Jackson Square Transit-Oriented Improvement Recommendations

Draft for Discussion, Revised May 7, 2003
Approved by JCG Site Planning Committee

I. Overview of Transportation in Jackson Square

The Jackson Square Coordinating Group (JCG) is producing planning and development guidelines for an area within a 1/4 mile radius of the Jackson Square MBTA Station. This section provides an overview of transportation issues in this part of the City of Boston.

Jackson Square Coordinating Group Consensus on Transportation

The Jackson Square Coordinating Group (JCG) was formed in June 1999, building on earlier planning work. A series of community meetings and charrettes were held and attended by hundreds of people. A final report, Putting the Pieces Together, was issued in July 2001. That report summarizes the final charrette of February, 2001, and contains the following statements:

"In the spring of 2000, over 800 residents including youth from Roxbury and Jamaica Plain gathered at more than 80 community meetings to discuss Jackson Square… A clear majority … expressed … a preference for development that does not increase car traffic, but instead encourages alternatives such as walking and using public transportation." (p.2-1)

"The current traffic patterns present a barrier between neighborhoods and split the community in half. Charrette participants clearly communicated a strong desire to reduce the traffic load on Columbus Ave., thereby helping to re-knit the urban fabric." (p.3-5)

"The scale of Columbus Avenue generates a physical barrier that can be addressed by new development of the area. Many residents see the potential for creating connections by reducing traffic and creating a pedestrian environment in an area that is currently dominated by vehicular traffic. Many voiced concerns regarding the public hazards that excessive traffic brings to residential communities. These potential hazards include greater danger of asthma attacks due to increased levels of pollution, the cost and injuries resulting from car accidents, and threat of an increase in pedestrian deaths."

The report also highlighted these "key points" with regard to transportation:

- Reduce width of Columbus Ave, by having one lane for parking and slow traffic
- Change texture of street to decrease speed of cars at crossings; add speed signs
- Make Columbus easier to cross in several locations
- Add Green strips along sides of Columbus Ave.
- Develop a traffic management plan
- Change timing on lights for pedestrians to cross more easily.
- Add a bike and pedestrian path along the Eastern side of the train tracks, from Centre St. to Atherton St.
- Maintain pedestrian access from the dead end of Amory St. up to Centre St.

Role of Public Actors

The Boston Redevelopment Authority (BRA) is the City's planning and development agency. The BRA has an agreement with the Massachusetts Department of Capital Asset Management (DCAM) to administer the RFP/RFQ process for several vacant parcels in the area owned by the state. The BRA is coordinating the planning process. The Boston Public Health Commission (BPHC) is responsible for monitoring and improving public health of city residents. In particular, the BPHC is conducting a study of air quality in the planning area, with a focus on pollutants emitted from transportation sources. The Boston Transportation Department (BTD) is responsible for installing and maintaining road markings, traffic signs, bike racks, and parking meters. The BTD planning staff helps produce neighborhood transportation plans and reviews development projects to insure that transportation impacts are minimized and mitigated. The Boston Department of Public Works is responsible for constructing and maintaining roadways, medians, and sidewalks, and other public infrastructure including public footways and bridges. The MBTA operates rail rapid transit service on its Orange Line serving Jackson Square. Several MBTA bus routes also serve the neighborhood, as described below.

Role of Developers

Any proposed development presented to the JCG must reflect the need for transit-oriented development and be sensitive to the existing high rate of respiratory disease in the area. These elements are not add-ons, but should be incorporated into the initial conception of projects and in the design of buildings and streetscapes. The JCG seeks original and inventive solutions to create a healthy, vibrant, affordable, and transit-oriented community. Some of the solutions include: minimizing car use, car dependency, and asphalt, reducing the impact of development on air quality, increasing the use of public transit, walking, and bicycling, and addressing the needs of families with children, elders, and people with asthma. The developer is expected to bring creative solutions to the Jackson Square community.

Existing Modes of Transportation

Transportation data are available for Jamaica Plain (including Mission Hill) and for Roxbury. These data are presented in Table 1. About one-third of all trips, both in Roxbury and Jamaica Plain, start and end within the same neighborhood. About two-thirds of these neighborhood trips are walk trips. Few of the other types of trips are walk trips. Transit has the largest share of trips to the downtown area ("core area") and a significant share to other trips outside the neighborhood but within Boston ("rest of Boston").

Table 1. **Distribution of Trips and Mode Shares**

	Roxbury					Jamaica Plain				
		Mode Share					Mode Share			
Trip Type	**% of trips**	**Auto**	**Transit**	**Walk**	**Total**	**% of trips**	**Auto**	**Transit**	**Walk**	**Total**
Within Neighborhood	34%	30%	7%	63%	100%	30%	30%	3%	68%	101%
To Core Area	8%	43%	57%	0%	100%	8%	37%	63%	0%	100%
To Rest of Boston	33%	69%	23%	8%	100%	32%	63%	29%	8%	100%

To Inner Communities	17%	85%	15%	0%	100%	19%	81%	18%	1%	100%
To Outer Communities	8%	95%	5%	0%	100%	11%	92%	8%	0%	100%
TOTAL	100%					100%				

Source: Central Transportation Planning Staff (CTPS) data as reported in *Boston Transportation Fact Book and Neighborhood Profiles* (Boston Transportation Department 2002). The "core area" includes downtown and Back Bay. "Rest of Boston" is the city limits not including the previous two categories (the neighborhood itself and the core area).

