

Redmond Central Connector Master Plan
Appendix G

Cost Considerations

The Berger Partnership
May, 2011

Redmond Central Connector Master Plan Cost Considerations Preface

May 10, 2011

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This master plan is intended to serve as a decision-making guide for the City. “Decision-making” frequently implies spending money; as a result, this plan includes preliminary cost estimates for specific items in the Connector. It is important to note that these costs are intended to be used as budgeting figures and do not reflect a guaranteed construction cost, as the elements are not yet fully designed to ensure that level of accuracy.

Most park projects lend themselves to phasing, and this is the case with the Redmond Central Connector. Furthermore, many master plans are never fully realized, as priorities and influences change over time. Through the planning phase of this project we have identified several areas that together make up the Connector. These Master Plan Cost Considerations (MPCC) address each of these areas individually with numerous assumptions made for levels of design not yet fully defined or visible in the master plan drawings. The assumptions for this document are as follows.

General Assumptions

- This estimate has been prepared on the assumption that the project is bid and a general contractor will complete the work.
- Park plans and graphics included in the master plan are intended to convey a long-term vision for the corridor.
- All elements included on the plans may not be included in this Probable Cost of Construction due to pending resolution on adjacent properties by the City and (or) the proposed work involves significant impacts beyond the scope of this project.
- Items involving work that is not clearly defined at the master plan level are either noted as N.I.C. or given a cost allowance. The allowances provided are estimated figures based on items from similar projects of like character and site conditions.

Cost Ranges

Some elements included in the MPCC that may have a range in costs are included with the higher cost to allow the city further leeway in establishing a budget.

Mark-up Definitions

Mark-ups are generally required to allocate prime contractor costs beyond those that can be quantified under Direct Costs. Additional post-bid mark-ups may also be included to reflect additional costs to the project beyond those of the general

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contractor, including sales tax, design fees and administrative costs. A typical percentage assigned to each of these mark-ups is noted below and is typical for similar projects but may vary based upon a variety of factors.

Construction Contract Mark-ups

- Direct Construction Costs: The sum of line item costs in the estimate. These are the direct costs to the prime contractor.
- Design Contingency: Design contingency is a reflection of the level of design on which the MPCC is based. This contingency is an allowance to reflect unforeseen or non-quantifiable elements of the project that will be incorporated during subsequent design development work. This contingency is higher in the early phases of design and gets lower as the design approaches completion. This is not a bid contingency or an owner construction contingency. For this project, we would recommend a design contingency of 20%.
- General Conditions: Direct field costs to the general contractor which cannot be charged to any particular item of work. These items include, but are not limited to: mobilization, job shack, phone and fax, storage shed, temporary work, demobilization, etc. For this project, general conditions are assumed to be 5%.
- Contractor Overhead: Home office costs to the general contractor including, but not limited to: accounting, billing, estimating, project management, etc. For this project, Contractor overhead is assumed to be 5%.
- Contractor Profit: This fee is a percentage of gross project costs. For this estimate, contractor profit is assumed to be 6%.
- Escalation: Escalation is a provision for inflation increasing the cost of labor, materials and equipment over time. Escalation is typically applied from the date of the estimate projecting to the midpoint of future construction. For the purposes of this cost estimate, given no firm timeline, *no escalation has been included in this cost estimate*. While a rate of escalation is highly dependent on existing economic conditions, the rate is historically in the “ballpark” of around 3% annually, but can fluctuate greatly.

Post-Bid Costs (Soft Costs)

- Sales Tax: The local sales tax rate will ultimately be applied to the costs. This MPCC includes 9.5% sales tax.

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- Estimated Design Fees: Design costs to the consultant team to develop the design, apply for permits, and produce Construction Documents to put the project out to bid. For this estimate, design fees are assumed to be 15% of the total cost of construction.
- Administrative Costs: Administrative costs include budgeting of city department staff time in realizing a project. Administrative costs can range widely dependent upon a city's bookkeeping and project management protocols. For this MPCC, we have assumed administrative costs of 10%.
- Permitting Costs: Permit costs are generally based on a percentage of the value of the permitted improvement. (To clarify, this does not usually mean the cost of the entire project, but the element being permitted.) These permit fees are difficult to forecast and are not included in this estimate (listed as NIC). However in two (2) areas where environmental permits and mitigation are anticipated, permitting and mitigation allowances have been included.

MPCC Qualifications

These Master Plan Cost Considerations are prepared as a guide only. The Berger Partnership makes no warranty that actual costs will not vary from the amounts indicated and assumes no liability for such variance.

This MPCC is based on master plan level design.

Fees such as permits, inspections, and utility connections are not included in this MPCC.

No maintenance costs are included in this MPCC.

