



April 6, 2020

Alaska Dept. of Education and Early Development
Division of School Finance and Facilities
801 West 10th Street, Suite 200
Juneau, Alaska 99811-0500

Attn: Larry Morris, REFP

Re: Program Demand Cost Model - Model School Summary of Proposed Changes

Dear Mr. Morris,

Attached please find our summary of changes to the Model School Escalation Study. After review, should you have questions, require additional information or have suggestions as to proposed changes resulting from your experience with school projects this past year, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kent Gamble'.

Kent Gamble, Principal
KG/as

2020 MODEL SCHOOL CHANGES

1. The exterior walls have been updated to provide for assemblies commonly in use. Changes include use of metal stud framing, metal siding, and use of a phenolic resin rain screen assembly for accent at 20% of the overall exterior closure area.
2. Inclusion of emergency lockdown provisions at exterior doors and classroom doors.
3. Inclusion of ballistic protection panels at reception areas.
4. Addition of flat panel monitors for visual display.

HMS Project No.: 20013

SUMMARY COST COMPARISON

	2019 Total	2020 Total	Delta	Comments
01 - EXISTING CONDITIONS	\$ 0	\$ 0	N/A	
02 - SUBSTRUCTURE	797,458	801,865	0.01	Price updates.
03 - SUPERSTRUCTURE	2,094,192	2,059,671	-0.02	Price updates.
04 - EXTERIOR CLOSURE	976,993	1,612,976	0.65	Adaptation of new assembly and lockdown provisions.
05 - ROOF SYSTEMS	1,212,048	1,220,856	0.01	Price updates.
06 - INTERIORS				
General Contractor	689,136	754,960	0.10	Price updates, ballistic protection, lockdown.
Subcontractor	932,607	919,700	-0.01	Decrease in labor rate.
07 - CONVEYING EQUIPMENT	0	0	N/A	
08 - MECHANICAL	2,376,428	2,332,227	-0.02	Materials price updates, labor correction.
09 - ELECTRICAL	1,683,133	1,695,597	0.01	Materials price updates, labor correction.
10 - EQUIPMENT AND FURNISHINGS	437,110	461,470	0.06	Addition of flat panel monitors and price updates.
11 - SPECIAL CONDITIONS	0	0	N/A	
SUBTOTAL:	\$ 11,199,105	\$ 11,859,322	0.06	
12 - GENERAL REQUIREMENTS AND PROFIT	2,903,680	3,000,958	0.03	No change.
SUBTOTAL:	\$ 14,102,785	\$ 14,860,280	0.05	
13 - SITE AND INFRASTRUCTURE				
General Contractor	\$ 1,227,267	\$ 1,233,437	0.01	Price updates.
Subcontractor (Site Electrical)	63,550	66,034	0.04	Price updates.
SUBTOTAL:	\$ 15,393,602	\$ 16,159,751		
14 - CONTINGENCIES	1,539,360	1,615,975	0.05	No change.
TOTAL ESTIMATED CONSTRUCTION COST:	\$ 16,932,962	\$ 17,775,726	0.05	
COST PER SQUARE FOOT:	\$ 409.01 /SF	\$ 429.37 /SF		
GROSS FLOOR AREA:	41,400 SF	41,400 SF		

STATE OF ALASKA
ESCALATION COST STUDY

MODEL SCHOOL BUILDING
ANCHORAGE, ALASKA (BASE)

APRIL 2020



HMS Project No.: 20013

02 - SUBSTRUCTURE	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$
Excavate for footings and backfilling	650	CY	9.75	6,338	0.200	130.00		
4,000 psi concrete foundations including waste	107	CY	157.62	16,865	1.125	120.38		
4,000 psi concrete bases including waste	18	CY	157.62	2,837	1.125	20.25		
4,000 psi concrete wall including waste	250	CY	157.62	39,405	1.350	337.50		
Bar reinforcement	35,000	LBS	0.70	24,500	0.010	350.00		
Formwork to footing	3,380	LF	2.65	8,957	0.100	338.00		
Formwork to wall	20,300	SF	2.85	57,855	0.145	2943.50		
2" insulation to wall	10,150	SF	1.36	13,804	0.010	101.50		
Dampproof	12,688	SF	1.20	15,226	0.026	329.89		
6" fill, Type II, 2" minus	740	CY	21.00	15,540	0.130	96.20		
4,000 psi concrete slab on grade	495	CY	157.62	78,022	1.250	618.75		
10 mil vapor retarder	40,400	SF	0.09	3,636	0.002	80.80		
6"x6" - W1.4xW1.4 welded wire mesh	40,400	SF	0.30	12,120	0.004	161.60		
Cure and finish concrete	40,400	SF	0.32	12,928	0.025	1010.00		
Saw cut joint and filler	3,000	LF	0.75	2,250	0.035	105.00		

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02 - SUBSTRUCTURE	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$
Pump concrete	375	CY	40.00	15,000				
Expansion joint and sealant	1,000	LF	1.43	1,430	0.030	30.00		
Total Hours:							6,773.37	Hours
							@	\$ 70.15

TOTAL ESTIMATED COST:	\$ 326,713	\$ 475,152	\$ 801,865
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HMS Project No.: 20013

03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

MEZZANINE FLOOR (FAN ROOM)

W-beams	2,850	LBS	1.80	5,130	0.010	28.50		
T.S. columns	2,500	LBS	2.00	5,000	0.020	50.00		
Plates, anchors and grout	4	EA	115.00	460	1.000	4.00		
Steel joists	6,000	LBS	2.25	13,500	0.011	66.00		
Angles	1,010	LBS	2.15	2,172	0.025	25.25		
1 1/2"x20 gauge metal deck	1,000	SF	2.60	2,600	0.035	35.00		
Concrete topping	9	CY	157.62	1,419	1.400	12.60		
6"x6" - W1.4xW1.4 mesh	1,000	SF	0.30	300	0.004	4.00		
Cure and finish concrete	1,000	SF	0.32	320	0.025	25.00		
Formwork to edge	78	LF	1.67	130	0.100	7.80		
Pump concrete	9	CY	40.00	360				
8'0" access ladder with cage	1	EA	1,040.00	1,040	2.265	2.27		

ROOF STRUCTURE

Plates, anchors and grout	120	EA	110.00	13,200	1.200	144.00		
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03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

ROOF STRUCTURE (Continued)

