

5. Bicycle Network Plan

Perhaps no neighborhood of Boston is as associated with bicycling as is Jamaica Plain. Always more prominent here than elsewhere in Boston, bicycling use has exploded in the neighborhood, especially in the area surrounding the Centre/South corridor. The corridor is parallel to two of the most visible and well-used linear parks in Massachusetts – the Southwest Corridor Park and the Emerald Necklace. Meanwhile, the many bicyclists in the neighborhood (and many outside it) have the Centre/South corridor as their destination. Neighborhood residents are increasing bicycle use for daily errands as well as commuting. Encouraging bicycle use in the Centre/South corridor was seen as a high priority not just due to growing ridership, but as part of the sustainable future of the neighborhood and the city. As importantly, improving bicycle facilities is seen as an immediate means of achieving community and business growth.

Through the many conversations about bicycling, a number of community principles emerged to help guide the development of bicycle recommendations and facilities through this plan and for Jamaica Plain's future.

- ◆ Accommodate bicycles – The priority is to accommodate bicycle facilities in the public right-of-way along the entire length of the corridor
- ◆ Achieve balance – Bicycling is an important functional component of the corridor, but recommendations to provide facilities must be balanced with other considerations: parking, wider sidewalks, bus stops, travel lanes. Education of both motor vehicle drivers and bicyclists is critical to improve safety.
- ◆ Provide connections – Connections should be made not only to the surrounding neighborhood, but also along key streets fostering interaction between the parallel regional facilities and the neighborhood oriented Centre/South corridor.

Process

The Jamaica Plain community is knowledgeable and passionate about bicycling. Discussions that took place during community meetings about how best to accommodate bicycles were sophisticated and at the forefront of national bicycling research and application. With a constrained, active right-of-way, and bicyclists encompassing the full spectrum of riding ability, it was evident that any design would have to be customized block-by-block. To that end, Toole Design Group, the bicycle experts on the Boston Transportation

"Exclusive bicycle facilities are the preferred facility type in Boston where feasible. On streets where an exclusive facility is not feasible, the appropriate shared facility design should be provided."

**City of Boston
Complete Streets Guidelines**

Bike Lanes, On-Street Parking and Business

A Study of Bloor Street in Toronto's Annex Neighbourhood



February 2009

Department’s Complete Streets team, presented a State of the Practice on bicycle facility design and assisted in developing a corridor design plan.

State of the Practice

The State of the Practice was presented to the Advisory Committee and community at a public meeting on April 29, 2010 to define the terms for design and review national examples.

Minimum Design Guidelines

National design standards, as adopted by AASHTO, have defined the minimum lane widths acceptable for bicycle, travel, and parking lanes.

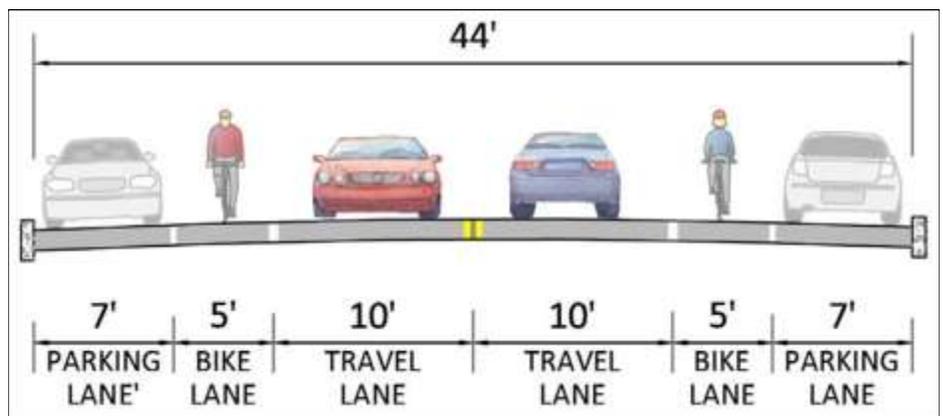
Bicycle Facility Terms

Bike Lane: A portion of a roadway for preferential or exclusive use by bicyclists designated by pavement markings and, if used, signs.

