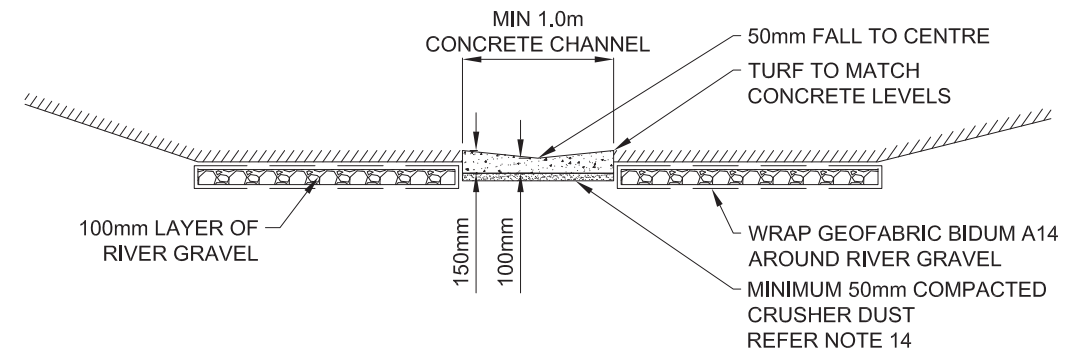
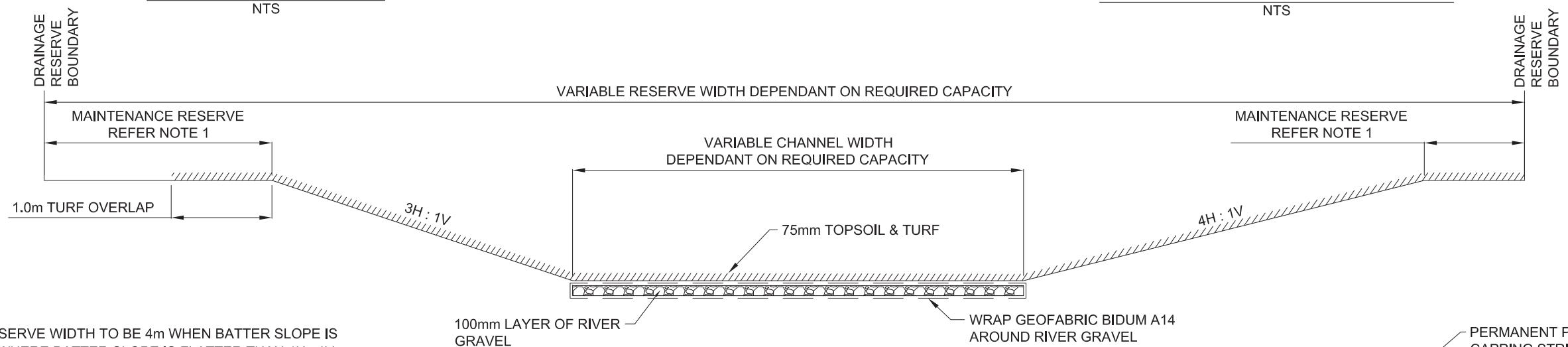


**TYPICAL OPEN CHANNEL INVERT TREATMENT  
FOR TRUNK DRAINAGE**  
NTS



**TYPICAL OPEN CHANNEL INVERT TREATMENT  
FOR LONGITUDINAL GRADES < 1%**  
NTS

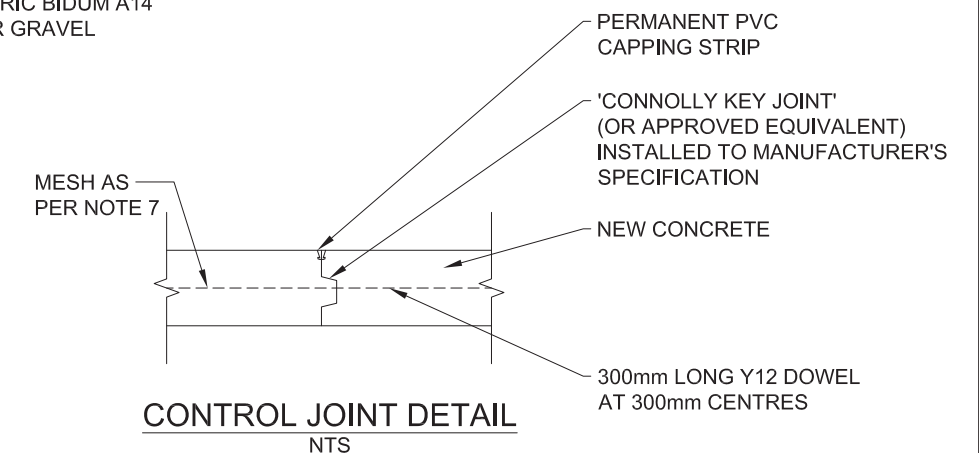


**TYPICAL OPEN CHANNEL CROSS SECTION  
FOR LONGITUDINAL GRADES ≥ 1%**  
NTS

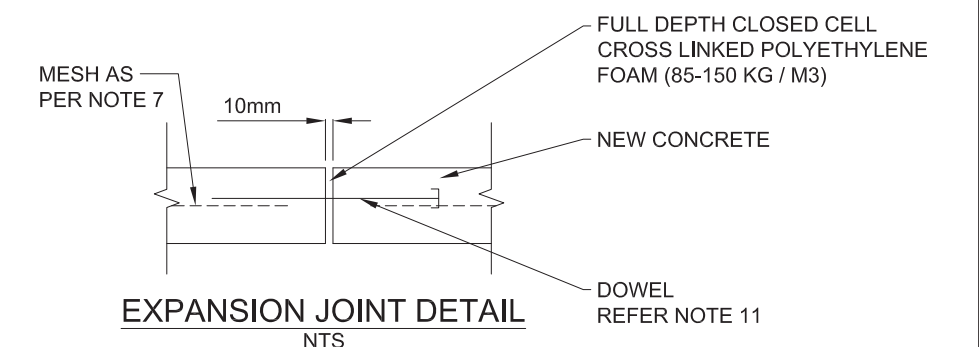
## NOTES:

1. MAINTENANCE RESERVE WIDTH TO BE 4m WHEN BATTER SLOPE IS STEEPER 4H : 1V. WHERE BATTER SLOPE IS FLATTER THAN 4H : 1V MAINTENANCE RESERVE WIDTH TO BE 1m
2. 75mm TOPSOIL & TURF TO BE PROVIDED FOR FULL WIDTH OF CHANNEL (OUTSIDE OF CONCRETE INVERT). TURF TO OVERLAP MAINTENANCE RESERVE A MINIMUM OF 1m
3. MAINTENANCE RESERVE TO BE GRASS SEEDED WHERE TURF IS NOT REQUIRED
4. TURF TO BE PINNED DOWN WITH WIRE PEGS AT 500mm CENTRES UNTIL SUFFICIENT ESTABLISHMENT IS ACHIEVED. ALL PINS TO BE REMOVED ONCE TURF IS ESTABLISHED TO PREVENT DAMAGE TO MAINTENANCE VEHICLES
5. CONCRETE N25 / 20 TO BE USED IN INVERT OF CHANNEL WHERE LONGITUDINAL GRADE < 1% AND COMPLY WITH AS 1379 AND AS 3600 WITH A SLUMP OF 70 TO 90mm
6. CONCRETE N32 / 20 TO BE USED FOR TRUNK DRAINAGE INVERTS AND COMPLY WITH AS 1379 AND AS 3600 WITH A SLUMP OF 70 TO 90mm
7. SL62 MESH TO BE PROVIDED FOR STANDARD INVERT CONCRETE, SL82 TO BE USED IN TRUNK DRAINAGE CONDITIONS
8. REINFORCEMENT MESH TO COMPLY WITH AS 4671, LAP MESH 400mm, 50mm TOP AND EDGE COVER, UNLESS OTHERWISE SPECIFIED
9. REINFORCEMENT BAR CHAIRS ARE TO BE USED TO ACCURATELY LOCATE MESH. PLACE CHAIRS AT 500mm MAXIMUM CENTRES IN A TRIANGULAR PATTERN


10. REINFORCING MESH CAN BE REPLACED WITH THE USE OF FIBRE REINFORCED CONCRETE (FRC). USE OF FRC SHALL NOT REMOVE NEED FOR EXPANSION / CONTROL JOINTS
11. DOWELS TO BE 12mm DIA GALVANISED STEEL BARS, GRADE 250R, 300mm LONG AT 300mm CENTRES. GREASE ONE END OF DOWEL & ATTACH DOWEL CAP
12. CONTROL JOINTS TO BE PLACED EVENLY ALONG CONCRETE INVERT LENGTH AT 3.0m MAX CENTRES. EXPANSION JOINTS TO BE PROVIDED AT EVERY THIRD JOINT TO ACHIEVE 9.0m MAX CENTRES
13. ALL CONCRETE SHALL BE SPRAYED WITH AN APPROVED CURING PRODUCT AND BROOM FINISHED
14. MINIMUM 50mm COMPACTED CRUSHER DUST TO BE PROVIDED UNDER TYPICAL CONCRETE INVERT. WHERE HIGHLY EXPANSIVE SOILS ARE PRESENT, PLACE 100mm COMPACTED DEPTH TYPE 2.4 GRAVEL (TO BE DIRECTED BY SUPERINTENDENT)
15. TRUNK DRAINAGE CONCRETE INVERT SUBGRADE MATERIAL TO BE INVESTIGATED ONSITE TO ENSURE ITS SUITABILITY FOR 8 TONNE MAINTENANCE VEHICLE USAGE



**CONTROL JOINT DETAIL**  
NTS



**EXPANSION JOINT DETAIL**  
NTS

|  |         |                               |         |                |                                    |        |                 |  |   |  |               |        |
|--|---------|-------------------------------|---------|----------------|------------------------------------|--------|-----------------|--|---|--|---------------|--------|
| D                                      | 29/1/15 | REVISED FORMAT AND TITLEBLOCK | Griffin | SURVEY         | DRAWN<br>R. MILES                  | SIGNED | DATE<br>04/4/13 | DIRECTOR<br>ENGINEERING AND<br>COMMERCIAL INFRASTRUCTURE |  | <b>STANDARD<br/>TYPICAL OPEN CHANNEL<br/>CROSS SECTION</b> | SHEET 1 OF 1  |        |
| C                                      | 09/7/13 | INCLUSION OF BASE TREATMENTS  |         | SURVEY FILE No | DESIGNED                           | SIGNED | DATE            | ORIGINAL SIGNED BY S. M. HOLLEY<br>JASON DEVITT          |   |  | WORKS JOB No. |        |
| B                                      | 03/4/13 | REVISED NOTES AND TITLEBLOCK  |         | LEVEL DATUM    | CHECKED                            | SIGNED | DATE            | DATE 28/7/07   |   |  | DRAWING No.   | AMEND. |
| E                                      | 03/18   | MINOR MODIFICATIONS           |         | MERIDIAN       | MANAGER TECHNICAL SERVICES         |        |                 | DATE 28/7/07   |   |  | A3-00868      | E      |
|  | DATE    | DESCRIPTION                   | APPVD   |                | ORIGINAL SIGNED BY G.HAWES 28/7/07 |        |                 | DATE 28/7/07   |   |  |               |        |
| AMENDMENTS AND REVISIONS               |         |                               |         |                | G. HAWES RPEQ 5693                 |        |                 |  |   |  |               |        |
| \STANDARD DRAWINGS\STORMWATER\AS-00868 |         |                               |         |                |                                    |        |                 |  |   |  |               |        |