

Opinions of Probable Construction Cost

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Opinions of Probable Construction Cost

Project Areas

For planning purposes, order of magnitude Opinions of Probable Construction Cost (OPCC) were prepared for several areas:

- West Area:** West End improved amenities, ecological restoration, Charles River Community Garden and Henderson Garage Area improvements.
- Artesani Parking Lot:** Reconfiguration and stormwater infrastructure.
- Central Area:** Event Lawn restoration, New Aquatics Office and other improvements.
- Island, Amphitheater, Herter Center:** New pedestrian bridge over the moat, various amphitheater upgrades, and rehabilitation of the Herter Center as High School Rowing / Amphitheater Support / multi-use facility.
- East Lawn to Eliot Bridge:** high-use event lawns, stormwater and parking lots improvements.
- East Meadow Past Eliot Bridge:** Park expansion in conjunction with the future Eliot Bridge approach intersection reconfiguration.
- Soldiers Field Road Diet and Multi-Use Path:** Reconfiguration of Soldiers Field Road from Arsenal Street Bridge to Eliot Bridge, and reconstruction of the Dr. Paul Dudley White greenway as a shared use path.

Assumptions and Qualifications

- The Opinion represents the consultant's best judgment, utilizing MassDOT 2022 published unit prices where available, recent materials or product quotes, and the Consultant's recent experience.
- The Opinion includes Design and Construction Contingencies. It excludes yearly escalation costs.

Implementation

As part of the next steps, the DCR will utilize this Master Plan Report to prepare an implementation plan that includes project phasing and securing funding sources for implementation. Anticipated projects are below:

- Project 1: Artesani parking lot reconfiguration; Soldiers Field Road Diet
- Project 2: Central Area improvements/ Aquatics office; Eliot Bridge park expansion
- Project 3: Island, Amphitheater, Herter Center; East Lawn
- Project 4: West Area

1 West End, Woodland, Charles River Community Garden and Henderson Garage Area				
	Qty	Unit cost	Total Cost	
Site Preparation				
Asphalt parking lot paving demolition	sf	16100	\$ 3.00	\$ 48,300.00
Concrete bench pad demolition	sf	60	\$ 4.00	\$ 240.00
Gravel path removal	sf	9150	\$ 2.00	\$ 18,300.00
Granite curb removal	lf	350	\$ 10.00	\$ 3,500.00
Invasive species removal and restoration w/ seed	ac	7.4	\$ 12,000.00	\$ 88,800.00
Tree removal under 24" cal. Hazard trees and hardscape impac	ea	15	\$ 1,500.00	\$ 22,500.00
Tree protection fence	lf	4000	\$ 12.00	\$ 48,000.00
Erosion control	lf	2700	\$ 8.00	\$ 21,600.00
Garage Structure Demolition	ls	1	\$ 25,000.00	\$ 25,000.00
Misc. other site preparation	ls	1	\$ 20,000.00	\$ 20,000.00
Mobilization	ls	1	\$ 20,000.00	\$ 20,000.00
Site Preparation Subtotal				\$ 316,240.00
Hardscape				
Porous asphalt parking lot paving, vehicular	sf	6500	\$ 21.00	\$ 136,500.00
Asphalt new parking lot at Community Gardens	sf	11000	\$ 8.00	\$ 88,000.00
Asphalt new or realigned park paths	sf	14000	\$ 8.00	\$ 112,000.00
Concrete bench pad new	sf	255	\$ 14.00	\$ 3,570.00
Wood decking at fishing overlook and Woodland Boardwalks	sf	760	\$ 90.00	\$ 68,400.00
Woodland Boardwalks	sf	1000	\$ 300.00	\$ 300,000.00
Stabilized stonedust surfacing	sf	12100	\$ 7.00	\$ 84,700.00
Parking Lot Striping	lf	1000	\$ 5.00	\$ 5,000.00
Accessible curb ramp	sf	263	\$ 14.00	\$ 3,682.00
Cast-in-place detectible tile	sf	16	\$ 60.00	\$ 960.00
Vertical Granite Curb	lf	1090	\$ 100.00	\$ 109,000.00
Bank stabilization with boulders/stone remnants at overlooks	ls	1	\$ 40,000.00	\$ 40,000.00
Hardscape Subtotal				\$ 951,812.00
Stormwater				
Bioretention swale / Rain Garden	sf	3500	\$ 20.00	\$ 70,000.00
Pretreatment Chamber	ea	1	\$ 6,000.00	\$ 6,000.00
Catch basin	ea	6	\$ 6,000.00	\$ 36,000.00
Drainage pipe	lf	1650	\$ 85.00	\$ 140,250.00
Flared end section	ea	1	\$ 1,200.00	\$ 1,200.00
Stormwater Subtotal				\$ 253,450.00
Misc. Site Improvements				
Benches new or existing refurbished & reinstalled	ea	8	\$ 1,800.00	\$ 14,400.00
Protective guardrail fence at outfall structure	lf	70	\$ 150.00	\$ 10,500.00
Salvaged granite block seats at woodland	ea	6	\$ 1,000.00	\$ 6,000.00
Picnic tables new	ea	4	\$ 2,100.00	\$ 8,400.00
Trash receptacle	ea	1	\$ 3,600.00	\$ 3,600.00
Misc. Site Improvements Subtotal				\$ 42,900.00
Charles River Community Garden				
Stabilized stonedust paths at Community Garden	sf	3000	\$ 7.00	\$ 21,000.00
Raised garden beds ADA accessible, installed	ea	8	\$ 1,500.00	\$ 12,000.00
Imported soil for raised garden beds	cy	24	\$ 85.00	\$ 2,040.00
Wood and metal mesh perimeter fence + 2 gates, installed	lf	590	\$ 127.00	\$ 74,930.00
Install / repair bed edging where affected by path construction	lf	1000	\$ 12.00	\$ 12,000.00
Picnic table at Community Garden	ea	1	\$ 2,104.00	\$ 2,104.00
Canopy structure at Community Garden, 10'x30', delivered	ls	1	\$ 18,100.00	\$ 18,100.00
Canopy structure footings and installation	ls	1	\$ 9,000.00	\$ 9,000.00
Charles River Community Garden Subtotal				\$ 151,174.00
Signage & Wayfinding				
Parking Lot cantilevered ID sign	ea	2	\$ 7,750.00	\$ 15,500.00
Interpretive panels	ea	2	\$ 7,750.00	\$ 15,500.00
Biking / pedestrian 'Share the Path' sign	ea	3	\$ 1,875.00	\$ 5,625.00
Welcome wayside / orientation sign w/ R&Rs- 2 sided	ea	2	\$ 9,875.00	\$ 19,750.00
Directional internal park information sign	ea	1	\$ 2,875.00	\$ 2,875.00
Parking standard signs at accessible / reserved parking	ea	4	\$ 300.00	\$ 1,200.00
Signage & Wayfinding Subtotal				\$ 60,450.00
Planting				
Bank vegetative restoration at overlooks only	sf	1500	\$ 25.00	\$ 37,500.00
Loam & Seed	sf	4000	\$ 1.00	\$ 4,000.00
Imported soil for meadow area	cy	472	\$ 65.00	\$ 30,680.00
Fine Grading at Lawn Bowl	sy	2835	\$ 4.00	\$ 11,340.00
Meadow seeding and establishment	sf	25500	\$ 1.00	\$ 25,500.00
Woodland understory restoration, limited areas	sf	2000	\$ 15.00	\$ 30,000.00
New trees 3-3.5 cal.	ea	8	\$ 2,000.00	\$ 16,000.00
Planting Subtotal				\$ 155,020.00
Total Before Contingencies				\$ 1,931,046.00
Design contingencies 20%				\$ 386,209.20
Total w/ Design Contingency				\$ 2,317,255.20
Construction Contingency 20%				\$ 463,451.04
TOTAL West End, Woodland, Charles River Community Garden and Henderson Garage Area				\$ 2,780,706.24