Shared Lane: Any roadway where bicycles and motor vehicles operate on which no bicycle lane is designated.

Shared Lane Marking: A pavement marking symbol (“sharrow”) that indicates an appropriate bicycle positioning in a shared lane.

Climbing Lane: An asymmetrical facility in which a bicycle lane is provided in the uphill direction only while the downhill direction is a shared lane.



AASHTO Dimensions

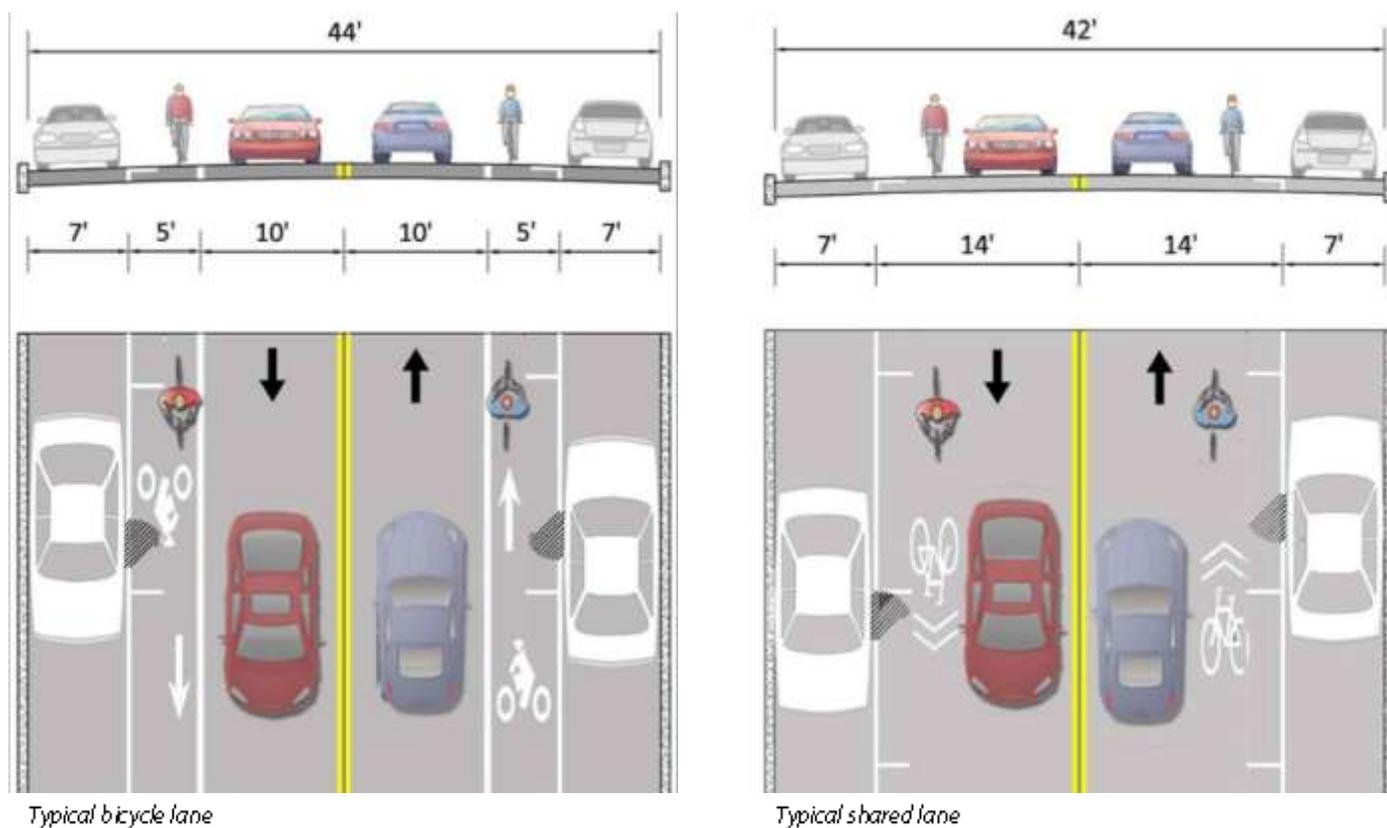
Shared Lane Markings versus Bicycle Lanes

