

Luther Burbank Park Probable Cost of Construction

April 2006



The Berger Partnership PS
Landscape Architecture

Preface:

This master plan is intended to serve as a decision-making guide for the City. It documents physical improvements that can be undertaken in the park to better meet the program needs of park users and the City. "Decision-making" frequently implies spending money; as a result this plan includes preliminary cost estimates for specific items in the park. 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 Luther Burbank Park Improvements. This Probable Cost of Construction (PCC) has been broken down into geographic sections, within which specific construction items and tasks have been itemized. The cost estimate is intended to provide enough detail to allow cost information to be extracted in order to define project scope and set budgets for possible future phases.

This estimate has been prepared on the assumption that a general contractor will complete the work

The PCC is completed based on a master plan level of design, allowing for an adequate level of detail to identify proposed improvements and assign costs and priorities. Typically the next stages of design (after master plan) are more refined and specific design and engineering will be developed for selected park elements as they are prepared to be implemented (i.e. through a typical process of design development and construction documents). This evolution of design allows greater certainty over costs. In reviewing this PCC, be aware that significant design remains during which more cost details can be generated. It is important to note that proposed design improvements are based on aerial photography and a very limited site survey and have been completed to a degree of detail appropriate to these sources.

Assumptions:

A list of assumptions related to the estimate has been included. Given that the project is at an early level of development, much of the cost work must be based on assumptions of construction type, project scope, and allowances used to estimate quantities. Additionally, area square footages used to calculate some of the costs are based on the site aerial photo and GIS data, leading to a reasonable but not exact level of accuracy. An awareness of these assumptions is critical in using this cost estimate as an effective tool.

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Mark-up Definitions:

There are numerous mark-ups that are generally applied to the direct construction costs, and the range of these mark-ups can vary greatly. Included in these mark-ups are contingencies for both design and construction. As portions of the master plan are pursued for further design development, the evolution of design allows greater certainty over costs and as a result, diminishes the amount of design and construction contingency necessary as more certainty is realized. Regardless of the design detail, retaining contingencies is customary and prudent for projects of this nature.

Furthermore, some of the noted elements of the master plan could be pursued by Parks staff, reducing or eliminating some of these mark-ups. For this reason, *we have not included mark-ups on the direct construction cost*, but are including these possible mark-ups for your consideration in later budgeting.

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 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 on 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 PCC 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. General conditions are generally assumed to be 5- 8%.

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- Contractor Overhead: Home office costs to the general contractor including, but not limited to: accounting, billing, estimating, project management, etc. Contractor overhead is generally assumed to be 5%.
- Contractor Profit: This fee is a percentage of gross project costs. Contractor profit is generally assumed to be 6%.
- Escalation: Escalation is a provision for inflation increasing the cost of labor, material 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, a “ballpark” rate of .26% per month could be used in calculating various timing options.

POST-BID COSTS (Soft Costs)

- Sales Tax: This PCC assumes no Sales Tax. However, the local sales tax rate will ultimately be applied to the costs.
- 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. Design fees are generally assumed to be 10%-13% of the total cost of construction.
- Administrative Costs: Administrative costs are generally assumed to be 10%, and include budgeting of city department staff time in realizing a project. For this PCC, no such costs are included.

PROBABLE COST OF CONSTRUCTION QUALIFICATIONS

This Probable Cost of Construction is 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 PCC is based on master plan level design.

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

No maintenance costs are included in this PCC.

End of Report

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 1: Upper Luther Burbank	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing (Non-Trails) *1		Allow		22,000.00
Clear/ Grub*2	25,000	SF	0.40	10,000.00
Hauling/Dumping (Non-Trails)		Allow		12,000.00
Grading (Rough & Fine Grading)	25,000	SF	0.20	5,000.00
Fill Import *3				None
T.E.S.C.I *4				N.I.C.
Subtotal Upper L.B. Site Preparation				\$27,000.00
Site Improvements				
Trails *5				\$783,081.00
84th Ave Bypass Trail		Allow	51,837.00	
I-90 Lid Connector Trail		Allow	52,800.00	
Ravine View Trail		Allow	51,524.00	
North Interior Trail		Allow	212,220.00	
South Interior Trail		Allow	414,700.00	
South Entry Rustic Shelter		Allow		12,000.00
Benches	8	EA	1,000.00	8,000.00
Signage *6	4	Allow		6,000.00
Overlook Along 28th Ave *7		Allow		12,000.00
Street Lighting				N.I.C.
Street Improvements *8	800	SF	12.00	9,600.00
Ropes Course		Allow		60,000.00
Bridge *9		Allow		75,000.00
Forest Overlook/ Treehouse		Allow		15,000.00
Subtotal Upper L.B. Site Improvements				\$980,681.00
Landscape				
Trees (Estimated)	100	EA	300.00	30,000.00
Shrubs & Groundcover *10	55,000	SF	1.50	82,500.00
Soil Amendment*11	30	CY	40.00	1,200.00
Mulch *12	95	CY	40.00	3,800.00
Irrigation *13				Not Used.
Subtotal L.B. Site Site Landscape				\$117,500.00
Upper L.B. Total				\$1,125,181.00

Luther Burbank Cost Estimate Assumptions

Area 1: Upper Luther Burbank

The following assumptions have been made in providing the probable cost of construction:

- *1 Assumes demolition & site clearing included all clearing/ grubbing, vegetation removal, hardscape removal, existing structures demolition, and hauling & dumping of materials. Work associated with trail construction not included as it is represented in estimates provided by the Mountains to Sound Greenway Trust.
- *2 Area calculation for clearing & grubbing, grading, and shrubs & groundcover is estimated as proposed (estimated) trail plus 3 foot swath on both sides of trail
- *3 Cut & fill to be balanced on site
- *4 Temporary Erosion & Sedimentation Control not included as method to be determined.
- *5 Cost estimate provided by Mountains to Sound Greenway Trust Report
- *6 Wayfinding and interpretive signage included in signage allowance
- *7 Overlook along 28th Avenue includes baulustrade and paving/ pavers
- *8 Street improvements include asphalt paving and sub-grade for vehicle pull-outs
- *9 Bridge figure on low end of bridge estimate, suspension bridge supported by public could be more costly
- *10 Pit planting of small plants (1 gal. max.) @ large spacing
- *11 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth. Applied at pit planting only
- *12 Mulch is 3" in depth in areas of new planting
- *13 Irrigation not used in this section of the Park