Assumptions

30 sf each pad
6" gravel and subbase removal
Assume not salvageable
Removal, herbicide, overseeding, 5 year control.
Hazard / dead trees / path impacts
Portable CLF
Compost sock
1,600 sf 1 story cinder block structure

Use vehicular asphalt profile
4'-6"x9'-4" (42 sf) pads per bench
Ipe wood decking on PT wood structure on grade.
Ipe wood decking on PT structure w/ helical piers
Stonedust with Organic-Lock binder
Reflectorized white, parking symbol
Cast in place concrete at curb ramp
Cast in place cast iron surfacing

3 overlooks

HDPE pipe

DCR standard Shurcliff bench, installed
Steel posts and rails
Found on site, installed on compacted gravel base
DCR standard: Dumor 77-68-1D, ADA
DCR standard Dumor 157-32, installed

Stonedust aw/ Organic-Lock binder
4' x 8' 27.5" ht, Cedar kits
3 cy at each planter + install
Cedar posts & rails, metal mesh, 2 gates, installed
Cedar 2x6x8" planks and wood stakes, installed
DCR standard: Dumor 77-68-1D, ADA
10'x30' USA Shade Systems "Multi-Shade Walk"
3 @ 24" dia 54" ht reinforced concrete footings

2'-3" x 2'-10" panel, wood cantilever post, installed
2'-3" x 2'-10" panel, wood cantilever post, installed
5"x12" panel on steel post, installed
2'-6" x 6'-3", full color w/ map, installed
8"x30" panel on steel post, installed
MassDOT aluminum signs on steel posts, installed

Plugs and small container low-growing plants
Seed w/shade-tolerant lawn or meadow seed mix
25,500 sf at 6" imported meadow soil

Assume plugs

Exclusions: BWSC outfall reconstruction or demolition; Henderson Boathouse parking lot and stormwater improvements (by others); contaminated soils remediation, hazardous materials abatement.

