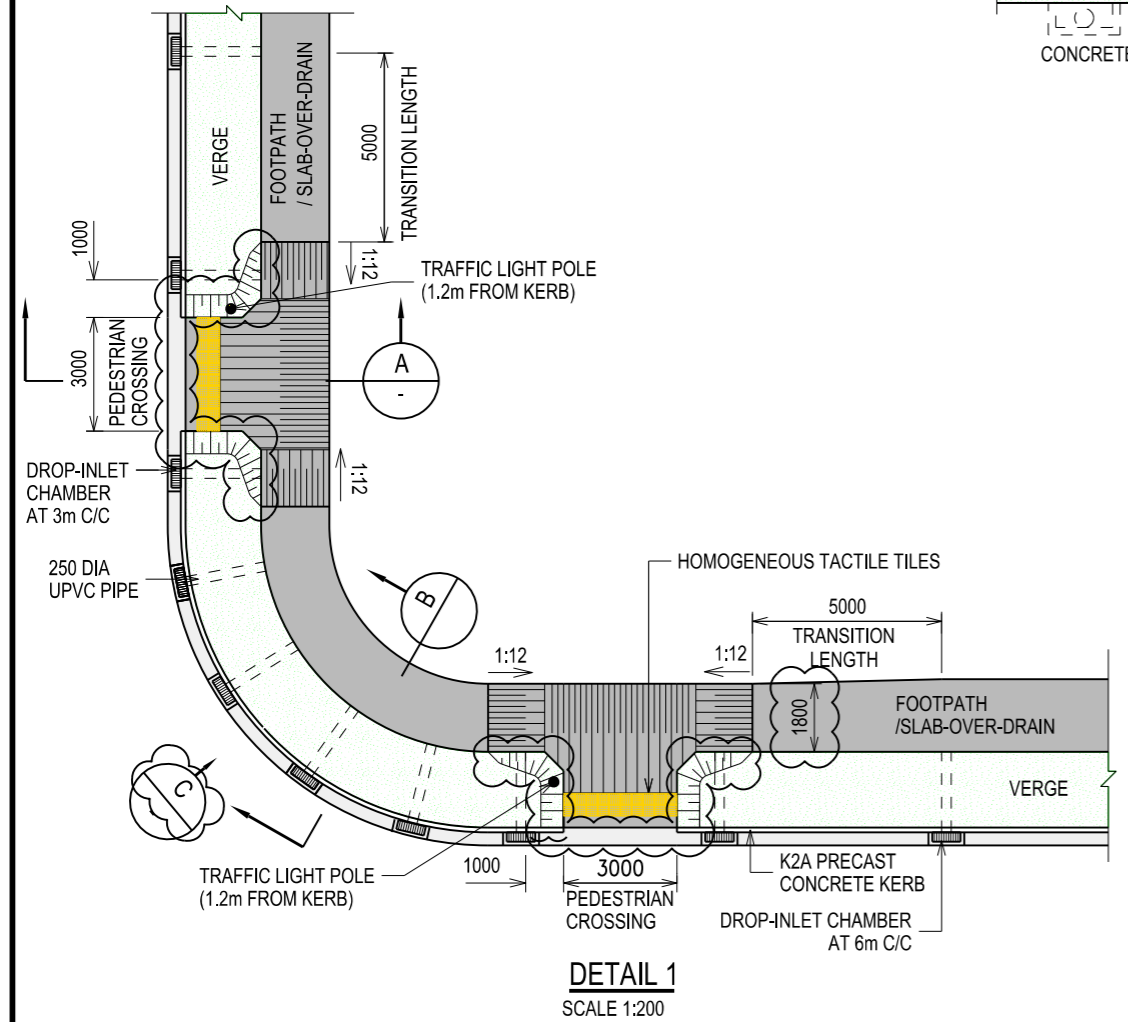
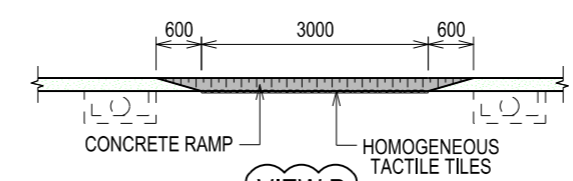
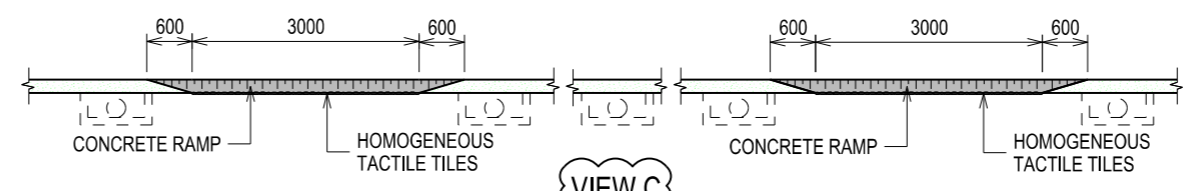
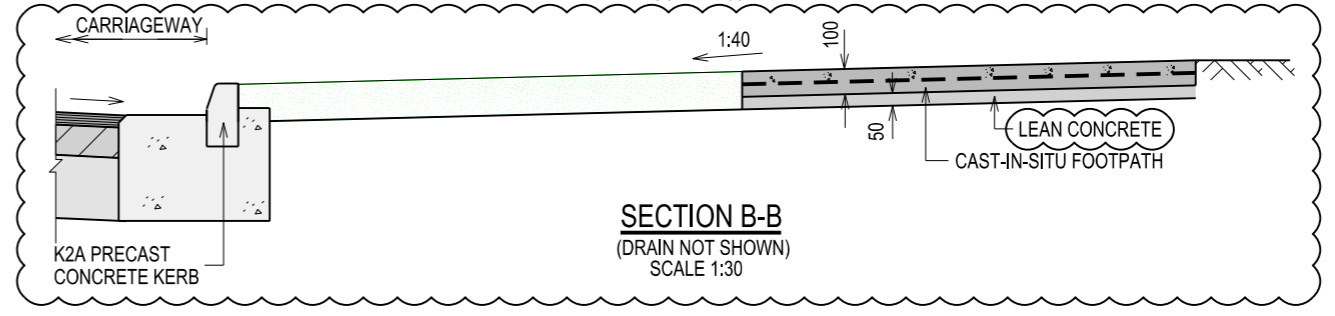
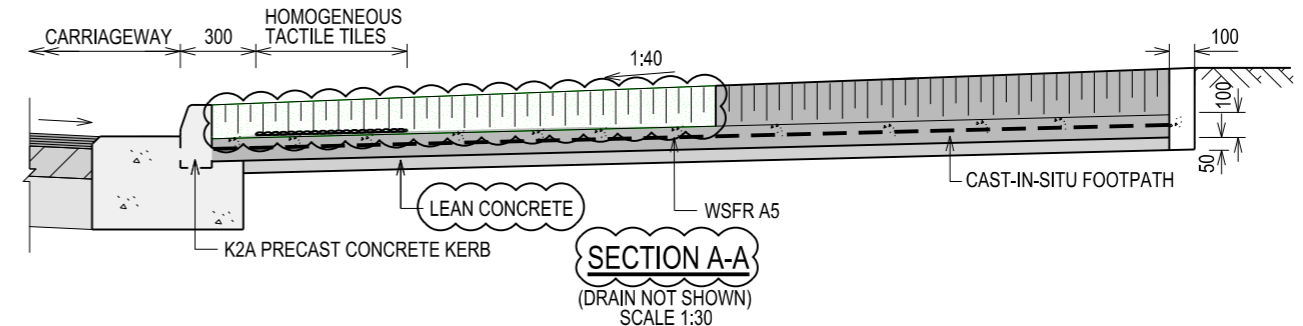
REV.	DATE
A	OCT 2015
B	SEP 2017



