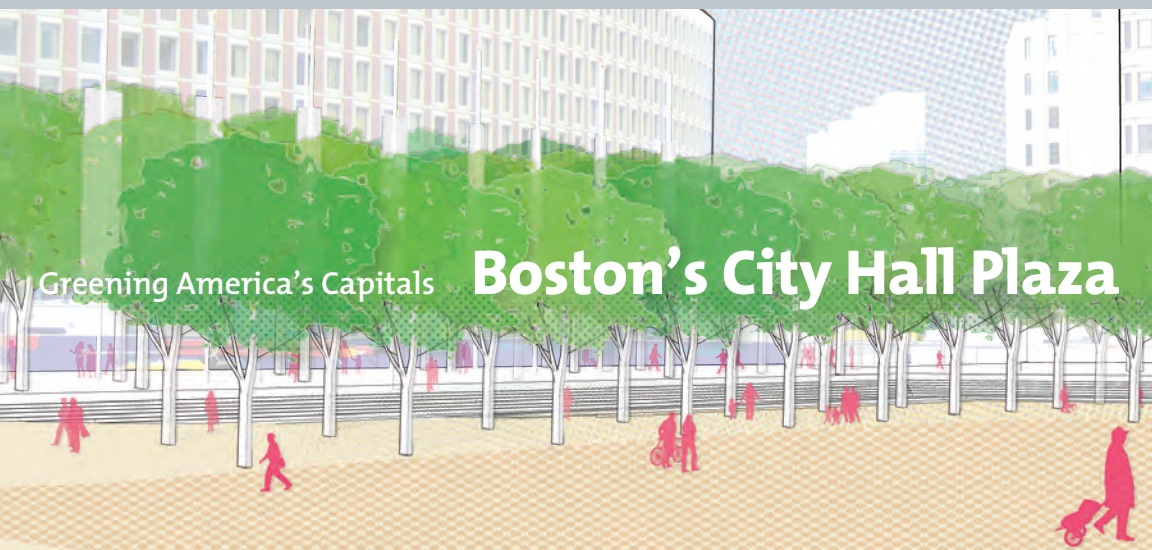


US EPA ARCHIVE DOCUMENT



Greening America's Capitals

Boston's City Hall Plaza

Utile, Inc.
Reed Hilderbrand Associates
Durand & Anastas Environmental Strategies
Nitsch Engineering
For the U.S. Environmental Protection Agency

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An aerial photograph of Boston's City Hall Plaza. The plaza is a large, open, reddish-brown paved area in the center, surrounded by various buildings. To the left is a large, curved building with a dark roof. To the right is a large, rectangular building with a light-colored roof. The surrounding area is filled with other buildings, streets, and some greenery.

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July 2011

Prepared for

U.S. Environmental Protection Agency
U.S. Department of Housing and Urban
Development
U.S. Department of Transportation
&
The City of Boston

Prepared by

Lead Consultant
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Durand & Anastas Environmental Strategies
Nitsch Engineering

Title Page: An aerial view of the plaza.

Copyright page and contents page: A photocol-
lage of the existing plaza, with significant
structures or areas of the plaza noted.



| Community Arcade

| JFK Building Lower Wing

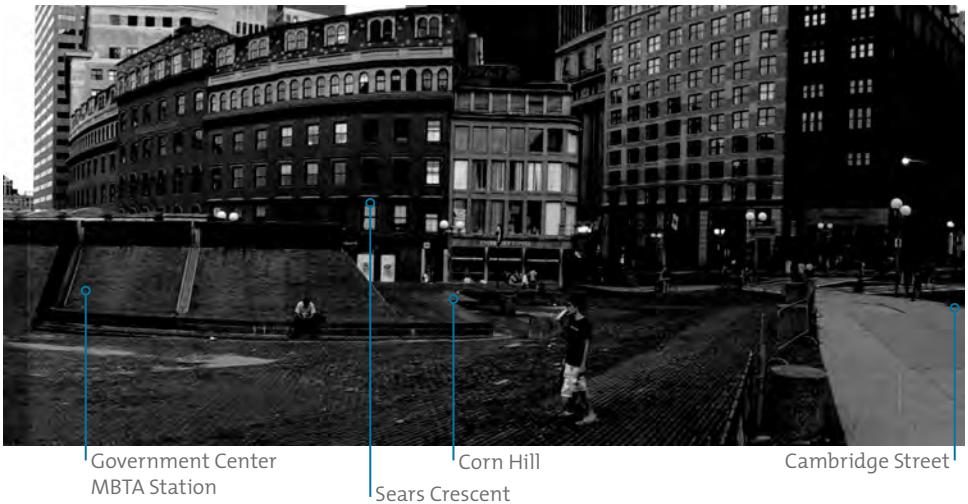
Boston City Hall |

Greening America's Capitals is a project of the Partnership for Sustainable Communities between EPA, the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (DOT) to help state capitals develop an implementable vision of distinctive, environmentally friendly neighborhoods that incorporate innovative green building and green infrastructure strategies. EPA is providing this design assistance to help support sustainable communities that protect the environment, economy, and public health and to inspire state leaders to expand this work elsewhere. Greening America's Capitals will help communities consider ways to incorporate sustainable design strategies into their planning and development to create and enhance interesting, distinctive neighborhoods that have multiple social, economic, and environmental benefits.

Boston, Massachusetts, was chosen as one of the first five state capital cities to receive this assistance beginning in the fall of 2010, concluding with a site visit in the winter of 2010.

More information at <http://epa.gov/smart-growth/greencapitals.htm>

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Executive Summary

City Hall Plaza, a 7-acre red brick expanse in the center of downtown Boston, is one of Boston's largest civic spaces. Envisioned as a grand public space in the 1960s, it sits in front of City Hall, flanked by federal government buildings and private businesses. This expanse of open space is a rare asset to have in the middle of a city, but City Hall Plaza is often devoid of visitors, windswept, and barren. The character of City Hall Plaza can be improved through sustainable planning and design approaches that combine forward-thinking environmental strategies and a focused understanding of how the plaza can be better used for a wider variety of transportation choices and civic events.

The intention of this report is to provide the City of Boston with both a comprehensive vision for City Hall Plaza as well as a set of incremental steps to achieve that vision. The designs in this report are a collaboration between the design team—comprised of Utile, Reed Hilderbrand Associates, Durand & Anastas Environmental Strategies, and Nitsch Engineering—and the City of Boston's Environment & Energy Services (EES) and Public Facilities Department (PFD) departments, the Boston Redevelopment Authority (BRA), the Mayor's office, and the U.S. Environmental Protection Agency.

A three-day design workshop was held in December 2010 that engaged key agency partners, designers, planners, scientists, and other experts (see Appendix B for details). In addition, the City of Boston organized a parallel civic engagement process with a series of public symposiums at which experts and the design team presented thoughts and observations about City Hall Plaza. The workshop and report are funded by U.S. EPA as part of the agency's Greening America's Capitals program. The program provides assistance to state capital cities to envision implementable designs for specific neighborhoods, public spaces, or corridors that offer greater environmental, social, and economic benefits.

Two design scenarios are presented in this report. Both focus on creating right-sized civic spaces for the plaza that perform better environmentally. The first involves minimal regrading and uses trees to better define the main plaza space and the north plaza area. The second regrades much of the plaza to create a continuous slope from Congress Street to Cambridge Street and subdivides the plaza with allées of trees. Both scenarios achieve the following goals:

- » Help develop an implementable vision of a distinctive, environmentally friendly civic place
- » Create well-defined edges and entrances
- » Provide more bike access and parking
- » Connect the plaza to existing streets
- » Increase green elements such as trees and vegetation for better stormwater management
- » Support energy efficiency and green building improvements in City Hall and nearby buildings

Importantly, both scenarios create realistic greening options that build upon the critical work that a variety of stakeholders and public agencies are doing to improve aspects of the plaza and its environs: the Massachusetts Bay Transportation Authority (MBTA) is building a new entrance headhouse for the Government Center T station; the Boston Redevelopment Authority is implementing a redesign of Cambridge Street; the City of Boston Public Facilities Department is working to make the existing plaza more accessible; and several private property owners are improving their facilities.

Through smart management and the forging of partnerships with other public agencies, the city has the opportunity to begin a transformation of City Hall Plaza quickly and in concert with current, funded projects.

Environmental Benefits

One of the goals of the study was to synthesize the maximum number of environmental benefits with a cohesive vision for the plaza and environs—to improve the environmental performance of the site in concert with making it a better civic space. The design scenarios that follow tackle this goal in several ways, some explicit and quantifiable and others less measurable. The design scenarios keep City Hall Plaza as primarily a hardscaped area, but add a dense urban tree canopy, which will help clean the air, produce oxygen, absorb ozone, store water, cool the area by providing shade, and perhaps most importantly, help with stormwater management. In addition, the design scenarios make the plaza into a multimodal transportation hub, with bicycle, pedestrian, and T connections—and largely accessible to those with disabilities. Through smart sustainable design and the introduction of green infrastructure, the existing conditions of the plaza can be improved.

Green infrastructure will help to treat rain where it falls and keep dirty stormwater from entering and overwhelming the city sewer systems. Green infrastructure can be broadly defined as smart urban planning and landscape design focused on enhancing general environmental quality and providing utility services, which often includes capturing and filtering pollutants from runoff by passing stormwater through soils and retaining it on site. Specific tools include green roofs and permeable paving materials, planting of trees, alternative designs of streets and building systems, rain gardens, bioswales, and rainwater harvesting. The Charles River Watershed Association estimates that the plaza generates approximately 10 million gallons of runoff in a typical year, or 240,000 gallons of water in a 1-inch storm. Slowing down, treating, or reusing even a small percentage of the stormwater on the plaza will have a significant effect on the overall environmental performance of the plaza, relieve the burden on the city's sewer system, and decrease the flow of runoff from rain or snow into Boston Harbor.

As green infrastructure, trees offer exceptional value. They produce multiple beneficial effects—from stormwater infiltration to cleaning the air to helping to cooling their surroundings to

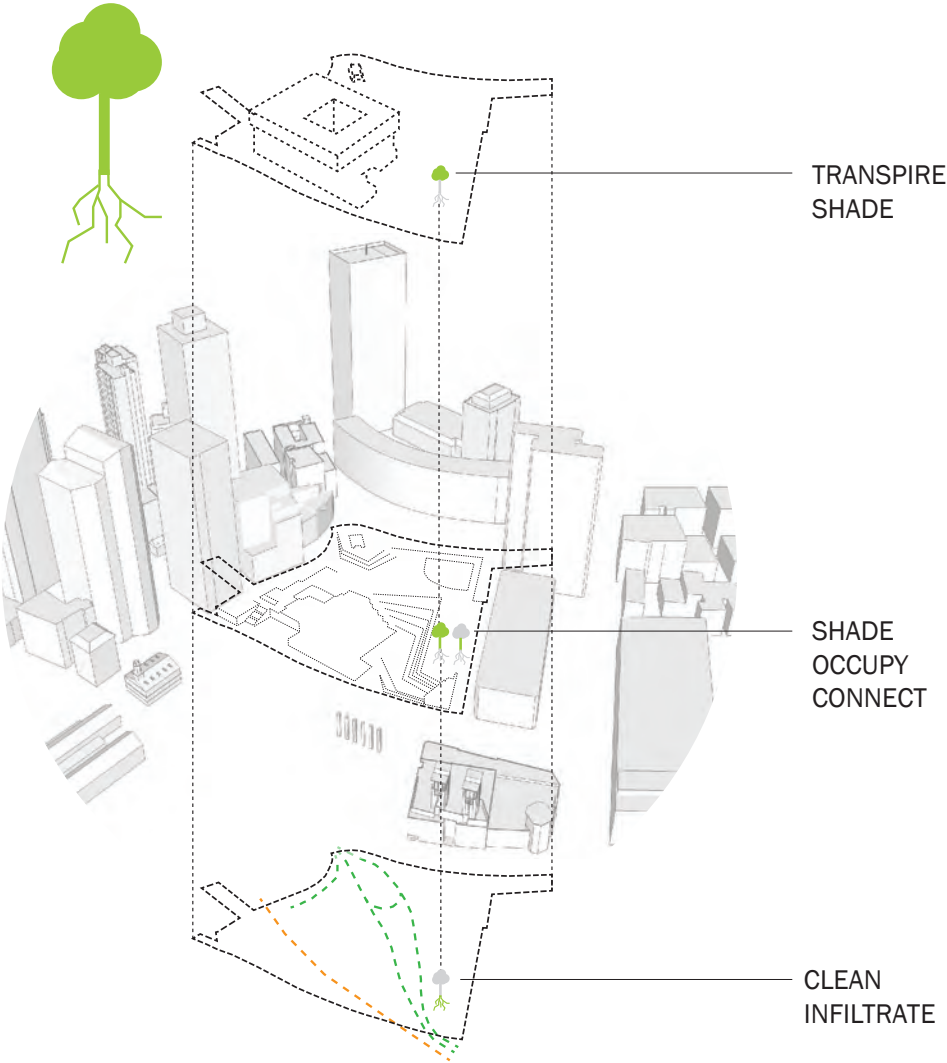


Fig. 1 A tree is good-value green infrastructure because it performs in a myriad of ways—it transpires, shades, occupies, connects, cleans, and infiltrates. This one element cleans the air, slows stormwater, and provides shade and shelter.

absorbing ozone. In addition to the direct environmental benefits, trees will help develop a sense of place by providing shade, defining the edges of the plaza, providing a sense of scale in the plaza, and offering respite for pedestrians, nearby workers, and visitors.

Much research has been conducted on the multiple benefits of green infrastructure, trees, and implementation strategies in recent years. The EPA maintains an extensive database of research, case studies, and best practices. These include:

- » "How does green infrastructure benefit the environment?" (<http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm>)
- » "Green Infrastructure: Types, Applications, and Design Approaches to Manage Wet Weather" (<http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm>)
- » "Green Municipalities" (<http://cfpub.epa.gov/npdes/greeninfrastructure/gicasestudies.cfm#Municipal>)

These resources that can help guide the City, other public agencies, and consultant groups as they work on a redesign of the plaza.

In addition to green infrastructure solutions, the plaza also has the potential to become a multimodal transportation hub with a bike share station, bike parking, more accessible routes, and electric vehicle charging stations. The combined effects of these transportation options would help reduce greenhouse gas emissions, as well as enliven the plaza by providing citizens with more reasons to visit. The plaza could also relieve the maintenance and programming burden of softscaped public spaces in the city, such as the Common, by accommodating additional events. Increased transportation options and programming—together with stormwater management strategies and increased tree canopy—will help develop a more livable, vibrant community around Government Center.

Thoughtful planning and design can improve the environmental performance of the plaza, and can help serve as a model for the rest of the city and the Commonwealth.

