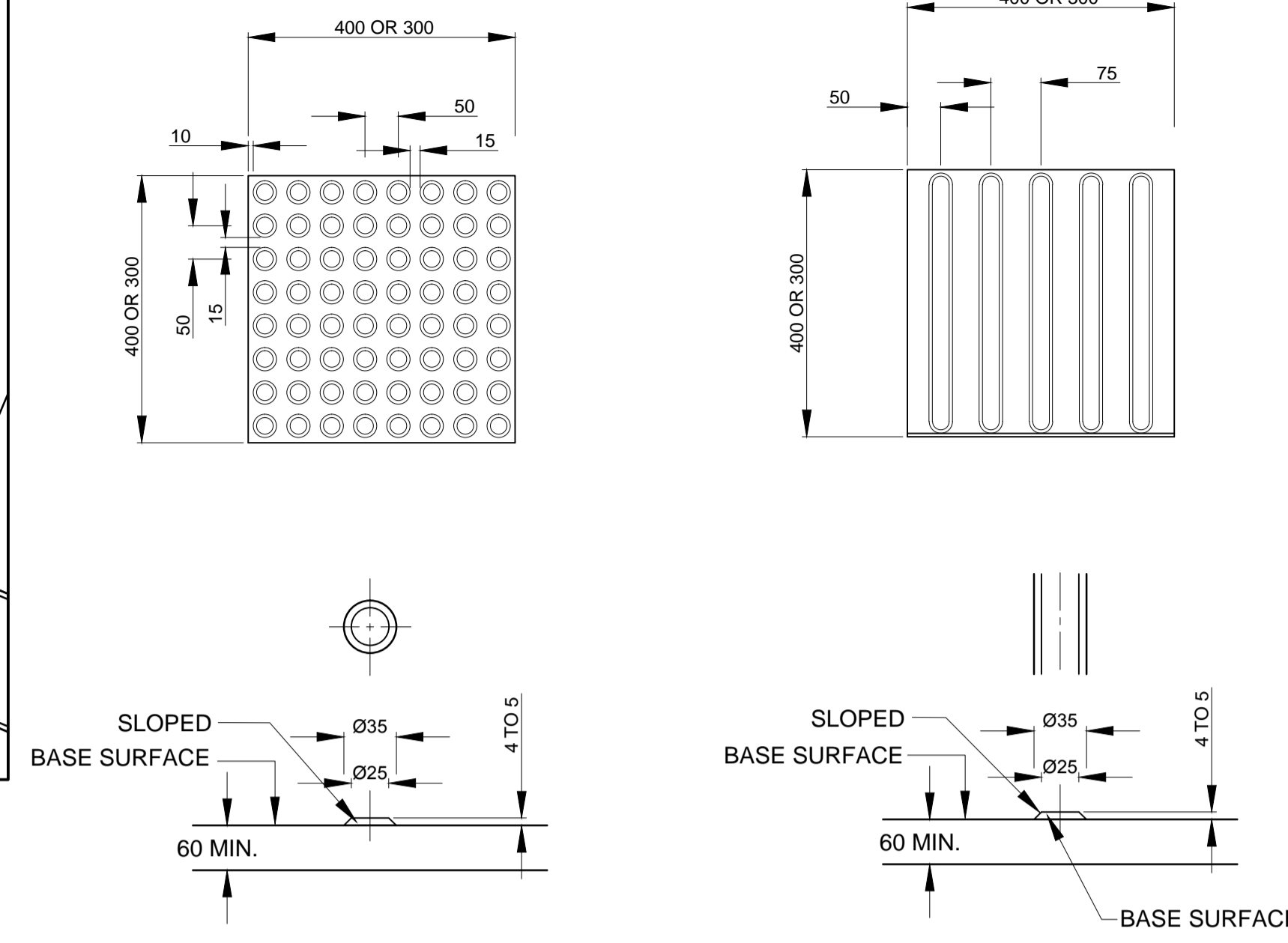


NOTES AND SPECIFICATIONS

- SPECIFICATIONS FOR PEDESTRIAN RAMPS, AT STREET CROSSINGS:**
- RAMPS SHALL BE REQUIRED AT ALL PEDESTRIAN CROSSINGS.
 - POSITION FOR THE PROPOSED PEDESTRIAN CROSSINGS MUST BE SUBMITTED FOR APPROVAL TO THE CITY OF TSHWANE TRAFFIC ENGINEERS DIVISION.
 - PEDESTRIAN RAMPS SHALL BE CONSTRUCTED WITH 30 MPa PRECAST TGSi BLOCKS, 400 X 400 X (60mm MIN.) OR 300 X 300 X (60mm MIN.) OR CONCRETE WITH SURFACE FINISH AS SPECIFIED.
 - ALL THE TRANSITION SECTIONS SHALL BE CONSTRUCTED WITH BEVEL CONCRETE PAVER BLOCKS MIN. (60mm THICKNESS) ACCORDING TO PROPOSED SLOPES.
 - MINIMUM SET BACK "BUFFER STRIP" OF 300mm BEHIND THE EDGE OF THE HAZARDOUS ROADWAY MUST BE PROVIDED. MUST BE CONSTRUCTED WITH CLASS 25/19 IN-SITU CAST CONCRETE (PREFERRED) OR PRECAST FIG. 1, AT A 2% SLOPE BACK TO EDGE OF ROADWAY TO ASSURE PROPER STORMWATER DRAINING.
 - THE PRECAST CONCRETE BLOCKS SHALL BE PLACED WITH JOINTS NOT SMALLER THAN 5mm OR EXCEEDING 10mm.
 - THE JOINTS SHALL BE FILLED WITH A MORTAR CONSISTING OF ONE PART CEMENT AND THREE PARTS APPROVED BUILDING SAND, MEASURED PER VOLUME.
 - THE SLOPE OF THE RAMP AND APPROACHES SHALL NOT EXCEED THE MAXIMUM SLOPES AS INDICATED. THE COMBINED LANDING AND RAMP AREA WILL NOT EXCEED A 1:50 (2%) SLOPE. ALL APPROACHES MUST BE CONSTRUCTED ACCORDING TO THE MIN. TRANSITION LENGTHS WITH EXCEPTION ON THE RULES. IT COULD BE CONSULTED WITH THE TRAFFIC SYSTEM ENGINEERS.
