



City of Richmond

Report to Committee

To: Public Works & Transportation Committee

Date: April 6, 2010

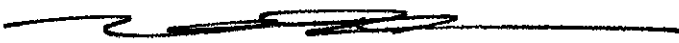
From: Victor Wei, P. Eng.
Director, Transportation

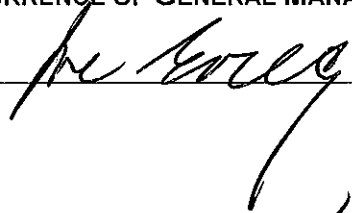

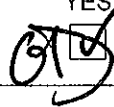
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Vol 01

Re: CITY-WIDE STREET FURNITURE PROGRAM – REPORT BACK ON ADDING
STREET FURNITURE ELEMENTS

Staff Recommendation

1. That the City continue to pursue the provision of new street furniture without advertising at selected locations as part of new development requirements and special streetscape enhancement projects through to the expiry of the forthcoming 5-year contract with Pattison Outdoor for the provision of selected street furniture elements.
2. That, as part of a revised street furniture strategy to be developed near the expiry of the forthcoming contract with Pattison Outdoor, staff include the option of the City purchasing street furniture without advertising as an alternative to involving the third party provision of street furniture in return for advertising rights in the public realm.


Victor Wei, P. Eng.
Director, Transportation
(604-276-4131)

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ROUTED TO:		CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Environmental Programs		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Roads & Construction		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Budgets & Accounting.....		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Parks Planning, Design & Construction.....		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
REVIEWED BY TAG		YES <input checked="" type="checkbox"/> 	NO <input type="checkbox"/>
			REVIEWED BY CAO
			YES <input checked="" type="checkbox"/> 
			NO <input type="checkbox"/>

Staff Report

Origin

At the October 26, 2009 regular Council meeting, Council considered a report on a proposed short-term contract for the provision of selected elements of street furniture and adopted on consent the following referral:

That (4) staff investigate:

- (a) the cost to the City for adding more street furniture;*
- (b) the feasibility and cost of introducing three-part recycling bins;*
- (c) the regulation of newspaper distributors.*

This report addresses parts (a) and (b) of the referral; part (c) is addressed as part of a separate report regarding the regulation of individual newspaper boxes that would manage the placement, appearance and maintenance of newspaper boxes and introduce permit fees and insurance requirements for distributors of free newspapers.

Analysis

1. Proposed City Street Furniture Program with Pattison Outdoor

At the October 26, 2009 regular Council meeting, Council approved the terms of a 5-year street furniture contract with Pattison Outdoor (Pattison) for the provision of the following elements:

- bus stop shelters with advertising, including nine new shelters and the refurbishment or repainting of the existing 39 shelters;
- new litter receptacles at all bus stop shelters; and
- three new multiple publication newsracks to be placed at the Aberdeen, Lansdowne and Richmond-Brighthouse Canada Line stations.

The contract is currently being drafted and staff anticipate that installation of the new street will commence in Summer 2010.

2. Street Furniture Programs in Other Cities

Staff reviewed street furniture programs in other cities across Canada to assess best practices with particular respect to the funding of street furniture elements. These programs range from public sector models in which the local government owns and manages the street furniture and, in some cases, operates a program of advertising sales to generate revenue, to private sector models in which the city contracts with a private 'turnkey' contractor for most or all street furniture. All private turnkey street furniture contracts are funded through the sale of advertising space on advertising panels (or faces), typically integrated into the street furniture. Many cities lie somewhere between the two extremes of these two models.

Examples from other cities include Revelstoke, which has a population of 9,000 and funds the purchase and maintenance of all street furniture. Penticton has a population of 33,000 and also funds the purchase and maintenance of all street furniture; these costs are partially offset by revenue received from advertising on bus stop benches only. Victoria has a population of 80,000 and currently has 90 transit shelters with advertising provided by Pattison Outdoor with a further

150 transit shelters without advertising owned and maintained by the City. Vancouver, with a population of 528,000, has a long-term contract with CBS/JCDecaux that provides the rights to transit shelter advertising to the company in exchange for installing and maintaining a variety of street furniture elements including transit shelters, benches, litter containers, bike racks, automated public toilets, and direction signs. In addition, the City of Vancouver directly funds custom street furniture for specific projects (e.g., Granville Street Redesign). Table 1 below summarises these findings.

Table 1: Street Furniture Programs in BC Cities

City	Population	Transit Service?	Funding of Street Furniture
Revelstoke	9,000	Yes	<ul style="list-style-type: none"> by the City
Penticton	33,000	Yes	<ul style="list-style-type: none"> by the City partially offset by revenue from advertising on transit benches
Victoria	80,000	Yes	<ul style="list-style-type: none"> by the City partially offset by revenue from 90 transit shelters with advertising (of a total of 240) that are provided and maintained by Pattison Outdoor
Richmond	185,000	Yes	<ul style="list-style-type: none"> by the City via DCCs for new capital projects partially offset by revenue from: <ul style="list-style-type: none"> 42 transit shelters (of a total of 45) provided and maintained by Pattison Outdoor 316 transit benches provided and maintained by Key Bench and Goodwill Advertising
Vancouver	528,000	Yes	<ul style="list-style-type: none"> via contract with CBS/JCDecaux for supply and maintenance of up to 1,100 transit shelters (some with advertising), benches, litter containers, bike racks, automated public toilets, and direction signs by the City for custom street furniture for specific projects

