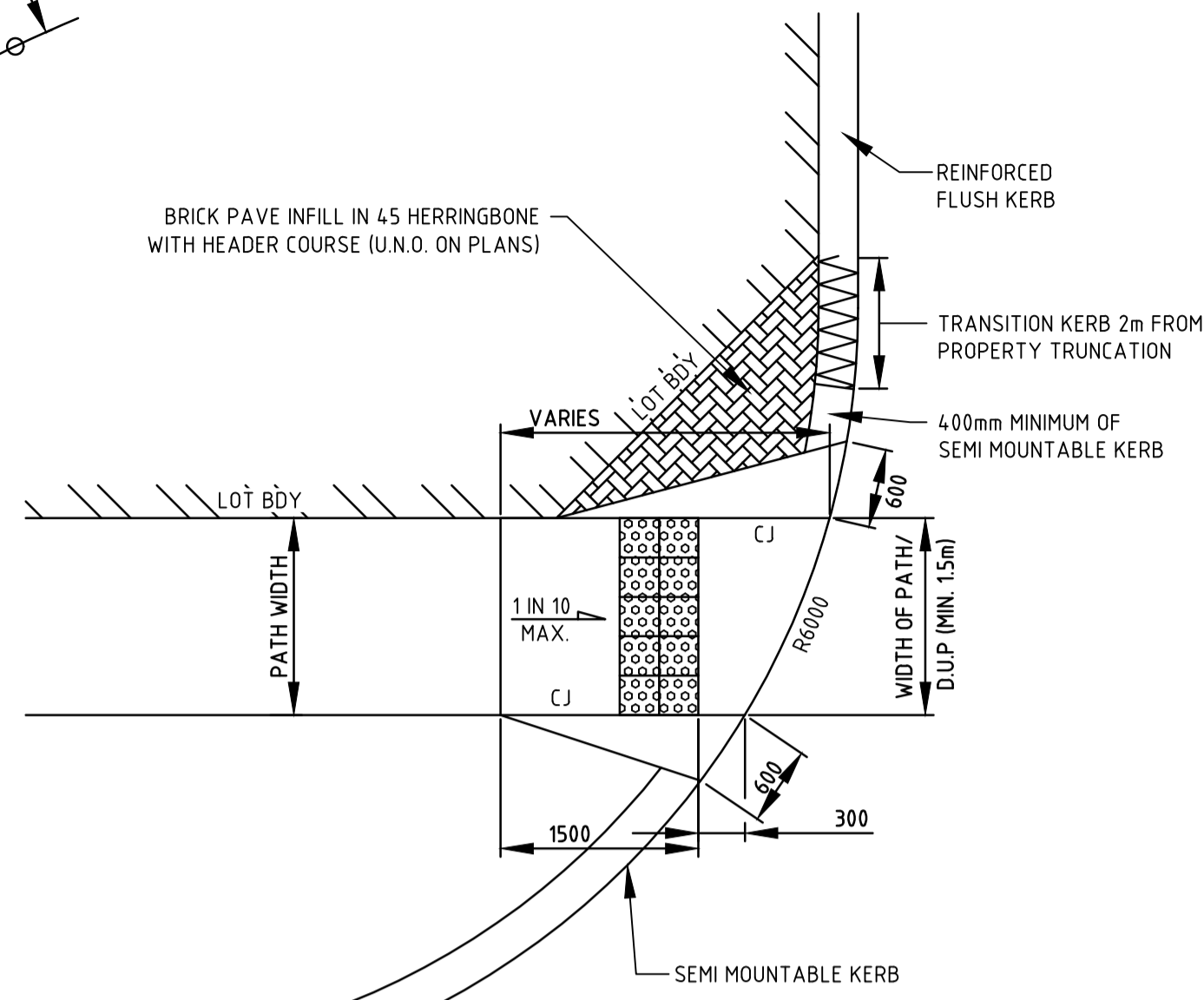
