

Test Case 2

Historic Building/Urban Location

Existing Conditions/Site Context Plan Test Case Assumptions	119
Site Security Assessment Plan Security and Site Design Topics	120
Conceptual Strategy Plan	121
Project Area Design Studies Project Area: Zone 2 Security Design Problem Proposed Security Design Solution	122
Project Area Design Studies Project Area: Zone 3 Security Design Problem Proposed Security Design Solution	123
Final Concept Plan Security and Site Design Solution	124

INTRODUCTION

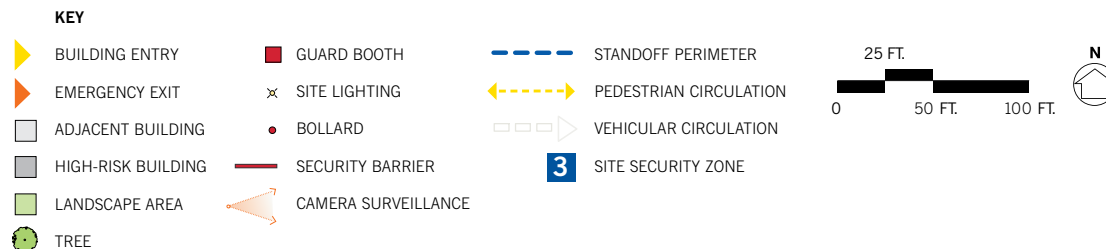
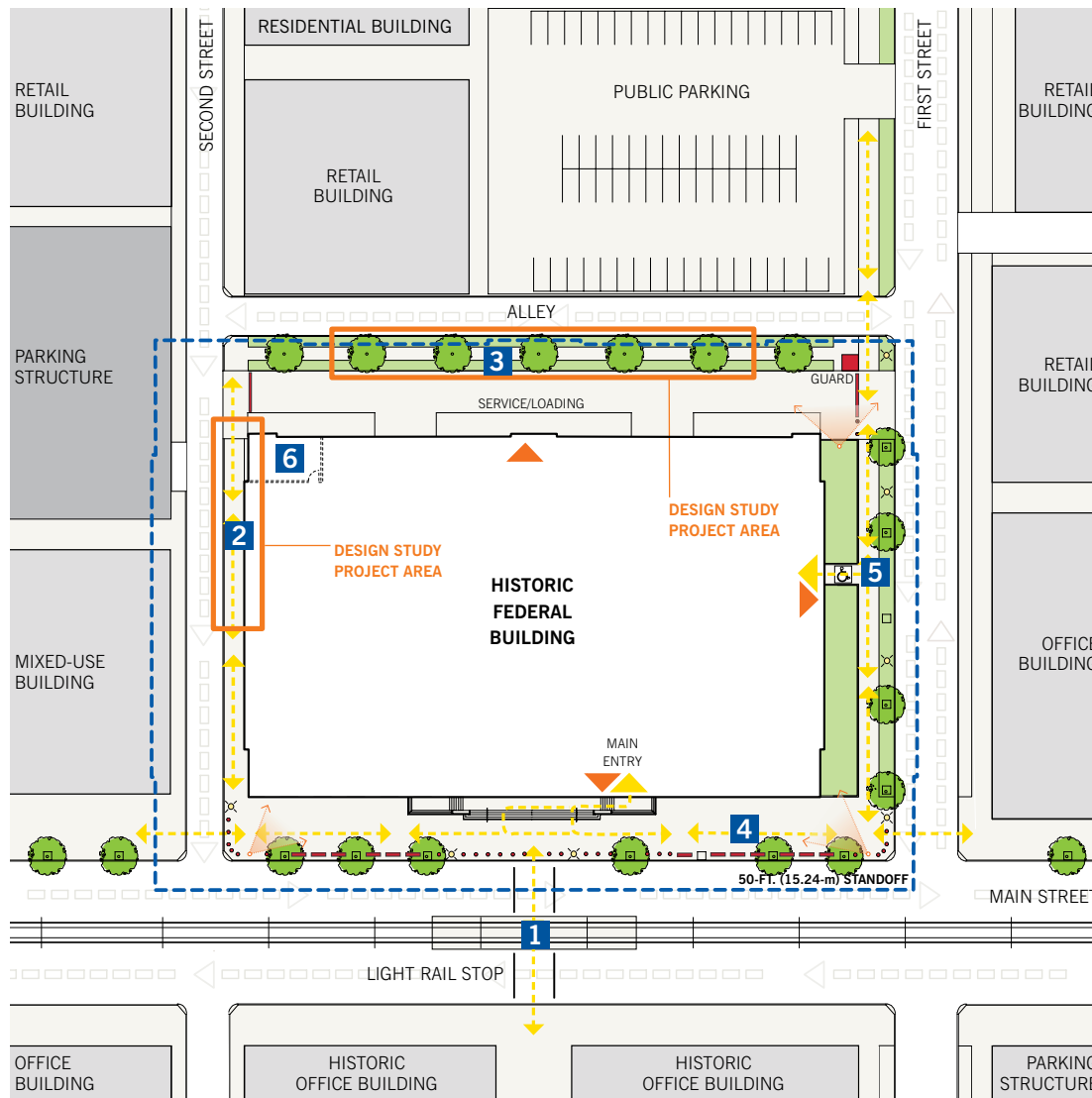
This test case presents an opportunity to augment security at a historic federal courthouse, recently added to the National Register of Historic Places, and to preserve and enhance the fabric of the historic district in a dense urban area. The historic building is constructed of thick masonry, which will resist a measurable degree of force. Remnants of the historic landscape, including large, healthy specimen trees, are intact around the site. A classic formal stairway from Main Street leads to the lobby. Unfortunately, this historic configuration does not easily accommodate the security-screening queue or inspection equipment. The recently added entry at First Street, for persons with disabilities, is neither up to code nor in keeping with the historic character of the site.

