

Westwood Hanlon Elementary School

790 Gay Street
Westwood, MA

January 17, 2022

60% Construction Document Estimate

Construction Manager:

Compass Project Management, Inc.
A Vertex Company
One Edgewater Drive, Suite 204
Norwood, MA 02062

Architect:

Dore + Whittier
260 Merrimac Street
Newburyport, MA 01950
(978) 499-2999

Estimator:

Miyakoda Consulting Inc.
PO Box 120731
Boston, MA 02111
(617) 799-5832

Westwood Hanlon Elementary School

Westwood, MA

INTRODUCTION

Description:

- 1** Construction of Westwood Hanlon Elementary School project
- 2** GSF for this building is 113,141 GSF
- 3** Site utility infrastructure, Site improvements and soft landscaping
- 4** Hazardous material abatement of existing 1 story brick building

Particulars:

- 1** Drawings and Project Manual received from Dore + Whittier dated December 21, 2021
- 2** Detailed quantity takeoff from these documents where possible
- 3** Experience with similar projects of this nature

Assumptions:

- 1** The Project will be a DBB Chapter 149 bid package
- 2** Our costs assume that there will be at least three subcontractors submitting unrestricted bids in each sub-trade
- 3** Unit rates are based on current dollars
- 4** Subcontractor's markups have been included in each unit rate. Markups cover the cost of field overhead home office overhead and subcontractor's profit
- 5** General Conditions and Requirements value covers Sub-Contractor's bond, site office overheads, and building permit applications
- 6** Fee markup is calculated on a percentage basis of direct construction costs. The value covers Contractor's bond, insurance and profit
- 7** Design and Pricing Contingency markup is an allowance for unforeseen design issues, design detail development and specification clarifications
- 8** Escalation is based on 4% per Annum. We have escalated by 6 months.

Exclusions:

- 1** Design fees and other soft costs
- 2** Owner's project administration
- 3** Construction of temporary facilities
- 4** Relocation expenses
- 5** Printing and advertising
- 6** Existing condition surveys and investigations
- 7** Work beyond the boundary of the site
- 8** Testing
- 9** Specialties, loose furnishings, fixtures and equipment beyond those noted
- 10** Preconstruction Fee
- 11** Construction Contingency
- 12** Traffic Improvements

Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

MAIN SUMMARY - NEW CONSTRUCTION CHAPTER 149

<u>DESCRIPTION</u>			<u>TOTAL</u>	<u>COST/SF</u>
1 Direct Trade Costs With Site				
2 New Construction	113,141 GSF		\$49,006,552	\$433.15
Building Demolition			\$273,884	
3 Site Development			\$10,252,070	
Hazardous Waste			\$750,000	\$6.63
9 Direct Trade Cost SubTotal			\$60,282,506	\$532.81
10 Design and Pricing Contingency	2.00%	\$60,282,506	\$1,205,650	\$10.66
11 Trade Cost SubTotal			\$61,488,156	\$543.46
12 General Conditions	3.25%	\$61,488,156	\$1,998,365	\$17.66
13 General Requirements	3.00%	\$63,486,521	\$1,904,596	\$16.83
14 Insurance	1.40%	\$65,391,117	\$915,476	\$8.09
15 Bond	1.00%	\$66,306,592	\$663,066	\$5.86
16 Permit	Waived	\$66,969,658		
17 Fee	3.00%	\$66,969,658	\$2,009,090	\$17.76
18 Estimated Construction Cost Total			\$68,978,748	\$609.67
19 Escalation	2.00%	\$68,978,748	\$1,379,575	\$12.19
20 (Assume August 2022 Start of Construction)				
21 Estimated Construction Cost Total			\$70,358,324	\$621.86

Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DIRECT COST SUMMARY

<u>ELEMENT</u>	<u>TOTAL</u>	<u>COST/SF</u>
9		
10 A10 FOUNDATIONS	\$3,406,776	\$30.11
11		
12 A20 BASEMENT	\$0	\$0.00
13		
14 B10 STRUCTURE	\$5,484,540	\$48.48
15		
16 B20 EXTERIOR CLOSURE	\$8,031,680	\$70.99
17		
18 B30 ROOFING	\$2,295,884	\$20.29
19		
20 C10 INTERIOR CONSTRUCTION	\$5,007,976	\$44.26
21		
22 C20 STAIRCASES	\$267,403	\$2.36
23		
24 C30 INTERIOR FINISHES	\$2,889,093	\$25.54
25		
26 D10 CONVEYING SYSTEMS	\$146,850	\$1.30
27		
28 D2020 PLUMBING	\$2,096,019	\$18.53
29		
30 D3010 HVAC	\$8,952,182	\$79.12
31		
32 D4010 FIRE PROTECTION	\$684,179	\$6.05
33		
34 D50 ELECTRICAL	\$5,412,938	\$47.84
35		
36 E10 EQUIPMENT	\$981,620	\$8.68
37		
38 E20 FURNISHINGS	\$1,202,557	\$10.63
39		
40 F10 SPECIAL CONSTRUCTION	\$2,146,855	\$18.98
41		
42 F30 DEMOLITION	\$0	\$0.00
43		
44 TOTAL	<u>\$49,006,552</u>	<u>\$433.15</u>
45		
46		

Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>RATE/UNIT</u>	<u>TOTAL</u>
10 A10 FOUNDATIONS				
11				
12 A1010 FOUNDATIONS				
13 <i>Continuous footing</i>	2,388	<i>LF</i>		
14 Concrete; material	234	CY	\$150.00	\$35,100
15 Concrete; place (combination of pumping/trucking)	234	CY	\$110.00	\$25,740
16 Reinforcement	17,550	LB	\$2.00	\$35,100
17 Formwork	4,776	SF	\$22.00	\$105,072
18 <i>Spread footings:</i>	161	<i>EA</i>		
19 Concrete; material	752	CY	\$150.00	\$112,800
20 Concrete; place	752	CY	\$110.00	\$82,720
21 Reinforcement (85#/cy)	63,920	LB	\$2.00	\$127,840
22 Formwork	9,897	SF	\$25.00	\$247,425
23 <i>Piers</i>	116	<i>EA</i>		
24 Concrete; material	44	CY	\$150.00	\$6,600
25 Concrete; place	44	CY	\$110.00	\$4,840
26 Reinforcement (200#/cy)	8,800	LB	\$2.00	\$17,600
27 Formwork	16,126	SF	\$25.00	\$403,150
28 <i>Foundation walls</i>	4,949	<i>SF</i>		
29 Concrete; material	419	CY	\$150.00	\$62,850
30 Concrete; place	419	CY	\$110.00	\$46,090
31 Reinforcement	62,850	LB	\$2.00	\$125,700
32 Formwork	9,897	SF	\$18.00	\$178,146
33 Brick/ Stone shelf	2,083	LF	\$8.00	\$16,664
34 Elevator pits	1	EA		
35 Concrete; material	14	CY	\$150.00	\$2,100
36 Concrete; place	14	CY	\$110.00	\$1,540
37 Reinforcement	408	LB	\$2.00	\$816
38 Formwork	103	SF	\$25.00	\$2,563
39 <i>Elevator shaft walls</i>	186	<i>SF</i>		
40 Concrete; material	7	CY	\$150.00	\$1,050
41 Concrete; place	7	CY	\$110.00	\$770
42 Reinforcement	1,050	LB	\$2.00	\$2,100
43 Formwork	372	SF	\$22.00	\$8,184
44				
45 Anchor bolts	644	SET	\$42.00	\$27,048
46				
47 <i>Thermal & Moisture Protection</i>				
48 2" Insulation at foundation walls	4,949	SF	\$2.85	\$14,103
49 Waterproofing elevator pit	204	SF	\$22.00	\$4,488
50 Damp proofing to foundation walls	4,949	SF	\$6.00	\$29,691



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

51					
52	Dewatering during excavation	1	LS	\$20,000.00	\$20,000
53	A1010 FOUNDATIONS TOTAL				\$1,747,890
54					
55	A1030 SLAB ON GRADE				
56	<i>Earthwork</i>				
57	Continuous footing w/foundation wall	2,388	LF		
58	Excavation	1,456	CY	\$12.00	\$17,472
59	Backfill from import	803	CY	\$25.00	\$20,075
60	Spread footings	134	EA		
61	Excavation	1,482	CY	\$12.00	\$17,784
62	Backfill from import	730	CY	\$25.00	\$18,250
63	Elevator pits; cut and fill	1	EA	\$3,500.00	\$3,500
64					
65	Building slab excavation				
66	Soil cut and fill	13,861	CY	\$16.00	\$221,776
67	Structural Soil Import	9,891	CY	\$30.00	\$296,730
68	12" base course sand & gravel below slab on grade	3,157	CY	\$38.00	\$119,966
69	Miscellaneous earthwork	1	LS	\$75,000.00	\$75,000
70					
71	<i>Concrete</i>				
72	Slab on grade; 5" thick,	77,330	SF		
73	Concrete; material	1,255	CY	\$150.00	\$188,250
74	Concrete; place & finish	77,330	SF	\$3.00	\$231,990
75	premium slopes and finishes	3,860	SF	\$1.50	\$5,790
76	Reinforcement (6x6 mesh)	88,930	SF	\$1.50	\$133,394
77	Interior concrete ramp	512	SF	\$25.00	\$12,800
78	Slab depressions	125	LF	\$18.00	\$2,250
79	Slab isolation joints	6,190	LF	\$8.00	\$49,520
80					
81	<i>Miscellaneous</i>				
82	Mitigation barrier	1,255	CY	\$75.00	\$94,125
83	Housekeeping & mechanical equipment pads	1	LS	\$10,000.00	\$10,000
84					
85	<i>Thermal & Moisture Protection</i>				
86	Slab on grade; vapor barrier, 15% laps	89,518	SF	\$1.50	\$134,277
87	2" Rigid insulation under slab on grade	77,842	SF	\$2.85	NIC
88	2" Insulation to perimeter	2,083	SF	\$2.85	\$5,937
89	A1030 SLAB ON GRADE TOTAL				\$1,658,886
90					
91	A10 FOUNDATIONS TOTAL				\$3,406,776
92					
93					



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

94	A20 BASEMENT				
95					
96	No anticipated work				
97					
98	TOTAL SYSTEM A20 BASEMENT				\$0
99					
100					
101	B10 STRUCTURE				
102					
103	B1010 UPPER FLOOR CONSTRUCTION				
104	Concrete				
105	Slab topping on 2" mtl deck; 4 1/2" total thickness	36,885	SF		
106	Concrete Light weight material	512	CY	\$158.00	\$80,942
107	Upper level premium	512	CY	\$10.00	\$5,123
108	Reinforcement (6x6 mesh)	40,574	SF	\$1.10	\$44,631
109	Rebar at corners and openings	1,189	LBS	\$2.00	\$2,378
110	Concrete; place & finish	36,885	SF	\$3.00	\$110,655
111					
112	Structural steel framing	306	TNS		
113	HSS shape beam	9	TNS	\$5,500.00	\$49,500
114	WF shape beam	119	TNS	\$5,150.00	\$612,850
115	WF shape beam >100#/LF	12	TNS	\$5,400.00	\$64,800
116	HSS shape column	131	TNS	\$5,500.00	\$720,500
117	Braced framing	20	TNS	\$5,500.00	\$110,000
118	Misc. steel	15	TNS	\$4,800.00	\$72,000
119	Base Plates	161	EA	\$75.00	\$12,075
120	Moment connections	132	EA	\$800.00	\$105,600
121	Shear studs	7,377	EA	\$7.00	\$51,639
122	AESS allowance	1	AL	\$25,000.00	\$25,000
123	2" deep x 20ga galv composite floor deck	36,885	SF	\$3.95	\$145,696
124					
125	Misc. Metals				
126	Misc. steel framing	114,384	SF	\$0.25	\$28,596
127					
128	Thermal & Moisture Protection				
129	Fireproof	1	LS	\$25,000.00	\$25,000
130	Floor Construction Firestopping	114,384	GSF	\$0.35	\$40,034
131	B1010 UPPER FLOOR CONSTRUCTION TOTAL				\$2,307,019
132					
133	B1020 ROOF CONSTRUCTION				
134	Concrete				
135	Slab topping on 2" mtl deck; 6" total thickness @ RTU	2,660	SF		



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

136	Concrete NWT material	49	CY	\$158.00	\$7,783
137	Reinforcement (6x6 mesh)	2,926	SF	\$1.10	\$3,219
138	Concrete; place & finish	2,660	SF	\$3.00	\$7,980
139					
140	<i>Structural steel framing</i>	382	TNS		
141	HSS shape beam	27	TNS	\$5,500.00	\$148,500
142	WF shape beam	223	TNS	\$5,150.00	\$1,148,450
143	WF shape beam >100#/LF	43	TNS	\$5,400.00	\$232,453
144	Open wet joists	61	TNS	\$5,700.00	\$347,700
145	Misc. steel	28	TNS	\$5,000.00	\$140,000
146	Moment connections	118	EA	\$750.00	\$88,500
147	shear studs	530	EA	\$7.00	\$3,710
148	HSS hanger from cafe roof	1	EA	\$650.00	\$650
149	3" deep, 20 ga type "B" galv metal roof deck	62,636	SF	\$4.25	\$266,203
150	Galv acoustic roof deck; Gym	12,325	SF	\$8.50	\$104,763
151	Other misc plates, connections	74,961	SF	\$2.00	\$149,922
152	Rough blocking to roof	74,961	SF	\$0.50	\$37,481
153	Formed metal panel roof screen, 8' high	79	LF	\$800.00	\$63,200
154					
155	<i>Canopy roof</i>	0	SF		
156	CLT decking	4,720	SF	\$42.00	\$198,240
157					
158	<i>Misc. Metals</i>				
159	Misc. steel framing	114,384	SF	\$2.00	\$228,768
160	B1020 ROOF CONSTRUCTION TOTAL				\$3,177,521
161					
162	TOTAL SYSTEM B10 SUPERSTRUCTURE				\$5,484,540
163					
164					
165	B20 EXTERIOR CLOSURE				
166					
167	B2010 EXTERIOR WALLS	72,557	SF		
168					
169	<i>Exterior wall</i>	72,557	SF		
170	Staging, scaffolding, hoists, related equipment	72,557	SF	\$3.25	\$235,810
171	Brick veneer	31,688	SF	\$38.00	\$1,204,144
172	Natural stone veneer	4,490	SF	\$75.00	\$336,750
173	Cast stone sill	565	SF	\$60.00	\$33,900
174	Terracotta cladding	16,872	SF	\$80.00	\$1,349,760
175	Terracotta projections	4,516	SF	\$80.00	\$361,280
176	MCP panel system	2,242	SF	\$75.00	\$168,150
177	8" CMU backup wall	12,184	SF	\$24.00	\$292,416
178	12" CMU backup wall	10,563	SF	\$28.50	\$301,046



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

179	6" metal stud	35,094	SF	\$8.00	\$280,754
180	3" rigid insulation	36,743	SF	\$4.50	\$165,344
181	Mineral fiberglass batt	19,114	SF	\$2.50	\$47,785
182	Air vapor barrier	72,557	SF	\$6.50	\$471,621
183	Gyp BD-5 sheathing	35,094	SF	\$2.75	\$96,509
184	5/8 GWB	35,094	SF	\$3.25	\$114,056
185	Fin metal edge trim	2,602	LF	\$25.00	NIC
186	Caulking and sealants	72,557	SF	\$1.00	\$72,557
187					
188	<i>Miscellaneous</i>				
189	Sills	1,814	LF	\$75.00	\$136,044
190	Makerspace tube steel	1	LS	\$35,000.00	\$35,000
191	Fixed rated expansion joint	35	LF	\$65.00	\$2,275
192	Loose galv steel lintel @ doors, windows & louvers	1,088	LF	\$140.00	\$152,320
193	Through wall sheet mtl flashing sheathing & rigid insul.	2,083	LF	\$25.00	\$52,075
194	Dimensional characters; School name	1	LS	\$12,800.00	\$12,800
195	Mockup; allow	1	LS	\$30,000.00	\$30,000
196	B2010 EXTERIOR WALLS TOTAL				\$5,952,395
197					
198	B2020 EXTERIOR WINDOWS	13,415	SF		
199	Curtain wall	9,290	SF	\$125.00	\$1,161,250
200	Translucent glass at gym	1,565	SF	\$130.00	\$203,450
201	Windows	4,125	SF	\$95.00	\$391,875
202	Blocking for windows	4,125	LF	\$5.50	\$22,688
203	Premium for school guard glazing	1	LS	\$50,000.00	\$50,000
204	Add premium for ballastic glazing	1	LS	\$25,000.00	\$25,000
205	Sunshades	258	LF	\$150.00	\$38,700
206	Backer rod	1	LS	\$35,000.00	\$35,000
207	<i>Thermal & Moisture Protection</i>				
208	Window caulking	5,915	LF	\$1.50	\$8,873
209	B2020 EXTERIOR WINDOWS TOTAL				\$1,936,835
210					
211	B2050 EXTERIOR DOORS AND GRILLES				
212	<i>Aluminum entry doors including hardware</i>				
213	Alum FG door; 6'-0 3/4"x7'-0"	6	PR	\$8,000.00	\$48,000
214	Alum FG door; 6'-0"x7'-0"	1	PR	\$8,000.00	\$8,000
215	Alum FG door; 6'-2 1/2"x7'-2 3/4"	3	PR	\$8,000.00	\$24,000
216	Alum FG door; 6'x7'-2 3/4"	3	PR	\$8,000.00	\$24,000
217	Alum G door; 6'-0"x7'-0"	1	PR	\$7,500.00	\$7,500
218	Auto controls	3	SETS	\$2,500.00	\$7,500
219	Premium for school guard glazing	5	PR	\$500.00	\$2,500
220	Premium for Bullet resistant glazing	2	PR	\$500.00	\$1,000



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

221	<i>HM doors including hardware</i>				
222	HM F door; 7x7	1	PR	\$3,250.00	\$3,250
223	HM F door; 6x7	4	PR	\$3,200.00	\$12,800
224	Door caulking	1	LS	\$1,900.00	\$1,900
225	B2050 EXTERIOR DOORS AND GRILLES TOTAL				\$140,450
226					
227	B2070 EXTERIOR LOUVERS AND VENTS				
228	Fixed aluminum louvers; allow	20	SF	\$100.00	\$2,000
229	B2070 EXTERIOR LOUVERS AND VENTS TOTAL				\$2,000
230					
231	B2080 EXTERIOR WALL APPURTENANCES				
232	Exterior alum. sun control devices (part of glazing system)				w/ glazing
233	B2080 EXTERIOR WALL APPURTENANCES TOTAL				\$0
234					
235	TOTAL SYSTEM B20 EXTERIOR CLOSURE				\$8,031,680
236					
237					
238	B30 ROOFING				
239					
240	B3010 ROOF COVERINGS				
241	<i>Roofing</i>				
242	PVC membrane roofing system, 60 mil	74,961	SF	\$6.60	\$494,743
243	1/2" cover board	74,961	SF	\$5.00	\$374,805
244	R-60 insulation	74,961	SF	\$6.00	\$449,766
245	Vapor retarder	74,961	SF	\$1.00	\$74,961
246	1/2" substrate board	74,961	SF	\$4.65	\$348,569
247	Tapered insulation	15,294	SF	\$1.50	\$22,941
248	<i>Canopy roof</i>				
249	PVC membrane roofing system, 60 mil	4,720	SF	\$6.60	\$31,152
250	1/2" cover board	4,720	SF	\$5.00	\$23,600
251	Vapor retarder	4,720	SF	\$1.00	\$4,720
252	Membrane to the parapet	1	LS	\$50,000.00	\$50,000
253					
254	Alum. roof edge/facias roof edge/high performance paint	2,806	LF	\$50.00	\$140,300
255	<i>Roofing Accessories</i>				
256	Walkway pads	1,470	SF	\$8.00	\$11,760
257	Terracotta cladding equipment at roof	521	SF	\$82.00	\$42,722
258	Roof access hatch 36"x36"	3	EA	\$5,500.00	\$16,500
259	Roof access hatch 36"x54"	1	EA	\$5,500.00	\$5,500
260	Expansion joint covers	1	LS	\$10,000.00	\$10,000
261					
262	<i>Mechanical roof top equipment</i>				



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

263	Roof ladders	4	EA	\$1,800.00	\$7,200
264					
265	Miscellaneous roof accessories	1	LS	\$25,000.00	\$25,000
266	B3010 ROOF COVERINGS TOTAL				\$2,134,238
267					
268	B 3020 ROOF APPURTONANCES				
269	Roof Drain/ overflow drain w/ insula sump	28	EA	\$750.00	\$21,000
270	EF flashing	7	EA	\$150.00	\$1,050
271	Roof and wall flashing	422	LF	\$18.00	\$7,596
272	Misc. flashing	1	LS	\$50,000.00	\$50,000
273	B 3020 ROOF APPURTONANCES TOTAL				\$79,646
274					
275	B 3060 HORIZONTAL OPENINGS				
276	Skylights	328	SF	\$250.00	\$82,000
277	B 3060 HORIZONTAL OPENINGS TOTAL				\$82,000
278					
279	TOTAL SYSTEM B30 ROOFING				\$2,295,884
280					
281					
282	C10 INTERIOR CONSTRUCTION				
283					
284	C1010 PARTITIONS				
285					
286	Masonry partitions	23,480	SF		
287	Staging, scaffolding, hoists, related equipment	23,480	SF	\$3.50	\$82,180
288	4" CMU	187	SF	\$18.00	\$3,366
289	Type HF8; 6" CMU, 7/8" Hat channel, 5/8" GWB	670	SF	\$24.00	\$16,080
290	Type E, E1; 8" CMU wall	12,965	SF	\$22.00	\$285,219
291	Type E2; 8" CMU wall -2 hr	601	SF	\$24.50	\$14,736
292	8" CMU elevator wall	1,056	SF	\$24.50	\$25,872
293	10" CMU	1,232	SF	\$25.50	\$31,416
294	Type G; 12" CMU	6,769	SF	\$29.00	\$196,301
295	Gypsum board partitions	123,423	SF		
296	Type A; 6" Metal studs, 5/8" GWB both sides, sound insulation	18,619	SF	\$14.50	\$269,976
297	Type A1A; 6" Metal studs, 2 layer 5/8" GWB both sides, sound insulation	697	SF	\$19.50	\$13,592
298	Type A2, 6" Metal studs, 5/8" GWB both sides, sound insulation	779	SF	\$14.50	\$11,296
299	Type A2A; 6" Metal studs, (2) 5/8" GWB both sides, sound insulation	20,532	SF	\$19.50	\$400,374
300	3-5/8" Metal studs, 5/8" GWB both sides	3,808	SF	\$12.00	\$45,696

Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

301	Type B; 3-5/8" Metal studs, 5/8" GWB both sides, sound insulation	1,799	SF	\$13.50	\$24,287
302	Type C; 8" Metal studs, 5/8" GWB both sides, sound insulation	6,767	SF	\$15.75	\$106,580
303	Type F; 2-1/2" Metal studs, 5/8" GWB, sound insulation	246	SF	\$8.75	\$2,153
304	Type F4; 3-5/8" Metal studs, 5/8" GWB, sound insulation	13,882	SF	\$10.50	\$145,761
305	Type F6; 6" Metal studs, 5/8" GWB, sound insulation	30,785	SF	\$11.75	\$361,724
306	Type F6a; 6" Metal studs, 5/8" GWB, Non-rated acoustic barrier	957	SF	\$12.00	\$11,483
307	Type F8; 7/8" Furring channel, 5/8" GWB	627	SF	\$6.00	\$3,762
308	Type M; 6" Metal studs, (2) 5/8" GWB both sides, sound insulation	2,925	SF	\$19.50	\$57,038
309	Premium for abuse resistant walls	1	LS	\$75,000.00	\$75,000
310	Rough carpentry internal partitions and ceilings	226,609	SF	\$1.50	\$339,914
311	Misc. metals for interior masonry (lintels, restraint)	2,348	LF	\$35.00	\$82,180
312					
313	<i>08 80 00 Glazing</i>				
314	Interior window	119	SF	\$85.00	\$10,115
315	Interior storefront	1,964	SF	\$150.00	\$294,600
316					
317	<i>Operable partition</i>				
318	Paired panel system	1	LS	\$18,000.00	\$18,000
319					
320	<i>Interior penetration firestopping</i>				
321	Interior caulking	114,384	GSF	\$1.25	\$142,980
322	Top-of-partition firestopping	114,384	GSF	\$0.65	\$74,350
323	C1010 PARTITIONS TOTAL				\$3,146,028
324					
325	C1020 INTERIOR DOORS, FRAMES & HARDWARE				
326	<i>08 11 13 Hollow Metal Doors and Frames</i>				
327	Type F HM door; 3'-0"x7'-0"	3	EA	\$300.00	\$900
328	Type F HM door; 5'-0"x7'-0"	1	PR	\$600.00	\$600
329	Type F HM door; 6'-0"x7'-0"	1	PR	\$1,200.00	\$1,200
330	<i>Door Frames</i>				
331	Type 1 HM frame; single	67	EA	\$245.00	\$16,415
332	Type 1 HM frame; double	18	EA	\$299.00	\$5,382
333	Type 2 HM frame; Double	4	EA	\$299.00	\$1,196
334	Type 3 HM frame; single	17	EA	\$961.00	\$16,337
335	Type 4 HM frame; single	25	EA	\$761.00	\$19,025
336	Type 4 HM frame; Double	10	EA	\$1,277.00	\$12,770



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

337	Type 5 HM frame; single	27	EA	\$1,889.00	\$51,003
338	Type 5 AL frame; single	3	EA	\$2,077.90	\$6,234
339	Type 7 HM fame; single	8	EA	\$5,172.00	\$41,376
340	45 min fire rate	1	EA	\$75.00	\$75
341	60 min fire rate	7	EA	\$100.00	\$700
342	90 min fire rate	7	EA	\$125.00	\$875
343	<i>08 14 16 Flush Wood Doors</i>				
344	Type F wood door; 3'-0"x7'-0"	131	EA	\$350.00	\$45,850
345	Type F wood door; 3'-6"x7'-0"	1	EA	\$350.00	\$350
346	Type F wood door; 4'-0"x7'-0"	4	PR	\$550.00	\$2,200
347	Type F wood door; 6'-0"x7'-0"	10	PR	\$700.00	\$7,000
348	Type FG wood door; 6'-0"x7'-0"	2	PR	\$1,285.00	\$2,570
349	Type G wood door ; 3'-0"x7'-0"	3	EA	\$496.25	\$1,489
350	Type G wood door ; 6'-0"x7'-0"	2	PR	\$642.50	\$1,285
351	Type G wood door; 7'-0"x7'-0"	1	PR	\$642.50	\$643
352	Type N wood door; 6'-0"x7'-0"	6	PR	\$700.00	\$4,200
353	Type V wood door; 3'-0"x7'-0"	2	EA	\$415.00	\$830
354	Type V wood door; 6'-0"x7'-0"	1	PR	\$830.00	\$830
355	Premium cost for acoustical doors	1	LS	\$5,250.00	\$5,250
356	Premium cost to fully gasketed	1	LS	\$450.00	\$450
357	Premium cost for Bullet resistant glazing	1	LS	\$7,800.00	\$7,800
358	<i>08 41 13 Aluminum Framed Entrances, Storefront</i>				
359	Type G glass door ;3'-0"x7'-0"	5	EA	\$3,500.00	\$17,500
360	Type G glass door ; 6'-0"x7'-0"	5	PR	\$7,000.00	\$35,000
361	Type G glass door ; 7'-0"x7'-0"	1	PR	\$7,000.00	\$7,000
362	Type FG alum door ; 3'- 1 3/4"x7'-2 3/4"	1	EA	\$4,000.00	\$4,000
363	Type FG alum door ; 3'- 0"x7'-0"	4	EA	\$4,000.00	\$16,000
364	Type FG alum door ; 3'-0"x7'-2 3/4"	1	EA	\$4,000.00	\$4,000
365	Type FG alum door ; 3'-6-1/4"x7'-2 3/4"	2	EA	\$4,000.00	\$8,000
366	Type FG alum door ; 6'-0"x7'-0"	2	PR	\$8,000.00	\$16,000
367	Type FG alum door ; 7'-0"x7'-0"	1	PR	\$8,000.00	\$8,000
368	<i>08 33 23 Coiling and Overhead Doors</i>				
369	Overhead door: 10'-0"x10'-0"	1	EA	\$8,500.00	\$8,500
370	Overhead door: 13'-0"x9'-6"	1	EA	\$10,497.50	\$10,498
371	Overhead door: 8'-0"x8'-0"	2	EA	\$5,440.00	\$10,880
372	<i>08 3 1 00 Access Doors & Panels</i>				
373	Access doors	34	EA	\$350.00	\$11,900
374	<i>08 80 00 Glazing</i>				
375	Door sidelights - See door frame				Included
376	Glazing to door - See door				Included
377					
378	Glass pocket door ; 8'-0"x7'-0"	27	EA	\$11,200.00	\$302,400
379	Alum door ; 3' -3-1/2"x6'-11 1/2"	24	EA	\$3,500.00	\$84,000



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

380					
381	<i>08 71 00 Door Hardware</i>				
382	Hardware	223	SET	\$850.00	\$189,550
383	Powered door openers	2	LOC	\$3,000.00	\$6,000
384	Paint door frames	179	EA	\$85.00	\$15,215
385	Paint door	7	EA	\$70.00	\$490
386	Blocking at doors	3,139	LF	\$3.50	\$10,987
387	Door Installation	223	EA	\$250.00	\$55,750
388	C1020 INTERIOR DOORS, FRAMES & HARDWARE TOTAL				\$1,076,503
389					
390	C1030 FITTINGS				
391	<i>Miscellaneous Metals</i>				
392	<i>Miscellaneous metals</i>	114,384	SF	\$1.00	\$114,384
393	Glass infill railing	174	LF	\$445.00	\$77,430
394					
395	<u>Finish Carpentry</u>				
396	Countertop support work	1	LS	\$15,440.00	\$15,440
397	Misc. millwork standing and running trim	114,384	SF	\$0.25	\$28,596
398	<i>Markerboards and tackboards</i>				
399	MB 14460 at Adaptive PE	1	EA	\$1,200.00	\$1,200
400	MB 14460 at Art Classroom	1	EA	\$1,200.00	\$1,200
401	MB 7260 at Art Classroom	1	EA	\$600.00	\$600
402	MB 12084 at Extended Learning	2	EA	\$1,680.00	\$3,360
403	MB 14484 at Extended Learning	3	EA	\$1,680.00	\$5,040
404	MB 4860 at Extended Learning	1	EA	\$400.00	\$400
405	MB 14460 at Focus Program Room	2	EA	\$1,200.00	\$2,400
406	MB 12060 at General Classroom	20	EA	\$1,000.00	\$20,000
407	MB 4860 at General Classroom	20	EA	\$400.00	\$8,000
408	MB 14460 at Kindergarten Classroom	5	EA	\$1,200.00	\$6,000
409	MB 9660 at Kindergarten Classroom	5	EA	\$800.00	\$4,000
410	MB 12084 at Media Center	2	EA	\$1,680.00	\$3,360
411	MB 14460 at Music classroom	3	EA	\$1,200.00	\$3,600
412	MB 9648 at Music classroom	1	EA	\$640.00	\$640
413	MB 9660 at Resource Room	4	EA	\$800.00	\$3,200
414	MB 14460 at STE Room	1	EA	\$1,200.00	\$1,200
415	MB 14460 at WABA Upper	1	EA	\$1,200.00	\$1,200
416	MB 14460 at WABA lower	0	EA	\$1,200.00	\$0
417	TB 6060 at Extended Learning	2	EA	\$450.00	\$900
418	TB 4848 at General Classroom	20	EA	\$288.00	\$5,760
419	TB 9648 at General Classroom	20	EA	\$576.00	\$11,520
420	TB 3660 at Kindergarten Classroom	5	EA	\$270.00	\$1,350
421	TB 7248 at Kindergarten Classroom	5	EA	\$432.00	\$2,160
422	TB 9648 at Kindergarten Classroom	5	EA	\$576.00	\$2,880