 - THE CROSS FALL OF THE KERB'S CAST IN-SITU CHANNEL AT THE RAMP, SHALL NOT EXCEED 1:15 (6.6%), OTHERWISE THE CHANNEL AND THE KERB SHALL BE RECONSTRUCTED OVER A MINIMUM LENGTH OF 3 METERS. CARE MUST BE TAKEN TO PREVENT POSSIBLE DRAINAGE PROBLEMS.
 - THE CROSS FALL OF THE RAMP NEED TO BE CONSTRUCTED ACCORDING TO THE PROPOSED SLOPES. A MAX SLOPE OF 1:50 (2%).
 - THE PAVING ADJACENT TO THE RAMP AND ALL TRANSITIONS SHALL BE CONSTRUCTED TO AVOID SEVERE CHANGES IN GRADE BETWEEN THE PAVING AND THE TRANSITION SECTIONS. SEE ISOMETRIC VIEW.
 - THE PAVEMENT LAYER SHALL CONSIST OF THE FOLLOWING:
 - 150mm IN-SITU LAYER (MIN.) G9 COMPACTED TO AT LEAST 91% OF THE MODIFIED AASHTO DENSITY.
 - 150mm SUBBASE SELECTED MATERIAL STABILIZED TO C4.
 - THE BEDDING MATERIAL UNDER TGSi BLOCKS SHALL CONSIST OF A 3:1 RIVER SAND/CEMENT MIXTURE. THICKNESS WILL VARY DEPENDING ON THE PAVERS USED.
 - EXISTING PAVING MUST BE CUT IN STRAIGHT LINES, FOLLOWING AN APPROVED METHOD.
 - THE FOLLOWING GUIDELINE DOCUMENTS WERE USED TO COMPILE THESE TYPICAL STANDARD DETAILS FOR THE CITY OF TSHWANE:
 - SANS 784:2008
 - SANS 10400-5:2011
 - NTR 1, VERSION 6 OF NOV 2016 (DRAFT)
 - TGSi - (TACTILE GROUND SURFACE INDICATORS)
 - W-BLOCK - (WARNING BLOCK)
 - D-BLOCK - (DIRECTIONAL BLOCK)
 - ALL DIMENSIONS ON STD009 IN mm
 - THIS IS A GUIDELINE INDICATING THE MINIMUM SPECIFICATIONS. SUBMIT DETAIL DESIGN FOR APPROVAL TO THE TSHWANE TRAFFIC SYSTEM ENGINEERS.