A separate study examined census tracts that roughly cover the 1/4 mile planning area. These data show that of the 14, 888 workers over the age of 16 who live in the area, 50% use some means other than automobile to get to work. A full 37% took public transportation. Thirteen percent use another means, including 2.2% who bicycled and 7% who walked. Of the working adults in these tracts, 71% work in Boston.

Existing Regional Roadway System

Columbus Avenue is the major arterial passing through Jackson Square. It is designated as part of State Route 28 and is part of the National Highway System. Route 28 enters Boston on Blue Hill Avenue and turns northwest on Seaver Street which becomes Columbus Avenue at Walnut Street at the edge of Franklin Park. Columbus Avenue continues through the Jackson Square planning area and then becomes Tremont Street at Roxbury Crossing. It provides a connection to Interstate 93 via Melnea Cass Boulevard at Ruggles Street. Traffic volumes on Columbus are about 31,000 vehicles per day (2002 counts) on Columbus Avenue near Dimock Street rising to 41,000 vehicles per day (1996 counts) at Roxbury Crossing.

Centre Street connects the Jamaicaway and much of Jamaica Plain to Columbus Avenue. It is also a major commercial street. Lamartine Street is a two-lane collector street that connects Green Street to Centre Street and is used to provide access from Jamaica Plain to Columbus Avenue. Amory Street is a two-lane collector that runs from Williams Street to Columbus Avenue and is also used as a through street to reach Columbus Avenue from Jamaica Plain.

Southwest Corridor Path

The Southwest Corridor is a linear park running the length of the Orange Line from Forest Hills Station to Back Bay Station. It is owned by the MBTA and managed by the MDC. There is a continuous pathway along the corridor that ends at Back Bay. Up to Massachusetts Avenue there is a separate bicycle path that is officially designated the "Pierre Lallement Bicycle Path" after the French immigrant and Roxbury resident who in the 1860s was one of the first to attach pedals to a two-wheel vehicle. There are two separate paths, one for pedestrians and one for bicyclists; the two paths sometimes cross over each other. The path runs adjacent to Lamartine Street from New Minton Street to Centre Street. The path crosses Centre Street and makes two right-angle turns along the sidewalk before starting again between the Jackson Square MBTA station and Bromley-Heath Housing. This crossing is difficult the path approaching from Bromley-Heath is not aligned with the path on the other side of the intersection. After Ruggles Station, the path becomes more like an urban sidewalk. Many bicyclists continue along Columbus

Avenue at that point through the South End. The path is used as a route to central Boston and Cambridge by bicyclists from Jamaica Plain, Roslindale, and points south. From Jackson Square to Ruggles, the road adjacent to the path has three narrow lanes, high-speed traffic, and no shoulders, and as such is considered unsafe by most bicyclists.

Existing Pedestrian Flows

There is significant pedestrian traffic to Jackson Square Station. As noted below, 40% of people entering and 60% of those exiting travel on foot. There is a significant flow of pedestrians from the station to Amory Street via an informal pathway over empty MBTA land and the dead-end portion of Amory Street, which is a City owned right-of-way. There is also a significant flow of pedestrians from Jackson Square station to residential areas on the other side of Columbus Avenue, an intersection that is difficult for pedestrians (see details below).

Existing Public Transit System

There is a Jackson Square rapid transit station on the MBTA's Orange Line that runs from Forest Hills Station to Oak Grove in Malden. The station has no automobile parking available to the public except on-street parking and private lots. There is a drop off area on the side of Centre Street opposite the station. There are bike racks along side and in front of the station. There is a bus loading area adjacent to the train station. There are about 4,800 daily exits or entrances to
Jackson Square Station. About 40% of station users arrive on foot and another 40% arrive by bus (see Table 1). Five bus routes serve the station (see Table 2 below). Bus ridership by route is shown in Table 3.

Potential Bus Route Improvements

- Improve the frequency and schedule adherence of bus route 41. This route connects JP Centre and Hyde Square with Jackson Square via Centre Street, and continues to Dudley Square and UMass. This route is frequently behind schedule and also runs infrequently, creating the possibility of very long waiting times.
- Add bus service to the parts of Roxbury & Dorchester that are not served by buses from Jackson Square. This could include adding new routes or altering existing routes.
- Extend bus route 14 from its current terminus at Heath Street to the D branch of the Green Line at Brookline Village. This extension would provide direct access to Brookline Village, a significantly quicker ride to downtown Boston, and access to connections at Kenmore Square to Route 57 and the B and C branches of the Green Line.