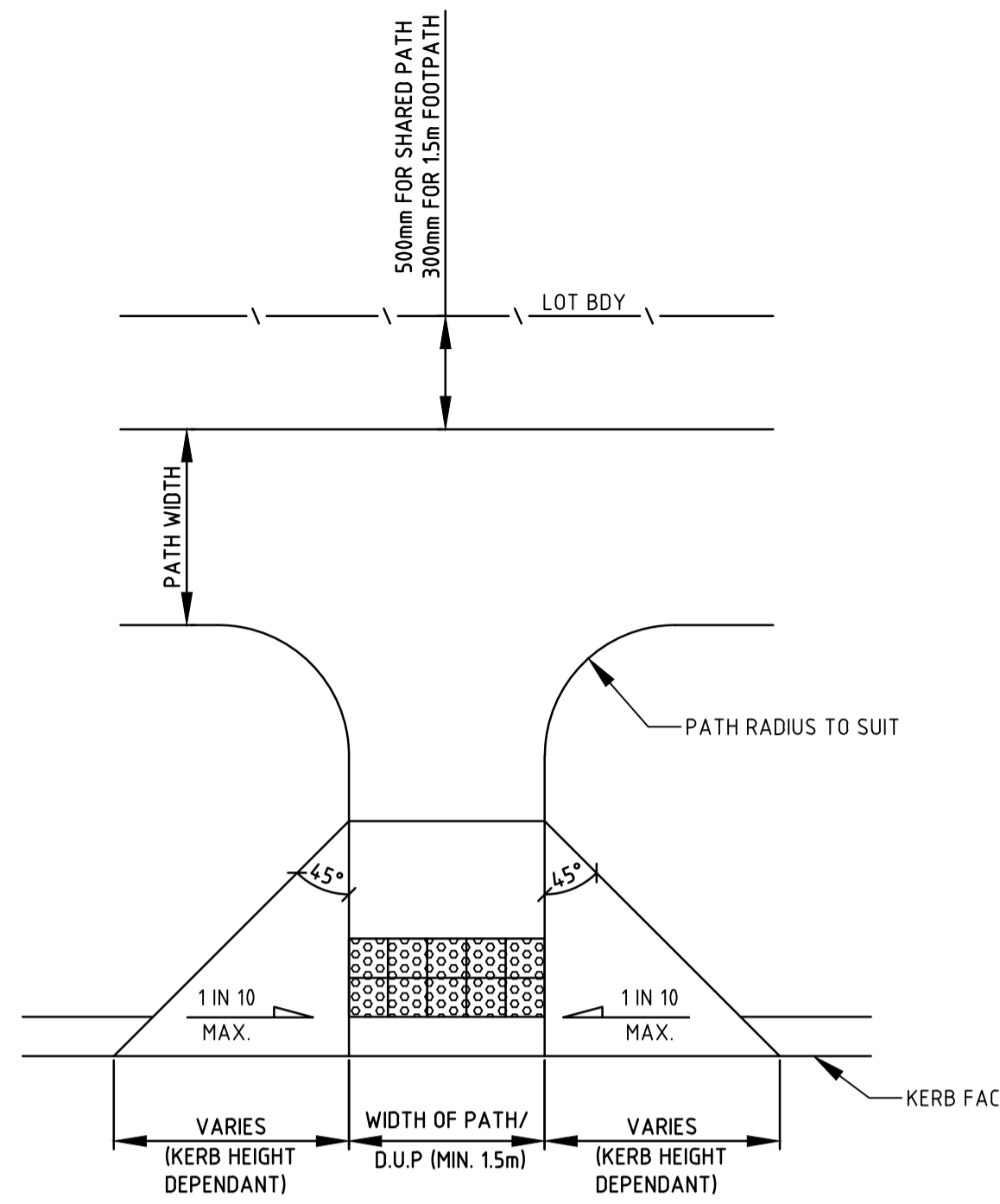