**TOP VIEW
PATTERN DETAIL
WARNING TACTILE
(W- BLOCK)**

**TOP VIEW
PATTERN DETAIL
DIRECTIONAL TACTILE
(D-BLOCK)**

(THE COLOR OF WARNING BLOCKS MUST BE TERRACOTTA "RED" AND THE DIRECTIONAL BLOCKS GREY)

ROAD CLASS	MIN. WIDTH OF LOWERED KERB FOR RAMPS	MIN. WIDTH OF RTM 3 LANE OR PEDESTRIAN BLOCK CROSSINGS
CLASS 2	800	2400
CLASS 3 - 5	800	2400
BRT AND NMT ROUTES INTERSECTION CONTROLLED	2400	2400
INTERSECTION UNCONTROLLED	1600	2400
CROSSING AT BRT STATIONS	3000	3000

UNLESS OTHERWISE APPROVED, THE WIDTH OF LOWERED KERBS AND ROAD CROSSING MARKINGS MUST BE DESIGNED ACCORDING TO DEMAND.

AMENDMENTS			
NR.	DATE	APPROVED	DESCRIPTION

DESIGNED (APPROVED FOR COT) W. BRUHNIS	DRAWN S. AUDIE
DESIGN CHECKED BY MS CB. RAMEKANE	INFRASTRUCTURE TECHNICAL INFORMATION MANAGEMENT D.J. CHALMERS

CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT

GROUP HEAD
Mr Letlonkane P. (Phoko)
P.O. BOX 1409
PRETORIA 0001

ACTING DIVISIONAL HEAD
Mr Lebepe M.T. (Thabo)
P.O. BOX 1409
PRETORIA 0001

DRAWING APPROVED BY ACTING EXECUTIVE DIRECTOR
Mr Lebepe M.T. (Thabo)

TYPICAL STANDARD DETAILS

PEDESTRIAN RAMPS FOR THE DISABLED

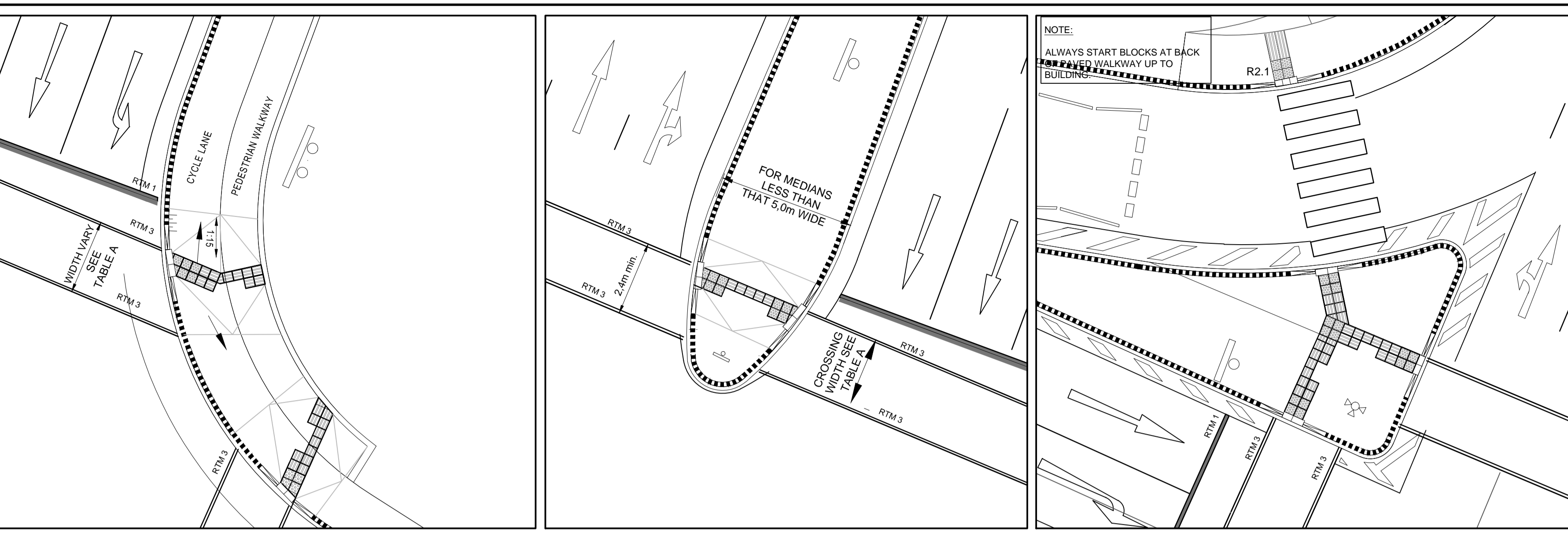
DESCRIPTION OF PROJECT

CONTRACT No.: PROJECT No.:

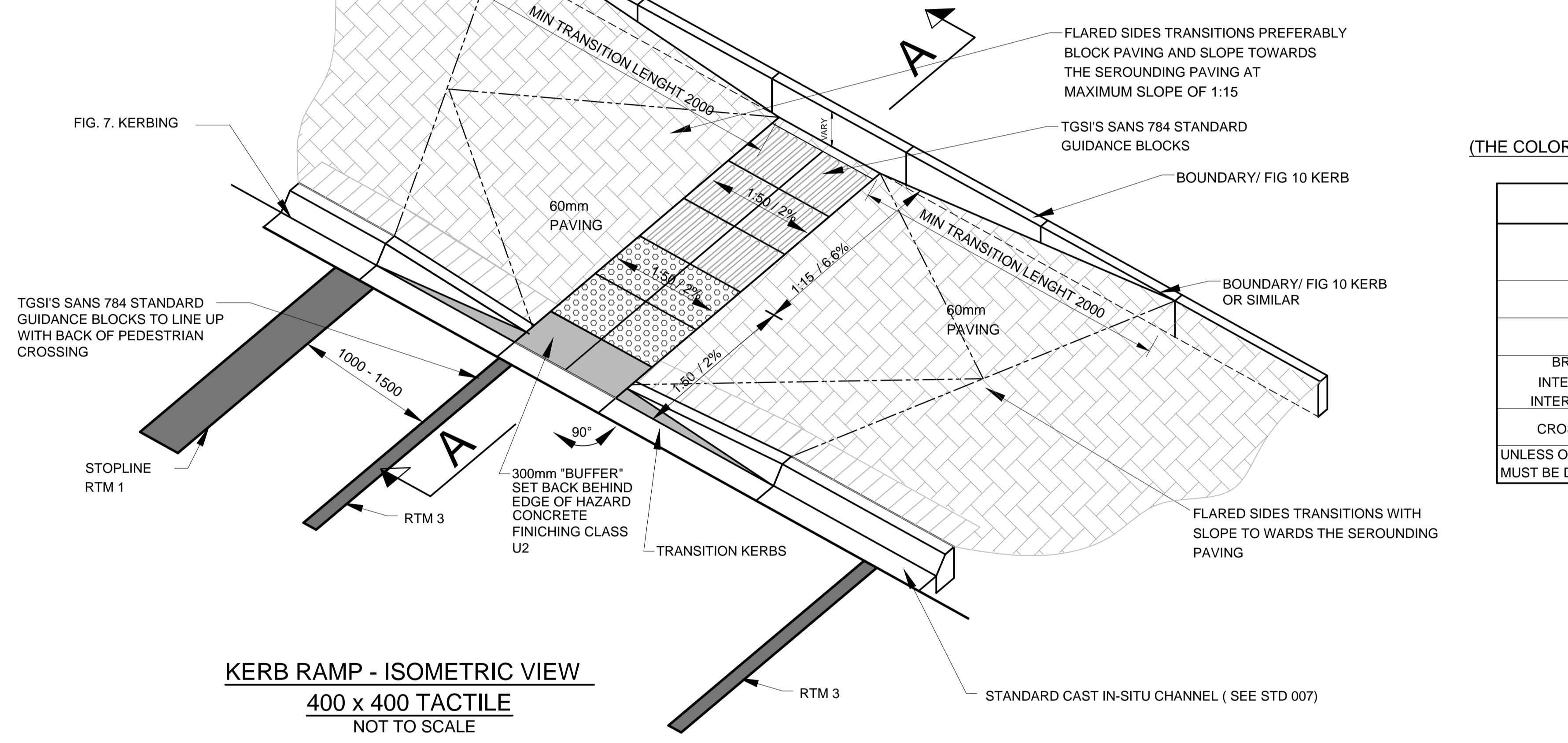
DATE: 01 August 2018 SCALE: AS SHOWN ORIGINAL PAPER SIZE: A1