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Downtown Trail (2012)

Item Description	Quantity	Unit	Unit Cost	Total
Site Preparation				
Clearing/Grubbing	60,000	SF	1.00	60,000.00
Scope Includes:				
Area outside of stormwater trunk line limit of work only				
28' wide swath (6' either side of trail and shoulder width)				
Tree Removal		Allow		10,000.00
Near R.R. abutment				
Remove Railroad Tracks		Allow		75,000.00
Scope Includes:				
Areas outside of stormwater trunk line limit of work only				
Ties and gravel base where needed				
Hauling/Dumping		Allow		75,000.00
Scope Includes:				
RR Ties				
RR Tracks				
Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	60,000	SF	3.00	180,000.00
Scope Includes:				
Area outside of stormwater trunk line limit of work only				
Balanced cut and fill on site				
28' wide swath (6' either side of trail and shoulder width)				
Retaining walls (North and South) at RR abutment for connections to Sammamish River Trail (SRT) over Sammamish River				
Import fill (16' width of trail @ 5' avg depth)	2,000	CY	25.00	50,000.00
(2) 10' tall walls avg. height (7' above/ 3' below)	6,400	FF	20.00	128,000.00
Accommodates 5% Slope Trail (included in trail cost below)				
MSE or precast block				
Railing @ \$15/ LF	640	LF	65.00	41,600.00
Environmental Permitting & Mitigation Allowance		Allowance		140,000.00
T.E.S.C. (Not Included In Cost)				N.I.C.
Subtotal Site Preparation				\$759,600.00
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Subtotal Site Civil Infrastructure				N.I.C.

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Downtown Trail (2012)

Item Description	Quantity	Unit	Unit Cost	Total
Site Improvements				
Trail- 12' wide asphalt trail	4,900	LF	30.00	147,000.00
4" asphalt lift				
Trail- Additional cost of 12' wide concrete trail	4,900	LF	12.00	58,800.00
CIP concrete paving (4" depth concrete)				
16' crushed rock subgrade (including 2' crushed rock shoulders both sides)	1,350	LF	30.00	40,500.00
Occurs outside of stormwater trunk line limit of work (crushed rock base included in stormwater trunk line scope of work)				
CIP concrete stairs at Sammamish River (includes rebar)	150	CY	950.00	142,500.00
Improvements between Redmond Way crossing and SRT atop abutment				
Improvements include:				
Existing subgrade to remain				
16' wide concrete paving with thickened edge	1,300	LF	50.00	65,000.00
Railing	2,600	LF	65.00	169,000.00
Seating Nodes				
Improvements include:				
Concrete Pavers (600 sf per seating node)	16	EA	9,600.00	153,600.00
Tables	8	EA	2,500.00	20,000.00
Benches	16	EA	2,500.00	40,000.00
Bike Racks	16	EA	1,500.00	24,000.00
Trash Can (Trash, Recycling, Pet Waste)	16	EA	1,000.00	16,000.00
East/ West Pedestrian Street Crossings at: 170th Ave. NE, 166th Ave. NE, 161st Ave. NE, 164th Ave. NE (future 2012) & Leary				
Improvements Include:				
Enhanced paving (800 sf per crossing)	5	EA	5,600.00	28,000.00
Striping	5	EA	5,000.00	25,000.00
Bollards (6 per crossing)	5	EA	1,200.00	6,000.00
Potential modification of traffic control signaling at existing intersections	2	EA	100,000.00	200,000.00
Modifications include:				
164th Ave. NE and 166th Ave. NE				
4-way improvements				
Ped heads, push buttons and wiring at signals				
North/South Mid-Block Pedestrian Street Crossings to Town Center Mall across NE 76th St at 168th				
Improvements Include:				
Enhanced paving (800 sf per crossing)	1	EA	5,600.00	5,600.00
Striping	1	EA	5,000.00	5,000.00
Lighted pedestrian mid-block crossing	1	EA	75,000.00	75,000.00
Redmond Way Trestle Improvements as needed to meet WSDOT/AASHTO standards				
Enhance pedestrian and safety amenities (rail demo and asphalt trail and subgrade included elsewhere)		Allow		20,000.00
170th Trestle Improvements as needed to meet WSDOT/ AASHTO standards		Allow		10,000.00
Improvement allowance to provide:				
Grading to meet ADA				
Decking to meet ADA				
Guardrails				
Signage				
Traffic and trail etiquette signs on trail		Allow		5,000.00
Traffic control signage as needed on approaching roads		Allow		10,000.00
Lighting- safety pathway lighting				
Approximately 1 fixture every 75 ft.		Allow		237,000.00
				N.I.C.
Subtotal Site Improvements				\$1,503,000.00

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Downtown Trail (2012)