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

423	TB 7248 at Music classroom	2	EA	\$432.00	\$864
424	TB 4860 at Resource Room	2	EA	\$360.00	\$720
425	TB 6036 at Speech	2	EA	\$270.00	\$540
426	TB 4848 at STE Room	1	EA	\$288.00	\$288
427	Misc. markerboard/tackboard	1	LS	\$15,000.00	\$15,000
428	<i>Interior guardrails</i>				
429	Handrail at ramp	122	LF	\$250.00	\$30,500
430	<i>Signage</i>				
431	Display case cabinet	6	EA	\$3,500.00	\$21,000
432	Metal top trim	1	LS	\$1,600.00	\$1,600
433	Art display rail	1	LS	\$1,200.00	\$1,200
434	Building wayfinding signage	1	LOC	\$7,500.00	\$7,500
435	Framed signs	1	LS	\$2,500.00	\$2,500
436	Miscellaneous signage	114,384	GSF	\$0.50	\$57,192
437	<i>Wall & corner guards</i>				
438	Stainless steel corner guards	1	LS	\$5,760.00	\$5,760
439	<i>Toilet compartments (Solid Polymer)</i>				
440	Toilet compartments	18	EA	\$1,250.00	\$22,500
441	Toilet compartments - ADA	8	EA	\$1,500.00	\$12,000
442	Urinal screen	9	EA	\$750.00	\$6,750
443	<i>Metal lockers</i>				
444	Kitchen staff lockers	3	EA	\$500.00	\$1,500
445	Locker at Ext. Day stor.	3	EA	\$500.00	\$1,500
446	<i>Toilet accessories</i>				
447	Paper towel dispenser and soap dispenser @ classrooms	31	SET	\$135.00	\$4,185
448	Gang bathroom	6	EA	\$3,500.00	\$21,000
449	Single user bathroom	20	EA	\$750.00	\$15,000
450	Mop holder w/shelf (Janitors)	4	EA	\$200.00	\$800
451	<i>Fire extinguisher cabinets</i>				
452	Fully recessed/non-rated	11	EA	\$550.00	\$6,291
453	Semi-recessed/non-rated	6	EA	\$200.00	\$1,200
454					
455	General office service desk	16	LF	\$1,200.00	\$19,200
456	Sills	1,325	LF	\$55.00	\$72,875
457	Custom window seat-w/storage	200	LF	\$250.00	\$50,000
458					
459	Trash receptacles	26	LF	\$500.00	\$13,000
460					
461	Interior expansion	1	LS	\$15,000.00	\$15,000
462					
463	<i>Miscellaneous</i>				
464	Curtain and track at Nurse office	34	LF	\$120.00	\$4,080
465	Curtain and track at Extended Learning	359	LF	\$120.00	\$43,080

Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

466	Hoist beam	1	EA	\$5,000.00	\$5,000
467	C1030 FITTINGS TOTAL				\$785,445
468					
469	TOTAL SYSTEM C10 INTERIOR CONSTRUCTION				\$5,007,976
470					
471					
472	C20 STAIRCASES				
473					
474	C2010 STAIRCASES				
475	<i>Interior stairs</i>				
476	Concrete fill egress stairs	5	FLT	\$3,500.00	\$17,500
477	Egress stairs	3	FLT	\$25,000.00	\$75,000
478	Open/monumental stairs	1	FLT	\$75,000.00	\$75,000
479	Media center stairs	1	FLT	\$3,000.00	\$3,000
480	Wood stair at Cafeteria	52	LF	\$150.00	\$7,800
481	Ramp to stage	1	LS	\$12,000.00	\$12,000
482	Paint stairs	1	LS	\$15,000.00	\$15,000
483	<i>Stair finishes</i>				
484	Carpet at stair	116	SF	\$20.00	\$2,320
485	Raised rubber tile	2,391	SF	\$25.00	\$59,783
486	C2010 STAIRCASES TOTAL				\$267,403
487					
488	TOTAL C20 STAIRCASES				\$267,403
489					
490					
491	C30 INTERIOR FINISHES				
492					
493	C3010 WALL FINISHES				
494	Tile walls at bathroom, kitchen and Jan	9,018	SF	\$26.50	\$238,977
495	Tile walls at corrido, cafeteria and water fountain	896	SF	\$26.50	\$23,744
496	Linoleum wall covering at corridor	2,010	SF	\$18.00	\$36,180
497					
498	Acoustic wall panels	5,045	SF	\$28.00	\$141,260
499	Custom graphic wall covering	275	SF	\$15.00	\$8,460
500	DWP-1	472	SF	\$25.00	\$11,800
501	4x4 Custom PEG board system	1	EA	\$448.00	\$448
502	Wall slats	830	SF	\$55.00	\$45,650
503	Finish to Prescinium	50	LF	\$300.00	\$15,000
504	Wall pad at Adaptive PE	268	SF	\$20.00	\$5,360
505	Wall safety pads at Gym	585	SF	\$20.00	\$11,700
506	Removable wall pads	364	SF	\$25.00	\$9,100
507	Acoustical CMU, paint at GYM	2,880	SF	\$1.50	\$4,320
508	Paint CMU Walls	44,612	SF	\$1.15	\$51,304



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

509	Paint to GWB	183,771	SF	\$1.00	\$183,771
510	Misc. paint	114,384	GSF	\$0.50	\$57,192
511	C3010 WALL FINISHES TOTAL				\$844,266
512					
513	C3020 FLOOR FINISHES	114,384			
514	<i>Tile:</i>				
515	QT	1,670	SF	\$26.50	\$44,255
516	QT base	212	LF	\$18.00	\$3,816
517	Stone threshold	20	EA	\$175.00	\$3,500
518	Tile at bathroom	2,436	SF	\$24.50	\$59,682
519	Tile base	760	LF	\$16.00	\$12,160
520	<i>Flooring</i>				
521	Wood stage floor	958	SF	\$25.00	\$23,950
522	Wood athletic flooring	11,342	SF	\$25.00	\$283,550
523	Carpet	796	SY	\$54.00	\$42,984
524	FTF; Flocked tile flooring;	27,435	SF	\$8.00	\$219,480
525	Linoleum	20,588	SF	\$7.00	\$144,116
526	Linoleum at corridor, mixer	17,715	SF	\$8.00	\$141,720
527	Lin at bathroom	1,366	SF	\$7.00	\$9,562
528	Rubber athletic	1,698	SF	\$18.00	\$30,564
529	Ramp finish	212	SF	\$10.00	\$2,120
530	Rubber base	1	LS	\$25,525.00	\$25,525
531	<i>Painting</i>				
532	Sealed concrete	6,186	SF	\$2.00	\$12,372
533	C3020 FLOOR FINISHES TOTAL				\$1,059,356
534					
535	C3030 CEILING FINISHES				
536	Acoustical ceilings; ACP 1A, 3A,4A -2x2	44,803	SF	\$8.00	\$358,424
537	Acoustical ceilings; ACP 1A, 2A -2x2 > 10'-0" A.F.F.	21,604	SF	\$9.75	\$210,639
538	Acoustical ceilings ACP 5A at bathroom	3,508	SF	\$9.00	\$31,572
539	Acoustical ceilings; ACP 7A -2x2'	4,562	SF	\$11.00	\$50,182
540	Acoustic ceiling; ACP9 20'-0" AFF	642	SF	\$12.50	\$8,025
541	Absorptive panels	1	LS	\$35,000.00	\$35,000
542	GWB ceilings	8,195	SF	\$15.00	\$122,925
543	GWB soffit	1,238	SF	\$25.00	\$30,950
544	Metal ceiling; MCM	548	SF	\$60.00	\$32,880
545	Acoustic wood baffles; WD-1	882	SF	\$38.00	\$33,516
546	2"x2" Decorative wood fins-wall to ceiling application; WD-1	308	SF	\$48.00	\$14,784
547	Paint exposed ceiling	4,445	SF	\$2.15	\$9,557
548	5'x5' Convex curved panels (kine tics ovations)	142	SF	\$55.00	\$7,810
549	GYM exposed ceiling - see Acoustical deck	11,350	SF	\$2.00	\$22,700
550	Illuminated light panel @ 12'-6" AFF	288	SF		Electrical
551	Paint GWB ceilings	9,433	SF	\$1.75	\$16,508



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

552	C3030 CEILING FINISHES TOTAL				\$985,472
553					
554	TOTAL SYSTEM C30 INTERIOR FINISHES				\$2,889,093
555					
556					
557	D10 CONVEYING SYSTEMS				
558					
559	D1010 CONVEYING SYSTEMS				
560	Elevator pit ladder	1	EA	\$1,500.00	\$1,500
561	Sill angles	2	EA	\$175.00	\$350
562	Elevators; 2 stops	1	EA	\$145,000.00	\$145,000
563	D1010 CONVEYING SYSTEMS TOTAL				\$146,850
564					
565	TOTAL SYSTEM D10 CONVEYING SYSTEMS				\$146,850
566					
567					
568	D15 MECHANICAL				
569					
570	D2020 PLUMBING				
571	<u>Storm Piping Under slab</u>				
572	15" Sv Wt Cast Iron Pipe	10	LF	\$352.03	\$3,520
573	12" Sv Wt Cast Iron Pipe	170	LF	\$215.86	\$36,696
574	10" Sv Wt Cast Iron Pipe	260	LF	\$122.17	\$31,764
575	8" Sv Wt Cast Iron Pipe	210	LF	\$93.92	\$19,723
576	6" Sv Wt Cast Iron Pipe	220	LF	\$64.25	\$14,135
577	4" Sv Wt Cast Iron Pipe	110	LF	\$41.43	\$4,557
578	Sv Wt Cast Iron Fittings	123	EA	\$527.13	\$64,574
579	Floor Cleanouts	13	EA	\$334.15	\$4,344
580	Exterior Wall Sleeves	2	EA	\$485.00	\$970
581	Excavation, Bedding, and Backfill		By Others	\$26.40	\$0
582	Gaskets, Lubricants, Etc.	1	LS	\$4,100.00	\$4,100
583					
584	<u>Sanitary Waste and Vent Piping Underslab</u>				
585	6" Sv Wt Cast Iron Pipe	60	LF	\$64.25	\$3,855
586	5" Sv Wt Cast Iron Pipe	310	LF	\$53.18	\$16,486
587	4" Sv Wt Cast Iron Pipe	1,680	LF	\$41.43	\$69,602
588	2" Sv Wt Cast Iron Pipe	440	LF	\$24.26	\$10,674
589	Sv Wt Cast Iron Fittings	311	EA	\$139.33	\$43,366
590	Floor Cleanouts	17	EA	\$334.15	\$5,681
591	FD 1 Floor Drains	4	EA	\$322.90	\$1,292
592	FD 2 Floor Sinks	11	EA	\$775.88	\$8,535
593	Exterior Wall Sleeves	2	EA	\$265.00	\$530
594	Excavation, Bedding, and Backfill		By Others	\$26.40	\$0



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

595	Gaskets, Lubricants, Etc.	1	LS	\$4,100.00	\$4,100
596					
597	<u>Rain Leaders</u>				
598	8": No Hub Cast Iron Pipe	420	LF	\$73.56	\$30,895
599	6" No Hub Cast Iron Pipe	540	LF	\$49.28	\$26,611
600	5" No Hub Cast Iron Pipe	1,040	LF	\$41.16	\$42,806
601	4" No Hub Cast Iron Pipe	650	LF	\$33.39	\$21,704
602	No Hub Cast Iron Fittings	331	EA	\$214.85	\$71,169
603	Hangers	331	EA	\$93.00	\$30,806
604	Roof Drains	29	EA	\$645.06	\$18,707
605	Overflow Drains	27	EA	\$628.45	\$16,968
606	Wall Scuppers	14	EA	\$427.63	\$5,987
607	Floor Sleeves	44	EA	\$136.00	\$5,984
608	Fiberglass Pipe Insulation	2,235	LF	\$16.30	\$36,431
609	Drain Sump Insulation	56	EA	\$275.00	\$15,400
610	Exterior Wall Sleeves	14	EA	\$285.00	\$3,990
611	No Hub Couplings, Etc.	1	LS	\$6,400.00	\$6,400
612					
613	<u>Sanitary Waste and Vent Piping Above Slab</u>				
614	4" No Hub Cast Iron Pipe	2,440	LF	\$33.39	\$81,472
615	3" No Hub Cast Iron Pipe	720	LF	\$25.62	\$18,446
616	2" No Hub Cast Iron Pipe	3,640	LF	\$19.16	\$69,742
617	2" Galvanized Stl Pipe Sch 40 T&C	63	LF	\$28.74	\$1,811
618	No Hub Cast Iron Fittings	850	EA	\$81.63	\$69,386
619	Galvanized Drainage Pattern Fittings	8	EA	\$129.13	\$1,017
620	Hangers	858	EA	\$93.00	\$79,782
621	150# Bronze Gate Valves	1	EA	\$252.06	\$252
622	150# Bronze Check Valves	1	EA	\$350.83	\$351
623	Lavatory Carriers	38	EA	\$392.67	\$14,921
624	Double Water Closet Carriers	10	EA	\$1,185.96	\$11,860
625	Water Closet Carriers	31	EA	\$730.60	\$22,649
626	Urinal Carriers	12	EA	\$392.67	\$4,712
627	FD 1 Floor Drains	4	EA	\$322.90	\$1,292
628	Roof Flashings	4	EA	\$285.00	\$1,140
629	Floor Sleeves	85	EA	\$136.00	\$11,560
630	No Hub Couplings ,Etc.	1	LS	\$7,400.00	\$7,400
631					
632	<u>Domestic Water Piping</u>				
633	6" Ductile Iron Pipe	18	LF	\$31.22	\$562
634	Mech Joint Fittings	1	EA	\$297.05	\$297
635	Excavation, Bedding and Backfill	18	LF	\$21.00	\$378
636	Thrust Block	1	EA	\$512.00	\$512
637	Exterior Wall Sleeve	1	EA	\$196.00	\$196



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

638	6" L Copper Tubing	60	LF	\$178.79	\$10,727
639	4" L Copper Tubing	360	LF	\$93.21	\$33,556
640	3" L Copper Tubing	640	LF	\$58.29	\$37,306
641	2 1/2" L Copper Tubing	620	LF	\$40.23	\$24,943
642	2" L Copper Tubing	1,160	LF	\$24.48	\$28,397
643	1 1/2" L Copper Tubing	1,100	LF	\$17.52	\$19,272
644	1 1/4" L Copper Tubing	820	LF	\$15.27	\$12,521
645	1" L Copper Tubing	1,120	LF	\$13.22	\$14,806
646	3/4" L Copper Tubing	2,260	LF	\$9.31	\$21,041
647	1/2" L Copper Tubing	2,180	LF	\$7.33	\$15,979
648	1/2" K Copper Tubing	240	LF	\$8.40	\$2,016
649	Wrought Copper Fittings	1,290	EA	\$125.00	\$161,250
650	Hangers	1,290	EA	\$93.00	\$119,970
651	125# Cast Iron Gate Valves	6	EA	\$945.00	\$5,670
652	150# Bronze Ball Valves	150	EA	\$142.00	\$21,300
653	150# Bronze Drain Valves	20	EA	\$102.02	\$2,040
654	125# Cast Iron Check Valves	4	EA	\$1,064.39	\$4,258
655	150# Bronze Check Valves	10	EA	\$154.60	\$1,546
656	150# Bronze Balancing Valves	28	EA	\$267.45	\$7,489
657	125# Cast Iron Strainers	1	EA	\$1,589.95	\$1,590
658	125# Cast Iron Reduced Pressure Zone Backflow Preventors	1	EA	\$4,580.25	\$4,580
659	150# Bronze Reduced Pressure Zone Backflow Preventors	9	EA	\$388.15	\$3,493
660	Water Meter	1	EA	\$3,145.00	\$3,145
661	Pressure Reducing Valves	1	EA	\$1,975.00	\$1,975
662	Large Water Hammer Arrestors	12	EA	\$361.00	\$4,332
663	Water Hammer Arrestors	24	EA	\$121.81	\$2,923
664	Trap Primers	6	EA	\$214.81	\$1,289
665	Non Freeze Wall Hydrants	2	EA	\$351.77	\$704
666	HB 1 Interior Hosebibbs	11	EA	\$115.71	\$1,273
667	Thermometers	5	EA	\$202.94	\$1,015
668	Pressure Gauges	4	EA	\$167.13	\$669
669	Vacuum Breakers	2	EA	\$197.63	\$395
670	Fiberglass Pipe Insulation	10,320	LF	\$7.10	\$73,272
671	Solder, Flux, Gas, Etc.	1	LS	\$5,600.00	\$5,600
672					
673	<u>Natural Gas Piping</u>				
674	No Work Required		LF		\$0
675					
676	<u>Radon Mitigation</u>				
677	4" Perforated PVC Pipe w/ Ftgs		LF	\$21.60	\$0
678	4" PVC Pipe w/ Ftgs, Hgrs		LF	\$34.90	\$0
679	Radon Fans		EA	\$1,475.00	\$0
680	Geo Textile		SF	\$1.86	\$0



Westwood Hanlon Elementary SchoolWestwood, MA
113,141 GSF**DETAILED ESTIMATE - NEW CONSTRUCTION**

681	Crushed Stone		YDS	\$17.52	\$0
682					
683	<u>Plumbing Fixtures and Equipment</u>				
684	Flushometers	46	EA	\$995.46	\$45,791
685	P1 B Child Water Closets	5	EA	\$789.63	\$3,948
686	P2A Wall Hung Lavatories w/ Sensor Operated Faucets	38	EA	\$950.95	\$36,136
687	P3,3A Wall Hung Urinals w/ Sensor Operated Faucets	12	EA	\$1,110.36	\$13,324
688	P4,4 A Classroom Sink	55	EA	\$850.70	\$46,789
689	P5 Hand Sinks	34	EA	\$850.70	\$28,924
690	P6 Bilevel Electric Water Coolers	7	EA	\$2,974.00	\$20,818
691	P7 Mop Receptors	7	EA	\$1,045.00	\$7,315
692	P8,8A Art Room Sink w/ Solids Interceptors	4	EA	\$1,623.69	\$6,495
693	P9 Emergency Eyewash	1	EA	\$1,326.70	\$1,327
694	P10 Refrigerator Condensate Pump	3	EA	\$615.36	\$1,846
695	P11 Shower Module	1	EA	\$2,612.80	\$2,613
696	P12 Washing Machine Box	2	EA	\$425.00	\$850
697	P13 Dishwasher	1	INSTALI	\$285.00	\$285
698	Commercial Kitchen Hand Sinks	1	INSTALI	\$205.00	\$205
699	Commercial Kitchen 3 Bay Sink	1	INSTALI	\$685.00	\$685
700	Commercial Kitchen Prep Sinks	2	INSTALI	\$489.00	\$978
701	Commercial Kitchen Ware Wash	1	INSTALI	\$489.00	\$489
702	Commercial Kitchen Hose Reel	1	INSTALI	\$205.00	\$205
703	DWH 1,2 Electric Water Heaters 36 KW 150 GPH, 119 Gallon	2	EA	\$29,874.00	\$59,748
704	XT 1,2 Expansion Tanks 8 Gallon Acceptance	2	EA	\$1,312.00	\$2,624
705	RCP 1 Hot Water Recirculation Pump 5 GPM @ 20 FT	1	EA	\$684.00	\$684
706	GI 1 Grease Interceptor 127 LBS	1	EA	\$6,845.00	\$6,845
707	GI 2 Grease Interceptor 50 LBS	1	EA	\$3,296.00	\$3,296
708	Solids Interceptors	4	EA	\$425.00	\$1,700
709	Leak Detection	1	EA	\$4,978.00	\$4,978
710	DMV 1 House Antiscald Valve 85 GPM	1	EA	\$11,450.00	\$11,450
711					
712	<u>Miscellaneous</u>				
713	Coordination Drawings, As Builts, Submittals, O&M's	1	LS	\$29,450.00	\$29,450
714	Rigging, Hoisting, and Scaffolding	1	LS	\$3,812.00	\$3,812
715	Flushing and Sanitizing	1	LS	\$4,945.00	\$4,945
716	Concrete Housekeeping Pads	2	EA	\$712.00	\$1,424
717	Drip Pans w/ Leak Detection	2	EA	\$1,574.00	\$3,148
718	Valve Tags, Pipe Identification	1	LS	\$10,450.00	\$10,450
719	D2020 PLUMBING TOTAL				\$2,096,019
720					
721	D3010 HVAC				
722	<u>Sheetmetal</u>				
723	Galvanized Ductwork	77,451	LBS	\$11.80	\$913,922



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

724				
725	<u>Sheetmetal Accessories</u>			
726	Displacement Diffusers	156	EA	\$225.00 \$35,100
727	Supply Air Grilles	6	EA	\$275.00 \$1,650
728	Supply Air Diffusers	7	EA	\$185.00 \$1,295
729	Return Air Grilles	118	EA	\$319.00 \$37,642
730	Exhaust Air Grilles	36	EA	\$241.00 \$8,676
731	Cafeteria Supply Diffusers	5	EA	\$525.00 \$2,625
732	Gym Supply Air Grilles	24	EA	\$684.00 \$16,416
733	Gym Return Air Grilles	4	EA	\$1,185.00 \$4,740
734	Canvas Flexible Connections	43	EA	\$1,675.00 \$72,025
735	Flexible Duct Preinsulated	163	EA	\$46.00 \$7,498
736	Volume Dampers	381	EA	\$125.00 \$47,625
737	Fire Dampers		ALLOW	\$26,000.00 \$0
738	Fire Smoke Dampers		ALLOW	\$20,000.00 \$0
739				
740	<u>Insulation</u>			
741	2" Thk Fiberglass Duct Wrap	47,662	SF	\$5.30 \$252,609
742				
743	<u>Indoor Geothermal Piping</u>			
744	Hgrs (CS Stan Wt)	126	LF	\$421.38 \$53,094
745	Geothermal Drop Piping to Heat Pumps w/ Ftgs, Hgrs	210	LF	\$230.26 \$48,355
746	Valving, Specialties at Pipe Entrance	1	LS	\$22,450.00 \$22,450
747	Valving, Specialties at Geothermal Circulators	3	EA	\$36,159.00 \$108,477
748	Valving, Specialties at Heat Pumps	5	EA	\$12,850.00 \$64,250
749	Fiberglass Insulation	336	LF	\$25.90 \$8,702
750				
751	<u>Heating Hot/ Dual Temperature Water Piping</u>			
752	Heating Hot Main Piping w/ Ftgs, Hgrs (CS Sch 40)	3,297	LF	\$149.21 \$491,945
753	Heating Hot Water Runout Piping to AHU w/ Ftgs, Hgrs	840	LF	\$77.99 \$65,512
754	Hgrs (L Copper)	15,700	LF	\$28.22 \$443,054
755	Valving, Specialties at Heat Pumps	6	EA	\$6,059.00 \$36,354
756	Valving, Specialties at Circulators	2	EA	\$16,577.00 \$33,154
757	Valving, Specialties at Air Handling Units	12	EA	\$3,581.00 \$42,972
758	Valving, Specialties at Terminal Units	287	EA	\$826.00 \$237,062
759	Fiberglass Insulation	19,837	EA	\$8.10 \$160,680
760				
761	<u>Chilled Water Piping</u>			
762	Chilled Water Main Piping w/ Ftgs, Hgrs (CS Stan Wt)	3,297	LF	\$318.29 \$1,049,402
763	Chilled Water Runout Piping to AHU's W/ Ftgs, Hgrs	840	LF	\$114.82 \$96,449
764	Valving, Specialties at Heat Pumps	6	EA	\$8,290.00 \$49,740
765	Valving, Specialties at Circulators	2	EA	\$27,862.00 \$55,724
766	Valving, Specialties at AHU	12	EA	\$5,767.00 \$69,204



Westwood Hanlon Elementary SchoolWestwood, MA
113,141 GSF**DETAILED ESTIMATE - NEW CONSTRUCTION**

767	Fiberglass Insulation	4,137	LF	\$15.60	\$64,537
768					
769	<u>Geothermal Field</u>				
770	Geothermal Piping to Field w/ Ftgs (HDPE)	900	LF		F10 SPECIAL CONSTRUCTION
771	Geothermal Runout Piping in Field w/ Ftgs	7,440	LF		F10 SPECIAL CONSTRUCTION
772	Geothermal Well Piping	50,120	LF		F10 SPECIAL CONSTRUCTION
773	Geothermal Wells w/ Grouting	80	EA		F10 SPECIAL CONSTRUCTION
774	Geothermal Piping in Vault w/ Ftgs, Hgrs, Valving, Specialties	1	LS		F10 SPECIAL CONSTRUCTION
775	Excavation, Bedding and Backfill	8,340	LF		F10 SPECIAL CONSTRUCTION
776	Machine Rental, Misc.	1	LS		F10 SPECIAL CONSTRUCTION
777					
778	<u>Refrigerant Piping</u>				
779	Refrigerant Suction Piping w/ Ftgs, Hgrs (ACR Tubing)	1,200	LF	\$37.63	\$45,156
780	Refrigerant Liquid Piping w/ Ftgs, Hgrs	1,200	LF	\$26.38	\$31,656
781	Specialties at Condensing Units	12	EA	\$1,171.00	\$14,052
782	Purging and Charging	12	EA	\$900.00	\$10,800
783	Elastomeric Insulation	1,200	LF	\$5.10	\$6,120
784					
785	<u>Air Conditioning Condensate Piping</u>				
786	(L Copper)	240	LF	\$52.64	\$12,634
787	Ftgs, Hgrs	3,680	LF	\$33.30	\$122,544
788	Fiberglass Pipe Insulation	3,680	LF	\$8.30	\$30,544
789					
790	<u>Equipment</u>				
791	Heating	6	EA	\$161,450.00	\$968,700
792	Heating Hot Water Circulators	2	EA	\$4,175.00	\$8,350
793	Air Separators	5	EA	\$4,896.00	\$24,480
794	Expansion Tanks	3	EA	\$4,012.00	\$12,036
795	Chilled Water Circulators	2	EA	\$6,752.00	\$13,504
796	Compensated Chilled Water Circulators	2	EA	\$1,125.00	\$2,250
797	Geothermal Circulators	2	EA	\$9,875.00	\$19,750
798	EF 1,5,9,10,11 Roof Fans 600 CFM @ .8", 1/4 HP	5	EA	\$2,275.00	\$11,375
799	EF 2,12 Roof Fans 680 CFM @ .8" 1/2 HP	2	EA	\$2,612.00	\$5,224
800	EF 3,7 Roof Fans 1,170 CFM @ .8", 3/4 HP	2	EA	\$2,975.00	\$5,950
801	EF 4 ,6 Roof Fans 300 CFM @ .8", 1/6 HP	2	EA	\$2,100.00	\$4,200
802	EF 8,13 Roof Fans 75 CFM @ .8", 1/15 HP	2	EA	\$1,985.00	\$3,970
803	EF 14 Roof Fan 250 CFM @ .3", 1/10 HP	1	EA	\$2,045.00	\$2,045
804	KEF 1 Roof Fan 1,750 CFM @ 1.5", 1 HP	1	EA	\$6,890.00	\$6,890
805	Kiln Exhaust Hood	1	EA	\$3,312.00	\$3,312
806	Kitchen Hood w/ Fire Suppression	1	EA	\$22,150.00	\$22,150
807	Split Air Conditioners w/ Condensing Units 18 MBH	10	EA	\$5,875.00	\$58,750
808	Split Air Conditioners 18 MBH	2	EA	\$2,975.00	\$5,950
809	Split Air Conditioner 24 MBH w/ Condensing Unit	1	EA	\$6,975.00	\$6,975



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

810	VRF Condensing Unit 36 MBH	1	EA	\$5,600.00	\$5,600
811	Hydronic Unit Heaters 8.7 MBH	5	EA	\$1,450.00	\$7,250
812	Hydronic Unit Heaters 9.7 MBH	2	EA	\$1,575.00	\$3,150
813	Hydronic Unit Heaters 28.7 MBH	1	EA	\$2,063.00	\$2,063
814	Hydronic Unit Heaters 20.1 MBH	6	EA	\$1,845.00	\$11,070
815	Hydronic Unit Heaters 16.5 MBH	2	EA	\$1,712.00	\$3,424
816	Hydronic Unit Heater 12 MBH	1	EA	\$1,645.00	\$1,645
817	Hydronic Unit Heater 57.5 MBH	1	EA	\$2,975.00	\$2,975
818	Glycol Feed Units 18 GPM @ 70 PSI, 1/2 HP	3	EA	\$5,400.00	\$16,200
819	Buffer Tank 500 Gallon	1	EA	\$20,870.00	\$20,870
820	7,055 CFM	4	EA	\$54,660.00	\$218,640
821	8,025 CFM	2	EA	\$96,450.00	\$192,900
822	6,455 CFM	1	EA	\$75,125.00	\$75,125
823	10,435 CFM	1	EA	\$126,125.00	\$126,125
824	18,935 CFM	2	EA	\$215,630.00	\$431,260
825	3,000 CFM	1	EA	\$31,250.00	\$31,250
826	Makeup Air Unit w/ HW, CHW Coils 1,500 CFM	1	EA	\$9,645.00	\$9,645
827	36" Wide Radiant Ceiling Panels	3,483	LF	\$58.96	\$205,358
828	24" Wide Radiant Ceiling Panels	428	LF	\$36.45	\$15,601
829	Panel Radiation	145	LF	\$198.63	\$28,801
830	Heat Exchanger 2,526 MBH	1	EA	\$16,125.00	\$16,125
831	Heat Exchanger 511 MBH	1	EA	\$6,512.00	\$6,512
832	Air Conditioning Condensate Pumps	12	EA	\$185.00	\$2,220
833	Sound Attenuators	20	EA	\$3,612.00	\$72,240
834	Variable Volume Boxes 16" Inlet	1	EA	\$1,386.00	\$1,386
835	Variable Volume Boxes 14" Inlet	1	EA	\$1,212.00	\$1,212
836	Variable Volume Boxes 12" Inlet	5	EA	\$1,085.00	\$5,425
837	Variable Volume Boxes 10" Inlet	2	EA	\$986.00	\$1,972
838	Variable Volume Boxes 9" Inlet	2	EA	\$945.00	\$1,890
839	Variable Volume Boxes 8" Inlet	2	EA	\$912.00	\$1,824
840	Variable Volume Boxes 7" Inlet	34	EA	\$868.00	\$29,512
841	Variable Volume Boxes 6" Inlet	6	EA	\$845.00	\$5,070
842	Variable Volume Boxes 5" Inlet	15	EA	\$812.00	\$12,180
843	Variable Volume Boxes 4" Inlet	31	EA	\$745.00	\$23,095
844	Variable Frequency Drives	8	EA	\$3,400.00	\$27,200
845	Magnetic Motor Starters	15	EA	\$1,125.00	\$16,875
846					
847	<u>Automatic Temperature Controls</u>				
848	Heating		PTS	\$565.00	\$0
849	Heating Hot Water Circulators		PTS	\$565.00	\$0
850	Chilled Water Circulators		PTS	\$565.00	\$0
851	Compensated Chilled Water Circulators		PTS	\$565.00	\$0
852	Geothermal Circulators		PTS	\$565.00	\$0



