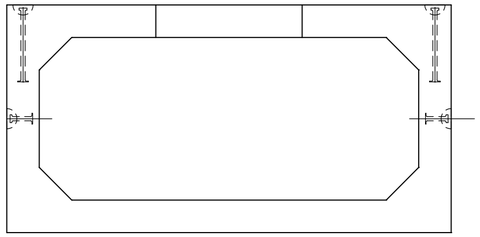
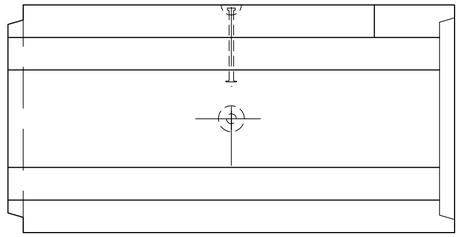
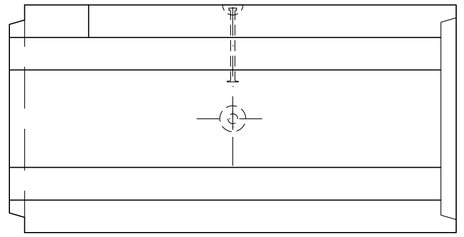
DO NOT SCALE, IF IN DOUBT PLEASE ASK.



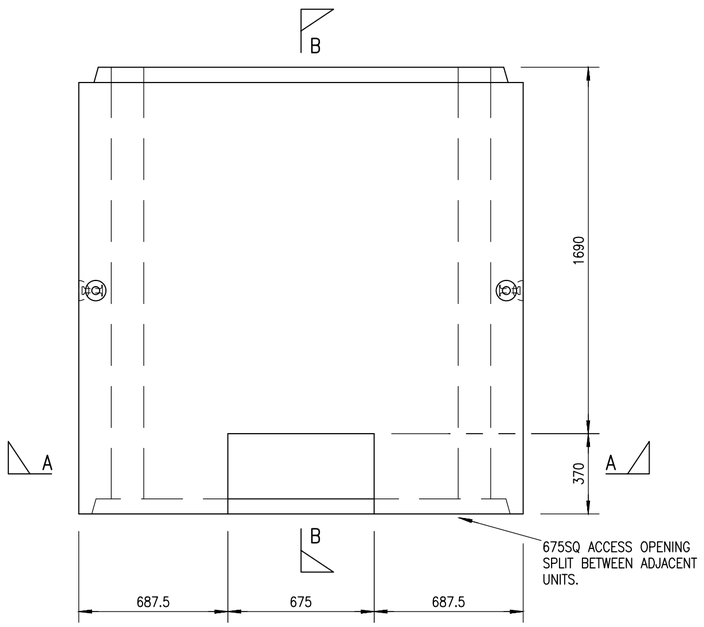
SECTION A–A (through Culvert Cross Section)



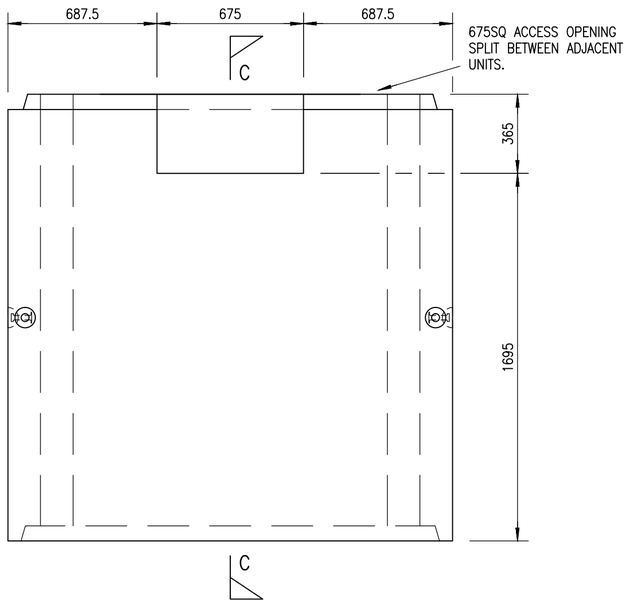
SECTION B–B (through Culvert Unit Length)



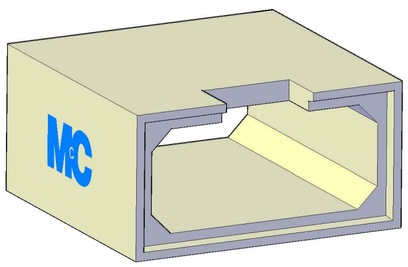
SECTION B–B (through Culvert Unit Length)



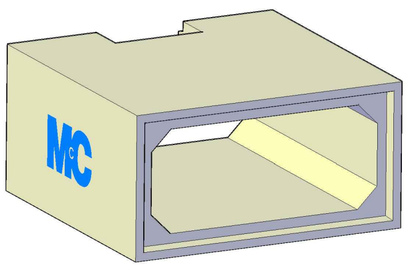
PLAN – Culvert Unit With Access Opening.