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Project: Luther Burbank Master Plan

Date: March 2006

Area 2: Downtown Entry	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing*1		Allow		\$10,000.00
Clear/ Grub	2,000	SF	0.20	400.00
Asphalt Removal	4,500	SF	0.70	3,150.00
Hauling/Dumping		Allow		6,000.00
Underdrainage *2		Allow		8,000.00
Grading (Rough & Fine Grading)	25,000	SF	0.20	5,000.00
T.E.S.C.I *3				N.I.C.
Subtotal Downtown Entry Preparation				\$23,000.00
Site Improvements				
Enhanced Paving/ Pavers	1,500	SF	14.00	21,000.00
Asphalt Paths*4 *5	2,000	SF	3.50	7,000.00
Tables	3	EA	1,000.00	3,000.00
Benches	16	EA	1,000.00	16,000.00
Interpretive Signage*6	2	Allow		6,000.00
Sculptural Element				N.I.C.
Bocce Court		Allow		5,000.00
Chess Board		Allow		3,000.00
Subtotal Downtown Entry Site Improvements				\$61,000.00
Landscape				
Irrigation*7	50,500	SF	1.50	75,750.00
Lawn*8	47,000	SF	0.20	9,400.00
Shrubs & Groundcover *9	3,500	SF	2.00	7,000.00
Trees (Estimated)	15	EA	300.00	4,500.00
Soil Amendment*10	32	CY	40.00	1,280.00
Mulch*11	16	CY	40.00	640.00
Subtotal Downtown Entry Landscape				\$98,570.00
Downtown Entry Total				\$182,570.00

Luther Burbank Cost Estimate Assumptions

Area 2: Downtown Entry

The following assumptions have been made in providing the probable cost of construction:

- *1 Assumes demolition & site clearing includes all clearing/ grubbing, vegetation removal, hardscape removal, existing structures demolition, and hauling & dumping of materials
- *2 Underdrainage allowance is for plaza & bocce area
- *3 Temporary Erosion & Sedimentation Control not included as method (overall or phased) to be determined.
- *4 Existing paths to be reused, quantity reflects additional new paths only
- *5 Assumes asphalt paths are 5' wide
- *6 Wayfinding and interpretive signage included in signage allowance
- *7 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *8 Lawn restoration includes ripping & tilling 50% of existing lawn into grade & importing 4" sand & tilling to depth of 8"-10" & seeding.
- *9 Planting is primarily for enhancement of existing planting areas although new planting areas are proposed. Enhanced planting is assumed to require planting equivalent to 50% of total planting area while new planting areas are 100% new planting.
- *10 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth. Applied at new planting only
- *11 Mulch is 3" in depth and applied to all planted areas

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Area 3: Burbank Lid					
	Quantity	Unit	Unit Cost		Total
Site Preparation					
Demolition & Site Clearing *1		Allow			2,700.00
Clear	3,500	SF	0.20	700.00	
Hauling/Dumping		Allow		2,000.00	
Grading (Rough & Fine Grading)	26,000	SF	0.20		5,200.00
Subtotal Lid & Connector Preparation					\$7,900.00
Site Improvements					
Overlook improvements (Topping Slab)	4,300	SF	5.00		21,500.00
Asphalt Paths *2 *3	2,750	SF	3.50		9,625.00
Upper Luther Burbank Connection Stairs		Allow			15,000.00
Signage*4	2	Allow			6,000.00
Tables	3	EA	1,000.00		3,000.00
Benches	9	EA	1,000.00		9,000.00
Subtotal Lid & Connector Site Improvements					\$64,125.00
Landscape					
Irrigation*5	33,000	SF	1.50		49,500.00
Lawn Restoration*6	25,000	SF	0.20		5,000.00
Shrubs & Groundcover *7	800	SF	5.00		4,000.00
Soil Amendment*8	13	CY	40.00		520.00
Mulch*9	20	CY	40.00		800.00
Subtotal Lid & Connector Landscape					\$59,820.00
Burbank Lid Total					\$131,845.00

Luther Burbank Cost Estimate Assumptions Area 3: Burbank Lid

The following assumptions have been made in providing the probable cost of construction:

- *1 Assumes demolition & site clearing includes all clearing/ vegetation removal, and hauling & dumping of materials
- *2 Existing paths to be reused, quantity reflects additional new paths only
- *3 Assumes asphalt paths are 5' wide
- *4 Wayfinding and interpretive signage included in signage allowance
- *5 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *6 Lawn restoration includes ripping & tilling existing lawn into grade & importing 4" sand & tilling to depth of 8"-10" & seeding.
- *7 Planting is primarily for enhancement of existing planting areas although new planting areas are proposed. Enhanced planting is assumed to require planting equivalent to 50% of total planting area while new planting areas are 100% new planting.
- *8 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth. Applied at new planting only
- *9 Mulch is 3" in depth and applied to all planting areas.

Note: All work on Burbank Lid to carry additional cost burden associated with work over structural slab & H2O membrane (N.I.C.). Materials import must equal a balance or reduction from export.