A light rail stop on Main Street is on direct axis with the building entrance and a historic pedestrian walkway across the street. Temporary barriers placed around the site are not consistent with the historic nature of the building or the district. The temporary barriers are not crash-rated to absorb the force of an oncoming vehicle.

Traffic studies conclude that the surrounding sidewalks should not be widened to increase standoff and that the heavily used public alley north of the courthouse should remain open. This creates control problems for the loading dock at the rear of the building.

This federal courthouse houses only court-related agencies and has a medium ISC security rating. Surrounding building uses are primarily low-risk office and retail. A private parking structure across narrow Second Street is considered a high-risk adjacency, particularly as the office of a high-profile federal occupant is located directly across the street. Many courthouse employees park in a public parking lot, accessed by a poorly lit sidewalk.

Test Case 2: Existing Conditions/Site Context Plan



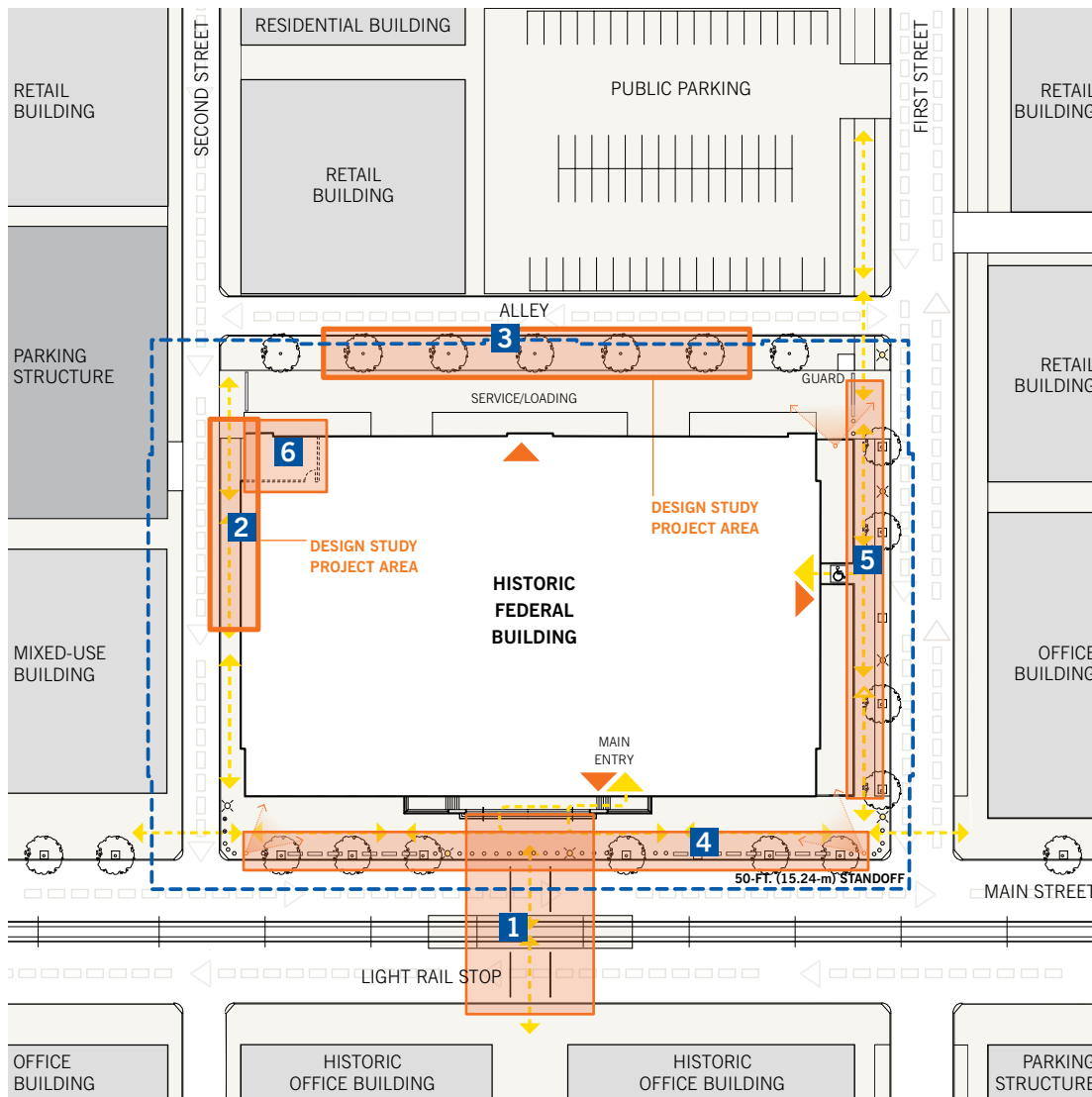
Test Case Assumptions

- 1 The historic federal building is located near a light rail transportation stop in a historic district. Key features are the historic light standards and street tree planting.
- 2 The sidewalks along Second Street cannot be widened to increase the standoff distance between the federal building and the adjacent parking structure, which presents a high risk.
- 3 There is a landscaped area between the loading dock and the alley north of the building, which is part of the public right-of-way.
- 4 There are no site amenities, such as outdoor seating or a bus shelter, serving tenants and visitors to the facility.
- 5 The ADA entry at the First Street side of the building is separated from the main building lobby.
- 6 The office of a high-profile occupant is located on the first floor of the northwest corner of the building, on the side of the building where the standoff is most compromised.

Rich architectural detailing, formal entry, and minimal setback are characteristics common to many urban historic federal buildings.

