

Test Case 5

New Construction/Urban Location

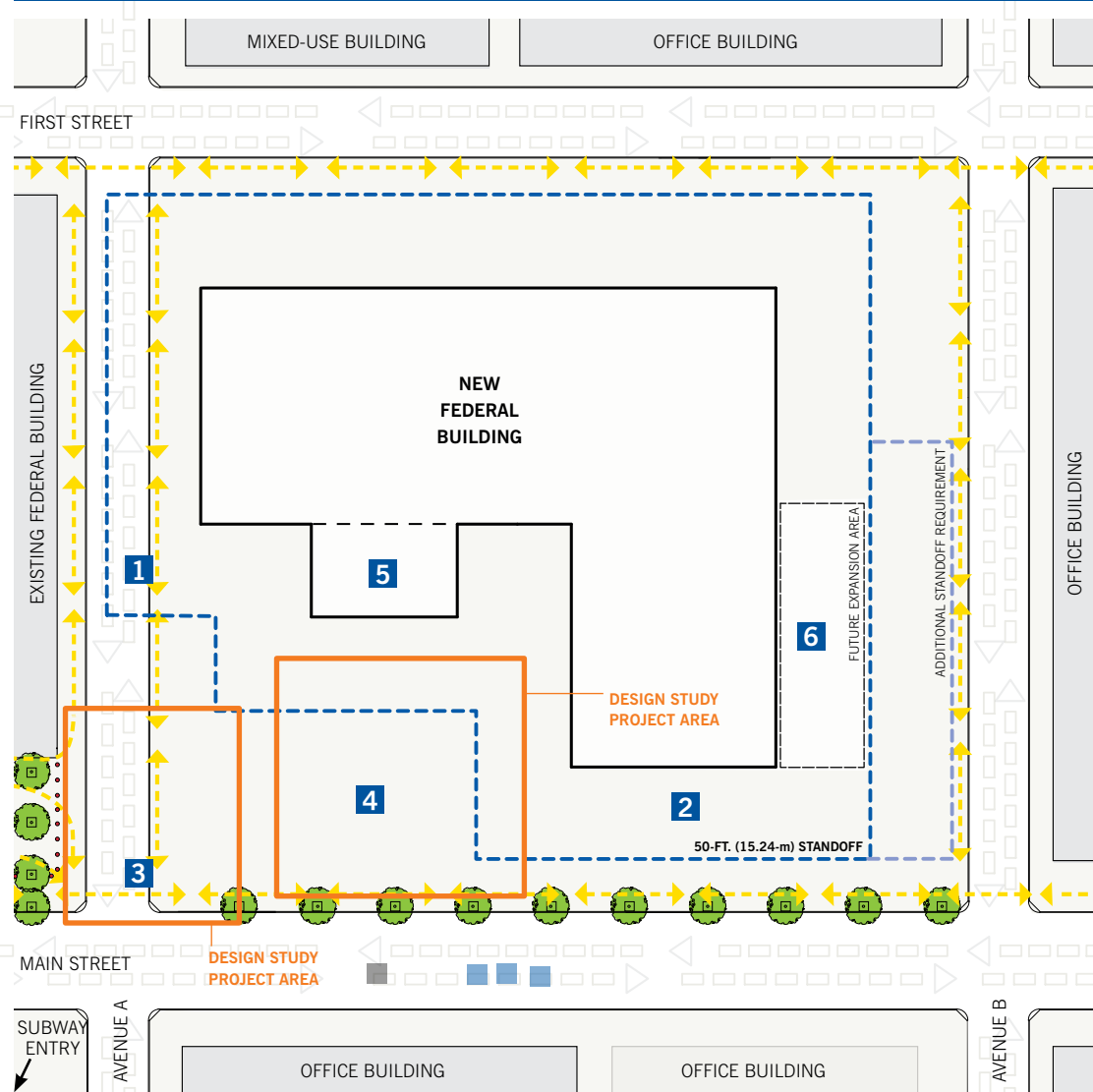
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INTRODUCTION

This test case illustrates how a new construction project can integrate security features into its overall design from the earliest planning stages, beginning in the Feasibility Study phase. During site selection, the team considers alternatives for building orientation, vehicular and pedestrian circulation, and parking in relation to such security requirements as standoff distances. For example, traffic on Avenue A between the existing federal building and the proposed new building poses a potential security risk. But closing this street may have a negative impact on traffic movement, an issue the Project Team must consider carefully.