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Area 4: Burbank Lid Connector		Quantity	Unit	Unit Cost	Total
Site Preparation					
Demolition & Site Clearing*1			Allow		600.00
Clear/ Grub	3,000	SF	0.20	600.00	
Grading (Rough & Fine Grading)*2	6,000	SF	6.00		36,000.00
Tilling*3	16,000	SF	0.25		4,000.00
Subtotal Lid & Connector Preparation					\$40,600.00
Site Improvements					
Asphalt Paths *4					None
Concrete Paths *5	1,300	SF	5.00		6,500.00
Cast In Place Concrete Stairs *5	450	SF	50.00		22,500.00
Enhanced Sidewalk*6	1,600	SF	6.00		9,600.00
Signage*7	1	Allow			3,000.00
Benches	4	EA	1,000.00		4,000.00
Art Elements					N.I.C.
Subtotal Lid & Connector Site Improvements					\$45,600.00
Landscape					
Irrigation *8	20,000	SF	1.50		30,000.00
Enhanced Native Shrubs & Groundcover	20,000	SF	0.50		10,000.00
Prarie Seed Mix	20,000	SF	0.50		10,000.00
Trees (Estimated)	20	EA	300.00		6,000.00
Soil Amendment*9	100	CY	40.00		4,000.00
Mulch*10	50	CY	40.00		2,000.00
Subtotal Lid & Connector Landscape					\$62,000.00
Burbank Lid Connector Total					\$148,200.00

Luther Burbank Cost Estimate Assumptions Area 4: Burbank Lid Connector

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, and hauling & dumping of materials
- *2 Grading cost estimated at higher rate due to steep topography of site
- *3 Lawn area is tilled and enhanced with soil import
- *4 Existing paths to be reused, quantity reflects additional new paths only
- *5 5' wide concrete sidewalk, paths, and stairs
- *6 Sidewalk from bottom of stairs to South Entry is concrete paving with enhanced treatment with integral color
- *7 Wayfinding and Interpretive Signage included in signage allowance
- *8 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *9 Assumes soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *10 Mulch is 3" in depth and applied to all planted areas

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Area 5: South Entry	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		11,300.00
Clear/ Grub	6,500	SF	0.20	1,300.00
Hauling/Dumping		Allow		10,000.00
Rough Grading	6,545	SF	0.20	1,309.00
Relocation of Light Poles & Utilities				N.I.C.
T.E.S.C.I *2				N.I.C.
Subtotal South Entry Site Preparation				\$12,609.00
Site Improvements				
Enhanced Paving/ Pavers	3,000	SF	14.00	42,000.00
Signage *3	2	Allow		6,000.00
Asphalt Paths *4 *5	1,765	SF	3.50	6,177.50
Benches	4	EA.	1,000.00	4,000.00
South wetland interpretive overlook		Allow		25,000.00
Kayak/ Canoe Launch		Allow		49,100.00
Concrete Pier Removal		Allow		8,000.00
Crushed Rock Path Improvements*6	900	SF	4.00	3,600.00
New Dock	250	SF	150.00	37,500.00
Beach (See Shoreline Section)				
Subtotal South Entry Site Improvements				\$132,277.50
Landscape				
Irrigation*7	8,000	SF	1.50	12,000.00
Shrubs & Groundcover*8	4,000	SF	3.00	12,000.00
Trees (Estimated)	10	EA	300.00	3,000.00
Soil Amendment* 9	37	CY	40.00	1,480.00
Mulch*10	19	CY	40.00	760.00
Subtotal South Entry Landscape				\$29,240.00
South Entry Total				\$174,126.50

Luther Burbank Cost Estimate Assumptions

Area 5: South Entry

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, and hauling & dumping of dock and other materials
- *2 Temporary Erosion & Sedimentation Control not included as method to be determined
- *3 Wayfinding and interpretive signage included in signage allowance
- *4 Existing paths to be reused, quantity reflects additional new paths only
- *5 Assume 5' wide asphalt paths
- *6 Path to car top boat launch and wetland overlook is 5' wide crushed rock with recycled plastic cage or header board
- *7 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *8 Planting is applied to both new and existing planting areas. Enhanced planting involves planting existing areas equivalent roughly to 50% of total planting area while new planting areas are 100% new planting
- *9 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *10 Mulch is 3" in depth and applied to all new planted areas

Note: Vegetation Management of South Wetland not included in cost.

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Area 6: Source Area	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		12,000.00
Clear/ Grub	45,000	SF	0.20	9,000.00
Hauling/Dumping		Allow		3,000.00
Underdrainage *2		Allow		10,000.00
Grading (Rough & Fine Grading)	26,000	SF	0.20	5,200.00
T.E.S.C.I *3				N.I.C.
Subtotal Source Area Site Preparation				\$27,200.00
Site Improvements				
Signage *4	2	Allow		6,000.00
General Source Restoration (Mechanical)				N.I.C.
Asphalt Paths*5 *6	320	SF	2.50	800.00
Path Repair *7	0	SF	3.00	None
Subtotal Source Area Site Improvements				\$6,800.00
Landscape				
Irrigation *8	40,000	SF	1.50	60,000.00
Shrubs & Groundcover *9	5,000	SF	3.00	15,000.00
Enhanced Native Shrubs & Groundcover *9	15,000	SF	1.50	22,500.00
Prarie Seed Mix*9	26,000	SF	0.50	13,000.00
Trees (Estimated)	20	EA	300.00	6,000.00
Lawn Restoration*10	35,000	SF	0.20	7,000.00
Soil Amendment*11	425	CY	40.00	17,000.00
Mulch*12	425	CY	40.00	17,000.00
Wetland Improvements				N.I.C.
Subtotal Source Area Landscape				\$157,500.00
Source Area Total				\$191,500.00

Luther Burbank Cost Estimate Assumptions

Area 6: Source Area

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, and hauling & dumping of materials
- *2 Underdrainage cost includes estimated allowance of enhanced drainage needed at lawn source area
- *3 Temporary Erosion & Sedimentation Control not included as method to be determined.
- *4 Wayfinding and interpretive signage included in signage allowance
- *5 Existing paths to be reused, quantity reflects additional new paths only
- *6 5' wide asphalt paths
- *7 Path repair includes necessary drainage/ run-off control of existing paths & new layer of crushed rock material as needed
- *8 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *9 Planting is applied to both new and existing planting areas. Enhanced planting involves planting existing areas equivalent roughly to 50% of total planting area while new planting areas are 100% new planting
- *10 Lawn restoration includes ripping & tilling 50% existing lawn into grade & importing 4" sand & tilling to depth of 8"-10" & seeding.
- *11 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *12 Mulch is 3" in depth and applied to all planted areas

