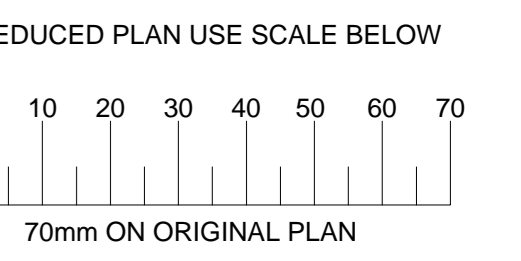




ENGINEERING UNIT
DEVELOPMENT ENGINEERING

PLAN DESCRIPTION	DWG. NO.	SHEET NO.
CONTINUED FROM		
CONTINUED ON		
CROSS SECTIONS		
TYPICAL CROSS SECTION		
SURVEY LAYOUT		



PROGRAMME MANAGERS



DESIGN CONSULTANT



CIVIL / STRUCTURAL
ENGINEERS AND PROJECT
MANAGERS

P.O. BOX 2155 TEL: (011) 536 8310
11101 LANCIA ROCKS FAX: 086-296 2242
4201 email: nankhoo@nankhoo.co.za

Revision	Date	Description

NOTE: No construction work to commence until land and servitude acquisitions have been completed.

Acquisitions completed

UNDERGROUND SERVICES CHECKED

SERVICE	DATE	SIGNATURE
S.W. DRAINS		
SEWERS		
WATER MAINS		
G.P.O. CABLES		
ELECTRIC CABLES		
S.A.R. CABLES		
E.S.C. CABLES		
OIL PIPE LINE		

NOTE: Only underground services affected by new construction work are shown. Care must be taken during excavations for road foundations, trenches, etc. to avoid damage to underground services such as sewers, drains, cables, water mains and connections. Wherever possible these must be located before work proceeds.

Contract No.

