

SurviveInPlace

Lesson 8 Hardening Your House

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This week, we're going to discuss ways to harden your house against intruders.

The concept of "soft" and "hard" targets is straight forward, but if you aren't familiar with it, think of a turtle. If you were going to attack a turtle, would you attack the hard top shell, or the soft underbelly? Obviously, you'd pick the "soft" target over the "hard" target. The same logic applies to selecting an individual house to burglarize in a neighborhood.

As an example, if you're a burglar on Christmas Eve and you see one house with security lighting and a German shepherd in the front yard and another with a Christmas tree and 20 presents in a picture window with a sign on the door that says, "Grandma, the back door is unlocked. We'll be home from service around 8:00," the soft, easy target is the house with the unlocked door and lots of presents to steal.

I need to start off right away by saying that you can easily spend hundreds of thousands of dollars hardening your house with upgraded doors, windows, walls, and roofs, but hundred thousand dollar solutions are not going to help most of the people taking this course. Most people who have that kind of money to throw at urban survival would be better off moving to a rural location full-time.

What we're going to do is focus on affordable strategies and techniques that can help protect your family and your belongings now and inexpensive ways to beef things up quickly if you need to in a survival situation. We're also going to get into some heavy topics and cover some more "extreme" strategies at the end of this lesson.

It's important to accept the fact that most houses in the US will always be vulnerable if someone is determined to get in or get you out. Many European homes are built of concrete blocks or large stone. It's a rare house in the US that can withstand a direct impact from a pickup. It's also a rare house that can withstand a few Molotov cocktails or even an ordinary wildfire, as we see almost every summer on the news.

This is why it is important to try to bring as little trouble on your house as possible, both now and in a disaster situation. Maintain good OpSec, don't escalate conflicts, and don't get involved in fights you don't have to. In an urban survival situation, it's important to blend in and stay as invisible as possible.

We're also going to cover things that you can do that won't be very noticeable to your neighbors. Ideally, we want to make security changes that will deter potential burglars/looters, stop them if they attempt to force their way into your house, but still stay under the radar so you don't get asked questions about "paranoia" or

make your house look like a target. We just want to make smart changes that will give us additional security without taking too much time or money.

Let's start by looking at how burglars break into houses right now. Amazingly, 32% enter through an unlocked door or window. According to the FBI's 13,360 reporting agencies, this happened well over 600,000 times in the US in 2007! That was in a GOOD economy with low unemployment.

In another career, I had to get into vacant and abandoned houses to inspect them. Many of the owners were from out of town and waiting for a key to arrive in the mail meant my projects got delayed by several days. As a result, I learned how to get into houses without keys.

I can tell you from personal experience, between sliding doors, unlocked windows, and unlocked doors; it was very rare that I wasn't able to get into houses quickly and without damaging anything.

After unlocked doors/windows, 26% of burglaries are forced by impact, 24% by prying or jimmying, and less than 7% us a pass key or lock pick, including the infamous "lock bumping."

The "where" is as interesting as the "how." 34% of burglars enter through the front door, 23% through a first-floor window, and 22% through the back door. Only 2% entered on the 2nd floor.

And alarms? Well, 41% of alarmed homes where burglaries were attempted had their systems turned off! (You probably found out that your alarm battery dies quickly when the electricity goes out, so unless you have it hooked up to a car battery that gets recharged regularly, don't depend on it in a "lights-out" situation)

Whether you have an alarm or not, it's a good idea to get a lawn sign and some stickers from a local alarm company. In interviews with burglars, most will avoid houses with alarm signs in favor of a "softer" target. Although there aren't statistics on the 41% of alarmed houses that had their alarms turned off, I would put money on the fact that they didn't have an obvious visible sign advertising the fact that they had an alarm in the first place.

So, to harden your house as efficiently as possible, let's go where the numbers tell us to go and take a look at front doors.

Most residential exterior doors in the US could be described as follows:

1. They open inwards. (So they can't be blocked and so you can install a screen door)
2. The hinges are screwed into the door frame.