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Area 7: Swim Beach	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *20		Allow		\$28,250.00
Demolition of Existing Restrooms & Life Guard House		Allow	15,000.00	
Clear/ Grub	10,000	SF	0.20	2,000.00
Tree Removal	5	EA.	250.00	1,250.00
Hauling/Dumping		Allow	10,000.00	
Grading (Rough & Fine Grading)	17,000	SF	0.20	3,400.00
Underdrainage *2		Allow		5,000.00
T.E.S.C.I *3				N.I.C.
Subtotal Swim Beach Site Preparation				\$36,650.00
Site Improvements				
New Beach Facility Building *13				N.I.C.
On- grade beach access points		Allow		5,000.00
Existing Fishing pier repairs/ improvements	1,200	SF	150.00	180,000.00
New floating swim dock		Allow		10,000.00
Signage *4	2	Allow		6,000.00
Concrete Paving	1,650	SF	6.00	9,900.00
Spray Park		Allow		80,000.00
Asphalt Paths *5 *6	0	SF	2.50	None
Path Repair *12	1,500	SF	3.00	4,500.00
Upland sand play area		Allow		8,000.00
Sand volleyball court		Allow		3,000.00
Tables	6	EA	1,000.00	6,000.00
Benches	18	EA	1,000.00	18,000.00
Beach Improvements (See Shoreline Area Section)				
Subtotal Swim Beach Improvements				\$330,400.00
Landscape				
Irrigation *7	10,500	SF	1.50	15,750.00
Lawn Restoration*11	7,500	SF	0.20	1,500.00
Shrubs & Groundcover*8	10,000	SF	3.00	30,000.00
Trees (Estimated)	20	EA	300.00	6,000.00
Soil Amendment*9	90	CY	40.00	3,600.00
Mulch*10	90	CY	40.00	3,600.00
Subtotal Swim Beach Landscape				\$60,450.00
Swim Beach Total				\$427,500.00

Luther Burbank Cost Estimate Assumptions

Area 7: Swim Beach

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, existing structure demolition, and hauling & dumping of materials
- *2 Underdrainage cost includes estimated allowance of enhanced drainage needed at lawn and upland beach area
- *3 Temporary Erosion & Sedimentation Control not included as method to be determined.
- *4 Wayfinding and Interpretive Signage included in signage allowance
- *5 Existing paths to be reused, quantity reflects additional new paths only
- *6 5' wide asphalt paths
- *7 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *8 Planting is primarily for enhancement of existing planting areas although new planting areas are proposed. Enhanced planting is assumed to require planting equivalent to 50% of total planting area while new planting areas are 100% new planting
- *9 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *10 Mulch is 3" in depth and applied to all planted areas
- *11 Lawn restoration includes ripping & tilling 50% existing lawn into grade & importing 4" sand & tilling to depth of 8"-10" & seeding
- *12 Path repair includes necessary drainage/ run-off control of existing paths
- *13 No cost is included as building program/ size is not finalized. Quality institutional buildings can cost \$150 - \$200 a square foot

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Area 8: Great Meadow	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$2,600.00
Clear/ Grub	8,000	SF	0.20	1,600.00
Hauling/Dumping		Allow		1,000.00
Underdrainage *2	90,000	SF	0.50	45,000.00
Grading (Rough & Fine Grading)	180,000	SF	0.20	36,000.00
Subtotal Great Meadow Site Preparation				\$83,600.00
Site Improvements				
Signage *3	1	Allow		3,000.00
Asphalt Paths *4 *5	6,000	SF	2.50	15,000.00
Path Repair *6	800	SF	3.00	2,400.00
Subtotal Great Meadow Site Improvements				\$20,400.00
Landscape				
Irrigation*7	188,000	SF	1.50	282,000.00
Lawn Restoration*8	180,000	SF	0.50	90,000.00
Shrubs & Groundcover *9	8,000	SF	3.00	24,000.00
Trees (Estimated)	30	EA	300.00	9,000.00
Soil Amendment*10	75	CY	40.00	3,000.00
Mulch*11	75	CY	40.00	3,000.00
Subtotal Great Meadow Landscape				\$411,000.00
Great Meadow Total				\$515,000.00

Luther Burbank Cost Estimate Assumptions

Area 8: Great Meadow

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, and hauling & dumping of materials
- *2 Underdrainage applied to 50% of Great Meadow area (area used for sporting)
- *3 Wayfinding and Interpretive Signage included in signage allowance
- *4 Existing paths to be reused, quantity reflects additional new paths only
- *5 5' wide asphalt paths
- *6 Path repair includes necessary drainage/ run-off control of existing paths & new layer of crushed rock material as needed
- *7 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *8 Lawn restoration includes ripping & tilling existing lawn into grade & importing 4" sand & tilling to depth of 8"-10" & seeding.
- *9 Planting is primarily for enhancement of existing planting areas although new planting areas are proposed. Enhanced planting is assumed to require planting equivalent to 50% of total planting area while new planting areas are 100% new planting.
- *10 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *11 Mulch is 3" in depth and applied to all planted areas