Tube steel columns	110,000	LBS	2.00	220,000	0.020	2200.00		
Steel joists	199,000	LBS	1.90	378,100	0.011	2189.00		
W-beams	18,500	LBS	1.80	33,300	0.010	185.00		
T.S. bracing	17,000	LBS	2.00	34,000	0.025	425.00		
Angles, connectors, etc.	19,000	LBS	2.15	40,850	0.025	475.00		
3"x20 gauge metal deck	44,170	SF	3.75	165,638	0.048	2120.16		

MISCELLANEOUS

Testing/inspection	1	LOT	2,500.00	2,500				
Crane rental	3	MOS	27,820.00	83,460				

Total Hours:

7,998.58 Hours
 @ \$ 89.13

SUBTOTAL: \$ 1,003,479 \$ 712,913 \$ 1,716,392

Subcontractor's Overhead and Profit on
 Material and Labor 20.00% 200,696 142,583 343,279

TOTAL ESTIMATED COST: \$ 1,204,175 \$ 855,496 \$ 2,059,671

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04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

EXTERIOR WALL

6" metal stud framing	23,665	SF	1.88	44,490	0.025	591.63		
7/8" hat channel furring	23,665	SF	0.53	12,542	0.080	1893.20		
1/2" plywood CDX AWW sheathing	23,665	SF	1.30	30,765	0.014	331.31		
2" rigid insulation	23,665	SF	1.05	24,848	0.009	212.99		
Metal siding panel, including flashing	18,932	SF	7.50	141,990	0.080	1514.56		
Phenolic resin panel	4,733	SF	22.00	104,126	0.147	695.75		
Vapro shield weather barrier	4,733	SF	1.30	6,153	0.800	3786.40		
High performance air barrier	23,665	SF	0.40	9,466	0.005	118.33		
6" R-19 batt insulation in stud wall cavity	23,665	SF	0.64	15,146	0.007	165.66		
10 mil vapor retarder	23,665	SF	0.09	2,130	0.002	47.33		
5/8" Type X gypboard	23,665	SF	0.65	15,382	0.020	473.30		
Tape and finish	23,665	SF	0.16	3,786	0.007	165.66		
Metal soffit panel	2,060	SF	4.50	9,270	0.090	185.40		
2"x6" framing and nailers to soffit	515	LF	0.92	474	0.026	13.39		

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04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

EXTERIOR WALL (Continued)

Rigid eave vent screen	1,130	LF	1.10	1,243	0.010	11.30
Fascia 1/2" CDX plywood (both sides)	5,000	SF	0.79	3,950	0.017	85.00
Metal accent panel at fascia	2,500	SF	7.50	18,750	0.090	225.00
2"x4" framing for fascia	2,900	LF	0.56	1,624	0.017	49.30
Flashing	1,690	LF	3.55	6,000	0.055	92.95
1"x6" interior trim	3,498	LF	1.56	5,457	0.016	55.97

DOORS

Hollow metal insulated frames for 3'0"x7'0" doors	16	EA	221.00	3,536	1.100	17.60
Hollow metal insulated frames for 6'0"x7'0" double doors	6	EA	271.00	1,626	1.750	10.50
3'0"x7'0" hollow metal insulated single doors	16	EA	615.00	9,840	0.750	12.00
3'0"x7'0" hollow metal insulated doors with vision panel (for double doors, each leaf counted separately)	12	EA	730.00	8,760	1.250	15.00
Hardware for single exterior doors	12	SETS	1,080.00	12,960	3.660	43.92
Hardware for single exterior doors, including emergency lockdown provisions	4	SETS	2,882.00	11,528	7.450	29.80

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04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

DOORS (Continued)

Hardware for double exterior doors	3	SETS	1,350.00	4,050	6.150	18.45	
Hardware for double exterior doors with panic hardware, including emergency lockdown provisions	3	SETS	6,705.00	20,115	14.900	44.70	
Motorized operable accessible door and push button actuator	1	EA	4,800.00	4,800	7.500	7.50	

WINDOWS

Metal clad insulated windows with screens	3,500	SF	58.00	203,000	0.160	560.00	
Solid surface sills	700	LF	11.00	7,700	0.060	42.00	

CAULKING

Sealant and backer rod	3,300	LF	1.77	5,841	0.043	141.90	
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Total Hours:

11,657.80 Hours
 @ \$ 73.91

TOTAL ESTIMATED COST:	\$ 751,348	\$ 861,628	\$ 1,612,976
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05 - ROOF SYSTEMS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

GENERAL CONTRACTOR

PITCHED ROOF

5/8" fire treated CDX plywood	44,170	SF	1.59	70,230	0.016	706.72		
8" R-38 rigid insulation	44,170	SF	5.50	242,935	0.021	927.57		
5/8" gypboard sheathing	44,170	SF	0.85	37,545	0.019	839.23		
Vapor barrier	44,170	SF	0.09	3,975	0.002	88.34		
Total Hours:							2,561.86 Hours	
							@	\$ 73.91
SUBTOTAL GENERAL CONTRACTOR:				\$ 354,685			\$ 189,347	\$ 544,032

SUBCONTRACTOR

Klip Rib metal roofing including fasteners, etc.	44,170	SF	7.40	326,858	0.052	2296.84		
Ice and water shield at eaves	6,000	SF	0.75	4,500	0.010	60.00		
Ridge flashing	450	LF	7.65	3,443	0.070	31.50		
Flashings	1,600	LF	5.12	8,192	0.070	112.00		
Fascia board and flashing	1,450	LF	7.87	11,412	0.120	174.00		
Total Hours:							2,674.34 Hours	
							@	\$ 78.38

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05 - ROOF SYSTEMS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$
SUBTOTAL:				\$ 354,405		\$ 209,615		\$ 564,020
Subcontractor's Overhead and Profit on Material and Labor			20.00%	70,881		41,923		112,804
SUBTOTAL SUBCONTRACTOR:				<u>\$ 425,286</u>		<u>\$ 251,538</u>		<u>\$ 676,824</u>
TOTAL ESTIMATED COST:				<u>\$ 779,971</u>		<u>\$ 440,885</u>		<u>\$ 1,220,856</u>

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06 - INTERIORS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