2 Artesani Parking Lot	Qty	Unit cost	Total Cost
Site Preparation			
Asphalt parking lot and road paving demolition	sf	136300	\$ 3.00 \$ 408,900.00
Asphalt path demolition	lf	16900	\$ 3.00 \$ 50,700.00
Concrete bench pad demolition	sf	180	\$ 4.00 \$ 720.00
Granite curb removal	lf	3900	\$ 10.00 \$ 39,000.00
Tree removal under 24" cal.	ea	32	\$ 1,500.00 \$ 48,000.00
Tree protection fence	lf	4000	\$ 12.00 \$ 48,000.00
Salvage and deliver existing benches to owner	ea	5	\$ 500.00 \$ 2,500.00
Erosion control	lf	1400	\$ 8.00 \$ 11,200.00
Catch basin / manhole removal	ea	8	\$ 800.00 \$ 6,400.00
Drainage pipe removal	lf	1500	\$ 30.00 \$ 45,000.00
Light pole remove and dispose	ea	8	\$ 800.00 \$ 6,400.00
Misc. other site preparation	ls	1	\$ 20,000.00 \$ 20,000.00
Mobilization	ls	1	\$ 20,000.00 \$ 20,000.00
Site Prep Subtotal			\$ 706,820.00
Hardscape			
Asphalt parking lot paving, vehicular	sf	118300	\$ 8.00 \$ 946,400.00
Asphalt new park paths	sf	17600	\$ 8.00 \$ 140,800.00
Concrete dumpster pad	sf	150	\$ 14.00 \$ 2,100.00
Concrete bench pad new	sf	588	\$ 14.00 \$ 8,232.00
Parking Lot Striping	lf	5000	\$ 1.50 \$ 7,500.00
Crosswalks at parking lot	lf	600	\$ 1.50 \$ 900.00
Accessible curb ramp concrete	sf	1000	\$ 14.00 \$ 14,000.00
Cast-in-place detectible tile	sf	100	\$ 20.00 \$ 2,000.00
Vertical Granite Curb	lf	2480	\$ 100.00 \$ 248,000.00
Hardscape Subtotal			\$ 1,369,932.00
Stormwater			
Bioretention swale / Rain Garden	sf	5800	\$ 20.00 \$ 116,000.00
Pretreatment Chamber	ea	4	\$ 6,000.00 \$ 24,000.00
Contech Jellyfish Filter	ls	1	\$ 250,000.00 \$ 250,000.00
Drainage pipe	lf	1000	\$ 85.00 \$ 85,000.00
Subsurface Corrugated Pipe Detention System	ls	1	\$ 2,500,000.00 \$ 2,500,000.00
Stormwater Subtotal			\$ 2,975,000.00
Misc. Site Improvements			
Benches new	ea	14	\$ 1,800.00 \$ 25,200.00
Trash receptacle	ea	1	\$ 3,600.00 \$ 3,600.00
Dumpster screen fence enclosure	lf	50	\$ 200.00 \$ 10,000.00
Misc. Site Improvements Subtotal			\$ 38,800.00
Signage & Wayfinding			
Main Identification Sign	ea	1	\$ 7,750.00 \$ 7,750.00
Parking Lot cantilevered ID sign	ea	1	\$ 7,750.00 \$ 7,750.00
Biking / pedestrian 'Share the Path' sign	ea	1	\$ 1,875.00 \$ 1,875.00
Welcome wayside / orientation sign w/ R&Rs- 3 sided	ea	1	\$ 13,125.00 \$ 13,125.00
Directional internal park information sign	ea	1	\$ 2,875.00 \$ 2,875.00
Parking standard signs at accessible / reserved parking	ea	9	\$ 300.00 \$ 2,700.00
Signage & Wayfinding Subtotal			\$ 36,075.00
Site Lighting			
New light pole fixture and pole	ea	23	\$ 6,000.00 \$ 138,000.00
Electrical handhole	ea	23	\$ 1,300.00 \$ 29,900.00
Precast standard foundation	ea	23	\$ 1,700.00 \$ 39,100.00
Ground rod	ea	23	\$ 150.00 \$ 3,450.00
4" electrical conduit encased in concrete	lf	2300	\$ 100.00 \$ 230,000.00
Overhead line relocation underground	ls	1	\$ 300,000.00 \$ 300,000.00
Site Lighting Subtotal			\$ 263,650.00
Planting			
Loam and seed areas	sf	1	\$ 71,200.00 \$ 76,980.00
New trees 3-3.5 cal.	ea	36	\$ 2,000.00 \$ 72,000.00
Planting Subtotal			\$ 148,980.00
Total Before Contingencies			\$ 5,539,257.00
Design Contingencies 20%			\$ 1,107,851.40
Total w/ Design Contingency			\$ 6,647,108.40
Construction Contingencies 20%			\$ 1,329,421.68
TOTAL Artesani Parking Lot and Event Lawn Area			\$ 7,976,530.08

Exclusions: Contaminated soils remediation, Hazardous materials abatement, Telford Bridge reconstruction, Dr. Paul Dudley White Path reconstruction along Soldiers Field Road.

Assumptions

30 sf each pad
Existing curbs not salvageable
Hazard / path impacts
Portable CLF
DCR to utilize elsewhere

Includes aggregate base
Use vehicular asphalt profile

4'-6"x9'-4" (42 sf) pads per bench
230 parking spots +HC + aisles
Thermoplastic
Assumption 6x17' (100 sf) curb ramps
assume 2x10 at 4 crosswalks

HDPE pipe

DCR standard Shurcliff bench, installed
DCR standard Dumor 157-32, installed
Steel posts, wood slats 8' ht. fence + canopy

6' x 4' panel, wood posts, installed
2'-3" x 2'-10" panel, wood cantilever post, installed
5"x12" panel on steel post, installed
Including 1 hinged glazed case for postings
8"x30" panel on steel post, installed
MassDOT aluminum signs on steel posts, installed

