

Needham Senior Center Site Feasibility Study
Needham, Massachusetts
June 18, 2010

APPENDIX B



Needham Senior Center Site Study

Cost Estimate Update #1

**Prepared for:-
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SUMMARY

	<u>Greene's Field, Option #1</u>	<u>Greene's Field, Option #2</u>	<u>Greene's Field, Option #4</u>	<u>Ridge Hill</u>	<u>Rosemary Lake</u>
Senior Center Building	5,183,640	5,183,640	5,183,640	5,183,640	5,183,640
Structured Parking	0	3,198,010	0	0	2,715,240
Demolition of Existing Building	0	0	0	157,810	0
Building Adjustments	0	(222,156)	0	0	(507,701)
Built-in structural capacity for future 2nd floor	0	0	0	0	61,710
General Site Work (Paving/Improvements/Landscaping/Lighting)	696,496	528,361	696,496	863,508	515,772
Drainage	93,238	44,727	93,238	268,000	212,344
Gas	302	302	302	16,069	475
Sewer	7,843	24,135	7,843	158,280	47,430
Water/Sprinkler	26,128	40,321	26,128	26,646	24,203
Electric/Tel/Cable	13,305	16,853	13,305	118,675	17,371
Widening of Driveway to 24 feet	0	0	0	177,725	39,988
Wetlands and Other Land Features	0	0	0	0	0
Sitework Premium (sheet piling, excavation, difficult working conditions on sloping site)	0	0	0	0	222,156
Parking for Pool Users	0	0	0	0	76,520
Site Improvements outside of Property Line	0	0	54,336	24,918	0
Total Construction Cost	6,020,952	8,814,194	6,075,288	6,995,272	8,609,150
Other Allowances	0	0	0	0	0
Renovate 4-bay garage and barn	0	0	0	449,350	0
Sewer (Option 2) - Saving on Option 1	0	0	0	(24,159)	0

Notes

1. Brief project description:-
 - Five Options for location of New Senior Center.
2. The estimate is based on the following:-
 - Prevailing wage.
 - Competitive bid to pre-selected contractors.
 - General contractor type project.
 - Receipt of 5# bona fide bids.
 - No phasing.
 - Bid date 2Q2010.
3. The gross floor area are based on the following:-
 - Measurement is taken to the outside face of the exterior wall.
4. Story heights:-
 - Varies
5. General Requirements for this project are included in unit pricing.
6. Special Conditions are included with General Requirements where applicable.
7. Escalation is included in unit pricing.
8. Design contingency is an allowance for future design modifications/additions, which alter the cost of the building as the design progresses, this percentage reduces as the design develops. It is based on a percentage of the sum of Sub-Total Construction, General Requirements and Escalation. For this level of estimate the following has been included:-
 - Included in unit pricing.
9. Construction contingency is an allowance for scope/design modifications made by the owner during construction and also for any unforeseen circumstances. It is based on a percentage of the sum of Sub-Total Construction, General Requirements, Escalation and Design Contingency. The following has been included:-
 - Excluded.
10. This estimate has been prepared from the following design information:-
 - Site plans dated April 5, 2010 and April 6, 2010.
 - Various emails from bh+a and Tetra Tech.
 - Telephone conversation with bh+a and Tetra Tech.
11. The estimate includes the following:-
 - Tel/data - empty conduit system only.

Notes (Cont'd)

12. The estimate excludes the following:-
 - Utility company backcharges.
 - Building permit fees.
 - Sales tax.
 - Design consultant's fees.
 - Loose furniture, fittings and equipment.
 - Fixed furniture, fittings and equipment except as normally included with building construction.
 - Telephones.
 - Complete audiovisual.
 - Security cameras, monitors, videos, etc.