Fig. 2 This diagram explains the environmental benefits of trees as well as the infrastructure support trees need to function healthily in the urban environment (*facing page*). Reed Hilderbrand Associates has been researching the performance of urban tree canopy, and they have reached the conclusion that trees offer the best-value green infrastructure because trees clean the air, produce oxygen, absorb ozone, store water and help with stormwater infiltration, cool, and provide shade. *Image from Reed Hilderbrand Associates.*

cool..... up to 20° f
intercept40% of precipitation
store..... 58 gal of rainfall
produce up to 49 lbs of oxygen
sequester up to 13 lbs co2
absorb..... 4 lbs ozone, 3 lbs particulates

urban trees perform as living infrastructure



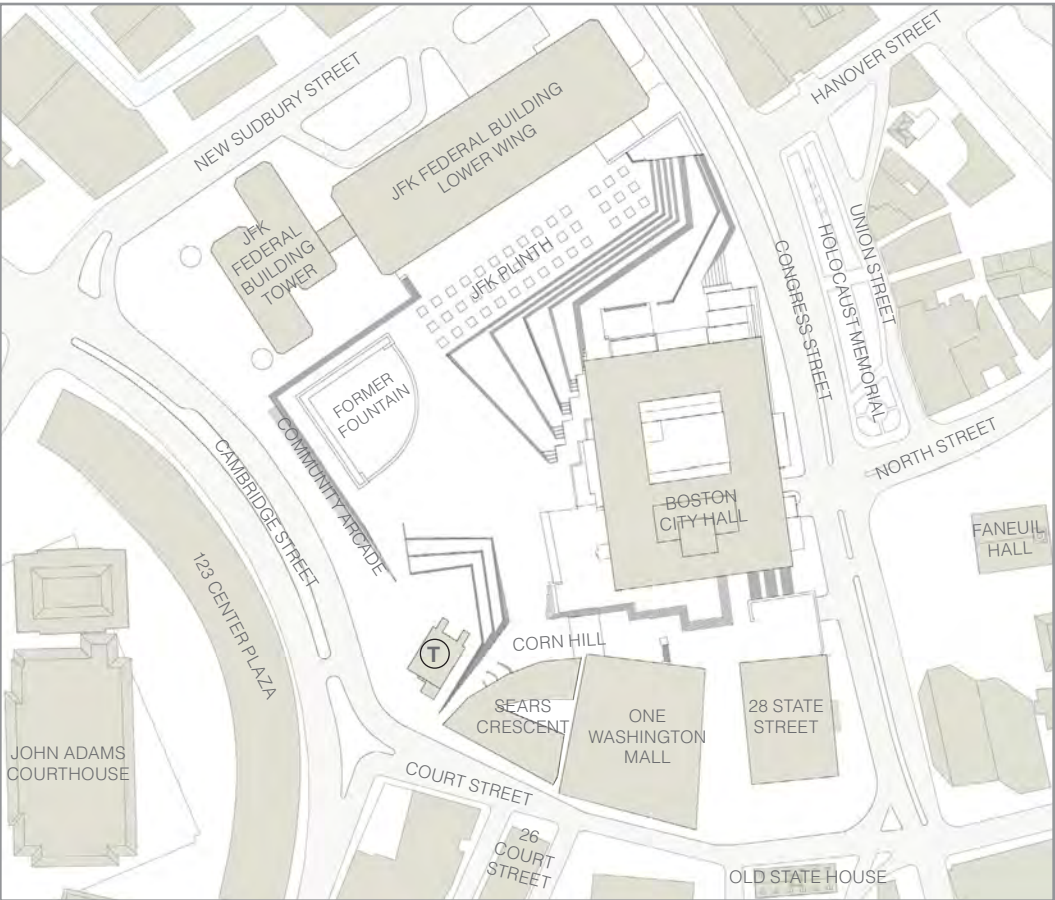
when we provide them with infrastructure support*

support13.8 psi loading
aerate 25% soil volume
grow1390 cu ft/tree root volume
irrigate1.5 in/ft runoff or supplemental
innoculate 8 gal/1000 sf compost tea

* without this, the average life expectancy of an urban street tree is 7-10 years;
requirements based on quercus palustris/pin oak at central wharf, boston

LIFE / SUPPORT

Background



Study Area

The City Hall Plaza study is focused on the 7-acre brick plaza surrounding Boston's City Hall and bounded by Cambridge Street to the west, Congress Street to the east, the Sears Crescent building and Court Street to the south, and the JFK federal buildings to the north. It is in the heart of the Government Center environs that spans from Boston Common on the south-west to North Station to the North End and includes Christopher Columbus Park and Long Wharf. This area encompasses the State House, the Old State House, the Walk to the Sea, Faneuil Hall and Quincy Marketplace, much of the Rose F. Kennedy Greenway, and portions of the Freedom Trail.

Fig. 3 Study Area: The study area is bounded by two arterial roads—Cambridge and Congress streets—and government offices and private buildings.

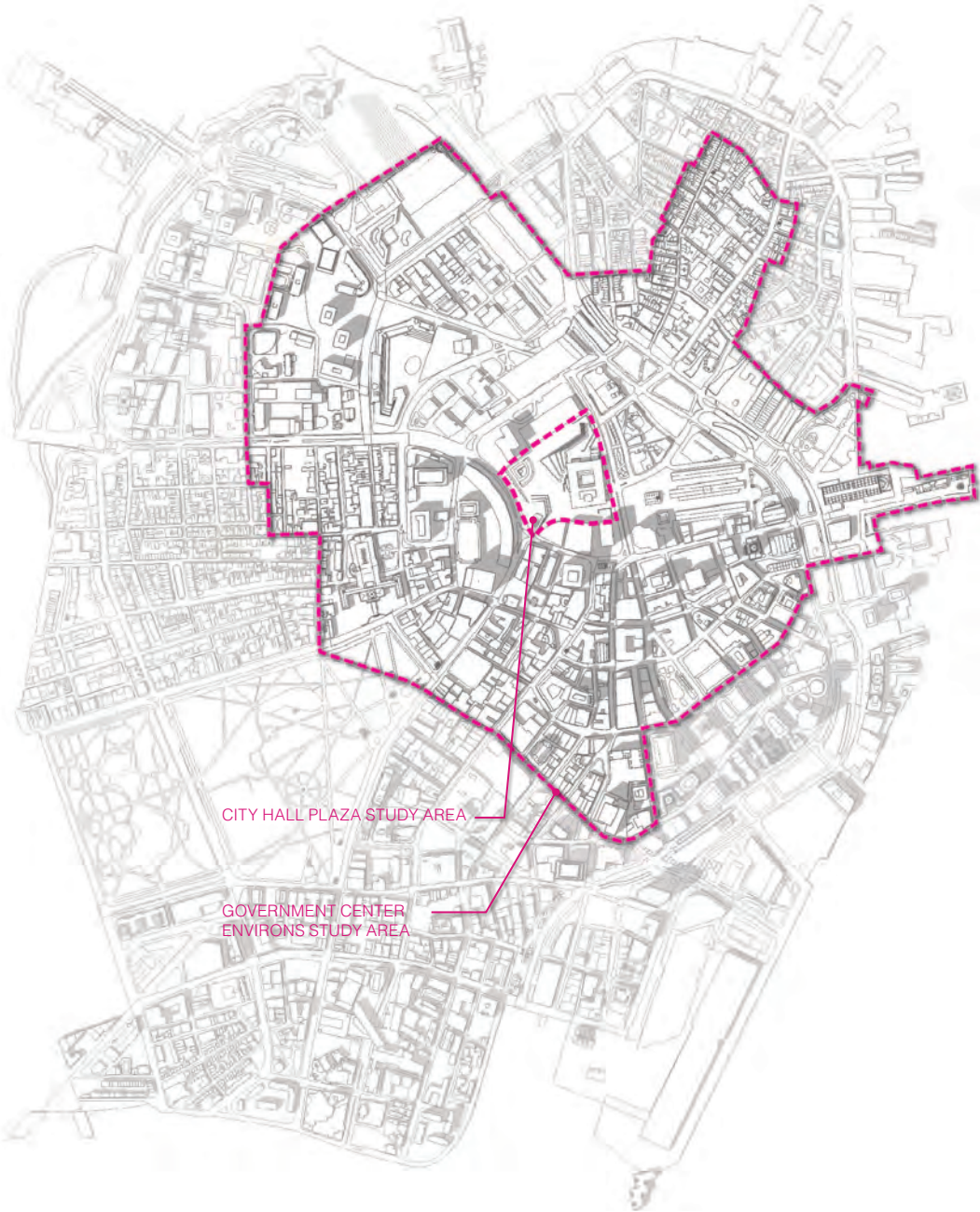


Fig. 4 Government Center Environs: City Hall Plaza is the center of the Government Center environs, which spans from Boston Common to the North End.

Historical Overview

Originally heralded as a harbinger of modernity, an engine of growth for a stagnant economy, and a new commons breathing life and air into the heart of the city, the plaza and its environs came to be disparaged as a brutal and cold environment, disconnected with the life and culture of its context, devoid of economic life and a harsh, windswept open space.



1950s

Fig. 5 Central Artery

The Central Artery (Interstate 93 elevated highway), built between 1951 and 1954, increased vehicular mobility but severed neighborhood connections. Scollay Square was cut off from the market district, the North End, and the waterfront.

Fig. 6 Scollay Square

In the 1950s Scollay Square, an entertainment district, was identified as a key area for redevelopment.

Fig. 7 1959 Master Plan

Image courtesy of Paul Spreiregen. The original 1959 Government Center Master Plan from Adams Howard and Greeley positioned Boston's new governmental and business district at the convergence of established residential and commercial areas slated for conversion and areas targeted for new development.

1960s

Fig. 8 1961 Master Plan

The 1961 master plan for Government Center by Pei Cobb Freed envisioned a large open space inspired by a New England town green. Image courtesy of Harry C. Cobb.



1990s

Fig. 9 Construction of the plaza

Construction began on Government Center in 1963. Kallman McKinnell & Knowles won the open competition in 1962 to design City Hall and the plaza. Land was cleared for redevelopment in Scollay Square and the West End. Under construction is City Hall, the JFK Federal Building, and the State Office Building (now 100 Cambridge Street). These building footprints would have been nearly impossible to accommodate within the confines of the pre-redevelopment urban fabric.

Fig. 10 City Hall

The new City Hall, which opened in 1969 to great fanfare, was heavily promoted as the modern Boston. A *New York Times* insert from 1965 heralded the new City Hall and Government Center complex.

Fig. 11 Redesign efforts

Since the plaza and City Hall opened, its condition has deteriorated, and it is now often a subject of controversy. From the 1990s to today there have been regular attempts to redesign the plaza, ranging from a 1994 ideas competition sponsored by the City of Boston to the Trust for City Hall Plaza proposal by Chan Krieger in 1998 (*shown above*) to design studios in schools.

Fig. 12 Current plaza

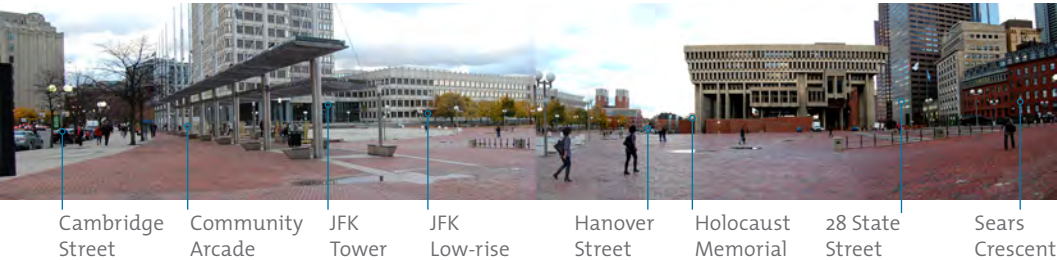
In 2004 the Project for Public Spaces identified City Hall Plaza as the worst single public plaza worldwide. In 2009 the Cultural Landscape Foundation included City Hall Plaza as one of its Marvels of Modernism.

Existing Conditions

City Hall Plaza is a complex urban landscape. The site is laden with varying physical conditions above and below the surface, a wide range of public and private stakeholders, and a complicated history. It occupies a central location in the city but is often perceived as disconnected from its immediate surroundings.

- » City Hall Plaza is a roofscape. Below it are an MBTA Station, MBTA tunnels (both in use and abandoned), a parking garage, vents for the T and the garage, stormwater pipes, various utilities, and steam tunnels.
- » The plaza is mostly owned by the BRA. Adjacent properties are owned by a range of public and private entities. Any significant redesign must engage these stakeholders.
- » The plaza sits apart from nearby destinations. The physical and visual connections to Faneuil Hall and the rest of the city can be improved. Although this is a transit hub, with the Government Center T Station (Green line) and the nearby Bowdoin (Blue line) and State Street (Orange and Blue lines) stations, pedestrian and bicycle routes could be improved.

Fig. 13 This photocollage of the plaza shows the public property and private property owners that border the plaza—the federally- owned JFK buildings and the privately owned Sears Crescent and 28 State Street buildings.





- Crossroads Initiative
- Freedom Trail
- Walk to the Sea
- Historic sites along the Freedom Trail
- Historic sites along the Walk to the Sea

Fig. 14 The plaza is in the middle of the city yet historic paths such as the Freedom Trail and the Walk to the Sea skirt by its edges.

Connectivity

Although the plaza is in the middle of downtown Boston and much of the new development of the last 40 years has occurred within walking distance, it remains isolated from the city. It is perceptually, psychologically, and, in ways, physically separated from the larger city. Two arterial roads—Congress Street and Cambridge Street—border the plaza. The Freedom Trail and the historic Walk to the Sea skirt the edges of the plaza. The Crossroads Initiative, which aims to extend the public realm improvements of the Rose Kennedy Greenway to the rest of downtown, includes Court Street to the south of the plaza and suggests a connection from Hanover Street diagonally across the plaza to the T Station, and thus begins to address this issue.

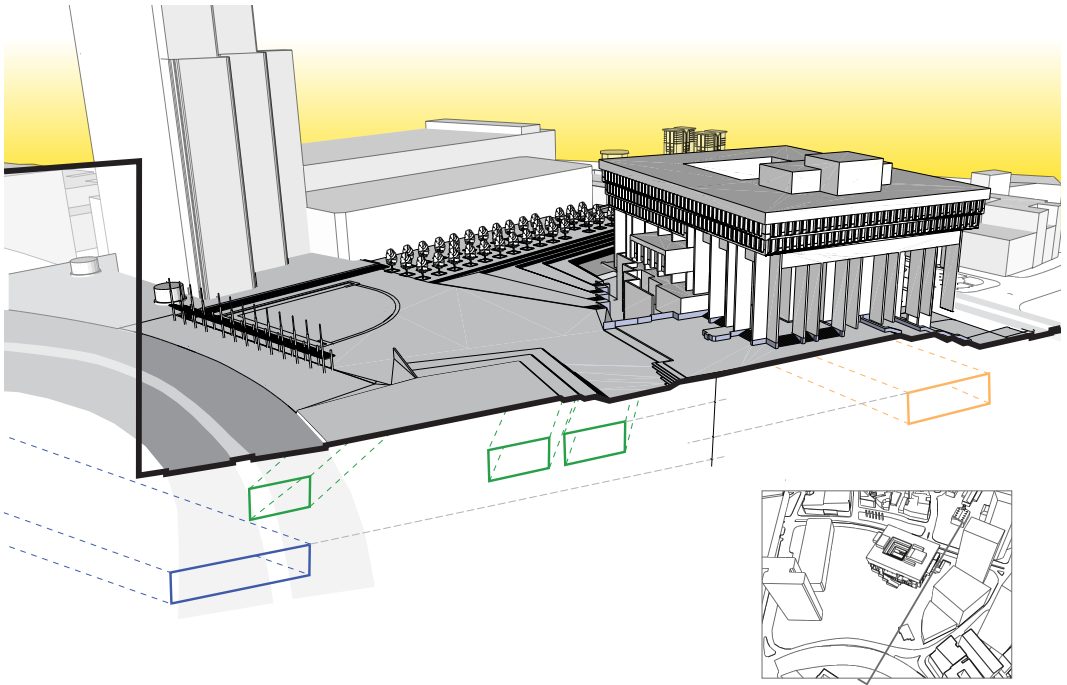
Currently, the highest volume of pedestrian traffic across the plaza is between the Government Center T Station and Faneuil Hall. The pedestrian flow is also heavy along Cambridge/Tremont streets, from the Massachusetts

General Hospital area to the State House/Boston Common area. Few pedestrians traverse the plaza side of Congress Street, which features a heavy corbeled overhang and a relatively narrow sidewalk. Along both Cambridge and Congress streets, there is a large gap between crosswalks because of the superblock of City Hall Plaza, and pedestrians often jaywalk—even on Congress Street where there is a fence in the median. Court Street, though not an arterial roadway, also has heavy vehicular traffic. New Sudbury Street carries significantly fewer vehicles and pedestrians.