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

853	EF 1,5,9,10,11 Roof Fans 600 CFM @ .8", 1/4 HP	15	PTS	\$565.00	\$8,475
854	EF 2,12 Roof Fans 680 CFM @ .8" 1/2 HP	6	PTS	\$565.00	\$3,390
855	EF 3,7 Roof Fans 1,170 CFM @ .8", 3/4 HP	6	PTS	\$565.00	\$3,390
856	EF 4 ,6 Roof Fans 300 CFM @ .8", 1/6 HP	6	PTS	\$565.00	\$3,390
857	EF 8,13 Roof Fans 75 CFM @ .8", 1/15 HP	6	PTS	\$565.00	\$3,390
858	EF 14 Roof Fan 250 CFM @ .3", 1/10 HP	3	PTS	\$565.00	\$1,695
859	KEF 1 Roof Fan 1,750 CFM @ 1.5", 1 HP	3	PTS	\$565.00	\$1,695
860	Kiln Exhaust Hood	1	PTS	\$565.00	\$565
861	Kitchen Hood w/ Fire Suppression	1	PTS	\$565.00	\$565
862	Split Air Conditioners w/ Condensing Units 18 MBH	50	PTS	\$565.00	\$28,250
863	Split Air Conditioners 18 MBH	3	PTS	\$565.00	\$1,695
864	Split Air Conditioner 24 MBH w/ Condensing Unit	5	PTS	\$565.00	\$2,825
865	VRF Condensing Unit 36 MBH	2	PTS	\$565.00	\$1,130
866	Hydronic Unit Heaters 8.7 MBH	15	PTS	\$565.00	\$8,475
867	Hydronic Unit Heaters 9.7 MBH	6	PTS	\$565.00	\$3,390
868	Hydronic Unit Heaters 28.7 MBH	3	PTS	\$565.00	\$1,695
869	Hydronic Unit Heaters 20.1 MBH	18	PTS	\$565.00	\$10,170
870	Hydronic Unit Heaters 16.5 MBH	6	PTS	\$565.00	\$3,390
871	Hydronic Unit Heater 12 MBH	3	PTS	\$565.00	\$1,695
872	Hydronic Unit Heater 57.5 MBH	3	PTS	\$565.00	\$1,695
873	Glycol Feed Units 18 GPM @ 70 PSI, 1/2 HP	6	PTS	\$565.00	\$3,390
874	Buffer Tank 500 Gallon	2	PTS	\$565.00	\$1,130
875	7,055 CFM	120	PTS	\$565.00	\$67,800
876	8,025 CFM	60	PTS	\$565.00	\$33,900
877	6,455 CFM	30	PTS	\$565.00	\$16,950
878	10,435 CFM	30	PTS	\$565.00	\$16,950
879	18,935 CFM	60	PTS	\$565.00	\$33,900
880	3,000 CFM	18	PTS	\$565.00	\$10,170
881	Makeup Air Unit w/ HW, CHW Coils 1,500 CFM	18	PTS	\$565.00	\$10,170
882	36" Wide Radiant Ceiling Panels	586	PTS	\$565.00	\$331,090
883	24" Wide Radiant Ceiling Panels	155	PTS	\$565.00	\$87,575
884	Panel Radiation	12	PTS	\$565.00	\$6,780
885	Heat Exchanger 2,526 MBH	4	PTS	\$565.00	\$2,260
886	Heat Exchanger 511 MBH	4	PTS	\$565.00	\$2,260
887	Variable Volume Boxes 16" Inlet	3	PTS	\$565.00	\$1,695
888	Variable Volume Boxes 14" Inlet	3	PTS	\$565.00	\$1,695
889	Variable Volume Boxes 12" Inlet	15	PTS	\$565.00	\$8,475
890	Variable Volume Boxes 10" Inlet	6	PTS	\$565.00	\$3,390
891	Variable Volume Boxes 9" Inlet	6	PTS	\$565.00	\$3,390
892	Variable Volume Boxes 8" Inlet	6	PTS	\$565.00	\$3,390
893	Variable Volume Boxes 7" Inlet	102	PTS	\$565.00	\$57,630
894	Variable Volume Boxes 6" Inlet	18	PTS	\$565.00	\$10,170
895	Variable Volume Boxes 5" Inlet	45	PTS	\$565.00	\$25,425



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

896	Variable Volume Boxes 4" Inlet	93	PTS	\$565.00	\$52,545
897	Miscellaneous Monitoring Points	10	PTS	\$565.00	\$5,650
898	Operators Work Station	1	LS	\$26,450.00	\$26,450
899					
900	<u>Miscellaneous</u>				
901	Coordination Drawings, Submittals, As Builts, O&M's	1	LS	\$78,450.00	\$78,450
902	Rigging, Hoisting, and Scaffolding	1	LS	\$94,125.00	\$94,125
903	Valve Tags, Pipe Identification	1	LS	\$23,450.00	\$23,450
904	Seismic Restraint , Certification	1	LS	\$22,560.00	\$22,560
905	Concrete Housekeeping Pads	27	EA	\$1,075.00	\$29,025
906	Testing and Balancing	644	MH	\$145.00	\$93,380
907	D3010 HVAC TOTAL				\$8,952,182
908					
909	D4010 FIRE PROTECTION				
910	<u>Service from Site</u>				
911	6" Ductile Iron Pipe	18	LF	\$60.14	\$1,083
912	Mechanical Joint Fittings	1	EA	\$625.00	\$625
913	Thrust Blocks	1	EA	\$625.00	\$625
914	Exterior Wall Sleeves	1	EA	\$286.00	\$286
915	Excavation, Bedding, and Backfill	18	LF	\$23.00	\$414
916					
917	<u>Bulk Mains and Riser Piping</u>				
918	6" Blk Stl Pipe Stan Wt Grooved	924	LF	\$70.58	\$65,216
919	4" Blk Stl Pipe Sch 40 Grooved	168	LF	\$44.09	\$7,407
920	2 1/2" Blk Stl Pipe Sch 40 Grooved	105	LF	\$27.28	\$2,864
921	2" Blk Stl Pipe Sch 40 T&C	168	LF	\$24.01	\$4,034
922	Grooved Fittings	150	EA	\$430.31	\$64,385
923	125# Cast Iron Fittings	21	EA	\$133.70	\$2,808
924	Hangers	171	EA	\$93.00	\$15,868
925	Valving, Specialties at Service Entrance	1	LS	\$7,799.00	\$7,799
926	Siamese Fire Department Connection w/ Valving	1	EA	\$3,580.00	\$3,580
927	Roof Manifold	3	EA	\$2,075.00	\$6,225
928	Fire Hose Valves	6	EA	\$278.41	\$1,670
929	Riser Control Valves	4	EA	\$1,324.76	\$5,299
930	Floor Control Valves	5	EA	\$3,045.00	\$15,225
931					
932	<u>Sprinkler Heads and Branch Piping</u>				
933	165 Degree Concealed Heads w/ Branch Piping	804	EA	\$520.00	\$418,080
934	165 Degree Upright Heads w/ Branch Piping	129	EA	\$275.00	\$35,475
935					
936	<u>Miscellaneous</u>				
937	Coordination Drawings, Hydraulic Calculations, As Builts, Etc.	1	LS	\$13,750.00	\$13,750
938	Spare Head Cabinets	4	EA	\$526.00	\$2,104



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

939	Valve Tags, Pipe Identification	1	LS	\$3,412.00	\$3,412
940	Seismic Restraints, Certification	1	LS	\$5,945.00	\$5,945
941	D4010 FIRE PROTECTION TOTAL				\$684,179
942					
943	TOTAL SYSTEM D15 MECHANICAL				\$11,732,380
944					
945					
946	D50 ELECTRICAL				
947					
948	D5010 ELECTRICAL				
949	Light Fixtures				
950	Type EL	1	EA	\$248.17	\$248
951	Type LK22	22	EA	\$325.49	\$7,161
952	Type LP4	17	EA	\$444.68	\$7,559
953	Type LP8	216	EA	\$837.93	\$180,992
954	Type LP10	2	EA	\$1,034.55	\$2,069
955	Type LP16	4	EA	\$1,675.85	\$6,703
956	Type LPG Hi-Bay	48	EA	\$471.90	\$22,651
957	Type LR22	57	EA	\$211.27	\$12,042
958	Type LR24	4	EA	\$235.47	\$942
959	Type LR14	22	EA	\$235.47	\$5,180
960	Type LR4	8	EA	\$393.25	\$3,146
961	Type LR10	4	EA	\$983.13	\$3,933
962	Type LS4	38	EA	\$248.05	\$9,426
963	Type LS4B	14	EA	\$248.05	\$3,473
964	Type LS8	30	EA	\$496.10	\$14,883
965	Type PC1	4	EA	\$541.48	\$2,166
966	Type PC2	15	EA	\$541.48	\$8,122
967	Type PC3	5	EA	\$541.48	\$2,707
968	Type PC4	5	EA	\$541.48	\$2,707
969	Type PD1	5	EA	\$638.28	\$3,191
970	Type PD2	5	EA	\$928.68	\$4,643
971	Type PD3	5	EA	\$1,173.70	\$5,869
972	Type PD5	6	EA	\$638.28	\$3,830
973	Type RC1	215	EA	\$296.45	\$63,737
974	Type RC2	170	EA	\$296.45	\$50,397
975	Type RC3	58	EA	\$296.45	\$17,194
976	Type RC4	40	EA	\$296.45	\$11,858
977	Type RCW	9	EA	\$306.13	\$2,755
978	Type RD4	1	EA	\$931.70	\$932
979	Type SD1	46	EA	\$541.48	\$24,908
980	Type SL4	16	EA	\$544.50	\$8,712
981	Type SL5	6	EA	\$544.50	\$3,267



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

982	Type Exit	53	EA	\$323.68	\$17,155
983	Type LPS	58	LF	\$122.51	\$7,106
984	Type LRS	838	LF	\$98.31	\$82,386
985	Type LWD	164	LF	\$98.31	\$16,123
986	Type LWS	102	LF	\$98.31	\$10,028
987	Type LWSA	76	LF	\$98.31	\$7,472
988	Type RPS	188	LF	\$83.79	\$15,753
989	Type SL7	134	LF	\$157.00	\$21,038
990	Type TR1 Track	50	LF	\$44.77	\$2,239
991	Type TH1 Track Lt	14	EA	\$170.91	\$2,393
992	Type TH2 Track Lt	6	EA	\$170.91	\$1,025
993	Type TH3 Track Lt	15	EA	\$170.91	\$2,564
994	Type Exterior Canopy Cnlt	6	EA	\$405.35	\$2,432
995					
996	Branch Circuitry				
997	<i>Branch Circuitry</i>				
998	3/4" Emt, 4#12	4,147	LF	\$13.84	\$57,370
999	MC Cable	37,320	LF	\$6.50	\$242,406
1000	3/4" Emt, 4#10	570	LF	\$15.93	\$9,078
1001	1" Emt, 4#8	120	LF	\$23.57	\$2,828
1002	Plenum Cable	12,960	LF	\$1.59	\$20,543
1003					
1004	Switches	14	EA	\$78.65	\$1,101
1005	Momentary Contact Switches	6	EA	\$124.03	\$744
1006	OS, PS Power Pack	81	EA	\$181.50	\$14,702
1007	Local Switch/Dimming Station L	116	EA	\$151.25	\$17,545
1008	Touch Screen LTS	2	EA	\$701.80	\$1,404
1009	Master Station M	2	EA	\$701.80	\$1,404
1010	Occupancy Sensor	192	EA	\$202.68	\$38,914
1011	Photo Sensor	52	EA	\$202.68	\$10,539
1012					
1013	<i>Wiring Devices</i>				
1014	Receptacles	136	EA	\$75.63	\$10,285
1015	Junc Boxes, Misc	39	EA	\$63.53	\$2,477
1016	Receptacles GFI	80	EA	\$93.78	\$7,502
1017	Receptacles Quad	43	EA	\$124.63	\$5,359
1018	Floor Power Outlet	9	EA	\$387.20	\$3,485
1019	Receptacles GFI WP	27	EA	\$245.03	\$6,616
1020	Receptacles w/ I/O Module	266	EA	\$134.31	\$35,726
1021	Receptacles GFI w/ I/O Module	100	EA	\$152.46	\$15,246
1022	Receptacles Quad w/ I/O Module	134	EA	\$193.60	\$25,942
1023	Install Door Controller FBO w/ Disc	6	EA	\$302.50	\$1,815
1024	Door Pushplate	12	EA	\$248.05	\$2,977



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

1025	Key Switch	2	EA	\$107.69	\$215
1026	Install Motor Logic Controller MLC FBO w/ Disc	30	EA	\$302.50	\$9,075
1027	Motorized Shade Conn	109	EA	\$151.25	\$16,486
1028	Motorized Shade Switch	22	EA	\$163.35	\$3,594
1029	EPO Pushbutton	3	EA	\$223.85	\$672
1030	20/2 Amp Receptacle, Kitch	1	EA	\$101.64	\$102
1031	20/3 Amp Receptacle, Kitch	3	EA	\$101.64	\$305
1032	20/2 Amp Receptacle Tw Lk	24	EA	\$101.64	\$2,439
1033	30 Amp Receptacle, misc	3	EA	\$130.08	\$390
1034	30 Amp Receptacle Tw Lk	17	EA	\$130.08	\$2,211
1035	30 Amp Receptacle Kitch	9	EA	\$130.08	\$1,171
1036	40/3 Amp Receptacle Kitch	2	EA	\$257.13	\$514
1037	60 Amp Receptacle		EA	\$257.13	
1038					
1039	Theatrical Lighting and Controls	1	LS	\$98,736.00	\$98,736
1040	Kitchen Hood Wiring	1	LS	\$1,125.30	\$1,125
1041					
1042	Power Circuitry				
1043	MC Cable #12	768	LF	\$6.74	\$5,174
1044	3/4" Emt, 4#12	3,044	LF	\$14.50	\$44,147
1045	3/4" Emt, 4#10	2,100	LF	\$15.93	\$33,445
1046	1" Emt, Controls	600	LF	\$21.78	\$13,068
1047	1" Emt, 4#8	1,200	LF	\$23.57	\$28,285
1048	1" Emt, 4#6	10	LF	\$26.04	\$260
1049	1 1/4" Emt, 4#4	450	LF	\$34.13	\$15,360
1050	1 1/4" Emt, 4#2	2,460	LF	\$40.14	\$98,734
1051	1 1/2" Emt, 4#1	1,240	LF	\$48.16	\$59,722
1052	2" Emt, 3#1, 3/0,2#6	120	LF	\$55.90	\$6,708
1053	2" Emt, 4 1/0	120	LF	\$53.94	\$6,473
1054	2" Emt, 4 2/0	900	LF	\$59.80	\$53,818
1055	2" Emt, 4 3/0	690	LF	\$68.22	\$47,072
1056	2 1/2" Emt, 4 250Mcm	380	LF	\$87.29	\$33,170
1057	3" Emt, 4 350Mcm	840	LF	\$109.57	\$92,035
1058	3 1/2" Emt, 4 500 Mcm	80	LF	\$146.68	\$11,734
1059	4" Emt, 4 600 Mcm	1,740	LF	\$170.83	\$297,240
1060	3" EMT Cdt, PV, empty	200	LF	\$31.75	\$6,350
1061	1" Pvc, EG Ctrls	240	LF	\$16.79	\$4,030
1062	2" Pvc, 4#1	80	LF	\$39.32	\$3,146
1063	2" Pvc, 4 3/0	100	LF	\$60.29	\$6,029
1064					
1065	4C#6 MI Cable	1,200	LF	\$61.60	\$73,921
1066	1C#1 MI Cable	1,760	LF	\$50.20	\$88,357
1067					



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

1068	Air Terminal	233	EA	\$142.18	\$33,127
1069	Eqpt Bond/Conn	33	EA	\$169.40	\$5,590
1070	Through-Roof Conn	32	EA	\$568.70	\$18,198
1071	Ground Rod	21	EA	\$338.80	\$7,115
1072	LP Cable Cu	5,230	LF	\$8.98	\$46,961
1073	1" PVC CDT	630	LF	\$7.18	\$4,525
1074	Service Grounding	1	LS	\$5,033.60	\$5,034
1075					
1076	Power Equipment				
1077	<i>Switchgear, Panelboards, Transformers</i>				
1078	3000/2500 Amp Main Switchboard	1	LS	\$95,367.36	\$95,367
1079	Meter Pan	1	EA	\$738.10	\$738
1080	Electronic Submeter	23	EA	\$1,294.70	\$29,778
1081	SPD @ Switchboard	1	EA	\$2,855.60	\$2,856
1082	SPD @ Panelboard	30	EA	\$1,113.20	\$33,396
1083	100 Amp Panel Board	7	EA	\$3,625.16	\$25,376
1084	225 Amp Panel Board	8	EA	\$6,083.88	\$48,671
1085	225 Amp Panel Board, 2-Section	1	EA	\$11,122.32	\$11,122
1086	225 Amp Panel Board, 3-Section	3	EA	\$17,206.20	\$51,619
1087	225 Amp Panel Board, 4-Section	1	EA	\$23,290.08	\$23,290
1088	400 Amp Panel Board, 2-Section	1	EA	\$14,036.00	\$14,036
1089	400 Amp Panel Board, 3-Section	1	EA	\$21,707.40	\$21,707
1090	600 Amp Distr Board	1	EA	\$10,962.60	\$10,963
1091	800 Amp Distr Board	2	EA	\$14,229.60	\$28,459
1092	30 Kva Transformer K13	1	EA	\$9,631.60	\$9,632
1093	45 Kva Transformer K13	12	EA	\$11,737.00	\$140,844
1094	112 Kva Transformer K13	2	EA	\$21,296.00	\$42,592
1095	100 Amp Disconnect @ Xfmr	3	EA	\$1,633.50	\$4,901
1096					
1097	<i>Emergency Generator</i>				
1098	500 Kw Emergency Generator, Gas, Custom Encl	1	EA	\$328,853.80	\$328,854
1099	200 Kw Load Bank	1	EA	\$17,787.00	\$17,787
1100	200 Amp Encl Ckt Brkr	2	EA	\$1,923.90	\$3,848
1101	600 Amp Encl Ckt Brkr	1	EA	\$5,771.70	\$5,772
1102	Autotransfer Sw 200A	1	EA	\$8,639.40	\$8,639
1103	Autotransfer Sw 600A	1	EA	\$17,653.90	\$17,654
1104	Storm Switch 200A	1	EA	\$7,260.00	\$7,260
1105	Generator Annunciator	1	EA	\$1,621.40	\$1,621
1106					
1107	<i>Motors:</i>				
1108	Heat Trace Controller, 30' Cable	2	EA	\$1,468.94	\$2,938
1109	Manual Snap Switch Starter VAV	67	EA	\$181.50	\$12,161
1110	Manual Snap Switch Starter Misc	32	EA	\$181.50	\$5,808



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

1111	Manual Snap Switch Starter WP	5	EA	\$338.80	\$1,694
1112	20/2 Amp Disconnect, Motorized Backboard Conns	6	EA	\$907.50	\$5,445
1113	20/2 Amp Disconnect	12	EA	\$580.80	\$6,970
1114	30 Amp Disconnect, Gym Eqpt	5	EA	\$774.40	\$3,872
1115	30/2 Amp Disconnect	12	EA	\$580.80	\$6,970
1116	30 Amp Disconnect	4	EA	\$774.40	\$3,098
1117	60 Amp Disconnect	12	EA	\$1,318.90	\$15,827
1118	100 Amp Disconnect	3	EA	\$1,437.48	\$4,312
1119	100 Amp Disconnect, Elev	1	EA	\$1,437.48	\$1,437
1120	200 Amp Disconnect WP	6	EA	\$2,244.55	\$13,467
1121	Elev CP Terms	1	LS	\$774.40	\$774
1122	Install <10HP VFD FBO	9	EA	\$1,367.30	\$12,306
1123	Install 20-30HP VFD FBO	10	EA	\$2,081.20	\$20,812
1124	Chiller Module CP Conn's	6	EA	\$931.70	\$5,590
1125					
1126	Special Systems				
1127	Fire Alarm				
1128	Teflon MC Cable	16,040	LF	\$7.38	\$118,391
1129	3" Rigid, Riser Cables	60	LF	\$114.95	\$6,897
1130	FATC	2	EA	\$798.60	\$1,597
1131	Pull Station	22	EA	\$229.90	\$5,058
1132	Audible/Visual, MNS	73	EA	\$347.88	\$25,395
1133	Smoke Detector	121	EA	\$387.20	\$46,851
1134	Heat Detector	1	EA	\$387.20	\$387
1135	CO Detector	33	EA	\$387.20	\$12,778
1136	Strobe A clg	42	EA	\$229.90	\$9,656
1137	Strobe A wall	42	EA	\$229.90	\$9,656
1138	Strobe F clg	42	EA	\$229.90	\$9,656
1139	Strobe F wall	46	EA	\$229.90	\$10,575
1140	WP Beacon, Strobe	2	EA	\$287.38	\$575
1141	Duct Detector	9	EA	\$889.35	\$8,004
1142	Door Release	6	EA	\$514.25	\$3,086
1143	Cent Eqpt FACP, testing, Voice Command DVC	1	LS	\$28,162.75	\$28,163
1144	MNS Electronic Message Board	5	EA	\$1,403.60	\$7,018
1145	FCPS Booster Power Supply	1	EA	\$3,291.20	\$3,291
1146	Ansul Conn's	1	LS	\$895.40	\$895
1147	Annunciator Panel	1	EA	\$2,323.20	\$2,323
1148	Misc Connections, Relays	18	EA	\$272.25	\$4,901
1149	Master Box Radio w/ Antenna, cables	1	LS	\$8,397.40	\$8,397
1150	Knox Box	4	EA	\$520.30	\$2,081
1151					
1152	Emergency Responder Radio System BDA	1	LS	\$60,000.00	\$60,000
1153					

Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION**1154 Communications System**

1155 MDF Rack, PP's, Terms	1	EA	\$14,762.00	\$14,762
1156 IDF Rack, PP's, Terms	3	EA	\$7,381.00	\$22,143
1157 Misc Rack Enclosures	15	EA	\$580.80	\$8,712
1158 Voice Demarc	1	LS		
1159 CATV Demarc	1	LS		
1160 4" Floor Sleeves	21	EA	\$229.90	\$4,828
1161 4" Wall Sleeves	21	EA	\$229.90	\$4,828
1162 Main Ground Bar	1	EA	\$1,476.20	\$1,476
1163 Tel Ground Bar	3	EA	\$738.10	\$2,214
1164 #3/0G Wire	600	LF	\$9.19	\$5,511
1165 25 Pair CAT 5E Cable	900	LF	\$4.40	\$3,964
1166 12 Strand Multi-Mode Fiber	900	LF	\$6.18	\$5,565
1167 6 Strand Multi-Mode Fiber	900	LF	\$4.30	\$3,866
1168 18" Cable Tray	180	LF	\$39.45	\$7,100
1169 4" EMT Cdt	600	LF	\$34.64	\$20,785
1170 Cat 6A Cable	86,700	LF	\$1.71	\$147,919
1171 WAP Outlet 2c, Eqpt+D295	49	EA	\$713.90	\$34,981
1172 Tel, Data Outlet 1c	53	EA	\$72.60	\$3,848
1173 Data FP Outlet 1c	8	EA	\$72.60	\$581
1174 Data PC Outlet 1c	2	EA	\$72.60	\$145
1175 CB Call Button Outlet 1c	39	EA	\$125.84	\$4,908
1176 Tel/Data Outlet 2c	135	EA	\$89.54	\$12,088
1177 Tel/Data Outlet Pro 2c	52	EA	\$89.54	\$4,656
1178 Tel/Data Outlet 4c	1	EA	\$139.15	\$139
1179 CAT 6A Cable	24,600	LF	\$1.65	\$40,631
1180 HDMI Cable	9,000	LF	\$1.53	\$13,776
1181 Audio Cable	9,000	LF	\$1.41	\$12,687
1182 AV FP Low Video Presentation Outlet (1C,H,A)	8	EA	\$211.75	\$1,694
1183 AV Pro High Video Presentation Outlet (3C,H,A)	52	EA	\$332.75	\$17,303
1184 Network Switches Allowance	1	LS	\$270,000.00	\$270,000
1185				
1186 Clock/ Public Address System:				
1187 2 1/2" Emt, Riser Cables	50	LF	\$66.74	\$3,337
1188 Comm Cable	9,450	LF	\$1.25	\$11,778
1189 Main Sound Rack	1	LS	\$54,934.00	\$54,934
1190 Local Sound System Rack	1	EA	\$7,792.40	\$7,792
1191 Clock C, LV	72	EA	\$254.10	\$18,295
1192 S1 Speaker	2	EA	\$290.40	\$581
1193 S2 Speaker	6	EA	\$290.40	\$1,742
1194 S3 Speaker	8	EA	\$290.40	\$2,323
1195 HS Speaker, horn	4	EA	\$254.10	\$1,016
1196 S Speaker, flush	218	EA	\$254.10	\$55,394



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

1197	Microphone	5	EA	\$459.80	\$2,299
1198	Master Clock GPS	1	EA	\$5,711.20	\$5,711
1199	Clock Antenna	1	EA	\$1,863.40	\$1,863
1200					
1201	Security Access Control System				
1202	3/4" Emt, 4#12	90	LF	\$13.84	\$1,245
1203	Signal Cable	14,800	LF	\$1.25	\$18,445
1204	Access Control Panel, PS's	3	LS	\$6,921.20	\$20,764
1205	Card Reader	37	EA	\$810.70	\$29,996
1206	Keypad	7	EA	\$810.70	\$5,675
1207	Panic Button	2	EA	\$199.65	\$399
1208	Door Contact	70	EA	\$187.55	\$13,129
1209	Motion Sensor PIR	52	EA	\$465.85	\$24,224
1210	AI Video Intercom/Door Release	6	EA	\$798.60	\$4,792
1211	Electric Transfer Hinge (Allow), stubup	37	EA	\$66.55	\$2,462
1212	Pushbar w/ REX (FBO), stubup	37	EA	\$66.55	\$2,462
1213					
1214	CCTV Security System:				
1215	Central Monitoring/Recording Eqpt	1	LS	\$37,153.05	\$37,153
1216	CAT 6E Cable	13,800	LF	\$1.75	\$24,212
1217	CCTV Camera , Fixed	45	EA	\$1,276.55	\$57,445
1218	CCTV Camera , WP	24	EA	\$1,863.40	\$44,722
1219					
1220	Audio Visual/ IPTV System				
1221	3/4" Emt, 4#12	60	LF	\$14.50	\$870
1222	AV Rack	2	EA	\$1,040.60	\$2,081
1223	AV Backbox, stubup, misc	56	EA	\$72.60	\$4,066
1224	AV Sound System Eqpt Package, Cafet	1	LS	\$75,000.00	\$75,000
1225	AV Sound System Eqpt Package Gym	1	LS	\$30,000.00	\$30,000
1226					
1227	Intercom Systems:				
1228	1" Emt, Cables	300	LF	\$21.27	\$6,382
1229	3/4" Emt, Cables	300	LF	\$16.01	\$4,802
1230	VMS Video Monitor Handset Master Station	3	EA	\$1,452.00	\$4,356
1231	VES Video Entrance Station	1	EA	\$574.75	\$575
1232	AES Audio Entrance Station	1	EA	\$574.75	\$575
1233	Remote Annunciator	1	EA	\$1,621.40	\$1,621
1234	Power Supply	1	EA	\$459.80	\$460
1235					
1236	Speech Reinforcement System				
1237	Classroom SR System	43	RM	\$2,250.60	\$96,776
1238					
1239	Temp Power and Lighting	114,384	SF	\$0.50	\$57,192



Westwood Hanlon Elementary SchoolWestwood, MA
113,141 GSF**DETAILED ESTIMATE - NEW CONSTRUCTION**

1240 D50 ELECTRICAL TOTAL				5,412,938
1241				
1242 TOTAL SYSTEM D50 ELECTRICAL				\$5,412,938
1243				
1244				
1245 E10 EQUIPMENT				
1246				
1247 E1020 INSTITUTIONAL EQUIPMENT				
1248 Time capsules	1	LS	\$7,800.00	\$7,800
1249 Projection screens	8	EA	\$15,000.00	\$120,000
1250 Stage Curtains	1	LS	\$50,000.00	\$50,000
1251 Gymnasium equipment	1	LS	\$75,000.00	\$75,000
1252 Wall pads	1	LS	\$10,000.00	\$10,000
1253 Bleacher	350	EA	\$250.00	\$87,500
1254 Kiln	1	EA	\$3,500.00	\$3,500
1255 Refrigerator/ Freezer	4	EA	\$2,000.00	\$8,000
1256 Undercounter refrigerator	4	EA	\$1,500.00	\$6,000
1257 Coffee Make	2	EA	\$300.00	\$600
1258 Microwave	2	EA	\$800.00	\$1,600
1259 Dishwasher	3	EA	\$1,200.00	\$3,600
1260 Washer	1	EA	\$1,250.00	\$1,250
1261 Dryer	1	EA	\$1,250.00	\$1,250
1262 Healthcare equipment	1	LS	\$15,000.00	\$15,000
1263 Food service equipment				
1264 Kitchen Food Service; budget provided	1	LS	\$590,520.00	\$590,520
1265 E1020 INSTITUTIONAL EQUIPMENT TOTAL				\$981,620
1266				
1267 TOTAL SYSTEM E10 FITTINGS & EQUIPMENT				\$981,620
1268				
1269				
1270 E20 FURNISHINGS				
1271				
1272 E2020 SPECIALTIES / MILLWORK				
1273 STE Room	1	EA		
1274 Upper cabinet	18	LF	\$200.00	\$3,600
1275 Plastic countertop	44	LF	\$225.00	\$9,900
1276 ABA / CBA Barrier free knee space cabinet	3	LF	\$250.00	\$750
1277 Base cabinet	15	LF	\$240.00	\$3,600
1278 Kindergarten	5	EA		
1279 Upper cabinet	55	LF	\$200.00	\$11,000
1280 ABA / CBA Barrier free knee space cabinet	15	LF	\$250.00	\$3,750
1281 Base cabinet	40	LF	\$200.00	\$8,000
1282 Open book case	45	LF	\$150.00	\$6,750



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

1283	Plastic countertop	60	LF	\$225.00	\$13,500
1284	Custom window seat-w/storage	50	LF	\$250.00	\$12,500
1285	TSO	15	LF	\$180.00	\$2,700
1286	TS-3684-M; Tall storage double door	5	EA	\$1,500.00	\$7,500
1287	General Classroom	20	EA		
1288	Upper cabinet	220	LF	\$200.00	\$44,000
1289	ABA / CBA Barrier free knee space cabinet	60	LF	\$250.00	\$15,000
1290	Base cabinet	160	LF	\$250.00	\$40,000
1291	Plastic countertop	220	LF	\$225.00	\$49,500
1292					
1293	TSO	40	LF	\$180.00	\$7,200
1294	TS-3684-M; Tall storage double door	20	EA	\$1,500.00	\$30,000
1295	BC01 / ABC018 / DBC01 open bookcase unit	120	LF	\$200.00	\$24,000
1296	Open book case	240	LF	\$150.00	\$36,000
1297	Art Classroom	1	EA		
1298	Upper cabinet	8	LF	\$200.00	\$1,600
1299	Plastic countertop	48	LF	\$225.00	\$10,800
1300	ABA / CBA Barrier free knee space cabinet	8	LF	\$250.00	\$2,000
1301	Base cabinet	6	LF	\$240.00	\$1,440
1302	ABC012-54 Cubbies	22	LF	\$360.00	\$7,920
1303	Media Center	1	EA		
1304	BC01 / ABC018 / DBC01 open bookcase unit	140	LF	\$200.00	\$28,000
1305	Service counter	20	LF	\$1,200.00	\$24,000
1306	Plastic countertop	15	LF	\$225.00	\$3,375
1307	TBO-3684 tall book storage open shelves	57	LF	\$180.00	\$10,260
1308	TSC-30 -1 Tall student cubbies	2	EA	\$980.00	\$1,960
1309	TS-3684-M; Tall storage double door	3	EA	\$1,500.00	\$4,500
1310	<i>Extended learning</i>	6	EA		
1311	AB (Base cabinet ,sink)	12	LF	\$240.00	\$2,880
1312	ABA / CBA Barrier free knee space cabinet	36	LF	\$250.00	\$9,000
1313	Solid surface countertop	48	LF	\$340.00	\$16,320
1314	TBO-3684 tall book storage open shelves	6	LF	\$180.00	\$1,080
1315	TSC-36K-1 Tall student cubbies	104	EA	\$980.00	\$101,920
1316	TSO-3384-15	2	EA	\$750.00	\$1,500
1317	<i>Resource room</i>	2	EA		
1318	AB (Base cabinet ,sink)	36	LF	\$240.00	\$8,640
1319	Open book case	12	LF	\$150.00	\$1,800
1320	Plastic countertop	48	LF	\$225.00	\$10,800
1321	TW -3684 Teacher wardrobe unit	2	EA	\$1,500.00	\$3,000
1322	<i>Learning Center</i>	2	EA		
1323	Base cabinet & countertop	12	LF	\$420.00	\$5,040
1324	TW -3684 Teacher wardrobe unit	4	EA	\$1,500.00	\$6,000
1325	Custom window seat-w/storage	24	LF	\$250.00	\$6,000



