

	Factoria Recycling & Transfer Station Cost Elements	Cost per Sq. Ft.	Element Cost	Percent of Total Cost	Benefits
1	Fully enclosed building	\$137	\$9,612,000	21.4%	A. Control community impacts <ul style="list-style-type: none"> a. Noise – insulation and doors b. Dust – misting/dust collection system c. Odor – misting/filtration/odor neutralizers d. Light pollution – contain within facility e. Litter – full enclosure/door placement, draft control f. Vectors – bird netting/quick turnover B. Storage – 3 days C. Flexibility for technology upgrades D. Aesthetics – interior/exterior finishes
2	Commercial tipping floor in transfer building (37,627sf)	\$44	\$1,669,000	3.7%	A. Segregated tipping floor for safety and efficiency B. Maneuverability and traffic flow C. Clear-span (no columns) for efficient circulation, flexibility and safety D. Storage E. Flexibility to sort waste to remove recyclables
3	Self-haul tipping floor in transfer building (22,424sf)	\$37	\$835,000	1.9%	A. Segregated tipping floor for safety B. Maneuverability and traffic flow C. Clear-span (no columns) for efficient circulation, flexibility and safety D. Storage E. Flexibility to sort waste to remove recyclables
4	Recycling in transfer building (10,349sf)	\$15	\$151,000	0.3%	A. Operational efficiency increases with interior collection B. Flexible for accepting a wide-range of materials C. Same environmental controls as rest of building



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	Factoria Recycling & Transfer Station Cost Elements	Cost per Sq. Ft.	Element Cost	Percent of Total Cost	Benefits
5	Household Hazardous Waste (separate building) with drive-thru canopy (7,500sf)	\$212	\$1,594,000	3.5%	A. Efficient collection, sorting, and packing B. Enhanced environmental and safety controls, e.g., spill control/mitigation C. Protected drive-thru canopy for unloading
6	Pre-load compactor (1)	n/a	\$1,945,000	4.3%	A. Maximize payload B. Reduce traffic C. Reduce greenhouse gases D. Operational cost savings
7	Site development (400,000sf)	\$32	\$12,764,000	28.4%	A. Storm water - on-site filtration and detention B. Excavation/mass earthwork/site demolition C. Retaining structures D. Site Utilities – water, power, lighting, gas, utility hook-ups E. Site fixtures and specialties – signage, bollards, F. On-site paving – roads, parking
8	Regulatory and sustainability requirements	n/a	\$6,903,000	15.3%	A. LEED a. Environmental benefits b. Long-term cost savings c. Better work/visitor environment B. Segregated drainage – environmental protection C. Landscaping – low impact development (LID) D. Wetland mitigation E. Off-site access street modifications



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	Factoria Recycling & Transfer Station Cost Elements	Cost per Sq. Ft.	Element Cost	Percent of Total Cost	Benefits
9	Operational requirements	n/a	\$3,178,000	7.1%	<ul style="list-style-type: none"> A. Crew quarters B. Efficient on-site administrative offices and meeting space C. On-site fueling D. Scale house and scales E. Security F. SCADA – minimize operational costs and increase efficiency, RFID G. Post-disaster immediate occupancy <ul style="list-style-type: none"> a. Enhanced structure – ability to provide services within 24 hours after a major seismic event b. Emergency generator to continue operation during power failures
10	Continue operation during construction	n/a	\$2,074,000	4.6%	<ul style="list-style-type: none"> A. Minimize impacts to customers B. Minimize impacts to other facilities – closing during construction would have significant adverse impacts on the Houghton and Renton transfer stations
11	Sales tax	n/a	\$4,275,000	9.5%	
	TOTAL		\$45,000,000	100.0%	



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Factoria Recycling and Transfer Station Cost Savings

VALUE ENGINEERING – external engineering review (October 2011)

Item	Savings (2013\$)
Reduce lower level	925,000
Reduce building overhangs	333,019
Eliminate portion of temporary shoring wall	320,755
Remove asphalt in low traffic wear areas	416,981
Avoid earthwork during winter season	333,962
Subtotal	\$2,329,717

DESIGN REASSESSMENT – internal design adjustments (ongoing)

Item	Savings (2013\$)
Eliminate one pre-load stationary compactor	1,483,019
Reduce area of tipping building and lower level	883,679
Reduce maintenance and operations building to one story	425,283
Reduce site work including cut/fill, reduction in size of soldier pile wall	3,421,698
Reduce solar panel arrangement	414,057
Construct tipping building in one phase (no temporary building wall)	193,490
Eliminate decant area	98,868
Reduce size of fuel storage tank	43,302
Reduce number of new weigh scales from 2 to 0	889,245
Reuse existing scale house	271,887
Reduce utility quantities at site entrance	37,736
Subtotal	\$8,162,264

Total \$10,491,981



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