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 9: Main Entry	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$4,200.00
Clear/ Grub	3,500	SF	0.20	700.00
Remove Existing Signage		Allow		500.00
Hauling/Dumping		Allow		3,000.00
Fill Import*2	500	CY	40.00	20,000.00
Grading (Rough & Fine Grading)	3,500	SF	2.00	7,000.00
Relocation of Light Poles & Utilities				N.I.C.
Subtotal Main Entry Site Preparation				\$31,200.00
Site Improvements				
Curb @ Iconic Overlook	50	LF	15.00	750.00
Signage *3	1	Allow		3,000.00
Concrete Sidewalks *4	900	SF	6.00	5,400.00
Asphalt Paths *5	150	SF	2.50	375.00
Iconic Overlook *6		Allow		20,000.00
Enhanced Paving/ Pavers	2,800	SF	14.00	39,200.00
Iconic Entry Identity Features		Allow		18,000.00
Street Improvements*7		Allow		209,462.50
Retaining Wall*7	3,400	FF	50.00	170,000.00
Vehicle Pull Outs	1,600	SF	6.50	10,400.00
New Lift of Asphalt	9,625	SF	2.50	24,062.50
Additional Various Street Improvements		Allow		5,000.00
Loop Road				N.I.C.
Lighting		Allow		20,000.00
Subtotal Main Entry Site Improvements				\$316,187.50
Landscape				
Irrigation *8	3,500	SF	1.50	5,250.00
Shrubs & Groundcover *9	3,500	SF	3.00	10,500.00
Trees (Estimated)	40,000	EA	300.00	12,000.00
Soil Amendment*10	32	CY	40.00	1,280.00
Mulch *11	32	CY	40.00	1,280.00
Subtotal Main Entry Landscape				\$30,310.00
Main Entry Total				\$377,697.50

Luther Burbank Cost Estimate Assumptions

Area 9: Main Entry

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, and hauling & dumping of materials
- *2 Fill import required for Iconic Overlook
- *3 Wayfinding and interpretive signage included in signage allowance
- *4 5' wide concrete sidewalks
- *5 5' wide asphalt paths
- *6 Iconic Overlook includes baulustrade and retaining structure, which is not reflected in price.
- *7 Street improvements include 22' wide asphalt road w/o curb & gutter and 4' tall (average) retaining wall required along length road
- *8 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *9 Planting is primarily for enhancement of existing planting areas although new planting areas are proposed. Enhanced planting is assumed to require planting equivalent to 50% of total planting area while new planting areas are 100% new planting.
- *10 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *11 Mulch is 3" in depth and applied to all planted areas

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 10: Campus Area	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$26,000.00
Clear/ Grub	50,000	SF	0.20	10,000.00
Existing Playground Removal		Allow		10,000.00
Hauling/Dumping		Allow		6,000.00
Grading (Rough & Fine Grading)*2	50,000	SF	0.20	10,000.00
Play Area Subsurface Drainage	4,500	SF	0.50	2,250.00
Subtotal Campus Area Site Preparation				\$38,250.00
Site Improvements				
Signage *3	2	Allow		6,000.00
Asphalt Paths *4 *5	3,500	SF	3.50	12,250.00
Crushed Rock Paths (5' wide)	3,500	SF	2.00	7,000.00
New Picnic Shelter		Allow		20,000.00
Tables	3	EA	1,000.00	3,000.00
Benches	10	EA	1,000.00	10,000.00
Basketball Standards at Tennis Courts	4	EA	1,000.00	4,000.00
Playground Site Modifications		Allow		5,000.00
Play Area Surfacing (Engineered Wood Surface)	4,500	SF	5.00	22,500.00
New Playground Structures		Allow		100,000.00
Tetherball	1	EA	500.00	500.00
Maintenance yard upgrades		Allow		100,000.00
Site Upgrades		Allow		100,000.00
Building Replacement *11				N.I.C.
Wayfinding Signage	2	Allow		6,000.00
C.I.P. Stairs (Connection to Parking Lot)	400	SF	50.00	20,000.00
Subtotal Campus Area Site Improvements				\$316,250.00
Landscape				
Irrigation*6	73,000	SF	1.50	109,500.00
Shrubs & Groundcover*7	5,000	SF	3.00	15,000.00
Trees (Estimated)	30	EA	300.00	9,000.00
Lawn Restoration*8	68,000	SF	0.20	13,600.00
Soil Amendment*9	150	CY	40.00	6,000.00
Mulch*10	150	CY	40.00	6,000.00
Subtotal Campus Area Landscape				\$159,100.00
Campus Area Total				\$513,600.00

Luther Burbank Cost Estimate Assumptions Area 10: Campus Area

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, and hauling & dumping of materials
- *2 Grading cost estimated at higher rate due to steeper topography of proposed stairs
- *3 Wayfinding and Interpretive Signage included in signage allowance
- *4 Existing paths to be reused, quantity reflects additional new paths only
- *5 5' wide asphalt paths
- *6 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *7 Planting is primarily for enhancement of existing planting areas although new planting areas are proposed. Enhanced planting is assumed to require planting equivalent to 50% of total planting area while new planting areas are 100% new planting.
- *8 Lawn restoration includes ripping & tilling 50% existing lawn into grade & importing 4" sand & tilling to depth of 8"-10" & seeding.
- *9 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *10 Mulch is 3" in depth and applied to all planted areas
- *11 No cost is included as building program/ size is not finalized. Quality institutional buildings can cost \$150 - \$200 a square foot

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 11: Dock/ Boiler Building Area	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$53,240.00
Clear/ Grub	1,200	SF	0.20	240.00
Existing Concrete Bulkhead Selective Demo		Allow		8,000.00
Dock Demolition		Allow		35,000.00
Hauling/Dumping		Allow		10,000.00
Grading (Rough & Fine Grading)*2	2,000	SF	0.50	1,000.00
T.E.S.C.I *3				N.I.C.
Subtotal Dock/ Boiler Building Area Site Preparation				\$54,240.00
Site Improvements				
Shell House *15				N.I.C.
Restroom Improvements		Allow		20,000.00
Boiler Building Improvements *15				N.I.C.
Dock Improvements*4	4,600	SF	150.00	690,000.00
Signage *5	2	Allow		6,000.00
New Crushed Rock Paths *6 *8	2,000	SF	4.00	8,000.00
Path Repair *7	350	SF	3.00	1,050.00
Asphalt Paths*9	400	SF	2.50	1,000.00
Beach Improvements (See Shoreline Area Section)				
Subtotal Dock/ Boiler Building Area Site Improvements				\$726,050.00
Landscape				
Irrigation *10	12,000	SF	1.50	18,000.00
Shoreline Planting *11	8,000	SF	1.50	12,000.00
Shrubs & Groundcover *12	12,000	SF	3.00	36,000.00
Trees (Estimated)	50	EA	300.00	15,000.00
Soil Amendment*13	112	CY	40.00	4,480.00
Mulch*14	112	CY	40.00	4,480.00
Subtotal Dock/ Boiler Building Area Landscape				\$89,960.00
Dock/ Boiler Building Area Total				\$870,250.00