Bicycle paths through the city terminate or become “advanced” level as they approach Government Center. Bicyclists often find it hard to navigate the arterial traffic of Cambridge and Congress streets, and the lack of marked bike lanes further challenges cyclists. Bicycle and pedestrian connections from the plaza to the waterfront, the Greenway, or Boston Common could also be stronger.



Fig. 15 Bike paths through the city become “advanced” level as they approach the plaza because of the grade changes and the arterial roads (Cambridge and Congress streets).



Topography and Infrastructure

The plaza's topography is defined both by how sloped it is (a grade change of 28 feet at its most extreme), and by the MBTA tunnels and infrastructure underneath.

The high point of the plaza is at the southwest corner, near the Government Center T Station. From this point to Congress Street, there is an approximately 30-foot grade change, with stairs leading down the site toward Congress Street on both sides of City Hall.

Three MBTA lines—the Blue, Green, and Orange lines—run underneath or on the border of the plaza. In addition, an abandoned Green Line tunnel runs underneath Corn Hill (it was taken out of service when the plaza was constructed

in the 1960s). An underground parking garage, which is used by both City Hall and the adjacent privately owned buildings, occupies much of the southeast of the plaza. Grates for vents for the T and the garage also appear on the plaza. In addition, storm drains are integrated into the brickwork, following the fan-shaped terraces as they step down to Congress Street.

The line between the Charles River and Boston Harbor watersheds runs through the plaza at approximately the edge of the JFK building property. Stormwater from Cambridge Street and the JFK building drains to the Charles River. The plaza itself and Congress Street drain to Boston Harbor.

Fig. 16
A section through the plaza reveals utilities, MBTA tunnels, and other infrastructure.

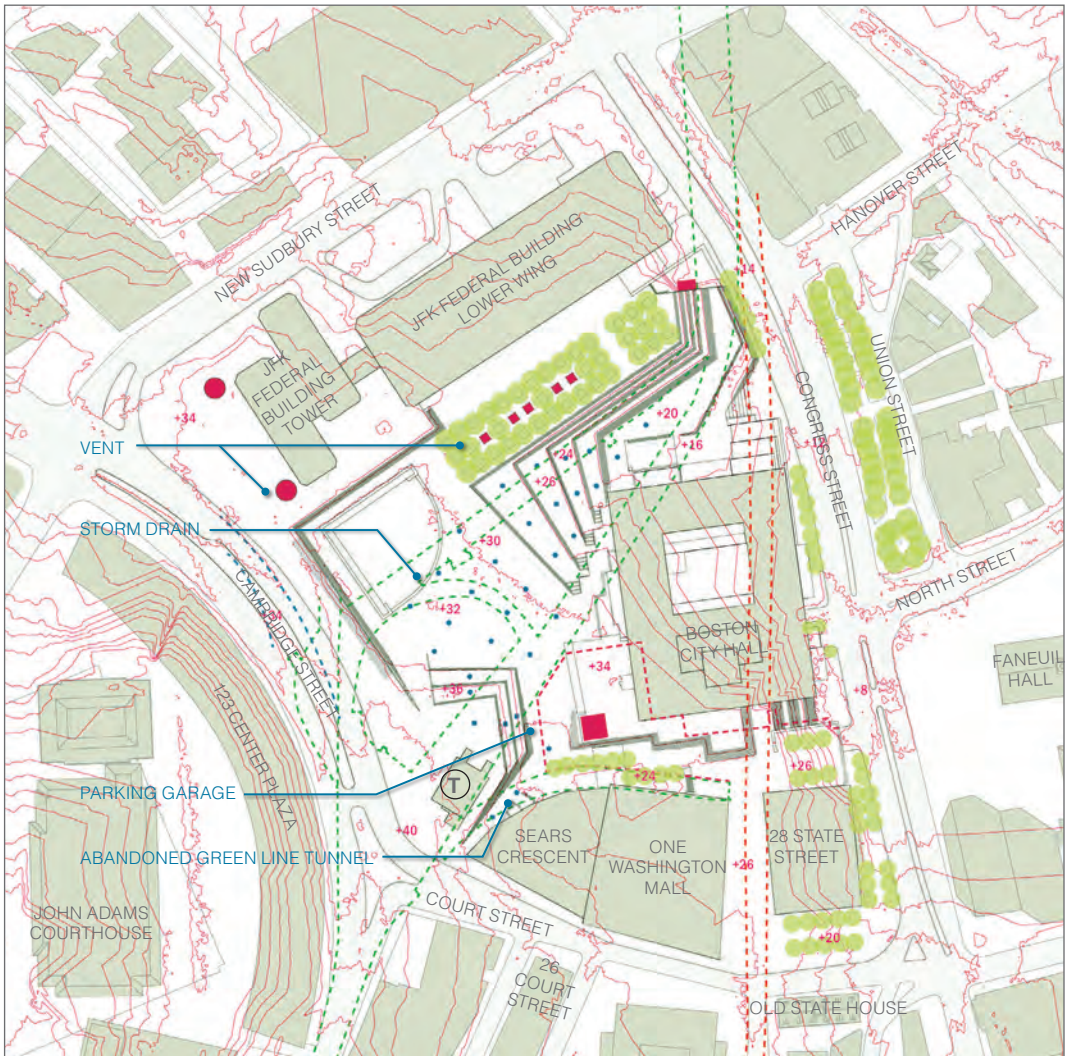
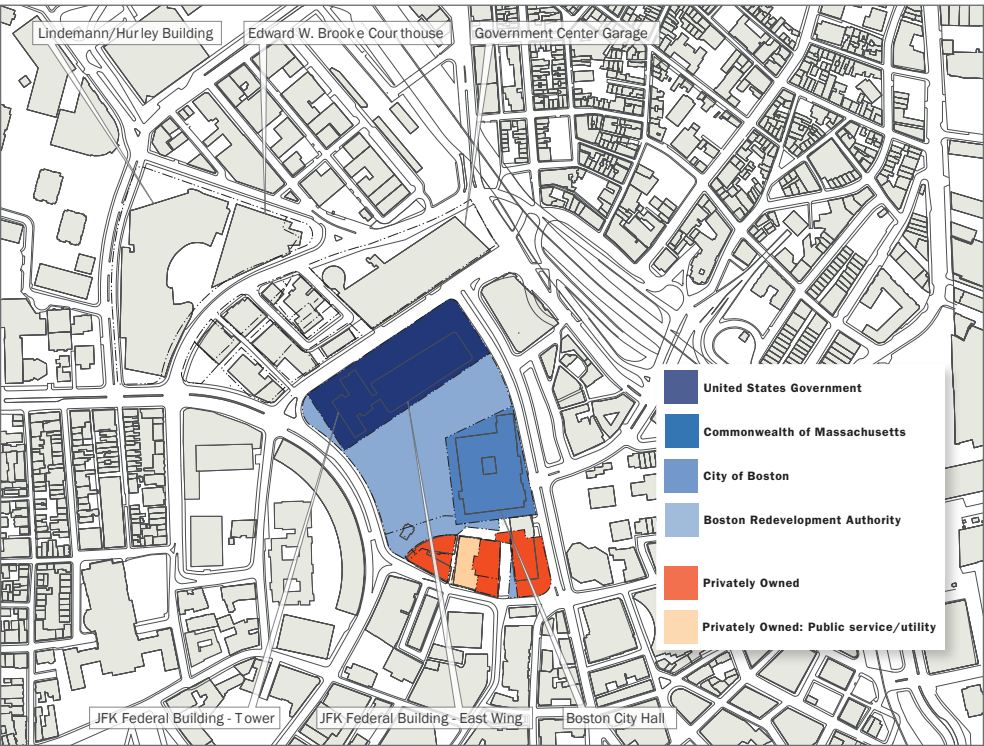


Fig. 17 Topography and underground infrastructure of the plaza.

Fig. 18 A view from Congress Street looking west toward the main plaza space and 123 Center Plaza.



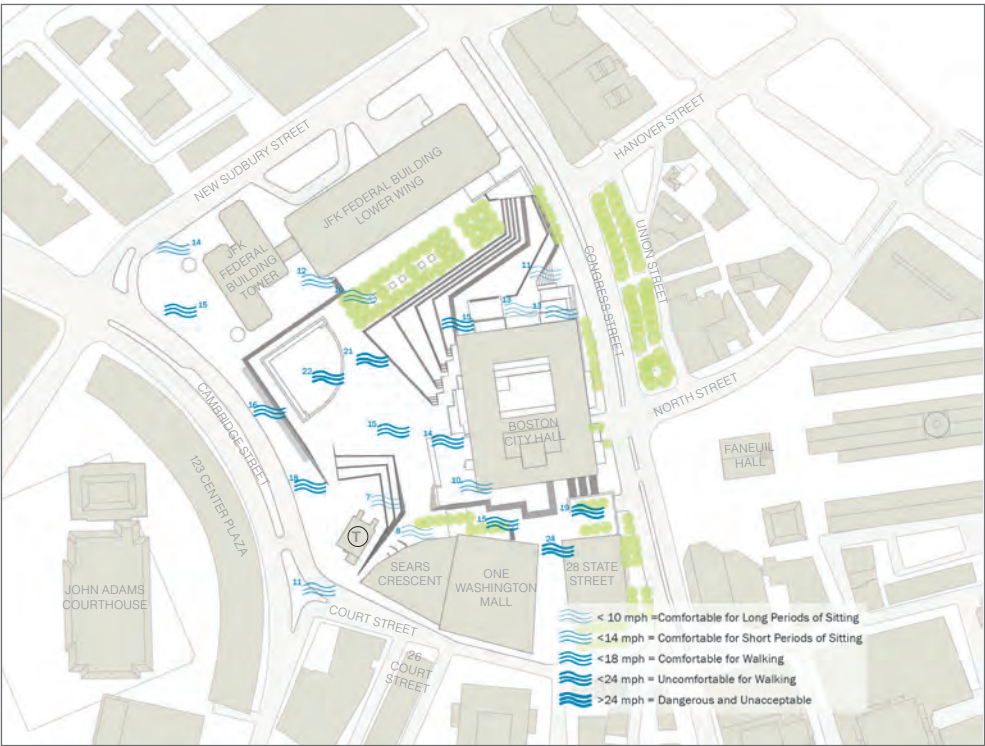


Ownership

The Boston Redevelopment Authority owns and maintains the plaza. City Hall, which sits on the Plaza, is owned by the City of Boston and managed by the Public Facilities Department. The General Services Administration (GSA) owns the JFK buildings on the north side of the plaza. Private entities own the buildings to the south of the plaza and 123 Center Plaza across Cambridge Street. In addition, a complex group of public agencies and private entities—including the Department of Public Works, the Boston Transportation Department, the MBTA, and the private owners of 28 State Street, One Washington

Mall, and the Sears Crescent buildings—owns or is responsible for the maintenance of the infrastructure underneath the plaza, the streets adjacent to the plaza, and the structures on or near it.

Fig. 19
An ownership map of City Hall Plaza.



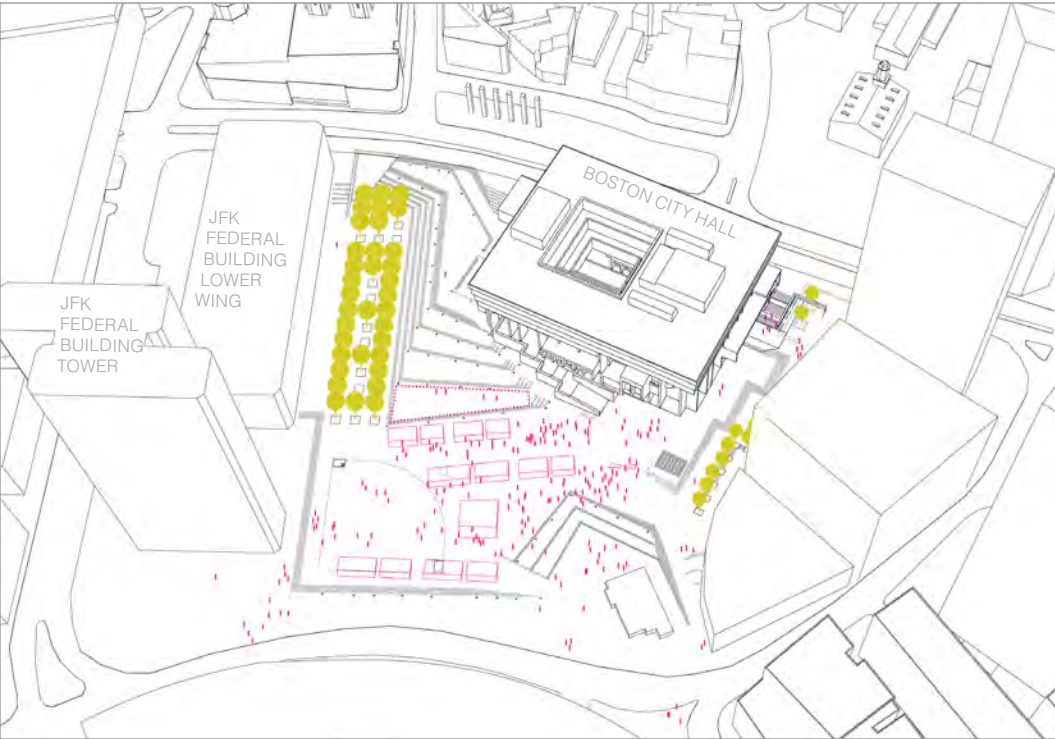
Comfort

City Hall Plaza is often windswept and desolate. There are no trees to mediate or block the wind on the main plaza and no shelter from rain as one walks across the broad expanse of the plaza. The trees on the JFK plinth are surrounded by concrete barriers for security reasons, which makes this area of shelter considerably less desirable as a place to sit or rest. In the wintertime, snow is piled up on the plaza, sending pedestrians on roundabout paths in the cold weather.

Fig. 20 Average wind speeds and comfort levels show that the northwest plaza, near the former fountain, is the most wind-exposed area. This data is from the Trust for City Hall Plaza report, “A Plan to Revitalize Boston’s City Hall Plaza” (March 1998).

Fig. 21 A pedestrian traverses the plaza on a windy, rainy day.





Programming

From March through October the plaza hosts events, concerts, and regular programming, such as the summer farmers market. As one of the few large hardscaped public spaces in the city, it is often used for large festivals, including annual Boston food festivals like Chowderfest and the Scooperbowl. In addition, there is a popular weekly concert series in the summer on the stage on the north of the plaza.

2011 Programming Schedule for the Plaza	
MAR 15 – MAY 15	Big Apple Circus
MAY 21	African Event
JUNE 3	Pride Events
JUNE 4	Filipino Independence
JUNE 6 – 10	Scooper Bowl
JUNE 11	Pride Event
JUNE 12	Portuguese event
JUNE 21 – 27	Phantom Gourmet
JUNE 28 – JULY 5	Harborfest
JULY 20	Colombian Flag Raising
AUG 16- 21	Greenfest
SEPT 11	Guatemalan Flag Raising
SEPT 18	Costa Rican Flag Raising
OCT 1	Cruisin' New England Car Show

Fig. 22 A diagram of the plaza during Hub on Wheels.



Fig. 23 Hub on Wheels
(top).

Fig. 24 Fourth of July
ceremony (above left).

Fig. 25 Summer concert
series on the north
side of the plaza (above
center).