Generally, larger cities can attract private sector models that feature a broader suite of street furniture elements due to the correspondingly larger advertising market potential. Smaller cities that have public transit service typically can support only the provision of bus stop shelters or benches with advertising with all other street furniture elements (e.g., benches not at bus stops, litter receptacles, bike racks, etc) being funded and maintained by the local government. Essentially, this is the City's current model – bus stop shelters with benches and litter receptacles are provided and maintained by Pattison while bus stop benches are provided and maintained by Goodwill Bench and Key Advertising. All other street furniture elements are funded and maintained by the City or funded through the development application process and subsequently maintained by the City. Table 2 details the existing quantities of street furniture in the city.

Table 2: Existing Street Furniture Quantities

Street Furniture Element	Est. #
Bus Stop Shelter with Advertising	42
Bus Stop Shelter with no Advertising	3
Bench with Advertising	316
Bench with no Advertising	40
Litter Receptacle	300
Beverage Recycling Receptacle	50
Individual Newspaper Box	337
Bike Rack	40

Given the minimal response to the City's Request for Proposal issued in April 2009 for a city-wide street furniture program that specified that advertising would be permitted only on bus stop shelters, up to one-third of benches not at bus stops, bike racks, and bike lockers, it is not clear if Richmond's advertising market potential could ever attract a private sector operator that would

supply all of the desired street furniture based on the amount of advertising permitted. The City would likely need to expand the forms of advertising allowed in the public realm (e.g., billboards) if the objective is to generate sufficient revenue for the operator to offset the costs of providing a suite of street furniture.

3. Sample Costs of Street Furniture Elements

Table 3 below identifies a range of estimated unit costs as well as operating costs for a suite of street furniture elements. Sample illustrations of these elements are shown in **Attachment 1**.

Table 3: Estimated Costs of Street Furniture Elements

Street Furniture Element	Estimated Unit Capital Cost	Est. Annual Operating Costs ⁽¹⁾
Bus Stop Shelter with Bench	\$8,500-\$20,000 (basic to high end)	Maintenance/Unit: \$425-\$1,000
Bench not in Bus Shelter	\$1,500-\$5,500 (basic to high end)	Maintenance/Unit: \$75-\$275
Litter Receptacle	\$275-\$1,500 (basic to high end)	Maintenance/Unit: \$13.75-\$75 plus annual servicing costs
Recycling Receptacle (3-stream)	\$1,000-\$2,500 (basic to high end with multiple bins & liners)	Maintenance/Unit: \$50-\$120 plus annual servicing costs
Multiple Publication Newsrack (MPN)	\$6,000 (basic) for 4-unit capacity & recycling slot	Maintenance/Unit: \$300 plus annual servicing costs
Bike Rack	\$650 (basic) for 8-10 bikes \$5,000 (high end-covered) for 10 bikes	Maintenance/Unit: \$32.50-\$250
Bike Locker (1 pod of 10 lockers)	\$15,000	Maintenance/Unit: \$750

Notes:

1. Maintenance cost is based on 5% of the capital cost (i.e., assumes a 20-year life span).

The City's Request for Proposal issued in April 2009 for a city-wide street furniture program identified projected annual growth rates for each street furniture element. Based on these rates, Table 4 below indicates a potential deployment scenario and the resulting quantities of each element installed initially in Year 1 and after each five-year period over a 20-year time horizon.

Table 4: Estimated Quantities of Street Furniture Elements

Street Furniture Element	Estimated Quantities of Street Furniture Elements					
	Projected Annual Growth	End Year 1	End Year 5	End Year 10	End Year 15	End Year 20
Bus Shelters including Bench	20 per year	20	100	200	300	400
Benches not in Bus Shelters	20 per year	20	100	200	300	400
Litter Receptacles	12 per year	12	60	120	180	240
Recycling Receptacles (3-stream)	3 per year	25	37	52	67	82
MPN (4-unit with recycling receptacle)	3 per year	5	17	32	47	62
Bike Racks	7 per year	20	48	138	173	208
Bike Lockers	1 10-unit pod every 3 years	None	1 pod	3 pods	5 pods	6 pods

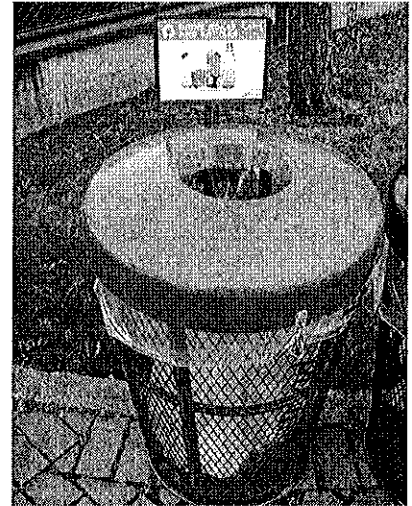
Attachment 2 combines the data from Tables 3 and 4 to derive an annual estimated cost (in 2010 dollars) of providing, maintaining and servicing the identified street furniture elements over the sample 20-year time horizon. In summary, Year 1 capital costs range from \$316,300 to \$765,500 (basic to higher end) and operating costs range from \$23,565 to \$46,025 for

maintenance (basic to higher end) plus \$56,050 for servicing (supplies and personnel). In subsequent years, annual capital costs average from \$245,430 to \$605,100 (basic to higher end) and average annual operating costs increase by \$14,300 to \$32,300 for maintenance (basic to higher end) plus \$25,000 for servicing.

