

DESIGN FOR NATURAL SURVEILLANCE

Provide windows that overlook communal areas and have a line of sight to stairways, play areas, and other potentially unseen spots. Design balconies to look out on common areas. Visitors standing outside a unit's door should be visible from inside the unit, even for children.

Design landscaping to allow for surveillance. Keep shrubs and hedges to less than 3 feet tall near buildings to prevent people from hiding behind them. Consider planting flowerbeds underneath windows so that someone standing in them looks suspicious. Burglar-proof plants, such as thorny bushes, near windows and doorways are also helpful. Trim tree branches up to 6 feet off the ground to increase visibility around trees.

Lighting helps with surveillance and safety at night. Lighting does not have to be bright, but it should be uniform. Remember to shield fixtures (*Systems: Measure 14—Light Pollution Reduction*). Consider using occupancy sensors or photocell controls on outdoor lighting to save energy (*Systems: Measure 13—High-Efficiency Lighting*).



The courtyard at Betty Ann Gardens has many elements for natural surveillance: balconies that look toward a central area, benches to encourage leisure time, and proper site lighting.

PROVIDE TERRITORIAL REINFORCEMENT

Gates and fences are one way to discourage trespassing, but landscaping and other attractive visual cues may be better ways to help differentiate private from public areas. Design building entries to promote a feeling of ownership. Steps, fences, pathways, lighting and overhangs can create a transition space between public and private areas in low-density housing. In dense buildings, various strategies can be used to create a buffer between public spaces and private units, such as providing relief in interior corridors at unit entries, creating a recessed doorway with a small overhang for a porch-like entry, or distinguishing the unit's entry with a special light fixture. Areas without these buffer zones may seem unwatched, which may encourage crime.

MAKE MAINTENANCE A PRIORITY

To effectively provide safety, a building and its grounds need to be well tended. Maintain landscaping and create good storage for bicycles and children's toys on the ground floor. Promote good housekeeping of common areas, and locate the janitor closets in convenient places to make it easier to do regular and special maintenance. If graffiti or vandalism occurs, remedy the situation quickly to discourage repeat incidents (*Planning & Design: Measure 07—Vandalism Deterrence and Management*).

Code Considerations

Lighting requirements generally stipulate a minimum and average footcandle level for outdoor areas. Funders or cities may have requirements for entryway designs or security features in crime-ridden neighborhoods. The recommendations presented here will enhance the security of any project that meets these other requirements.

Considerations for Residents

Reduced crime, improved relationships with neighbors, better community appearance and better quality of life.

Cost and Cost Effectiveness

BENEFIT	★★★	May add some minimal design time and potentially some cost for benches, overhangs and similar elements. To avoid increasing cost, use elements with dual functions, such as overhangs on south exposures. Prioritize site planning and minimize added features to reduce cost.
COST	\$	

Resources

- » **Local Government Commission** has fact sheets on community design, traffic calming and safety: www.lgc.org
- » **U.S. Department of Housing and Urban Development's** Affordable Housing Design Advisor: www.designadvisor.org
- » **Project for Public Spaces** has excellent resources on designing secure public spaces: http://pps.org/buildings/info/how_to/security

VANDALISM DETERRENCE AND MANAGEMENT

Tips for Reducing Vandalism and Graffiti

WHO	KEY BENEFITS
Developer/PM Planner Policymaker ✓ Architect ✓ Builder ✓ Resident ✓ Building Manager	✓ Health/IEQ ✓ Site/Community Energy Efficiency Water Efficiency Material Efficiency ✓ O&M ✓ Resident Satisfaction ENERGY STAR
DIVISION 2: Site Construction, DIVISION 9: Finishes	

Recommendation

Take steps to protect the development against vandalism during and after construction to reduce wasted materials and costly replacement.

Description

Vandalism may occur throughout construction and afterward, and can lead to early failure of building components. It is also frustrating for residents and facility staff, and can lead to costly repairs.

During construction, reduce vandalism by monitoring the site and restricting access to areas prone to vandalism and graffiti.

Once a building is occupied, designs that promote interaction among neighbors, walkable areas, and good maintenance will lessen vandalism (*for more about designing for walking and bicycling, social gathering places and safety, see Planning & Design: Measure 04, 05 and 06*).

Benefits

Deterring vandalism results in cleaner, safer communities. Quick response to incidents will increase residents' morale and discourage future vandalism.

Application

Protection against vandalism applies to every project, and is especially applicable in crime-prone areas.

