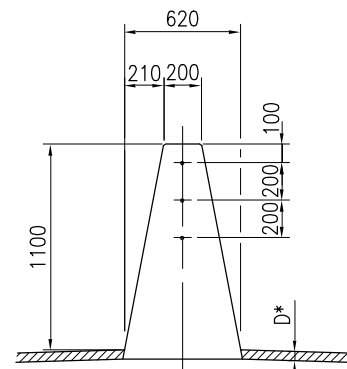


\* Refer Note 6

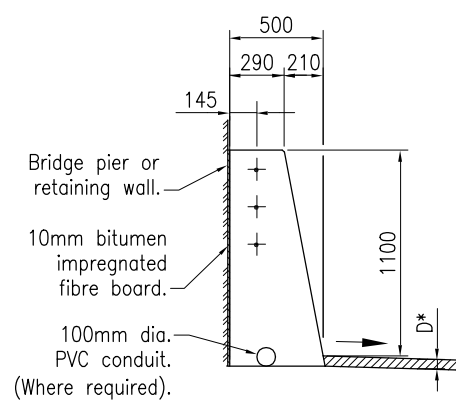
WITH LIGHTING

CAST WITH PAVEMENT SUPPORT



\* Refer Note 6

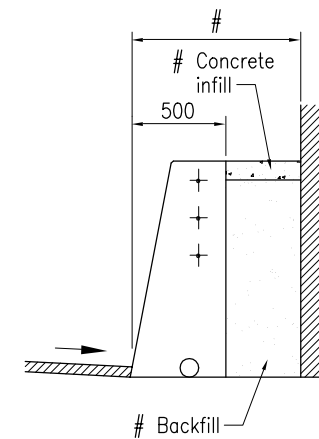
WITHOUT LIGHTING



\* Refer Note 6

CAST AGAINST WALLS/PIERS

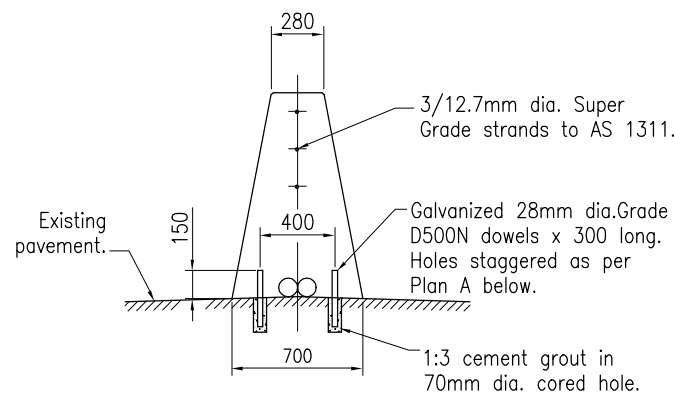
or cast monolithically with the wall



# Refer Note 13

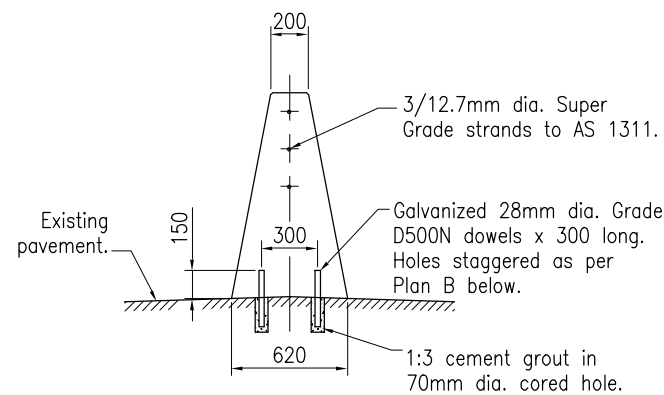
OFFSET FROM WALLS/PIERS

# Refer Note 13

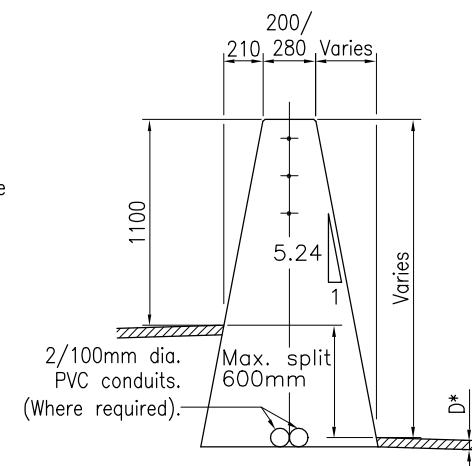