General Contractor								
PARTITIONS								
3 5/8" metal, 20 gauge studs at 16" o/c, including track	45,045	SF	1.59	71,622	0.022	981.98		
6" metal, 20 gauge studs at 16" o/c, including track	4,455	SF	1.88	8,375	0.025	110.93		
5/8" Type X gypboard	88,320	SF	0.65	57,408	0.020	1766.40		
7/16" Level 7 ballistic protection panel at reception	95	SF	55.00	5,225	0.150	14.25		
Tape and finish	83,320	SF	0.16	13,331	0.007	583.24		
1/2" cement board	1,680	SF	1.59	2,671	0.029	48.72		
1/2" plywood backing	16,000	SF	0.79	12,640	0.014	224.00		
2"x6" blockings	2,500	LF	0.87	2,175	0.025	62.50		
Sound insulation	10,000	SF	0.48	4,800	0.007	70.00		
Acoustical sealants	1,667	LF	0.38	633	0.009	15.00		
DOORS								
3'0"x7'0" hollow metal frames, welded	60	EA	182.00	10,920	1.000	60.00		
6'0"x7'0" hollow metal double door frames	8	PRS	220.00	1,760	1.650	13.20		

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06 - INTERIORS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE	TOTAL	HOURS	TOTAL		
			\$	\$				
General Contractor								

DOORS (Continued)

3'0"x7'0" solid core doors	54	EA	460.00	24,840	0.750	40.50	
3'0"x7'0" solid core doors with glazed opening	22	EA	670.00	14,740	1.250	27.50	
Hardware for single doors	60	SETS	830.00	49,800	2.880	172.80	
Hardware for double doors	8	SETS	1,350.00	10,800	5.750	46.00	
Rolling grille at kitchen serving line	1	EA	4,600.00	4,600	13.330	13.33	
Add for emergency lockdown hardware	16	EA	1,810.00	28,960	7.450	119.20	

GLAZING

Relights in hollow metal frame	180	SF	38.00	6,840	0.108	19.44	
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SPECIALTIES

Toilet partitions, HDPE	5	EA	1,065.00	5,325	3.200	16.00	
Toilet partitions, handicapped	4	EA	1,140.00	4,560	4.600	18.40	
Toilet accessories	175	EA	105.00	18,375	0.750	131.25	
Lockers	50	EA	285.00	14,250	1.000	50.00	
Chalkboards/white board	768	SF	26.00	19,968	0.025	19.20	

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06 - INTERIORS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$
General Contractor								

SPECIALTIES (Continued)

Tack boards	768	SF	9.95	7,642	0.020	15.36		
Fire extinguishers and cabinets	8	EA	326.00	2,608	1.750	14.00		
Signage	55	EA	79.00	4,345	0.450	24.75		
Total Hours:							4,677.95 Hours	
							@	\$ 73.91

TOTAL ESTIMATED COST - GENERAL CONTRACTOR:	\$ 409,213	\$ 345,747	\$ 754,960
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06 - INTERIORS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

FLOOR

Carpet tile	3,190	SY	42.00	133,980	0.175	558.25		
Carpet inlays	1	LOT	1,450.00	1,450	50.000	50.00		
Gym flooring, wood and channels	3,600	SF	16.65	59,940	0.180	648.00		
Mosaic ceramic tile	1,400	SF	8.15	11,410	0.110	154.00		
Vinyl tile	2,000	SF	3.22	6,440	0.020	40.00		
Sheet vinyl	1,000	SF	4.96	4,960	0.018	18.00		
Linoleum	2,450	SF	4.75	11,638	0.031	75.95		
Concrete sealer and hardener	2,250	SF	0.35	788	0.017	38.25		

BASE

4" rubber	7,660	LF	1.44	11,030	0.020	153.20		
6" coved	550	LF	2.60	1,430	0.060	33.00		
Ceramic tile base	210	LF	8.27	1,737	0.090	18.90		
Wood base	480	LF	2.30	1,104	0.035	16.80		

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06 - INTERIORS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE	TOTAL	HOURS	TOTAL		
			\$	\$				
Subcontractor								

WALLS

Paint (3 coats)	100,000	SF	0.30	30,000	0.017	1700.00
Ceramic tile	1,680	SF	10.00	16,800	0.120	201.60
14 ounce vinyl wall covering	2,000	SF	1.70	3,400	0.025	50.00
FRP board	2,880	SF	3.60	10,368	0.039	112.32
MDO plywood wainscot at gym	4,520	SF	1.75	7,910	0.025	113.00

CEILINGS

Acoustical ceiling tile glued to gypboard	6,500	SF	3.05	19,825	0.025	162.50
Suspended acoustic ceiling	29,550	SF	3.41	100,766	0.032	945.60
Suspended gypboard taped and sanded	1,750	SF	3.17	5,548	0.060	105.00
Paint gypboard ceiling	5,350	SF	0.30	1,605	0.019	101.65

PAINTING

Interior trim and sills	4,198	LF	0.24	1,008	0.020	83.96
Single door frames	76	EA	4.95	376	0.350	26.60

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06 - INTERIORS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$
Subcontractor								

PAINTING (Continued)

Double door frames	14	EA	6.00	84	0.415	5.81		
Doors	104	EA	12.60	1,310	0.850	88.40		
Paint miscellaneous metals	250	SF	0.37	93	0.023	5.75		
Total Hours:							5,506.54 Hours	
							@	\$ 58.37
SUBTOTAL:				\$ 445,000		\$ 321,417		\$ 766,417
Subcontractor's Overhead and Profit on Material and Labor	20.00%			89,000		64,283		153,283

TOTAL ESTIMATED COST - SUBCONTRACTOR:	\$ 534,000	\$ 385,700	\$ 919,700
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08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PLUMBING

Cast Iron Waste, Vent Pipes and Fittings

4" diameter pipe	520	LF	21.32	11,086	0.281	146.12
3" diameter pipe	490	LF	16.24	7,958	0.254	124.46
2" diameter pipe	500	LF	14.59	7,295	0.242	121.00
1 1/2" diameter pipe	600	LF	14.10	8,460	0.170	102.00
4" floor cleanout	6	EA	238.81	1,433	1.333	8.00
3" VTR	4	EA	192.00	768	1.700	6.80
4" VTR	2	EA	255.00	510	1.800	3.60

Hot and Cold Water Copper Pipes and Fittings

2" diameter copper pipe	180	LF	19.36	3,485	0.190	34.20
1 1/2" diameter copper pipe	270	LF	11.98	3,235	0.154	41.58
1 1/4" diameter copper pipe	100	LF	8.56	856	0.138	13.80
1" diameter copper pipe	430	LF	5.50	2,365	0.118	50.74
3/4" diameter copper pipe	500	LF	3.60	1,800	0.105	52.50

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08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PLUMBING (Continued)

Hot and Cold Water Copper Pipes and Fittings (Continued)