3. They have a handle and a deadbolt that go into the door frame.

The saying that a chain is only as strong as its weakest link applies here. If a burglar kicks a door and the door is flimsy, then the door itself will break. If it is solid and opens inwards, the force will be transferred to the door hinges and the deadbolt. More specifically, it will be transferred to the screws and whatever the screws are solidly attached to.

Of the two sides of the door, the deadbolt side is normally the weakest since it is doing alone what the two hinges are doing as a team. When you think about how a deadbolt works, it's basically securing your door to your doorframe (instead of to a stud), which is normally only a $\frac{3}{4}$ " thick piece of soft wood. (It's not much different than the boards that get broken in martial arts demonstrations.)

Since doors normally close flush on the inside of the frame, that means that there isn't very much depth to that $\frac{3}{4}$ " piece of wood to support your deadbolt and a good kick is all it takes to get through most doors.

Here are the factors that we can change to make exterior doors more resistant to forcible entry:

Door – If you are replacing your door, go for a solid wood door, fiberglass, or aluminum door, depending on what is recommended for your locale and the direction the door is facing (in relation to the sun.) Check with contractors to see if there are any businesses in your area that stock used doors. It's possible to get great looking, solid, slow growth wood doors that are 50+ years old for less than a flimsy new door.

Windows in doors are great for light and seeing out, but they are also a weak spot on a door and allow a burglar to reach in and unlock/open the door. If you currently have windows in your door, keep reading for how to make them more secure.

Windows by doors – If you have an entryway with windows on one or both sides of your door(s) look into putting security film on them, at a minimum. I'll show you videos on security film on the resource page for this lesson located at <http://urbansurvivalplan.com/365/househardening> . If you have creative ways to replace the glass with wood that won't detract from the house, please share them with your fellow students about it on the resource page.

Deadbolt – Look for an ANSI level I lock. You can buy levels I, II, and III. Level I is the highest. It should feel nice and solid in your hand...like it could take a few solid strikes with a sledgehammer.

Door Frame – When you buy a pre-hung door, it is pre-hung on a decorative frame, usually wood that gets nailed to the header. If you’ve ever seen a house being built, you know that the doors get “framed” out way before the doors are actually installed. This framing that creates the door openings is called a header and they are built from 2x4 or 2x6 studs. They are solid and what you want to attach your strike plate and hinges to. If you are installing a new door, consider getting a door that is pre-hung on a metal frame.

Strike Plate – The strike plate is what your deadbolt goes through or into on the door frame. The bigger the strike plate, and the more holes it has for screws to secure it to your studs, the more secure your door will be. Use a flashlight to see how long of a screw you would need to screw the strike plate through the decorative frame and into a stud. In most cases, a 3” screw will go through the frame, through a small dead space, and into a stud.

Hinges – You should use 3” screws with the hinges as well to secure them through the decorative frame and into a stud.

Door Swing – If you are installing a new door, consider installing it so that it swings outwards. It will negate much of the advantage that an intruder has during a forcible entry attempt. Any attempts to kick, ram, or push the door open will be thwarted by the entire door frame in addition to the hinges and deadbolt.

There is a risk in doing this. If you are in blizzard country and get deep snow against your door, you won’t be able to open it to dig out. If you are in flood country and water rises quickly, you may not be able to open the door until the water level is the same inside and out. And, if you ever need help from the fire department or EMS and can’t unlock the door, they will have to do quite a bit of damage to get in...but since you’re trying to make your house difficult for determined people to break into, that’s a trade-off you may be willing to live with.

<p>To Do: Remove a strike plate screw and a hinge screw from each door in your house. If they aren’t 3” long, then replace them with 3” screws.</p>
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Katy Bars. I love the story of the katy bar. King James I of Scotland was being overrun and the queen and one of his maidservants, Catherine, was with him in his chambers. The intruders were in the castle and fast approaching the king’s chambers. Out of devotion to her king, Catherine put her arm where the missing locking bar was supposed to go across the door so that it wouldn’t open. She kept her arm in place until the intruders broke her arm, entered the room, and killed the king. (We’re going to use materials that are harder than a forearm.)

