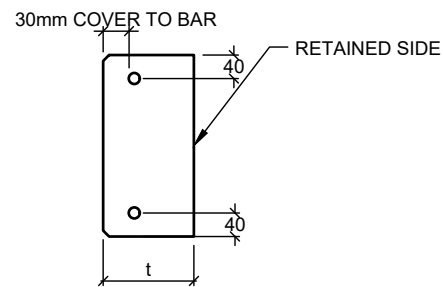
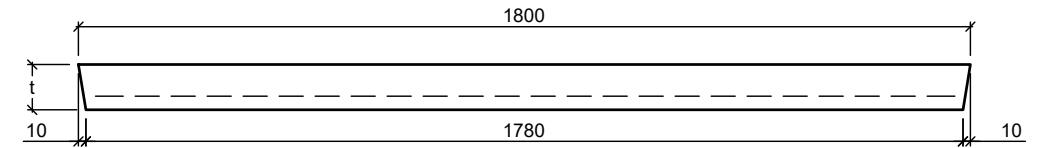


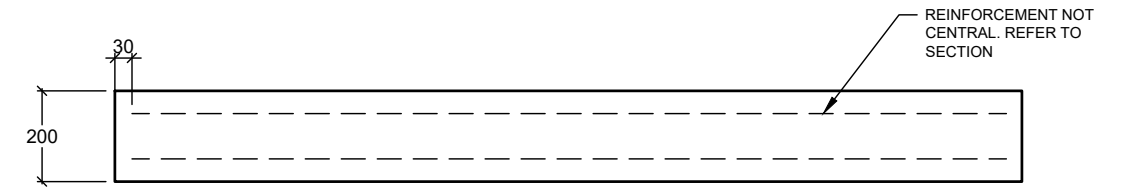
**TYPICAL SLEEPER RETAINING WALL DETAIL**



**SECTION VIEW**



**PLAN VIEW**



**ELEVATION VIEW**

**REINFORCEMENT TYPES**

TYPE A	EITHER: 2/N12, 3N10, 2/12mm GFRP (60GPa) OR ALSO 2/N10 USING 60MPa CONCRETE
TYPE B	EITHER: 2/N10, 2/10mm GFRP (60GPa)

**SLEEPER SIZE = 1800 LONG X 200mm DEEP**

WALL TYPE	THICKNESS (t)	REINFORCEMENT	SOIL RETAINED (H) 5KPa	SOIL RETAINED (H) 10KPa
1800-77-A	77mm	TYPE A	2.8m	2.4m
1800-100-A	100mm	TYPE A	5.0m	4.8m
1800-120-A	120mm	TYPE A	6.5m	6.0m
1800-77-B	77mm	TYPE B	1.8m	1.4m
1800-100-B	100mm	TYPE B	3.5m	3.0m
1800-120-B	120mm	TYPE B	5.0m	4.5m

**ASSUMED SOIL PROPERTIES**

SOIL DENSITY (kN/m <sup>3</sup> )	18
Ka	0.35
INTERNAL FRICTION ANGLE	30 DEGREE

**SPECIFICATIONS:**

- SLEEPER CONCRETE GRADE TO BE N40. CASTING EACH SLEEPER REQUIRES RIGID FORMWORK AND CONCRETE COMPACTION IN ACCORDANCE WITH AS3600
- THESE SLEEPER WALLS SPECIFICATIONS ARE ONLY SUITABLE FOR USE WITH RETAINING WALLS WHICH SATISFY THE FOLLOWING CONDITIONS:
  - THE WALL IS NOT SUBJECT TO HEAVY SURCHARGE LOADS, THE SURCHARGE LOADS THAT INCLUDED IN THIS CALCULATION IS 5kPa or 10 kPa
  - THE FINAL SURFACE GRADIENT ABOVE THE WALL IS LEVEL OR ONLY SLIGHT (LESS THAN 1 VERTICAL RISE IN 10 HORIZONTAL)
  - THE WALLS BACKFILL IS FREE DRAINING CONSISTING OF SAND &/OR GRAVEL
  - ALL SUB-SURFACE WATER IS DRAINED BY MEANS OF AN AGRICULTURAL DRAIN, OR OTHER SUITABLE METHOD.
  - SLEEPERS ARE HANDLED WITH DUE CARE DURING TRANSPORTATION AND ERECTION
  - SLEEPER MINIMUM END BEARING LENGTH SHALL NOT BE LESS THAN 25mm EACH END