13. Allowances:-
 - See Estimate.

14. Assumptions:-
 - See Estimate.

15. Estimates by other firms:-
 - Site utility quantities provided by Tetra Tech.

Description	Qty	Unit	Rate	Amount	Totals
Greene's Field, Option #1					
<u>Senior Center Building</u>					
Two story Senior Center Building (GFA)	20,000	sf	259.18	5,183,640	5,183,640
<u>Structured Parking</u>					
Not applicable			0.00	0	0
<u>Demolition of Existing Building</u>					
Not applicable			0.00	0	0
<u>Building Adjustments</u>					
Not applicable			0.00	0	0
<u>Built-in structural capacity for future 2nd floor</u>					
Not applicable			0.00	0	0
<u>General Site Work (Paving/Improvements/Landscaping/Lighting)</u>					
Site clearance/preparation	1	ls	18,513.00	18,513	
Cut/fill	1	ls	15,427.50	15,428	
Asphalt paving including curbing, lines, signs, etc	23,500	sf	6.17	145,019	
Concrete sidewalks including curbs	2,600	sf	11.11	28,880	
Site improvements (walls/signage/furniture/etc)	1	ls	55,539.00	55,539	
Baseball field relocation	57,400	sf	4.94	283,372	
Landscaping	1	ls	111,078.00	111,078	
Pole Bases (Cast-in Place) including excavation	6	ea	771.38	4,628	
Poles and Lamps	6	ea	4,134.57	24,807	
1" PVC Conduit w/wiring & trench	440	lf	20.98	9,232	696,496
<u>Drainage</u>					
Catch Basin	3	ea	2,900.37	8,701	
Double Catch Basin	1	ea	3,301.49	3,301	
Drain Manhole (4' Dia.)	2	ea	7,096.65	14,193	
Water Quality Unit	2	ea	6,788.10	13,576	
Outlet structure	1	ea	6,479.55	6,480	
6" HDPE (Roof Leaders) w/trench	310	lf	35.79	11,095	
12" HDPE w/trench	230	lf	49.37	11,355	
15" HDPE w/trench	20	lf	56.77	1,135	
15" RCP w/trench	60	lf	81.46	4,887	
Subsurface Infiltration System, Stormtech SC740 Chamber	25	ea	740.52	18,513	93,238
<u>Gas</u>					
Trench only for gas service	35	lf	8.64	302	302
<u>Sewer</u>					
8" pvc pipe w/trench	55	lf	38.26	2,104	
Connect to main	1	ea	2,776.95	2,777	
Police detail	30	hour	98.74	2,962	7,843
<u>Water/Sprinkler</u>					
2" Copper (Domestic Service Connection) w/trench	60	lf	45.67	2,740	
2" Gate Valve	1	ea	1,542.75	1,543	
Connect to main	1	ea	2,962.08	2,962	
4" CLDI (Fire Service Connection) w/trench	60	lf	74.05	4,443	
4" Tapping Sleeve	1	ea	4,134.57	4,135	
4" Gate Valve	1	ea	2,036.43	2,036	
Irrigation lines from existing system w/in Greene's Field may need to be relocated or replaced	1	ls	4,319.70	4,320	
Police detail	40	hour	98.74	3,949	26,128
<u>Electric/Te/Cable</u>					
2-4" PVC Conduits (Electric Service Connection), concrete encased w/trench & pull wire	90	lf	66.65	5,998	
2-4" PVC Conduits (Phone/Cable Service Connection) w/trench	90	lf	59.24	5,332	
Police detail	20	hour	98.74	1,975	13,305
<u>Widening of Driveway to 24 feet</u>					
Not applicable			0.00	0	0
<u>Wetlands and Other Land Features</u>					
Not applicable			0.00	0	0
<u>Sitework Premium (sheet piling, excavation, difficult working conditions on sloping site)</u>					
Not applicable			0.00	0	0
<u>Parking for Pool Users</u>					
Not applicable			0.00	0	0
<u>Site Improvements outside of Property Line</u>					
Not applicable			0.00	0	0
Greene's Field, Option #1	Total			6,020,952	6,020,952