4. Potential Introduction of 3-Stream Recycling Receptacles

As part of the City's goal of 85% waste diversion in the O Zone and surrounding area, recycling and litter bins were placed along the Middle Arm Dyke Trail to and from the Oval, at Canada Line stations and at the O Zone. In addition to litter, three streams of recyclables were collected: organic material, paper (newspaper and paper products) and bottles/containers. With the help of 290 volunteer Green Ambassadors, the initiative worked well and staff are currently determining the actual waste diversion rate achieved.

The containers (see **Figure 1**) are cost-effective (\$325 per unit) and their design includes several features to improve service efficiency: (1) graffiti-resistant surface; (2) area on container where bracket with instructional signage can be placed or attached; and (3) see-through sides that readily indicate whether or not the bin needs servicing. The beverage container recycling bins used for the O Zone (approximately 50 containers) have been redeployed to City parks.



**Figure 1: Recycling Bin
used at O Zone**

The bins used for the O Zone represent a basic style of container. Higher end models are available that consolidate the streams into one container as shown in **Attachment 1**. One such model is currently deployed in the cafeteria at City Hall. The City has recently been approached by a private company that would supply a 3-stream receptacle at no capital cost to the City, where the City provides servicing, on the premise that the company is permitted to sell advertising space. In addition, City staff are currently seeking further information from one company regarding a potential public spaces recycling pilot project, where the company would provide receptacles at no capital cost to the City, with the City assuming responsibility for all operating costs (i.e., servicing and maintenance).

Based on the City's experience with managing a recycling program for the O Zone, introduction of a 3-stream (litter, paper and bottles/containers) waste diversion program in public areas across the city is feasible, provided additional resources are in place. Staff estimate that a broader, city-wide program would entail increased capital costs (new receptacles and new customized service vehicles) and operating costs (maintenance of receptacles and vehicles as well as additional full-time staff for servicing) as summarized in Table 5 and based on the following assumptions:

- initial quantities in Year 1 and annual expansion rates as identified in Table 2;
- each collection vehicle has a capital cost of \$45,000 and an annual operating cost of \$10,000;
- the annual cost of supplies is \$17,800 per position while 1.0 FTE position is assumed to have a cost of \$76,500 (including benefits); and
- in Year 1, one new truck, 0.5 FTE position and all supply costs are required with an additional 1.0 FTE position and truck required in Years 3 and 5 and every five years thereafter (i.e., Years 10, 15 and 20) plus all supply costs per position each year.

Table 5: Estimated Costs of 3-Stream Recycling Program in Public Areas

Type of Cost	Element	Annual Costs		
		Year 1	Avg in Years 2-20	Total over 20 Yrs
Capital	Receptacles	\$25,000-\$62,500	\$3,000-\$7,500	\$82,000-\$205,000
	Service Vehicle	\$45,000	\$11,850	\$270,000
	Total	\$70,000-\$107,500	\$14,850-\$19,350	\$352,000-\$475,000
Operating	Maintenance – Receptacle	\$1,250-\$3,125	\$150-\$375	\$53,500-\$133,750
	Maintenance – Vehicle	\$10,000	\$37,370	\$720,000
	Supplies	\$17,800	\$66,520	\$1,281,600
	Personnel – Servicing	\$38,250	\$247,620	\$4,743,000
	Total	\$67,300-\$69,175	\$351,660-\$351,885	\$6.80M-\$6.90M

In Year 1, capital costs range from \$70,000 to \$107,500 while operating costs range from \$67,300 to \$69,1875. Over a 20-year period, total capital costs are \$352,000 to \$475,000, while total operating costs are around \$6.85 million (expressed in 2010 dollars).

Financial Impact

None to the City at this time. Should Council wish to pursue an expanded street furniture program that includes a 3-stream waste diversion program for public areas, the acquisition of street furniture elements could be funded via annual increases to the City's capital and operating budgets. Given the large scale of a city-wide street furniture plan, a separate program within the City's DCC Program would need to be established, which would require a reduction to other programs in order to keep the overall amounts unchanged. The scope of the increased costs would vary in accordance with the type of street furniture selected (basic to higher end) as well as the initial Year 1 quantities and subsequent annual additions of elements. The introduction of a 3-stream recycling program would also require new customized service vehicles and additional full-time staff for servicing.

The identified budgets would be considered as part of the City's capital and operating budget approval processes and may reduce the funding availability for other capital projects. The additional capital costs may be partially offset by expanding advertising opportunities in the public realm to allow, for example, advertising on recycling receptacles and/or larger format media such as electronic billboards. Note that the Council-approved terms of the new 5-year contract with Pattison will provide that company with the right of first refusal over other forms of advertising in the public realm on programs and initiatives of the City.

