

## Cut Costs on the Construction Site:

4 Tips for Lowering Costs by  
Preventing Theft of Materials and  
Equipment

White Paper



**Timeline of Equipment Theft**

If you are in the construction business then you have probably noticed how tools and equipment just seem to walk away when you aren't looking. It isn't your imagination. Theft of heavy machinery and building materials from construction sites has been a growth industry in recent years.

Some would have you believe that the theft of building materials, copper wire and hand tools is unavoidable and just the price of doing business. They build it into their price quote and pass the loss on to the customer. This is a mistake for two reasons. One, it makes your quotes higher than your security conscious competitors. Two, if you accept theft as inevitable then your costs will start to snowball. For example, theft of copper wire alone totals around 1 billion dollars a year and the FBI has stated that it is beginning to threaten critical U.S infrastructure<sup>i</sup>.

Heavy machinery is an even bigger problem because it can be sold for high prices and is relatively easy to steal. Many of these thefts go unreported so exact numbers are difficult to find but it is estimated that between 300 million and 1 billion dollars of heavy equipment is stolen per year.<sup>ii</sup> It is becoming such an issue that the National Equipment Register was set up in 2001 to help combat heavy equipment theft.

## Unseen Costs of Construction Theft

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The size of a construction site will have a large impact on what kind of theft you will need to worry about. Criminals that target a massive airport under construction for high dollar equipment will not bother with a suburban housing project down the street.

Putting the actual cost of the stolen items aside for a moment, there are indirect costs that must be considered. Administrative staff will have to spend time fixing the problem. That lost time may put the entire project behind schedule and cause heavy financial repercussions if loans are involved.

Experts estimate that hidden costs of this type are often 2 to 10 times more expensive than the price of the item stolen<sup>iii</sup>.

This white paper will examine the four main security vulnerabilities in a construction site and help identify effective solutions for them.

## Common Problems with Construction Security

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Construction sites are very difficult to properly secure because of their very nature. They have crowds of people coming onto and leaving the site with little to no oversight. Frequently the only thing stopping a worker from stealing high dollar equipment or materials is the honor system.

To keep your costs low enough to be competitive you will need to find solutions for:

- **An Open Workplace** – Everything about the design of a construction site is set up for ease of access. Work crews and materials need to be able to get to where they are going quickly and easily. Equipment must be easy to use so workers can just jump in and get to work. In fact, this is a prime example of how the contractor is his own worst enemy when it comes to security. They have actually requested the manufacturer make the equipment easier to use with features like universal keys that are extremely easy to copy.
- **Little To No Supervision** – During the work day a construction site is densely populated and not a very good target for would be thieves. However, if they just wait till after five o'clock or the weekend then it is quite a different story. A construction site is often deserted during off hours, which makes it vulnerable to thieves.

- **No Accountability** – Tools, equipment and other supplies are shared on a construction site. So, if something goes “missing” or gets broken it can be nearly impossible to attribute it to a specific worker.
- **Unsecured Construction Office** – The construction office is the most important place on the site. It houses everything from petty cash to architectural drawings and should be as secure as possible. Unfortunately, pre-owned trailers or substandard prefab construction is used, which can easily be breached by an enterprising thief.

### Lower Costs by Eliminating Theft

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The construction industry is showing signs of recovery but projects are still scarce and budgets are tight. If you want to stay competitive in today’s marketplace then you must do all you can to stop theft on the worksite.

Instead of tightening security, some companies have instead decided to inflate their quotes to cover the added expense. This is not only unfair to the customer, it will likely get you underbid by a more security conscious firm. Better security may cost more in the short term but it’s the best way to stay competitive for the long term.

### Secure the Perimeter

Controlling the access to your construction site is crucial. You need to know who is coming onto and leaving the site, as well as what they have with them. There are many fencing options for this purpose but the most popular choice is chain link mesh. It is economical, has an open weave to heighten visibility and still has the strength needed to prevent unauthorized access.

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For the best results, chain length should have a clear area of 5 feet on both sides of the fence and be used in combination with other measures like barbed wire, security cameras and spotlights.

Make sure that the fence encircles the entire site and then plan for any entrances and exits. They should act as choke points so everyone can be accounted for at all times.

Fences of this type will last for years in the elements but they need to be regularly inspected regardless. If left unattended then a theft can cut through the mesh at an out of the way point and gain access to everything on the site. Make sure to repair any breaches as soon as possible to discourage trespassers.

### **Use Surveillance Measures**

You need to keep an eye on your construction site at all times but especially after hours. With large sites and open areas to cover, an unmanned security system is not always a viable option. The best solution would be a combination of:

- **Security Cameras** – Set the cameras along the fence line and at any entry and exit points. When fed into closed circuit monitors, they allow the supervisor to keep an eye on the workers during the day while giving a security guard complete coverage of the site at night. Also, if the feeds are recorded, they can be used as evidence of theft when a perpetrator is caught.
- **Security Personnel** – Actually having a human on site is still the best way to deter crime. No one wants to commit a crime with witnesses and a thorough patrol will usually catch any problems that the cameras may miss. Having a security guard on larger sites is beneficial during the day as well. They can keep an eye on equipment storage or work the gate to monitor traffic flow.