Shepherd's crook

1100 lf, 6 segments, 6 utility poles

3 Event Lawn Area and Artesani Playground	Qty	Unit cost	Total Cost
Site Preparation			
Asphalt path demolition	lf	4250	\$ 3.00 \$ 12,750.00
Concrete bench pad demolition	sf	300	\$ 4.00 \$ 1,200.00
Gravel path removal	sf	1295	\$ 2.00 \$ 2,590.00
Tree protection fence	lf	2500	\$ 12.00 \$ 30,000.00
Salvage existing benches, deliver to owner	ea	10	\$ 300.00 \$ 3,000.00
Erosion control	lf	1200	\$ 8.00 \$ 9,600.00
Light pole remove and dispose	ea	4	\$ 800.00 \$ 3,200.00
Lifeguard station sheds demolition	ls	1	\$ 3,000.00 \$ 3,000.00
Misc. other site preparation	ls	1	\$ 20,000.00 \$ 20,000.00
Mobilization	ls	1	\$ 20,000.00 \$ 20,000.00
Site Prep Subtotal			\$ 105,340.00
Hardscape			
Asphalt new park paths	sf	3500	\$ 8.00 \$ 28,000.00
Concrete bench or table pad new	sf	1932	\$ 14.00 \$ 27,048.00
Stabilized stonedust surfacing	sf	4100	\$ 7.00 \$ 28,700.00
Bank stabilization with stone remnants at overlooks	ls	1	\$ 20,000.00 \$ 20,000.00
Granite block seat wall	lf	40	\$ 500.00 \$ 20,000.00
Hardscape Subtotal			\$ 123,748.00
Stormwater			
Storm water improvements	ls	1	\$ 50,000.00 \$ 50,000.00
Stormwater Subtotal			\$ 50,000.00
Misc. Site Improvements			
Benches new	ea	22	\$ 1,800.00 \$ 39,600.00
Picnic tables new or relocated	ea	6	\$ 2,100.00 \$ 12,600.00
Trash receptacle	ea	3	\$ 3,600.00 \$ 10,800.00
Canopy structure at Artesani Spray Pool	ls	1	\$ 40,000.00 \$ 40,000.00
Canopy structure footings and installation	ls	1	\$ 7,000.00 \$ 7,000.00
Drinking Fountain	ea	1	\$ 15,000.00 \$ 15,000.00
Misc. Site Improvements Subtotal			\$ 125,000.00
Herter Community Garden			
Stabilized stonedust paths at Community Garden	sf	3700	\$ 7.00 \$ 25,900.00
Raised garden beds ADA accessible, installed	ea	8	\$ 1,500.00 \$ 12,000.00
Imported soil for raised garden beds	cy	24	\$ 85.00 \$ 2,040.00
Wood and metal mesh perimeter fence, 4 gates, installed	lf	780	\$ 127.00 \$ 99,060.00
Install / repair bed edging where affected by path constructor	lf	1000	\$ 12.00 \$ 12,000.00
Herter Community Garden Subtotal			\$ 162,900.00
Lifeguard Station			
Lifeguard station and pergola construction	sf	532	\$ 550.00 \$ 292,600.00
Lifeguard station soft costs, FF+E	ls	1	\$ 102,410.00 \$ 102,410.00
Lifeguard Station Subtotal			\$ 395,010.00
Signage & Wayfinding			
Main Identification Sign	ea	1	\$ 7,750.00 \$ 7,750.00
Facility ID Cantilevered sign	ea	1	\$ 7,750.00 \$ 7,750.00
Parking Lot cantilevered ID sign	ea	1	\$ 7,750.00 \$ 7,750.00
Interpretive panels	ea	2	\$ 7,750.00 \$ 15,500.00
Biking / pedestrian 'Share the Path' sign	ea	3	\$ 1,875.00 \$ 5,625.00
Welcome wayside / orientation sign w/ R&Rs- 2 sided	ea	1	\$ 9,875.00 \$ 9,875.00
Welcome wayside / orientation sign w/ R&Rs- 3 sided	ea	1	\$ 13,125.00 \$ 13,125.00
DCR rules and regulations consolidated signage	ea	1	\$ 1,750.00 \$ 1,750.00
Directional internal park information sign	ea	1	\$ 2,875.00 \$ 2,875.00
Signage & Wayfinding Subtotal			\$ 72,000.00
Site Lighting			
New light pole fixture and pole	ea	20	\$ 6,000.00 \$ 120,000.00
Electrical handhole	ea	20	\$ 1,300.00 \$ 26,000.00
Precast standard foundation	ea	20	\$ 1,700.00 \$ 34,000.00
Ground rod	ea	20	\$ 150.00 \$ 3,000.00
4" electrical conduit encased in concrete	lf	1600	\$ 100.00 \$ 160,000.00
Site Lighting Subtotal			\$ 343,000.00
Planting			
Drainage at Event Lawn	lf	2300	\$ 15.00 \$ 34,500.00
Loam amendments at Event lawn	cy	1515	\$ 30.00 \$ 45,450.00
Fine grading at Event Lawn	sy	4550	\$ 4.00 \$ 18,200.00
Event lawn seed	sy	4550	\$ 10.00 \$ 45,500.00
Irrigation at event lawn	ls	1	\$ 100,000.00 \$ 100,000.00
Bank vegetative stabilization	sf	1500	\$ 25.00 \$ 37,500.00
Soil amendments and Shade meadow around Event Lawn	sy	2000	\$ 15.00 \$ 30,000.00
New trees 3-3.5 cal.	ea	10	\$ 2,000.00 \$ 20,000.00
Planting Subtotal			\$ 331,150.00
Total Before Contingencies			\$ 1,365,148.00
Design Contingencies 20%			\$ 273,029.60
Total w/ Design Contingency			\$ 1,638,177.60
Construction Contingencies 20%			\$ 327,635.52
TOTAL Artesani Parking Lot and Event Lawn Area			\$ 1,965,813.12

Exclusions: Contaminated soils remediation, Hazardous materials abatement.