Item Description	Quantity	Unit	Unit Cost	Total
Landscape				
Irrigation				
2" Meter (provided by municipality)		Allow		9,000.00
POC (DCVA, Master valve, vaults, etc.; assumes 2" connection)		Allow		20,000.00
Controller (commercial, maxicom)		Allow		15,000.00
Mainline system w/ quick couplers	6,200	LF	28.00	173,600.00
Meadow Irrigation	67,800	SF	1.00	67,800.00
Planting Bed Irrigation	72,000	SF	1.75	126,000.00
Site Restoration				
Improvements include:				
6' on either side of path (5,650 LF)				
Import 4" of topsoil	828	CY	35.00	28,980.00
Meadow mix (seeded)	67,800	SF	0.50	33,900.00
Planting Areas at Pedestrian Street Crossings				
Improvements include:				
9 street crossings				
500 sf of planting at each crossing				
Topsoil import- 6"	250	CY	35.00	8,750.00
Trees	50	EA	400.00	20,000.00
Shrubs, groundcover, and mulch @ edge restoration	500	SF	8.00	4,000.00
Planting Areas at Seating Nodes				
Improvements include:				
16 seating nodes				
500 sf at each seating node				
Topsoil import- 6"	250	CY	35.00	8,750.00
Trees	50	EA	400.00	20,000.00
Shrubs, groundcover, and mulch @ edge restoration	500	SF	8.00	4,000.00
Subtotal Landscape				\$539,780.00
Construction Soft Costs				
Traffic Control				
		Allow		45,000.00
Includes:				
160th, Leary, 166th and 170th				
2 flaggers, 1 uniformed police officer				
4 portable message signs				
Survey (1.5% Project Cost)				\$42,710.70
Mobilization (8% Project Total)				\$227,790.40
Subtotal Construction Soft Costs				\$315,501.10
Total				\$3,117,881.10

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Downtown Trail (2012)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$623,576.22
Subtotal				\$3,741,457.32
General Conditions (5%)				\$187,072.87
Subtotal				\$3,928,530.19
Contractor Overhead (5%)				\$196,426.51
Subtotal				\$4,124,956.70
Contractor Profit (6%)				\$247,497.40
Total Construction Contract Amount				\$4,372,454.10

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$415,383.14
Estimated Design Fees (15% Total Construction Contract Amount)				\$655,868.11
Administrative Costs (10% Design Contingency)				\$65,586.81
Permitting Fees (N.I.C.)				\$0.00
Design and Administrative Soft Costs Subtotal				\$1,136,838.07

Grand Total Downtown Trail 2012 Project Amount				\$5,509,292.16
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Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Sammamish River Crossing (Sammamish River to Redmond Way)				
Site Preparation				
Clearing/Grubbing	30,000	SF	1.00	30,000.00
Scope Includes: 75% of landscape area				
Tree Removal		Allow		2,000.00
Near R.R. abutment				
Hauling/Dumping		Allow		5,000.00
Scope Includes: Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	15,000	SF	3.00	45,000.00
Scope Includes: Balanced cut and fill on site				
T.E.S.C. (Not Included In Cost)				N.I.C.
Sammamish River Crossing 2016-2020 Subtotal Site Preparation				\$82,000.00
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Sammamish River Crossing 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.
Site Improvements				
"The Ties"	1,255	LF	Varies	
Scope Includes:				
60% of length of Ties to be flush stone paving bands	879	LF	70.00	61,495.00
40% of length of Ties to be 2' high stone seatwalls	377	LF	220.00	82,830.00
8% of length receives screen, shelter or feature attachments	188	LF	700.00	131,775.00
Art Integration Allowance			Allow	500,000.00
Sammamish River Crossing 2016-2020 Subtotal Site Improvements				\$776,100.00
Landscape				
Irrigation				
Meadow Irrigation	20,000	SF	1.00	20,000.00
Planting Bed Irrigation	10,000	SF	1.75	17,500.00
Site Restoration				
Improvements include:				
Import 4" of topsoil at meadow areas	244	CY	35.00	8,540.00
Meadow mix (seeded)	20,000	SF	0.50	10,000.00
Planting Areas				
Topsoil import- 6"	185	CY	35.00	6,475.00
Trees	25	EA	400.00	10,000.00
Shrubs, groundcover, and mulch	10,000	SF	8.00	80,000.00
Sammamish River Crossing 2016-2020 Subtotal Landscape				\$152,515.00
Sammamish River Crossing 2016-2020 Subtotal				\$1,010,615.00

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$202,123.00
Project Subtotal				\$1,212,738.00
General Conditions (5%)				\$60,636.90
Subtotal				\$1,273,374.90
Contractor Overhead (5%)				\$63,668.75
Subtotal				\$1,337,043.65
Contractor Profit (6%)				\$80,222.62
Sammamish River Crossing 2016-2020 Construction Contract Amount				\$1,417,266.26

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$134,640.30
Estimated Design Fees (15% Total Construction Contract Amount)				\$212,589.94
Administrative Costs (10% Design Contingency)				\$21,258.99
Permitting Fees (N.I.C.)				\$0.00
Sammamish River Crossing 2016-2020 Design and Administrative Soft Costs				\$368,489.23
TOTAL Sammamish River Crossing 2016-2020 Costs				\$1,785,755.49

