Responding to Bomb Threats, Bombing Incidents and Suicide Bombers

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For law enforcement, fire, and EMS services

v1.0

Firefighters Support Foundation

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Acknowledgements

This program is a resource for law enforcement, fire and EMS service personnel.

While not all of the material in this program will be equally applicable to these three services, most of it will be.

This program isn't specifically designed to be give as is (although it can be); rather it is designed to be a resource to help you construct a training program for your own purposes and audience.

Permission is granted to copy freely from this program, but acknowledgement of it as the source is appreciated.

All other documents referenced in this presentation, other than books, are included on this CD-ROM or are on the web page that you downloaded this file from.

Purpose

Contents

- Explosives

Section 1

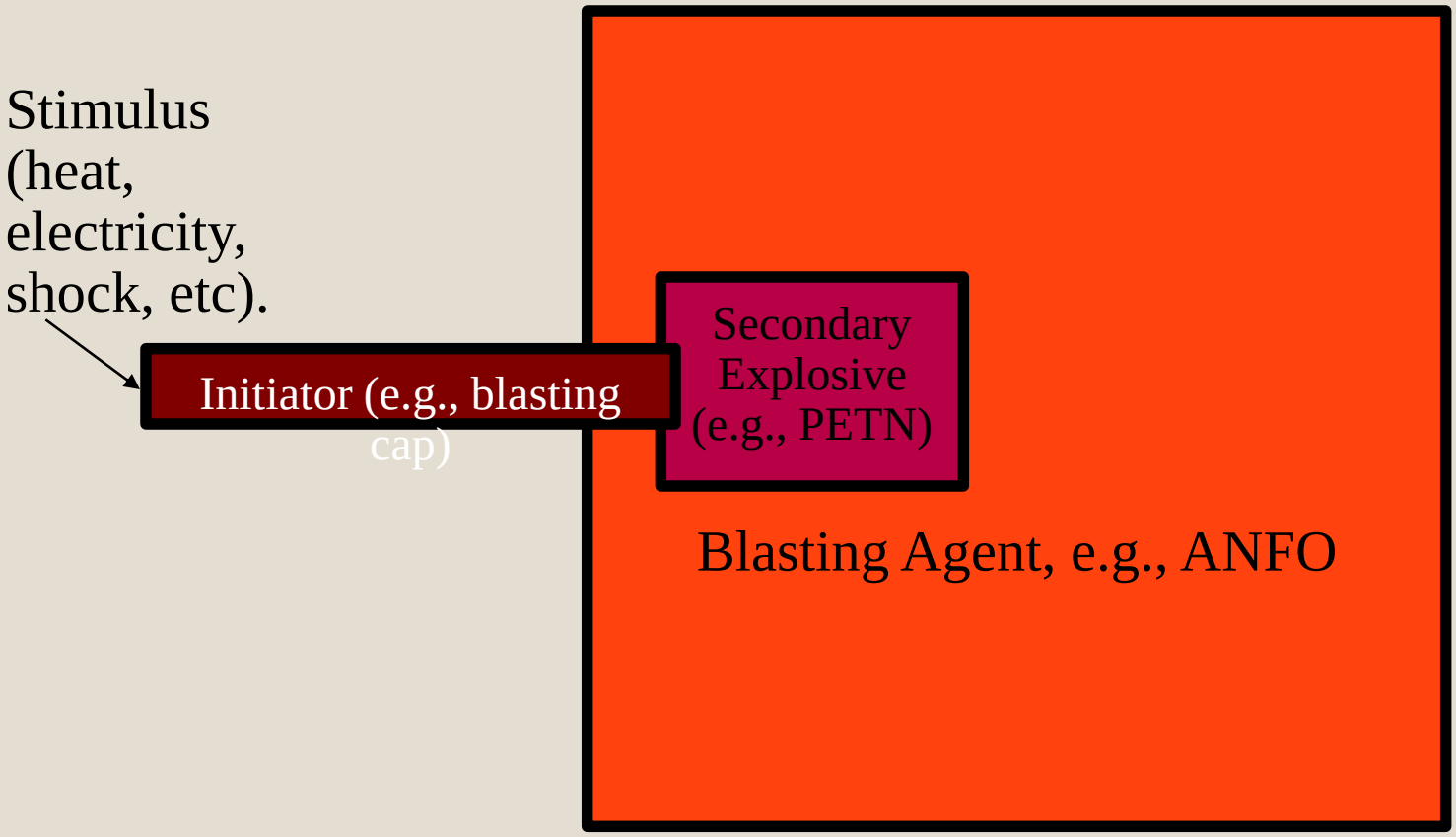
- An explosion is a sudden increase in volume and release of energy in an explosive material in an extreme manner, usually with the generation of high temperatures and the release of gases. An explosion creates a shock wave.
- Low explosives propagate the reaction by deflagration (burning) at speeds of 3300 feet/second or less. Low explosives are usually *mixtures* of a combustible substance and an oxidant. They are usually used as propellants and pyrotechnics.
- With high explosives the reaction is propagated by the shock wave, traveling in excess of 3300 feet/second. High explosives are usually chemical *compounds*.
- An explosive that deflagrates in open air may detonate if confined.

Explosions & Explosives

- Primary explosives are extremely sensitive to mechanical shock, friction, and heat. As a general rule, they are compounds that are sufficiently sensitive that they can be initiated with a blow from a hammer. Example: blasting caps (lead azide).
- Secondary explosives (also called *base explosives*) are relatively insensitive to shock, friction, and heat. Examples: Dynamite, TNT, RDX (C4), PETN, HMX, det cord. They often require a primary explosive to initiate their detonation.
- Tertiary explosives (or *blasting agents*) are insensitive to shock and cannot be reliably detonated with *practical* quantities of primary explosives; they require a secondary explosive to initiate their detonation. Example: e.g. ammonium nitrate/fuel oil mixture (ANFO)

High Explosive Types

Explosive Chain Example



Fuel and Oxidizers

- Just like an ordinary fire, all explosions require a fuel (something to burn) and an oxidizer (something to supply oxygen)
- An ordinary fire draws oxygen from the air, which is a diffuse source of oxygen
- An explosion draws oxygen from the oxidizer, which is a rich and concentrated source of it, thus the reaction is more intense and quicker—that is, it's an explosion rather than a fire.

Common Fuels

- Hydrocarbons
  - Fuel oil
  - Turpentine
  - Sugar
  - Wax
  - Vaseline
  - Sawdust
  - Glycerin
- Energetic Hydrocarbons
  - Nitromethane (racing fuel)
  - Nitrobenzene
  - Ethyl Nitrate
- Elemental
  - Powdered aluminum, magnesium, antimony
  - Phosphine
  - Hydrogen sulfide

Common Oxidizers

- Background: Oxidizers consist of a binding agent and an oxygen supplying agent. e.g.:
  - Bonding agent: *ammonium*
  - Oxygen supply: *nitrate*
  - Combine to form the oxidizer: *ammonium nitrate*
- Rule of thumb: many oxidizers end in "*ate", "ite", or "ide".*
  - *Nitrate, peroxide, chlorate, dichroimate, iodate, permanganate, perchlorate*
- Another common oxidizer is *nitric acid*

Explosives Examples

- Oxidizer and fuel:
  - Ammonium nitrate and fuel oil, or ANFO
  - Potassium Chlorate and sugar
  - Nitric Acid and Urea = Urea Nitrate
- Remember that many high explosives (e.g., TNT, RDX (C4), PETN, HMX, det cord) are compounds, not mixtures. In their case you might notice materials that just plain look like packaged high explosives (TV and movies aren't too bad in this regard). They might also have commercial or military markings indicating so.
- But many can also be molded or packaged to look like anything.