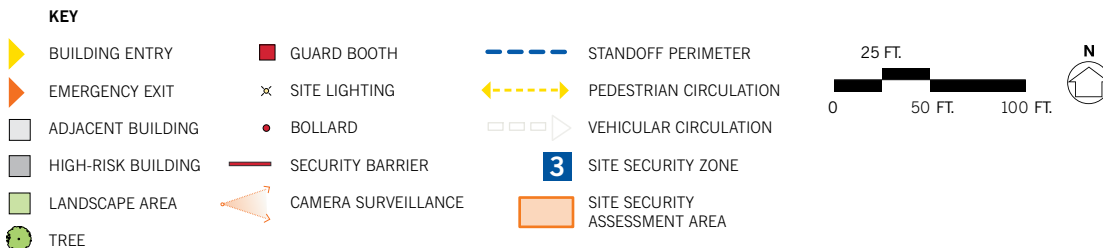


Test Case 2: Site Security Assessment Plan

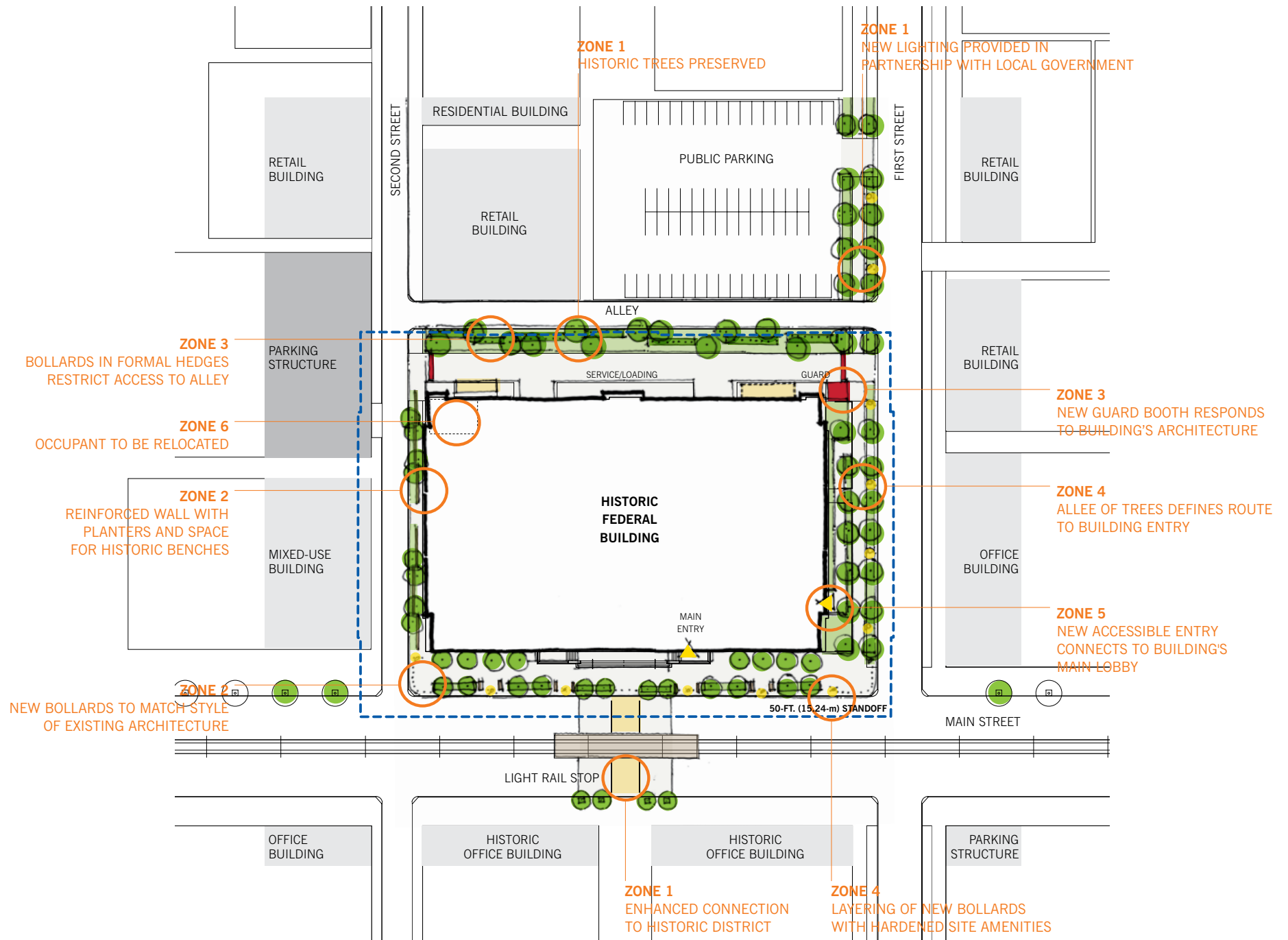


Security and Site Design Topics

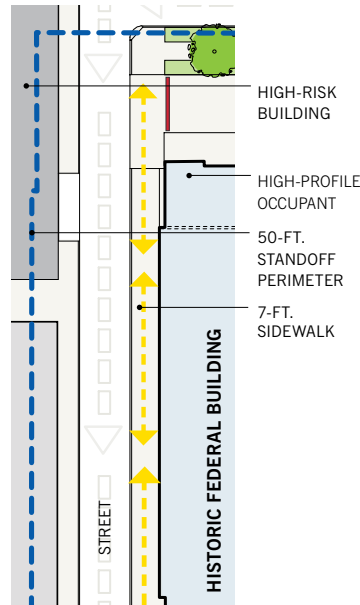
- 1 The proximity of the building to the light rail stop presents an opportunity to develop public space that can integrate the building into the urban fabric of the existing historic district.
- 2 The privately owned parking garage within the 50-foot standoff represents a high risk. The federal building may need additional hardening on the west side to mitigate vulnerability.
- 3 There is insufficient vehicular and pedestrian access control between the alley and the service/loading area. The mature trees and formal hedges in the median were part of the site's original historic landscape design.
- 4 The sidewalk along Main Street is littered with a mix of temporary and permanent barriers that are neither sufficiently anchored nor reinforced to stop a vehicle. They ignore the historic architecture of the building.
- 5 Accessible entries located away from the main entry require additional security screening and may not conform to the intent of accessibility laws or the principles of universal access.