Table 1: **Characteristics of Jackson Square MBTA System Users, 1994** (source: CTPS survey)

Mode		Access %	Egress %
Walk	959	42.3%	59.4%
Bus		40.9%	33.4%
Park & Ride	246	10.8%	1.1%

Occupation	
Professional	43%
Trades	3%
Clerical	26%

Age	
17 and under	3%
18-24	17%
25-34	28%

Drop off/pick up	116	5.1%	6.3%
Bicycle	12	0.5%	0%
Taxi	9	0.4%	0%
TOTAL	1342	100%	100%

Walk Time	Access	Egress
0-5 min	58%	55%
6-10 min	26%	31%
11-15 min	10%	3%
16-20 min	6%	12%
TOTAL	100%	100%
Mean	7.2 min	8.1 min

Retail	4%
Homemaker	6%
Student	9%
Retired	4%
Unemployed	1%
Other	4%
Total	54%

Ann. Household Income	
< $20,000	21%
$20 to $30	29%
$30 to $40	20%
$40 to $60	20%
$60 to $80	7%
> $80,000	4%
Total	100%

35-44	27%
45-64	20%
65+	4%
Total	100%

Gender	
Male	30%
Female	70%
Total	100%

Auto Available for Trip	
Yes	36%
No	65%
Total	100%

Table 2: **Bus Routes Serving Jackson Square Station**

#	Name	Via	Hours	Interval	Riders/day
14	Heath St-Roslindale Sq.*	Dudley, Warren, Amer. Legion Highway	M-S, 7 am to 7 pm,	30 min to 45 min	1450
22	Ashmont-Ruggles	Columbus, Seaver, Blue Hill, Talbot	all	8 min to 20 min	8300
29	Jackson Sq-Mattapan	Columbus, Seaver, Blue Hill	M-F, limited Sat	16 min to 60 min	2250
41	Monument-UMass*	Centre, Dudley	all	20 min to 40 min	1000
44	Jackson Sq-Ruggles	Columbus, Humboldt	all	11 min to 45 min	4050
48	Jamaica Plain Loop	Centre, Paul Gore, Lamartine, Amory, Washington, Green	M-S 9 to 5PM	30 to 35 min	200

*Note: Beginning in 2002, route 41 was extended from Dudley to the Monument and route 14 (Roslindale to Heath) was combined with route 46 (Heath to Dudley).

Table 3: **Bus activity at Jackson Square Station, typical weekday (1999 to 2002 data)**

		Inbound		Outbound	
#	Name	On	Off	On	Off
14	Heath St-Roslindale				
22	Ashmont-Ruggles	125	1164	818	137
29	Jackson Sq-Mattapan				
41	Monument-Umass *	99	57	105	67
44	Jackson Sq-Ruggles	547	0	0	581
48	Jamaica Plain Loop	0	18	14	0

* When data were collected, Rt. 41 went only as far as Dudley

II. On-Site Transportation Guidelines

General Roadway and Sidewalk Design Considerations

Sidewalks on Columbus Avenue and Centre Street should be 12 to 15 feet wide including a landscaping and street furniture strip. The following improvements should be made to roads adjacent to the parcels:

- Create a buffer from moving traffic using street trees, on-street parking, or both.
- Provide street furniture and amenities (benches, trash cans, public art, bike racks, etc.)
- Provide street trees and other landscaping
- Provide new street lighting of a design to be determined. The design should minimize light pollution.
- Provide new sidewalks adjacent to all parcels to be developed (on Columbus, Centre, and Amory streets and any new streets created), a minimum of 5' wide for residential streets and 10' for commercial/mixed use streets.

Street trees create a buffer between the walking zone and the roadway.

Amory Street Cut-Through

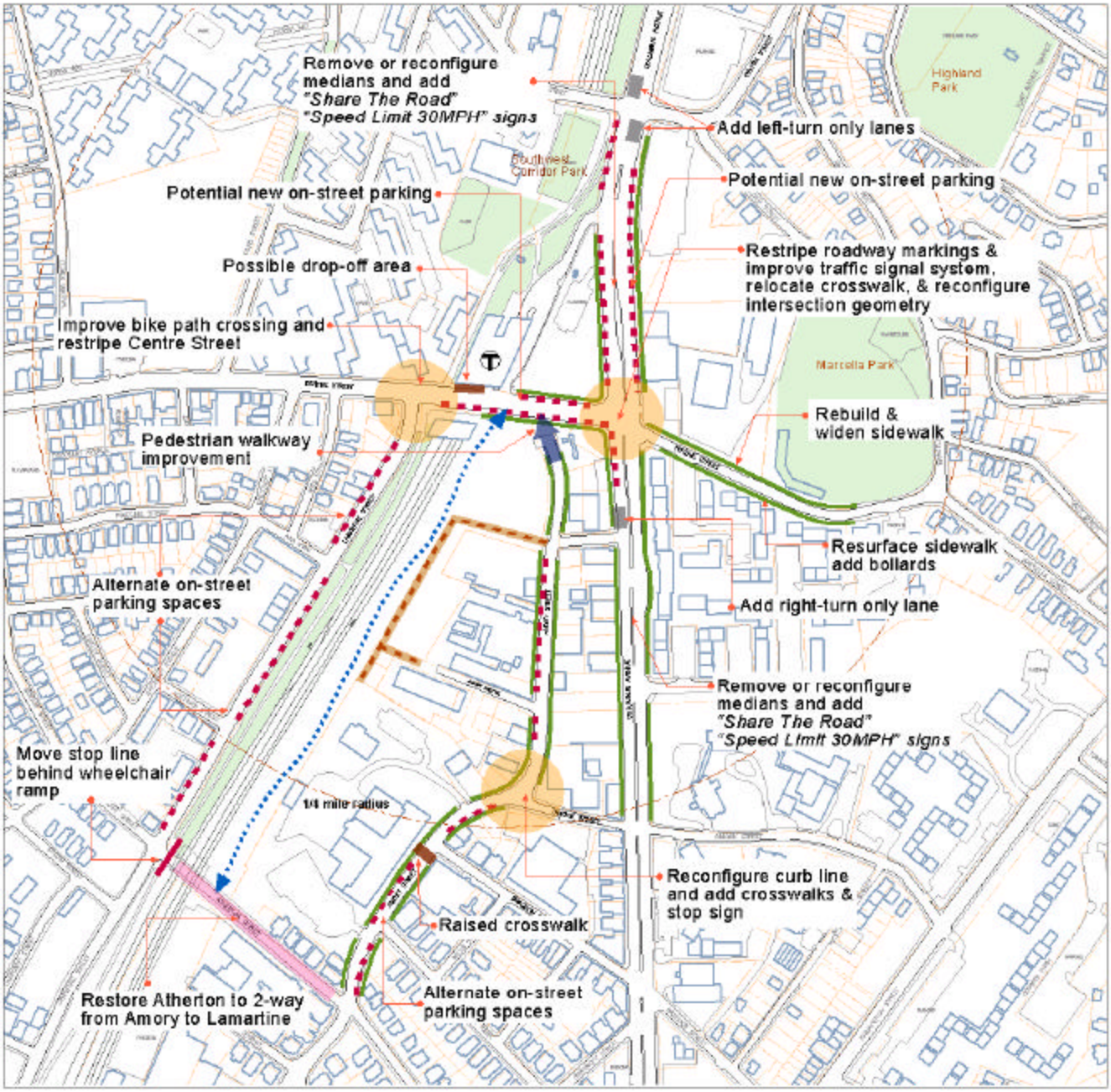
The existing cut-through from the Amory Street dead end to Centre Street is a major pedestrian access point to the Jackson Square MBTA station. It should be formalized and maintained as part of the site plan of adjacent developments. An additional possible access point is via the proposed path along the MBTA right-of-way. It must be attractive and open enough to be safe.