WITH LIGHTING

CAST ON TOP OF EXISTING PAVEMENT

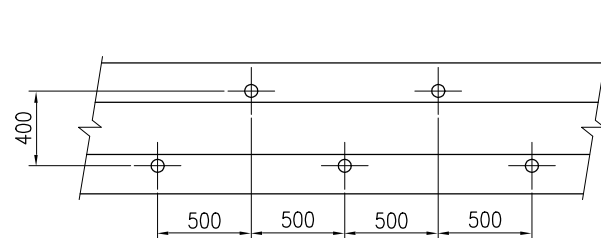


WITHOUT LIGHTING

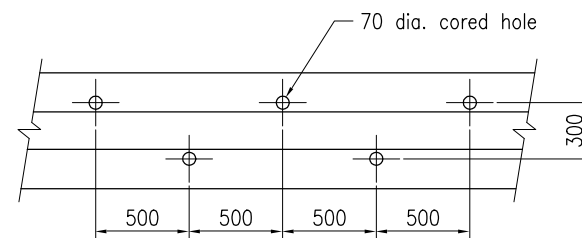


\* Refer Note 6

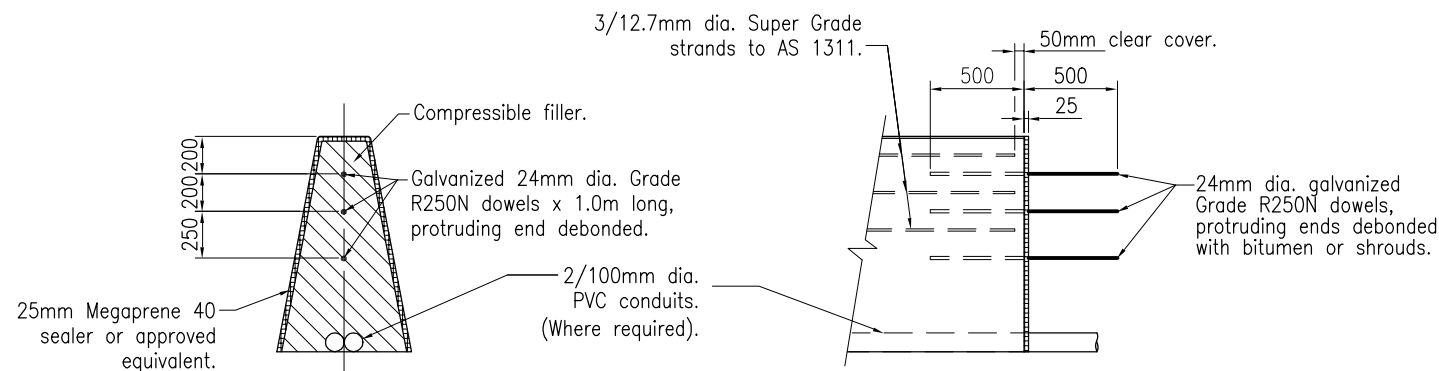
SPLIT CARRIAGEWAYS



PLAN A



PLAN B

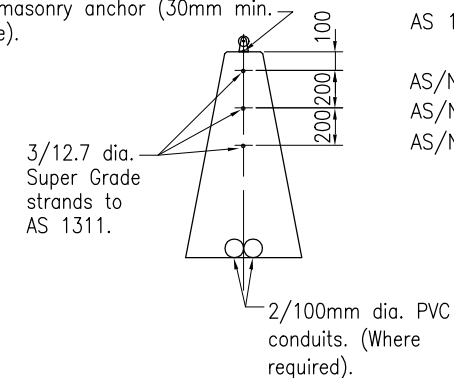


END ELEVATION

ELEVATION

END TREATMENT FOR EXPANSION JOINTS

Where required, delineator bracket to be fixed to the barrier with an approved 10mm dia. masonry anchor (30mm min. into concrete).