- 6 The office at the northwest corner is highly visible from the street and vulnerable to threat from the adjacent high-risk building, as well as from traffic along Second Street, which falls within the 50-foot standoff zone.



Test Case 2: Conceptual Strategy Plan



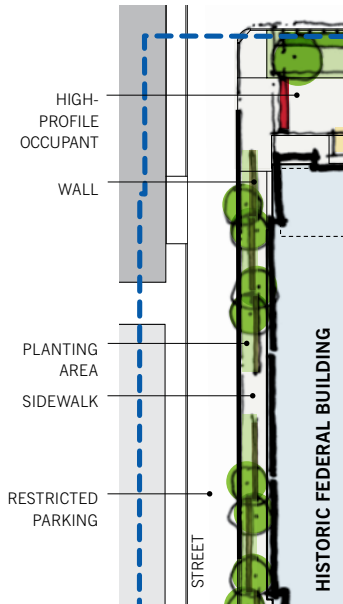
Existing Conditions Plan



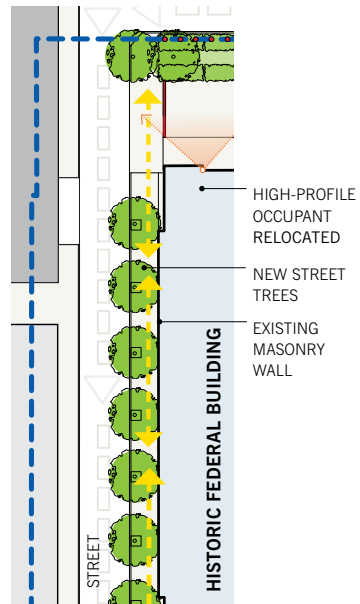
Security Design Problem

Current ISC standards for standoff distances can be impossible for a historic building in an urban location. Adjacent buildings within the standoff perimeter should be evaluated for potential security risks. For example, a privately owned parking garage within the 50-ft. standoff represents a higher risk than a retail building or a parking garage outside the standoff. Risk acceptance might be appropriate for a low-risk building, while mitigation measures such as sidewalk widening or the acquisition of adjacent properties might be necessary if the risk is deemed too high. In this case, the sidewalk may not be widened because of local transportation needs, so alternative solutions need to be explored.

