



ILLINOIS FIRE SERVICE INSTITUTE

STATE FIRE ACADEMY



**To help firefighters do their work through training, education,
information and research.**



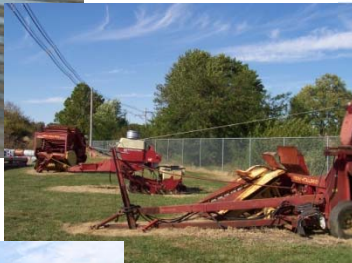
AGRICULTURAL TRAINING SITE

Rescue personnel learn principles and guidelines for a safe response to tractor roll-overs, entrapment in field agricultural machinery, entanglements in stationary equipment, electrical incidents, agricultural chemical spills and exposure, fires related to the farm operation and other agriculturally-related incidents.

Extrication drills, equipment stabilization, lock out tag out of electrical, hydraulic and pneumatic machinery, patient assessment, treatment and packaging also can be included.

The Fire Fighting Foam class provides the firefighter with a basic understanding of the common types of fire fighting foams (for Class A, Class B, & Polar Solvent fuels), the apparatus and equipment needed to deliver them, and the procedures for setting up and using them effectively. The class also addresses the logistics of large scale foam operations.

- **Agricultural Rescue**
- **Fire Fighting Foam Applications**
- **Ethanol Awareness**
- **Grain Bin Rescue**





AUTO EXTRICATION

Operations in situations laying down, crouching, or crawling in vehicles is the order of the day. Firefighters will be challenged by scenarios where all members of the team must be working to keep from pushing out of the "golden hour".

Experienced students will build upon basic and advanced skills as they train on large vehicles such as motor coaches, busses, campers, box trucks and semi tractor trailers.



- Basic Auto Extrication
- Advanced Auto Extrication
- Bus Extrication
- Incident Safety Officer Challenge
- Large Vehicle Extrication
- New Car Extrication
- Vehicle Firefighting
- Vehicle/Machinery Operations Level
- Vehicle/Machinery Technician Level



Tax Payer



BURN BUILDINGS

There are three live burn buildings on the IFSI campus; the Tower, the Taxpayer, and the Single Story Residence.

These are the only three structures on the property where live burn evolutions are permitted.



Students are not allowed to enter live fire areas in the buildings without an Instructor present. The instructor should never be more than three feet away from the student.

Fire sets in these structures are not so large that Firefighters cannot work in the building without a hood. If the fire is too hot in the building we are not teaching, because the Students are not listening.

- **Fire Academy**
- **Fire Officer Training**
- **RIT Under Fire Training**
- **Annual Fire College**
- **Weekend Light and Fight**



Single Story Residence



Burn Tower

**7 Levels
Burn Levels, 2/3/4/5**



FIRE INVESTIGATION BURN BUILDINGS

There are four buildings that are specifically designed for Fire Investigation located on the IFSI campus. The quad is referenced as the Fire Investigation Resource Center.



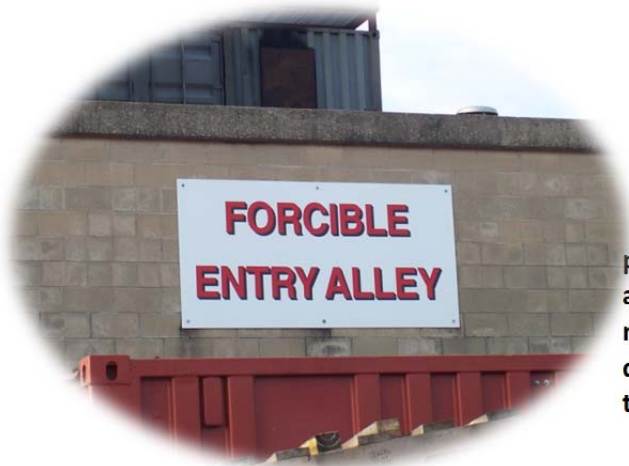
- **Live fire opportunities to support arson investigation training**
- **Designed to reflect standard wood frame building construction**
- **Allows for flexible room configurations and realistic residential fuel packages**
- **Provides resources for a variety of fire behavior and development scenarios**
- **Designed to provide up to eight separate burn spaces**