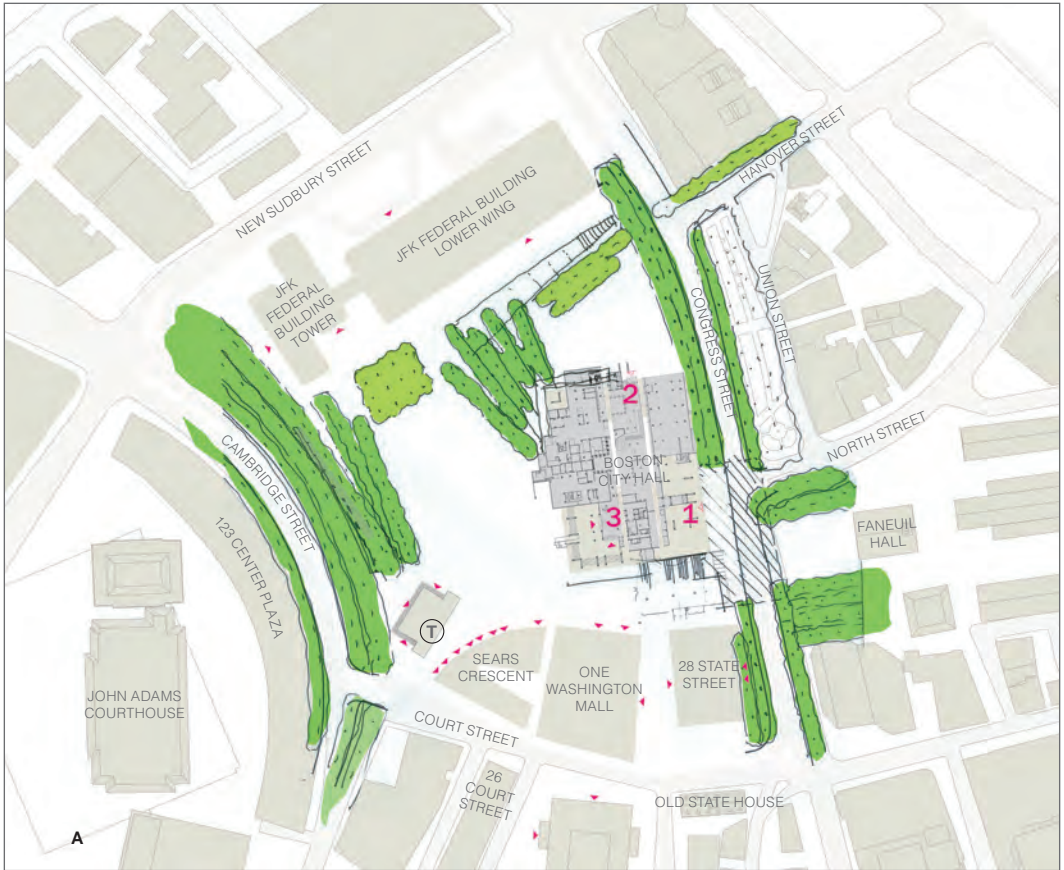
Fig. 26 Big Apple Circus
occupies the plaza from
mid-March to mid-May
each year (above right).

Fig. 27 A diagram of
the plaza as occupied
during major speeches or
celebrations (right).

Fig. 28 A diagram of the
plaza as occupied during
the farmers market (right
bottom).



The Scenarios



The design scenarios create more robust and flexible civic spaces on the plaza, and introduce green infrastructure that will both make the plaza perform better environmentally and improve the quality of the public space. The scenarios were guided by a series of questions emerged through the workshops and in conversations with the EPA and city officials:

- » Can the City Hall Plaza support the growth of a major tree canopy with all of the associated ecological benefits?
- » Could a new approach to stormwater management be a major driver of the redesign?
- » What kinds of programming and civic events can City Hall Plaza support and encourage that are not feasible or desired on the Rose Fitzgerald Kennedy Greenway and/or the Boston Common?

Fig. 29 Scenario A

Scenarios A and B, generated during the three-day workshop in December, were developed further by the design team and presented at a series of public symposiums organized by the City of Boston.

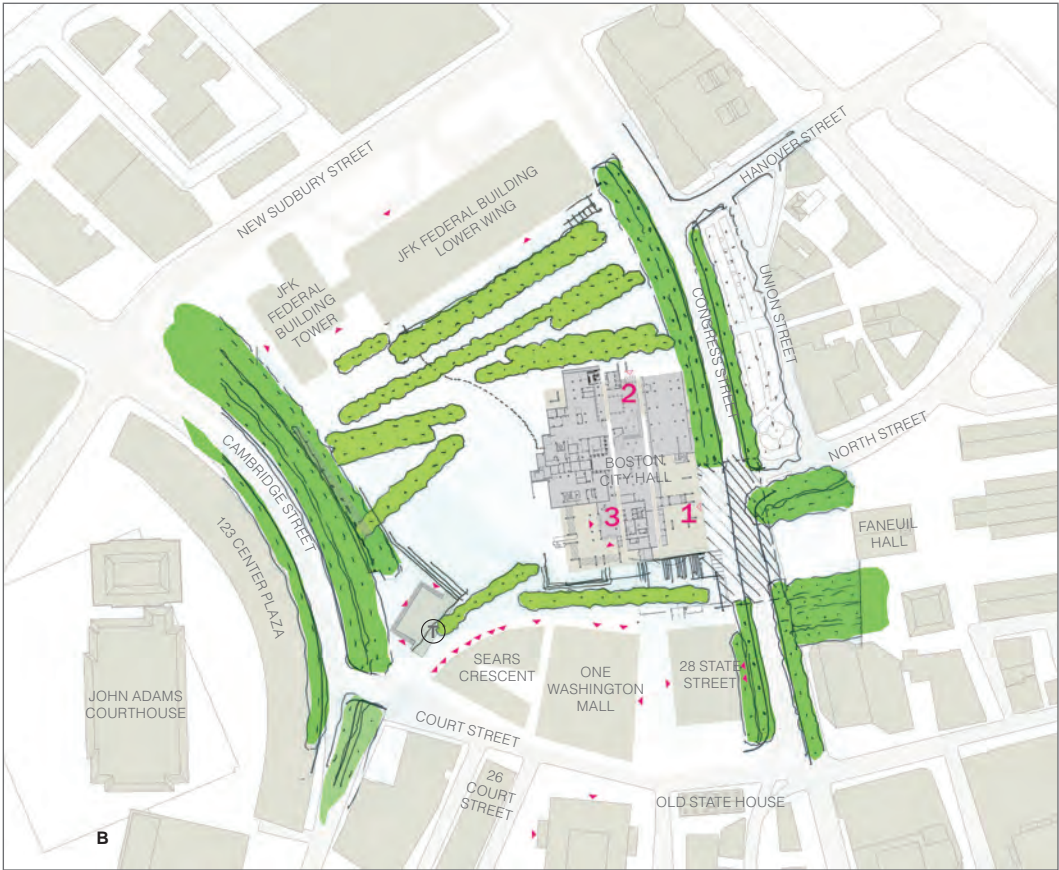


Fig. 30 Scenario B

Floor number*

Doors

** Because of the topographic change across the site, City Hall has entrances on three different levels.*

- » Could City Hall Plaza be the primary downtown transportation hub, with a bicycle share program, a bicycle parking facility, and more accessible paths through the plaza and from the T stations? The potential of the plaza is evident—as are its problems—and these questions helped to pinpoint the desired outcomes of any redesign scenario. These questions, and the answers provided by workshop participants, revealed two primary issues that should be considered for redesign scenarios:
- » Slope The slope between Cambridge and Congress streets could be recalibrated overall and in specific reference to the entrances of existing buildings and the subway station. The topography of the design scenarios took into account potential stormwater management more ADA accessible, and potential bicycle routes through the site.

- » **Trees** Large numbers of shade trees will define and structure a hierarchy of spaces or “outdoor rooms” in the expanse of the plaza, provide shade, and contribute to stormwater management.

Both the manipulation of the slope and the addition of trees were identified by the City and workshop participants as fundamental components of new visions for the plaza. In the design scenarios, these components create a strong sense of place in the plaza by framing with trees a large outdoor room that coincides with a newly configured space big enough for large civic events—and help with stormwater management, overall air quality, and heat island effect, among other environmental benefits. At the same time, the scenarios make strong visual connections to the surrounding city through manipulations of the grade and alignment of trees.

Comparing the Two Scenarios

Both schemes took advantage of the current public projects, as discussed previously in this report, and sought to smooth out the grading in the immediate proximity of City Hall and the redesigned MBTA subway headhouse. This was achieved by reducing the number of stairs leading from both structures to open up more contiguous plaza space. Both scenarios also proposed planting more trees along the narrowed and realigned Cambridge Street edge and adding staggered rows of trees between the curb and the existing Community Arcade. Both schemes also envision an equally robust redesign of Congress Street at the bottom of the grade of the plaza. The design team strongly believes that improvement to the plaza itself needs to start with these two important street edges because these edges define the connection between the plaza and the rest of the city.

The two scenarios rely on large groups of trees to structure and “green” the space, define the edges and the civic spaces, and provide shade and offer the potential for stormwater infiltration, shade, buffer from wind, mitigation of heat island effect, and improved air quality. Both scenarios have the same goals (as outlined in the Executive Summary), and use the same design palette—trees and slope—but they differ in a few significant ways. The primary difference between the scenarios is the scale and variety of spaces that result. Scenario A creates a large civic space and a second, smaller plaza near Congress Street. Both spaces are shaped by dense plantings of trees that define a shady threshold between them. Scenario B creates a larger variety of urban spaces using rows of trees, but without a single identifiable plaza space as in Scenario A.

Both schemes are identical on the south side of the plaza and proximate to the MBTA and City of Boston accessibility projects, the first phases of what is likely to be a more coordinated City Hall Plaza proposal. The scenarios differ on the north side of the plaza where the space meets JFK complex and the landscaped plinth immediately to its south. As a result, the two scenarios provide flexibility without delaying the launch of near-term improvements on the south side of the plaza. Scenario A has minimal regrading of the plaza topography. Thus, it is more feasible financially, involves less earthwork, and could be easily implemented incrementally. Scenario B involves an almost-total regrading of the plaza. This amount of regrading and earthwork would be more difficult to implement incrementally. Both scenarios also focus on the plaza itself but would not preclude new development and active ground uses on the edges of the plaza.

Both scenarios keep the plaza as primarily a hardscaped urban site, but potentially one with a more varied material palette, and with better defined civic spaces and much improved environmental performance with the introduction of trees and a better stormwater management approach.

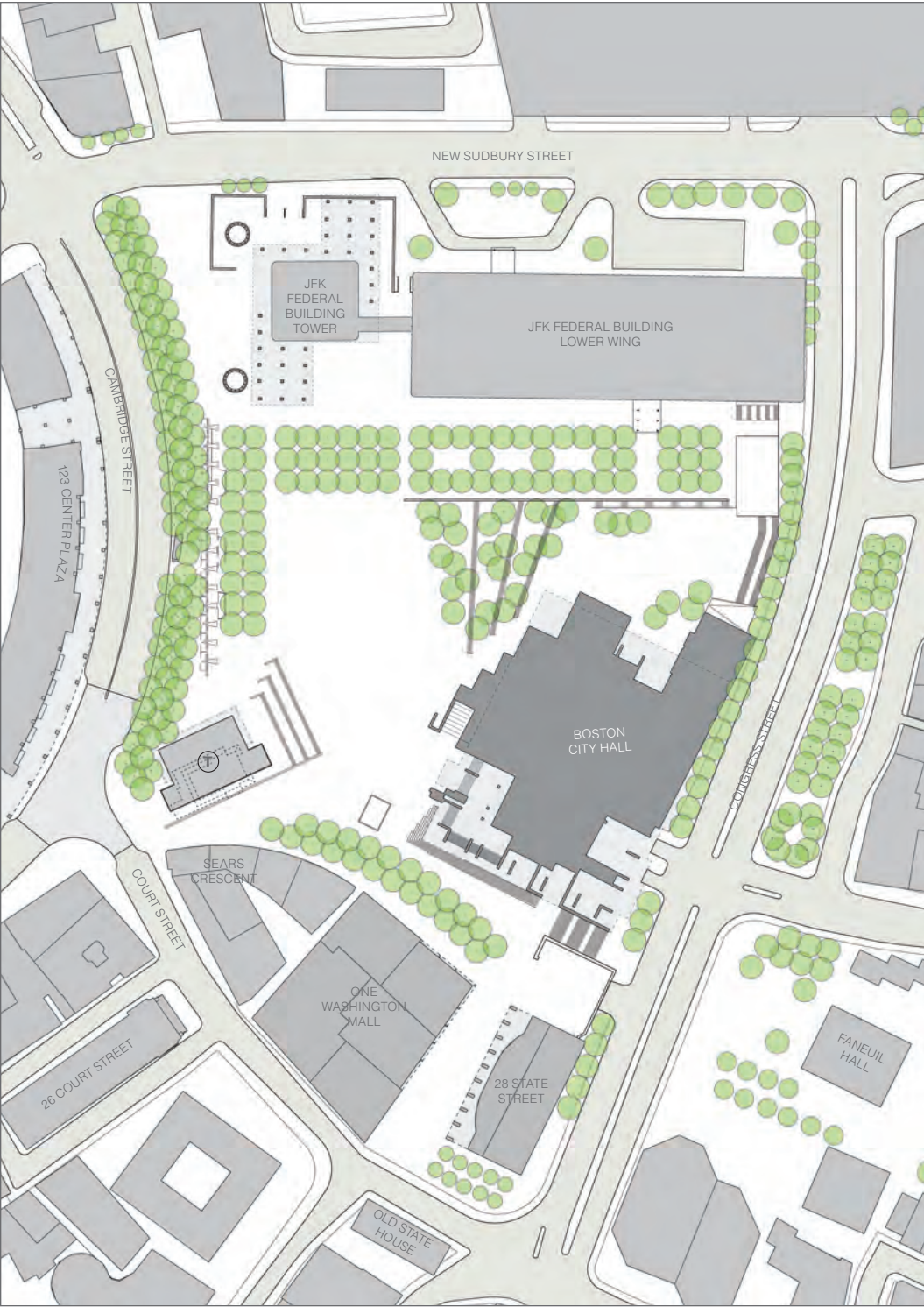
Scenario A

The first scenario assumes that the large plinth just south of the low wing of the JFK complex will stay in place for the foreseeable future. Instead, the grove of trees on the extended plinth is rehabilitated and extended to the west to create a stronger spatial boundary on the north side of the plaza. The design also rearranges the broad fan-shaped stairs on the north side of the plaza into a tighter configuration of terraces supporting a dense tree canopy. In addition to the trees along the north side of the plaza and another double row of trees proposed on the east of the arcade (roughly parallel to the new trees along Cambridge Street), a smaller plaza space is defined. This space has roughly the same dimensions as the lawn that faces the Hatch Shell on the Esplanade (an outdoor concert venue adjacent to the Charles River Esplanade that is perhaps best known for hosting the Boston Pops Orchestra annually for the Boston Fourth of July celebration, but is also used for free concerts during the summer months). The reconfiguration of the existing stair-terraces leading down to Congress Street also creates a better-proportioned plaza space near the Congress Street sidewalk. This space can serve as an extension of the Market District, which has been proposed by the BRA and was the subject of a 2009 study by the Project for Public Spaces. The plinth along the south side of the JFK complex is capped with a multilevel glass bicycle parking facility. When viewed from the North End and the Greenway at night, this pavilion-like structure would be a beacon at the end of Hanover Street.

Fig. 31 Scenario A Plan (facing page) shows the new, proposed MBTA station footprint with the current station footprint in dashed lines. Two primary spaces are defined by trees, and the fan-shaped stairs are changed to allow a broader space in the main plaza.



Fig. 32 Scenario A: Perspective view looking from the MBTA station toward Faneuil Hall.





Tree Canopy and Potential Infiltration Areas

Where there is tree canopy without the subway, parking garage, or vents underneath, there is the possibility of infiltration and groundwater recharge. Soil and subsurface conditions need to be fully understood before this can be considered viable.

Fig. 33 Scenario A: Location of tree canopy and potential infiltration areas.



Right-Sizing the Civic Space

Fig. 34 Scenario A creates two primary civic spaces. Together with the existing third space adjacent to 28 State Street, this creates a rich range of spaces for the plaza (above right).

Fig. 35 The main civic space in Scenario A is approximately the size of the Hatch Shell on Boston's Esplanade (above).