Installation of bicycle facilities, whether shared-lane markings or bicycle lanes, is recommended on streets where bicycling is present or encouraged. Much of the conversation about shared or exclusive lanes centered around safety and the comfort level of bicyclists. While they share many common elements in terms of raising awareness, there is currently no data showing that either facility reduces or increases bicycle crashes involving opening the door of a parked vehicle (“dooring”).



Ultimately, the preference for the Centre/South corridor is to install designated bicycle lanes where feasible and shared lane markings or “sharrows” where roadway width does not allow it. One critical distinction added is the addition of marked “Tees” showing the door zone lines in situations where either the shared lane marking or designated bicycle lane is adjacent to curb-side parking.

Results from a study completed recently in San Francisco, showed a change in cyclist riding patterns after installation of the “Tees”, as they rode further from parked cars.

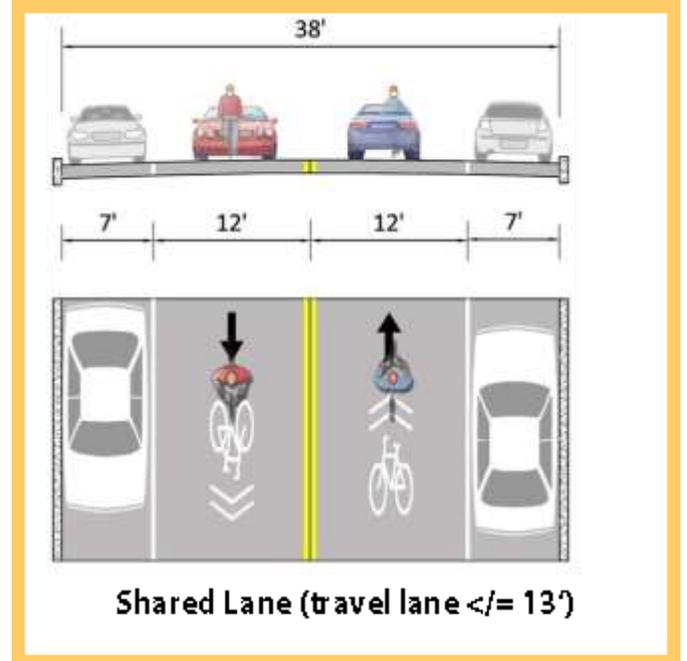
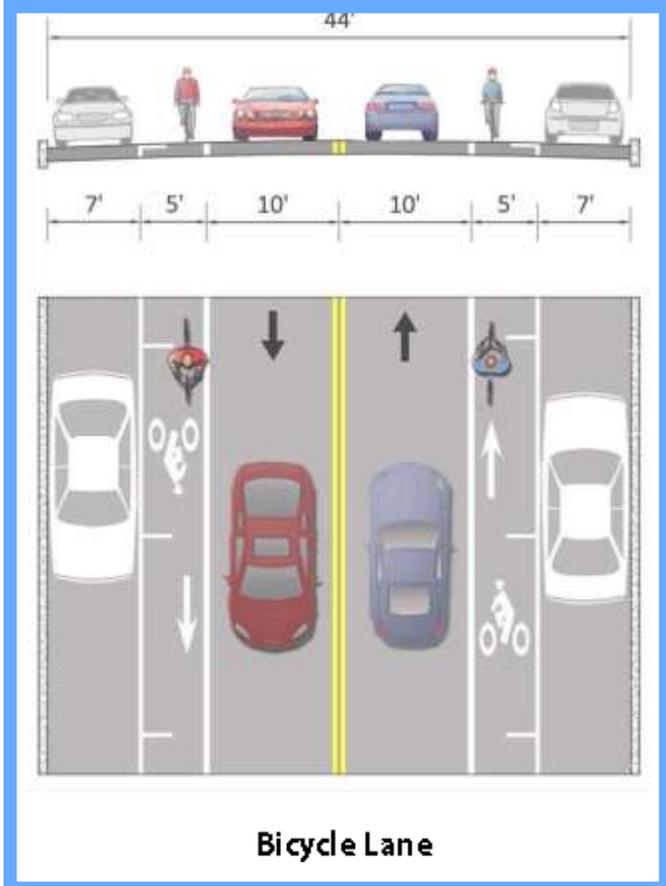
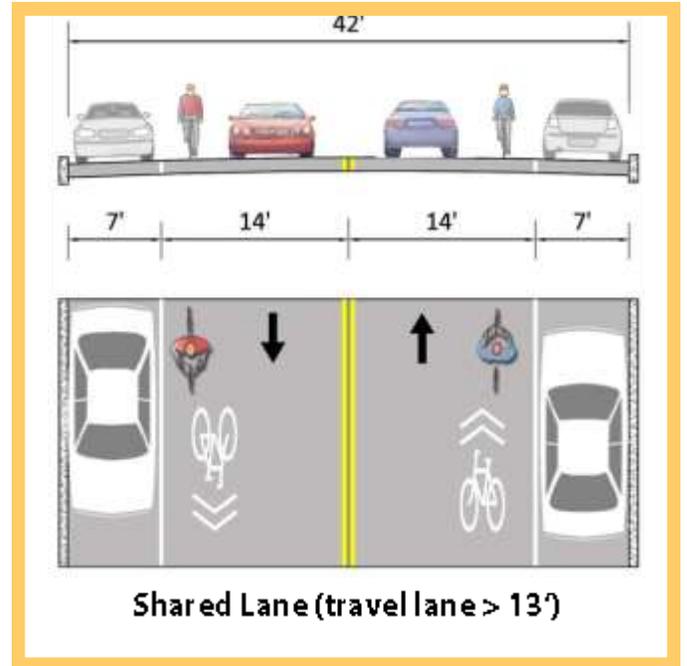
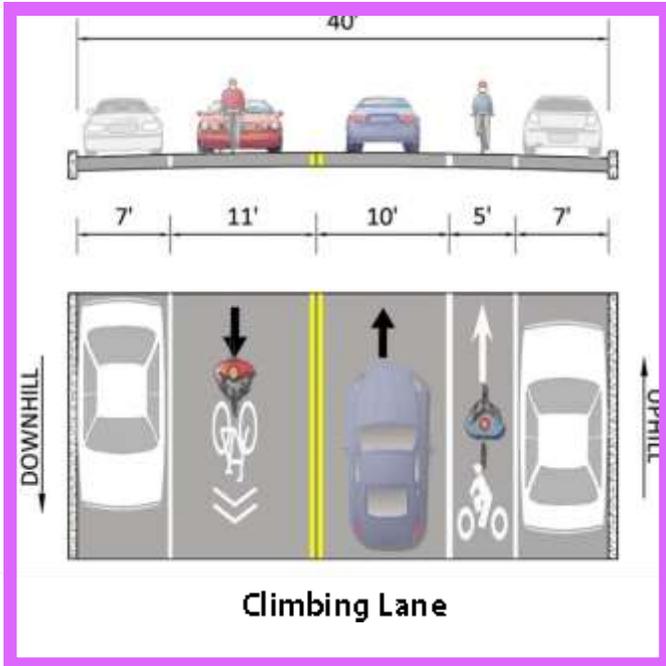