1/2" diameter copper pipe	580	LF	2.40	1,392	0.099	57.42		
2" diameter coupling	12	EA	13.15	158	0.615	7.38		
1 1/2" diameter coupling	18	EA	7.85	141	0.533	9.59		
1 1/4" diameter coupling	9	EA	5.85	53	0.471	4.24		
1" diameter coupling	29	EA	3.39	98	0.444	12.88		
3/4" diameter coupling	34	EA	1.72	58	0.381	12.95		
1/2" diameter coupling	39	EA	0.85	33	0.364	14.20		
2" diameter fittings (tee/elbow)	9	EA	36.00	324	0.727	6.54		
1 1/2" diameter fittings (tee/elbow)	14	EA	21.67	303	0.615	8.61		
1 1/4" diameter fittings (tee/elbow)	5	EA	14.22	71	0.533	2.67		
1" diameter fittings (tee/elbow)	22	EA	10.10	222	0.500	11.00		
3/4" diameter fittings (tee/elbow)	25	EA	3.60	90	0.421	10.53		
1/2" diameter fittings (tee/elbow)	29	EA	1.53	44	0.400	11.60		

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08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PLUMBING (Continued)

Hot and Cold Water Copper Pipes and Fittings (Continued)

Clips and hangers to support pipes	230	EA	10.65	2,450	0.533	122.59		
Valves and gauges	1	LOT	3,500.00	3,500	30.000	30.00		
1 1/2" insulation	2,060	LF	3.00	6,180	0.060	123.60		
Subtotal Hours:							1,150.60	Hours
Premium Time	10.00%						115.06	Hours
Total Hours:							1,265.66	Hours
							@	\$ 71.69
SUBTOTAL:				\$ 64,368		\$ 90,735		\$ 155,103
Subcontractor's Overhead and Profit on Material and Labor	20.00%			12,874		18,147		31,021
SUBTOTAL:				\$ 77,242		\$ 108,882		\$ 186,124

PLUMBING FIXTURES

Standard wall mounted water closets, flush valve and carrier	13	EA	690.00	8,970	4.100	53.30		
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HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PLUMBING FIXTURES (Continued)

Standard water closets, handicapped	6	EA	750.00	4,500	4.500	27.00		
Urinals, flush valve and carrier	6	EA	850.00	5,100	3.350	20.10		
Counter mounted lavatory basin	18	EA	485.00	8,730	2.200	39.60		
Mop sink	2	EA	650.00	1,300	3.500	7.00		
Stainless steel drinking fountain cooler with bottle refilling station	4	EA	1,120.00	4,480	4.000	16.00		
Stainless steel classroom sink	15	EA	490.00	7,350	3.250	48.75		
Work room sink	1	EA	565.00	565	3.250	3.25		
Nurse's sink	1	EA	565.00	565	3.250	3.25		
Three compartment sink	1	EA	2,400.00	2,400	3.750	3.75		
Hand sink	1	EA	510.00	510	3.250	3.25		
Shower stall and controls	2	EA	1,750.00	3,500	4.750	9.50		
Connection to kitchen equipment	1	LOT	620.00	620	10.000	10.00		
2" to 3" diameter floor drain	8	EA	165.00	1,320	1.400	11.20		
Non-freeze hose bib	4	EA	135.00	540	0.750	3.00		

HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PLUMBING FIXTURES (Continued)

119 gallon hot water generator	1	EA	4,850.00	4,850	16.000	16.00		
Circulation pump	1	EA	1,150.00	1,150	3.100	3.10		
Drain trap insulation kit	19	EA	45.00	855	0.500	9.50		
20 GPM grease interceptor	1	EA	4,100.00	4,100	2.667	2.67		
Subtotal Hours:							290.22	Hours
Premium Time	10.00%						29.02	Hours
Total Hours:							319.24	Hours
							@	\$ 71.69
SUBTOTAL:				\$ 61,405		\$ 22,886		\$ 84,291
Subcontractor's Overhead and Profit on Material and Labor	20.00%			12,281		4,577		16,858
SUBTOTAL:				\$ 73,686		\$ 27,463		\$ 101,149

HEATING

1,600 MBH cast iron oil/gas fired boiler, hot water/glycol complete with controls	2	EA	41,000.00	82,000	115.000	230.00		
10" diameter stainless steel flue and breaching, double wall	28	LF	98.00	2,744	0.450	12.60		

HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

HEATING (Continued)

Flue cap	1	EA	470.00	470	2.000	2.00		
55 gallon expansion tank	1	EA	1,375.00	1,375	3.000	3.00		
Air separator, 3" strainer	1	EA	2,700.00	2,700	4.000	4.00		
Glycol make-up tank with feed pump	1	EA	945.00	945	6.700	6.70		
Glycol fluid	330	GALS	13.50	4,455	0.045	14.85		
3" diameter circulation pump	2	EA	2,660.00	5,320	4.000	8.00		
3" diameter copper pipe	300	LF	37.70	11,310	0.286	85.80		
2 1/2" diameter copper pipe	200	LF	29.84	5,968	0.258	51.60		
2" diameter copper pipe	500	LF	19.36	9,680	0.190	95.00		
1 1/2" diameter copper pipe	550	LF	11.98	6,589	0.154	84.70		
1 1/4" diameter copper pipe	250	LF	8.56	2,140	0.138	34.50		
1" diameter copper pipe	650	LF	5.50	3,575	0.118	76.70		
3/4" diameter copper pipe	800	LF	3.60	2,880	0.105	84.00		
3" diameter coupling	15	EA	36.00	540	1.231	18.47		

HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

HEATING (Continued)

2 1/2" diameter coupling	10	EA	25.50	255	1.067	10.67		
2" diameter coupling	25	EA	13.15	329	0.615	15.38		
1 1/2" diameter coupling	28	EA	7.85	220	0.533	14.92		
1 1/4" diameter coupling	13	EA	5.85	76	0.471	6.12		
1" diameter coupling	33	EA	3.39	112	0.444	14.65		
3/4" diameter coupling	40	EA	1.72	69	0.381	15.24		
3" diameter fitting (tee/elbow)	14	EA	94.00	1,316	1.231	17.23		
2 1/2" diameter fitting (tee/elbow)	8	EA	66.25	530	1.231	9.85		
2" diameter fitting (tee/elbow)	19	EA	36.00	684	0.727	13.81		
1 1/2" diameter fitting (tee/elbow)	21	EA	21.67	455	0.615	12.92		
1 1/4" diameter fitting (tee/elbow)	10	EA	14.22	142	0.533	5.33		
1" diameter fitting (tee/elbow)	25	EA	10.10	253	0.500	12.50		
3/4" diameter fitting (tee/elbow)	30	EA	3.60	108	0.421	12.63		
Clips and hangers to support pipes	300	EA	10.65	3,195	0.533	159.90		

HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

HEATING (Continued)

Valves and gauges	1	LOT	6,750.00	6,750	45.000	45.00		
2" insulation	3,250	LF	7.20	23,400	0.065	211.25		
Cabinet unit heaters	6	EA	1,645.00	9,870	4.000	24.00		
Unit heaters	6	EA	570.00	3,420	3.350	20.10		
(2) rows fin tube and enclosure	880	LF	49.25	43,340	0.640	563.20		

COOLING AT COMPUTER ROOM

3 ton, DX type air conditioner unit with remote condenser (mini split)	1	EA	27,600.00	27,600	32.000	32.00		
Refrigerant, 30 lbs. cylinder	120	LBS	13.50	1,620			Included	
2" diameter coolant supply and return pipes with fittings	250	LF	30.25	7,563	0.160	40.00		
1" diameter coolant supply and return pipes with fittings	250	LF	12.66	3,165	0.120	30.00		
2" diameter circulation pump	1	EA	1,400.00	1,400	3.250	3.25		
Valves and gauges	1	LOT	1,350.00	1,350	10.000	10.00		
1 1/2" insulation	500	LF	3.00	1,500	0.065	32.50		

HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

AIR SYSTEMS

30,000 CFM outdoor air handling unit with economizer and heat recovery	2	EA	145,500.00	291,000	100.000	200.00		
2,000 CFM to 3,000 CFM exhaust fan	2	EA	2,900.00	5,800	8.000	16.00		
750 to 1,500 CFM exhaust fan	3	EA	1,875.00	5,625	6.500	19.50		
200 CFM to 750 CFM exhaust fan	1	EA	1,075.00	1,075	4.000	4.00		
500 CFM to 750 CFM VAV boxes	50	EA	820.00	41,000	2.250	112.50		
2 SF heating coils	50	EA	630.00	31,500	1.100	55.00		
Galvanized ductwork with hangers and connections	31,000	LBS	3.78	117,180	0.065	2015.00		
10" flexible duct	600	LF	7.05	4,230	0.150	90.00		
Outside air/exhaust louvers with bird screens	150	SF	36.30	5,445	0.100	15.00		
Dampers under 1 SF	20	EA	128.00	2,560	0.400	8.00		
1 SF to 2 SF dampers	4	EA	166.64	667	0.650	2.60		
2 SF to 5 SF dampers	1	EA	218.32	218	0.750	0.75		
1 SF to 2 SF motorized dampers	4	EA	185.00	740	2.000	8.00		

HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

AIR SYSTEMS (Continued)

Small grille, register or diffuser	75	EA	66.20	4,965	0.500	37.50		
Medium grille, register or diffuser	25	EA	122.50	3,063	0.650	16.25		
Large grille, register or diffuser	6	EA	155.00	930	1.000	6.00		
2" insulation	1,000	SF	2.60	2,600	0.020	20.00		
2" lining	600	SF	3.65	2,190	0.035	21.00		

CONTROLS, TESTING AND BALANCE

Microprocessor, digital equipment, software and programming	1	LOT	34,200.00	34,200	280.000	280.00		
DDC points	160	EA	980.00	156,800	6.600	1056.00		
Thermostats	20	EA	112.00	2,240	2.650	53.00		
Thermostats with guards	2	EA	138.00	276	2.800	5.60		
Testing and balancing	105	UNITS			2.000	210.00		
Commissioning	1	LOT	2,000.00	2,000	160.000	160.00		

FIRE PROTECTION

4" diameter sprinkler riser and valves	1	EA	4,250.00	4,250	32.000	32.00		
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HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

FIRE PROTECTION (Continued)

Fire department connection	1	EA	650.00	650	3.300	3.30
Wet sprinkler system throughout facility	41,400	SF	1.85	76,590	0.025	1035.00
Design fee and commissioning	1	LOT	5,000.00	5,000	16.000	16.00

GAS/FUEL OIL

1" diameter black steel pipe supply line including fittings	120	LF	4.58	550	0.120	14.40
Connection to equipment	5	EA	220.00	1,100	2.000	10.00
50 gallon day tank with duplex pumps	1	EA	10,500.00	10,500	4.100	4.10
3/4" diameter black steel pipe including fittings	25	LF	3.90	98	0.120	3.00
Valves	1	LOT	270.00	270	1.500	1.50
Testing, including fuel oil	1	LOT	1,500.00	1,500	8.000	8.00

Subtotal Hours: 7,683.37 Hours

Premium Time 10.00% 768.34 Hours

Total Hours: 8,451.71 Hours
@ \$ 71.69

SUBTOTAL: \$ 1,098,225 \$ 605,903 \$ 1,704,128

HMS Project No.: 20013

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

Subcontractor's Overhead and Profit on Material and Labor	20.00%		219,645		121,181		340,826
SUBTOTAL:			<u>\$ 1,317,870</u>		<u>\$ 727,084</u>		<u>\$ 2,044,954</u>

TOTAL ESTIMATED COST:			<u>\$ 1,468,798</u>		<u>\$ 863,429</u>		<u>\$ 2,332,227</u>
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HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

SERVICE AND DISTRIBUTION

1,600 amp main enclosed disconnect	1	EA	13,900.00	13,900	29.000	29.00		
Main distribution panel with 1,600 amp bus and fused switches	1	EA	17,100.00	17,100	32.000	32.00		
3 1/2" diameter rigid steel conduit and fittings	20	LF	24.00	480	0.364	7.28		
3 1/2" diameter x 90° elbow	2	EA	200.00	400	2.200	4.40		
2" diameter IMC conduit	50	LF	8.90	445	0.160	8.00		
1 1/2" diameter IMC conduit	220	LF	7.05	1,551	0.133	29.26		
1 1/4" diameter IMC conduit	250	LF	5.45	1,363	0.123	30.75		
1" diameter IMC conduit	120	LF	4.25	510	0.114	13.68		
500 KCMIL copper wire	150	LF	10.17	1,526	0.0500	7.50		
#1/0 THHN copper wire	400	LF	2.55	1,020	0.024	9.60		
#2 THHN copper wire	1,150	LF	1.48	1,702	0.017	19.55		
#4 THHN copper wire	1,000	LF	0.96	960	0.015	15.00		
#4 ground wire (10'0") and connect to building	2	EA	36.00	72	1.040	2.08		

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

SERVICE AND DISTRIBUTION (Continued)