Design of Newly Created Streets

Some new streets are proposed adjacent to parcels F and I. Figure 1 shows proposed locations of these streets. The design goals are to create a pleasant walking environment; safe crossings; bike friendly; and on-street parking wherever possible, in order to maintain an urban character, reduce speeds, and reduce real or perceived need for surface parking lots. Sidewalks should be 8 feet wide (7 feet minimum). Public Works Department guidelines call for a minimum of 20 feet of clear roadway width for emergency vehicle access, regardless of whether the street functions as a one-way or two-way street. On-street parking should be on both sides of the street if there is sufficient width. Some issues to be determined with regard to these new streets are:

- Curb-to-curb width
- One-way or two-way operation
- Regulation of on-street parking
- Location of neck downs (only where there is permanent on-street parking)

These decisions will be made based on the site design proposal and the proposed circulation pattern and parking provision. Resident permit parking should be considered for the on-street parking, given the likelihood of commuter parking to access the MBTA station. The resident-only all-day parking could permit non-resident time-limited parking (such as one-hour or two-hour parking). Back-in angle parking should be considered as a way to increase the number
spaces of parking.


Remove or reconfigure medians and add "Share The Road" "Speed Limit 30MPH" signs
Add left-turn only lanes
Potential new on-street parking
Restripe roadway markings & improve traffic signal system, relocate crosswalk, & reconfigure intersection geometry
Possible drop-off area
Improve bike path crossing and restripe Centre Street
Rebuild & widen sidewalk
Pedestrian walkway improvement
Resurface sidewalk add bollards
Alternate on-street parking spaces
Add right-turn only lane
Remove or reconfigure medians and add "Share The Road" "Speed Limit 30MPH" signs
Move stop line behind wheelchair ramp
1/4 mile radius
Reconfigure curb line and add crosswalks & stop sign
Raised crosswalk
Restore Atherton to 2-way from Amory to Lamartine
Alternate on-street parking spaces
Highland Park
Southwest Corridor Park
Marcella Park
Jackson Square
Potential Transportation Improvements
Potential bike and pedestrian path
Potential new street
Streetscape improvement
On-street parking
Roadway marking improvement
Intersection improvement

Bicycle and Pedestrian Path along MBTA Line

A bicycle and pedestrian path has been proposed along the east side of the MBTA right of way between Atherton Street and Centre Street. This will provide a direct connection for bicyclists and pedestrians between Atherton Street and Jackson Square. Returning Atherton St to two-way operation between Amory and Lamartine would then provide a two-way connection at that point to the Southwest Corridor path, and also would provide a means for bicyclists to go to Franklin Park (via School Street) without having to negotiate Egleston Square. The elements to be determined with regard to the proposed new path are:

- width
- paving materials
- landscaping
- connections to Southwest Corridor Path, and to the street network to provide access to the Egleston Sq. commercial district and to Franklin Park
- lighting
- ownership and responsibility for maintenance