Assumptions

30 sf each pad
6" gravel and subbase removal
Portable CLF
DCR to utilize elsewhere

Assume sheds are not salvageable

Use vehicular asphalt profile
4'-6"x9'-4" (42 sf) pads per bench
Stonedust with Organic-Lock binder

HDPE pipe

DCR standard Shurcliff bench, installed
DCR standard Dumor 77-68-1D, ADA
DCR standard Dumor 157-32, installed
8'w x 60' USA-Shade Systems "Multi-Shade Walk"
7@ 24" dia 54" ht reinforced concrete footings.
Includes footing and water line installation

Stonedust aw/ Organic-Lock binder
4' x 8' 27.5" ht, Cedar kits
3 cy at each planter + install
Cedar posts & rails, metal mesh, 2 gates, installed
Cedar 2x6x8" planks and wood stakes, installed

35-40% project soft costs (A&E, project management, FF+E, legal, moving costs, etc)

6' x 4' panel, wood posts, installed
2'-3" x 2'-10" panel, wood cantilever post, installed
2'-3" x 2'-10" panel, wood cantilever post, installed
2'-3" x 2'-10" panel, wood cantilever post, installed
5"x12" panel on steel post, installed
2'-6" x 6'-3", full color w/ map, installed
Including 1 hinged glazed case for postings
1'-6" x 2'-6" panel on steel post, installed
8"x30" panel on steel post, installed

Flat panel drains at 15' o.c.
Amend existing to meet High Use Lawn spec
40920sf*1/9
Plant low-growing bank vegetation
Strip, decompact + amend, seed, 1 yr establish.

4 Island, Amphitheater, Herter Center				Qty	Unit cost	Total Cost
Site Preparation						
Asphalt parking lot paving demolition Lot # 3	sf	11000	\$ 3.00	\$ 33,000.00		
Asphalt path demolition	sf	30000	\$ 3.00	\$ 90,000.00		
Granite curb removal	lf	600	\$ 10.00	\$ 6,000.00		
Invasive species removal and restoration	ac	1	\$ 12,000.00	\$ 12,000.00		
Tree removal under 24" cal.	ea	15	\$ 1,500.00	\$ 22,500.00		
Tree protection fence	lf	3000	\$ 12.00	\$ 36,000.00		
Erosion control	lf	700	\$ 8.00	\$ 5,600.00		
Misc. other site preparation	ls	1	\$ 20,000.00	\$ 20,000.00		
Mobilization	ls	1	\$ 20,000.00	\$ 20,000.00		
Site Prep Subtotal				\$ 212,100.00		
Hardscape						
Asphalt parking lot paving, vehicular Lot # 3	sf	23000	\$ 8.00	\$ 184,000.00		
Asphalt new park paths	sf	24000	\$ 8.00	\$ 192,000.00		
Concrete bench pad	sf	252	\$ 14.00	\$ 3,528.00		
Vertical Granite Curb	lf	1000	\$ 100.00	\$ 100,000.00		
New pedestrian bridge, 50' span, 8'-wide	ls	1	\$ 250,000.00	\$ 250,000.00		
Expand wood boardwalk	sf	800	\$ 300.00	\$ 240,000.00		
Parking lot striping Lot #3	lf	1000	\$ 5.00	\$ 5,000.00		
Stabilized stonedust surfacing	sf	13000	\$ 7.00	\$ 91,000.00		
Bank stabilization with stone remnants at overlooks	ls	1	\$ 20,000.00	\$ 20,000.00		
Hardscape Subtotal				\$ 1,085,528.00		
Stormwater						
Bioretention area	sf	1639	\$ 20.00	\$ 32,780.00		
Lot 3 Subsurface Corrugated Pipe Detention System	ls	1	\$ 550,000.00	\$ 550,000.00		
Pretreatment chamber			\$ 6,000.00			
Pretreatment Chamber	ea	2	\$ 6,000.00	\$ 12,000.00		
Moat dredging	ton	3188	\$ 70.00	\$ 223,160.00		
Stormwater Subtotal				\$ 817,940.00		
Misc. Site Improvements						
Benches new or existing refurbished & reinstalled	ea	6	\$ 1,800.00	\$ 10,800.00		
Trash receptacles	ea	1	\$ 3,600.00	\$ 3,600.00		
Misc. Site Improvements Subtotal				\$ 3,600.00		
Amphitheater						
Granite terraces and steps	lf	620	\$ 500.00	\$ 310,000.00		
Wood stage and ramp	sf	1320	\$ 90.00	\$ 118,800.00		
Green Room 8' w x 26' l single story, w/ unisex restroom	sf	208	\$ 350.00	\$ 72,800.00		
Stage Canopy with integrated stage lighting truss	ls	1	\$ 100,000.00	\$ 100,000.00		
Portable toilets screen fence enclosure	lf	50	\$ 200.00	\$ 10,000.00		
Other theater area improvements	ls	1	\$ 15,000.00	\$ 15,000.00		
Amphitheater Subtotal				\$ 626,600.00		
Herter Center Rehabilitation						
Herter Center Building rehabilitation	sf	5875	\$ 650.00	\$ 3,818,750.00		
Demolition	sf	5875	\$ 5.87	\$ 34,486.25		
Hazardous Materials Abatement	sf	5875	\$ 8.80	\$ 51,700.00		
Roof-mounted Photovoltaic Array	ls	1	\$ 105,500.00	\$ 105,500.00		
Herter Center Rehabilitation Subtotal				\$ 4,009,936.25		
High School Rowing new buildings						
Boat Storage Building - 20' x 90' (Large)	sf	1800	\$ 420.00	\$ 756,000.00		
Boat Storage Building - 20' x 70' (Small)	sf	1400	\$ 420.00	\$ 588,000.00		
New dock, permanent	sf	2600	\$ 250.00	\$ 650,000.00		
High School Rowing Subtotal				\$ 1,994,000.00		
Signage & Wayfinding						
Facility ID Cantilevered sign	ea	2	\$ 7,750.00	\$ 15,500.00		
Parking Lot cantilevered ID sign	ea	1	\$ 7,750.00	\$ 7,750.00		
Interpretive panels	ea	1	\$ 7,750.00	\$ 7,750.00		
Biking / pedestrian 'Share the Path' sign	ea	1	\$ 1,875.00	\$ 1,875.00		
Welcome wayside / orientation sign w/ R&Rs- 2 sided	ea	1	\$ 9,875.00	\$ 9,875.00		
Directional internal park information sign	ea	1	\$ 2,875.00	\$ 2,875.00		
Parking standard signs at accessible / reserved parking	ea	3	\$ 300.00	\$ 900.00		
Signage & Wayfinding Subtotal				\$ 46,525.00		
Planting						
Bank vegetative restoration and tree pruning at overlooks only	sf	1500	\$ 25.00	\$ 37,500.00		
Woodland understory planting - limited areas	sf	300	\$ 25.00	\$ 7,500.00		
Loam and seed at removed hardscape and at edges of new hardscape	cy	150	\$ 50.00	\$ 7,500.00		
seed at removed hardscape and at edges of new hardscape	sy	450	\$ 20.00	\$ 9,000.00		
Planting Subtotal				\$ 52,500.00		
Total Before Contingencies				\$ 8,848,729.25		
Design Contingencies 20%				\$ 1,769,745.85		
Total w/ Design Contingency				\$ 10,618,475.10		
Construction Contingencies 20%				\$ 2,123,695.02		
TOTAL Island, Amphitheater, Herter Center				\$ 12,742,170.12		