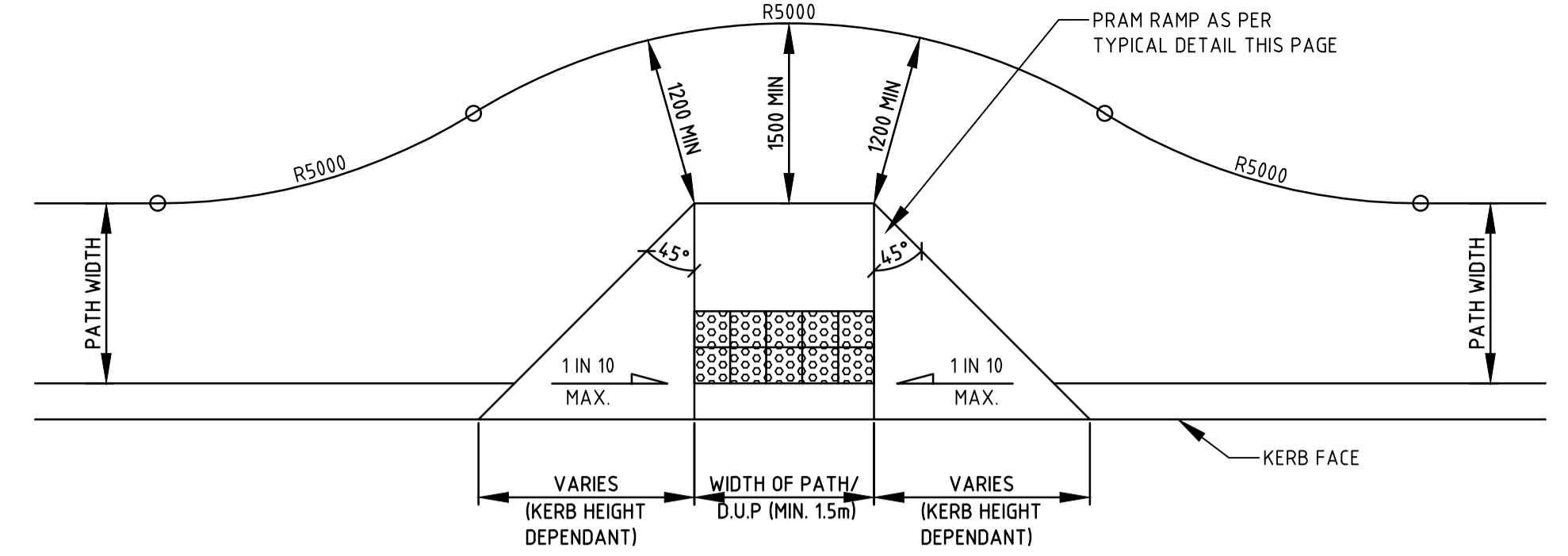
**RAMP ON RADIUS**  
N.T.S.