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Higher Ground (Redmond Way to 161st Ave NE)				
Site Preparation				
Clearing/Grubbing	37,865	SF	1.00	37,865.00
Scope Includes:				
75% of landscape & paving area				
Tree Removal		Allow		2,000.00
Near R.R. abutment				
Hauling/Dumping		Allow		3,000.00
Scope Includes:				
Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	15,000	SF	3.00	45,000.00
Scope Includes:				
Balanced cut and fill on site				
T.E.S.C. (Not Included In Cost)				N.I.C.
Higher Ground 2016-2020 Subtotal Site Preparation				\$87,865.00
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Higher Ground 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.
Site Improvements				
Paving Areas (Total)	10,110	SF	Varies	
Includes:				
80% CIP concrete paving (4" depth, standard finish)	8,088	SF	3.50	28,308.00
20% CIP enhanced concrete paving (4" depth, standard finish)	2,022	SF	7.00	14,154.00
CIP concrete stairs (includes rebar)	85	CY	950.00	80,750.00
"The Ties"	1,835	LF	Varies	
Scope Includes:				
60% of length of Ties to be flush stone paving bands	1,285	LF	70.00	89,915.00
40% of length of Ties to be 2' high stone seatwalls	551	LF	220.00	121,110.00
8% of length receives screen, shelter or feature attachments	275	LF	700.00	192,675.00
Art Integration Allowance			Allow	250,000.00
Higher Ground 2016-2020 Subtotal Site Improvements				\$776,912.00
Landscape				
Irrigation				
Meadow Irrigation (60%)	24,220	SF	1.00	24,220.00
Planting Bed Irrigation (40%)	9,690	SF	1.75	16,957.50
Site Restoration				
Improvements include:				
Import 4" of topsoil at meadow areas	296	CY	35.00	10,360.78
Meadow mix (seeded)	24,220	SF	0.50	12,110.00
Planting Areas				
Topsoil import- 6"	179	CY	35.00	6,280.56
Trees	25	EA	400.00	10,000.00
Shrubs, groundcover, and mulch	9,690	SF	8.00	77,520.00
Higher Ground 2016-2020 Subtotal Landscape				\$157,448.83
Higher Ground 2016-2020 Subtotal				\$1,022,225.83

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$204,445.17
Project Subtotal				\$1,226,671.00
General Conditions (5%)				\$61,333.55
Subtotal				\$1,288,004.55
Contractor Overhead (5%)				\$64,400.23
Subtotal				\$1,352,404.78
Contractor Profit (6%)				\$81,144.29
TOTAL Higher Ground 2016-2020 Construction Contract Amount				\$1,433,549.06

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$136,187.16
Estimated Design Fees (15% Total Construction Contract Amount)				\$215,032.36
Administrative Costs (10% Design Contingency)				\$21,503.24
Permitting Fees (N.I.C.)				\$0.00
Higher Ground 2016-2020 Design and Administrative Soft Costs				\$372,722.76

TOTAL Higher Ground 2016-2020 Costs \$1,806,271.82

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Station (161st Ave NE to Leary Way)				
Site Preparation				
Clearing/Grubbing	49,031	SF	1.00	49,031.25
Scope Includes: 75% of landscape & paving area				
Hauling/Dumping		Allow		2,000.00
Scope Includes: Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	30,000	SF	3.00	90,000.00
Scope Includes: Balanced cut and fill on site				
T.E.S.C. (Not Included In Cost)				N.I.C.
Station 2016-2020 Subtotal Site Preparation				\$141,031.25
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Station 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.
Site Improvements				
Paving Areas (Total)	31,110	SF	Varies	
Includes:				
25% CIP standard finish concrete paving (4" depth)	7,778	SF	3.50	27,221.25
60% CIP enhanced concrete paving (4" depth)	18,666	SF	7.00	130,662.00
15% CIP stone pavers on rat slab	4,667	SF	45.00	209,992.50
"The Ties"	2,145	LF	Varies	
Scope Includes:				
60% of length of Ties to be flush stone paving bands	1,502	LF	70.00	105,105.00
40% of length of Ties to be 2' high stone seatwalls	644	LF	220.00	141,570.00
8% of length receives screen, shelter or feature attachments	322	LF	700.00	225,225.00
Station Canopies	3	EA	80,000.00	240,000.00
Pavilion	1	EA	350,000.00	350,000.00
Site Furnishings			Allow	60,000.00
Art Integration Allowance			Allow	500,000.00
Station 2016-2020 Subtotal Site Improvements				\$1,989,775.75
Landscape				
Irrigation				
Meadow Irrigation (20%)	3,584	SF	1.00	3,584.25
Planting Bed Irrigation (80%)	14,337	SF	1.75	25,089.75
Site Restoration				
Improvements include:				
Import 4" of topsoil at meadow areas	44	CY	35.00	1,533.26
Meadow mix (seeded)	3,584	SF	0.50	1,792.13
Planting Areas				
Topsoil import- 6"	266	CY	35.00	9,292.50
Trees	25	EA	400.00	10,000.00
Shrubs, groundcover, and mulch	14,337	SF	8.00	114,696.00
Station 2016-2020 Subtotal Landscape				\$165,987.89
Station 2016-2020 Subtotal				\$2,296,794.89