Exclusions: Contaminated soils remediation, Hazardous materials abatement.

5 East Lawn to Eliot Bridge				Qty	Unit cost	Total Cost
Site Preparation						
Asphalt parking lot paving demolition	sf	36000	\$ 3.00	\$ 108,000.00		
Asphalt path removal	sf	30000	\$ 3.00	\$ 90,000.00		
Concrete bench pad demolition	sf	1200	\$ 4.00	\$ 4,800.00		
Granite curb removal	lf	1900	\$ 10.00	\$ 19,000.00		
Tree removal under 24" cal.	ea	20	\$ 1,500.00	\$ 30,000.00		
Tree protection fence	lf	3500	\$ 12.00	\$ 42,000.00		
Erosion control	lf	1800	\$ 8.00	\$ 14,400.00		
Catch basin removal	ea	2	\$ 800.00	\$ 1,600.00		
Misc. other site preparation	ls	1	\$ 10,000.00	\$ 10,000.00		
Mobilization	ls	1	\$ 10,000.00	\$ 10,000.00		
Site Prep Subtotal				\$ 329,800.00		
Hardscape						
Asphalt parking lot paving, vehicular Lots # 1 + 2	sf	36000	\$ 8.00	\$ 288,000.00		
Asphalt new park paths	sf	40000	\$ 8.00	\$ 320,000.00		
Concrete dumpster pad	sf	150	\$ 14.00	\$ 2,100.00		
Concrete bench or table pad new	sf	1512	\$ 9.00	\$ 13,608.00		
Stabilized stonedust surfacing	sf	3330	\$ 7.00	\$ 23,310.00		
Parking Lot Striping Lots # 1 + 2	lf	2000	\$ 5.00	\$ 10,000.00		
Accessible curb ramp	ea	5	\$ 14.00	\$ 70.00		
Vertical Granite Curb	lf	1800	\$ 100.00	\$ 180,000.00		
Bank stabilization with stone remnants at overlooks	ls	1	\$ 40,000.00	\$ 40,000.00		
Hardscape Subtotal				\$ 877,088.00		
Stormwater						
Bioretention swale / Rain Garden	sf	2100	\$ 20.00	\$ 42,000.00		
Pretreatment Chamber	ea	2	\$ 6,000.00	\$ 12,000.00		
Drainage pipe	lf	975	\$ 85.00	\$ 82,875.00		
Drainage at Event Lawn	lf	5000	\$ 15.00	\$ 75,000.00		
Contech Jellyfish Filter	ea	1	\$ 250,000.00	\$ 250,000.00		
Catch Basins/ drain manholes	ea	8	\$ 6,000.00	\$ 48,000.00		
Lot 1 Subsurface Corrugated Pipe Detention System	ls	1	\$ 450,000.00	\$ 450,000.00		
Lot 2 Subsurface Corrugated Pipe Detention System	ls	1	\$ 375,000.00	\$ 375,000.00		
Stormwater Subtotal				\$ 1,334,875.00		
Misc. Site Improvements						
Benches new or existing refurbished & reinstalled	ea	36	\$ 1,800.00	\$ 64,800.00		
Picnic tables new	ea	6	\$ 2,100.00	\$ 12,600.00		
Trash receptacle	ea	3	\$ 3,600.00	\$ 10,800.00		
Dumpster and Porta Potty screen fence enclosure	lf	75	\$ 200.00	\$ 15,000.00		
Drinking Fountain	ea	2	\$ 15,000.00	\$ 30,000.00		
Misc. Site Improvements Subtotal				\$ 133,200.00		
Signage & Wayfinding						
Main Identification Sign	ea	1	\$ 7,750.00	\$ 7,750.00		
Facility ID Cantilevered sign	ea	1	\$ 7,750.00	\$ 7,750.00		
Parking Lot cantilevered ID sign	ea	2	\$ 7,750.00	\$ 15,500.00		
Biking / pedestrian 'Share the Path' sign	ea	3	\$ 1,875.00	\$ 5,625.00		
Welcome wayside / orientation sign w/ R&Rs- 2 sided	ea	2	\$ 9,875.00	\$ 19,750.00		
Directional internal park information sign	ea	1	\$ 2,875.00	\$ 2,875.00		
Parking standard signs at accessible / reserved parking	ea	4	\$ 300.00	\$ 1,200.00		
Signage & Wayfinding Subtotal				\$ 60,450.00		
Planting						
Fine grading at Event Lawn	sy	8000	\$ 4.00	\$ 32,000.00		
Fine Grading at Lawn Bowl	sy	4600	\$ 4.00	\$ 18,400.00		
Loam amendments at Event Lawn	cy	2600	\$ 25.00	\$ 65,000.00		
Loam amendments at Lawn Bowl	cy	1525	\$ 25.00	\$ 38,125.00		
Seed at Event Lawn	sy	8000	\$ 10.00	\$ 80,000.00		
Seed at Lawn Bowl	sy	4550	\$ 10.00	\$ 45,500.00		
Bank vegetative stabilization	ls	1	\$ 50,000.00	\$ 50,000.00		
Meadow seeding between path and bank	sy	13780	\$ 15.00	\$ 206,700.00		
New trees 3-3.5 cal.	ea	56	\$ 2,000.00	\$ 112,000.00		
Planting Subtotal				\$ 647,725.00		
Total Before Contingencies				\$ 3,383,138.00		
Design Contingencies 20%				\$ 676,627.60		
Total w/ Design Contingency				\$ 4,059,765.60		
Construction Contingencies 20%				\$ 811,953.12		
TOTAL East Lawn to Eliot Bridge Improvements				\$ 4,871,718.72		