Currently, the space is oversized for most gatherings. Many events are dwarfed in the main plaza space, but the north stage area is too small for many of the popular summer concerts. To better serve a wide variety of functions, these spaces should be resized and redefined. Tree canopy will help define space with its height and breadth, and it also has the advantage of creating smaller, more intimate spaces among the trees. Scenario A creates two primary “rooms,” the first in front of City Hall and the second in the area of the current stage. These two, plus a third smaller zone off of Washington Mall, offer a diversity of spaces for different programs, events, or installations. For example, the space off Congress Street, near the JFK low-rise building, could support public art and smaller concerts or other events, or it could be a different type of space, such as a pocket park. The largest space is sized for civic events, such as the flag-raising ceremony on the Fourth of July, Hub on Wheels, and the swearing-in ceremony for new citizens.



Pedestrian and Bike Paths

This diagram—which is intuitive and based on casual observation—shows how the plaza could become a multimodal transportation hub. Already, large volumes of commuters and tourists pass through the T Station daily. The team observed that pedestrians tend to stay on the edges, rarely venturing through the center of the plaza (or from the T Station to the Hanover Street area). A reconfigured plaza could help clarify pedestrian paths and add bike paths, and with careful regrading and material choices, the plaza could be much more accessible for all people.

Fig. 36 Scenario A: Pedestrian and bike paths through the plaza.



Fig. 37 Scenario A: View from the T Station toward Faneuil Hall.

Fig. 38 Existing: View from the T Station toward Faneuil Hall.

View from the T Station toward Faneuil Hall

Through site visits and during discussions in the workshop, the team realized that it is critically important to create visual, as well as physical, connections between the plaza and other assets in the city. The most heavily trafficked route on the plaza is between the T Station and the stairs to Faneuil Hall. This route sees a steady stream of workers, city and federal government employees, and tourists throughout the day. However, from the T Station, one can barely see Faneuil Hall. Walking toward Faneuil Hall, pedestrians encounter the Corn Hill “moat,” the sunken area in front of private buildings along Corn Hill, to the right. Between the moat and the main path, there are trees in raised planters. The path of travel is not clear.

Scenario A reshapes the City Hall stairs, pulling the stairs back to ease the path of the travel and create a clear visual connection to Faneuil Hall, and regrades the Corn Hill “moat” to make it level with the adjacent plaza. New trees follow the shape of Corn Hill, clarifying what is the *path* (closer to City Hall) and what is *place* (adjacent to the Corn Hill buildings).

View from Northwest

An allée of trees along Cambridge Street creates an anteroom before one enters the broad space of the plaza. The new Government Center MBTA Station would be visible through the trees from Cambridge and Tremont streets. Trees on both sides of the Community Arcade will provide shade for the seasonal farmers market. Scenario A continues the trees from the JFK Building plinth up to Cambridge Street. The trees along the reconfigured terraces leading down to Hanover Street have a more informal organization.

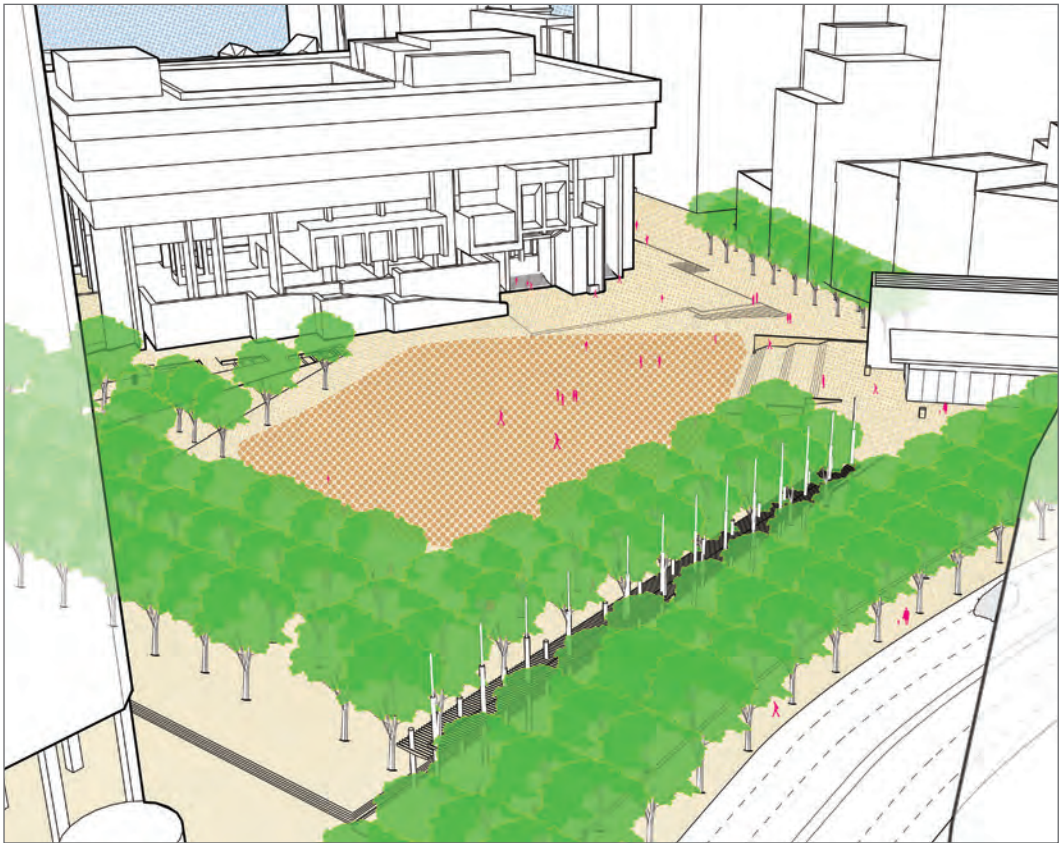
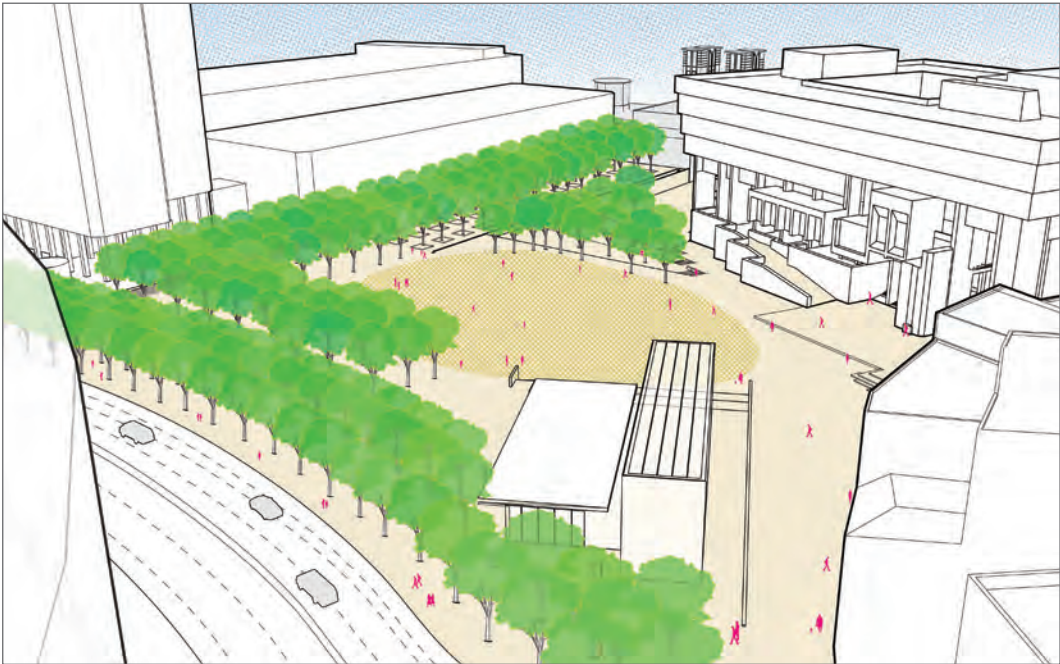


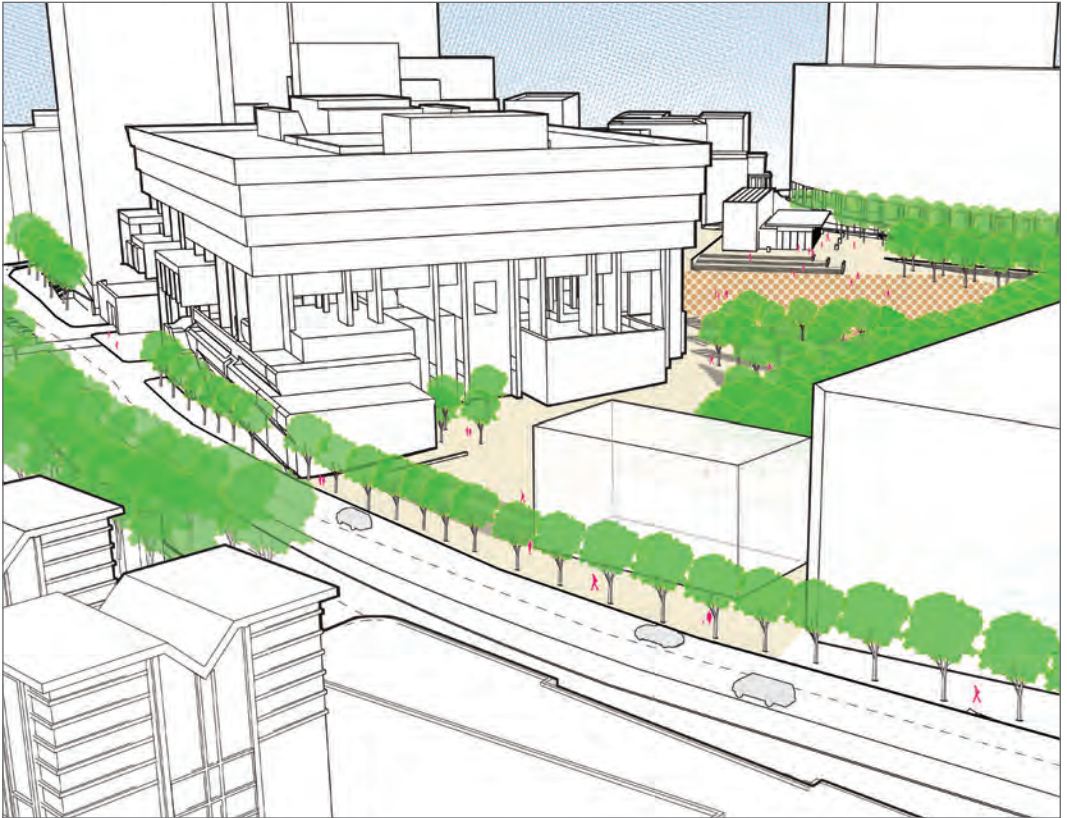
Fig. 39
Scenario A: View
from Northwest.



View from Southwest

The new headhouse, with its height and its doors opening in three directions (as opposed to the single direction riders are currently sent out), will alter the experience of the plaza and pedestrian travel through the plaza. Scenario A reshapes the stairs around the headhouse to be parallel to the station. This simplifies the path of travel and helps guide people walking out of the station.

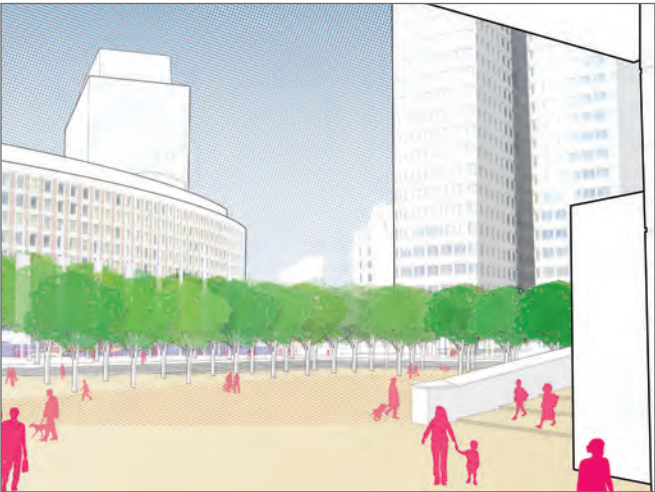
Fig. 40
Scenario A: View from Southwest.



View from Northeast

Fig. 41
Scenario A: View
from Northeast

At the northeast corner of the plaza, a multistory structure caps the end of the JFK plinth. This building could house shared bike parking and offer an elevator for handicap access to the JFK federal building. As a glass structure, it could be a beacon at the end of Hanover Street and a complement to the new Government Center T Station.



View from City Hall entrance toward Cambridge Street

The main civic space formed by the trees is sized large enough to accommodate events and programming, such as the Big Apple Circus, Hub on Wheels, Chowderfest, ScooperBowl, the start of charity walks, and large concerts. The trees define the edges of the plaza but allow views below and through the tree canopy to the city beyond.



View from JFK Plinth

Among the trees, the spaces are more intimate for sitting and reading, eating lunch, or simply gathering with friends. The larger civic space of the plaza is still visible through the trees.



Fig. 42 Existing View from City Hall entrance toward Cambridge Street.

Fig. 43 Scenario A: View from City Hall entrance toward Cambridge Street.



Fig. 44 Existing View from JFK Plinth.

Fig. 45 Scenario A: View from JFK Plinth.



Fig. 46 Existing View from Congress Street.

Fig. 47 Scenario A: View from Congress Street.



View from Congress Street

Scenario A creates a reshaped set of stairs from Congress Street to the plaza. This space could host smaller concerts or public art installations. The JFK plinth remains, and there is a multistory glass structure that caps the end of Hanover Street. Lit at night, this structure helps guide visitors to the plaza. Many programs could go inside this structure, such as a cafe. The design team envisioned it as bike parking or as a site for the city's new bikeshare program.