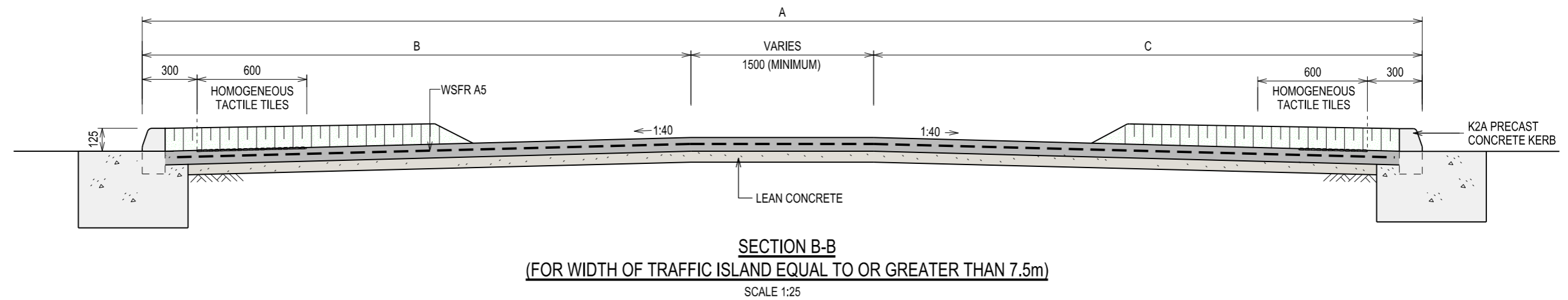
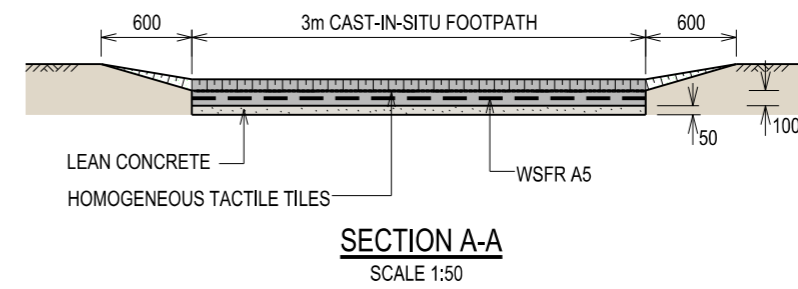
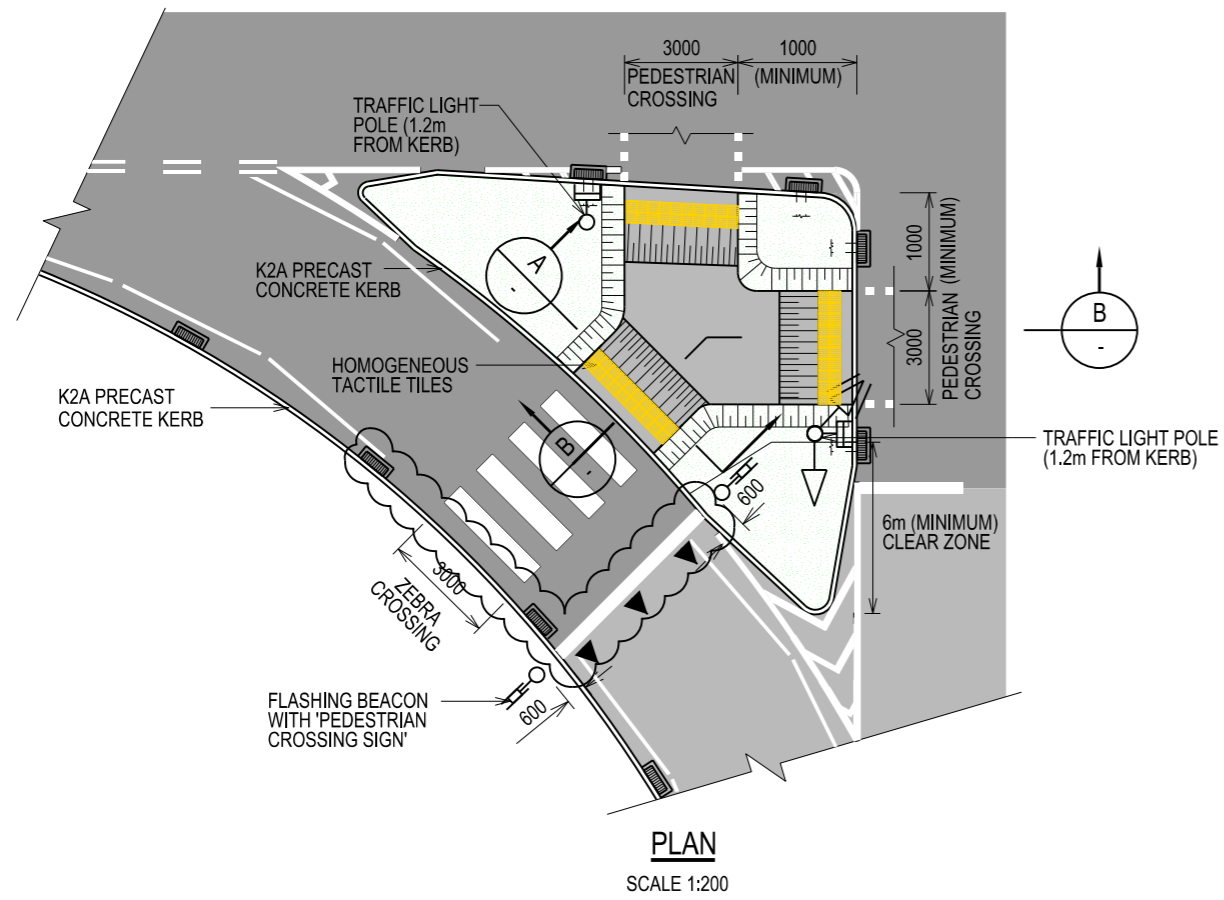
DRAWING NO.	LTA/SDRE14/3/KER5	REV.	B
DATE OF ISSUE	1st APR 2014	SCALE	AS SHOWN
		SHEET NO.	1 OF 7