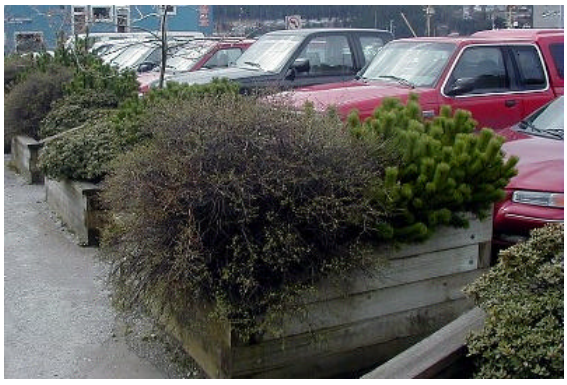
Off-Street Parking and Loading

BTD published the following *guidelines* for Jamaica Plain and Roxbury off-street parking for *sites near an MBTA station*:

Non-residential: 0.75 to 1.25 spaces per 1000 sf

Residential: 0.75 to 1.25 spaces per unit

The JCG planning process clearly calls for creative measures to insure no increased automobile traffic in the area. Therefore fewer spaces per unit should be built, taking into account an inventory of on-street parking (including existing spaces, and planned additional spaces on existing or new streets), the proximity of transit, and the Transportation Demand Management plans that will be required of developers. For residential units new on-street parking within a three minute walk of a residence should be counted to make up a ratio of up to 0.67 spaces per unit. For commercial units, on-street parking within a five minute walk should be considered, along with the type of business/activity at the site to determine parking need (e.g. a furniture store that provides free delivery will need little parking).



Landscaping can make parking lots much more attractive.

Parking Lot Guidelines

- Locate curb cuts to minimize conflict with pedestrians and vehicular traffic flow.
- Do not place lots between the building front and the roadway.
- Create multiple small lots in preference to one large lot.
- Provide adequate dimensions for safe pedestrian access as well as auto access and circulation.
- Provide sidewalks for pedestrians within parking lots.
- Provide landscaping to improve aesthetics.
- Provide in lot sidewalks.
- Provide adequate lighting for night time security.
- Provide alleys for loading and dumpster access.

The drop-off area across from the MBTA

- Providing drop-off areas and taxi stands at the front of buildings (see photo to be added).

III. Off-Site Transportation Guidelines

On-Street Parking

In addition to new on-street parking on some of the proposed new streets, on-street parking could potentially be added to Centre Street between Lamartine and Columbus Avenue, and on Columbus Avenue between Centre Street and Heath Street. The table below shows that approximately XX on-street parking spaces could be added. This number of spaces includes the existing drop-off area on the south side of Centre Street. These spaces could be unrestricted, time-limited (2 hr, 1 hr, 30 min., 15 min) or metered. For example, 15 min. parking could be used both for MBTA drop-off and for short shopping visits to the new retail uses.

Table 1: **Additional on-street parking spaces possible on existing streets**

Centre Street	miles	feet	corners + driveways	right turn lane	available ft	spaces (20 ft/space)
North side: Columbus to Busway	0.050	264	40	0	224	11
South side: Columbus, to Lamartine *	0.098	517	40	0	327	16
Columbus Avenue						
West side: Busway to Centre	0.092	486	40	0	296	14
West side: Busway to Heath		248	0**	0	248	12
West side: Centre to Muffler Mart Driveway		178	0	0	178	9
East side: Ritchie to Heath	0.147	778	40	0	588	29
East & West Sides, Heath to Cedar		Still to be counted				
TOTAL POSSIBLE SPACES					At least	91

* Assumes moving existing neck downs and MBTA drop-off area.

** Doesn't include current entrance to MBTA employee parking.

Amory Street Conditions

Amory Street runs north-south for 1.2 miles from Williams Street to Columbus Avenue. Amory Street connected to Centre Street until the reconfiguration of Jackson Square in the 1980s as part of the Southwest Corridor Project. The street width varies considerably. There is one lane in each direction and parking generally is permitted only on one side of the street. The center yellow line is mostly faded.

Amory Street is used as an alternative through route to Washington Street, which is typically congested between Montebello and Columbus, and to Centre St, with traffic going up Green St. to Centre. Vehicles headed northbound turn right on Dimock Street, and then left on Columbus Avenue, since only a right turn is permitted at the Amory and Columbus intersection (a left turn is not currently

possible because there is no break in the median at Amory Street). In 2002, there were approximately 5,000 vehicles per day (two way) on Amory Street north of Dimock Street. However, the volume is certainly much greater south of Dimock, since most of the northbound traffic uses Dimock Street.

Atherton Street runs one-way westbound and has one wide lane and meets Amory Street at a signalized intersection. (The one-way restriction between Amory and Lamartine went into effect on July 1, 1987.) Atherton is the only street between Centre and Boylston that crosses over the Southwest Corridor and railroad tracks to Lamartine Street. As a result, it gets a significant amount of traffic. Cars parked too close to the intersection on Atherton make the left turn from Amory northbound on to Atherton westbound difficult at times. The loop detectors on Atherton do not detect bicycles. There is a BHA elderly housing project at 125 Amory; residents of this project have difficulty crossing Amory Street. There is a handicapped vehicle parking area directly in front of the building with a wheelchair ramp. The nearest crosswalk is at Bragdon Street. At the unsignalized intersection with West Walnut Park, there is no wheelchair ramp meeting the crosswalk on the east side of Amory Street. Between West Walnut Park and Bragdon Street, parking is prohibited on the west side 8 am to 6 pm and on the east side at all times.

Amory Street looking north towards School Street and Marbury Terrace. Note faded double yellow line. The recently marked diagonal crosswalk lengthens the crossing distance. There are no wheelchair ramps.