I'll tell you about a "pretty" solution to this on the resource page, but you can have the materials on hand to make an improvised katy bar in under 5 minutes for \$20-\$30 per door. Simply buy two "S" or "U" shaped brackets that will hold a 2X4, some 3-3 ½" screws, and a board or metal pipe long enough to span the width of your door, plus the brackets. You don't need to do anything with the brackets now, other than have them on hand. If the need arises, you can pull them out, screw them into your studs on both sides of your door in 5 minutes and drop your katy bar into place.

Power tools with no electricity. Make sure you have a plan for how you will screw and drill if you don't have any power. Many popular tool batteries become almost worthless after a few short years of use. Other than manually drilling/screwing, you can develop a habit of always keeping your batteries charged OR you can look for a 12 or 24 volt drill combo set with a dead battery. Take the dead battery apart and rig it so you can run a wire from the old base to one or two 12V car/motorcycle batteries. It's heavy, bulky, and compact, but you can charge car/motorcycle batteries with a solar charger and you won't have to worry about it running dead as quick as the batteries that come with your drill.

You can also use an 18 volt drill with three 6 volt motorcycle batteries.

**If you've got specific information on powering drills with more voltage than they're designed to use, please let me and the other students know on the resource page for this lesson.

As a note: If you find that the wire running from the battery to the drill gets hot, it means that you need to use a larger wire.

Security Lighting

This is a simple one. Install security lighting with motion detectors covering the main approaches to your house. We have lights with two settings...they turn on at a dim setting when it is dark out and intensify anytime the motion detector detects movement. I have not found any reasonably priced solar security lights that are as bright as 120V ones, so you will have to make a judgment call on which features are most important to you.

Windows

Windows are the next vulnerability that we're going to cover. I am always somewhat amused at houses that have beefed up front doors, but a big picture window 10 feet away that I could easily break and walk through.

Windows are an obvious vulnerability in most houses, but I certainly don't want to get rid of mine and I doubt you do either.

Again, we're looking for solutions that don't make your house stand out, will increase your security now, and increase your security in the event of a disaster.

Plywood is a great field expedient option for protecting your windows in a hurricane, but is obviously a poor choice during normal times. If you use plywood during a disaster situation, it will protect your windows, but it will do so at the cost of reduced visibility. Even so, I would suggest having a few extra panels on hand. Why? Because every other option takes time to research, decide on, and install. Every other option takes significantly more money than plywood as well.

In short, I know that you can go out in the next 7 days and buy a few sheets of plywood, but it may take weeks or months to follow through on any of the other options.

Tempered Glass – While 4X stronger than ordinary windows tempered (safety) windows will still break and allow entry into a house, they just doesn't shatter. This is a good choice for sliding glass windows (required by law) so that people don't get hurt walking through them, but a poor choice for security.

Security Film – Security film is basically a film, like window tinting, that is installed on the inside of the window, so attacks will still break the window, but the film will hold the glass together and keep it from entering your house. This film should be professionally installed, and costs between \$5 and \$10 per square foot. It will stop bricks, branches, rocks, and bats. If you're willing to pay more, you can even get film that will stop bullets. I've got some great videos on the resource page that show how well security film can protect your windows.

Storm Windows – Storm windows or hurricane windows are laminated at the factory and are made to withstand debris flying into them at 100mph. They are normally tempered and essentially, are made by layering glass and high density plastic sheets. Again, the glass still breaks when it is impacted, but it is held together and there will not be a hole that an intruder can use to enter or reach in. See the video for details.

Lexan – Lexan is a polycarbonate (long chains of carbon) that is bullet resistant or bullet proof, depending on the thickness. It's used for Nalgene hiking bottles and for windows along golf courses. It does scratch more than glass, but is extremely impact resistant. Lexan has a lower R-value than glass and doesn't insulate against sound as well. If you go this route, look for Lexan that is warranted against discoloration, but be aware that Lexan is protected from discoloration by using a UV coating, which is good if you're trying to protect furniture, but bad if you're heating your house with passive solar.