Scenario B

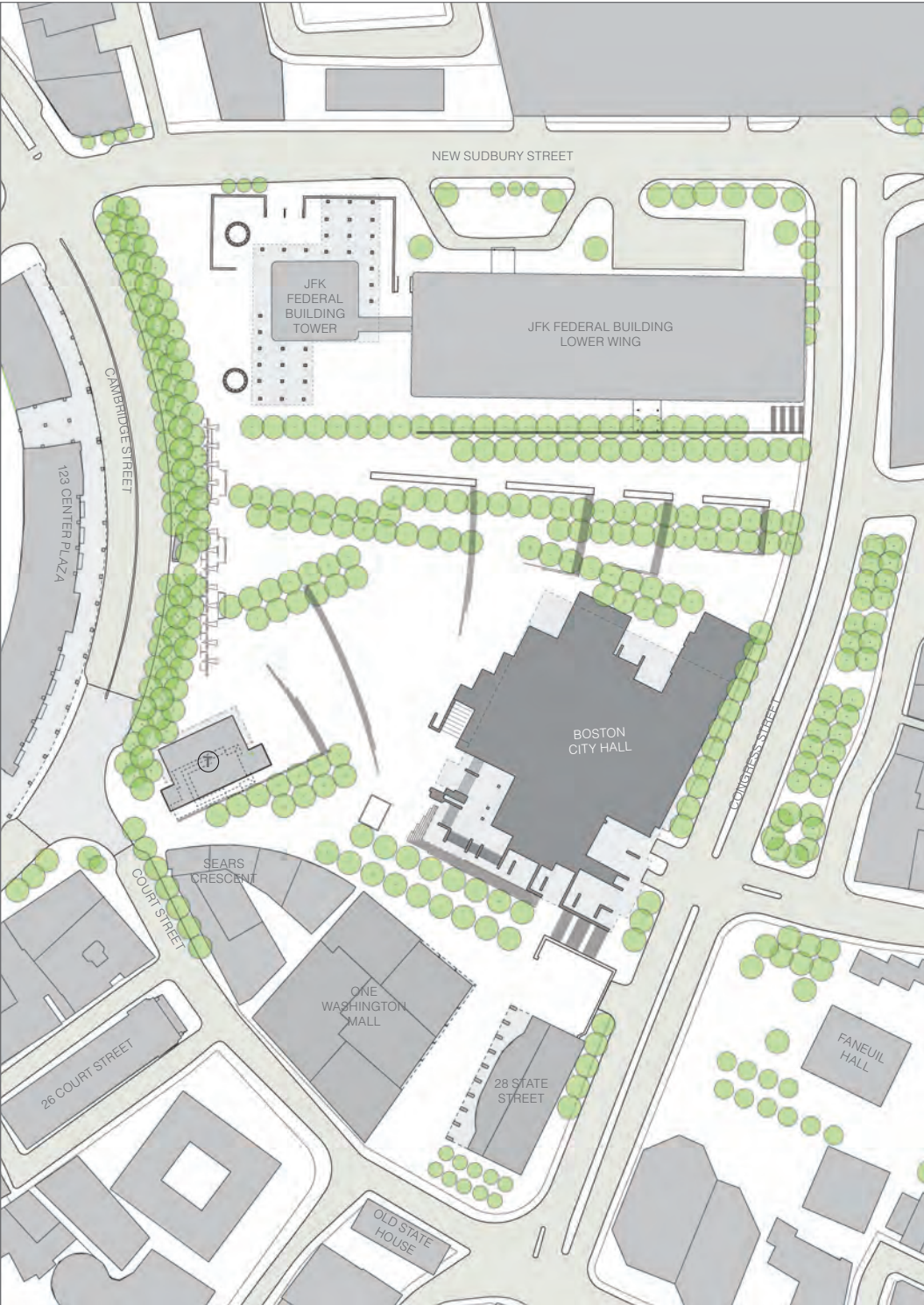
The second scenario imagined that the plinth along the south edge of the JFK complex could be removed and replaced by a smooth and continuous slope between Congress and Cambridge streets. This approach—recreating the approximate alignment and grade of the once-continuous Hanover Street—was central to the Trust for City Hall Plaza design proposal from 1998. The team's proposal left the nature of the connection ambiguous. It could be a conventional street, but it might be more appropriate as a shared street, perhaps closed to all traffic in high tourist season and during civic events and open to traffic during the winter (except for First Night, Boston's New Year's Eve celebration) when the plaza is not used much. During the workshop, participants—including transportation experts—came to the conclusion that there are very few benefits to opening the street up to vehicular traffic from a transportation planning standpoint, but there may be significant benefits if and when the GSA decides to redevelop all or part of the JFK complex.

Whether this new sloped corridor is a pedestrian connection, a street, or both, the new space establish a broader strategy for organizing and sub-dividing the plaza. Double rows of trees create a series of east-west spaces. The trees also create triangle-shaped garden-like park spaces adjacent to Congress Street and Cambridge Street. These rows of trees—and the spaces they define—run perpendicular to the direction of the new trees along Cambridge and Congress streets.

Fig. 48 Scenario B Plan (*facing page*) shows the new, proposed MBTA station footprint with the current station footprint in dashed lines. The spaces are defined by the double rows of trees.



Fig. 49 Scenario B: Perspective view from a smaller space in the northwest plaza, looking toward Cambridge Street.





Tree Canopy and Potential Infiltration Areas

Similar to Scenario A, there is the possibility of infiltration and improved stormwater management strategies for Scenario B. The double rows of trees offer the opportunity for a different paving material, potentially a pervious paving material, to allow for infiltration in select areas. As with Scenario A, soil and subsurface conditions need to be studied in greater detail to determine where infiltration can occur or stormwater can be slowed down.

Fig. 50 Scenario B: Location of tree canopy and potential infiltration areas.



Tree Canopy and Gathering Spaces

Fig. 51 Scenario B creates a rich range of spaces for the plaza.

Scenario B has a wider range of spaces with a variety of sizes and orientations. The spaces are all on a sloped surface (Scenario A has large flat areas or terraces), which will make certain types of gatherings more difficult, such as the large events already programmed for the plaza like the Big Apple Circus or Hub on Wheels.



Pedestrian and Bike Paths

The sloped surface of Scenario B, albeit a much larger and more expensive design than Scenario A, could offer more paths through the plaza for bicyclists, pedestrians, and those in wheelchairs. These paths could make the plaza truly a plaza for everyone. This scenario emphasizes path over place, because although the slope makes travel easier for many people and bicyclists, it would make certain events more difficult to host on the plaza.

Fig. 52 Scenario B: Pedestrian and bike paths through the plaza.

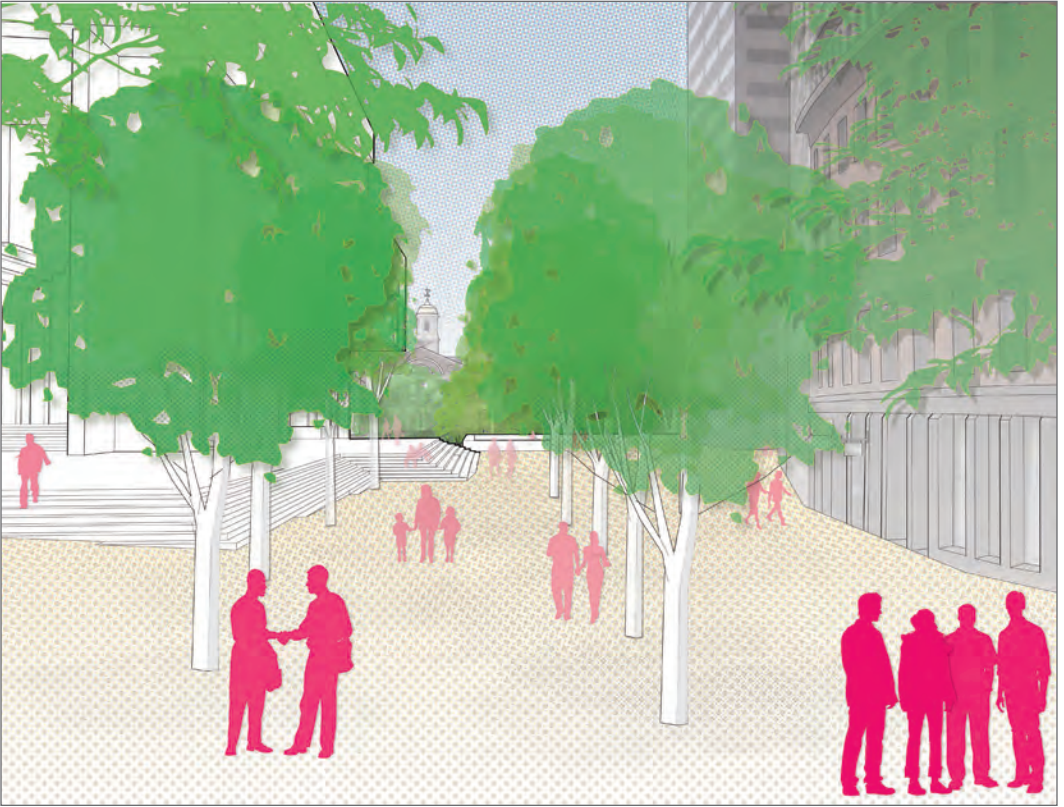


Fig. 53 Scenario B: View from the T Station toward Faneuil Hall.

Fig. 54 Existing: View from the T Station toward Faneuil Hall.

View from the T Station toward Faneuil Hall

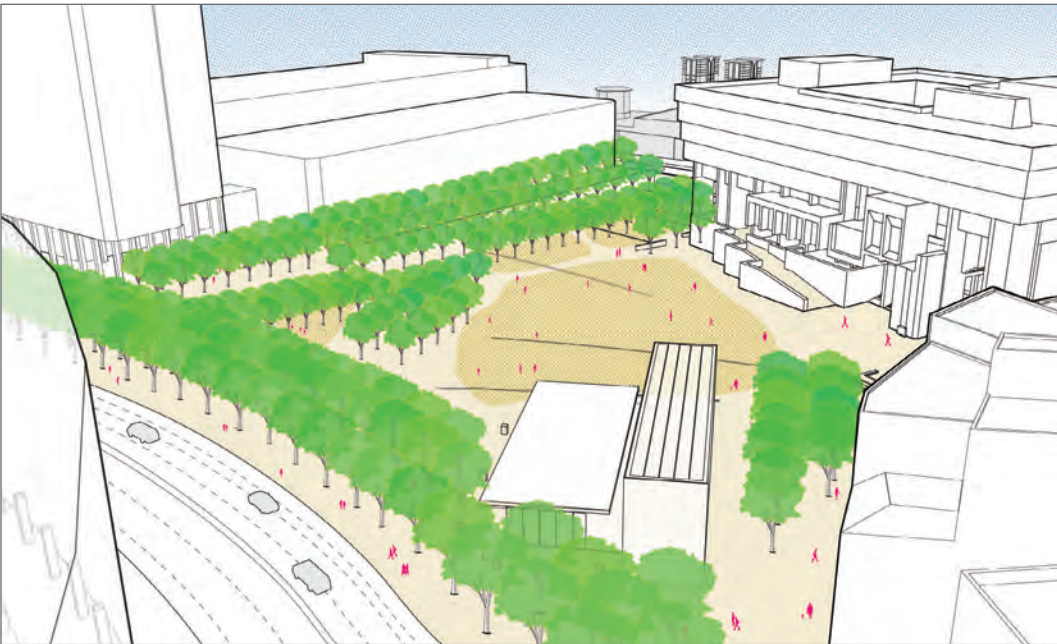
To link the plaza visually with Faneuil Hall, Scenario B, like Scenario A, pulls back the City Hall entry stairs. This opens up the view to Faneuil Hall and simplifies and clarifies the path. Similar to Scenario A, this scheme also rethinks the Corn Hill "moat" and the trees in the Corn Hill area. An allée of trees guides pedestrians toward Faneuil Hall. The Corn Hill moat in Scenario B, as in Scenario A, is regraded to be level with the adjacent plaza surface. It could be an area for cafe seating for the private businesses on the plaza's edge.

View from Northwest

Multiple allées guide pedestrians and bicyclists through the plaza. The new Hanover Street extension could be a woonerf (defined as a street where pedestrians and cyclists have legal priority over motorists), a pedestrian-only path, or potentially a trolley turnaround, as past proposals have envisioned. Along Cambridge Street Scenario B takes the same strategy as Scenario A, creating a strong tree edge before the broader spaces of the plaza.



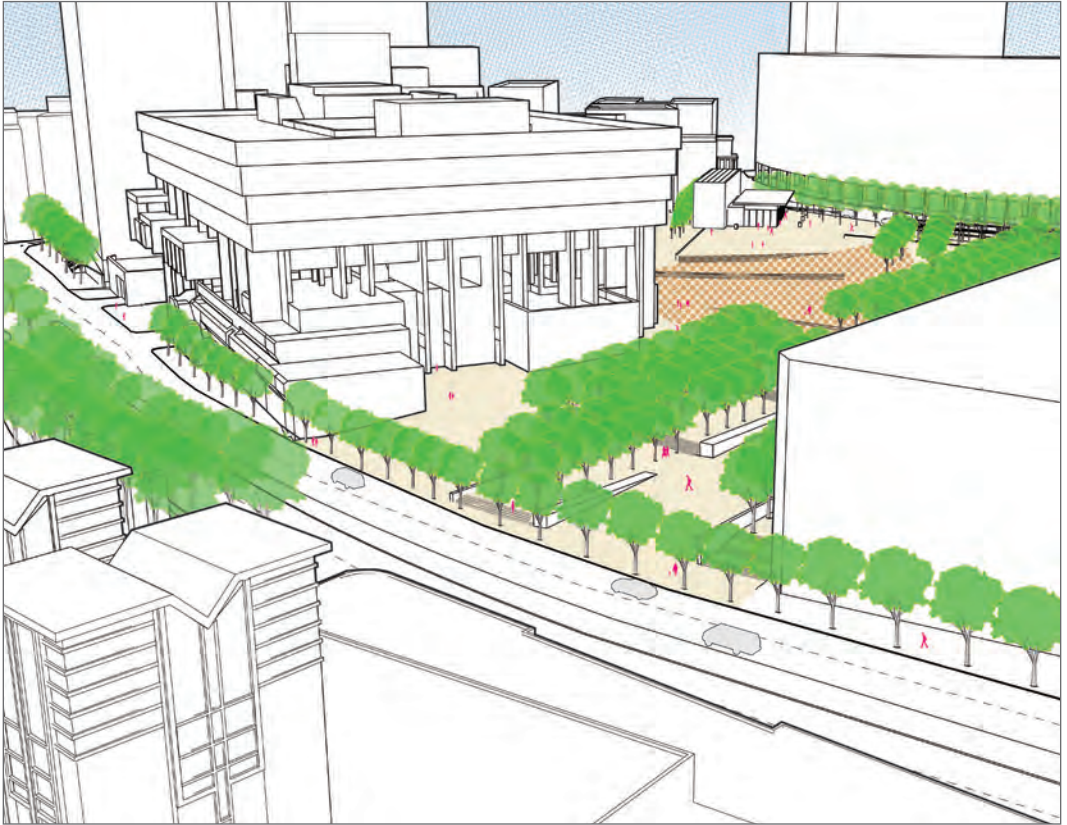
Fig. 55
Scenario B: View
from Northwest.



View from Southwest

The new headhouse opens out onto the plaza, directing pedestrians toward the Hanover Street extension. The large civic space in the foreground is interrupted by steps that mediate the grade change and the cross-slopes.

Fig. 56
Scenario B: View from Southwest.



View from Northeast

Fig. 57
Scenario B: View
from Northeast.

To the south of the continuous Hanover Street extension, there are terraces, which provide smaller gathering areas under tree canopy. These more intimate zones could host public art installations, seating, or smaller garden spaces. There is a greater diversity of spaces in this scenario than in Scenario A, and a larger portion of the plaza will be accessible to bicyclists and people in wheelchairs.

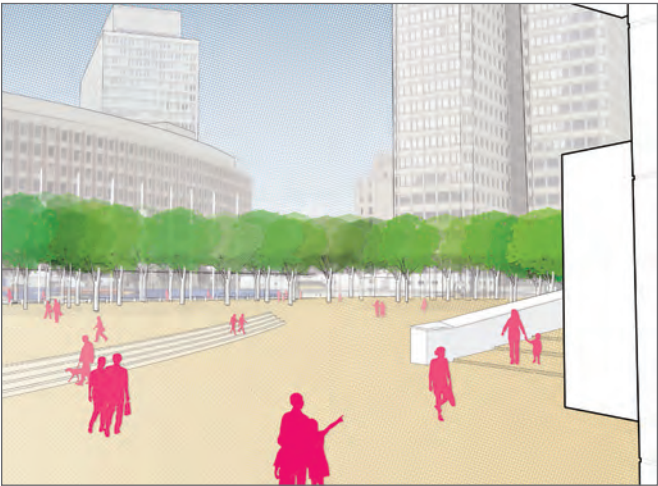


Fig. 58 Existing View from City Hall entrance toward Cambridge Street.

Fig. 59 Scenario B: View from City Hall entrance toward Cambridge Street.

View from City Hall entrance toward Cambridge Street

The main civic space shaped by the allées, the T station, and City Hall is large enough to accommodate events and programming such as the start of charity walks, large concerts, and other large gatherings. However, because stairs punctuate the space and the slope, it might be difficult to host events such as the Big Apple Circus that require a large flat surface.



Fig. 60 Existing View from JFK Plinth.

Fig. 61 Scenario B: View from JFK Plinth.

View from JFK Plinth

A view across the allées to the large opening in the plaza. Within the trees, the spaces are more intimate and sized for smaller gatherings, or casual lunches for nearby workers.



Fig. 62 Existing View from Congress Street.

Fig. 63 Scenario B: View from Congress Street.