Improvised Explosives

- Some other, peroxide-based, improvised explosives are:
- HMTD: hexamethalene triperoxide diamine, a white powder
- TATP : triacetone triperoxide, a white crystalline powder with a distinctive acrid smell
- MEKP: methyl ethyl ketone peroxide, a colorless oily liquid
- Oxy-acetylene
  - Ethylene oxide, propylene oxide, propane/butane
- Most of these are very unstable and dangerous

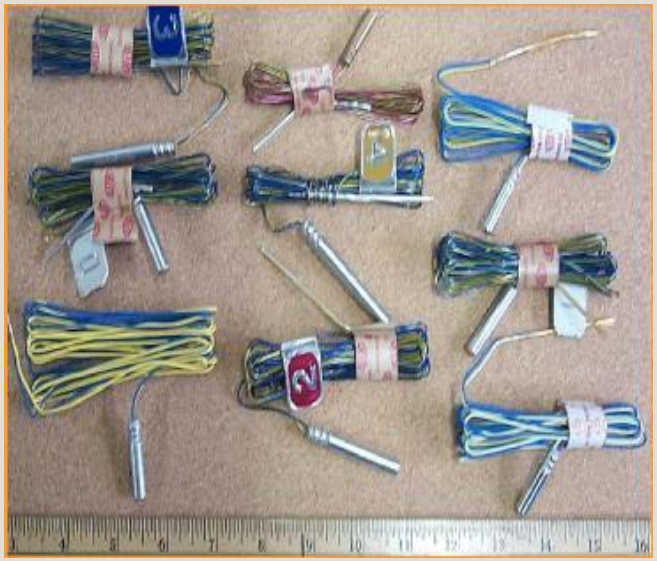
Drug Test Kit Warning!

- HMTD and TATP look like crack and meth
- Drug-test kits can cause a hypergolic (sudden, violent) reaction
- If you have ANY suspicion that a substance might be an explosive rather than drugs, do not use a drug-test kit!

Cautionary Story

- On May 25, 2006, the HIDTA Meth Lab Unit in Phoenix, Arizona conducted a narcotics search warrant in Phoenix. During the execution of this warrant the suspect warned detectives of a substance that was in the kitchen, “because he didn’t want anyone to get hurt”. The suspect called this substance “flash powder”. This substance, which was stored in plastic containers, looked like crystal methamphetamine
- No drug tests were performed on the substance and the Arizona Department of Public Safety Bomb Squad Unit was called. The Bomb techs took a very small sample, placed it in a hole and performed a burn test. The substance sparked and ignited. This was done again with a larger sample, and the substance exploded.

Some Explosives



Blasting caps

Dynamite

Some Explosives (2)

PETN

Slurry/gel mixture
TOVEX is one
brand name

Some Explosives (3)

Pipe bomb

TATP

IED

Some Explosives (4)

Sheet explosive (RDX, PETN) DetaSheet (commercial name)

TNT

Some Explosives (5)

Semtex
(used like C-4)

C-4

Bomb Components

- Bombs consist of:
  - An explosive or explosive chain
  - An initiator: typically a blasting cap or a fuse
  - A power source such as a battery or a match
  - A switch (with an electric power source)
- The detonation can be initiated by:
  - Electricity, including static electricity
  - Heat
  - Friction
  - Shock (impact)
  - Radio/cell phone transmissions

Example Components

+

+

Power source **Switch** **Initiator**

+

+

=

Explosive(s) **Shrapnel**

NOTE: Bombs can also be initiated by fuses or mechanical triggers

Car Bomb Before

Car Bomb After

Briefcase Bomb Before

This bomb was in this building,
which was built to code.

Briefcase Bomb After

Explosive Pressures

6 pounds C4

- 7 feet: 62 to 444 psi
- 50 feet: 2 to 5 psi

300 pounds ANFO

- 7 feet: 850 to 7100 psi
- 100 feet: 4 to 9 psi

What does this mean?

- 1 psi will knock you down
- 5 psi will rupture eardrums
- 30 psi damages lungs
- 100 psi will kill you

These are very rough but conservative estimates. Pressures can go up or down considerably depending on reflection and shielding. Also shrapnel and fragmentation can cause additional injuries.

Pressure Effects

TARGET ELEMENT	DAMAGE	OVERPRESSURES (PSI)
Glass Windows	10% Glass window breakage	0.3
	Some window frame failure	0.5-1.0
	50% Glass window breakage	1.1
	Severe window frame failure	1.5-3.0
	90% Glass window breakage	3.5
	99% Glass window breakage	9.2
Wood Frame Buildings	Threshold	0.9
	Roof rafters cracked	0.5-1.5
	Studs & sheathing cracked	1.0-3.0
	50% collapse	3.0
	Structure collapse	Over 5.0
Metal (Butler) Buildings	Moderately buckled/joints separated	0.5-1.0
	Severe buckling/panels torn off	1.0-2.0
	Complete destruction	Over 3.0
8-12" Concrete Block/Brick (Unreinforced)	Severe damage/shattering	1.0-2.0
	Collapse	7.0-8.0
Corrugated Asbestos Siding	Shattering	1.0-2.0
Concrete Walls (Reinforced)	Moderate cracking	3.0-4.0
	Severe spalling/wall displacement	6.0-8.0
	Concrete shatters, steel remains	10-14
	Complete destruction	14-20
Liquid Storage Tanks	Slight damage	0.5-1.5
	Severe damage	3.0-4.0
	Collapse	8.0-10
Heavy Machinery	Moderate damage	6.0-8.0
	Complete displacement	8.0-10
	Destruction	14-20
Steel Towers	Blown down	14-20
Vehicles/Trailers	Complete destruction	10-14

Bombs and Terrorism

Section 2

Why Bombs?

- Easy and cheap to build
  - Plans all over the Net (e.g., thedisease.net)
  - Parts and chemicals easy to obtain
- High impact
- Many delivery options
- Don't need large groups
- Difficult to identify perpetrator and facilitators
- Difficult forensic examination

Easily Disguised

- Can package bomb in anything:
  - Briefcase
  - Backpack
  - Shoes
  - Handbag
  - Cell phone
  - Mail package
  - Computers
  - Anything, really...