Storm Shutters – These can be accordion shutters, swinging shutters, or rolling shutters. This is a much more expensive option than the previous ones, and more visible, but one that you want to be aware of...particularly the rolling shutters. Popular in Europe for decades, they are controlled from the inside and allow you to have full light, no light, or partial light in a room. They are built out of aluminum, will protect your windows, increase the R-value of your window openings, and are very strong.

Walls

A good friend of mine had a heart-wrenching experience a few years ago that I want to briefly share with you. He was working on a house in a rough part of San Antonio where the houses are small and close together when he heard screams outside. He went out to see smoke pouring out of the house next door. Worse, he saw a mom and her young daughter trapped inside reaching through burglar bars trying to get out. He tried pulling, prying, and everything else he could think of to get them out, but the bars wouldn't budge.

He tried every door and window, got tools from his truck and put his feet against the house and tried to dead lift the burglar bars away from the house. He told me he had tears in his eyes watching the mom and daughter get weaker and weaker.

He kept trying to save them until his hair was singed, his hands were burned, his lungs burned from the smoke, and the mom and child were overcome by smoke and disappeared below the window. This all happened within a few quick minutes, and the fire department arrived as my friend was forced to back away from the house due to the smoke and heat.

They forced their way in with hooligans and pry bars and got the mother and child out, but it ended up being too late.

Here's the tie in to the course...two days later, Mitch went back to work on the house that he'd been working on before the fire. What he saw made him sick.

After the fire department broke into the house, somebody re-secured the front door with sheets of plywood.

That didn't stop the neighborhood kids from getting into the house. They simply took a cinder block, beat through the asbestos tile siding, and then beat through the sheetrock and walked into the house between the studs and stole everything that had any value! If Mitch would have only known to do this, he feels like he could have saved the mother and child that he watched suffocate to death.

Here's the takeaway...your house is only as secure as it's weakest component, but you can spend a fortune if you're always in search of the "perfectly secured" house. There will always be a "next thing" that you can do to secure your house.

You have to make a decision as to what level of security you're going to be comfortable with and when it makes sense to make upgrades to your house. As an example, it doesn't do any good to have a perfectly secured house if you don't have food and water inside of it.

Decide how secure you want your urban home to be this week. If there are too many things that you want to upgrade, you might want to change your plans or find that it makes more sense to sell your house and buy another home that already has some or all of the upgrades you want in place.

I know a couple who are VERY switched on when it comes to survival preparedness, but who still have vinyl siding, simple doors that swing inwards, and normal windows.

They know the risks involved with this construction and have chosen to accept them. They have an alarm, big dogs that bark, a survival plan, firearms training and martial arts training but just don't have the money to turn their house into a castle.

If money was no object, they'd move to a rural area before upgrading their urban house anyhow. Eventually, they'd love to have a more secure home, but for now they're spending most of their discretionary money on training and travel.

If you're remodeling -- If you don't already have a brick, rock, or concrete house and are planning on re-doing your siding, consider using **Hardiplank or other**

concrete fiberboard sidings. In addition to increasing the security of your house, it will probably last longer than you will and it is fireproof.

Landscaping

One landscaping upgrade that you can make today (or in the spring if it's wintertime when you're reading this) is to plant rose bushes or other thorny plants under your windows and in places where you want to stop movement. Make sure to pay special attention to where you plant thorny plants if you have children or children visit you regularly.

If your lot is sloped, you might also consider terracing. If you are into gardening, you already know that this will prevent water and soil runoff, but if the terraces are big enough (2 feet for vehicles, 3 feet for people), it will slow them down and/or force them to follow pre-defined approaches, like your driveway and/or sidewalk.

Up-Armoring Your House

I had considerable debate on whether or not to put this section into the course. I'm very pragmatic and I don't want to sensationalize survival preparations by amazing you with disaster scenarios and preparations that you'll probably never use. If you are in a situation where you need sandbags in a normal American house, other than a flood, you're in big trouble. American homes just aren't made to withstand a determined attack. Heck, most can't even withstand bad storms.

