
**URBAN SEARCH AND RESCUE -
OPERATIONS**
**Undertake structural collapse rescue as
part of an urban search and rescue
(USAR) operation**

level:	5
credit:	12
planned review date:	December 2004
sub-field:	Specialist Rescue
purpose:	<p>People credited with this unit standard are able to: prepare for a structural collapse operation as part of a USAR operation; assess and manage structural collapse as part of a USAR operation; determine location and condition of casualties as part of a USAR operation; gain access to casualties as part of a USAR operation; remove casualties as part of a USAR operation; and terminate USAR rescue operations.</p> <p>This unit standard is for people actively involved in Urban Search and Rescue (USAR) and disaster operations.</p>
entry information:	<p>Prerequisite: Unit 18516 <i>Demonstrate knowledge of, and provide support at, urban search and rescue operations</i>; Unit 6400, <i>Manage first aid in emergency situations</i>; Unit 17279, <i>Describe the coordinated incident management system in emergency response activities</i>; and Unit 10618, <i>Rescue casualties using rescue techniques</i>, or demonstrate equivalent knowledge or skills.</p>
accreditation option:	Evaluation of documentation and visit by NZQA and industry.
moderation option:	A national moderation system of moderation networks has been established by the Fire and Rescue Services Industry Training Organisation.
special notes:	<p>1 Legislation and regulations applying to this unit standard include the Health and Safety in Employment Act 1992, Fire Service Act 1975, Police Act 1958, Civil Defence Emergency Management Act 2002, Health and Safety Regulations (1995), and their subsequent amendments.</p>

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- 2 This unit standard may be assessed under real or practical simulated conditions. Assessment evidence is expected from a variety of sources over a period of time from a range of structural emergency situations.
- 3 This unit standard covers the competency to undertake structural collapse as a member of an Urban Search and Rescue Task Force.
- 4 The primary reference for this unit standard is the New Zealand Fire Service USAR Category II Technician Student Manual (2002) available from www.usar.govt.nz and the Federal Emergency Management Agency *Structural Collapse Technician Course – Student Manual* available from www.fema.gov/usr/sctc.shtm
- 5 Rescue resources may include but are not limited to – hand tools, atmospheric monitoring equipment, concrete cutters and corers, trained dogs, aerial ladders, platforms, bulldozers, bob cats, cranes, back hoes, generators, hydraulic jacks, lights and towers, wire rubble baskets, acoustic devices, fibre-optic cameras, time-lapse cameras, search cameras, thermal imaging cameras, infra-red cameras, concrete cutting chain saws, air-hammers, drills, lighting, ropes, bolt cutters, wheel barrows, buckets, communications, portable toilets, tents, heaters.
- 6 Atmospheric monitoring techniques are those specified in Australian/New Zealand Standard AS/NZS 2865:2001 *Safe working in a confined space*.
- 7 Definition
Structural collapse rescue is defined as the mobilisation of resources required to safely and expeditiously locate and remove trapped and often injured victims from partially or totally collapsed structures or environments and the provision of emergency care in doing so.

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Elements and Performance Criteria

element 1

Prepare for a structural collapse operation as part of a USAR operation.

performance criteria

- 1.1 Operation and task information is obtained and analysed in accordance with the primary reference.
- 1.2 Rescue resources are identified, selected and verified in accordance with the primary reference.
- 1.3 Personal protective equipment is selected in accordance with the nature of the structural collapse operation.

Range: may include but is not limited to – respiratory, ear, eye, and head protection, knee pads, footwear, overalls, wet weather gear.

element 2

Assess and manage structural collapse as part of a USAR operation.

performance criteria

- 2.1 Situational and environmental hazards are identified and controlled in accordance with the primary reference.

Range: any three from - below debris hazards, surface hazards, overhead hazards, structural and terrain instability, dangerous goods and hazardous substances, utilities, irrespirable atmosphere, adverse weather conditions.
- 2.2 Physical features of structural collapse are assessed in accordance with the primary reference.

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- 2.3 Scene is managed to control access and maintain a safe and effective operational environment in accordance with the primary reference.
- 2.4 Communication with other personnel on site is established and maintained in accordance with the primary reference.
- 2.5 Site of structural collapse is sectorised and boundaries are defined in accordance with the primary reference.
- 2.6 Structural collapse marking system is implemented in accordance with the primary reference.

element 3

Determine location and condition of casualties as part of a USAR operation.

performance criteria

- 3.1 Reconnaissance of incident scene is undertaken in accordance with primary reference.
- 3.2 Evidence of location of casualties within collapsed structure is collected and reported in accordance with the primary reference.
- 3.3 Resources used on surface or lightly trapped casualties are in accordance with the primary reference.
- 3.4 The condition of surface or lightly trapped casualties and the nature of the entrapment are ascertained in accordance with the primary reference.
- 3.5 Search marking systems are utilised in accordance with the primary reference.

element 4

Gain access to casualties as part of a USAR operation.

performance criteria

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4.1 Techniques and equipment used to access casualties are in accordance with the primary reference.

Range: shoring, tunnelling, cutting, lifting or removal of concrete slabs, steel cutting, breaching, concrete coring, breaking.

element 5

Remove casualties as part of a USAR operation.

performance criteria

5.1 Entrapped casualties are released, treated and stabilised in accordance with the nature of their condition and the primary reference.

5.2 Casualties are removed from the scene in accordance with the nature of their condition and the primary reference.

5.3 Evidence of the casualty's identity is collected and processed in accordance with the primary reference.

5.4 Actions taken to preserve incident scene are in accordance with the primary reference.

element 6

Terminate USAR rescue operations.

performance criteria

6.1 Equipment is recovered, cleaned and serviced in accordance with the manufacturer's guidelines and the primary reference.

6.2 Signs and symptoms of operational stress are recognised and reported in accordance with the primary reference.

6.3 Operational documentation is completed in accordance with the primary reference.

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Range: may include but is not limited to – site sectorisation plan, memoranda of understanding, equipment, running and repair logs, notes of sketches and other relevant information required for potential coronal or other legal proceedings, incident reports, communication logs, injury register, decontamination.

6.4 Exposure records are completed in accordance with the primary reference.

Comments on this unit standard

Please contact the Fire and Rescue Services Industry Training Organisation info@frsito.org.nz if you wish to suggest changes to the content of this unit standard.

Please Note

Providers must be accredited by the Qualifications Authority or a delegated inter-institutional body before they can register credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for providers wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

This unit standard is covered by AMAP 0039 which can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.