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$459,358.98
Project Subtotal				\$2,756,153.87
General Conditions (5%)				\$137,807.69
Subtotal				\$2,893,961.56
Contractor Overhead (5%)				\$144,698.08
Subtotal				\$3,038,659.64
Contractor Profit (6%)				\$182,319.58
Station 2016-2020 Construction Contract Amount				\$3,220,979.21

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$305,993.03
Estimated Design Fees (15% Total Construction Contract Amount)				\$483,146.88
Administrative Costs (10% Design Contingency)				\$48,314.69
Permitting Fees (N.I.C.)				\$0.00
Station 2016-2020 Design and Administrative Soft Costs				\$837,454.60

TOTAL Station 2016-2020 Costs				\$4,058,433.81
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Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Promenade (Leary Way to 164th Ave NE)				
Site Preparation				
Clearing/Grubbing	16,680	SF	1.00	16,680.00
Scope Includes: 75% of landscape & paving area				
Hauling/Dumping		Allow		2,000.00
Scope Includes: Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	5,000	SF	3.00	15,000.00
Scope Includes: Balanced cut and fill on site				
T.E.S.C. (Not Included In Cost)				N.I.C.
Promenade 2016-2020 Subtotal Site Preparation				\$33,680.00
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Promenade 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.
Site Improvements				
Paving Areas (Total)	12,055	SF	Varies	
Includes:				
25% CIP standard finish concrete paving (4" depth)	3,014	SF	3.50	10,548.13
60% CIP enhanced concrete paving (4" depth)	7,233	SF	7.00	50,631.00
15% Stone pavers on rat slab	1,808	SF	45.00	81,371.25
"The Ties"	2,145	LF	Varies	
Scope Includes:				
60% of length of Ties to be flush stone paving bands	1,502	LF	70.00	105,105.00
40% of length of Ties to be 2' high stone seatwalls	644	LF	220.00	141,570.00
8% of length receives screen, shelter or feature attachments	322	LF	700.00	225,225.00
Canopies	3	EA	40,000.00	120,000.00
Screens	160	LF	100.00	16,000.00
Site Furnishings			Allow	40,000.00
Art Integration Allowance			Allow	500,000.00
Promenade 2016-2020 Subtotal Site Improvements				\$1,290,450.38
Landscape				
Irrigation				
Planting Bed Irrigation (100%)	10,185	SF	1.75	17,823.75
Planting Areas				
Topsoil import- 6"	189	CY	35.00	6,601.39
Trees	15	EA	400.00	6,000.00
Shrubs, groundcover, and mulch	10,185	SF	8.00	81,480.00
Promenade 2016-2020 Subtotal Landscape				\$111,905.14
Promenade 2016-2020 Subtotal				\$1,436,035.51

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$287,207.10
Project Subtotal				\$1,723,242.62
General Conditions (5%)				\$86,162.13
Subtotal				\$1,809,404.75
Contractor Overhead (5%)				\$90,470.24
Subtotal				\$1,899,874.98
Contractor Profit (6%)				\$113,992.50
Promenade 2016-2020 Construction Contract Amount				\$2,013,867.48

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$191,317.41
Estimated Design Fees (15% Total Construction Contract Amount)				\$302,080.12
Administrative Costs (10% Design Contingency)				\$30,208.01
Permitting Fees (N.I.C.)				\$0.00
Promenade 2016-2020 Design and Administrative Soft Costs				\$523,605.55

TOTAL Promenade 2016-2020 Costs				\$2,537,473.03
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Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Open Space (164th Ave NE to 166th Ave NE)				
Site Preparation				
Clearing/Grubbing	28,010	SF	1.00	28,010.25
Scope Includes: 75% of landscape & paving area				
Hauling/Dumping		Allow		5,000.00
Scope Includes: Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	15,000	SF	3.00	45,000.00
Scope Includes: Balanced cut and fill on site				
T.E.S.C. (Not Included In Cost)				N.I.C.
Open Space 2016-2020 Subtotal Site Preparation				\$78,010.25
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Open Space 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.
Site Improvements				
Paving Areas (Total)	13,452	SF	Varies	
Includes:				
25% CIP standard finish concrete paving (4" depth)	3,363	SF	3.50	11,770.50
60% CIP enhanced concrete paving (4" depth)	8,071	SF	7.00	56,498.40
15% Stone pavers on rat slab	2,018	SF	45.00	90,801.00
"The Ties"	2,145	LF	Varies	
Scope Includes:				
60% of length of Ties to be flush stone paving bands	1,502	LF	70.00	105,105.00
40% of length of Ties to be 2' high stone seatwalls	644	LF	220.00	141,570.00
8% of length receives screen, shelter or feature attachments	322	LF	700.00	225,225.00
Canopies	7	EA	40,000.00	280,000.00
Screens	385	LF	100.00	38,500.00
Site Furnishings			Allow	60,000.00
Art Integration Allowance			Allow	500,000.00
Open Space 2016-2020 Subtotal Site Improvements				\$1,509,469.90
Landscape				
Irrigation				
Planting Bed Irrigation (100%)	23,895	SF	1.75	41,816.25
Planting Areas				
Topsoil import- 6"	443	CY	35.00	15,487.50
Trees	15	EA	400.00	6,000.00
Shrubs, groundcover, and mulch	23,895	SF	8.00	191,160.00
Open Space 2016-2020 Subtotal Landscape				\$254,463.75
Open Space 2016-2020 Subtotal				\$1,841,943.90