It means that civil order has broken down and someone believes that you have something they want badly enough that they're willing to kill you to get it (or find out if you have it.) It probably also means that it's time to relocate as soon as possible.

For the most part, everything that we've discussed in the course has applications in both normal times and in disaster situations. Up-armoring your house is more of a the-end-of-the-world-as-we-know-it strategy and I would suggest reading through it quickly and storing the information but not spending too much time on it. I sincerely hope that it you never have a need to use it.

That being said, here are a few quick, easy, field expedient strategies that you can use to harden your house against small arms fire. To start with, let's take a look at how far various rounds penetrate sandbags/blocks.

Caliber (all FMJ)	Inches of Penetration in Dry Sand/dirt	Inches of Penetration in Wet Sand/dirt	Inches of Penetration in Gravel
.22	5	na	na
.223 (M55)	5	6	4
.308	5	13	4
12 gauge slug	5	na	na
9mm	6	na	na
.45 ACP	6	na	na

*na – no data was available for these calibers in wet sand/dirt or gravel.

Notice the difference between wet and dry sand for .30 bullets?

US Army FM 21-75 suggests placing 18" of sand/dirt/gravel between you and your threat. The most obvious way to do this is with sandbags. You can buy sandbags locally through construction supply stores, or you can buy them online. I have a link on the resource page where you can get them for about 50c apiece.

Sandbags are the easiest solution because they are modular, easy to move, and store easily, but here are some other containers you can use:

1. Luggage lined with garbage bags.
2. Rubbermaid (or similar) storage bins.
3. Shirts, jackets, and/or pants, sewn or taped shut.
4. Buckets
5. Using other materials from the course, build an 18" wide trough out of plywood or particle board and line it with plastic sheeting.

Incidentally, it takes 10" of paper (books, phonebooks, etc.) to stop handgun rounds and 20" to stop most rifle rounds.

Again, if it is at all possible, you want to avoid armed encounters, especially in most American homes. If the situation in your area ever deteriorates to where armed violence is inevitable in your immediate area (directed either at you or your neighborhood), it would be smarter (if possible) to relocate to a safer area. You could either make your exit from the city or relocate to a more defensible urban

location, such as an industrial/warehouse building, or a stone/masonry house on a multi-acre lot. We'll be covering this in a future lesson.

As you're filling your containers with dirt/gravel/sand, one option that you have is to get the material by digging a trench between the street and your house to slow or stop vehicles. It will make it obvious that you are taking defensive precautions, but if you are in a situation where you need sandbags, that is probably a foregone conclusion.

Another barrier that you can use to protect your house and funnel approaches is parking vehicles in your yard. There were families in New Orleans who did this after Katrina to block off their entire neighborhood and it worked quite effectively.

So, this week, we've covered how burglars are actually breaking into houses, simple, inexpensive strategies to make your house a harder target, some advanced strategies you can use to harden your house, and some extreme strategies you can use in disaster situations.

In summary, go with the low cost/high probability fixes first and do the high cost/low probability fixes as time and money allow:

To Do	Date Completed
Lock your doors and windows.	Every Day
Confirm that your door screws go into your header studs. Replace if necessary.	
Upgrade your locks and strike plates, if necessary.	
Install security lighting	
If you have an alarm, use it.	Every Day
If you have an alarm, make sure you have visible signs advertising the fact.	
If you don't have an alarm, consider getting stickers saying that you do have one.	
Buy wood, brackets and screws to be able to secure your doors and windows in a disaster situation.	
Everything else, as time and money allows.	N/A

Again, here's the resource page for this lesson:
<http://urbansurvivalplan.com/365/househardening>

We're picking up steam now! Here's what we'll be covering over the next few weeks:

Lessons from Katrina...from security contractors and people who teamed up and rode out the storm.

Logistics...house clearing, who will you let in, diffusing persistent neighbors, staying invisible, how to recycle urine, and more!

Poop, sleep, and psychology...everyone has to face these three things every day. We'll walk through how to do it in a disaster situation.

Venturing out...safe travel and commerce.

Time to leave...when your current location is no longer survivable.

See you in 7 days!

God Bless,

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