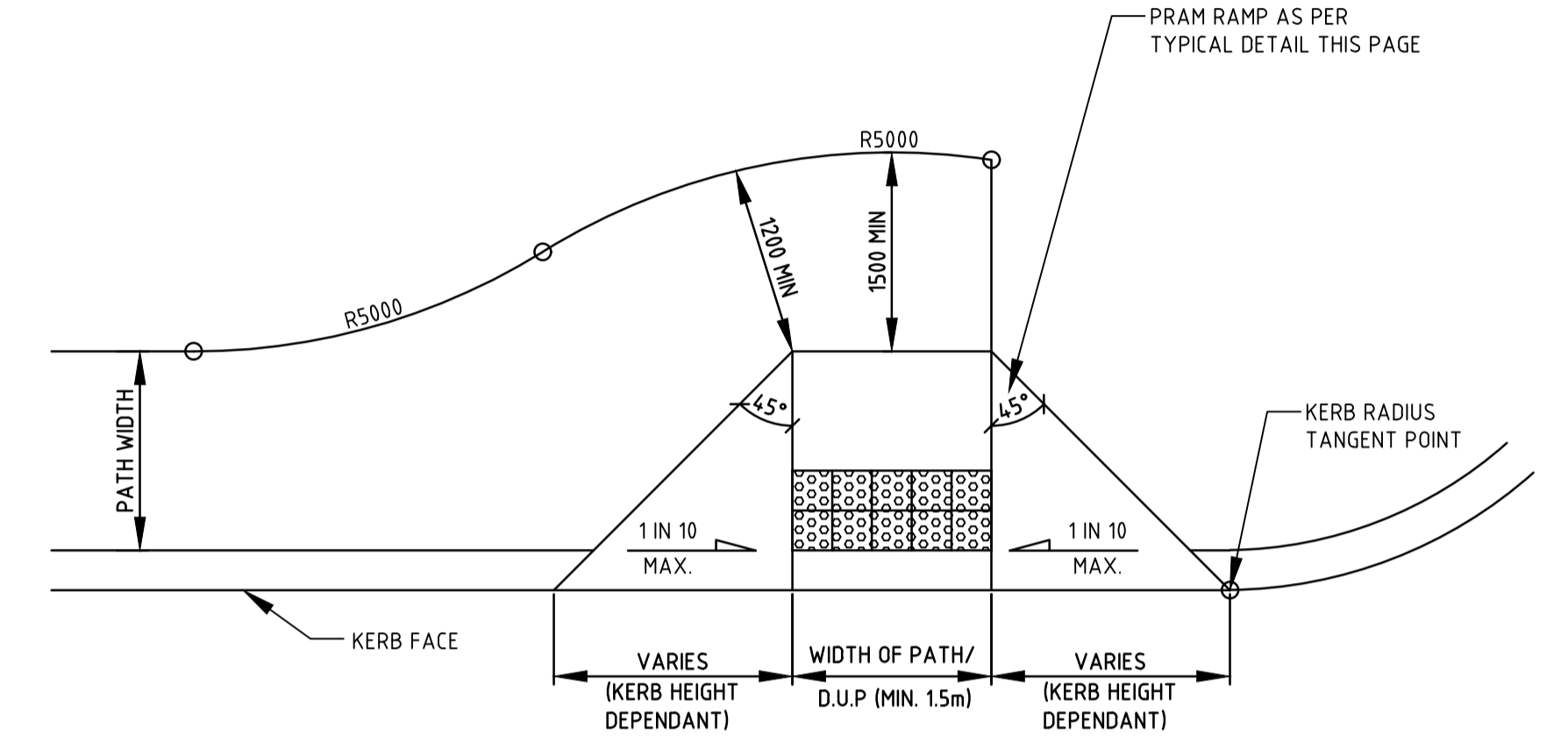
**RAMP ON RADIUS (AT LANEWAYS)**  
N.T.S.



