SPECIFICATION FOR REACTIVE TENSION SYSTEM
VARIABLE LENGTH BARRIER

Reactive Tension System Variable Length Barrier (RTS-VLB) shall be fabricated from A36 steel, utilizing all welded construction. Final assemblies may be bolted together. The minimum pin-to-pin length of the RTS-VLB shall be at approximately 1015mm (40”) with a maximum pin-to-pin length of approximately 1370mm (54”).

The RTS-VLB shall consist of an inner shell and an outer shell; both hot dip galvanized in accordance with ASTM, A123. The minimum weight of the assembled RTS-VLB shall be 306 kg (675 lb).

The maximum outside dimensions of the RTS-VLB shall approximate the outside dimensions of the standard Reactive Tension Moveable Barrier System (RTMBS). The minimum outside cross sectional dimensions of the RTS-VLB inner shell shall not be less than the inner dimensions of the outer shell by more than 25mm (1”) at any location. The hinges utilized on the RTS-VLB shall be similar to the hinges used on the remainder of the system. The longitudinal strength of the RTS-VLB under impact shall be consistent with the strength of the standard RTMBS.

When the Reactive Tension System Variable Length Barrier is positioned on the road surface, it is held to the correct length by the adjacent barriers. During normal transfers and maneuvers it is free to adjust to keep the system in equilibrium, however in case of an impact at any location on the barrier chain the RTS-VLB it is automatically hydraulically locked. The VLB essentially acts as an expansion joint which allows the system to compensate for changes in length associated with bridge deck expansion joints, transfers on curved alignments or other situations which necessitate the system contract or expand to maintain equilibrium.

The Reactive Tension System Variable Length Barrier can also be used as a variable length connector between sections of RTMBS or between RTMBS and an anchorage system. If used in this manner, the RTS-VLB can be extended or compressed as necessary by supplying a tension or compression load with the Barrier Transfer Machine (BTM) or by using manual devices such as a “come-a-long”, “port-a-power” or other similar means. Multiple RTS-VLB units can be connected in order to open and close longer sections if the need arises. Depending on the application, some of these may be hydraulically operable to facilitate operational maneuvers. When hydraulically operable the units are referenced as RTS POWERED GATE VLBs.