DRAWING NO: STD009 SHEET NO: 1 OF 2

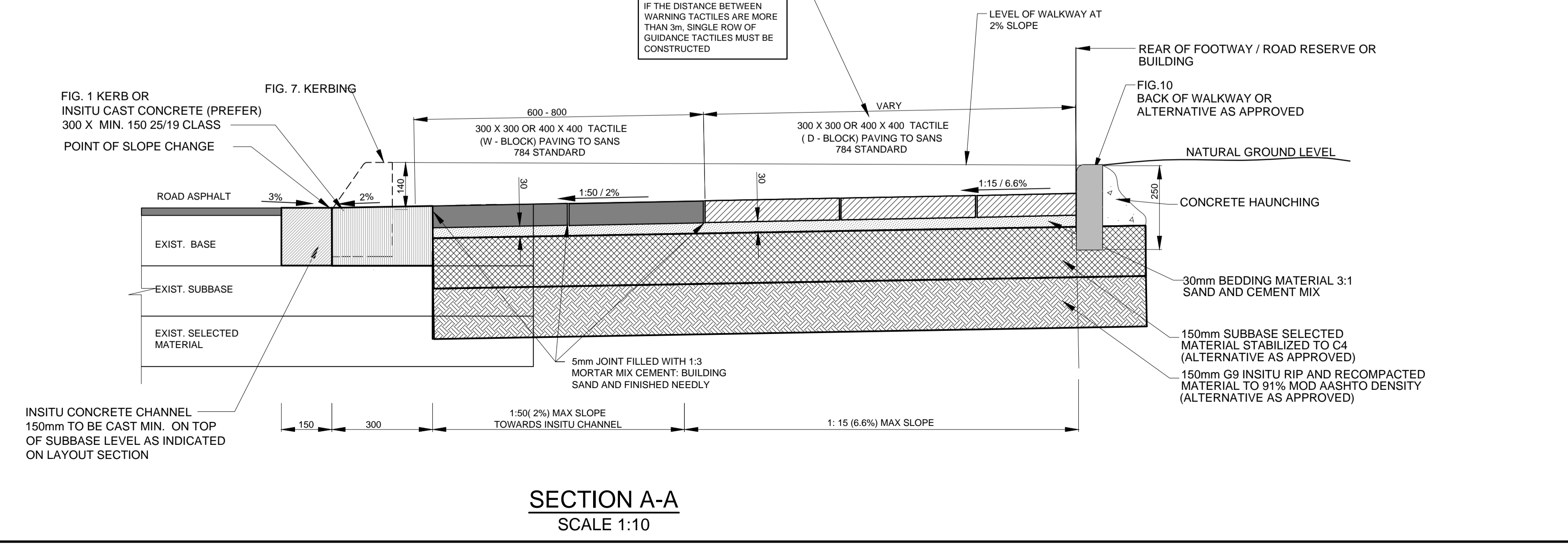
ROADS AND TRANSPORT For Internal Approval	
SIGNATURE WHEN APPLICABLE	
DIRECTOR: INFRASTRUCTURE PROVISION	SIGNATURE DATE
DIRECTOR: INFRASTRUCTURE CONSTRUCTION (PROJECT) MANAGEMENT	SIGNATURE DATE
DIRECTOR: INFRASTRUCTURE ASSET MANAGEMENT	SIGNATURE DATE
DIRECTOR: TRANSPORT INFRASTRUCTURE PLANNING	SIGNATURE DATE
DIRECTOR: INTELLIGENT TRANSPORT SYSTEM AND TRAFFIC ENGINEERING	SIGNATURE DATE
DIRECTOR: INFRASTRUCTURE MAINTENANCE MANAGEMENT (IMM)	SIGNATURE DATE



TYPE A PEDESTRIAN CROSSING (WITH CYCLE LANE) NOT TO SCALE
TYPE B PEDESTRIAN CROSSING (MEDIAN LESS THAN 5,0m WIDE) NOT TO SCALE
TYPE D PEDESTRIAN CROSSING (ISLAND CROSSING) NOT TO SCALE



**KERB RAMP - ISOMETRIC VIEW
400 x 400 TACTILE
NOT TO SCALE**



**SECTION A-A
SCALE 1:10**