From Bragdon Street to Columbus Ave

Bragdon Street is a one lane, one-way street westbound. The three-legged intersection of Bragdon and Amory Street is unsignalized. Because Amory Street curves and there is a building very close to the roadway, drivers exiting Bragdon may have difficulty seeing traffic on Amory, especially southbound traffic on Amory (for drivers turning from Bragdon to Amory). It is also difficult for drivers southbound on Amory (towards Green Street) to see traffic existing Bragdon Street.

The Amory Street and Dimock Street intersection is Y-shaped and unsignalized. There is a stop sign facing drivers on Dimock Street entering Amory. There are no marked crosswalks. There is a very large amount of paved area. The sight lines are poor for drivers on Dimock approaching Amory.

The Amory Street and Dimock Street Intersection. The red car facing the camera has a stop sign. There are no visible pavement markings. The intersection is difficult for pedestrians to cross safely.

Between Dimock Street and Columbus Avenue there are many curb cuts for driveways and loading docks along the east side of Amory Street. The sidewalks on Amory Avenue do not meet minimum width standards.

Amory Street makes a 90 degree turn to connect with Columbus Avenue. There are no warning signs about this sharp turn. There are no reflectors on the swing gate blocking the dead end continuation of Amory Street. There is an illegal driveway leading up a steep slope at this sharp turn.

Pedestrian Connection from Amory to Jackson Square Station

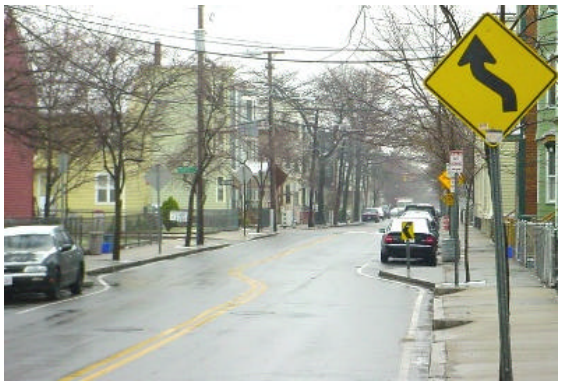
Amory Street was dead ends just before Centre Street. There is a swing gate blocking vehicular access for the last block approaching Centre Street. Pedestrians continue to use this last block as the most direct route to Jackson Square Station.

The final 50 feet from the Amory Street dead end to the Centre Street sidewalk is a steep walk through dirt and grass. There is little street lighting. There is a push-button activated pedestrian signal a short distance away permitting pedestrians to cross to Jackson Square station. Cyclists also use the path and the light to get from Amory Street onto the Southwest Corridor bike path (heading north) while avoiding the difficult crossing of Columbus at Centre. The pedestrian green is illuminated only upon request, and in coordination with the other signals, which means that the wait for a pedestrian green can be significant. The wheelchair ramps at this crosswalk are damaged. The crosswalk markings are faded.

The walk from the Amory Street deadend to the Jackson Square T Station.

Potential Amory Street Improvements

In addition to the issues mentioned above, general improvements include: roadway resurfacing, new sidewalks, new street lighting, and repainting lane markings and crosswalks. In order to make the road more pedestrian friendly, on-street parking could alternate between different sides of street. Neckdowns should be added at intersections and where parking lanes begin and end. The neckdowns could be landscaped, possibly with trees, if subsurface conditions permit. Speed humps should be considered to slow traffic in front of the BHA elderly and disabled housing at 125 Amory. Sidewalks should be widened where they are below the 5 ft. minimum standard and should have clear space of at least 4 ft. to permit wheelchair access. New development should minimize the number of driveway curbcuts intruding on sidewalks. Atherton Street between Amory and Lamartine Street should be returned to two-way operation as it was before 1987.



Changing on-street parking from one side of the street to the other can help reduce excessive speeds on straight residential streets. (Photo: Columbia Street in Cambridge).

Columbus Avenue approaching Centre Street: three travel lanes and no buffer between the

Potential Columbus Avenue Improvements

From Heath Street to Centre/Ritchie

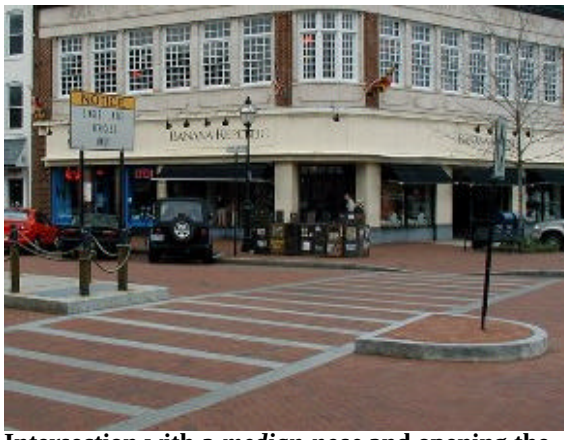
Between Heath Street and Centre/Ritchie, Columbus Avenue has three 10 ft. travel lanes and a raised median that varies considerably in width. There are left turn lanes at the Center/Ritchie intersection, but not at Heath Street. Because of the number of lanes and the distance between intersections, motorists regularly go faster than the 30 mph statutory speed limit (there is no posted limit). An off-peak speed study is needed at this section of Columbus Avenue.