Conclusion

Currently, the City funds the acquisition and maintenance of the majority of street furniture elements through various capital programs (e.g., No. 3 Road Streetscape project) and operating budgets. Additional street furniture can be obtained through the development application process on a site-specific basis. The only street furniture elements wholly funded and maintained by third parties are bus stop shelters and benches at bus stops, both of which have advertising.

The new 5-year street furniture contract with Pattison Outdoor will expand beyond bus stop shelters with benches to include litter receptacles at bus stops with shelters and three MPNs at the Canada Line stations. In addition, the City has been approached by agencies regarding the provision of 3-stream recycling receptacles.

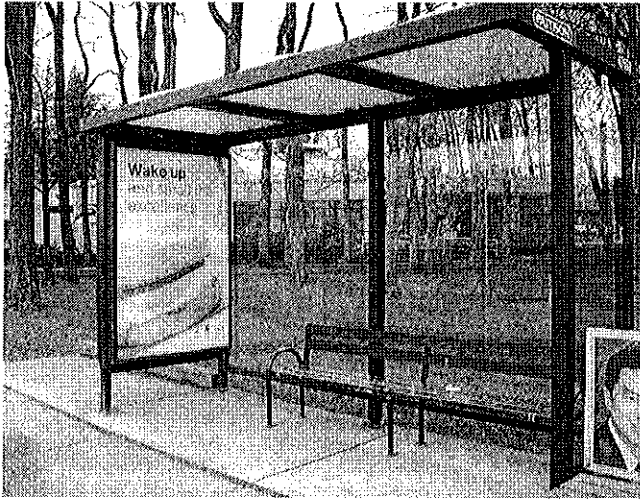
Given these factors, staff recommend that the City continue to pursue the provision of new street furniture without advertising at certain locations as part of new development requirements and streetscape enhancement projects (e.g., No. 3 Road Streetscape) through to the expiry of the forthcoming 5-year contract with Pattison Outdoor for the provision of selected street furniture elements. Towards the end of the 5-year contract with Pattison, staff propose that a revised street furniture strategy include the option of the City purchasing street furniture without advertising as an alternative to involving third party provision of street furniture in return for advertising rights in the public realm.



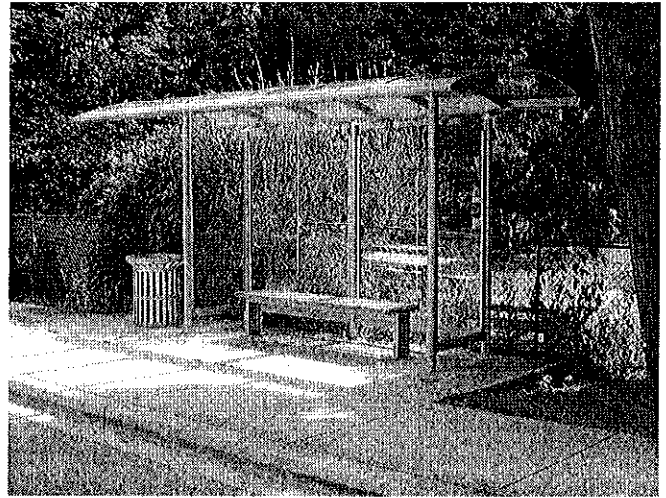
Joan Caravan
Transportation Planner
(604-276-4035)

JC:jc

Sample Street Furniture Elements



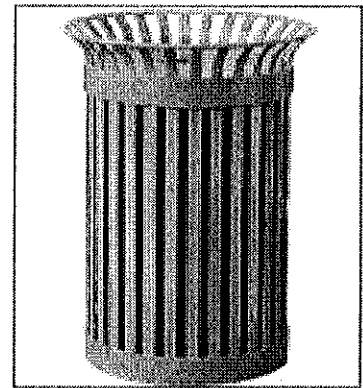
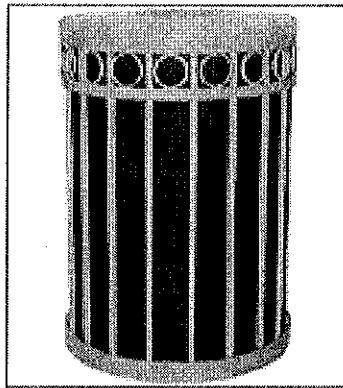
Bus Shelter (Basic): ~\$8,500



