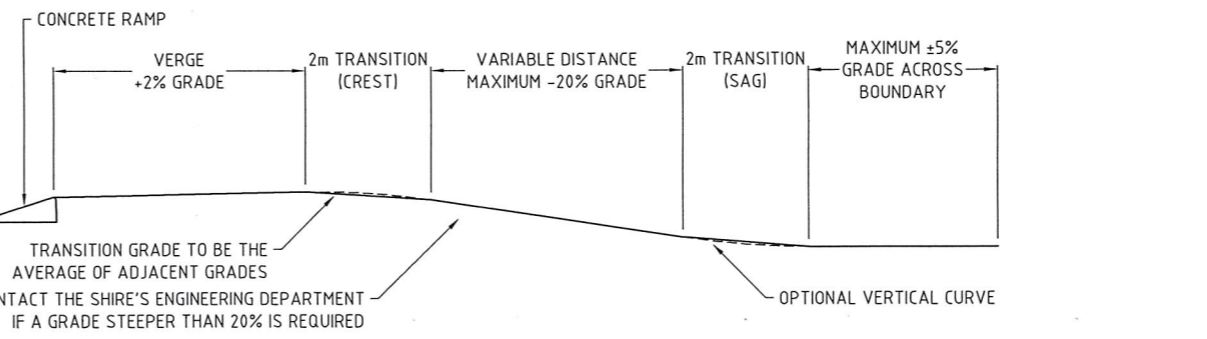
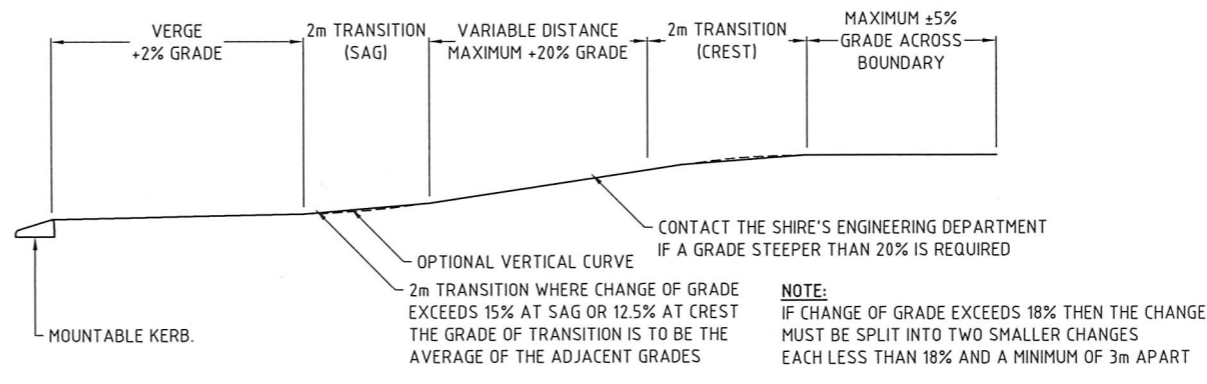


CROSSOVER CLASS	STANDARD WIDTH AT BOUNDARY	MAX WIDTH AT BOUNDARY	MIN CONCRETE DEPTH	'D'
RESIDENTIAL	3000	6000	150	1000
INDUSTRIAL/COMMERCIAL	3000	10000	150 - F62 REO	2000
RURAL ACCESS	3000	11000		1000



No.	DESCRIPTION	APPROVED & DATE
0	ORIGINAL ISSUE	05DEC16
1	CULVERT SIZE AND ALIGNMENT NOTES	19MAY21

- NOTES**
- ACCEPTABLE MATERIAL:
 - CONCRETE 150mm (RESIDENTIAL) 25MPa MINIMUM CONCRETE STRENGTH, STEEL REINFORCING MAY BE USED TO REDUCE CRACKING OR INCREASE STRENGTH FOR CROSSOVERS THAT WILL HAVE HEAVY VEHICLES ON THEM.
 - CONCRETE - 150mm REINFORCED (INDUSTRIAL & COMMERCIAL) 25MPa MINIMUM CONCRETE STRENGTH
 - BRICK PAVED - TRAFFICABLE 50mm (RESIDENTIAL)
 - ASPHALT - 50mm
 - TWO COAT BITUMINOUS SEAL - 14/7mm OR 10/5mm
 - EXPANSION JOINTS TO BE THICKNESS OF THE CONCRETE.
 - EXPANSION JOINTS MUST BE PROVIDED AT THE REAR OF THE KERB, AT ANY JOINTS WITH FOOTPATH/SHARED PATHS AND AT THE LOT BOUNDARY.
 - MAXIMUM SPACING BETWEEN EXPANSION JOINTS TO BE 2m.
 - CULVERT & HEADWALLS:
 - CONTACT ENGINEERING SERVICES FOR PREFERRED CULVERT PIPE ALIGNMENT.
 - A CULVERT INCLUDING HEADWALLS MUST BE PROVIDED IF THE VEHICLE CROSSOVER PREVENTS STORMWATER FLOW WITHIN THE TABLE DRAINS. ALL REINFORCED CONCRETE PIPES AND CULVERTS SHALL CONFORM TO THE AS/NZS 4058:2007 SPECIFICATIONS FOR PRECAST CONCRETE DRAINAGE PIPES. REINFORCED CONCRETE DRAINAGE PIPES SHALL BE CLASS "2" UNLESS OTHERWISE REQUIRED BY COUNCIL. THEY SHALL HAVE A MINIMUM DIAMETER OF 450MM AND A MINIMUM COVER OVER THE PIPES OF 300MM.
 - RESIDENTIAL CULVERTS ARE THE ONLY CULVERTS THAT WILL BE CONSIDERED BY THE SHIRE FOR HDPE PIPES AND SHALL CONFORM AS2566.1 & 2. THE HEADWALLS SHALL BE OF A PRECAST DESIGN UNLESS OTHERWISE APPROVED BY THE SHIRE, VARY IN HEIGHT ACCORDING TO THE LOCATION, THE HEADWALL SHALL SIT ON A FOOTING AS PER DRAWING AND ALL CONCRETE WILL BE 25 MPA STRENGTH. THE PIPE WILL SIT ON A COMPACTED SAND BED, AND WILL BE COVERED WITH 150MM OF COMPACTED AND/OR ROLLED GRAVEL. THE HEADWALLS SHOULD BE DELINEATED WITH A STANDARD GUIDE POST.
 - ALL EXCAVATIONS SHALL BE EXECUTED CLEANLY AND EFFICIENTLY TO PROVIDE A FIRM BASE FOR THE CULVERT TO BE PLACED. THE PIPE/CULVERT INVERT IS TO BE PLACED AT THE BOTTOM OF THE SWALE TO ASSIST STORMWATER FLOW. IN SOME SITES THE SWALE MAY NEED TO BE RE-ESTABLISHED TO THE CORRECT DEPTH.

Shire of Northam
 395 Fitzgerald Street
 PO Box 613 Northam WA
 P (08) 9622 6100 F (08) 9622 1910
 E records@northam.wa.gov.au
 W www.northam.wa.gov.au

DRAWN	M. NEWTON	SIGNED	<i>MNewton</i>	DATE	19 MAY 21
APPROVED	C. KLEYNHANS	SIGNED	<i>CKleynhans</i>	DATE	19 MAY 21

STANDARD DRAWING
CROSSOVERS

DRAWING NUMBER: ES-SD-CR-003
 VERSION: 1

NOT TO SCALE