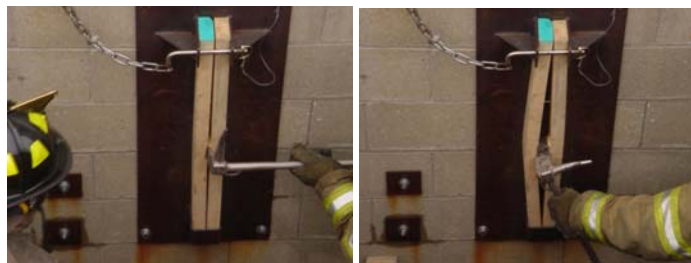
FORCIBLE ENTRY PROPS

There are a number of forcible entry props located throughout the facility. Most are located in Forcible Entry Alley on the north side of the Tower. These props are also duplicated in or on many of the Burn Buildings and are used in these locations as part of a drill or scenario.



Burglar Bar

Simulates cutting through burglar bars.
Basic FF skills for holding a saw horizontally



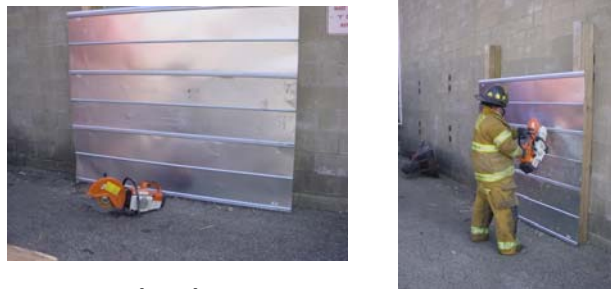
Screwed and Glued

Simulates prying a door and jamb apart.
Also used to insert delays into a scenario



Inward/Outward Opening Doors

Simulates opening a door using a set of Irons, or other combination of striking and prying tools, or hand operated hydraulic tools.



Overhead Door

Simulates cutting through an overhead door using hand tools or rotary saws.



4 X 4 Prop

Simulates a situation that requires a FF to split or break apart dimensional wood. Also used to create or insert delays into a scenario.

Lock Pulling Station

Simulates pulling a lock using A Tool or K Tool.



Roll Up Door Prop

Simulates a roll up security gate on a store front.



HAZARDOUS MATERIAL ON SITE PROPS



RAIL CARS IFSI Currently has 5

rail cars on site that are used for various firefighters training. Hazardous materials and confined space training most often

use the cars, however rope and the fire fighting programs utilize these props from time to time. There are three non-pressurized cars, one pressurized car and a box car on the tracks.



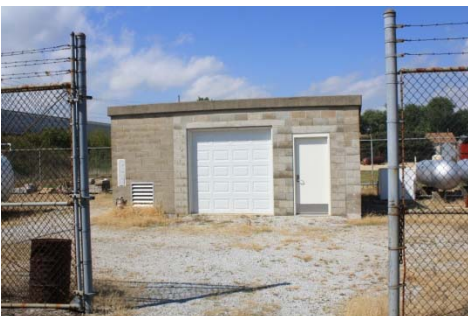
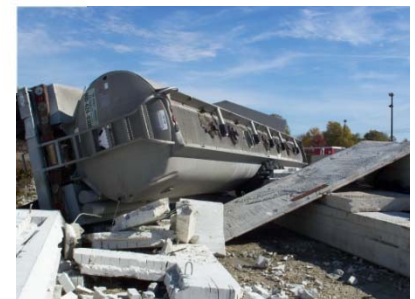
While these cars are ageing, they still serve the physical purpose of working on and around rail cars.



- Hazardous Materials Operations
- Hazardous Materials Technician A and B
- State of Illinois WMD Haz. Mat. Team Validation Exercises
- Firefighter Foam Application Techniques
- Clandestine Drug Lab Operations
- Confined Space Training
- Vertical Rescue Training
- Law Enforcement Mitigation Teams
- Firefighter Programs



306 TANKER We currently have a 306 tanker on site that is used by the hazardous materials and fire fighting programs. It is used in foam application drills as well as fuel leak scenarios.



CLANDESTINE DRUG LAB HOUSE

When the clandestine methamphetamine epidemic hit the Midwest, the building was cleaned out, the new overhead door was installed and makeshift lab scenarios were staged in this facility for hazardous materials and law enforcement mitigation teams.





LP BURN SITE

The Illinois Fire Service Institute, with assistance from a grant provided by the Illinois Propane Education and Research Council, offers courses delivered from traveling training units and fixed sites in the State of Illinois.

The IFSI 2010FY Report reflects 68 classes, and 325 fire departments represented by 2,135 students. These classes were conducted on site, as well as throughout the State of Illinois.