The new federal courthouse planned for this site has a medium ISC security rating. Locating the new building close to the adjacent existing federal building to share a common standoff zone creates a larger buildable site area, while providing opportunities for shared site amenities and security features. The Project Team must provide sufficient area within the standoff zone for a possible 30-year expansion. And, since the subway station most federal workers will use is located along Avenue A just south of Main Street, the city and the Project Team would like to enhance this commonly used pedestrian path.

Test Case 5: Existing Conditions/Site Context Plan



KEY

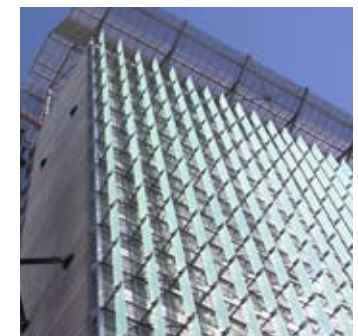
BUILDING ENTRY	GUARD BOOTH	STANDOFF PERIMETER
EMERGENCY EXIT	SITE LIGHTING	PEDESTRIAN CIRCULATION
ADJACENT BUILDING	BOLLARD	VEHICULAR CIRCULATION
HIGH-RISK BUILDING	SECURITY BARRIER	SITE SECURITY ZONE
LANDSCAPE AREA	CAMERA SURVEILLANCE	
TREE		