Perpetrators

- It is already a serious problem
  - In U.S., 1983-2002 (20 years) Source: *The Journal of trauma, injury, infection, and critical care*, 2005, vol.59, no6, pp.1436-1444
    - 36,110 incidents
    - 5931 injuries
    - 699 deaths
  - 2000-3000 criminal bombings/year (source FBI/DOJ)
- Carried out by: individuals, small groups, large groups, terrorist organizations
  - Both crazy and smart; all dangerous
- Most states have terrorist groups—foreign or domestic--of one sort or another operating within them

Targets

- Not just the usual targets in big cities
- It's coming to small-town America, too
  - Government buildings
  - Mass transit
  - Public buildings
  - Controversial businesses
  - Water supplies
  - Schools
  - Etc.

Bottom Line

- Bombs are already a common threat
- They will become more common, and...
- Will become more powerful as larger and foreign groups employ them more
- It is a problem that every agency in every geographic area must plan for
- Fire, police and EMS play a role
  - So do citizens and businesses

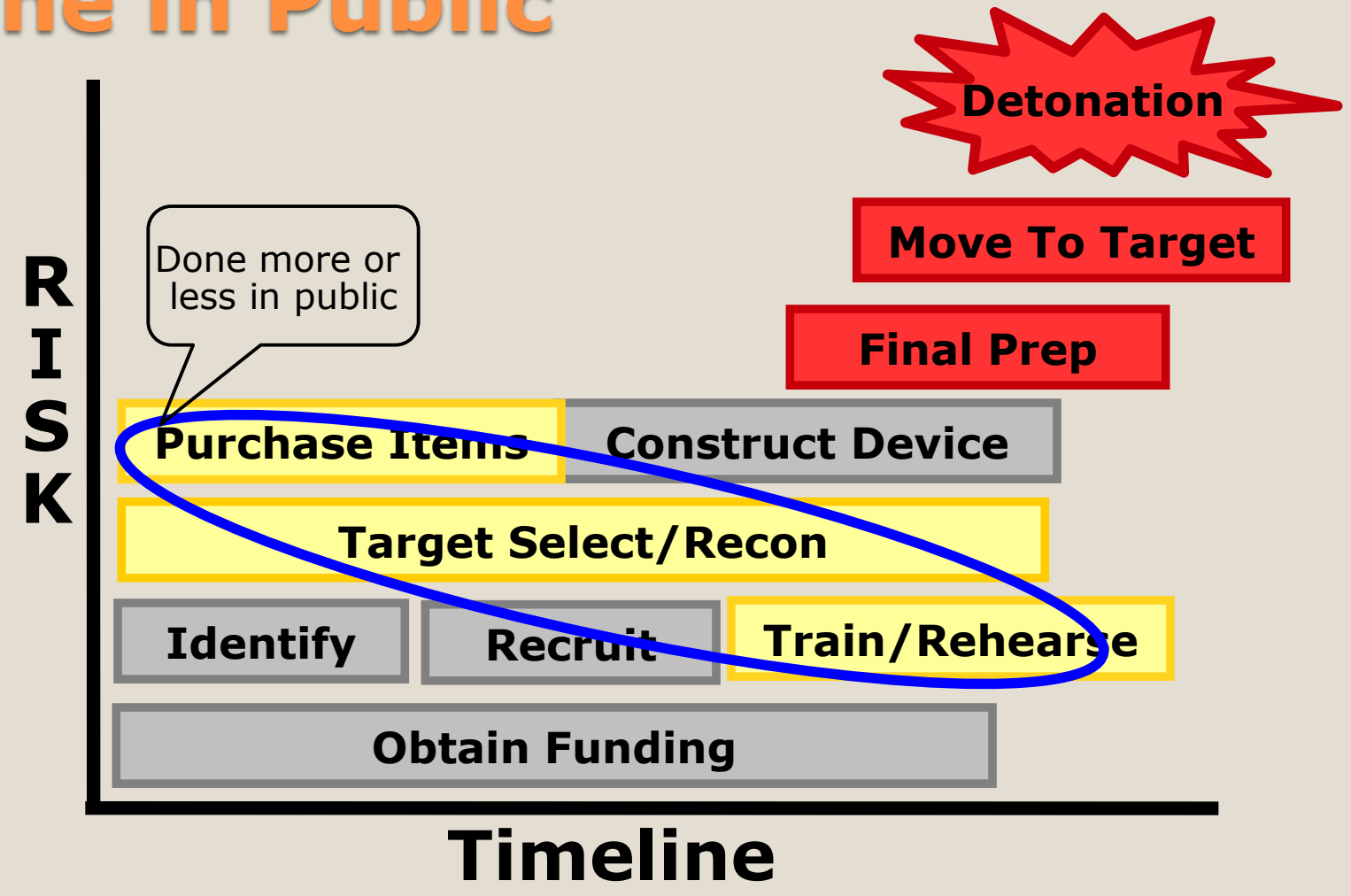
Stages of a Bombing Incident

Section 3

Stages of a Bombing

Done in Secret

Done in Public



Bomb Moved Into Place

Section 4

- Pre-Attack Detection and Countermeasures

Activities Done in Secret

- Obtaining funding
  - Detection and countermeasures are pretty much the purview of the federal agencies and not relevant to most local LE, Fire and EMS.
- Identifying and Recruiting perpetrators
  - Done typically in hard to observe and penetrate circles. Detection and countermeasures usually dependent on targeted undercover work.
- Constructing device
  - Here you can sometimes play a role as you can with activities done in public

Activities Done in Public

- Gathering intelligence on targets, training for the event, and purchasing materials are where activities are often observable.
- Also, you may be in a position to observe some aspect of device construction

Recon and Intel Indicators

- Repeated, prolonged presence of unknown individuals
- Suspicious individuals
- Unusual picture taking or video recording of buildings, landmarks, security practices, etc.
- Unusual use of binoculars
- Questions about security, school hours, etc.
- Unusual requests for public documents: blueprints, schedules, routes, etc.
- Present in a clearly marked restricted area
- Testing of security measures
- Theft or loss of uniforms, ID cards, official vehicles, explosives or precursors
- Map sketching
- Extensive list in *Terrorist Indicators* document

Training Indicators

- Unusual or suspicious persons about
- Choreographed movements of individual(s) or vehicles
- Timed movements of individual(s) or vehicles
- Obvious martial/combat type training occurring in secret
  - Bombs are often only a component of an attack, and have been used in combination with guns and other weapons and tactics.

Purchasing Materials

- Many explosive materials and precursors are now at least somewhat restricted
  - Make a point to monitor sales in your jurisdiction
  - Make sure the appropriate vendors in your jurisdiction are reporting as they are supposed to
- Many bomb components are not suspicious or regulated by themselves, but certain combinations should trigger suspicion
  - e.g.; purchase of 10 2-inch threaded pipes and 20 end caps by an unknown or suspicious person
  - Make sure that vendors of potentially suspicious supplies know that you want them to report it to you. Reach out!

What Can You Do?