Improvements are needed to improve safety and the pedestrian environment. The most important safety improvement for drivers is to create left turn lanes for the left turns from Columbus to Heath Street, as recommended in the *Lower Roxbury Transportation Strategies Study*. Between intersections, the traffic volume could be handled with two through lanes instead of three, as is the case on Columbus between Egleston and Centre/Ritchie and also between Ruggles and Prentiss southbound. The right lane could be used for on-street parking. It would be become a straight or right lane at Heath Street. This change would tend to slow the excessive speeds, especially at off peak hours, provide a buffer for pedestrians on the sidewalk, improve the comfort of bicyclists using the roadway, and provide parking for the new development planned in the area without taking up excessive land for surface parking. If the parking lane is permanent, neckdowns can be added on the corner of Centre/Ritchie Street and of Heath Street (southbound). Parking in the sidewalk is common in front of the buildings owned by Urban Edge on Columbus opposite the T station, and must be stopped.

There is a planting strip between the roadway and the sidewalk on the east side of Columbus. This could be improved with additional landscaping. On the west side, a planting strip with street trees and street furniture should be added to create a buffer between the walking zone and the roadway. The median is excessively wide in some places in this stretch. Most of Columbus Avenue north of Heath Street does not have a raised median. Removing or narrowing the median would provide space to allow bicyclists to share the right lane safely, rather than taking up an entire travel lane. It would also reduce the overall street width and provide additional real estate for sidewalks. The median could remain in place at the Centre/Ritchie intersection with a split in the double yellow line to lead drivers around it. Keeping a median or median island at the intersection provides a place for traffic signals. Speed limit (30 mph) and Share the Road (with bicycles) signs are needed, one in each direction.

Columbus Ave./Centre St./Ritchie St. Intersection

The signal equipment at this intersection is old and does not have the functionality required. New signal hardware and a new controller are needed. Currently the signal is timed so that pedestrians crossing lawfully must wait in the median for up to two minutes before they are permitted to finish crossing. The pedestrian signal timing should be adjusted to minimize pedestrian delay. Concurrent pedestrian green with a leading pedestrian interval should be used and the walk signal should be automatic (no push button).



Intersection with a *median nose* and opening the full width of the crosswalk.

A redesign of the intersection should carefully consider altering the geometry to align approach lanes with receiving lanes and to shorten the crossing distance for pedestrians and reduce the speed of turning traffic. The existing right-turn lane from Centre to Columbus should be converted into permanent on-street parking with a neckdown added at the corner. On-street parking should also be added on Centre Street. There

is sufficient width for on-street parking on both sides, one travel lane west bound, and a left turn lane and a left, straight, or right lane east bound. Clear lane markings are needed on Centre Street. Depending on the geometry, it may be appropriate to carry the crosswalk through the median, creating a *median nose*. If so, the cut in the crosswalk should be the same width as the crosswalk (see photo). Distinctive pavement materials for the crosswalks should be used, bordered by white thermoplastic stripes (see photo). Although white is the most visible, thermoplastic does not last that long given the very high traffic volumes passing through this intersection. A crosswalk paved with inlaid stone will be visible even as the thermoplastic starts to wear.

From Centre/Ritchie to Dimock Street

Between Centre/Ritchie and Dimock Street, Columbus Avenue has two lanes in each direction, on-street parking, and a raised median. The exception is the short block between Centre and the Amory Street Connector, where the stretch of the curb lane between the Muffler Mart driveway and Amory St. Connector functions as a right-turn only lane. It should be marked as such. This stretch of roadway is very awkward for bicyclists, especially heading southbound. There is not enough room in the right lane for a motorist to pass a bicyclist who is keeping a safe distance from parked cars and their opening doors. Because it is uphill in that direction, bicyclists may be traveling at only 10 mph or less. At a minimum, Share the Road signs should be installed (showing images of a bicycle and a motor vehicle). Additional width for lane sharing could be obtained by removing the median, leaving it in place at the Centre/Ritchie and Dimock Street intersections as a crossing island and to hold traffic signal posts. Pedestrian conditions could be improved by adding more street trees and street furniture. One possibility is to remove the median but keep crossing islands at intersections. Widen the parking and travel lane on the southbound (uphill) side would provide lane-sharing width for bicyclists (if this is not possible, Share the Road signs could be added). Speed limit (30 mph) signs are also needed, one in each direction. The pedestrian signals should be retimed at Dimock Street to minimize pedestrian delay.

Distinctive paving material can make crosswalks more visible and attractive.

Centre Street

From Lamartine to Columbus

The drop-off area for the Jackson Square MBTA station is across the street from the station. Many people use the travel lane (marked No Standing Any Time) opposite the station because transit riders will not then have to cross the street, which involves significant delay.

On-street parking should be added. As on Columbus Avenue, this would provide parking places for those accessing the proposed new commercial and residential uses, and would help to reduce traffic speed and provide a buffer for pedestrians. The drop-off area could be relocated from the south side of Centre to the north side, adjacent to the station. Alternatively, spaces on both sides of the street could be marked for 15 min. parking to accommodate both transit drop-off and short-term parkers. Street trees and

Centre Street is wide enough to be narrowed, with on-street parking and perhaps a bike lane. There should be a planting strip between the sidewalk and the roadway.

street furniture such as benches, trash baskets, bike racks, and historic street lighting should be provided between the walking zone and the roadway.

