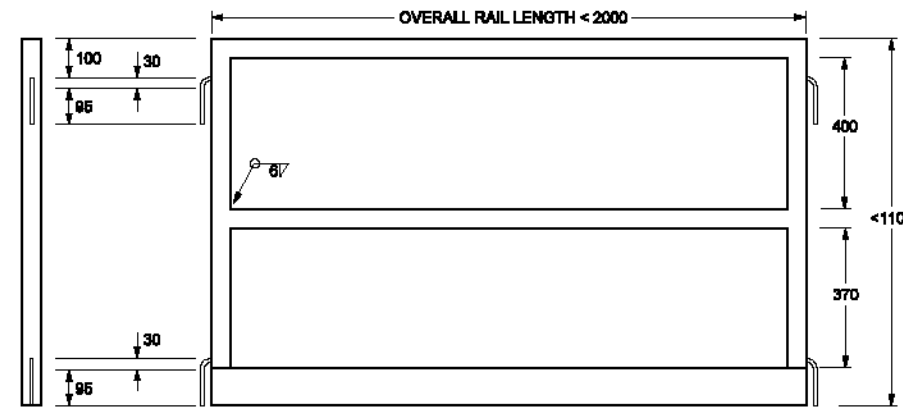
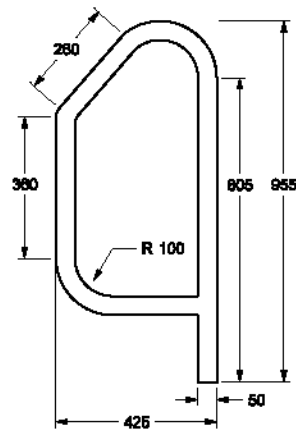


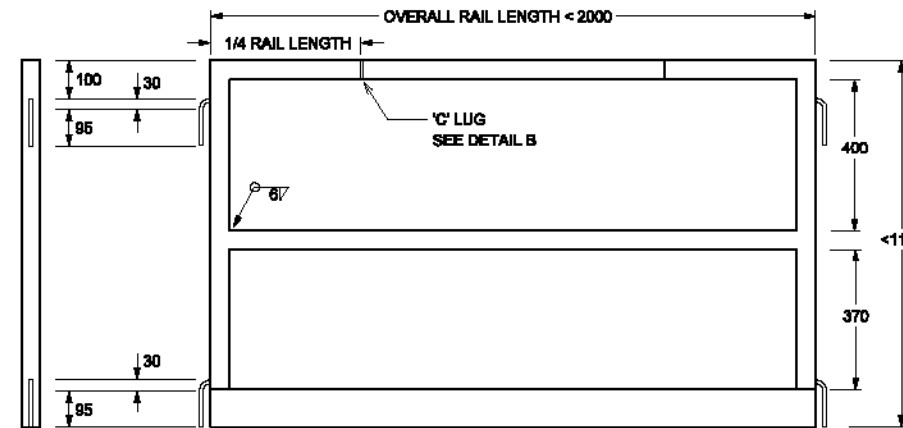
**FRONT GUARDRAIL**  
(Permanently Fixed)



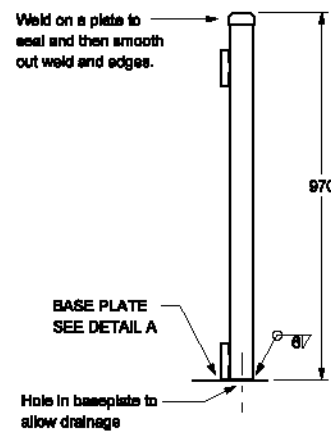
**SIDE GUARDRAIL**



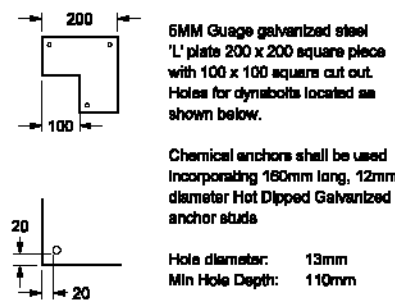
**HAND RAIL**  
(Permanently Fixed)