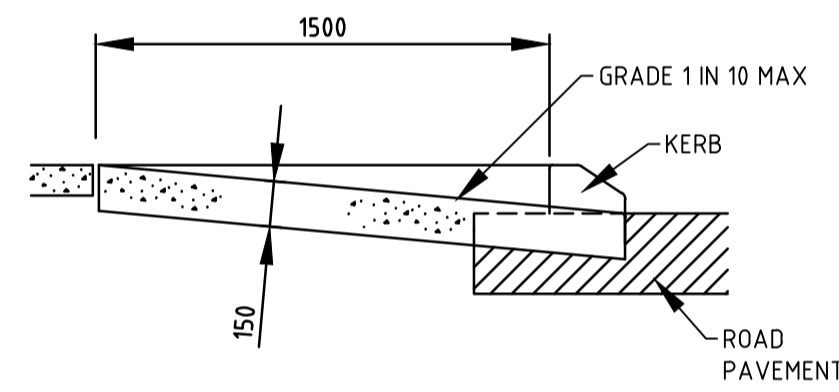
**RAMP ON BOUNDARY ALIGNED PATH**  
N.T.S.



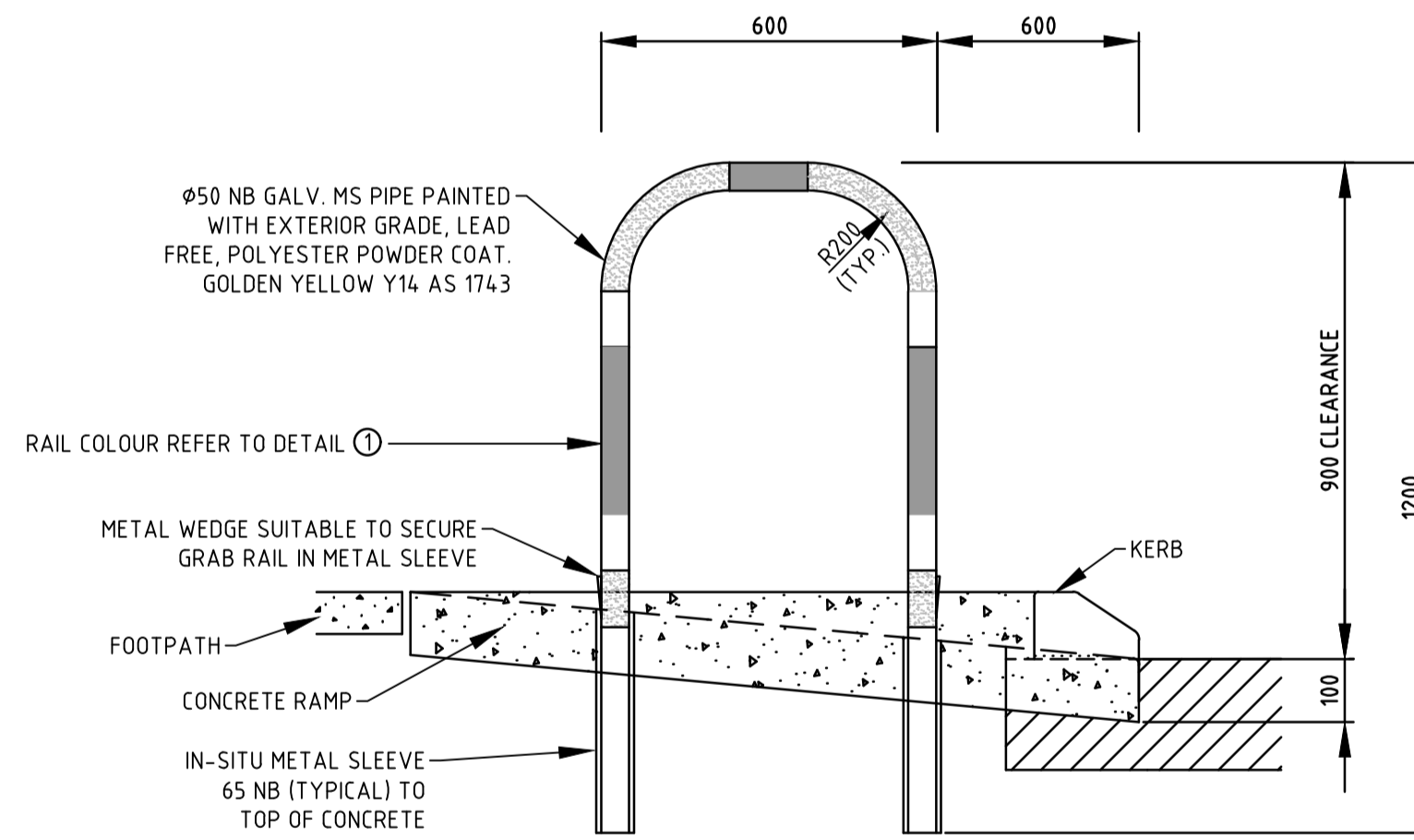
**RAMP ON STRAIGHT**  
N.T.S.



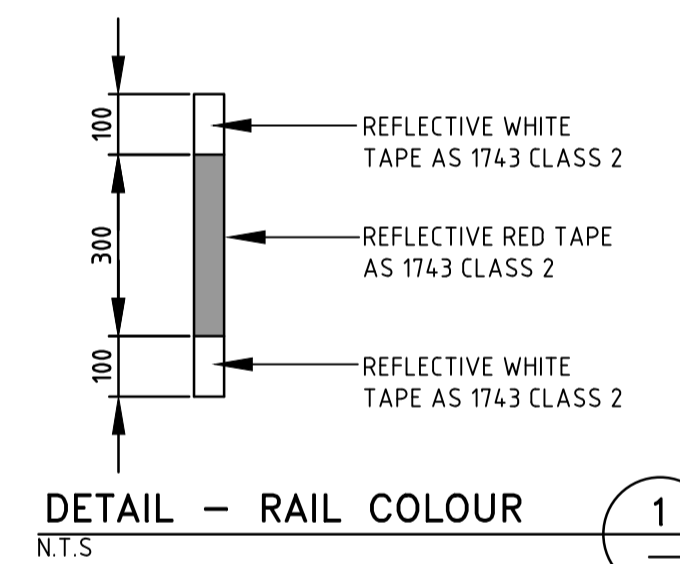
**RAMP AT END OF PATH ON KERB TANGENT POINT**  
N.T.S.