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$368,388.78
Project Subtotal				\$2,210,332.68
General Conditions (5%)				\$110,516.63
Subtotal				\$2,320,849.31
Contractor Overhead (5%)				\$116,042.47
Subtotal				\$2,436,891.78
Contractor Profit (6%)				\$146,213.51
TOTAL Open Space 2016-2020 Construction Contract Amount				\$2,583,105.29

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$245,395.00
Estimated Design Fees (15% Total Construction Contract Amount)				\$387,465.79
Administrative Costs (10% Design Contingency)				\$38,746.58
Permitting Fees (N.I.C.)				\$0.00
Open Space 2016-2020 Design and Administrative Soft Costs				\$671,607.37

TOTAL Neighborhood 2016-2020 Costs				\$3,254,712.66
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Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Neighborhood (166th Ave NE to 170th Ave NE)				
Site Preparation				
Clearing/Grubbing	50,066	SF	1.00	50,066.25
Scope Includes:				
75% of landscape & paving area				
Hauling/Dumping		Allow		5,000.00
Scope Includes:				
Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	10,000	SF	3.00	30,000.00
Scope Includes:				
Balanced cut and fill on site				
T.E.S.C. (Not Included In Cost)				N.I.C.
Neighborhood 2016-2020 Subtotal Site Preparation				\$85,066.25
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Neighborhood 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.
Site Improvements				
Paving Areas (Total)	5,075	SF	Varies	
Includes:				
70% CIP standard finish concrete paving (4" depth)	3,553	SF	3.50	12,433.75
20% CIP enhanced concrete paving (4" depth)	1,015	SF	7.00	7,105.00
10% Stone pavers on rat slab	508	SF	45.00	22,837.50
"The Ties"	1,290	LF	Varies	
Scope Includes:				
60% of length of Ties to be flush stone paving bands	903	LF	70.00	63,210.00
40% of length of Ties to be 2' high stone seatwalls	387	LF	220.00	85,140.00
8% of length receives screen, shelter or feature attachments	194	LF	700.00	135,450.00
Canopies	2	EA	40,000.00	80,000.00
Screens	835	LF	100.00	83,500.00
Site Furnishings			Allow	30,000.00
Art Integration Allowance			Allow	750,000.00
Neighborhood 2016-2020 Subtotal Site Improvements				\$1,269,676.25
Landscape				
Irrigation				
Meadow Irrigation (50%)	30,840	SF	1.00	30,840.00
Planting Bed Irrigation (50%)	30,840	SF	1.75	53,970.00
Planting Areas				
Topsoil import- 6"	571	CY	35.00	19,988.89
Trees	15	EA	400.00	6,000.00
Meadow mix (seeded)	30,840	SF	0.50	15,420.00
Shrubs, groundcover, and mulch	30,840	SF	8.00	246,720.00
Neighborhood 2016-2020 Subtotal Landscape				\$372,938.89
Neighborhood 2016-2020 Subtotal				\$1,727,681.39

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$345,536.28
Project Subtotal				\$2,073,217.67
General Conditions (5%)				\$103,660.88
Subtotal				\$2,176,878.55
Contractor Overhead (5%)				\$108,843.93
Subtotal				\$2,285,722.48
Contractor Profit (6%)				\$137,143.35
Neighborhood 2016-2020 Construction Contract Amount				\$2,422,865.83

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$230,172.25
Estimated Design Fees (15% Total Construction Contract Amount)				\$363,429.87
Administrative Costs (10% Design Contingency)				\$36,342.99
Permitting Fees (N.I.C.)				\$0.00
Neighborhood 2016-2020 Design and Administrative Soft Costs				\$629,945.11