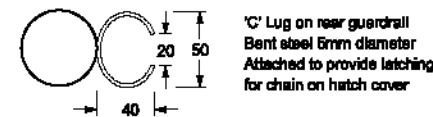
**REAR GUARDRAIL**



**SUPPORT POST**



(not to scale)  
**DETAIL A**



(not to scale)  
**DETAIL B**

**Notes:**

**Guardrails and Piping**

- 1 Guardrails must comply with AS 1657-1992
- 2 All piping shall be steel hot dipped galvanized after fabrication to AS 4860.
- 3 All piping shall be seamless, welded or drawn welded manufacture. Split pipe shall not be used.
- 4 All pipes are to be sealed to prevent ingress of moisture. If drain holes are needed for galvanizing, situate at location on rail least likely to be affected by water buildup.(ie underside of rail, bottom of posts etc).
- 5 All dimensions are in mm unless stated otherwise.
- 6 Corner joints shall be mitre cut.
- 7 Mid rail joints shall be profile cut.
- 8 All welds to AS/NZS 1554.1
- 9 Given dimensions apply to most pumpstations, but should be checked on site prior to fabrication
- 10 All materials shall be of the following minimum properties

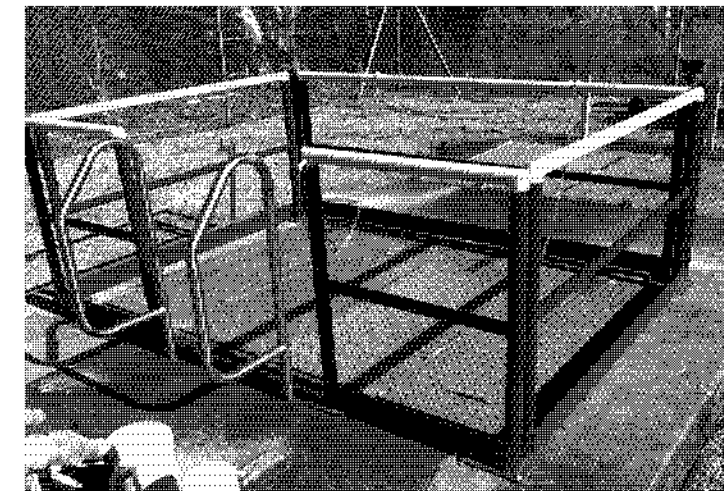
STEEL	
COMPONENT	MINIMUM DIMENSION
Posts	48.3 mm OD Steel Pipe
Top Rail	33.7 mm OD Steel Pipe
Intermediate Members	26.9 mm OD Steel Pipe
Toe Board	100mm high x 6mm thick

**Handrails**

- 1 Handrails shall be constructed to bent 50mm OD Aluminium tube with 2.0 mm wall thickness.
- 2 The handrails shall be cemented directly into the surface.

**General Layout**

- 1 Two front handrails 570mm apart.
- 2 Two front guardrail sections 780mm apart to form the access area at the edge where the hatch opens.
- 3 A single rear guard rail is placed between two support posts, along the edge where the hatch cover is hinged.
- 4 The 'C' lugs on the rear guard rail can be used to secure the hatch open.
- 5 The side guardrails connect between the left and right support posts and front guardrails using the incorporated protrusions and slots.



NO	DESCRIPTION	DRN	DATE	CKD	APPD
AMENDMENTS					



DES	P. BUTCHER
DRN	D. ORRIDGE
CKD	P. BUTCHER
APPD	J. PUDNEY
SCALE	1:20
ISSUED	APR 2008
ALL DIM.	IN mm
DRAFTING STANDARD TO A.S.1100	

**SEWER PUMP STATIONS**  
Guardrails, Handrails  
and Support Posts  
Hot Dipped Galvanized Steel

A3	DRAWING NUMBER	W2-3-04A	
DRAFTING STANDARD TO A.S.1100		CAD PRODUCT - DO NOT AMEND MANUALLY	