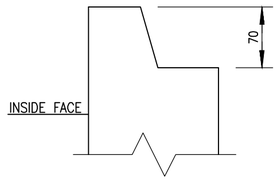
PLAN – Culvert Unit With Access Opening.



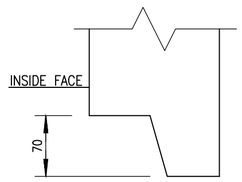
Conceptual View of Culvert Unit.
(Looking at Spigot Joint) Scale 1:30@A2



Conceptual View of Culvert Unit.
(Looking at Spigot Joint) Scale 1:30@A2



DETAIL A (Spigot)



DETAIL B (Socket)

1. Handling

a) Unit Volume / Weight:

Unit Ref	Vol(m3)	Weight(T)	Weight(T) + 5%
-	-	-	-

Weight is based on 2.6 T/cu m
+5% is recommended for sizing lifting equipment.

b) All lifting points shall be used as specified below:
Also refer to Lifting & Handling Instructions Diagram on drawing .

Site Handling System (Ref "A") (Lifting)	Qty	Type	SWL
Spherical-Head Anchors	2	340mm long	10.0T

Factory System (Ref "B") (De-Mould)	Qty	Type	SWL
Spherical-Head Anchors	2	115mm long	10.0T

De-Mould Anchor recesses to be filled in by F.P. McCann prior to delivery.

c) Minimum lifting chain length = - mm

2. Concrete

a) Mix Refs: - Telford R204.
b) Lifting strength based on 2 cubes = 15N/sq mm.
c) Characteristic 28 day cube strength = 55 N/sq mm.
d) Concrete provides Design Chemical Class 4 (DC4) to Special Digest 1, Table F2.

3. Reinforcement

a) Reinforcement (500B or C) to BS4449.
b) Scheduling, dimensioning, bending and cutting to BS8666.
c) Cage to be tack welded and/or tied with 17 gauge annealed tying wire.

4. Manufacture

a) Manufactured to Specification For Highways Works Series 1700.
b) Tolerances to Specification For Highways Works Series 1700.
c) Finishes:
- Top of exposed joint face: *steel float finish, U3*
- Joint face: *struck from wooden mould, F1*
- All faces: *struck from steel mould, F2*

d) Marking: Units shall be indelibly marked to show:
- Manufacturer name and logo
- Unit reference and date of manufacture
- Unit weight + 5%

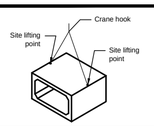
5. Design

a) Concrete design to .
b) Loading to .
Live Load = .
c) Depth of cover (roof to surface level): *Min - mm / Max - mm*.
d) F.P. McCann have designed the concrete units only, the stability of the support conditions should be checked by the overall scheme designer.
e) Design Life: >100 years to BS8500.
f) Cover to internal walls, roof, invert and external surfaces:

Block	Min Cover	Deviational Positioning
-	-	10mm

Internal	XC3/4	-	XF4
External	XC3/4	-	XF4

Rev	Date	Revision detail	By	Chk'd
0	-	Original Issue	-	-



Lifting and Handling Instructions
Unit to be rotated from manufacturing orientation after production by factory lifting points and spinners hung from spreader beam.
Site to handle via clutches connected to Spherical-Head lifting anchors cast into roof.
Minimum chain angle from the horizontal is 60 degrees.
For minimum chain length refer to Note 1c.
Units should be stacked singly, on wooden bearers for protection.
For further information regarding handling and installing box culvert sections, refer to the Box Culvert Association's Guide to site practice, available from www.boxculverts.org.uk or from F.P. McCann.

Manufacturing Tolerances
permissible dimensional variations from mean dimension shall be as follows:

Length:
up to 3m: +/-6mm
3m to 4.5m: +/-9mm
4.5m to 6m: +/-12mm

Cross section: (each direction)
up to 500mm: +/-6mm
500 to 700mm +/-9mm
Additional for every subsequent 250mm: +/-3mm

Straightness or bow: (deviation from intended line)
up to 3m: +/-6mm
3 to 6m: +/-9mm
6 to 12m: +/-12mm
Additional for every subsequent 6m: +/-6mm

As per specification for Highway Works, Series 1700.

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Contract / Title:
Typical Access Opening Split Between Adjacent Units.

Drawn: RH
Scale: 1:20 & 1:5 @A2
Status: INFORMATION
Date: 26:04:17
Chk'd:
Drawing no: SK10
Rev: 0

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A2 1cm
1cm A2