Westwood Hanlon Elementary School

Westwood, MA
113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

1326	Plastic countertop	7	LF	\$180.00	\$1,260
1327	TS- 3684-M Tall storage cabinet at Coaches Store	11	EA	\$1,500.00	\$16,500
1328	<i>ELL</i>	1	EA		
1329	Plastic countertop	9	LF	\$225.00	\$2,025
1330	Base cabinet	5	LF	\$240.00	\$1,200
1331	Open book case	3	LF	\$150.00	\$450
1332	Nurse Office	1	EA		
1333	Upper cabinet	10	LF	\$200.00	\$2,000
1334	Base cabinet	13	LF	\$240.00	\$3,120
1335	Plastic countertop	37	LF	\$225.00	\$8,325
1336	TS 308418- Tall storage double door cabinet	6	EA	\$1,250.00	\$7,500
1337	TS- 3684-M Tall storage double door cabinet	1	EA	\$1,500.00	\$16,500
1338	Focus program	1	EA		
1339	Plastic countertop	21	LF	\$225.00	\$4,725
1340	AB (Base cabinet ,sink)	3	LF	\$240.00	\$720
1341	ABA / CBA Barrier free knee space cabinet	13	LF	\$200.00	\$2,600
1342	TS 308418- Tall storage double door cabinet	2	EA	\$1,250.00	\$2,500
1343	<i>Staff Lunch workroom</i>	2	EA		
1344	Plastic countertop	24	LF	\$225.00	\$5,400
1345	AB (Base cabinet ,sink)	12	LF	\$240.00	\$2,880
1346	ABA / CBA Barrier free knee space cabinet	6	LF	\$200.00	\$1,200
1347	TS 328418- Tall storage double door cabinet	4	EA	\$1,300.00	\$5,200
1348	Upper cabinet	24	LF	\$200.00	\$4,800
1349	<i>Music classroom</i>	2	EA		
1350	Plastic countertop	12	LF	\$225.00	\$2,700
1351	ABA / CBA Barrier free knee space cabinet	6	LF	\$200.00	\$1,200
1352	Open book case	58	LF	\$150.00	\$8,700
1353	TS 308418- Tall storage double door cabinet	2	EA	\$1,250.00	\$2,500
1354	Upper cabinet	22	LF	\$200.00	\$4,400
1355	<i>Music storage</i>	1	EA		
1356	Standard music storage cabinets	1	EA	\$2,500.00	\$2,500
1357	M15-28x29	9	LF	\$250.00	\$2,250
1358	Mailboxes slot	1	EA	\$4,900.00	\$4,900
1359					
1360	WABA Upper	1	EA		
1361	Plastic countertop	19	LF	\$225.00	\$4,275
1362	AB. Base cabinet	17	LF	\$240.00	\$4,080
1363	Upper cabinet	8	LF	\$200.00	\$1,600
1364	WO2-3036	3	LF	\$180.00	\$540
1365	TS 368418- Tall storage double door cabinet	13	EA	\$1,500.00	\$19,500
1366	TSC-36K-1 Tall student cubbies	3	EA	\$980.00	\$2,940
1367	WABA Lower	1	EA		
1368	Plastic countertop	19	LF	\$225.00	\$4,275



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DETAILED ESTIMATE - NEW CONSTRUCTION

1369	AB. Base cabinet	17	LF	\$240.00	\$4,080
1370	Upper cabinet	8	LF	\$200.00	\$1,600
1371	WO2-3036	3	LF	\$180.00	\$540
1372	TS 368418- Tall storage double door cabinet	13	EA	\$1,500.00	\$19,500
1373	TSC-36K-1 Tall student cubbies	3	EA	\$980.00	\$2,940
1374	Coaches off/ storage	2	EA	\$3,000.00	\$6,000
1375	<i>Mother's room</i>	2	<i>ea</i>		
1376	Plastic countertop	16	LF	\$225.00	\$3,600
1377	TW3684- Teacher wardrobe unit	2	EA	\$1,800.00	\$3,600
1378	AB. Base cabinet	6	LF	\$240.00	\$1,440
1379	ABA / CBA Barrier free knee space cabinet	6	LF	\$200.00	\$1,200
1380	<i>School Psychology</i>	2	<i>ea</i>		
1381	Plastic countertop	12	LF	\$225.00	\$2,700
1382	AB. Base cabinet	4	LF	\$240.00	\$960
1383	Open book case	6	LF	\$150.00	\$900
1384	TS 308418- Tall storage double door cabinet	2	EA	\$1,250.00	\$2,500
1385	<i>Speech T14/AQ1.52</i>	2	<i>ea</i>		
1386	Plastic countertop	12	LF	\$225.00	\$2,700
1387	Open book case	6	LF	\$150.00	\$900
1388	Base cabinet	6	LF	\$240.00	\$1,440
1389	TS 308418- Tall storage double door cabinet	4	EA	\$1,250.00	\$5,000
1390	CT-SS at Secretary 152A	21	LF	\$1,000.00	\$21,000
1391	CT-PL-1 (countertop) at Secretary 152A	10	LF	\$180.00	\$1,800
1392	Furnishings miscellaneous metals	114,384	SF	\$0.50	\$57,192
1393	Rough carpentry	114,384	SF	\$0.75	\$85,788
1394	Store Shelving at Art Workroom	48	LF	\$75.00	\$3,600
1395	Store Shelving at GYM	96	LF	\$75.00	\$7,200
1396	Kitchen Dry store Shelf	24	LF	\$75.00	\$1,800
1397	WS2- Adjustable shelves at General Classroom	100	LF	\$150.00	\$15,000
1398	WS2- Adjustable shelves-Adaptive PE	6	LF	\$150.00	\$900
1399	WS2- Adjustable shelves at Art Classroom	19	LF	\$150.00	\$2,850
1400	WS2- Adjustable shelves at Nurse	5	LF	\$150.00	\$750
1401	WS2- Adjustable shelves at Kindergarten Classroom	25	LF	\$150.00	\$3,750
1402					
1403	<i>Entrance mats</i>				
1404	Walk of mat (WOM)	708	SF	\$45.00	\$31,860
1405	Walk of carpet (WOC)	352	SF	\$10.50	\$3,696
1406					
1407	Exterior Window treatment	14,980	SF	\$8.00	\$119,840
1408	Premium for motorized shades	1	LS	\$15,000.00	\$15,000
1409	Interior window treatment	2,083	SF	\$7.00	\$14,581
1410	E2020 SPECIALTIES / MILLWORK TOTAL				\$1,202,557
1411					



Westwood Hanlon Elementary SchoolWestwood, MA
113,141 GSF**DETAILED ESTIMATE - NEW CONSTRUCTION**

1412 TOTAL SYSTEM E20 FURNISHINGS				\$1,202,557
1413				
1414				
1415 F10 SPECIAL CONSTRUCTION				
1416				
1417 F1010 SPECIAL CONSTRUCTION				
1418 Geothermal Field				
1419 Geothermal Piping to Field w/ Ftgs (HDPE)	900	LF	\$29.30	\$26,370
1420 Geothermal Runout Piping in Field w/ Ftgs	7,440	LF	\$21.30	\$158,472
1421 Geothermal Well Piping	50,120	LF	\$3.96	\$198,475
1422 Geothermal Wells w/ Grouting	80	EA	\$15,500.00	\$1,240,000
1423 Geothermal Piping in Vault w/ Ftgs, Hgrs, Valving, Specialties	1	LS	\$134,500.00	\$134,500
1424 Excavation, Bedding and Backfill	8,340	LF	\$23.00	\$191,820
1425 Machine Rental, Misc.	1	LS	\$5,600.00	\$5,600
1426 Valving, Specialties at Pipe Entrance	1	LS	\$22,450.00	\$22,450
1427 Valving, Specialties at Geothermal Circulators	2	EA	\$36,159.00	\$72,318
1428 Valving, Specialties at Heat Pumps	6	EA	\$12,850.00	\$77,100
1429 Geothermal Circulators	2	EA	\$9,875.00	\$19,750
1430 F1010 SPECIAL CONSTRUCTION TOTAL				\$2,146,855
1431				
1432 TOTAL SYSTEM F10 SPECIAL CONSTRUCTION				\$2,146,855
1433				
1434				
1435 F30 DEMOLITION				
1436				
1437 F2020 SELECTIVE DEMOLITION				
1438 See building demolition				
1439 F2020 SELECTIVE DEMOLITION TOTAL				\$0
1440				
1441 TOTAL SYSTEM F20 DEMOLITION				\$0
1442				
1443				
			TOTAL TO SUMMARY	\$49,006,552



Westwood Hanlon Elementary School

Westwood, MA

113,141 GSF

DIRECT COST SITEWORK SUMMARY

<u>ELEMENT</u>	<u>TOTAL</u>
10 F20 FACILITY REMEDIATION	See main Sum.
11	
12 F30 DEMOLITION	See main Sum.
13	
14 G10 SITE PREPARATION	\$2,123,741
15	
16 G20 SITE IMPROVEMENTS	\$4,960,035
17	
18 G30 SITE CIVIL/MECHANICAL UTILITIES	\$2,643,201
19	
20 G40 SITE ELECTRICAL UTILITIES	\$525,093
21	
22	
23 SITWORK TOTAL	<u>\$10,252,070</u>
24	
25	

Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
9	F20 FACILITY REMEDIATION				
10					
11	F2010 Hazardous Materials Remediation				
12	Hazmat abatement -Budget prvided	1	LS	\$750,000.00	See main Sum.
13	F20 FACILITY REMEDIATION TOTAL				See main Sum.
14					
15					
16	F30 DEMOLITION				
17					
18	F3010 Structure Demolition				
19	Building demolition	506,077	CF	\$0.35	See main Sum.
20	F30 DEMOLITION TOTAL				See main Sum.
21					
22					
23	G10 SITE PREPARATION				
24					
25	G1010 Site Clearing				
26	31 10 00 Site Clearing				
27	Site clearing	6	ACRES	\$3,500.00	\$21,000
28	R & D trees	10	ACRES	\$8,000.00	\$80,000
29	Construction fence Phase I, install, maintain, remove & rein	3,904	LF	\$16.00	\$62,464
30	Construction fence Phase II, install, maintain, remove & rei	1,930	LF	\$16.00	\$30,880
31	Construction fence Phase III, install, maintain, remove & rei	2,257	LF	\$16.00	\$36,112
32	Orange safety fence	1,932	LF	\$18.50	\$35,742
33	Phase 2 & 3 orange safety fence	528	LF	\$10.00	\$5,280
34	Phase 1 & 2 double construction gate	1	PR	\$2,800.00	\$2,800
35	Phase 3. Double construction gate	1	PR	\$2,800.00	\$2,800
36	Phase 1 & 2 Stabilized construction entrance	1,308	SF	\$7.50	\$9,810
37	Phase 3. Stabilized construction entrance	1,222	SF	\$7.50	\$9,165
38	<i>Contractor parking</i>				
39	Phase 1 & 2 temporary staging	2,778	SF	\$3.50	\$9,723
40	Phase 2 stage area	3,495	SF	\$3.50	\$12,233
41	Phase 3 stage area	4,505	SF	\$3.50	\$15,768
42	Temp signs	1	LS	\$3,000.00	\$3,000
43	Wash down/re-fueling/parking allowance	3,000	SF	\$2.00	\$6,000
44	31 23 19 Dewatering and Drainage				
45	Dewatering for sitework excavation; allow	1	LS	\$35,000.00	\$35,000
46	31 25 00 Erosion and Sedimentation Controls				
47	Erosion control	322	LF	\$12.00	\$3,864
48	Perimeter protection barrier B silt fence with wattles	3,512	LF	\$14.00	\$49,168
49	Inlet protection	48	EA	\$275.00	\$13,200
50	Phase 1 & 2. 6' Screened super silt fence	1,218	LF	\$14.00	\$17,052



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
51	Erosion control perimeter protection at Phase 2 temporary stockpile area	410	LF	\$12.00	\$4,920
52	Phase 3. 6' Screened super silt fence	2,670	LF	\$14.00	\$37,380
53	Phase 1 & 2 temporary sediment basin	88	CY	\$15.00	\$1,324
54	Stabilize low points and step slope with slope protection	25,395	SF	\$2.75	\$69,836
55					
56	G1020 Site Demolition and Relocation				
57	<i>02 41 00 Demolition</i>				
58	<i>33 05 05 Selective Site Utility Demolition</i>				
59	Saw cut existing pavement	375	LF	\$12.00	\$4,500
60	R & D asphalt pavement	34,636	SF	\$1.00	\$34,636
61	R & D asphalt sidewalk	16,713	SF	\$1.00	\$16,713
62	R & D curbing	433	LF	\$8.00	\$3,464
63	R & D sand playground	5,736	SF	\$1.50	\$8,604
64	R & D sport field	13,219	SF	\$1.50	\$19,829
65	R & D bike packs on bit concrete	358	SF	\$1.50	\$537
66	Existing playground equipment removed and discarded	1	AL	\$3,500.00	\$3,500
67	R & D stone wall	973	LF	\$35.00	\$34,055
68	Cut, cap and remove existing utility	1	AL	\$50,000.00	\$50,000
69	Misc. demolition other than above	1	AL	\$85,000.00	\$85,000
70					
71	<u>G1020.01 Building Demolition</u>				
72	<i>02 30 00 Building Demolition</i>				
73	Building demolition				See Above
74					
75	G1030 Site Earthwork				
76	Soils characterization and disposal; allowance	1	AL	\$75,000.00	\$75,000
77	Remove & stockpile topsoil	2,466	CY	\$10.00	\$24,659
78	Rock excavation; allow	4,366	CY	\$75.00	\$327,431
79	Cut and fill for building				See Building
80	Gravel base to building				See Building
81	Sitework cut and fill	22,215	CY	\$15.00	\$333,225
82	Roadways pavement cut and fill	7,632	CY	\$15.00	\$114,480
83	Pedestrian Paving cut and fill	1,783	CY	\$15.00	\$26,745
84	Stabilized stonedust detail 3/L4.01	2,055	SF	\$5.00	\$10,275
85	Dirt footpath 2' width	2,584	SF	\$8.00	\$20,672
86	10' Wide dirt fire access trail. scope includes brush, tree and	3,740	SF	\$2.75	\$10,285
87	Rough and fine grading	169,336	SF	\$1.50	\$254,004
88	Plumbing excavation, Bedding, and Backfill	3,470	LF	\$26.40	\$91,608
89	<i>G10 SITE PREPARATION TOTAL</i>				<u>\$2,123,741</u>
90					



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
91					
92	<u>G20 SITE IMPROVEMENTS</u>				
93					
94	G2020 Roadways				
95	32 12 00 Flexible Paving				
96	Bituminous concrete roadway detail 1/L4.01	83,533	SF	\$3.45	\$288,189
97	Bituminous concrete- Fire lane detail 1/L4.01	12,004	SF	\$3.45	\$41,414
98	Bituminous concrete 1/L4.01	10,517	SF	\$3.45	\$36,284
99	Patch existing pavement at street	300	SF	\$8.50	\$2,550
100	Porous pavement; parking lot	26,845	SF	\$6.50	\$174,493
101	Gravel base to roadway & parking lot	5,427	CY	\$38.00	\$206,226
102					
103	32 16 00 Curbs and Gutters				
104	Vertical granite curb detail 4/L4.01	7,162	LF	\$48.00	\$343,776
105	Flush granite curb detail 6/L4.01	170	LF	\$42.00	\$7,140
106	Vertical planter curb	102	LF	\$48.00	Alternate
107	Flush precast concrete curb detail 5/L4.01	373	LF	\$28.00	\$10,444
108					
109	32 17 00 Paving Specialties				
110	Painted crosswalk	1,933	SF	\$2.50	\$4,833
111	Striped pedestrian crossing	2,616	SF	\$2.50	\$6,540
112	Parking stall painting	143	EA	\$35.00	\$5,005
113	Parking stall painting; HC	4	EA	\$200.00	\$800
114	Misc. marking other than above	1	LS	\$3,900.00	\$3,900
115					
116	G2030 Pedestrian Paving				
117	32 13 10 Rigid Paving				
118	Concrete sidewalk detail 2/L4.01	19,568	SF	\$6.50	\$127,192
119	Bituminous concrete walk	3,265	SF	\$3.15	\$10,285
120	Concrete pad detail 2/L4.01	1,455	SF	\$10.00	\$14,550
121	Concrete entrance pavement	8,695	SF	\$8.50	\$73,908
122	Concrete pavement at Steam Porch	2,718	SF	\$10.00	\$27,180
123	Vehicular grade concrete pad for storage shed	82	SF	\$10.00	\$820
124	Curb cut Type 1	12	EA	\$450.00	\$5,400
125	Curb cut Type 2	9	EA	\$480.00	\$4,320
126	Concrete ramp	354	SF	\$15.00	\$5,310
127	Metal rails at concrete ramp	126	LF	\$260.00	\$32,760
128	Gravel base to concrete pavement	993	CY	\$38.00	\$37,734
129					
130	G2040 Site Development				
131	<u>G2040.01 Fences and Gates</u>				
132	32 31 00 Fences and Gates				
133	4' metal picket fence	767	LF	\$120.00	\$92,040



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
134	4' metal picket fence gate	2	EA	\$1,000.00	\$2,000
135	Emergency access gate	1	EA	\$5,500.00	\$5,500
136	Guardrail detail 9/L4.01	536	LF	\$55.00	\$29,480
137	8' Ht. Vinyl coated chain link fence detail 15/L4.01	208	LF	\$90.00	\$18,720
138	4" Black vinyl clad fence at playground	1,420	LF	\$36.00	\$51,120
139	Single gate - 4' Ht.	4	LEAF	\$550.00	\$2,200
140	Backstop at little league baseball field	1,140	SF	\$50.00	\$57,000
141	Sports barrier netting system behind each soccer equal to 20' Barrier	246	LF	\$200.00	\$49,200
142					
143					
144	<u>G2040.02 Site and Street Furnishes</u>				
145	Concrete stairs per riser	106	LFR	\$85.00	\$9,010
146	Concrete cheek wall	22	LF	\$240.00	\$5,280
147	Galvanized steel handrail at stair	42	LF	\$360.00	\$15,120
148	Storage shed	1	LS	\$4,100.00	\$4,100
149	Fence at dumpster pad	32	LF	\$75.00	\$2,400
150	Double gate at dumpster pad	2	EA	\$1,500.00	\$3,000
151	Bike racks	34	EA	\$450.00	\$15,300
152	Bench Type 1	2	EA	\$1,500.00	\$3,000
153	Bench Type 2	1	EA	\$2,500.00	\$2,500
154	Trash receptacle	1	AL	\$4,500.00	\$4,500
155	Concrete filled steel bollards	17	EA	\$750.00	\$12,750
156	Precast concrete bollard	14	EA	\$650.00	\$9,100
157	Raised planter	27	LF	\$150.00	\$4,050
158	Illuminated entry sign	2	EA	\$26,000.00	\$52,000
159	40' Flag pole w/ foundation	1	EA	\$7,500.00	\$7,500
160	Traffic signs	30	EA	\$480.00	\$14,400
161	Picnic table	2	EA	\$1,200.00	\$2,400
162	Square court	3	LS	\$375.00	\$1,125
163	Painted hopscotch	1	LS	\$350.00	\$350
164	Boulders set in lawn	34	EA	\$750.00	\$25,500
165	Colored nonsked coating at crossing	540	SF	\$3.50	\$1,890
166	Sand/Water play tables	2	EA	\$10,000.00	\$20,000
167					
168	<u>Versa-lok retaining wall detail 9/L4.01</u>	480	LF		
169	Excavation	107	CY	\$15.00	\$1,600
170	Gravel base to footing; 12" thick	39	CY	\$38.00	\$1,486
171	Remove of excavation material on site	107	CY	\$4.00	\$427
172	4" sub drain pipe	480	LF	\$18.00	\$8,640
173	3/4" Crushed stone backfill	141	CY	\$30.00	\$4,230
174	Backfill with stockpile soil	32	CY	\$10.00	\$320



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
175	Modular concrete units retaining wall	3,456	SF	\$60.00	\$207,360
176	<u>Double side natural stone wall with guardrail detail 8/L4.01</u>	147	LF		
177	Excavation	147	CY	\$15.00	\$2,205
178	Gravel base to footing; 18" thick	37	CY	\$38.00	\$1,406
179	Remove of excavation material on site	147	CY	\$4.00	\$588
180	Footing concrete strip footing CF4'-2"x18"	36	CY	\$155.00	\$5,580
181	Footing formwork	441	SF	\$12.00	\$5,292
182	Re-bar at footing	2,880	LBS	\$2.00	\$5,760
183	Place from truck & vibrate	36	CY	\$110.00	\$3,960
184	Concrete retaining wall	36	CY	\$155.00	\$5,580
185	Retaining wall formwork	1,617	SF	\$18.00	\$29,106
186	Re-bar at retaining wall	4,320	LBS	\$2.00	\$8,640
187	Place from truck & vibrate	36	CY	\$110.00	\$3,960
188	Nature stone face	1,323	SF	\$75.00	\$99,225
189	18" Metal guardrail on top of wall	147	LF	\$140.00	\$20,580
190					
191	32 18 00 Athletic and Recreational Surfacing				
192	<i>Little league baseball</i>	40,383	SF		
193	Rough/fine grading	40,383	SF	\$0.75	\$30,287
194	Cut and fill	1,750	CY	\$15.00	\$26,250
195	8" Stone base	1,097	CY	\$38.00	\$41,686
196	Sand base	274	CY	\$45.00	\$12,330
197	Underdrain	37,550	GSF	\$0.95	\$35,673
198	Infield surfacing; Engineered infield mix, 4" Depth	2,833	SF	\$2.75	\$7,791
199	Irrigation outfield	37,550	SF	\$1.50	\$56,325
200	Sod lawn	37,550	SF	\$2.50	\$93,875
201	5'x15' Aluminum bleacher	2	EA	\$13,650.00	\$27,300
202	Single gate at batting cage	2	EA	\$500.00	\$1,000
203	Removable foul poles	2	EA	\$5,135.00	\$10,270
204	Base plate	4	EA	\$370.00	\$1,480
205	Pitching rubber	1	EA	\$220.00	\$220
206	Team bench	2	EA	\$1,500.00	\$3,000
207	Scoreboard	1	EA		Electrical
208	<i>11 V 11 Soccer Field</i>	86,108	SF		
209	Rough/fine grading	86,108	SF	\$0.75	\$64,581
210	Cut and fill	3,731	CY	\$15.00	\$55,965
211	8" Stone base	2,339	CY	\$38.00	\$88,882
212	Sand base	585	CY	\$45.00	\$26,325
213	Underdrain	86,108	GSF	\$0.95	\$81,803
214	Irrigation at soccer field area only	74,250	SF	\$1.50	\$111,375
215	Sod lawn	74,250	SF	\$2.50	\$185,625
216	lawn	11,858	SF	\$0.50	\$5,929



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
217	Soccer goal	1	LS	\$2,500.00	\$2,500
218	<i>Poured in place surfacing playground</i>	10,616	SF		
219	Rough/fine grading	10,616	SF	\$0.75	\$7,962
220	Cut and fill	460	CY	\$15.00	\$6,900
221	Stone base	360	CY	\$38.00	\$13,680
222	Rubber playground safety surface	10,616	SF	\$18.00	\$191,088
223	Swing set	2	EA	\$3,300.00	\$6,600
224	Accessible platform and stairs	1	LS	\$32,000.00	\$32,000
225	Double slide	1	LS	\$5,000.00	\$5,000
226	Activated slope with euroflex spheres and half spheres	1	LS	\$26,400.00	\$26,400
227	Landscape structures "Alpha link tower"	1	LS	\$75,000.00	\$75,000
228	Landscape structures "Crab trap"	1	LS	\$50,000.00	\$50,000
229	Miscellaneous play structures	1	LS	\$30,000.00	\$30,000
230	Flush perimeter concrete curb 6/L4.01	593	LF	\$28.00	\$16,604
231	<i>Asphalt basketball court</i>	2,025	SF		
232	Rough/fine grading	2,025	SF	\$0.75	\$1,519
233	Cut and fill - see earthwork	88	CY	\$15.00	\$1,320
234	12" Stone base	83	CY	\$38.00	\$3,154
235	Asphalt basketball court	2,025	SF	\$3.50	\$7,088
236	Basketball courts marking	2,025	SF	\$2.50	\$5,063
237	Basketball hoops	1	EA	\$2,950.00	\$2,950
238	Elec vehicle charging station				Electrical
239					
240	G2050.02 Lawns and Grasses				
241	<i>32 92 00 Turfs and Grasses</i>				
242	Respread topsoil, amended	2,466	CY	\$12.00	\$29,591
243	Topsoil for lawn	4,089	CY	\$25.00	\$102,225
244	Topsoil for planting beds, shrubs and perennials	2,677	CY	\$28.00	\$74,956
245	Mulch	454	CY	\$45.00	\$20,430
246	Loam and seed	215,421	SF	\$0.25	\$53,855
247	Seed mix #1: New England conservation / wildlife maix	29,963	SF	\$0.35	\$10,487
248	Seed mix #2: New England erosion control/ restoration mi:	8,002	SF	\$2.50	\$20,005
249	G2050.03 Trees, Plants and Ground Covers				
250	<i>32 93 00 Plants</i>				
251	Existing tree to remain and be protect	2	EA	\$350.00	\$700
252	<i>Deciduous Trees</i>	151	EA		
253	Red Maple 3" Cal	10	EA	\$1,250.00	\$12,500
254	Green mountain Sugar Maple 3" Cal	1	EA	\$1,250.00	\$1,250
255	Green mountain Sugar Maple 4" Cal	4	EA	\$1,500.00	\$6,000
256	River Birth 3" Cal	7	EA	\$1,250.00	\$8,750
257	Sweet Gum 3" Cal	27	EA	\$1,250.00	\$33,750
258	Black Gum 3" Cal	11	EA	\$1,250.00	\$13,750



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
259	American Sycamore 4" Cal	23	EA	\$1,500.00	\$34,500
260	Pin Oak 4" Cal	5	EA	\$1,500.00	\$7,500
261	Red Oak 3" Cal	13	EA	\$1,250.00	\$16,250
262	Princeton Elm 4" Cal	16	EA	\$1,500.00	\$24,000
263	Red Maple 3" Cal	30	EA	\$1,250.00	\$37,500
264	Red Sunset Maple 3" Cal	4	EA	\$1,250.00	\$5,000
265	Ornamental Trees	29	EA		
266	Shadbush 10'Ht.	8	EA	\$950.00	\$7,600
267	Witch Hazel 10 Gal	14	EA	\$1,050.00	\$14,700
268	Sweetbay Magnolia 8'Ht.	7	EA	\$850.00	\$5,950
269	Evergreen Trees	38	EA		
270	White spruce 8' Ht.	16	EA	\$850.00	\$13,600
271	White Pine 8' Ht.	22	EA	\$850.00	\$18,700
272	Shrubs	2,544	EA		
273	Red Chokeberry 3 Gal	22	EA	\$150.00	\$3,300
274	Summersweet 5 Gal	128	EA	\$250.00	\$32,000
275	New Jersey Tea 3 Gal	171	EA	\$150.00	\$25,650
276	Sweet Fern 3 Gal	1,499	EA	\$150.00	\$224,850
277	Red Twig Dogwood 5 Gal	17	EA	\$250.00	\$4,250
278	Bush Honey Suckle 5 Gal	153	EA	\$250.00	\$38,250
279	Dwarf Fothergilla 5 Gal	16	EA	\$250.00	\$4,000
280	Inkberry 5 Gal	65	EA	\$250.00	\$16,250
281	Winterberry 5 Gal	75	EA	\$250.00	\$18,750
282	Spicebush 5 Gal	12	EA	\$250.00	\$3,000
283	Juniper 5 Gal	56	EA	\$250.00	\$14,000
284	Bayberry 5 Gal	9	EA	\$250.00	\$2,250
285	Fragrant Sumac 5 Gal	191	EA	\$250.00	\$47,750
286	Rosebay Rhododendron 3' Ht.	11	EA	\$150.00	\$1,650
287	Highbush Blueberry 5 Gal	48	EA	\$250.00	\$12,000
288	Arrowood Viburnum 5 Gal	9	EA	\$250.00	\$2,250
289	Cranberry Bush Viburnum 5 Gal	48	EA	\$250.00	\$12,000
290	Cranberry Bush 5 Gal	14	EA	\$250.00	\$3,500
291	Perennials	1,435	EA		
292	Coneflower 1 Gal	300	EA	\$12.50	\$3,750
293	Beebalm 1 Gal	25	EA	\$12.50	\$313
294	Narrow Leaf Mountain Mint 1Gal	50	EA	\$12.50	\$625
295	Moss Phlox 1Gal	75	EA	\$12.50	\$938
296	Coneflower 1Gal	385	EA	\$12.50	\$4,813
297	Ral	550	EA	\$12.50	\$6,875
298	Swamp Milkweed 1 Gal	25	EA	\$12.50	\$313
299	New England Aster 1 Gal	25	EA	\$12.50	\$313
300	Grasses and Sedges	2,648	EA		



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
301 Pennsylvania Sedge 1 QT	1,400	EA	\$7.00	\$9,800
302 Switch Grass 2 Gal	1,248	EA	\$15.00	\$18,720
303 Plant maintenance and guarantee	1	LS	\$12,000.00	\$12,000
304 <i>G20 SITE IMPROVEMENTS TOTAL</i>				<u>\$4,960,035</u>
305				
306				
307 <u>G30 SITE CIVIL/MECHANICAL UTILITIES</u>				
308				
309 G3010 Water Utilities				
310 33 10 00 Water Utilities				
311 8" Ductile Iron Pipe	1,188	LF	\$80.40	\$95,515
312 6" Ductile Iron Pipe	1,188	LF	\$64.33	\$76,426
313 4" Ductile Iron Pipe	54	LF	\$45.84	\$2,475
314 Ductile Iron Fittings	47	EA	\$844.47	\$39,690
315 Wet Taps	1	EA	\$5,382.00	\$5,382
316 Curb Cocks w/ Boxes	18	EA	\$2,412.73	\$43,429
317 Fire Hydrants	4	EA	\$4,696.44	\$18,786
318 Connection to Existing water line	1	AL	\$25,000.00	\$25,000
319 Excavation, Bedding, and Backfill	2,430	LF	\$25.56	\$62,111
320 Gaskets, Lubricants, Etc.	1	LS	\$6,720.00	\$6,720
321 Gate valves	17	EA	\$1,500.00	\$25,500
322 Thrust blocks	19	EA	\$800.00	\$15,200
323 Pressure testing & chlorinate	2,540	LF	\$5.00	\$12,700
324 Concrete encasement	95	SF	\$20.00	\$1,900
325				
326 G3020 Sanitary Sewerage Utilities				
327 33 31 00 Sanitary Sewerage				
328 8" SDR 35 Pipe	1,674	LF	\$20.74	\$34,719
329 Grease Interceptor, 5,000 Gallon	1	EA	\$32,450.00	\$32,450
330 Sanitary Manholes	10	EA	\$4,615.00	\$46,150
331 Connection to Existing Sanitary Manholes	1	EA	\$8,500.00	\$8,500
332 Excavation, Bedding, and Backfill	1,674	LF	\$25.56	\$42,787
333 Lubricant, Etc.	1	LS	\$1,875.00	\$1,875
334 Re-line existing sewer line in Gay St	1	LS	\$25,000.00	\$25,000
335 Pressure testing & video				Included
336 Concrete encasement	300	SF	\$20.00	\$6,000
337				
338 G3030 Storm Drainage Utilities				
339 33 41 00 Storm Utility Drainage				
340 24" Corrugated Polyethylene Pipe	198	LF	\$97.92	\$19,388
341 18" Corrugated Polyethylene Pipe	180	LF	\$67.20	\$12,096
342 15" Corrugated Polyethylene Pipe	882	LF	\$55.60	\$49,039
343 12" Corrugated Polyethylene Pipe	1,962	LF	\$52.45	\$102,907