GENERAL LAYOUT WITH TYPE 2 PEDESTRIAN CROSSING POINTS



<p><b>STANDARD DETAIL</b></p> <p>FOOTPATH RAMP - TYPE 2 PEDESTRIAN CROSSING POINTS</p>		<p>Land Transport Authority</p>	
		<p>DRAWING NO. LTA/SDRE14/3/KER6</p>	<p>REV. B</p>
<p>B SEP 2017</p>	<p>A OCT 2015</p>	<p>DATE OF ISSUE 1st APR 2014</p>	<p>SCALE AS SHOWN</p>
<p>REV. DATE</p>	<p>DATE</p>	<p>SHEET NO. 2 OF 7</p>	<p>3-6</p>



WHEN A ≥ 7.5m	WHEN A < 7.5m
B = 3m	B = VARIES (MIN 1.5m)
C = 3m	C = VARIES (MIN 1.5m)

**NOTES:**

- Drop-inlet chamber and scupper pipe is to be provided only where there is a provision of a drain at the traffic island.
- Clear zone shall be free of obstruction.

**STANDARD DETAIL**

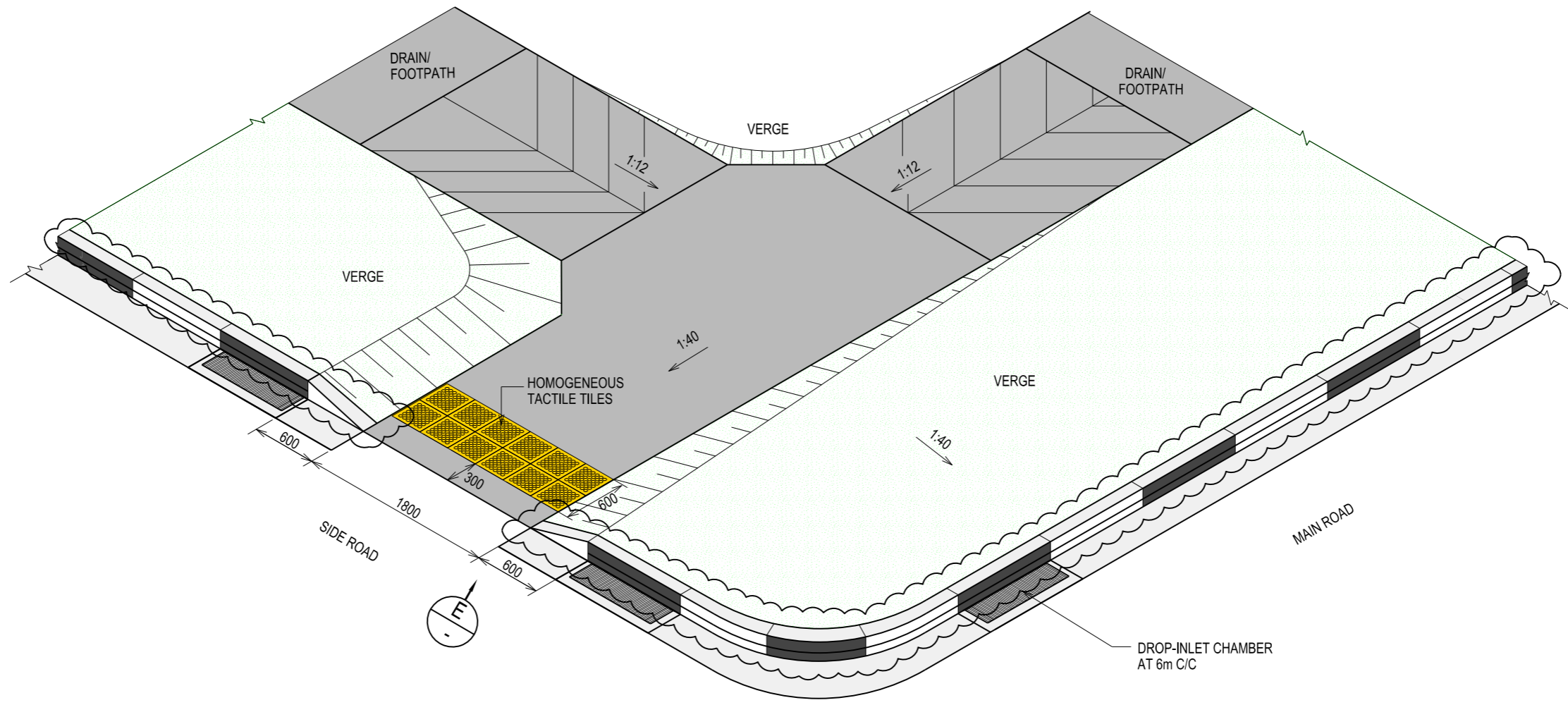
FOOTPATH RAMP - TRAFFIC ISLAND



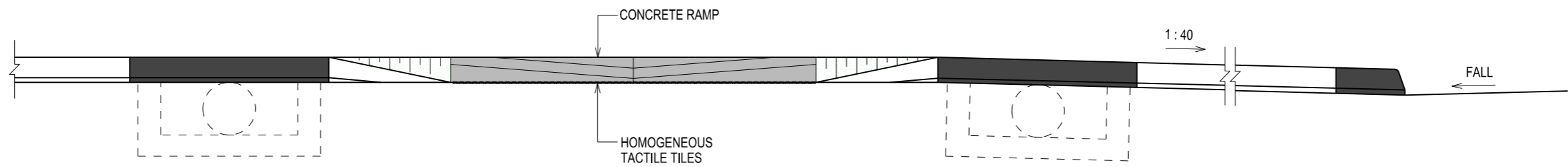
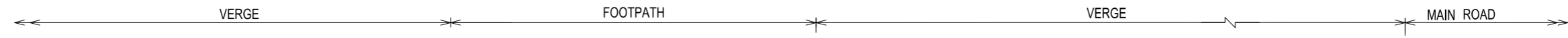
REV.	DATE
A	OCT 2015
B	SEP 2017
C	APR 2019