- Both you and your sources can:
  - Take vehicle registration numbers
  - Take your own picture of suspicious persons
    - Cell phones have this capability
  - Ask for names (anyone can introduce themselves to someone)
  - Photocopy identification that's presented
- Report this information to your *fusion center*—very important!
- Just letting them know that they are detected can be a deterrence
- Operation Safeguard in NYC is a good example of a successful outreach and reporting program

Constructing Devices

- Fire, police and EMS are often in people's homes and on their property, and can legally report on anything they observe in the legitimate course of their business
- We are often invited into homes, and people don't clean up before we come!
- People say things to fire and EMS personnel that they wouldn't say to police
- You may see or hear evidence of device construction or incident plans

When at Calls, Look For:

- Unusual or out-of-place amounts of a fuel or an oxidizer
- Bomb construction activity
- Explosive materials or precursors
- Blasting caps or det cord
  - Caps can be commercial, military or improvised
- Evidence of bomb plans
- Maps, diagrams, schematics, components, etc.
- Switches, or small disassembled electronics in conjunction with other cues (chemical, behavioral, etc.)
  - Switches can be purchased, or improvised from aluminum foil, or mouse traps, musical greeting cards, or whatever

When Attending to Injured

- When attending to an injured person that you even remotely suspect may have been injured by an explosive, ask:
- *What kind of explosive were you working with?*
- *It's very important for us to know what chemicals you might have been exposed to; what might they be?*

Great Story

- In 2003 in Jersey City, the FD was dispatched to an apartment for a smoke report. At arrival, they could not find smoke, but a subsequent search discovered multiple 1-gallon milk jugs full of urine. Firefighters and police were puzzled, naturally.
- However, a recent graduate of the Incident Response to Terrorist Bombings course at New Mexico Tech recognized the urine as a precursor to a urea nitrate bomb. The urine is boiled into a 30:1 concentration and used instead of urea. This is a technique used by Middle Eastern terrorists.
- Further search discovered area blueprints and diagrams with notes for all of the tunnels and bridges accessing Manhattan.
- An arrest was made, and an attack thwarted.

Section 5

- Bomb Threats

Bomb Threat--Received

- Do not hang up or otherwise break off contact if at all possible – gather information. The more information provided, the more likely it's for real
  - 1. When is the bomb going to explode?
  - 2. Where is the bomb right now?
  - 3. What does the bomb look like?
  - 4. What kind of bomb is it?
  - 5. What will cause the bomb to explode?
  - 6. Did you place the bomb?
  - 7. Why?
  - 8. What is your address?
  - 9. What is your name?
- See *ATF Bomb Threat Checklist* and use it at dispatch

Bomb Threat—First Actions

- Establish ICS and command post, however primitive
- Traditional advice is to shut down radios in threat area and use land lines or runners for comms, and do not use cell phones.
  - Radio and cell phone transmissions may detonate the device
  - BUT: see next slide for issues with this advice
- Notify relevant agencies: police, fire, EMS, ATF, bomb squad, state and federal agencies as appropriate, etc., and stage them
- Establish comms with the building/area supervisor (school principal, business CEO, building owner, etc.)

Radio Cell Phone Issues

- Radio and cell phone transmissions can sometimes cause bomb detonation, so turning them off at a scene is traditionally recommended
- But: at any bomb threat or bomb detonation scene, hundreds of people in the area will be calling and texting to their friends and family
- There isn't anything you can do about this. The "good news" is that probably any RF-sensitive bombs will have already been detonated by their cell phone usage by the time you arrive
- Therefore, your use of radios and cell phones may not be a dangerous as it used to be thought, and in fact most response operations are crippled without radio comms. You will have to make the choice.

Next Actions

- Validate the threat
  - Talk to person who received threat
  - Confer with person in charge of facility/area
  - Talk to maintenance custodians
  - Listen to/read the threat message
- Decide whether to search without evacuation, or to evacuate first.
  - The decision to evacuate is often the building management's, not yours. Know who is in charge for the facilities in your jurisdiction
    - Evacuations are expensive and most threats are hoaxes
    - If your recommendation to evacuate is refused, have the deciding authority sign a *Decline of Evacuation* form
  - You should have a bomb threat plan already worked out with the likely facilities in your area, including how to handle this issue. Make the contacts there, encourage them to have a plan appropriate to their facility, and to rehearse it.
  - Most bombs are placed in publicly accessible areas

Search Without Evacuation

- This is the most efficient, since room/area occupants know what belongs there and what doesn't
- One strategy:
  - Have room occupants search their rooms.
    - If so, provide them with quick instruction on how to safely search, including instructions not to touch anything that is suspicious.
  - If nothing suspicious found there, they stay in place while maintenance and emergency responders search public places
- With occupants sequestered, they are (partially) shielded, particularly with brick or concrete walls
- Don't allow free movement of people during search

If No Suspicious Package

- If no suspicious package found
  - Building management/owner may declare it safe
    - They are the only ones who can declare it safe. You can not and must not. (You can advise, though.)
  - Or you & they elect to do more intensive search
    - Possibly with different sets of eyes
    - Note that bomb squad does not search—they respond when suspicious package is found
- Remember that hoaxes can be intelligence gathering missions for a future actual bomb and secondary device

If Suspicious Package Found

- Do not touch the item!!!
  - Just because someone else may have moved it doesn't mean it's safe to touch or move again
- Evacuate area to safe distance
  - Partial or full facility evacuation; to where? Must decide
    - Should inspect evac route for secondary device before actual evac
  - Further evacuation area: how far, to where? Must decide
  - Note extensive "safe" distances in *ATF Evacuation Distance Card*. You will have to modify based on available shielding, item assessment, and practicality
  - But note that safe distances are much further than you might think
- Call bomb squad
- Now it's just a property damage issue

Evacuation Distances

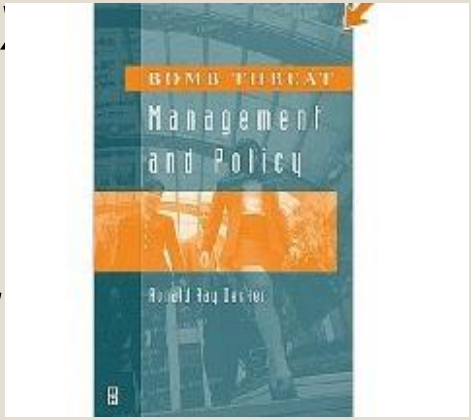
There are many such recommendations available,
and distances vary, but this one from the ATF is typical.
See also *NCTC Standoff Distances*.pdf

ATF	VEHICLE DESCRIPTION	MAXIMUM EXPLOSIVES CAPACITY	LETHAL AIR BLAST RANGE	MINIMUM EVACUATION DISTANCE	FALLING GLASS HAZARD
	COMPACT SEDAN	500 Pounds 227 Kilos *(In Trunk)*	100 Feet 30 Meters	1,500 Feet 457 Meters	1,250 Feet 381 Meters
	FULL SIZE SEDAN	1,000 Pounds 455 Kilos *(In Trunk)*	125 Feet 38 Meters	1,750 Feet 534 Meters	1,750 Feet 534 Meters
	PASSENGER VAN OR CARGO VAN	4,000 Pounds 1,818 Kilos	200 Feet 61 Meters	2,750 Feet 838 Meters	2,750 Feet 838 Meters
	SMALL BOX VAN *(14 FT BOX)*	10,000 Pounds 4,545 Kilos	300 Feet 91 Meters	3,750 Feet 1,143 Meters	3,750 Feet 1,143 Meters
	BOX VAN OR WATER/FUEL TRUCK	30,000 Pounds 13,636 Kilos	450 Feet 137 Meters	6,500 Feet 1,982 Meters	6,500 Feet 1,982 Meters
	SEMI-TRAILER	60,000 Pounds 27,273 Kilos	600 Feet 183 Meters	7,000 Feet 2,134 Meters	7,000 Feet 2,134 Meters