- **Guard Dogs with Trainer** – This may seem like an extreme option but it is very effective. Dogs have better senses than we do so they will often detect intruders long before a human would. They present a psychological deterrent because many people are afraid of being bitten by a dog. Plus, they provide added security to the human guard as they make their rounds. Never use dogs without a handler even on a fenced in site. If you just turn them loose on the site after hours and a trespasser is injured by the dogs then you may be open to a lawsuit.

### **Create Inventory Control Measures**

Some tools and equipment need to be shared between workers but that doesn't mean you shouldn't always know who is responsible for it at any given time. Supply sheds and equipment storage need to be off limits to all but a few of the most trusted workers and they should be held accountable for the contents.

To do this properly you will need:

- **Secure Keys** – Keys to restricted areas and equipment sheds should be assigned to specific supervisors and they need to be marked “Do Not Duplicate”
- **Anti Theft Devices** – After hours, equipment should be fitted with devices like kill switches, steering wheel locks, gas tank locks, etc.
- **Identifiable Tools** – You need to be able to instantly recognize any tool that belongs to the construction company. Paint them in your company colors, mark the company name on them and give them unique identification numbers.

- **Check Out Systems** – If you have marked your equipment as suggested above then a sign out sheet is a natural extension. Work crews need to sign for their equipment when the work day begins and sign it back in at the end. No extra equipment should be allowed since it is given out on an as needed basis.
- **Loss Reporting Procedures** – Not every loss is due to theft and workers need a way of communicating a loss to their supervisors. If the equipment or tool was broken then it should be replaced as quickly as possible. If an item is stolen then there needs to be a system in place to quickly report that to the police and get an investigation underway.

One of the most popular ways to get an extremely secure construction office at an affordable price is by purchasing a shipping container conversion.

### **Purchase a Secure Construction Trailer**

Sensitive documents, petty cash and high cost equipment are often stored in the construction office. So, why do many companies purchase or rent flimsy trailers that can easily be broken into? Prefab construction is not known for its durability and a strong kick will usually gain you entrance to a cheap construction trailer.

A secure construction office will have reinforced walls, windows and doors. The only downside is their price. Most fall in the range of 15,000 to 45,000 dollars<sup>iv</sup>. Since the investment is so high, many companies decide to skimp on security.

One of the most popular ways to get an extremely secure construction office at an affordable price is by purchasing a shipping container conversion. A shipping container conversion will usually cost between 10,000 to 15,000 dollars depending on design, which is almost half the cost of stick and mortar construction.

There is a surplus of shipping containers in this country and a few companies are using them as raw materials for everything from apartments, houses, offices and storm shelters.

A shipping container that has been converted into a construction office has quite a few benefits:

- Lower cost, almost 50% less than traditional construction
- Solid steel construction for enhanced durability and strength
- Metal shutters that can be lowered to protect windows from tampering and breakage
- Light weight which allows them to be moved from site to site
- With proper insulation, it will consume 25% less energy than a standard construction office<sup>v</sup>

## Conclusion

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To win construction projects in today's market you have to be priced competitively. There is no way to effectively do that when dealing with theft on the construction site. The replacement cost of the item will affect the bottom line but not as much as the hidden costs. You will also need to spend time dealing with insurance companies, police and probably an unhappy customer when the schedule is pushed back due to unforeseen delays. Heightened security does cost money to implement but it will save you much more than you spend in the long run. This is especially true if you utilize new techniques like a cargo container conversion for your reinforced construction office.

## About Brasstown Group Inc

The Brasstown Group Inc is a North Georgia company specializing in shipping container conversion. They offer basic or custom models of construction trailers, storm shelters, weekend cabins and many more. The Brasstown Group has built their reputation on quality work and affordable prices. Call (706) 692-7226 for more details.



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<sup>i</sup> Retrieved 15 August 2013 from <http://www.cnbc.com/id/100946683>

<sup>ii</sup> Retrieved 15 August 2013 from <http://www.constructionequipmentguide.com/Law-Enforcement-Focuses-on-Construction-Site-Theft/5408/>

<sup>iii</sup> Reducing Theft at Construction sites: Lessons Learned From a Problem Oriented Project by Ronald V. Clark

<sup>iv</sup> Retrieved 19 August 2013 from <http://www.costowl.com/b2b/office-trailers-construction-cost.html>

<sup>v</sup> Retrieved 19 August 2013 from [http://archrecord.construction.com/news/daily/archives/090917cargo\\_container.asp](http://archrecord.construction.com/news/daily/archives/090917cargo_container.asp)