DRAWING NO. LTA/SDRE14/3/KER7		REV. C
DATE OF ISSUE 1st APR 2014	SCALE AS SHOWN	SHEET NO. 4 OF 7



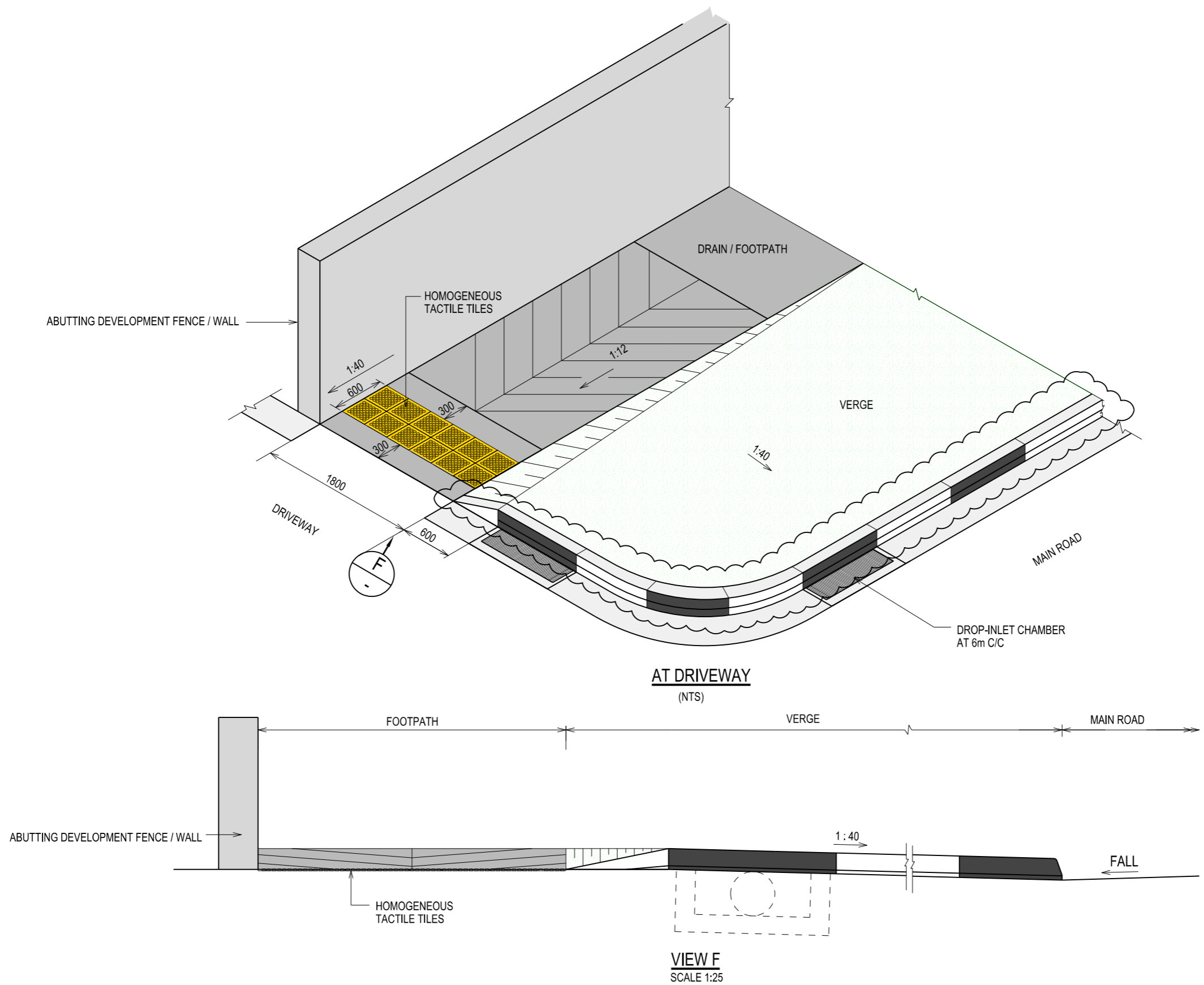


AT SIDE ROAD  
(NTS)



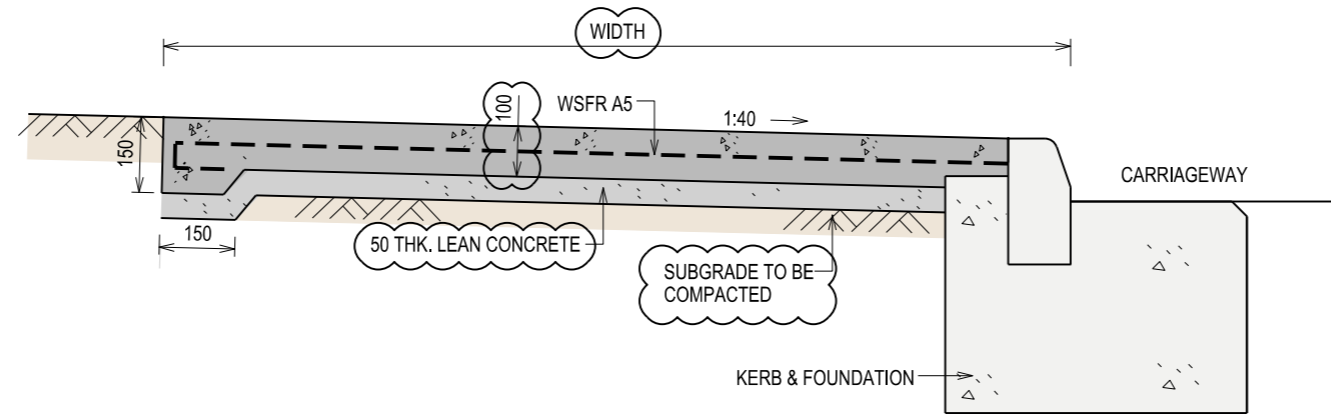
VIEW E  
SCALE 1:25

		STANDARD DETAIL			
		FOOTPATH RAMP - SIDE ROAD		DATE OF ISSUE	SHEET NO.
				1st APR 2014	5 OF 7