Design Details

DURING DESIGN

Many physical features that contribute to a project's sense of place can discourage vandalism. Create clearly marked access ways with good lighting and physical barriers to prevent hiding spots. Provide views from each residential unit. Provide clearly marked and centrally located entrances with good lighting. Design landscaping to deter vandals. (*Planning & Design: Measure 06—Design for Safety*)

Some specific vandalism control strategies are:

- » **Provide a constructive outlet for youths.** Most vandalism is caused by teens and young adults. Providing basketball courts, parks, and walking and biking access to activities are good ways to encourage positive behavior.
- » **Use durable and vandal-proof materials.** The most vital points are walls, windows, doors and entryways.
 - »» **Walls.** It can be difficult to remove graffiti from porous siding materials like stucco. Fiber cement, aluminum and composite siding can provide a better defense against graffiti (*Structure: Measure 10—Durable Siding*). Avoid large, clear wall areas that invite graffiti. Design staggered surfaces instead of smooth and flat ones. Alternatively, encourage children or local artists to paint murals in these areas.
 - »» **Windows.** Unmonitored windows may attract vandalism more than windows in visible locations. Also, consider using raised-floor construction or otherwise raising the height of ground-floor windows to put them out of easy reach.
 - »» **Doors/Entries.** Use high-quality metal or solid-core doors with durable hardware and locksets, especially in remote areas on the site. Entries should be well lit, with shields or valances to reduce light pollution (*Systems: Measure 14*), motion sensors, and steps or pathways to help distinguish public from private zones (*Planning & Design: Measure 06—Design for Safety*).
- » **Use darker paint on walls.** Darker paint, especially at ground level, helps discourage vandalism. Also, it is easier to paint over graffiti on dark surfaces (graffiti may show through light-colored paint).
- » **Use anti-graffiti coating.** On surfaces likely to attract graffiti, apply an anti-graffiti coating, which is usually a water- or oil-based clear coat that can be easily cleaned.
- » **Protect walls with landscaping.** Plants such as vines and fast-growing creepers are an economical way to protect walls and fences against tagging. However, rodents and other pests can be a concern when vines cover walls.

ON THE CONSTRUCTION SITE

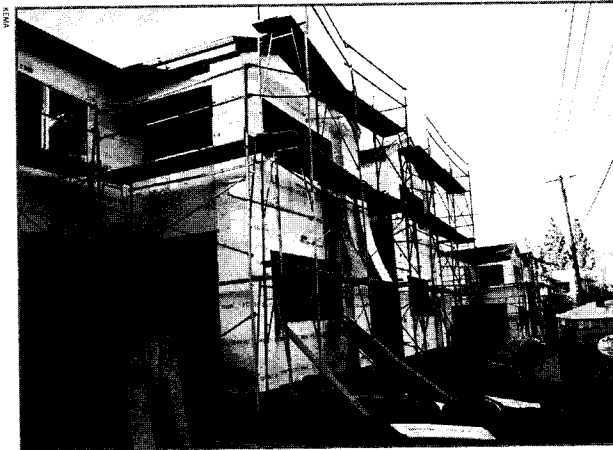
Early involvement of the community with the project can help protect against graffiti, theft, trespassing and vandalism on the construction site. Neighbors and community groups with a stake in the development are more likely to pay attention to activities on the site.

Neglected areas invite disrespect and crime more than clean, well-tended spaces. Regularly clean job sites and provide adequate physical barriers around vandalism-prone areas, such as back walls and alleyways.

POST-CONSTRUCTION

Create a vandalism management plan to counteract damage that may occur. Remedy any vandalism and graffiti within twenty-four hours. Show clear ownership and pride in the development by conducting regular maintenance and cleaning.

When cleaning up graffiti, use the least toxic means available. Use stain-hiding paints for covering graffiti on wood and walls. Harsh cleaners may be needed to clean porous surfaces like brick.



This job site was not vandalized, but it looks as though it could have been. A clean and well-maintained site and building discourages vandals.

Code Considerations

Some jurisdictions may have anti-blight ordinances that require cleanup of graffiti and construction jobsites both during and after construction. Developers and property managers should check with local officials for details.

Considerations for Residents

Occupants benefit from improved quality of life, a more attractive home, and reduced crime. In the mid-1980s, the New York Police Department found that cleaning the graffiti off the subway trains reduced violent crime by more than 80%. The theory is that criminals are less likely to act when they are in an orderly, well-kept space.

Cost and Cost Effectiveness

BENEFIT	★★★	Very cost effective. Most strategies do not add cost beyond standard practice.
COST	\$	

Resources

- » **City of Oakland's** graffiti abatement hotline: (510) 238-4703
- » **City of Sioux Falls, South Dakota** graffiti brochure (download Planning & Design, MeasureF file): [www.siouxfalls.org/health/media/graffiti.Planning & Design, Measuref](http://www.siouxfalls.org/health/media/graffiti.Planning%20&%20Design,Measuref)
- » **State of Victoria (Australia)**, Department of Education has useful tips for preventing graffiti, vandalism and other crime: www.sofweb.vic.edu.au/emerg/crimprev/index.htm