Bicycle Plan

Toole Design Group worked with the community to develop a bicycle plan for the corridor that has since been implemented. The initial plan was completed after a review of the topography, context, and layout of the corridor, but assumes that the street width and existing parking remain constant. As mentioned above, the corridor is characterized by somewhat limited curb-to-curb widths. Typical widths throughout the corridor range from 38 feet to 53 feet. While this physical reality clearly constrains the available options, it brings into focus decisions that must be made in any multimodal corridor. The concept ultimately recommended integrates the input of many stakeholders and adapts to the transportation and land use conditions of the corridor.

Bicycle Facilities Installed Along the Centre/South Corridor





All four types of bicycle facilities shown are part of the plan for the Centre/South corridor.

Detailed designs based on the short-term plan shown on p. 38 were completed during Summer 2010, and the Boston Transportation Department began installation in September 2010 as part of its ongoing bicycle initiative.

Continued Awareness and Education

Throughout the process, increasing bicycle accommodations and encouraging ridership were seen as key components of the overall future of the Centre/South corridor. While the community principles that emerged in regards to bicycling will guide the continued development of the Corridor, it is understood that improving bicycle opportunities is good for the physical, environmental and commercial health of the entire Jamaica Plain community. To maintain safe and well-used bicycle facilities:

Continue to raise awareness of bicycling as a method to achieving commercial vibrancy

National studies suggest that bicyclists are neighborhood customers and often shop more frequently in local stores. Encouraging this behavior benefits businesses.

Bicycle lanes are the preferred means of onstreet accommodation

In all areas, bicycle lanes are preferred but often require removing parking to fit within the available right-of-way. As designs for areas develop, the City will closely review underutilized parking for possible elimination to incorporate bicycle lanes.

Education and enforcement are critical

As the place where the neighborhood comes together, bicyclists (and for that matter pedestrians and drivers) of different abilities will use the same facilities. With new installations complete, and to encourage additional ridership, an education and enforcement campaign around the proper use of bicycle facilities should be put in place in Jamaica Plain.

Provide specific bicycle connections

Bicycling in Jamaica Plain is not only a through movement activity, as many community members also travel within the neighborhood via bicycle. Even with the implementation of the bicycle network plan described above, connections between it and parallel networks of the Emerald Necklace and Southwest Corridor are needed. For the Centre/South corridor to continue to thrive as a nexus of bicycling activity, additional connections must be made. Neighborhood streets connecting the three main corridors have been identified and should be prioritized to incorporate bicycle accommodations. Green Street, in particular, provides a connection between the Southwest



Opportunities for regional connections include the Emerald Necklace and Southwest Corridor



Green Street is just one example of a potential neighborhood connection, in this case via contra-flow bike lane

Corridor and JP Centre, and with parking allowed on only one side of the street, a bicycle lane could be accommodated the entire length between the Southwest Corridor and Centre Street. The graphic on the opposite page highlights the corridors identified to provide these connections, which are also listed below:

- ◆ Perkins Street
- ◆ Paul Gore Street
- ◆ Boylston Street
- ◆ Pond Street
- ◆ Green Street
- ◆ Centre Street



In Fall 2010, the City of Boston installed bicycle lanes and shared lane markings throughout the corridor in accordance with the plan developed through this community process.

6. Parking Analysis & Recommendations

Parking, especially at the curbside, is important to businesses, residents, customers, and visitors of Jamaica Plain. Community perception is that this parking is continuously oversubscribed. With a limited right-of-way, it quickly became evident that the potential to remove parking, even on a limited basis, opened up myriad possibilities to achieve other desirable community goals – wider sidewalks, bicycle lanes, landscaping, sidewalk cafes. Finding the balance between all of these potential goals is the key question in the Streetscape and Transportation Action Plan. In order to understand how to make these choices, a more thorough, corridor-wide understanding of existing parking supply and use was necessary.