View from Congress Street

Scenario B has the continuous Hanover Street extension at the northern edge of the plaza, a terraced area with trees adjacent to Hanover Street, and then a ramp, similar to the current plaza, for wheelchair and bicycle use, between the terraces and City Hall. This variety of space enables a wider range of activities on the plaza. For example, the Hanover Street extension could host the popular seasonal farmers' market or the beginnings of charity walks. The terraced areas are more intimately sized.

Next Steps for City Hall Plaza

EPA's Greening America's Capitals project in Boston is intended to serve as a catalyst for, or complement, a larger planning process for City Hall Plaza and Government Center. Through the EPA-sponsored workshop, a distinct set of priorities emerged, based in part on a series of planned or ongoing projects on and around the site. The following priorities and upcoming projects should be leveraged to transform City Hall Plaza:

- » An ADA accessible path to City Hall and general circulation improvements for the plaza
- » Re-alignment of Cambridge Street on the western edge of the plaza
- » Construction of the new Government Center MBTA Station
- » General improvements to the Corn Hill "moat," the depressed area of the plaza along Corn Hill

The Boston Redevelopment Authority (BRA), Environment & Energy Services (EES), and the Public Facilities Department (PFD) are leading the efforts on the ongoing projects in the area, setting the standards for sustainable development and strategies in the city, and thus are critical to any efforts to redesign City Hall Plaza. Other key

public and private partners include:

- » The Boston Department of Public Works
- » The Boston Transportation Department
- » The consultant teams working on the Cambridge Street re-alignment project, the MBTA station, and the new accessible path
- » The GSA, as any significant changes to Cambridge Street or the plaza will affect its property
- » Boston Water and Sewer Commission

As the City embarks on this process, consideration should also be given to long-term maintenance of the plaza, both in terms of the materials and the design, and also in how the plaza will be cared for and programmed.

City Hall Plaza Concept Plan

To inform and guide the ongoing projects, the vision for the plaza needs to be developed. A specific study for an overall concept plan could build on the EPA Greening America's Capitals study and frame and inform the proposed projects on and bordering City Hall Plaza. The study may include: stormwater management

strategies; considerations about low-maintenance, durable, and accessible paving materials; landscape strategies; enhanced walking and biking scenarios; and accessible paths. This resulting framework plan, further developed than the scenarios in this report, will provide a roadmap to coordinate the activities of the different agencies and consultants working on projects in the area.

Accessibility and Circulation Improvements

The Public Facilities Department is studying ADA accessible path options to City Hall. The City is planning to construct an accessible path by the fall of 2011, thus there is the imperative and funding to complete this project. This PFD study has focused on the Washington Mall and Corn Hill areas of the plaza to make an accessible path from either Court Street or Cambridge Street to City Hall. These two areas are also the most heavily trafficked by pedestrians—the path between the MBTA Station and Faneuil Hall has the heaviest pedestrian flows on the plaza. The opportunity exists to create general improvements for pedestrians along these corridors, as well as an accessible

path—resulting in a plaza that is more accessible for all people.

Among the options considered in the charrette were reshaping the entry plinth to City Hall, creating a larger Corn Hill area, and realigning the trees to better direct the pedestrian path between the plaza and Faneuil Hall. Developing these options further in cooperation with PFD is the next step in creating a more accessible, pedestrian-friendly plaza.

Cambridge Street / Government Center MBTA Station Area

It is critical to coordinate the projects along or near Cambridge Street—the realignment of Cambridge Street and the new Government Center MBTA Station. These independently funded projects, each with its own consultant and client team, will redefine the west side of the plaza. Both projects are currently being designed, and the City and MBTA will need to coordinate project details such as matchlines, grading, paving materials, and any landscape features.

Particular attention should be paid to pedestrian and bike access to and through the plaza and the new MBTA station; seasonal activities that take place on the

plaza's edge, such as the farmers market and Hub on Wheels; and streetscape and landscape elements along the realigned Cambridge Street edge, including electric vehicle charging stations, which have been proposed by the Boston Transportation Department. These projects should also coordinate with the City Hall Plaza concept plan and the accessibility and circulation improvements, so that materials, grading, and pedestrian paths are coordinated.

Corn Hill Area

In addition to the Washington Mall and Cambridge Street areas, the Corn Hill "moat" area of the plaza, adjacent to the Sears Crescent, needs to be reconsidered. Due to the level change, it remains separate from the rest of the plaza, and this area, adjacent to businesses such as coffee shops and restaurants, could become a vibrant place with redesign. Because these buildings are owned by private entities, this effort will require a different process than the other areas of the plaza. It must engage all property owners at the very earliest stages of the project to develop a design approach that will engage the widest spectrum of stakeholders. The goal is a proposal that is environmentally responsible, enhances the public realm, and

improves private property values.

Improvement to the Corn Hill area could happen in concert with the other efforts on the plaza, but the concept plan and other design efforts should not depend on a redesign of the Corn Hill "moat." Because of the different property owners and the complexities of regrading this area—as well as the lack of any imperative or secured funding—the Corn Hill area will occur along a different timeline. However, it is important to engage with these property and business owners early in the process.

Public Outreach

The City of Boston has already started a public engagement process through the series of symposiums it has arranged. The next steps would include continuing these symposiums to inform and get feedback from the public. In addition, regular updates on the ongoing projects will help maintain stakeholder and public interest. Updates could be posted on an independent website, such as the BRA created for the Crossroads Initiative, on the BRA's website or blog, or through EES's Facebook feed. Ideally, it would occur on all these platforms to maximize the public outreach. It is important to engage all interested citizens and activists, both to gain their support

of any design schemes but also to draw upon their knowledge and expertise.

Funding

As noted, there are several independently funded projects on or adjacent to City Hall Plaza: the new Government Center MBTA Station, the realignment of Cambridge Street, and the accessible path to City Hall. These projects together have the potential to repave and regrade one-quarter to one-fifth of the plaza. Although these projects are in different stages of design, each has secured funding.

Conclusion: All Path and No Place

Through smart management and forging partnerships with other public agencies, the City has the opportunity to begin a transformation of City Hall Plaza quickly and in concert with current, funded projects.

Boston's open spaces reflect the constant movement of this major capital city. Boston Common is crisscrossed by paths that aim for the shortest route between street intersections on either side of the park. What constitutes as place in the Common is mostly sections of lawn between the paths that can be appropriated for a picnic or a touch football game. Where there is an

eddy in these path systems, a body of water appears, like the Frog Pond or the Lagoon in the Garden.

In addition to the paths in the Common, the Freedom Trail, Harbor Walk, Crossroads Initiative, and two Walks to the Sea establish a network of pathways moving through and among destinations around the city.

City Hall Plaza, currently serves a role more as a path than a place, or destination unto itself. Most of the plaza is comprised of wide stairs and landings that spiral down and around City Hall towards Hanover Street and the North End. Perhaps the 7 acres of City Hall Plaza presents an opportunity to finally make a space where place is privileged over path—a place that is right-sized and well-designed to serve as Boston's civic living room. This outdoor room could be lined with a dense canopy of trees to provide ample shade and to create green living walls at its edges. Food and retail kiosks could populate this edge for festivals and during the warm weather months.

As the result of seed funding from the EPA in Washington, DC, as well as planned and on-going projects in the vicinity, there is a unique opportunity to update and improve the plaza as a civic place that serves citizens and visitors alike.

Appendix

A

Case Studies

Campus Martius Detroit, Michigan

Dilworth Plaza Philadelphia, Pennsylvania

U.S. Courthouse Plaza Minneapolis,
Minnesota

Bryant Park New York, New York

Schouwburgplein Rotterdam,
Netherlands

B

Workshop

Description, Schedule,
and Participants

Campus Martius

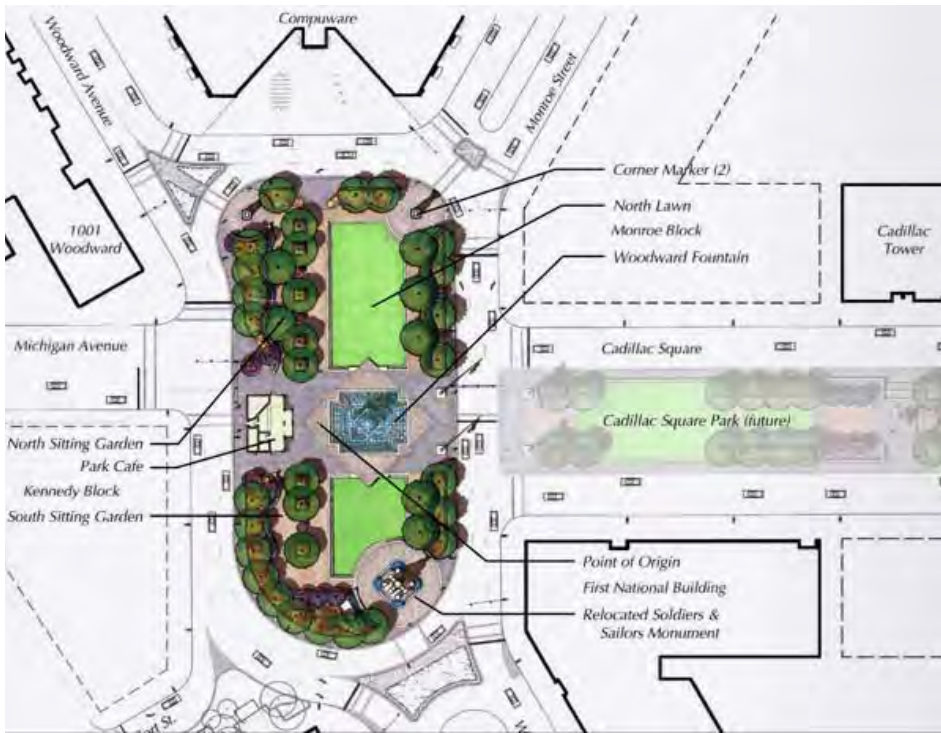
Detroit, Michigan

This main intersection in downtown Detroit was transformed into a 2.5-acre, vibrant, well-loved civic space. The effort was led by the nonprofit Detroit 300 Conservancy, a group of citizens, civic organizations, and businesses, and has become a model for cities throughout North America. Campus Martius redefines the downtown around this central square. Detroit partnered with Detroit 300 and undertook this modest but effective way to rehabilitate the downtown. The park opened in 2004 and now attracts more than 2 million visitors each year. It has catalyzed approximately \$700 million in new development in the adjacent neighborhoods, including cafes, retail, and a large office building. Year-round programming draws visitors and workers to the park.



Fig. 64 In the late 18th century, Campus Martius served as a military training ground, which is how it received its name. At the center of Campus Martius lies a point known as the “Point of Origin” because it is from this location that the City of Detroit’s coordinate system was created.

Fig. 65 Plan of Campus Martius redesign.



Relevance to City Hall Plaza

Similar to City Hall Plaza, Campus Martius was a barren urban plot of land, surrounded by arterial roads. It also occupies a central location in the city but remained physically disconnected from the city.

Funding and Key Partners

Detroit 300 funded the construction of Campus Martius Park. The Detroit 300 Conservancy, a successor group to the Detroit 300, constructed the park and is responsible for its management, maintenance, and operation under a long-term operating agreement with the City of Detroit.

Fig. 66 Summer concert in Campus Martius (*below left*).

Fig. 67 Nearby workers occupy the tables (*below center*).

Fig. 68 The fountain draws many visitors (*below right*).

Fig. 69 An overhead view of the plaza (*bottom*).



Dilworth Plaza

Philadelphia, Pennsylvania *in progress*

Dilworth Plaza is a 1960s-era sunken concrete plaza that sits atop one of the city's busiest transit hubs to the west of Philadelphia's City Hall. The redesign of the plaza, organized by the Center City District, a private-sector group, will replace the modernist concrete plaza with ❶ a great lawn; ❷ a reconfigurable, flexible open space that can accommodate winter ice skating, summer concerts, and large assemblies; a programmable fountain; ❸ glass transit station entrances; ❹ a cafe with outdoor seating; and improvements in stormwater management. The new design seeks to reestablish direct pedestrian access to this sunken plaza, enhance and frame City Hall, and create an active civic space through the addition of green space and an engaging, educational water feature. In addition, the design seeks to maximize programming opportunities in all four seasons. An innovative group of private and public partners are funding this project, which is being coordinated with improvements to the City Hall transit station below the plaza.

Fig. 70 The existing conditions (below) of this modernist-era plaza leave much to be desired. The vast hardscaped plaza is bleak much of the year. In addition, a profusion of steps make the plaza difficult to access for many citizens.



Fig. 71 The plaza redesign (right) features a large lawn and reprogrammable fountain and large gatherings or seasonable activities.



Relevance to City Hall Plaza

Similar to Boston's City Hall Plaza, Dilworth Plaza can be seen as a large roovescape over many levels of underground infrastructure. Part of the challenge for both projects is coordinating independently funded and managed projects in this area—in this case, the design for the Center City District and the City Hall Station's \$200-million-dollar renovation, which is being handled by the Philadelphia transit authority, SEPTA.

Sustainable Design Features

A 36,000-gallon underground cistern will collect rainwater for on-site irrigation. The programmable fountain adds an element of delight to the public realm and helps tell the story of water on the site. Increased landscape area will help air quality. Porous paving around the station entrances will reduce stormwater runoff.

Funding and Key Partners

The private-sector Center City District group has organized and managed this redesign effort. In October 2010, the project received \$15 million in funding from the federal TIGER II grant program. The commonwealth of Pennsylvania is providing a matching \$15.5 million. Additional contributions come from foundations, and adjacent property owners. Funding is also expected from the city of Philadelphia, SEPTA, and loan financing.

Fig. 72 A diagram of the underground cistern for water collection (right).

Sq. Ft.	Proposed	Existing
Impermeable Paving	69,266	112,178
Permeable Paving	14,598	0
Fountain	11,561	2,841
Planting and Lawns	27,685	6,643

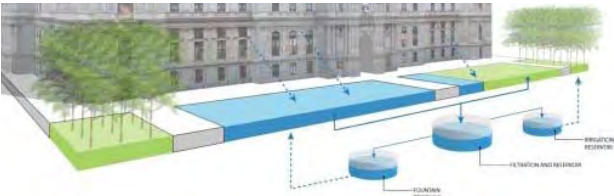


Fig. 73 Three plan views of the new plaza (right). The design features “pixels” that can be reconfigured to support a water feature, programmed activities such as large civic gatherings or farmers markets, ice skating, etc.

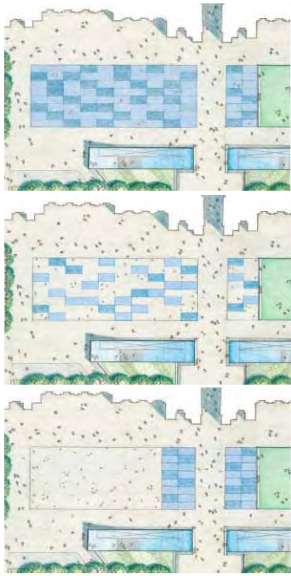


Fig. 74 Three perspective views of the new plaza that correspond to the plan views (far right).



U.S. Courthouse Plaza

Minneapolis, MN

This 1.2-acre plaza in Minneapolis, commonly known as Drumlins Park, sits in front of the federal courthouse and across the street from City Hall. The sculptural landscape forms were inspired by the drumlins, or elongated hills shaped by glacial drifts, formed by the Mississippi River in Minnesota. The plaza design is notable for how it overcomes infrastructure and security obstacles. It lies atop an underground parking structure, which created weight restrictions, left no space for subsurface plantings, and required a ground-level ventilation system. The design effectively contends with these challenges. The drumlins, acting in concert with bollards and ❶ log benches, serve as security barriers for the federal building and guide pedestrians from various ends of the open plaza to the courthouse entrance. The lightweight log benches, made of Jack Pine, a native Minnesota species, are intended to evoke and honor Minnesota's history as a logging and lumber capital. ❷ Sculptures add visual interest to the public realm.