Liquefied Petroleum Gas Fire Fighting is a four-hour class underwritten completely by the Illinois Propane Education and Research Council.

- **Annual Fire College**
- **Firefighter Academy**
- **Explorer Cadet Fire School**
- **Per Request**



Photograph By: WILLIAM FARNUM 01/01/2002. Copyright University of Illinois Fire Service Institute





RESCUE CITY TRAINING PROPS

- 3 Story Light-weight multi-family collapse pile
- 4 Story concrete office building with elevator shaft and parking garage collapse pile.
- 20' x 21' Collapse House stands 15' and represents a 5 story collapse into itself.
- 3 Story concrete office building with multiple floor and wall collapses.
- Multiple breaching challenges on different building construction materials.
- Raker Tester to test student built raker systems. This prop is only one of three in the country.
- **Fire Academy**
- **Fire Officer Training**
- **State Weapons of Mass Destruction Collapse Operation Training**
- **State Weapons of Mass Destruction Collapse Technician Training**





ROOF PROPS



There are two pitched roof props available at ground level. There are two flat roof props available at ground level.

There are two elevated roof props located on top of the RTC prop. The two props offer a shallow and steep angle.



Flat Roof

- Fire Academy
- Annual Fire College
- Fire Explorer & Cadet School



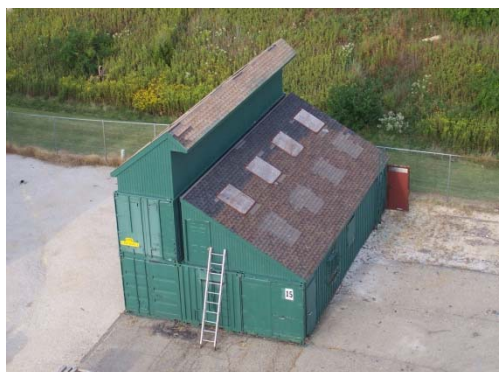
Pitched Roof

- Fire Academy
- Annual Fire College
- Fire Explorer & Cadet School



Elevated Pitched Roofs

- Fire Academy
- Annual Fire College
- Fire Explorer & Cadet School

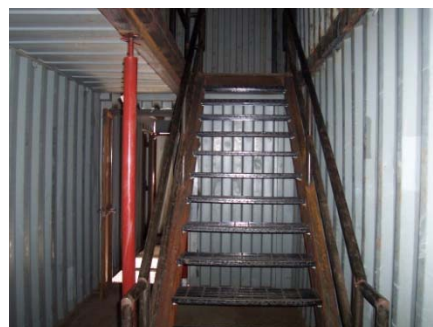




STREETSCAPE

Streetscape is a 25 sea-land container prop designed to simulate a city block that has proven to be a valuable training prop. The prop offers simulated commercial hardware store, insurance office, Laundromat, fitness center and machine shop. On the 2nd and 3rd floor are apartments with varied floor plans. There is over 9,000 square feet of hallways, stairways, and designed storage rooms. During FY 2012 a Class A Smoke generation system was added. See picture below. This allows us to introduce live smoke into the structure while still maintaining a “no live burn” status for the prop.

- Fire Academy
- Fire Officer Training
- State of Illinois Validation Exercises
- Annual Fire College
- Command Level Disciplines
- Cornerstone Weekend Training



Class A Smoke Generation System



TECHNICAL RESCUE

VERTICAL & CONFINED SPACE

TRAINING PROP

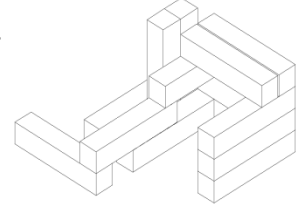
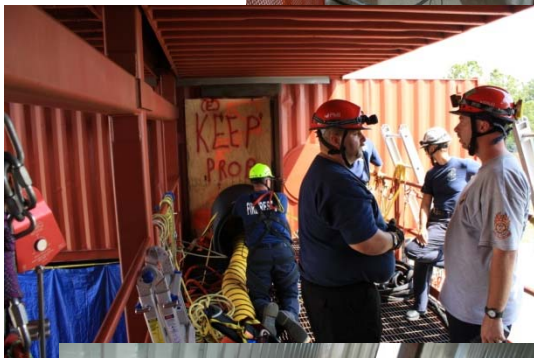
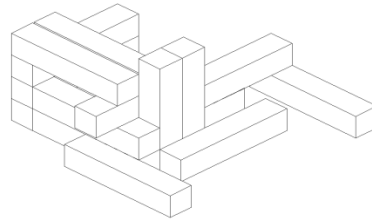
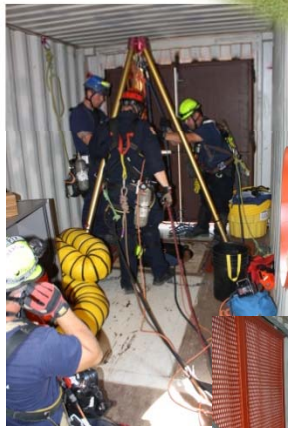
- 15 containers
- 40 foot at highest elevation
- Each container offers 2560 cubic feet; with a total of 39,000 cubic feet of training space.
- Several horizontal and vertical entry points.