Existing Conditions

Currently, on-street parking is available throughout the Centre/South Corridor. Three municipal parking lots are spread throughout the corridor, and numerous off street private lots exist, typically associated with commercial or retail uses. Curbside regulations for on-street parking vary throughout the corridor.

On street parking

On street parking is permitted along most of Centre and South Streets, with exceptions for crosswalks, driveways, bus stops, and other interruptions typical of an urban street. Spaces are not marked, so the number of available spaces in the corridor can only be estimated. Between Forest Hills and Jackson Square, there are approximately 600 on street parking spaces. Of these spaces, approximate 270 are unregulated, 275 have a two hour limit, and 70 have a one hour limit. There are approximately sixteen additional spaces with restricted parking during school hours. There is also a limited supply of spaces reserved for handicapped access and several areas that serve as loading zones during designated portions of the day.

Corridor offstreet public parking lots

LOT	SPACES	OCCUPANY
(1) 350-352 Centre St. (Blessed Sacrament)	24	42%
(2) 490-498 Centre St. (Curley School)	33	70%
(3) 737 Centre St. (Blanchard's).	97	71%
TOTAL SPACES	154	66%

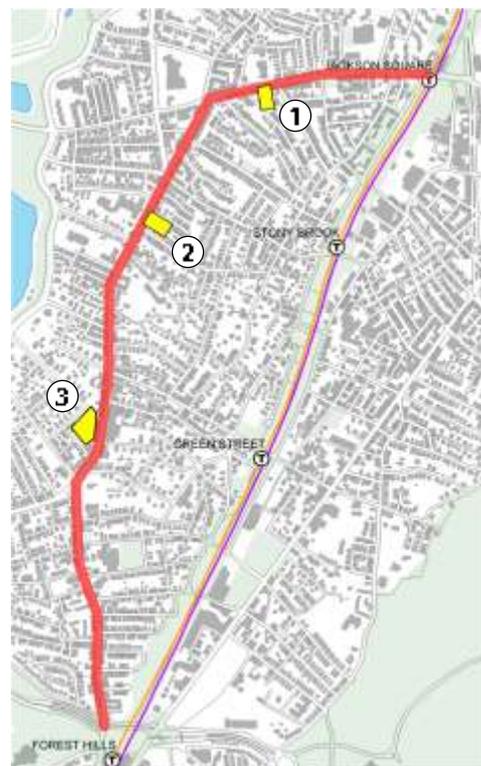
Off street – municipal Three municipal off-street parking lots are located within the Centre/South Corridor, and are operated by the City of Boston. The total ca-



Boston Transportation Department vehicles equipped with license plate recognition technology aided in the parking study

Corridor on-street parking

ON STREET PARKING SPACES BY REGULATION	
Unregulated	270
2 hour limit	273
1 hour limit	70
School zone	16
TOTAL SPACES	612



Off street municipal parking lots



Corridor off-street private parking lots

LOT	SPACES	OCCUPANCY
(A) Stop & Shop Plaza	246	72%
(B) Blessed Sacrament	17	88%
(C) Creighton & Day	12	33%
(D) HiLo	65	58%
(E) 7-11	15	73%
(F) CVS	28	50%
(G) Morrison's	20	90%
(H) Curley School	46	96%
(I) Apartments (opp Robinwood)	14	100%
(J) Apartments (opp Burrage)	22	64%
(K) West Cork Auto	17	94%
(L) Burroughs	50	94%
(M) Blanchard's	15	100%
(N) Metcalf	47	-
(O) St. Thomas Aquinas	55	-
(P) McBride	25	-
(Q) Atwood Sq.	24	-
(R) Agassiz School	18	-
(S) Carolina	18	-

capacity of these lots is 154 vehicles.