REV.	DATE			SCALE	
C	APR 2019			AS SHOWN	
B	SEP 2017				
A	OCT 2015				

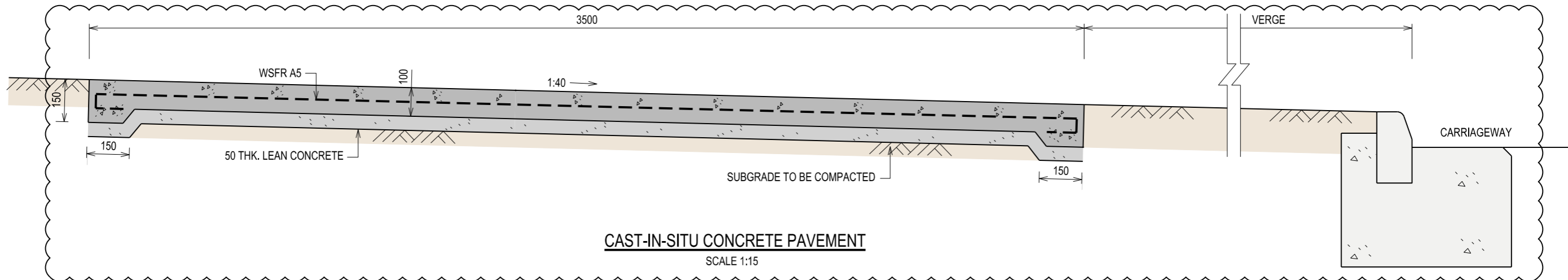


		<b>STANDARD DETAIL</b>			
		<b>FOOTPATH RAMP - DRIVEWAY</b>			
REV.	DATE			DRAWING NO. LTA/SDRE14/3/KER9	
C	APR 2019	DATE OF ISSUE 1st APR 2014		SCALE AS SHOWN	SHEET NO. 6 OF 7
B	SEP 2017				
A	OCT 2015				