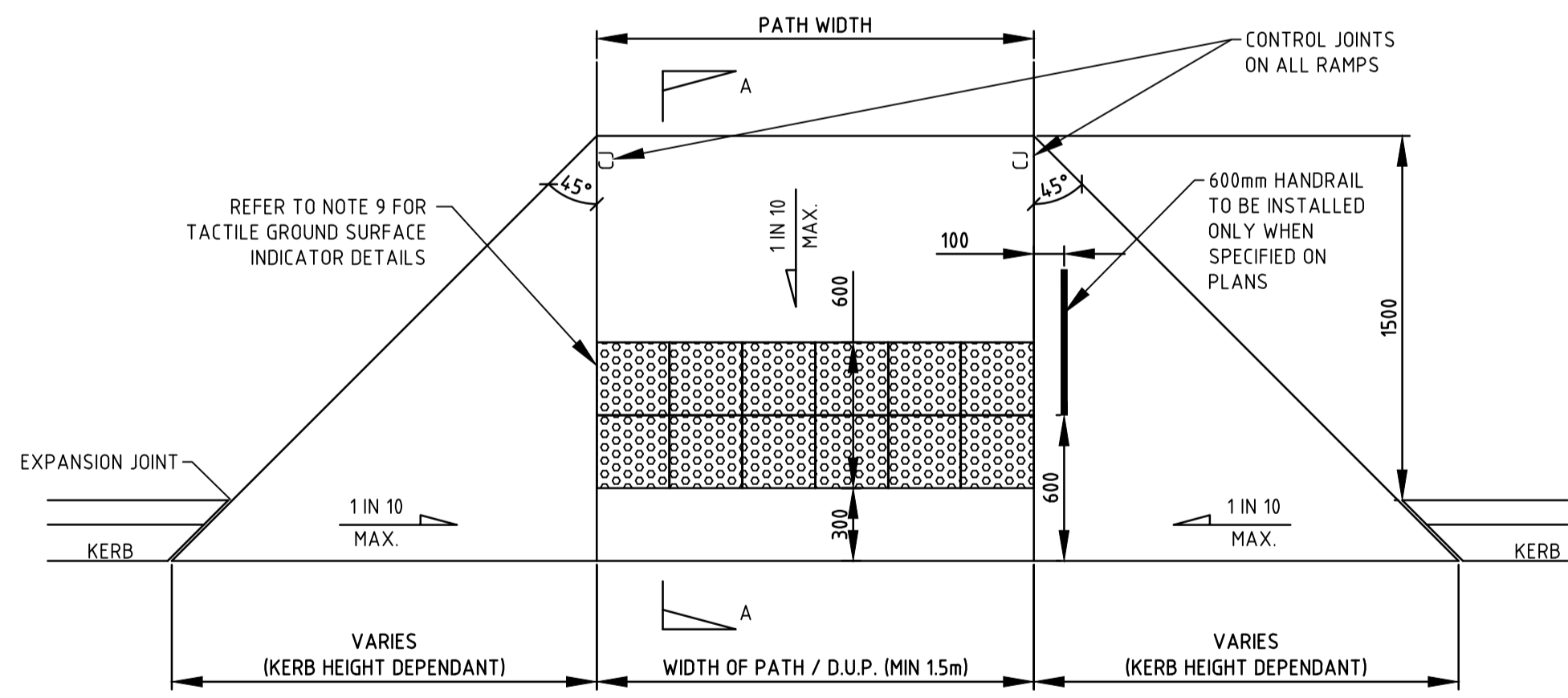
**SECTION A-A (RAMP)**  
N.T.S.



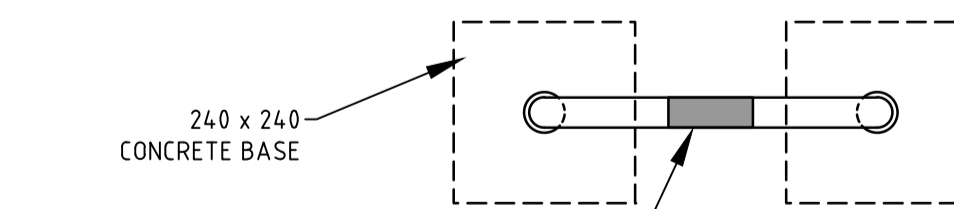
**ELEVATION - HAND RAIL DETAIL**  
N.T.S.