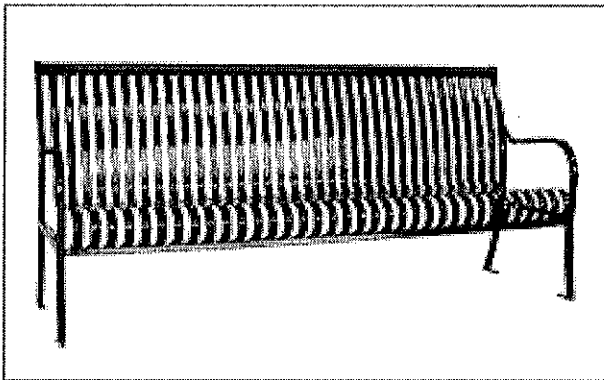
Bus Shelter (Higher End): ~\$20,000



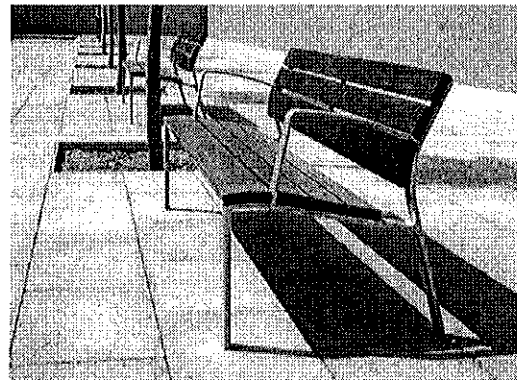
Litter Receptacle (Basic): ~\$275



Litter Receptacles (Higher End): ~\$1,500

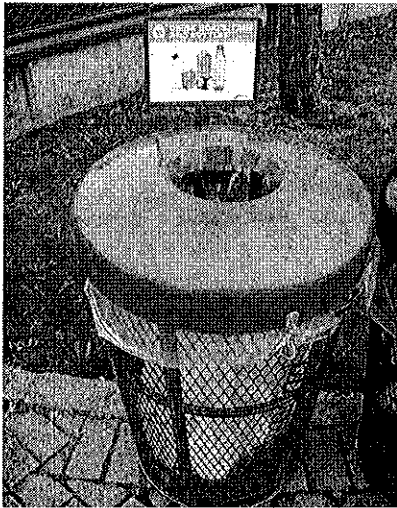


**Bench with No Advertising
(Basic): ~\$1,500**

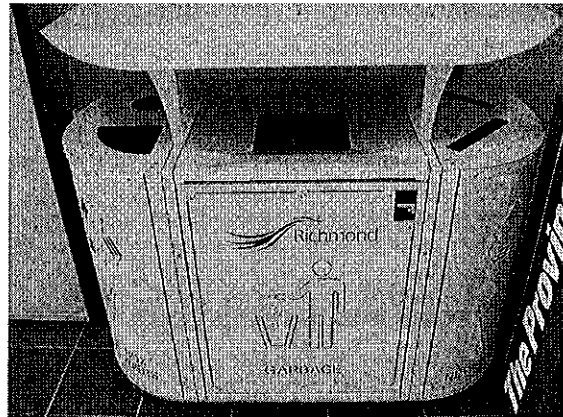


**Bench with No Advertising
(Higher End): ~\$5,500**

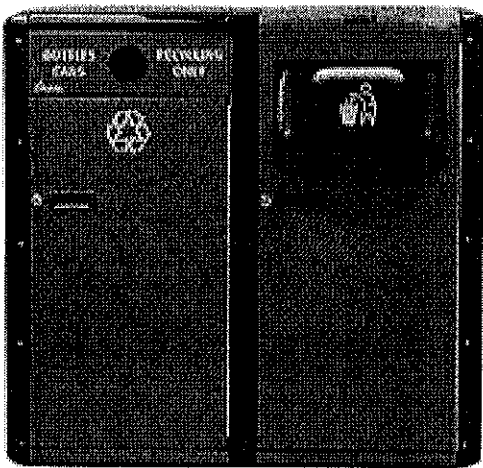
Sample Street Furniture Elements



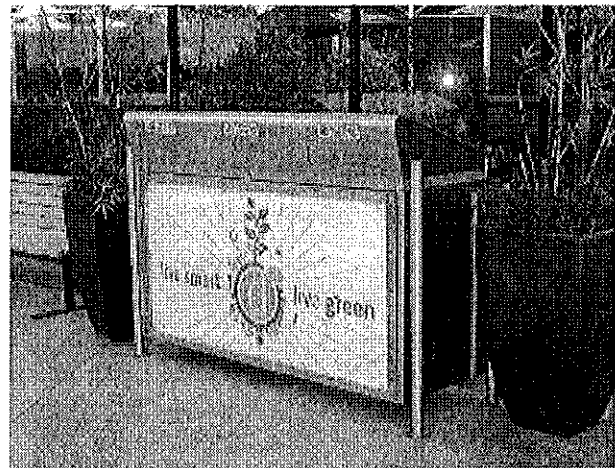
**Recycling Receptacle
(Basic): ~\$350**



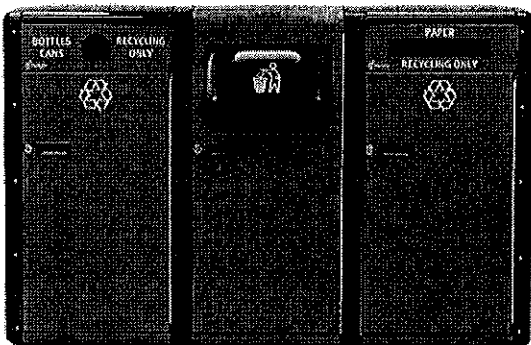
3-Stream Receptacle (Higher End): ~\$2,500