Luther Burbank Cost Estimate Assumptions Area 11: Dock/ Boiler Building Area

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, dock demolition and hauling & dumping of materials
- *2 Grading cost estimated at higher rate due to steeper topography of hillside paths
- *3 Temporary Erosion & Sedimentation Control not included as method to be determined
- *4 Dock improvements include complete replacement of existing dock with steel & fiberglass structures to meet current E.S.A. permitting standards and assume an average unit cost based on fixed pier and floating dock construction at 8' wide
- *5 Wayfinding and interpretive signage included in signage allowance
- *6 Existing paths to be reused, quantity reflects additional new paths only
- *7 Path repair includes necessary drainage/ run-off control of existing paths & new layer of crushed rock material as needed
- *8 Crushed rock paths are 5' wide for rough estimate purposes
- *9 5' wide asphalt paths
- *10 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *11 Shoreline planting includes pit planting of small species @ large spacing
- *12 Planting is primarily for enhancement of existing planting areas although new planting areas are proposed. Enhanced planting is assumed to require planting equivalent to 50% of total planting area while new planting areas are 100% new planting.
- *13 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *14 Mulch is 3" in depth and applied to all planted areas
- *15 No cost is included as building program/ size is not finalized. Quality institutional buildings can cost \$150 - \$200 a square foot

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 12: Shoreline	Quantity	Unit	Unit Cost	Total
Site Preparation				
Human Access Beaches (80')	1,200	LF	325.00	390,000.00
Micro Beaches (30')	300	LF	110.00	33,000.00
Restored Shoreline Habitat Zones	1,100	LF	60.00	66,000.00
Subtotal Shoreline Site Preparation				\$489,000.00
Site Improvements				
Human Access Beaches (80')	1,200	LF	665.00	798,000.00
Micro Beaches (30')	300	LF	355.00	106,500.00
Restored Shoreline Habitat Zones	1,100	LF	145.00	159,500.00
Subtotal Shoreline Site Improvements				\$1,064,000.00
Landscape				
Irrigation				Not Used
Human Access Beaches (80')				None
Micro Beaches (30')				None
Restored Shoreline Habitat Zones	20,000	SF	5.00	100,000.00
Subtotal Shoreline Landscape				\$100,000.00
Shoreline Total				\$1,653,000.00

Luther Burbank Cost Estimate Assumptions Area 12: Shoreline

The following assumptions have been made in providing the probable cost of construction:

- *1 Temporary Erosion & Sedimentation Control not included as method to be determined.
- *3 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, dock demolition and hauling & dumping of materials
- * Grading cost estimated at higher rate due sensitive nature of shoreline
- *3 Wayfinding and interpretive signage included in signage allowance
- * Shoreline planting includes pit planting of small species @ large spacing
- * Planting is applied to both new and existing planting areas. Enhanced planting involves planting existing areas equivalent roughly to 50% of total planting area while new planting areas are 100% new planting.
- *10 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- * Mulch is 3" in depth and applied to all planted areas

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 13: Amphitheater	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$8,000.00
Remove Existing Seatwalls		Allow	5,000.00	
Hauling/Dumping		Allow	3,000.00	
Underdrainage (Filter Fabric & Drain Pipe) *2		Allow		8,000.00
Grading (Rough & Fine Grading)*3	3,700	SF	1.50	5,550.00
T.E.S.C.I *4				N.I.C.
Subtotal Amphitheater Site Preparation				<u>\$21,550.00</u>
Site Improvements				
Replace Seatwall terracing *5	1,600	FF	30.00	48,000.00
Improved Stage		Allow		20,000.00
Community Fire Pit		Allow		5,000.00
Path Repair *6	600	SF	3.00	4,000.00
Subtotal Amphitheater Site Improvements				<u>\$77,000.00</u>
Landscape				
Irrigation *7	12,000	SF	1.50	18,000.00
Lawn Restoration*8	12,000	SF	0.20	2,400.00
Shrubs & Groundcover*9	1,500	SF	3.00	4,500.00
Soil Amendment*18	14	CY	40.00	560.00
Mulch	14	CY	40.00	560.00
Subtotal Amphitheater Landscape				<u>\$26,020.00</u>
Amphitheater Total				<u>\$124,570.00</u>

Luther Burbank Cost Estimate Assumptions

Area 13: Amphitheater

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, existing structure demolition and hauling & dumping of materials
- *2 Underdrainage applied to 50% of Great Meadow area (area used for sporting)
- *3 Grading cost estimated at higher rate due to steeper topography of hillside
- *4 Temporary Erosion & Sedimentation Control not included as method to be determined
- *5 New seatwall terracing composed of 18" high retaining wall suitable seating
- *6 Path repair includes necessary drainage/ run-off control of existing paths & new layer of crushed rock material as needed
- *7 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *8 Lawn restoration includes ripping & tilling 50% existing lawn into grade & importing 4" sand & tilling to depth of 8"-10" & seeding
- *9 Planting is applied to both new and existing planting areas. Enhanced planting involves planting existing areas equivalent roughly to 50% of total planting area while new planting areas are 100% new planting.
- *10 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *11 Mulch is 3" in depth and applied to all planted areas