**DETAIL - RAIL COLOUR**  
N.T.S.

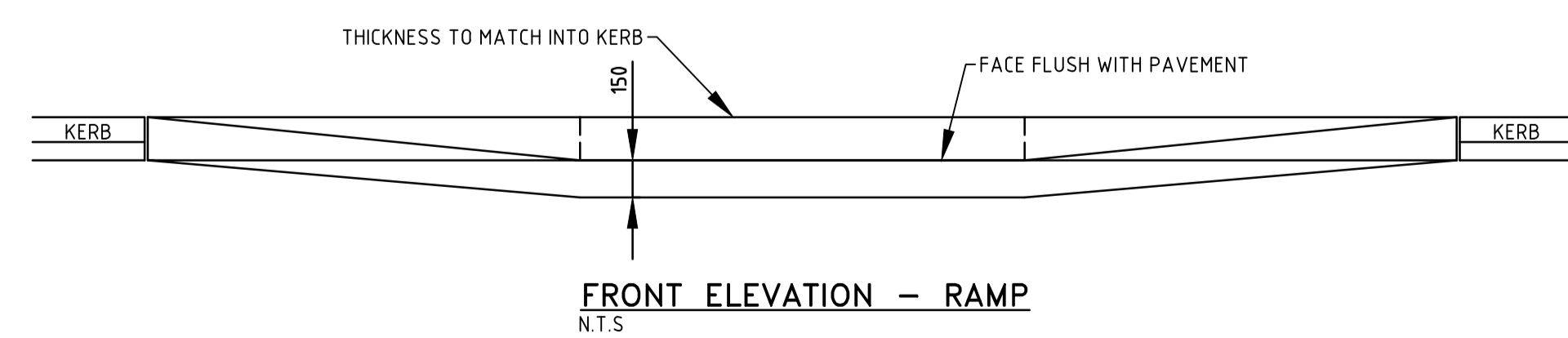


**PLAN - PEDESTRIAN RAMP**  
N.T.S.

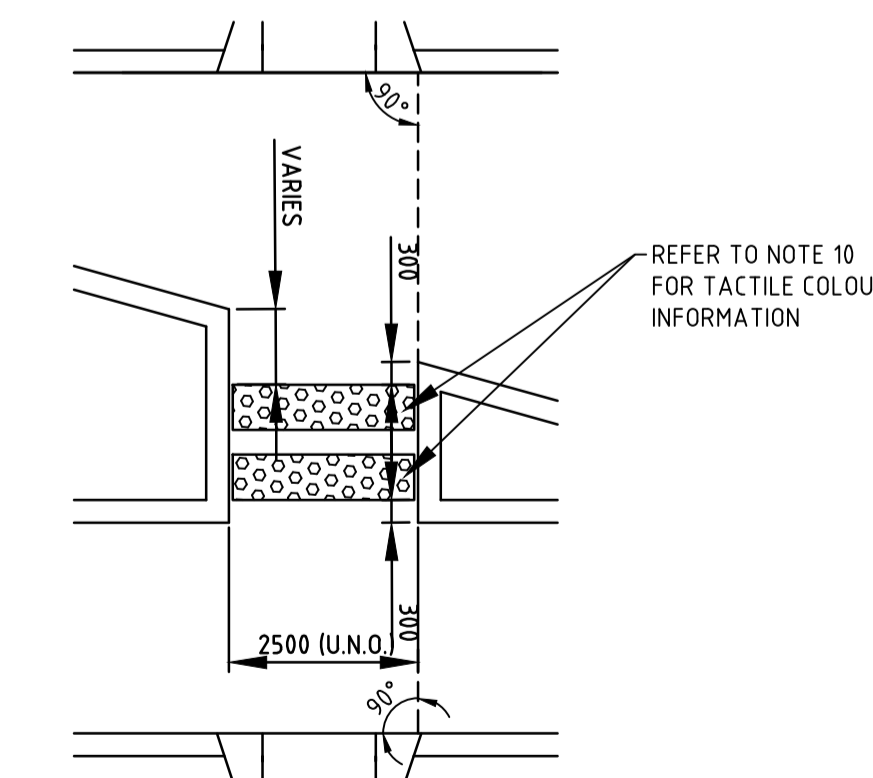


**PLAN - HAND RAIL DETAIL**  
N.T.S.

NOTE:  
RAMP TO BE PLACED IN LINE WITH FOOTPATH OR MEDIAN & OPPOSING RAMP AT 90° TO THE DIRECTION OF TRAVEL.