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
344 10" Corrugated Polyethylene Pipe	54	LF	\$45.60	\$2,462
345 8" Corrugated Polyethylene Pipe	180	LF	\$32.90	\$5,922
346 6" Corrugated Polyethylene Pipe	252	LF	\$31.70	\$7,988
347 24" Perforated Pipe	198	LF	\$115.60	\$22,889
348 8" Perforated Pipe	324	LF	\$38.90	\$12,604
349 6" Perforated Pipe	3,942	LF	\$34.60	\$136,393
350 Catch Basins	16	EA	\$3,412.00	\$54,592
351 Drainage Manholes	36	EA	\$4,875.00	\$175,500
352 Outlet Control Structures	3	EA	\$30,450.00	\$91,350
353 Water Quality Units	11	EA	\$9,175.00	\$100,925
354 Collection Chambers	581	EA	\$1,245.00	\$723,345
355 Area Drains	12	EA	\$985.00	\$11,820
356 Trench Drain	20	LF	\$286.00	\$5,720
357 Grade Cleanouts	46	EA	\$625.00	\$28,750
358 Flare Ends	3	EA	\$784.00	\$2,352
359 30 MM Membrane	49,500	SF	\$1.26	\$62,370
360 Geo Textile	49,500	SF	\$1.95	\$96,525
361 Gravel	3,183	YDS	\$17.52	\$55,766
362 Excavation, Bedding, and Backfill	8,172	LF	\$25.56	\$208,876
363 Miscellaneous	1	LS	\$6,800.00	\$6,800
364				
365 G3044 Heating Distribution				
366 4" Ductile Iron Pipe	216	LF	\$43.09	\$9,307
367 4" Mechanical Joint 90	4	EA	\$423.38	\$1,694
368 4" Mechanical Joint 45	4	EA	\$408.75	\$1,635
369 Excavation, Bedding, and Backfill	216	LF	\$25.56	\$5,521
370 Miscellaneous	1	LS	\$350.00	\$350
371				
372 G3040 Gas Utilities				
373 33 50 00 Gas Service				
374 No work shown in this section				
375				
376 G30 SITE CIVIL/MECHANICAL UTILITIES TOTAL				\$2,643,201
377				
378				
379 G40 SITE ELECTRICAL UTILITIES				
380				
381 G4010 Site Electrical Utilities				
382 Site Lighting:				
383 Type SL1/3 Pole w/ 1-Fixt	21	EA	\$2,761.22	\$57,986
384 Type SL2/3 Pole w/ 2-Fixt	6	EA	\$4,673.02	\$28,038
385 Type SL1/PT Ped Lt Pole	19	EA	\$2,269.96	\$43,129
386 Type SL6 Uplight	3	EA	\$1,040.60	\$3,122



Westwood Handlon Elementary School
Westwood, MA

SITWORK DETAILED ESTIMATE

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>TOTAL</u>
387 Type SL7 Uplight	4	EA	\$689.70	\$2,759
388 WP Junc Box, future signage	2	EA	\$447.70	\$895
389 1" Pvc, 4#8 UG	5,560	LF	\$16.41	\$91,226
390 Site Lighting Controls	1	LS	\$4,162.40	\$4,162
391 Electric Vehicle Charging Dual Stations	2	EA	\$8,131.20	\$16,262
392 1" Pvc, 4#8 UG	600	LF	\$16.41	\$9,845
393 1" Pvc, CAT 6 UG	600	LF	\$7.53	\$4,521
394 Pullbox PB	7	EA	\$2,686.20	\$18,803
395				
396 Site Utilities				
397 Utility Pole Riser	1	LS	\$4,162.40	\$4,162
398 Electric Manhole	1	EA	\$10,744.80	\$10,745
399 4" Pvc UG (Empty, Primary Service By Others)	1,760	LF	\$16.18	\$28,472
400 Utility Tranformer Pad (Xfmr by Others)	1	EA	\$4,162.40	\$4,162
401 Install Utility Metering Cabinet FBO	1	EA	\$1,984.40	\$1,984
402 4" Pvc, 4 600 Mcm UG (Sec Service)	300	LF	\$105.86	\$31,759
403 4" Pvc UG (Spare)	50	LF	\$16.18	\$809
404 Trench, Concrete, Backfill	1,000	LF	\$48.40	\$48,400
405 4" Pvc, (empty, 4x880' Telecom Service)	3,520	LF	\$16.18	\$56,943
406 Innderduct	2,640	LF	\$3.99	\$10,542
407 Comm Manhole	2	EA	\$7,453.60	\$14,907
408				
409 Site CCTV Security (per Engr):	NIC			
410				
411 Shed Electric - Feeder only	Shed Electri	1		
412				
413 Site Demo & Temp, Miscellaneous:				
414 Temp Power and Lighting	1	LS	\$14,520.00	\$14,520
415 Misc Site Demo	1	LS	\$10,890.00	\$10,890
416 Equipment Rentals	1	LS	\$6,050.00	\$6,050
417 <i>G40 SITE ELECTRICAL UTILITIES TOTAL</i>				<u>\$525,093</u>
418				
419	TOTAL SITWORK SUMMARY			<u><u>\$10,252,070</u></u>
420				





60% Construction Document Estimate

Westwood Hanlon Elementary School

Westwood, MA

PM&C LLC
20 Downer Avenue, Suite 5
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:

Dore + Whittier

January 14, 2022



Westwood Hanlon Elementary School
Westwood, MA

14-Jan-22

60% Construction Document Estimate

MAIN CONSTRUCTION COST SUMMARY

	Start Date	Gross Floor Area	\$/sf	Estimated Construction Cost
NEW CONSTRUCTION				
NEW SCHOOL		113,141	\$438.46	\$49,608,275
DEMOLISH EXISTING BUILDINGS		33,500	\$8.00	\$268,000
REMOVE HAZARDOUS MATERIALS (UEC 8/12/21)				\$750,000
SITework				\$10,076,469
SUB-TOTAL	Jul-22	113,141	\$536.52	\$60,702,744
ESCALATION TO START DATE JULY 2022 - (assumed 3.5% PA)	1.46%			\$886,260
DESIGN AND PRICING CONTINGENCY	2.5%			\$1,517,569
SUB-TOTAL		113,141	\$557.77	\$63,106,573
GENERAL CONDITIONS/GR's	6.00%			\$3,786,399
BONDS	1.00%			\$631,066
INSURANCE	1.25%			\$788,832
PERMITS/FEES				waived
OVERHEAD + PROFIT	3.0%			\$2,049,386
TOTAL CONSTRUCTION COST		113,141	\$621.90	\$70,362,256

ALTERNATES

Add UV-C to HVAC System	\$93,235
Add Phase 2 Landscape Planting	\$245,456
Add Solid Surface Countertop at Classrooms ILO Plastic Laminate	\$16,843



Westwood Hanlon Elementary School
Westwood, MA

14-Jan-22

60% Construction Document Estimate

This 60% Construction Document cost estimate was produced from drawings and specifications dated December 21, 2021 prepared by Dore + Whittier and their design team.

This estimate includes all direct construction costs, general contractors overhead and profit and design contingency. Cost escalation assumes start dates indicated.

Bidding conditions are expected to be public bidding under 149 of the Massachusetts General Laws to pre-qualified general contractors, and pre-qualified sub-contractors, open specifications for materials and manufacturers.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

ITEMS NOT CONSIDERED IN THIS ESTIMATE

Items not included in this estimate are:

- All professional fees and insurance
- Building Permit costs
- Land acquisition, feasibility, and financing costs
- All Furnishings, Fixtures and Equipment
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items (e.g. draperies, furniture and equipment)
- Rock excavation; special foundations (unless indicated by design engineers)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>		SubTotal	TOTAL	\$/SF	%
A10 FOUNDATIONS					
A1010	Standard Foundations	\$1,659,099			
A1020	Special Foundations				
A1030	Lowest Floor Construction	\$1,521,948	\$3,181,047	\$28.12	6.4%
B10 SUPERSTRUCTURE					
B1010	Upper Floor Construction	\$2,268,304			
B1020	Roof Construction	\$3,390,175	\$5,658,479	\$50.01	11.4%
B20 EXTERIOR CLOSURE					
B2010	Exterior Walls	\$6,196,915			
B2020	Windows	\$1,907,572			
B2030	Exterior Doors	\$162,100	\$8,266,587	\$73.06	16.7%
B30 ROOFING					
B3010	Roof Coverings	\$2,536,114			
B3020	Roof Openings	\$51,353	\$2,587,467	\$22.87	5.2%
C10 INTERIOR CONSTRUCTION					
C1010	Partitions	\$3,230,761			
C1020	Interior Doors	\$1,080,002			
C1030	Specialties/Millwork	\$951,859	\$5,262,622	\$46.51	10.6%
C20 STAIRCASES					
C2010	Stair Construction	\$244,100			
C2020	Stair Finishes	\$48,322	\$292,422	\$2.58	0.6%
C30 INTERIOR FINISHES					
C3010	Wall Finishes	\$821,332			
C3020	Floor Finishes	\$1,002,947			
C3030	Ceiling Finishes	\$1,093,728	\$2,918,007	\$25.79	5.9%
D10 CONVEYING SYSTEMS					
D1010	Elevator	\$158,200	\$158,200	\$1.40	0.3%
D13 SPECIAL CONSTRUCTION					
D1313	Special Construction (Geothermal Wells)	\$2,400,000	\$2,400,000	\$21.21	4.8%
D20 PLUMBING					
D20	Plumbing	\$1,983,000	\$1,983,000	\$17.53	4.0%
D30 HVAC					
D30	HVAC	\$8,658,501	\$8,658,501	\$76.53	17.5%



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>		SubTotal	TOTAL	\$/SF	%
D40 FIRE PROTECTION					
D40	Fire Protection	\$686,283	\$686,283	\$6.07	1.4%
D50 ELECTRICAL					
D5010	Service & Distribution	\$1,758,580			
D5020	Lighting & Power	\$1,357,130			
D5030	Communication & Security Systems	\$1,870,912			
D5040	Other Electrical Systems	\$255,000	\$5,241,622	\$46.33	10.6%
E10 EQUIPMENT					
E10	Equipment	\$975,256	\$975,256	\$8.62	2.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$1,338,782			
E2020	Movable Furnishings	NIC	\$1,338,782	\$11.83	2.7%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$0			
F2020	Hazardous Components Abatement	\$0	\$0	\$0.00	0.0%
TOTAL DIRECT COST (Trade Costs)			\$49,608,275	\$438.46	100.0%



Westwood Hanlon Elementary School
Westwood, MA

14-Jan-22

60% Construction Document Estimate

GFA

113,141

CONSTRUCTION COST SUMMARY IN CSI FORMAT

	NEW SCHOOL		SITEWORK		TOTAL PROJECT	
	Subtotal	Total	Subtotal	Total	Subtotal	Total
NEW SCHOOL BUILDING						
DIV. 2 EXISTING CONDITIONS						
024100 Site Demolition						
DIV. 3 CONCRETE						
033000 Cast In Place Concrete	\$2,427,381	\$2,427,381	\$20,000	\$20,000	\$2,447,381	\$2,447,381
033500 Concrete Finishes						
DIV. 4 MASONRY						
042000 Unit Masonry	\$3,210,183	\$3,210,183	\$7,200	\$7,200	\$3,217,383	\$3,217,383
DIV. 5 METALS						
051200 Structural Steel Framing	\$5,176,951	\$5,786,364	\$10,000	\$10,000	\$5,186,951	\$5,796,364
055000 Metal Fabrications	\$609,413				\$609,413	
DIV. 6 WOODS, PLASTICS & COMPOSITES						
061000 Rough Carpentry	\$466,525	\$774,320			\$466,525	\$774,320
062000 Finish Carpentry	\$307,795				\$307,795	
DIV. 7 THERMAL & MOISTURE PROTECTION						
070001 Waterproofing, Dampproofing and Caulking	\$842,906	\$5,592,838		\$11,970	\$842,906	\$5,604,808
070002 Roofing	\$2,321,394				\$2,321,394	
072100 Thermal Insulation	\$49,918				\$49,918	
076400 Wall Panels	\$2,358,620		\$11,970		\$2,370,590	
078100 Applied Fireproofing						
078400 Firestopping	\$10,000				\$10,000	
079500 Construction & Expansion Joints	\$10,000				\$10,000	
DIV. 8 DOORS & WINDOWS						
080001 Windows	\$2,314,892	\$3,252,790			\$2,314,892	\$3,252,790
080002 Glazing	\$31,320				\$31,320	
081113 Doors, Frames and Hardware	\$115,600				\$115,600	
081400 Wood Doors	\$213,225				\$213,225	
083100 Access Doors and Panels	\$10,000				\$10,000	
083200 Sliding Glass Doors	\$252,000				\$252,000	
083300 Overhead Doors						
083510 Folding Grilles	\$38,650				\$38,650	
084413 Glazed Aluminum Curtainwall						



Westwood Hanlon Elementary School
Westwood, MA

14-Jan-22

60% Construction Document Estimate

GFA

113,141

CONSTRUCTION COST SUMMARY IN CSI FORMAT

	NEW SCHOOL		SITEWORK		TOTAL PROJECT	
	Subtotal	Total	Subtotal	Total	Subtotal	Total
NEW SCHOOL BUILDING						
086300 Metal Framed Skylights		\$39,353			\$39,353	
087100 Door Hardware		\$236,350			\$236,350	
089000 Louvers and Vents		\$1,400			\$1,400	
DIV. 9 FINISHES						\$5,707,450
090002 Tile		\$429,876			\$429,876	
090003 Acoustical Tile		\$784,312			\$784,312	
090005 Resilient Flooring		\$585,277			\$585,277	
090007 Painting		\$324,055			\$324,055	
092900 GWB, Lath and Plastering		\$3,065,640			\$3,065,640	
096466 Wood Athletic Flooring		\$287,318			\$287,318	
096625 Precast Terrazzo						
096700 Fluid Applied Floor						
096800 Carpet		\$40,142			\$40,142	
098400 Acoustic Panels		\$190,830			\$190,830	
099500 Wall Covering						
DIV 10 SPECIALTIES						\$427,080
101100 Markerboards		\$102,078			\$102,078	
101200 Display Cases		\$14,801			\$14,801	
101400 Signage		\$97,741	\$20,000		\$117,741	
102113 Toilet Compartments		\$54,700			\$54,700	
102228 Folding Partition		\$15,300			\$15,300	
102600 Wall Protection		\$4,000			\$4,000	
102813 Toilet Accessories		\$101,820			\$101,820	
104400 Fire Protection Specialties		\$14,000			\$14,000	
105113 Metal Lockers		\$2,640			\$2,640	
107113 Sun Control Devices						
DIV. 11 EQUIPMENT						\$975,256
112313 Time Capsule		\$1,000			\$1,000	
111300 Loading Dock Equipment						
114000 Foodservice Equipment		\$590,520			\$590,520	
114500 Appliances		\$28,100			\$28,100	
115200 Projection Screens		\$138,000			\$138,000	
116100 Theatre Equipment		\$50,000			\$50,000	
116623 Gymnasium Equipment		\$167,636			\$167,636	
116800 Playfield Equipment and Structures						
116810 Playground Structures						
119000 Miscellaneous Equipment						



Westwood Hanlon Elementary School
Westwood, MA

14-Jan-22

60% Construction Document Estimate

GFA

113,141

CONSTRUCTION COST SUMMARY IN CSI FORMAT

	NEW SCHOOL		SITEWORK		TOTAL PROJECT	
	Subtotal	Total	Subtotal	Total	Subtotal	Total
NEW SCHOOL BUILDING						
DIV. 12 FURNISHINGS		\$1,338,782				\$1,338,782
122400 Window Shades		\$135,682			\$135,682	
123000 Casework		\$1,155,850			\$1,155,850	
124813 Entrance Floor Mats and Frames		\$47,250			\$47,250	
126100 Fixed Audience Seating						
126613 Telescoping Bleachers						
DIV. 13 SPECIAL CONSTRUCTION						
130000 Temporary Work						
DIV. 14 CONVEYING SYSTEMS		\$155,000				\$155,000
142424 Holeless Hydraulic Elevators		\$155,000			\$155,000	
DIV. 21 FIRE SUPPRESSION		\$686,283				\$686,283
210000 Fire Suppression		\$686,283			\$686,283	
DIV.22 PLUMBING		\$1,983,000				\$1,983,000
220000 Plumbing		\$1,983,000			\$1,983,000	
DIV. 23 HVAC		\$8,658,501				\$8,658,501
230000 HVAC		\$8,658,501			\$8,658,501	
DIV.26 ELECTRICAL		\$5,241,622		\$521,910		\$5,763,532
260000 Electrical		\$5,241,622		\$521,910		\$5,763,532
270000 Communications						
280000 Electronic Safety and Equipment						
DIV. 31 EARTHWORK		\$1,011,425		\$3,220,535		\$4,231,960
311000 Site Preparation & Clearing				\$601,930		\$601,930
312000 Earthwork		\$1,011,425		\$2,469,830		\$3,481,255
312500 Erosion Control				\$148,775		\$148,775
DIV. 32 EXTERIOR IMPROVEMENTS				\$4,383,527		\$4,383,527
320000 Paving, curbing & Edging				\$1,359,910		\$1,359,910
323119 Site Improvements				\$1,683,728		\$1,683,728
329900 Landscaping				\$1,339,889		\$1,339,889
DIV. 33 UTILITIES		\$2,400,000		\$1,881,327		\$4,281,327
331000 Water Distribution				\$402,200		\$402,200



Westwood Hanlon Elementary School
Westwood, MA

14-Jan-22

60% Construction Document Estimate

GFA

113,141

CONSTRUCTION COST SUMMARY IN CSI FORMAT

	<i>NEW SCHOOL</i>		<i>SITEWORK</i>		<i>TOTAL PROJECT</i>	
	<i>Subtotal</i>	<i>Total</i>	<i>Subtotal</i>	<i>Total</i>	<i>Subtotal</i>	<i>Total</i>
NEW SCHOOL BUILDING						
332313 Geothermal Wells	\$2,400,000		\$69,600		\$2,469,600	
333000 Sanitary Sewerage			\$176,000		\$176,000	
334000 Storm Drainage Systems			\$1,233,527		\$1,233,527	
<i>SUBTOTAL DIRECT (TRADE) COST</i>		\$49,608,275		\$10,076,469		\$59,684,744



CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

GROSS FLOOR AREA CALCULATION

First Floor	77,339
Second Floor	36,665

TOTAL GROSS FLOOR AREA (GFA)	114,004 sf
-------------------------------------	-------------------

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

033000 CONCRETE

Strip Footings	198	CY
Foundation Walls	443	CY
Spread Footings	823	CY
Piers	77	CY
Total Foundation Concrete	1,541	CY

Strip footings/Grade Beams

Formwork	3,930	sf	14.00	55,020
Re-bar	18,890	lbs.	2.00	37,780
Concrete material; 4,500 psi	198	cy	132.00	26,136
Placing concrete	198	cy	90.00	17,820

Foundation walls

Formwork	18,160	sf	18.00	326,880
Re-bar	40,860	lbs.	2.00	81,720
Concrete material; 4,500 psi	443	cy	132.00	58,476
Placing concrete	443	cy	120.00	53,160
Form shelf	2,275	lf	8.00	18,200

Column Footings

Formwork	10,666	sf	16.00	170,656
Re-bar	94,914	lbs.	2.00	189,828
Concrete material; 4,500 psi	823	cy	132.00	108,636
Placing concrete	823	cy	120.00	98,760
Set anchor bolts grout plates	166	ea	165.00	27,390

Piers

Formwork	3,984	sf	22.00	87,648
Re-bar	6,574	lbs	2.00	13,148
Concrete material; 4,500 psi	77	cy	132.00	10,164
Placing concrete	77	cy	120.00	9,240

Miscellaneous

Elevator pit, complete	1	loc	30,000.00	30,000
------------------------	---	-----	-----------	--------

042000 MASONRY

Insulation, load bearing at brick shelf	2,275	lf	10.00	22,750
---	-------	----	-------	--------

070001 WATERPROOFING, DAMPPROOFING AND CAULKING

Bituminous dampproofing at brick shelf	3,413	sf	3.00	10,239
--	-------	----	------	--------

072100 THERMAL INSULATION

Insulation, 2" rigid	9,740	sf	3.50	34,090
----------------------	-------	----	------	--------

312000 EARTHWORK

Strip footings

Excavation	1,363	cy	14.00	19,082
Reuse excess material on site	1,363	cy	12.00	16,356
Backfill with selected existing material	1,018	cy	16.00	16,288

Spread footings

Excavation	2,109	cy	14.00	29,526
Reuse excess material on site	2,109	cy	12.00	25,308



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

54	Backfill with selected existing material	1,209	cy	16.00	19,344		
55	<u>Miscellaneous</u>						
56	Foundation drain, per civil plans	1,157	lf	22.00	25,454		
57	Allowance for dewatering for foundation work	1	ls	20,000.00	20,000		
58	SUBTOTAL					1,659,099	

A1020 SPECIAL FOUNDATIONS

60	No work in this section						
62	SUBTOTAL					-	

A1030 LOWEST FLOOR CONSTRUCTION

66	033000 CONCRETE						
67	<u>Slab on grade, 5" thick</u>	77,339	sf				
68	Vapor barrier, heavy duty, 15 mil	77,339	sf	1.00	77,339		
69	WWF reinforcement	88,940	sf	1.50	133,410		
70	Concrete - 5" thick	1,251	cy	130.00	162,630		
71	Placing concrete	1,251	cy	55.00	68,805		
72	Finishing and curing concrete	77,339	sf	2.75	212,682		
73	Sawcut full depth control joints	77,339	sf	0.22	17,015		
74	<u>Miscellaneous</u>						
75	Moisture mitigation admixture					NIC	
76	Equipment pads	1	ls	10,000.00	10,000		
78	072100 THERMAL INSULATION						
79	Insulation, 2" to 4' at perimeter	4,150	sf	2.00	NIC		

312000 EARTHWORK

82	<u>Slab on grade</u>						
83	<u>Drilling/matting/blasting</u>						
84	Pre-blast survey	1	ls	50,000.00	by owner		
85	At building footprint; assume 4.5' rock removal below FFE incl. 5' offset	4,241	cy	45.00	190,845		
86	To design subgrade of pavement area; 2' of rock removal	1,333	cy	45.00	w/ site		
87	To design subgrade of playground areas; 2' of rock removal	3,815	cy	45.00	w/ site		
88	Trench; for utility lines - allowance	500	cy	65.00	w/ site		
89	To design subgrade of fire road; 3' of rock removal	1,333	cy	45.00	w/ site		
90	Rock excavation/hauling to stockpile location	11,222	cy	7.00	78,554		
91	Process and stockpile for reuse within building footprint incl. 12" of structural below SOG	18,516	tns	7.00	129,612		

Building Earthwork

93	Cut	7,140	cy	8.00	57,120		
94	Gravel layer 12" thick; from processed rock	2,900	cy	10.00	29,000		
95	Fill - (from processed rock to bring up levels, areas outside of r	3,400	cy	10.00	34,000		
96	Fill - (from processed rock to replace rock removal)	2,700	cy	10.00	27,000		
97	Stockpile processed rock for base materials	2,222	cy	3.50	w/ site		
98	Stockpile cut soils for reuse on site	7,140	cy	3.50	24,990		
99	Load excess soils for disposal	7,140	cy	3.50	NR		
100	Less than RCS-1 site disposal 1.65x	11,781	tn	18.00	NR		
101	Plumbing E&B	4,081	lf	28.00	114,268		
102	Sub-slab ventilation system	77,339	sf	2.00	154,678		
103	SUBTOTAL					1,521,948	

TOTAL - FOUNDATIONS

\$3,181,047

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION



CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

111 No work in this section
112 SUBTOTAL

114 **A2020 BASEMENT WALLS**
115 No work in this section
116 SUBTOTAL

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

122 802 tns including canopies
123 **B1010 FLOOR CONSTRUCTION** 14.07 lbs/gsf
124 6,666 \$/Tn

125 033000 CONCRETE

126 Concrete on Metal Deck
127 WWF reinforcement 42,165 sf 1.50 63,248
128 Concrete fill to metal deck; light weight, 4-1/2" thick 586 cy 175.00 102,550
129 Moisture mitigation admixture NIC
130 Place and finish concrete 36,665 sf 2.50 91,663
131 Rebar to decks 11,000 lbs 2.00 22,000

132 051200 STRUCTURAL STEEL FRAMING

134 Beams; W-sections 170 tns 4,800.00 816,000
135 Brace frames; HSS 23 tns 4,800.00 110,400
136 Hung lintels at windows 4 tns 4,800.00 19,200
137 Miscellaneous supports at windows 13 tns 4,800.00 62,400
138 Columns; HSS 145 tns 4,800.00 696,000
139 Shear studs 8,148 ea 3.50 28,518
140 2" Metal galvanized floor deck 36,665 sf 5.00 183,325
141 Moment connections 126 ea 500.00 63,000

142 078100 FIREPROOFING/FIRESTOPPING

144 Firestopping 1 ls 10,000.00 10,000
145 Fireproofing 36,665 sf 2.50 NR
146 SUBTOTAL 2,268,304

148 **B1020 ROOF CONSTRUCTION**

149 033000 CONCRETE

151 WWF reinforcement 3,117 sf 1.50 4,676
152 Concrete fill to metal deck; light weight, 6" thick 58 cy 175.00 10,150
153 Place and finish concrete 2,710 sf 2.50 6,775
154 Rebar to decks 813 lbs 2.00 1,626

155 051200 STRUCTURAL STEEL FRAMING

157 Beams; W-sections 291 tns 4,800.00 1,396,800
158 Beams; HSS 36 tns 4,800.00 172,800
159 Parapet framing at CMU backup, 8lbs/lf 4 tns 4,800.00 19,200
160 Joists 65 tns 4,800.00 312,000
161 Misc angles and bent plates at roof edge, allow per note 4,375 lf 75.00 328,125
162 3" Metal galvanized roof deck 78,290 sf 5.75 450,168
163 Premium for acoustic deck at gym 12,145 sf 7.00 85,015
164 Moment connections 125 ea 500.00 62,500
165 Roof screen support 4 tns 6,500.00 26,000
166 Canopies



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW CONSTRUCTION								
167	HSS	31	tns	6,500.00	201,500			
168	HSS, tapered	16	tns	9,000.00	144,000			
169								
170	061000 ROUGH CARPENTRY							
171	T&G laminated deck, 4-1/2"	4,824	sf					
172	Media Center	960	sf	35.00	33,600			
173	Main Entry	1,200	sf	35.00	42,000			
174	Plaza canopy	2,664	sf	35.00	93,240			
175								
176	078100 FIREPROOFING/FIRESTOPPING							
177	Fireproofing - specific locations only, allow	1	ls	25,000.00		NR		
178	SUBTOTAL						3,390,175	
179								
180	TOTAL - SUPERSTRUCTURE							\$5,658,479
181								
182								
183	B20 EXTERIOR CLOSURE							
184								
185	B2010 EXTERIOR WALLS	56,894	SF					
186								
187	042000 MASONRY							
188	Brick veneer, utility; including detailing	35,214	sf	34.00	1,197,276			
189	Natural stone veneer; 3-5" bed depth, Buechelstone Barnwood Blue	5,300	sf	75.00	397,500			
190	Cast stone; Custom Cast Stone	250	sf	55.00	13,750			
191	Kingspan Kooltherm, 3" - 2 layers 1-1/2"	40,764	sf	5.50	224,202			
192	CMU back up, 8"	8,670	sf	28.00	242,760			
193	CMU back up, 12"	14,049	sf	33.00	463,617			
194	Premium for engineered masonry ties at sloped walls	470	sf	5.00	2,350			
195	Staging to exterior wall	70,906	sf	3.50	In rates			
196								
197	052000 MISC. METALS							
198	Miscellaneous metals	63,483	sf	1.00	63,483			
199								
200	070001 WATERPROOFING, DAMPPROOFING AND CAULKING							
201	Air and vapor barrier	56,894	sf	7.50	426,705			
202	AVB at window openings	5,241	lf	5.00	26,205			
203	AVB at MCM and Terracotta panel projections	8,758	sf	7.50	65,685			
204	AVB at soffit	545	sf	7.50	4,088			
205	Miscellaneous sealants	70,906	sf	0.50	35,453			
206								
207	076400 CLADDING							
208	Metal composite panels; Alucobond	1,470	sf	80.00	117,600			
209	Metal composite panels; Alucobond projections/Sunshades, all sides, 1, 2/A6.60, A6/A6.65	2,852	sf	80.00	228,160			
210	Terracotta shingle	14,660	sf	90.00	1,319,400			
211	Terracotta sill	100	sf	90.00	9,000			
212	Terracotta shingle Projections - sides and soffits, M10/A6.65	5,906	sf	90.00	531,540			
213	MCM soffits	345	sf	80.00	27,600			
214	Terracotta soffits	200	sf	90.00	18,000			
215	Mockup	1	ls	40,000.00	40,000			
216								
217	072100 THERMAL INSULATION							
218	Insulation, 6" mineral fiber	16,130	sf	5.00	w/ cladding			
219	Fiberglass thermal spacer, 6"	14,660	sf	5.00	w/ cladding			
220	Insulation at window openings	5,241	lf	2.50	13,103			
221	Insulation at MCM panel projections	2,852	sf	3.00	w/ cladding			
222	Insulation at soffit	545	sf	5.00	2,725			



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

223							
224	092900	GYPSUM BOARD ASSEMBLIES					
225		Sheathing, 5/8"	34,175	sf	3.00	102,525	
226		6" stud; LGMF	34,175	sf	9.00	307,575	
227		GWB lining	34,175	sf	3.50	119,613	
228		Premium for sloped wall	1,975	sf	10.00	19,750	
229		Framing and sheathing at MCM and Terracotta panel projections	10,308	sf	15.00	154,620	
230		Framing at soffit	545	sf	14.00	7,630	
231							
232	101400	SIGNAGE					
233		Building signage, allow	1	ls	15,000.00	15,000	
234		SUBTOTAL					6,196,915
235							
236	B2020	WINDOWS					
237			14,012	SF			
238	061000	ROUGH CARPENTRY					
239		Wood blocking at openings	5,241	lf	12.00	62,892	
240							
241	070001	WATERPROOFING, DAMPPROOFING AND CAULKING					
242		Backer rod & double sealant	5,241	lf	10.00	52,410	
243							
244	080001	WINDOWS					
245		Aluminum windows, thermally broken heavy commercial extruded aluminum	5,015	sf	100.00	501,500	
246		Premium for architectural subsill	659	lf	50.00	32,950	
247		Premium for awning openings	64	ea	500.00	32,000	
248		Curtainwall, Aluminum; double pane	8,997	sf	125.00	1,124,625	
249		Premium for translucent glass at gym	1,565	sf	5.00	7,825	
250		Premium for tempered glass; IG5	1,476	sf	5.00	7,380	
251		Premium for School Guard glass	1,584	sf	30.00	47,520	
252		Premium for Level 3 ballistic glazing	53	sf	150.00	7,950	
253		Sunscreens					
254		Sunscreens - aluminum fins/outriggers	112	lf	260.00	29,120	
255							
256	089000	LOUVERS					
257		Aluminum louvers - allowance	20	sf	70.00	1,400	
258		SUBTOTAL					1,907,572
259							
260	B2030	EXTERIOR DOORS					
261							
262	061000	ROUGH CARPENTRY					
263		Wood blocking at openings	100	lf	11.00	1,100	
264							
265	079200	JOINT SEALANTS					
266		Backer rod & double sealant	100	lf	10.00	1,000	
267							
268	081110	HOLLOW METAL					
269		<u>Thermally insulated and galvanized</u>					
270		Frames, single	1	ea	450.00	450	
271		Frames, double	5	ea	450.00	2,250	
272		Type F; Flush HM door	11	leaf	500.00	5,500	
273							
274	080001	WINDOWS					
275		Glazed aluminum entrance doors including frame and hardware; single	4	ea	5,000.00	20,000	
276		Glazed aluminum entrance doors including frame and hardware; double	10	pr	10,000.00	100,000	
277							