25 FT. 50 FT. 100 FT. N

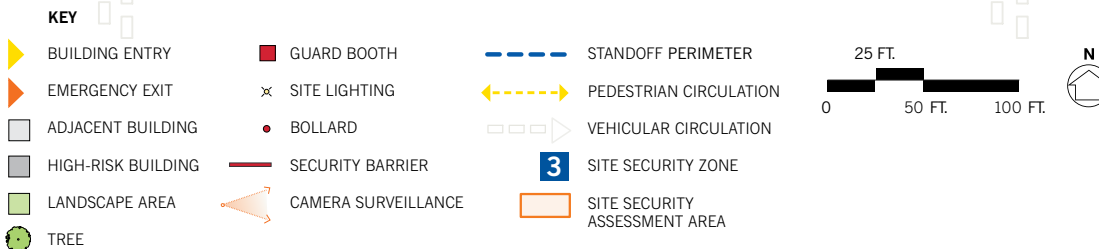
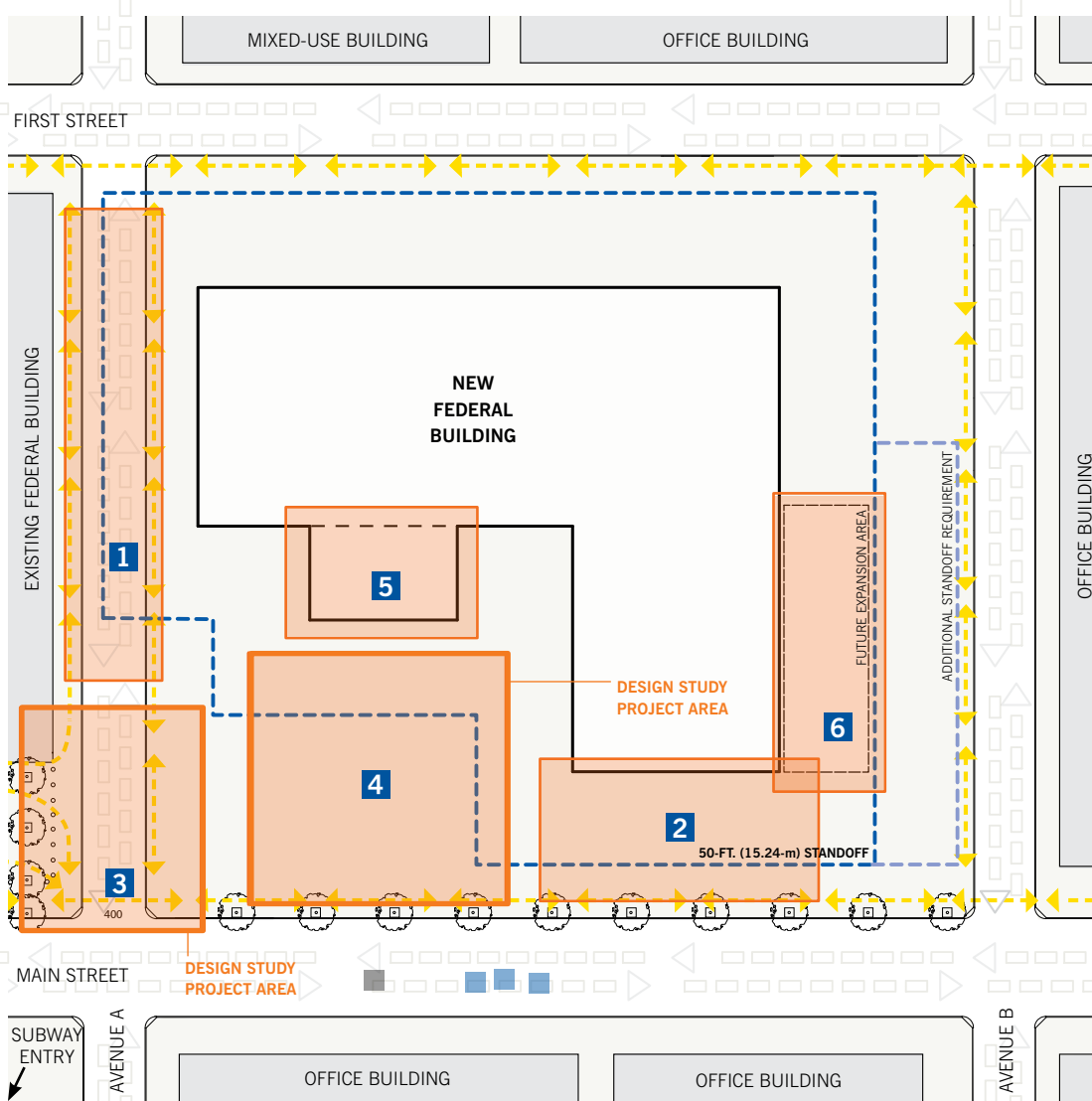
Test case assumptions

- 1** There is an existing federal building across Avenue A from the site. The street between the two federal buildings falls within the likely standoff area of the new federal building.
- 2** The maximum available standoff differs on each side of the building, but the minimum of 50 feet (per ISC criteria) is a starting place for determining the location of perimeter barriers.
- 3** As the site design is developed, provisions should be included for first responder vehicles, which may need direct access to all sides of the building in an emergency.
- 4** Security measures are to be integrated into the design of a multipurpose public space.
- 5** The design of the new federal building includes a hardened lobby vestibule to screen visitors prior to entry into the main building.
- 6** A square footage allowance has been provided for 30-year expansion, to accommodate future building needs. The site must provide enough space for the additional standoff requirement in the event that there is an addition to the building.

Many new federal facilities include security screening outside the main building envelope and massing and detailing in a contemporary architectural language.