225 amp, 120/208V, 4 wire, 3 phase, 42 circuit, MLO subpanel	2	EA	3,200.00	6,400	24.000	48.00
100 amp, 120/280V, 4 wire, 3 phase, 30 circuit subpanel	4	EA	1,875.00	7,500	16.000	64.00

FIXTURES

2'0"x4'0" LED troffer	486	EA	281.00	136,566	1.650	801.90
1'0"x4'0" LED troffer	120	EA	165.00	19,800	1.200	144.00
4'0" surface LED wraparound	12	EA	149.00	1,788	1.200	14.40
6" diameter surface wet location LED downlight fixture	42	EA	165.00	6,930	1.300	54.60
LED high bay gym fixture	30	EA	550.00	16,500	2.100	63.00
LED exit sign with battery	40	EA	110.00	4,400	1.000	40.00
Self-contained dual head emergency light	6	EA	164.00	984	2.000	12.00
LED wall pack with cut off optics, building mounted exterior light fixtures	10	EA	567.00	5,670	2.000	20.00
Recessed soffit LED fixture with tempered lens, tamperproof	6	EA	245.00	1,470	1.850	11.10

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

FIXTURES (Continued)

Lighting control panel	2	EA	1,850.00	3,700	16.000	32.00
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DEVICES

Single switch	60	EA	12.10	726	0.620	37.20
Three way switch	8	EA	19.00	152	1.100	8.80
Keyed switch	4	EA	47.30	189	0.780	3.12
Local lighting control	16	EA	42.00	672	1.100	17.60
Dual technology occupancy sensor	26	EA	140.00	3,640	1.600	41.60
Occupancy sensor/switch	30	EA	70.00	2,100	0.620	18.60
Wall switch with built-in motion sensor and control switch	2	EA	135.00	270	1.350	2.70
20 amp duplex outlet	320	EA	13.00	4,160	0.900	288.00
GFI duplex outlet	48	EA	19.50	936	1.125	54.00
Quadraplex floor outlet	16	EA	170.00	2,720	1.300	20.80
GFI 15 amp duplex outlet, weatherproof	3	EA	40.00	120	1.250	3.75
50 amp special outlet	3	EA	50.00	150	0.727	2.18

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

DEVICES (Continued)

30 amp special outlet	2	EA	40.00	80	1.125	2.25		
Junction box with cover	29	EA	8.10	235	0.200	5.80		
Emergency light connection	40	EA	46.00	1,840	1.000	40.00		
Night light connection	30	EA	16.80	504	1.000	30.00		
100 amp, 4 pole electrical contactor	2	EA	1,210.00	2,420	3.685	7.37		
K-1900 photocell/time switch	2	EA	125.00	250	0.850	1.70		
30 HP, 3 phase, 208 volt motor connection	3	EA	136.05	408	5.500	16.50		
10 HP to 7 1/2 HP, 3 phase, 208 volt motor connection	2	EA	88.00	176	2.775	5.55		
5 HP to 1 HP, 3 phase, 208 volt motor connection	11	EA	65.00	715	1.800	19.80		
30 HP variable frequency drive	3	EA	8,125.00	24,375	34.000	102.00		
10 HP variable frequency drive	2	EA	3,950.00	7,900	17.000	34.00		
Fractional motor connection	13	EA	40.00	520	1.750	22.75		
Thermal switch	19	EA	45.00	855	0.600	11.40		

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

DEVICES (Continued)

60 amp, 3 pole fused disconnect switch	4	EA	920.00	3,680	2.460	9.84
Fused disconnect switch, weatherproof	1	EA	550.00	550	2.830	2.83
10 HP combination motor starter/disconnect switch	11	EA	730.00	8,030	2.520	27.72

Conduit and Wiring

1" diameter EMT conduit	3,380	LF	2.26	7,639	0.070	236.60
3/4" diameter EMT conduit	9,350	LF	1.29	12,062	0.0620	579.70
1/2" diameter EMT conduit	6,100	LF	0.90	5,490	0.047	286.70
#6 THHN	9,000	LF	0.70	6,300	0.010	90.00
#8 THHN	14,100	LF	0.48	6,768	0.009	126.90
#10 THHN	23,000	LF	0.36	8,280	0.008	184.00
#12 THHN	45,000	LF	0.27	12,150	0.005	225.00

FIRE ALARM SYSTEM (ADDRESSABLE)

16-zone fire alarm control panel, including standby batteries and charger	1	EA	5,010.00	5,010	22.000	22.00
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HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

FIRE ALARM SYSTEM (ADDRESSABLE) (Continued)

Fire alarm graphic annunciator	1	EA	850.00	850	15.000	15.00		
Manual pull station (break glass type)	12	EA	90.00	1,080	1.500	18.00		
Combination horn/strobe	59	EA	170.00	10,030	1.650	97.35		
Combination horn/strobe, weatherproof	11	EA	190.00	2,090	1.880	20.68		
Strobe only	15	EA	90.00	1,350	1.500	22.50		
Magnetic door hold release	30	EA	110.00	3,300	2.000	60.00		
Smoke detectors ionization	78	EA	130.00	10,140	1.250	97.50		
Heat detector	28	EA	105.00	2,940	0.700	19.60		
Duct detector	6	EA	330.00	1,980	2.450	14.70		
Connect to trip circuit	1	EA	109.00	109	1.150	1.15		
Connect to TTB	1	EA	112.00	112	1.150	1.15		
Connect to intercom system	1	EA	80.00	80	1.150	1.15		
Tamper switch and connection	1	EA	240.00	240	1.220	1.22		
Flow switch and connection	1	EA	240.00	240	1.220	1.22		

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

FIRE ALARM SYSTEM (ADDRESSABLE) (Continued)

Junction box	20	EA	8.10	162	0.200	4.00
1" diameter EMT conduit	4,400	LF	2.26	9,944	0.070	308.00
Fire alarm wiring	4,400	LF	0.41	1,804	0.015	66.00

DATA/TELECOMMUNICATION SYSTEM

4'0"x8'0"x3/4" AC grade plywood backboard	576	SF	2.20	1,267	0.038	21.89
48-pair telecom termination block	2	EA	78.00	156	0.430	0.86
Free-standing data equipment rack	5	EA	1,350.00	6,750	4.800	24.00
Plug strip	5	EA	130.00	650	0.720	3.60
48-port patch panel	13	EA	225.00	2,925	2.140	27.82
Cable management panel	10	EA	205.00	2,050	2.430	24.30
Fiber optic patch panel	3	EA	160.00	480	1.100	3.30
Connection to fire alarm system	1	EA	180.00	180	2.500	2.50
Single jack data/telephone outlet	10	EA	13.00	130	0.570	5.70
Two-jack data/telephone outlet	122	EA	22.00	2,684	0.720	87.84

