

APPENDIX G: ANTICIPATED PROJECT COSTS SUPPORTING DOCUMENTATION



Tolt Avenue Corridor Plan - Final Action Plan Unit Costs			
Unit List for Developing Estimate of Probable Construction Costs			
SvR # 11033; Updated: February 01, 2013			
Notes:			
1. Unit prices assume 2012 dollars and do not include Sales Tax, Escalation, Design and Construction Contingency, Engineering Design, Construction Man			
Item	Unit	Engineer Unit Price	Engineer Notes on Units/Item
Mobilization	LS	7%	% to be calculated from total
Temporary Controls and Protection			
TESC	SY	\$ 1	base cost to be reviewed on a project basis
Traffic Control	LF	\$ 20	base cost to be reviewed on a project basis
Tree and Vegetation Protection	LF	\$ 1	base cost to be reviewed on a project basis
Site Demolition and Earthwork			
Clearing, Grubbing & Haul	SF	\$ 0.50	COS \$1.00, but minimal along Tolt
Remove Tree	EA	\$ 1,000	KC barton, maybe higher given size of trees??
Remove concrete sidewalk	SY	\$ 22	COS 15-22 depending on quantity, KC Barton \$12
Remove asphalt pavement	SY	\$ 22	assumed 6" depth; COS 16-34 depending on quantity, KC Barton \$16
Remove curb	LF	\$ 10	COS 15,
Excavation & Haul Off	CY	\$ 30	WW Bid Tabs 23-50
Remove/Abandon Drainage Structure	EA	\$ 500	
Storm Drainage			
Storm Drain Maintenance Hole	EA	\$ 3,500	
Storm Drain Catch Basin	EA	\$ 2,500	
12" Diam. Storm Drain	LF	\$ 80	Include excavation, haul, pipe, bedding, backfill
Cleanout	EA	\$ 800	
Bioretention Swale/Planter Area	SF	\$ 12	Includes excavation, haul, soil, SSD, bedding, Backfill (no plants or mulch); comparable to KC Barton unit cost
Silva Cell Street Tree	EA	\$ 10,000	
Infiltration Trench	LF	\$ 100	Assume design similar infiltration to trench installed for sidewalk improvements (1.33 CY/LF); 6' square trench with 12" pipe, EPSD 67/CY
Franchise Utilities			
Power/Franchise Undergrounding	LF	\$ 425	includes vaults, handholds and JUT; base cost to be reviewed on a project basis
Reconnect Power/Franchise Services	EA	\$ 2,000	assume one per parcel
Relocate Utility Pole	EA	\$ -	locations per plan; assumes costs covered by franchise agreement
Lighting			
Street Light and Pole	EA	\$ 9,000	based on ped light and pole cost
Pedestrian Light and Pole	EA	\$ 8,500	from Lighting Group NW, incl. basket and banner supports
Pedestrian Light	EA	\$ 2,000	
Bollard Light	EA	\$ 500	from Lighting Group NW
Utilities			
Adjust existing structure to grade	EA	\$ 750	
Adjust existing water meter to grade	EA	\$ 500	assume one per parcel
Remove and Reinstall Fire Hydrant	EA	\$ 6,000	based on existing locations
Paving, Signage, and Striping			
Asphalt Concrete Pavement, 6" over 6"	SY	\$ 65	
Cement Concrete Pavement, 12" over 6"	SY	\$ 90	similar to KC Barton and WW bid tabs
Curb/Curb and Gutter	LF	\$ 25	includes curb cut openings for GSI
Concrete Driveway	EA	\$ 2,000	assumes 30 SY at (typical 15' wide, 5' ramp, 12' drive) 6" thick
Curb Ramp	EA	\$ 2,500	
Asphalt Pathway	SY	\$ 40	
Concrete Sidewalk	SY	\$ 40	COS
Striping	LF	\$ 3	assumes LF for full road width (4 stripes total)
Signage	Each	\$ 400	
Wayfinding	LS		
Site Furnishings			
Bicycle Rack	Each	\$ 250	
Bench	Each	\$ 500	
Trash/Recycling Receptacle	LF	\$ 250	
Landscaping			
Landscape areas, seeded	SF	\$ 0.50	This is tilling of subgrade
Landscape areas, planted	SF	\$ 7.00	soil prep, 8" topsoil, plants
Landscape areas, stormwater	SF	\$ 9.50	soil prep, 18" bioretention soil for treatment, plants
Street Tree - small	Each	\$ 300	
Street Tree - large	Each	\$ 350	
Irrigation	SF	\$ 1.75	fixed spray, sleeves for piping under pavement, meters, backflow