Description	Qty	Unit	Rate	Amount	Totals
Greene's Field, Option #2					
Senior Center Building					
Two story Senior Center Building (GFA)	20,000	sf	259.18	5,183,640	5,183,640
Structured Parking					
Underground garage, one level (397 sf/space)	39,864	sf	80.22	3,198,010	3,198,010
Demolition of Existing Building					
Not applicable			0.00	0	0
Building Adjustments					
Deduct for foundation being carried with Structured Parking	10,000	sf	22.22	(222,156)	(222,156)
Built-in structural capacity for future 2nd floor					
Not applicable			0.00	0	0
General Site Work (Paving/Improvements/Landscaping/Lighting)					
Site clearance/preparation	1	ls	18,513.00	18,513	
Cut/fill	1	ls	15,427.50	15,428	
Asphalt paving including curbing, lines, signs, etc	900	sf	6.17	5,554	
Concrete sidewalks including curbs	2,600	sf	11.11	28,880	
Site improvements (walls/signage/furniture/etc)	1	ls	55,539.00	55,539	
Baseball field relocation	57,400	sf	4.94	283,372	
Landscaping	1	ls	111,078.00	111,078	
Mounted on proposed building, allow	12	ea	833.09	9,997	528,361
Drainage					
Catch Basin	0	ea	2,900.37	0	
Double Catch Basin	0	ea	3,301.49	0	
Drain Manhole (4' Dia.)	1	ea	7,096.65	7,097	
Water Quality Unit	0	ea	6,788.10	0	
Outlet structure	1	ea	6,479.55	6,480	
6" HDPE (Roof Leaders) w/trench	320	lf	35.79	11,453	
12" HDPE w/trench	0	lf	49.37	0	
15" HDPE w/trench	0	lf	56.77	0	
15" RCP w/trench	60	lf	81.46	4,887	
Subsurface Infiltration System, Stormtech SC740 Chamber	20	ea	740.52	14,810	44,727
Gas					
Trench only for gas service	35	lf	8.64	302	302
Sewer					
8" pvc pipe w/trench	55	lf	38.26	2,104	
8" cast iron pipe w/trench	75	lf	135.76	10,182	
Oil/water separator w/excavation, etc., allow 20 gpm	1	ea	6,109.29	6,109	
Connect to main	1	ea	2,776.95	2,777	
Police detail	30	hour	98.74	2,962	24,135
Water/Sprinkler					
2" Copper (Domestic Service Connection) w/trench	60	lf	45.67	2,740	
2" Gate Valve	1	ea	1,542.75	1,543	
Connect to main	1	ea	2,962.08	2,962	
4" CLDI (Fire Service Connection) w/trench	60	lf	74.05	4,443	
4" Tapping Sleeve	1	ea	4,134.57	4,135	
4" Gate Valve	1	ea	2,036.43	2,036	
Relocate irrigation well & associated bubblers, etc	2	ea	7,096.65	14,193	
Irrigation lines from existing system w/in Greene's Field may need to be relocated or replaced	1	ls	4,319.70	4,320	
Police detail	40	hour	98.74	3,949	40,321
Electric/Tel/Cable					
2-4" PVC Conduits (Electric Service Connection), concrete encased w/trench & pull wire	90	lf	66.65	5,998	
Transformer pad (transformer by Utility) including secondary wiring	1	ls	3,548.33	3,548	
2-4" PVC Conduits (Phone/Cable Service Connection) w/trench	90	lf	59.24	5,332	
Police detail	20	hour	98.74	1,975	16,853
Widening of Driveway to 24 feet					
Not applicable			0.00	0	0
Wetlands and Other Land Features					
Not applicable			0.00	0	0
Sitework Premium (sheet piling, excavation, difficult working conditions on sloping site)					
Not applicable			0.00	0	0
Parking for Pool Users					
Not applicable			0.00	0	0
Site Improvements outside of Property Line					
Not applicable			0.00	0	0
Greene's Field, Option #2	Total			8,814,194	8,814,194