Test Case 5: Site Security Assessment Plan



Security and Site Design Topics

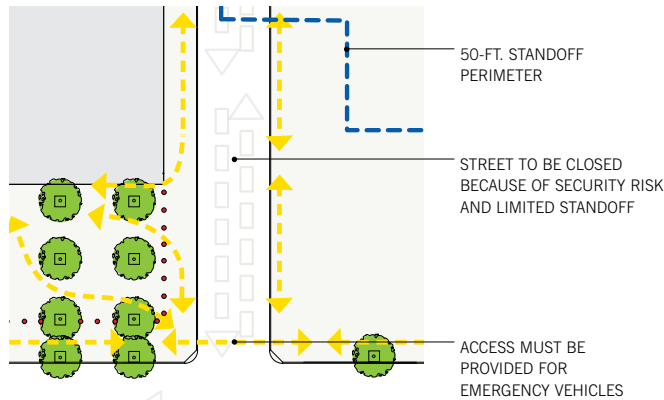
- 1** Through discussions with the city, the Project Team found that traffic volumes on Avenue A were low, and it may be appropriate to request street closure. This would enable the building footprint to move closer to the west property line, in keeping with the surrounding urban fabric.
- 2** On a dense urban site, maintaining a hardened perimeter at the required minimum standoff may interrupt the street edge. The team should look for opportunities to minimize unnecessary standoff and design usable space where possible.
- 3** Emergency access should be coordinated with the appropriate agencies at the earliest stages of site design.
- 4** A multipurpose public space that supports activity can enliven the site and allow room for public use and queuing.
- 5** The site layout should correspond with the building's lobby vestibule to balance all required security and facility operations needs with clear pedestrian circulation.
- 6** The 30-year expansion zone may be temporarily programmed until the site is further developed.