ATF I 5400.1 (01-99)

Resources

Bomb Threat Management and Policy
by Ronald Ray Decker



Georgia Bureau of Investigation,
A Guide to Handling Bomb Incidents

Just Google *"Handling Bomb Incidents"*
or *"Bomb Threat Policy"*

Guide to Bomb Scene Investigation, DOJ

More Dangerous Than Thought

- Bombs are more dangerous that you probably think
  - We've been conditioned by TV and movies to see people escaping explosions unhurt
- Note the over-pressure alone lethality distances in a previous slide
  - This does not account for shrapnel
    - Shrapnel typically travels at a couple thousand feet/second
    - If your shielding won't stop a high-powered rifle round, it won't stop shrapnel
  - This does not account for non-lethal crippling injuries that can be incurred at much greater distances
- Shock waves can travel over & around shielding

If You Evacuate

- Have an orderly plan pre-planned with facility
  - Routes, commands, comms, line of command
- Realize that evacuation may be more risky than “sheltering in place”
  - Some populations can't be reasonably evacuated: hospitals, prisons, etc.
- Have occupants take all personal belongings with them (as reasonable)
- Search all evacuation routs prior to sending people along them
- Now you have to search!

Search Policy Considerations

- There is a sample policy in the *Bomb Incident Plan-Policy* document that covers most aspects of bomb threat and bomb detonation response, including search tactics
- Use volunteers from the facility who know it well
- All searching should cease and all personnel should evacuate for 30 minutes before and after any specified detonation time

Search Techniques

- The *Bomb Incident Plan-Policy* document also includes search techniques in which responders ought to be trained, such as:
- In-house security, maintenance, and janitorial personnel are a good for searching public areas like hallways, rest rooms, stairwells, elevator shafts, utility closets and areas outside the structure.
- Obviously use K-9s if available
- Use chalk or tape to indicate cleared areas
- First search areas open to the public: hallways, rest rooms, vacant rooms, supply closets, stairwells, waste cans, etc.
- Use two people of different backgrounds to search an area, such as fire/police, fire/maintenance, police/occupant, etc.

Search Techniques (2)

- Have people search their own areas, since they are most familiar with them
- Search the room in vertical rings of height
  - Divide the area and select a search height
  - Start from the bottom and work up
  - Start back to back and work toward each other
  - Go around the walls and then toward the center of the room

Secondary Devices

- It is getting very common for a bomb threat or a bomb to be the first stage of an attack. The second attack—often another bomb—is set to go off a little while later in the evacuation area or the area where first responders will be working.
- Perpetrators will do "dry runs" of the attack (e.g., call in a bomb threat) to observe the actions of emergency responders and occupants
- Therefore, all evacuation and responder plans must include tactics to minimize the danger from secondary attacks and devices
  - At a minimum, this includes searches of all evacuation routes and evacuation areas prior to directing people along/to them

Secondary Device Tactics

- Evacuations should be to open areas like a field, not a parking lot where car bombs will remain undetected
- Evacuation routes should be randomized if possible
- Persons in authority (and possibly all adults) should be trained to look for secondary devices as they evacuate
- Emergency responders should look for secondary devices as they respond

Should be in Your Plan

- Crowd control
  - Friends, relatives, parents will show up in droves
- Management of qualified volunteers who will self-dispatch, and comms with them (minimize use of radios and cell phones if possible)
- Traffic control/shutdown/evacuation
- Press access/press area/PIO
- Triage and morgue area
- Witness/interview area
- All these should be already be part of your all-hazards ICS plans anyway

Re-Entry

- This is the decision of building/area management, not yours.
- If re-occupancy is dictated by building management, and you disagree, get it in writing (have a form pre-made).

Watch What You Say

- Do NOT publicly comment on devices found, on the maker or their skill level, or on your operations and countermeasures
- Comments only give bomb makers info and challenges them to do better
- Do not say things like *"It's a good thing this wasn't a sophisticated bomb or a lot of people would have been hurt"*
- Don't say *"There was no bomb"; instead say "There was no bomb found",* for obvious liability reasons

Section 6

- Post Detonation Response

Bomb-Specific

- This section is only concerned with *bomb* response issues
- We don't cover the "normal" ICS, rescue, structural, medical, triage, etc. issues that you are already familiar with for a mass casualty explosion
- We are concerned here with the initial response—not the much longer recovery operations or investigation
- Good resource for medical responders from the CDC: *www.bt.cdc.gov/masscasualties/ppt/bombings_1H.ppt*

Main Point

- This will be a chaotic event, with lots of agencies and people responding, and lots of people self-dispatching. Also, many members of the public will descend on the scene, as will the press.
- If you have not thought through the points that follow (and more), and have not rehearsed an event, you will fail. Uncontrolled chaos and needless deaths will occur, rather than controlled chaos and unpreventable deaths.
- If you do not have multi-agency NIMS/ICS competency, you need to get it right away.

First Steps

- Establish ICS, command, and a command center right away
  - Work out ahead of time who is to be in charge--fire or police--and which specific agency, and when command changes based on circumstances
- Consider having pre-made ID cards to distribute to people who show up and can be put to productive work since scene control is critical. Color coded by function?
- Consider assigning younger, fit volunteers as runners, since radios or cell phone use should be minimized to the extent possible

Assume Secondary Devices

- The call will probably come in as “an explosion”, which is more-or-less routine for most agencies.
- Consider treating every explosion run as a bomb run until proven otherwise.
- Consider staging and responding at different places during calls so your pattern can't be established ahead of time
- Consider sending someone ahead to do a hasty sweep of any staging area for secondary devices as personnel are on route
- Stage in open areas like fields if possible, away from areas where devices can be hidden, and not in parking lots.

Assume Secondary Devices (2)

- As personnel go from the staging area to their work area, have them search for secondary devices
- Consider "load and go" for alive victims that you would have normally worked on in place. Work out policy and legal issues ahead of time!
  - You should have addressed this in regard to other dangers—such as collapse or secondary explosions—anyway.
- Establish a safe perimeter assuming a secondary device. Since a car bomb is a typical such device, you will probably need a larger perimeter than you would otherwise establish for the incident.