**2-Stream Receptacle (Higher End -
Solar Garbage Compactor with
Recycling Unit): ~\$6,000**

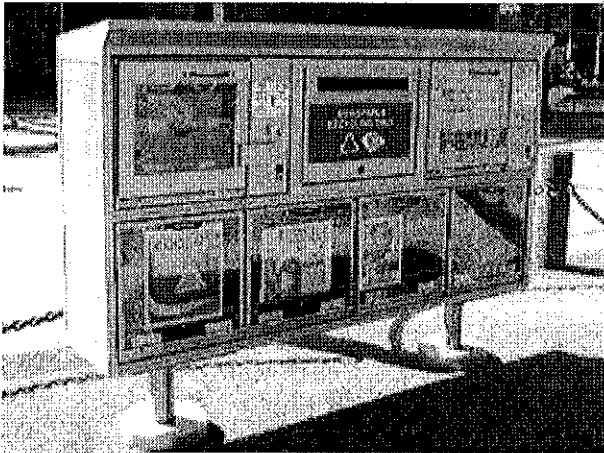


**3-Stream Receptacle (Higher End)
*Potential for No Capital Cost
If Advertising Allowed***

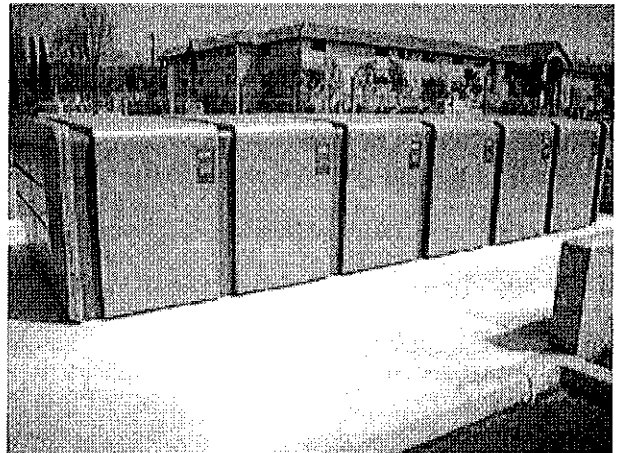


**3-Stream Receptacle (Higher End - Solar
Garbage Compactor with 2 Recycling
Units): ~\$7,500**

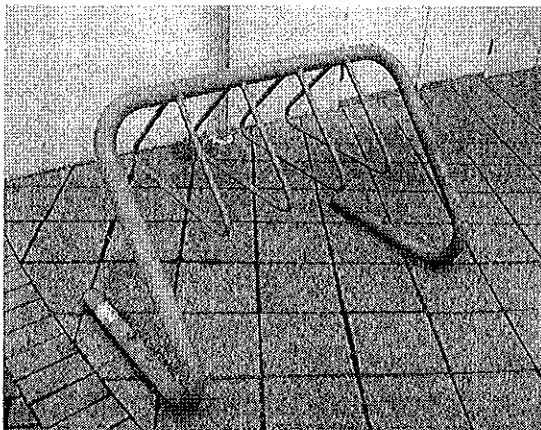
Sample Street Furniture Elements



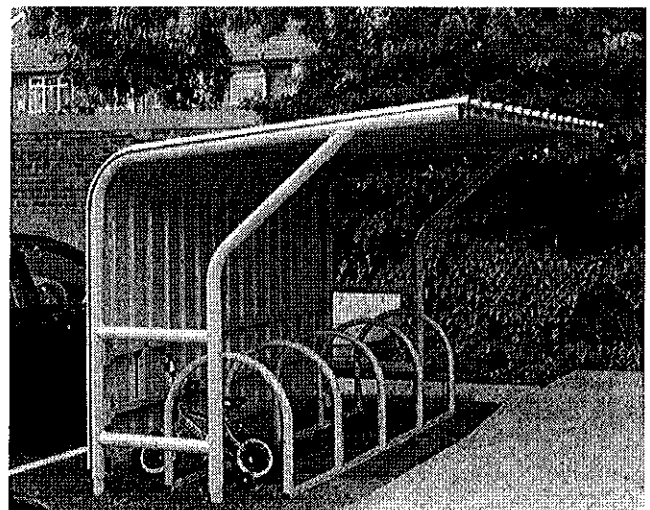
Multiple Publication Newsrack: ~\$6,000



Bicycle Lockers: ~\$15,000 for 1 10-unit pod



**Bicycle Rack (Basic): ~\$650 for
8-10 bike capacity**



**Bicycle Rack (Higher End-Covered):
~\$5,000 for 10-bike capacity**

Estimated Annual Costs of Street Furniture Elements (in 2010\$)

