

THE MUDDY RIVER  
AT CHARLESGATE,  
THE MISSING LINK  
BETWEEN THE  
EMERALD NECKLACE  
AND THE BASIN.

urban context, there has been a tendency to plant trees in straight lines even where there is enough room to relieve that urban linearity with informal massing of vegetation. The transition spaces between different areas of the Basin and at major approaches should have a treatment that underscores the richness and variety of the Basin experience. The willow trees at the Bowker Overpass are an example of what might be done. The mature willows mark the transition between the Fens and the Charles River Basin and help to soften the impact of the highway ramps.

The landscape at most bridges should be an important element that enhances the Basin landscape and orients users to the park. Motorists take in full views of the bridges and their problem landscapes as they drive along the Charles.

### Trees

Trees are the most important design element in shaping scenery. They form edges to paths and open space, create canopies, frame views, and are the object of the view themselves—the willows at the Esplanade, for example.

Within the small number of tree species that have been planted, some are poorly suited to the Basin's needs and should be phased out or used sparingly with greater attention to their placement. The bushy, full form of the American linden, for example, blocks water views. Mature Norway maples require deeper, better soil than the parkland can provide and should be phased out entirely. The yearly donation of cherry trees from Japan is a wonderful gesture, but their excessive use in the Basin has lessened their appeal and forced their siting in inappropriate places and configurations. Conversely, there are very few evergreens within the Basin, which would add winter interest in the parkland (see the plant list in Appendix E).

Particular signature trees, such as the London planetrees along Memorial Drive and the black willows at the Esplanade lagoons and Herter Park, should be preserved. Most of the Basin's trees show signs of stress due to an urban setting, intensive park use leading to soil compaction, or damage mowers have done to trunks.

### Shrubs and Grasses

Over time, security and maintenance issues have reduced the number of shrubs in the Basin landscape. The judicious use of shrubs in the parkland, however, can improve the character of particular areas, screen intrusive views, facilitate maintenance where banks need to be stabilized or grass maintenance is difficult, and control use where short-cut paths have degraded park areas.

Grass is currently the universal ground cover throughout the Basin. Many park areas need mown turf to support use and visual character. However, alternative treatments such as tall



CHERRY TREES AT THE  
RIVERSIDE BOAT CLUB.

meadow grasses or ivies should be considered to facilitate maintenance, increase visual diversity, and protect trees where repeated mower damage is weakening them. These alternative ground covers and shrubs require a different maintenance regime than turf does; additional staff and staff training would be required to maintain a more diverse landscape.

## Pathways

Large sections of Basin pathways are in poor condition. Clogged or nonexistent catch basins and poor grading have created drainage problems, such as at Herter Park. Pavement has cracked or spalled and potholes have developed

BARE PATHS NEAR MIT (LEFT), AND A JOGGING TRAIL WORN BY USERS AT LEDERMAN FIELD.



in other places such as the Cambridge Esplanade at MIT. The historic promenade at the Esplanade is in need of rehabilitation. Bridge walkways are not consistently plowed in the winter. Vegetation obstructs some of the paths in the Upper Basin. A regularly scheduled program of pathway maintenance must be developed.

The width of pathways is often inadequate for the amount of traffic they carry, particularly where parkways crowd the bank. Some stretches of pathway are only five feet wide, barely enough room for bicyclists to pass one another. In many of these stretches, users are spilling off the paved edges onto bare earth, in effect creating paths eight to ten feet wide. Some joggers

tend to make their own pathways off the paved surface, which helps to alleviate crowding on the main path but causes erosion and root compaction. In several places, such as Nonantum Road, light poles, signposts, guardrails, or electrical boxes have been placed in already narrow pathways, further constricting their width.

Narrow widths and overuse of the pathways have made conflicts between those on foot and those on wheels more common. Though users seem to sort themselves out and avoid collisions on crowded pathways, conflicts compel some users to avoid popular spots at certain times. The crowded conditions are aggravated by individuals who do not follow the rules of the road—giving audible signals before passing, for example, or moving at a moderate speed. Even though cyclists and skaters may be in control, their speed threatens many pedestrians. Pedestrians often look back over their shoulders at the sound of brakes or are startled as cyclists or skaters brush by them to pass while avoiding oncoming traffic. This constant state of nervousness is not conducive to quiet contemplation of the river scenery. Pedestrians themselves often walk more than two abreast which makes passing difficult and dangerous.

Ideally, wheeled users would be separated from pedestrians, as is done in the Southwest Corridor Park. The extremely constrained parkways, paths, and shore areas along most of the Charles River Basin make this impossible in most places. The twelve feet needed to establish two six-foot bicycle lanes next to parkways is simply unavailable along

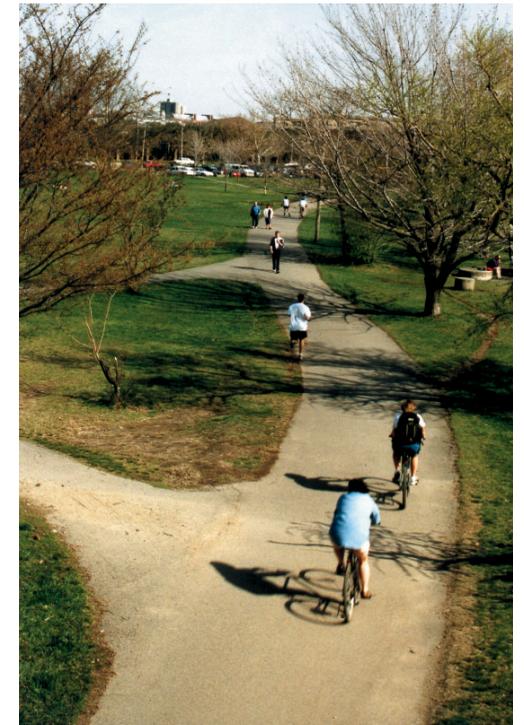
much of the Basin. While it is possible to add bicycle lanes in limited stretches along the parkways, the lack of continuity would force awkward and dangerous transitions as cyclists shifted from the roadway to a multiuse path and back again.

Another important consideration is the relation of pathways to parkways, which contributes to a sense of security. Along most of the north side of the river, the main pathway runs close to the parkway and is clearly visible from the road. On the south side along most of the Lower Basin and part of the Middle Basin, the path is not as visible from the road. The boardwalk underneath the Boston University Bridge is particularly problematic. Anyone on the boardwalk is invisible from the road or even from the path segments that lead to it. It is in the middle of one of the longest stretches with no exit from the Basin parklands.

While the Charles River Reservation is officially closed after dusk, some of the paths are lighted for night use, and many people use them.

People entering after dusk do so “at their own risk.” The pathways are not as safe at night as they are during the day. State Police records

BICYCLES, JOGGERS AND PEDESTRIANS SHARE THE PATH AT HERTER PARK.



document that a large number of incidents have taken place between sunset and sunrise; of fifty-eight incidents in the Lower Basin for which the time of trooper response is noted, twenty-eight took place after dark. On the few Basin pathways that are lighted, bulbs are often burned out. Only thirty-six percent of respondents to the user survey felt safe at night in the Basin. Although the reservation is not legally open at night, use does occur then and ways to make Basin pathways safer after dark should be explored.

### **Police Presence and Security**

Many users assert that a stronger police presence in the Basin has been necessary for some time. Patrolling on the pathways is limited to two State Police troopers on bicycles between the historic Charles River Dam and the Boston University Bridge and one between the Boston University Bridge and the Watertown Dam. In the summer they are joined by several MDC park rangers. MDC rules and regulations for the Basin, last updated in 1997, give MDC Rangers noncriminal citation powers and ticket books; State Police have full police powers.

The two State Police stations that patrol the Basin monitor security incidents in logbooks and daily journals. The Lower Basin Police Station covers the area between the historic Charles River Dam and the Boston University Bridge; the Upper Basin Police Station covers the rest of the Basin. The planning team consulted each station's records and interviewed

officers to determine the number of reported incidents; these were then separated into quality-of-life and safety concerns. Incidents that did not threaten the safety or property of people using the reservation but did affect, sometimes seriously, how comfortable people felt there—for example, drunken behavior, camping, drug use, and men exposing themselves—were classified as quality-of-life issues. Safety incidents include all serious injuries, threats, or damage to property, such as assault and collisions between an automobile and a pedestrian or cyclist. Collisions between automobiles on parkways were not included in the count.

In general, there were far more incidents reported below the BU Bridge than above it, including the majority of the safety incidents. In July 1997, for example, users reported thirty-two safety incidents and twenty-six quality-of-life incidents in the Lower Basin but only eight safety and seventeen quality-of-life incidents in the Upper Basin.

One of the most important safety issues is a lack of emergency and/or pay phones for reporting incidents. This is a serious safety issue. When accidents occur, it can be very difficult to call for medical assistance. For the safety of their students Harvard and MIT maintain emergency phones that connect directly to the police and cannot be used for any other purpose. These stretches of Basin parkland are the only ones with such facilities. No other public emergency phones exist within the Charles River Reservation, and all three sets of pay phones in the Basin are on the Boston Esplanade.

### **RECOMMENDATIONS FOR LANDSCAPE MANAGEMENT**

- **Implement a process of selective and sustainable clearing to achieve a more varied and picturesque effect along the entire Charles River Basin; make additional plantings in certain areas.**
- **Introduce a greater variety of plant choices and vegetation designs into the Basin landscape.** Planting should define open spaces, with plants in masses, and should incorporate informal configurations where there is sufficient park width. For visual and horticultural reasons the palette of canopy tree choices should be expanded. The palette of understory ornamental trees should also be expanded and should be planted in a greater variety of configurations to embellish structures, define terrace areas, and highlight sculpture. Evergreens should be planted to increase winter interest, modulate views year-round in and out of the parkland, and diversify the character of park areas. Native plants with berries should be introduced in the Upper Basin to increase interest and improve wildlife habitat.
- **Regrade parkland areas.** Changes in the grade will work to improve the character and usability of the park in areas where erosion, compaction, or past grading has resulted in slumped, unappealing, or difficult-to-use landforms.

- **Selectively remove trees where necessary to increase the amount of open, sunny parkland.** Selective tree removal will provide space for passive use and create better views of park spaces framed by vegetation.
- **Protect signature trees and devise a strategy for replacing them.** (See “Appendix D—Landscape Maintenance.”)
- **Judiciously introduce shrubs into the Basin landscape.** Use shrubs to improve the character of the park and parkways and to control pedestrian movement. Shrubs should also be used to embellish special structures or landscapes, such as boathouses and the lagoon banks. Security and maintenance issues should help determine the choice of species.
- **Implement a variety of strategies to protect trees from the stresses of soil compaction and mower damage.** Mature trees can withstand these stresses, but the bases of

small- to moderate-sized individual trees in heavily used narrow or exposed areas should be mulched. Masses of fescue or ground covers should be planted under trees to reduce the need for mowing. Paving units such as Belgian block should be installed to surround trees planted close to pathways in order to prevent compaction and mower damage.