Test Case 5: Conceptual Strategy Plan

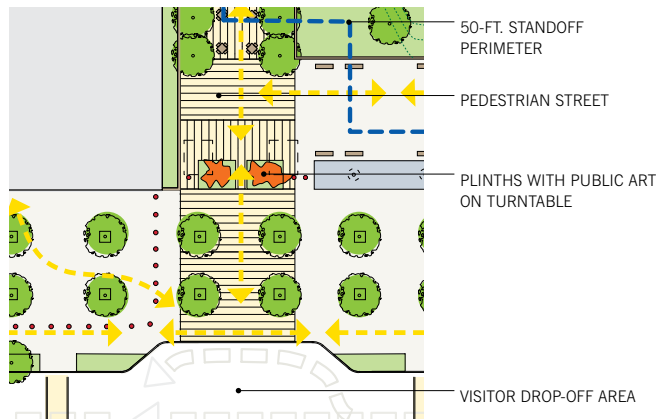


Project Area: Zone 3

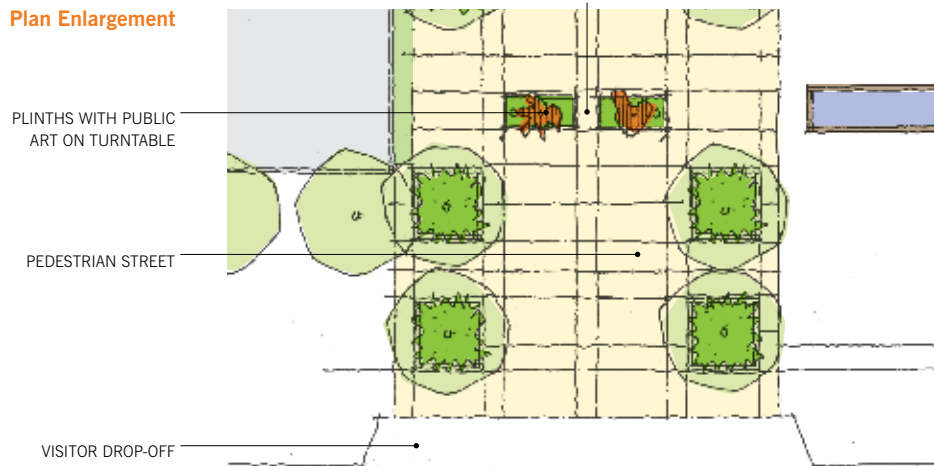
Existing Conditions Plan



Design Solution Plan



Plan Enlargement

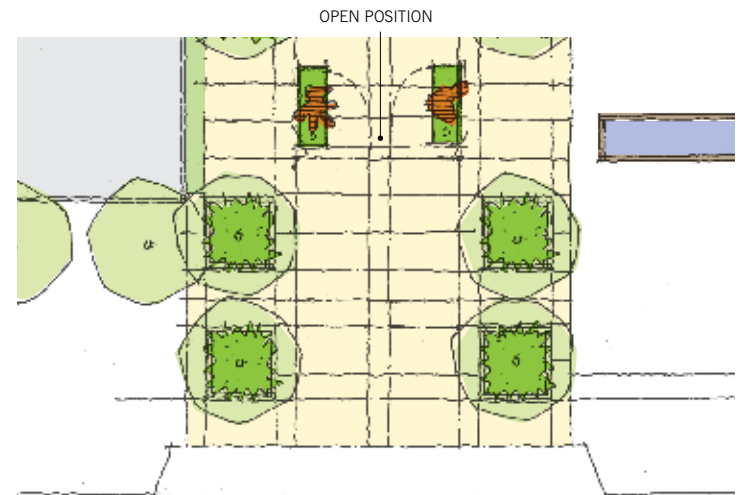


Security Design Problem

When a street is vacated for security purposes, significant investment is required to justify the impact to the surrounding urban environment. Practical issues, such as emergency vehicle access, must also be considered. The security elements needed to secure the standoff perimeter must allow first responders to quickly and easily access the site, if needed. Security elements should be multifunctional.

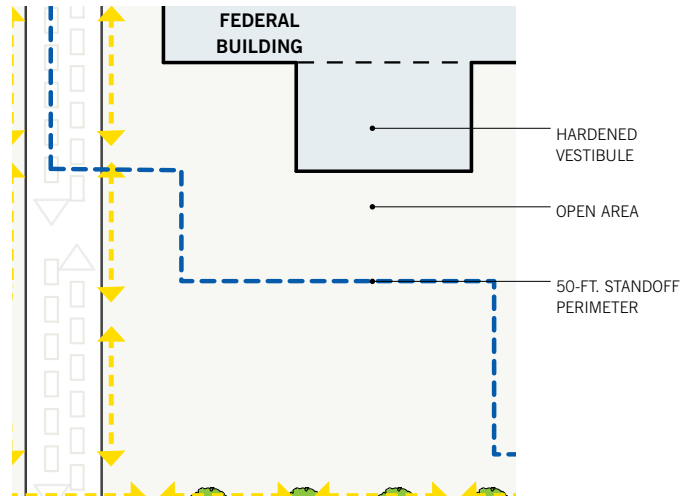
Proposed Security Design Solution

The permanently vacated street between the existing federal building and the new federal building is developed as a pedestrian public space that links the plazas of the two buildings. Special paving, planter plinths, a variety of seating areas, and an allee of canopy trees define the new pedestrian street. Turntables at the entry to the pedestrian space from the Main Street plaza secure the standoff perimeter and provide a base for public art pieces. The turntables may be rotated to allow vehicular access in the event of an emergency. On the opposite end, at First Street, an apron allows access for emergency vehicles, while retractable bollards protect the standoff (not shown here.)