Thoughts on Staging

- Time is of the essence (as it always is)
- Immediate action is likely to save more lives than waiting for complete staging or all resources
- Absent an obvious danger, such as collapse or another bomb, consider measured risk-taking to get the injured to care
- Consider establishing all but command post in stages as resources arrive so as to save lives.
  - Requires more training to do this

Perimeters

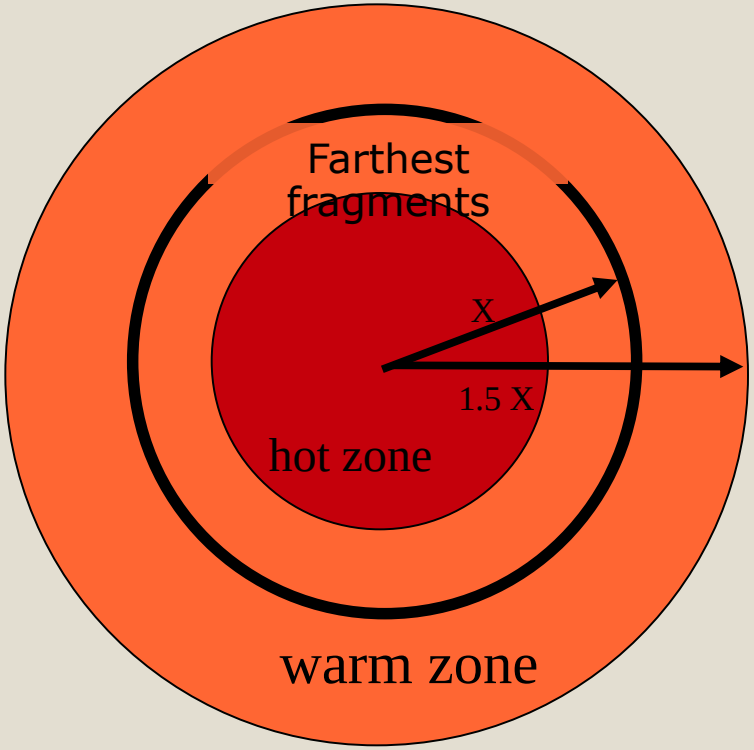
In addition to safety reasons, perimeters will be larger than you might have thought in order to preserve and recover evidence.

Hot zone: area where significant damage or risk exists. Only properly trained and equipped people allowed.

Warm zone: 1.5 times the distance from the blast center to the farthest found fragments (X). Must be preserved for evidence. Establish *controlled* corridors through it and limit personnel.

Cold zone outside warm zone is where command center, staging areas, and all else is.

You can see where all those self-dispatched volunteers with ID tags might be valuable.



Once Perimeters are Secured

- Do not let anyone leave the scene until they are checked
  - For injuries
  - For evidence
  - They might be perpetrators
- Control ingress and egress from zones
  - Comms will be chaotic to non-existent
  - In a large scene pre-made color-coded ID badges to be issued to responders can be handy
  - Can assign colored badges by function, zone, or other appropriate segmentation

Assume Secondary Devices (3)

- While secondary devices are now common, we are starting to see tertiary devices, too
  - So everyone needs to search very carefully, *in addition* to doing their assigned job, and be trained to do so
- Hospital ERs are common places for secondary bombs
  - Set to go off when they are swamped
  - Assign someone to sweep the ER and waiting room on explosion calls, working with the ER staff and hospital security, as you respond to primary location

Other Dangers

- Shrapnel and sharp objects
- Building collapse
- Air-borne contaminants
- Contaminated patients
- Contaminated scene/environment
- Perpetrators in the area
  - Including snipers
    - look high, and send someone high
- Terrorist patients
  - Violent response to responders
  - Weapons

Evidence

- What's important as evidence at a bomb scene might not be intuitive
- Primary evidence consists of fragments or parts of the explosive device
- Secondary evidence includes parts or fragments of an object or structure that was close to the seat of the explosion
- Other evidence includes objects that can assist investigators, such as the clothing of victims (alive or dead)
- This is why controlled perimeters and managed evidence collection is important at a blast site
- Note that some evidence might be hazardous or explosive. Don’t pick up anything that looks even possibly suspicious

Things to Look For

In addition to doing your job (LE, fire or EMS), at an explosion scene, and in addition to looking for secondary devices, make sure you also look for:

- People acting oddly
- Vehicles coming or leaving the scene that seem out of place
- Collapse dangers
- Weather dangers

Personal Protection

- Remember that the bombing of the World Trade Center is still claiming victims
- Bombs can release all kinds of chemicals
- Fire service: full PPE
- LE and EMS:
  - Masks and gloves at a minimum, hard hat, steel-toe boots, eye protection, hazmat suit if appropriate
- Bombs can be used to disseminate biological toxins, but most of the living toxins will be destroyed by the heat and the blast
  - But beware of a small explosion—it may be a bio or chem dispersal bomb