Exclusions: Site lighting and other electrical improvements; Mitch Ryerson Play Structure

Existing curbs not salvageable
Removal, herbicide, overseeding, 5 year control.
Hazard / dead trees / path impacts

4'-6"x9'-4" (42 sf) pads per bench

Prefabricated bridge, single span
add 4' width

Stonedust with Organic-Lock binder

46,000 sf at 3' depth = 5,100 cubic yards - Ask Rick or

DCR standard Shurcliff bench, installed

DCR standard Dumor 157-32, installed

Cut granite blocks with concrete footings
Wood structure, concrete footings, lpe decking
Excluding 35-40% project soft costs (A&E, project management, FF+E, legal, moving costs, etc.)

Steel posts, wood slats 8' ht. fence + canopy

Excluding 35-40% project soft costs (A&E, project management, FF+E, legal, moving costs, etc.)

Assumes 3,000 SF, 30 KW array @ \$3,500.00 per KW

Excluding 35-40% project soft costs (A&E, project management, FF+E, legal, moving costs, etc.)

Excluding 35-40% project soft costs

2'-3" x 2'-10" panel, wood cantilever post, installed

2'-3" x 2'-10" panel, wood cantilever post, installed

2'-3" x 2'-10" panel, wood cantilever post, installed

5"x12" panel on steel post, installed

2'-6" x 6'-3", full color w/ map, installed

8"x30" panel on steel post, installed

MassDOT aluminum signs on steel posts, installed

30 sf each pad
Assume not salvageable
Hazard trees and hardscape impacts
Portable CLF
Compost sock

4'-6"x9'-4" (42 sf) pads per bench
Stonedust with Organic-Lock binder

HDPE pipe
Flat panel drains at 15' o.c.

DCR standard Shurcliff bench, installed
DCR standard: Dumor 77-68-1D, ADA

Steel posts, wood slats 8' ht. fence + canopy

6' x 4' panel, wood posts, installed
2'-3" x 2'-10" panel, wood cantilever post, installed
2'-3" x 2'-10" panel, wood cantilever post, installed
5"x12" panel on steel post, installed
2'-6" x 6'-3", full color w/ map, installed
8"x30" panel on steel post, installed
MassDOT aluminum signs on steel posts, installed

72000 sf
42000 sf
Amend existing to meet High Use Lawn spec
Amend existing to meet High Use Lawn spec

Remove sod, amend soil, seed and establishment

6 East Meadow Past Eliot Bridge				
	Qty	Unit cost	Total Cost	
Site Preparation				
Asphalt path removal	sf	13000	\$ 3.00	\$ 39,000.00
Gravel or stonedust path removal	sf	17000	\$ 2.00	\$ 34,000.00
Tree removal under 24" cal. hazard trees , vista	ea	18	\$ 1,500.00	\$ 27,000.00
Tree protection fence	ls	2500	\$ 12.00	\$ 30,000.00
Erosion control	lf	1700	\$ 8.00	\$ 13,600.00
Invasive species removal	ac	2.5	\$ 12,000.00	\$ 30,000.00
Misc. other site preparation	ls	1	\$ 10,000.00	\$ 10,000.00
Mobilization	ls	1	\$ 10,000.00	\$ 10,000.00
Site Prep Subtotal				\$ 154,600.00
Hardscape				
Asphalt new park paths	sf	19000	\$ 8.00	\$ 152,000.00
Asphalt shared use path 12'-wide	sf	16800	\$ 8.00	\$ 134,400.00
Concrete bench new	sf	630	\$ 9.00	\$ 5,670.00
Stabilized stonedust surfacing	sf	3700	\$ 7.00	\$ 25,900.00
Bank stabilization with stone remnants at overlooks	ls	1	\$ 25,000.00	\$ 25,000.00
Hardscape Subtotal				\$ 342,970.00
Stormwater				
Bioretention swale / Rain Garden	sf	4700	\$ 20.00	\$ 94,000.00
Stormwater Subtotal				\$ 94,000.00
Misc. Site Improvements				
Benches new or existing refurbished & reinstalled	ea	15	\$ 1,800.00	\$ 27,000.00
Misc. Site Improvements Subtotal				\$ 27,000.00
Signage & Wayfinding				
Interpretive panels	ea	1	\$ 7,750.00	\$ 7,750.00
Biking / pedestrian 'Share the Path' sign	ea	1	\$ 1,875.00	\$ 1,875.00
Directional internal park information sign	ea	1	\$ 2,875.00	\$ 2,875.00
Signage & Wayfinding Subtotal				\$ 12,500.00
Planting				
Fine Grading at Lawn	sy	3300	\$ 4.00	\$ 13,200.00
Seeding at Lawn	sy	3300	\$ 10.00	\$ 33,000.00
Bank vegetative stabilization at vista	ls	1	\$ 25,000.00	\$ 25,000.00
Meadow seeding	sy	17440	\$ 15.00	\$ 261,600.00
New trees 3-3.5 cal.	ea	36	\$ 2,000.00	\$ 72,000.00
Planting Subtotal				\$ 404,800.00
Total Before Contingencies				\$ 941,870.00
Design Contingencies	20%			\$ 188,374.00
Total w/ Design Contingency				\$ 1,130,244.00
Construction Contingencies	20%			\$ 226,048.80
TOTAL East Lawn to Eliot Bridge Improvements				\$ 1,356,292.80