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

DATA/TELECOMMUNICATION SYSTEM (Continued)

Three-jack data/telephone outlet	1	EA	26.00	26	0.860	0.86		
Four-jack data/telephone outlet	1	EA	36.00	36	0.890	0.89		
Two-jack data/telephone outlet, floor mounted	3	EA	130.00	390	1.500	4.50		
Four-jack data/telephone outlet, floor mounted	4	EA	142.00	568	2.140	8.56		
Three-jack data/telephone outlet, ceiling mounted	1	EA	42.00	42	1.000	1.00		
Wireless access point	11	EA	235.00	2,585	1.100	12.10		
Smart board interface	20	EA	1,650.00	33,000	17.700	354.00		
Junction box	20	EA	8.10	162	0.200	4.00		
12" cable tray	450	LF	19.50	8,775	0.112	50.40		
4" diameter EMT conduit	150	LF	24.00	3,600	0.200	30.00		
3" diameter EMT conduit	40	LF	17.35	694	0.160	6.40		
1" diameter EMT conduit	300	LF	2.26	678	0.070	21.00		
3/4" diameter EMT conduit	1,420	LF	1.29	1,832	0.0620	88.04		
Category 6 cable	15,050	LF	0.39	5,870	0.015	225.75		

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

DATA/TELECOMMUNICATION SYSTEM (Continued)

100 pair Cat 3 copper voice backbone	200	LF	15.00	3,000	0.033	6.60
50 pair Cat 3 copper voice backbone	200	LF	7.50	1,500	0.018	3.60
12-strand fiber	100	LF	1.75	175	0.012	1.20
Single mode fiber	1,000	LF	0.30	300	0.008	8.00
Ground bar	1	EA	110.00	110	0.600	0.60
#2/0 bare copper ground	250	LF	3.49	873	0.016	4.00

PUBLIC ADDRESS SYSTEM

Link module	1	EA	1,625.00	1,625	12.000	12.00
Power amplifier	1	EA	735.00	735	1.500	1.50
Equipment rack	1	EA	950.00	950	3.000	3.00
Power amplifier	2	EA	1,100.00	2,200	7.700	15.40
AM/FM tuner	1	EA	730.00	730	1.500	1.50
CD player	1	EA	710.00	710	3.000	3.00
Clock/speaker	22	EA	444.00	9,768	2.500	55.00

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PUBLIC ADDRESS SYSTEM (Continued)

Digital clock	6	EA	400.00	2,400	0.770	4.62
Speaker	16	EA	120.00	1,920	0.950	15.20
Speaker, weatherproof	2	EA	239.00	478	1.100	2.20
3/4" diameter EMT conduit	1,000	LF	1.29	1,290	0.0505	50.50
4-pair Cat 3 wire	1,600	LF	0.20	320	0.011	17.60
25-pair Cat 3 wire	100	LF	1.30	130	0.014	1.40

SECURITY SYSTEM

12-zone security control panel with keypad, including stand-by batteries and charger	1	EA	2,255.00	2,255	5.500	5.50
Headend equipment	1	LOT	5,000.00	5,000	16.000	16.00
Classroom door lockdown hardware/interface	35	EA	900.00	31,500	7.000	245.00
Proximity card reader	2	EA	420.00	840	3.750	7.50
Door security contact	35	EA	135.00	4,725	1.700	59.50
Glass break detector	30	EA	117.00	3,510	0.900	27.00
Infrared motion detector, long coverage	9	EA	283.00	2,547	3.750	33.75

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

SECURITY SYSTEM (Continued)

Connection to fire alarm system	1	EA	85.00	85	1.150	1.15
3/4" diameter EMT conduit	1,800	LF	1.29	2,322	0.0620	111.60
6-plenum security wire	1,800	LF	0.47	846	0.015	27.00
Cat 6 camera cable	150	LF	0.37	56	0.015	2.25

DOOR ACCESS SYSTEM (ROUGH-IN ONLY)

Junction for devices	24	EA	5.10	122	0.200	4.80
Connect new devices to existing POE network switches	7	EA	50.00	350	2.021	14.15
J-hooks	91	EA	0.70	64	0.094	8.55
3/4" diameter EMT conduit	310	LF	1.29	400	0.062	19.22
Cat 6E cable	910	LF	0.39	355	0.015	13.65
Test system	1	LOT	100.00	100	6.736	6.74

SET, RESET AND LOCKDOWN FEATURES

Set, reset and lockdown system interface with door access system (allowance)	1	LOT	10000.00	10,000	200.000	200.00
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HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

VIDEO SURVEILLANCE SYSTEM

Data network switch, VOIP network switches, VOIP server	1	LOT	10500.00	10,500	90.900	90.90
CCTV server	1	EA	3500.00	3,500	12.120	12.12
Video recording and monitoring equipment	1	LOT	7500.00	7,500	21.820	21.82
Interior ceiling mounted camera	8	EA	400.00	3,200	3.300	26.40
Exterior camera, weatherproof, heated enclosure	6	EA	1650.00	9,900	6.800	40.80
3/4" diameter EMT conduit	210	LF	1.29	271	0.062	13.02
Category 6 cable	1,500	LF	0.32	480	0.013	19.50
6-strand fiber optic cable	200	LF	1.10	220	0.012	2.40

PUBLIC ADDRESS SYSTEMS (GYM AND STAGE)

Mixer/pre-amplifier	5	EA	985.00	4,925	2.100	10.50
Eight channel auto/gate	3	EA	890.00	2,670	1.550	4.65
Equalizer	3	EA	575.00	1,725	1.550	4.65
Power amp	1	EA	1,110.00	1,110	7.600	7.60
Power amp, dual channel	1	EA	1,420.00	1,420	7.600	7.60

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PUBLIC ADDRESS SYSTEMS (GYM AND STAGE) (Continued)

CD multi-player	3	EA	710.00	2,130	1.000	3.00		
AM/FM tuner	2	EA	730.00	1,460	1.000	2.00		
Speaker	17	EA	120.00	2,040	0.950	16.15		
Wireless receiver	2	EA	750.00	1,500	2.000	4.00		
Stand type microphone	6	EA	138.30	830	0.780	4.68		
Desk top microphone	2	EA	85.00	170	0.780	1.56		
Wireless microphone	3	EA	147.50	443	0.360	1.08		
Microphone floor outlet	4	EA	146.00	584	0.360	1.44		
Microphone stand	3	EA	121.00	363	0.180	0.54		
Equipment rack	2	EA	955.00	1,910	2.500	5.00		
Over-voltage protection	1	LOT	460.00	460	2.000	2.00		
Microphone cable	200	LF	1.10	220	0.013	2.60		
Cat 6 speaker cable	1,800	LF	0.32	576	0.015	27.00		