Description	Qty	Unit	Rate	Amount	Totals
Greene's Field, Option #4					
<u>Senior Center Building</u>					
Two story Senior Center Building (GFA)	20,000	sf	259.18	5,183,640	5,183,640
<u>Structured Parking</u>					
Not applicable			0.00	0	0
<u>Demolition of Existing Building</u>					
Not applicable			0.00	0	0
<u>Building Adjustments</u>					
Not applicable			0.00	0	0
<u>Built-in structural capacity for future 2nd floor</u>					
Not applicable			0.00	0	0
<u>General Site Work (Paving/Improvements/Landscaping/Lighting)</u>					
Site clearance/preparation	1	ls	18,513.00	18,513	
Cut/fill	1	ls	15,427.50	15,428	
Asphalt paving including curbing, lines, signs, etc	23,500	sf	6.17	145,019	
Concrete sidewalks including curbs	2,600	sf	11.11	28,880	
Site improvements (walls/signage/furniture/etc)	1	ls	55,539.00	55,539	
Baseball field relocation	57,400	sf	4.94	283,372	
Landscaping	1	ls	111,078.00	111,078	
Pole Bases (Cast-in Place) including excavation	6	ea	771.38	4,628	
Poles and Lamps	6	ea	4,134.57	24,807	
1" PVC Conduit w/wiring & trench	440	lf	20.98	9,232	696,496
<u>Drainage</u>					
Catch Basin	3	ea	2,900.37	8,701	
Double Catch Basin	1	ea	3,301.49	3,301	
Drain Manhole (4' Dia.)	2	ea	7,096.65	14,193	
Water Quality Unit	2	ea	6,788.10	13,576	
Outlet structure	1	ea	6,479.55	6,480	
6" HDPE (Roof Leaders) w/trench	310	lf	35.79	11,095	
12" HDPE w/trench	230	lf	49.37	11,355	
15" HDPE w/trench	20	lf	56.77	1,135	
15" RCP w/trench	60	lf	81.46	4,887	
Subsurface Infiltration System, Stormtech SC740 Chamber	25	ea	740.52	18,513	93,238
<u>Gas</u>					
Trench only for gas service	35	lf	8.64	302	302
<u>Sewer</u>					
8" pvc pipe w/trench	55	lf	38.26	2,104	
Connect to main	1	ea	2,776.95	2,777	
Police detail	30	hour	98.74	2,962	7,843
<u>Water/Sprinkler</u>					
2" Copper (Domestic Service Connection) w/trench	60	lf	45.67	2,740	
2" Gate Valve	1	ea	1,542.75	1,543	
Connect to main	1	ea	2,962.08	2,962	
4" CLDI (Fire Service Connection) w/trench	60	lf	74.05	4,443	
4" Tapping Sleeve	1	ea	4,134.57	4,135	
4" Gate Valve	1	ea	2,036.43	2,036	
Irrigation lines from existing system w/in Greene's Field may need to be relocated or replaced	1	ls	4,319.70	4,320	
Police detail	40	hour	98.74	3,949	26,128
<u>Electric/Tel/Cable</u>					
2-4" PVC Conduits (Electric Service Connection), concrete encased w/trench & pull wire	90	lf	66.65	5,998	
2-4" PVC Conduits (Phone/Cable Service Connection) w/trench	90	lf	59.24	5,332	
Police detail	20	hour	98.74	1,975	13,305
<u>Widening of Driveway to 24 feet</u>					
Not applicable			0.00	0	0
<u>Wetlands and Other Land Features</u>					
Not applicable			0.00	0	0
<u>Sitework Premium (sheet piling, excavation, difficult working conditions on sloping site)</u>					
Not applicable			0.00	0	0
<u>Parking for Pool Users</u>					
Not applicable			0.00	0	0
<u>Site Improvements outside of Property Line</u>					
Relocate curb at Pickering St & make good paving	1	ls	28,351.33	28,351	
Bus dropoff at Saint Joseph's School	1	ls	25,984.85	25,985	54,336
Greene's Field, Option #4					
	Total			6,075,288	6,075,288