Section 7

- Suicide Bombers

Suicide Bomber Types

- Type 1 - Bomb carried in bag/case

- Type 2 – Bomb worn on body

- Type 3 – Bomb in vehicle

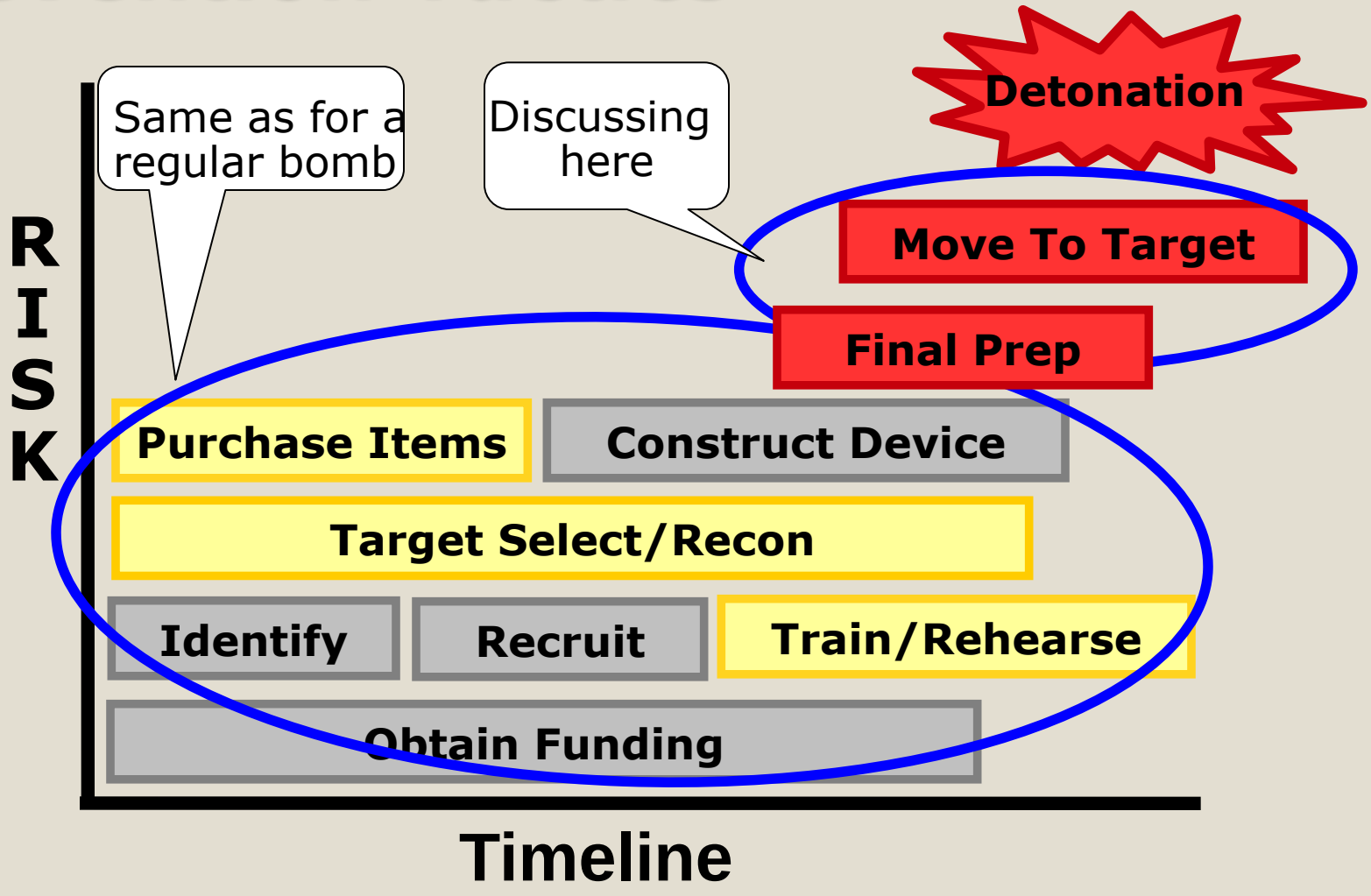
Reasons for Suicide Bombs

- They are very effective and very difficult to stop, especially given our laws and our reluctance to use force against suspected suicide bombers
- Because other methods, such as unattended bombs, won't work
- But since unattended bombs can still work so well in the U.S., we're unlikely to see suicide bombers until they won't
- On the other hand, people commit murder/suicides all the time. This is just another, more dramatic, way to do so, so we may see one soon

Suicide Bomber Profile

- There isn't one!
  - Any gender, age, ethnicity, dress, education, etc.
- Even behavioral profile cues, such as nervousness and sweating, are now being masked by tranquilizers
  - So we now have to look for people under the influence of tranquilizers, too

Prevention Tactics



Detection in Route

- Once suicide bomber is on way to target:
  - Prevent them from reaching target
    - Vehicles: barricades, serpentines, dogs, check points
    - People: magnometers, sniffers, dogs, security points
    - Many good books on this subject
  - Detect in route
    - Vehicles: inspections and searches at critical points
    - People: force single file through serpentine and use trained observers and questioners
    - Searches & inspections
- They can still detonate, but away from main target

Behaviors to Look For

- Emotion
  - No obvious emotion
  - Inappropriate emotional state
  - Eyes focused and vigilant
  - Does not respond to authoritative voice commands or direct salutation from a distance
  - May appear to be in a trance
- Appearance
  - Walks with deliberation, but not running
  - Sweating or anxious
  - Just prior to detonation, may hold hands above head and shout a phrase; or will place hands and head close
  - Pale face from recently shaved beard on males

Behaviors to Look For (2)

- Clothing is loose or out of sync with the weather, suspect's social position, or location
- Actions
  - Carrying heavy luggage, bag, or wearing a backpack
  - Keeps hands in pockets
  - Repeatedly pats upper body

Beware of These Tactics

- Distractions
  - A disturbance, unruly person, noise, small explosion (e.g., firecrackers) may be a diversion so that the bomber can circumvent security
  - Train to keep your focus on your Area Of Responsibility (AOR)!
    - This is a mark of a professional
- Sympathetic / "Unlikely" persons
  - People in wheelchairs, babies in strollers, etc.
  - All have been used to secret bombs to target

If Bomber Suspected

- Now it's a matter of minimizing loss of life, not preventing it
- Try to "innocently" divert them from the people-rich areas with traffic cones, re-routing of vehicle or pedestrian traffic, etc
  - These tactics must be pre-planned and rehearsed
  - Entire area/facility should go into a pre-planned evacuation mode
  - If a relatively "safe" detonation area is available or has been built, try to innocently direct bomber to it

Bomber Engagement

- If you have Probable Cause (PC) to believe that someone is a suicide bomber, you have the moral and usually the legal authority to neutralize them
- This usually involves a shot to the brain stem at close range
  - This topic covered below in the "Use of Force" section
- Some agencies require that 4 officers secure one limb each of the bomber to neutralize him/her
  - This is inadvisable
  - It's difficult to make this work
  - 4 trained officers are seldom available in the time required

If Bomber Neutralized

- Now you have an active bomb
- Treat just like a regular bomb
  - Evacuate
  - Establish perimeter
  - Call bomb squad
- If bomber compliant, and you choose not to neutralize them, do NOT close distance: control with long gun from cover
- Some suicide bombs have back-up timer switches to insure detonation by a certain time
  - The bomber is not the bomb maker, and won't know about handlers or back-up timer switches

Handlers

- Suicide bombers often have a handler who observes them and who can detonate the bomb themselves
  - If the bomber loses their nerve, is stopped, or neutralized, the handler detonates from a distance
- Thus neutralization doesn't always stop detonation
- This is why using security measures to insure that detection and potential detonations occur in a relatively people-free area is important
- Overwatch (snipers) play an important role in neutralizing both bomber and handler

Post Suicide Detonation

- In addition to response to a bombing, as discussed above:
- Look for handlers or co-conspirators. "Go high" to look for:
  - People calmly walking away from the incident instead of panicking or helping others
  - People video taping the incident
  - People whose behavior is uncharacteristic
- Someone should have this responsibility

Suicide Bomb Failure

- Even if a bomb itself fails to detonate, the initiator (probably a blasting cap) may well detonate
- You will hear a very loud BANG
- The potential bomber will be severely injured and probably flailing around on the ground
- He/she is still a very real danger! They may have a secondary means to detonate, and should still be considered an imminent threat
  - Treat accordingly
- Handler may also detonate them

Personal Protection

- A suicide bomb incident is a bomb incident, and all the protective measures discussed prior apply
- Structural damage and danger issues apply as with any bombing
- Note that some suicide bombers have been recruited because they were infected with blood borne pathogens (e.g., hepatitis B, HIV, etc.)

Section 8

- Use of Force

The Rules Don't Change

- The universal rule: you are allowed to use deadly force to stop actions that place you or innocent parties in *imminent danger* of *death* or crippling injury
- The other universal rule: policy is primary guide
- Imminent is not immediate
  - *Immediate* means it's *happening now*
  - *Imminent* means that if you wait any longer it will become immediate
- The particular action that places you in danger is irrelevant

Probable Cause

- To use deadly force, your must have probable cause to believe that you are in such danger
- Probable cause is essentially *reasonable belief*
  - More than reasonable suspicion
  - Less than absolute certainty
- Actions must pass the *reasonable man test:* would a reasonable person in your position, and with your experience and training, believe what you did?