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 14: Off Leash Area (OLA)	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$10,750.00
Clear/ Grub	20,000	SF	0.20	4,000.00
Asphalt Path Removal	2,500	SF	0.70	1,750.00
Hauling/Dumping		Allow		5,000.00
Underdrainage (Filter Fabric & Drain Pipe) *2		Allow		24,000.00
Grading (Rough & Fine Grading)	68,000	SF	0.20	13,600.00
T.E.S.C.I *3				N.I.C.
Subtotal Off Leash Area Site Preparation				\$48,350.00
Site Improvements				
Signage *4	2	Allow		6,000.00
Dog Hitching Post near Amphitheater*5		Allow		5,000.00
Covered Structure at Entry		Allow		20,000.00
Non-secure Cubbie Storage		Allow		3,000.00
Small Covered Structure at North End		Allow		12,000.00
Tables	12	EA	1,000.00	12,000.00
Benches	5	EA	1,000.00	5,000.00
Fencing (Chainlink)	1,500	LF	35.00	52,500.00
Controlled Entry Gates	4	EA	300.00	1,200.00
Asphalt Paths *6	300	SF	6.00	1,800.00
Enhanced Paving/ Pavers @ Entry	1,700	SF	14.00	23,800.00
Beach Improvements (See Shoreline Area Section)				
Subtotal Off Leash Area Site Improvements				\$142,300.00
Landscape				
Irrigation *7	12,000	SF	1.50	18,000.00
Field Restoration *8	68,000	SF	1.50	102,000.00
Shrubs & Groundcover*9	12,300	SF	3.00	36,900.00
Trees (Estimated)	20	EA	300.00	6,000.00
Soil Amendment*10	630	CY	40.00	25,200.00
Mulch *11	630	CY	40.00	25,200.00
Subtotal Off Leash Area Landscape				\$213,300.00
Off Leash Area Total				\$403,950.00

Luther Burbank Cost Estimate Assumptions Area 14: Off-Leash Area (OLA)

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, existing path removal and hauling & dumping of materials
- *2 Underdrainage applied to 50% of field restoration in heavy use areas
- *3 Temporary Erosion & Sedimentation Control not included as method to be determined.
- *4 Wayfinding and interpretive signage included in signage allowance
- *5 Hitching post and wash station shown proposed near amphitheater included in OLA cost
- *6 5' wide asphalt paths
- *7 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *8 Field restoration includes ripping & tilling existing lawn/ vegetation into grade & importing 4" sand & tilling to depth of 8"-10" & seeding for 50% lawn and 50% prairie mix
- *9 Planting is applied to both new and existing planting areas. Enhanced planting involves planting existing areas equivalent roughly to 50% of total planting area while new planting areas are 100% new planting.
- *10 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *11 Mulch is 3" depth in areas of new planting

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 15: Calkins Point	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$25,950.00
Clear/ Grub	10,000	SF	0.20	2,000.00
Asphalt Path Removal	2,000	SF	0.70	1,400.00
Concrete Removal	6,500	SF	0.70	4,550.00
Barn Relic Selective Demo		Allow		8,000.00
Hauling/Dumping		Allow		10,000.00
Grading (Rough & Fine Grading)	15,000	SF	0.20	3,000.00
T.E.S.C.I *2				N.I.C.
Subtotal Calkins Point Site Preparation				\$28,950.00
Site Improvements				
Signage*3		Allow		6,000.00
Crushed Rock Paths *4 *5	4,500	SF	4.00	18,000.00
Asphalt Paths*4 *6	2,770	SF	2.50	6,925.00
Tables	6	EA	1,000.00	6,000.00
Benches	18	EA	1,000.00	18,000.00
Shelter at Barn Relic*7		Allow		30,000.00
Beach Improvements (See Shoreline Area Section)				
Subtotal Calkins Point Improvements				\$84,925.00
Landscape				
Irrigation	32,000	SF	1.50	48,000.00
Lawn Restoration*9	32,000	SF	0.20	6,400.00
Shrubs & Groundcover*10	10,000	SF	3.00	30,000.00
Trees (Estimated)	40	EA	300.00	12,000.00
Soil Amendment*11	100	CY	40.00	4,000.00
Mulch*12	100	CY	40.00	4,000.00
Subtotal Calkins Point Landscape				\$104,400.00
Calkins Point Area Total				\$218,275.00

Luther Burbank Cost Estimate Assumptions Area 15: Calkins Point

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all estimated clearing/ grubbing, vegetation removal, existing path removal, selective barn relic demo and hauling & dumping of materials
- *2 Temporary Erosion & Sedimentation Control not included as method to be determined.
- *3 Wayfinding and interpretive signage for land and wetland ecology included in signage allowance
- *4 Existing paths to be reused, quantity reflects additional new paths only
- *5 5' wide crushed rock with recycled plastic cage or header board
- *6 5' wide asphalt paths
- *7 Barn Relic Structure cost is assumed to be structure only as programming is open
- *8 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *9 Includes ripping & tilling 50% existing lawn/ vegetation into grade & importing 4" sand & tilling to depth of 8"-10" seeding
- *10 Planting is applied to both new and existing planting areas. Enhanced planting involves planting existing areas equivalent roughly to 50% of total planting area while new planting areas are 100% new planting.
- *11 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new and enhanced planting areas
- *12 Mulch is 3" in depth and applied to new planting

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 16: The Ponds	Quantity	Unit	Unit Cost	Total
Site Preparation				
Demolition & Site Clearing *1		Allow		\$6,200.00
Clear/ Grub	16,000	SF	0.20	3,200.00
Hauling/Dumping		Allow		3,000.00
Grading (Rough & Fine Grading) *2	16,000	SF	3.00	48,000.00
T.E.S.C.I *3				N.I.C.
Subtotal Ponds Site Preparation				\$54,200.00
Site Improvements				
Wetland Expansion to South		Allow		200,000.00
Realign Boardwalk	250	LF	30.00	7,500.00
Signage *4		Allow		6,000.00
Vegetation Management				N.I.C.
Subtotal Ponds Site Improvements				\$213,500.00
Landscape				
Irrigation				Not Used
Shrubs & Groundcover*5	16,000	SF	1.50	24,000.00
Trees (Estimated)	20	EA	300.00	6,000.00
Soil Amendment*6	150	CY	40.00	6,000.00
Mulch *7	150	CY	40.00	6,000.00
Subtotal Ponds Landscape				\$42,000.00
The Ponds Total				\$309,700.00