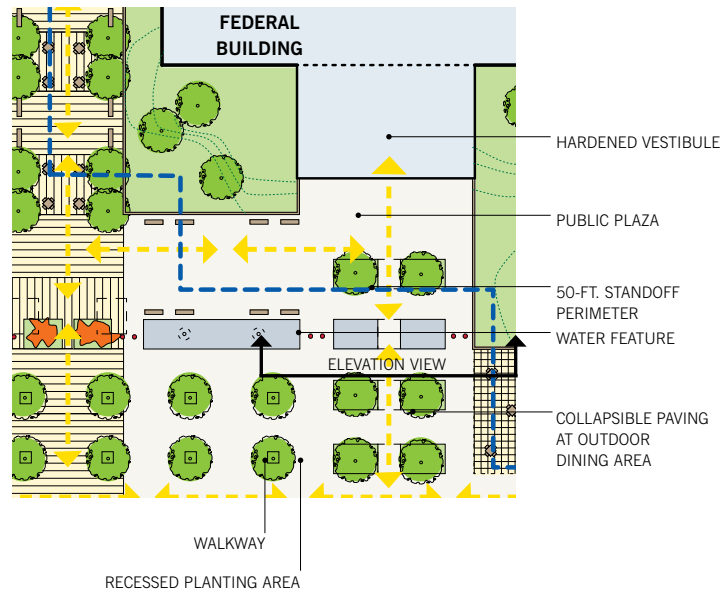


Project Area: Zone 4

Existing Conditions Plan



Design Solution Plan



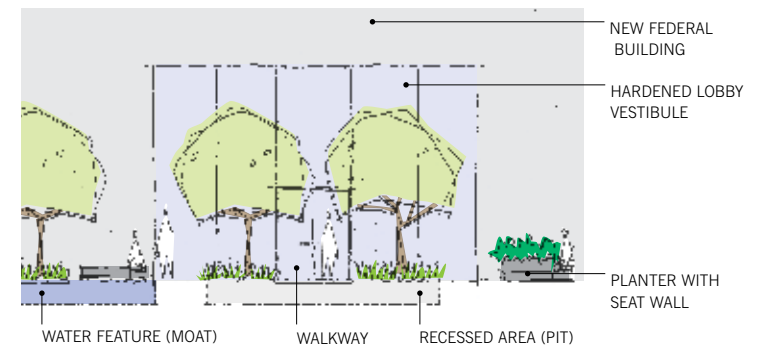
Security Design Problem

A multipurpose public space programmed for special functions activates the site, allows room for safe public demonstration, and manages queuing. Protecting this open space without overuse of security elements can be challenging. Public space surrounded by bollards or Jersey barriers can seem forbidding to pedestrians and discourage public use. It is critical to strike a balance between effective security design and quality public space to ensure the safety of users and foster activity.