Appendix G: Anticipated Project Costs Supporting Documentation



Toit Avenue Corridor Plan - Estimate of Probable Construction Costs
 SVR # 11033, Updated: February 01, 2013

Description	Toit Hill Road Intersection	Bridge	South Greenway	South Entry	Central Business District	Bird Street	North Greenway	North Entry	Walkway to NE 60th Street	Wayfinding Design Contract	Wayfinding Loops	Wayfinding En-Route Markers	Total
Subtotal of Construction Cost:	\$ 327,650	\$ 841,750	\$ 2,610,000	\$ 729,350	\$ 3,026,475	\$ 804,190	\$ 1,394,950	\$ 1,160,900	\$ 116,800	\$ -	\$ 55,000	\$ 5,000	\$ 9,902,665
Design, Management and Permitting													
	\$131,060	\$336,700	\$1,044,000	\$291,740	\$1,210,590	\$321,676	\$557,980	\$464,360	\$46,720	\$70,000	\$0	\$0	\$0
Overhead & Profit	\$39,318	\$101,010	\$313,200	\$87,522	\$363,177	\$96,503	\$167,394	\$139,308	\$14,016	\$0	\$6,600	\$600	\$600
Subtotal A (Design, OH, Profit + Construction):	\$ 498,028	\$ 1,279,460	\$ 3,967,200	\$ 1,108,612	\$ 4,800,242	\$ 1,222,369	\$ 2,120,324	\$ 1,764,568	\$ 177,536	\$ 70,000	\$ 61,600	\$ 5,600	\$ 5,600
Design Contingency													
	\$149,408	\$383,838	\$1,190,160	\$332,584	\$1,380,073	\$366,711	\$636,097	\$529,370	\$53,261	\$0	\$18,480	\$1,680	\$1,680
Subtotal B (A + Design Contingency):	\$647,436	\$1,663,298	\$5,157,360	\$1,441,196	\$5,980,315	\$1,589,079	\$2,756,421	\$2,293,938	\$230,797	\$70,000	\$80,080	\$7,280	\$7,280
Construction Contingency													
	\$64,744	\$166,330	\$515,736	\$144,120	\$598,031	\$156,908	\$275,642	\$229,394	\$23,080	\$0	\$8,008	\$728	\$728
Subtotal C (B + Construction Contingency):	\$712,180	\$1,829,628	\$5,673,096	\$1,585,315	\$6,578,346	\$1,747,987	\$3,032,063	\$2,523,332	\$253,876	\$70,000	\$88,088	\$8,008	\$8,008
Washington State Sales Tax													
	\$20,297	\$52,144	\$161,683	\$45,181	\$187,483	\$49,818	\$86,414	\$71,915	\$7,235	\$0	\$2,511	\$228	\$228
TOTAL ESTIMATED CONSTRUCTION COST	\$ 732,477	\$ 1,881,772	\$ 5,834,779	\$ 1,630,497	\$ 6,765,829	\$ 1,797,805	\$ 3,118,477	\$ 2,595,247	\$ 261,112	\$ 70,000	\$ 90,599	\$ 8,236	\$ 8,236
ROUNDED UP PROBABLE CONSTRUCTION COST	\$ 740,000	\$ 1,890,000	\$ 5,840,000	\$ 1,640,000	\$ 6,770,000	\$ 1,800,000	\$ 3,120,000	\$ 2,600,000	\$ 270,000	\$ 70,000	\$ 100,000	\$ 10,000	\$ 10,000
Low Range	\$ 650,000	\$ 1,690,000	\$ 5,250,000	\$ 1,460,000	\$ 6,080,000	\$ 1,610,000	\$ 2,800,000	\$ 2,330,000	\$ 230,000	\$ 63,000	\$ 81,000	\$ 7,000	\$ 7,000
High Range	\$ 810,000	\$ 2,070,000	\$ 6,420,000	\$ 1,800,000	\$ 7,450,000	\$ 1,980,000	\$ 3,440,000	\$ 2,860,000	\$ 290,000	\$ 77,000	\$ 100,000	\$ 10,000	\$ 10,000