Luther Burbank Cost Estimate Assumptions Area 16: The Ponds

The following assumptions have been made in providing the probable cost of construction:

- *1 Demolition & site clearing includes all clearing/ grubbing, vegetation removal, hauling & dumping of materials
- *2 Grading cost estimated at higher rate due sensitive nature of wetlands
- *3 Temporary Erosion & Sedimentation Control not included as method to be determined.
- *4 Wayfinding and interpretive signage for land and wetland ecology included in signage allowance
- *5 Planting includes buffer planting and small pit planting at large spacing within created wetlands.
- *6 Soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in new planting areas
- *7 Mulch is 3" in depth and applied to all planted areas

Note: Vegetation Management of Wetlands not included in cost.

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Area 17: West Hill		Quantity	Unit	Unit Cost	Total
Site Preparation					
Demolition & Site Clearing *1			Allow		\$18,000.00
Clear/ Grub			Allow	12,000.00	
Hauling/Dumping			Allow	6,000.00	
Grading (Rough & Fine Grading)*2			Allow		75,000.00
Underdrainage (Filter Fabric & Drain Pipe) *3	11,000		LF	0.50	5,500.00
Soil Import at Lawn (6" depth for lawn)*	407		CY	40.00	16,280.00
Subtotal West Hill Site Preparation					\$114,780.00
Site Improvements					
Signage *4			Allow		8,000.00
Cast In Place Concrete Stairs	450		SF	50.00	22,500.00
Concrete Paths *5 *6	1,500		SF	5.00	7,500.00
Water Feature			Allow		100,000.00
Crushed Rock Paths*5 *7	13,500		SF	4.00	54,000.00
Asphalt Paths*5 *8	200		SF	3.50	700.00
Pea Patch Plot Improvements*9			Allow		15,000.00
Pea Patch Storage Shed			Allow		12,000.00
Benches	10		EA	1,000.00	10,000.00
Climbing Wall & Bouldering Rocks			Allow		50,000.00
Subtotal West Hill Site Improvements					\$279,700.00
Landscape					
Irrigation*10	22,000		SF	1.50	33,000.00
Turf (Seeding)	22,000		SF	0.20	4,400.00
Shrubs & Groundcover*11			Allow		75,000.00
Enhanced Ornamental Planting at Vista Garden	12,000		SF	4.50	54,000.00
Meadow Planting (Seeded)*11	110,000		SF	0.50	55,000.00
Trees (Estimated)	40		EA	300.00	12,000.00
Trees for Fruit Orchard (Estimated)	35		EA	350.00	12,250.00
Soil Amendment*12			Allow		30,000.00
Mulch*13			Allow		15,000.00
Subtotal West Hill Landscape					\$290,650.00
West Hill Total					\$685,130.00

Luther Burbank Cost Estimate Assumptions Area 17: West Hill

The following assumptions have been made in providing the probable cost of construction:

- *1 Assumes demolition & site clearing includes all clearing/ grubbing, vegetation removal, and hauling & dumping of materials
- *2 Grading cost estimated at higher rate due to steep topography of site
- *3 Underdrainage applied to 50% of lawn area at vista garden
- *4 Wayfinding and interpretive signage included in signage allowance
- *5 Existing paths to be reused, quantity reflects additional new paths only
- *6 Assume 5' wide concrete paths & stairs
- *7 3' wide crushed rock with recycled plastic cage or header board
- *8 5' wide asphalt paths
- *9 Pea Patch Improvements are composed of crushed rock paths, which define individual plots. It is assumed that minimally constructed retaining elements will be needed
- *10 Irrigation assumes full replacement & a "best guess" of limits & irrigation type, which requires design refinement. It is difficult to assess existing conditions of irrigation. Typical irrigation costs are \$1.10-\$1.2/ SF for larger areas (rotor systems) and \$1.50-\$1.75/ SF for smaller areas (pop up sprays). Costs do not include point of connection or timer
- *11 Planting is applied to both new and existing planting areas. Enhanced planting involves planting existing areas equivalent roughly to 50% of total planting area while new planting areas are 100% new planting
- *12 Assumes soil amendment is imported mulch, 3" depth and tilled to 8"-12" depth in selective new and enhanced planting areas
- *13 Mulch is 3" in depth and applied to all planted areas

Probable Cost of Construction

Project: Luther Burbank Master Plan

Date: March 2006

Luther Burbank Park	Quantity	Unit	Unit Cost	Total
Upper L.B. Total				\$1,125,181.00
Downtown Entry Total				\$182,570.00
Burbank Lid Total				\$131,845.00
Burbank Lid Connector Total				\$148,200.00
South Entry Total				\$174,126.50
Source Area Total				\$191,500.00
Swim Beach Total				\$427,500.00
Great Meadow Total				\$515,000.00
Main Entry Total				\$377,697.50
Campus Area Total				\$513,600.00
Dock/ Boiler Building Area Total				\$870,250.00
Shoreline Total				\$1,653,000.00
Amphitheater Total				\$124,570.00
Off Leash Area Total				\$403,950.00
Calkins Point Area Total				\$218,275.00
The Ponds Total				\$309,700.00
West Hill Total				\$685,130.00
Luther Burbank Grand Total				\$8,052,095.00

*The above total is intended to reflect costs for the full master plan. It is important to note a master plan outlines a vision for what *could* be, but rarely are all components of the plan implemented.

*Cost does not include construction mark-ups, soft costs and contingencies as described elsewhere in this document.

*The cost of the following buildings are not included in this document as building program/ size is not finalized: new beach facility, shell house, and boiler building improvements.