REINFORCEMENT

NOTES :

- CONCRETE GRADE FOR EXTRUDED BARRIERS shall be S32 fibre concrete impregnated with 51mm virgin polypropylene fibrillated fibres at the rate of 0.9kg/m<sup>3</sup>. Steel fibres shall not be permitted as an alternative.
- LONGITUDINAL REINFORCEMENT, comprising 3/12.7 dia. Super Grade strands to AS 1311, shall extend for the entire length of the barrier, with 50mm cover at openings, expansion joints and at ends.
- CRACK CONTROL JOINTS IN EXTRUDED BARRIERS are to be formed by neatly saw cutting 50mm deep into the face of the barrier. Time of saw cutting to be determined to avoid shrinkage cracking occurring but must be within 12 hours of extrusion. Joints are to be at a maximum of 4.0m centres.
- EXPANSION JOINTS ON EXTRUDED BARRIERS shall be provided at the end of each days work. Barriers without lighting poles shall have expansion joints at 100m maximum intervals. Expansion joints shall also be provided between the extruded concrete barrier and the barrier terminal.
- CHAMFERS for extruded barriers shall be 15mm x 15mm.
- MINIMUM LENGTH OF CONCRETE BARRIER :

BARRIER ANCHORAGE METHOD	MINIMUM BARRIER LENGTH
Asphalt : D = 50mm	25m
Pavement : D = 100mm	
Compacted fill : D = 100mm	
Dowels (on top of pavement)	
Compacted fill/pavement : D = 200mm	20m

- DOWELS shall comply with AS/NZS 4671 and hot-dipped galvanized to AS/NZS 4680.
- BRIDGES - extruded barriers shall not be used on bridges. Individual assessment by a qualified structural engineer is required for expansion joints where ends of extruded concrete barriers abut bridges.
- SPECIAL BARRIER DESIGN is required:
  - on curves that have a design speed lower than the design speed on the previous geometric element by 20km/h or more.
  - when designing specifically for commercial vehicles.
- PVC CONDUITS are to comply with Department of Main Roads specification "Ducts and Pits".
- DELINEATOR BRACKET - for details refer to Standard Drawing No. 1466.
- BARRIER CENTRELINE to be vertical regardless of crossfall or superelevation.
- DETAIL TO BE SHOWN ON THE DRAWINGS:
 

Offset from walls/piers; concrete infill; backfill.
- DIMENSIONS are in millimetres unless shown otherwise.

ASSOCIATED DOCUMENTS :

- Department of Main Roads Manual of Standard Drawings Roads
- Department of Main Roads Manual of Standard Specifications Roads

REFERENCED DOCUMENTS

- Standard Drawings:
- 1466 Concrete Barriers - Delineator Bracket Details
- Standard Specifications:
- Ducts and Pits
- Australian Standards:
- AS 1311 Steel Tendons for Prestressed Concrete - 7-wire Stress-relieved Steel Strand for Tendons in Prestressed Concrete
  - AS/NZS 3845 Road Safety Barrier Systems
  - AS/NZS 4671 Steel Reinforcing Materials
  - AS/NZS 4680 Hot-Dip Galvanized (Zinc) Coatings on Fabricated Ferrous Articles

SINGLE SLOPE CONCRETE BARRIER			
-EXTRUDED MEDIAN BARRIER- BARRIER, REINFORCING AND EXPANSION JOINT DETAILS		Size A3	Drawing No
		as shown	1468
			Date 6/02
		A	B C