- Notes:**
- Does not include escalation.
 - Statement of probable costs based on Final Concept Plan.
 - Construction unit costs based on 2012 dollars.
 - Sales tax is applied to 30 percent of the total of Subtotal C.

Appendix G: Anticipated Project Costs Supporting Documentation

Tolt Avenue Corridor Plan - Final Action Plan Unit Costs					
Unit List for Developing Estimate of Probable Construction Costs					
SVR # 11033; Updated: February 01, 2013					
Bridge					
Station 6+50 to Station 8+50; Project length = 200 LF					
Item	Unit	Engineer Unit Price	Quantity	Total Item Cost	Notes on Quantities
Mobilization	LS	7%		\$56,000	6.7%
Temporary Controls and Protection					
ITESC	SY	\$1	0	\$0	
Traffic Control	LS	\$50,000	1	\$50,000	project specific cost
Tree and Vegetation Protection	LF	\$4	0	\$0	
				Subtotal	\$50,000
					5.9%
Site Demolition and Earthwork					
Clearing, Grubbing & Haul	SF	\$0.50	0	\$0	
Remove Tree	EA	\$1,000	0	\$0	
Remove concrete sidewalk	SY	\$22	0	\$0	
Remove asphalt pavement	SY	\$22	0	\$0	
Remove curb	LF	\$10	0	\$0	
Excavation & Haul Off	CY	\$30	0	\$0	
Remove/Abandon Drainage Structure	EA	\$500	0	\$0	
				Subtotal	\$0
					0.0%
Storm Drainage					
Storm Drain Maintenance Hole	EA	\$3,500	0	\$0	
Storm Drain Catch Basin	EA	\$2,500	0	\$0	
12" Diam. Storm Drain	LF	\$80	0	\$0	
Cleanout	EA	\$800	0	\$0	
Bioretention Swale/Planter Area	SF	\$12	0	\$0	
Silva Cell Street Tree	EA	\$10,000	0	\$0	
Infiltration Trench	LF	\$100	0	\$0	
				Subtotal	\$0
					0.0%
Franchise Utilities					
Power/Franchise Undergrounding	LF	\$425	0	\$0	
Reconnect Power/Franchise Services	EA	\$2,000	0	\$0	
Relocate Utility Pole	EA	\$0	0	\$0	
				Subtotal	\$0
					0.0%
Lighting					
Street Light and Pole	EA	\$9,000	0	\$0	
Pedestrian Light and Pole	EA	\$8,500	0	\$0	
Pedestrian Light	EA	\$2,000	0	\$0	
Bollard Light	EA	\$500	0	\$0	
				Subtotal	\$0
					0.0%
Utilities					
Adjust existing structure to grade	EA	\$750	0	\$0	
Adjust existing water meter to grade	EA	\$500	0	\$0	
Remove and Reinstall Fire Hydrant	EA	\$6,000	0	\$0	
				Subtotal	\$0
					0.0%
Paving, Signage, and Striping					
Asphalt Concrete Pavement, 6" over 6"	SY	\$65	0	\$0	
Cement Concrete Pavement, 12" over 6"	SY	\$90	0	\$0	
Curb/Curb and Gutter	LF	\$25	650	\$16,250	Tolt Hill to S. Greenway
Concrete Driveway	EA	\$2,000	0	\$0	
Curb Ramp	EA	\$2,500	0	\$0	
Asphalt Pathway	LF	\$45	0	\$0	
Concrete Sidewalk	SY	\$40	425	\$17,000	assume walk goes on existing roadway pavement
Striping	LF	\$3	0	\$0	
Signage	Each	\$400	0	\$0	
Wayfinding	LS	\$10,000	1	\$10,000	provided by Makers
				Subtotal	\$43,250
					5.1%
Site Furnishings					
Bicycle Rack	Each	\$250	0	\$0	
Bench	Each	\$500	0	\$0	
Trash/Recycling Receptacle	LF	\$250	0	\$0	
				Subtotal	\$0
					0.0%
Landscaping					
Landscape areas, seeded	SF	\$0.50	0	\$0	
Landscape areas, planted	SF	\$7.00	0	\$0	
Landscape areas, stormwater	SF	\$9.50	0	\$0	
Street Tree - small	Each	\$300	0	\$0	
Street Tree - large	Each	\$350	0	\$0	
Irrigation	SF	\$1.75	0	\$0	
				Subtotal	\$0
					0.0%
Other Items					
bridge load rating	Allow	\$10,000	1	\$10,000	from wsdot
bridge painting	LS	\$652,500	1	\$652,500	from wsdot
lighting at bridge	LS	\$30,000	1	\$30,000	assume 24 lights (2/steel member and 2 at signs; \$1000/EA), \$1500 power supply and \$4500
				Subtotal	\$692,500
					82.3%
				Construction Subtotal	\$841,750
				Mobilization	6.7%
				Temporary Controls and Protection	5.9%
				Site Demolition and Earthwork	0.0%
				Storm Drainage	0.0%
				Franchise Utilities	0.0%
				Lighting	0.0%
				Utilities	0.0%
				Paving, Signage, and Striping	5.1%
				Site Furnishings	0.0%
				Landscaping	0.0%
				Other Items	82.3%
					100%

