

Union County Standard Operating Guidelines
Special Operations

Special Operations, SOG 4.10

CAVE-IN and MANHOLE RESCUES

1. Intent and Purpose

To provide guidelines for the safe handling of cave-in and manhole rescues.

2. Procedure

a. Upon arrival:

- ✓ Report on conditions and give the exact location of the incident if different from one given by dispatch.
- ✓ Determine rescue problems involved and request additional equipment as may be necessary.
- ✓ If the incident is a cave-in, assess the problem and obtain additional information from witnesses or job foreman (if at a construction site).
- ✓ If the incident involves a manhole and electrical equipment is involved, request dispatch to notify power company personnel. Notify street department, highway department, sewer department, etc., as necessary.

b. Cave-in:

- ✓ Keep heavy equipment, fire apparatus, and spectators a safe distance away to avoid further slides or cave-ins. Shore up area, if needed.
- ✓ Provide victim air (preferably), or oxygen, from cylinders or compressors, by lowering air hose or cylinder with partly opened valve into hole (Garden hose can be used to convey air from cylinder).
- ✓ Provide victim with light and reassurance.
- ✓ If hole is large enough, you may be able to use a collapsible ladder, stokes stretcher, ladder belts on a rope, etc., to remove victim.
- ✓ When lowering a firefighter into a hole, a rescue harness with a rescue rope and safety line shall be used.
- ✓ Operations must proceed at a pace, which will provide for the safety of those trapped as well as those directly involved in rescue efforts.
- ✓ Safety must come before speed.
- ✓ Consider other “specialized” resources.

c. Manhole rescues:

- ✓ Notify dispatch if electrical equipment is involved and have the power company respond.
- ✓ Never enter, even to rescue, unless electrical power is cut off and verified as such by an authorized power company representative.
- ✓ Verify air quality and absence of combustible and/or poisonous gases. It is extremely desirable to have two (2) independent gas monitors in use at all times during rescue operations.

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- ✓ Whenever a manhole is entered, the rescuer shall wear a rescue harness, with Rescue rope, monitor, and breathing apparatus. An additional Rescue rope shall be taken in for the victim.
- ✓ Provide sufficient personnel above ground for support (It may take as many as four (4) firefighters to hoist one unconscious victim by rope, dependent on your hoisting system).
- ✓ One member (for each UCFD entering) of the above ground support team shall be standing by in a rescue harness secured to a Lifeline and wearing breathing apparatus in case problems in the operation occur.
- ✓ If possible, smoke ejectors (explosion proof) may be used to provide fresh airflow into the manhole.
- ✓ Provide Emergency Medical care as required.
- ✓ Operations must proceed at a pace, which will provide for the safety of those trapped as well as those directly involved in rescue efforts.
- ✓ Safety must come before speed.
- ✓ Consider other “specialized” resources.