The crosswalk at the busway is well used by pedestrians but is faded. It should be marked with distinctive pavers highlighted by white thermoplastic. The location of the crosswalk could be reconsidered in order to reduce crossing distance. The pushbutton-activated signal should be adjusted so that it starts a clearance interval from crossing traffic immediately upon activation, provided that the pedestrian phase has not been recently granted.

Centre and Lamartine St. intersection

Although the lane markings have faded, Centre Street westbound approaching Lamartine Street is designed to be two lanes, a left turn lane and a straight through lane. In practice, because of illegal parking, it typically functions as a single left or straight lane. If the drop-off area is moved in front of the station, the center line could be shifted over to accommodate two travel lanes (left only and straight only) and a parking lane westbound. The loop detector in left lane should be adjusted to be sensitive to bicycles, and the sensitive location should be marked. New signal and controller equipment is also needed. The intersection geometry should be studied to facilitate the left turn on to Lamartine and to improve the alignment of the bike path crossing. A diagonal bike crossing should be used to have cyclists crossing the sidewalk at as close to a right angle as possible, as opposed to the current situation in which cyclists must ride along the sidewalk with pedestrians, contrary to city traffic regulations. This improvement consists of two parts: a) move the path to a portion of Bromley-Heath land where it can cut across diagonally; b) move back the stop line and curb cut on the north side of Centre Street so that the crosswalk can line up with the relocated path crossing (see photo to be added).

Curb extension with trees and landscaping.

Centre Street and Chestnut Street

A public way is used at this location for off-street parking. The area should be redesigned to prevent parking on the sidewalk adjacent to the Tropical Market.

Lamartine Street

The surface of Lamartine is currently in poor condition due in part to sewer work in 2002. The Boston Water and Sewer Commission is scheduled to repave Lamartine Street in the first half of 2003. Parking is permitted only on the side opposite the Southwest Corridor Park. Because the roadway is wide (for two travel lanes) and straight, travel speeds can be high. A speed study is needed. One potential method of reducing speeds is to create a chicane effect by alternating the side of street with on-street parking. The transition areas should be marked with curb extensions (neckdowns), which can be landscaped, even with trees, if subsurface conditions permit. To reduce cost, this work should be done in conjunction with the repaving scheduled by the Boston Water and Sewer Commission.

Ritchie Street

Ritchie Street has a single travel lane in each direction and no on-street parking permitted on the north side. The north sidewalk is in poor condition and is substandard width, and is partially obstructed by a telephone switch box and light poles. The south sidewalk is often used for parking, illegally. The north sidewalk should be widened to meet City standards. It may be desirable to widen the right of way to provide wider sidewalks and possibly sufficient room for on-street parking on one side. Bollards could be installed on the sidewalk to prevent illegal parking on the sidewalk.

Transportation Demand Management

- Any transportation studies should document necessary improvements to public transit. For example, this could include studies by the developer documenting necessary MBTA improvements to bring more people to the area along current or proposed transit routes. The developer is expected to take a meaningful role in advocating for any such changes in conjunction with existing MBTA advocacy groups, the JCG, and other local neighborhood organizations.
- Developers/management of larger rental housing going in should provide (low-cost) shopping shuttles to take local residents to discount stores such as CostCo and BJ's.
- Secure bike parking should be provided inside multi-residence buildings (such as a locked bike room in a basement).
- Limited parking should be provided in order "level the playing field" for walking, riding, and taking transit.
- Where possible, apartments should be designed so as to facilitate licensing for home-day providers.
- Large residential buildings should have some dedicated space for childcare/youth service providers.
- Parking management should always be fully exploited before additional parking is added to the neighborhood.

Additional Site Design Concepts

- Greenspace and greenery needs to be integrated throughout the streetscape.
- Parks and open spaces should designed to attract both males and females and from a range of ages (e.g. basketball courts and a tot lot, a bike park and chess tables, etc.).
- People watching opportunities should be provided (e.g. alignment/location of benches, varied setbacks along sidewalk to provide places to stand and talk, etc.) in order to attract pedestrians and foster a vibrant street life.
- Jackson Sq. should have as many of the attributes as possible as the types of places around Boston where we currently take our out-of-town guests.
- There should be no blank walls (of buildings or free standing) along sidewalks – these say "danger, keep out," provide no escape form moving traffic, and are hot in the summer.
- Landscaping plants should have leafy growth either below knee height or above 10', to facilitate visibility and traffic & personal safety.
- Parking lots should never be between the building and the street.

Additional Roadway Design Concepts

- Use bike lanes to effectively increase turning radii (to permit street usage by large trucks and buses) without increasing travel lane width and thus encouraging high speeds.

- Do not create double left turn or right turn lanes, which makes it much more dangerous for pedestrians to cross.
- Use mid-block crosswalks, both to provide safer crossings (away from turning vehicles) and in areas of likely jay-walking/high demand (e.g. in front of Stop & Shop or the Youth Center).
- Consider back-in angle parking along some streets where width is adequate, to provide more on-street parking. Back-in is preferable to head-in angle parking because drivers do not have to back into moving traffic to leave. 1