Description	Qty	Unit	Rate	Amount	Totals
Ridge Hill					
Senior Center Building					
Two story Senior Center Building (GFA)	20,000	sf	259.18	5,183,640	5,183,640
Structured Parking					
Not applicable			0.00	0	0
Demolition of Existing Building					
Demolish two story wood framed building including foundations	110,700	cf	1.23	136,626	
Hazardous material abatement (asbestos in pipe/boiler insulation and window glazing compound & lead paint), allow	1	ls	18,513.00	18,513	
Demolish wood shed	5,410	cf	0.49	2,671	157,810
Building Adjustments					
Not applicable			0.00	0	0
Built-in structural capacity for future 2nd floor					
Not applicable			0.00	0	0
General Site Work (Paving/Improvements/Landscaping/Lighting)					
Site clearance/preparation	1	ls	27,769.50	27,770	
Cut/fill	1	ls	37,026.00	37,026	
Asphalt paving including curbing, lines, signs, etc	60,950	sf	6.17	376,122	
Concrete sidewalks including curbs	2,600	sf	11.11	28,880	
Site improvements (walls/signage/furniture/etc)	1	ls	55,539.00	55,539	
Landscaping	1	ls	166,617.00	166,617	
Pole Bases (Cast-In Place) including excavation	20	ea	771.38	15,428	
Poles and Lamps	20	ea	4,134.57	82,691	
1" PVC Conduit w/wiring & trench	3,500	lf	20.98	73,435	863,508
Drainage					
Catch Basin	6	ea	2,900.37	17,402	
Double Catch Basin	0	ea	3,301.49	0	
Drain Manhole (4' Dia.)	6	ea	7,096.65	42,580	
Water Quality Unit	1	ea	6,788.10	6,788	
12" flared end section	1	ea	1,851.30	1,851	
18" flared end section	1	ea	2,900.37	2,900	
Outlet structure	2	ea	6,479.55	12,959	
6" HDPE (Roof Leaders) w/trench	480	lf	35.79	17,180	
12" HDPE (Roof Leaders to Pond) w/trench	280	lf	49.37	13,823	
12" HDPE w/trench	750	lf	49.37	37,026	
15" HDPE w/trench	350	lf	56.77	19,871	
18" HDPE w/trench	75	lf	65.41	4,906	
2# infiltration ponds w/sediment forebay, allow	30,000	sf	3.02	90,714	268,000
Gas					
Trench only for gas service	1,860	lf	8.64	16,069	16,069
Sewer (Option 1)					
E-One grinder pump station (Model # DH502) w/excavtion, ballast electrical supply, etc	1	ea	31,478.27	31,478	
Sewer manhole	1	ea	6,664.68	6,665	
4" pvc pipe w/trench	25	lf	32.09	802	
2" pvc force main pipe w/trench	2,440	lf	44.43	108,412	
Connect to main including pavement removal/replacement	1	ea	7,960.59	7,961	
Police detail	30	hour	98.74	2,962	158,280
Water/Sprinkler					
2" Copper (Domestic Service Connection) w/trench	20	lf	45.67	913	
2" Gate Valve	1	ea	1,542.75	1,543	
Connect to main	1	ea	2,962.08	2,962	
4" CLDI (Fire Service Connection) w/trench	150	lf	74.05	11,108	
4" Tapping Sleeve	1	ea	4,134.57	4,135	
4" Gate Valve	1	ea	2,036.43	2,036	
Police detail	40	hour	98.74	3,949	26,646
Electric/Tel/Cable					
2-4" PVC Conduits (Electric Service Connection) w/trench & pull wire	1,860	lf	59.24	110,189	
Transformer pad (transformer by Utility) including secondary wiring	1	ls	3,548.33	3,548	
2-4" PVC Conduits (Phone/Cable Service Connection) w/trench	50	lf	59.24	2,962	
Police detail	20	hour	98.74	1,975	118,675
Widening of Driveway to 24 feet					
Allow	14,400	sf	12.34	177,725	177,725
Wetlands and Other Land Features					
Not applicable			0.00	0	0
Sitework Premium (sheet piling, excavation, difficult working conditions on sloping site)					
Not applicable			0.00	0	0
Parking for Pool Users					
Not applicable			0.00	0	0
Site Improvements outside of Property Line					
Add turn in lane at Charles River Road	1	ls	10,108.10	10,108	
Rebuild exist stone wall at Charles River Road, allow	1	ls	14,810.40	14,810	24,918
Ridge Hill					
	Total			6,995,272	6,995,272