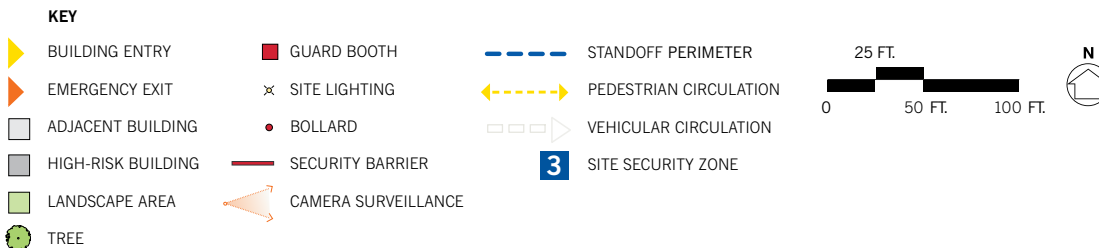
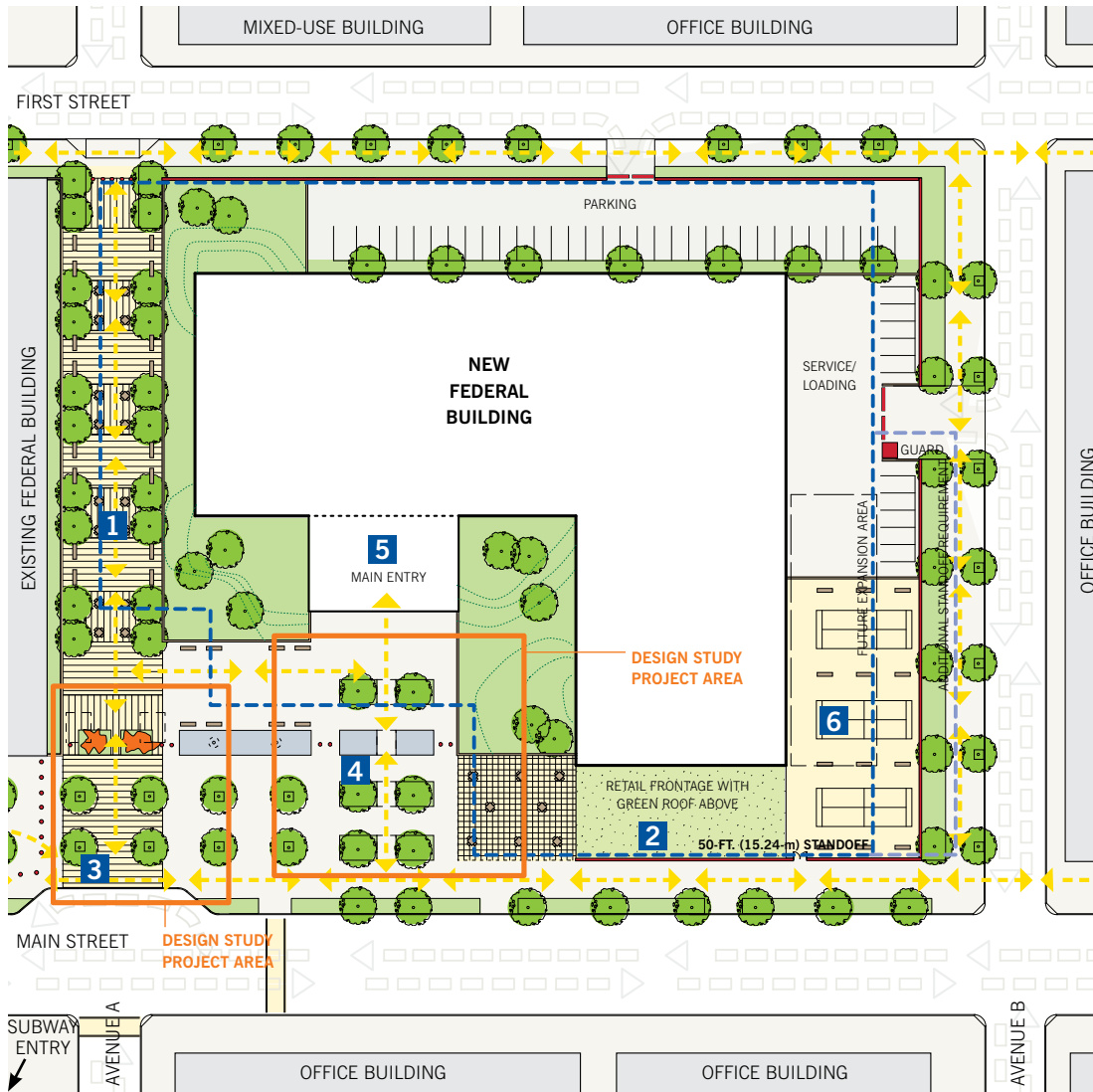
Proposed Security Design Solution

The landscape elements that define the space also protect the building and the public space. A mix of reinforced site walls, planting, recessed areas that serve as pits or moats, and collapsible paving prevent vehicular approach, while maintaining openness. Collapsible paving and other modern technologies are usually easiest to incorporate into new construction, when they can be designed in conjunction with existing underground utilities. The quality of public space is greatly improved when measures are unobtrusive.