- **Increase diversity, visual interest, and ease of maintenance by introducing a greater variety of ground covers.** Fescues should be used to mark the transition from turf areas to the river and river-edge vegetation or from turf to woodland areas. If planted as proposed along road shoulders, medians, under tree masses, and in selected parkland areas fescues could constitute about fifteen percent of the current turf area. Ground covers should be introduced under tree groupings and to create meadows in selected places such as Herter Park West and at the intersection of Greenough Boulevard and Arsenal Street. Belgian

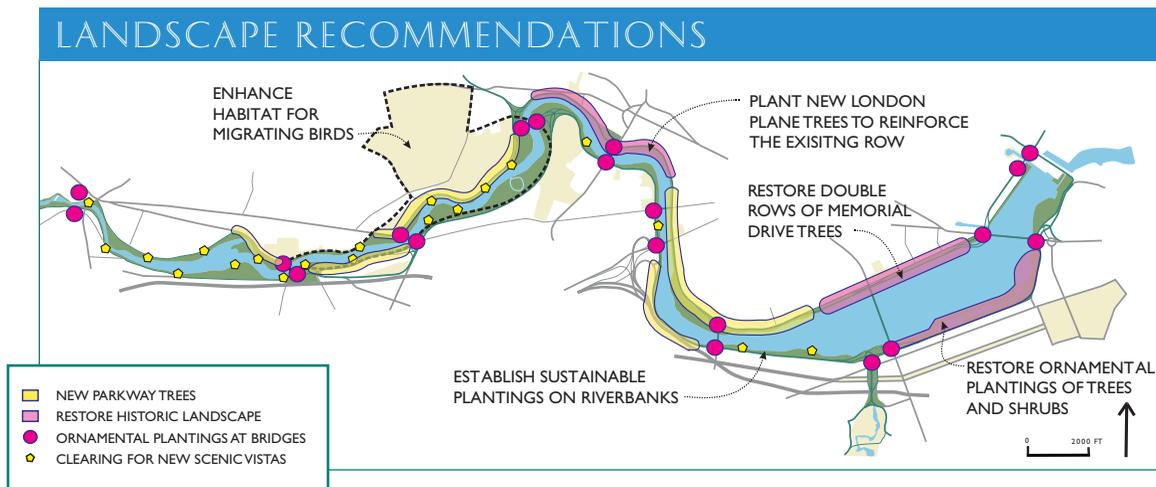
block might be used in places where short-cutting has killed grass and compacted soil, such as at pathway intersections.

- **Embellish important structures throughout the Basin with special horticultural treatments.** In particular, the Basin’s bridges and boathouses present strong images in the landscape, mark points of arrival along the journey up and down the Charles, and orient the user. Landscape treatments, such as the use of signature trees at selected bridge abutments and vines on bridges, should strengthen their visual presence.



- **Restore and protect the wetland environments in the Basin.** Wetlands at the General Service Administration site in Watertown and at Hell’s Half Acre, currently threatened by invasive exotic plants and pedestrian incursions, should be surveyed and restored.

SOIL COMPACTION AND EROSION TAKE THEIR TOLL ON PARKWAY TREES ALONG MEMORIAL DRIVE NEAR MIT.



**RECOMMENDATIONS FOR PARKLAND USE AND CIRCULATION**

- **Remove intrusive structures that have little or no historic significance and serve no compelling river-related purpose within the Basin.** The Daly Rink, the former bathhouse occupied by the American Legion Marsh Post at Gerry’s Landing, and the aging

pool complexes should be removed. The recreational value of uses currently housed in these structures should be assessed and, if appropriate, better integrated into the Basin landscape or accommodated elsewhere.

- **Expand unstructured spaces for passive uses throughout the Basin.** Unstructured spaces are flexible, benefit a much broader number of users, and support passive enjoyment of the river—a central purpose of the Charles River Basin. New areas for passive uses should be added wherever possible. Existing passive use space, such as that at the Esplanade and Magazine Beach, should be expanded. It is crucial to preserve pockets of quiet activity in the midst of even such high-use areas.
- **Convert specialized facilities and dedicated athletic fields to flexible use where possible.** Given the limited space along the Basin and the likelihood of future shifts in forms of recreation, dedicated facilities that benefit single user groups for limited periods of time should be discouraged. Fields should be adaptable to a variety of organized and informal games.
- **Distribute uses more evenly along the Basin.** Redistributing informal uses along the Basin will help to minimize impacts on the most popular stretches of parkland. A park area could be developed above the North Beacon Street Bridge to draw users into the upper reaches of the Basin. The expansion of park space at the MIT seawall would help alleviate the crush of users on Esplanade paths.

- **Increase the number of temporary parkway closures on weekends and extend the length of the season.**

Riverbend Park, the section of Memorial Drive closed to motorized traffic on Sundays from April through October, is

very popular. Expanding the parkway parks along most of the north bank could help to distribute users along the Basin.

Consideration should also be given to extending the parkway closure season.

- **Achieve adequate path widths while preserving the park-like condition of the Basin.** Wherever possible, pathways in constricted areas should be eight feet wide and incorporate one-foot shoulders on the down-slope side to prevent erosion. The difference between six- and eight-foot widths is so significant that it justifies extraordinary measures such as regrading riverbanks and rebuilding riprap slopes. Where the width of the parkland is sufficient, heavily trafficked multiuse paths should be ten feet wide. All multiuse paths and bridge crossings should be easily accessible to emergency and maintenance vehicles.

In no case should one or more paths dominate the bank or take up more than twenty percent of the width between the



FLEXIBLE-USE AREA AT HERTER PARK.

shore and the parkway curb. Unless the shore is armored with stone, all pedestrian paths should be a minimum of five feet from the shore and at least eight to twelve feet everywhere space permits

- **Where banks are wide enough, establish separate paths for wheeled users and pedestrians.** Where dual paths exist, as at the Esplanade islands, designate the path closest to the shore for pedestrian use only. Where space permits in the Upper Basin bicycle lanes and additional pedestrian pathways should be created along the shore. The MDC should field-test a variety of solidified soil paths for pedestrians to see which ones perform well over time. Avoid the use of asphalt surfaces close to the shore.
- **Discourage wheeled traffic on pedestrian paths.** A combination of rumble strips, soft surfacing, curved alignment, and gates should be sufficient to limit wheels on pedestrian-

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only pathways. To discourage excessive speeds at transition points, pavement at the approaches to intersections and pedestrian bridges should be scored.

- **Paint center stripes on all multiuse paths to help direct two-way traffic, and install jogging mile markers.** Choose a darker nonglare paint to be in keeping with the park setting.
- **Benches that face pathways should be set back on concrete pads at least 18 inches, preferably 24 inches, so that users' legs and feet do not extend into the path.**
- **Post trail etiquette signs and educate users to "share the path/share the park."**
- **Plow the main paths and bridge crossings of jogging loops along the river for year-round use.** Sweep the paths periodically to prevent slides and falls on bicycles and skates and to improve cleanliness.
- **Develop a path-monitoring and -maintenance program.** Set up a hotline or Web address for users to report problems quickly and easily. Establish an adopt-a-path program for volunteers to help with routine path and shore maintenance.
- **Add more pay phones at areas with heavy use.** Pay phones increase security by providing the means for people to contact the state police. In a reservation of this size it is not uncommon for people to overextend themselves in terms of time and distance. Provide pay phones at or near clearly recognizable drop-off/pick-up points for cars and taxis. Boathouses should be required to provide accessible public phones as part of their permits.
- **Minimize hiding places for potential assailants and keep sight lines clear.** A varied landscape is important both for visual interest and for improved habitat along the Basin, but shrubs and dense vegetation should be set back from main pathways in areas where security is a leading concern.
- **Install emergency telephones at regular intervals.** These should supplement a system of public telephones and campus security phones so that users can find a phone about every half-mile. Locations should be posted on each phone, making them readily available to caller and dispatcher. Adding emergency phones would enable people to report safety incidents quickly and might thus discourage criminals activity.
- **Design night lighting for select locations** People congregate in certain areas along the Basin, such as the Esplanade and the MIT front, to enjoy the night views of the city or to escape the summer heat. Esplanade pathways are already lighted, but appropriate lighting should be added at the terraced boat landings and at Watertown Square to improve the appearance and safety of these gathering places. Care should be taken to shield all light sources so as not to blind people to night views across the water.
- **Schedule some maintenance activities at night in key areas to improve safety.** A staggered maintenance schedule would reduce disruption during peak use times and provide an additional presence within the park after dark.
- **Increase the number of MDC bicycle patrols and encourage their enforcement of rules and regulations.**

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## PARKLAND STRUCTURES AND THEIR USE

The Basin parklands feature footbridges, boathouses and yacht clubs, swimming pools and bathhouses, athletic fields and courts, playgrounds, performance structures, maintenance facilities, monuments, and park furniture. The fifteen boathouses and four yacht clubs generate a significant amount of use and activity, but other structures are not water-dependent in a strict sense. Some take advantage of the river setting and are enhanced by it; others could operate just as successfully in another location. Many of the sports fields and facilities supplement similar facilities in local city parks.

Most of the facilities on Basin parkland are dedicated facilities—that is, they have only one use. They lack the design flexibility to allow their being shared by other uses. Some, including the pools, are open for very limited periods of time during the year. Many, however, are the product of prominent and significant designers and reflect the attitudes of the “City Beautiful” movement. At the start of the century the Metropolitan Park Commission established a high standard for the design of even the most utilitarian of structures. They are legitimate historic resources that deserve protection.

Six footbridges span the river, including the 1925 John W. Weeks Bridge, designed by McKim, Mead, and White. Arthur Shurcliff

designed the five footbridges that cross the Esplanade lagoons. In the second half of the twentieth century, nine utilitarian footbridges were constructed to carry pedestrians safely over Storrow Drive, Soldiers Field Road and Memorial Drive. Of these the Fiedler Bridge, with its flowing lines and broad span, is the most distinctive. There are also footbridges at Magazine Beach and Herter Park.

Boathouses, the most prevalent building type in the Charles River Basin, signify a 150-year tradition of crew racing on the

Charles. The fifteen boathouses along the banks include eleven dedicated to rowing and four to sailing. Anticipating the sheltered waters the historic Charles River Dam would create, most were built between 1900 and 1920, and, despite differing architectural styles, are similar in their bold massing, siting, and the way they engage the water’s edge with ramps and floats to facilitate boat launches. The oldest is Harvard University’s Newell Boathouse, constructed in 1900 to the design of Peabody and Stearns. Harvard built its Weld Boathouse in 1907, the Riverside Boat Club was built 1912, and the Cambridge Boat Club was completed in 1909. The oldest private rowing club on the river, the Union Boat Club, rebuilt its boathouse when the dam and the Boston Embankment were completed in 1910. Two of the four sailing pavilions are significant in architectural terms—the Walter C. Wood Sailing Pavilion, completed for MIT in 1936, and the MDC Community Boating pavilion, built on the Boston shore in 1941.