60% Construction Document Estimate

GFA 113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

278	087100	DOOR HARDWARE					
279		Hardware	11	leaf	1,600.00	17,600	
280		Auto opener	3	ea	4,000.00	12,000	
281							
282	090007	PAINTING					
283		Finish doors and frames	11	ea	200.00	2,200	
284		SUBTOTAL					162,100
285							
286		TOTAL - EXTERIOR CLOSURE					\$8,266,587

B30 ROOFING

B3010 ROOF COVERINGS

292	061000	ROUGH CARPENTRY					
293		Rough blocking	14,740	lf	8.00	117,920	
294							
295	070001	WATERPROOFING, DAMPPROOFING AND CAULKING					
296		AVB at roof perimeter	3,685	lf	8.00	29,480	
297							
298	070002	ROOFING AND FLASHING					
299		<u>Flat Roof</u>					
300		EPDM membrane roofing system, 60 mil - FR deck sheathing, VR/AB, 3 layers insulation; 9", coverboard, membrane	78,290	sf	25.00	1,957,250	
301		Membrane to backside of parapet	5,528	sf	13.00	71,864	
302		Membrane to top of Terracotta sunscreen	1,550	sf	13.00	20,150	
303		Canopies - EPDM membrane roofing system, 60 mil - coverboard, membrane	4,824	sf	15.00	72,360	
304							
305		<u>Miscellaneous Roofing</u>					
306		Roof edge, 8"	3,240	lf	38.00	123,120	
307		Prefinished metal closure, 6"	1,135	lf	30.00	34,050	
308		Walk pads	2,550	sf	12.00	30,600	
309		Roof access ladder	4	ea	3,000.00	12,000	
310							
311	076400	CLADDING					
312		Mechanical roof screens					
313		Terracotta	792	sf	85.00	67,320	
314		SUBTOTAL					2,536,114

B3020 ROOF OPENINGS

317	086300	ROOF SKYLIGHTS + HATCHES					
318		Raised skylights, 5'-8" x 5'-8"	6	ea	3,857.87	23,147	
319		Raised skylights, 5' x 8'	1	ea	4,800.00	4,800	
320		Raised skylights, 4' x 4'	6	ea	1,901.00	11,406	
321		Roof access hatch	4	ea	3,000.00	12,000	
322		SUBTOTAL					51,353
323							
324		TOTAL - ROOFING					\$2,587,467

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

331	042000	MASONRY	21,050	sf			
332		E1; 8" CMU	13,362	sf	28.00	374,136	
333							



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
384	Backer rod & double sealant	4,398	lf	2.50	10,995		
385							
386	080002 GLASS AND GLAZING						
387	Door glazing/sidelights/transoms; S-3 safety glazing 5/16"	783	sf	40.00	31,320		
388							
389	081113 HM DOORS AND FRAMES						
390	<u>Frames</u>						
391	Frame type 1 - single	139	ea	450.00	62,550		
392	Frame type 2 - double	33	ea	600.00	19,800		
393	Premium for sidelight/transom	783	sf	30.00	23,490		
394	<u>Doors</u>						
395	Type F - Flush HM	4	leaf	390.00	1,560		
396							
397	081400 WOOD DOORS						
398	Type F - Flush	162	ea	450.00	72,900		
399	Type FG - WD with upper and lower vision panels	12	ea	650.00	7,800		
400	Type G - WD with upper glass panel	11	ea	575.00	6,325		
401	Type N - WD with narrow lite	12	ea	550.00	6,600		
402	Type V - WD with view port	4	ea	525.00	2,100		
403	Premium for 90 min fire rated assembly	7	loc	10,000.00	70,000		
404	Premium for acoustical gasketing	1	loc	500.00	500		
405	Premium for STC-45		leaf	1,500.00			
406	Premium for STC-55	16	leaf	2,000.00	32,000		
407	Premium for STC-60	5	leaf	3,000.00	15,000		
408							
409	083100 ACCESS DOORS AND FRAMES						
410	Access doors	1	ls	10,000.00	10,000		
411							
412	080001 WINDOWS						
413	Type FG - Glazed aluminum entrance doors including frame and hardware; single door	6	ea	5,000.00	30,000		
414	Type FG - Glazed aluminum entrance doors including frame and hardware; double door	6	pr	10,000.00	60,000		
415	Type G - Half glazed aluminum entrance doors including frame and hardware; single door	3	ea	4,300.00	12,900		
416	Type G - Half glazed aluminum entrance doors including frame and hardware; double door	5	pr	8,500.00	42,500		
417	Aluminum frame type 5	63	sf	90.00	5,670		
418	Premium for school guard glazing	40	sf	30.00	w/ C1010		
419							
420	083200 SLIDING GLASS DOORS						
421	<u>Sliding glass doors with perimeter gasketing, sweep and laminated double glazing</u>						
422	3'-0" x 7'-0", surface door with aluminum frame	24	ea	2,625.00	63,000		
423	8'-0" x 7'-0", pocket doors (3 leaves) w/ aluminum frame	27	ea	7,000.00	189,000		
424							
425	083510 FOLDING GRILLES						
426	Side folding security grille at reception	310	sf	75.00	23,250		
427	Coiling counter doors -allow	1	ea	5,000.00	5,000		
428	Overhead security grille at kitchen	1	ea	10,400.00	10,400		
429							
430	087100 DOOR HARDWARE						
431	Hardware	205	leaf	950.00	194,750		
432	Auto opener	3	ea	4,000.00	12,000		
433							
434	090007 PAINTING						
435	Finish doors and frames	205	ea	200.00	41,000		
436	SUBTOTAL					1,080,002	
437							



CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

438	C1030 SPECIALTIES / MILLWORK						
439							
440	055000 MISCELLANEOUS METALS						
441	Guardrail system with perforated metal infill panels at open to below areas	122	lf	400.00	48,800		
442	Guardrail at platform ramp	10	lf	250.00	2,500		
443	Single handrail at corridor ramps	44	lf	75.00	3,300		
444	Double handrails at platform ramp and steps	77	lf	150.00	11,550		
445	Ships ladder to roof hatch at custodian storage	1	ls	3,000.00	3,000		
446	Miscellaneous metals throughout building	114,004	gsf	1.25	142,505		
447							
448	061000 ROUGH CARPENTRY						
449	Backer panels in electrical closets	1	ls	10,000.00	10,000		
450							
451	064100 INTERIOR ARCHITECTURAL WOODWORK						
452	Admin reception desks	1	ls	19,500.00	19,500		
453	Nurse office/waiting desk/ work counter	1	ls	8,400.00	8,400		
454	Media center circulation desk with book return level 1	1	ls	16,800.00	16,800		
455	Media center circulation desk with book return level 2					FF&E	
456	Trash receptacles at Cafeteria on casters; cabinet doors with false base for three trash cans, stainless steel countertop (3 loc)	26	lf	500.00	13,000		
457	Custodial work bench, allowance	1	ls	3,200.00	3,200		
458	Solid surface cap to low wall	6	lf	45.00	270		
459	Wood sills	1,430	lf	45.00	64,350		
460	Window seat at classrooms with storage below; similar to J12/AQ1.70 (qty per floor plan locations)	20	loc	5,000.00	100,000		
461	Shelf and rod at closets	1	ls	1,200.00	1,200		
462	Art display rail at corridors	60	lf	45.00	2,700		
463							
464	070001 WATERPROOFING, DAMPPROOFING AND CAULKING						
465	Miscellaneous sealants throughout building	114,004	gsf	1.00	114,004		
466							
467	079500 EXPANSION CONTROL						
468	Expansion joint covers, allowance	1	ls	10,000.00	10,000		
469							
470	101100 VISUAL DISPLAY SURFACES						
471	Markerboards	3,657	sf	20.00	73,140		
472	Tackboards	1,401	sf	18.00	25,218		
473	Tackable surface within acoustic wall panel feature wall; per email 1/7	120	sf	20.00	2,400		
474	Peg board panel at extended learning	32	sf	35.00	1,120		
475	Custom storage trough below peg board panels; 5' wide	1	loc	200.00	200		
476	Smart boards					FF&E	
477							
478	101200 DISPLAY CASES						
479	Display cases at corridor with glass shelves and doors; 6'-2" high	30	lf	493.36	14,801		
480							
481	101400 SIGNAGE						
482	Bronze dedication plaque	1	ea	3,000.00	3,000		
483	LEED certification recognition plaque	1	ea	1,500.00	1,500		
484	Wayfinding signage	1	ea	1,500.00	1,500		
485	Room Signs	276	ea	140.00	38,640		
486	Miscellaneous code signage	114,004	gsf	0.15	17,101		
487	Vinyl Applique signage						
488	Exterior door signage	20	ea	250.00	5,000		
489	Locations per drawings, not yet shown (allowance)	1	ls	10,000.00	10,000		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

490		4' x 12' signage at Gym, Café, Lobby, Media center	4	ea	1,500.00	6,000	
491							
492	102100	TOILET COMPARTMENTS					
493		<u>Plastic partitions</u>					
494		Toilet Partitions; ADA	8	ea	2,000.00	16,000	
495		Toilet Partitions; regular	18	ea	1,800.00	32,400	
496		Toilet Partitions; urinal screens	9	ea	700.00	6,300	
497							
498	102800	TOILET ACCESSORIES					
499		<u>Stainless steel accessories</u>					
500		Semi recessed waste units	23	ea	380.00	8,740	
501		Mirrors	34	ea	200.00	6,800	
502		Wall mounted soap dispensers	34	ea	70.00	2,380	
503		Dual roll toilet paper dispensers	38	ea	150.00	5,700	
504		42" Grab bars	8	set	200.00	1,600	
505		Sanitary napkin disposal	14	ea	100.00	1,400	
506		Hand dryers	23	ea	750.00	NIC	
507		CC-2; curved curtain and track at corridor markerboards; 23' long	3	ea	3,000.00	9,000	
508		CC-3; straight curtain and track at classroom glass sliders; 10' long	29	ea	1,400.00	40,600	
509		Cubicle curtain and track at resting	3	ea	2,000.00	6,000	
510		Janitors closet accessories	4	rms	300.00	1,200	
511		Shower accessories including grab bars, folding seat and curtain	2	ea	1,150.00	2,300	
512		Custodial workshop accessories	1	ea	1,500.00	1,500	
513		Adult changing table	1	ea	1,200.00	1,200	
514		Baby changing table	1	ea	800.00	800	
515		<u>Classrooms</u>					
516		Paper towel dispenser	28	ea	380.00	10,640	
517		Soap dispenser	28	ea	70.00	1,960	
518							
519	104400	FIRE PROTECTION SPECIALTIES					
520		Fire extinguisher cabinets	38	ea	350.00	13,300	
521		Defibrillator cabinets , allow	2	ea	350.00	700	
522							
523	102600	WALL PROTECTION					
524		Corner guards	20	loc	200.00	4,000	
525							
526	105000	LOCKERS					
527		Custodial; single tier metal with sloped top, 18" x 15" x 72"	3	opes	300.00	900	
528		Lockers at ext. day storage, double tier, allowance	6	opes	180.00	1,080	
529		Kitchen; single tier metal with sloped top, 12" x 12" x 72"	3	opes	220.00	660	
530		SUBTOTAL					951,859

TOTAL - INTERIOR CONSTRUCTION	\$5,262,622
--------------------------------------	--------------------

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

538	033000	CONCRETE					
539		Concrete to stairs	5	flt	1,500.00	7,500	
540							
541	055000	MISCELLANEOUS METALS					
542		Gallery stair; Ornamental with perforated metal infill guardrail system and wood top caps	1	flt	65,500.00	65,500	
543							



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

544	Media center stair with perforated metal infill guardrail system and wood top caps	1	flt	51,000.00	51,000			
545	Egress stairs with punched metal infill guardrails	3	flt	35,000.00	105,000			
546	Wide platform steps	53	lf	50.00	2,650			
547	Steps to stage including adjacent to ramp	2	loc	1,500.00	3,000			
548	Ramp to stage and music classroom corridor	315	sf	30.00	9,450			
549	SUBTOTAL					244,100		
550								
551	C2020 STAIR FINISHES							
552								
553	090005 RESILIENT FLOORS							
554	Rubber tile at stairs - intermediate and second floor landings	835	sf	14.00	11,690			
555	Rubber tile at stairs -first floor landings	1,070	sf	14.00	14,980			
556	Rubber tile at stairs - treads & risers	480	lfr	22.00	10,560			
557								
558	096560 ATHLETIC FLOORING							
559	Stage flooring to platform steps	53	lfr	44.00	2,332			
560								
561	096800 TILE CARPETING							
562	Carpet tile	90	lfr	14.00	1,260			
563								
564	090007 PAINTING							
565	Paint to stairs	5	flt	1,500.00	7,500			
566	SUBTOTAL					48,322		
567								
568	TOTAL - STAIRCASES							\$292,422

C30 INTERIOR FINISHES

C3010 WALL FINISHES

574							
575	064100 INTERIOR ARCHITECTURAL WOODWORK						
576	WD-2; wood slats at corridor; Sectis wood fins	830	sf	50.00	41,500		
577	Finish to proscenium - allowance	1	ls	15,000.00	15,000		
578	1/2" thick wood chair rail above linoleum wall covering	515	lf	35.00	18,025		
579	Hardwood trim at perimeter of acoustic panel feature walls	110	lf	35.00	3,850		
580	Maple plywood veneer panels with edge-band to match casework above wall cubbies adjacent to the classroom slider doors	624	sf	65.00	not shown		
581							
582	090002 TILE						
583	Kitchen tile; ceramic	1,161	sf	28.00	32,508		
584	Cafeteria tile at east wall	347	sf	28.00	9,716		
585	Corridor tile including service corridor and gallery stair	2,120	sf	24.00	50,880		
586	Janitors closet tile at sink area	99	sf	28.00	2,772		
587	Tile backsplash at staff lunch/workrooms	135	sf	32.00	4,320		
588	Single bathroom ceramic wall tile (full height in select rooms per finish schedule)	3,097	sf	28.00	86,716		
589	Gang bathroom ceramic wall tile	4,403	sf	28.00	123,284		
590							
591	090005 RESILIENT FLOORS						
592	Linoleum wall panel with metal trim on bottom edge and outside corners ; V26/AQ1.60	1,725	sf	7.50	12,938		
593							
594	098400 SOUND ABSORBING PANELS						
595	Acoustic wall panel stretch fabric system throughout; 1" thick panels (includes 5,045 SF per finish schedule)	5,229	sf	30.00	156,870		
596	Acoustic wall panel stretch fabric system throughout; 2" thick panels	224	sf	40.00	8,960		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW CONSTRUCTION							
597	Acoustic wall panel feature wall at lobby/living room	620	sf	30.00	18,600		
598	Diffuser wall panel at platform; DWP-1	160	sf	40.00	6,400		
599							
600	090007 PAINTING						
601	Paint to GWB	208,096	sf	0.75	156,072		
602	Paint to CMU	58,337	sf	1.25	72,921		
603	SUBTOTAL					821,332	
604							
605	C3020 FLOOR FINISHES						
606							
607	033000 CONCRETE						
608	Sealed concrete	5,860	sf	2.50	14,650		
609							
610	070001 WATERPROOFING, DAMPPROOFING AND CAULKING						
611	Waterproofing membrane to toilet rooms at elevated slabs; Note 18/A1.71	1,205	sf	8.00	9,640		
612							
613	090002 TILE						
614	Quarry tile flooring at kitchen	1,680	sf	26.00	43,680		
615	Quarry tile base	275	lf	18.00	4,950		
616	Ceramic tile at bathrooms	2,615	sf	22.00	57,530		
617	Ceramic tile base	845	lf	16.00	13,520		
618							
619	090005 RESILIENT FLOORS						
620	Marmoleum; Forbo	42,739	sf	6.00	256,434		
621	Flocked tile flooring, Flotex	27,410	sf	5.75	157,608		
622	Premium for patterned flooring in multiple colors at student-occupied and assembly spaces; 3 colors - allowance	16,610	sf	1.00	16,610		
623	Raised rubber flooring at ramp	315	sf	14.00	4,410		
624	Rubber athletic flooring; 6mm	1,705	sf	15.00	25,575		
625	Rubber base	18,618	lf	4.00	74,472		
626							
627	096800 TILE CARPETING						
628	Carpet tile	7,295	sf	5.33	38,882		
629	Area rugs		sf		F,F & E		
630							
631	096560 ATHLETIC FLOORING						
632	Wood athletic flooring at gym (Robbins or equal)	11,340	sf	23.00	260,820		
633	Stage flooring	945	sf	22.00	20,790		
634	Ventilating cove base	422	lf	8.00	3,376		
635	SUBTOTAL					1,002,947	
636							
637	C3030 CEILING FINISHES						
638							
639	090003 ACOUSTICAL TILE						
640	ACP-1a; 2'x2' Armstrong Ultima High NRC	35,330	sf	9.00	317,970		
641	ACP-2a; 2'x2' Armstrong Optima	16,753	sf	13.00	217,789		
642	ACP-3a; 2'x2' Armstrong Canyon	5,310	sf	4.75	25,223		
643	ACP-4a; 2'x2' Armstrong Kitchen zone	1,020	sf	5.00	5,100		
644	ACP-5a; 2'x2' Armstrong Ceramaguard fine fissured	2,970	sf	8.25	24,503		
645	ACP-7a; 2'x2' Armstrong Calla	3,765	sf	11.50	43,298		
646	WD-1; Acoustic wood baffles	890	sf	30.00	26,700		
647	WD-2; Sectis	355	sf	50.00	17,750		
648	Axion/perimeter trim allowance	1	ls	5,000.00	5,000		
649	4x4 Absorptive panels at music room; 2" RPG absorber panel per RCP legend quantities sheet A2.12	1,938	sf	31.80	61,628		
650	ACP-9; Barrel diffusers at music room	676	sf	51.00	34,476		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW CONSTRUCTION								
651	5x5 Convex curved panels; Kinetics ovation	125	sf	39.00	4,875			
652								
653	090007 PAINTING							
654	Paint GWB	16,458	sf	0.90	14,812			
655	Paint exposed structure	4,580	sf	1.50	6,870			
656	Paint exposed structure at gym	11,340	sf	2.00	22,680			
657								
658	092900 GYPSUM BOARD ASSEMBLIES							
659	GWB ceilings and horizontal soffits	9,158	sf	13.00	119,054			
660	Vertical soffits including at skylight locations	7,300	sf	20.00	146,000			
661	SUBTOTAL					1,093,728		
662								
663	TOTAL - INTERIOR FINISHES							\$2,918,007
664								
665								
666	D10 CONVEYING SYSTEMS							
667								
668	D1010 ELEVATOR							
669								
670	055000 MISCELLANEOUS METALS							
671	Pit ladder and sump pit cover	1	ea	3,000.00	3,000			
672	Sill angle	8	lf	25.00	200			
673								
674	142424 ELEVATOR							
675	Hydraulic passenger elevator; 2 stop	1	ea	155,000.00	155,000			
676	SUBTOTAL					158,200		
677								
678	TOTAL - CONVEYING SYSTEMS							\$158,200
679								
680	D13 SPECIAL CONSTRUCTION							
681								
682	D1313 SPECIAL CONSTRUCTION							
683								
684	332313 GEOTHERMAL WELLS							
685	Geothermal wells, 600' deep double U bend; including piping - non proprietary	80	ea	30,000.00	2,400,000			
686								
687	SUBTOTAL					2,400,000		
688								
689	TOTAL - SPECIAL CONSTRUCTION							\$2,400,000
690								
691	D20 PLUMBING							
692								
693	D20 PLUMBING, GENERALLY							
694	<u>Plumbing Equipment</u>							
695	DHW 1 & 2: 36kw electric hot water heater w/ 119 GAL Tank	2	ea	19,000.00	38,000			
696	XT-01&2: Expansion tank	2	ea	1,000.00	2,000			
697	Mixing valve, master	1	ea	6,800.00	6,800			
698	RCP-01: Hot water recirculation pump	1	ea	1,200.00	1,200			
699	Water meter assembly	1	ea	3,500.00	3,500			
700	Connection to gas meter (generator)	1	ea	1,400.00	1,400			
701	Reduced pressure backflow preventer, 4"	1	ea	9,000.00	9,000			
702	Reduced pressure backflow preventer, 1-1/2"	1	ea	850.00	850			
703	Reduced pressure backflow preventer, 3/4"	8	ea	500.00	4,000			
704	GI-01: Grease interceptor, 50 GPM	1	ea	3,800.00	3,800			
705	Exterior grease interceptor	1	ea		See civil			
706	SP-1: Elevator pit sump pump	1	ea	5,800.00	5,800			



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW CONSTRUCTION							
707	OI-1: Elev sump pump oil interceptor	1	ea	1,500.00	1,500		
708	SI-01: Inline interceptors at art sinks	4	ea	750.00	3,000		
709	Roof drain	27	ea	1,200.00	32,400		
710	Overflow roof drain	25	ea	1,200.00	30,000		
711	FD-01: floor drain	8	ea	800.00	6,400		
712	FD-02: floor sink	9	ea	1,050.00	9,450		
713	Trap primer	17	ea	775.00	13,175		
714	Hose bibb	9	ea	375.00	3,375		
715	Freezeproof hose bibb	7	ea	450.00	3,150		
716	Freezeproof roof hydrant	4	ea	450.00	1,800		
717	Rough-in & connection to kitchen equipment	1	ls	45,000.00	45,000		
718	<u>Plumbing Fixtures & Specialties</u>						
719	P-01: Water Closet	22	ea	1,550.00	34,100		
720	P-01 A\B: Water Closet ADA	30	ea	1,550.00	46,500		
721	P-02A: Lavatory, Wall Hung	39	ea	1,450.00	56,550		
722	P-03&03A: Urinal	13	ea	1,600.00	20,800		
723	P-04: Classroom Sink	28	ea	1,450.00	40,600		
724	P-04A: Classroom Sink ADA	26	ea	1,150.00	29,900		
725	P-05: Hand sink , Wall Hung	30	ea	1,450.00	43,500		
726	P-06: Drinking Fountain/Bottle filler ADA	9	ea	2,100.00	18,900		
727	P-07: Service Sink	5	ea	1,225.00	6,125		
728	P-07A: Utility Sink	2	ea	1,450.00	2,900		
729	P-08/08A: Art Sink	4	ea	1,600.00	6,400		
730	P-09: Emergency Eyewash	1	ea	800.00	800		
731	P-10: Ice Maker Connection	3	ea	350.00	1,050		
732	P-11: Shower, ADA	1	ea	4,200.00	4,200		
733	P-12: Laundry Connection	3	ea	600.00	1,800		
734	P-13: Dishwasher Connection	1	ea	450.00	450		
735	<u>Domestic Water Type L Copper Pipe</u>						
736	Domestic water pipe with fittings & hangers						
737	1/2"	842	lf	23.85	20,082		
738	3/4"	3,688	lf	25.45	93,860		
739	1"	1,227	lf	29.15	35,767		
740	1-1/4"	475	lf	30.75	14,606		
741	1-1/2"	320	lf	31.80	10,176		
742	2"	481	lf	37.10	17,845		
743	2-1/2"	187	lf	50.90	9,518		
744	3"	540	lf	56.20	30,348		
745	4"	345	lf	79.50	27,428		
746	6"	273	lf	154.00	42,042		
747	Fixture Connections	209	lf	350.00	73,150		
748	Domestic water pipe insulation	8,378	lf	10.00	83,780		
749	<u>Sanitary Waste And Vent Pipe</u>						
750	UG Sanitary waste pipe						
751	2"	414	lf	37.10	15,359		
752	3"	37	lf	45.60	1,687		
753	4"	2,061	lf	55.65	114,695		
754	5"	330	lf	76.35	25,196		
755	6"	49	lf	79.50	3,896		
756	FCO	18	ea	800.00	14,400		
757	AG Sanitary W&V pipe with fittings & hangers						
758	1-1/2"	1,045	lf	39.75	41,539		
759	2"	994	lf	42.40	42,146		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

760	3"	428	lf	47.70	20,416			
761	4"	1,957	lf	58.30	114,093			
762	Fixture Connections	209	lf	300.00	62,700			
763	<u>Storm Drainage, Hubless Cast Iron Pipe</u>							
764	UG Storm water pipe							
765	4"	174	lf	55.65	9,683			
766	6"	169	lf	79.50	13,436			
767	8"	334	lf	116.60	38,944			
768	10"	318	lf	132.50	42,135			
769	12"	173	lf	159.00	27,507			
770	15"	22	lf	212.00	4,664			
771	FCO	16	ea	800.00	12,800			
772	AG Storm water pipe (separate primary and secondary)							
773	4"	387	lf	58.30	22,562			
774	5"	686	lf	79.50	54,537			
775	6"	1,206	lf	84.80	102,269			
776	8"	518	lf	121.90	63,144			
777	Pipe insulation on horizontal runs	2,230	lf	18.00	40,140			
778	<u>Gas And Fuel Distribution Pipe</u>							
779	Gas And Fuel Distribution Pipe (emergency generator)	265	lf	55.00	14,575			
780	Equipment gas valves, connections, & access	1	ea	1,100.00	1,100			
781	<u>Miscellaneous</u>							
782	System testing and flushing	1	ls	20,000.00	20,000			
783	Coring, cutting, sleeves & fire stopping	1	ls	12,900.00	12,900			
784	Seismic Restraints and Structural Steel Comp.	1	ls	6,500.00	6,500			
785	Hydraulic lifts/rigging	1	ls	14,800.00	14,800			
786	Shop drawings / BIM / ENG Support / As-Builts	1	ls	24,000.00	24,000			
787	Commissioning Support	1	ls	2,400.00	2,400			
788	Fees & permits				waived			
789	SUBTOTAL					1,983,000		
791	TOTAL - PLUMBING							\$1,983,000

D30 HVAC

796	D30 HVAC, GENERALLY						
797	Geothermal Well Field						
798	Well-field with (80) boreholes 600' deep					w/ Special Construction	
799	Side stream filtration, air elimination, purge pump, valving, etc	1	ea	60,000.00	60,000		
800	Glycol system GF-3	1	ea	12,500.00	12,500		
801	Glycol fill	1	ls	20,000.00	20,000		
802	Chemical treatment system	1	ea	18,000.00	18,000		
803	<u>Heating & cooling equipment</u>						
804	Heat pump chillers HPC-1 ,2,3,4,5,6, 78 ton/ea	425	tons	1,425.00	605,625		
805	Expansion tank ET-1,2,3	3	ea	4,500.00	13,500		
806	Buffer tank BT-1	1	ea	7,000.00	7,000		
807	Air separator AS-1,2,3,4,5	5	ea	1,850.00	9,250		
808	Heat exchanger HX-1, 2	2	ea	30,000.00	60,000		
809	Glycol system GF-1,2	2	ea	15,000.00	30,000		
810	Glycol	1	ls	10,000.00	10,000		
811	Cabinet unit heater, HW	14	ea	1,500.00	21,000		
812	Unit heater, HW	4	ea	900.00	3,600		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW CONSTRUCTION							
813	Radiant panel, ceiling	4,288	lf	140.00	600,320		
814	Wall radiation unit	172	lf	105.00	18,060		
815	<u>Pumps</u>						
816	Heating hot water pump with VFD P-1,2, 530 gpm	2	ea	24,000.00	48,000		
817	Chilled water pump with VFD, P-3,4, 675 gpm	2	ea	30,450.00	60,900		
818	Geothermal well field pump with VFD P-5,6, 1200 gpm	2	ea	54,250.00	108,500		
819	Compensated water pump with VFD, P-7,8, 200 gpm	2	ea	12,500.00	25,000		
820	Condensate pump CP-1	10	ea	300.00	3,000		
821	<u>Air distribution</u>						
822	Air Handling Unit						
823	RTU-1 with HW/CHW coil, ERW (100% OA)	7,055	cfm	15.50	109,353		
824	RTU-2 with HW/CHW coil, ERW (100% OA)	8,025	cfm	15.50	124,388		
825	RTU-3 with HW/CHW coil, ERW (100% OA)	7,030	cfm	15.50	108,965		
826	RTU-4 with HW/CHW coil, ERW (100% OA)	6,455	cfm	15.50	100,053		
827	RTU-5 with HW/CHW coil, ERW (100% OA)	10,435	cfm	15.50	161,743		
828	RTU-6 with HW/CHW coil, ERW (100% OA)	8,660	cfm	15.50	134,230		
829	RTU-7 with HW/CHW coil, ERW (100% OA)	18,935	cfm	15.50	293,493		
830	RTU-8 with HW/CHW coil, ERW (100% OA)	7,250	cfm	15.50	112,375		
831	RTU-9 with HW/CHW coil, ERW (100% OA)	7,745	cfm	15.50	120,048		
832	RTU-10 with HW/CHW coil, ERW (100% OA)	18,630	cfm	15.50	288,765		
833	MAU-1 with HW/CHW coil	1,500	cfm	13.50	20,250		
834	HV-1 with HW/CHW coil	3,000	cfm	13.50	40,500		
835	Ductless split AC / ACCU unit, 1 ton	15	ea	6,500.00	97,500		
836	<u>Exhaust fan</u>						
837	Exhaust fans	14	ea	3,500.00	49,000		
838	Kitchen exhaust fan	1	ea	13,000.00	13,000		
839	Sheet metal & Accessories						
840	Sheet metal	95,000	lbs	13.50	1,282,500		
841	Kitchen exhaust black steel ductwork	3,500	lbs	20.00	70,000		
842	Dishwasher aluminum ductwork	1,000	lbs	18.00	18,000		
843	Duct insulation	60,000	sf	5.00	300,000		
844	Registers, grilles & diffusers	228	ea	140.00	31,920		
845	Displacement diffuser	165	ea	650.00	107,250		
846	VAV box	95	ea	1,200.00	114,000		
847	Sound attenuators	20	ea	2,500.00	50,000		
848	Miscellaneous Sheetmetal accessories, dampers...	114,004	sf	1.00	114,004		
849	Hydronic Piping						
850	Geothermal Pipe						
851	Geothermal HDPE piping with valves/accs	150	lf	200.00	30,000		
852	Heating Hot Water Piping						
853	3/4"	2,560	lf	27.00	69,120		
854	1"	1,310	lf	33.00	43,230		
855	1-1/4"	496	lf	40.00	19,840		
856	1-1/2"	1,091	lf	44.00	48,004		
857	2"	750	lf	47.00	35,250		
858	2-1/2"	825	lf	50.00	41,250		
859	3"	544	lf	68.00	36,992		
860	4"	468	lf	84.00	39,312		
861	5"	93	lf	110.00	10,230		
862	6"	237	lf	122.00	28,914		
863	8"	835	lf	150.00	125,250		
864	Chilled Water Pipe						
865	3/4"	311	lf	27.00	8,397		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW CONSTRUCTION								
866	1"	1,120	lf	33.00	36,960			
867	1-1/4"	374	lf	40.00	14,960			
868	1-1/2"	690	lf	44.00	30,360			
869	2"	877	lf	47.00	41,219			
870	2-1/2"	1,083	lf	50.00	54,150			
871	3"	674	lf	68.00	45,832			
872	4"	787	lf	84.00	66,108			
873	5"	760	lf	110.00	83,600			
874	Dual Temperature Pipe Runouts	6,748	lf	33.00	222,684			
875	Valves & accessories	1	ls	165,000.00	165,000			
876	<u>Condensate Drain Piping</u>							
877	Condensate piping with fittings & hangers	497	lf	38.00	18,886			
878	<u>Refrigerant Piping</u>							
879	Refrigerant piping	1,095	lf	32.00	35,040			
880	<u>Piping Insulation</u>							
881	Hydronic piping	22,504	lf	12.00	270,048			
882	Refrigerant piping	1,095	lf	8.00	8,760			
883	Condensate drain piping	497	lf	8.00	3,976			
884	<u>Controls (DDC)</u>							
885	Automatic temperature controls	114,004	sf	8.00	912,032			
886	<u>Balancing</u>							
887	System testing & balancing	114,004	sf	1.25	142,505			
888	<u>Miscellaneous</u>							
889	System testing and flushing	1	ls	25,000.00	25,000			
890	Coring, cutting, sleeves & fire stopping	1	ls	30,000.00	30,000			
891	Seismic Restraints and Structural Steel Comp.	1	ls	25,000.00	25,000			
892	Hydraulic lifts/rigging	1	ls	60,000.00	60,000			
893	Shop drawings / BIM / ENG Support / As-Builts	1	ls	195,000.00	195,000			
894	Commissioning Support	1	ls	40,000.00	40,000			
895	SUBTOTAL					8,658,501		
896								
897	TOTAL - HVAC							\$8,658,501
898								
899								
900	D40 FIRE PROTECTION							
901								
902	D40 FIRE PROTECTION, GENERALLY							
903	<u>Fire Protection System</u>							
904	Double check valve assembly, 6"	1	ea	12,850.00	12,850			
905	Preaction system for Network/Telecomm	1	ls	9,500.00	9,500			
906	Wet alarm valve assembly	1	ea	5,000.00	5,000			
907	Riser check valve assembly	4	ea	3,750.00	15,000			
908	Fire department connection	2	ea	1,200.00	2,400			
909	Electric bell	1	ea	500.00	500			
910	Zone control valve assembly	5	ea	2,500.00	12,500			
911	Fire department hose valve	5	ea	800.00	4,000			
912	Fire department hose valve with cabinet	4	ea	1,200.00	4,800			
913	Sprinkler head, pendant	825	ea	100.00	82,500			
914	Sprinkler head, upright with guard	142	ea	140.00	19,880			
915	Distribution piping with fittings & hangers	10,195	lf	29.50	300,753			
916	Zone/main sprinkler piping with fittings & hangers	1,760	lf	50.00	88,000			
917	Standpipe/main sprinkler piping with fittings & hangers	1,155	lf	80.00	92,400			
918	Additional standpipe	1	ls	2,500.00	2,500			
919	<u>Miscellaneous</u>							