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Tolt Avenue Corridor Plan - Final Action Plan Unit Costs					
Unit List for Developing Estimate of Probable Construction Costs					
SvR # 11033; Updated: February 01, 2013					
North Greenway					
Station 51+00 to Station 73+00; Project length = 2200 LF					
Item	Unit	Engineer Unit Price	Quantity	Total Item Cost	Notes on Quantities
Mobilization	LS	7%		\$92,000	
Temporary Controls and Protection					
TESC	SY	\$1	7000	\$7,000	length of project x 27'
Traffic Control	LF	\$30	2200	\$66,000	length of project
Tree and Vegetation Protection	LF	\$1	2200	\$2,200	length of project
				Subtotal	\$75,200
					5.4%
Site Demolition and Earthwork					
Clearing, Grubbing & Haul	SF	\$0.50	21000	\$10,500	15' wide Sta 59+00 to 73+00
Remove Tree	EA	\$1,000	15	\$15,000	street view shows none
Remove concrete sidewalk	SY	\$22	375	\$8,250	51+50 to 57+00 times 6' typical width
Remove asphalt pavement	SY	\$22	1700	\$37,400	51+50 to 61+50 times 15' typical width (incl. area for new patch at curb)
Remove curb	LF	\$10	1000	\$10,000	51+50 to 61+50
Excavation & Haul Off	CY	\$30	0	\$0	not required; addressed by demo
Remove/Abandon Drainage Structure	EA	\$500	9	\$4,500	assume 1 per 250 feet
				Subtotal	\$85,650
					6.1%
Storm Drainage					
Storm Drain Maintenance Hole	EA	\$3,500	3	\$10,500	assume 1 per 1000 feet
Storm Drain Catch Basin	EA	\$2,500	11	\$27,500	assume 1 per 200 feet
12" Diam. Storm Drain	LF	\$80	1800	\$144,000	assume 80% of project length
Cleanout	EA	\$800	0	\$0	
Bioretention Swale/Planter Area	SF	\$12	0	\$0	addressed in landscape areas
Silva Cell Street Tree	EA	\$10,000	0	\$0	
Infiltration Trench	LF	\$100	140	\$14,000	assume 20 LF per block/350 LF (based on previous Tolt Ave project)
				Subtotal	\$196,000
					14.1%
Franchise Utilities					
Power/Franchise Undergrounding	LF	\$475	890	\$422,750	north side of Commercial to north side of Morrison (51+00 to 58+50); Rutherford
Reconnect Power/Franchise Services	EA	\$2,000	4	\$8,000	assume 1 per parcel
Relocate Utility Pole	EA	\$0	6	\$0	approx. from CAD layout
				Subtotal	\$430,750
					30.9%
Lighting					
Street Light and Pole	EA	\$9,000	2	\$18,000	
Pedestrian Light and Pole	EA	\$8,500	0	\$0	
Pedestrian Light	EA	\$2,000	0	\$0	
Bollard Light	EA	\$500	8	\$4,000	per concept plan