HMS Project No.: 20013

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

HEARING IMPAIRED AUDIO SYSTEM

Master transmitter	1	EA	1,015.00	1,015	2.180	2.18
Slave transmitter	8	EA	900.00	7,200	1.200	9.60
Infrared radiator with wire guard	2	EA	365.00	730	3.130	6.26
Stethoscope style receiver	4	EA	169.00	676	1.310	5.24
Lanyard style receiver	2	EA	169.00	338	1.310	2.62
3/4" diameter EMT conduit	200	LF	1.29	258	0.0620	12.40
Cat 6 wiring	200	LF	0.32	64	0.015	3.00

EMERGENCY POWER

150 KW oil-fired emergency diesel generator including accessories and fuel tank (by Kohler Generator)	1	EA	70,000.00	70,000	81.800	81.80
Connection to leak detection system	1	EA	35.00	35	1.666	1.67
Connection to level indicator	1	EA	35.00	35	1.666	1.67
600 amp automatic transfer switch (by Kohler Generator)	1	EA	8,000.00	8,000	17.700	17.70
600 amp emergency distribution panel	1	EA	8,950.00	8,950	18.600	18.60

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09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

EMERGENCY POWER (Continued)

100 amp, 120/208 volt, 30 circuits MLO emergency panel	4	EA	1,875.00	7,500	16.000	64.00		
225 amp, 120/208 volt, 42 circuits, 4 wire, 3 phase MLO standby panel	2	EA	3,200.00	6,400	24.000	48.00		
1 1/4" diameter EMT conduit	175	LF	3.78	662	0.080	14.00		
2" diameter EMT conduit	100	LF	6.30	630	0.100	10.00		
2 1/2" diameter rigid steel conduit with fittings	15	LF	20.00	300	0.229	3.44		
#2 THHN copper	350	LF	1.48	518	0.017	5.95		
#1/0 THHN copper	600	LF	2.55	1,530	0.024	14.40		
#3/0 THHN copper	350	LF	3.99	1,397	0.032	11.20		
#4/0 THHN copper	80	LF	4.00	320	0.0360	2.88		

MISCELLANEOUS

Testing and certification	1	LOT	4,000.00	4,000	200.000	200.00		
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Subtotal Hours:

7,740.29 Hours

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09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$
Premium Time		10.00%				774.03	Hours	
Total Hours:						8,514.32	Hours	
						@	\$ 74.14	
SUBTOTAL:				\$ 781,746		\$ 631,252		\$ 1,412,998
Subcontractor's Overhead and Profit on Material and Labor		20.00%		156,349		126,250		282,599
TOTAL ESTIMATED COST:				\$ 938,095		\$ 757,502		\$ 1,695,597

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10 - EQUIPMENT AND FURNISHINGS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

SPORTS EQUIPMENT

Practice basketball goal, wall mounted (height adjustable)	4	EA	3,300.00	13,200	16.060	64.24
Retractable basketball goal	2	EA	6,325.00	12,650	21.500	43.00
Floor markings (subcontractor)	1	LOT	1,500.00	1,500	12.000	12.00
Floor insert	4	EA	237.00	948	0.600	2.40
Chinning bar	2	EA	415.00	830	2.850	5.70
Climbing pegboard	2	EA	377.00	754	2.200	4.40

FOOD PREPARATION AND LAUNDRY EQUIPMENT

Refrigerator	1	EA	1,925.00	1,925	1.000	1.00
Freezer	1	EA	1,649.00	1,649	1.000	1.00
Convection oven	1	EA	5,650.00	5,650	3.000	3.00
Stacked washer and dryer	1	EA	1,950.00	1,950	1.750	1.75
Range with hood	6	EA	3,520.00	21,120	1.750	10.50
Under counter refrigerator	5	EA	870.00	4,350	0.750	3.75

HMS Project No.: 20013

10 - EQUIPMENT AND FURNISHINGS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

VISUAL DISPLAY

Swing arm TV bracket	16	EA	155.00	2,480	1.220	19.52
65" flat panel television	16	EA	1,200.00	19,200	1.150	18.40

FURNISHINGS

Horizontal window blinds	3,000	SF	11.00	33,000	0.060	180.00
Rubber entry mat	200	SF	22.50	4,500	0.035	7.00

PLASTIC LAMINATED CASEWORK

9" deep x 12 3/4" high plastic laminated boot cubbies with (2) open face compartments with top shelf	168	LF	115.00	19,320	0.520	87.36
Overall 20'0" long x 2'6" deep x 3'0" high (2) tier receptionist desk with doors, knee space, drawers one side and plastic laminated top	1	EA	7,500.00	7,500	32.000	32.00
3'0" high base cabinet including plastic laminate top	196	LF	245.00	48,020	0.750	147.00
36" wide x 2'6" high x 14'0" tub storage cabinets	16	EA	2,550.00	40,800	11.500	184.00
4'0" wide x 7'0" high storage cabinets with adjustable shelves	16	EA	990.00	15,840	3.300	52.80

HMS Project No.: 20013

10 - EQUIPMENT AND FURNISHINGS	QUANTITY	UNIT	MATERIAL/EQUIPMENT		LABOR		TOTAL	TOTAL
			RATE	TOTAL	HOURS	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$			\$	\$

PLASTIC LAMINATED CASEWORK (Continued)

3'0" wide x 7'0" high lockable cabinets with rod and shelf	16	LF	358.00	5,728	3.000	48.00
2'6" high wall units	352	LF	190.00	66,880	0.520	183.04
1'6" high open shelf units	96	LF	46.00	4,416	0.500	48.00
Kitchenette base unit	12	LF	245.00	2,940	0.750	9.00
Wall mounted cabinet	12	LF	190.00	2,280	0.520	6.24
3'0"x3'0" music room and waiting closets	4	EA	515.00	2,060	2.000	8.00
12" high x 17'6" wide cubbies in kindergarten	4	EA	3,045.00	12,180	12.500	50.00
IMC stack	6	EA	1,890.00	11,340	12.000	72.00

Total Hours:

1,305.10 Hours
 @ \$ 73.91

TOTAL ESTIMATED COST:	\$ 365,010	\$ 96,460	\$ 461,470
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