Project Title

INTERIM SERVICES PROGRAMME

Drawing Title

Road Culvert Headwall Details

Scales Reference

AS SHOWN

Designed: I K Date: 26-03-2015

Checked: A S/P N Drawn by: I K

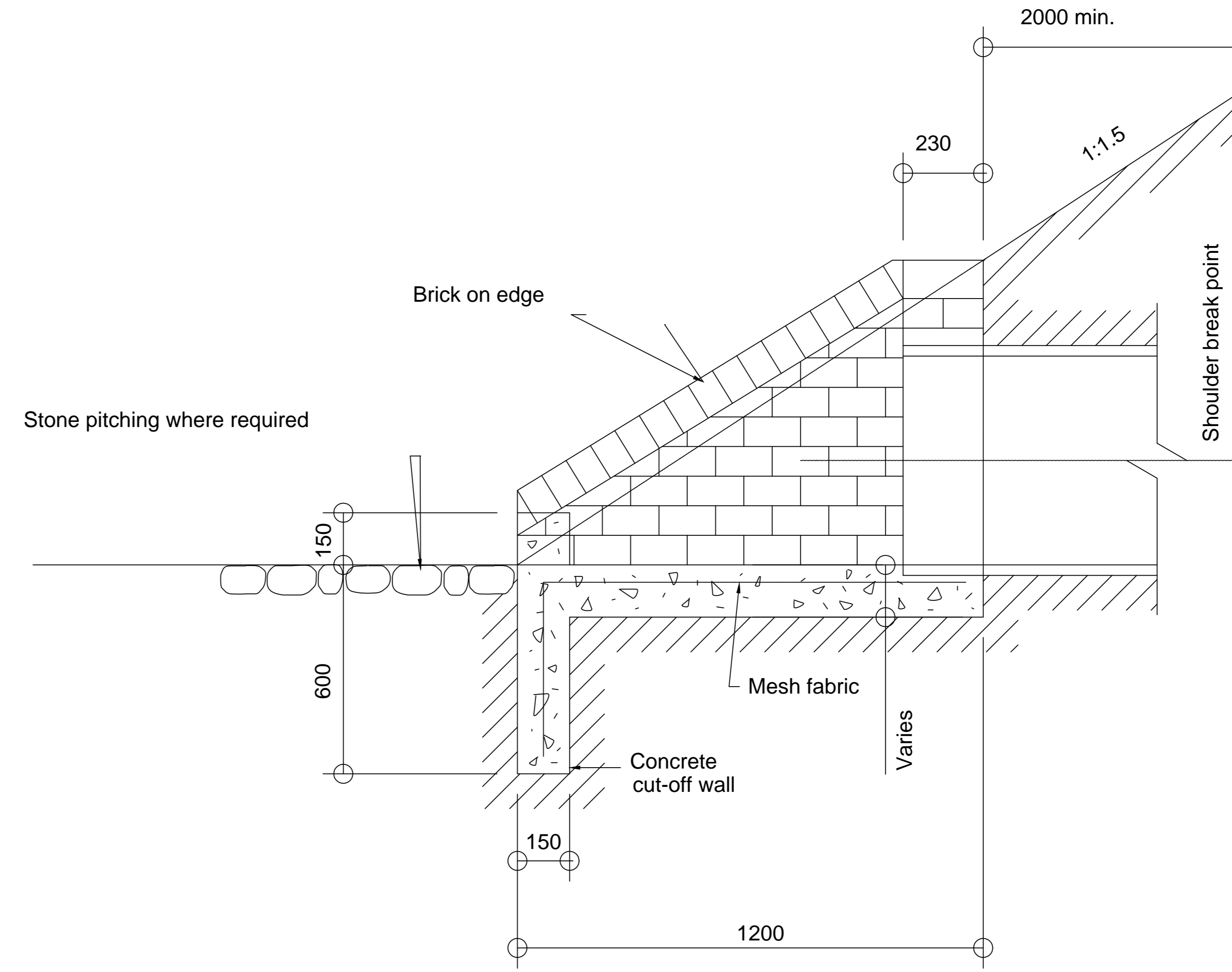
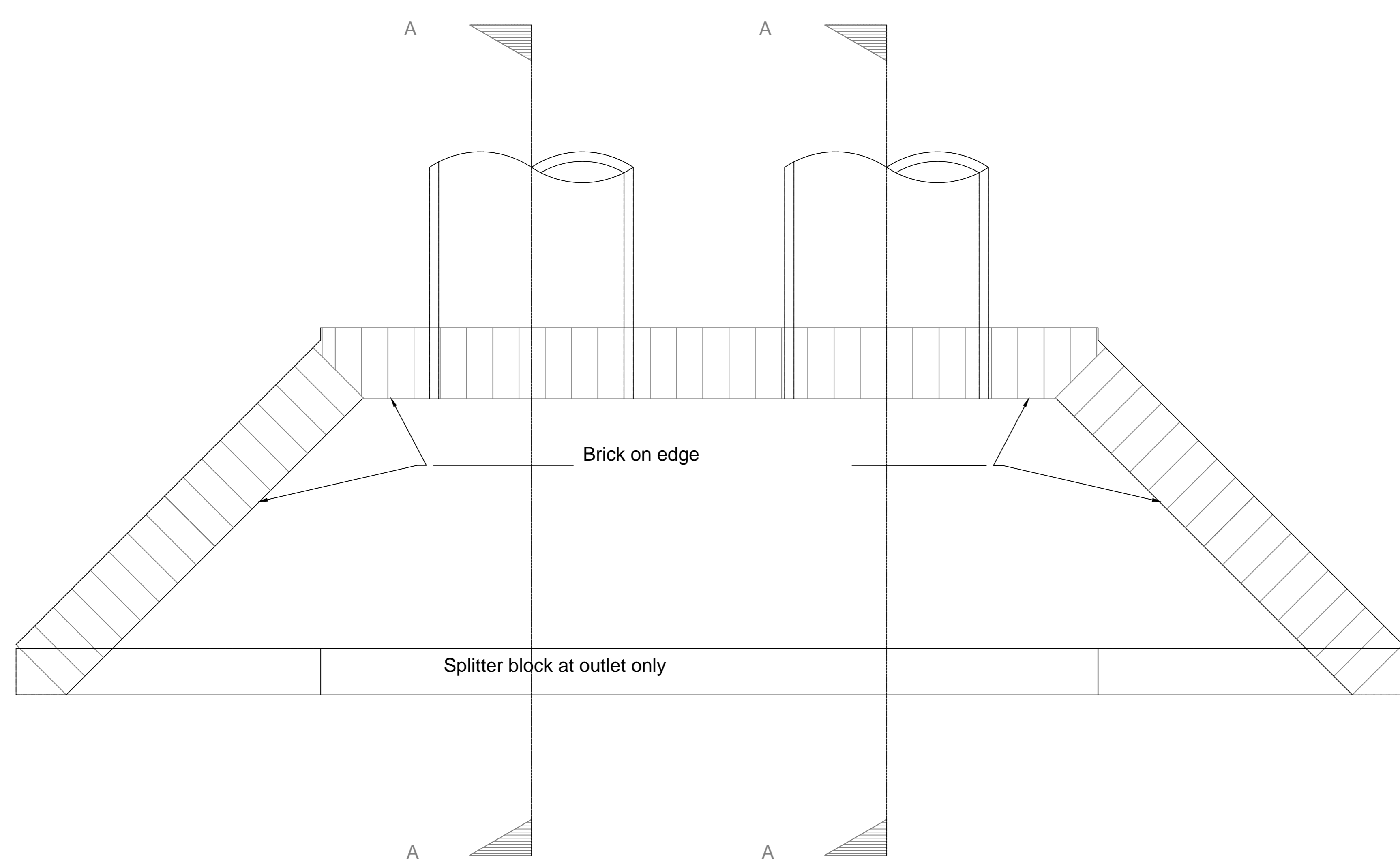
Senior Manager: Development Engineering (North)

