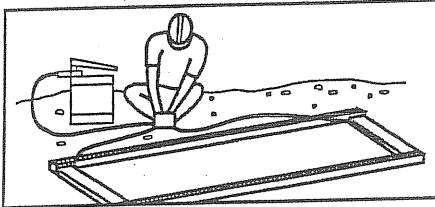




# WALER INSTALLATION AND REMOVAL INSTRUCTIONS

1. Complete the excavation.
2. Select the appropriate hose bridge manifold for the job. (Example: A two-way manifold for a Waler with two hydraulic struts.)

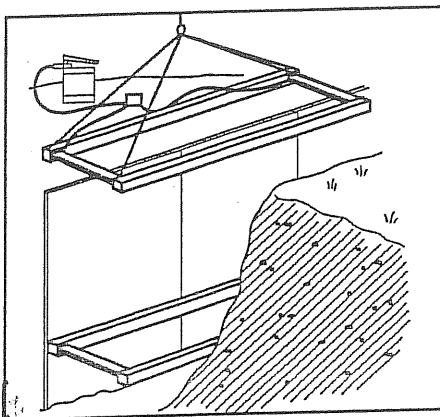


3. Connect the female ends of the manifold to the quick disconnect fittings on the struts. Care should be taken at this point to make sure that you have a good connection. You should also note which 1/4 turn valve on your manifold is connected to which hydraulic strut.

4. It is time to check the manifold for proper valve alignment.
  - A. Inlet valve on manifold should be open and connected to the pump bucket.
  - B. Valves for the strut hoses should be open.
  - C. Discharge valve on the bottom of the manifold should be closed.
  - D. The return valve on the pump bucket should be closed.

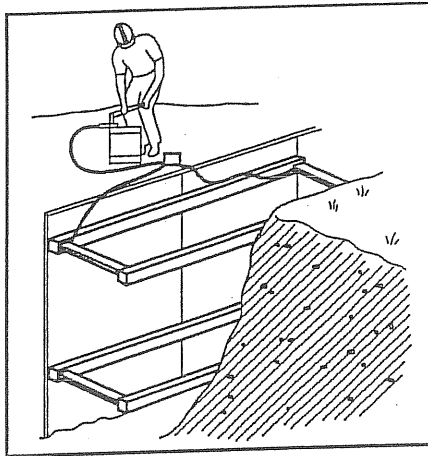
**HINT: Valves are open when they are in-line with the hoses.**

5. Connect the lifting sling to the Waler lifting eyes.
6. Walers should now be expanded to the size of a few inches narrower than the excavation. Remember to leave room for the sheeting.

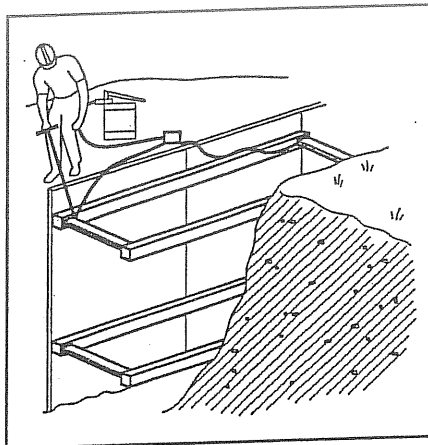


7. Lower the Waler into the excavation in its proper position. (Remember to space the Waler according to the Manufacturer's Tabulated Data.)

8. Position the sheeting around the excavation between the Waler and the excavation side walls.



9. Pump the Waler System to approximately 750 PSI, as indicated by the gauge on the pump bucket.
10. After setting the pressure to 750 PSI, allow the system to set for one minute. Then check to see if the pressure gauge is still in the green zone. If it is, proceed to the next step. If it isn't, re-apply pressure until you reach 750 PSI. Then check the gauge again.

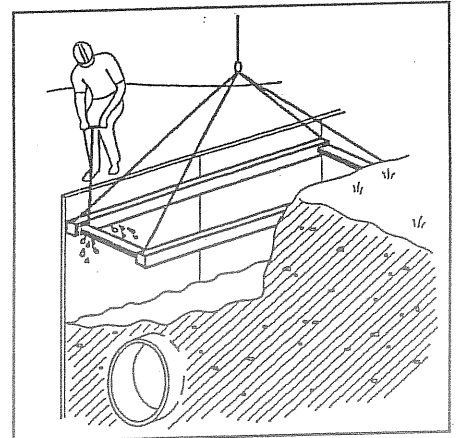


11. Using the Waler release tool, disconnect the hoses from the struts.
12. Release the pressure from the pump and manifold assembly by opening the 1/4 turn valve on the pump bucket.
13. Reconnect the manifold assembly to the next Waler that is to be installed.

14. Lower the next Waler into the excavation. If the Waler is to be positioned below the existing Waler, care should be taken to insure that the waler being installed is narrower than the one in the excavation, to allow passage.
15. Repeat the above steps until all the Waler units are installed and the excavation is properly shored.

## REMOVAL

1. Connect the lifting sling to the bottom Waler.



2. Using the Waler Release Tool, release the pressure in the struts a little at a time. While you are releasing the pressure, pay close attention to the ground that you are standing on for movement of the soil. If there is no movement of the soil, continue to release the pressure until the Waler is away from the side-walls of the trench.
3. Lift the Waler up to the next unit in the trench. While the sling is still hooked to the bottom waler (which is now directly below the unit you are about to release pressure on), release the pressure on the unit allowing the bottom waler to support the waler you are removing.
4. Repeat this procedure until all the Walers are out of the trench.
5. Properly store the units until their next use.

**NOTE:** This procedure is to be used along with GME Manufacturer's Tabulated Data to establish minimum spacing requirements.