				Subtotal	\$22,000
					1.6%
Utilities					
Adjust existing structure to grade	EA	\$750	0	\$0	
Adjust existing water meter to grade	EA	\$500	5	\$2,500	Assume 1 per parcel
Remove and Reinstall Fire Hydrant	EA	\$6,000	3	\$18,000	assume 1 per block
				Subtotal	\$20,500
					1.5%
Paving, Signage, and Striping					
Asphalt Concrete Pavement, 6" over 6"	SY	\$65	1400	\$91,000	Assume 5' path adjacent to all curb, plus 8' along parking area
Cement Concrete Pavement, 12" over 6"	SY	\$90	0	\$0	
Curb/Curb and Gutter	LF	\$25	1950	\$48,750	approx. from CAD layout
Concrete Driveway	EA	\$2,000	6	\$12,000	approx. from CAD layout
Curb Ramp	EA	\$2,500	10	\$25,000	
Asphalt Pathway	LF	\$45	2600	\$117,000	based on plan area
Concrete Sidewalk	SY	\$40	225	\$9,000	5 corners at 400 SF each
Striping	LF	\$3	2200	\$6,600	Project length from above
Signage	Each	\$400	22	\$8,800	Assumes 1 per 100 LF of project length
Wayfinding	LS	\$19,100	1	\$19,100	provided by Makers
				Subtotal	\$337,250
					24.2%
Site Furnishings					
Bicycle Rack	Each	\$250	11	\$2,750	Assumes 1 per 200 LF of project length
Bench	Each	\$500	11	\$5,500	Assumes 1 per 200 LF of project length
Trash/Recycling Receptacle	LF	\$250	11	\$2,750	Assumes 1 per 200 LF of project length
				Subtotal	\$11,000
					0.8%
Landscaping					
Landscape areas, seeded	SF	\$0.50	0	\$0	11,000 SF; Assume total landscaping area is average 5' wide along project len
Landscape areas, planted	SF	\$7.00	8800	\$61,600	Assume 4/5 of total landscape area
Landscape areas, stormwater	SF	\$9.50	2200	\$20,900	Assume 1/5 of total landscape area
Street Tree - small	Each	\$300	0	\$0	
Street Tree - large	Each	\$350	11	\$3,850	per concept plan
Irrigation	SF	\$1.75	11000	\$19,250	landscape (planted and stormwater) areas
				Subtotal	\$105,600
					7.6%
Other Items					
relocate fence at cemetery	LF	\$50	380	\$19,000	parcel length plus 10' each side into parcel
				Subtotal	\$19,000
					1.4%
Construction Subtotal				\$1,394,950	
Mobilization				6.6%	
Temporary Controls and Protection				5.4%	
Site Demolition and Earthwork				6.1%	
Storm Drainage				14.1%	
Franchise Utilities				30.9%	
Lighting				1.6%	
Utilities				1.5%	
Paving, Signage, and Striping				24.2%	
Site Furnishings				0.8%	
Landscaping				7.6%	
Other Items				1.4%	
				100%	