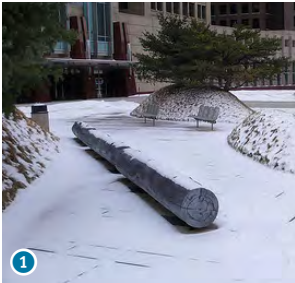


Fig. 75 The drumlins serve as a security barrier (below).

Fig. 76 Log bench of native Jack Pine wood (top).

Fig. 77 Sculpture (above).



Relevance to City Hall Plaza

This plaza, though much smaller, faced many of the same challenges as Boston's City Hall Plaza—namely subsurface conditions. The drumlin forms help direct visitors to the front door, introduce greenery and plantings on a plaza that otherwise would not be able to accommodate plantings, and act as security barriers.

Sustainable Design Features

The grass and trees of the drumlin forms improve air quality, and the trees provide shade. Native species, including Jack Pine trees, were used. Native Jack Pine was also used for the log benches and log bollards.

Funding and Key Partners

This project, part of the construction of the federal courthouse building, was funded by GSA. The sculptures are funded by the GSA's Art in Architecture program.

Fig. 78 Drumlins and log benches of native Jack Pine (*right*).

Fig. 79 Aerial view of US Courthouse Plaza in Minneapolis (*right bottom*).

Fig. 80 View of courthouse entrance (*below*).

Fig. 81 An overall view from a nearby building (*bottom*).



Bryant Park

New York, New York

In 1934, Bryant Park was redesigned and raised above the surrounding streets to accommodate library stacks underneath. This redesign visually and physically separated the park from its surroundings. The park soon became a site for drug dealing and other questionable or illegal activities and was nicknamed "Needle Park." In the early 1980s, William H. Whyte and the Project for Public Spaces started a study of Bryant Park, and the Rockefeller Brothers Fund provided money to start the Bryant Park Restoration Corporation. This corporation oversaw the redesign of the park and now manages the park through a long-term agreement with the City of New York. The rebirth of Bryant Park required the designers to take a new approach to planning and design in an intensely public process. Because of the landmark status of the park and numerous other factors, the redesign was subtle and incremental, but a series of small changes added up and the park thrives today. As Paul Goldberger wrote in the *New York Times*, "The social transformation of Bryant Park is as astonishing as its architectural evolution, and a great deal less subtle. . . . [But] this renovation should not be sold short as a work of architecture. It's in fact rather remarkable: a plethora of small changes in an unworkable design that, taken together, fix what was broken" (May 3, 1992).

Fig. 82 An overall plan of Bryant Park (below).

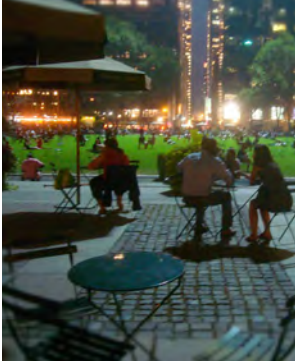
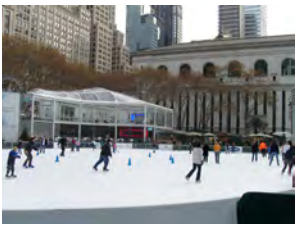
Fig. 83 Summer in Bryant Park (right top).

Fig. 84 Summer concert (right, second from top).

Fig. 85 Winter in Bryant Park (right, third from top).

Fig. 86 Ice skating (right, fourth from top).

Fig. 87 Summer evening (right, bottom).



Relevance to City Hall Plaza

The transformation of Bryant Park was subtle but highly effective and happened through an intensely public process. Any changes to Boston's City Hall Plaza will be necessarily incremental. Furthermore, changes may be limited by landmarks and preservation issues, as was the case with Bryant Park.

Sustainable Design Features

Bryant Park sat above its surroundings after the 1934 redesign and was blocked off visually and physically by hedges and walls. The 1980s redesign opened up the entrances and removed hedges so people could see into the park from the sidewalk. Restoring visual connections helped make the park a more inviting, attractive place.

Funding and Key Partners

The Rockefeller Foundation provided the seed money for the study in the 1980s, and the Rockefeller Brothers Fund started the Bryant Park Corporation, a nonprofit, private company. In 1988, the City signed an agreement entrusting management and improvements to the park to the Bryant Park Corporation, applying private management and private funding to a public park.



Fig. 88 Seats in the park (*left*).

Fig. 89 Cafe (*middle row, left*).

Fig. 90 Seating in the park (*middle row, center*)

Fig. 91 .Aerial of yoga class in park (*middle row, right*).

Fig. 92 Ice skating (*bottom*).



Schouwburgplein

Rotterdam, Netherlands

Following the devastation of World War II, nondescript towers were built around this 3-acre square, and this area of Rotterdam became derelict and empty by the 1980s. The square lacked a sense of place and was frequently used for parking. The city hired urban designers to rethink the town square. Schouwburgplein is an argument for unprogrammed, or loosely programmed, space in the public realm. It is an urban stage—a void that opens up views to the rest of the city. Rather than a sunken area, the square, which sits atop an underground parking garage, is elevated about 14 inches above the surrounding streets. This slight change in elevation helps define the edges of the square and ensured that the square would remain car-free. Because of the underground structure, the surface is very thin and lightweight, and it was impossible for the designers to plant anything here. However, the designers did specify planters with flowers and a grid of palm trees to provide shade and shelter in the summer months. Simple patterns of materials distinguish zones of the square: ❶ wood in a herringbone pattern, an epoxy floor, and ❷ perforated metal floor panels. Beneath the metal floor panels, jets of water can enliven the square in warm weather. A series of red, crane-like ❸ light masts are the square's signature. These masts are coin-operated and provide light for the square at night.

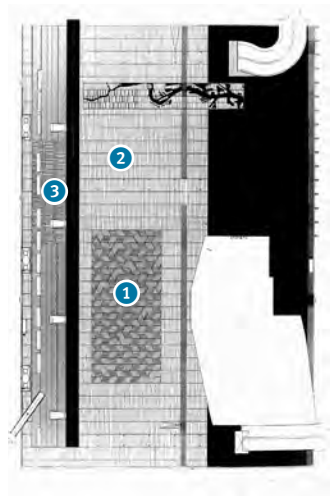


Fig. 93 Before West 8's intervention, the town square (above) was underutilized by pedestrians and often used as a parking lot.

Fig. 94 A bench (below).

Fig. 95 Plan (bottom).

Fig. 96 A photo of square on a sunny day (bottom right).



Relevance to City Hall Plaza

Similar to Boston's City Hall Plaza, the main goal at Schouwburgplein was to make an attractive, welcoming civic space—to foster a sense of place in the middle of Rotterdam. City Hall Plaza lacks the cultural venues that surround Schouwburgplein, but it does teem at its edges with city, federal, and private sector workers, who should be drawn to the plaza. Boston does need a flexibly programmed hardscape civic space to accommodate large gatherings, and events such as runs and festivals. Smart programming and partnerships with arts organizations help enliven Schouwburgplein, and a similar strategy would help enliven City Hall Plaza.

Sustainable Design Features

Raising the ground plane of the square effectively prevents vehicles from driving or parking on the square, and creates a well-defined edge to the site.

Funding and Key Partners

The project was funded by the City of Rotterdam.

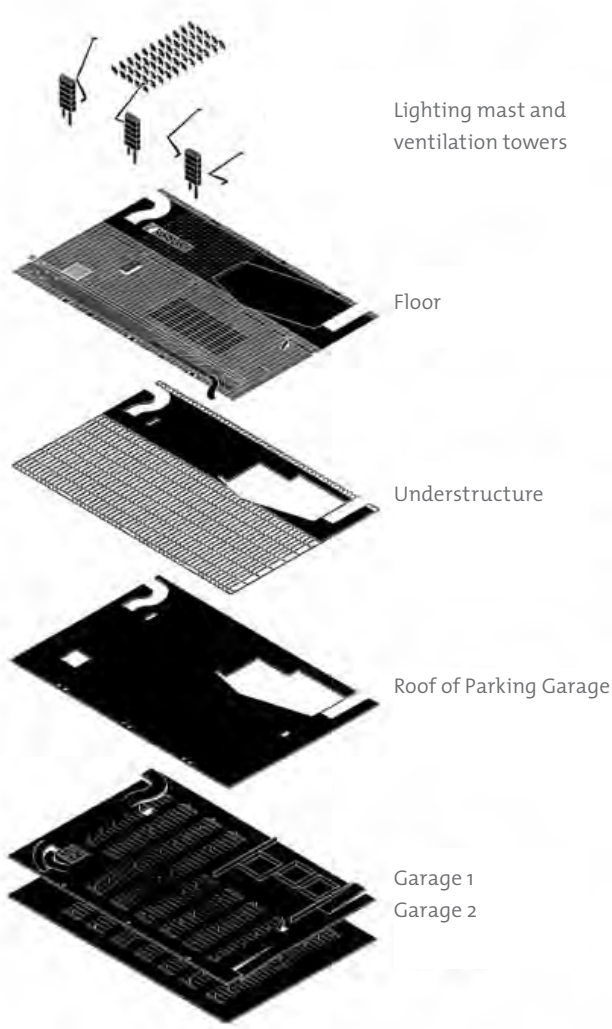


Fig. 97 Exploded axonometric view (right).

Fig. 98 The square at night (below).





Workshop

Description, Schedule, and Participants

Fig. 99 Photocollage of the workshops held from December 15 to 17, 2010 (facing page).

Fig. 100 Schedule of the three-day workshop (below).

The three-day workshop, from December 15 to 17, 2010, brought together experts in landscape architecture, urban design, civil engineering, stormwater management, energy design, multimodal transportation, and the history of Government Center. Utile and Reed Hilderbrand also engaged design teams that are currently working on projects within and adjacent to the plaza in order to find synergies between independently funded initiatives. During the sessions the team explored the full range of strategies that can improve the performance of the open space; including improved stormwater runoff approaches, tree canopy to increase summer shade and reduce the heat island effect, and new urban connections that improve bicycle and pedestrian connections across the site.

	December 15 Wednesday	December 16 Thursday	December 17 Friday
Workshops	8 AM	Introduction	Landscape and Sustainability
	9 AM	Infrastructure and Transportation	Wrap-up Session
	10 AM	Break	
	11 AM	Urban Design and Landscape	Executive Session
	12 PM	Regulatory Context and Implementation	
	Lunch	Lunch	Lunch
Design Sessions	1 PM	Design Session	Crit Session with Symposium Speakers
	2 PM		
	3 PM		
	4 PM		
	5 PM		

Participants

Introductory Session

Jim Hunt, EES
 Kairos Shen, BRA
 Abi Vladeck, COB
 Tom Skinner, Durand & Anastas
 Rosemary Monahan, EPA
 Abby Hall, EPA
 Clark Wilson, EPA
 Vineet Gupta, BTD
 Gianne Conard, GSA
 Michael Franzese, GSA
 John Sullivan, Boston Water & Sewer Comm.
 Holly Palmgren, MBTA
 Michael Carosetto, GSA
 Stephanie Pollack, Dukakis Center, Northeastern Univ.
 Eric Kramer, Reed Hilderbrand Associates

Infrastructure and Transportation

Andy Belden, Solar Boston
 Jason Schrieber, Nelson/Nygaard
 Jerry Friedman, HDR Inc.
 Holly Palmgren, MBTA
 Abi Vladeck, COB
 Para Jayasinghe, Boston PWD
 Andrew D. Brennan, MBTA
 Tom Skinner, Durand & Anastas
 Rosemary Monahan, EPA
 Abby Hall, EPA
 Clark Wilson, EPA
 Vineet Gupta, BTD
 Gianne Conard, GSA
 Michael Franzese, GSA
 John Sullivan, Boston Water & Sewer Commission
 Matthew Mayrl, Boston PWD
 Eric Kramer, Reed Hilderbrand Associates

Urban Design and Landscape

Jim Hunt, EES
 Kairos Shen, BRA
 Abi Vladeck, COB
 Tom Skinner, Durand & Anastas
 Rosemary Monahan, EPA
 Abby Hall, EPA
 Clark Wilson, EPA
 Vineet Gupta, BTD
 Gianne Conard, GSA
 John Sullivan, Boston Water & Sewer Comm.
 Holly Palmgren, MBTA
 Michael Carosetto, GSA
 Eric Kramer, Reed Hilderbrand Associates
 Joe Mulligan, COB Capital Construction
 Dino Di Franco, HDR Inc.
 David Dederer, Parks Dept.
 Toni Pollak, Parks Dept.
 Henry Moss, Bruner/Cott & Associates
 Anthony Pangaro, Millennium Partners
 George Thrush, Northeastern University
 Ellen Lipsey, Boston Landmarks Commission
 Skip Burck, Richard Burck Associates
 Caitlin Greeley, Boston Landmarks Commission

MBTA /Government Center / Accessibility Design Session

Andrew D. Brennan, MBTA
 Abi Vladeck, COB
 Abby Hall, EPA
 Clark Wilson, EPA
 Rosemary Monahan, EPA
 Eric Kramer, Reed Hilderbrand Associates

Tom Skinner, Durand &
Anastas

Kairos Shen, BRA

Prataap Patrose, BRA

Joe Mulligan, COB Capital
Construction

Dino Di Franzo, HDR Inc

Nicole Freedman, COB Bikes

Tim Stonor, Space Syntax

Leo Murphy, COB PFD

Kristin McColl, COB Disability
Commission

Landscaping and Sustainability

Kate Bowditch, Charles River
Watershed Association

Gary Hilderbrand, Reed
Hilderbrand Associates

Wilson Rickerson, Meister
Consultants

Kenya Thompson, BRA

Lara Mérida-Fernandes, BRA

Cynthia Smith, Halvorson
Design Partnership

Bryan Glascock, EES

David Conway, Nitsch
Engineering

Kristin Frederickson, Reed
Hilderbrand Associates

Jill Ochs-Zick, BRA

Judith Bowen, GSA

Abi Vladeck, COB

Skip Burck, Richard Burck
Associates

Tom Skinner, Durand &
Anastas

Rosemary Monahan, EPA

Jim Hunt, EES

Abby Hall, EPA

Clark Wilson, EPA

Regulatory Context

Judith Bowen, GSA

Abi Vladeck, COB

Kate Bowditch, Charles River
Watershed Association

Joe Mulligan, COB Capital
Construction

Lara Mérida-Fernandes, BRA

Kairos Shen, BRA

Bryan Glascock, EES

Stephanie Pollack, Dukakis
Center

Prataap Patrose, BRA

Gary Hilderbrand, Reed
Hilderbrand Associates

Robert Roseen, UNH
Stormwater Center

Wrap-up Session

Gary Hilderbrand, Reed
Hilderbrand

Abi Vladeck, COB

Jim Hunt, EES

Tim Stonor, Space Syntax

Ellen Lipsey, Boston
Landmarks Commission

Judith Bowen, GSA

Gianne Conard, GSA

Cynthia Smith, Halvorson
Design Partnership

Tom Skinner, Durand &
Anastas

Rosemary Monahan, EPA

Bryan Glascock, EES

Vineet Gupta, BTB

Abby Hall, EPA

Clark Wilson, EPA

Executive Session

Carl Dierker, EPA Regional

Richard Dimino, ABC

Bob Walsh, RF Walsh Co.

Bob Culver, MassDevelopment

Joanne Massaro, COB

Ted Landsmark, BAC

Gary Hilderbrand, Reed
Hilderbrand Associates

Abi Vladeck, COB

Lara Merida-Fernandes, BRA

Jim Hunt, EES

Tom Skinner, Durand & Anastas

Rosemary Monahan, EPA

Vineet Gupta, BTB

Abby Hall, EPA

Clark Wilson, EPA

Joe Mulligan, COB Capital
Construction

Utile, Inc.
Reed Hilderbrand Associates
Durand & Anastas Environmental Strategies
Nitsch Engineering
For the U.S. Environmental Protection Agency