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

920	Kitchen hood extinguishing system						by others	
921	System testing and flushing	1	ls	8,000.00	8,000			
922	Coring, cutting, sleeves & fire stopping	1	ls	4,600.00	4,600			
923	Seismic Restraints and Structural Steel Comp.	1	ls	3,200.00	3,200			
924	Hydraulic lifts/rigging	1	ls	4,300.00	4,300			
925	Shop drawings / BIM / ENG Support / As-Builts	1	ls	12,000.00	12,000			
926	Commissioning Support	1	ls	1,600.00	1,600			
927	Fees & permits						waived	
928	SUBTOTAL					686,283		
TOTAL - FIRE PROTECTION							\$686,283	

D50 ELECTRICAL

**D5010 SERVICE & DISTRIBUTION
Gear & Distribution**

937	<u>Normal Power</u>						
938	Submetering	1	ls	30,000.00	30,000		
939	3000AT 2500AF 480/277V main switchboard	1	ls	80,000.00	80,000		
940	800A 480/277V distribution panelboard	2	ea	16,000.00	32,000		
941	100A 480/277V panelboard	2	ea	1,600.00	3,200		
942	112.5kVA dry-type transformer K-13	1	ea	15,650.00	15,650		
943	45kVA dry-type transformer K-13	11	ea	6,650.00	73,150		
944	400A 208/120V panelboard double tub	1	ea	12,000.00	12,000		
945	225A 208/120V panelboard double tub	6	ea	5,000.00	30,000		
946	225A 208/120V panelboard	8	ea	2,500.00	20,000		
947	100A 208/120V panelboard	4	ea	1,600.00	6,400		
948	100A disconnect switch	2	ea	900.00	1,800		
949	Meter socket	1	ea	300.00	300		
950	SPD	19	ea	350.00	6,650		
951	<u>Normal power feeders</u>						
952	800A feed	900	lf	255.00	229,500		
953	250A feed	90	lf	93.00	8,370		
954	225A feed	1,020	lf	78.00	79,560		
955	200A feed	500	lf	66.00	33,000		
956	150A feed	120	lf	49.00	5,880		
957	100A feed	1,570	lf	33.50	52,595		
958	60A feed	150	lf	22.50	3,375		
959	<u>Emergency power</u>						
960	500kW natural gas generator 480volt with Level 3 50dba custom cover	1	ea	360,000.00	360,000		
961	200KW load bank	1	ea	25,000.00	25,000		
962	Allow for fuel for testing	1	ls	20,000.00	NR		
963	Quick connect manual transfer switch, WP	1	ea	15,000.00	15,000		
964	600A 480/277V ATS	1	ea	12,220.00	12,220		
965	150A 480/277V ATS	1	ea	4,625.00	4,625		
966	600A 480/277V distribution panelboard	1	ea	12,000.00	12,000		
967	225A 480/277V panelboard	5	ea	2,500.00	12,500		
968	45kVA dry-type transformer K-13	1	ea	6,650.00	6,650		
969	400A 208/120V panelboard	1	ea	12,000.00	12,000		
970	150A 208/120V panelboard	1	ea	2,150.00	2,150		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

971	100A 208/120V panelboard	3	ea	1,600.00	4,800		
972	100A disconnect switch	1	ea	900.00	900		
973	SPD	9	ea	350.00	3,150		
974	Emergency power feeders						
975	600A feed	60	lf	255.00	15,300		
976	400A feed	30	lf	178.00	5,340		
977	225A feed	780	lf	78.00	60,840		
978	200A feed	30	lf	66.00	1,980		
979	150A feed	430	lf	49.00	21,070		
980	100A feed	550	lf	33.50	18,425		
981	60A feed	780	lf	22.50	17,550		
982	Allow for 225A MI cable (riser not coordinated with plans)	350	lf	125.00	43,750		
983	<u>UPS System</u>						
984	24KW centralized UPS System, (not depicted on plans or specs)					NIC	
985	<u>Photovoltaic system</u>						
986	PV equipment & installation					NIC	
987	Future PV system rough in	1	ls	5,000.00	5,000		
988	<u>Equipment Wiring</u>						
989	Elevator cab feed & connection	1	ea	1,500.00	1,500		
990	Elevator feed & connection	1	ea	3,500.00	3,500		
991	ACCU feed & connection, exterior	15	ea	2,500.00	37,500		
992	ACCU feed & connection, interior	15	ea	850.00	12,750		
993	EF feed & connection	14	ea	1,000.00	14,000		
994	HPC feed & connection (Chiller)	6	ls	10,500.00	63,000		
995	HV feed & connection	1	ea	2,500.00	2,500		
996	MAU feed & connection	1	ea	3,500.00	3,500		
997	RTU feed & connection	10	ea	4,500.00	45,000		
998	Pump feed & connection	18	ea	1,500.00	27,000		
999	Sump pump feed & connection	2	ea	1,500.00	3,000		
1000	EWH feed & connection	2	ea	1,500.00	3,000		
1001	CUH/UH feed & connection	18	ea	900.00	16,200		
1002	VAV feed & connection	95	ea	350.00	33,250		
1003	Radiant panels feed and connection	1	ls	1,500.00	1,500		
1004	DDC system power	1	ls	1,000.00	1,000		
1005	VFD feed & connection only (per spec, furnished and installed)	8	ea	850.00	6,800		
1006	Motorized shades feed and connection	110	ea	350.00	38,500		
1007	Motorized doors feed and connection	4	ea	1,200.00	4,800		
1008	Kiln feed & connection	1	ls	1,500.00	1,500		
1009	<u>Kitchen Equipment Wiring</u>						
1010	Large equipment feed and connection	2	ea	1,200.00	2,400		
1011	Small equipment feed and connection	24	ea	450.00	10,800		
1012	KEF feed & connection	1	ea	1,500.00	1,500		
1013	<u>Gymnasium</u>						
1014	Scoreboard materials & installation (F&I per spec)	2	ea	13,000.00	26,000		
1015	Power & control wiring	2	ea	1,200.00	2,400		
1016	Motorized back stop feed, connection & special purpose receptacle	6	ea	1,200.00	7,200		
1017	Motorized curtain feed, connection & NFSS, allow	2	ea	1,200.00	2,400		



CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
1018	Motorized bleacher feed, connection & NFSS	2	ea	1,200.00	2,400		
1019	SUBTOTAL					1,758,580	
1020							
1021	D5020 LIGHTING & POWER						
1022	<u>Lighting Fixtures</u>						
1023	Exit sign	50	ea	180.00	9,000		
1024	Type EL	2	ea	250.00	500		
1025	Type LP4	19	ea	320.00	6,080		
1026	Type LP4B	6	ea	320.00	1,920		
1027	Type LP8	215	ea	600.00	129,000		
1028	Type LPG	48	ea	450.00	21,600		
1029	Type LPS	154	lf	100.00	15,400		
1030	Type LK22	22	ea	450.00	9,900		
1031	Type LR22	56	ea	250.00	14,000		
1032	Type LR24	4	ea	270.00	1,080		
1033	LR4	34	ea	280.00	9,520		
1034	LRS	1,092	lf	90.00	98,280		
1035	LP10	2	ea	900.00	1,800		
1036	LP16	3	ea	1,440.00	4,320		
1037	LR10	4	ea	1,440.00	5,760		
1038	LR14	15	ea	250.00	3,750		
1039	LWD	244	lf	120.00	29,280		
1040	LWD2	24	lf	125.00	3,000		
1041	Type LS4	21	ea	180.00	3,780		
1042	Type LS4B	10	ea	180.00	1,800		
1043	Type LS8	32	ea	280.00	8,960		
1044	Type LWS	85	lf	95.00	8,075		
1045	Type LWSA	100	lf	105.00	10,500		
1046	Type PC1	5	ea	650.00	3,250		
1047	Type PC2	15	ea	650.00	9,750		
1048	Type PC3	2	ea	650.00	1,300		
1049	Type PC4	5	ea	650.00	3,250		
1050	Type PC5	3	ea	650.00	1,950		
1051	Type PD1	5	ea	660.00	3,300		
1052	Type PD2	5	ea	900.00	4,500		
1053	Type PD3	5	ea	1,000.00	5,000		
1054	Type PD5	6	ea	2,000.00	12,000		
1055	Type RC1	201	ea	350.00	70,350		
1056	Type RC2	192	ea	350.00	67,200		
1057	Type RC3	35	ea	350.00	12,250		
1058	Type RC4	51	ea	350.00	17,850		
1059	Type RCW	9	ea	350.00	3,150		
1060	Type RD4	2	ea	250.00	500		
1061	Type RPS	4	ea	200.00	800		
1062	Type SD1	49	ea	650.00	31,850		
1063	Type SL4	16	ea	450.00	7,200		
1064	Type SL5, allow	17	ea	450.00	7,650		
1065	Type SL7	32	lf	125.00	4,000		
1066	Type TR1 (track)	105	lf	50.00	5,250		
1067	Type TH1, TH2, TH3 (track head)	29	ea	250.00	7,250		
1068	Light at RTU, allow	10	ea	150.00	1,500		
1069	Illuminated ceiling panels; Sectis backlit panel (288 SF)	1	ls	59,581.20	59,581		
1070	<u>Lighting controls</u>						



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW CONSTRUCTION							
1071	Networked lighting control system	113,141	sf	0.85	96,170		
1072	Master control station	1	ea	550.00	550		
1073	Local touch screen	2	ea	250.00	500		
1074	Occupancy/Daylight sensor	264	ea	180.00	47,520		
1075	Single pole LV switch	128	ea	30.00	3,840		
1076	Single pole switch	16	ea	30.00	480		
1077	Single pole switch WP, allow	12	ea	40.00	480		
1078	<u>Lighting circuitry</u>						
1079	Device plate WP	12	ea	16.00	192		
1080	Device plate	144	ea	4.30	619		
1081	Device box	1,780	ea	25.00	44,500		
1082	3/4" EMT	5,000	lf	7.50	37,500		
1083	#12 THHN	25,000	lf	1.00	25,000		
1084	MC cable	30,000	lf	5.00	150,000		
1085	LV cable	12,000	lf	1.50	18,000		
1086	<u>Branch devices</u>						
1087	Duplex receptacles	148	ea	25.00	3,700		
1088	Duplex receptacles (controlled)	218	ea	25.00	5,450		
1089	Double duplex receptacles	17	ea	50.00	850		
1090	Double duplex receptacles (controlled)	218	ea	50.00	10,900		
1091	GFI duplex receptacles	149	ea	32.00	4,768		
1092	Special 30A	3	ea	75.00	225		
1093	Connection to FA/BDA panel	9	ea	90.00	810		
1094	Floor box/poke thru	9	ea	750.00	6,750		
1095	<u>Branch circuitry</u>						
1096	Device plate WP	15	ea	16.00	240		
1097	Device plate	750	ea	4.30	3,225		
1098	Device box	775	ea	25.00	19,375		
1099	3/4" EMT	5,000	lf	7.50	37,500		
1100	#12 THHN	25,000	lf	1.00	25,000		
1101	MC cable	15,000	lf	5.00	75,000		
1102	SUBTOTAL					1,357,130	
1103							
1104	D5030 COMMUNICATION & SECURITY SYSTEMS						
1105	<u>Telephone/Data/CATV</u>						
1106	Telecommunications devices and cabling						
1107	MDF closet fit out	1	ea	12,000.00	12,000		
1108	IDF closet fit out	3	ea	8,500.00	25,500		
1109	1 port data	44	ea	18.00	792		
1110	2 port data	141	ea	36.00	5,076		
1111	3 port data	55	ea	54.00	2,970		
1112	AV device (2-port)	120	ea	36.00	4,320		
1113	WAP	81	ea	750.00	60,750		
1114	Backbone cable (run from each IDF to MDF)	1,400	lf	15.00	21,000		
1115	Cat cable	135,000	lf	1.20	162,000		
1116	Rough-in						
1117	MDF closet rough-in	1	ea	2,500.00	2,500		
1118	IDF closet rough-in	3	ea	1,500.00	4,500		
1119	Closet grounding	4	ea	350.00	1,400		
1120	Backboard	4	ea	350.00	1,400		
1121	Rough-in allow: sleeves, cable tray, 4" EMT	1	ls	25,000.00	25,000		
1122	Device box with 1" conduit stub	300	ea	95.00	28,500		
1123	2 gang device box with 1-1/4" conduit stub	120	ea	110.00	13,200		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW CONSTRUCTION							
1124	Network server equipment provide by owner per plan T2.03	1	ls	270,000.00	270,000		
1125	<u>Fire Alarm</u>						
1126	Fire alarm control panel	1	ls	18,000.00	18,000		
1127	Mass notification console	1	ea	3,500.00	3,500		
1128	Fire alarm terminal cabinet	4	ea	1,200.00	4,800		
1129	Remote annunciator	1	ea	1,600.00	1,600		
1130	Graphic map	1	ea	850.00	850		
1131	Plan cabinet	1	ea	650.00	650		
1132	Radio Master Box with antenna, arrester and grounding kit	1	ls	8,500.00	8,500		
1133	Knox box	2	ea	330.00	660		
1134	Beacon/bell	2	ea	250.00	500		
1135	Drill switch	1	ea	250.00	250		
1136	Initiating device	113	ea	135.00	15,255		
1137	Smoke detector (Classroom)	55	ea	135.00	7,425		
1138	CO detector	33	ea	105.00	3,465		
1139	Duct detector with remote test switch, allow	20	ea	450.00	9,000		
1140	Audio visual device	52	ea	115.00	5,980		
1141	Visual device	47	ea	105.00	4,935		
1142	Speaker/visual Mass Notification device	81	ea	140.00	11,340		
1143	Amber/FA device	84	ea	145.00	12,180		
1144	Magnetic door holder	6	ea	250.00	1,500		
1145	S type device ??	67	ea	200.00	13,400		
1146	FP equipment connection	18	ea	220.00	3,960		
1147	Control/monitor module, allow	60	ea	220.00	13,200		
1148	Elevator recall connection	2	ea	250.00	500		
1149	Kitchen suppression system connection	1	ea	250.00	250		
1150	Interface to Security, PA, AV systems, allow	1	ls	1,500.00	1,500		
1151	MNS mass notification message board	5	ea	1,000.00	5,000		
1152	Wire guard	6	ea	50.00	300		
1153	Testing and programming	1	ls	5,000.00	5,000		
1154	Rough-in:						
1155	Device box	650	ea	25.00	16,250		
1156	3/4" EMT	3,000	lf	7.00	21,000		
1157	FA cable	5,000	lf	1.25	6,250		
1158	FA MC cable	17,000	lf	5.50	93,500		
1159	<u>BAS System</u>						
1160	BAS System	113,141	sf	0.75	84,856		
1161	<u>Two-Way Communication System</u>						
1162	Two-way communication system, allow	1	ls	10,000.00	10,000		
1163	<u>Paging/Public Address</u>						
1164	Head-end	1	ls	12,000.00	12,000		
1165	Speaker, ceiling mount	143	ea	125.00	17,875		
1166	Speaker with volume control, ceiling mount	78	ea	150.00	11,700		
1167	Call box	31	ea	120.00	3,720		
1168	Cabling	13,500	lf	1.25	16,875		
1169	Rough-in						
1170	Speaker back box	220	ea	65.00	14,300		
1171	Device box with conduit stub	31	ea	120.00	3,720		
1172	<u>Master Clock</u>						
1173	Head-end	1	ls	8,000.00	8,000		
1174	Clock, 12" wireless communication	75	ea	120.00	9,000		
1175	MC cable for clock power	2,250	lf	4.25	9,563		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

1176	<u>Speech Amplification</u>						
1177	Speech amplification equipment	53	ea	2,600.00	137,800		
1178	Rough-in, allow	53	ea	450.00	23,850		
1179	<u>Cafetorium</u>						
1180	Audio/visual equipment, allow	1	ls	75,000.00	75,000		
1181	Audio/visual rough-in & power, allow	1	ls	25,000.00	25,000		
1182	Stage dimming system	1	ls	75,000.00	75,000		
1183	Stage fixture package	1	ls		Included above		
1184	Rough-in, power & installation, allow	1	ls	30,000.00	30,000		
1185	<u>Audio Visual Systems</u>						
1186	AV equipment					By Owner	
1187	Rough-In conduit and backboxes only, allow	113,141	sf	0.25	28,285		
1188	Gymnasium sound system, allow	1	ls	30,000.00	30,000		
1189	Rough-in, allow	1	ls	7,500.00	7,500		
1190	Student Dining sound system, allow	1	ls	25,000.00	25,000		
1191	Rough-in, allow	1	ls	3,500.00	3,500		
1192	AV Pro: device box w/(2) 1.25" conduits stubbed	55	ea	280.00	15,400		
1193	Flat panel display for digital messaging system	5	ea	5,000.00	25,000		
1194	Motorized projection screen & control station, allow	2	ea	1,200.00	2,400		
1195	<u>Video Management System - CCTV System</u>						
1196	Head end	1	ls	25,000.00	25,000		
1197	Camera	13	ea	850.00	11,050		
1198	Camera 180/270/260	36	ea	1,200.00	43,200		
1199	Camera WP 180/270	26	ea	1,800.00	46,800		
1200	Cabling	6,500	lf	1.10	7,150		
1201	Rough-in						
1202	Device box with conduit stub to accessible ceiling	66	ea	90.00	5,940		
1203	<u>Access Control- Intrusion Alarm</u>						
1204	Head end	1	ls	25,000.00	25,000		
1205	Interface to FA, PA, AV systems, allow					Included above	
1206	Card reader	27	ea	350.00	9,450		
1207	Door contact	77	ea	150.00	11,550		
1208	Keypad	5	ea	350.00	1,750		
1209	Panic button, allow	3	ea	150.00	450		
1210	Motion detector	49	ea	150.00	7,350		
1211	Wiring connection to device furnished & installed by Door Hardware Contractor: EH, EL, TS - allow	32	ea	90.00	2,880		
1212	Intercom Master, allow	3	ea	1,500.00	4,500		
1213	Intercom station	5	ea	750.00	3,750		
1214	Cabling	13,000	lf	1.10	14,300		
1215	Rough-in						
1216	3/4" conduit to door junction box	59	ea	90.00	5,310		
1217	4" square box with 3/4" conduit stub to door junction box	36	ea	90.00	3,240		
1218	Device box with conduit stub to accessible ceiling	61	ea	90.00	5,490		
1219	SUBTOTAL						1,870,912
1220							
1221	D5040 OTHER ELECTRICAL SYSTEMS						
1222	<u>Common Work Results for Electrical</u>						
1223	Lightning Protection System, UL master label	1	ls	60,000.00	60,000		
1224	Grounding and bonding	1	ls	25,000.00	25,000		
1225	Rigging	1	ls	10,000.00	10,000		
1226	Temp power and lights	1	ls	75,000.00	75,000		
1227	Seismic Restraints	1	ls	10,000.00	10,000		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW CONSTRUCTION							
1228	Coordination/Arc flash study	1	ls	15,000.00	15,000		
1229	Coordination, BIM	1	ls	10,000.00	10,000		
1230	Extra material per spec	1	ls	50,000.00	50,000		
1231	Fees & Permits				See summary		
1232	SUBTOTAL					255,000	
TOTAL - ELECTRICAL							\$5,241,622
E10 EQUIPMENT							
E10 EQUIPMENT, GENERALLY							
1241	112313 TIME CAPSULE						
1242	Time Capsule per specification	1	ea	1,000.00	1,000		
1243	111313 LOADING DOCK						
1244	Loading dock equipment					NR	
1246	111520 PROJECTION SCREENS						
1248	Cafeteria - 12' wide	1	ea	15,000.00	15,000		
1249	Gymnasium - 12' wide	1	ea	15,000.00	15,000		
1250	Extended learning area (ELA) - 16' wide	6	ea	18,000.00	108,000		
1251	114000 FOOD SERVICE EQUIPMENT						
1252	Kitchen equipment per Crabtree McGrath budget, 12/21/21	1	ls	590,520.00	590,520		
1254	114500 APPLIANCES						
1256	Under counter refrigerator	6	ea	1,200.00	7,200		
1257	Refrigerator	5	ea	1,800.00	9,000		
1258	Dishwasher	1	ea	900.00	900		
1259	Microwave ,allow	2	ea	600.00	1,200		
1260	Washer	2	ea	1,200.00	2,400		
1261	Dryer	2	ea	1,200.00	2,400		
1262	Kiln	1	ea	5,000.00	5,000		
1263	116100 THEATRICAL EQUIPMENT						
1264	Stage curtains and rigging	1	ls	50,000.00	50,000		
1266	116600 ATHLETIC EQUIPMENT						
1268	Gym wall pads	564	sf	14.00	7,896		
1269	Adaptive PE wall pads	150	sf	14.00	2,100		
1270	Basketball backstops, glass	6	ea	12,000.00	72,000		
1271	Gymnasium dividing wall, fabric; electrically operated	1	ls	30,000.00	30,000		
1272	Volleyball net and standards	1	ls	5,000.00	5,000		
1273	Digital scoreboards with shot clocks	1	ls	20,000.00	w/ electrical		
1274	Motorized bleachers; 276 seat capacity	1	ls	38,640.00	38,640		
1275	Manual bleachers; 100 seat capacity	1	ls	12,000.00	12,000		
1276	SUBTOTAL					975,256	
TOTAL - EQUIPMENT							\$975,256
E20 FURNISHINGS							
E2010 FIXED FURNISHINGS							
1284	124813 ENTRANCE FLOOR MAT AND FRAMES						



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
1286	Recessed floor grille & mats	700	sf	45.00	31,500		
1287	Walk off mats	350	sf	45.00	15,750		
1288							
1289	123000 CASEWORK						
1290	Education-as-Play installations	1	ls	75,000.00	NIC		
1291	<u>Adaptive PE</u>						
1292	2 tier wall shelving on standards	4	lf	100.00	400		
1293	Wall hung countertop	4	lf	275.00	1,100		
1294	<u>Art Classroom</u>						
1295	2 tier wall shelving on standards	19	lf	100.00	1,900		
1296	Base cabinet with plam countertop	16	lf	435.00	6,960		
1297	Open base cabinet with counters	21	lf	400.00	8,400		
1298	Wall cabinets	8	lf	250.00	2,000		
1299	Wall hung countertop	10	lf	275.00	2,750		
1300	<u>Admin corridor</u>						
1301	Base cabinet with plam countertop	8	lf	435.00	3,480		
1302	<u>Coaches office</u>						
1303	Base cabinet with plam countertop	10	lf	435.00	4,350		
1304	<u>Coaches storage</u>						
1305	TS-36	11	ea	1,875.00	20,625		
1306	<u>ELL</u>						
1307	Base cabinet with plam countertop	10	lf	435.00	4,350		
1308	Open base cabinet with counters	6	lf	400.00	2,400		
1309	<u>Exam</u>						
1310	Base cabinet with plam countertop	10	lf	435.00	4,350		
1311	Wall cabinets	10	lf	250.00	2,500		
1312	<u>Extended learning</u>						
1313	Counter/table; shaped	6	loc	9,000.00	54,000		
1314	Shelving cabinet, 12" x 36" high	72	lf	300.00	21,600		
1315	Student cubbies 36" x 84"	33	ea	1,800.00	59,400		
1316	Student cubbies 36" x 84"	55	ea	1,800.00	99,000		
1317	TSO-3384	2	ea	1,581.25	3,163		
1318	<u>Ext. day storage</u>						
1319	TW-36	3	ea	1,875.00	5,625		
1320	<u>Focus program</u>						
1321	Base cabinet with plam countertop	24	lf	435.00	10,440		
1322	BCo8-36	5	ea	1,125.00	5,625		
1323	TS-30	2	ea	1,562.50	3,125		
1324	<u>General classroom area A</u>	16	rms				
1325	2 tier wall shelving on standards	80	lf	100.00	8,000		
1326	Base cabinet with plam countertop	144	lf	435.00	62,640		
1327	BB02-36	64	ea	960.00	61,440		
1328	BCo12-48	32	ea	1,200.00	38,400		
1329	TS-36	32	ea	1,875.00	60,000		
1330	TSO-3684	16	ea	1,725.00	27,600		
1331	Wall cabinets	144	lf	250.00	36,000		
1332	<u>General classroom area B</u>	4	rms				
1333	2 tier wall shelving on standards	24	lf	100.00	2,400		
1334	Base cabinet with plam countertop	44	lf	435.00	19,140		
1335	BB02-36	20	ea	960.00	19,200		
1336	BCo12-36	8	ea	1,200.00	9,600		
1337	TS-36	4	ea	1,875.00	7,500		
1338	TSO-30	4	ea	1,562.50	6,250		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

1339	<u>Kindergarten classrooms</u>	5	rms				
1340	2 tier wall shelving on standards	25	lf	100.00	2,500		
1341	Base cabinet with plam countertop	60	lf	435.00	26,100		
1342	BB02-36	30	ea	960.00	28,800		
1343	BC012-36	30	ea	1,200.00	36,000		
1344	TS-36	5	ea	1,875.00	9,375		
1345	Wall cabinets	55	lf	250.00	13,750		
1346	<u>Kindergarten 137 - add to main kindergarten line TS-30</u>						
1347	TS-30	1	ea	1,562.50	1,563		
1348	<u>Kindergarten toilets</u>	5	rms				
1349	TS-27	5	ea	1,406.25	7,031		
1350	<u>Learning center</u>						
1351	Base cabinet with plam countertop	6	lf	435.00	2,610		
1352	BB01-36	2	ea	900.00	1,800		
1353	TW-36	2	ea	1,875.00	3,750		
1354	<u>Mail room</u>						
1355	Mail slots	1	ls	7,500.00	7,500		
1356	Wall hung countertop	23	lf	275.00	6,325		
1357	<u>Media center</u>						
1358	BB01-36	36	ea	900.00	32,400		
1359	BB02-26.5-3	3	ea	706.67	2,120		
1360	BB02-36	12	ea	960.00	11,520		
1361	Student cubbies 30"	2	ea	1,500.00	3,000		
1362	TSO-3684	19	ea	1,725.00	32,775		
1363	Wall hung countertop	29	lf	275.00	7,975		
1364	<u>Mothers</u>						
1365	Base cabinet with solid surface countertop	30	lf	475.00	14,250		
1366	TW-36	2	ea	1,875.00	3,750		
1367	<u>Resource room</u>						
1368	Base cabinet with plam countertop	12	lf	435.00	5,220		
1369	Base cabinet with solid surface countertop	6	lf	475.00	2,850		
1370	BB01-36	2	ea	900.00	1,800		
1371	TS-36	1	ea	1,875.00	1,875		
1372	TW-36	1	ea	1,875.00	1,875		
1373	Wall hung countertop	6	lf	275.00	1,650		
1374	<u>Music classrooms</u>						
1375	BB02-36	15	ea	960.00	14,400		
1376	Open base cabinet with counters	24	lf	400.00	9,600		
1377	TS-36	2	ea	1,875.00	3,750		
1378	Wall cabinets	21	lf	250.00	5,250		
1379	<u>Music storage</u>						
1380	Music storage cabinet	14	lf	800.00	11,200		
1381	<u>Nurse</u>						
1382	7 tier wall shelving on standards	5	lf	350.00	1,750		
1383	Base cabinet with solid surface countertop	5	lf	475.00	2,375		
1384	TS-30	7	ea	1,562.50	10,938		
1385	<u>OT</u>						
1386	2 tier wall shelving on standards	13	lf	100.00	1,300		
1387	Base cabinet with plam countertop	8	lf	435.00	3,480		
1388	BB01-36	2	ea	900.00	1,800		
1389	<u>School psychology</u>	2	rms				
1390	2 tier wall shelving on standards	18	lf	100.00	1,800		
1391	Base cabinet with plam countertop	8	lf	435.00	3,480		



60% Construction Document Estimate

GFA

113,141

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

NEW CONSTRUCTION

1392	Open base cabinet with counters	12	lf	400.00	4,800			
1393	TS-30	2	ea	1,562.50	3,125			
1394	<u>Secretary</u>							
1395	Wall hung countertop	10	lf	275.00	2,750			
1396	<u>Small group</u>	4	rms					
1397	TS-30	8	ea	1,562.50	12,500			
1398	<u>Speech</u>	2	rms					
1399	Base cabinet with plam countertop	10	lf	435.00	4,350			
1400	Open base cabinet with counters	12	lf	400.00	4,800			
1401	TS-30	2	ea	1,562.50	3,125			
1402	TS-36	2	ea	1,875.00	3,750			
1403	<u>Staff lunch/workroom add to main</u>							
1404	TS-32	3	ea	1,666.67	5,000			
1405	<u>Staff lunch/workroom</u>	2	rms		-			
1406	Base cabinet with solid surface countertop	24	lf	475.00	11,400			
1407	TS-32	4	ea	1,666.67	6,667			
1408	Wall cabinets	12	lf	250.00	3,000			
1409	<u>STE room</u>							
1410	Base cabinet with plam countertop	18	lf	435.00	7,830			
1411	Wall cabinets	18	lf	250.00	4,500			
1412	<u>STE storage</u>							
1413	TS-36	3	ea	1,875.00	5,625			
1414	<u>WABA lower</u>							
1415	Base cabinet with plam countertop	16	lf	435.00	6,960			
1416	BB01-36	4	ea	900.00	3,600			
1417	Open upper cabinets	3	lf	220.00	660			
1418	TS-32	2	ea	1,666.67	3,333			
1419	Student cubbies 36" x 84"	3	ea	1,800.00	5,400			
1420	Wall cabinets	8	lf	250.00	2,000			
1421	<u>WABA upper</u>							
1422	Base cabinet with plam countertop	19	lf	435.00	8,265			
1423	BB01-36	4	ea	900.00	3,600			
1424	Open upper cabinets	3	lf	220.00	660			
1425	TS-36	2	ea	1,875.00	3,750			
1426	Student cubbies	3	ea	1,800.00	5,400			
1427	Wall cabinets	8	lf	250.00	2,000			
1428								
1429	122400 WINDOW TREATMENT							
1430	Roller shades at exterior glazing	14,012	sf	7.00	98,084			
1431	Premium for motorized shades at media center, A27/A6.60	1,135	sf	13.00	14,755			
1432	Premium for motorized shades at cafeteria skylights, per spec	96	sf	13.00	1,248			
1433	Premium for motorized shades at extended learning skylights	193	sf	13.00	2,509			
1434	Roller shades to glazed vision panels at interior doors, sidelights, and transom openings	3,181	sf	6.00	19,086			
1435	SUBTOTAL						1,338,782	
1436								
1437	E2020 MOVABLE FURNISHINGS							
1438	No work in this section							
1439	SUBTOTAL						NIC	
1440								
1441	TOTAL - FURNISHINGS							\$1,338,782
1442								
1443								
1444	F20 SELECTIVE BUILDING DEMOLITION							
1445								