Exclusions: Roadway demolition and reconstruction for Soldiers Field Road and Dr. Paul Dudley White Path (included elsewhere).

6" gravel and subbase removal
Hazard / path impacts / vista
Portable CLF
Compost sock
Removal, herbicide, overseeding, 5 year control.

Dr. Paul Dudley White realigned segment
4'-6"x9'-4" (42 sf) pads per bench
Stonedust with Organic-Lock binder

DCR standard Shurcliff bench, installed

2'-3" x 2'-10" panel, wood cantilever post, installed
5"x12" panel on steel post, installed
8"x30" panel on steel post, installed

Remove sod, amend soil, seed and establishment

7 Soldiers Field Road Diet and Multi-Use Path				
	Qty	Unit cost	Total Cost	
Site Preparation				
Asphalt road paving demolition	sf	233900	\$ 3.00	\$ 701,700.00
Asphalt path demolition (Dr. Paul Dudley White path)	sf	48456	\$ 3.00	\$ 145,368.00
Concrete paving demolition at median	sf	5500	\$ 4.00	\$ 22,000.00
Granite curb removal	lf	18660	\$ 10.00	\$ 186,600.00
Vehicular guardrail removal at median	lf	2350	\$ 12.00	\$ 28,200.00
Tree removal under 24" cal.	ea	12	\$ 1,500.00	\$ 18,000.00
Tree protection fence	lf	12500	\$ 12.00	\$ 150,000.00
Catch basin removal	ea	30	\$ 800.00	\$ 24,000.00
Drain pipe removal	lf	7000	\$ 30.00	\$ 210,000.00
Light pole remove and dispose	ea	50	\$ 800.00	\$ 40,000.00
Misc. other site preparation	ls	1	\$ 50,000.00	\$ 50,000.00
Mobilization	ls	1	\$ 20,000.00	\$ 20,000.00
Site Prep Subtotal				\$ 1,595,868.00
Hardscape Subtotal				
Asphalt shared use path 12'-wide	sf	73000	\$ 8.00	\$ 584,000.00
Traffic roadway striping	lf	35000	\$ 1.50	\$ 52,500.00
Crosswalks at Shared Use Path	lf	1300	\$ 1.50	\$ 1,950.00
Traffic arrows	ea	20	\$ 400.00	\$ 8,000.00
Roadway signage misc.	ls	1	\$ 10,000.00	\$ 10,000.00
Hardscape Subtotal				\$ 656,450.00
Stormwater				
Bioretention swale along shared use path	sf	45000	\$ 20.00	\$ 900,000.00
Stormwater Subtotal				\$ 900,000.00
Eliot Bridge Approach Intersection Improvements				
Complete sub-project	ls	1	\$ 3,000,000.00	\$ 3,000,000.00
Eliot Bridge Approach Intersection Subtotal				\$ 3,000,000.00
Everett Street Intersection Improvements				
Complete sub-project	ls	1	\$ 1,000,000.00	\$ 1,000,000.00
Eliot Bridge Approach Intersection Subtotal				\$ 1,000,000.00
Site Lighting				
New roadway light fixture and pole - Decorative pendant	ea	27	\$ 9,000.00	\$ 243,000.00
New shared path light fixture and pole- Shepherd's crook	ea	62	\$ 6,000.00	\$ 372,000.00
Electrical handhole	ea	89	\$ 1,300.00	\$ 115,700.00
Precast standard foundation	ea	89	\$ 1,700.00	\$ 151,300.00
Ground rod	ea	89	\$ 150.00	\$ 13,350.00
4" electrical conduit encased in concrete	lf	9400	\$ 100.00	\$ 940,000.00
Electrical box	ea	3	\$ 10,000.00	\$ 30,000.00
Site Lighting Subtotal				\$ 1,865,350.00
Planting				
Fine Grading at Lawn	sy	18262	\$ 4.00	\$ 73,047.11
Seeding at Lawn	sy	18262	\$ 10.00	\$ 182,617.78
New trees 3-3.5 cal.	ea	15	\$ 2,000.00	\$ 30,000.00
Planting Subtotal				\$ 285,664.89
Total Before Contingencies				\$ 9,303,332.89
Design Contingencies	20%			\$ 1,860,666.58
Total w/ Design Contingency				\$ 11,163,999.47
Construction Contingencies	20%			\$ 2,232,799.89
TOTAL Soldiers Field Road Improvements				\$ 13,396,799.36

Exclusions: Everett Street from Western Avenue to the Soldiers Field Road intersection.

Existing curbs not salvageable

New layout affecting median
Portable CLF

Only to Eliot Bridge Intersection.
Thermoplastic paint
Thermoplastic paint
Thermoplastic paint
Misc. traffic signs installed

Assume 75% of length of path and 10'-wide

Includes shared path realignment

excludes Eliot Street improvements

125' o.c. typ.
100' o.c. typ.