Year	Bus Shelters			Benches			Litter Receptacles			Recycling Receptacles			Bike Racks		
	#	Capital	Maint.	#	Capital	Maint.	#	Capital	Maint.	#	Capital	Maint.	#	Capital	Maint.
1	20	\$170,000-\$400,000	\$8,500-\$20,000	20	\$30,000-\$110,000	\$1,500-\$5,500	12	\$3,300-\$18,000	\$165-\$900	25	\$25,000-\$62,500	\$1,250-\$3,125	20	\$13,000-\$100,000	\$650-\$5,000
2	40	\$170,000-\$400,000	\$17,000-\$40,000	40	\$30,000-\$110,000	\$3,000-\$11,000	24	\$3,300-\$18,000	\$330-\$1,800	28	\$3,000-\$7,500	\$1,400-\$3,500	27	\$4,550-\$35,000	\$878-\$6,750
3	60	\$170,000-\$400,000	\$25,500-\$60,000	60	\$30,000-\$110,000	\$4,500-\$16,500	36	\$3,300-\$18,000	\$495-\$2,700	31	\$3,000-\$7,500	\$1,550-\$3,875	34	\$4,550-\$35,000	\$1,105-\$8,500
4	80	\$170,000-\$400,000	\$34,000-\$80,000	80	\$30,000-\$110,000	\$6,000-\$22,000	48	\$3,300-\$18,000	\$660-\$3,600	34	\$3,000-\$7,500	\$1,700-\$4,250	41	\$4,550-\$35,000	\$1,333-\$10,250
5	100	\$170,000-\$400,000	\$42,500-\$100,000	100	\$30,000-\$110,000	\$7,500-\$27,500	60	\$3,300-\$18,000	\$825-\$4,500	37	\$3,000-\$7,500	\$1,850-\$4,625	48	\$4,550-\$35,000	\$1,560-\$12,000
6	120	\$170,000-\$400,000	\$51,000-\$120,000	120	\$30,000-\$110,000	\$9,000-\$33,000	72	\$3,300-\$18,000	\$990-\$5,400	40	\$3,000-\$7,500	\$2,000-\$5,000	55	\$4,550-\$35,000	\$1,788-\$13,750
7	140	\$170,000-\$400,000	\$59,500-\$140,000	140	\$30,000-\$110,000	\$10,500-\$38,500	84	\$3,300-\$18,000	\$1,155-\$6,300	43	\$3,000-\$7,500	\$2,150-\$5,375	62	\$4,550-\$35,000	\$2,015-\$15,500
8	160	\$170,000-\$400,000	\$68,000-\$160,000	160	\$30,000-\$110,000	\$12,000-\$44,000	96	\$3,300-\$18,000	\$1,320-\$7,200	46	\$3,000-\$7,500	\$2,300-\$5,750	69	\$4,550-\$35,000	\$2,243-\$17,250
9	180	\$170,000-\$400,000	\$76,500-\$180,000	180	\$30,000-\$110,000	\$13,500-\$49,500	108	\$3,300-\$18,000	\$1,485-\$8,100	49	\$3,000-\$7,500	\$2,450-\$6,125	76	\$4,550-\$35,000	\$2,470-\$19,000
10	200	\$170,000-\$400,000	\$85,000-\$200,000	200	\$30,000-\$110,000	\$15,000-\$55,000	120	\$3,300-\$18,000	\$1,650-\$9,000	52	\$3,000-\$7,500	\$2,600-\$6,500	83	\$4,550-\$35,000	\$2,698-\$20,750
11	220	\$170,000-\$400,000	\$93,500-\$220,000	220	\$30,000-\$110,000	\$16,500-\$60,500	132	\$3,300-\$18,000	\$1,815-\$9,900	55	\$3,000-\$7,500	\$2,750-\$6,875	90	\$4,550-\$35,000	\$2,925-\$22,500
12	240	\$170,000-\$400,000	\$102,000-\$240,000	240	\$30,000-\$110,000	\$18,000-\$66,000	144	\$3,300-\$18,000	\$1,980-\$10,800	58	\$3,000-\$7,500	\$2,900-\$7,250	97	\$4,550-\$35,000	\$3,153-\$24,250
13	260	\$170,000-\$400,000	\$110,500-\$260,000	260	\$30,000-\$110,000	\$19,500-\$71,500	156	\$3,300-\$18,000	\$2,145-\$11,700	61	\$3,000-\$7,500	\$3,050-\$7,625	104	\$4,550-\$35,000	\$3,380-\$26,000
14	280	\$170,000-\$400,000	\$119,000-\$280,000	280	\$30,000-\$110,000	\$21,000-\$77,000	168	\$3,300-\$18,000	\$2,310-\$12,600	64	\$3,000-\$7,500	\$3,200-\$8,000	111	\$4,550-\$35,000	\$3,608-\$27,750
15	300	\$170,000-\$400,000	\$127,500-\$300,000	300	\$30,000-\$110,000	\$22,500-\$82,500	180	\$3,300-\$18,000	\$2,475-\$13,500	67	\$3,000-\$7,500	\$3,350-\$8,375	118	\$4,550-\$35,000	\$3,835-\$29,500
16	320	\$170,000-\$400,000	\$136,000-\$320,000	320	\$30,000-\$110,000	\$24,000-\$88,000	192	\$3,300-\$18,000	\$2,640-\$14,400	70	\$3,000-\$7,500	\$3,500-\$8,750	125	\$4,550-\$35,000	\$4,063-\$31,250
17	340	\$170,000-\$400,000	\$144,500-\$340,000	340	\$30,000-\$110,000	\$25,500-\$93,500	204	\$3,300-\$18,000	\$2,805-\$15,300	73	\$3,000-\$7,500	\$3,650-\$9,125	132	\$4,550-\$35,000	\$4,290-\$33,000
18	360	\$170,000-\$400,000	\$153,000-\$360,000	360	\$30,000-\$110,000	\$27,000-\$99,000	216	\$3,300-\$18,000	\$2,970-\$16,200	76	\$3,000-\$7,500	\$3,800-\$9,500	139	\$4,550-\$35,000	\$4,518-\$34,750
19	380	\$170,000-\$400,000	\$161,500-\$380,000	380	\$30,000-\$110,000	\$28,500-\$104,500	228	\$3,300-\$18,000	\$3,135-\$17,100	79	\$3,000-\$7,500	\$3,950-\$9,875	146	\$4,550-\$35,000	\$4,745-\$36,500
20	400	\$170,000-\$400,000	\$170,000-\$400,000	400	\$30,000-\$110,000	\$30,000-\$110,000	240	\$3,300-\$18,000	\$3,300-\$18,000	82	\$3,000-\$7,500	\$4,100-\$10,250	153	\$4,550-\$35,000	\$4,973-\$38,250
Total		\$3.4M-\$8.0M	\$1.8M-\$4.2M		\$600,000-\$2.2M	\$315,000-\$1.16M		\$66,000-\$360,000	\$34,650-\$189,000		\$82,000-\$205,000	\$53,500-\$133,750		\$99,450-\$765,000	\$43,250-\$432,500