**FRONT ELEVATION - RAMP**  
N.T.S.



**TACTILE IN MEDIAN CUT-OUTS TYPICAL DETAIL**  
N.T.S.

**DRAWING NOTES:**

- ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
- PRAM RAMP TO BE EXTRUDED USING 32MPA GRADE CONCRETE IN ACCORDANCE WITH AS 1379 WITH FIBRE REINFORCEMENT AT A MIXING RATE OF 0.9KG/M<sup>3</sup>. MAXIMUM AGGREGATE SIZE OF 10MM WITH MAXIMUM SLUMP AT DELIVERY OF 90MM.
- BEDDING TO BE MIN 100mm THICK SAND.
- FOUNDATIONS TO BE COMPACTED TO 95% MODIFIED DRY DENSITY.
- EXPANSION JOINTS ARE TO BE 10mm CANITE BACKING MATERIAL SEALED WITH BUTYL MASTIC COMPOUND FILLER OR EQUIVALENT.
- SURFACE TO BE BROOM FINISH, NON SLIP, PARALLEL TO KERBLINE - 2mm DEEP.
- TACTILE GROUND SURFACE INDICATORS PROVIDED SHALL COMPLY WITH AS/NZ 1428.
- ALL PRAM RAMP AND PEDESTRIAN MEDIAN BREAKS TO HAVE TACTILE GROUND SURFACE INDICATORS INSTALLED (TYP.)
- ACCEPTED TACTILE PAVING SYSTEMS LOCATED IN CONCRETE OR ON ASPHALT SURFACES INCLUDE:  
- FIBRE REINFORCED POLYMER CAST IN PLACE OR APPLIED TO THE SURFACE WITH MECHANICAL AND ADHESIVE FIXINGS.  
- POLYMER CEMENT BASE WITH FIBERGLASS REINFORCING.
- ACCEPTED TACTILE PAVING SYSTEMS LOCATED WITHIN BRICK PAVING INCLUDE:  
- CONCRETE TILE INSERTS.  
- POLYMER CEMENT BASE WITH FIBERGLASS REINFORCING.
- TACTILE COLOURS ARE TO BE AS FOLLOWS:  
- BLACK IF LOCATED WITHIN PRAM RAMP OR ON CONCRETE SURFACES.  
- CREAM IF LOCATED ON ASPHALT SURFACES.  
- CONTRASTING COLOUR IF LOCATED WITHIN BRICK PAVED SURFACES.
- HANDRAIL TO BE PLACED ON LEFT-HAND SIDE WHEN FACING DIRECTION OF TRAVEL.

REV	DATE	DESCRIPTION	DRAWN
I	09/22	TACTILE GROUND SURFACE INDICATOR SUPPLIER NAMES REMOVED FROM DRAWING NOTES	J.M
H	08/22	RAMP WINGS AMENDED FROM 600mm WIDE TO 1 IN 10 MAX. (WIDTH DEPENDANT ON KERB HEIGHT)	J.M
G	06/19	REVIEW COMPLETED & DRAFTING AMENDMENTS MADE	J.M
F	06/18	FURTHER TACTILE SURFACE INDICATOR NOTES & TACTILES IN MEDIAN CUT OUTS ADDED	J.M
E	05/17	HAND RAIL ADDED & RAMP ON STRAIGHT, RADIUS, END OF PATH & LANEWAY ADDED	J.M
D	06/16	TACTILE SURFACE INDICATOR NOTES AMENDED & HAND RAILS REMOVED	J.M
C	09/12	CITY OF KWINANA LOGO ADDED	J.M

ASSOCIATE CONSULTANT:
J.M



PROJECT:	STANDARD DETAILS PEDESTRIAN RAMP & HAND RAIL
PHONE: (08) 9439 0200	ADDRESS: Cnr Gilmore Avenue and Sulphur Road, Kwinana WA 6167
FAX: (08) 9439 0222	
EMAIL: admin@kwinana.wa.gov.au	
WEB: http://www.kwinana.wa.gov.au	

SCALE:	N.T.S (A1)
DESIGN:	S.S
CHECK:	R.N
DRAWN:	J.M
DATE:	05/17
AUTHORISED (MANAGER ENGINEERING SERVICES):	R.NAJAFZADEH

DRAWING TITLE:	STANDARD DETAILS PEDESTRIAN RAMP, TACTILES & HAND RAIL
FILE NO:	ENG03
DRAWING NUMBER:	STD-R04
REVISION:	I