TOTAL Neighborhood 2016-2020 Costs \$3,052,810.94

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Creekside (170th Ave NE to Bear Creek Trail)				
Site Preparation				
Clearing/Grubbing	41,745	SF	1.00	41,745.00
Scope Includes: 75% of landscape & paving area				
Hauling/Dumping		Allow		5,000.00
Scope Includes: Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	20,000	SF	3.00	60,000.00
Scope Includes: Balanced cut and fill on site				
T.E.S.C. (Not Included In Cost)				N.I.C.
Creekside 2016-2020 Subtotal Site Preparation				\$106,745.00
Site Civil Infrastructure (Not Included In Cost)				
Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Creekside 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.
Site Improvements				
Paving Areas (Total)	3,250	SF	Varies	
Includes:				
70% CIP standard finish concrete paving (4" depth)	2,275	SF	3.50	7,962.50
20% CIP enhanced concrete paving (4" depth)	650	SF	7.00	4,550.00
10% Stone pavers on rat slab	325	SF	45.00	14,625.00
"The Ties"	810	LF	Varies	
Scope Includes:				
60% of length of Ties to be flush stone paving bands	567	LF	70.00	39,690.00
40% of length of Ties to be 2' high stone seatwalls	243	LF	220.00	53,460.00
8% of length receives screen, shelter or feature attachments	122	LF	700.00	85,050.00
Canopies	2	EA	40,000.00	80,000.00
Site Furnishings			Allow	15,000.00
Art Integration Allowance			Allow	500,000.00
Creekside 2016-2020 Subtotal Site Improvements				\$800,337.50
Landscape				
Irrigation				
Meadow Irrigation (80%)	44,528	SF	1.00	44,528.00
Planting Bed Irrigation (20%)	11,132	SF	1.75	19,481.00
Planting Areas				
Topsoil import- 6"	206	CY	35.00	7,215.19
Trees	25	EA	400.00	10,000.00
Meadow mix (seeded)	44,528	SF	0.50	22,264.00
Shrubs, groundcover, and mulch	11,132	SF	8.00	89,056.00
Creekside 2016-2020 Subtotal Landscape				\$192,544.19
Creekside 2016-2020 Improvement Subtotal				\$1,099,626.69

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$219,925.34
Project Subtotal				\$1,319,552.02
General Conditions (5%)				\$65,977.60
Subtotal				\$1,385,529.62
Contractor Overhead (5%)				\$69,276.48
Subtotal				\$1,454,806.10
Contractor Profit (6%)				\$87,288.37
Creekside 2016-2020 Construction Contract Amount				\$1,542,094.47

Design and Administrative Soft Costs

Sales Tax (9.5%)				\$146,498.97
Estimated Design Fees (15% Total Construction Contract Amount)				\$231,314.17
Administrative Costs (10% Design Contingency)				\$23,131.42
Permitting Fees (N.I.C.)				\$0.00
Creekside 2016-2020 Design and Administrative Soft Costs				\$400,944.56
TOTAL Creekside 2016-2020 Costs				\$1,943,039.03

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Sammamish Valley (Sammamish River Trestle to NE 124th St.)				
Site Preparation				
Clearing/Grubbing	152,460	SF	1.00	152,460.00
Scope Includes:				
Assumption that train tracks are removed				
Area outside of stormwater trunk line limit of work only				
6' either side of trail and shoulder width				
Hauling/Dumping		Allow		5,000.00
Scope Includes:				
Landscape Debris				
Rough Grading (Assumes balanced cut and fill on site. Does not include import or export of fill)	20,000	SF	3.00	60,000.00
Scope Includes:				
Balanced cut and fill on site				
Environmental Permitting & Mitigation Allowance		Allowance		120,000.00
T.E.S.C. (Not Included In Cost)				N.I.C.
Sammamish Valley 2016-2020 Subtotal Site Preparation				\$337,460.00

Site Civil Infrastructure (Not Included In Cost)

Water				N.I.C.
Sewer				N.I.C.
Electrical				N.I.C.
Sammamish Valley 2016-2020 Subtotal Site Civil Infrastructure				N.I.C.

Site Improvements

Trail- 12' wide asphalt trail	12,105	LF	30.00	363,150.00
4" asphalt lift				
Trail- Additional cost of 12' wide concrete trail	12,105	LF	12.00	145,260.00
CIP concrete paving (4" depth concrete)				
16' crushed rock subgrade (including 2' crushed rock shoulders both sides)	14,475	LF	30.00	434,250.00
Improvements between Sammamish River Trestle and 90th St. NE atop abutment				
Improvements include:				
Existing subgrade to remain				
16' wide concrete paving with thickened edge	2,370	LF	50.00	118,500.00
Railing	2,370	LF	65.00	154,050.00
CIP concrete stair connections south of 90th St.	120	CY	950.00	114,000.00
"The Ties"	6,000	LF	Varies	
Scope Includes:				
400 LF (avg.) at each intersection, crossing, driveway, and node				
60% of length of Ties to be flush stone paving bands	4,200	LF	70.00	294,000.00
40% of length of Ties to be 2' high stone seatwalls	1,800	LF	220.00	396,000.00
8% of length receives screen, shelter or feature attachments	900	LF	700.00	630,000.00
Primary Seating Nodes (Landings)				
Improvements include:				
Concrete Pavers (800sf per seating node)	3	EA	12,000.00	36,000.00
Tables	6	EA	2,500.00	15,000.00
Benches	6	EA	2,500.00	15,000.00
Bike Racks	1	EA	1,500.00	1,500.00
Trash Can (Trash, Recycling, Pet Waste)	1	EA	1,000.00	1,000.00
Art Integration Allowance	3	EA	250,000.00	750,000.00