Appendix G: Anticipated Project Costs Supporting Documentation

Tolt Avenue Corridor Plan - Estimate of Probable Wayfinding Costs
By Makers, January 08, 2013

	Design (Preparation of construction documents)	Average design cost	Production/ Installation cost per unit	Average production/ installation cost per unit	1. South Greenway	2. Wayfinding Design Elements	3. Wayfinding Loop Paths	4. Central Business District	5. North Greenway	6. Bird Street
Gateways	\$4,000-10,000	\$7,000	\$10,000	\$10,000						
Auto-oriented directional signs	\$1,000-1,500	\$1,250	\$2,000-4,800. Less if replacing panels on existing signs.	\$3,400						
Burmashave-style sequence signs	\$800-900 for first sign	\$850	\$2,000-4,800	\$3,400	1					
after first sign	\$100-200 for each sign after first	\$150		\$3,400	5				4	
Over street banner signs	\$1,000-\$2,000	\$1,500	\$10,000-15,000. Depends on materials and construction.	\$12,500						
Pedestrian-oriented directional signs and parking directional signs	\$800-900 for first sign	\$850	\$2,000	\$2,000			1			
after first sign	\$100-300 for each sign after first	\$200		\$2,000			13	4		
Inlays and en-route markers	\$800-900 for first sign	\$850	\$150-200 to add to existing post, \$150-600 for other conditions	\$375			1			
after first sign	\$100-200 for each sign after first	\$150		\$375			26			
Information kiosks	\$5,500	\$5,500	\$5,000-6,000	\$5,500	1		3	2		
Total Cost for Project:					\$25,900	\$71,150	\$54,625	\$19,000	\$19,100	\$0

Notes:

- The total project cost for the Wayfinding Design Contract includes all wayfinding elements. This cost may vary if they're done by project instead of all at once.

no add'l wayfinding
proposed with this
project

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Tolt Avenue Corridor Plan - Estimate of Probable Wayfinding Costs
By Makers, January 08, 2013

Design (Preparation of construction documents)	Average design cost	Production/Installation cost per unit	Average production/Installation cost per unit	7. Bridge	8. En-Route Markers	9. South Entry	10. North Entry	11. Tolt Hill Road Intersection	12. Walkway North of NE 55th Street	Total (projects 1-15)
Gateways	\$4,000-10,000	\$7,000	\$10,000	1			1			2
Auto-oriented directional signs	\$1,000-1,500	\$1,250 Less if replacing panels on existing signs.	\$2,000-4,800					2		2
Burmashave-style sequence signs after first sign	\$800-900 for first sign \$100-200 for each sign after first	\$850 \$150	\$2,000-4,800							1
Over street banner signs	\$1,000-\$2,000	\$1,500	\$10,000-15,000. Depends on materials and construction.			1	1			9
Pedestrian-oriented directional signs and parking directional signs after first sign	\$800-900 for first sign	\$850	\$2,000							2
Inlays and en-route markers after first sign	\$100-300 for each sign after first	\$200								1
Information kiosks	\$5,500	\$5,500	\$5,000-6,000							17
										1
										39
										7
Total Cost for Project:				\$10,000	\$4,875	\$12,500	\$22,500	\$6,800		\$0

Notes:

- The total project cost for the Wayfinding Design Contract includes all wayfinding elements. This cost may vary if they're done by project instead of all at once.

no wayfinding proposed with this project

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