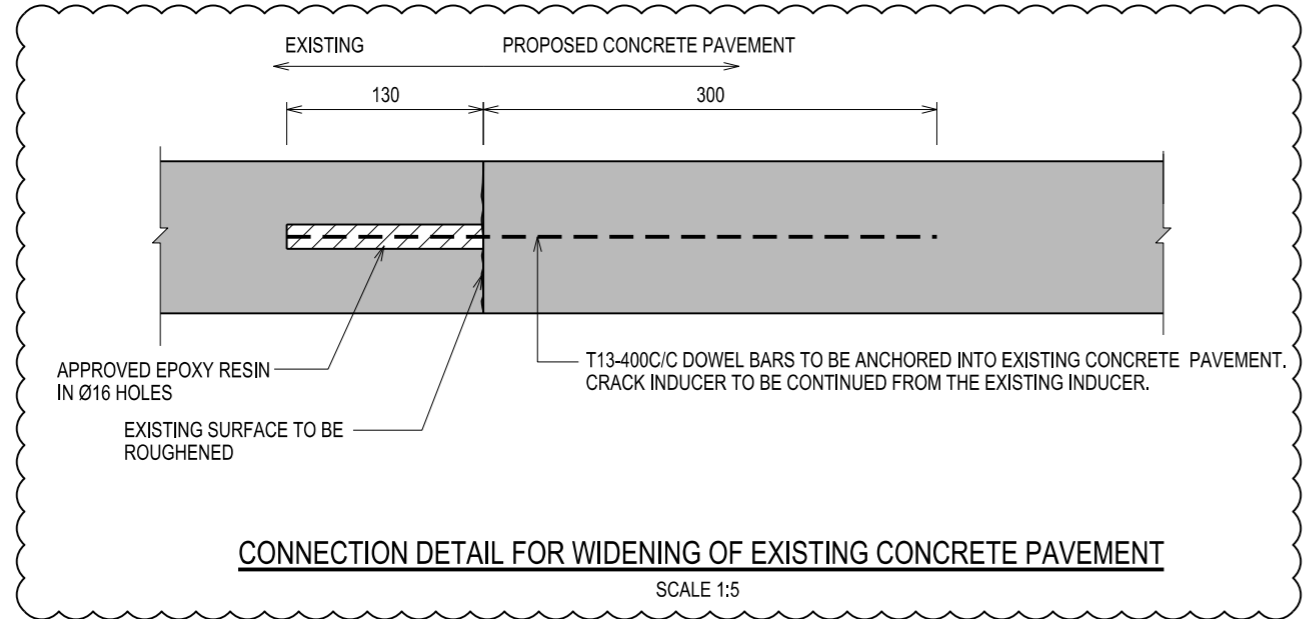




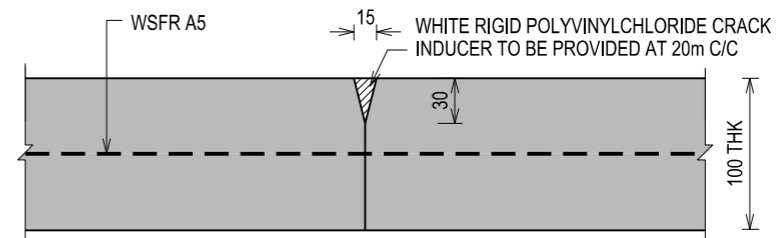
**CAST-IN-SITU CONCRETE PAVEMENT (NEXT TO KERB)**  
SCALE 1:15