The design provides numerous, varied configured confined space challenges. On the east side of the prop, there are two 40 foot elevator shafts.

Rappelling, Self Rescue, Ledge Pick Off, Line Transfer and Tri-pod applications are just a few of the technical skills developed with this prop.

The Confined Space Operations class is 40 hours with 30+ hours of hands-on applications. The Confined Space Technician class is a 48 hour class with over 40 hours of hands-on application.

- **Rescue High Line Operations**
- **Rope Operations Level Training**
- **Rope Technician Level Training**
- **State of Illinois WMD TRT Validation Exercises**
- **Confined Space Operations Level Training**
- **Confined Space Technician Level Training**





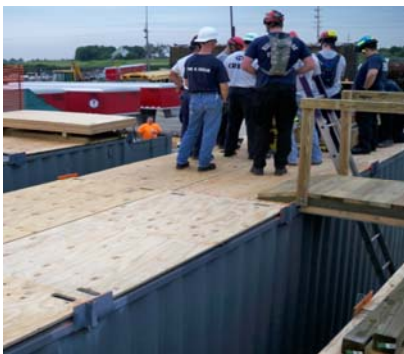
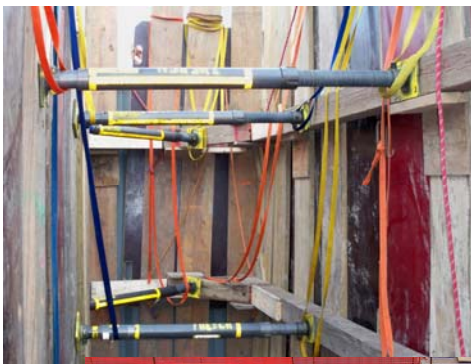
TRENCH PROP

Excavation on the IFSI grounds will hit a very high water table. The water table can threaten the safety of the student and instructor as well as offers a significant challenge to the completion of course objectives.

Students are given the opportunity to develop trench rescue shoring skills in a controlled environment. The prop enhances the level of instruction for the trench program and allows skills to be developed by the students prior to completing rescue scenarios in a "live trench".

The 16 sea-land containers within this prop offer linear, T's, L's, and U trench designs of various widths and at 8 to 16 foot depths.

- **Industrial Fire Brigade Training**
- **Trench Rescue Operations Level Training**
- **Trench Rescue Technician Level Training**
- **State of Illinois WMD TRT Validation Exercises**





Single Family Dwelling Simulator

We are developing a plan to improve upon the use of this prop as a single family dwelling. Completion goal is June 2012.

The conversion of the Regional Training Center burn cans into a two story single family dwelling simulator will provide new options for a number of programs.

The plan calls for a first floor with a Family Room, Furnace and Water Heater, Open Dining and Kitchen area, Utility Room, Bathroom and Bedroom.

The interior and exterior stairs lead to the second floor with a Master Bedroom, Master Bath, and Attic Area.

The prop will include a Class A (straw/wood smoke) Smoke system providing IFSI with an additional resource for;

- **Regional Fire Department training**
- **Cornerstone Classes**
- **Fire Officer Training**
- **Fire Academy**
- **Fire College**
- **Fire Fighting Program**



Research and Fire Behavior Lab

This prop was originally designed for Industrial use and may still be used for Industrial classes.

The prop is receiving an upgrade that will provide IFSI with desperately needed space to conduct research during the live burn season without impacting the scheduling of the burn buildings.

The upgrade will add a third container to the north end of the existing containers, ceiling heat deflectors, channel system for wall and ceiling inserts, heat monitoring thermocouples.