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Seating Nodes (Islands & Eddies)				
Improvements include:				
Concrete Pavers (600sf per seating node)	8	EA	9,600.00	76,800.00
Tables	8	EA	2,500.00	20,000.00
Benches	8	EA	2,500.00	20,000.00
Bike Racks	8	EA	1,500.00	12,000.00
Trash Can (Trash, Recycling, Pet Waste)	8	EA	1,000.00	8,000.00
Art Integration Allowance	8	EA	25,000.00	200,000.00
Pedestrian Street Crossings at: 116th Ave. NE, 95th St. NE, 90th				
Improvements Include:				
Enhanced paving (800sf per crossing)	3	EA	5,600.00	16,800.00
Striping	3	EA	5,000.00	15,000.00
Bollards (6 per crossing)	3	EA	1,200.00	3,600.00
Potential modification of traffic control signaling at existing	2	EA	100,000.00	200,000.00
Modifications include:				
116th, 95th and 90th				
4-way improvements				
Ped heads, push buttons and wiring at signals				
Pedestrian Driveway Crossings from Sammamish River at RR				
Major Pedestrian Driveway Crossings (Commercial Driveways > 35' width)				
Improvements Include:				
Enhanced paving (600sf per crossing)	2	EA	2,800.00	5,600.00
Bollards (6 per crossing)	2	EA	1,200.00	2,400.00
Striping	2	EA	1,250.00	2,500.00
Modifications include:				
Permanent Signage				
Minor Pedestrian Driveway Crossings (Driveways < 35' width)				
Improvements Include:				
Enhanced paving (300sf per crossing)	5	EA	1,400.00	7,000.00
Bollards (6 per crossing)	5	EA	1,200.00	6,000.00
Striping	5	EA	850.00	4,250.00
Modifications include:				
Permanent Signage				
Canopies	11	EA	40,000.00	440,000.00
Sammamish River Trestle Improvements				N.I.C.
154th Ave NE Bridge Improvements				N.I.C.
Sammamish Valley 2016-2020 Subtotal Site Improvements				\$4,507,660.00

Landscape

Irrigation

2" Meter (provided by municipality)		Allow		9,000.00
POC (DCVA, Master valve, vaults, etc.; assumes 2" connection)		Allow		20,000.00
Controller (commercial, maxicom)		Allow		15,000.00
Mainline system w/ quick couplers	14,475	LF	28.00	405,300.00
Meadow Irrigation (80%)	44,528	SF	1.00	44,528.00
Planting Bed Irrigation (20%)	11,132	SF	1.75	19,481.00

Planting Areas

Topsoil import- 6"	206	CY	35.00	7,215.19
Trees	25	EA	400.00	10,000.00
Meadow mix (seeded)	44,528	SF	0.50	22,264.00
Shrubs, groundcover, and mulch	11,132	SF	8.00	89,056.00

Site Restoration

Improvements include:				
6' on either side of path (14,475LF)				
Import 4" of topsoil	2,123	CY	35.00	74,305.00
Meadow mix (seeded)	173,700	SF	0.50	86,850.00

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Trail Enhancements (2016-2020)

Item Description	Quantity	Unit	Unit Cost	Total
Planting Areas at Pedestrian Street Crossings				
Improvements include:				
3 street crossings				
500 sf of planting at each crossing				
Topsoil import- 6"	30	CY	35.00	1,050.00
Trees	24	EA	400.00	9,600.00
Shrubs, groundcover, and mulch @ edge restoration	1,500	SF	8.00	12,000.00
Planting Areas at Seating Nodes (Landings, Islands & Eddies)				
Improvements include:				
11 seating nodes				
600 sf at each seating node				
Topsoil import- 6"	125	CY	35.00	4,375.00
Trees	100	EA	400.00	40,000.00
Shrubs, groundcover, and mulch @ edge restoration	6,600	SF	8.00	52,800.00
Sammamish Valley 2016-2020 Subtotal Landscape				\$922,824.19
Sammamish Valley 2016-2020 Improvement Subtotal				\$5,767,944.19
Escalation (undetermined %)				\$0.00
Design Contingency (20%)				\$1,153,588.84
Project Subtotal				\$6,921,533.02
General Conditions (5%)				\$346,076.65
Subtotal				\$7,267,609.67
Contractor Overhead (5%)				\$363,380.48
Subtotal				\$7,630,990.16
Contractor Profit (6%)				\$457,859.41
Construction Contract Amount				\$8,088,849.57
Design and Administrative Soft Costs				
Sales Tax (9.5%)				\$768,440.71
Estimated Design Fees (15% Total Construction Contract Amount)				\$1,213,327.43
Administrative Costs (10% Design Contingency)				\$121,332.74
Permitting Fees (N.I.C.)				\$0.00
Design and Administrative Soft Costs Subtotal				\$2,103,100.89
TOTAL Sammamish Valley 2016-2020 Costs				\$10,191,950.45
Grand Total 2016-2020 Improvements				\$28,630,447.24

Master Plan Cost Considerations

Project: Redmond BNSF Trail Corridor

Date: May 2011

Project Description

Total Cost

Phase 1- Downtown Trail (2012)	\$5,509,292.16
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Phase 2- Downtown and Sammamish Valley Trail Enhancements (2016-2020)	\$28,630,447.24
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