Peak occupancy of public off-street lots occurred in the morning for **Blessed Sacrament and Curley School, and in the evening at Blanchard's**. Blessed Sacrament was less than half occupied when observed in the evening.

Off street – private parking

The largest of the numerous off street private parking lots were also inventoried and are shown in the diagram to the left. Regulations and use restrictions vary by facility, but generally private lots are for use by employees or customers of the adjacent establishment.

Parking use

Given the size of the corridor, and the depth of information requested, a specially equipped BTM vehicle was used to conduct parking occupancy and duration analysis. On Tuesday, April 13th, 2010 the vehicle completed hourly passes along the corridor beginning at 8 AM, with a final pass at 9 PM. The vehicle was equipped with license plate recognition technology, which allowed capture of the number of vehicles per block, but also the ability to determine the length of stay of particular vehicles. This information was balanced against the inventory of parking spaces and aggregated by corridor section.

On a corridor-wide basis, on street parking occupancy fluctuated between 47% and 70%, as shown below. Note that parking typically achieves a “functionally full” level when it is 85% occupied, and this threshold is shown in green below.

Key Terms

Parking Occupancy: Percent of total spaces that are filled at a given time

Parking Duration: Average length of stay of a parked car



Corridor-wide on street parking occupancy

JP Centre	80% of cars park for less than 1 hour	10% of cars park for more than 3 hours
Hyde Square	85% of cars park for less than 2 hours	15% of cars park for more than 6 hours

Corridor-wide occupancy peaked from 10 AM – 1 PM, and then again from 5 PM to 7 PM. The average duration of all cars observed is 1.86 hours. All of the parking results are shown by segment in appendix B, and several key observations from the analysis are described below.

Recommendations

- ◆ Explore strategic parking removal to achieve corridor goals
Overall parking occupancy of less than 75% demonstrates that available on-street parking exists. Removing one or two spaces on a block would allow for creation of sidewalk space for outdoor cafes, street trees or other amenities described in the guidelines.

Existing conditions summary

- ◇ *In all areas, at all times, parking occupancy is typically well below 85%.*
- ◇ *Commercial areas (JP Centre, Hyde Square) showed the highest occupancy*
- ◇ *In residential areas, occupancy typically peaks after 5 PM, which is typical for the land use.*
- ◇ *Existing parking regulations (1 hour, 2 hour parking) are observed, but with violators.*

- ◆ Maximize onstreet parking through design
Any design of bus stops, curb extensions, sidewalk improvements, or traffic signals must be done with care and attention to its impact on onstreet parking. Moving bus stops to far-side (past the intersection), combining curb extensions with fire hydrants, narrowing driveways or other such design elements all can preserve curb space for onstreet parking.

- ◆ Perform targeted enforcement of overtime parking
While most spaces are used in accordance with the existing regulations, the low percentage of vehicle parking over the limit occupy a disproportionate share of the available space. Overtime parking should be enforced, especially in commercial areas.

- ◆ Consider adding parking meters in commercial districts with community approval

Within the highest demand commercial areas, parking meters should be considered. With the City’s new multi-space meters, several possibilities have opened up for community consideration:

- ◇ Pricing could be adjusted to reflect neighborhood character
- ◇ Efficient parking is promoted because spaces need not be marked
- ◇ Time limits could be adjusted so customers wanting to exceed the current 2 hour maximum would not be penalized.

- ◆ Improve signage and attractiveness of the municipal parking lots
Clear, marked directional and informational signs are an early first step towards the maximum utilization of these resources. All should be scheduled for design upgrade, as a more attractive and accessible facility would encourage greater use. The Mozart Park municipal lot has been identified as most in

need of upgrade, with many commenting that they do not use it today because it is perceived as unsafe.

- ◆ Pursue partnerships with private parking lots

Parking for employees is a key issue for many merchants, and certain private lots are the best alternative to accommodate this demand, while freeing up on-street spaces. The Hi-Lo Supermarket lot is among those identified for potential partnership.