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# Harvard University
Cambridge Campus Transportation Guidelines

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Introduction

The *Harvard University Cambridge Campus Transportation Guidelines* present a range of non-automobile transportation guidelines for Harvard University’s Cambridge campus. The primary purpose of the guidelines is to provide a basic framework of transportation planning considerations that should be used to inform individual capital projects as they are planned and developed. The application of the guidelines will contribute to and enhance the non-auto environment of the campus.

The guidelines focus on the pedestrian, bicycle and transit environment of the Harvard campus in Cambridge, providing a discussion of general guidelines within each area, and a list of considerations for future development and ongoing maintenance efforts. The guidelines are neither prescriptive, nor are they intended to establish rigid rules or standards. Rather they are intended to promote consistency and coordination in the implementation of transportation improvements on the Cambridge campus.

The *Harvard University Cambridge Campus Transportation Guidelines* will allow Harvard to better define the transportation improvements which best suit campus needs. Application of these guidelines will help to create attractive and convenient non-auto modes of transportation for Harvard students and affiliates.

If you have questions about the Guidelines or their application, please contact the University Planning Office.
While Harvard’s Cambridge campus already prioritizes pedestrians over vehicles, other alternative modes such as bicycles and transit are given more prominence. In so doing, the relationship between pedestrians, bicycles, automobiles, and delivery vehicles should be better defined to reduce the potential conflicts between these modes. The following guidelines, when applied on a campus-wide basis in Cambridge, will promote the use of alternative non-auto modes of transportation.1

1. Pedestrian Environment

   A. Pathway Network and Primary Connections: As the campus develops, important connections should be strengthened and new connections provided between popular origins and destinations.

   B. Pathway Design: Campus pathways should meet the needs of intended users, including pedestrians, bicycles, wheelchairs, and service/emergency vehicles, and should provide adequate width, sight distance, accessible grades, suitable materials, and other safety characteristics.

2. Bicycles

   A. Bicycle Network: As the campus develops, important connections should be strengthened and new connections provided to meet the needs of commuter and non-commuter cyclists.

   B. Bicycle Facilities: To complement a strong bicycle network, adequate bicycle parking and amenities should be provided for the convenience and security of cyclists, further encouraging bicycling as a primary mode of transportation.

3. Transit

   The Harvard Shuttle Service should continue to be developed and evaluated to best serve the Harvard campus. Opportunities for further integration with other public and private transportation services should be pursued.

4. Vehicular Accommodations

   In areas where it is necessary to accommodate vehicles on campus, the importance of vehicles should be de-emphasized and a safer environment should be promoted for pedestrians in all campus parking lots and service areas.

This document presents a discussion of each of the above guidelines, and provides a list of considerations for future development and ongoing maintenance efforts. Harvard’s campus context is shown in Figure 1, and an inventory of existing transportation facilities in the Cambridge campus is provided in Appendix A.

1Unless otherwise noted, references to “campus” in this report are to Harvard’s Cambridge campus.
1. Pedestrian Environment

The purpose of pedestrian guidelines is to encourage walking as a viable alternative mode, by making walking on campus safer, easier, more attractive, and better integrated into the larger transportation network. To achieve this goal, the campus must comprehensively incorporate the characteristics of a pedestrian-friendly environment.

A. Pathway Network and Primary Connections:

As the campus develops, important connections should be strengthened and new connections provided between popular origins and destinations.

The pedestrian network is identified by interconnected public sidewalks, pedestrian and shared use paths, plazas, and building lobbies, providing access to Harvard’s campus and circulation between residential, academic, and administrative facilities.

The Cambridge campus already has an extensive pedestrian pathway network. A functional representation of the existing campus pedestrian network is presented in Figure A-1 in Appendix A. This classification considers campus destinations, major gathering areas, and the interface with the public realm.

Connections

To preserve the integrity of the pedestrian network, it is important that primary connections are protected and enhanced. Figure 2 presents a framework of primary pedestrian connections both on and off the Cambridge campus. The pedestrian framework will serve to inform future decisions about project location and siting, renovation projects, and ongoing maintenance.

Primary pedestrian connections include:

- **Connections on Primary Roadways** - Primary Roadways include arterial roadways and major connectors such as Massachusetts Avenue, Garden Street, Memorial Drive, Putnam Avenue, and Mt. Auburn Street.

- **Connections on Secondary Roadways and Public Accessways** - Secondary Roadways include neighborhood roads contributing to the larger Primary Roadway system. Often, these connections serve residential buildings and social and recreational amenities.

  Public Accessways refer to corridors providing vehicular and pedestrian access off public streets.

- **On-Campus Connections** - These include formal ways within Harvard-owned properties dominantly traveled by faculty, students, and employees.

**Major Gathering Areas**

The conceptual pedestrian framework pays specific attention to major gathering points that are origins or destinations for pedestrians within the campus.
Major gathering points include garages, Harkness Commons, the Science Center, Memorial Hall, Holyoke Center, Harvard Yard, Malkin Athletic Center (MAC), and the new café at the Bauer Laboratory.

**Public Realm Connectivity**

The conceptual pedestrian framework identifies where the Harvard campus pedestrian facilities intersect with the external street system.

It is important to ensure that pedestrian connectivity is both safe and seamless, with particular regard to street crossing locations, such as Massachusetts Avenue at Holyoke Center, Maxwell Dworkin to Northwest Science Building, the Science Center, and the new LISE building.

**Proposed New Buildings**

As projects are considered, buildings should be located to encourage and enhance major pedestrian connections on the campus. This does not preclude the possibility of locating buildings on such routes. Rather, the design of the building ground floor should be given careful consideration with regard to the campus-wide pedestrian function.

**Examples:**

Pedestrian connections can be enhanced through the appropriate design of the building lobby or pass-through, often yielding opportunities for new gathering points.

The LISE project, currently under construction, provides an excellent example of how the building’s design will improve connectivity and enhance the pedestrian environment by way of its courtyard improvements and welcoming entry portico.

The existing internal connection through the Science Center is an example of an important pedestrian route being accommodated within a building. The Holyoke Center fulfills a similar function.

**Considerations**

i. Current informal pedestrian connections, often defined by well-worn paths, should be considered for paving.

ii. New pathways or sidewalks should complement existing paths and be integrated with building entrances to ensure their use. They should also be installed where there are missing linkages. Important missing or constrained pedestrian connections include:

- the connection from central Oxford Street to the Divinity School
- a connection to neighborhood streets at the northeast edge of campus
- universal access ramps including ramps at street crossing facilities and building entries
- clear connections from Blackstone and Pleasant Streets to the central campus
- the connection from Everett Street to the Divinity School
- a direct connection from Harkness Commons to Everett Street
iii. Entrances should be designed so that they subtly lead pedestrians in a preferred direction as they leave a building towards a destination, gathering point, or pedestrian crossing location.

Where buildings are located on the edge of the campus, entrances should be provided on both the public street and the internal campus. Entrances should be oriented towards primary pedestrian pathways, thereby enhancing, where possible, the interface of the campus with the public realm.

B. Pathway Design:

Campus pathways should meet the needs of intended users, including pedestrians, bicycles, and service and emergency vehicles and provide adequate safety, width, sight distance, accessible grades, and materials.

Figure A-2 in Appendix A presents a survey of sidewalk surfaces and crosswalk provisions within and around the campus.

Currently most, but not all, designated pedestrian routes on the Harvard campus are universally accessible. Universal accessibility serves not only those in wheelchairs, but also pedestrians and those using bicycles, in-line skates, or other non-motorized transportation.

Several state and federal regulations provide guidance on pathway design. The Massachusetts Architectural Access Boards (MAAB) and Americans with Disabilities Act (ADA) specify minimum widths, grade, and material for pathways.

Proposed New Buildings

As new buildings and renovations are considered, active ground floor activity with a visual connection between the interior and exterior of the building can offer a safe, interesting, and inviting environment for pedestrians and improve the safety of surrounding pathways.

Considerations

i. Width:

Campus pathways should be five to eight feet wide depending on the availability of space, use and designation. Paths that are narrower than five feet should provide a five-by-five-foot passing space every 200 feet.

Where appropriate, pathways should be wide enough to accommodate emergency and service vehicles.

ii. Accessibility:

Pathways need to meet the minimum MAAB and ADA requirements, as follows:

- Width of four feet, with three feet of unobstructed walkway.
- Grades of not more than 5 percent (1:20) and maximum cross slope of 2 percent (1:50).
iii. Intersections:
Radii at intersections should be smooth and appropriately sized for the scale of the intersecting walks. The radii should cater to cyclists as well as pedestrians to minimize traffic on adjacent landscaping. Adequate site distances should be provided to avoid blind corners.

iv. Material:
To minimize impacts to the environment, pervious materials should be used where appropriate. Pervious materials that are fully accessible should be investigated as options for paving material. Pathway material should be slip-resistant, stable, and firm with a smooth surface that is easy to walk or bike on, easy to maintain, and easy to clean in winter.

v. Lighting and Security:
All primary pathways should have adequate lighting and access to security blue-light phones. The placement of these phones should be located in fully accessible, barrier-free locations, should be highly visible, and should not compromise the caller's security.

vi. Landscaping/Furniture:
Landscaping can be used to define pedestrian routes and promote way-finding by creating visual cues.

Pedestrian furnishings, including benches, tables, and artwork, create an attractive and functional environment. (Note: landscaping should be well maintained not only to enhance its appearance, but also to ensure that visibility and security are not compromised.)

vii. Buildings:
New buildings should provide informal observation of all pathways, i.e. “eyes on the street,” through the use of windows, lobbies, and active courtyards.

Also, secondary entrances should be visible from key pedestrian areas to integrate buildings into the pedestrian realm as well as to offer a sense of security.
2. Bicycles

Bicycles offer a convenient and healthy way to get to and around campus, and the provision of good facilities and amenities will encourage bicycling as a primary mode of transportation. To complement a strong bicycle network, adequate bicycle parking and amenities provide convenience and security for cyclists, further encouraging bicycling as a primary mode of transportation.

A. Bicycle Network:

As the Cambridge campus develops, important connections should be strengthened and new Cambridge connections provided to meet the needs of commuter and non-commuter cyclists.

Similar to the pedestrian network, it is important to preserve the integrity of the bicycle network by protecting and enhancing primary connections. The bicycle network is primarily based on official bike lanes, edge lines, multi-use paths, suitable routes (no official bike designation), dismount zones, and amenities; such as bicycle racks, showers, and lockers.

The conceptual framework for this network, which is shown in Figure 3, includes a combination of official and unofficial bicycle routes on public streets.

Bike Lanes

Streets can be made safer and more comfortable for bicyclists by providing bike lanes. Bike lanes support and encourage bicycling as a means of transportation by helping to define road space, promoting a more orderly flow of traffic, and signaling motorists that cyclists have a right to the road.

Three distinct facilities provide safe travel lanes for bicyclists, as follows:

- Bike lanes are marked lanes in the public right-of-way that are by law exclusively for use by bicyclists. Bike lanes in Cambridge have bicycle symbols and arrows, which emphasize the correct direction of travel.
- Edge lines are a single painted stripe that define the right extent of the automobile travel lane. It serves as a visual guide separating automobile traffic from bicycle traffic and provides a paved shoulder for cyclist use. When there is not enough paved width to support a bike lane on the public right-of-way, an edge line is recommended.
- Bike paths and multi-use paths are dedicated pathways exclusively used by non-automobile traffic, including bicycle users, roller-bladers, pedestrians, and others. Bike paths and multi-use paths are associated with Memorial Drive's Riverbend Park and the connection, between and within, Cambridge Common, the planned Flagstaff Park, and Broadway via the Broadway deck.

It is generally the practice of the City of Cambridge to add bike lanes or edge lines when improvements or sub-surface work require street demolition and resurfacing.
Routes

Like pedestrians, cyclists use the most convenient route, which is often the most direct route. Some routes suit commuting needs to and from campus, while other routes serve trips within the campus or between the Cambridge campus and Allston.

Often these on-street routes are other than those defined by bike lanes, edge lines, and dedicated paths. Some routes are certainly better than others when it comes to safety, road conditions, potential for automobile and pedestrian conflicts, and connectivity.

Harvard’s CommuterChoice program has worked diligently with the Harvard and Cambridge biking community to define the best routes for bicyclists when such routes do not include bike lanes or edge lines. From this program’s findings, two categories of bike routes have been identified, as follows:

- Suitable Bike Route - These routes provide appropriate roadway facilities to promote bicycle use without compromising safety, assuming cyclists observe the same traffic rules that apply to motorized vehicles. They often lead to roads with painted bike lanes or edge stripes, or to Harvard nodes where bicyclists may work, attend classes, or recreate.

- More Suitable Bike Route - These routes provide additional features that promote a safer connection between points. They may include off-street ways, long sight lines, reduced vehicle and pedestrian conflicts, or location on streets where street widths allow for more room to share vehicles and parked cars.

Figure A-3 in Appendix A provides a map of recommended bicycle routes in and around the campus that is consistent with the conceptual framework of bicycle connections presented in Figure 3.

Dismount Zones

For the safety and comfort of pedestrians, particularly in space-constrained areas, selected parts of campus have been designated as Dismount Zones. The primary Dismount Zone is Harvard Yard.

A smaller zone is the pedestrian path located between Vanserg and the Biological Labs and extending between the Semitic Museum and Yenching Library to Divinity Avenue. This area is extremely narrow, and serves as an access to the adjacent daycare center.

Existing Dismount Zones are shown in Figure A-3 in Appendix A.

As development progresses, the pros and cons of Dismount Zones should be carefully considered. Pedestrian safety is a critical factor, but the convenience that bicycles offer to campus users must be considered.
Considerations
i. Opportunities to accommodate bicycles on campus should be identified.
ii. Opportunities for new bike lanes and edge lines on the local roadways on and in the vicinity of campus should be identified.
iii. Suitable access to and from surrounding streets should be incorporated.
iv. Suitable signage and/or pavement markings must be provided in dismount zones.
v. North/South routes should be improved, in particular:
   - Radcliffe Quad to and from Harvard Yard
   - Harvard Yard to and from Murr Athletic Center
   - River Houses to and from Harvard Yard

B. Bicycle Facilities:
To complement a strong bicycle network, adequate bicycle parking and amenities provide convenience and security for cyclists, further encouraging bicycling as a primary mode of transportation.

The provision of bicycle facilities is essential to supporting a bicycle network. Bicycle facilities should have an adequate capacity of safe and secure bicycle parking for both short and long-term users, sheltered parking where possible, and convenient shower and lockers for cyclists.

Capacity
Harvard provides bicycle parking in accordance with the Cambridge Zoning Ordinance. The requirement for general academic buildings is one bicycle space for every 10 auto spaces provided (or allocated from the Harvard Parking Inventory) and for residential buildings is one space for every eight beds.

Harvard may have a higher bicycle parking demand. Anecdotal information suggests that the population of the Science buildings has a higher bicycle usage, and so higher ratios of bicycle parking may be needed.

Furthermore, it is important that additional new parking be provided to relieve existing capacity problems, as well as providing for new and relocated faculty, student, and staff population associated with new buildings.

Long and Short-Term Bicycle Parking
The need for bicycle parking varies depending on the type of user and the length of stay in a building, as follows:

- Short-term parking serves visitors for up to two hours, and should be provided in convenient and accessible locations, ideally within 50 feet of each of the main building entrances.
- Long-term parking serves those who stay in a building for the majority of a day. At least one-third of all bicycle parking should be for long-term users, although locations may serve a group of adjacent buildings.

Covered or weather-protected parking should be encouraged where possible for both long and short-term bicycle parking to make cycling in inclement weather more viable.
There are many types of rack designs available for bicycle parking. Some are more likely to be used by bicyclists if they meet certain basic standards. The following design criteria have been developed for the campus, and are consistent with the City of Cambridge guidelines.

The elements of a bicycle rack should satisfy the following criteria:

- The part of the rack that supports the bicycle should be well anchored to the ground.
- The rack should support the bicycle upright on its frame.
- The rack should prevent the bike wheel from tipping over.
- The rack should provide a two-point support system that supports the bicycle and allows the user to securely lock the frame and wheels.
- The rack should resist being cut or damaged by common hand tools such as bolt or pipe cutters.
- Front-in parking should allow a U-lock to lock the front wheel and the bicycle frame.
- Back-in parking racks should allow a U-lock to lock the rear wheel and seat tube of the bicycle.
- The combination of more than one bike rack in close proximity to form a larger rack should provide 2.5-foot centers to allow independent bike access and enough room for two bikes to be secured to each rack element.
- Where two or more racks are provided at the same location, six feet should be allowed for each row of bicycles, with four foot aisle width between bicycle rows.

**Rack Style**

Currently, several different types of bicycle parking frames are provided on the Cambridge campus.

Bicycle parking that does not meet the above design criteria, such as the “wave,” “rail,” or “wheel-holder” style racks, should be replaced as development or ongoing maintenance occurs.

There are several rack designs that satisfy the City of Cambridge’s guidelines. The “post and ring” style is used widely around the city, and is appropriate for low capacity situations. Higher capacity designs are more appropriate for locations in the Cambridge campus. A number of designs are available that provide aesthetic styles and meet the City’s guidelines.

The “coat-hanger” style and the “inverted U” style racks are both appropriate for the Cambridge campus. The latter is currently used by the cities of Boston and Cambridge, although predominantly as single unit racks rather than multiple unit racks. Various ring styles are also available.
The use of vertical bicycle rack styles is appropriate in instances where limited space is available for bicycle parking. Generally, the use of vertical bicycle storage is more appropriate for long-term bicycle storage. However, it may be provided as another parking option where it appropriately meets users’ needs and usability requirements. Where provided, vertical bicycle parking should meet the applicable rack design criteria noted above.

Bicycles should not be locked to ramp railings or fences. The campus has several signs that prohibit this, but the practice is prevalent, most likely due to the lack of adequate or convenient bicycle parking.

One method that will prevent cyclists from parking at railings is the use of a rub-rail. While generally this is used to prevent handlebars from falling through a fence, it can prevent bikes from being locked to a railing or fence. Use of this design should be considered as a deterrent, which may be a more acceptable alternative to enforcement strategies.

**Building Design**

Commuters are more likely to choose cycling as their mode of travel if they can park their bike in a long-term bike parking facility that is covered or weather-protected. Bicycle parking may be installed in a building or parking garage, even where space is limited through the use of vertical or other space-efficient bike racks.

Providing commuting employees who bike to work with a place to shower, change, and store clothes, can further encourage bicycle use. Providing shower and locker facilities in close proximity to bicycle parking areas can promote bicycle use by facilitating convenience and security to bicycle commuters and recreational users.

If bicycle parking is to be located inside a building, careful consideration must be given to bicycle access and egress. Locations should provide ease of use for the cyclist and minimize potential conflicts with pedestrians and vehicles.

**Considerations**

i. Capacity

Since the City required bicycle spaces are a minimum standard, projects should consider the project demand number for bicycle parking spaces and the proximity to other parts of campus.

ii. Parking/Design

Long-term parking should be weather-protected, secure, well lit, and provide adequate room between bicycle rows to prevent damage from other bikes. Locked areas, areas adjacent to building security guards, and indoor areas are all suitable locations for long-term bicycle parking.

Roofs of weather-protected parking should be at least seven feet high. Parking can be located under overhangs or awnings, in basements, under stairs, or other suitable locations.

Where aesthetically appropriate, bicycle lockers should be considered. These should be available to users for a nominal fee.
As bicycle racks are replaced through ongoing maintenance, inappropriate “wheel-holder,” “rail,” and “wave style” bicycle racks should be replaced with bicycle rack styles that meet the suggested design criteria.

iii. Siting
Bicycle parking should be located in prominent locations and visible so that anyone in a bicycle area can be seen by passersby or from building windows. If landscaping is used to screen bicycle parking, low hedges should be used and trimmed regularly.

There should be adequate clearance for cyclists to maneuver and avoid conflicts with pedestrians or parked vehicles.

Bicycle parking areas should be located in relation to primary circulation corridors, near campus entry points, and in proximity to the entries of key buildings. Parking located in proximity to building entries should not interfere with pedestrian movement or have a negative impact on the view of the entry.

Where appropriate, installation of rub rails on rails and fences that are currently being used to illegally park bicycles should be considered.

iv. Building Design
Projects should consider providing bicycle parking within a building. Examples include creating a bicycle storage room and using basement space. Where feasible, showers and lockers serving building occupants should be accommodated within new buildings.
3. Transit

Transit is a key component in providing commuting options to single occupant vehicles (SOV) travel. Cambridge is well-served by multiple transit options, that promote connectivity, efficiency, and convenience among transit users.

Transit service to and within campus (Harvard and M2 shuttles) should be enhanced and integrated with other public and private transportation services.

Harvard University Shuttle

Harvard University operates a comprehensive shuttle bus system that supports both Harvard commuter and inter-campus needs. The weekday shuttle routes are presented in Figure A-4 in Appendix A.

The University Shuttle Service operates throughout the academic year, except during holiday and semester breaks. It provides safe and convenient transportation throughout the Cambridge and Allston campuses with major stops at Memorial Hall, Pound Hall, Currier House, Mather House, Johnston Gate, the Science Center, JFK, and the Business School. As shown in Figure A-4 in Appendix A, there are 18 Harvard Shuttle stops within the Cambridge campus.

Shuttle Bus rides are free to all members of the Harvard Community, including faculty, staff, and students. Fully accessible vehicles also operate year round to transport persons with mobility impairments.

The Memorial Hall stop is the only transfer point on the Cambridge campus, currently serving two of the three routes. Harvard is currently evaluating a single shuttle stop serving all three routes to allow for transfer to all areas of Cambridge and Allston. One option is the potential routing of the Allston Route to Memorial Hall.

Public and Private Transportation

Public transportation includes a range of transit options provided by the Massachusetts Bay Transportation Authority (MBTA), as shown in Figure A-5 in Appendix A. These transit options are available to the general public, including Harvard students, faculty, and staff.

The public transportation system plays a vital role in single occupant vehicle reductions, as the system promotes efficient commuting from as far away as Maine, via public and private bus/train services.

Red Line Station - The Red Line and Harvard station were constructed in 1909, and over time, the Harvard station has established itself as a multi-modal transportation hub serving Cambridge and surrounding communities.

The Red Line subway service connects Harvard station with Somerville and northern portions of Cambridge, as well as points south, including Boston, Quincy, and Braintree. The Red Line provides direct connections with the Green and Orange Lines and with Commuter Rail at South Station and Porter Square.
MBTA Bus Routes - The MBTA offers service throughout Cambridge. Bus routes connecting at the Harvard T Station include the following:

- **1**: Harvard/Holyoke Gate - Dudley Station via Mass Ave.
- **66**: Harvard Square - Dudley Station via Harvard Street.
- **68**: Harvard Square - Kendall/MIT via Broadway.
- **69**: Harvard Square - Lechmere Station via Cambridge Street.
- **71**: Watertown Square - Harvard Station via Mt. Auburn Street.
- **72**: Huron Avenue - Harvard Station via Concord Avenue
- **73**: Waverley Square - Harvard Station via Trapelo Road.
- **74/75**: Belmont Center - Harvard Station via Concord Avenue.
- **77**: Arlington Heights - Harvard Station via Mass Ave.
- **77A**: North Cambridge - Harvard Station, Local.
- **78**: Arlmont Village - Harvard Station via Park Circle.
- **86**: Sullivan Square Station - Reservoir (Cleveland Circle) via Harvard Square.
- **96**: Medford Square - Harvard Station via George Street.

**M2 Cambridge/LMA Shuttle** - Run by MASCO, the M2 shuttle connects the Cambridge campus to the Harvard Longwood Campus in the City of Boston's Longwood Medical Area. All Harvard University affiliates have access to this shuttle. The M2 shuttle stops on the Cambridge campus are included in Figure A-5 in Appendix A.

**Considerations**

i. Provision of covered shelters should be considered at shuttle stops and transfer points. Shelters should be constructed of vandal-resistant materials and consist of a roof, back, and at least one side panel. The shelter should be designed and placed to allow passengers to see approaching buses and allow drivers to see waiting passengers. Shelters should include seating (where justified by demand), signage, lighting, and route and schedule information at both shuttle and MBTA routes, where appropriate.

ii. As new buildings are designed, Harvard shuttle bus routes and stops should be considered. Opportunities for shared use of building lobbies as sheltered waiting areas should be identified.

iii. Shuttle services should be monitored to evaluate changes in ridership. Modifications to routes and stop locations should be re-evaluated as needed. It is important to note that the addition of new stops may increase the travel time and may not be beneficial.

iv. While outside the control of the University, it would be desirable to ask the MBTA to consider locating shelters at high boarding locations.

v. Opportunities for coordination should be investigated with the MBTA for the stop on Massachusetts Avenue at the United Methodist Church, as this stop serves MBTA Routes 77 and 96. Such a shelter, and associated amenities, would highlight the importance of public transit at one of the main entrances to the Cambridge campus.
4. Vehicular Accommodations

The Cambridge campus is becoming predominantly pedestrian in character, but there are certain areas where it is necessary to accommodate vehicular traffic. Although some of these vehicular needs will be eliminated over time, much of this vehicular activity will inevitably remain. Where it is not feasible to remove vehicles, it is important to minimize their conflict with non-auto users as discussed below.

Pedestrian-Vehicle Areas: The importance of vehicles should be de-emphasized and a safer environment promoted for pedestrians in all campus parking lots.

There are a number of areas where the pedestrian system is impacted by vehicle conflicts. Surface parking areas that are used significantly by pedestrians include Holmes Field, Littauer, International Legal Studies, DeWolfe Street, Museum of Contemporary Zoology, and Andover.

The construction of the underground parking garage includes the consolidation of the MCZ lot and the lots in front of Andover, thereby eliminating those areas of conflict and providing substantial improvements in the non-auto environment.

Servicing and Loading

Harvard has endeavored to consolidate service facilities where possible, with significant success. The Cambridge campus already benefits from a substantial existing system of service tunnels and building linkages.

When Harvard builds new buildings, it complies with the Cambridge Zoning Ordinance (CZO) loading requirements. The CZO provides very specific guidelines on how loading facilities should be designed with regards to length, width, height, ability to turnaround on-site, and the type of vehicle that should be accommodated.

In general, Harvard’s loading and servicing accommodations should be consolidated as much as possible.

Ideally, service vehicles should be able to enter service areas and turn around so that they can exit in a forward direction. Vehicles should be able to easily maneuver into and out of the service areas without impacting pedestrian or through traffic movements. The design should discourage vehicles from backing over sidewalks and crosswalks. Inconvenient loading facilities will contribute to illegal parking and unfavorable operations.

Service facilities should be separated from pedestrian areas and screened to reduce visual impact to the non-auto environment without impacting sight distance for pedestrians or drivers.
Considerations

i. Parking lots that also are major pedestrian pathways should consider painting pedestrian paths, realigning parking spaces to respect the pedestrian desire lines, allowing for an unbroken pedestrian path through the use of a continuous paving pattern between walks, and landscaping where possible.

ii. Where it is not possible to eliminate vehicles, areas of pedestrian-vehicle conflict should be designed to emphasize the pedestrian as the primary user. This can be accomplished through special pavement treatments, raised crosswalks, pavement striping and signage. An example of this treatment is in front of Maxwell Dworkin, where the Oxford Street sidewalk is continued in brick across the vehicle driveway.

iii. Compact trash trucks and other service and maintenance vehicles should be used where possible to reduce vehicular intrusion and circulation conflicts.

Trash collection and other regular service deliveries should be monitored to reduce the number of service vehicles on-campus daily. Scheduling of these vehicles outside of the peak hours on campus should be considered to reduce potential conflicts. Opportunities for internal trash collection should be explored.

iv. Where vehicle drop-off and pick-up zones are needed, the design and materials choice should reflect the prioritization of pedestrians over vehicles.

v. Loading and servicing areas should be designed to allow vehicles to easily maneuver into and out of the service areas without impacting pedestrian or through traffic movements.
Figure 2
Conceptual Pedestrian Framework

Harvard University Cambridge Campus
Transportation Guidelines
Appendix A:
Existing Conditions
Transportation Inventory

Figure A-1 ................................... Pedestrian Activity Level Classification
Figure A-2 ................................................................. Sidewalk Survey
Figure A-3 .................................................. Bicycle Rack Locations & Bicycle Routes
Figure A-4 ........... Harvard University Shuttle Service, Weekday Routes
Figure A-5 ................................................................. Public Transportation
Figure A-3

Bicycle Routes and Amenities
Existing Conditions (Fall 2004)

Harvard University Cambridge Campus
Transportation Guidelines

Source: Harvard CommuterChoice