The three swimming pools in the Basin—at North Beacon Street, Magazine Beach, and Charlesbank Park—were built in response to the increasing pollution of the river, which



THE FIEDLER FOOTBRIDGE LINKS THE ESPLANADE WITH BEACON STREET AND THE NEARBY PUBLIC GARDEN.

made it unsafe to continue to swim at such popular areas as Magazine Beach. All are simple, low-profile masonry structures built between 1951 and 1952. The pools and their accompanying bathhouses take up limited shore space and bear little relation to the river.

There are three broad areas within the Basin where sports fields and courts have been accommodated: Lederman Field, Magazine Beach, and Daly Field. Taken together there are six softball fields, two soccer fields, two tennis courts and several informal volleyball courts. The fields at Magazine Beach overlap so that softball games and soccer games cannot be played simultaneously. The poor condition of the turf at many of these fields indicates the intensity of the use.

Four deteriorated and antiquated playgrounds were recently removed from the Esplanade. Playgrounds in varying degrees of repair are located at Magazine Beach, near Longfellow Park, and in Watertown along Charles River Road. Playgrounds have been reconstructed at Herter Park's Artesani Playground and the Lee Pool.

Performance facilities and sites include the Hatch Shell, the Esplanade, Lederman Field, and the Publick Theatre at Herter Park. The

Hatch Shell, built in 1940 to replace earlier band shells from 1929 and 1934, has become one of the region's most popular outdoor venues for music, an icon of New England that attracts a full season of public programs. It was completely restored a decade ago.

Completed in 1960 as part of the proposed Metropolitan Boston Arts Center, the Publick Theatre in Herter Park has presented plays each season since. Built on the site of the Charles River Speedway, the Publick Theatre is located on an island surrounded by a moat that flows from the river. The striking sculptural landform of the island creates an inward-focused amphitheater that is connected to the surrounding park by a bridge and a glass-and-steel building designed by Saltonstall Morton Architects. This two-story structure is the Herter Center. It is currently used for storage and office space for the New England Sports Museum.

The scope of the events that take place at these facilities—attendance, duration, and impact—varies tremendously. The High School Jazz Band Festival attracts a few hundred listeners to the Hatch Shell, while hundreds of thousands attend the Forth of July Boston Pops concert.



THE PUBLICK THEATRE AT HERTER PARK.

Maintenance, support, and administrative facilities include the MDC stables at the historic Charles River Dam, completed in 1910 to a design by Guy Lowell and recently renovated; the 1910 Fens Gate House at Charlesgate, which screens the outflow from the Stony Brook culvert; the Magazine Beach maintenance building, converted from an 1818 powder magazine by the Olmsted brothers in 1899 and currently used for storage; and the intricate and handsome Upper Basin headquarters complex on Soldiers Field Road, designed by William Austin of Stickney and Austin and built about 1900.

The Charles River Basin—particularly the Esplanade—features numerous memorials, monuments, and statues in addition to the Hatch Shell. The only other substantial memorial, excluding bridges, honors the founders of

Watertown near Watertown Square. Several markers have been placed along the river to identify historic sites, including one on the knoll near the point where Roger Clap and the Dorchester Men landed in 1630.



THE UPPER BASIN POLICE STATION AND MAINTENANCE BUILDING, BUILT AROUND 1900, ON SOLDIERS FIELD ROAD.

The best monuments combine superior design with a functional purpose. The Curtis Memorial bridges the lagoon. The charming Lotta fountain was built to provide dogs with water on hot days. The Oliver Wendell Holmes memorial, originally located opposite the judge's house on Beacon Street, provides a place to sit near the Boat Basin. The Storrow monument provides a map of the Charles and nearby bodies of water to help people orient themselves. Other monuments function solely to memorialize individuals, such as the statues of Sen. David I. Walsh, Gen. George Patton, Gov. Maurice Tobin, and Gen. Charles Devens facing the Hatch Shell oval.

Basin parklands feature an array of park furniture and amenities. Historic site furnishings are one of the best indicators of how people have used the Basin through time. Scores of benches in several styles have been provided for public use within the Charles River Basin. Four of the five types of metal-frame benches aged better than those made of concrete. Those with concrete supports have generally not worn well; many are broken. The benches in John F. Kennedy Park, completed in 1987, are based on a design by Arthur Shurcliff. They have heavy-gauge steel legs and broad wood-slat seats and backs. They are attractive, comfortable, and

durable. There are several sun shelters with benches in the Lower Basin, built to replace earlier shelters with striped canvas roofs. These sun shelters reflect the need of earlier generations for shade before the newly planted trees matured along the Basin.

There are six public bathrooms along 17.5 miles of riverbank, one of which is open year-round. There are only ten water fountains along the Basin, six of them along the Esplanade and two at Magazine Beach. There is one concession stand on the Esplanade and one near the spray pool in Charlesbank Park. There are three banks of pay telephones, all on the Esplanade.

## EXISTING CONDITIONS AND ISSUES

### Physical Condition

The condition of boathouses varies greatly. Structural failure is apparent on one, the MDC Boathouse on the Charles River Dam. The three swimming pools and bathhouses are all nearing the end of their useful lives. The Lee Pool and Bathhouse have been closed for several years due to structural problems. The roof of the Magazine Beach maintenance building needs to be replaced, though its massive masonry walls are sound.

**Visibility and Access**

The North Beacon Street Pool and Bathhouse is isolated from the river by a busy intersection and partially cut off from the neighborhoods by the Massachusetts Turnpike. The Fens Gate House is almost entirely hidden by the Bowker Overpass; only drivers on the westbound ramp to Storrow Drive are afforded a quick glimpse of this handsome building. The Upper Basin headquarters complex is not fully occupied and therefore vulnerable to vandalism. Its Captain's House is screened by overgrown vegetation from the parkway. The Saltonstall Memorial, a handsome work of art, is all but lost in the trees. At Herter Park the moat surrounding the Publick Theatre has partially silted in, and vegetation has totally obscured views of the island to the extent that many do not recognize it as such. Crude lighting, staging, and storage trailers obscure the potential of this island setting.

**Effect on Viewsheds**

The Magazine Beach Pool and Bathhouse block views to the river. The American Legion Marsh Post at the Eliot Bridge, built as a bathhouse in 1941, has little architectural merit, has been modified, and blocks a key view to the river and the Eliot Bridge from Greenough Boulevard.

Special events also affect views. Because most large events are sponsored, there is a danger that their commercial aspects—large banners, canopies, and inflatable signs bearing the names

and logos of companies—will overwhelm the river setting. Vehicles have taken over more and more space to service these events and intrude on the park setting.

**Crowding and Capacity**

Existing boathouses are at capacity; demand for more space has built up over the past twenty years. The pool and bathhouse at Magazine Beach crowd that site. Parking for the Lee Pool intrudes upon the river pathway. Special events are taxing segments of the Basin. The Hatch Shell and the staging grounds for various walkathons, road races, and boating events are under stress and overcrowded. These events also cause noise, trash, parking, and traffic problems for the surrounding neighborhoods. The impact of special events on the quiet enjoyment of the Basin by regular users must be taken into consideration and a better balance struck.

Without planning, monuments and memorials may proliferate to the point that they clutter the riverbanks. Some seem out of place—the two cherry trees and the massive stone and wooden rail next to the Hatch Shell, for example, or the bust of Arthur Feidler on the island near the lagoon. Once installed, monuments are very difficult to remove or modify.

**Privatization of Public Space**

The regattas fence off sizable areas of the shoreline each year for three to four days. Sponsorship is essential to many of the events, but it is

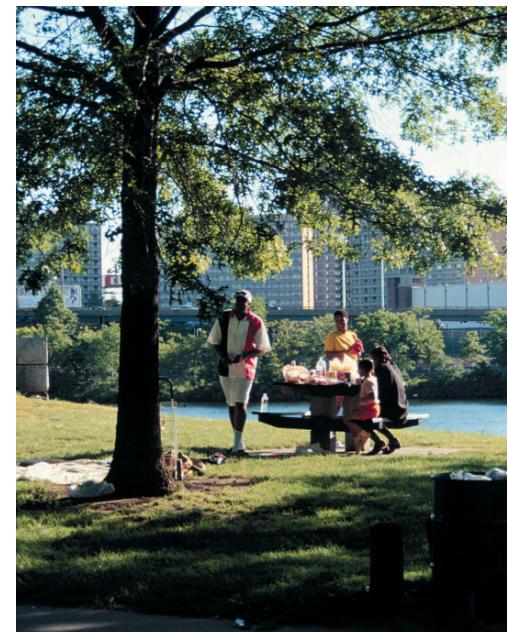
important to preserve public access and the character of the Basin while sponsors' desire for visibility is accommodated.

**Lack of Amenities**

One of the most important issues raised during the master planning process, including the user survey, is the lack of crucial amenities in the Basin. An intensive survey of the area corroborated this opinion. Benches, though in decent shape—seventy-five percent need only minor, cosmetic repair or no repair at all—are poorly distributed. Some stretches of parkland are cluttered, and others, such as Charles River Road, are underserved. Many benches seem haphazardly placed, with little attention to views or proximity to traffic. In some places benches protrude onto narrow pathways and create pinch points and uncomfortable conflicts between passive and active users. Little provision is made for other types of informal seating, such as

grassy slopes, terraced steps, and sitting walls. And even though only twenty percent of benches require major repair and another five percent require replacement, these benches are highly visible and color public perception of Basin maintenance.

A FAMILY PICNICS AT MAGAZINE BEACH.





THE LONGFELLOW BRIDGE AND ONE OF THE BASIN'S ORIGINAL LAMPS, IN 1910.

The Basin also offers only twenty-one picnic tables. In heavily used areas such as Herter Park and Magazine Beach, large family picnics are one of the primary weekend activities. Existing picnic tables are always full during summer. The lack of designated

places for grills means people place their small grills directly on the grass, creating a fire hazard and posing a danger for children.

Site furnishings are highly vulnerable to vandalism and costly to maintain. Many of the original site furnishings along the Basin—for example, the spiked lamps of the original Esplanade—have long since disappeared. As a result the Basin lacks much of the rich detailing that was present in its first few decades. Some of the wooden roofs on the sun shelters are low and pose a hazard to bicyclists and should either be moved back from pathways or elevated a few inches. The roofing materials on many of them are not in keeping with their original design. In some cases the benches are missing entirely.

Though the earlier spiked gas lamps are gone, some of the original acorn-style lamps remain. Reproduction acorn lights were specified for the renovation of Memorial Drive in front of MIT and were intended to continue up river, but now extend only as far as the dual parkway. Beyond that point modern streetlights prevail.