Description	Qty	Unit	Rate	Amount	Totals
Rosemary Lake					
Senior Center Building					
One story Senior Center Building (GFA)	20,000	sf	259.18	5,183,640	5,183,640
Structured Parking					
Underground garage, two levels (360sf /space)	40,000	sf	67.88	2,715,240	2,715,240
Demolition of Existing Building					
Not applicable			0.00	0	0
Building Adjustments					
Deduct for foundation being carried with Structured Parking	20,000	sf	18.51	(370,260)	
Deduct for one-story construction	1	ls	137,440.51	(137,441)	(507,701)
Built-in structural capacity for future 2nd floor					
Allow	10,000	sf	6.17	61,710	61,710
General Site Work (Paving/Improvements/Landscaping/Lighting)					
Site clearance/preparation	1	ls	27,769.50	27,770	
Cut/fill	1	ls	37,026.00	37,026	
Asphalt paving including curbing, lines, signs, etc	16,600	sf	6.17	102,439	
Concrete sidewalks including curbs	2,600	sf	11.11	28,880	
Site improvements (walls/signage/furniture/etc)	1	ls	88,862.40	88,862	
Landscaping	1	ls	178,959.00	178,959	
Pole Bases (Cast-In Place) including excavation	8	ea	771.38	6,171	
Poles and Lamps	8	ea	4,134.57	33,077	
1" PVC Conduit w/wiring & trench	600	lf	20.98	12,589	515,772
Drainage					
Catch Basin	0	ea	2,900.37	0	
Double Catch Basin	2	ea	3,301.49	6,603	
Drain Manhole (4' Dia.)	3	ea	7,096.65	21,290	
Water Quality Unit	1	ea	6,788.10	6,788	
12" flared end section	1	ea	1,851.30	1,851	
Outlet structure	1	ea	6,479.55	6,480	
6" HDPE (Roof Leaders) w/trench	400	lf	35.79	14,317	
12" HDPE w/trench	40	lf	49.37	1,975	
36" RCP w/trench (line replacement including removal of extg)	400	lf	246.84	98,736	
Subsurface Infiltration System, Stormtech SC740 Chamber	40	ea	740.52	29,621	
Infiltration pond w/sediment forebay, allow	1	ea	24,684.00	24,684	212,344
Gas					
Trench only for gas service	55	lf	8.64	475	475
Sewer					
Sewer manhole (4' Dia.)	1	ea	6,664.68	6,665	
8" pvc pipe w/trench (sewer service connection)	30	lf	38.26	1,148	
8" pvc pipe w/trench (line replacement including removal of extg)	400	lf	45.67	18,266	
Oil/water separator w/excavation, etc., allow 20 gpm	1	ea	6,109.29	6,109	
8" cast iron pipe w/trench	70	lf	135.76	9,503	
Connect to main	1	ea	2,776.95	2,777	
Police detail	30	hour	98.74	2,962	47,430
Water/Sprinkler					
2" Copper (Domestic Service Connection) w/trench	80	lf	45.67	3,653	
2" Gate Valve	1	ea	1,542.75	1,543	
Connect to main	1	ea	2,962.08	2,962	
4" CLDI (Fire Service Connection) w/trench	80	lf	74.05	5,924	
4" Tapping Sleeve	1	ea	4,134.57	4,135	
4" Gate Valve	1	ea	2,036.43	2,036	
Police detail	40	hour	98.74	3,949	24,203
Electric/Tel/Cable					
2-4" PVC Conduits (Electric Service Connection) w/trench & pull wire	100	lf	59.24	5,924	
Transformer pad (transformer by Utility) including secondary wiring	1	ls	3,548.33	3,548	
2-4" PVC Conduits (Phone/Cable Service Connection) w/trench	100	lf	59.24	5,924	
Police detail	20	hour	98.74	1,975	17,371
Widening of Driveway to 24 feet					
Allow	3,240	sf	12.34	39,988	39,988
Wetlands and Other Land Features					
Not applicable			0.00	0	0
Sitework Premium (sheet piling, excavation, difficult working conditions on sloping site)					
Sheet piling for excavation work	7,200	sf	30.86	222,156	222,156
Parking for Pool Users					
Surface parking lot (31 spaces) closest to lake	12,400	sf	6.17	76,520	76,520
Site Improvements outside of Property Line					
Not applicable			0.00	0	0
Rosemary Lake	Total			8,609,150	8,609,150