Elevation View



Test Case 5: Final Concept Plan



Security and Site Design Solutions

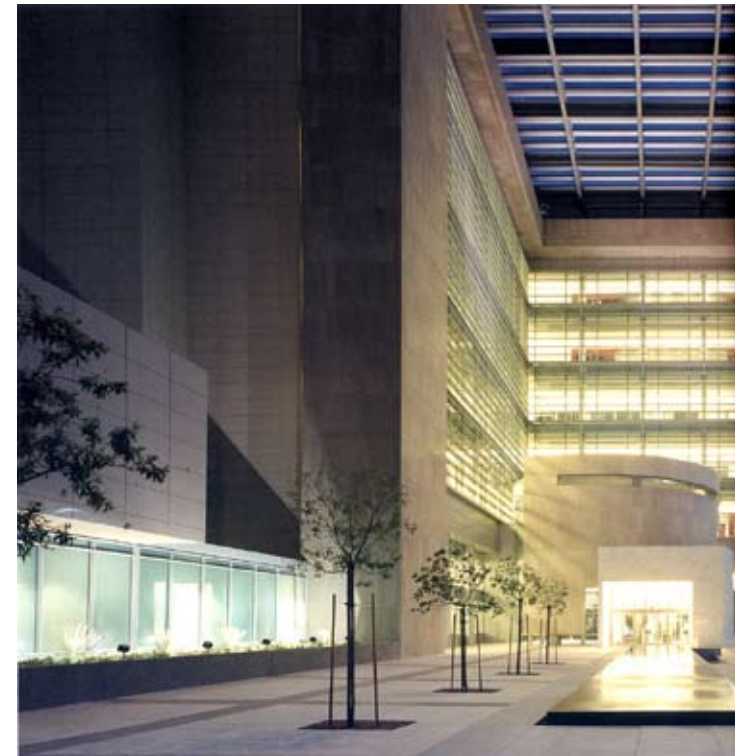
- 1 The permanently vacated street between the existing federal building and the new federal building becomes a pedestrian public space. Permanent and temporary seating creates an amenity for users of the site.
- 2 Retail frontage protects the standoff along Main Street; the storefronts provide a physical barrier, while activating the street edge and encouraging public use.
- 3 Moveable plinths on hinged turntables restrict vehicular access to the pedestrian street. In an emergency, the plinths rotate to allow emergency vehicles into a dedicated fire lane.
- 4 A public plaza provides both passive and programmed open space. Security elements integrated into landscape features maintain openness and connect the site to its context.
- 5 The site's landscape and security elements and hardened vestibule create secure public space, protect the building, and manage the entry process.
- 6 Land set aside for future expansion is temporarily programmed with sports courts, which require minimal investment yet provide recreation for both the site's tenants and the neighborhood.

Sculptural bollards can function as public art, while carefully designed berms prevent vehicle entry even as they blend into a site's topography.





Though new buildings in urban locations must meet the most stringent security criteria, they also offer the greatest opportunities for innovative site security design. Such projects demand consideration of security from the earliest stages of site selection, with a long-term vision of what site security can be. When done well, these projects retain and enhance the positive urban presence of the federal government. As setbacks become lively urban spaces and the new public squares of today, the federal facilities they protect become important, contributing members of their communities. In short, constraints demand creativity, and creativity advances site security in all dimensions.



Acknowledgements

Creating a guide to site security design requires at least as much collaboration as security design itself and entails similar complexity. So it is with immense gratitude that we thank the consultants, designers, security experts, and government employees who have helped craft this document over the past two years. Special thanks must go to our consultant team, who worked closely with us to bring together text, image, and graphic organization so that our message was clear. Mary Ann Lasch, Heather Modzelewski, and Elizabeth Riordan at Gensler; Jennifer Cosgrove, Samantha Harris, and Mark Rios at Rios Clementi Hale Studios; and Hyun Auh and Emanuela Frigerio at C&G Partners were all instrumental in making this project possible. Hinman Consulting Engineers and the staff at Carol R. Johnson Associates contributed as members of the consulting team at various stages.

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Though the *Site Security Design Guide* is intended to convey a timeless philosophy—that strategic reduction of risk, comprehensive site design, collaborative participation, and a long-term development strategy are hallmarks of successful site security design—we realize that ultimately this is a living document. So our last thank you goes to those who will use this *Guide* and move it forward, with innovative design and security concepts that demonstrate ever better solutions in the spirit of these hallmarks.

Frank Giblin
Office of the Chief Architect

Brian Goldstein
Office of the Chief Architect

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