Scenario 1

- You see what clearly appears to be a suicide bomb vest under the clothes of a person walking towards a large crowd. This person exhibits several of the behavioral cues discussed earlier.
- Is there imminent danger to you or third parties
  - Yes
- Are you justified in using deadly force at that point?
  - Yes
- Would challenging the suspect be appropriate?
  - No

Discussion Scenario 1

- Your observation of several unique indicating cues would certainly cause a reasonable person to believe that many innocent parties are in imminent danger.
- That gives you the authority to use deadly force
- Challenging the suspect would not be appropriate since they could, and would have reason to, detonate without you seeing any indicators, or before you could react to them. You'd no more challenge a suicide bomber in this situation than you would challenge someone with a gun pointed at you.

Scenario 2

- You get a report that there may be a white suicide bomber in a brown pickup wearing a baseball hat who will detonate at a local courthouse. You see a pickup and a driver matching the description driving down a country road 4 miles from the courthouse.
- Is there imminent danger to you or third parties
  - No
- Are you justified in using deadly force at that point?
  - No
- Would challenging the suspect be appropriate?
  - Yes – from a distance

Discussion Scenario 2

- The description isn't specific enough that a reasonable person would *believe* (not just *suspect*) that the truck you saw had a suicide bomber
- The driver is 4 miles from populated areas, That should give you enough time to challenge it in some way: do a traffic stop, set up a roadblock, etc.

Informants

- In that last scenario, we didn't mention if the informant was believable. In order for you to act, even on very specific descriptions and information, the informant telling it to you *must be reliable given the totality of the circumstances* (Illinois v. Gates, 462 U.S. 213 (1983); some states still use the more restrictive Aguilar-Spinelli test)
  - Police officers are almost always considered reliable in this kind of circumstance
  - Other informants must pass the reliability test above, and in the case of using deadly force, extra caution is appropriate
- Which brings us to scenario 3...

Scenario 3

- An informant who has been extremely reliable on multiple occasions in the past has infiltrated a terrorist organization and tells you that Mary Smith will be wearing a suicide vest as she leaves her apartment at 3:00. She will walk the 5 minutes to the courthouse and detonate herself there. You surveil Mary's apartment, and at 3:00 she leaves wearing a long overcoat on a 68 degree day. She walks deliberately with her hands in her pockets towards the courthouse with her gaze fixed straight ahead. You identify yourself and call out to her to stop, and she ignores you.

- Is there imminent danger to you or third parties?
  - Yes
- Are you justified in using deadly force at that point?
  - Yes
- Would challenging the suspect be appropriate
  - No

Other Scenarios

- You can construct an infinite number of scenarios and nuances about suicide bombers, *just like you can for any kind of deadly threat:*
  - Fleeing suicide bomber
  - Compromised/uncompromised suspect
  - Shades of gray about PC
  - Etc.
- As with any other kind of deadly threat, the standard is PC based on the totality of the circumstances known to the officer at the time

Yes, but…

- If you shoot Mary and you're right, you're a hero
- If you shoot her and she's not wearing a vest, you're a test case
- *This is one reason that every LE agency needs to have a suicide bomber policy addressing this issue specifically*
  - So the officer doesn't have to rely simply on PC
  - So the officer has had a chance to think about this situation and hopefully go through some training in it

Neutralization Options

- Neutralizing a suicide bomber calls for de-animating them immediately
- The only reasonably reliable way to do this is a head shot, preferably between the nose and eyes, or to the brain stem
- This calls for a sniper shot or a contact-range pistol shot
  - If you don't have sniper overwatch available, an officer is going to have to inconspicuously approach the bomber from the rear and take the pistol shot

Comments of Deadly Force

- State laws are often more restrictive than federal law
- Policy controls actions, too
- The first time you run your officers through a “sneak up on the suicide bomber and shoot them in the back of the head” exercise, even with just plain paper targets, expect some queasiness on their part
  - We don't train to assassinate someone

Stopping Suicide Bombers

- Your chances of detecting or learning about a suicide bomber once they are on their way to their target, *and* successfully stopping them, are extremely slim
- Physical security methods that prevent persons from entering into large groups of people until they have been screened are essential at high-value targets
  - Bombers can still kill people, but not in the numbers they hope for
- Intelligence gathering—using every possible method—is the only real key to preventing most bombings

Section 9

- Facility Security and Risk Assessment and Planning

Security & Risk Assessment

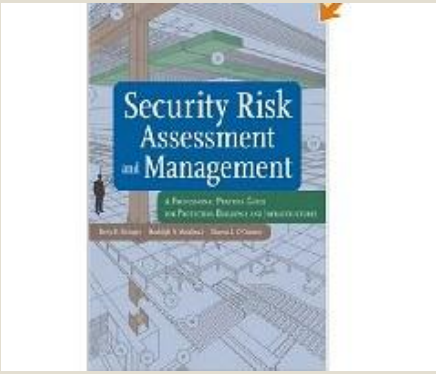
- This subject is not covered in this presentation, but it is a vital element of your response
- Public safety personnel should, as a routine part of their job, sit down with the high-threat facilities in their jurisdiction and work through a security and risk assessment with them
  - Schools
  - Businesses
  - Public buildings
  - Public works
  - Etc.

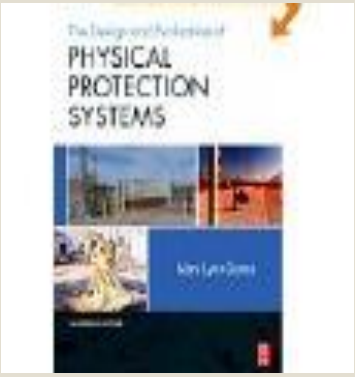
Response Plan

- You should also work out a response plan with each high-threat facility to likely events: bomb threats, bombings, active shooter, fire, mass causality, etc. This should include such things as:
  - Command structure and decision makers
  - Comms
  - Response areas
  - Evac routes
  - Etc.

Resources

- Risk assessment and security planning are well-developed professional areas and may good resources exist. Two good books are:
- *Security & Risk Assessment Management,* Biringer et al
- *Design and Evaluation of Physical Protection Systems*, Garcia





Section 10

- Resources

Other Resources

- ATF offers a free CD-ROM on bomb threat response. Go to www.threatplan.org to order one.
- DHS Office of Bomb Prevention Tech Resources, www.tripwire-dhs.net
- See the resources on the CD-ROM or web page that this program came from
- The Office of Domestic Preparedness offers an extensive number of free courses on terrorism and response. See the ODP catalog
- New Mexico Tech offers multi-day programs in NM for first responders that are completely free (they cover all travel, lodging and meal expenses) on many aspects of terrorist activity prevention and response. Two relating to bombs are:
  - Incident Response to Terrorist Bombings
  - Prevention and Response to Suicide Bombing Incidents
  - Go to www.emrtc.nmt.edu/training.php to learn more
- The Institute for Preventative Strategies (DHS funded) offer certificates for fire and LE in terrorism prevention: www.preventativestrategies.net