The five public bathrooms at the pools, Daly Field and Rink, and the Hatch Shell are open seasonally during limited times, and for major events the MDC does bring in temporary toilets. Only the newly renovated bathrooms at the Dartmouth Street Overlook on the Esplanade are open consistently. The boathouses, sailing pavilions, yacht clubs, and community gardens are usually willing to open their doors in case of emergency, but the public is not invited to use these facilities.

Water fountains are unevenly distributed, and some do not work. The Basin also offers few choices for food and drink. Food concession trucks are only allowed onto the reservation with a permit during special events. Concession trucks swing by at the Herter Park parking lot occasionally but do not stay long. While many users would welcome affordable food concessions, others object to the intrusive visual quality of concession trucks with their commercial colors and advertising.

Finally, few signs help orient first-time visitors to the Basin, explain its rules and regulations, or interpret its natural and cultural history. The bike route signs give cyclists the mistaken impression that they have right of way on pathways that function as multiuse paths.

#### RECOMMENDATIONS FOR PARKLAND STRUCTURES

- **Remove intrusive structures that have little or no compelling river-related purpose within the Basin**, such as the Daly Rink, the bathhouse occupied by the American Legion Marsh Post at Gerry's Landing, and the aging pool complexes. The recreational value of uses housed in these structures should be assessed and, if appropriate, better integrated into the Basin landscape or accommodated elsewhere.
- **Develop design guidelines for new construction that reflect the character-defining features of Basin architecture.** The Basin should accommodate only those facilities that can harmonize with the river setting and guard against a proliferation of facilities for special interests. Structures should be sited so that they emphasize the river landscape and are folded into that landscape. Playful and irregular massing can break down the scale of large facilities and

help them blend with irregular landscape forms. Heights should be limited to that of the surrounding trees if possible, and a profile that ties the building to the surrounding landscape should be encouraged. Exterior materials, textures, and colors should be as natural as possible to complement the landscape. New construction should harmonize with existing architectural forms. Most of the boathouses, for example, were built in the first decade of the twentieth century and exhibit characteristic massing, contours, siting, and materials. Modern boathouses should reflect this character without mimicking past styles.

- **A database of all relevant information on the Basin’s memorials, monuments, and statues should be created and standard operating procedures established for their maintenance.** Existing monuments should be restored and protected, according to written maintenance protocols.

- **Develop stringent criteria for the permitting, design, and siting of new monuments.** Eliot argued that monuments and other “obtrusive structures” were inappropriate because they might detract from the river scenery. Instead of stones or statuary, the MDC should encourage the donation of well-integrated functional elements (benches, landings, pedestrian bridges), with naming

privileges for only the most generous donations and worthy recipients. Only inconspicuous plaques, less than one by five inches, should be permitted on donated benches. Donated trees should have no permanent markers placed on them.

- **Certain zones such as the island at the Esplanade should become off limits for monuments.**

To honor those who have been major benefactors of the Basin, the MDC might consider a “donor’s grove” at the Dartmouth or Gloucester Street Overlook, where their names could be organized and recorded in the pavement. A similar donor’s wall has been established at Wellesley College.

- **Create design standards for park furnishings and establish maintenance procedures and schedules.** Patterns and specifications for historic lights, benches, rails, and other furnishings should be retained for future use. The bench design for John F. Kennedy Park, based on the earlier Shurcliff design, should be the standard for the Basin. While it may be tempting to choose metal or plastic slat



THIS MODERN BENCH ON THE ESPLANADE ACROSS FROM MIT IS BASED ON AN EARLIER SHURCLIFF DESIGN AND SHOULD BE USED THROUGHOUT THE BASIN.

benches because they are easier to maintain, wooden slats are far more comfortable and aesthetically pleasing. All benches should be sited on concrete pads to avoid mud holes, and the concrete should be dark to blend better with the surrounding turf and asphalt

paths.

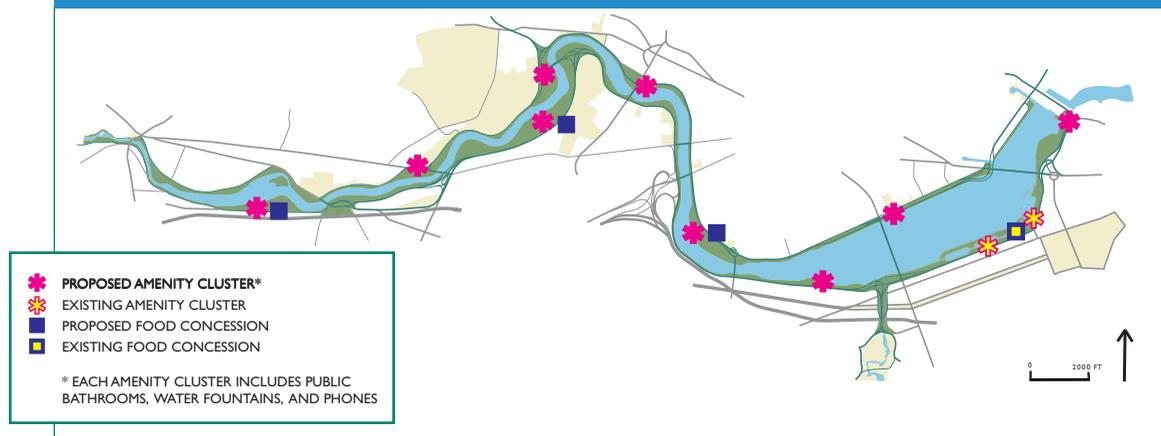
- **Encourage alternative seating arrangements, especially along the water.**

Maintain, where appropriate, or create gentle grassy slopes down to the water’s edge for sitting and lying down. In some cases, banks should be cut back

and shrubs removed to achieve this condition. Gentle slopes between 5:1 and 10:1 are generally well drained and dry to sit on. They allow people to sit close to the water and accommodate groups well. The wooden landings offer a clean and comfortable surface to sit or lie on, attracting scores of people on warm day. They should be repaired and supplemented.

- **Remove dilapidated or poorly sited benches and the pads they sit on.** Collapsing park furnishings and empty footings color

## VISITOR AMENITIES



condition. They foster an appearance of neglect and should be quickly repaired or removed. Benches and pads that are too close to parkways or isolated and rarely used should be removed and the area restored to turf.

- **Redistribute crowded benches and place new benches in select locations where they afford good views, are accessible from paths, and are sufficiently set back from the parkways.** Where appropriate, benches should be arranged to form alcoves for small groups to socialize as well as enjoy the view. Encourage boat clubs and institutions along the river to donate and maintain benches near their facilities.
- **Add tables, ash pits, and extra trash barrels in a few designated areas.** Too many furnishings can create a cluttered appearance, but the current number of picnic tables does not satisfy the demand for them. Picnic tables should be heavy-duty but movable, so that people can combine them and so that maintenance

crews can take them in for the winter or for repairs. To avoid a cluttered appearance picnic tables should be set back from the water's edge and grouped relatively close to parking lots to accommodate groups who arrive by car with picnics and grills.

- **Provide bicycle racks at key locations.** Bicycle racks should be placed only near playgrounds, sports fields, and in major gathering places where people are apt to leave their bicycles unattended. Boat houses should be required to provide bicycle racks.
- **Replace or repair damaged water fountains and add new ones along the upper stretches of the Basin and along the MIT seawall.** Joggers have repeatedly asked for water fountains, which should be located along the most popular loops. Water fountains close to boat landings would also serve the boating community; boat clubs should

donate them as part of their community service. Some fountains might be equipped with dog basins to serve the substantial canine population.

- **Locate concession stands and food carts where they will best serve the public and not intrude into the Basin landscape.** Magazine Beach, Herter Park, and Daly Field are potential sites for walk-up concession stands or food carts. The MDC should seek and approve an appropriate design for concession stands and food carts in order to avoid the intrusion of commercial signs and canopies in the public landscape. Require food vendors to pick up trash and maintain the portion of the park around their site on a daily basis. In the longer term, consideration should be given to locating restaurants in historic buildings such as the Upper Lock Gate House at the historic Charles River Dam. Since boating traffic drops away after dark, dinner cruises should be allowed on the river.



AN ICE CREAM CONE MAKES A VISIT TO THE RIVER THAT MUCH MORE ENJOYABLE.

- **Increase the availability of public bathrooms; supervise and maintain them regularly.** Several options exist for increasing the number of bathrooms in the Basin. The feasibility of the European model of unsupervised, pay-per-use toilets should be explored. A higher cost per use should be permitted in lieu of the exterior advertising that is often used to generate income to the provider. (No advertising of any type should be allowed in the Charles River Basin; useful information for park users should appear where advertisements normally do.) The units should be modified to blend with the Charles River Basin landscape in form and color.

Link expansion permits for boathouses and yacht clubs to the provision of public restrooms. Some boat clubs allow the public to use their bathrooms, but they do not advertise their availability because of security and liability concerns. Other options include installing solar-powered composting toilets, as are used on the Boston Harbor islands, or increasing the number of portable toilets. The latter would be a more immediate, if less aesthetic, solution to the problem, and would permit the MDC to tailor the number of portable toilets to seasonal use and events. They are privately maintained and difficult to vandalize, but they are costly to operate for long periods. Bathrooms might be linked to such other facilities as concession stands or boat rentals. Close supervision and constant maintenance is essential to the success of public bathrooms.

- **Install orientation signs at key gateways to the Basin.**

All signs throughout the Basin should have a unified color and design. Orientation signs should include:

- \* *A map of the entire Basin, including mileage of loops, connections to other regional open space systems, connections to public transit, and major destination points.*
- \* *The locations of bathrooms, drinking fountains, pay phones, emergency phones, concessions, and other amenities.*
- \* *The locations of particular uses, such as canoe and kayak rentals and the Publick Theatre.*

- **Install trail etiquette signs at regular intervals.** A committee of interested citizens should review the precise content of these signs. Members of the Citizens Advisory Committee have expressed interest in pursuing design and installation of these signs as an early action item. Trail signs should include this information:
  - \* Keep right
  - \* Pass on the left, after audible signal



LEARNING TO SKATE IN REVERSE AT RIVERBEND PARK ON MEMORIAL DRIVE.

- \* Bicyclists and skaters should wear safety helmets
- \* Walk pets on short leashes (seven feet or less) and remove droppings
- \* Move off the pathway when stopped
- \* Pedestrians should walk no more than two abreast

- **Replace bike route signs with multiuse path signs and install mileage markers along the paths for joggers and walkers.**
- **See “Historic Resources and Interpretation,” beginning on page 26, for preservation recommendations.**

## USE OF PARK FACILITIES

- **Concerts and other special events at the Hatch Shell and elsewhere should not unreasonably interfere with the public's enjoyment of the Charles River Basin.**

During special events other users should be able to circulate along the main pathways and enjoy the river.

- **Allow a wide range of appropriate events to be staged along the Basin.** Special events should benefit from and complement the river setting. Events that do not meet these criteria, in the judgment of the MDC, should be staged elsewhere (for example, at City Hall Plaza, the Boston and Cambridge Commons, or Columbus Park). Event sponsors and the MDC should sign a written permit agreement that includes MDC rules and regulations; a schedule for the event; and a map showing walkathon routes, delivery routes, staging areas, electrical hookups, temporary parking areas, and other details. The permit should be kept with the event manager and be available to MDC Rangers for review. This would represent a refinement of the current permit system.

Performance bonds should be posted for all large organized events to support cleanup and turf-mitigation measures. A payment system should be devised to distribute

financial responsibility in a way that reflects the relative impacts of different events. After large events these funds should be used to restore the landscape to its previous condition.

Event sponsors should demonstrate the capacity to organize and manage the event including security, efficient setup and clean-up, and restoration of any damaged facilities. Setup, take-down, and cleanup should be done immediately before and after the event.

Delivery vehicles should not be allowed to drive on soft turf areas, especially after a rain, or to park in the Basin for longer than one hour. Arrangements should be made for parking elsewhere during the event. Heavy equipment that could damage the Basin landscape or furnishings should be barred.

Event sponsors should work in partnership with the MBTA to actively encourage the use of public transportation by participants or provide special shuttle service. Use of the Basin for political or commercial purposes should be scrupulously avoided.

While sponsorships of special events should be encouraged, large banners bearing sponsor or brand names should be strictly limited in size and quantity. Sponsors' enclosures should not be erected more than twenty-four hours in advance of an event and should be removed within twenty-four hours after the event ends. Under no circumstances should enclosures, vehicles, or equipment block any part of the shoreline or any pathway. Tents



THE AUDIENCE PREPARES FOR A CONCERT ON THE CAMBRIDGE SIDE OF THE WEEKS BRIDGE.

or enclosures should be set back a minimum of forty feet from the water's edge. The promotion or selling of products, other than food from permitted concession stands, should not be allowed.

- **Stage special events, walks and races at a variety of locations to avoid undue burden on a single site.** Road races and walkathons currently begin at the Esplanade, an already intensely used place. Consistent with the goal of introducing more quiet space there for passive activities, the number of special events staged from here should be reduced and promoters encouraged to use these alternative venues:

- ★ *Lechmere Canal:* The head of Lechmere Canal might be an ideal spot for smaller walkathons and road races if an agreement can be reached with the City of Cambridge, which owns the land. It has copious parking, adequate transit, and excellent public services. Perhaps more important, it is almost entirely paved, so events staged here would have relatively low impacts on the Basin landscape.

- ★ *Lederman Field:* Lederman Field is one of the best alternatives to the Hatch Shell or Esplanade for small- and medium-sized road races and walkathons. Like the Esplanade, Lederman Field offers access to transit and spectacular views. Special events here would have to be scheduled around athletic events, the primary use of this area. Should the Lee Pool complex be replaced or removed in the future it will be important to maintain public restrooms, drinking fountains, and a concession stand to support large events.

- ★ *Cambridge Esplanade:* If the eastbound lanes of Memorial Drive next to the river are closed periodically as they are at Riverbend Park further west, the Cambridge Esplanade at MIT could be a site for staging road races, walkathons, and other events.

- ★ *The Charlesgate:* Overlooked and forgotten by many park users, The Charlesgate



PARTICIPANTS IN THE AIDS ACTION COMMITTEE'S ANNUAL WALK FOR LIFE TAKE ADVANTAGE OF A REST STOP AT CHARLESGATE.

provides a large area for gatherings.

- ★ *Riverbend Park:* Riverbend Park from River Street to Greenough Boulevard has ample room for events as well as for other public uses. It is accessible by public transit, and Harvard Square garages are available for parking. Walkathons and road races usually end with a celebration, including a band or disk jockey that plays for several hours. The presence of residential buildings would require strict controls on noise.

- ★ *Daly Field:* With improved public transit access to the upper end of the Basin, Daly

Field could become a more active staging ground for events. It offers ample parking and room for thousands to gather. Event sponsors should be encouraged to provide shuttle service from MBTA stations and elsewhere in the Basin.

- **Ban special events from certain areas of the Basin.** The Esplanade islands, Herter Park West, and Hell's Half Acre should be protected as oases of calm and quiet.

- **Maintain the Hatch Shell as the premier outdoor performance venue in the metropolitan region and reserve it primarily for musical performances.** The original bequest for the Hatch Shell prohibits use of the facility for political purposes. To protect residents in adjacent neighborhoods the MDC should test sound levels at the property line and at the source to establish appropriate decibel levels; the Boston ordinance governing sound levels in a residential/commercial area sets a ceiling of 65 decibels/25 hertz at the source. Events should take place only from 7:00 a.m. to 10:00 p.m. There should be no amplified sound before 10:00 a.m., with the exception of sound checks. The MDC should approve the use of sound amplification elsewhere in the Basin and should stipulate that it be directed away from residential areas. Groups that consistently violate the ordinance should be denied access to the facility for the following season. Exceptions to the noise ordinance

for certain special events, such as the Fourth of July, should be made at the discretion of the MDC. Bullhorns used during walkathons should not be allowed near residential areas.

With the exception of the Fourth of July celebration, special concert events should be limited in scope to the grassy oval and the music lagoon. The oval, about thirteen thousand square feet, can comfortably accommodate eight hundred to one thou-

sand people sitting on blankets. Another two hundred to four hundred listeners can be accommodated at the edges of the oval or across the lagoon with a view of the Hatch Shell. Events that draw crowds significantly larger than this cannot be accommodated comfortably in this space. If they are permitted, a rest period of two weeks afterward should be instituted to support landscape recovery. Scheduling events four days a week

from June through September—rather than five days week, as is currently done—would also reduce wear and tear.

Overall, use of the Hatch Shell should be reduced by one-third to maintain the turf in reasonable condition.

- **Fully restore and preserve the Herter Center and outdoor theatre for future public use.** The Herter Center performance complex is less than fifty years old. Modern preservation standards might construe the structure as an intrusion into the original park setting and suggest its removal, but it serves an ongoing public purpose and with some reasonable investment could be restored. Link the outdoor Publick Theatre and Herter Center programmatically so that they support each other. Local institutions and business partners should be identified to assist in advocacy and fund-raising efforts.



THE HERTER CENTER BRIDGES THE LAGOON AT HERTER PARK.

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## PARKWAYS, BRIDGES AND PATHS

Parkways following the banks of the river were an integral part of the Charles River Reservation from its creation. The tree-lined parkways, or “pleasure drives,” were designed to provide access by horse-drawn vehicle to the scenery of the river, to link the Basin to other reservations, and, to a lesser degree, to provide access from the western suburbs to the city. In contrast to the rectilinear pattern of urban streets and the straight causeways and bridges that crossed the open marshes, the parkways were broad and expansive. Their sweeping curves and open vistas unlocked the scenery of the Charles, once hidden behind private commercial lots and visible only from dead-end streets.

The parkways in large measure function as Charles Eliot intended—as “instruments by which the scenery is made accessible and enjoyable.” Though burdened by much greater traffic than their founders could have imagined, the parkways remain among the most enjoyable roadways in the metropolitan region. Motorists can see the Boston skyline from as far away as Watertown, a sight that reappears along the

river closer to the city. The parkways provide motorists several opportunities to stop, park, and visit the shores of the river.

Breadth of view and the broad gesture were essential to the parkway aesthetic. Ironically, the scale and alignment of the earliest parkways for carriages anticipates the modern highways

designed for motor cars a half-century later. Motorists today feel quite comfortable going five times the speed for which the parkways were intended.

Eliot had proposed that the context of a parkway should determine whether its design was formal or picturesque, and Arthur Shurcliff appears to have intended a formal planting of street trees along virtually all the parkways. The 1928 master plan map shows trees on only one



LOOKING SOUTHEAST ALONG MEMORIAL DRIVE NEAR HARVARD SQUARE, ABOUT 1965.

side of Cambridge Parkway, a feature that, to its detriment, characterizes it today. The Cambridge underpass at the Longfellow Bridge, where the viaduct is today, was to be built on

filled land with a picturesque massing of trees on either side, a rare exception to regimented street trees. The formal boulevard treatment of Memorial Drive in front of MIT was intended to reach beyond the end of the seawall all the way to the Boston University Boathouse. The map shows that the Soldiers Field Road extension in front of the Brighton Abattoir site had been deleted as an alternate route. The Birmingham Parkway, a somewhat redundant road that maintains a much stronger parkway character than the commercial Soldiers Field Road extension, was also shown on the 1928 map. No landscape treatment was indicated for the Arsenal Street and North Beacon Street sections.

The parkway system from the historic Charles River Dam to Watertown Square consists of Storrow Drive on the south bank and Memorial Drive on the north bank, Soldiers Field Road and its extension, Greenough Boulevard, Nonantum Road, and Charles River Road. The vision of a continuous parkway system for the entire length of the Basin was not completed until the 1960s with the construction of Greenough Boulevard. Some of the late parkways were never fully landscaped, while many of the original parkways were widened and are no longer delineated by a consistent row of street trees.

Reinforcing the continuity and landscape character of these parkways is crucial to the success of the Charles River Basin as a scenic reservation in the heart of the city. Achieving this end in the face of increased traffic and speed is a fundamental challenge.

## HISTORIC BRIDGES

The Charles River Basin contains eleven automobile bridges that connect major roadways as well as multiuse and railroad bridges. The automobile bridges spanning the river are the most prominent and play an exceptionally important role in defining the historic character of the Basin. Most of these bridges, in particular the 1906 Longfellow Bridge and the 1907 Galen Street Bridge, are handsome examples of early twentieth-century civic design that were specifically planned to enhance the aesthetic character of the Basin. The Longfellow Bridge is certainly the most substantial, the most visible, and to many the most handsome of the bridges. It is notable for its buttresses shaped like Viking ships heading upstream, which recall the popular myth that Leif Erickson discovered the Charles River Valley. In addition to vehicles the bridge also carries the MBTA Red Line.

Other bridges that cross the river are the Harvard Bridge at Massachusetts Avenue, the Boston University, River Street, Western Avenue, Anderson, Eliot, Arsenal Street, and North Beacon Street bridges. On the Cambridge side of the river, secondary bridges carry traffic over the Broad and Lechmere Canals. Other bridges include the Craigie Bridge at the Historic Charles River Dam, and the Grand Junction Railroad Bridge at the Boston University Bridge. All of the bridges are more than fifty years old and are designated as contributing structures in the Charles River Basin Historic District.



## EXISTING CONDITIONS AND ISSUES

### Interference with River Views

One of the most valued aspects of the Charles River Basin is that its parkway system visually connects tens of thousands of people every day to the river. Some parkways provide beautiful views to the Charles, but the growth of vegetation along many, particularly in the Upper Basin in Watertown, blocks river views. The roadway between the Bowker Overpass and the River Street Bridge and stretches of Memorial Drive near Longfellow Park no longer provide access to river scenery—their original and primary purpose.

### Horticultural Condition, Diversity, and Maintenance

Trees along the parkway shoulders, the narrow portions of land immediately abutting parkway edges, are subject to severe stress, including desiccation, car exhaust, salt and sand deposition, loss of topsoil caused by storm drainage problems, reduction of root systems due to roadway

construction, soil compaction from running and bicycling, and trunk damage caused by grass mowing. The vast majority of trees now exhibit such signs of stress as crown dieback, root shoots, leaf scorch, girdling roots, or loss of the tree's center leader.

Alternating clusters of different species of trees and other plantings would create an ecosystem less susceptible to disease and insect infestation. Several strategies for species distribution, some more successful than others, exist for the parkway shoulders. In a few places, most notably the site of the London planetrees along Memorial Drive, one plant species grows on both sides of the parkway for an extended distance. Along other stretches of the parkways, such as Memorial Drive between the River Street and Western Avenue bridges, one species inhabits one side of the road and another the opposite side. The most common condition is the use of clusters of different tree species along a parkway

stretch, with each species grouped for a distance before changing, as on Soldiers Field Road across from Herter Park. In some cases, as on Storrow Drive west of the Bowker Overpass, adjacent trees are of different species. Of these strategies, single-species plantings and clusters of a small variety of species are the most visually successful. There are very few ornamental plantings along the parkways. For some time during the 1980s the MDC maintained numerous floral

displays along its parkways, to great public acclaim.

The maintenance of parkway trees is limited due to staff and funding shortages. Maintenance is critical if parkway plantings are to survive and perform well in the inhospitable shoulder zone.

### Medians

Parkway medians have been treated inconsistently and are of uneven visual quality. Some are hard surfaced, with weeds forcing their way up through the pavement. Others are narrow zones of grass with guardrails that make mowing difficult. Some wider medi-

ans, such as those along Soldiers Field Road, have been planted with trees, which greatly enhances the visual character of the parkway but complicates mowing.

### Curbs

The parkway curbs are not at a consistent eight-inch height and are losing their ability to protect the shoulder planting zone from salt and sand deposition and road runoff. In some places, curbing has broken down or been lost. Other places, such as along the Soldiers Field Road commercial strip, have no curb at all. The majority of curbing is intact, but repeated road surfacing has raised the road level and reduced curb height.

### Shoulders

Because bikers and runners use them heavily, the shoulders have suffered from a great deal of soil compaction and loss of turf.

### Guardrails

There is no consistent guardrail design, and the location of guardrails along the parkways appears inconsistent. Metal guardrails, used frequently on the parkways, make these roads feel like highways rather than pleasure drives.

### Traffic Volume and Speed

The Charles River Basin parkways function as major arterials serving Boston, Cambridge, Watertown, and Newton. The most significant change to the parkways over the decades has been the increase in traffic volume and speed, which has



THE BASIN PARKWAYS ARE INTENDED FOR PLEASURE VEHICLES ONLY.

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had a deleterious effect on parkway infrastructure and landscaping and has changed the way people experience the Charles River Basin.

Parking rules and speed limits are not aggressively enforced. Due in part to a lack of enforcement, speeds on the parkways have climbed well above posted speed limits. The road alignments and the lack of curb cuts invite high speeds. The entire southern bank has become a speedway. There are particular problems on the north bank at the straightaway in front of MIT and near Magazine Beach where the Reid Overpass allows acceleration. Many of these parkways have become high-speed barriers between neighborhoods and the Basin.

### **Design**

The sweeping curves of the parkways reflect the broad curves of the river and make them pleasing roads to drive. However, many parkway design elements, such as guardrails and lighting, are in poor condition or are not in character with the parkland setting. In many cases the landscaping no longer helps to mediate between the parkways and the river. Rather than providing openings and framing views, landscape materials tend to line the drives with monotonous walls of green.

### **Parkway and Lane Widths**

Planning participants and users agree that the parkways dominate too much of the Basin. While they must be maintained as functional arterials, their negative impacts should be more effectively mitigated. Two of the most dramatic possibilities are narrowing certain parkways to reclaim parkland and capturing other parkways for temporary weekend use by pedestrians, bicyclists, and skaters.

Some of the parkways built or expanded between the 1940s and 1960s were laid out in anticipation of higher volumes of traffic than have actually occurred, particularly in the Upper Basin and along the north shore. Numerous segments of these parkways are thus excessively wide both for existing and anticipated traffic demand. Recent traffic counts substantiate these observations. In these cases it is both feasible and desirable to narrow the parkways permanently.

Although the overall width of the parkways can be quite generous, the driving lanes themselves are narrower than the eleven-foot MDC standard. Along much of the Basin, particularly on the north side, parkway lanes are only ten feet wide. Shoulders vary but are often only one foot wide, making them too narrow for cyclists who prefer to ride on the road. These narrow widths do slow traffic and preserve space for parkland.

### **Parking**

Parking is quite limited in many parts of the Basin. On the south side of the Lower Basin a few spaces are available by the Lee Pool. The Massachusetts Eye and Ear Infirmary allows Community Boating members to use its parking lot during evenings and weekends. Parallel parking exists along the north side of the Lower Basin, but students and commuters tend to use it all day. It is almost always impossible for people who wish to use the Basin on weekdays to find an open parking space. Above the Lower Basin, parking exists in lots sited where parklands widen. There is some parallel parking along Charles River Road and North Beacon Street in Watertown and off-peak parking along Memorial Drive. Large numbers of private surface and structured parking spaces abutting the Basin could potentially be shared during off-peak hours.

### **Intersection Crossings**

It is difficult in places for pedestrians, joggers, cyclists, and skaters to cross the parkways to get to the Basin. While almost all of the intersections are signalized, many of the traffic lights do not have pedestrian walk phases. Where there are pedestrian walk phases, the wait is in many cases too long—up to 110 seconds in one case. Long stretches of the parkways have no pedestrian signals of any kind, for example, along the MIT campus and Nonantum Road. Intersection handicap ramps, which are heavily used by

bicyclists and skaters, are often poorly aligned with crosswalks, and space is insufficient for bicycles, pedestrians, and skaters to queue at some crosswalks and pedestrian islands.

### Condition of bridges

Most of the bridges in the Charles River Basin are experiencing some degree of deterioration, and several, although structurally sound, are in poor condition. Bridge rehabilitation places a major strain on the MDC's annual bond fund spending cap. If there are no public safety concerns, capital funds for their reconstruction are difficult to secure. Bridge repair and replacement must respect the historic character of the Basin. Structural recommendations are beyond the scope of this report.

### RECOMMENDATIONS FOR THE PARKWAYS AND BRIDGES

- **Restore the pleasure-drive character of the parkways and reserve and reinforce a consistent parkway character along the entire length of the Charles River Basin.** Enhance

the original landscape character of the parkways to integrate them with the river setting. This will help calm traffic as motorists slow down to enjoy the view. Key initiatives should include replanting the roadway allées, opening views to the water, choosing appropriate light fixtures that support the historic character of the parkways, and removing or redesigning intrusive elements such as guardrails.

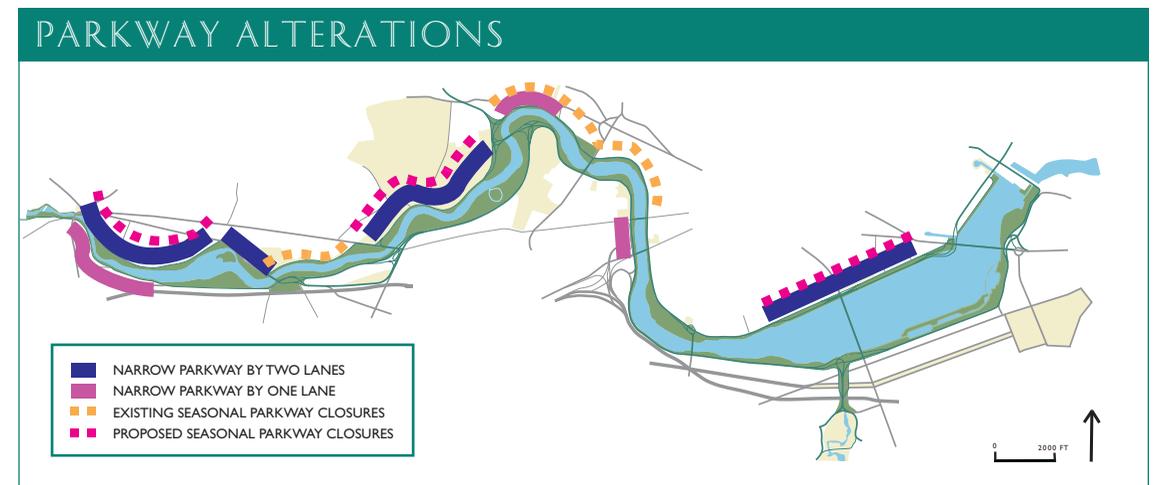
- **Narrow selected segments of the parkways to reclaim riverbank.** Narrowing parkways can be done only where the roads have significant excess capacity and where fewer lanes can handle projected traffic volumes. Narrowing selected segments of the parkways will help to slow traffic to the posted speed limit. Pedestrian safety and access to the Basin will be enhanced both by reducing the amount of roadway that must be crossed to reach the river and by slowing traffic on those roads.

Reclaimed riverbank will permit congested pathways to be widened from five to six feet to ten or twelve feet in certain areas. The additional room for riverbank landscap-

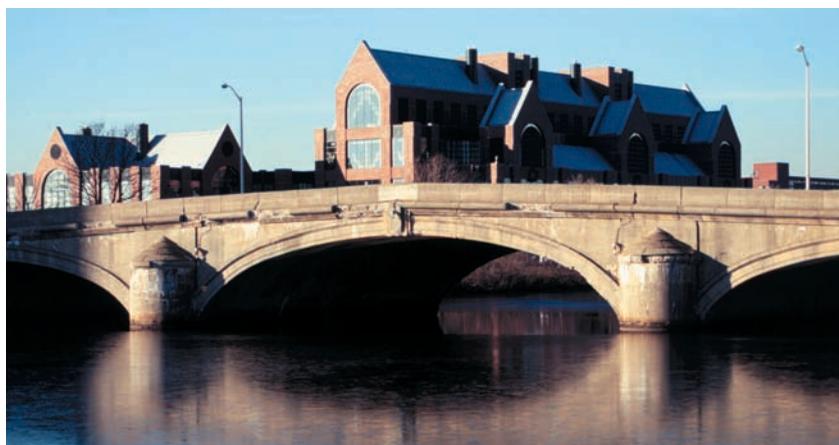
ing will result in a more attractive and useful edge for people and improved habitat and water quality.

After careful consideration of traffic counts on the parkways and of the width and quality of the parkland adjacent to them, this Master Plan recommends these permanent lane alterations:

- \* close one eastbound travel lane of Nonantum Road from Galen Street to Charlesbank Road;
- \* close one travel lane in each direction on Charles River Road from Galen Street to North Beacon Street;
- \* close one travel lane in each direction on North Beacon Street;
- \* close one travel lane in each direction on Greenough Boulevard from Arsenal Street to the approach to the Eliot Bridge;
- \* close one westbound travel lane on Memorial Drive between Fresh Pond Parkway and Hawthorn Street;
- \* close one westbound travel lane from the service road at the Genzyme front, off



THE HANDSOME RIVER STREET BRIDGE, COMPLETED IN 1926, SHOULD BE STABILIZED AND RESTORED.



- Soldiers Field Road at the overpass between Cambridge Street and Western Avenue;
- \* close one eastbound travel lane along Memorial Drive at the Cambridge Esplanade in front of MIT;
- \* narrow the eastbound ramp from the Boston University Bridge to Memorial Drive, to provide a wider sidewalk and safer pedestrian crossings.

• **Add more parkway closures to Riverbend Park, expand the Riverbend Park model to other Basin parkways during spring, summer, and fall weekends, and expand the parkway closure season.**

Adding temporary parkway closures will dramatically increase the access of pedestrians, bicyclists, and skaters to the Charles River Basin. Additions to Riverbend Park should be phased in over time on a trial basis to determine the cumulative effect on local traffic. In addition to Riverbend Park and Greenough Boulevard between North Beacon and Arsenal Streets, these parkways should be closed on weekends:

- \* Charles River Road
- \* Greenough Boulevard
- \* Eastbound lanes along the Cambridge Esplanade (with two-way traffic on the westbound lane)

Close some of the parkways on Saturdays as well as, or instead of, Sundays. Experiment with the schedule of closures. Lower- and Middle-Basin parkways might be closed on Sundays and Upper-Basin parkways on Satur-

days, for example, to draw people to different areas and to serve different groups. Expand the length of season for parkway closures.

• **Reserve existing parking spaces for park users, especially in the Lower Basin.**

In such high-demand locations as the Cambridge Esplanade, limit parking to two or four hours during the day to keep students and commuters from monopolizing available spaces. MDC Park Rangers and State Police will need to enforce these limits if they are to work. The parking supply should be increased in the evenings and on weekends by developing shared parking agreements with businesses or institutions along the river and installing clear signage to direct users to those lots. One westbound lane of Soldiers Field Road along Herter Park should be set aside for weekend and special-events parking in order to allow a reduction in the size of the main parking lot at Herter Park.

Parking and access for shell trailers should be maintained for boathouses. Because trailers are intermittently present, areas of reinforced turf could be designated for their use. Trailers should not be stored for long periods of time next to boathouses.

• **Improve and expand the traffic and pedestrian signalization throughout the Basin.**

Improved signals will dramatically improve safety for non-automotive users. Pedestrian signals should be provided along most at-



THREE NEW PEDESTRIAN SIGNALS ARE RECOMMENDED FOR MEMORIAL DRIVE NEAR MIT.

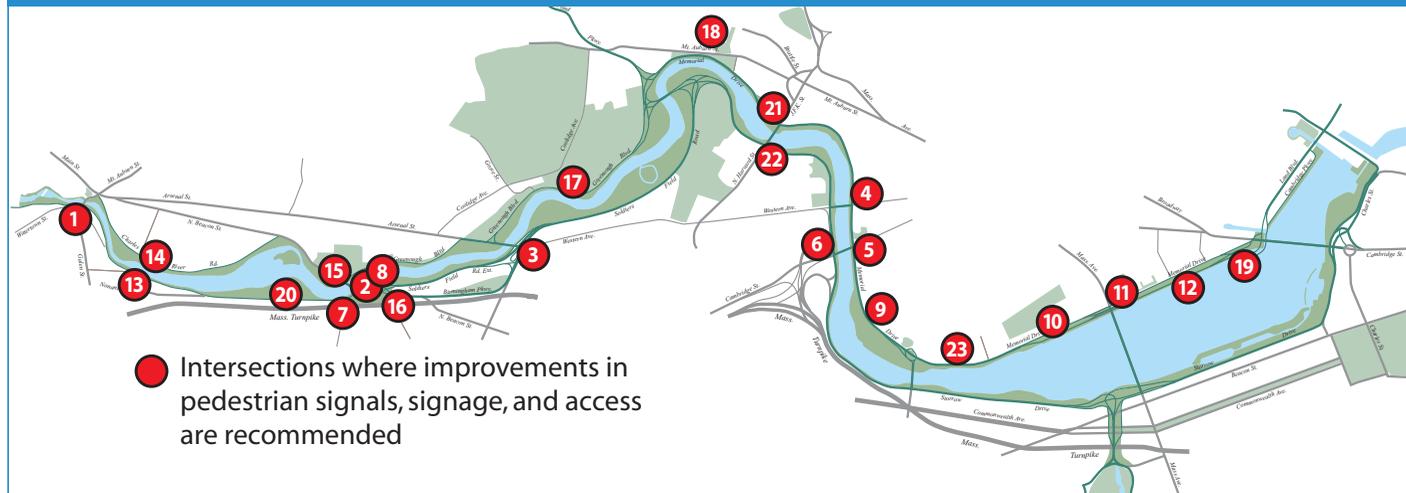
grade path crossings in the Lower Basin where traffic is heavy. Pedestrian crossing signals should be timed with parallel vehicular signals. Motor vehicles are required to yield to pedestrians in case of conflict, but it would be preferable to install an exclusive interval for pedestrian crossings within the signal cycle where traffic volumes warrant the added time.

Wait times for path users should not be excessively long, preferably between sixty and seventy-five seconds. Provide sufficient room at intersections for several bicycles, pedestrians, and skaters to wait safely for the light to change. New crossing signal icons might display a cyclist as well as a pedestrian figure to alert drivers to the presence of fast-moving cyclists and skaters.

Add pedestrian signals to the following existing traffic lights (numbers correspond to the numbering on the diagram on page 72):

- 1 Nonantum Road at Galen Street
- 2 Nonantum Road at North Beacon Street, west side
- 3 Soldiers Field Road at Arsenal Street
- 4 Memorial Drive at Western Avenue
- 5 Memorial Drive at River Street
- 6 Soldiers Field Road at Cambridge Street

## PEDESTRIAN CROSSINGS



- **Strengthen pedestrian access.** Provide pedestrian protection at the intersection of Greenough boulevard, the Eliot Bridge, and Fresh Pond Parkway. Improve or add handicap ramps at all intersections

Install additional pedestrian signals at several cross streets and mid-block locations:

- 7 Nonantum Road and Brooks Street: align crosswalk and existing signal
- 8 Nonantum Road at North Beacon Street, east side
- 9 Memorial Drive at either Pleasant or Magazine Street in Cambridgeport
- 10 Memorial Drive at Endicott Street at MIT
- 11 Memorial Drive at Harvard Bridge
- 12 Memorial Drive at Wadsworth Street by MIT (Wadsworth is preferred over Ames to avoid queues back to the underpass)

In all instances it appears that pedestrian volumes warrant pedestrian signals. This assumption will need to be tested in each case, particularly at the mid-block crossings.

Install pedestrian/bicycle crosswalks and yield signs at certain intersections or mid-block crossings:

- 13 Nonantum Road at Charlesbank Road (possible link to a future pedestrian bridge)
- 14 key cross streets on Charles River Road, including Irving Street near the playground
- 15 North Beacon Street at Greenough Boulevard
- 16 at the intersection of Soldiers Field Road and Parsons Street add a crosswalk to serve Brighton
- 17 Greenough Boulevard at Grove Street
- 18 Memorial Drive at Sparks Street (Sparks is preferred over Hawthorn due to its alignment, parking, bus stop, and proximity to Mt. Auburn Street)
- 19 Memorial Drive at the start of the curved viaduct as it approaches Longfellow Bridge.

along the Basin to serve bicyclists, skaters, and people in wheelchairs; align ramps with crosswalks at the following locations:

- 20 Nonantum Road at Brooks Street
- 21 Memorial Drive at JFK Street
- 22 Soldiers Field Road at North Harvard Street
- 23 Memorial Drive at Amesbury Street

NARROWING GREENOUGH BOULEVARD BY TWO LANES WILL ALLOW THE REESTABLISHMENT OF A HEALTHY RIVERBANK ALONG THE SHOULDER OF THE PARKWAY.



- **Selectively clear vistas in the Upper Basin to reestablish access to river scenery for motorists, bicyclists, and pedestrians** (see page 41).
- **Balance river views with traffic screening.** Decisions about shoulder and parkland planting should balance the need for river views from the road with the need to screen traffic from parklands.
- **Implement a comprehensive maintenance program for parkway trees.**
- **Improve the shoulder planting zone, or “tree lawn,” to support plant growth.** The shoulder planting zones are key to reintegrating the parkways into the park. Currently most tree lawns are poor environments for plantings. The minimum width of tree lawns should be six feet, the standard width throughout much of the Basin, but a minimum of eight to ten feet would create a far healthier planting zone. Where the shoulder planting zone is less than six feet wide, trees should be avoided and fescue should be planted.
- **Along any given stretch, parkway trees should alternate among clusters of no more than three species in order to provide canopy continuity.** Recommendations for parkway tree plantings should consider the adjacent context of the parkway, how the road alignment affects the perception of the tree allée, and the relative needs for plantings on the river and land sides of the parkway.
- **For ground cover, shoulders should be planted with fescue-rich grass mix.** Fescue requires only two mowings per season and is more adaptable to inhospitable urban conditions than other grass types. Less mowing will reduce damage to trees, while turf coverage will reduce water transpiration and soil compaction in the shoulder zone. Other grasses with a high salt tolerance should be part of the mix. Further research and trials should be undertaken to determine the most successful mix.
- **Replace and maintain topsoil in shoulders.** Topsoil is missing and needs to be replaced in most shoulder planting zones. Sandy loam and organic material should be added whenever new planting is planned.
- **Increase the paved shoulder width to a minimum of three feet where existing pavement allows.** Widening shoulders would provide space for those cyclists wanting to bike on the parkways but can only do so today along sections of the Upper Basin. Recreational bicyclists will continue to be accommodated on multiuse paths along the river in order to limit the width of the parkways and preserve space for parkway trees.
- **Embellish rotary islands and medians with plantings of perennials and ornamental grasses to improve their visual character and support maintenance.** Where the median is narrow, about three feet, use pavers on a bituminous concrete sub-base to inhibit weed growth. Where the median is a

minimum of six feet, plant with a fescue mix and, in certain limited areas where more ornamental treatment is warranted, with compact, hardy shrubs (but avoid shrubs such as *rosa rugosa*, which tend to trap trash). Where the median is a minimum of ten feet, plant with canopy trees and underplant with fescue to reinforce parkway character.