Deputy Head: Development Engineering

Head: Engineering

Drawing No Sheet 01

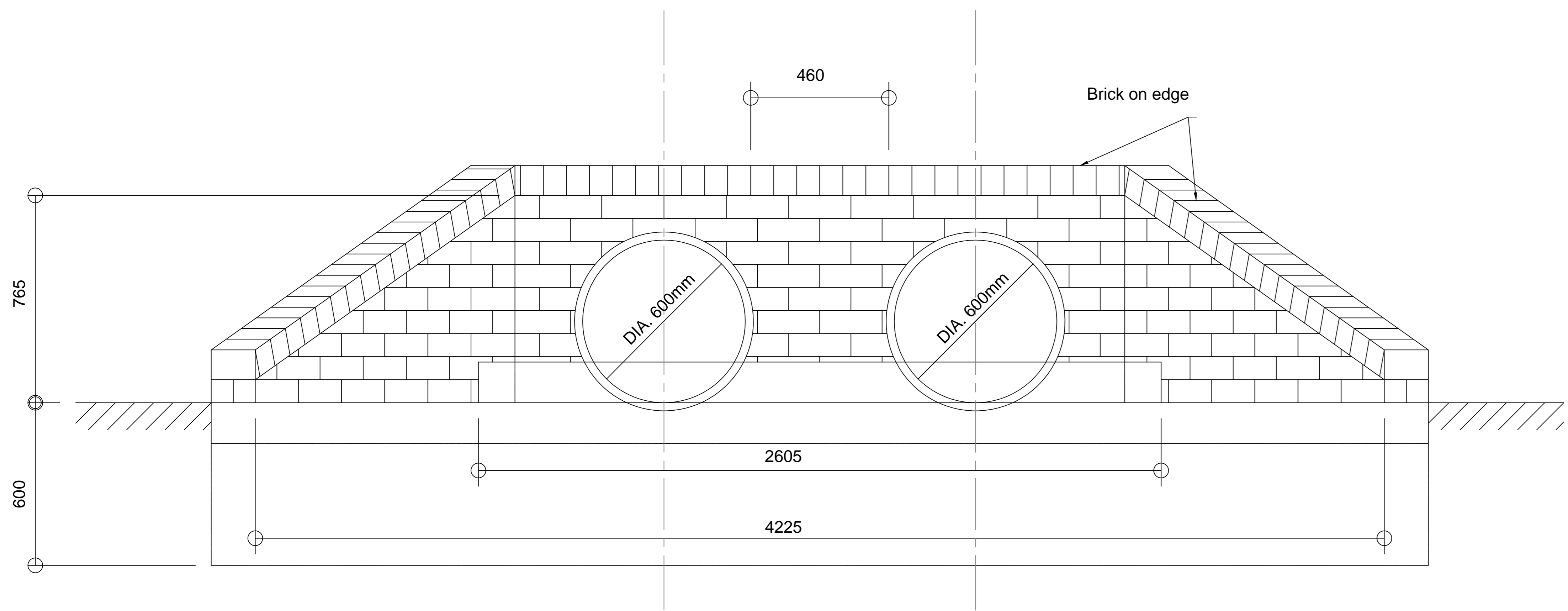
of 01 Sheets



SECTION A-A

Nominal Dia.	Dimensions (mm)				
	A	B	C	D	E
600	765	1 380	1 200	3 000	150

- NOTES:**
- Splitter block and pitching to be provided at all outlets where erosion is likely to occur.
 - Splitter block may be omitted if discharge velocity is less than 0.9 m/s.
 - Cut-off walls may be omitted if structure is founded on rock.
 - For multiple pipe culverts increase dimensions 'E' and 'F' by (n-1)(A+450)mm; Where n = number of pipes and A = nominal diameter of pipes.
 - Pipes to be cut flush with headwall.
 - For skew pipe culverts the headwall shall be parallel to the centre line of the road.
 - If corrugated metal pipes are used 4x20mmx150mm long galvanised anchor bolts in the hollows of the corrugation are to be used.
 - All concrete is to be 20MPa.
 - Square mesh fabric (Reference S.M.F.193) is to be placed 50mm from top in all apron slabs and centrally in cut-off walls.
 - Brickwork is to consist of good quality burnt clay common bricks in accordance with SABS 227 Specification, or cement bricks in accordance with SABS 987 Specification, uniform in size and shape laid in stretcher bond style with the skins tied together with galvanised crimped wire wall ties.
 - Brickwork is to be placed every 4th course.
 - Jointing on all visible faces to be pointed.
 - No in-fill shall be larger than a half standard brick size unless 15MPa concrete is used.



FRONT ELEVATION - DOUBLE PIPE

For Approval

AS BUILT
Date: Sign: