BIKE TOURS OF CAMBRIDGE **2008**
Sponsored by Cambridge Bicycle Committee
RIDE INFO: *www.cambridgebikes.org*

trails, sails, rails, and wheels

SATURDAY MAY 17

CAMBRIDGE TRANSPORTATION HISTORY

CAMBRIDGE TRANSPORTATION HISTORY TIMELINE

TRAILS, SAILS, RAILS, AND WHEELS **2008**
RIDE INFO: *www.cambridgebikes.org*

1400s and earlier — Native American Trails

1600s — Early Roads

1662 — First bridge over the Charles outside Harvard Square (present location of Lars Anderson Bridge)

1793 — First bridge to Boston, the Cambridge Bridge opens (later know as West Boston Bridge; replaced by the Longfellow Bridge in 1906)

Daily stage coach operations start between Boston & Cambridge

1803 — March 8 Cambridge & Concord Turnpike Corporation was established by act of the Massachusetts legislature

1807 — February Cambridge & Concord Turnpike opens from Cambridge Common to Concord

1811 — First span at River Street Bridge opens (replaced in 1924)

1824 — First span at Western Avenue Bridge opens (replaced in 1926)

1835 — Boston & Lowell Railroad trains skirt the edge of East Cambridge along the banks of the Millers River

1841 — Charlestown Branch Railroad built to serve ice houses at Fresh Pond

1842 — January 5 Passenger service on the 'ice trains' between Fresh Pond and Charlestown

May 30 First commuter rail service: Charlestown to Porter Sq. and Fresh Pond

Courtesy of the Cambridge Historical Society, CHS Image Collection

Courtesy of the Cambridge Historical Society, CHS Image Collection

left to right: Harvard Square 1860, cattle yards in Porter Square, cow tunnel below Walden Street, onmibus in front of 147 Brattle Street

One way to understand a city's history and appearance is to find the vestiges of past transportation modes. Massachusetts Avenue began as an Indian path that followed the flat, dry route between rivers and hills. Driving cattle to Porter Square's slaughter houses was so important that railroads were required to provide passages under their bridges. Central Square was the destination of the Boston omnibus, a horse-drawn carriage that ran on tracks. Getting ice from Fresh Pond to Charlestown for shipment to the Caribbean spurred early railroad development. Huron Avenue's shops grew up around the stops of the first electric trolleys. A rise in the sidewalk in Harvard Square hides an abandoned subway tunnel. Join us as we bicycle around Cambridge and through history, passing the relics of transportation modes both ancient and modern.

start: 10:15AM arrival at Cambridge Common
10:30AM ride starts
ends: Cambridge Common
ride length: 11 miles
ride time: approx 2.5 hours

trails, sails, rails, and wheels

WESTWARD HO! THE FIRST TURNPIKE

Over 150 years before the opening of the Massachusetts Turnpike, the Cambridge Concord Turnpike connected the two villages. Constructed in a nearly straight line between Cambridge Common and Concord Center, the route was encumbered by steep hills, particularly near Belmont Center.

In Cambridge, between 1805 and 1806, the turnpike began at the West Boston Bridge in Cambridgeport (now Kendall Square) and ran westerly along today's Broadway to Cambridge Common, skirting Harvard College by 90 feet as required by law. West of the Common, it followed today's Concord Avenue northwest past Fresh Pond to Belmont Center. While there were no tollgates within Cambridge (as the result of a lawsuit), one gate was erected about 1/2 mile west of Fresh Pond, and another in Lincoln.

The privately owned turnpike was not economically successful, probably because it bypassed Lexington and its steep hills created difficulties for horse-drawn carts. (The new routes built later for railroads tended to follow the gentle grades of river valleys.) In May 1829 the turnpike became a public road. Its entire route through Cambridge remains today as city streets.

RAILS TO HARVARD YARD (63 YEARS BEFORE THE RED LINE)

A little-known fact of Cambridge transportation history is that the first train service to Harvard Square began 63 years before the subway station opened there. The Harvard Branch Railroad provided train service direct to Harvard Yard, with a depot near Austin Hall at Harvard Law School. Built in the summer and fall of 1849, the line started service at the end of 1849. The 3/4-mile line branched off the Fitchburg Railroad near the present-day Park Street crossing. The service lasted only 6 years, but at its peak, the line provided 10 round trips to Charlestown, with some trips to Boston. Competition from the horse-drawn omnibus to Boston contributed to the railroad's demise. In 1855 the Fitchburg Railroad, which

Location of former Harvard Branch Railroad Station, now the area of Austin Hall, Harvard Law School (within white circle)

Location of former cattle pens in Porter Square (within white circle)

operated the branch line, abandoned the tracks; this was the first railroad in the U.S. to be abandoned. No evidence of the line remains; however, Museum Street follows the old right of way.

THE CATTLE ARE COMING! THE CATTLE ARE COMING!

When we think of cattle drives, we typically think of cowboys, horses, and the Wild West, but cattle drives in Cambridge were a common event during the early 20th century. Potter's slaughterhouse west of Porter Square was one of several in the city. Cattle would be driven over the roads from farms outside the city, even from as far away as Maine. With the coming of the railroads, cattle from the Midwest would be unloaded at rail yards in North Cambridge and herded through the streets of Cambridge.

When the 'ice railroad' was built west to Fresh Pond, the local cattle drovers insisted on accommodation for the cattle drives. Bridges over the tracks were built at Hampshire Street (now Beacon Street) and North Avenue (now Massachusetts Avenue). The Walden Street Bridge, just west of Porter Square, was built with a cattle passage to connect the Kidder-Sargent farm with Potter's slaughterhouse.

RAILS TO TRAILS: TO NORTHAMPTON VIA THE CENTRAL MASSACHUSETTS

The last railway to be built in Cambridge was the first to be completely converted to a multi-use trail. Opened in 1881 as far west as Hudson, MA the line reached Northampton in 1887. Between 1890 and 1893, the Central Massachusetts Railroad was part of a long-distance route, connecting south to Harrisburg, PA, and Washington, DC, via the Poughkeepsie Bridge (one of the few early spans across the Hudson River).

Beginning in 1900, things went downhill. The Central Massachusetts had become part of the Boston & Maine, which also acquired the Fitchburg, a superior east-west route. Still, two or three round trips ran between Boston and Northampton through the 1920s. A hurricane in 1938 severed the line at Barre, and through service ended.

CAMBRIDGE TRANSPORTATION HISTORY TIMELINE

1845 Henry David Thoreau travels through Cambridge on Fitchburg Railroad between his cabin at Walden Pond and Boston

1849 December Harvard Branch Railroad begins service from Boston to Harvard Yard

1855 Harvard Branch Railroad abandoned

1856 First horsecar line in New England: Boston to Mt. Auburn Cemetery

1881 Last river transport to wharfs in Harvard Square

1889 October 1 Central Massachusetts Railroad opens from Cambridge to Hudson, MA

1890 Charles River Road (now Memorial Drive) constructed along the river banks

1892 Horse car lines changed to electric streetcars

1894 August 3 Longfellow Bridge opens (replacing West Boston Bridge)

1906 Huron Avenue electric streetcar line opens, replacing horsecar line on Brattle Street

1912 March 23 Harvard Square subway station opens, Cambridge-Dorchester Tunnel subway service to Park Street begins with stations at Central and Kendall Squares

1912 Anderson Memorial Bridge open

1912 June 1 Lechmere Viaduct opens: Direct streetcar service from Harvard Square to Scollay Square via Cambridge Street

1920s Last schooners to Lechmere and Broad Canals

1920s Ford assembled Model Ts at 640 Memorial Drive

1922 July 9 Direct streetcar service to Subway ends; riders change at Lechmere.

1924 River Street Bridge opens (replacing original span of 1811)

1926 John W. Weeks footbridge opens

Western Avenue Bridge opens (replacing original span of 1824)

left to right: trolley ticket, Cambridge omnibus, ice cutting at Fresh Pond

On its east end, the line across North Cambridge remained important until 1980 for freight traffic to Boston, bypassing the tight clearances on the Fitchburg line at Porter Square. Red Line construction from Davis Square to Alewife followed the line. Some of the last trains on the Central Massachusetts through Cambridge carried the Red Line tunnel excavate, which was delivered for fill beneath what has become Danehy Park.

In 1985, with the subway construction completed, a multi-use path known as Linear Park opened from Davis to Alewife. West of Alewife to the Belmont line, the Central Massachusetts is an unpaved path. The entire Central Massachusetts line in Cambridge has evolved from rails to trails.

Plans call for the Somerville Community Path to be extended along the Central Massachusetts east of Cedar Street. Several other segments of the line, such as the 5-mile Norwottuck Trail between Northampton and Amherst, have also been converted from rails to trails. Bike enthusiasts hope to see the Mass Central Rail Trail's entire 104 miles from the Charles to Northampton converted to a chain of connecting trails (www.masscentralrailtrail.org).

ICE CUTTERS ATTRACT A RAILROAD THAT TRANSPORTS AN EXISTENTIALIST TO A POND THAT ATTRACTS THE ICE CUTTERS

The story begins 15,000 years ago with the retreating Laurentide Glacier sculpting a deep fresh-water pond in the western portion of our fair city. Skip ahead about 14,800 years to 1806, when Frederic Tudor, Boston's 'Ice King,' bought his first brig, Favorite, which carried Fresh Pond ice 1,500 miles to Martinique. In the decades that followed, Fresh Pond ice was shipped to the Caribbean, Europe, and even as far away as India, insulated by a coating of sawdust, wood shavings, or rice chaff.

The ice trade's dependence on horse-drawn carts to carry ice over the Concord Turnpike to the Charlestown docks was the weak link in the ice-exporting business. Looking to increase its traffic base in 1841, the 2-year old Charlestown Branch Railroad built a line west to the north bank of Fresh Pond, where spur tracks served the three major ice houses owned by Tudor, Addison Gage, and Nathaniel J. Wyeth (also owner of the Fresh Pond Hotel at what is now Kingsley Park). By the spring of 1842, horse-drawn trains were carrying Fresh Pond ice to the docks in Charlestown. Soon steam locomotives were procured to transport ice and passengers alike, and a depot was constructed at Porter Square.

In May of 1843, the paper mill tycoon Alvah Crocker of Fitchburg started construction of a parallel line from Charlestown to his hometown. The Fitchburg Railroad reached Concord in June 1844. The following year, a 28-year old Harvard graduate, Henry David Thoreau, built his cabin at Walden near the train tracks whose carriages frequently transported him to Boston. The following winter, with Tudor's ice cutters at work on Walden Pond, Thoreau noted in his journal:
"The sweltering inhabitants of Charleston and New Orleans, of Madras and Bombay and Calcutta, drink at my well … The pure Walden water is mingled with the sacred water of the Ganges."

Today 26 passenger trains pass both Walden Pond and Cambridge. While ice shipments ended by 1890, a lone weekly freight train still plies the rails near Fresh Pond, passing the long-gone ice houses on its way to a bakery in Watertown.

FIRST HORSE-CAR LINE IN NEW ENGLAND

Following the route of the first stagecoach to Boston, the first horse-car line entered Cambridge over the West Boston Bridge (predecessor of the Longfellow Bridge). Following the routes of Main Street and Massachusetts Avenue, the horse-car line passed through Harvard Square and headed west out Brattle Street past Mount Auburn Cemetery to the Belmont line. A large horse-car barn was constructed at the end of the line; this building now houses the Star Market on Mt. Auburn Street. As the horse-car lines were converted to electric trolleys in the 1890s, the car barn was also converted to house electric streetcars.

A SUBURBAN STREETCAR IN CAMBRIDGE

When it was time to convert the Brattle Street horse-car line to electric trolleys, the residents objected to the noise of the new streetcars. Instead of following Brattle Street west from Harvard Square, two routes were constructed in 1894: one on Mt. Auburn Street and another into an undeveloped area of Cambridge along Huron Avenue. The lines rejoined by the car barn opposite Mt. Auburn Cemetery.

While Mt. Auburn Street was more urbanized, the land along Huron Avenue was largely undeveloped. In many cities, land developers extended streetcar lines out of the cities to land they sold for homes for commuters who used the streetcars to reach work. These developments were known as 'streetcar suburbs.' The Huron Avenue line is the only example in Cambridge. In an early instance of 'transit-oriented development,' small business districts developed at the stops along the Huron Avenue line. On April 1, 1938, the Huron Avenue streetcar became a trackless trolley route and remains one of the four such routes still in operation in the Cambridge area.

THE SUBWAY COMES TO HARVARD SQUARE

Construction of the Cambridge-Dorchester Tunnel began in 1909. Service began on March 23, 1912, between Harvard Square and Park Street. The entire tunnel was completed six years later when the segment that included the Broadway and Andrew Square stations in South Boston was opened on June 29, 1918.

The Eliot Yards were built at what is now the Harvard Kennedy School and JFK Park. Eliot Yard was the primary base of operations for the Red Line fleet until the opening of Cabot Yard in the 1970s. The yard itself remained in operation until 1980, when construction of the Red Line Northwest Extension to Alewife began. An attractive temporary station constructed mostly of wood, known as 'Harvard-Brattle,' opened in 1981 in the western half of the yard and served as a transfer station for bus connections. The construction of the extension required the demolition of portions of the Harvard Square bus tunnel, which was closed for several years.

Courtesy of the Cambridge Historical Society, CHS Image Collection

Former Harvard Sqaure subway entrance now news agent, Out of Town News

Today an abandoned subway tunnel remains from Harvard Square under Brattle and Eliot Streets leading to the site of the Harvard Kennedy School, resulting in a notable hump in Eliot Street. One section of the Eliot Yard wall remains along the walkway from Eliot

Trivia: *A short section of abandoned subway tunnel still lies beneath Harvard Square, representing the tunnel to the Eliot Yards on the river in the days before the Red Line extension to Alewife in 1984.*

CAMBRIDGE TRANSPORTATION HISTORY TIMELINE

1936 — April 10 First trackless trolley line (Harvard to Lechmere)

1938 — April 1 Huron Avenue streetcar becomes trackless trolley

1952 — 1952 Memorial Drive extended from Hawthorne Street to Gerry's Landing and Eliot Bridge constructed

1958 — September 4 Last streetcar routes (71 Harvard-Watertown and 73 Harvard-Waverly) converted to trackless trolleys

1960s — Kendall Square cleared to become NASA headquarters

Dr. Paul Dudley White bikeway constructed

1970 — Governor Francis W. Sargent decrees: no more expressways within Route 128 (kills 'Inner Belt' through Cambridge and Somerville)

1984 — Red Line extension to Alewife opens

1985 — Linear Park (multi-use path) constructed Davis Square to Alewife

1991 — Cambridge Bicycle Committee is established by City Council

1993 — Minuteman Bikeway (Cambridge to Bedford) opens

2011 — Urban Ring Phase II opens (planned)

2014 — Dec. 31 Green Line extension to Somerville and Medford opens

UPCOMING

Courtesy of the Cambridge Historical Society, CHS Image Collection

top: Central Square traffic station; right: Harvard Square circa 1920s

Street to JFK Park.

Immediately to the west on the site of the present Charles Hotel were the Bennett Street Yards, the base for streetcar operations throughout Cambridge, including lines to Arlington, Belmont, and Watertown. Bennett Street Yard consisted of three large car barns, a lobby building, a garage building, and an extensive outside storage yard. Some of the yard was paved over in 1942 and 1949 when streetcar lines were converted to trackless trolleys. The original lobby building (where the yard supervisors worked) remains today on a 'bus alley' between Bennett Street and Mt. Auburn Street.

MEMORIAL DRIVE: MULTIMODALISM IN A LINEAR PARK

The 1890s was the heyday of the linear park — a new concept pioneered by Frederick Law Olmsted with the Emerald Necklace in Boston. Rather than following the geometric lines of a formal park (e.g., Central Park in New York), the linear park meanders in a curvilinear form, often following a watercourse. In the Emerald Necklace, Olmsted laid out intertwining multimodal transportation facilities: carriageways, equine paths, and walking paths.

In Cambridge, landscape architect Charles Eliot (who joined the Olmsted firm in 1893) developed plans for a carriageway along the banks of the Charles River Basin as part of a metropolitan parks system. Following a concept dating to 1870, the riverbank was formalized with a series of seawalls. The 1910 dam replaced the tidal basin with a pool of constant water elevation, eliminating the odiferous exposure of the flats during low tide and making the water's edge a desirable place to be for the first time. Between 1892 and 1914, the Cambridge Parks Department constructed the carriage road and a walkway along the seawall.

In the 1960s, the Paul Dudley White bike path was established from the Charles River Dam to Watertown Square. Unique to Memorial Drive is the practice of closing the roadway near Harvard Square to motor vehicles Sundays from 11 a.m. to 7 p.m. April through mid-November, allowing greater enjoyment of the riverbanks unencumbered by traffic and exhaust.

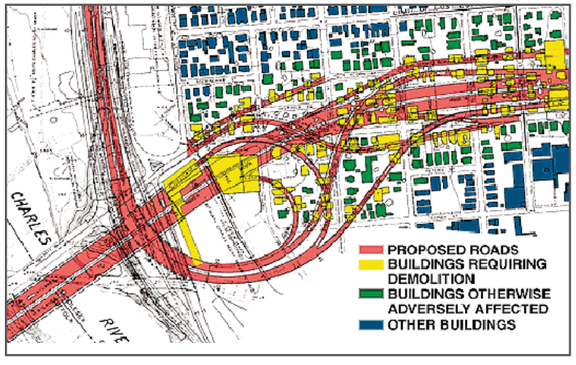
Today, the concept of a linear park with multimodal transportation facilities can be seen along Memorial Drive with accommodations for motor vehicles, bicyclists, joggers, skaters, and pedestrians.

SPARE THE BELT AND SAVE THE CITY! (THE HIGHWAY THAT WASN'T)

A landmark event in transportation history occurred in February 1970 when Massachusetts Governor Francis W. Sargent decreed a moratorium on new highway construction within Route 128. Never before had an elected official taken such a bold stand. After all, since the advent of the Interstate Highway system in 1956, highways had been synonymous with progress and prosperity. But this one decree saved Cambridge from being ravaged by a tornado-like path of destruction from the Boston University Bridge to Union Square in Somerville.

To relieve traffic on the antiquated streets of Boston, the Massachusetts Department of Public Works (Mass DPW) in 1948 proposed an expressway in a loop configuration through downtown Boston on the east side and Cambridge and Somerville on the west side. The eastern half of the route was built as the elevated Central Artery in 1956 through 1960. The remainder of the loop was to branch off behind Boston City Hospital, cross Roxbury and the Fenway, and cross the Charles at the location of the Boston University Bridge. The six-lane route through Cambridge would have been located just west of Brookline Street, south of Massachusetts Avenue and in alignment with Elm Street to the Somerville line. Interchanges were planned for Massachusetts Avenue and the Route 2 extension at the Somerville line. The section from City Hospital to Somerville was called the 'Inner Belt,' which would complement the other circumferential or belt highways: Route 128 and the 'Outer Belt,' now known as I-495.

Demolition for the Inner Belt began in Roxbury and the South End in the early 1960s. In Cambridge, a coalition of residents, community groups, civic leaders, and academics joined to oppose the project, which would have displaced 7,000 residents and divided the city with an elevated highway much like Boston's Central Artery.



Plans for proposed 1970s 1970s highway construction that was never built.

One of those protesting the Belt was Fred Salvucci, who later became transportation secretary under Governor Michael Dukakis. At the time, Salvucci was a transportation consultant to Boston Mayor Kevin White. Partly because of his efforts, local and state officials — even Cambridge's Congressman Thomas P. 'Tip' O'Neil — took heed of the magnitude of the potential destruction of neighborhoods along the Belt. The crescendo of intense protest produced a favorable outcome when Governor Sargent's highway moratorium saved Cambridgeport and Area 4 from the wrath of demolition crews.

No evidence of the Inner Belt can be seen today in Cambridge. (In Somerville, the 'ramps to nowhere' off I-93 at Sullivan Square are the only artifacts of the ill-planned highway.) A mural off Magazine Street at Riverside Road pays tribute to the victory of grass roots activists in stopping the Belt. Also, Melina Cass Blvd. in Roxbury traces some of the Boston portion of the route.

CAMBRIDGE, THE FINAL FRONTIER (ALMOST)

Space travel and Cambridge: if not for one historic tragedy, the famous line from Apollo 13 could have been "Cambridge, we have a problem." In the early 1960s, with Massachusetts native John Fitzgerald Kennedy in the White House, plans were to locate NASA's Mission Control in Kendall Square, near MIT. In a style of 'urban renewal' typical of the 1950s and 1960s, blocks of industrial buildings were leveled and much of Broad Canal filled in. A suburban-style campus including a high rise surrounded by low-rise buildings and surface parking followed.

GRAND JUNCTION RAILROAD — THE FIRST URBAN RING

Late 19th-century Boston was the railroad hub of New England, with major lines approaching radially from the north, south, and west. Connecting these lines were two 'belt' or 'ring' routes: The Union Railroad, which ran through the streets of Boston between North and South Stations, and the Grand Junction, which connected the busy pier of East Boston with rail lines in Somerville and Allston.

In 1856, the Grand Junction was built through East Cambridge and Cambridgeport to link with the Boston & Albany Railroad in Allston. At the time, the line was built on waterfront property along the edge of the Charles River tidal marshes. Industrialization of the city followed the railroad's arrival. At its peak around 1910, the Grand Junction served over 40 Cambridge industries, more than any other railroad in Greater Boston. Connecting to all lines north and west of Boston, the Grand Junction was truly the first 'inner belt' or 'urban ring' line, although the line never offered passenger service.

trails, sails, rails, and wheels
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Organized by the Cambridge Bicycle Committee
RIDE INFO: *www.cambridgebikes.org*

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1 Walden Street Bridge, Cattle Tunnel, Fitchburg Line
2 Fresh Pond: Ice Business
3 Harvard Square,Bennett Street Yards
4 Inner-Belt Mural
5 Grand Junction
6 North Point Park, Charles River, Canals and a Snack

REFERENCES
Please check online for more information about the research .

start: 10:15[AM] arrival at Cambridge Common
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SCHOONERS, CANALS, AND SHIPPING ON THE CHARLES

From the 1630 founding of Newtowne (as Cambridge was known until 1638) to the 1920s, the Charles was an important route of commerce. The first docks were in tidal marshlands on the edge of the original village (now Harvard Square). Commercial ships called on the square until 1890.

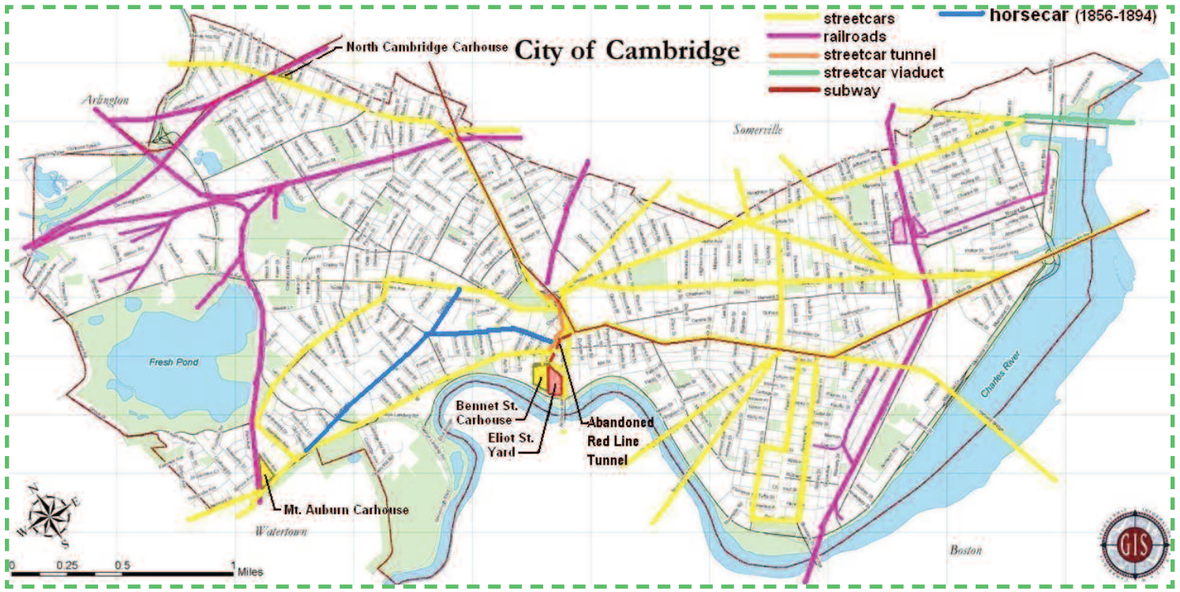
Other docks were constructed in Riverside, Cambridgeport, and East Cambridge, where the Broad Canal (at Kendall Square) and the Lechmere Canal were constructed by filling in tidal marshlands. Schooners were seen in these canals until the 1920s. The construction of the Charles River Dam in 1910 signaled a change in the character of the river. The tidal river became a basin with a constant water elevation. Seawalls replaced natural banks, and the vision of Charles Eliot and other pioneering landscape designers led to the construction of Memorial Drive by the Cambridge Parks Department between 1892 and 1914. Today, river traffic includes sailboats, crew shells, 'duck boats,' and other recreational craft.

The 20th century saw an evolution of businesses along the Grand Junction corridor from manufacturing to research and science. The last Grand Junction customer in Cambridge was the Necco factory, recently converted to a research facility for Novartis.

Though no customers remain in Cambridge, the line is used for a daily freight train to Chelsea by CSX and for shuttling passenger equipment between North and South stations by both the MBTA and Amtrak. A side track by MIT is the temporary home of the Barnum & Bailey circus train when it visits Boston. After the final show, the circus elephants, ponies, and horses march through Cambridge, perhaps the most unique parade through the city!

The Cambridge Bicycle Committee has put forth a proposal to create a trail with rail along the Grand Junction corridor. The multi-use path would connect the Dudley White pathways on either side of the Charles with the proposed Somerville Community Path.

The Grand Junction corridor remains an important factor for transportation 150 years later. The proposed Urban Ring transit route would also parallel the Boston's 'urban ring' from the BU Bridge through Cambridge, Somerville, Everett, Chelsea, and East Boston.



TRACK THROUGH TOWN

Over the years, railroads, streetcars, and subways have left their tracks across the city. The map above is an all-time compilation of rail lines on the surface, in tunnels, and above the ground (not including temporary traces on Mt Auburn St. and vicinity during the subway construction 1909–1912).

ACKNOWLEDGMENTS

Thanks to city staff, members of the Cambridge Bike Committee and others for their work in making this ride possible. In particular, thanks to Charles Sullivan of the Cambridge Historical Commission for historical information and images; Sgt. Kathy Murphy and the Cambridge Police Bike Patrol officers; Ranger Jean Rogers of the Cambridge Water Department; James Wilcox of the Department of Public Works; Cara Seiderman and Stephanie Andenberg of the Community Development Department; and Jenni Alden, John Burckardt, Steve Miller, and Gerry Swislow who planned the ride an dprepared this brochure, and the other members of the Cambridge Bike Committee who helped run the ride. Thanks to Roberts Winters for help with speaking and Trudi Harkins for expert editing. Thanks also to Mark Vassar of the Cambridge Historical Society, and Lynn Matis at the State Transportation Library for help with images. And Dereck Mangus for assistance with photography. Some images courtesy of the Cambridge Historical Society, CHS Image Collection. We thank both Lyall Croft of Boston Bike Tours and Harvard Square Eastern Mountain Sports for providing mechanical support to our riders.