<i>CSI CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EST'D COST</i>	<i>SUB TOTAL</i>	<i>TOTAL COST</i>
---------------------	--------------------	------------	-------------	----------------------	-----------------------	----------------------	-----------------------

NEW CONSTRUCTION

1446	F2010 BUILDING ELEMENTS DEMOLITION						
1447	See main summary for demolition of existing buildings						
1448	SUBTOTAL						
1449							
1450	F2020 HAZARDOUS COMPONENTS ABATEMENT						
1451	See main summary for HazMat allowance					See Summary	
1452	SUBTOTAL						
1453							
1454	TOTAL - SELECTIVE BUILDING DEMOLITION						



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

SITework

G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Phase 1

Site construction fence; chain-link (phasing dwgs)	1,855	lf	14.00	Incl. below
Site construction fence; orange snow fence (phasing dwgs)	2,275	lf	5.25	Incl. below
Site construction fence; screened super silt	1,690	lf	22.00	37,180
Site construction fence; orange snow fence	1,950	lf	5.25	10,238
Construction entrance with wheel wash	1	loc	15,000.00	15,000
Clear and grub fire trail; select clearing	7,190	sf	2.50	17,975
Tree Clearing	9	ac	7,500.00	67,500
Stump disposal/grinding	9	ac	3,500.00	31,500
Rock processing and soil staging area	1	ac	15,000.00	15,000
Trail area temp parking	13,140	sf	1.50	NR
Temp stockpile/staging area	2,725	sf	2.50	incl.above

Phase 2

Temp Bus loop through parking area	4,010	sf	3.00	12,030
Line striping and temp signage	1	ls	10,000.00	10,000
Site construction fence; orange snow fence	545	lf	5.25	2,861
Temp stockpile/staging area	7,865	sf	2.50	19,663

Phase 3

Site construction fence; chain-link	1,400	lf	14.00	Incl. below
Site construction fence; chain-link with jersey barrier	775	lf	120.00	93,000
Site construction fence; orange snow fence	455	lf	5.25	2,389
Site construction fence; screened super silt	1,415	lf	22.00	31,130
Construction entrance with wheel wash	1	loc	15,000.00	15,000
Clear and grub	1	ls	25,000.00	25,000
Demolish existing paving & walks	67,400	sf	1.25	84,250
Demolish existing curbing	865	lf	9.00	7,785
Sawcut existing asphalt roadway	215	lf	8.25	1,774
Patching for utilities	375	sf	8.00	3,000
Remove drain lines - allowance	1,000	lf	20.00	20,000
Remove utility structures - allowance	10	loc	500.00	5,000
Remove fencing	291	lf	5.00	1,455
Tree protection fencing; edge of woodland areas	2,500	lf	14.00	35,000
Temp stockpile/staging area	4,515	sf	5.00	22,575

Phase 4

Remove temp access drive	1,429	sy	3.00	4,287
Remove temp bus loop	446	sy	3.00	1,338

Topsoil management

Strip topsoil & forest mat; 6" thick	9,800	cy	6.00	58,800
Stockpile for reuse	9,800	cy	5.00	49,000

SUBTOTAL

699,730

Earthwork

Drilling/matting/blasting

Pre-blast survey	1	ls	50,000.00	by owner
At building footprint; assume 4.5' rock removal below FFE incl. 5' offset	4,241	cy	45.00	w/ building
To design subgrade of pavement area; 2' of rock removal	1,333	cy	45.00	59,985
To design subgrade of playground areas; 2' of rock removal	3,815	cy	45.00	171,675
Trench; for utility lines - allowance	500	cy	65.00	32,500
To design subgrade of fire road; 3' of rock removal	1,333	cy	45.00	59,985
Rock excavation/hauling to stockpile location	11,222	cy	7.00	w/ building
Process and stockpile for reuse within building footprint incl. 12" of structural below SOG x1.65 - 2,900cy structural 3,900cy fill	18,516	tns	7.00	w/ building
Stockpile processed rock for roadway base materials	2,238	cy	3.50	7,833



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITework							
57	<u>Site Earthwork</u>						
58	Cut; site rock removal backed out of site cut	30,119	cy	8.00	240,952		
59	Store cut onsite	30,119	cy	3.50	105,417		
60	Process cobbles and boulders; reused as gravels below; 25% of cut	7,530	cy	7.00	52,710		
61	Fill - (from cut)	30,119	cy	10.00	301,190		
62	Fill - (building cut)	7,140	cy	10.00	71,400		
63	Fine/rough grading	32,943	sy	2.25	74,122		
64	<u>Erosion control</u>						
65	Silt fence with straw wattles	3,550	lf	12.00	42,600		
66	Inlet protection	48	ea	350.00	16,800		
67	Slope soil matting	47,500	sf	1.25	59,375		
68	Erosion control monitoring & maintenance	1	ls	30,000.00	30,000		
69	Street sweeping allowance	1	ls	10,000.00	10,000		
70	Hazardous Waste Remediation					NIC	
71	SUBTOTAL						1,336,544
72							
73	G20 SITE IMPROVEMENTS						
74	<u>Roadways and Parking Lots</u>						
75	<u>Bituminous concrete paving</u>	102,090	sf				
76	gravel base; 12" thick	3,781	cy	45.00	170,145		
77	credit to reuse remaining rock as gravel	2,238	cy	(27.00)	(60,426)		
78	asphalt top; 1.5" thick	957	tns	150.00	143,550		
79	asphalt binder; 2.5" thick	1,593	tns	130.00	207,090		
80	Non-tabled crosswalk premium; includes markings	2,510	sf	2.00	5,020		
81	<u>Bituminous concrete paving fire access</u>	10,760	sf				
82	gravel base; 12" thick	399	cy	45.00	17,955		
83	asphalt top; 1.5" thick	101	tns	150.00	15,150		
84	asphalt binder; 2.5" thick	168	tns	130.00	21,840		
85	Non-skid coating	10,760	sf	2.00	NR		
86	<u>Porous pavement Areas 1-5</u>	14,090	sf				
87	Porous asphalt paving; 4" thick	352	tns	200.00	70,400		
88	Choker course; 4" thick	130	cy	48.00	6,240		
89	gravel base; 8" thick	350	cy	45.00	15,750		
90	3/8" pea gravel; 3" thick	130	cy	48.00	6,240		
91	3/4" crushed stone; 12" thick	522	cy	45.00	23,490		
92	<u>Porous pavement Areas 6-11</u>	12,060	sf				
93	Porous asphalt paving; 4" thick	301	tns	200.00	60,200		
94	Choker course; 4" thick	112	cy	48.00	5,376		
95	gravel base; 8" thick	299	cy	45.00	13,455		
96	3/8" pea gravel; 3" thick	112	cy	48.00	5,376		
97	3/4" crushed stone; 30" thick	1,117	cy	45.00	50,265		
98	Vertical granite curbing	6,280	lf	44.00	276,320		
99	Mountable curbing	55	lf	42.00	2,310		
100	Precast concrete curbing	250	lf	32.00	8,000		
101	Parking stall	152	spc	85.00	12,920		
102	Parking stall - ADA	7	spc	250.00	1,750		
103	Crosswalk striping	9	ea	2,500.00	22,500		
104	Parking lot markings	1	ls	10,000.00	10,000		
105	Pavement markings for games	1	ls	10,000.00	10,000		
106	ADA Curb cuts	20	loc	850.00	17,000		
107	Emergency access gates	2	loc	15,000.00	30,000		
108	Knox box	4	loc	250.00	1,000		
109	Gay Street crosswalk solar signal and signage	2	ea	20,000.00	40,000		
110	<u>Traffic signs</u>						
111	Signs - new	38	ea	125.00	4,750		
112	Signs - mounting hardware	38	ea	225.00	8,550		
113	Signs - posts	38	ea	487.50	18,525		



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITework							
114	SUBTOTAL					1,240,741	
115							
116	<u>Pedestrian paving</u>						
117	<u>Concrete walk</u>	31,520	sf				
118	Gravel base; 8" thick	782	cy	45.00	35,190		
119	Concrete, 4" thick	31,520	sf	9.50	299,440		
120	Concrete, stairs	100	lf	225.00	22,500		
121	Handrails for stairs - stainless steel	40	lf	375.00	15,000		
122	Stair cheek walls	20	lf	350.00	7,000		
123	Concrete ramp premium	660	sf	20.00	13,200		
124	Handrails for ramp - stainless steel	170	lf	375.00	63,750		
125	<u>Concrete pads</u>	1,205	sf				
126	Gravel base; 12" thick	45	cy	45.00	2,025		
127	Concrete, 6" thick	1,205	sf	18.00	21,690		
128	<u>Stabilized stone dust</u>	2,045	sf				
129	Gravel base; 8" thick	51	cy	45.00	2,295		
130	Stone dust; 4" thick	51	tns	200.00	10,200		
131	Geotextile fabrics	2,045	sf	0.75	1,534		
132	<u>Woodland Path</u>	7,835	sf				
133	Woodland trail for fire access including dirt path	1	ls	20,000.00	20,000		
134	<u>Bituminous walkways</u>	3,880	sf				
135	gravel base; 8" thick	96	cy	45.00	4,320		
136	asphalt top; 1.5" thick	36	tns	150.00	5,400		
137	asphalt binder; 1.5" thick	36	tns	130.00	4,680		
138	SUBTOTAL					528,224	
139							
140	<u>Pour-in-Place Surfacing</u>	10,348	sf				
141	crushed stone base; 7" thick	222	cy	48.00	10,656		
142	finishing stone; 1" thick	32	cy	48.00	1,536		
143	Play surfacing, rubber	8,885	sf	26.00	231,010		
144	Play surfacing, sloped	1,463	sf	32.00	46,816		
145	Play surfacing, spheres allowance	1,463	sf	8.00	11,704		
146	Playground equipment	1	ls	220,000.00	220,000		
147	Playground curbing	735	lf	50.00	36,750		
148	Accessible platform w/ stairs for double slide	1	loc	5,000.00	5,000		
149	SUBTOTAL					563,472	
150							
151	<u>Fencing</u>						
152	Metal picket - 4' Ht.	210	lf	100.00	21,000		
153	Metal picket - 4' Ht. single gate	2	ea	2,500.00	5,000		
154	CLF - 4' Ht.	2,055	lf	65.00	133,575		
155	CLF - 4' Ht. single gate	4	ea	1,000.00	4,000		
156	Guardrail with CLF	540	lf	130.00	70,200		
157	CLF - 8' Ht	205	lf	90.00	18,450		
158	Yellow fence topper at little league field	360	lf	6.00	2,160		
159	20' ht. Sports netting	90	lf	180.00	Alternate		
159	Screening at generator	1	ls	5,000.00	5,000		
160	Dumpster enclosure - 7' Ht. fixed louver galv. Steel	55	lf	125.00	6,875		
161	Dumpster enclosure - 7' Ht. fixed louver galv. Steel - double gate	2	ea	10,000.00	20,000		
162	Dumpster enclosure - 7' Ht. fixed louver galv. Steel - single gate	1	ea	2,500.00	2,500		
163	SUBTOTAL					288,760	
164							
165	<u>Little League Field</u>						
166	Rubber edging; allowance	1,000	lf	20.00	20,000		
167	Infield mix; native infield mix	128	tn	175.00	22,400		
168	Gravel base; 6" thick	117	cy	45.00	5,265		



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITework							
169	Fortified mound	1	ea	5,000.00	5,000		
170	Fortified home plate	1	ea	3,500.00	3,500		
171	Foul poles	2	ea	3,600.00	7,200		
172	Backstop	1	ea	35,000.00	35,000		
173	Players benches	2	ea	2,500.00	5,000		
174	5' x 15' Aluminum bleachers	2	ea	7,500.00	15,000		
175	Field painting allowance	1	ls	5,000.00	5,000		
176	Natural Grass Field Mix; outfield only	31,085	sf	0.75	23,314		
177	Sod infield and edges	2,980	sf	2.50	7,450		
178	Imported topsoil; swell 25% 8" thick	1,057	cy	55.00	Incl. below		
179	Irrigation at little league field	34,065	sf	1.25	42,581		
180	SUBTOTAL					196,710	
181							
182	<u>Soccer field</u>	69,235	sf				
183	Field painting allowance	1	ls	5,000.00	5,000		
184	Soccer goals 8' x 24' (movable)	1	sts	12,500.00	12,500		
185	Natural Grass Field Mix	69,235	sf	0.75	51,926		
186	Imported topsoil; swell 25% 8" thick	2,148	cy	55.00	Incl. below		
187	Irrigation at soccer field	69,235	sf	1.25	86,544		
188	SUBTOTAL					155,970	
189							
190	<u>Site Improvements</u>						
191	Basketball hoop	1	loc	5,700.00	5,700		
192	Street Sign	2	loc				
193	Foundation, 6' total depth	20	lf	1,000.00	20,000		
194	Stone veneer	96	sf	75.00	7,200		
195	Steel, allow	1	ls	10,000.00	10,000		
196	Terracotta cladding over CFMF, 3/4" plywood	126	sf	95.00	11,970		
197	Metal lettering	1	ls	20,000.00	20,000		
198	Ring bike rack - per Landscape Forms	10	ea	667.80	6,678		
199	Bike racks - type 2 (Madrax Genesis 6 bike capacity)	20	ea	1,351	27,020		
200	40' Flagpole	1	ea	15,000.00	15,000		
201	Bollard - Type 1 - no detail	7	ea	2,800.00	19,600		
202	Bollard - Type 2 - no detail	7	ea	1,800.00	12,600		
203	Bollards - Steel filled with concrete at transformer and generator	19	ea	900.00	17,100		
204	Trash receptacles - Chase Park by Landscape Forms	4	ea	2,700.88	10,804		
205	Recycling receptacles - Chase Park by Landscape Forms	4	ea	2,938.32	11,753		
206	Birdhouse - Pre-assembled by Chirp Birdhouses	2	ea	294.00	588		
207	Bench - Palisade by Landscape Forms	3	ea	5,090.12	15,270		
208	Bench - Extasi by Landscape Forms	2	ea	3,286.08	6,572		
209	Bench - Binocular by Landscape Forms	1	ea	11,995.20	11,995		
210	Bench - Harvest by Landscape Forms	8	ea	2,656.36	21,251		
211	Dining tables - Harvest by Landscape Forms	4	ea	4,437.16	17,749		
212	SUBTOTAL					268,850	
213							
214	<u>Site Walls</u>						
215	<u>Modular block retaining wall avg. 7.5' ht.</u>	365	lf				
216	Modular blocks	3,103	sf	40.00	124,120		
217	Excavate and prepare wall base	122	cy	100.00	12,200		
218	Backfill wall - crushed stone	216	cy	50.00	10,800		
219	Backfill-controlled placement; above grade - on-site soils no geogrid	324	cy	25.00	8,100		
220	4" perforated wall drain	365	lf	22.00	w_drainage		
221	Wood guardrail	365	lf	65.00	incl. above		
222	CLF on top of guardrail	365	lf	45.00	16,425		
223	<u>Modular block retaining wall avg. 4' ht.</u>	110	lf				
224	Modular blocks	550	sf	40.00	22,000		
225	Excavate and prepare wall base	37	cy	100.00	3,700		



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK							
226	Backfill wall - crushed stone	65	cy	50.00	3,250		
227	Backfill-controlled placement; above grade - on-site soils no geogrid	98	cy	25.00	2,450		
228	4" perforated wall drain	110	lf	22.00	w_drainage		
229	Wood guardrail	110	lf	65.00	incl. above		
230	CLF on top of guardrail	110	lf	45.00	4,950		
231	<u>Double sided stone wall - 5.5' ht - stonewall solutions</u>	115	lf				
232	Stone wall solutions; quote	1,575	sf	124.50	196,088		
233	Excavation	68	cy	25.00	1,700		
234	Store on site for reuse	68	cy	8.00	544		
235	Crushed stone leveling pad	34	cy	50.00	1,700		
236	Concrete pad; 18" thick	26	cy	1,000.00	26,000		
237	Concrete anchor; 12" thick	9	cy	1,000.00	9,000		
238	Backfill	467	cy	35.00	16,345		
239	Drainage pipe	115	lf	22.00	w_drainage		
240	Handrail	115	lf	225.00	25,875		
241	SUBTOTAL					485,247	
242							
243	<u>Landscaping & Plantings:</u>						
244	Imported topsoil for seeded areas; swell 25% - 12" thick per detail carried 6" thick	2,920	cy	55.00	160,600		
245	Imported topsoil; swell 25% 8" thick - soccer field	2,148	cy	55.00	118,140		
246	Imported topsoil; swell 25% 8" thick - little league field	1,057	cy	55.00	58,135		
247	Screen topsoil	9,800	cy	7.50	73,500		
248	Export tailings from screening process - assume clean rock	2,940	cy	8.50	24,990		
249	Amend/Place for new seeded areas/ planting areas/ root zone (4,100cy needed)	6,860	cy	20.00	137,200		
250	Planting soils; swell 25%	1,063	cy	65.00	69,095		
251	Boulders at outdoor classroom	12	ea	550.00	6,600		
252	<u>Seed mixes</u>						
253	Lawn areas	369,050	sf	0.35	129,168		
254	Woodland areas; restoration areas	24,265	sf	0.45	10,919		
255	Conservation mix	29,185	sf	0.45	13,133		
256	<u>Trees</u>						
257	Evergreen 8' Ht.	30	ea	850.00	25,500		
258	Deciduous, 3"-3.5" cal	37	ea	1,400.00	51,800		
259	Deciduous, 4"-4.5" cal	21	ea	1,600.00	33,600		
260	Ornamental; 8' Ht.	7	ea	1,200.00	8,400		
261	Ornamental; 10' Ht.	5	ea	1,500.00	7,500		
262	Ornamental; 10' Gal.	14	ea	1,350.00	18,900		
263	<u>Shrubs & Ground covers</u>						
264	Shrubs 3' Ht.	11	ea	75.00	825		
265	Shrubs 3 Gal.	123	ea	25.00	3,075		
266	Shrubs 5 Gal	583	ea	40.00	23,320		
267	<u>Perennials and Grasses</u>						
268	1 Gal. - Perennials	1,110	ea	18.00	19,980		
269	1 Qt. - Grasses	1,400	ea	12.00	16,800		
270	2 Gal. - Grasses	1,213	ea	18.00	21,834		
271	<u>Irrigation</u>						
272	Irrigation - areas surround sports fields	89,700	sf		NIC		
273	SUBTOTAL					1,033,014	
274							
275	G30 CIVIL MECHANICAL UTILITIES						
276	331000 <u>WATER UTILITIES</u>						
277	4" CLDI - domestic	45	lf	95.00	4,275		
278	6" CLDI - fire hydrant	60	lf	105.00	6,300		
279	8" CLDI - fire loop	2,435	lf	115.00	280,025		
280	Connect to existing water line	2	ea	12,500.00	25,000		
281	Fire department connection	1	ea	2,000.00	2,000		



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK							
282	Gate valve	18	ea	1,500.00	27,000		
283	Fire hydrant	4	ea	6,500.00	26,000		
284	Thrust blocks	20	ea	850.00	17,000		
285	Pressure testing & chlorinate	2,540	lf	5.00	12,700		
286	Concrete encasement	95	sf	20.00	1,900		
287	SUBTOTAL					402,200	
288							
289	333000 SANITARY SEWERAGE UTILITIES						
290	<u>Sanitary sewer</u>						
291	8" PVC	1,250	lf	65.00	81,250		
292	Re-line existing sewer line in Gay Street; 8" sewer - 260'	1	lf	15,000.00	15,000		
293	Manhole	8	loc	4,500.00	36,000		
294	Connect to existing structure	1	ls	10,000.00	10,000		
295	Grease trap; 5,000 gal.	1	loc	25,000.00	25,000		
296	Pressure testing & video	1,250	lf	3.00	3,750		
297	Concrete encasement	250	sf	20.00	5,000		
298	SUBTOTAL					176,000	
299							
300	334000 STORM DRAINAGE UTILITIES						
301	6" HDPE - Perf pipe in stone	1,157	lf	25.00	w/building		
302	6" HDPE - Perf underdrains	2,272	lf	34.00	77,248		
303	8" HDPE - Perf pipe in stone	387	lf	30.00	11,610		
304	6" perforated CPP	3,400	lf	22.00	74,800		
304	6" CPP	290	lf	55.00	15,950		
305	8" CPP	140	lf	60.00	8,400		
306	10" CPP	40	lf	65.00	2,600		
307	12" CPP	1,950	lf	70.00	136,500		
308	15" CPP	970	lf	80.00	77,600		
309	18" CPP	150	lf	90.00	13,500		
310	24" CPP	170	lf	100.00	17,000		
311	24" RCP	10	lf	125.00	1,250		
312	Area drain	18	loc	3,500.00	63,000		
313	Manhole	29	loc	4,500.00	130,500		
314	Manhole - 5'	1	ea	5,200.00	5,200		
315	Catch basins	17	loc	4,200.00	71,400		
316	Catch basins; deep sump	2	loc	4,800.00	9,600		
317	Curb inlet	1	ea	4,800.00	4,800		
318	Cleanout	38	loc	1,400.00	53,200		
319	FES	7	ea	2,500.00	17,500		
320	OCS	6	loc	8,000.00	48,000		
321	WQI	9	loc	12,000.00	108,000		
322	WQS	2	loc	12,000.00	24,000		
323	Roof drain connection	2	ea	600.00	1,200		
324	Trench drains	35	lf	150.00	5,250		
325	<u>Bio-retention area</u>	14,878	sf				
326	shape basins	14,878	sf	5.00	74,390		
327	mulch	138	cy	50.00	6,900		
328	24" Planting soil mix	1,102	cy	60.00	66,120		
329	12" Sand	551	cy	40.00	22,040		
330	4" Double washed pea stone	182	cy	50.00	9,100		
331	12" Pipe bedding	551	cy	40.00	22,040		
332	Level spreader	960	sf	10.00	9,600		
333	Sediment forebay	160	sf	10.00	1,600		
334	<u>Underground Infiltration system</u>						
335	<i>Underground recharger - C - 1</i>	4,790	sf				
336	SC- 740 chambers and installation - 74.9cuft/per chamber with a 6" stone base	117	ea	200.00	23,400		



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK							
337	Excavate and dispose of soils	887	cy	50.00	44,350		
338	Install stone base	293	tn	50.00	14,650		
339	Fine grade base	4,790	sf	0.25	1,198		
340	Back-fill infiltration bed with 1-2" crushed stone	772	tn	50.00	38,600		
341	Geotextile fabrics	11,975	sf	0.75	8,981		
342	<i>Underground recharger - C - 2</i>	3,710	sf				
343	SC- 740 chambers and installation - 74.9cuft/per chamber with a 6" stone base	96	ea	200.00	19,200		
344	Excavate and dispose of soils	687	cy	50.00	34,350		
345	Install stone base	227	tn	50.00	11,350		
346	Fine grade base	3,710	sf	0.25	928		
347	Back-fill infiltration bed with 1-2" crushed stone	634	tn	50.00	31,700		
348	Geotextile fabrics	9,275	sf	0.75	6,956		
349	<i>Underground recharger - C - 3</i>	6,875	sf				
350	SC- 740 chambers and installation - 74.9cuft/per chamber with a 6" stone base	184	ea	200.00	36,800		
351	Excavate and dispose of soils	1,273	cy	50.00	63,650		
352	Install stone base	420	tn	50.00	21,000		
353	Fine grade base	6,875	sf	0.25	1,719		
354	Back-fill infiltration bed with 1-2" crushed stone	1,214	tn	50.00	60,700		
355	Geotextile fabrics	17,188	sf	0.75	12,891		
356	<i>Underground recharger - C - 4</i>	4,700	sf				
357	SC- 740 chambers and installation - 74.9cuft/per chamber with a 6" stone base	126	ea	200.00	25,200		
358	Excavate and dispose of soils	870	cy	50.00	43,500		
359	Install stone base	287	tn	50.00	14,350		
360	Fine grade base	4,700	sf	0.25	1,175		
361	Back-fill infiltration bed with 1-2" crushed stone	832	tn	50.00	41,600		
362	Geotextile fabrics	11,750	sf	0.75	8,813		
363	<i>Underground recharger - C - 5</i>	3,125	sf				
364	SC- 740 chambers and installation - 74.9cuft/per chamber with a 6" stone base	77	ea	200.00	15,400		
365	Excavate and dispose of soils	579	cy	50.00	28,950		
366	Install stone base	191	tn	50.00	9,550		
367	Fine grade base	3,125	sf	0.25	781		
368	Back-fill infiltration bed with 1-2" crushed stone	508	tn	50.00	25,400		
369	Geotextile fabrics	7,813	sf	0.75	5,860		
370	<i>Underground recharger- C-6</i>	1,280	sf				
371	MC-3500 chambers and installation - 179.9cuft/per chamber with a 12" stone base (90" long x 77" wide/ea)	24	ea	500.00	12,000		
372	Excavate and dispose of soils; assume 6' depth	284	cy	45.00	12,780		
373	Install stone base; 12" thick	78	tn	50.00	3,900		
374	Fine grade base	1,280	sf	0.25	320		
375	Back-fill infiltration bed with 1-2" crushed stone; 9.1cy/ea	218	cy	45.00	9,810		
376	Geotextile fabrics	3,200	sf	0.75	2,400		
377	<i>Underground recharger- C-7</i>	1,530	sf				
378	MC-3500 chambers and installation - 179.9cuft/per chamber with a 12" stone base (90" long x 77" wide/ea)	28	ea	500.00	14,000		
379	Excavate and dispose of soils; assume 6' depth	340	cy	45.00	15,300		
380	Install stone base; 12" thick	94	tn	50.00	4,700		
381	Fine grade base	1,530	sf	0.25	383		
382	Back-fill infiltration bed with 1-2" crushed stone; 9.1cy/ea	255	cy	45.00	11,475		
383	Geotextile fabrics	3,825	sf	0.75	2,869		
384	SUBTOTAL					1,932,837	
385							
386	<u>Geothermal Wells</u>						
387	Earthwork support for wells	1	ls	200,000.00	in rates w/ building		
388	8" HDPE supply return main lines (four pipes; two supply and two return)	435	lf	160.00	69,600		
389	SUBTOTAL					69,600	



60% Construction Document Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

SITEWORK

390							
391	<u>Gas service</u>						
392	E&B trench for new lines, pipe and install by utilities						
393	New gas service - not shown on plans	1	ls	20,000.00	20,000		
394						20,000	

G40 ELECTRICAL UTILITIES

395	<u>Civil</u>						
396	Concrete:						
397	Primary and telecom combo ductbank	800	lf	35.00	28,000		
398	Primary DB AA 2-4"	200	lf	15.00	3,000		
399	Secondary DB BB 7-4"	30	lf	35.00	1,050		
400	Generator DB	70	lf	20.00	1,400		
401	Telecom DB CC 4-4"	200	lf	20.00	4,000		
402	Transformer & Generator pad	2	ea	1,500.00	3,000		
403	Site lighting Pole base	46	ea	350.00	16,100		
404	EV station base	2	ea	350.00	700		
405	Excavation and backfill:						
406	Primary and telecom combo ductbank	800	lf	22.00	17,600		
407	Primary DB AA 2-4"	200	lf	15.00	3,000		
408	Secondary DB BB 7-4"	30	lf	25.00	750		
409	Generator DB	70	lf	22.00	1,540		
410	Telecom DB CC 4-4"	200	lf	22.00	4,400		
411	Lighting, Security & EV, sign etc.	12,020	lf	6.00	72,120		
412	<u>Power</u>						
413	Pole riser, new	1	ea	1,500.00	1,500		
414	Primary and telecom combo ductbank	800	lf	125.00	100,000		
415	Pull box inc addendums	9	ea	1,000.00	9,000		
416	Primary DB AA 2-4" conduits, empty (feeder by Utility co)	200	lf	50.00	10,000		
417	Manhole	2	ea	8,500.00	17,000		
418	13.8kV-480/277V pad mounted transformer	1	ea			By Eversource	
419	Transformer pad	2	ea			See Civil	
420	Secondary DB BB 8-4" with 2,400A feeders	50	lf	1,185.00	59,250		
421	Generator DB, with feeders, conduit & control wiring	70	lf	330.00	23,100		
422	<u>Site lighting</u>						
423	Site lighting fixture Type SL1/3	21	ea	2,000.00	42,000		
424	Site lighting fixture Type SL2/3	6	ea	2,700.00	16,200		
425	Site lighting fixture Type SL1/PT	19	ea	1,700.00	32,300		
426	Site lighting fixture Type SL6	3	ea	1,000.00	3,000		
427	Site lighting fixture Type SL7	4	ea	750.00	3,000		
428	Circuitry & pull boxes	6,500	lf	11.00	71,500		
429	Wireless site lighting controls allowance	1	ls	5,000.00	5,000		
430	1" Spare inc	2,000	lf	9.00	18,000		
431	<u>Sign/Scoreboard Power</u>						
432	Handhole (Quazite box with cover)	7	ea	1,500.00	10,500		
433	1" spare conduit	3,000	lf	9.00	27,000		
434	<u>Site Communications</u>						
435	Communication riser pole, new	1	ea	1,200.00	1,200		
436	Communications manhole	4	ea	8,500.00	34,000		
437	Telecom DB CC 4-4" conduits, empty	200	lf	70.00	14,000		
438	<u>Electric Vehicle Stations</u>						
439	Electric Vehicle Stations	2	loc	7,500.00	15,000		
440	40A EVC feeder	520	lf	18.00	9,360		
441	<u>Site Security</u>						
442	Site security, allow (Cameras on Building)					Assumes NIC	
443	SUBTOTAL						678,570

SUBTOTAL - SITE DEVELOPMENT	\$10,076,469
------------------------------------	---------------------



60% Construction Document Estimate

<i>CSI CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EST'D COST</i>	<i>SUB TOTAL</i>	<i>TOTAL COST</i>
---------------------	--------------------	------------	-------------	----------------------	-----------------------	----------------------	-----------------------

SITEWORK



CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
----------	-------------	-----	------	-----------	------------	-----------	------------

ALTERNATES

1 Add UV-C to HVAC System

	Add factory mounted Germicidal Ultraviolet Light sections, installed adjacent downstream of the cooling coil	64,300	cfm	1.25	80,375		
	SUBTOTAL					80,375	
	Markups						12,860

TOTAL - Add UV-C					<i>ADD</i>		\$93,235
-------------------------	--	--	--	--	------------	--	-----------------

2 Add Phase 2 Landscape Planting

	Planting soils; swell 25%	1	ls	10,000.00	10,000		
	<u>Trees</u>						
	Evergreen 8' Ht.	8	ea	850.00	6,800		
	Deciduous, 3"-3.5" cal	62	ea	1,400.00	86,800		
	Deciduous, 4"-4.5" cal	27	ea	1,600.00	43,200		
	Ornamental; 10' Ht.	3	ea	1,200.00	3,600		
	<u>Shrubs & Ground covers</u>						
	Shrubs 3 Gal.	1,569	ea	25.00	39,225		
	Shrubs 5 Gal	248	ea	40.00	9,920		
	<u>Perennials and Groundcovers</u>						
	1 Gal. - Perennials	625	ea	18.00	11,250		
	2 Gal. - Grasses	35	ea	23.00	805		
	SUBTOTAL					211,600	
	Markups						33,856

TOTAL - Additional planting					<i>ADD</i>		\$245,456
------------------------------------	--	--	--	--	------------	--	------------------

3 Solid surface countertops at classrooms ILO Plan

	Solid surface countertops at classrooms ILO Plan	1	ls	14,520.00	14,520		
	SUBTOTAL					14,520	
	Markups						2,323

Solid surface countertops at classrooms ILO Plan					<i>ADD</i>		\$16,843
---	--	--	--	--	------------	--	-----------------