

# Go Green, Cut Costs: Secure Your School

By Farhan Karimi

## Sustainable design offers opportunities in school security.



On initial inspection school security and sustainability may not seem to coalesce. That said, be it by coincidence or chance, the two fields in fact do share significant overlap.

From here this overlap will be explored, delving into an array of green design methods which can double as security measures within schools. Specifically, the focus will revolve around lighting and landscaping. These two areas offer ample opportunities in both security and sustainability, some in more obvious ways, others not so apparent.

### Shine a light

Lighting, one of the most versatile tools at your disposal, possesses wide-ranging potential in a variety of areas. Take outdoor lighting. It is intuitive that well-lit areas are less likely to be trespassed upon by nighttime intruders than areas shrouded in shadows. The opportunity here lies in LED lights.

According to the Department of Energy (DOE), LED bulbs use upwards of 75% less energy than standard incandescent bulbs. On top of which they last 25 times longer. Over time, that less money spent will have a direct impact on improving the bottom line. This is especially beneficial when it comes to LED lights because they are much brighter than their incandescent counterparts allowing for heightened levels of security.

Also worth noting, especially being that many schools are environments for children, LEDs are free of toxic chemicals which may not necessarily be the case when it comes to other bulbs.

When installing outdoor lighting, ensuring your lights are out of reach of tampering is a key best practice. Also, while it is important that entrance areas are especially well-lit, less frequented areas should not be ignored. Dual-level lamps can provide increased lighting when their motion sensors are triggered, providing another avenue to heighten security in these areas. This can also provide employees who work at night an increased measure of safety, especially in instances when they walk to their cars alone.

### Let the light in

Increasing the amount of natural light into a school building, also known as daylighting, is a design method which provides dual measures of increased safety. The first measure, which more immediately stands out, is well placed windows provide faculty with natural

surveillance vantage points to individuals coming and going from the school. This can be crucial in prevention as well as giving classrooms vital advanced warning time in order to react in instances of worst case scenarios.

Perhaps less obvious, but still a profound benefit of daylighting is the impact it has on bettering student mental health. Artificial lighting has been linked to strain, fatigue and increased levels of stress. Long-term, this can have a compounding effect. Overall, increased levels of daylight has a direct relation to a more positive school environment, leading to better school attendance on top of better behaved students.

A further value, more daylight means less need for artificial light. This provides a decrease in energy expended equating to a smaller power bill.

To enjoy the benefits of daylighting, windows should be placed at angles allowing the optimum amount of light—avoiding distracting glare should be kept top of the mind during this design process. An extra tip is to install reflective floors to further elevate natural light illumination. Installing a thoughtfully placed skylight can also elevate the atmosphere of the room to the betterment of both students and faculty.

### Secure landscaping

Vegetation, not often thought as an area primed for improving security, in fact provides just that opportunity. Whereas wide windows can open natural fields of vision, thoughtfully planted bushes and trees can strategically obscure vision lines of outside intruders. Also worth keeping in mind, if already present vegetation is obscuring faculty's vision lines, they should be removed.

Depending on the landscaping layout, certain designs can lend to a more "open" and welcome area while other designs can relay a more defensive connotation. Continuing down this thread of emphasis on design, the overall atmosphere of a school can be enhanced by an increased number of plants, bushes, trees and the like.

Parlaying into the sustainability element, properly placed foliage can play a role in a water reclamation system, collecting stormwater and irrigation runoff. From there the water can be reused, for instance being pumped back into toilets and other plumbing systems. Water saved, money saved and flooding mitigation are all benefits of this

process.

Specifically, "green roofs" can be made into gardens in which students can play active roles, providing learning opportunities on top of building a sense of community. This sense of community can be beneficial to overall student wellbeing. It is important however to ensure student safety through fencing surrounding the perimeter of the roof.

Another way vegetation can be blended into school security is through planted bollards. Used to secure entrances and building perimeters, a bollard made to look like a lush potted plant can offer protection against intrusive vehicles all while adding to the aesthetic appeal of the campus. Just keep in mind that overdoing it with too many bollards can look out of place.

Now, you would not want your child attending a school with a barbed wire fence. Which is why thorn bearing plants trained over fences can be a perfect alternatives for keeping intruders out while maintaining a campus' visual appeal. And thorn bearing plants do not necessarily need to be intertwined with the manmade. These defensive bushes and trees can be barriers in and of themselves. The only real setback to this method is the requirement of regular maintenance. Also, time may be a factor when it comes for the plants to reach their ideal sizes. Once the plants are fully matured however, expect resilient barriers.

### In closing

Consider the benefits of using some of these sustainable and security approaches in tandem to achieve maximum efficiency and effect. Keep in mind, putting the above methods into practice will take significant planning and organization. This of course is no simple task, and it will take tremendous effort. However, the effort will be worth it.

And if in enhancing that safety the environment is improved and money is saved to better invest for students elsewhere, well that's all the better.

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