Conceptual Strategy Investigation: Rejected



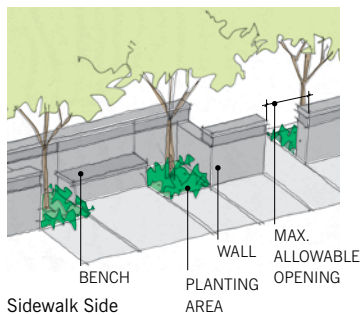
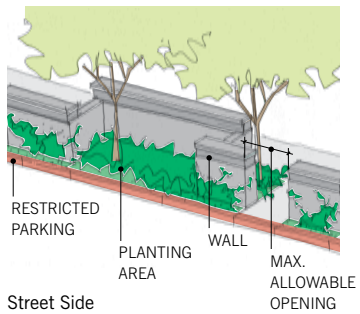
Design Solution Plan



Proposed Security Design Solution

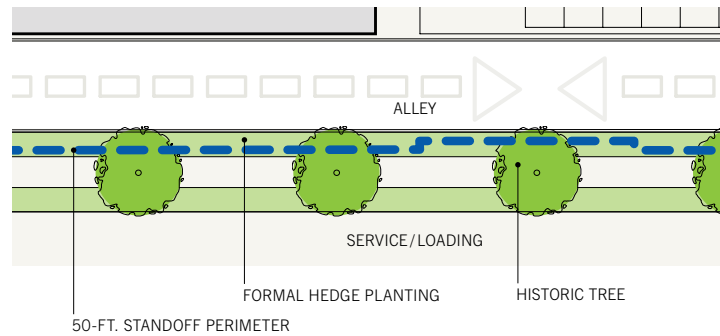
As a means of providing a hardened perimeter, the team investigates a staggered wall system with integrated seating and planting areas. Due to the spatial constraints of a dense urban site, however, this hardened wall element would provide only marginal protection. Also, given the thick masonry construction of the historic structure, the building itself resists a measurable degree of force.

The approach in this case is to accept the risk on this side of the building and not provide additional hardening. Operational measures are used to mitigate security concerns; for example, a high-profile occupant is relocated to a safer side of the building. Street parking is eliminated on both sides of the street within the 50-ft. standoff on the west side of the building.