**CAST-IN-SITU CONCRETE PAVEMENT**  
SCALE 1:15



**CONNECTION DETAIL FOR WIDENING OF EXISTING CONCRETE PAVEMENT**  
SCALE 1:5

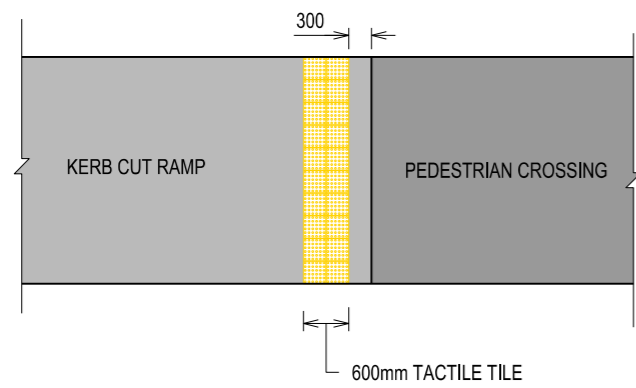


**DETAIL OF CRACK INDUCER**  
SCALE 1:5

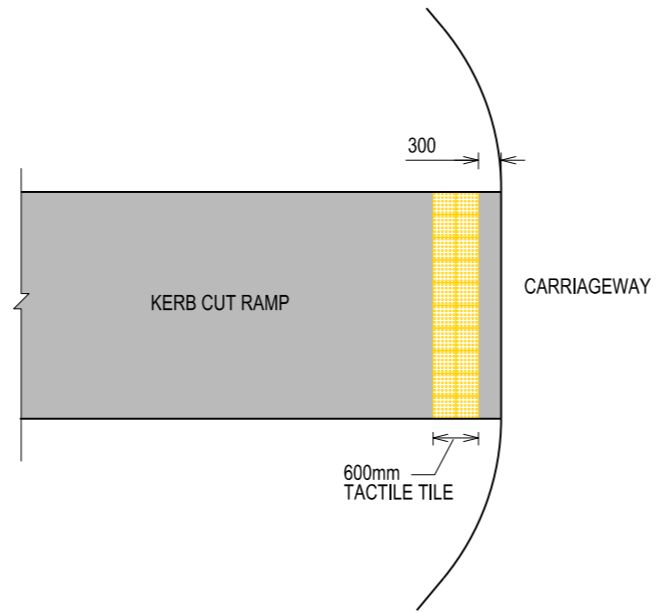
**NOTES:**

1. All concrete for footpath shall be of C25/30.
2. The underlying subgrade shall be compacted to minimum 90% of maximum dry density.
3. Concrete cover shall be of 45mm
4. Footpath/cycling path finishes shall be wire brushed.

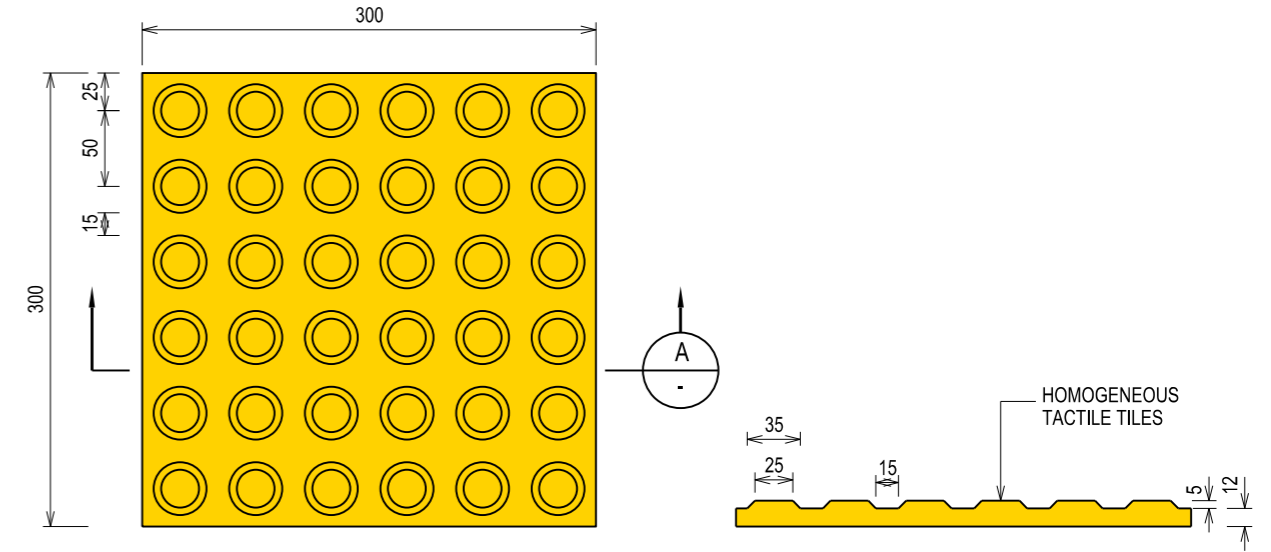
<p><b>STANDARD DETAIL</b></p> <p>CAST-IN-SITU CONCRETE PAVEMENT</p>		<p>Land Transport Authority</p>		
		<p>DRAWING NO. LTA/SDRE14/3/KER11</p>	<p>REV. B</p>	
<p>REV. B SEP 2017</p>	<p>REV. A OCT 2015</p>	<p>DATE OF ISSUE 1st APR 2014</p>	<p>SCALE AS SHOWN</p>	<p>SHEET NO. 1 OF 1</p>



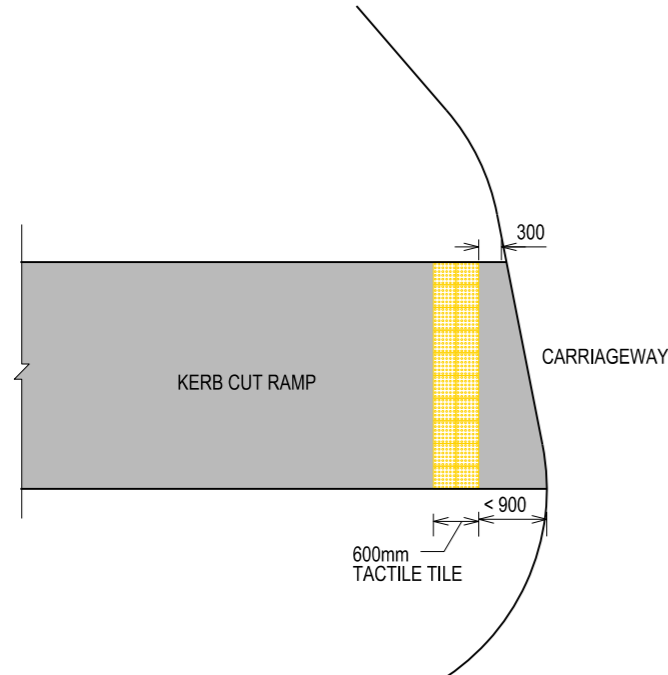
**TYPE A - ARRANGEMENT OF TACTILE TILES  
(STRAIGHT KERB CUT RAMP)**  
SCALE 1:100