- **Assess the need for guardrails, and use only where necessary. Consider a center guardrail where needed, rather than double guardrails.** Where there are insufficient recovery zones, guardrails contribute to parkway safety by directing cars away from steep embankments, trees, or other hazards. Recent research indicates, however, that many guardrails may actually raise the risk to people by directing a skidding car back into traffic. Guardrails are visually intrusive, narrow the usable portion of paths, and reduce the quality of the park experience. The MDC should review the current standards for the design and location of guardrails along parkways and remove those that are unnecessary or dangerous.



CORTEN STEEL  
GUARDRAILS ON  
WOODEN POSTS  
BLEND WELL WITH  
A PARK LANDSCAPE

- **Standardize guardrail design throughout the Basin and substitute a distinctive design that is safe and attractive.** Consider changing all rails to wood with steel backing as on the Merritt Parkway or corten steel on wooden uprights, the National Park Service standard for reservations. Where guardrails back onto a path, a second wooden rail should be placed on the path side to protect bicyclists and skaters from injury.

- **Calm traffic and reduce speeds on parkways that abut neighborhoods.** Proper landscaping with trees fairly close to the curb will narrow the apparent width of the parkway and thus induce motorists to slow down. The ability of trees to reach across the parkway from either side and interlace their branches creates the greatest sense of enclosure. This planting should be a high priority for parkways.

Attractive signs should mark the transition to MDC parkways along the river. Textured pavement should be introduced at certain key transition points to special zones, such as the Cambridge Esplanade, in order to slow traffic. Rumble strips are effective but should be sited with care; sudden changes in sound and texture can startle drivers and cause them to swerve. Where weekend road-closures are anticipated, rumble strips should have a smooth section at the center to permit inline skaters to cross them. Raised speed bumps at intersections, while appropriate for residential streets, would not be safe for the

speeds and volumes of parkway traffic. They are an attractive nuisance for skaters and bicyclists, some of whom use them to get airborne.

Strictly enforce speed limits after a period of notification, and use portable radar-activated speed signs to indicate the speed of oncoming cars during the notification period. Concentrate enforcement efforts where pedestrian conflict is high and speeders can be pulled over safely. Combine enforcement with an effort to educate motorists about the parkways as a special asset shared by bicyclists, skaters, and pedestrians.

- **Maintain ten- to eleven-foot lane widths as the standard.** This lane width is generally appropriate for parkways. Where off-peak parallel parking is permitted, the parking lane width should be eight feet, with a shoulder of two to three feet, to accommodate car doors.

#### RECOMMENDATIONS FOR HISTORIC BRIDGES

- **Prepare historic structure reports for all bridges to assess their historical significance and structural integrity and to recommend proper preservation programs and techniques.**



THIS 1932 SHOWS THE HISTORIC LAMPS THAT ORIGINALLY LINED THE ANDERSON BRIDGE.

- **Develop and follow maintenance plans for each bridge.** In the event a bridge needs to be replaced, new bridge design should reflect the key character-defining features of Basin bridges, including such features as arches and historic lighting.
- **Reintroduce consistent lighting on all Charles River bridges to mark the river at night and illuminate these landmarks.** Design and install architectural lighting for the Longfellow Bridge, Eliot Bridge, and Weeks Footbridge to illuminate their distinctive architectural features.
- **Seek alternative sources of funding for bridge repair and replacement that does not compete for limited park budgets.**

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## ACCESS AND CIRCULATION

Use of the Charles River Basin is enhanced by its proximity to public transportation, its connections to other areas, and the ability of users to make effective use of its pathways.

Many people already use public transportation to get to the Charles. Subway service is best below the Anderson Bridge, where the Red Line stations at Charles/MGH, Kendall Square/MIT, and Harvard Square are close to the Basin. The Charles/MGH station comes closest to the river and is currently undergoing redesign. The Green Line runs parallel to the Charles for much of the river's length, with convenient stations at Lechmere and the Science Museum, and from Park Street through the Boston University stops on Commonwealth Avenue.

Because commercial vehicles are not allowed on the Basin parkways, bus service is available only on intersecting or nearby routes. Bus service in the middle stretches of the Basin from lines crossing the Western Avenue, River Street, and Arsenal Street bridges is acceptable. In the Upper Basin, bus lines serving Watertown Square, Newton Corner, and Oak Square are marginally convenient, coming within a fifteen-minute walk of major destination points on the river.

Years of planning and effort have brought about some exciting new east-west pathway connections. New connections between Watertown Square and the Upper Charles River

Reservation are currently under construction; portions are already open. What was once known as the "Lost Half-Mile," the stretch between the historic Charles River Dam and Boston Harbor, is now being built as the "New Charles River Basin," a system of linked parks and pathways.

One of the most common travel patterns for walkers, joggers, and skaters along the river is making a loop around the Basin. Above the Boston University Bridge a series of loops of manageable distances exists; the only loop that is too long to stroll comfortably is between the Galen Street and North Beacon Street bridges in the Upper Basin.

## EXISTING CONDITIONS AND ISSUES

### North-South Connections

The Charles River Basin is the heart of the Metropolitan Park System, yet its connections to that system are often tenuous, particularly to the north and south. The Emerald Necklace originally connected with the Basin at the Fens, yet the Bowker Overpass prevents a direct link. Fresh Pond and Mt. Auburn Cemetery are an easy trip from the Basin, but there is no safe and easy path to either. Although a multiuse trail from the Minuteman Bike Path at Alewife to the Watertown Arsenal has been proposed, the Basin currently is not connected to it or to any other part of the growing network of multiuse trails in the region.

### Absence of Loops

The most tenuous and incomplete pedestrian, biker, and skater loops are in the Lower Basin, the most densely populated and heavily used part.

### Underutilized Public Transit

Parking lots could be reduced in the Basin if more users traveled by subway or bus, particularly for special events.

## RECOMMENDATIONS FOR ACCESS AND CIRCULATION

- **Strengthen the connections to the Emerald Necklace by creating a new Charlesgate path system.**
- **Establish a connection across North Beacon Street to the restored open space associated with the Arsenal development and to the Minuteman Bike Path extension on the opposite side of Arsenal Street.**
- **Produce a pocket trail map to introduce users to these new regional links and to proposed connections.**
- **Establish a connection along the upstream side of the Museum of Science.**
- **Improve connections to the shore path at both ends of the Longfellow Bridge and from the new Charles/MGH subway station.** Coordinate Longfellow Bridge connections on the Boston side with circulation improve-

ments around a new Charles/MGH subway station. Establish a direct aerial connection between the redesigned station, the Basin, and the Longfellow Bridge. A well-designed system of pedestrian bridges would provide full access without compromising the historic integrity of the Longfellow Bridge. Improve the connections at the Cambridge viaduct.

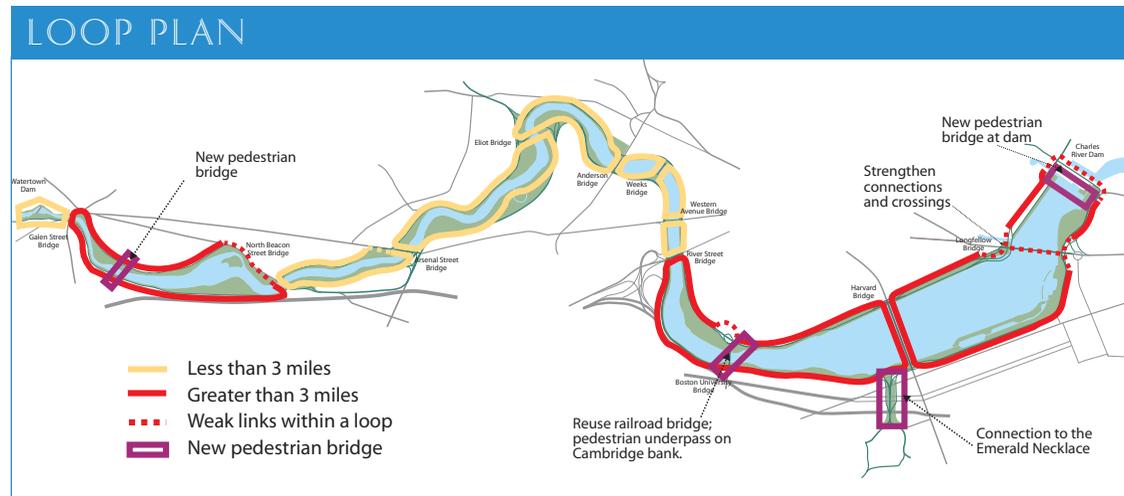
- **Create a new pedestrian crossing across the river at the Boston University Bridge.**

Use the abandoned half of the Grand Junction Railroad Bridge that passes underneath the Boston University Bridge to make a new crossing. Deck over and pave the bridge section and fence off the active tracks. Provide a ramped path up to the crossing on the south side and a ramped path down from the intersection on the north side.

THE WEEKS BRIDGE, DESIGNED BY MCKIM, MEAD AND WHITE AND DEDICATED IN 1927, SETS A HIGH STANDARD FOR PEDESTRIAN BRIDGES ACROSS THE CHARLES.



Separate but related initiatives would improve pathway loops in the Lower Basin: 1) create a second boardwalk underpass at the Boston University Bridge to link this loop to Magazine Beach along the river; 2) extend



the shore path across the railroad tracks and along the shore in front of Boston University's DeWolfe Boathouse; and 3) working with the city of Cambridge, extend a path underneath Memorial Drive and up the Grand Junction Railroad alignment into East Cambridge.

- **Build a new pedestrian bridge across the river near Maple Street in Newton in the Upper Basin.** This 200-foot bridge would shorten a 3.5-mile loop to a more manageable distance, provide better access to Daly Field and the Watertown meadows, and provide stunning views of the Upper Basin. Such a project should be able to attract private funding and could be built in conjunction with public improvements to the park area along Charles River Road. The Weeks Bridge is a good example of a privately funded improvement.

- **Encourage the use of public transportation to reach the Basin for outings and special events.** Work with the MBTA to provide clear orientation maps and signs to help visitors find their way to the river. Announcements for large events at the Basin should encourage public transportation use by giving directions and schedules.

Study the concept of dedicated shuttle vans to serve the Basin during peak-use periods. "Green vans" might be equipped with bicycle racks so that families could take one-way bicycle trips along the Charles. Special events in the Upper Basin could use the vans to supplement public transportation. While expensive, such a program might attract business sponsors because of its high visibility.

- **Maintain existing pedestrian bridges.** Clean drains, paint support structures and railings, trim overhanging branches, and regrade surfaces.