Estimated Annual Costs of Street Furniture Elements (in 2010\$)

Year	Pod of 10 Bike Lockers			Multiple Publication Newsracks			Servicing Costs for MPNs, Litter & Recycling Receptacles			Total Across All Elements		
	#	Capital	Maint.	#	Capital	Maint.	Capital (Vehicle)	Maint. (Vehicle)	Supplies/Personnel	Capital	Maint.	Supplies/Personnel
1	0	\$0	\$0	5	\$30,000	\$1,500	\$45,000	\$10,000	\$56,050	\$316,300-\$765,500	\$23,565-\$46,025	\$56,050
2	0	\$0	\$0	8	\$18,000	\$2,400	\$0	\$10,000	\$56,050	\$228,850-\$588,500	\$35,008-\$75,450	\$56,050
3	1	\$15,000	\$750	11	\$18,000	\$3,300	\$45,000	\$20,000	\$150,350	\$288,850-\$648,500	\$57,200-\$115,625	\$150,350
4	1	\$0	\$750	14	\$18,000	\$4,200	\$0	\$20,000	\$150,350	\$228,850-\$588,500	\$68,643-\$145,050	\$150,350
5	1	\$0	\$750	17	\$18,000	\$5,100	\$45,000	\$30,000	\$244,650	\$273,850-\$633,500	\$90,085-\$184,475	\$244,650
6	2	\$15,000	\$1,500	20	\$18,000	\$6,000	\$0	\$30,000	\$244,650	\$243,850-\$603,500	\$102,278-\$214,650	\$244,650
7	2	\$0	\$1,500	23	\$18,000	\$6,900	\$0	\$30,000	\$244,650	\$228,850-\$588,500	\$113,720-\$244,075	\$244,650
8	2	\$0	\$1,500	26	\$18,000	\$7,800	\$0	\$30,000	\$244,650	\$228,850-\$588,500	\$125,163-\$273,500	\$244,650
9	3	\$15,000	\$2,250	29	\$18,000	\$8,700	\$0	\$30,000	\$244,650	\$243,850-\$603,500	\$137,355-\$303,675	\$244,650
10	3	\$0	\$2,250	32	\$18,000	\$9,600	\$45,000	\$40,000	\$338,950	\$273,850-\$633,500	\$158,798-\$343,100	\$338,950
11	3	\$0	\$2,250	35	\$18,000	\$10,500	\$0	\$40,000	\$338,950	\$228,850-\$588,500	\$170,240-\$372,525	\$338,950
12	4	\$15,000	\$3,000	38	\$18,000	\$11,400	\$0	\$40,000	\$338,950	\$243,850-\$603,500	\$182,433-\$402,700	\$338,950
13	4	\$0	\$3,000	41	\$18,000	\$12,300	\$0	\$40,000	\$338,950	\$228,850-\$588,500	\$193,875-\$432,125	\$338,950
14	4	\$0	\$3,000	44	\$18,000	\$13,200	\$0	\$40,000	\$338,950	\$228,850-\$588,500	\$205,318-\$461,550	\$338,950
15	5	\$15,000	\$3,750	47	\$18,000	\$14,100	\$45,000	\$50,000	\$433,250	\$288,850-\$648,500	\$227,510-\$501,725	\$433,250
16	5	\$0	\$3,750	50	\$18,000	\$15,000	\$0	\$50,000	\$433,250	\$228,850-\$588,500	\$238,953-\$531,150	\$433,250
17	5	\$0	\$3,750	53	\$18,000	\$15,900	\$0	\$50,000	\$433,250	\$228,850-\$588,500	\$250,395-\$560,575	\$433,250
18	6	\$15,000	\$4,500	56	\$18,000	\$16,800	\$0	\$50,000	\$433,250	\$243,850-\$603,500	\$262,588-\$590,750	\$433,250
19	6	\$0	\$4,500	59	\$18,000	\$17,700	\$0	\$50,000	\$433,250	\$228,850-\$588,500	\$274,030-\$620,175	\$433,250
20	6	\$0	\$4,500	62	\$18,000	\$18,600	\$45,000	\$60,000	\$527,550	\$273,850-\$633,500	\$295,473-\$659,600	\$527,550
Total		\$90,000	\$47,250		\$372,000	\$201,000	\$270,000	\$720,000	\$6.02M	\$4.98M-\$12.26M	\$3.21M-\$7.08M	\$6.02M