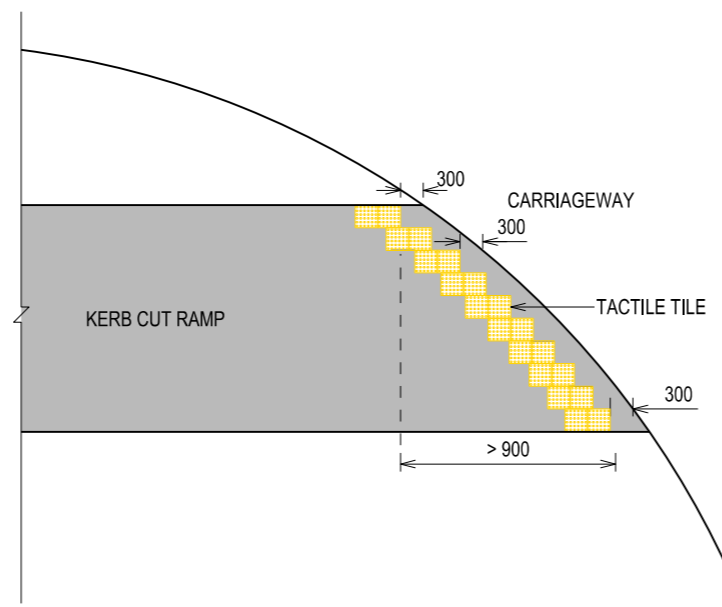
**TYPE B - ARRANGEMENT OF TACTILE TILES  
(CURVE KERB CUT RAMP)**  
SCALE 1:100



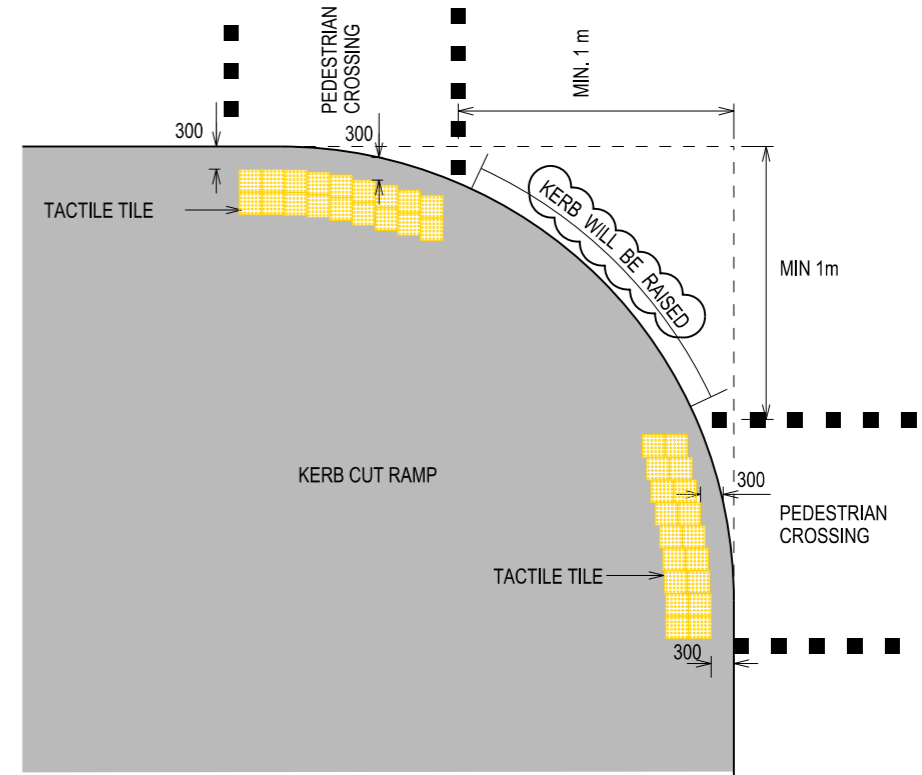
**HOMOGENEOUS TACTILE TILES**  
SCALE 1:5



**TYPE C - ARRANGEMENT OF TACTILE TILES  
(CURVE KERB CUT RAMP)**  
SCALE 1:100



**TYPE D - ARRANGEMENT OF TACTILE TILES  
(CURVE KERB CUT RAMP)**  
SCALE 1:100



**TYPE E - ARRANGEMENT OF TACTILE TILES  
(CURVE KERB CUT RAMP)**  
SCALE 1:100

NOTE: Minimum 2 set of tactile tiles to be laid for both side of type e ramp

- NOTES:**
- The tactile tiles shall have a minimum of 30% luminance contrast with the footpath ramp.
  - All homogeneous tiles shall comply with the following:
    - Water absorption : 0.4% maximum per ASTM C72
    - Modules of rupture : 10.34 MN/m<sup>2</sup> per ASTM C99
    - Compressive strength : 131 MN/m<sup>2</sup> per ASTM 0170
  - All homogeneous unglazed ceramic tiles shall comply to ISO 13006:2012.

- Tactile tiles shall comply to SS485:2011 for skid resistance based on wet pendulum test (Classification V).
- For driveways leading to two or less individual house units, a flushed kerb is to be provided without any tactile tiles.
- For closely-spaced driveways with footpath separated from the carriageway by a green verge or kerb, and with footpath length less than 10m, the whole footpath is to be flushed.

REV.	DATE
A	OCT 2015
B	SEP 2017

**STANDARD DETAIL**

HOMOGENEOUS TACTILE TILES AND ARRANGEMENT OF TACTILE TILES



DRAWING NO. LTA/SDRE14/3/KER12		REV. B
DATE OF ISSUE 1st APR 2014	SCALE AS SHOWN	SHEET NO. 1 OF 1

