Operations Involving Wire Rope Barriers

PURPOSE

To describe VICSES policy and procedure in relation to operations involving wire rope barriers.

SCOPE

This Standard Operating Procedure applies to all VICSES members.

BACKGROUND

Wire rope barriers are now common on the majority of Victorian roads and freeways and are installed to offer protection against vehicle collisions due to:

- Vehicles crossing opposite lanes of traffic on a freeway or other divided road
- Vehicles running off the road and/or down embankments or at sharp turns or bends which may result in collision with trees close to roads

Wire rope barriers are increasingly being used in areas instead of the conventional 'Guard Rail' design. They are designed with four high tensioned wire rope lengths that are supported by posts that fit into concrete sleeves in the ground.

The top wire rope minimises the potential for vehicle roll over and heavy vehicles overrunning the barrier. The lower bottom rope provides greater protection for vehicles with lower centres of gravity.

VICSES members may encounter wire rope barriers in a damaged state when responding to incidents involving vehicle collisions.

POLICY

VICSES members shall not cut wire rope barriers under tension at any stage during operations or training. If cut, the high tensioned wires can retract quickly and have the potential to cause serious injury to any person in the immediate vicinity.

Wire rope barriers should only be loosened or dismantled if the rescue operation requires it and it is safe to do so. If the car or person is not entangled in the barrier, or the car or person can be extracted without further interference with the barrier, then the wire rope barrier should be left alone and in situ.

PROCEDURE

1. What to do if a Wire Rope Barrier is Damaged

- Approach the barrier with extreme caution.
- Conduct a Dynamic Risk Assessment to assess the situation and determine if the barrier will / will not be safe to work around.
- Under no circumstances should any wires be cut.

2. Dismantling a Wire Rope Barrier

Turn-buckle

- A wire rope barrier can have the tension released by turning the turn-buckle located on each wire rope length, normally located in the middle of the barrier.
- These buckles can be easily released by placing a handle/spanner in the middle of the buckle and turn the buckle towards you to release the tension.
- The wire ropes must be completely loosened until all tension is released. This will be evident when the wires are laying slack on the ground.

No Turn-buckle

- If there is no turn-buckle, you can slowly loosen the wire ropes by loosening the rigging screws located at either end.
- Slowly loosen one rigging screw at a time.
- The top two wires are threaded through the posts, and the bottom two wires are woven on the outside of the posts.
- The wire ropes must be completely loosened until all tension is released. This will be evident when the wires are laying slack on the ground.

3. VICROADS Attendance

VICROADS road safety crews may be in attendance at the incident. It is recommended to discuss with the VICROADS crews the best and safest practice in dismantling the wire rope barrier.

4. Who to Contact to Advise of a Damaged Wire Rope Barrier

Once you have completed all rescue tasks, before you clear the area check with Victoria Police on-scene to see if the damaged wire rope

barrier has been reported to VICROADS. If not, contact VICROADS Traffic Management Centre (phone: (03) 9855 7551) to advise them of the damaged wire rope barrier and where it is located.

When the rescue is completed, ensure no part of the wire rope barrier is left where it may cause a traffic hazard. Leave the dismantled wire rope barrier for VICROADS to repair/reassemble.

SAFETY AND ENVIRONMENTAL NOTES

5. Safety

Many wire rope barrier installations have access points at either end of the tensioners for access to the opposite side.

Assess the ground surface on the opposite side of the barrier as it may not be suitable for vehicle access.

Ensure no downed power lines are across the wire rope barrier. If so, the barrier may be live with electricity. Refer to 'SOP024 – Operations Involving Power lines and Conductors'.

The wire ropes may be frayed which can be hazardous due to the high strain that they are tensioned at. Caution must be exercised when approaching and operating around them.

RESPONSIBILITIES

This procedure is issued under the authority of the Director of Operations. It is administered at State level by the Manager State Operations, at Regional level by Regional Managers and at Unit level by Unit Controllers.

REFERENCES

References used in the preparation of this SOP:

1. Consultation with VICROADS – Road Safety Section Feb 08
2. Brifen Wire Rope Safety Fence Guide
3. VICSES Road Rescue Learner Guide Edition 1 2005

ENDORSEMENT

Effective Date:	Endorsed by:
1st July 2008	Trevor White VICSES Director of Operations