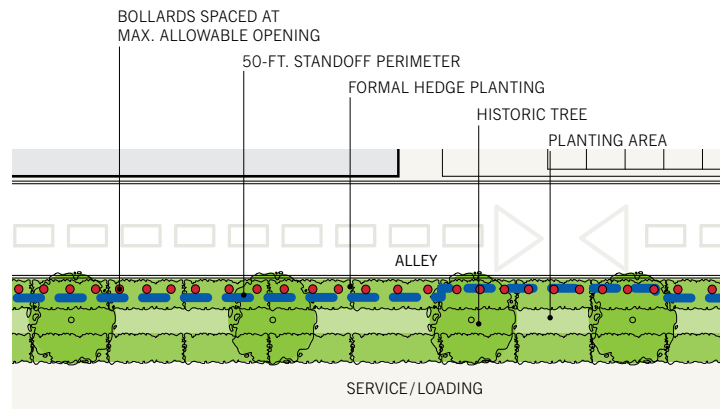


Project Area: Zone 3

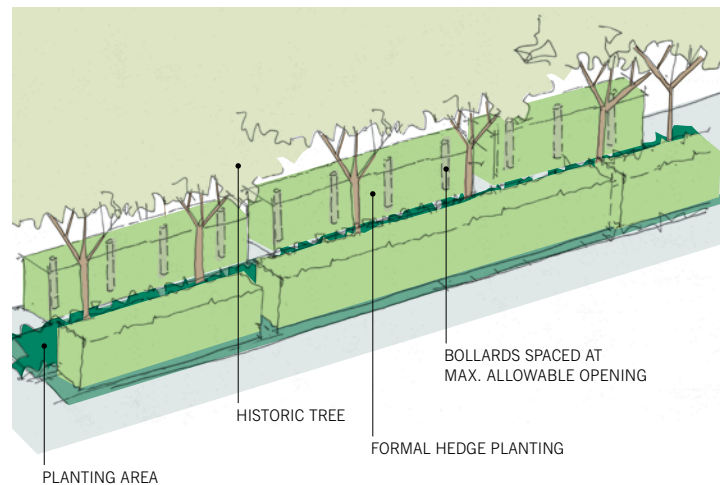
Existing Conditions Plan



Design Solution Plan



Bird's-Eye View



Security Design Problem

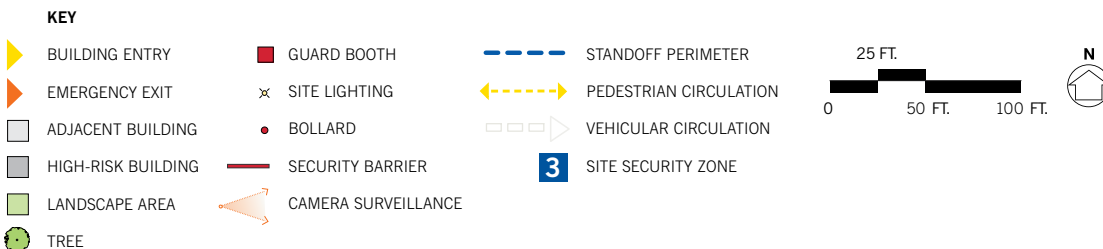
Alleys and service entries can present security issues with regard to public access. In some cases, an alley must be maintained as part of the public right-of-way. This can present significant risk, especially when the alley is in the required standoff. Both vehicular and pedestrian access to the building site through the public alley should be controlled and carefully monitored. Service entries should have limited access regulated by staffed guard booths, or automated security devices activated by key cards. The historic trees along the median present another issue when considering the implementation of security elements. The footing required to adequately anchor bollards or site walls can disrupt or destroy the root systems of mature trees if not placed properly. Underground conditions should be investigated and documented to understand possible impediments to effective security design.

Proposed Security Design Solution

Security hardening is added to the median between the alley and the service entry to prohibit vehicular approach from the alley. Bollards are combined with formal hedgerows in a staggered pattern to create a secure edge along the 50-ft. standoff perimeter that is aesthetically mitigated by ground cover and tree plantings. The planting serves to keep pedestrians from walking over the median into the service area. The historic trees are preserved by placing the bollards close to the curb line at the alley, where their footings are clear of the trees' root systems. The hedges originally designed for the site are removed and replaced with the same plant material to permit the installation of the bollards, while maintaining the historic design intent.

Alternately, the design team might have chosen to use low ground cover rather than hedges here. In cases where there is concern about concealed objects or sight lines, this approach may be more appropriate. Even without concealing the bollards, this method of greening the ground plane still would soften their visual impact.

Test Case 2: Final Concept Plan



Security and Site Design Solutions

- 1** An enhanced crosswalk emphasizes the pedestrian connection from the building's main entry to the light rail stop and the historic district beyond. New street amenities, such as benches and bicycle racks, heighten public use.
- 2** After careful study of reasonable options, risk acceptance is a better alternative than investing scarce resources on security measures that would not significantly mitigate risk.
- 3** The median between the alley and the service entry incorporates security measures that prohibit vehicular approach and regulate pedestrian access, while accommodating historic landscape elements.
- 4** A kit-of-parts consistent with the historic character of the building includes security elements that are also site amenities, such as a new bus shelter, lighting standards, and covered seating.
- 5** A new ADA entry near the building's main lobby integrates into the landscape area on the east side of the site.
- 6** The high-profile occupant is relocated to an office on the First Street side, where reinforced site walls and raised planting areas offer better protection.

Bollard and guard booth designs are based on material and style cues from existing features.





Site security at historic and other landmark buildings demands extra care, as their architectural, landscape, and urban design may contribute to their significance. Security elements must take cues from existing features in order to serve unobtrusively. At some sites, where a building is only a short distance from a public street, the introduction of physical countermeasures may provide little security enhancement, but considerable negative impact. Where this is the case, Project Teams should consider how operational measures, such as extra security patrols or interior space planning, might better serve the project's comprehensive goals.

